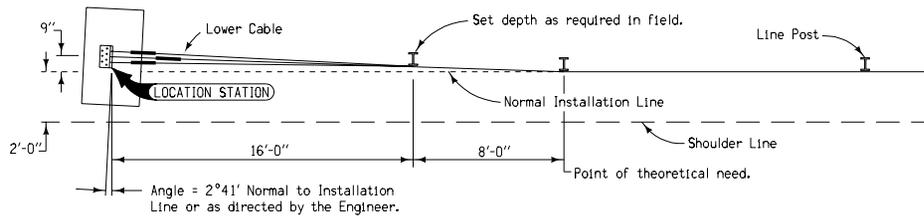
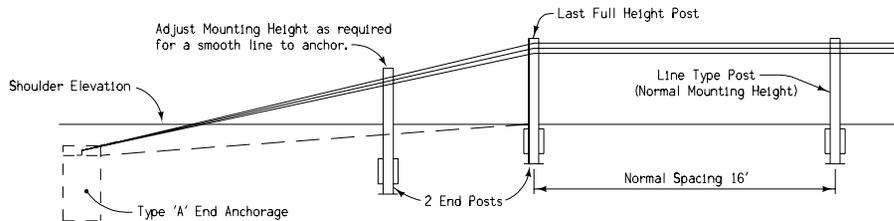


TYPE 'A' END ANCHORAGE DETAILS

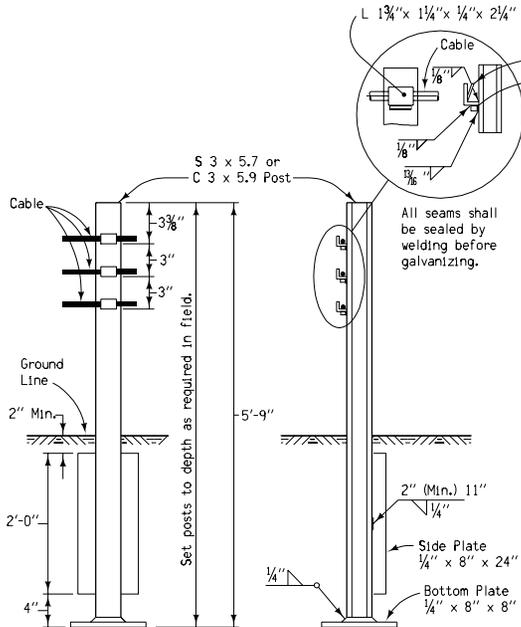
Anchor shall be cast in place with \perp normal to line of guardrail. Excavation for anchor shall be to the neat lines indicated. Forms will be allowed only for the ends (the 2' dimension) of the anchor.



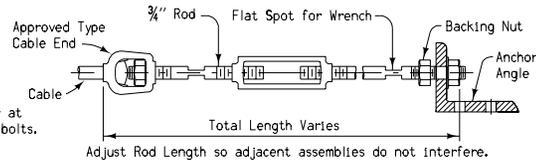
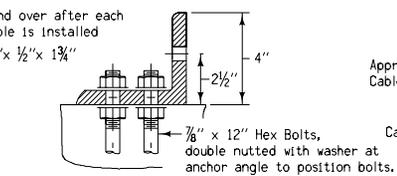
PLAN - 24' ANCHORAGE SECTION



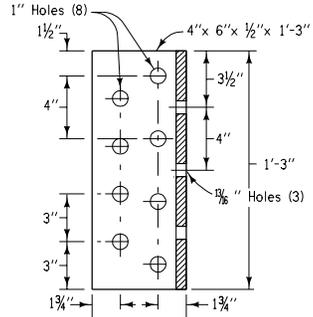
ELEVATION - TYPE 'A' END ANCHORAGE



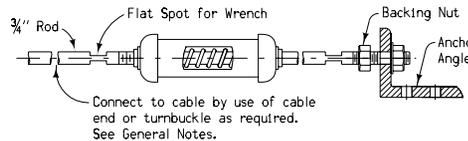
DETAILS OF END POST



**(TURNBUCKLE)
TYPICAL CABLE END ASSEMBLY**



ANCHOR ANGLE



**(SPRING TYPE COMPENSATING DEVICE)
TYPICAL CABLE END ASSEMBLY**

CABLE TENSION ADJUSTMENTS FOR TEMPERATURE VARIATIONS														
Temperature Range Degrees F	120 to 110	109 to 100	99 to 90	89 to 80	79 to 70	69 to 60	59 to 50	49 to 40	39 to 30	29 to 20	19 to 10	9 to 0	-1 to -10	-11 to -20
Spring Compression Inches *	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3	3 1/4	3 1/2	3 3/4	4	4 1/4

* From the unloaded position in each spring

Turnbuckles shall be of the open type and shall each provide for a minimum takeup of 12 inches.

The spring type compensating device is installed to maintain cable tension for various temperature conditions. This device shall provide for 5 inch minimum travel and have a spring rate of 450+ 50 lbs. per inch. Turnbuckles are used to pretension each cable to the proper tension, depending on the temperature at the time of adjustment. The spring compression adjustments for various temperatures are listed in the table on this plan.

Turnbuckles and compensating devices shall each be equipped with adequate and proper bolts and fittings (to provide for use separately or in combination) to connect the guardrail cable to the end anchorage.

Contract Items:

Installation of Guardrail
Cable Guardrail End Anchorage, RE-29A

List of materials for the RE-29A Type 'A' End Anchorage:

- 1 Anchor Angle and Hardware
- 1.19 cubic yards concrete
- 59 lbs. of reinforcing steel (approx.)
- 3 Cable End Assemblies

Tabulation: 108-9

Iowa Department of Transportation
Highway Division

STANDARD ROAD PLAN RE-29A

REVISION: Clarify bending of cable brackets and remove information already in the specifications book.	REVISION NO. 11
<i>Deanna McFalls</i>	REVISION DATE 04-18-06
APPROVED BY DESIGN METHODS ENGINEER	

**TYPE 'A' ANCHORS
FOR CABLE GUARDRAIL**