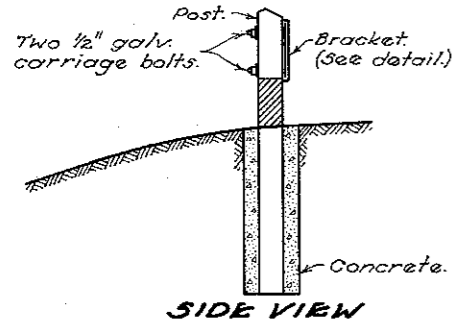


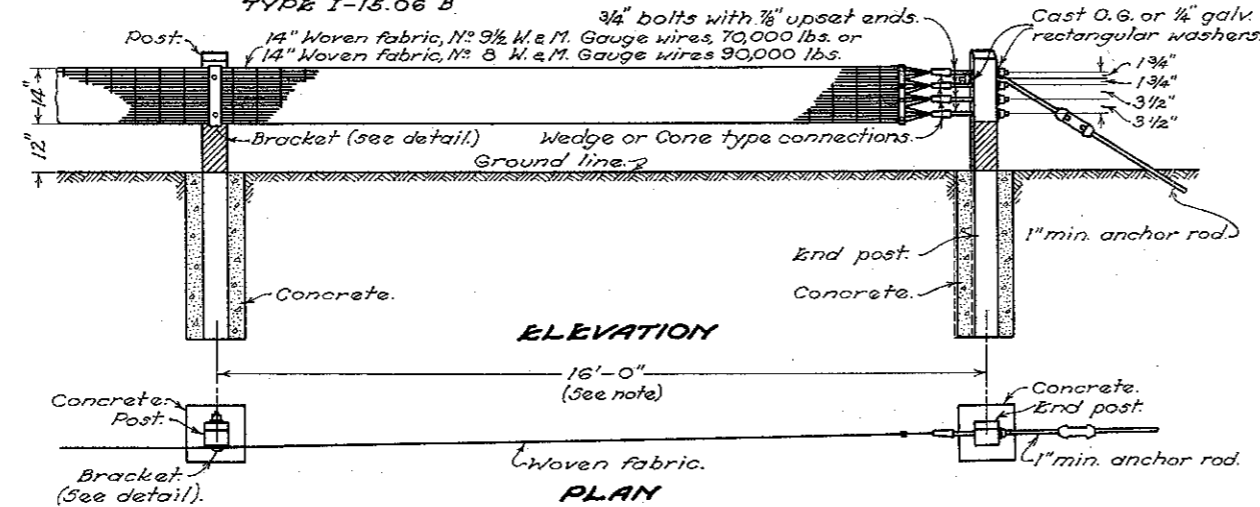
STANDARD GUARD RAIL

WOVEN WIRE FABRIC BAND

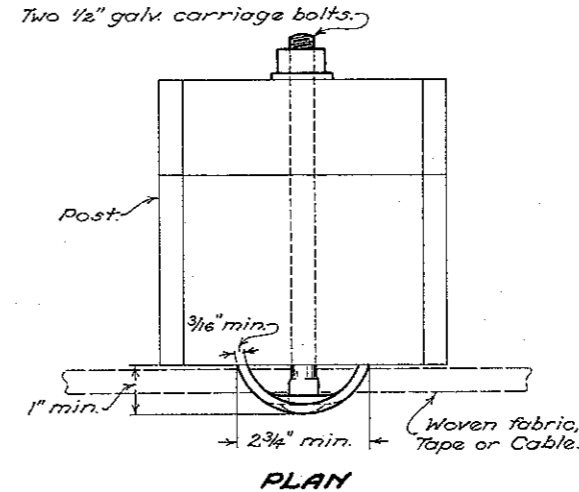
TYPE I-15.06 B.



SIDE VIEW



BRACKET



NOTES

GENERAL: End anchorage, erection details and notes on Standard Construction Drawing I-15 No. 1 apply to rails shown on this drawing. Standard Construction Drawings I-15 No. 1 and I-15 No. 3 should be used together.

The Standard Construction and Material Specifications of the State of Ohio shall apply to guard rails shown hereon except as hereinafter noted.

I-15.06 B. WOVEN WIRE FABRIC BAND: The rail element shall consist of a woven wire fabric band 14" wide. The band shall be made of 24 longitudinal wires, interwoven with No. 10 gauge transverse wires spaced 2" centers. The ultimate tensile strength of this rail as a whole including band, connectors, and connections to end posts shall be not less than 90,000 pounds for No. 8 gauge longitudinal wires, and not less than 70,000 pounds for No. 9 1/2 gauge longitudinal wires.

Brackets for supporting the rail at the intermediate posts shall conform to the bracket detail shown hereon. The rail shall be considered under required tension when the rail is taut and the band is under tension of about 1,500 pounds.

I-15.06 A. MULTIPLE TRAFFIC TAPE: The rail element shall consist of two or three flat tapes of wires, as specified, of approximately equal strength.

Each tape shall be made, in accordance with Section I-15.06 (a) of the Specifications, of twenty-one 11 gauge steel wires, or made of six No. 8 gauge longitudinal wires interwoven with No. 10 gauge transverse wires spaced 2" centers. Each tape shall develop an ultimate tensile strength of not less than 25,000 pounds. Where extra strength tape is specified each tape shall develop an ultimate tensile strength of not less than 35,000 pounds. Brackets for supporting tapes shall conform to the bracket detail shown hereon. When specified 5/8" x 1" bolts or individual tape brackets of a cross section similar to the bracket detail shown hereon may be furnished. Such bracket shall be not less than 3/16" thick, 3 15/16" long, 2" wide, not less than 2 9/32" deep and shall be fastened to the posts with 1/2" carriage bolts.

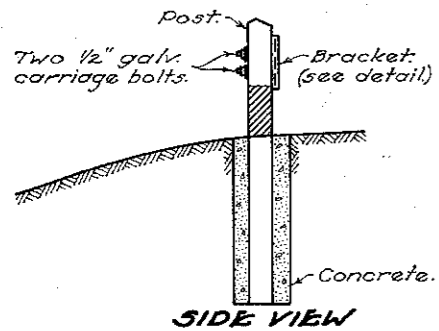
I-15.04 A. MULTIPLE CABLE: The rail element shall consist of three wire cables, as specified, of equal strength, each with nominal diameter of 3/4". The cables shall be supported at the posts by 1/2" J bolts or by brackets similar to the detail shown hereon.

POST SPACING: Posts shall be spaced 12' on centers when called for on the plans, special provisions, or proposals. On curves having radii less than 600' they shall be spaced as called for in the Specifications.

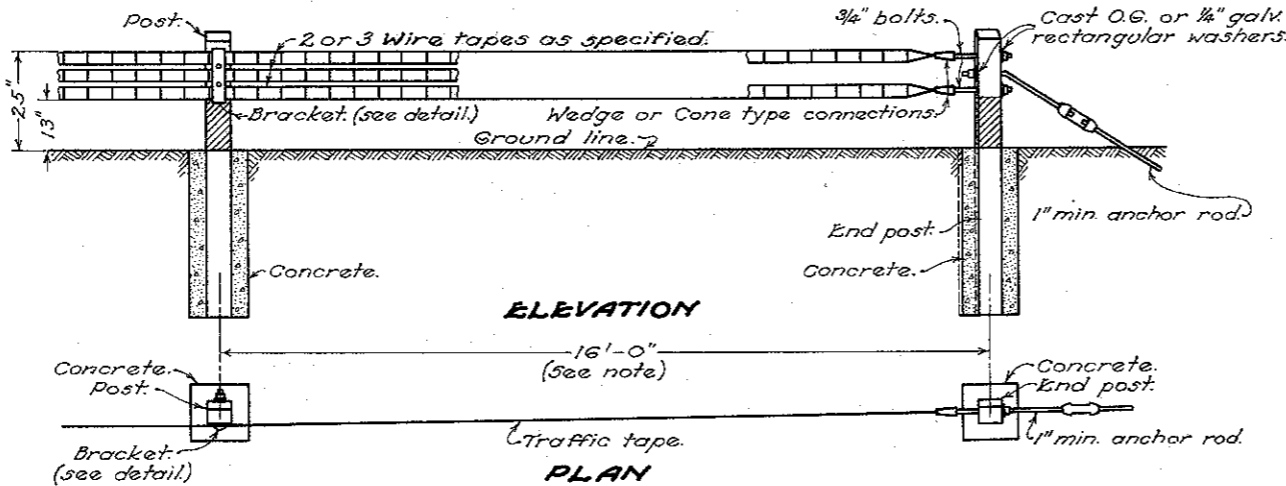
PAINTING: Butt treatment for posts, prime and two finish coats for all timber, shop and two field coats for non-galvanized metal shall conform to the Specifications.

MULTIPLE TRAFFIC TAPE

TYPE I-15.06 A.

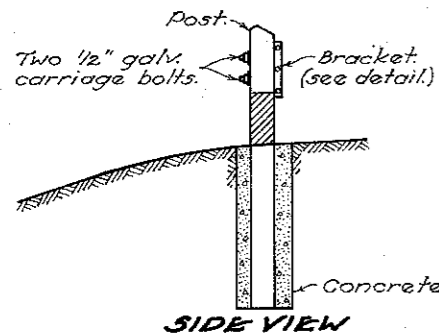


SIDE VIEW

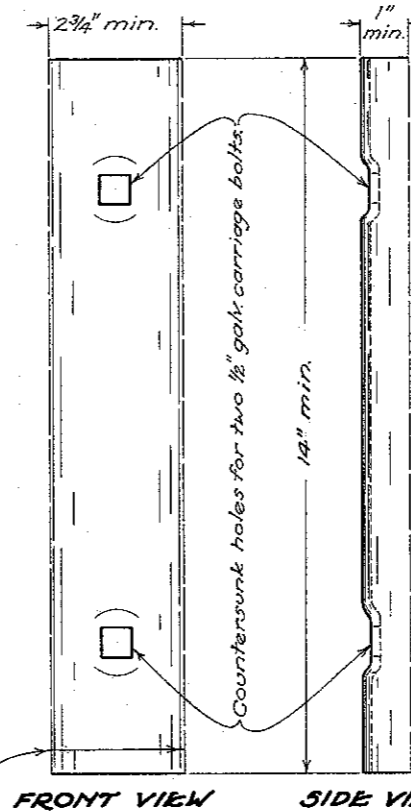
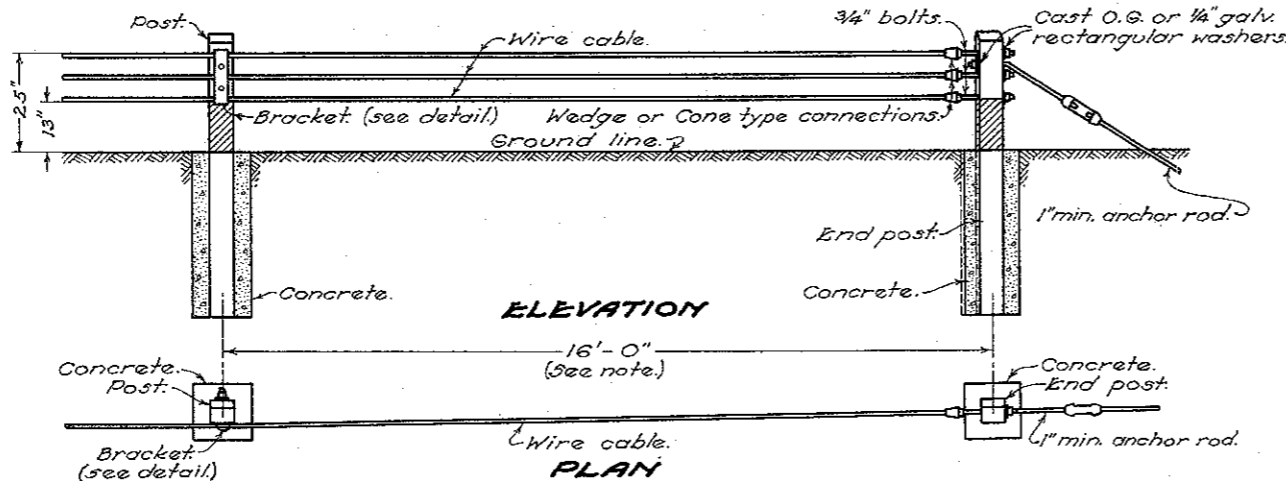


MULTIPLE CABLE

TYPE I-15.04 A.



SIDE VIEW



Notches for woven fabric wires, tape or cable shall be provided to permit such elements to move longitudinally.

In lieu of two 1/2" galv. carriage bolts, three galv. carriage bolts of equivalent cross sectional area may be used to fasten bracket to post. The two or three holes in the bracket are to be spaced to accommodate the rail elements.

The bracket shall be made of steel or malleable iron and galvanized.

BUREAU OF LOCATION & RIGHT OF WAY
OHIO DEPARTMENT OF HIGHWAYS

GUARD RAIL

STANDARD
CONSTRUCTION
DRAWING
APPROVED *gbl*

**I-15
No. 3**

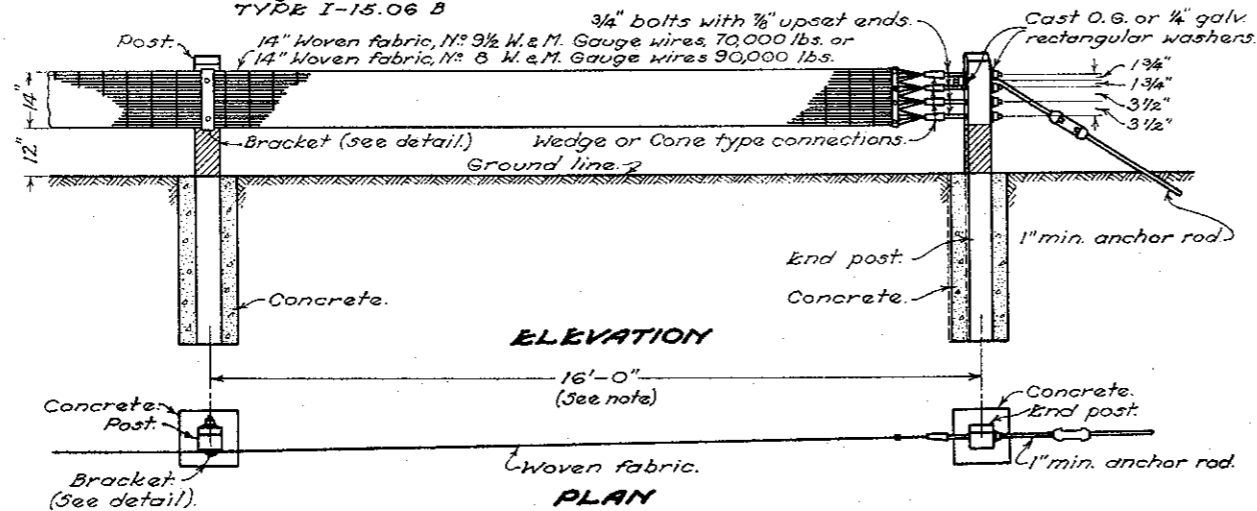
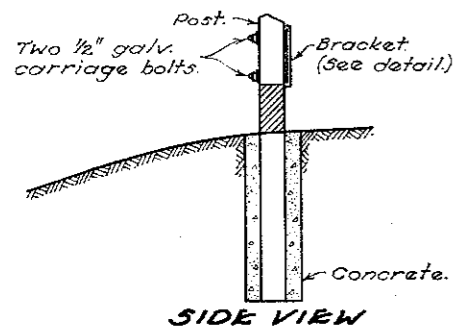
CHIEF ENGINEER

DATE
10-1-59

STANDARD GUARD RAIL

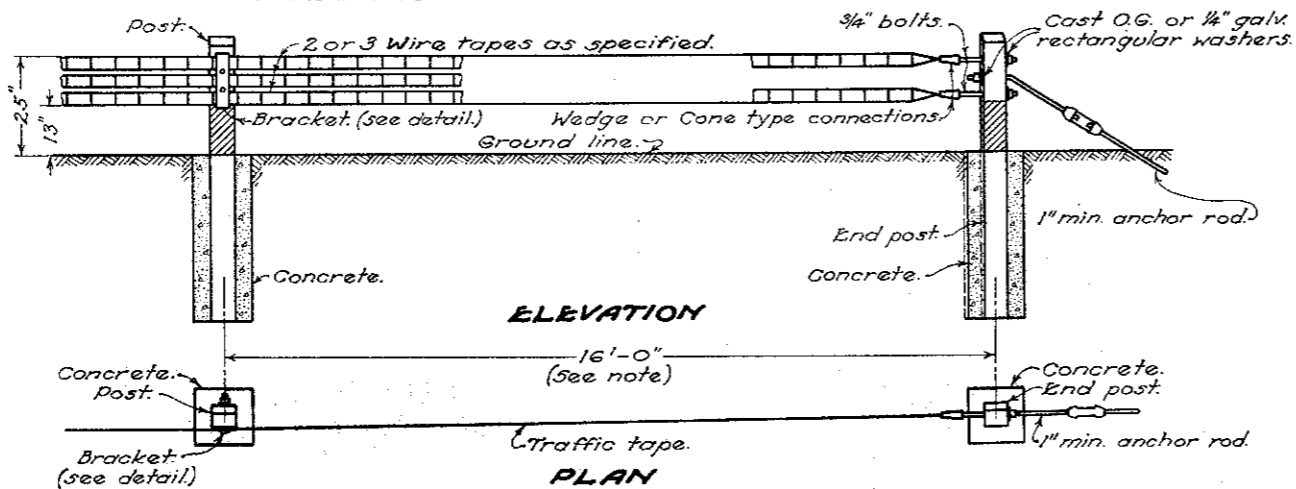
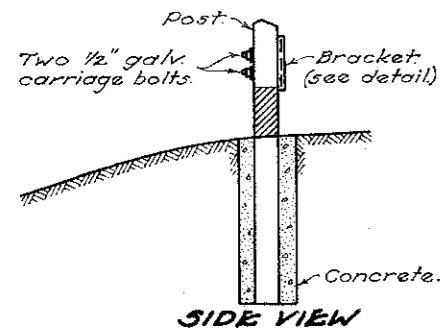
WOVEN WIRE FABRIC BAND

TYPE I-15.06 B



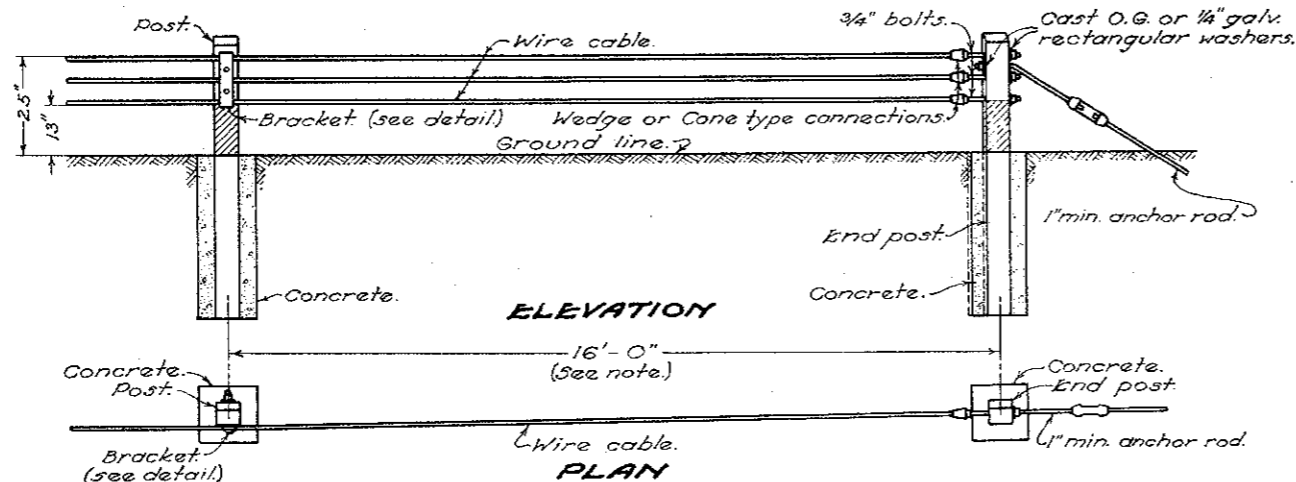
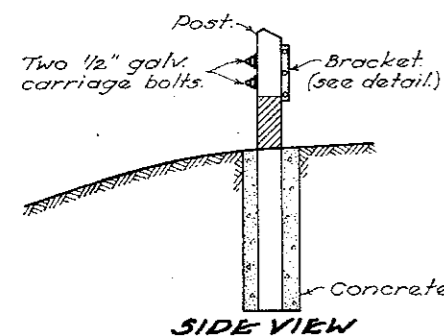
MULTIPLE TRAFFIC TAPE

TYPE I-15.06 A

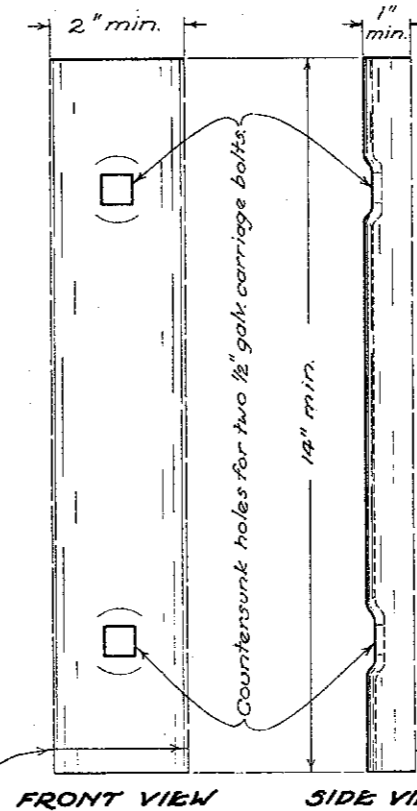
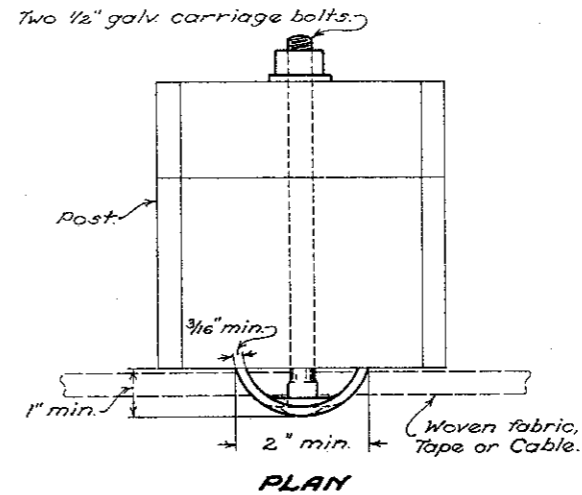


MULTIPLE WIRE CABLE

TYPE I-15.04 A



BRACKET



Notches for woven fabric wires, tape or cable shall be provided to permit such elements to move longitudinally.

In lieu of two 1/2" galv. carriage bolts, three galv. carriage bolts of equivalent cross sectional area may be used to fasten bracket to post. The two or three holes in the bracket are to be spaced to accommodate the rail elements.

The bracket shall be made of steel or malleable iron and galvanized.

NOTES

GENERAL: End anchorage, erection details and notes on Standard Construction Drawing I-15 No. 1 apply to rails shown on this drawing. Standard Construction Drawings I-15 No. 1 and I-15 No. 3 should be used together.

The Standard Construction and Material Specifications of the State of Ohio shall apply to guard rails shown hereon except as hereinafter noted.

I-15.06 B, WOVEN WIRE FABRIC BAND: The rail element shall consist of a woven wire fabric band 14" wide. The band shall be made of 24 longitudinal wires, interwoven with No. 10 gauge transverse wires spaced 2" centers. The ultimate tensile strength of this rail as a whole including band, connectors, and connections to end posts shall be not less than 90,000 pounds for No. 8 gauge longitudinal wires, and not less than 70,000 pounds for No. 9 1/2 gauge longitudinal wires.

Brackets for supporting the rail at the intermediate posts shall conform to the bracket detail shown hereon. The rail shall be considered under required tension when the rail is taut and the band is under tension of about 1,500 pounds.

I-15.06 A, MULTIPLE TRAFFIC TAPE: The rail element shall consist of two or three flat tapes of wires, as specified, of approximately equal strength.

Each tape shall be made, in accordance with Section I-15.06 (a) of the Specifications, of twenty-one 11 gauge steel wires, or made of six No. 8 gauge longitudinal wires interwoven with No. 10 gauge transverse wires spaced 2" centers. Each tape shall develop an ultimate tensile strength of not less than 25,000 pounds. Where extra strength tape is specified each tape shall develop an ultimate tensile strength of not less than 35,000 pounds. Brackets for supporting tapes shall conform to the bracket detail shown hereon. When specified 5/8" 2" bolts or individual tape brackets of a cross section similar to the bracket detail shown hereon may be furnished. Such bracket shall be not less than 3/16" thick, 3 15/16" long, 2" wide, nor less than 2 5/32" deep and shall be fastened to the posts with 7/8" carriage bolts.

I-15.04 A, MULTIPLE CABLE: The rail element shall consist of three wire cables, as specified, of equal strength, each with nominal diameter of 3/4". The cables shall be supported at the posts by 1/2" J" bolts or by brackets similar to the detail shown hereon.

POST SPACING: Posts shall be spaced 12' on centers when called for on the plans, special provisions, or proposals. On curves having radii less than 600' they shall be spaced as called for in the Specifications.

PAINTING: Butt treatment for posts, prime and two finish coats for all timber, shop and two field coats for non-galvanized metal shall conform to the Specifications.

BUREAU OF LOCATION & RIGHT OF WAY
OHIO DEPARTMENT OF HIGHWAYS

GUARD RAIL

STANDARD
CONSTRUCTION
DRAWING

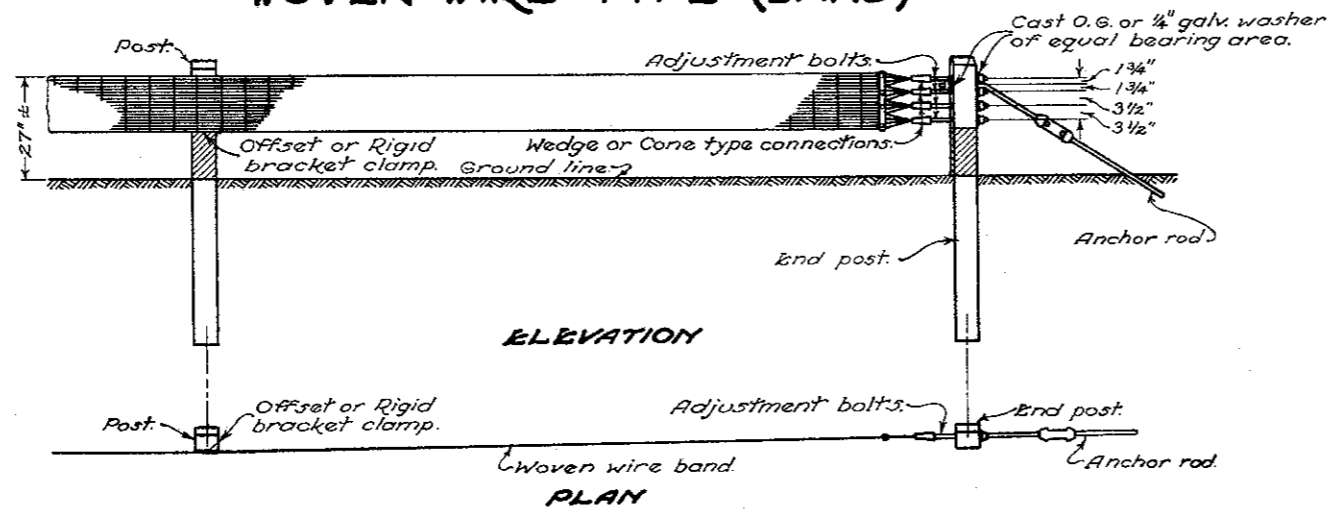
**I-15
No. 3**

APPROVED M.D.S. CHIEF ENGINEER.

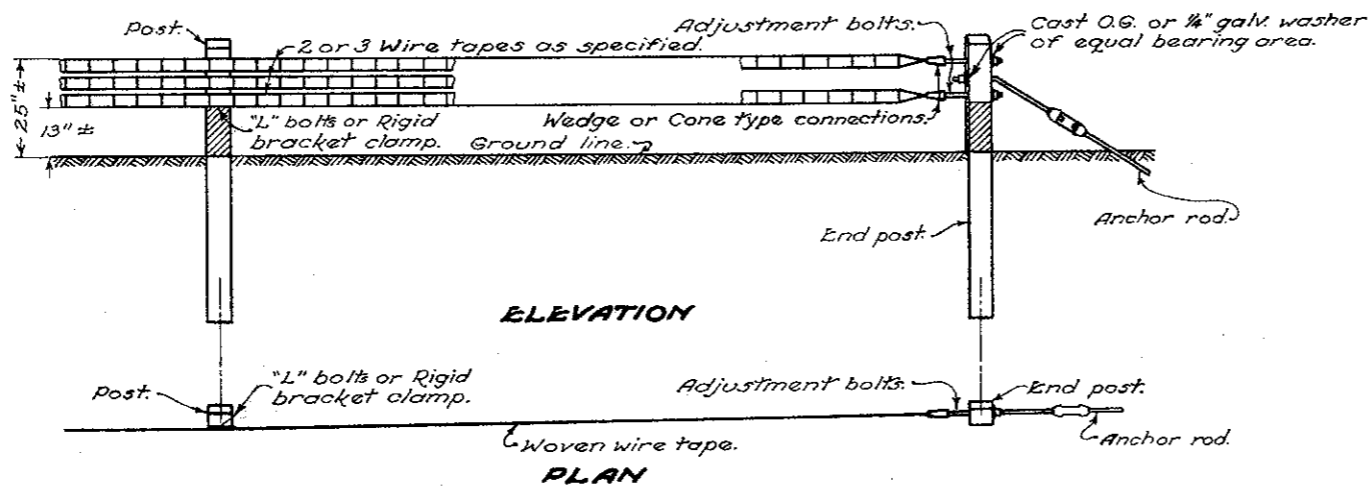
DATE:
10-1-'39
6-2-41

STANDARD GUARD RAIL

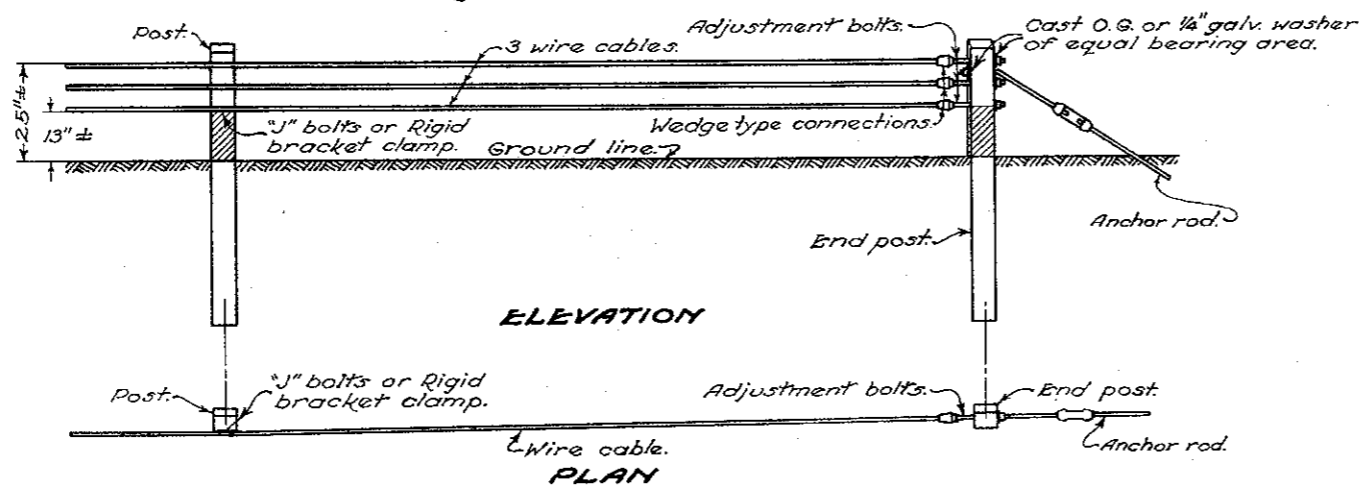
WOVEN WIRE TYPE (BAND)



WOVEN WIRE TYPE (TAPE)



WIRE CABLE TYPE



NOTES

GENERAL: Standard Construction Drawings showing post details shall be used in conjunction with this drawing.

BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF HIGHWAYS

**GUARD
RAIL**

DATE
10-1-39
6-2-41
2-1-47

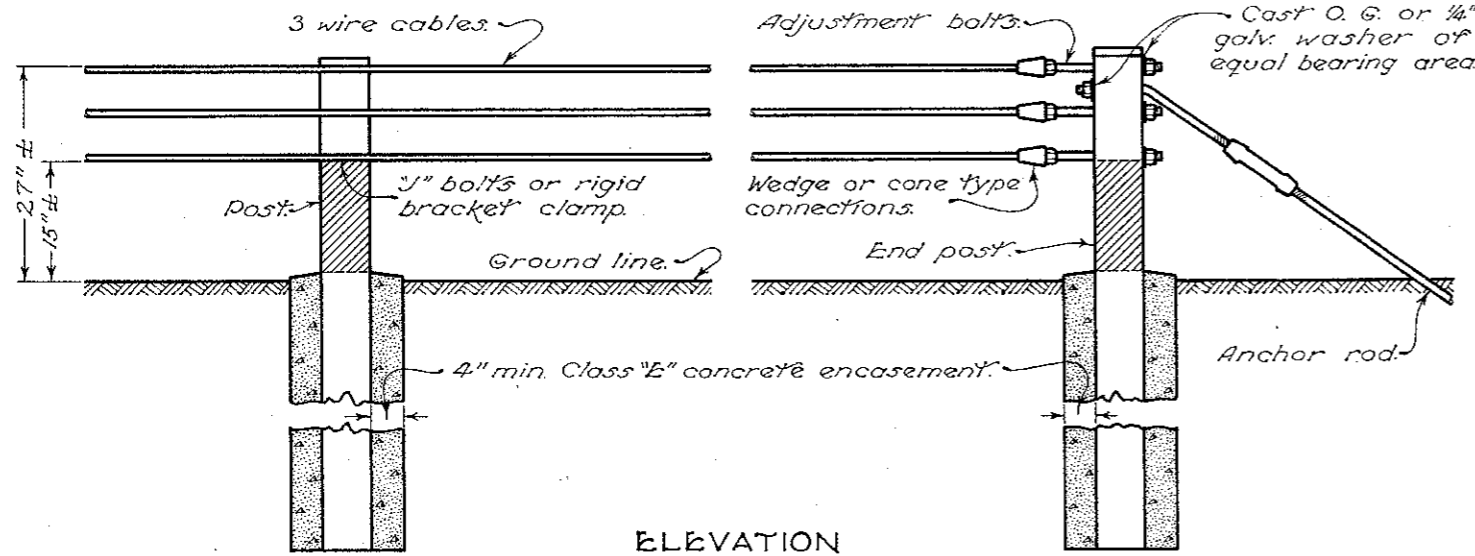
STANDARD
CONSTRUCTION
DRAWING

I-15
No. 3

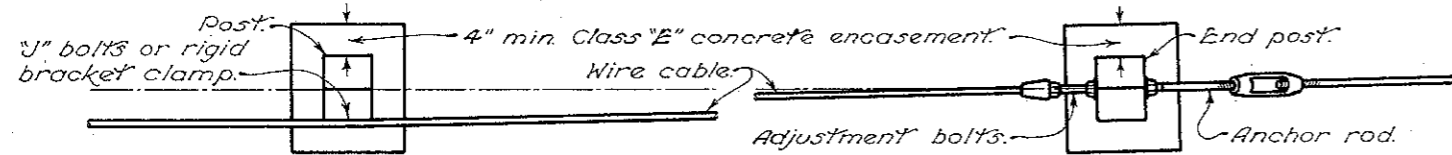
APPROVED *[Signature]* CHIEF ENGINEER

STANDARD GUARD RAIL

WIRE CABLE TYPE

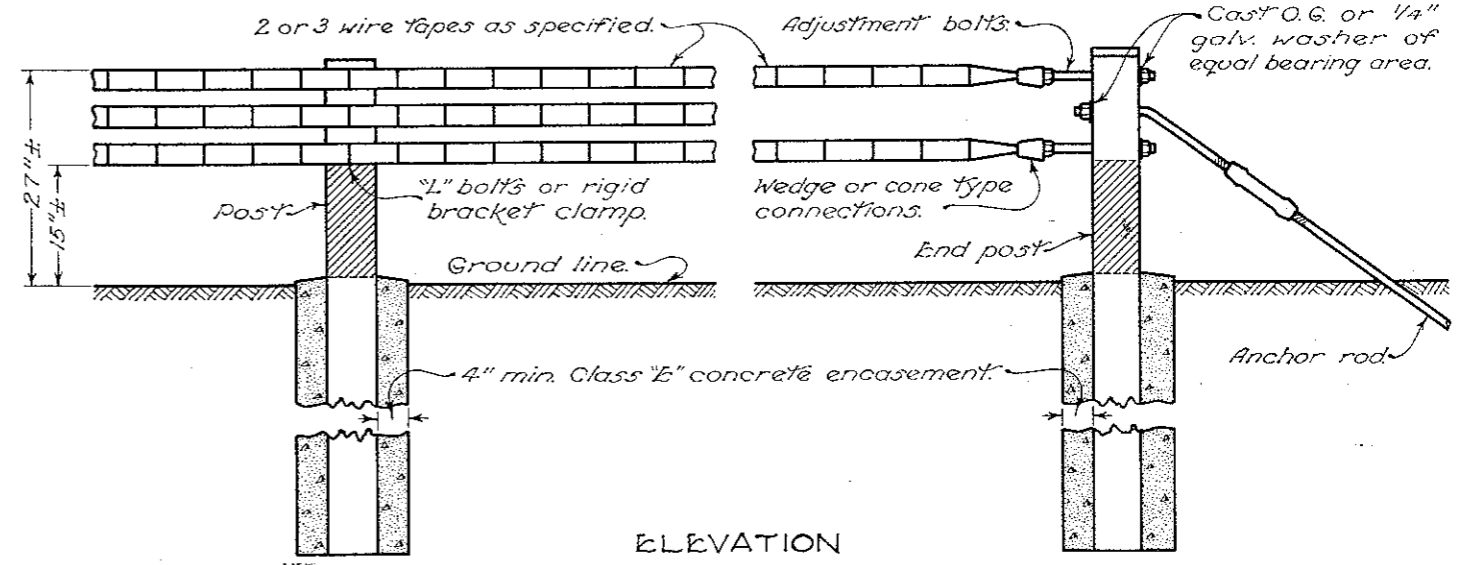


ELEVATION

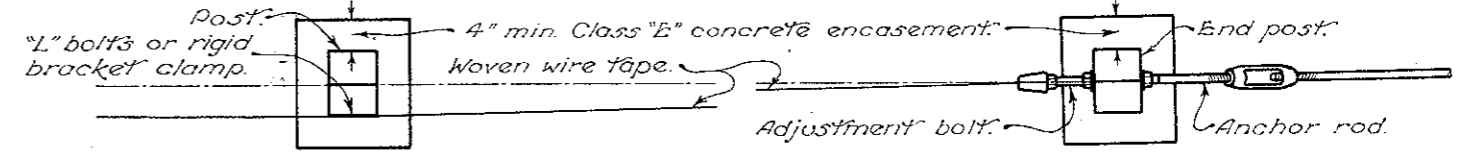


PLAN

WOVEN WIRE TYPE (TAPE)

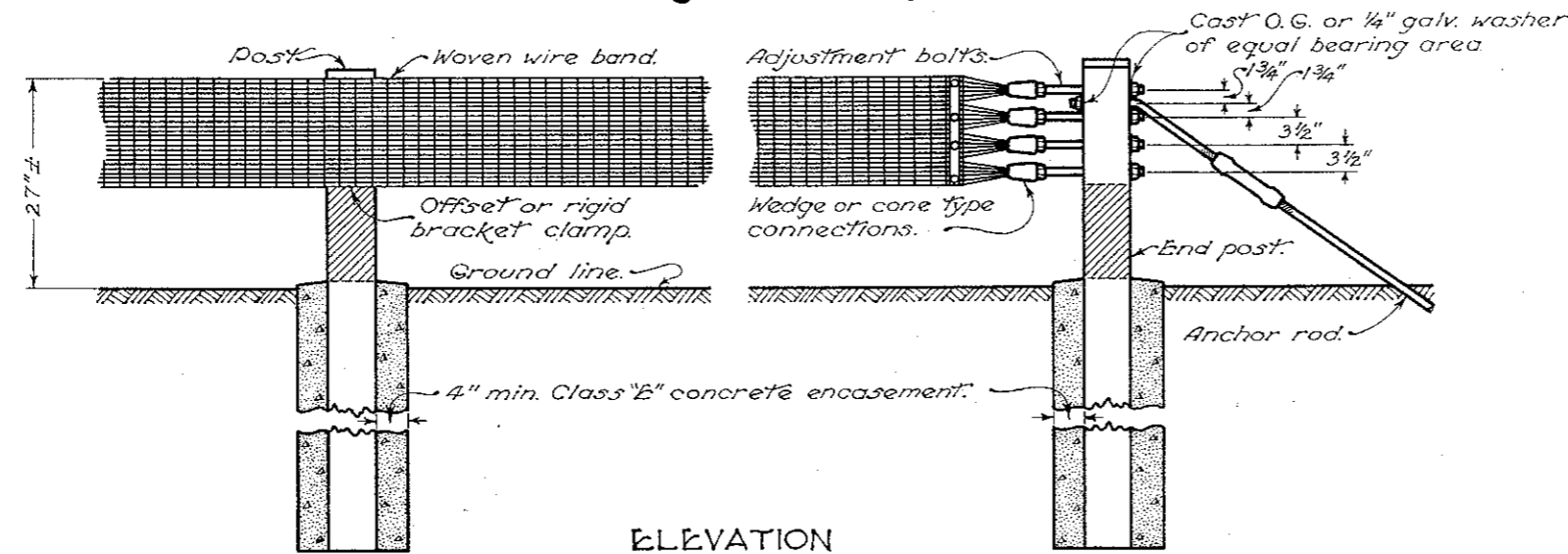


ELEVATION

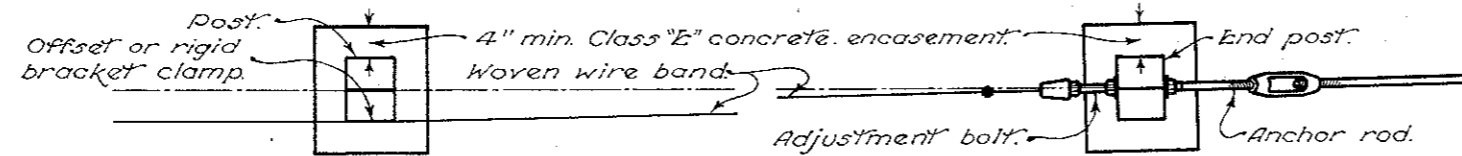


PLAN

WOVEN WIRE TYPE (BAND)



ELEVATION



PLAN

NOTES

GENERAL: Standard Construction Drawing showing post details shall be used in conjunction with this drawing.

BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF HIGHWAYS

GUARD RAIL

DATE
10-1-39
6-2-41
2-1-47
12-1-54

STANDARD CONSTRUCTION DRAWING
I-15
No. 3
APPROVED *K. R. ...* ENGR. L. & D.