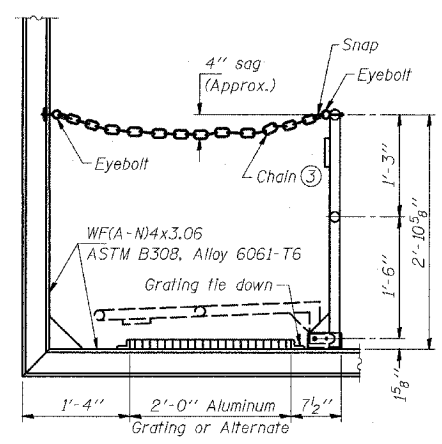
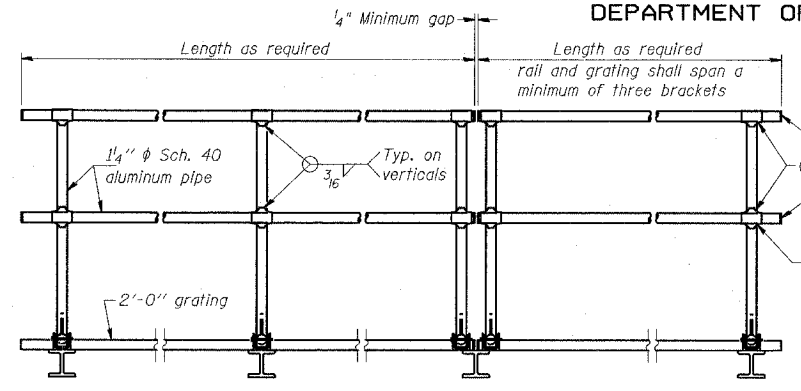


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SIDE ELEVATION
(Showing safety chain w/o sign)



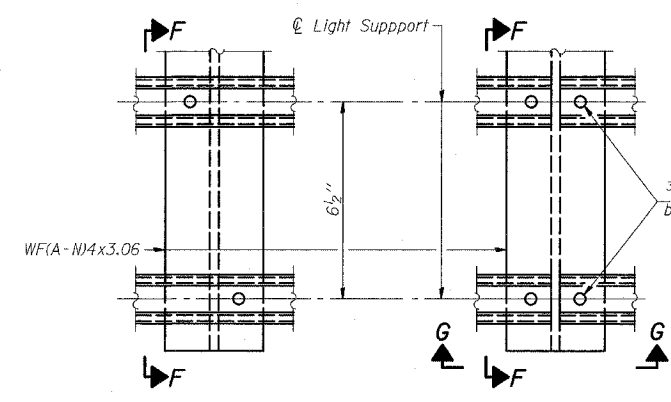
FRONT ELEVATION

HANDRAIL DETAILS

Handrail pipe shall be ASTM B241, Alloy 6063-T6 or Alloy 6061-T6.

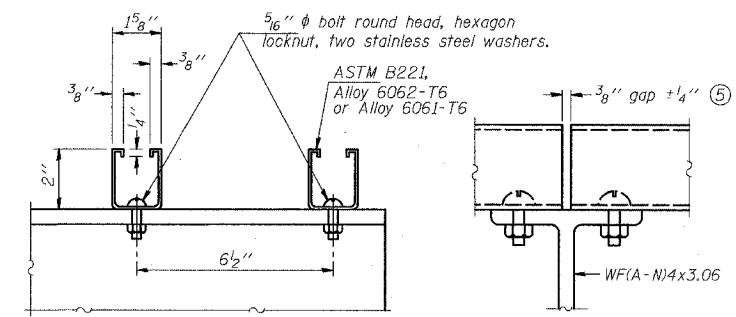
① Install standard force-fit end caps or weld 1/8" end plates with 1/8" c.f.w. and grind smooth. (All rail ends)
Fittings-ASTM B26, Alloy 356-T7

② Horizontal handrail member shall be continuous thru fitting. Provide 1/16" hole in fitting for 3/8" bolt. Field drill 1/16" hole in horizontal rail member. Provide locknut and two stainless steel washers for bolt. (Use 5/16" eyebolts in 1/16" holes on top rail at ends only.)



DETAIL F

DETAIL G

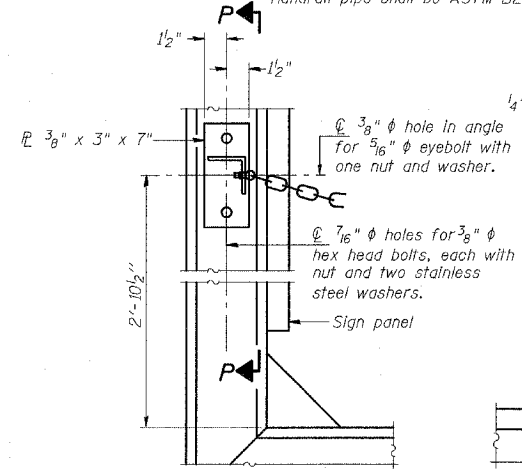


SECTION F-F

SECTION G-G

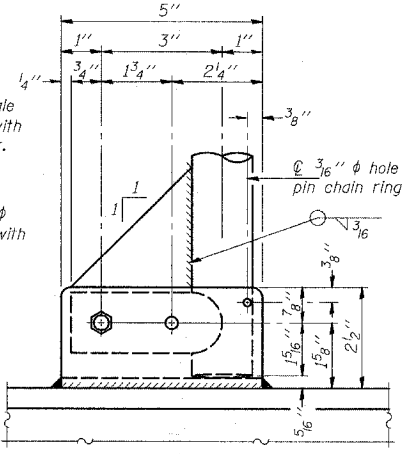
LIGHTING FIXTURE MOUNTS (IF REQUIRED)

⑤ Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.



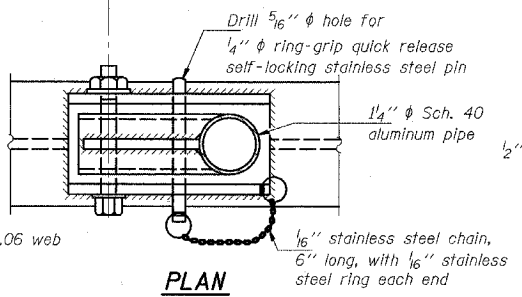
ALTERNATE SAFETY CHAIN ATTACHMENT
(With Sign Present)

Items not shown same as "Side Elevation" of "Handrail Details"

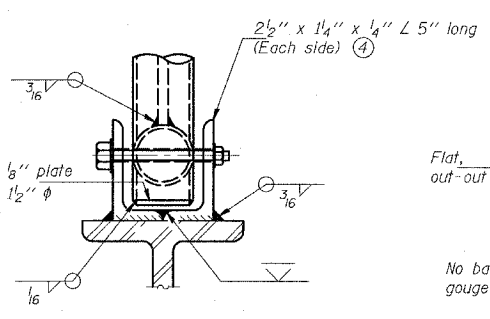


SIDE ELEVATION

Drill and ream for 3/8" bolt with hexagon locknut and two stainless steel washers.

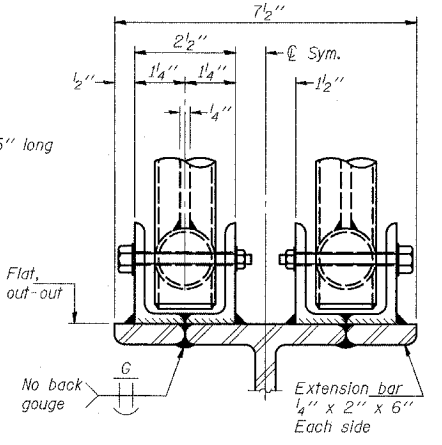


**PLAN
DETAIL E HANDRAIL HINGE**

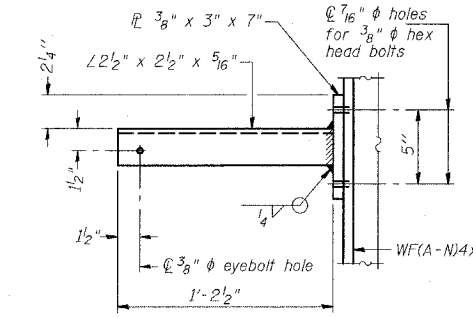


FRONT ELEVATION

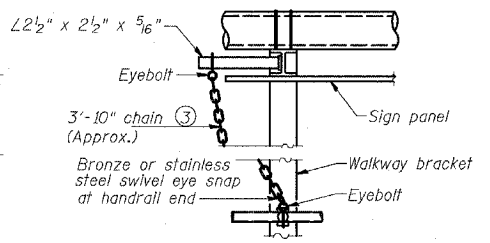
See "ELEVATION" at right for dimensions.



ELEVATION AT HANDRAIL JOINT ④



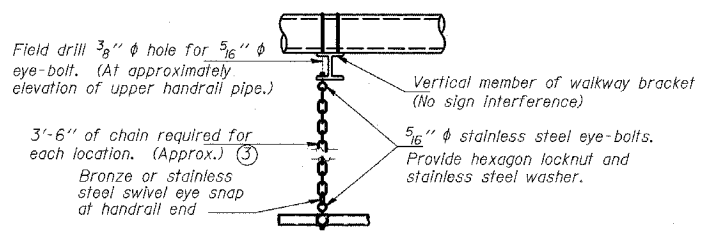
SECTION P-P



ALTERNATE SAFETY CHAIN ATTACHMENT

Details not shown similar to "Safety Chain" Details (Walkway omitted for clarity)
③ 3/16" galvanized steel chain, approximately 12 links per foot. Chain to be hot dip galvanized after manufacture and suitable for prolonged exterior exposure. Alternate materials may be substituted with the Engineer's approval.

④ Extrusions may be used in lieu of the details shown, with approval of the Engineer.



SAFETY CHAIN

One required for each end of each walkway.

DESIGNED	20
CHECKED	EXAMINED
DRAWN	PASSED
CHECKED	

NUMBER	REVISION	DATE

PLAN AT HANDRAIL JOINT

Details not shown same as "PLAN"

OS-A-11 11/1/2002

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94 (DAN RYAN EXPRESSWAY)

OVERHEAD SIGN STRUCTURES
ALUMINUM HANDRAIL DETAILS

SCALE: AS NOTED
DATE: MARCH 25, 2005
DRAWN BY: AMB
CHECKED BY: TB