

**SUPERSEDED BY EB 21-057  
EFFECTIVE 11/24/21**

# ENGINEERING INSTRUCTION

NEW YORK STATE DEPARTMENT OF TRANSPORTATION

**TITLE:** FRAMES & GRATES

**Subject Code:** 7.27-2-655

**Distribution:**

30 Main Office    32 Regions    34 Special

**Code:** EI 89-21

**Date:** 7/11/89

**APPROVED:**

*J R Lambert* 7/11/89  
J. R. LAMBERT, Deputy Chief Engineer (Fac. Des. Div.)

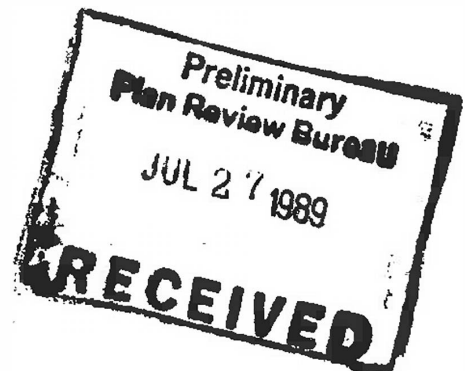
**Supersedes:**

Attached is a three page proposal insert modifying the Frames & Grates Standard Sheets.

Page 1 of 3 modifies Standard Sheets 655-3, 655-4R1, 655-5R1 and 655-6R1. These modifications give the Contractor the option of fabricating the corners of the frame with either mitered or coped angles. Prior to this modification the frames shown on Standard Sheets 655-3 and 655-6R1 showed mitered angles for the corner joint and 655-4R1 and 655-5R1 showed a coped angle at the corner. This difference has caused some problems and confusion as the frame and grate sizes are the same for each type of grate.

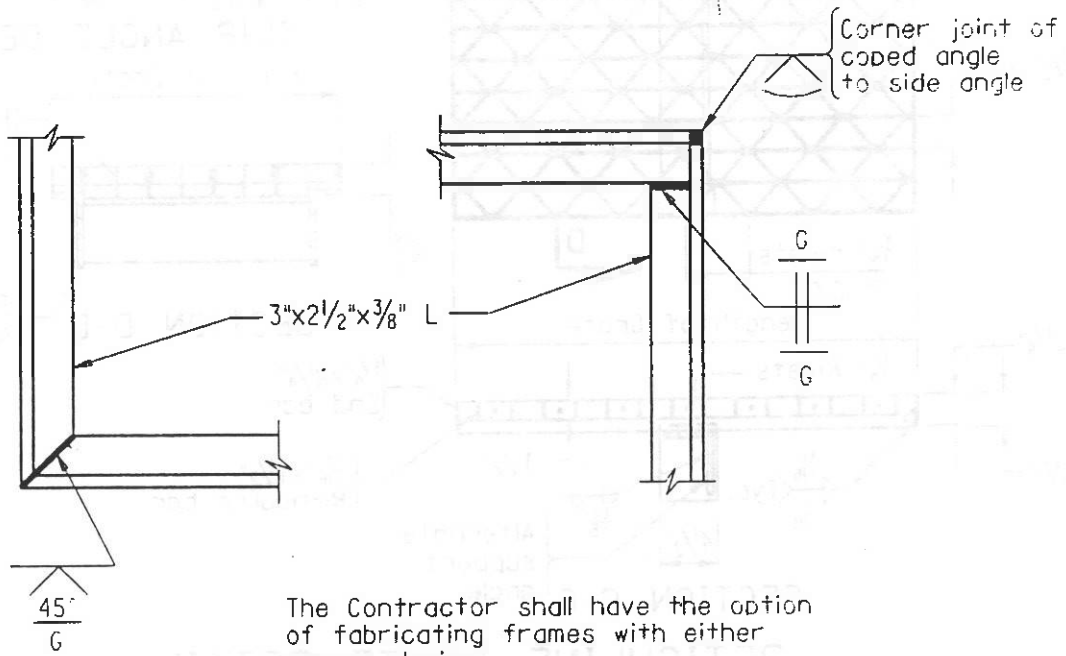
Page 2 of 3 modifies Standard Sheet 655-3 and page 3 of 3 modifies Standard Sheet 655-6R1. These modifications allow the Contractor to fabricate the grates shown on these standard sheets with clip angles and an alternate support angle in lieu of the support angle shown. This modification should result in a cost saving to the Department because the Contractor does not have to notch the grate's bearing bars to accommodate the support angles. This modification also permits a similar support angle design for all rectangular and reticuline grates.

These modifications will be inserted into contracts with frames and grates by the Main Office beginning with the letting of November 16, 1989.



# FRAMES AND GRATES

Add the following details to Standard Sheets  
655-3, 655-4R1, 655-5R1 and 655-6R1.



The Contractor shall have the option of fabricating frames with either corner design.

TABLE OF DIMENSIONS FOR ALTERNATE SUPPORT ANGLES

No.	Size	Length	Weight	Notes

# FRAMES AND GRATES

Add the following to Standard Sheet 655-3.

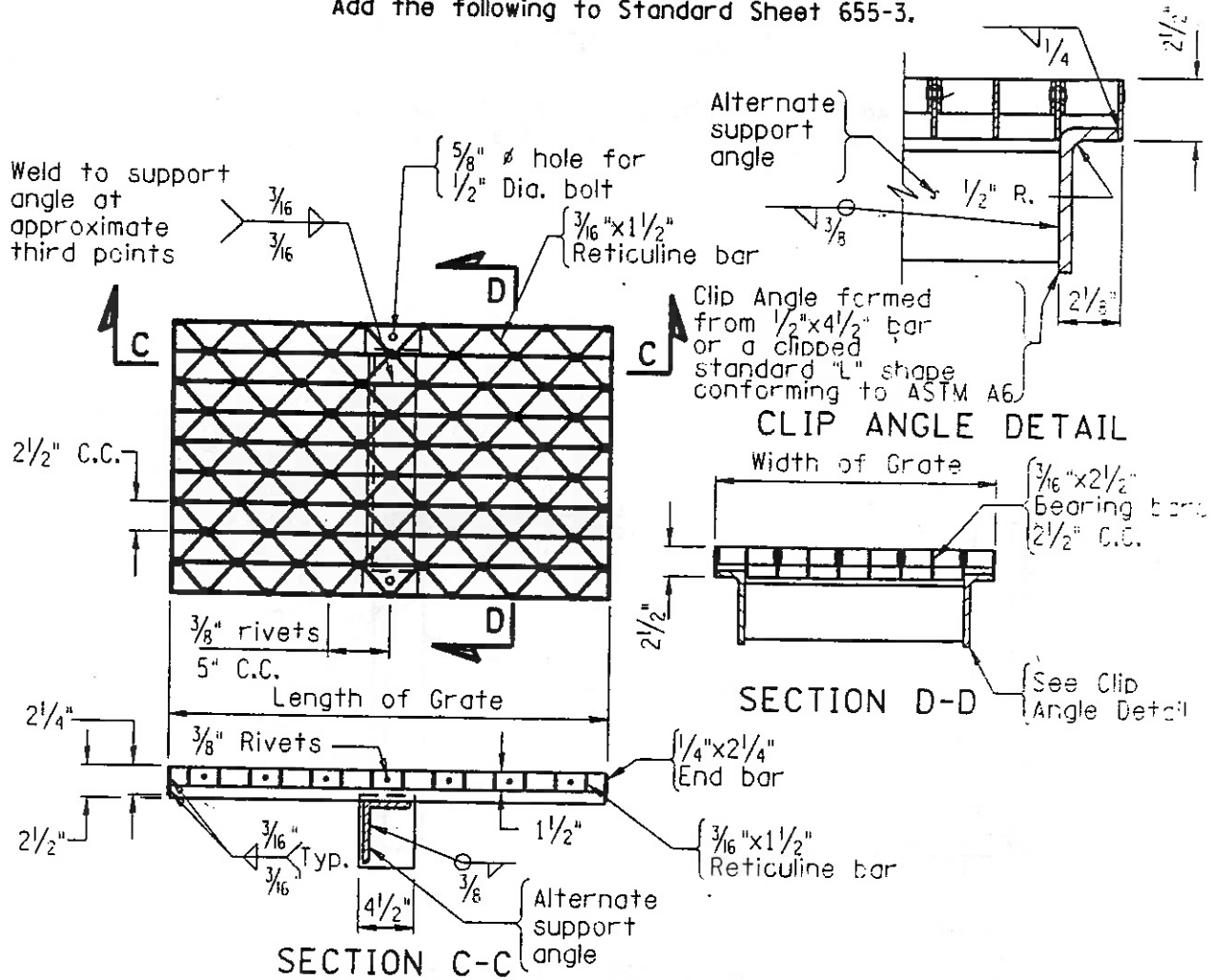
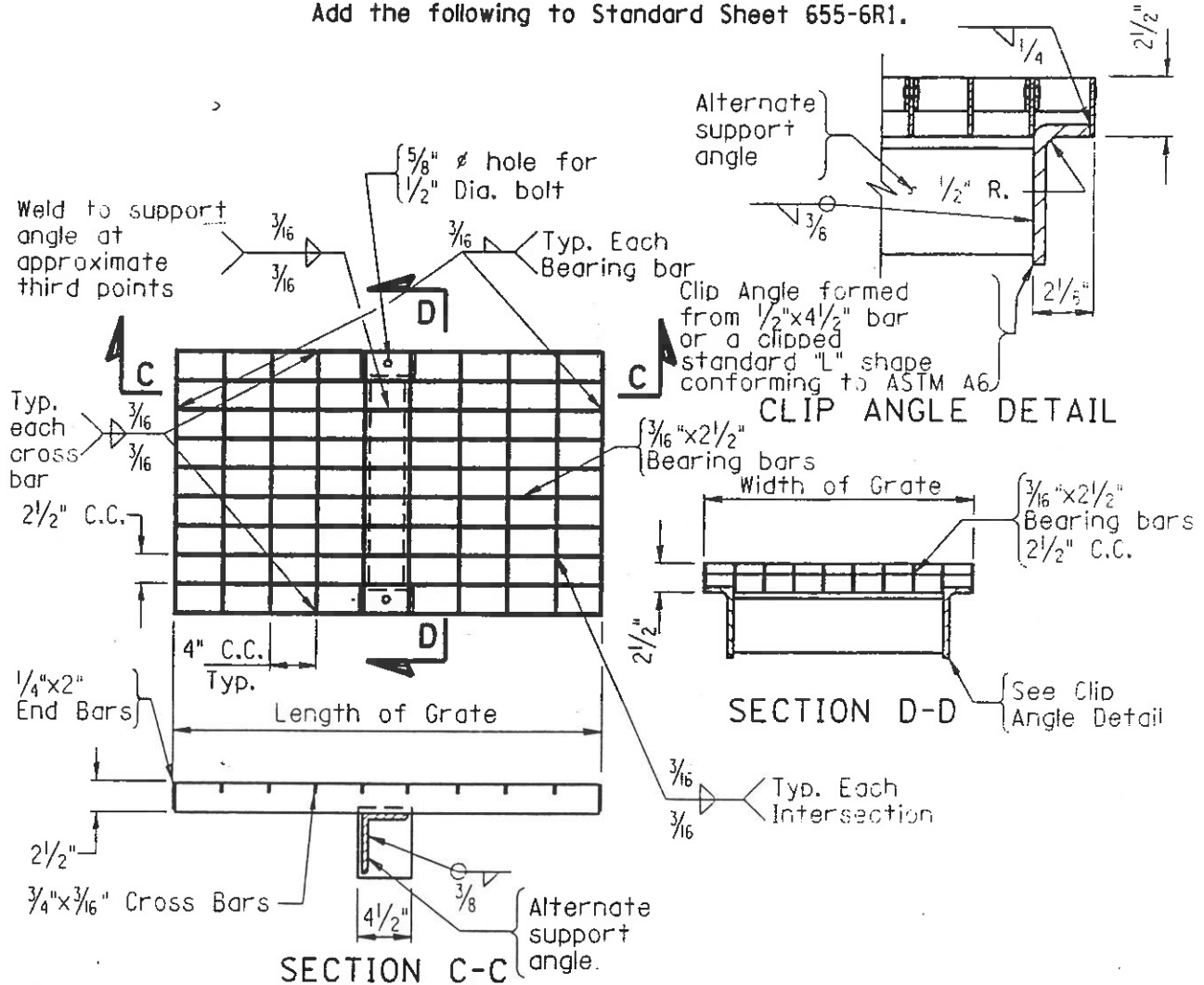


TABLE OF DIMENSIONS FOR ALTERNATE  
SUPPORT ANGLES AND CLIP ANGLES

Grate No.	Alternate Support Angles			Clip Angles		
	No.	Size	Length	No.	Size	Length
3	1	5"x3 1/2"x1/2"	1'-6 1/16"	2	6"x2 1/8"x1/2"	4 1/2"
6	1	6"x3 1/2"x1/2"	1'-8 9/16"	2	7"x2 1/8"x1/2"	4 1/2"
11	1	6"x3 1/2"x1/2"	1'-11 1/16"	2	7"x2 1/8"x1/2"	4 1/2"
16	2	6"x4"x1/2"	2'-1 9/16"	4	7"x2 1/8"x1/2"	4 1/2"
22	1	8"x4"x1/2"	2'-9 1/16"	2	9"x2 1/8"x1/2"	4 1/2"

# FRAMES AND GRATES

Add the following to Standard Sheet 655-6R1.



## RECTANGULAR GRATE DETAIL FOR ALTERNATE SUPPORT ANGLE

TABLE OF DIMENSIONS FOR ALTERNATE SUPPORT ANGLES AND CLIP ANGLES						
Grate No.	Alternate Support Angles			Clip Angles		
	No.	Size	Length	No.	Size	Length
3	1	5"x3 1/2"x1/2"	1'-6 1/16"	2	6"x2 1/8"x1/2"	4 1/2"
6	1	6"x3 1/2"x1/2"	1'-8 9/16"	2	7"x2 1/8"x1/2"	4 1/2"
11	1	6"x3 1/2"x1/2"	1'-11 1/16"	2	7"x2 1/8"x1/2"	4 1/2"
16	2	6"x4"x1/2"	2'-1 9/16"	4	7"x2 1/8"x1/2"	4 1/2"
22	1	8"x4"x1/2"	2'-9 1/16"	2	9"x2 1/8"x1/2"	4 1/2"