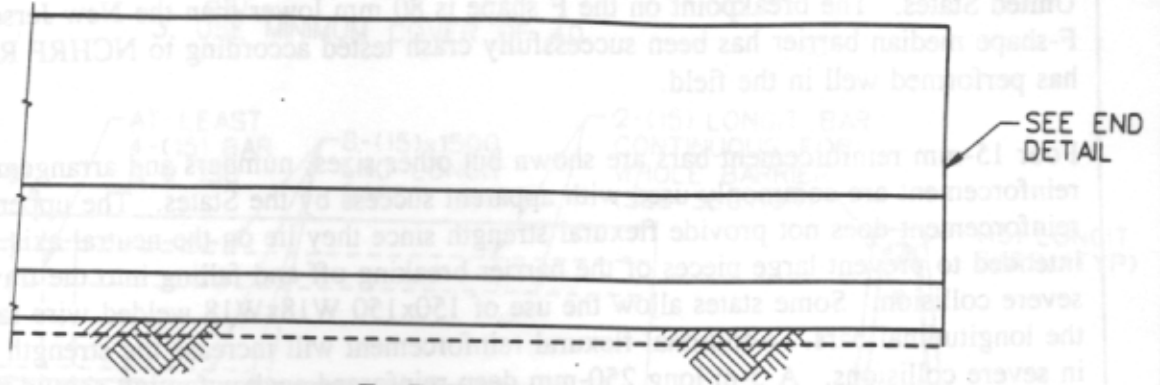
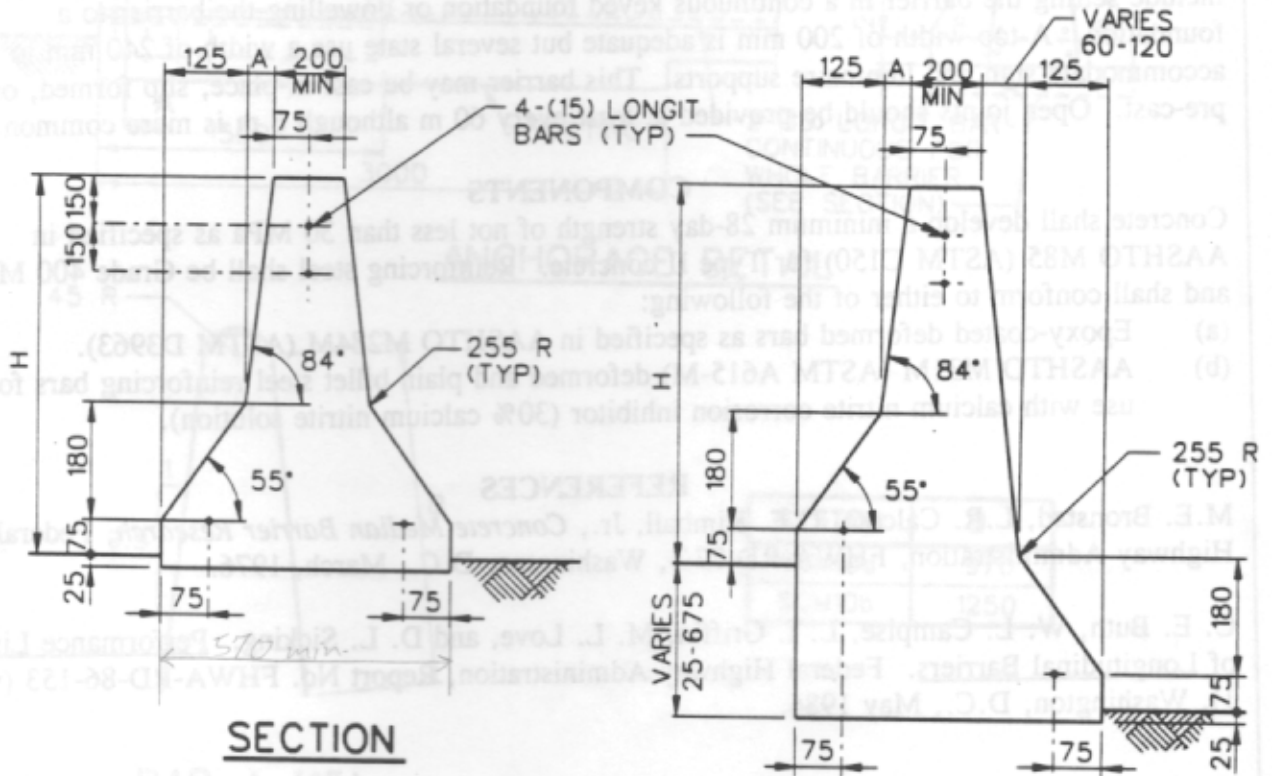


- NOTES:**
1. ALL EDGES SHALL BE ROUNDED WITH A 24 R EXCEPT AS SHOWN.
 2. THE BARRIER SHALL BE ANCHORED AT THE ENDS OR AT INTERRUPTIONS WITH EITHER A DOWELED-IN CONNECTION OR A 255 DEEP MONOLITHIC FOOTING.



ELEVATION



SECTION

SECTION

SYSTEM	A	H
SGM10a	60	810
SGM10b	85	1070

1994

F-SHAPE MEDIAN BARRIER



SGM10a-b

SHEET NO.	REF. NO.
1 of 4	MB5-F

INTENDED USE

The F-shape median barrier is similar to the more common New Jersey shape used throughout the United States. The breakpoint on the F shape is 80 mm lower than the New Jersey shape. The F-shape median barrier has been successfully crash tested according to NCHRP Report 230 and has performed well in the field.

Four 15-mm reinforcement bars are shown but other sizes, numbers and arrangements of reinforcement are commonly used with apparent success by the States. The upper longitudinal reinforcement does not provide flexural strength since they lie on the neutral axis. These bars are intended to prevent large pieces of the barrier breaking off and falling into the travelled way in a severe collision. Some states allow the use of 150x150 W18xW18 welded wire fabric in place of the longitudinal bars. Additional flexural reinforcement will increase the strength of the barrier in severe collisions. A 3-m long 250-mm deep reinforced anchor footing should be provided at both ends to properly secure the barrier. Other common methods of supporting this barrier include setting the barrier in a continuous keyed foundation or dowelling the barrier to a foundation. A top-width of 200 mm is adequate but several state use a width of 240 mm to accommodate sign and luminaire supports. This barrier may be cast-in-place, slip formed, or pre-cast. Open joints should be provided at least every 60 m although 6 m is more common.

COMPONENTS

Concrete shall develop a minimum 28-day strength of not less than 30 MPa as specified in AASHTO M85 (ASTM C150) for Type II concrete. Reinforcing steel shall be Grade 400 MPa and shall conform to either of the following:

- (a) Epoxy-coated deformed bars as specified in AASHTO M284M (ASTM D3963).
- (b) AASHTO M31M (ASTM A615-M) deformed and plain billet steel reinforcing bars for use with calcium nitrite corrosion inhibitor (30% calcium nitrite solution).

REFERENCES

M.E. Bronstad, L.R. Calcote, C.E. Kimball, Jr., *Concrete Median Barrier Research*, Federal Highway Administration, FHWA-RD-77-4, Washington, D.C., March, 1976.

C. E. Buth, W. L. Campise, L. I. Griffin, M. L. Love, and D. L. Sicking. Performance Limits of Longitudinal Barriers. Federal Highway Administration, Report No. FHWA-RD-86-153 (vol. 1), Washington, D.C., May 1986.

F-SHAPE MEDIAN BARRIER

SGM10a-b

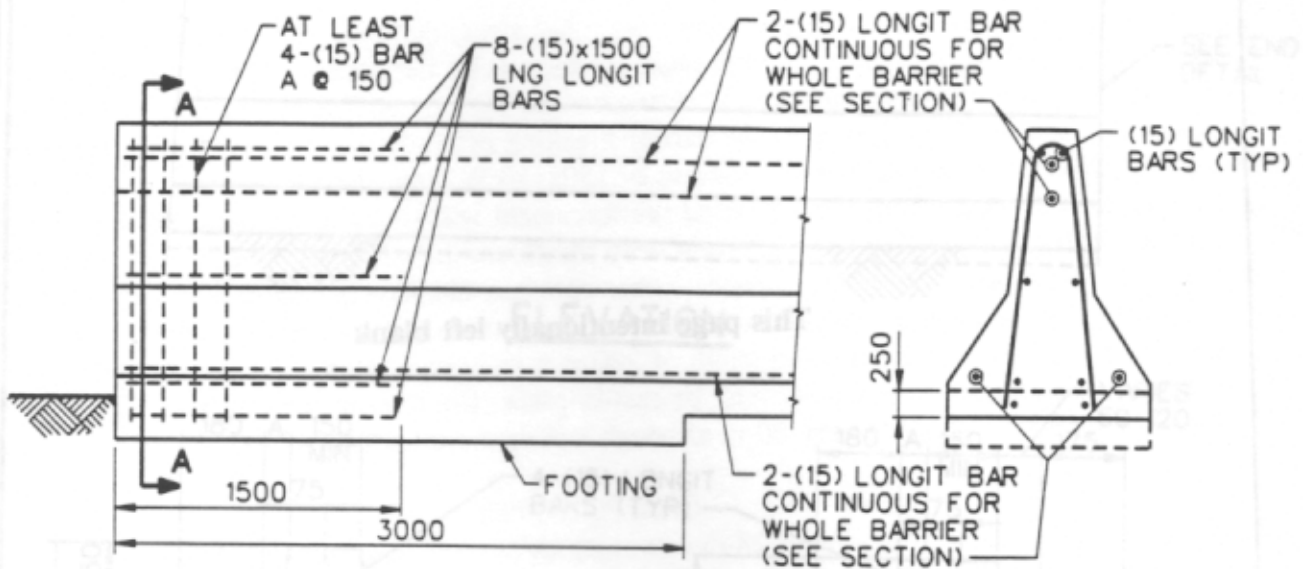
SHEET NO.

REF. NO.

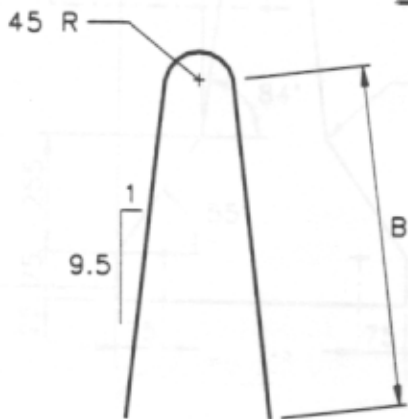
2 of 4



- NOTES:**
1. THE TOTAL LENGTH OF THE BARRIER SHALL BE LESS THAN 6000. A LENGTH OF 6000 IS THE MOST COMMON.
 2. BARRIER MAY BE MONOLITHIC WITH FOOTING OR IT MAY BE CONNECTED WITH 10 (25) REBAR DOWELS SET 2 IN LINE AT 610.
 3. USE MINIMUM COVER OF 40.



ANCHORAGE DETAIL



BAR A (15)

SYSTEM	B
SGM10a	970
SGM10b	1250

1994

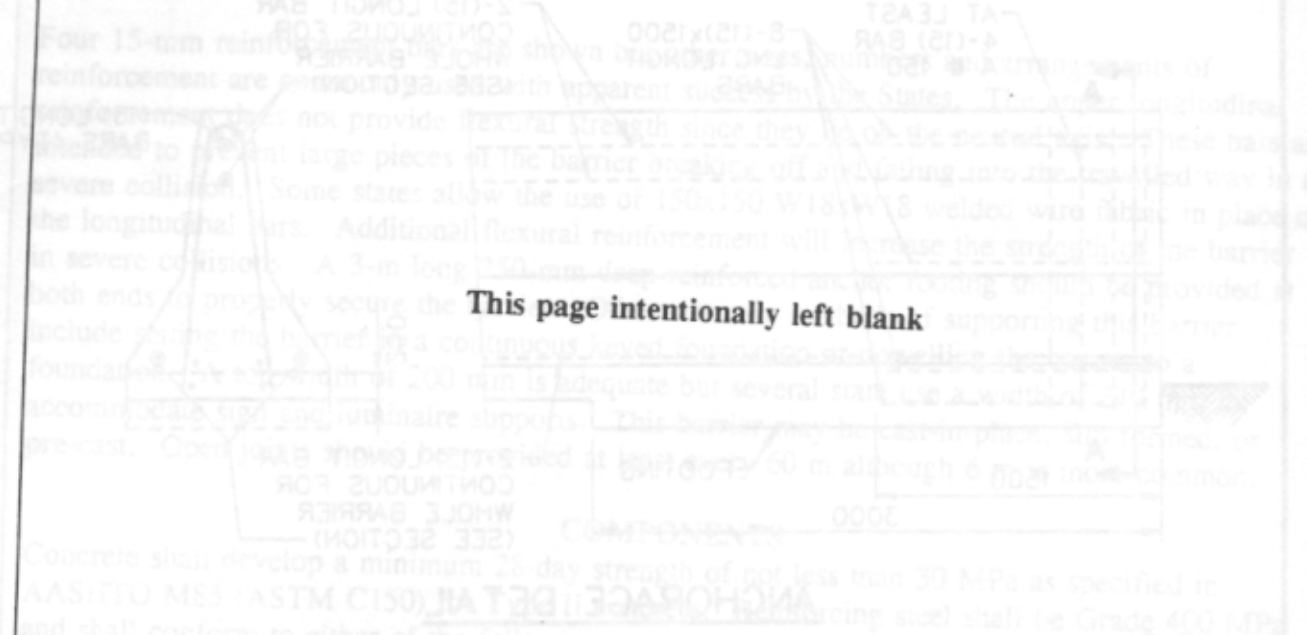
F-SHAPE MEDIAN BARRIER



SGM10a-b

SHEET NO.	REF. NO.
3 of 4	MB5-F

NOTES:
1. THE TOTAL LENGTH OF THE BARRIER SHALL BE LESS THAN 80000 A LENGTH OF 6800 IS THE MOST COMMON.
2. BARRIER MAY BE MONOLITHIC WITH FOOTING OR IT MAY BE CONCRETE WITH 10 DEEP REBAR-DOWELS SET IN LINE AT 3000 mm ON THE F-SHAPED SIDE OF THE BARRIER.
3. THE BARREN SHALL BE REINFORCED WITH 10 DEEP REBAR-DOWELS SET IN LINE AT 3000 mm ON THE F-SHAPED SIDE OF THE BARRIER.
4. THE BARRIER SHALL BE REINFORCED WITH 10 DEEP REBAR-DOWELS SET IN LINE AT 3000 mm ON THE F-SHAPED SIDE OF THE BARRIER.



Concrete shall develop a minimum 28-day strength of not less than 30 MPa as specified in AASHTO M85 (ASTM A615) or Grade 40 MPa and shall conform to either of the following:

- (a) Epoxy-coated deformed bars as specified in AASHTO M318 (ASTM A631).
- (b) AASHTO M319 (ASTM A615) deformed and plain billet steel reinforcement bars for use with calcium nitrite corrosion inhibitor (30% calcium nitrite solution).

REFERENCES

M. E. Bronstad, L. B. Calvert, and J. B. Kirball, Jr., *Concrete Median Barrier Research*, Federal Highway Administration, Report FHWA/T-77-14, Washington, D.C., March, 1976.

C. E. Butb, W. L. Culpise, L. L. Griffin, M. L. Love, and D. L. Seving, *Performance Limits of Longitudinal Barriers*, Federal Highway Administration, Report No. FHWA/T-86-153 (vol. 1), Washington, D.C., May 1986.

F-SHAPE MEDIAN BARRIER

SGM10a-b

SHEET NO.	REF. NO.
4 of 4	

