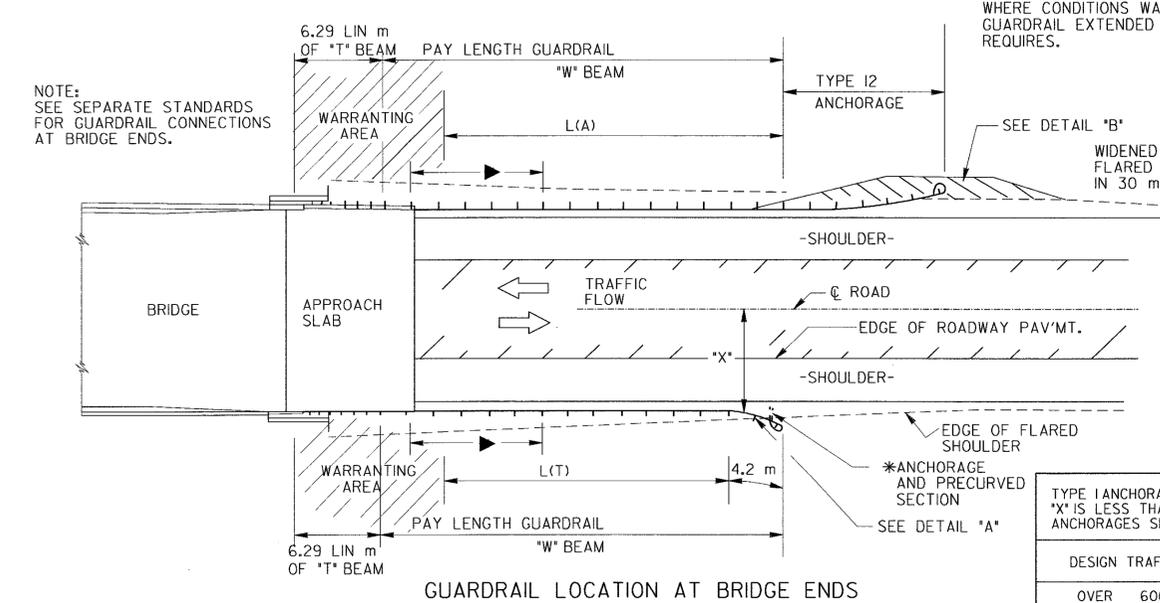
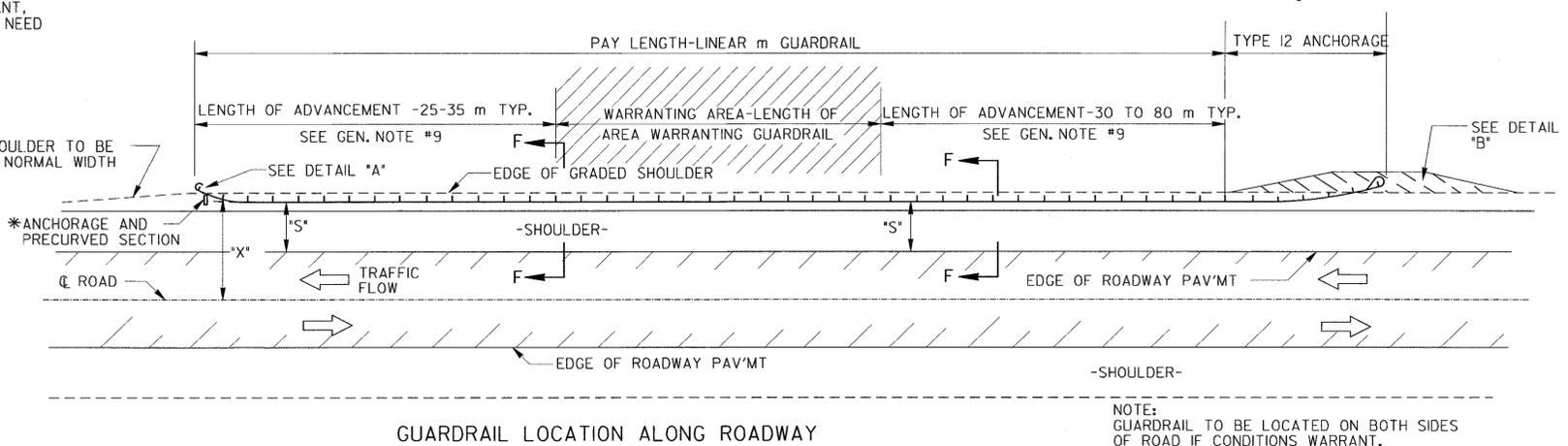


NOTE:  
FOR MINIMAL REDUCTION (TO 600 mm) OF SHOULDER ACROSS BRIDGE, ALIGNMENT SHALL BE STRAIGHT FOR SHORT INSTALLATIONS (LESS THAN 70 m) AS SHOWN HEREON. FOR LONGER INSTALLATIONS, OR GREATER REDUCTION OF SHOULDER WIDTH, GUARDRAIL INSTALLATION SHALL BE AS PER DETAIL AT BOTTOM MIDDLE.

NOTE:  
SEE SEPARATE STANDARDS FOR GUARDRAIL CONNECTIONS AT BRIDGE ENDS.



GUARDRAIL LOCATION AT BRIDGE ENDS



GUARDRAIL LOCATION ALONG ROADWAY

TYPE 1 ANCHORAGES\* WILL BE UTILIZED AT THE TRAILING END, UNLESS THE DISTANCE \*X\* IS LESS THAN THE PARAMETER GIVEN IN THIS TABLE IN WHICH CASE TYPE 12 ANCHORAGES SHALL BE REQUIRED. (TYPE 1 ANCHORAGES REQUIRE PRECURVED SECTION)

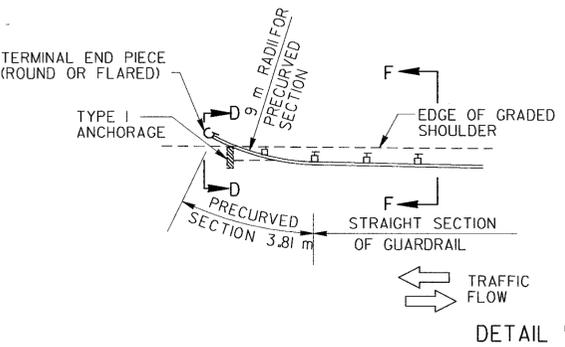
DESIGN TRAFFIC VOLUME	DESIGN SPEEDS (AS SHOWN ON COVER SHEET)				
		65 km/h	80 km/h	90 km/h	100 km/h
OVER 6000 A.D.T.	4.5	6.0	6.5	9.0	
1500 - 6000 A.D.T.	3.5	5.0	6.0	8.0	
750 - 1500 A.D.T.	3.0	4.5	5.0	6.0	
UNDER 750 A.D.T.	2.0	3.0	3.5	5.0	

\*S\* IS THE OFFSET TO THE FACE OF THE GUARDRAIL; THIS WILL BE 600 mm GREATER THAN THE USABLE SHOULDER WIDTH (PER AASHTO MINIMUM SHOULDER REQUIREMENTS) EXCEPT WHERE THE CURRENT A.D.T. IS UNDER 400, IN WHICH CASE \*S\* MAY BE EQUAL TO THE USABLE OR GRADED SHOULDER WIDTH.

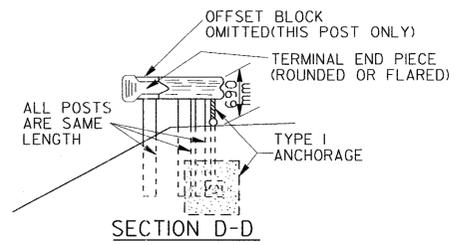
NOTE:  
THESE MINIMUM LENGTHS ARE FOR STRAIGHT ALIGNMENTS IN ADVANCE OF WARRANTING AREA.

DESIGN TRAFFIC VOLUME (ADT)	MIN. L(A) IN meters	MIN. L(T) IN meters
OVER 6000	50	35
1500 - 6000	45	30
750 - 1500	40	25
UNDER 750	35	20

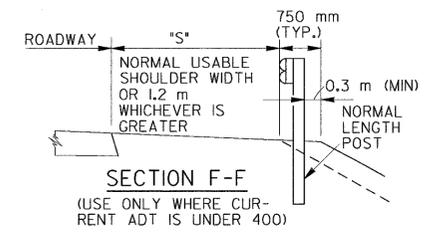
SEE GENERAL NOTE NO. 9.



DETAIL "A"



SECTION D-D



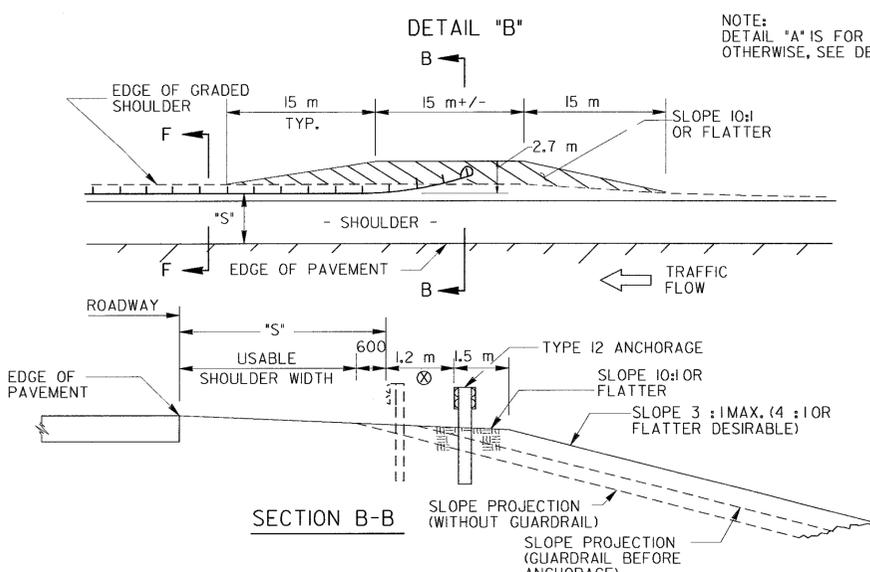
SECTION F-F

GENERAL NOTES:

- GUARDRAIL, ITS FITTINGS, PARTS, ETC. ARE TO BE IN ACCORDANCE WITH GEORGIA STANDARD SPECIFICATIONS AND/OR SPECIAL PROVISIONS.
- FOR DETAILS OF BEAM TYPE GUARDRAIL, ACCESSORIES, GUARDRAIL POST, OFFSET BLOCKS, GUARDRAIL ANCHORAGES TYPE 1 AND TYPE 12, & BRIDGE END CONNECTION DETAILS, SEE APPLICABLE GEORGIA STANDARD PLANS AND/OR CONSTRUCTION DETAILS.
- ALL OFFSET AND LENGTHS HERE SHOWN ARE APPLIED TO FACE OF GUARDRAIL.
- POST SPACING SHALL BE 1.905 m, UNLESS OTHERWISE NOTED.
- TYPE 12 ANCHORAGES SHOULD BE TERMINATED ON SLOPES 10:1 OR FLATTER. WHERE NORMAL SLOPE IS STEEPER, A 10:1 OR FLATTER SLOPE SHOULD BE CONSTRUCTED AT LOCATIONS WHERE TYPE 12 ANCHOR FLARES BACK OF SHOULDER.
- GUARDRAIL SHALL NOT BE ERECTED ON SLOPES WHICH ARE STEEPER THAN 10:1, EXCEPT FOR THE PORTION OF PRECURVED (SHOP CURVED) SECTION THAT EXTENDS BACK OF THE SHOULDER AS SHOWN IN DETAIL "A" WHICH IS ERECTED ON NORMAL SLOPES OR EXCEPT WHERE SHOWN OTHERWISE IN PLANS.
- PAY LENGTH SHALL BE MEASURED ALONG FACE OF GUARDRAIL.
- W. BEAM GUARDRAIL WILL HAVE A CONSTANT CENTER OF RAIL HT. OF 550 mm THRU OUT INSTALLATION EXCEPT WHERE A PORTION OF THE PRECURVED SECTION SHOWN IN DETAIL "A" EXTENDS BACK OF THE GRADED SHOULDER.
- GUARDRAIL WILL EXTEND PAST WARRANTING AREA ON BOTH THE APPROACH & TRAILING ENDS TO PREVENT VEHICLE PENETRATION BEHIND THE RAIL INTO THE WARRANTING AREA. THE TYPICAL LENGTHS OF ADVANCEMENT SHOWN MAY BE INCREASED OR DECREASED WHEN SHOWN IN THE PLANS, OR WHERE DIRECTED BY THE ENGINEER BECAUSE OF SPEED DESIGN, ROADSIDE GEOMETRY, SIZE OF OBJECT, OR OTHER CONDITIONS. IF FURTHER INFORMATION IS DESIRED; SEE G.A. D.O.T. "GUIDELINES FOR DETERMINING GUARDRAIL NEED, LOCATION AND STANDARDS" OR AASHTO "ROADSIDE DESIGN GUIDE".

SPECIAL NOTE:  
LOCATION AND QUANTITIES GIVEN IN THE PLANS FOR GUARDRAIL AND ANCHORAGES ARE ESTIMATES MADE FROM OFFICE COMPUTATIONS. A FINAL DETERMINATION AS TO LOCATIONS AND QUANTITIES OF GUARDRAIL AND ANCHORAGES WILL BE MADE BY THE ENGINEER OR A REPRESENTATIVE FROM THE OFFICE OF TRAFFIC OPERATIONS AFTER CONSTRUCTION OF ROADWAY.

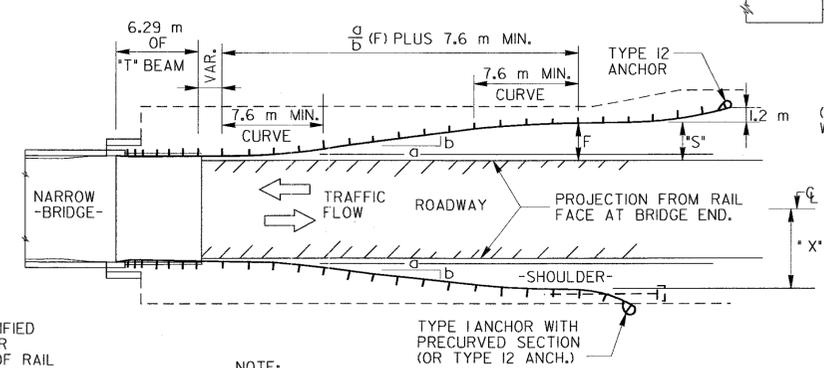
NOTE:  
DIMENSIONS ARE IN MILLIMETERS UNLESS SPECIFIED OTHERWISE.



DETAIL "B"

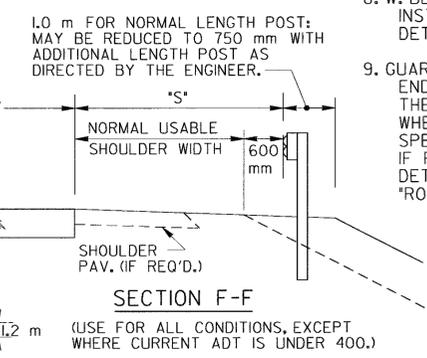
SECTION B-B

NOTE:  
WHERE CONDITIONS PROHIBIT CONSTRUCTION AS HERE SHOWN, THE FLARED EMBANKMENT MAY BE MODIFIED AT THE DIRECTION OF THE ENGINEER OR AS SHOWN ON THE PLANS IN ORDER TO PROVIDE THE 10:1 OR FLATTER SLOPES AROUND THE ANCHORAGE AND TO MAINTAIN THE CONSTANT 550 mm TO CENTER OF RAIL HEIGHT IS MAINTAINED.



GUARDRAIL LOCATION AT END OF NARROW BRIDGE

(NOTE: DETAILS NOT SHOWN HERE ARE SIMILAR TO THOSE AT TOP LEFT.)



SECTION F-F

OPERATING SPEED (km/h)	FLARE RATE a/b
100	13:1 MIN.
90	12:1 MIN.
80	11:1 MIN.
70	10:1 MIN.
65	9:1 MIN.

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

STANDARD  
GUARDRAIL LOCATION DETAILS  
FOR UNDIVIDED HIGHWAYS AND  
ROADS (WITH SHOULDERS  
ADJACENT TO THE ROADWAY)  
(METRIC)

DEC. 1995

NUMBER  
4052

DES. (SUBMITTED) *James H. Kennel*  
STA. BOARD & AIRPORT DESIGN ENGR.  
TRA. (APPROVED) *Paul L. Eubank*  
CHK. CHIEF ENGINEER