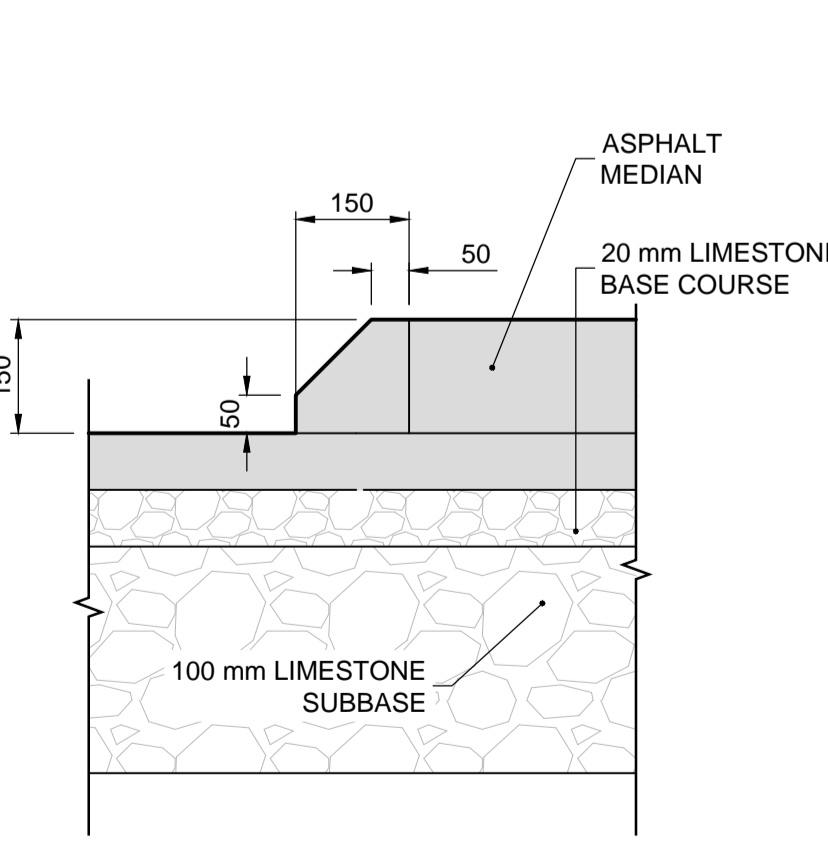
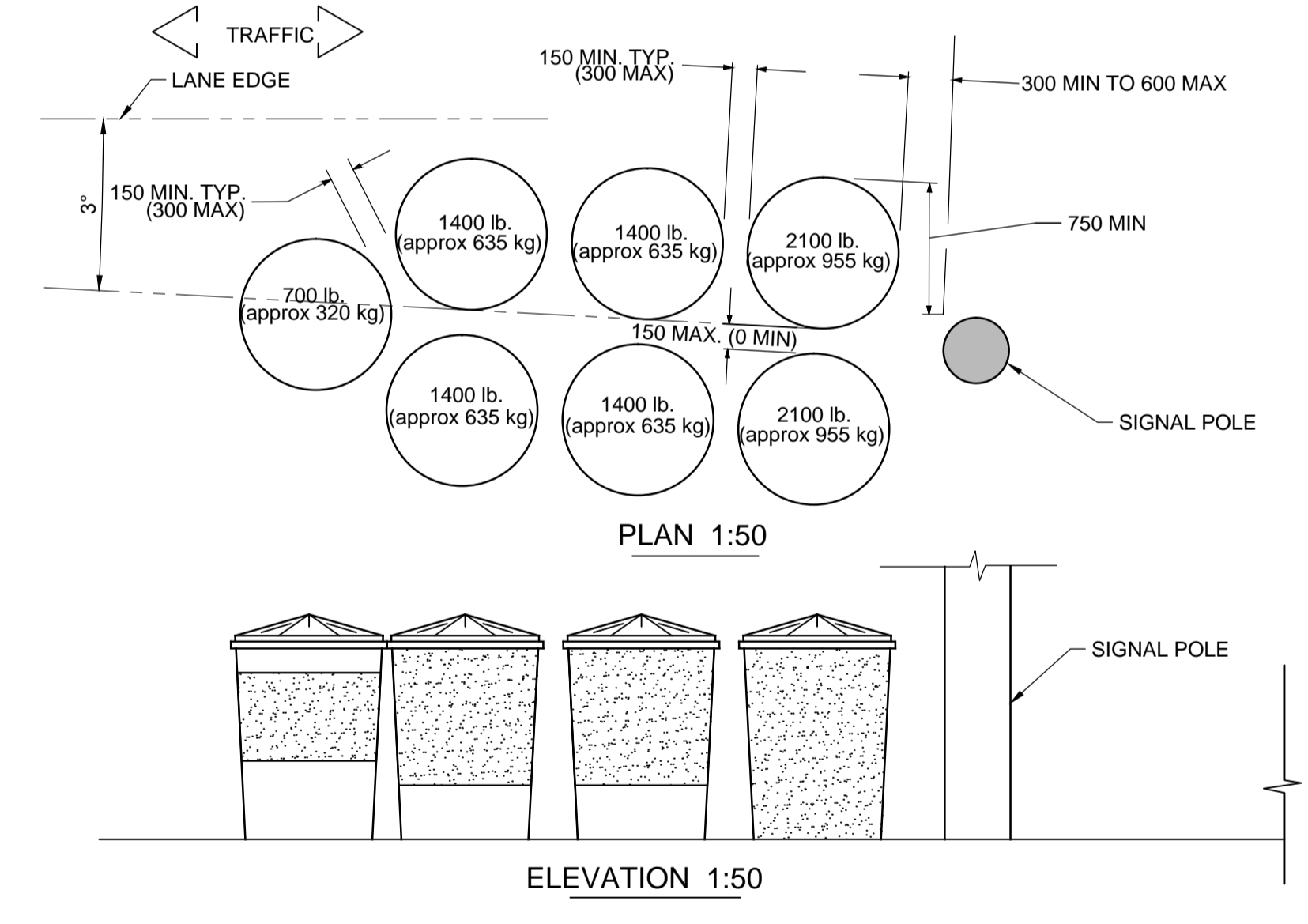


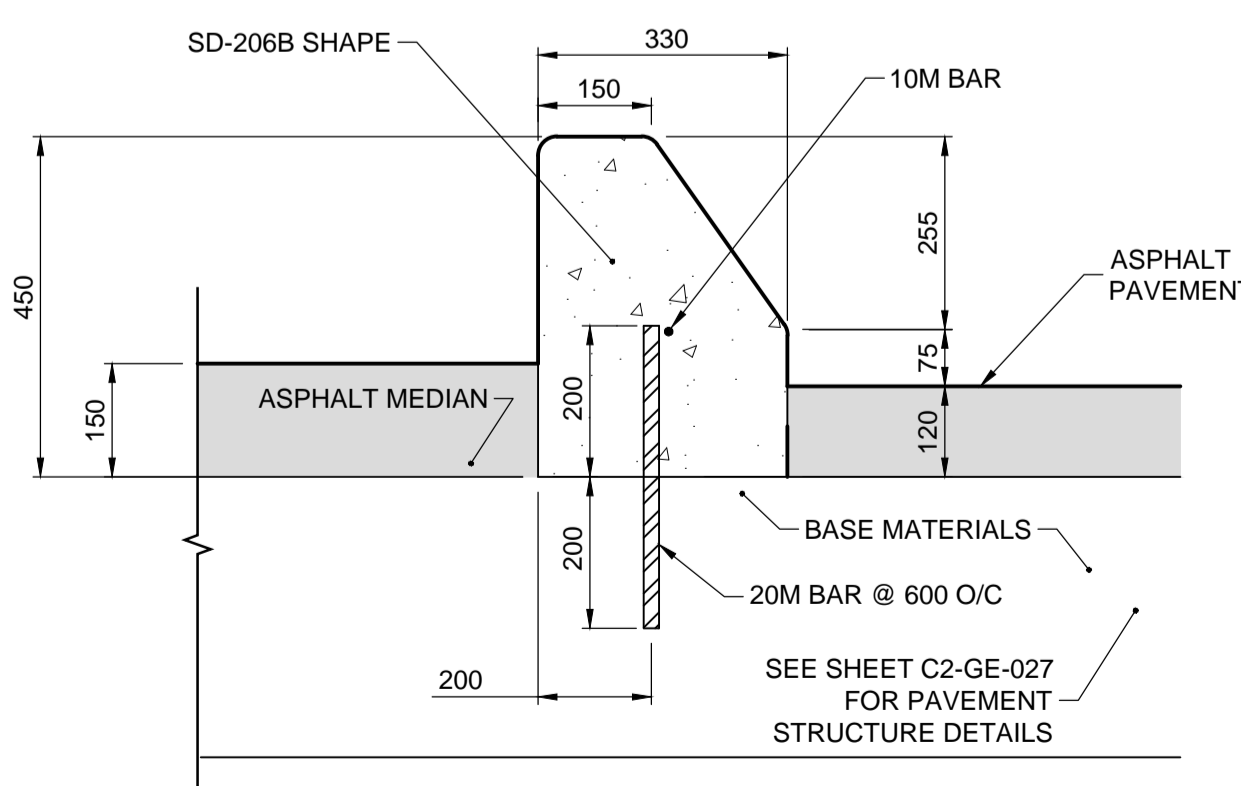
DESIGN CALCULATIONS FOR A POSTED VELOCITY OF 50 km/h (SEE NOTE 1)

ROW	816.5 kg CAR			2041.2 kg TRUCK		
	SAND WT (lb)	EXIT VEL (km/h)	AVG g's FOR ROW	EXIT VEL (km/h)	AVG g's FOR ROW	
0		50.00		50.00		
1	700	35.98	5.18	43.26	2.70	
2	2800	14.06	4.72	26.64	4.99	
3	2800	5.50	0.72	16.41	1.89	
4	4200	1.65	0.12	8.48	0.85	

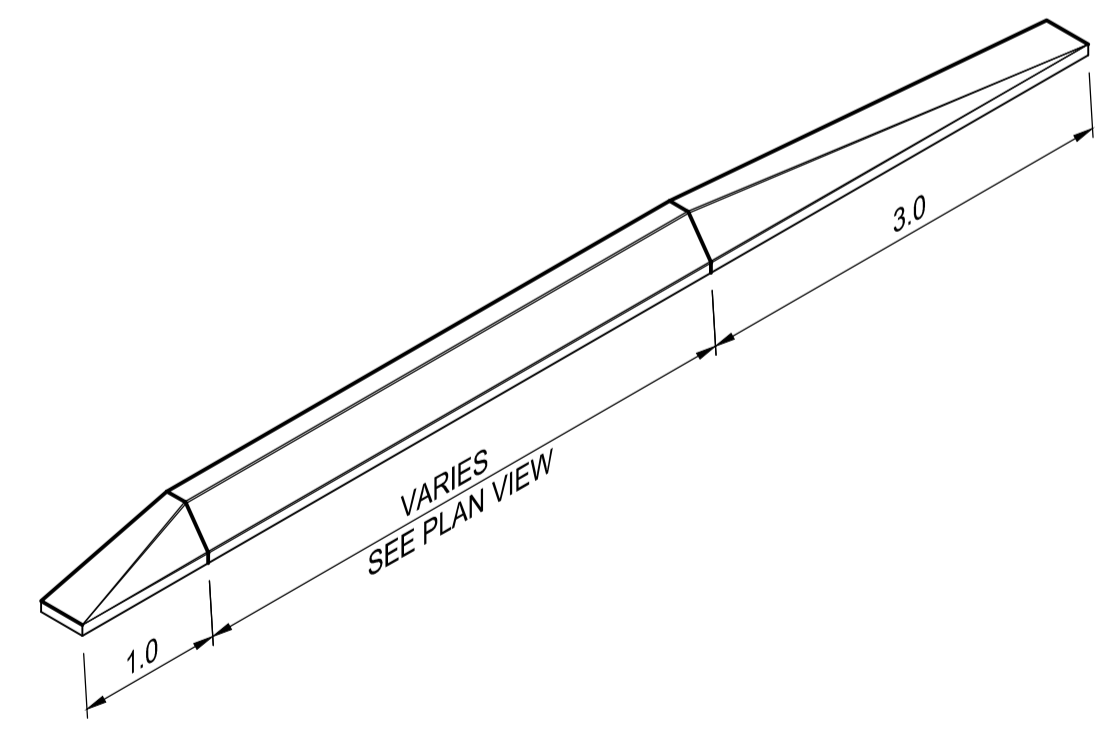
NOTE:
1. THE DESIGN CALCULATIONS APPLY ONLY FOR A FRONTAL IMPACT IN EITHER A UNIDIRECTIONAL OR BIDIRECTIONAL LAYOUT.



1 TEMPORARY ASPHALT CURB
SCALE: 1:10



B SAFETY CURB-SECTION
SCALE: 1:10



2 SAFETY CURB
SCALE: NTS (ISOMETRIC VIEW)

LEGEND

- RAILWAY SIGNAL
- SAND FILLED BARRELS AND SIGNALS FOR PHASE II CONSTRUCTION SHOWN THUS
- SAND FILLED BARRELS AND SIGNALS FOR PHASE III CONSTRUCTION SHOWN THUS

APEGM
Certificate of Authorization
Dillon Consulting Limited (MB)
No. 1789 Date: 17/01/09

UNDERGROUND STRUCTURES		B.M. ELEV.	SEE SHEET C2-CT-007 FOR CONTROL POINT INFORMATION
SUPPLY U/G STRUCTURES	DATE		

NO.	REVISIONS	DATE	BY	DATE
1	ADDENDUM #1	17/01/25	DBW	
0	ISSUED FOR TENDER	17/01/09	DBW	

DESIGNED BY	RTP	CHECKED BY	DBW
DRAWN BY	PMW	APPROVED BY	DBW
HOR. SCALE	1:150	RELEASED FOR CONSTRUCTION	
VERTICAL		DATE	

ENGINEER'S SEAL
PROVINCE OF MANITOBA
D.B. WIEBE
Member 22480
REGISTERED PROFESSIONAL ENGINEER
CONSULTANT PROJECT NUMBER
16-3353

THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
Winnipeg
WAVERLEY STREET UNDERPASS AT CN MILE 3.89 RIVERS SUB
CONTRACT 2: UNDERPASS STRUCTURES, RAILWORKS,
ROADWORKS, LAND DRAINAGE SEWER, PUMPING STATION
AND LANDSCAPING WORKS
CITY DRAWING NUMBER
U-239-2016-C2-CT-006
SHEET 006 OF 081
CONSULTANT DRAWING NUMBER
C2-CT-006
DETOUR PEDESTRIAN CROSSING DETAILS

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