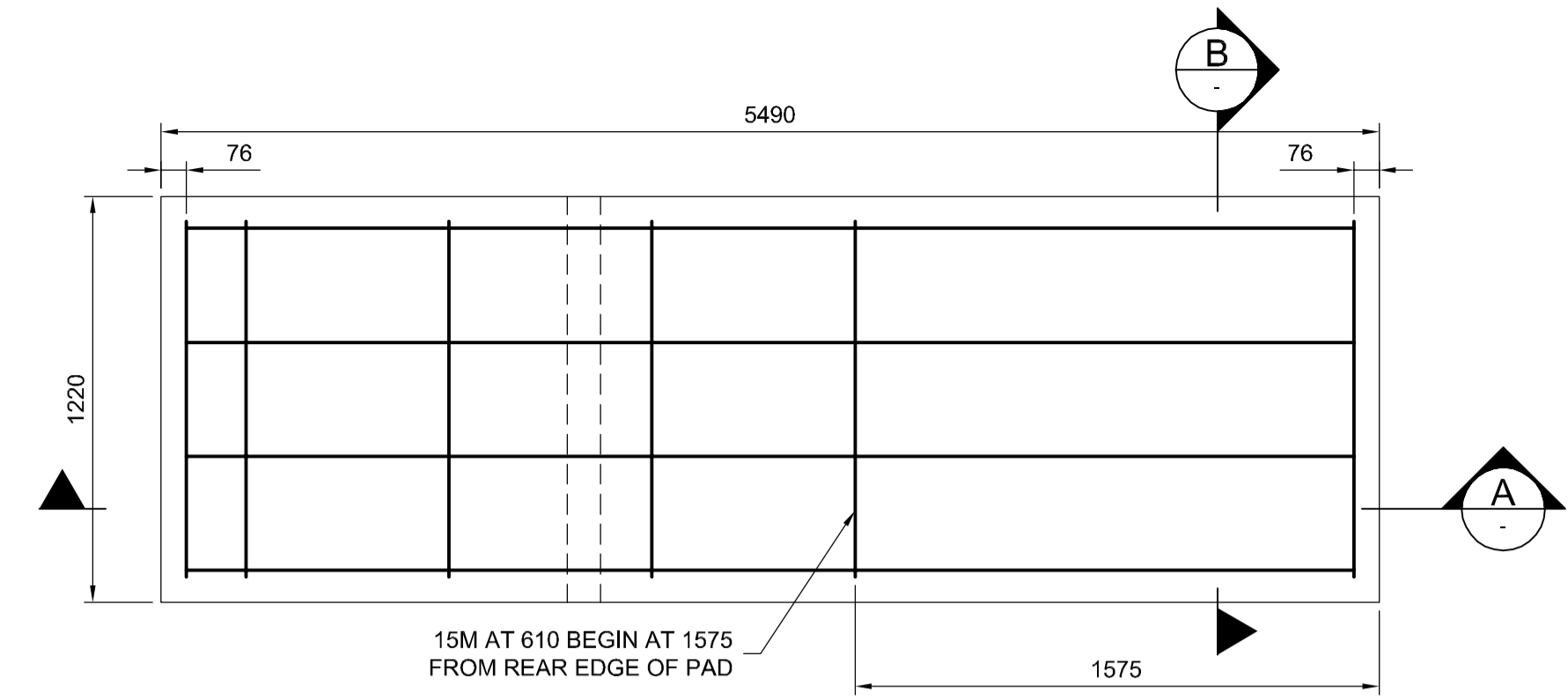
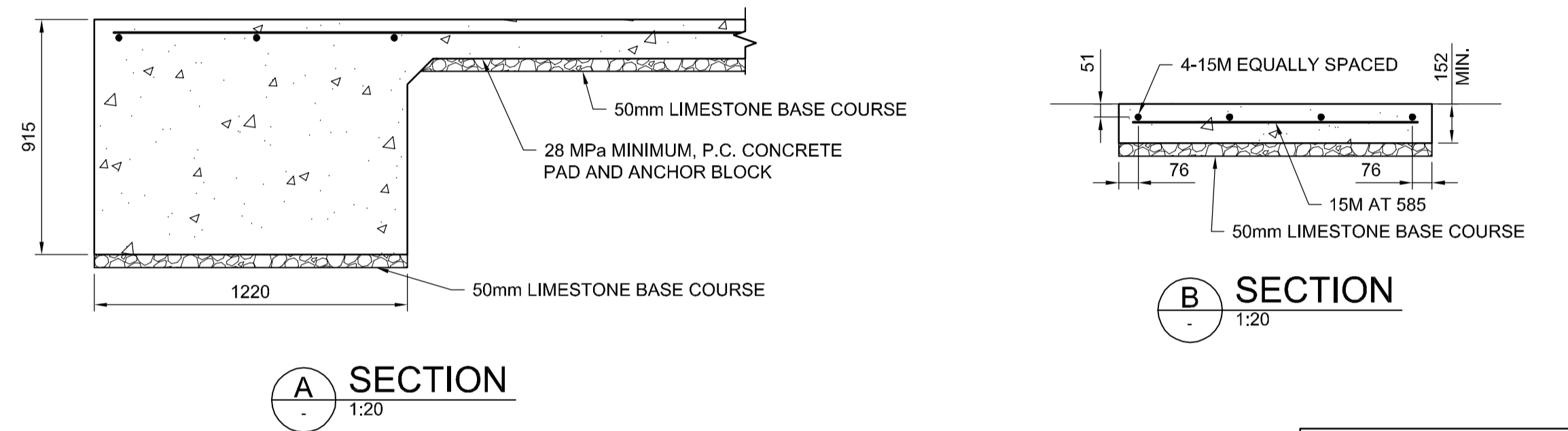


SITE PLAN - CRASH CUSHION LAYOUT  
1:40



PLAN - REINFORCING  
1:20

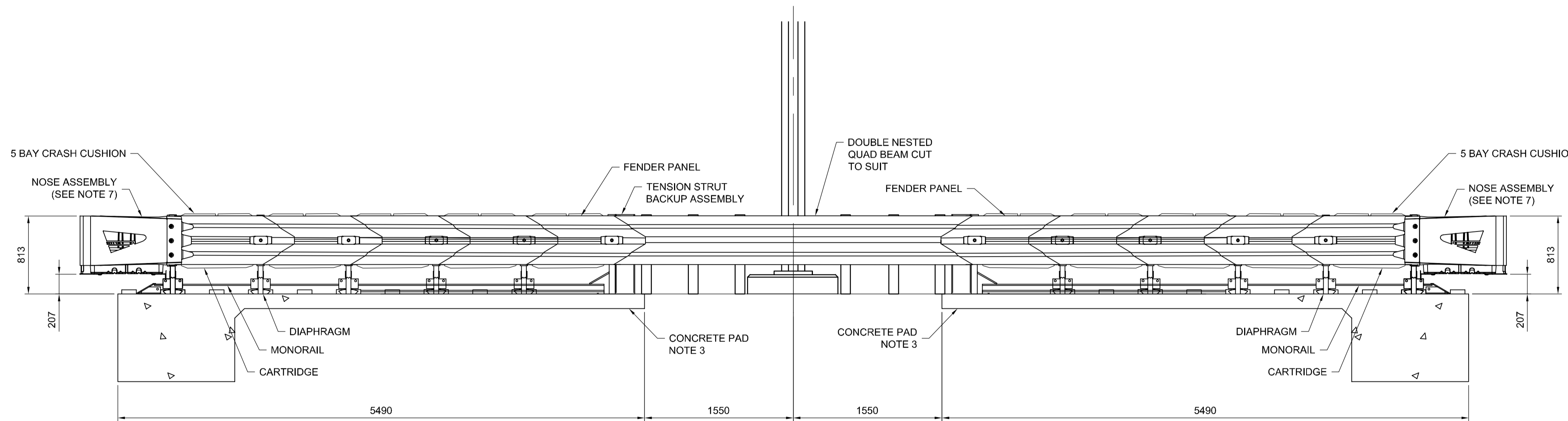


SITE PLAN - CRASH CUSHION LAYOUT  
1:40

ALL CRASH CUSHION REINFORCING TO BE STAINLESS STEEL AS PER NOTE ON SHEET 001 REGARDING TRAFFIC BARRIER REINFORCING STEEL.

CRASH CUSHION WITH TENSION STRUT BACKUP NOTES:

1. PROVISION SHALL BE MADE FOR REAR FENDER PANELS TO SLIDE REARWARD UPON IMPACT 762 MIN.
2. WHERE NECESSARY, THE CONTRACTOR SHALL SUPPLY AN ADEQUATE TRANSITION FROM THE QUADGUARD II SYSTEM TO THE OBJECT BEING SHIELDED.
3. ALL UNITS ARE MILLIMETERS UNLESS OTHERWISE NOTED.
4. BACKUP, EXTENSION PANEL, AND NOSE ASSEMBLIES ARE NOT INCLUDED IN MODEL NUMBER, ORDER SEPARATELY.
5. CURB SHALL BE SD-205 BARRIER CURB (100 HEIGHT) ALONG ENTIRE LENGTH OF QUADGUARD II SYSTEM WESTBOUND AND SD-202A LIP CURB (75 HEIGHT) EASTBOUND.
6. THE QUADGUARD II SYSTEM HAS BEEN TESTED TO NCHRP 350.
7. CRASH CUSHION SHALL BE SUPPLIED TO ACCOMMODATE A DESIGN SPEED OF 80 km/h. THE SYSTEM SHALL MEET THE REQUIREMENTS OF NCHRP REPORT 350 TEST LEVEL 3.



SIDE VIEW  
1:30

NOTE: DETAILS AND NOTES SHOW QUADGUARD II SYSTEM WITH TENSION STRUT BACKUP. EQUIVALENT CRASH CUSHION SYSTEM CAN BE USED PENDING APPROVAL FROM THE CONTRACT ADMINISTRATOR.

ENGINEER'S SEAL FOR SELECTION OF CRASH CUSHION STYLE ONLY. CONCRETE PAD AND REINFORCING DESIGN, AND CRASH CUSHION DESIGN AND INSTALLATION SHALL BE AS PER MANUFACTURER'S DETAILS.

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES  
DECIMALIZED NUMBERS INDICATE METRES

WARNING

IF POWER EQUIPMENT OR EXPLOSIVES ARE TO BE USED FOR EXCAVATION ON THIS PROJECT THE CONTRACTOR MUST:

1. NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.
2. TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS SEE PROVINCIAL REGULATION 210/72 FOR DETAILS.
3. OBTAIN EXCAVATION PERMITS PRIOR TO CONSTRUCTION.

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DESIGNED BY	RTP	CHECKED BY	DBW
DRAWN BY	RTP	APPROVED BY	DBW
HOR. SCALE	AS SHOWN	RELEASED FOR CONSTRUCTION	
VERTICAL	AS SHOWN		
NO.	REVISIONS	DATE	BY
0	ISSUED FOR TENDER	17/01/09	DBW

DESIGNED BY	RTP	CHECKED BY	DBW
DRAWN BY	RTP	APPROVED BY	DBW
HOR. SCALE	AS SHOWN	RELEASED FOR CONSTRUCTION	
VERTICAL	AS SHOWN		
NO.	REVISIONS	DATE	BY

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

Waverley Street Underpass at CN Mile 3.89 Rivers Sub  
Contract 2: Underpass Structure, Railworks,  
Roadworks, Land Drainage Sewer, Pumping Station  
and Landscaping Works

CITY DRAWING NUMBER  
U-239-2016-C2-CS-076

SHEET 076 OF 085

CONSULTANT DRAWING NUMBER  
C2-CS-076

S783 - CRASH CUSHION WITH  
TENSION STRUT BACKUP