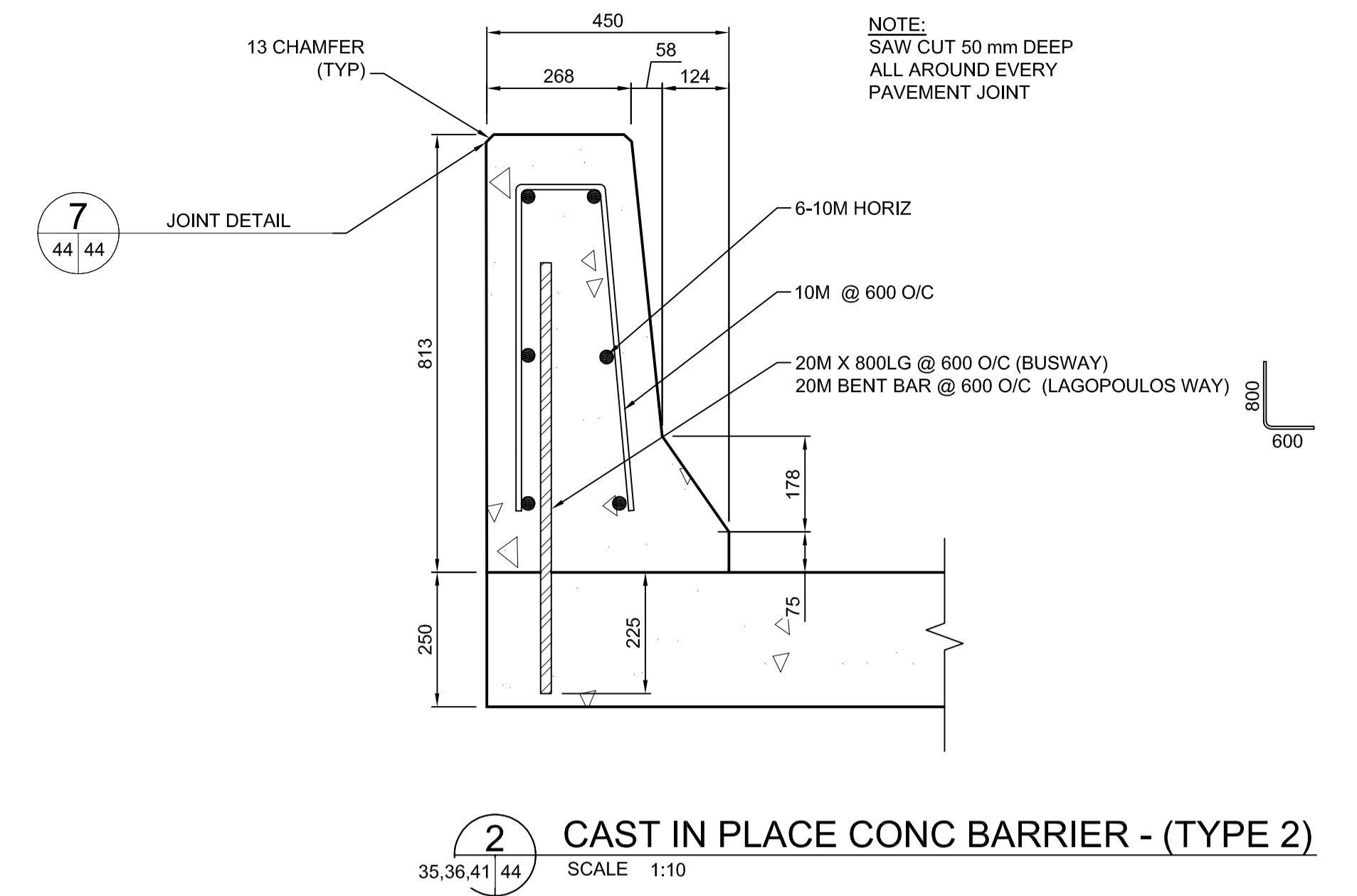
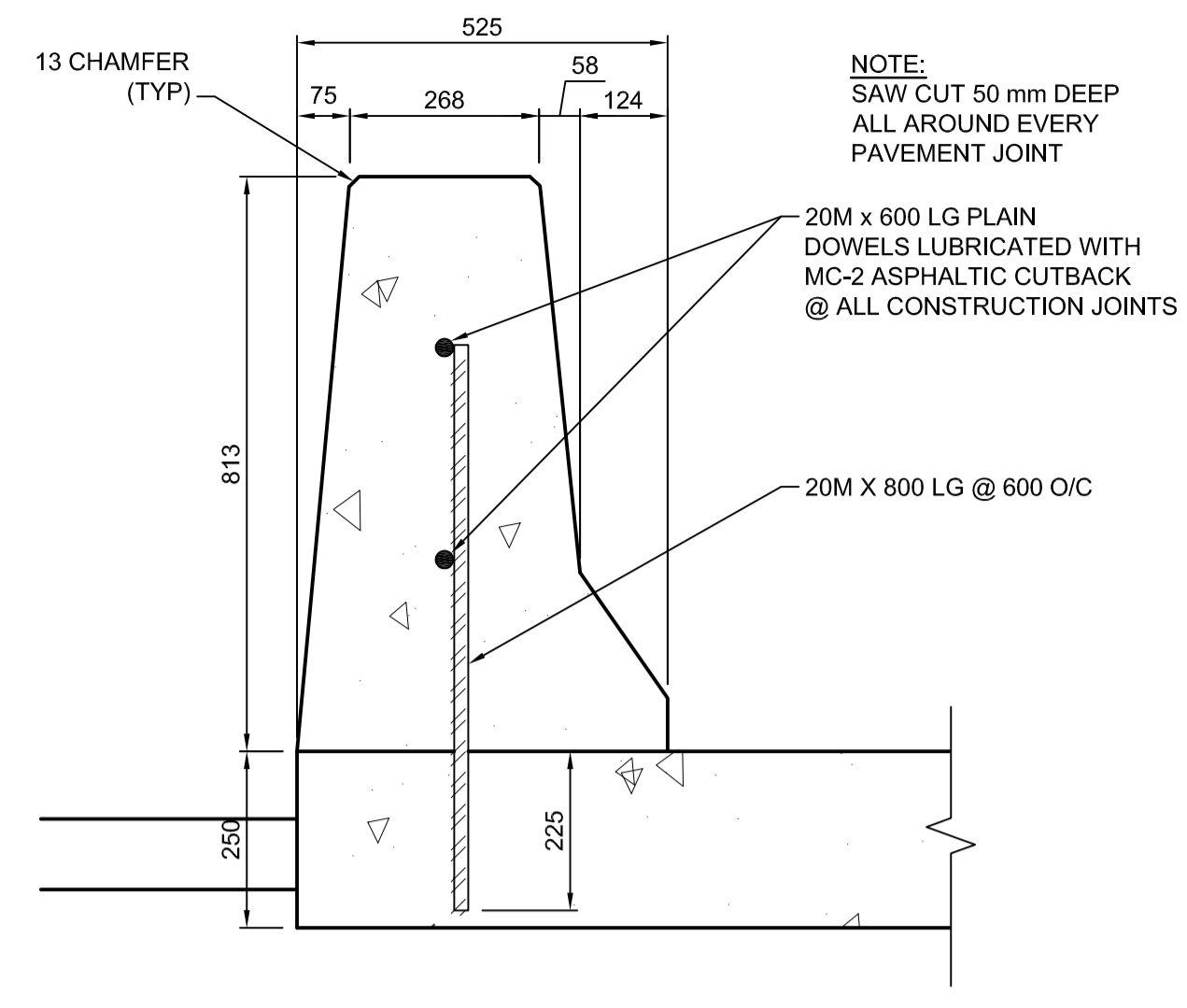
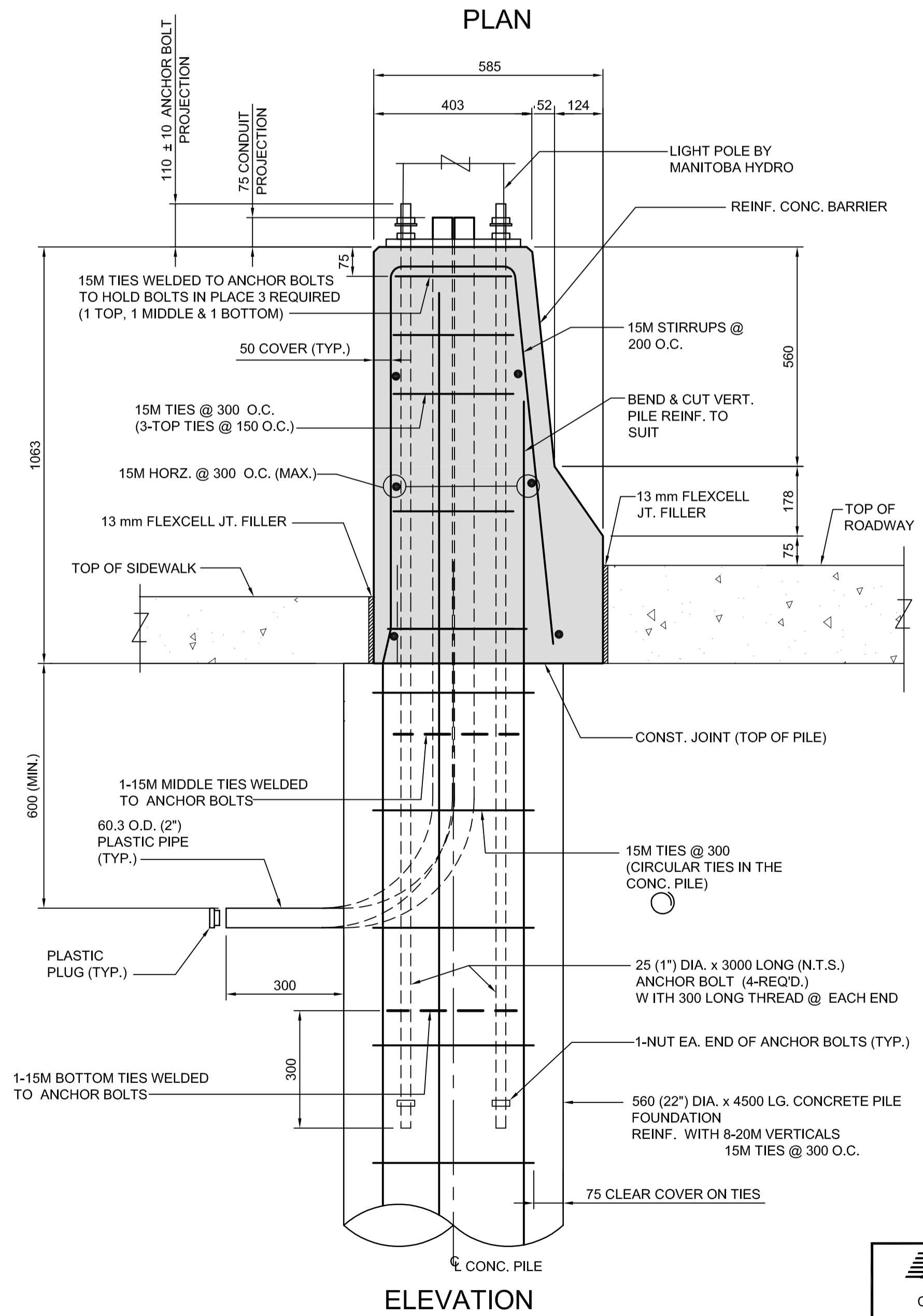


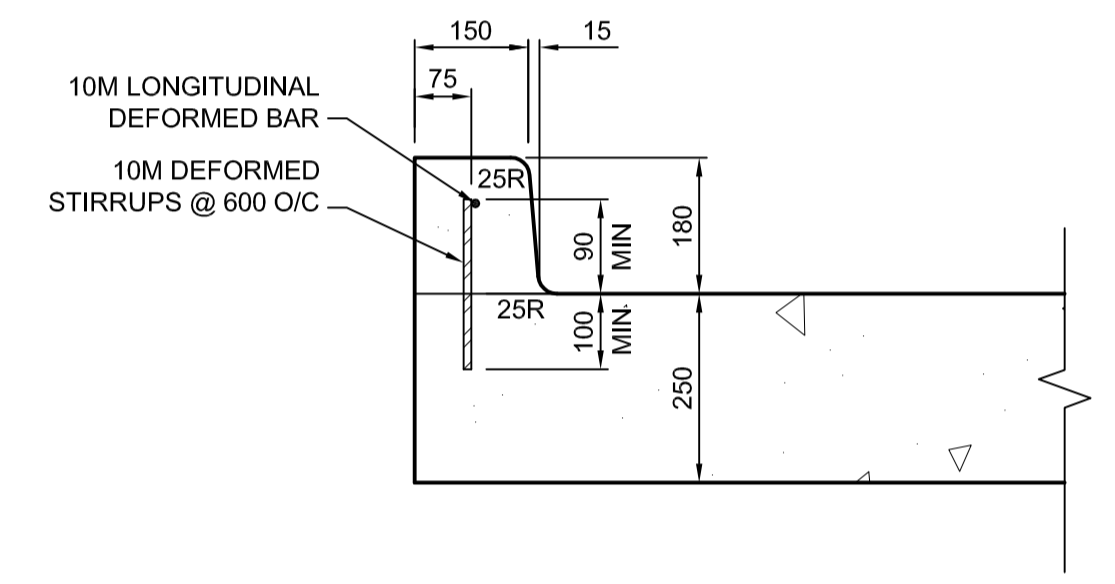
1 SLIP FORMED CONC BARRIER - (TYPE 1)
32-35,41 44 SCALE 1:10



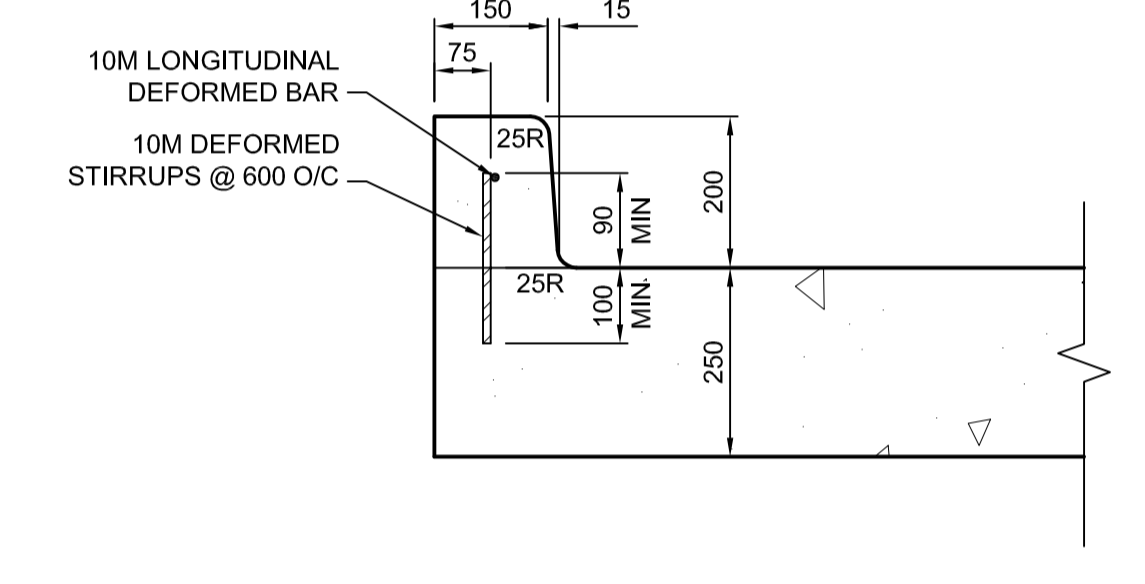
2 CAST IN PLACE CONC BARRIER - (TYPE 2)
35,36,41 44 SCALE 1:10



3 LIGHT STANDARD CONCRETE BARRIER (TYPE 3)
33,34 44 SCALE 1:10



4 180 BARRIER CURB (SD-203A)
31,37 44 SCALE 1:10



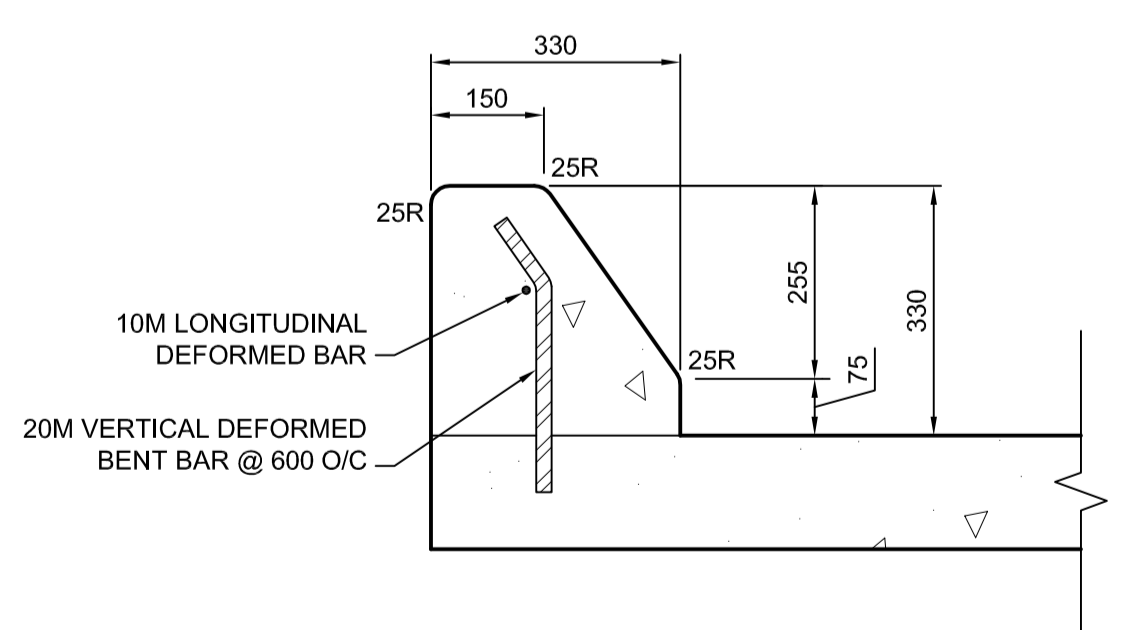
5 200 BARRIER CURB (SD-203A)
37 44 SCALE 1:10

GENERAL NOTES

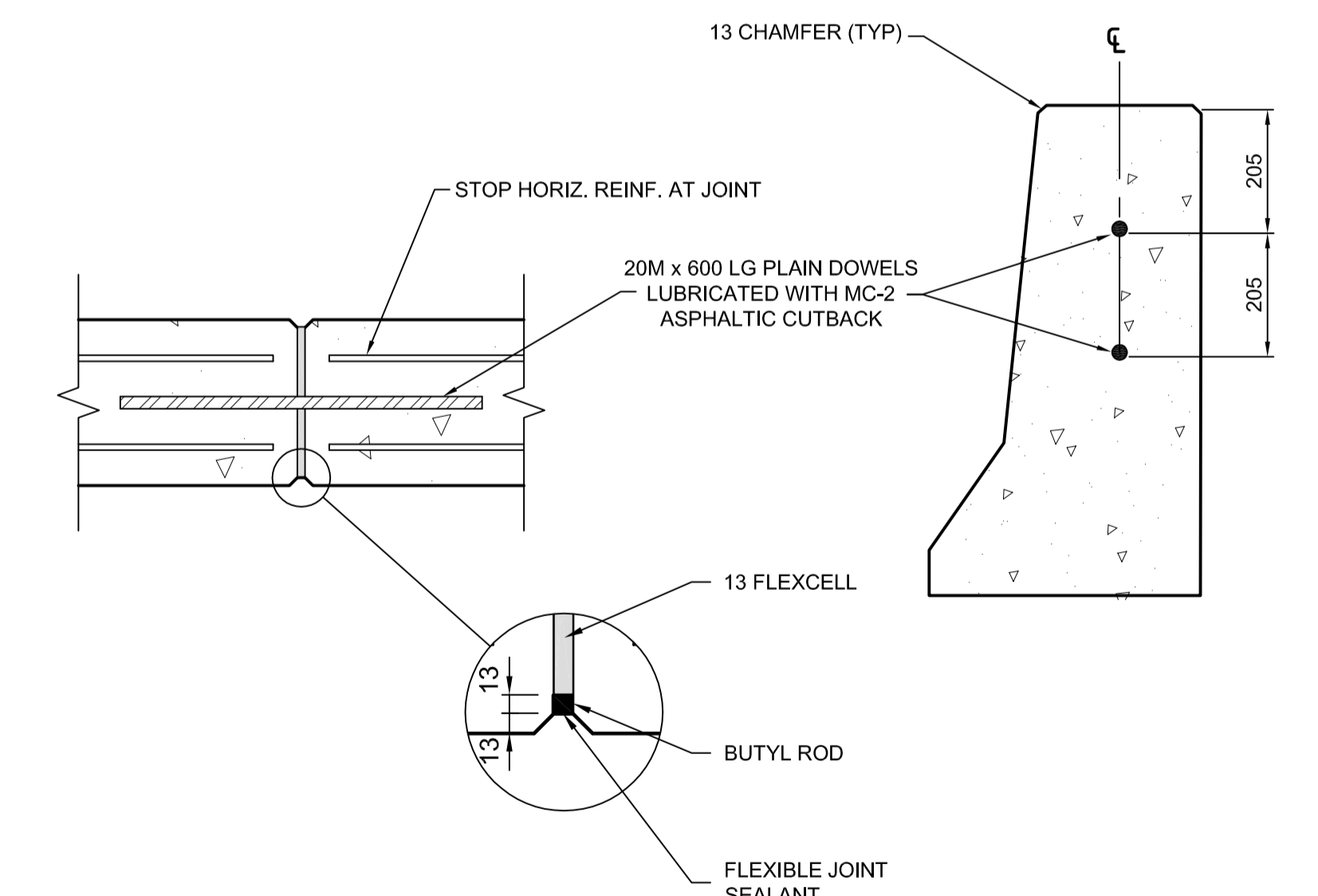
- REINFORCING STEEL**
CSA G30.12 GRADE 400
VERTICAL BARS FULL LENGTH OF PILE
- ANCHOR BOLTS**
CSA G40.21 GRADE 300W
4-25 (1") DIA. X 3000 LONG
EACH BOLT C/W 3 NUTS & 1 WASHER
300 LONG THREAD AT EACH END.
HOT DIP GALVANIZED FULL LENGTH
BCD = BOLT CIRCLE DIAMETER TO CENTRE OF BOLT GROUP
- ANCHOR BOLTS SHALL BE ALIGNED WITH A TEMPORARY STEEL TEMPLATE. PLACEMENT OF ANCHOR BOLTS AND CONCRETE WITHOUT THE TEMPLATE WILL NOT BE PERMITTED.
- TOP OF PILE SHALL BE FORMED WITH A TUBULAR FORM (SONOTUBE) AS FOLLOWS:
(a) BORED PILES - MIN. 500 mm BELOW FINAL GRADE
(b) "HYDRO-JET EXCAVATED" PILES - MIN. 1000 mm BELOW FINAL GRADE
- CONCRETE MIX DESIGN**
PROPORTIONING OF FINE AGGREGATE, COARSE AGGREGATE, CEMENT, WATER, AND AIR ENTRAINING AGENT SHALL BE SUCH AS YIELD CONCRETE HAVING THE REQUIRED STRENGTH AND WORKABILITY AS FOLLOWS:
i) MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS = 35 MPa
ii) MAXIMUM WATER/CEMENT RATIO = 0.45
iii) MINIMUM CEMENT CONTENT = 340 kg/m³
iv) SLUMP = 80 mm ± 30 mm
v) AGGREGATE: 20 mm NOMINAL
vi) AIR CONTENT: 5.0 TO 8.0 PERCENT
vii) CEMENT - TYPE HS, HIGH SULFATE-RESISTANT.
- LIGHT STANDARD POLES SUPPLY & INSTALLATION BY MANITOBA HYDRO.
- TYPICAL PILE INSTALLATION LOCATION AS SHOWN ON DRAWINGS. CONTRACT ADMINISTRATOR MAY MODIFY DEPENDING ON SITE APPURTENANCES.

CONSTRUCTION SEQUENCE

- PLACE SLIP FORMED CONCRETE BARRIER.
- SAW CUT AND REMOVE SLIPFORMED CONC. BARRIER AT PILE LOCATIONS.
- INSTALL CONCRETE PILES (SEE ABOVE NOTES)
- EXTEND PILE REINFORCING THROUGH TOP OF CONCRETE BARRIER.
- PLACE CONCRETE BARRIER.



6 SAFETY CURB (SD-206B)
37-39 44 SCALE 1:10



7 TYPICAL TYPE 2 BARRIER JOINT DETAIL
44 44 SCALE 1:10



LOCATION UNDERGROUND	APPROVED STRUCTURES	B.M. 654265 (633392.694, 5525026.192) ELEV. 232.518
SUPY. U/G STRUCTURES COMMITTEE	DATE	
NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE, BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.		
2	ISSUED FOR TENDER	04/29/09 TJP
1	SUBMITTED FOR 95% REVIEW	02/13/09 TJP
NO.	REVISIONS	DATE BY

DESIGNED BY	RTP/NBG
DRAWN BY	TJH/NBG
CHECKED BY	ORIGINAL SIGNED BY TARAN J. PETERS
APPROVED BY	ORIGINAL SIGNED BY DAVE P. KRAHN
HOR. SCALE	AS NOTED
VERTICAL	
DATE	04/29/09

DILLON CONSULTING

RELEASED FOR CONSTRUCTION
ORIGINAL SIGNED BY RANDY FINGAS
DATE 04/29/09

ENGINEER'S SEAL
PROVINCE OF MANITOBA
REGISTERED PROFESSIONAL ENGINEER
S.S. RIHAL
04-29-09
CONSULTANT PROJECT NO. 088813

THE CITY OF WINNIPEG TRANSIT DEPARTMENT

Winnipeg

SOUTHWEST RAPID TRANSIT CORRIDOR - STAGE 1
TRANSITWAY CONSTRUCTION, DONALD/HARKNESS RECONSTRUCTION & ASSOCIATED WORKS

CITY DRAWING NUMBER P-3299-44
SHEET 44 OF 64
CONSULTANT DRAWING NUMBER C3-C3026-T

G:\CAD\088813\Contract\Contract 3-Donald Street\Current\Roadway\C1-501-Cross Sections.dwg