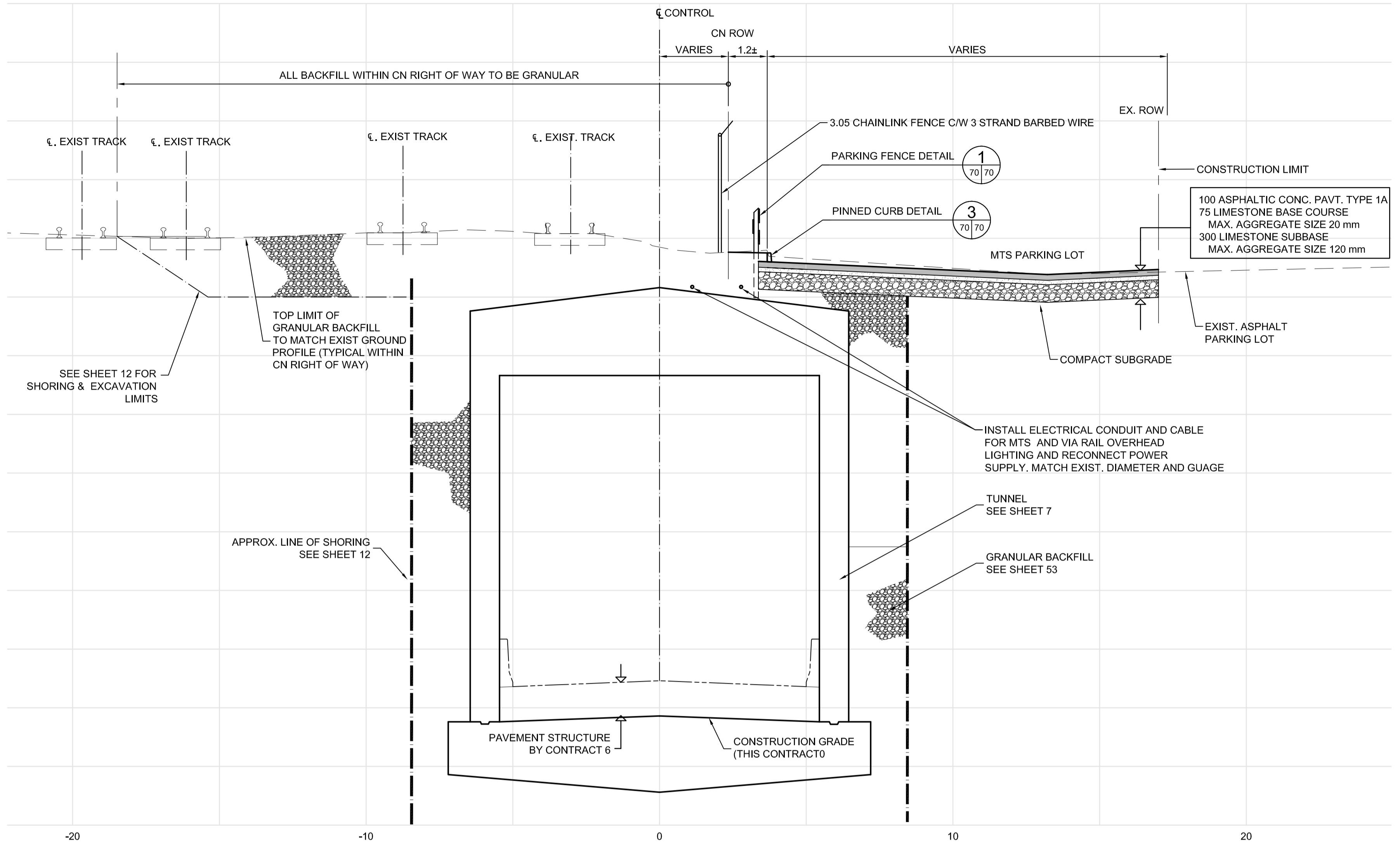
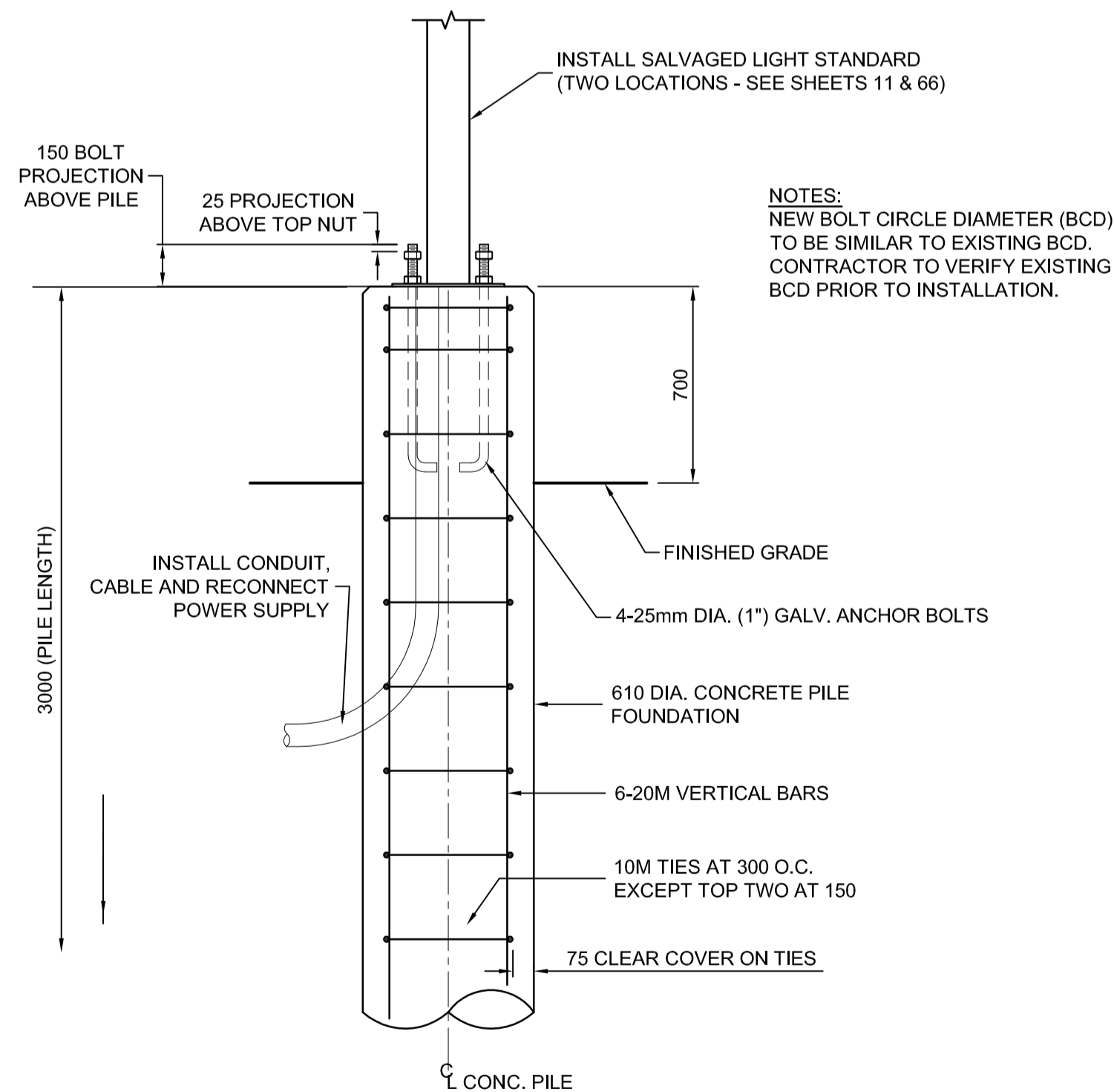


1 WOOD PARKING FENCE DETAIL
SCALE 1:10



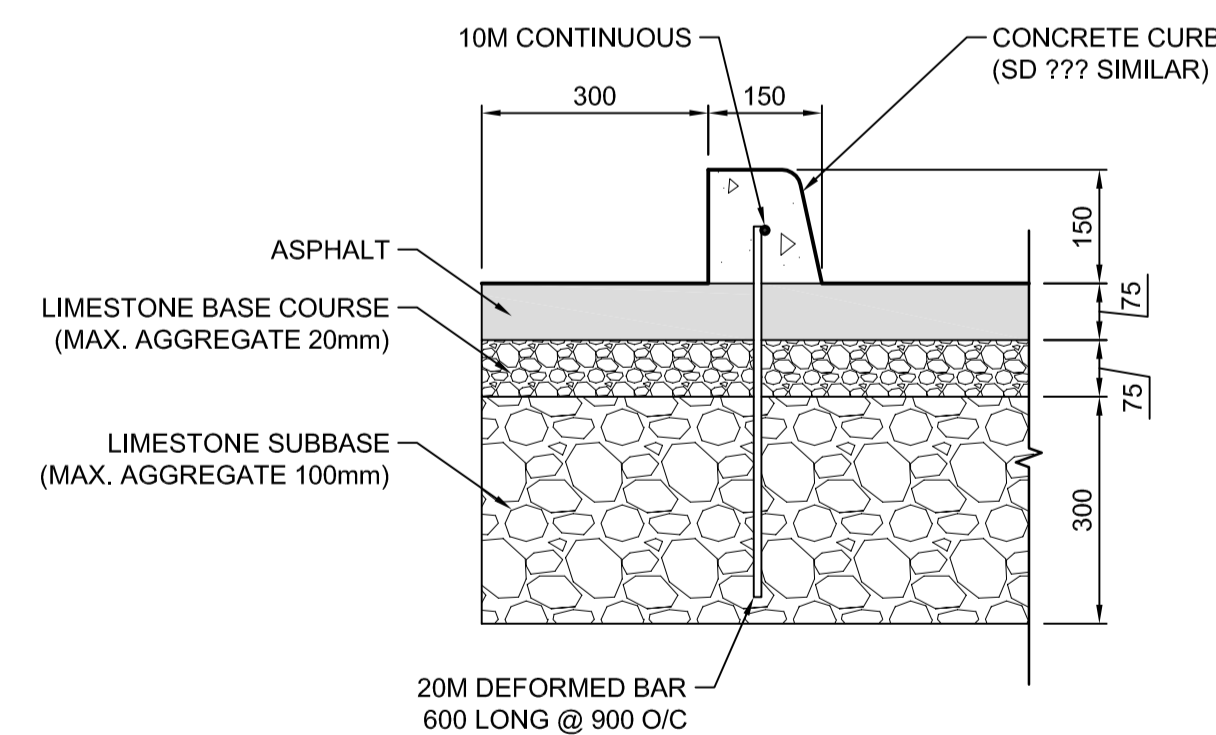
A SECTION - STA. 11+820
SCALE: H = 1:100 V = 1:50



2 CAST IN PLACE PILE FOUNDATION DETAIL (PEMBINA DODGE)
SCALE 1:20 2 REQUIRED

PILE CONSTRUCTION NOTES

- REINFORCING STEEL**
* CSA G30.12 GR. 400
* VERTICAL BARS FULL LENGTH OF PILE
* HOT DIP GALVANIZED
- ANCHOR BOLTS**
CSA G40.21 GR. 300W
4-25mm (1") DIA. x 750mm LONG + 100mm HOOK
EACH BOLT C/W 2 NUTS & 2 WASHERS
TOP 300 THREADED
HOT DIP GALVANIZED FULL LENGTH
BCD = BOLT CIRCLE DIAMETER TO CENTRE OF BOLT GROUP
- ANCHOR BOLTS SHALL BE ALIGNED WITH A TEMPORARY 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. 1000 mm BELOW FINAL GRADE
(b) "HYDRO-JET EXCAVATED" PILES - MIN. 1500 mm BELOW FINAL GRADE
- CONTRACTOR SHALL REMOVE THE BASE TEMPLATE, NUTS AND FORM, FOLLOWING A MINIMUM 24 HOUR CONCRETE CURING PERIOD.
- CONCRETE**
CONCRETE MATERIAL SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES IN ACCORDANCE WITH CSA A23.1-04:
i) CLASS OF EXPOSURE: S-1
ii) COMPRESSIVE STRENGTH @ 56 DAYS = 35 MPa
iii) WATER/CEMENTING MATERIALS RATIO = 0.4
iv) AIR CONTENT: CATEGORY 2 PER TABLE 4 OF CSA A23.1-04 (4-7%)
v) CEMENT - TYPE HS OR HSB, HIGH SULPHATE RESISTANT.



3 PINNED CURB DETAIL
SCALE 1:10

- NOTES**
- MTS PARKING LOT TO BE RESTORED TO EQUAL OR BETTER CONDITION AT COMPLETION OF STAGE 2 TUNNEL CONSTRUCTION
 - EXISTING VIA RAIL LIGHT STANDARDS AFFECTED BY TUNNEL CONSTRUCTION TO BE REMOVED AND REPLACED AT COMPLETION OF PROJECT

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES.

NOTE:
1. ALL ELECTRICAL WORK ASSOCIATED WITH INSTALLATION OF BLOCK HEATER RECEPTACLES AND REINSTALLATION OF LIGHT STANDARDS FOR PEMBINA DODGE, VIA RAIL AND MTS CALL CENTRE SHALL BE IN ACCORDANCE WITH CSA C22.1, CANADIAN ELECTRICAL CODE, PART 1, LATEST EDITION AND CSA C22.3 NO.1-M1987



LOCATION UNDERGROUND STRUCTURES SUPPLY, U/G STRUCTURES COMMITTEE DATE: _____	APPROVED DATE: _____	B.M. ELEV. _____	DESIGNED BY RTP DRAWN BY TJH/RTP CHECKED BY DPK APPROVED BY DPK HOR. SCALE 1:100 VERTICAL 1:50		ENGINEER'S SEAL PROVINCE OF MANITOBA ORIGINAL REGISTERED BY D.P. KRAHN 10/13/2009 Member 4226 REGISTERED PROFESSIONAL ENGINEER		CITY DRAWING NUMBER U237-09-70 SHEET 70 OF 73
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.			ISSUED FOR TENDER 10.13.2009 TJH NO. REVISIONS _____	RELEASED FOR CONSTRUCTION DATE: _____	CONSULTANT PROJECT NO. 088813	SOUTHWEST RAPID TRANSIT CORRIDOR - STAGE 1 TRANSITWAY TUNNEL AT CN RIVERS SUBDIVISION MILEAGE 1.38 & ASSOCIATED WORKS	CONSULTANT DRAWING NUMBER C4-C3008-T