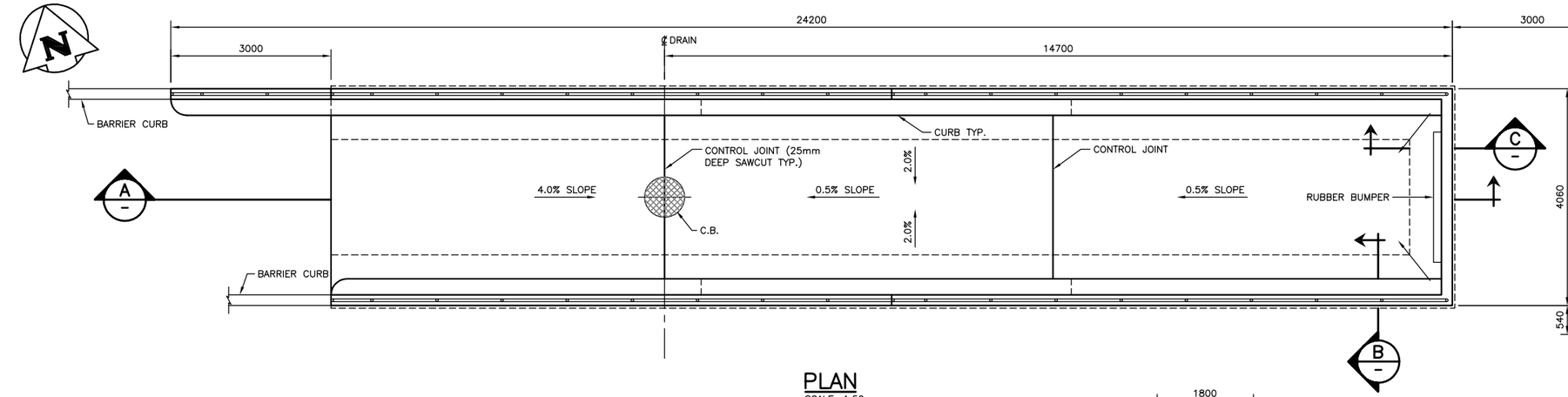
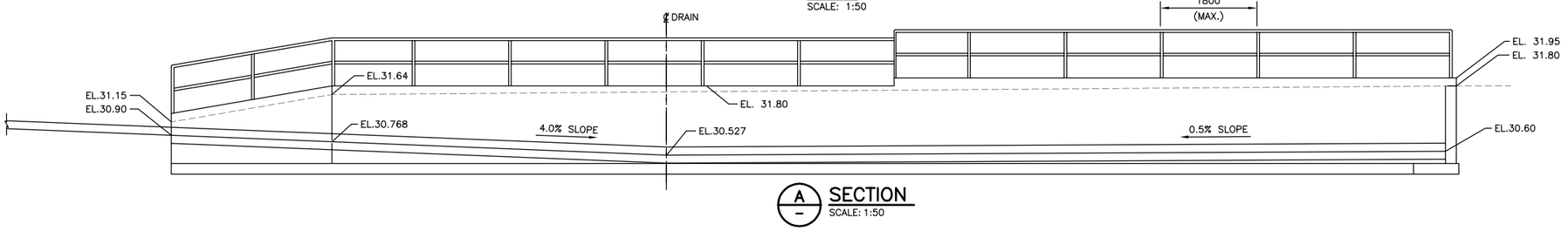
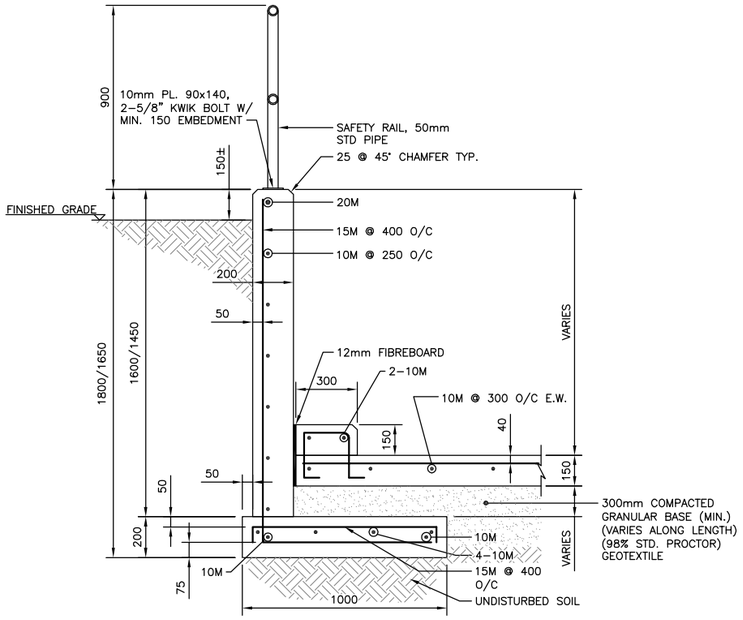


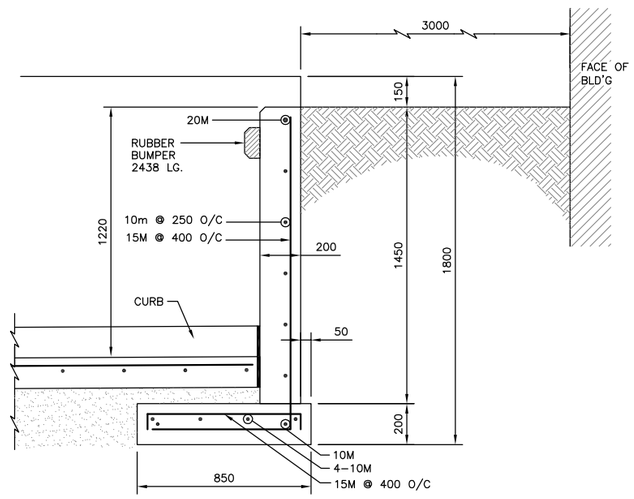
PLAN
SCALE: 1:50



A SECTION
SCALE: 1:50



B DETAIL
SCALE: 1:15



C DETAIL
SCALE: 1:15

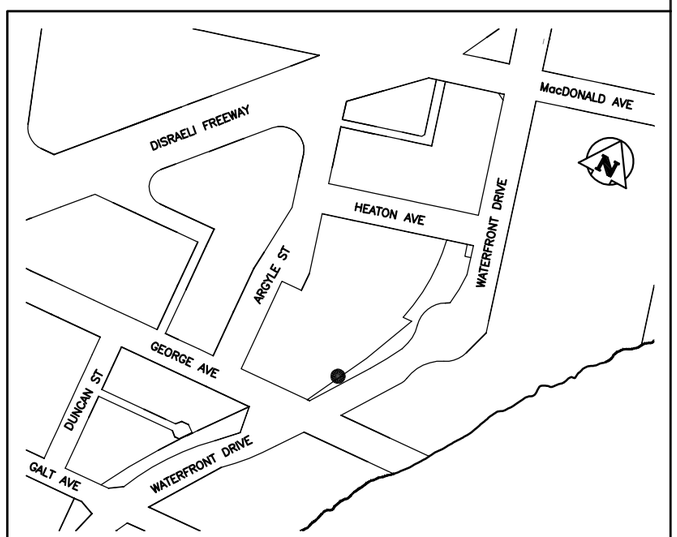
CONCRETE

1. CONCRETE MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH CAN/CSA-A23.1-M90. SEE BELOW FOR MIX REQUIREMENTS.
2. CEMENT TYPE SHALL BE AS NOTED IN INDIVIDUAL MIX DESIGNS TO CAN/CSA-A5 (LATEST).
3. MIX WATER TO BE DRINKABLE.
4. ADMIXTURES SHALL NOT BE USED UNLESS SPECIFIED HEREIN OR APPROVED BY THE DESIGN ENGINEER. CALCIUM CHLORIDE SHALL NOT BE USED.
5. DESIGN, FABRICATE AND ERECT FORMWORK/SHORING IN ACCORDANCE WITH CAN/CSA-S269.3-M92. ALLOW SUFFICIENT CONCRETE CURING TIME PRIOR TO REMOVAL.
6. LOCATE AND FABRICATE ALL CONSTRUCTION JOINTS, CONTROL JOINTS AND EXPANSION JOINTS AS DETAILED ON THE DRAWINGS. JOINTS NOT SHOWN SHALL BE BE APPROVED BY THE DESIGN ENGINEER PRIOR TO THE PLACEMENT OF CONCRETE.
7. PROVIDE ADEQUATE COLD/HOT WEATHER PROTECTION AS REQUIRED DURING CURING PERIOD.
8. CONCRETE MIX DESIGNS

FOUNDATION WALLS & FOOTINGS	28 DAY COMP. STRENGTH	30 MPa
	CEMENT	TYPE 50
	W/C RATIO	0.45
	AGGREGATE SIZE (MAX.)	20mm
	ENTRAINED AIR	4%-6%
	SLUMP (MAX.)	90mm (±10mm)
SLABS (EXTERIOR)	28 DAY COMP. STRENGTH	30 MPa
	CEMENT	TYPE 10
	W/C RATIO	0.45
	AGGREGATE SIZE (MAX.)	20mm
	ENTRAINED AIR	4%-6%
	SLUMP (MAX.)	90mm (±10mm)

REINFORCING STEEL

1. REINFORCING STEEL TO BE NEW DEFORMED BILLET STEEL BARS CONFORMING TO CAN/CSA G30.18-M92. GRADES TO BE; 400 MPa FOR 15M BARS AND LARGER; 300 MPa FOR 10M BARS.
2. WELDED STEEL WIRE FABRIC SHALL CONFORM TO CAN/CSA G30.5-M1983. 400 MPa MINIMUM GRADE IN FLAT SHEETS ONLY UNLESS APPROVED OTHERWISE.
3. SUBMIT SHOP DRAWINGS WHICH CLEARLY INDICATE BAR SIZES, SPACINGS, LOCATIONS & QUANTITIES OF REINFORCING STEEL, BENDING & CUTTING SCHEDULES, SUPPORTING & SPACING DEVICES, ETC. FOR REVIEW PRIOR TO FABRICATION. DETAIL, FABRICATE AND PLACE REINFORCING IN ACCORDANCE CSA A23.1, CSA A23.3 AND ACI 315-80 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" EXCEPT AS NOTED. LAP STEEL 36 BAR DIAMETERS (MINIMUM) UNLESS NOTED OTHERWISE.
4. BEND ALL HORIZONTAL REINFORCING 300mm AROUND CORNERS OR PROVIDE ADDITIONAL 600mm X 600mm ANGLE BARS.
5. REINFORCING STEEL SHALL BE CLEAN, FREE OF RUST, DIRT, LOOSE SCALE, OIL, GREASE OR ANY OTHER MATERIAL WHICH WOULD REDUCE BOND WITH THE CONCRETE.
6. TIE, SUPPORT AND SPACE ALL REINFORCING STEEL WITH PROPER APPROVED DEVICES DESIGNED FOR USE IN REINFORCED CONCRETE, TO PREVENT DISPLACEMENT OF REINFORCING AND ENSURE SPECIFIED CONCRETE COVER.
7. PROVIDE MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS NOTED IN SECTIONS.



SITE LOCATION PLAN
SCALE: 1:2000

300 LDS	LAND DRAINAGE SEWER	300 LDS						
250 WWS	WASTE WATER SEWER	250 WWS		TEST HOLE				
—·····—	GAS	—·····—	⊣	GUY WIRE				
— — — —	HYDRO	— — — —	⊶	LIGHT STANDARD				
—·—·—	M.T.S.	—·—·—		BACK OF CURB				
150 WM	WATERMAIN	150 WM		CONCRETE				
⊹	HYDRANT	✦		ASPHALT				
⊗	VALVE	⊗		SIDEWALK		× — ×	℄ PROFILE	— — —
○	MANHOLE	●		PROPERTY LINE		□ — □	N/W LANE EDGE	
□	CATCH BASIN	■	⊕	SURVEY BAR	⊕	○ — ○	S/E LANE EDGE	
▽	CURB INLET	▼	⊙	GEODETIC BENCHMARK	⊙	℄	PARKING/DRIVEWAY	
•	POLES T-MTS H-HYDRO		231.334	ELEVATION	(32.231)	TTTTT	WINDOW/DOOR SILL	
EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PROFILE	PROPOSED

LOCATION APPROVED
UNDERGROUND STRUCTURES

SUPV. 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.

B.M. 52-019
ELEV. 231.196m
GALT AVE. AND WATERFRONT SRIVE, TBLT. IN S. CONC. FOUNDATION OF SLUICE GATE IMMEDIATELY E. OF PUMPING STATION @ END OF GALT AVE., 1.2m E. & 0.8m BELOW TOP OF S.W. COR. OF SLUICE GATE.

NO.	REVISIONS	DATE	BY
0	ISSUED FOR TENDER	08/08/06	RJH

KGS GROUP — *CONSULTING ENGINEERS & PROJECT MANAGERS*
WINNIPEG (204) 896-1209
THUNDER BAY (807) 345-2233

DESIGNED BY	RJL	CHECKED BY	RJH
DRAWN BY	JG	APPROVED BY	
HOR. SCALE: AS NOTED VERTICAL:		RELEASED FOR CONSTRUCTION:	
DATE	20/06/06	DATE	

ENGINEER'S SEAL
PROVINCE OF MANITOBA
R.J. LONG
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NO.
06-0107-10

Winnipeg
THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES DIVISION

PROJECT TITLE
WATERFRONT DRIVE APPROACH AND LOADING DOCK

STRUCTURAL DETAILS

SHEET	OF
01	01

COMPUTER FILE NAME: 06-0107-10
CITY DRAWING NUMBER: **0002**

2006\06-0107-10\MUN_DWGS\LOADING DOCK\DWG\P-0002.DWG