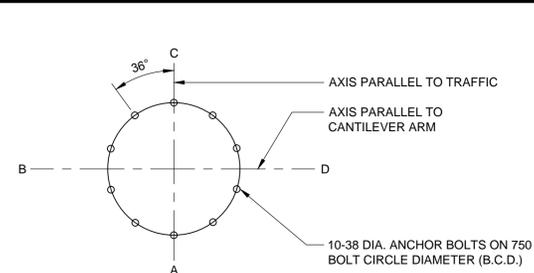
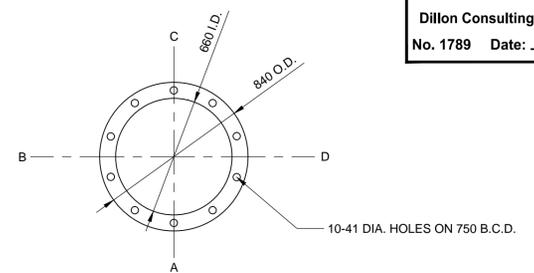


**SITE PLAN**  
1:250



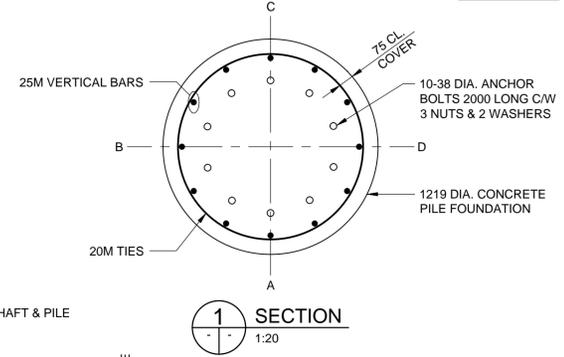
**ANCHOR BOLTS LAYOUT**  
1:20



**LOWER ANCHOR BOLT ASSEMBLY TEMPLATE**  
1:20

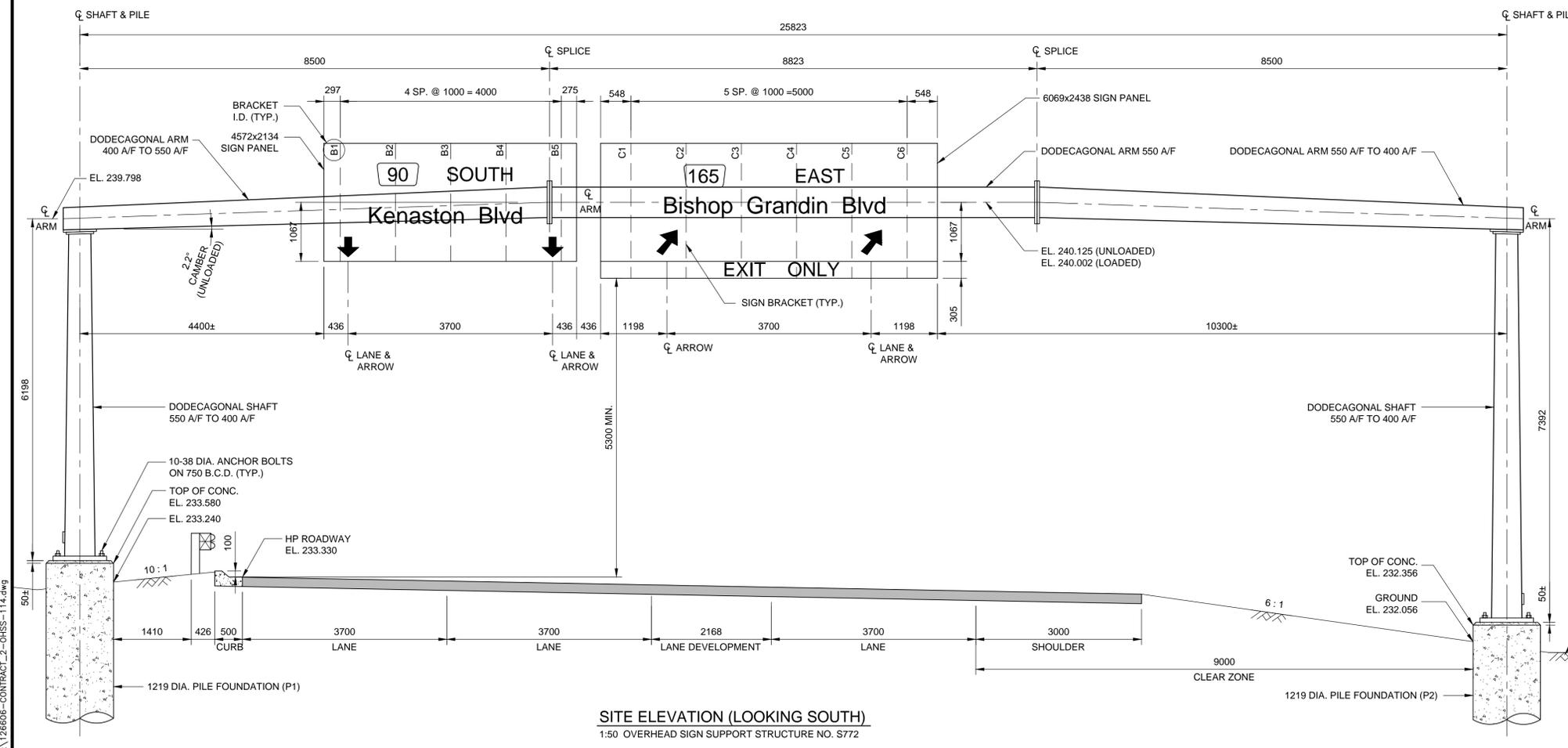


**KEY PLAN**  
**PILE CONSTRUCTION NOTES**

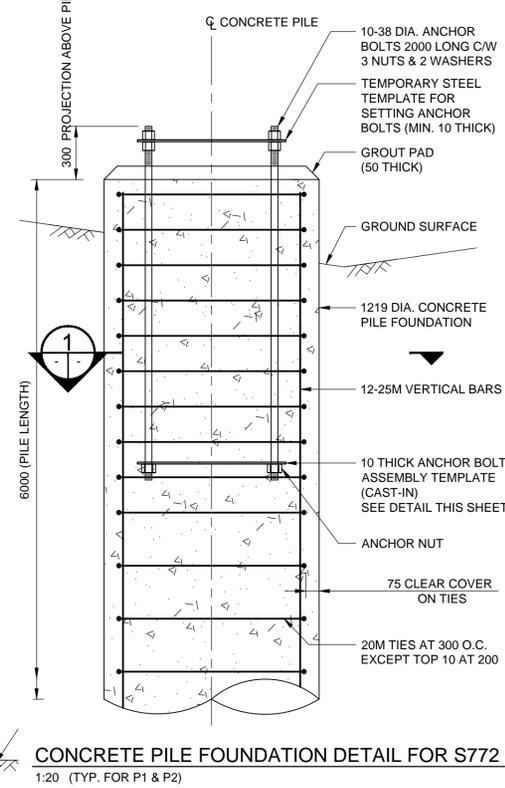


**SECTION**  
1:20

- PILE CONSTRUCTION NOTES**
- REINFORCING STEEL**
    - CSA G30.18 GR. 400W
    - VERTICAL BARS FULL LENGTH OF PILE
    - HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A767
  - ANCHOR BOLTS**
    - ASTM F1554 GR. 55 (380 MPa)
    - 10-38 DIA. ANCHOR BOLTS 2000 LONG
    - EACH BOLT C/W 3 NUTS & 2 WASHERS
    - TOP 300 THREADED 6 UNC CLASS 2A
    - BOTTOM 1100 THREADED 6 UNC CLASS 2A
    - HOT DIP GALVANIZED FULL LENGTH
    - B.C.D. = 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
    - FOLLOWING INSTALLATION OF THE STEEL STRUCTURE, TIGHTEN THE LOWER LEVELING NUTS AND UPPER ANCHOR NUTS TO A SNUG-TIGHT CONDITION, FOLLOWED BY 1/3 NUT ROTATION (+20°/0°) OF THE UPPER ANCHOR NUTS.
  - FORM TOP OF PILE WITH A TUBULAR FORM (SONOTUBE):
    - 1m FOR DRILLED SHAFTS
    - 1.5m FOR HYDRO-EXCAVATED SHAFTS
  - CONTRACTOR SHALL REMOVE THE ANCHOR BOLT SETTING TEMPLATE, NUTS AND FORM, FOLLOWING A MINIMUM 24 HOUR CONCRETE CURING PERIOD.
  - 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) CLASS OF EXPOSURE: S-1
    - ii) MINIMUM COMPRESSIVE STRENGTH AT 56 DAYS = 35 MPa
    - iii) MAXIMUM WATER/CEMENT RATIO = 0.40
    - iv) AIR CONTENT: CATEGORY 2 PER TABLE 4 OF CSA A23.1-09 (4.7%)
    - v) CEMENT IN ACCORDANCE WITH CSA A23.1-09



**SITE ELEVATION (LOOKING SOUTH)**  
1:50 OVERHEAD SIGN SUPPORT STRUCTURE NO. S772



**CONCRETE PILE FOUNDATION DETAIL FOR S772**  
1:20 (TYP. FOR P1 & P2)

**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:
- NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.
  - TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS SEE PROVINCIAL REGULATION 210/72 FOR DETAILS.
  - OBTAIN EXCAVATION PERMITS PRIOR TO CONSTRUCTION.
  - A MINIMUM VERTICAL SEPARATION OF 300 mm FROM GAS MAINS AND 100 mm FROM GAS SERVICE MUST BE MAINTAINED BETWEEN ANY MANITOBA HYDRO FACILITY AND ANY NEW INSTALLATIONS.
  - A MINIMUM 900 mm OF COVER SHALL BE MAINTAINED IN ALL AREAS WHERE EQUIPMENT WILL BE CROSSING, TRAVELING OR COMPACTING OVER THE HIGH PRESSURE GAS MAINS.
  - IF EQUIPMENT MUST CROSS, TRAVEL, OR COMPACT OVER THE GAS MAIN WITH LESS THAN THE MINIMUM DEPTH COVER, EARTH BRIDGING OR STEEL PLATES SHALL BE PLACED OVER THE MAIN AND EXTEND A MINIMUM OF 1.0 METRE ON EITHER SIDE AT EACH CROSSING LOCATION.

**CENTER OF PILE LAYOUT TABLE**

STRUCTURE	STATION	O/S	NORTH	EAST
S772 (P1)	1+160.000	8.812 L	5519455.292	629859.047
S772 (P2)	1+160.000	17.011 R	5519443.386	629836.132

150 W.M.	WATERMAIN	150 W.M.	M.T.S.	M.T.S.	150 mm W.M.	WATERMAIN	150 mm W.M.
+	HYDRANT VALVE	+	+	+	+	HYDRANT VALVE	+
300 LDS	LAND DRAINAGE SEWER	300 LDS	300 LDS	300 LDS	300 mm L.D.S.	LAND DRAINAGE SEWER	300 mm L.D.S.
250 WWS	WASTE WATER SEWER	250 WWS	250 WWS	250 mm W.W.S.	250 mm W.W.S.	WASTE WATER SEWER	250 mm W.W.S.
○	MANHOLE	○	○	○	○	MANHOLE	○
○	CATCH BASIN	○	○	○	○	CATCH BASIN	○
○	TEST HOLES	○	○	○	○	TEST HOLES	○
+	JUNCTIONS	+	+	+	+	JUNCTIONS	+
+	CULVERT	+	+	+	+	CULVERT	+
100 GAS	GAS	100 GAS	100 GAS	100 mm W.W.S.	100 mm W.W.S.	GAS	100 mm W.W.S.
EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PROFILE

**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.	654008	N: 5515764.610	E: 633359.697	654210	N: 5514436.957	E: 630550.534
DESIGNED BY	CDW	DESIGN TEAM		DESIGNED BY	CDW	
DRAWN BY	LFY	DRAWN BY	LFY	DRAWN BY	LFY	
CHECKED BY	SSR	CHECKED BY	SSR	CHECKED BY	SSR	
APPROVED BY	DPK	APPROVED BY	DPK	APPROVED BY	DPK	
HOR. SCALE	AS NOTED	RELEASED FOR CONSTRUCTION		HOR. SCALE	AS NOTED	
VERTICAL	AS NOTED	VERTICAL	AS NOTED	VERTICAL	AS NOTED	
ISSUED FOR TENDER	13/08/08	MRD		ISSUED FOR TENDER	13/08/08	MRD
NO. REVISIONS		DATE	BY	DATE		BY

**DILLON CONSULTING**

REGISTERED PROFESSIONAL ENGINEER

15/08/08  
C.D. WARD  
Member 24456

CONSULTANT PROJECT NUMBER  
**12-6606**

**THE CITY OF WINNIPEG PUBLIC WORKS DEPARTMENT**

Waverley West Arterial Roads Project (WWARP) PART 3 - CONTRACT 2  
ROUTE 90 TO ROUTE 165 OVERPASS (KENASTON BLVD.) AND ASSOCIATED WORKS

CITY DRAWING NUMBER  
**B242-13-115**

SHEET OF  
**115** OF **128**

CONSULTANT DRAWING NUMBER  
**S772-2013-01**

G:\CAD\126606\Contract\_2\Current\126606-CONTRACT\_2-OHSS-114.dwg