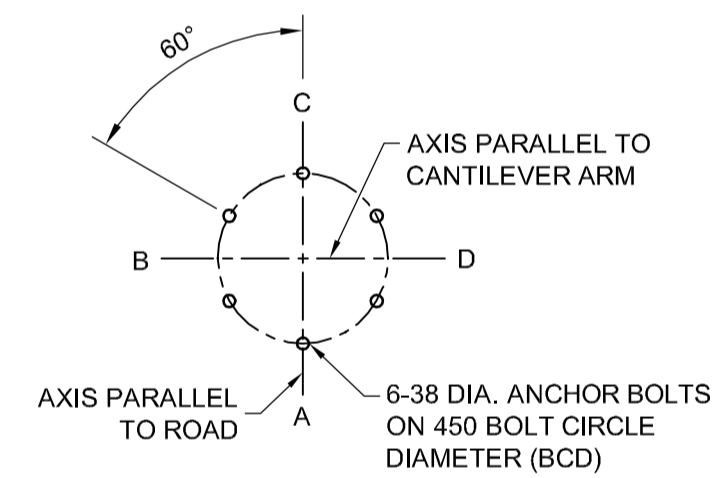
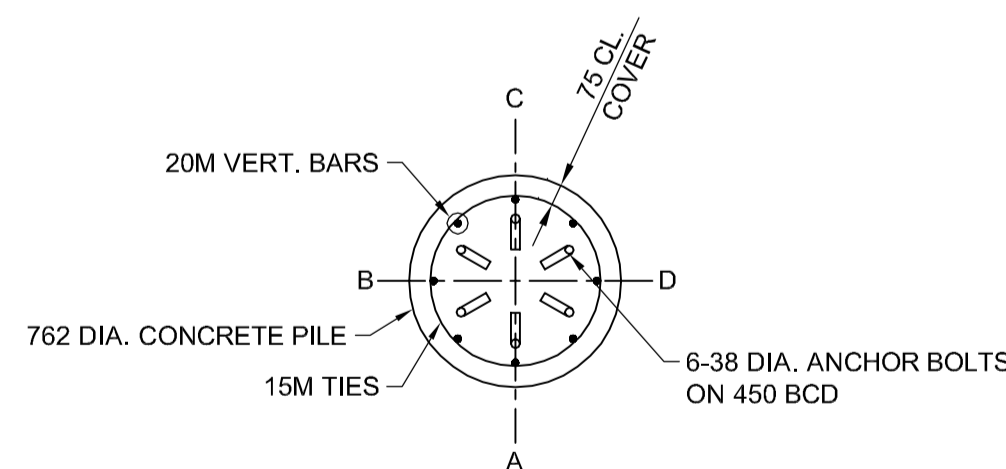


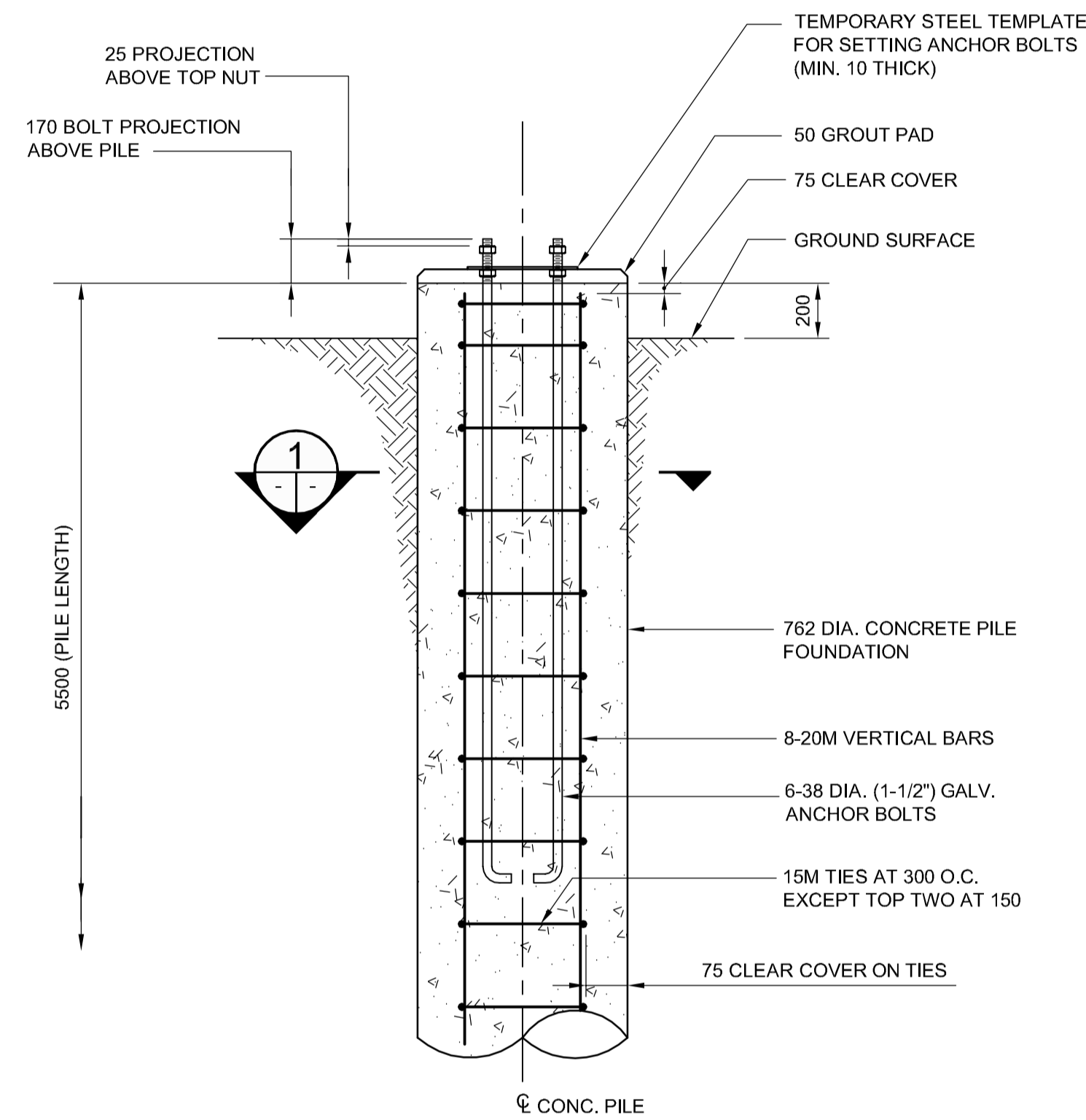
SITE ELEVATION - LOOKING SOUTH
1:50 OVERHEAD SIGN SUPPORT STRUCTURE NO. S769



ANCHOR BOLTS LAYOUT



SECTION 1
SCALE 1:20



CONCRETE PILE FOUNDATION DETAIL
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)
 - 6-38 (1-1/2") DIA. x 1500 LONG + 150 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 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:

 - CLASS OF EXPOSURE: S-1
 - MINIMUM COMPRESSIVE STRENGTH AT 56 DAYS = 35 MPa
 - MAXIMUM WATER/CEMENT RATIO = 0.40
 - AIR CONTENT: CATEGORY 2 PER TABLE 4 OF CSA A23.1-09 (4-7%)
 - CEMENT IN ACCORDANCE WITH CSA A23.1-09



Certificate of Authorization

Dillon Consulting Limited (MB)

No. 1789 Date: 2013-04-05

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.

G:\CAD\126606\Contract\Contract_1\Current\126606-09-STR-COM.dwg

150 WM	150 WM	MTS	M.T.S.	MTS	150 mm W.M.	150 mm W.M.	150 mm W.M.
HYDRANT VALVE	HYDRANT VALVE	MTS	CONCRETE ASPHALT PLANING	MTS	HYDRANT VALVE	MTS	HYDRANT VALVE
LAND DRAINAGE SEWER	LAND DRAINAGE SEWER	300 LDS	PAVING STONES	300 mm L.D.S.	LAND DRAINAGE SEWER	300 mm L.D.S.	LAND DRAINAGE SEWER
WASTE WATER SEWER	WASTE WATER SEWER	250 WWS	PROPERTY LINE	250 mm W.W.S.	WASTE WATER SEWER	250 mm W.W.S.	WASTE WATER SEWER
MANHOLE	MANHOLE	MTS	SURVEY BAR	MTS	MANHOLE	MTS	MANHOLE
CATCH BASIN	CATCH BASIN	MTS	CURB RAMP	MTS	CATCH BASIN	MTS	CATCH BASIN
CURB INLET	CURB INLET	MTS	DITCH	MTS	CURB INLET	MTS	CURB INLET
TEST HOLES	TEST HOLES	MTS	SWALE	MTS	TEST HOLES	MTS	TEST HOLES
CULVERT	CULVERT	MTS		MTS	CULVERT	MTS	CULVERT
100 GAS	100 GAS	MTS		MTS	100 GAS	MTS	100 GAS
EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PROFILE

UNDERGROUND STRUCTURES

SUPPLY 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	DESIGNED BY	CDW
ELEV. 232.463 m	DRAWN BY	JD
	CHECKED BY	SSR
	APPROVED BY	DPK
	HOR. SCALE	AS NOTED
	VERTICAL	AS NOTED
	RELEASSED FOR CONSTRUCTION	DATE
	CONSULTANT PROJECT NUMBER	12-6606

DESIGN TEAM

DILLON CONSULTING

ENGINEER'S SEAL

PROVINCE OF MANITOBA
ORIGINAL STAMPED BY
S.S. RIHAL
2013-04-05
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT PROJECT NUMBER

12-6606

THE CITY OF WINNIPEG PUBLIC WORKS DEPARTMENT

Winnipeg

WWARP III - KENASTON BLVD EXTENSION CONTRACT 3

S769 - ELEVATION AND PILE DETAILS

CITY DRAWING NUMBER: S769-2013-02
SHEET 18 OF 23
CONSULTANT DRAWING NUMBER