

8800

€ SIGN PL. & LANE

3500

ASPH. LANE

SAFETY CURB

SITE ELEVATION - LOOKING EAST

1:50 OVERHEAD SIGN SUPPORT STRUCTURE NO. S770

3500

750±

<sup>©</sup> SIGN PL. & LANE

3500

ASPH. LANE

- ROADWAY

 $\searrow$  900x900 MAX. SIGN PANEL (TYP.)

€ SHAFT & PILE

6-38 DIA. ANCHOR

BOLTS ON 450 BCD —

TOP OF PILE EL. 234.312

762 DIA. PILE -FOUNDATION

4550

- DODECAGONAL SHAFT

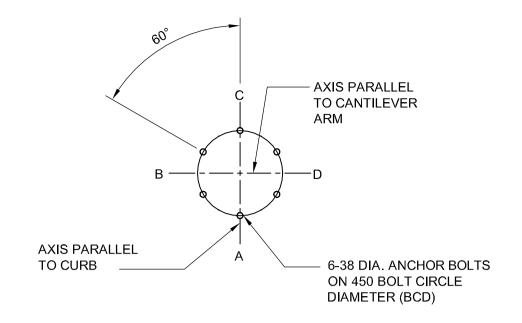
2800

- ISOLATE PILE AS

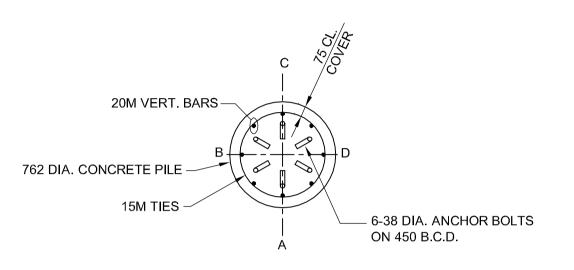
PER SD-228C

DODECAGONAL ARM

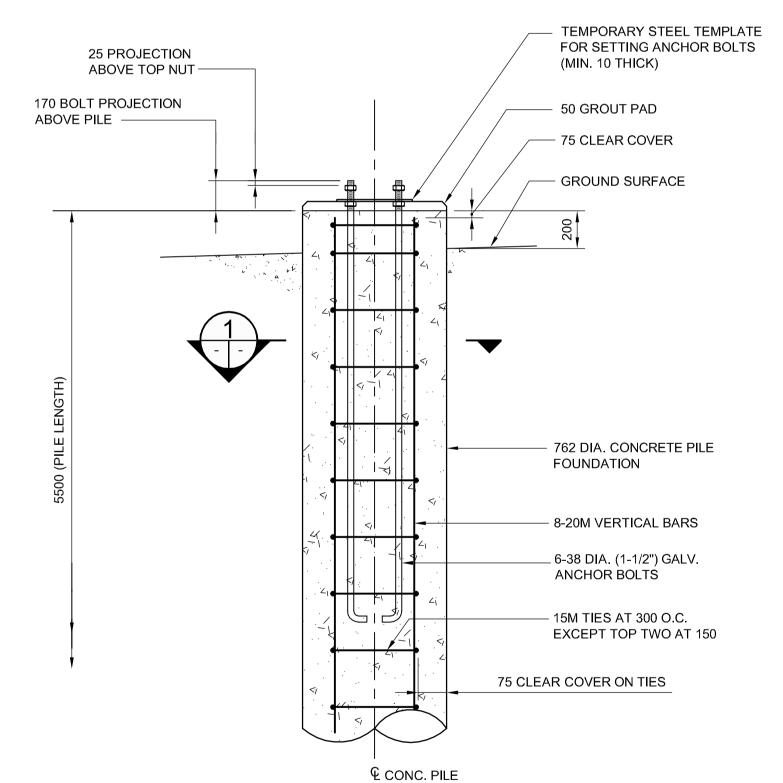
300 A/F TO 125 A/F



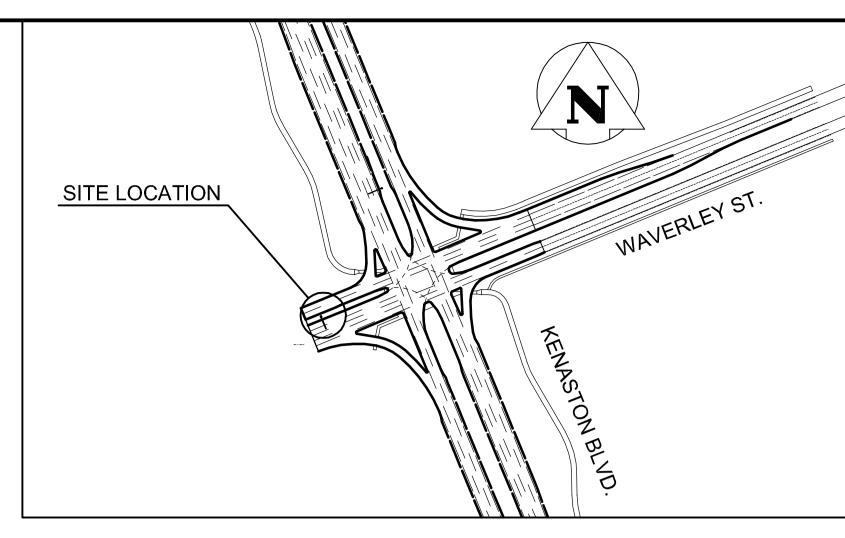
# ANCHOR BOLTS LAYOUT







# CONCRETE PILE FOUNDATION DETAIL



**KEY PLAN** 

#### PILE CONSTRUCTION NOTES

#### 1. REINFORCING STEEL

- CSA G30.18 GR. 400W
- VERTICAL BARS FULL LENGTH OF PILE
- HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A767

#### 2. 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.

### 3. FORM TOP OF PILE WITH A TUBULAR FORM (SONOTUBE):

- 1m FOR DRILLED SHAFTS • 1.5m FOR HYDRO-EXCAVATED SHAFTS
- 4. CONTRACTOR SHALL REMOVE THE ANCHOR BOLT SETTING TEMPLATE, NUTS AND FORM, FOLLOWING A MINIMUM 24 HOUR CONCRETE CURING PERIOD.

### 5. 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

# 

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:

- 1. NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.
- 2. TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS SEE PROVINCIAL REGULATION 210/72 FOR DETAILS.
- 3. OBTAIN EXCAVATION PERMITS PRIOR TO CONSTRUCTION.

150 . <u>wm</u>	WATERMAIN	150 WM	MIS	M.I.S.	MIS	<u>150 mm W.M.</u>	WATERMAIN	150 mm W.M.	i
<b>ф</b>	HYDRANT	•		CONCRETE	111111111111111		HYDRANT		UN
$\otimes$	<del>-VALVE</del>	$\otimes$		ASPHALT			VALVE	X	
300 LDS	LAND DRAINAGE SEWER	300 LDS		PLANING		300 mm L.D.S.	LAND DRAINAGE SEWER	300 mm L.D.S.	
250 WWS	WASTE WATER SEWER	250 WWS		SIDEWALK		250 mm W.W.S.	WASTE WATER SEWER	250 mm W.W.S.	SUPV
0	MANHOLE	•		PAVING STONES		—· <del>×</del> ·—	€ PROFILE	<b>—·—·</b>	
	CATCH BASIN			PROPERTY LINE			NORTH/WEST GUTTER		NO <sup>-</sup>
$\nabla$	CURB INLET	<b>▼</b>	<del> </del>	SURVEY BAR		<b></b> → <b>-</b>	SOUTH/EAST GUTTER		LOCA
•	TEST HOLES			CURB RAMP			NORTH/WEST T/LANE		Δ \ / Δ
[]	CULVERT		<b>←</b>	DITCH	<b>—</b>		SOUTH/EAST T/LANE		THAT
100 .GAS	GAS	100 GAS		SWALE	<b>←</b> ~				THAT THAT CONF LOCA OBTA BEFO
EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PROFILE	PROPOSED	BELC
	→ → → → → → → → → → → → ← → ← → ← ← ← ←	→ HYDRANT  WALVE  300 LDS LAND DRAINAGE SEWER  250 WWS WASTE WATER SEWER  O MANHOLE  CATCH BASIN  V CURB INLET  TEST HOLES  CULVERT  100 GAS GAS	→         HYDRANT         →           300 LDS         LAND DRAINAGE SEWER         300 LDS           250 wws         WASTE WATER SEWER         250 wws           O         MANHOLE         →           CATCH BASIN         ■           V         CURB INLET         ▼           TEST HOLES         CULVERT         100 GAS           100 GAS         GAS         100 GAS	→         HYDRANT         →         —<	→ HYDRANT → CONCRETE   ⊗ VALVE ⊗ ASPHALT	→ HYDRANT → CONCRETE   ⊗ VALVE ⊗ ASPHALT   300 LDS LAND DRAINAGE SEWER 300 LDS PLANING   250 WWS WASTE WATER SEWER 250 WWS SIDEWALK   ○ MANHOLE → PAVING STONES   □ CATCH BASIN → PROPERTY LINE   ▼ CURB INLET ▼ SURVEY BAR   • TEST HOLES □ CURB RAMP   □ CULVERT □ DITCH   100 GAS GAS 100 GAS SWALE	→ HYDRANT → CONCRETE ±   ⊗ VALVE ⊗ ASPHALT ± 300 LDS PLANING ✓ 300 mm LDS   250 WWS WASTE WATER SEWER 250 WWS SIDEWALK 250 mm W.W.S.   O MANHOLE → PAVING STONES XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	HYDRANT  → HYDRANT  → ASPHALT  SIDEWALK  O MANHOLE  CATCH BASIN  CONCRETE  DICATCH BASIN  FROPERTY LINE  CURB INLET  TEST HOLES  CULVERT  CULVERT  CONCRETE  CONCRETE	→         HYDRANT         →         CONCRETE         ±         HYDRANT         +           ⊗         VALVE         ⊗         ASPHALT         ±         HYDRANT         ±           300 LDS         LAND DRAINAGE SEWER         300 LDS         PLANING         200 MM         LAND DRAINAGE SEWER         300 mm LDS         LAND DRAINAGE SEWER         300 mm LDS         LAND DRAINAGE SEWER         300 mm LDS         WASTE WATER SEWER         250 mm W.W.S         WASTE WATER SEWER         250 mm W.W.S

n W.M.	UNDERGROUND STRUCTURES	B.M ELE
W.W.S.	SUPV. U/G STRUCTURES DATE COMMITTEE	
	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.	4
	CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE	0
	OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.	0
DSED		NO.

UCTURES	B.M ELE	. 654008 N: 5515764.610 E: 63335 V. 232.463 m	9.697		DESIGNED BY	CDW	DESIGN TEAM	ΕN
DATE					DRAWN BY	JD		<b>ا</b> و
DAIL					CHECKED BY	SSR	DILLON	
RUCTURES AS					APPROVED BY	DPK	CONSULTING	3
TEE IS GIVEN RE SHOWN OR ARE EXACT.	1	ISSUED FOR TENDER	13-04-05	MRD	HOR. SCALE	AS NOTED	RELEASED FOR CONSTRUCTION	C
AND EXACT S MUST BE JAL UTILITIES	0	ISSUED FOR 90% REVIEW	13-02-22	MRD	VERTICAL	AS NOTED		
ONSTRUCTION.	NO.	REVISIONS	DATE	BY	DATE	2013-04-05	DATE	

ENGINEER'S SEAL  ORIGINAL STAMPED BY S.S. RIHAL 2013-04-05 PROFESSIONAL
CONSULTANT PROJECT NUMBE
 12-6606

	<b>©</b>
	Winnipeg
WEER	\M\MARP III .

# THE CITY OF WINNIPEG PUBLIC WORKS DEPARTMENT

WWARP III - KENASTON BLVD EXTENSION	CITY DRAWING NUMBER S770-2013-01		
CONTRACT 3	SHEET	OF 23	
S770 - WAVERLEY ST ER WEST OF	CONSULTAN	T DRAWING NUMBER	

S770 - WAVERLEY ST. E.B. WEST OF	CONSULTA
KENASTON BLVD.	
LOCATION AND DETAILS	