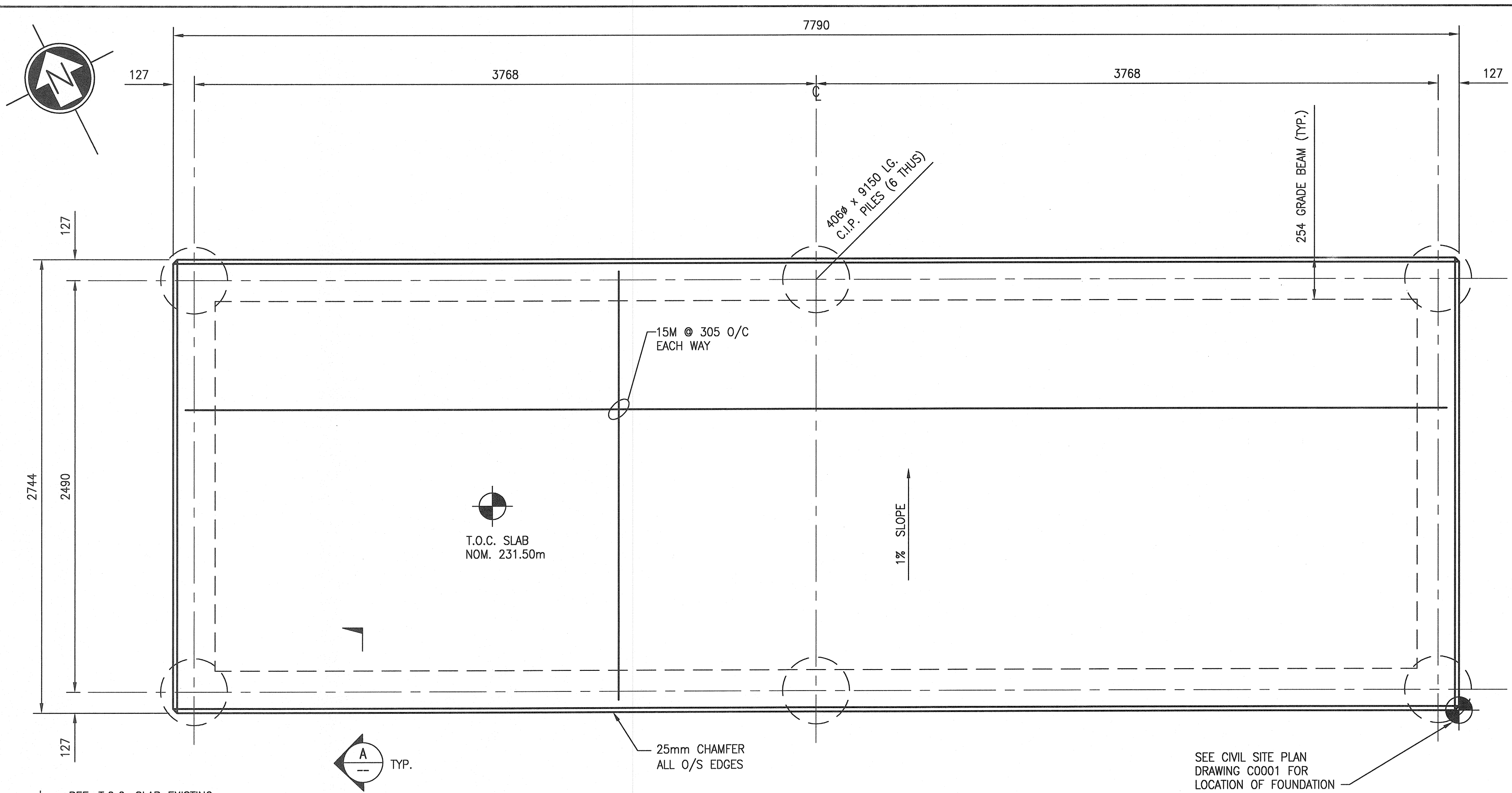
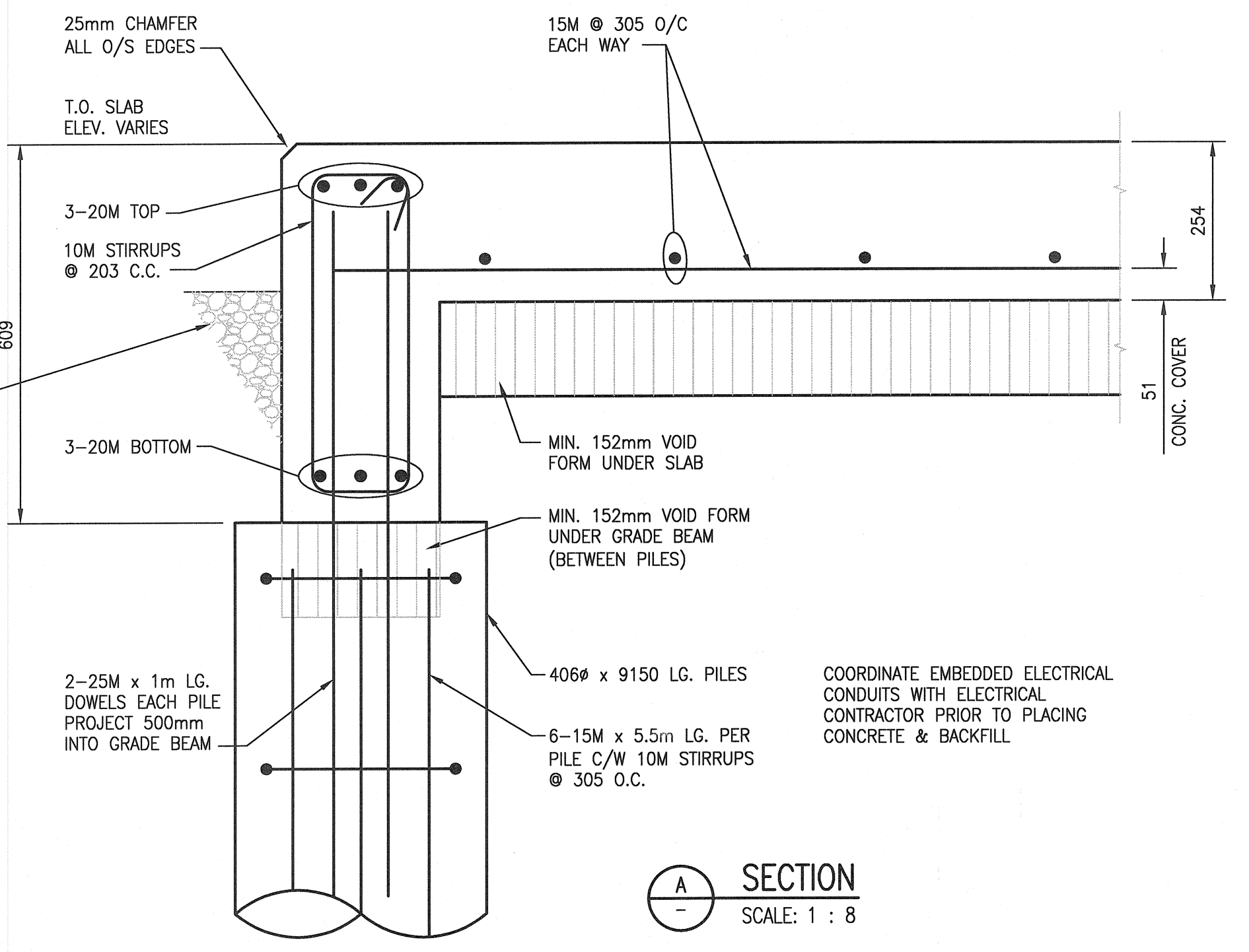
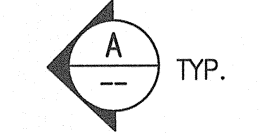


A1 SIZE - 594mm x 841mm



PLAN
SCALE: 1 : 20

- REF: T.O.C. SLAB EXISTING MOTOR ROOM MAIN FLOOR EL. 231.67m
- AND -
- REF: T.O.C. SLAB EXISTING ELECTRICAL VAULT FLOOR EL. 231.44m



SECTION
SCALE: 1 : 8

TOP OF INSULATING STONE (ALL AROUND, SEE ELECTRICAL DWGS.) TO EQUAL EXISTING GRADE ELEVATIONS. *DO NOT RAISE EXISTING GRADE LINES.

SHOP DRAWINGS:

- THE CONTRACTOR SHALL SUBMIT SPECIFIED SHOP DRAWINGS TO THE CONTRACT ADMINISTRATOR FOR REVIEW. ALL SUBMISSIONS MUST BE IN METRIC UNITS.
- SHOP DRAWINGS FOR THE FOLLOWING COMPONENTS SHALL BE SEALED, SIGNED AND DATED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE PROVINCE OF MANITOBA:
 - REINFORCING STEEL.
- THE CONTRACTOR SHALL REVIEW SHOP DRAWINGS, PRODUCT DATA AND SAMPLES PRIOR TO SUBMISSION AND STAMP AND SIGN DRAWINGS INDICATING CONFORMANCE TO THE CONTRACT REQUIREMENTS. THE CONTRACTOR SHALL VERIFY:
 - FIELD MEASUREMENTS
 - FIELD CONSTRUCTION CRITERIA
 - WEIGHTS AND LOADS
- THE CONTRACTOR SHALL COORDINATE EACH SUBMISSION WITH REQUIREMENTS OF WORK AND CONTRACT DOCUMENTS. INDIVIDUAL SHOP DRAWINGS WILL NOT BE REVIEWED UNTIL ALL RELATED DRAWINGS ARE AVAILABLE.
- THE CONTRACTOR SHALL NOTIFY THE CONTRACT ADMINISTRATOR, IN WRITING AT TIME OF SUBMISSION, OF DEVIATIONS FROM REQUIREMENTS OF CONTRACT DOCUMENTS.
- THE CONTRACTOR'S RESPONSIBILITY FOR ERRORS AND OMISSIONS IN SUBMISSION IS NOT RELIEVED BY THE CONTRACT ADMINISTRATOR'S REVIEW OF SUBMITTALS.
- NO DELAY OR CLAIMS WILL BE ALLOWED THAT ARISE BECAUSE OF DELAYS IN SUBMISSION, RE-SUBMISSION, AND REVIEW OF SHOP DRAWINGS.

DESIGN LOADS:

- CLIMATIC:
 - $S_s = 1.9$ kPa.
 - $S_f = 0.2$ kPa.
 - $Q_{so} = 0.45$ kPa.
 - $h = 1.25$
 - $h_s = 1.25$
- UNIFORM LIVE:
 - ON EQUIPMENT PAD = 2.4 kPa.
- DEAD LOAD:
 - SELF WEIGHT
- EQUIPMENT (COLLATERAL):
 - TRANSFORMER = 3818 KG.
 - SWITCH GEAR = 1452 KG.
 - CSTE = 365 KG.
 - * SEE ELECTRICAL DRAWINGS FOR LAYOUT

PILE DESIGN LOADS: (kN)

	V	H
ULS	156.4	8.5
SLS	123.4	3.6

GENERAL NOTES:

- DO NOT SCALE DRAWINGS.
- THESE NOTES ARE TO BE READ IN CONJUNCTION WITH ALL PERTINENT CODES AND CONTRACT DOCUMENTS. IN THE EVENT OF A CONFLICT, THE MOST STRINGENT REQUIREMENT SHALL GOVERN.
- DESIGN CODES:
 - (ALL REFERENCES TO CURRENT EDITION IN EFFECT AT TIME OF DESIGN)
 - NATIONAL BUILDING CODE (NBC) OF CANADA
 - MANITOBA BUILDING CODE
 - STEEL CODE CSA S16.1
 - CONCRETE CODE CSA A23.1, A23.2, A23.3
- VERIFY ALL DIMENSIONS AND ELEVATIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION.
- TAKE MEASUREMENTS IN FIELD AS REQUIRED TO VERIFY OR SUPPLEMENT DIMENSIONS SHOWN.
- MODIFY EXISTING WORK TO ACCOMMODATE NEW CONSTRUCTION AS APPROVED. VERIFY DIMENSIONS, ELEVATIONS AND EXTENT OF WORK WITH DRAWINGS PRIOR TO PROCEEDING WITH CONSTRUCTION.
- T.O.C. EQUIPMENT SLAB PROVIDED IS ABOVE CITY OF WINNIPEG MINIMUM DESIGN ELEVATION OF 229.98m (FPL).
- LOCATE, MARK AND PROTECT ALL EXISTING SERVICE LINES DURING CONSTRUCTION.

FOUNDATION PILING

- PILING CONTRACTOR SHALL TAKE PRECAUTIONS DURING EXCAVATION NOT TO DAMAGE EXISTING FOUNDATIONS OR FACILITIES. SHORE AND BRACE SHALLOW FOUNDATIONS WITHIN IMMEDIATE VICINITY OF EXCAVATION TO AVOID SHIFTING AND UNDERMINING OF FOOTINGS.
- INSTALLATION OF ALL PILING SHALL BE OVERSEEN BY APPROPRIATELY QUALIFIED FIELD PERSONNEL AND ACCURATE LOG RECORDS KEPT BY THE PILING CONTRACTOR, INCLUDING A RECORD OF ALL PROBLEMS ENCOUNTERED DURING DRILLING. RECORDS SHALL INCLUDE:
 - EXCAVATION LOGS
 - SHAFT COMPLETION DEPTHS
 - AS CONSTRUCTED DIMENSIONS
 - PILE ECCENTRICITY IF ENCOUNTERED
- THE ENGINEER MUST BE INFORMED OF ANY REQUIREMENT FOR DEVIATION FROM THE APPROVED DRAWINGS BEFORE THE WORK IS UNDERTAKEN.
- TOP OF PILE ELEVATIONS ARE AS SHOWN ON DRAWINGS. THE PILING CONTRACTOR SHALL USE THE BENCH MARK PROVIDED BY THE OWNER FOR LAYOUT OF THE WORK.

CAST-IN-PLACE CONCRETE

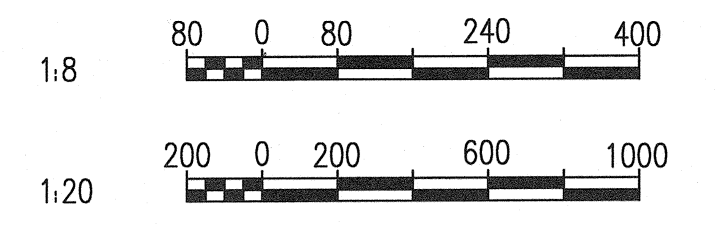
- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO CSA STANDARD CSA A23.1 AND CSA A23.2 INCLUDING HEATING/HOARDING AND REQUIREMENTS FOR COLD WEATHER CONCRETING.
- CEMENT SHALL BE TYPE HS SULPHATE RESISTING FOR ALL CONCRETE INCLUDING PILES AND PILE CAPS.
- CONCRETE MIX SHALL BE:
 - COMPRESSIVE STRENGTH @ 28 DAYS: 35MPa
 - MAX. AGGREGATE SIZE: 20mm
 - MAX. SLUMP: 100mm
 - AIR CONTENT: 3-5%
 - W/C RATIO: MAX. 0.45
- REINFORCING STEEL SHALL CONFORM TO CSA G30; GRADE 400.
- ALL STEEL TO BE DETAILED IN ACCORDANCE WITH THE LATEST RSIC (REINFORCING STEEL INSTITUTE OF CANADA) MANUAL OF STANDARD PRACTICE, CSA A23.1 AND CSA A23.3, EXCEPT AS NOTED ON DRAWINGS.
- ALL REINFORCING STEEL SHALL BE HELD IN PLACE AND TIED BY THE USE OF PROPER ACCESSORIES SUPPLIED BY THE REINFORCING STEEL FABRICATOR.
- LAP ALL BARS MINIMUM 400mm.
- ALL REINFORCING STEEL SHALL BE CLEANED OF ALL DIRT, GREASE AND ALL OTHER DELETERIOUS MATERIALS PRIOR TO PLACING.
- REINFORCING STEEL SHALL NOT BE WELDED OR HEATED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
- COVER TO REINFORCING STEEL SHALL BE AS FOLLOWS:
 - PILES - 76 SIDES
 - BEAMS - 51 TOP, 76 BOT, 51 SIDES
 - SLAB - 51 BOT
- A MINIMUM OF 25MPa STRENGTH MUST BE OBTAINED PRIOR TO REMOVAL OF FORMWORK.

EXCAVATION AND BACK FILL

- TAKE PRECAUTION DURING EXCAVATION/DEMOLITION WORK TO AVOID ANY DAMAGE TO ADJACENT EXISTING FOUNDATIONS/FACILITIES.
- WHERE COMPACTED GRANULAR FILL IS SPECIFIED THE SUB GRADE SHALL BE COMPACTED TO 98% OF STANDARD PROCTOR DENSITY PRIOR TO PLACING COMPACTED GRANULAR BASE.
- COMPACTED GRANULAR BASE SHALL BE PLACED IN 102 MAXIMUM LIFTS AND COMPACTED TO 100% OF STANDARD PROCTOR DENSITY.

LAST SAVE: 2018/12/14 - 11:26am
PATH: M:\657381\ENGIN\425TR\DD - General DWG\1-0179F-S0001-001-00.dwg

DRAWING NUMBER	REFERENCE DRAWINGS
1-0179F-C0001	SITE PLAN



NO.	REVISIONS	DATE	DESIGN	CHECK
00	ISSUED FOR TENDER AND CONSTRUCTION	2018/12/14	KK	RD

SNC-LAVALIN INC.
148 Nature Park Way
Winnipeg, MB, Canada R3P 0X7
204-786-8080

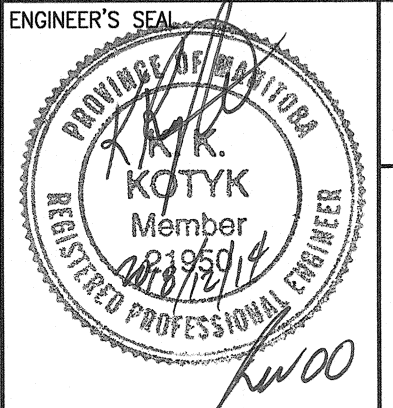
DESIGNED BY: K. KOTYK
CHECKED BY: R. DIONISIO

DRAWN BY: W. LOPEZ
APPROVED BY: B. CLEVEN

SCALE: AS SHOWN
ISSUED FOR CONSTRUCTION BY: K. ZUREK

DATE: 2018/07/16
DATE: 2018/12/14

CONSULTANT NO.:



THE CITY OF WINNIPEG
Winnipeg WATER AND WASTE DEPARTMENT

ROLAND FLOOD PUMPING STATION
2019 UPGRADES
STRUCTURAL FOUNDATION
NEW WORK

CITY DRAWING NUMBER: 1-0179F-S0001
SHEET: 001
REV: 00
SIZE: A1

1-0179F-S0001-001-00.dwg