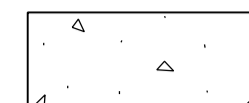
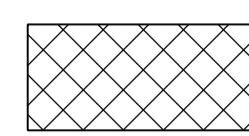
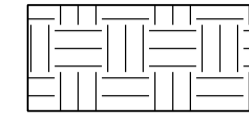
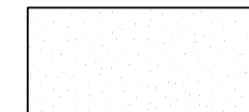
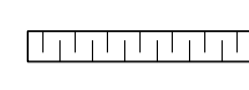

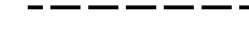





LEGEND

-  CONCRETE
-  CUT AND REMOVE EXISTING CONCRETE/CMU CUT IN PLAN OR SECTION
-  ROCK
-  GROUT
-  RIGID INSULATION
-  EARTH OR FINISHED GRADE
-  OUTLINE OF NEW STRUCTURES
-  OUTLINE OF EXISTING STRUCTURES
-  NEW PILE
-  EXISTING PILE

GENERAL NOTES

1. SEE DRAWINGS 1-0102-DGAD-A003 FOR ABBREVIATIONS.
2. DIMENSIONS IN MILLIMETRES.
3. ELEVATIONS IN METRES.
4. READ STRUCTURAL DRAWINGS IN CONJUNCTION WITH ALL RELATED CIVIL AND ELECTRICAL DRAWINGS, EXISTING DRAWINGS AND OTHER CONTRACT DOCUMENTS.
5. DESIGN DETAILS, SECTIONS, AND STANDARD DETAILS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS AND LOCATIONS OCCURRING THROUGHOUT THE PROJECT, WHETHER OR NOT THEY ARE INDIVIDUALLY CALLED OUT ON DRAWINGS.
6. DESIGN LOADS INDICATED ON DRAWINGS ARE SERVICES LOADS (UNFACTORED). DESIGN LOADS INDICATED ON DRAWINGS WITH SUBSCRIPT "f" ARE FACTORED LOADS.
7. DO NOT EXCEED DESIGN LOADS NOTED ON DRAWINGS DURING CONSTRUCTION.
8. SEE ELECTRICAL DRAWINGS FOR SIZES, REINFORCING, AND LOCATIONS OF CONCRETE ENCASED CABLES, CONDUITS, DUCT BANKS, AND CONCRETE PADS FOR ELECTRICAL EQUIPMENT NOT SHOWN ON STRUCTURAL DRAWINGS.
9. STRUCTURAL MEMBERS SHALL NOT BE CUT OR MODIFIED UNLESS SPECIFICALLY DETAILED OR APPROVED IN WRITING BY THE CONTRACT ADMINISTRATOR.

DESIGN CRITERIA

1. APPLICABLE CODE: 2010 NATIONAL BUILDING CODE WITH 2011 MANITOBA AMENDMENTS. (NBC)
2. IMPORTANCE CATEGORY

POST DISASTER	
I_s (ULS) = 1.25	
I_s (SLS) = 0.9	
I_w (ULS) = 1.25	
I_w (SLS) = 0.75	
3. SITE LOCATION: WINNIPEG, MANITOBA
4. SNOW LOAD DATA:

GROUND SNOW LOADING	$S_s = 1.90 \text{ kPa}$
ASSOCIATED RAIN LOADING	$S_r = 0.20 \text{ kPa}$
5. RAIN LOAD DATA:

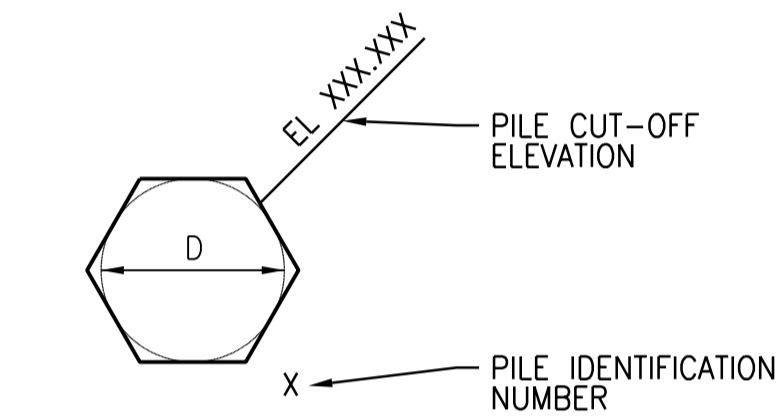
ONE DAY RAINFALL	108 mm
EXPOSURE CATEGORY	OPEN TERRAIN
6. WIND LOAD DATA:

1 IN 50 YEAR HOURLY WIND PRESSURE	0.45 kPa
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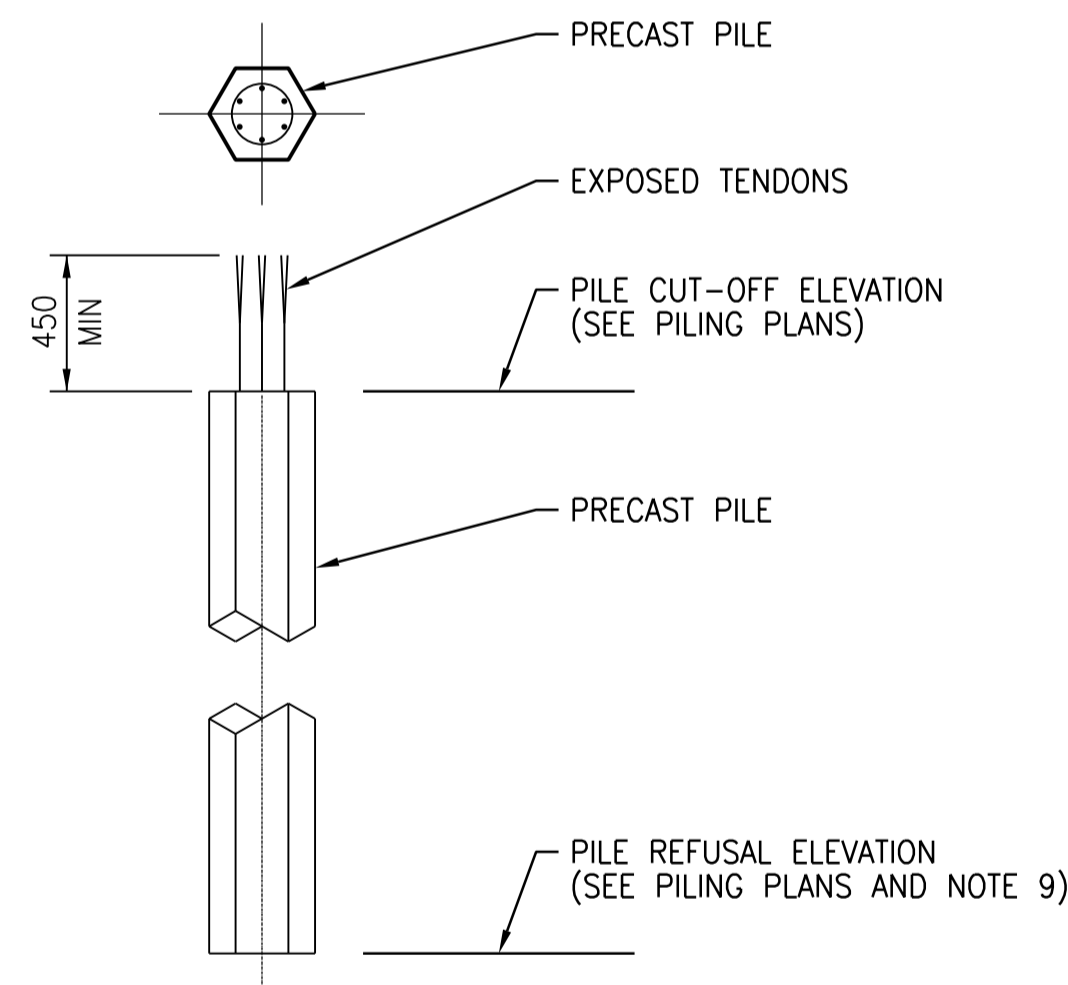
FOUNDATIONS

1. REFER TO GEOTECHNICAL REPORT SEWPCC UPGRADING/EXPANSION/CIVIL/GEOTECH GEOTECHNICAL INVESTIGATION REPORT DATED MARCH 2014 PREPARED BY KGS GROUP.
2. DESIGN GROUND WATER LEVEL ELEVATION: 227.500m
3. PROTECT PILES FROM DAMAGE DURING CONSTRUCTION.
4. PRESTRESSED CONCRETE PILES (HEXAGONAL), SEE DETAIL 1

PILE DIAMETER(D)	SLS PILE CAPACITY
300mm	555 kN
350mm	780 kN
400mm	1050 kN
5. SEE DETAIL 2 FOR TYPICAL CUT-OFF REQUIREMENTS.
6. NOTIFY CONTRACT ADMINISTRATOR IF FINAL ELEVATION OF TOP OF INSTALLED PILE IS BELOW CUT-OFF ELEVATION PLUS MINIMUM LENGTH FOR EXPOSED TENDONS. SEE DETAIL 3 FOR PILE EXTENSION.
7. WHERE CUT-OFF ELEVATION OF PILE IS LOWER THAN GENERAL EXCAVATION LIMIT FOR THE SURROUNDING AREA, EXCAVATE LOCALLY AROUND THE PILE TO CUT-OFF ELEVATION MINUS 375mm.
8. BENCHMARK: REFER TO CIVIL DRAWINGS.
9. ESTIMATED PILE REFUSAL ELEVATION BASED ON MEMORANDUM SEWPCC UPGRADING/EXPANSION PROJECT 682-2012 TEMPORARY EXCAVATION AND REFUSAL OF DRIVEN PILES, PREPARED BY KGS GROUP.

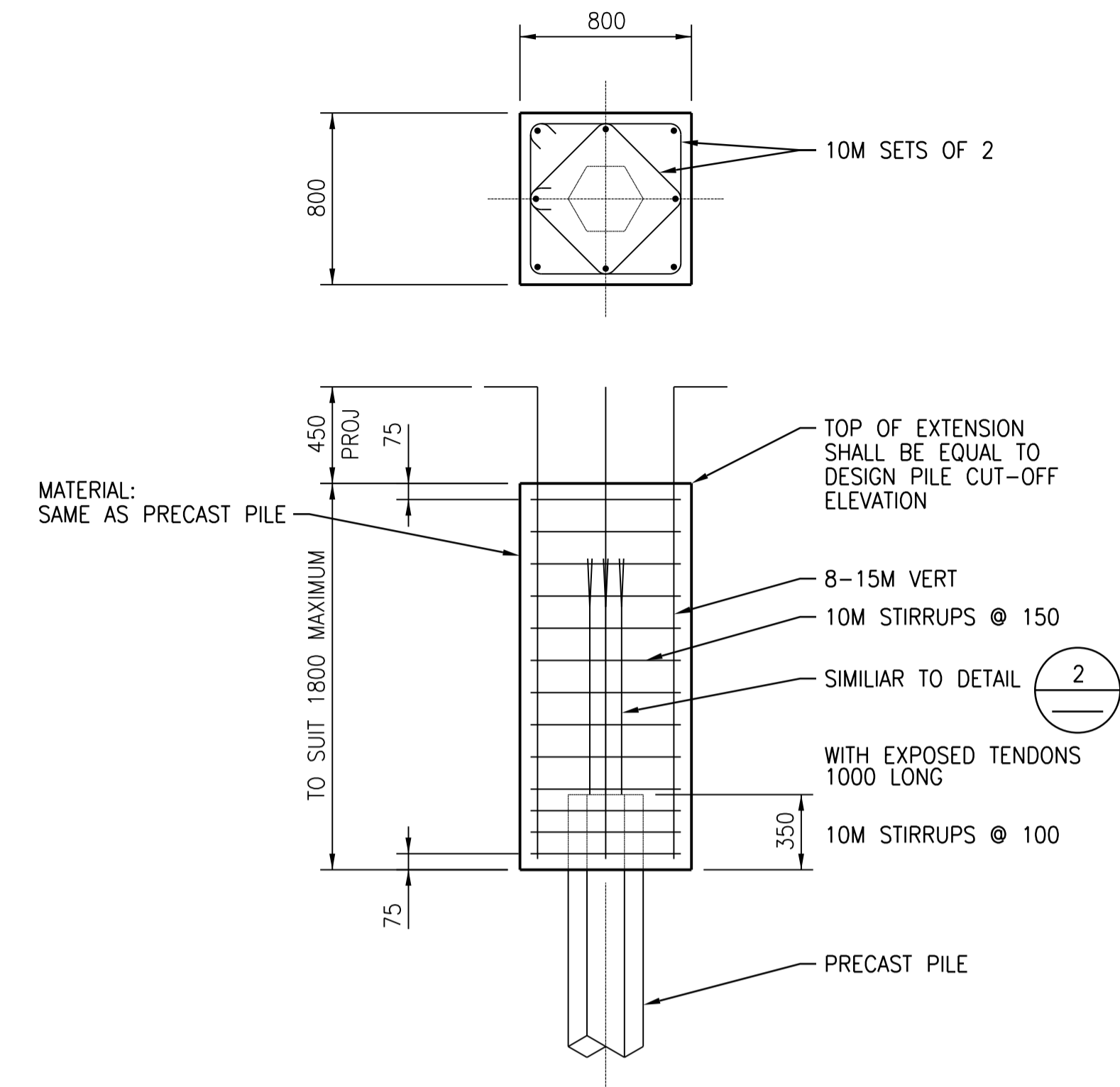


1 DETAIL
NTS



TYPICAL PILE CUT-OFF

2 DETAIL
1:25



MATERIAL:
SAME AS PRECAST PILE

NOTE:

1. THIS PILE EXTENSION DETAIL APPLIES TO PILES DRIVEN A MAXIMUM OF 900mm LOWER THAN EXPECTED.

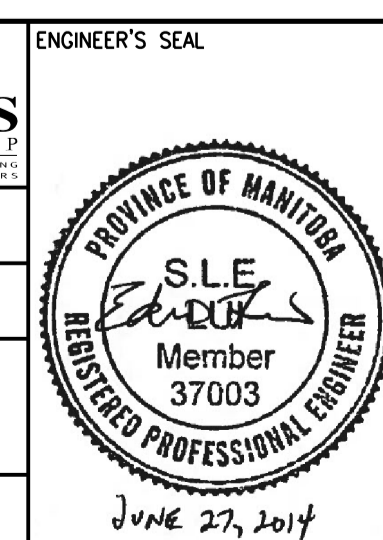
TYPICAL CAST IN PLACE
PILE EXTENSION

3 DETAIL
1:25



NO.	REVISIONS	DATE	DESIGN	CHECK
00	ISSUED FOR TENDER	06/2014	G.O.	B.W.

CH2MHILL		KGS GROUP	
DESIGNED BY: E. LUI	CHECKED BY: B. WILLIAMSON	DRAWN BY: G. OMORI	APPROVED BY: E. LUI
SCALE: NTS	ISSUED FOR CONSTRUCTION BY: DATE: 2014/06/27	DATE: 2014/06/27	DATE:
CONSULTANT NO.: 474248			



THE CITY OF WINNIPEG Winnipeg WATER AND WASTE DEPARTMENT	
SOUTH END WATER POLLUTION CONTROL CENTRE SEWPCC UPGRADING/EXPANSION PROJECT STRUCTURAL GENERAL NOTES AND LEGEND	
CITY DRAWING NUMBER 1-0102-SGAD-A001	SHEET REV. SIZE 001 00 A1