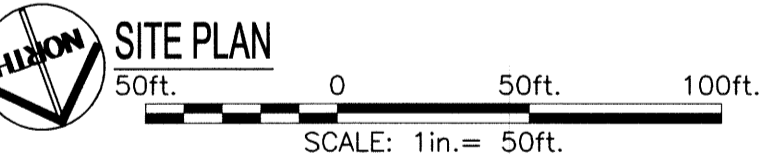
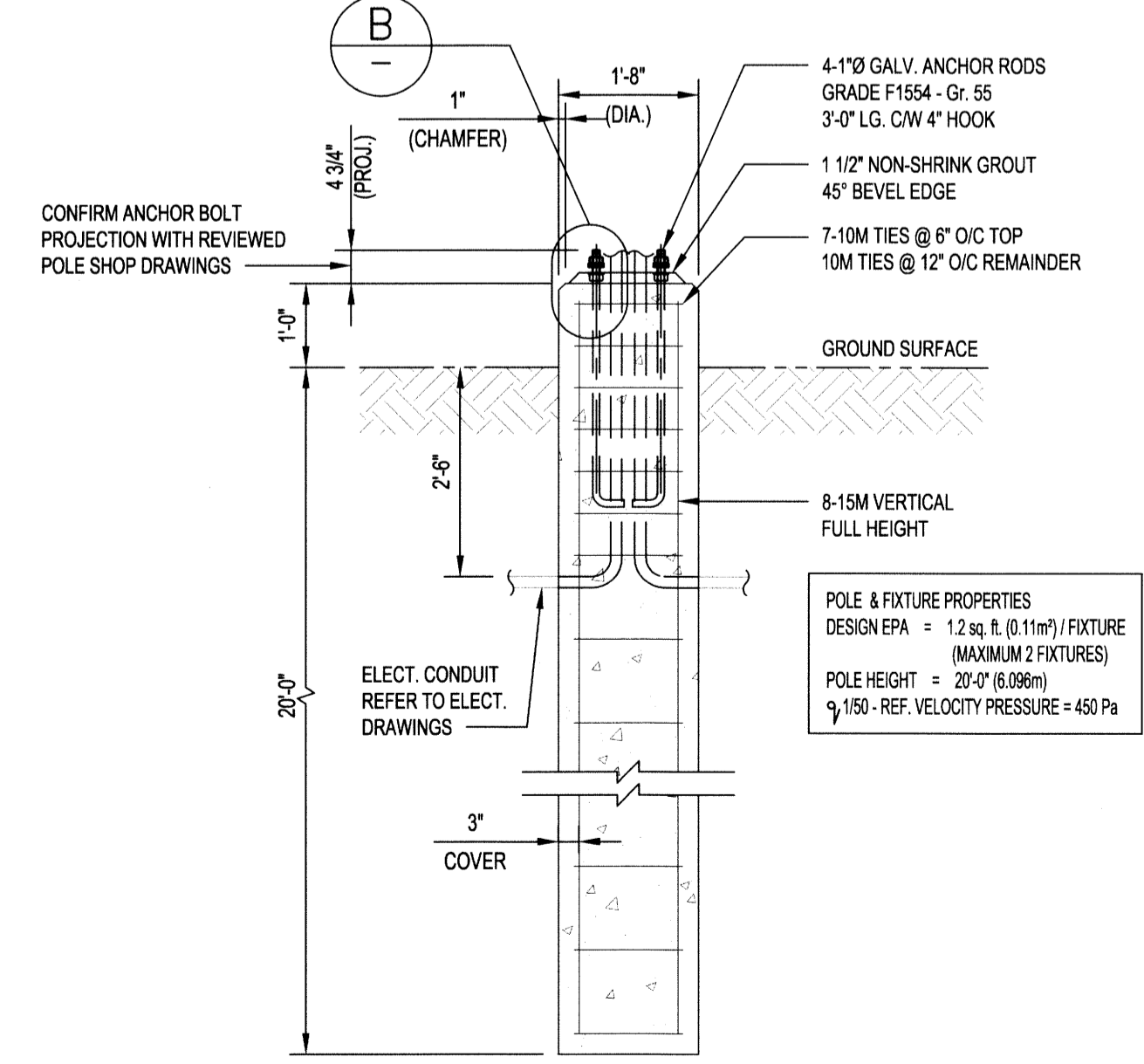


GEOTECHNICAL REVIEW:
 CONTRACTOR TO PROVIDE CONTRACT ADMINISTRATOR MINIMUM 48 HOURS NOTICE PRIOR TO DRILLING PILES TO PERMIT KGS GROUP TO CONDUCT SOIL TESTING. DO NOT INSTALL PILES UNTIL SOIL TESTING HAS BEEN COMPLETED.

DEMOLITION:
 CONTRACTOR TO JACK HAMMER AND REMOVE EXISTING CONCRETE POLE BASES (410) DOWN TO 12" BELOW GRADE. BACKFILL AND REPAIR LANDSCAPING TO MATCH EXISTING.



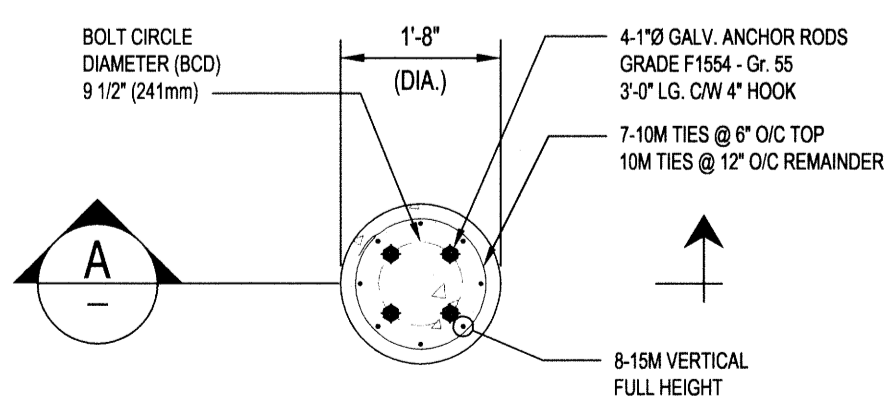
NOTE:
 CONFIRM LOCATION OF LIGHT POLE FOUNDATIONS WITH CONTRACT ADMINISTRATION BEFORE PROCEEDING.



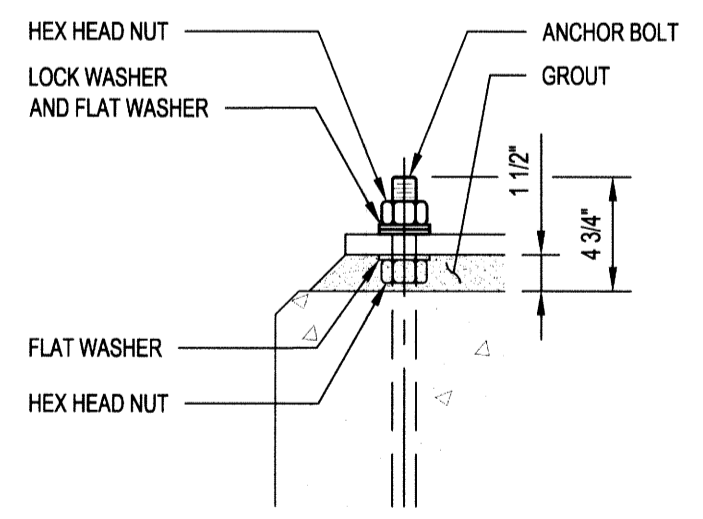
A SECTION - PILE 'P1'
 SCALE: 1/2"=1'-0"

NOTE:
 CONFIRM POLE, BASE AND BOLT CIRCLE DIAMETER WITH REVIEWED LIGHT POLE SHOP DRAWINGS AND COORDINATE WITH CONCRETE WORK.

PILE SCHEDULE			
MARK	DIAMETER	PILE LENGTH (BELOW GRADE)	REMARKS
P1	1'-8"	20'-0"	REFER TO SECTION A & DETAIL 1



1 DETAIL - PILE 'P1'
 SCALE: 1/2"=1'-0"



B DETAIL - ANCHOR
 SCALE: 1 1/2"=1'-0"

FOUNDATIONS (C.I.P. CONCRETE PILES):

- FOUNDATIONS SHALL BE CAST-IN-PLACE CONCRETE FRICTION PILES AS SHOWN ON DRAWINGS.
- CONCRETE PILES HAVE BEEN DESIGNED FOR AN AVERAGE ALLOWABLE SKIN FRICTION VALUE OF 14 kPa (PS) AND 18 kPa (LS). ACTUAL SKIN FRICTION VALUES AND SOIL CONDITIONS TO BE TESTED ON SITE BY KGS GROUP DURING CONSTRUCTION.
- INSTALLATION OF ALL CONCRETE PILES SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA, PRIOR TO PLACEMENT OF CONCRETE.
- THE PILING CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND SERVICES IN PILING AREA WHETHER SHOWN OR NOT. EXPOSE ALL SERVICES CLOSE TO PILING AS REQUIRED.
- PILES SHALL NOT BE MORE THAN 50mm OUT OF POSITION Laterally AT THE TOP AND NOT MORE THAN 2% OUT OF PLUMB.
- REINFORCE ALL PILES AS DETAILED ON THE DRAWINGS. REFER TO CONCRETE NOTES FOR CONCRETE REQUIREMENTS. INSTALL EACH PILE AS A CONTINUOUS POUR.
- VIBRATE TOP 14" (4.5m) OF CONCRETE IN ALL PILES.
- SLEEVING WHERE REQUIRED SHALL BE INCLUDED IN THE PILING CONTRACT.

REINFORCING STEEL:

- REINFORCING STEEL TO BE NEW DEFORMED BILLET STEEL BARS CONFORMING TO CSA G30.19 (LATEST), GRADE TO BE 400 MPa.
- REINFORCING STEEL SHALL BE CLEAN, FREE OF RUST, DIRT, LOOSE SCALE, OIL, GREASE OR ANY OTHER MATERIAL WHICH WOULD REDUCE BOND WITH THE CONCRETE.
- SUBMIT SHOP DRAWINGS WHICH CLEARLY INDICATE BAR SIZES, SPACINGS, LOCATIONS & QUANTITIES OF REINFORCING STEEL, BENDING & CUTTING SCHEDULES, SUPPORTING & SPACING DEVICES, ETC. FOR REVIEW PRIOR TO FABRICATION. DETAIL, FABRICATE AND PLACE REINFORCING IN ACCORDANCE WITH CSA A23.1 (LATEST), CSA A23.3 (LATEST) AND ACI SP-46 (LATEST) UNLESS NOTED. LAP STEEL 36 BAR DIAMETERS (MINIMUM) UNLESS NOTED.
- TI, SUPPORT AND SPACE ALL REINFORCING STEEL WITH PROPER APPROVED DEVICES DESIGNED FOR USE IN REINFORCED CONCRETE, TO PREVENT DISPLACEMENT OF REINFORCING AND ENSURE SPECIFIED CONCRETE COVER.
- PROVIDE MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS FOLLOWS:

C.I.P. PILES 75mm

NOTES:
 THESE DRAWINGS SHALL NOT BE SCALED.
 THE CONTRACTOR SHALL VISIT THE SITE AND SATISFY ONESELF ALL DIMENSIONS, DATUM, AND DETAILED INFORMATION SHOWN ARE CORRECT.
 ALL PRODUCTS AND MATERIALS TO BE USED AND INSTALLED SHALL CONFORM WITH MANUFACTURERS SPECIFICATIONS & APPLICABLE CODES.

CONCRETE:

- CONCRETE MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH CSA A23.1 (LATEST), SEE BELOW FOR MIX REQUIREMENTS.
- ADMIXTURES SHALL NOT BE USED UNLESS SPECIFIED HEREIN OR APPROVED BY THE DESIGN ENGINEER. CALCIUM CHLORIDE SHALL NOT BE USED.
- MIX WATER SHALL BE POTABLE.
- DESIGN, FABRICATE AND ERECT FORMWORK/SHORING IN ACCORDANCE WITH CAN/CSA-S269.3 (LATEST). ALLOW SUFFICIENT CONCRETE CURING TIME PRIOR TO REMOVAL.
- CONCRETE FINISHING SHALL MEET THE REQUIREMENTS OF CSA A23.1 (LATEST).
- FORM RELEASE AGENT SHALL BE BIODEGRADABLE, NON-STAINING AND NON-VOLATILE.
- PROVIDE ADEQUATE COLDHOT WEATHER PROTECTION AS REQUIRED DURING CURING PERIOD.
- PLACE AND SECURE ALL EMBEDDED ANCHORS, WELD PLATES, SLEEVES, BUCKS, DOWELS, INSERTS, WATERSTOPS, ETC. PRIOR TO PLACING CONCRETE. CO-ORDINATE WITH ALL TRADES FOR EMBEDDING OF ALL OTHER, CONDUIT, SERVICES, BLOCKING, ETC.
- ALL EXPOSED CORNERS TO HAVE 25mm CHAMFER FILLET UNLESS NOTED.
- CAST-IN-PLACE ANCHOR BOLTS SHALL MEET REQUIREMENTS OF ASTM A307 (LATEST).
- EXPANSION ANCHORS SHALL BE HILTI KWIK-BOLTS OR APPROVED EQUAL, UNLESS NOTED. INSTALL AS PER MANUFACTURER'S INSTRUCTIONS.
- THE CONCRETE SUPPLIER SHALL BE CERTIFIED TO MEET THE REQUIREMENTS OF CSA A23.1.
- THE CONCRETE SUPPLIER SHALL SUBMIT CONCRETE MIX DATA SUBMISSION FORMS FOR EACH TYPE OF CONCRETE SPECIFIED FOR REVIEW PRIOR TO BATCHING ANY CONCRETE.

CONCRETE MIX DESIGNS:

CONCRETE MIX DESIGN SHALL BE PROPORTIONED TO MEET THE FOLLOWING PERFORMANCE REQUIREMENTS:

C.I.P. PILES, PILE CAPS, FOOTINGS & RAFT SLABS:		
EXPOSURE CLASS	S-2	
MIN. 28 DAY COMP. STRENGTH	35 MPa	
CEMENT TYPE	HS	
MAX. W/C RATIO	0.45	
MAX. AGGREGATE SIZE	20mm	
ENTRAINED AIR CONTENT	4%-7%	

No.	REVISION/DESCRIPTION	BY	DATE
0	ISSUED FOR CONSTRUCTION	FBV	15.09.29

SEAL

15-09-29

DRAWN: FBV, CHECKED: RC, DESIGNED: RC, APPROVED: RC

DATE: 2014.11.10

USER APPROVAL

THE CITY OF WINNIPEG
 PLANNING, PROPERTY AND
 DEVELOPMENT DEPARTMENT
 MUNICIPAL ACCOMMODATIONS DIVISION
 3-65 GARRY STREET, R3C 4K4

PROJECT
 BROOKLANDS SCHOOL
 SITE LIGHTING UPGRADE

1950 PACIFIC AVENUE WEST

SHEET TITLE
 STRUCTURAL
 FOUNDATION PLAN

SCALE: AS SHOWN PROJECT No: 2015-701 SHEET No: S1

APEGM
 Certificate of Authorization
 KGS Group
 No. 245

KGS GROUP
 CONSULTING ENGINEERS