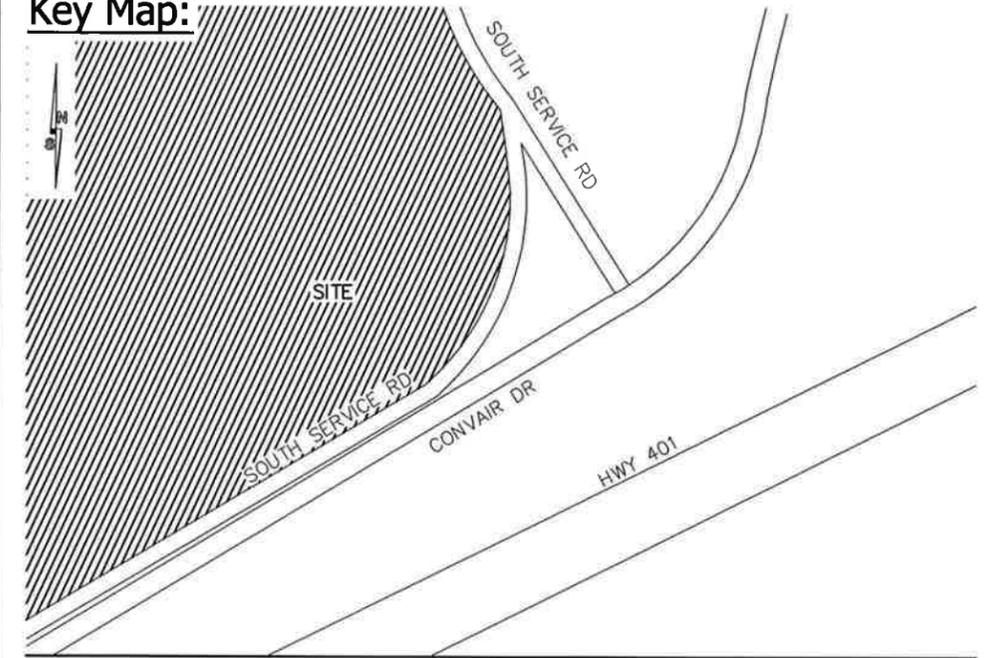


Environment Canada

Key Map:



Project Information:

Site Type: SODAR INSTALLATION
 Site Name: ENVIRONMENT CANADA
 Address: N/A
 City: MISSISSAUGA
 Project Number: 131-23844-00

Contacts:

ENVIRONMENT CANADA

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 4905 DUFFERIN STREET
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STRUCTURAL / ELECTRICAL ENGINEERS

GENIVAR
 220 ADVANCE BOULEVARD
 BRAMPTON, ON, L6T 4J5
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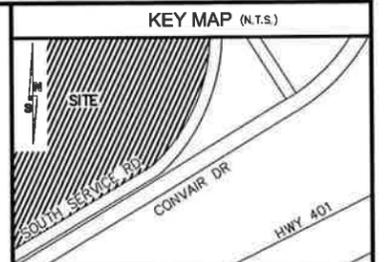
Drawing List:

			ISSUE	DATE	DESCRIPTION
SITE PLAN	S1	PAGE:1	2	01/07/2014	NOTES ADDED
CONCRETE PAD DETAILS	S2	PAGE:2	2	01/07/2014	DETAIL REVISED
H-FRAME MOUNT DETAILS	S3	PAGE:3	2	01/07/2014	REMOVED TRENCH DETAIL
GENERAL NOTES	N1	PAGE:4	2	01/07/2014	NOTES ADDED
GENERAL NOTES	N2	PAGE:5			
ELECTRICAL	E1	PAGE:6	2	01/07/2014	NOTES ADDED
GTA TRENCH DETAIL		PAGE:7			



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REFERENCE DRAWINGS

NOTES

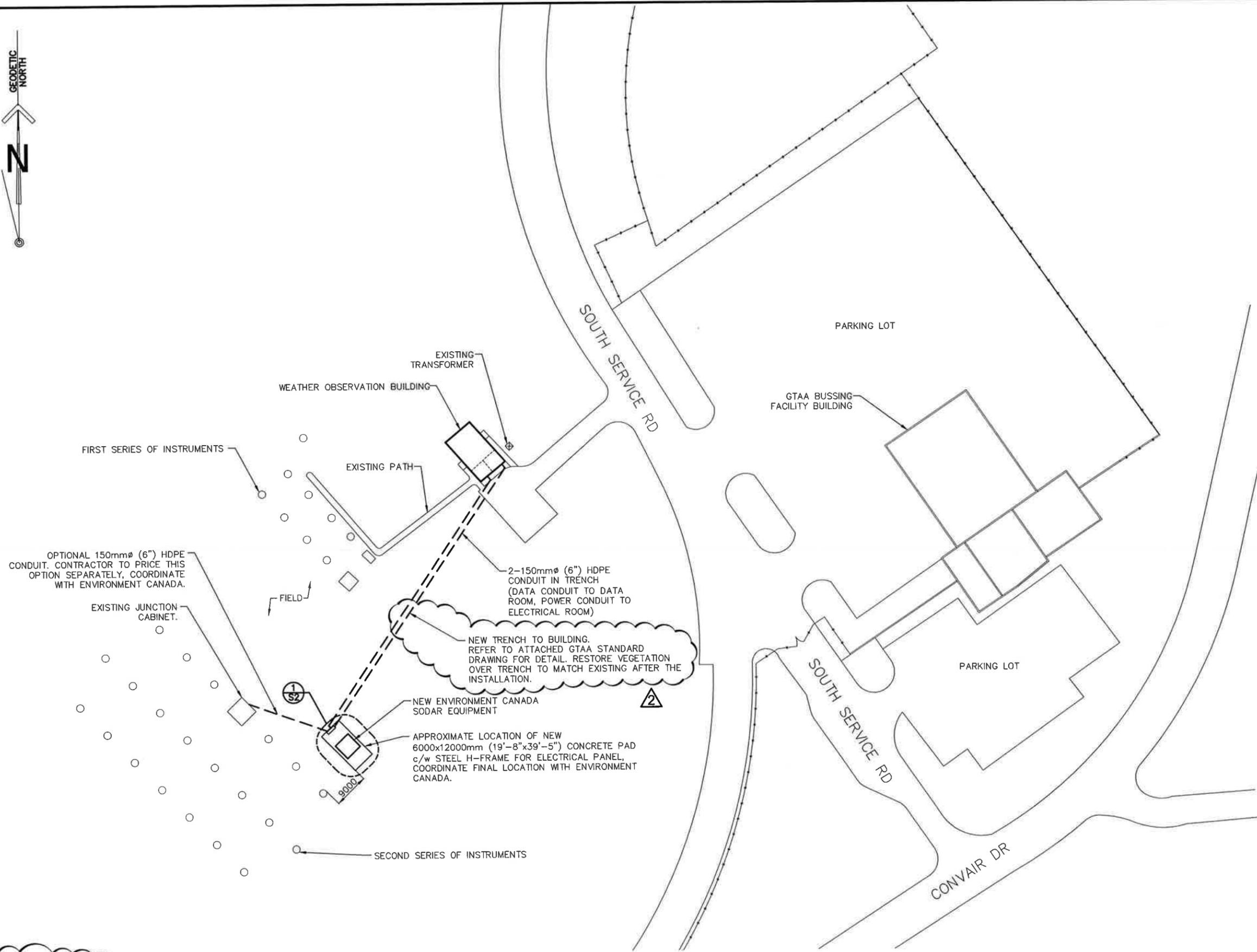
THE INFORMATION CONTAINED IN THIS SCHEMATIC PLAN IS SOLELY INTENDED AS A GENERIC REPRESENTATION OF EQUIPMENT LOCATION. THESE DRAWINGS ARE COPYRIGHT AND THE PROPERTY OF GENIVAR AND MAY NOT BE USED UNTIL MARKED AS ISSUED FOR CONSTRUCTION. REPRODUCTION OF THESE DRAWINGS WITHOUT THE CONSENT OF THE ENGINEER, IS STRICTLY PROHIBITED. DO NOT SCALE THESE DRAWINGS. ANY ERRORS OR DISCREPANCIES ARE TO BE REPORTED IMMEDIATELY TO THE ENGINEER.



2	01/07/2014	NOTES ADDED	J.E.
1	11/20/2013	ISSUED FOR F.A.P.	K.F.
0	11/11/2013	ISSUED FOR REVIEW	K.L.
No.	DATE	REVISIONS	BY



TITLE: SITE PLAN	
DESCRIPTION: SODAR INSTALLATION	
ADDRESS: N/A	
PLOT DATE: Jan. 7, 14	SCALE: AS NOTED
SITE CODE: -	DRAWING No: S1
GENIVAR PROJECT #: 131-23844-00	PAGE No: 1
DESIGNED BY: I.H.	DRAWN BY: K.F.

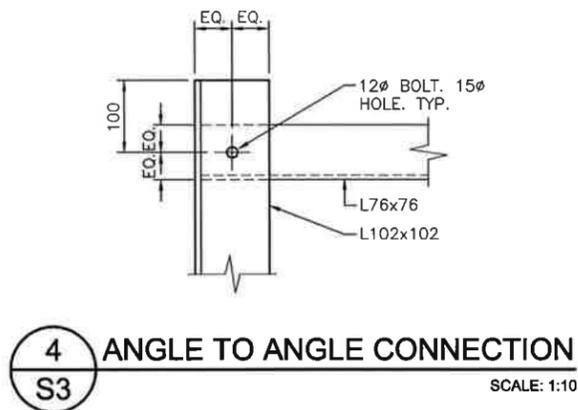
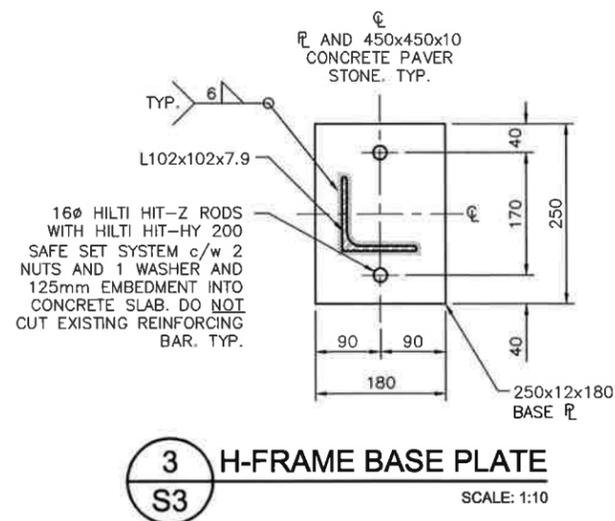
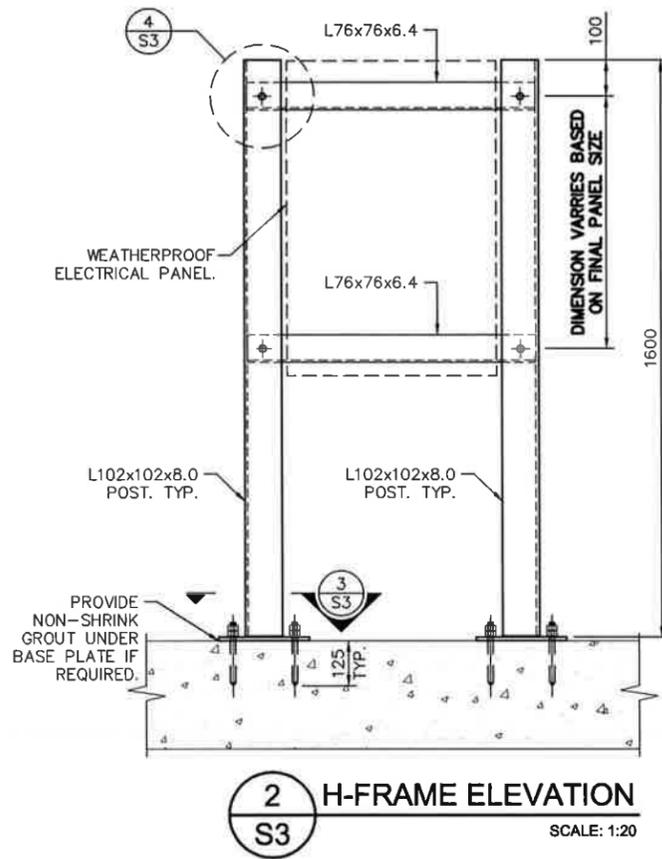
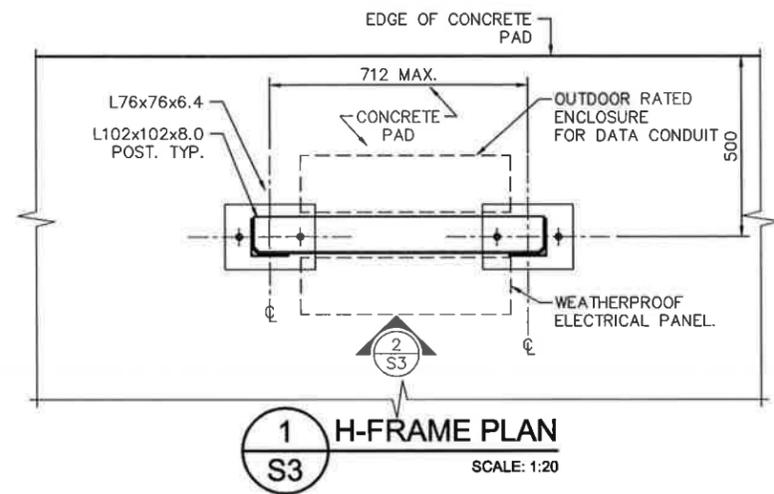


PLAN NOTES

1 - EXISTING BUILDING INFORMATION WAS OBTAINED FROM SITE OBSERVATIONS BY GENIVAR CONDUCTED ON SEPTEMBER 5 AND NOVEMBER 1, 2013.

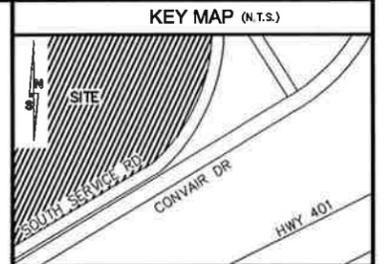
2 - REFER TO DRAWINGS N1 AND N2 FOR GENERAL NOTES.

1 SITE PLAN
SCALE: N.T.S.



GENERAL NOTES

- 1 - CONTRACTOR SHALL VERIFY EXISTING DIMENSIONS, DETAILS AND CONDITIONS, REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
- 2 - ALL MATERIALS TO BE HOT DIP GALVANIZED AFTER FABRICATION INCLUDING NUTS, BOLTS, AND WASHERS, UNLESS NOTED OTHERWISE.
- 3 - DESIGN IS BASED ON N.B.C.C. 2010 AND CSA S37-01 WIND REFERENCE VELOCITY PRESSURE: 450Pa, 1/10 YEAR RETURN PERIOD GUST FACTOR = 2.5
- 4 - BOLTS SHALL BE IN FULL BEARING WITH THREADS EXCLUDED FROM THE SHEAR PLANE.
- 5 - REFER TO DRAWING N1 AND N2 FOR ADDITIONAL NOTES.



REFERENCE DRAWINGS

NOTES

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No.	DATE	REVISIONS	BY
2	01/07/2014	REMOVED TRENCH DETAIL	J.E.
1	11/20/2013	ISSUED FOR F.A.P.	K.F.
0	11/11/2013	ISSUED FOR REVIEW	K.L.

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TITLE: H-FRAME MOUNT DETAILS	
DESCRIPTION: SODAR INSTALLATION	
ADDRESS: N/A	
DATE: Jan. 7, 14	SCALE: AS NOTED
SITE CODE: -	DRAWING No: S3
GENIVAR PROJECT #: 131-23844-00	PAGE No: 3
DESIGNED BY: I.H.	DRAWN BY: K.F.

GENERAL NOTES

- REPORT ANY INCONSISTENCIES BETWEEN DRAWINGS AND SITE CONDITIONS BEFORE PROCEEDING WITH THE WORK. DO NOT SCALE THESE DRAWINGS.
- THESE DRAWINGS ARE THE PROPERTY OF ENVIRONMENT CANADA AND GENIVAR INC. AND SHALL NOT BE REPRODUCED IN ANY MANNER, INCLUDING FOR SHOP DRAWING PREPARATION WITHOUT WRITTEN APPROVAL.
- THESE DRAWINGS ARE NOT TO BE USED FOR CONSTRUCTION UNTIL APPROVED AND SIGNED BY A REGISTERED PROFESSIONAL ENGINEER FROM GENIVAR INC. AND WHEN MARKED IN THE REVISION BLOCK WITH "ISSUED FOR F.A.P."
- THESE DRAWINGS SHOW THE COMPLETED STRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY ON THE JOB SITE, AND FOR DESIGN, INSTALLATION, AND SUPERVISION OF ALL TEMPORARY BRACING, SUPERIMPOSED CONSTRUCTION LOADS, AND SUPPORTS DURING CONSTRUCTION. DO NOT EXCEED ORIGINAL BUILDING DESIGN LOADS WITHOUT SHORING. OBTAIN ALL APPROVALS AND CLEARANCES FROM GTAA BEFORE BEGINNING ANY WORK.
- PROTECT THE EXISTING BUILDING AND FINISHES AGAINST DAMAGE DURING THE COURSE OF WORK. THE CONTRACTOR IS TO LOCATE ALL HIDDEN REINFORCING STEEL AND STRUCTURAL MEMBERS PRIOR TO CUTTING THROUGH ANY WALL, FLOOR OR ROOF ASSEMBLY. COMPLETE ALL LOCATES OF STRUCTURAL REINFORCING STEEL AND SERVICES USING X-RAYS TO THE REQUIREMENTS OF THE GTAA. SEAL ALL OPENINGS AND PROVIDE FIRE SEALANT WHERE HOLES PENETRATE THROUGH FIRE RATED ASSEMBLIES. REFER TO FIRE STOPPING DETAILS PROVIDED WITH THE SET.
- ALL DIMENSIONS ARE IN MILLIMETRES, ELEVATIONS IN METRES U/N.
- THE CONTRACTOR IS REQUIRED TO COORDINATE ALL INDEPENDENT INSPECTION AND TESTING SERVICES. IF REQUIRED BY GTAA OR ENVIRONMENT CANADA, REPORTS ARE TO BE SUBMITTED TO THIS OFFICE FOR REVIEW. THE CONTRACTOR IS TO PROVIDE A SCHEDULE AND KEEP THIS OFFICE UPDATED WITH RESPECT TO SITE PROGRESS TO ALLOW COORDINATION OF PERIODIC FIELD REVIEW BY THE ENGINEER.
- ALL STRUCTURAL MEMBERS ARE LOADED CONCENTRICALLY AT MEMBER CENTRELINES, U/N.
- INSTALL ALL ANCHORS AND PREFABRICATED COMPONENTS IN ACCORDANCE WITH FULL MANUFACTURERS INSTRUCTIONS, FOR THE PROJECT AND WEATHER CONDITIONS PRESENT AT THE TIME OF INSTALLATION.
- THE CONTRACTOR SHALL PROTECT FROM DAMAGE ALL EXISTING STRUCTURE AND PROPERTIES ADJACENT TO THE AREAS OF WORK. ALL DISTURBED AREAS, DAMAGED PROPERTIES OR STRUCTURES SHALL BE RESTORED TO ORIGINAL CONDITION AT THE EXPENSE OF THE CONTRACTOR AND TO THE SATISFACTION OF THE GTAA.
- THE CONTRACTOR MUST NOTIFY THE ENGINEER IF ANY CHANGES TO STEEL OR EQUIPMENT PLACEMENT ARE NECESSARY DUE TO SITE CONDITIONS PRIOR TO PROCEEDING WITH ANY WORK.
- SUBMIT REDLINES/AS-BUILT DRAWINGS CAPTURING ALL OF THE CHANGES THAT OCCURRED DURING CONSTRUCTION.

MATERIAL AND DESIGN DATA

- ALL LOADS SHOWN ON DRAWINGS ARE UNFACTORED SERVICE LOADS IN KN AND kPa UNLESS OTHERWISE NOTED. ALL MATERIALS TO BE NEW.
- CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS: 25 MPa UNLESS NOTED. SUPPLY CONCRETE AS PER CSA A23.1-04 TABLE 13 ALTERNATIVE 3, CLEARLY COORDINATING MIX DESIGNATIONS WITH AIR CONTENT CATEGORY, EXPOSURE CLASS, UNLESS INDICATED ON THE DRAWINGS.
- REINFORCING STEEL: TO CSA G30.18-M92. GRADE 400R.
- STRUCTURAL STEEL: TO CSA G40.20-04/G40.21-04.
 - A) ROLLED W. SHAPES: GRADE 350W
 - B) OTHER SHAPES AND PLATES: GRADE 300W
 - C) HOLLOW STRUCTURAL SECTIONS: GRADE 350W - CLASS C
 - D) WELDING ELECTRODES: E480XX
 - E) STRUCTURAL BOLTS: ASTM A325
 - F) ANCHOR RODS: GRADE 300W
 - G) LINDAPTER HOLLOW BOLTS: 316 STAINLESS STEEL
- MASONRY MATERIALS:
 - A) LOAD BEARING BLOCK: TO CSA A165.SERIES-04.
WEIGHT: LIGHTWEIGHT NORMAL WEIGHT
HOLLOW: H/15/C/M H/15/A/M
SOLID: S/15/C/M S/15/A/M
 - B) LOAD BEARING BRICK: TO CSA A82.1-M87
 - C) MORTAR: CSA A179-04, TO PROPERTY SPECIFICATIONS
LOAD BEARING ABOVE GRADE MORTAR: TYPE 'S'
NON-BEARING OR VENEER ABOVE GRADE MORTAR: TYPE 'N'
BELOW GRADE MORTAR: TYPE 'S'
 - D) GROUT: CSA A179-04 TO PROPERTY SPECIFICATIONS.
- STRUCTURAL LUMBER TO BE GRADE MARKED TO CONFORM TO CSA STANDARD 0141-05.
 - A) SPECIES GROUP: SPF U/N
 - B) GRADE: NO. 2 OR BETTER

- DESIGN LOADS: BASED ON 2010 N.B.C.C.
A) DESIGN IS IN ACCORDANCE WITH CSA S37.01 ANTENNAS AND SUPPORTING STRUCTURES WITH Q (1/30) RETURN WIND LOAD = 450 P_0

CODES AND STANDARDS (LATEST EDITIONS)

- CONFORM TO REQUIREMENTS OF THE NATIONAL BUILDING CODE AND THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS (LATEST EDITIONS).
- CONCRETE: TO CSA STANDARD CAN/CSA A23.1, A23.2, A23.3, A23.4.
MASONRY: TO CSA STANDARD CSA-S304.1 AND CSA-A370, CSA-A371.
CONNECTORS FOR MASONRY: TO CSA-A370.
MASONRY CONSTRUCTION FOR BUILDINGS: TO CSA-A371.
STRUCTURAL STEEL: TO CAN/CSA-S16.
LIGHT GAUGE STEEL: TO CAN/CSA-S136.
WELDING: TO CSA STANDARDS W59, CAN/CSA-S16, AND W47.1.
TIMBER: TO CAN/CSA-086.
ALUMINUM: TO CAN3-S157.

INSPECTION AND TESTING

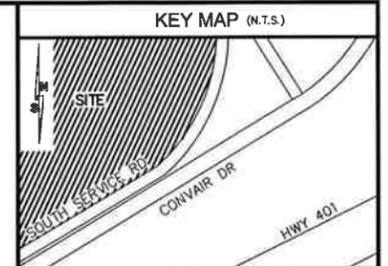
- GTAA OR ENVIRONMENT CANADA MAY APPOINT AN INDEPENDENT INSPECTION AND TESTING AGENCY. THE COST OF THE INSPECTION SHALL BE PAID BY GTAA OR ENVIRONMENT CANADA. WORK WILL BE INSPECTED TO ENSURE CONFORMANCE WITH THE CONTRACT DOCUMENTS. SCHEDULING OF INSPECTIONS WILL BE COMPLETED BY THE GENERAL CONTRACTOR. REPORTS ARE TO BE SUBMITTED TO THIS OFFICE WITHIN THREE (3) WORKING DAYS OF SUCH INSPECTION.

AIRSIDE STANDARDS

- ALL WORK AND EQUIPMENT INSTALLED MUST COMPLY WITH THE OBSTACLE LIMITATION SURFACES OUTLINED IN TRANSPORT CANADA TP312E.

ENVIRONMENTAL

- DO NOT EXCAVATE OR DISTURB EXISTING GROUND SURFACES PRIOR TO OBTAINING LOCATES AND CLEARANCES FOR ALL EXISTING SERVICES.
- REPAIR DISTURBED GROUND SURFACES TO MATCH EXISTING. RESTORE VEGETATION.
- ALL EXCESS MATERIALS FROM EXCAVATION TO BE REMOVED FROM SITE.
- NO CONCRETE EQUIPMENT CAN BE WASHED ON SITE.
- CONCRETE MUST NOT BE DEPOSITED INTO THE STORM SYSTEM.
- ALL WASTE MUST BE REMOVED FROM SITE AND DISPOSED OF FOLLOWING ALL FEDERAL, PROVINCIAL, AND MUNICIPAL REGULATIONS.



REFERENCE DRAWINGS

NOTES

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No.	DATE	REVISIONS	BY
2	01/07/2014	NOTES ADDED	J.E.
1	11/20/2013	ISSUED FOR F.A.P.	K.F.
0	11/11/2013	ISSUED FOR REVIEW	K.L.



TITLE: GENERAL NOTES	
DESCRIPTION: SODAR INSTALLATION	
ADDRESS: N/A	
PROJ. DATE: Jan. 7, 14	SCALE: AS NOTED
SITE CODE: -	DRAWING No.: N1
GENIVAR PROJECT #: 131-23844-00	PAGE NO.: 4
DESIGNED BY: I.H.	DRAWN BY: K.F.

STRUCTURAL STEEL SPECIFICATIONS:

GENERAL

- CONFORM TO THE GENERAL REQUIREMENTS AND SPECIAL CONDITIONS CONTAINED IN THE TENDER FORM AND THE GENERAL SPECIFICATIONS. FOLLOW CISC CODE OF STANDARD PRACTICE FOR STRUCTURAL STEEL, UNLESS PROJECT SPECIFICATIONS ARE MORE STRINGENT.
- SUPPLY AND DELIVER THE FOLLOWING TO OTHER TRADES, TOGETHER WITH LAYOUT DRAWINGS. ANCHOR BOLTS, CONNECTION ASSEMBLIES FOR SETTING IN CONCRETE, LOOSE LINTELS, SHELF ANGLES AND BEARING PLATES.
- CONFORM TO CSA STANDARDS CAN/CSA-S16, CAN/CSA-S136, W47.1, W48.1, W48.1, W55.3, W59 AND CAN/CSA G40.20 LATEST EDITIONS.
- MATERIALS SHOWN ON THE DRAWINGS OR IN THIS SPECIFICATION ARE TO ESTABLISH THE REQUIRED DEGREE OF QUALITY OR PERFORMANCE. SUBSTITUTION MAY BE PERMITTED UPON PROOF OF EQUIVALENCE. SUBMIT ALL PROPOSAL FOR SUBSTITUTION TO THE ENGINEER IN WRITING IN ADVANCE OF SHOP DRAWINGS. EACH ITEM WILL BE CLEARLY IDENTIFIED. DO NOT PROCEED WITH PROPOSAL UNLESS IT IS ACCEPTED IN WRITING BY THE ENGINEER.
- TOLERANCES: FABRICATION AND ERECTION TOLERANCES SHALL MEET THE REQUIREMENTS OF CSA STANDARD S16.
- DEFLECTION REQUIREMENTS: TOTAL DEFLECTION NOT TO EXCEED 1/180 OF THE SPAN, LIVE LOAD DEFLECTION TO 1/360 OF THE SPAN, EXCEPT WHERE SUPPORTING MASONRY INCREASE STIFFNESS TO 1/720 OF THE SPAN.
- WORK SHALL BE CARRIED OUT BY A MEMBER OF THE CANADIAN INSTITUTE OF STEEL CONSTRUCTION. WELDING SHALL BE PERFORMED BY FIRMS FULLY APPROVED BY THE CANADIAN WELDING BUREAU UNDER THE REQUIREMENTS OF CSA STANDARD W47.1. SUBMIT DOCUMENTATION BEFORE COMMENCING WORK.
- DESIGN CONNECTIONS TO CONFORM TO CAN/CSA-S16 AND THE CISC HANDBOOK OF STEEL CONSTRUCTION. FOR STANDARD SHEAR CONNECTIONS, DESIGN FOR A SERVICE CAPACITY IN KN EQUAL TO THE BEAM DEPTH IN MM MULTIPLIED BY .5, UNLESS A GREATER REACTION IS NOTED ON THE DRAWINGS. DESIGN ALL SPLICES AND CONNECTIONS OF TENSION OR COMPRESSION MEMBERS FOR THEIR FULL CAPACITY. ARRANGE AND PAY FOR NONDESTRUCTIVE TESTING OF ALL UNSPECIFIED SPLICES IN COLUMNS, BEAMS AND JOIST COMPONENTS. ALL CONNECTIONS AND DETAILS SHALL BE DESIGNED BY A QUALIFIED REGISTERED PROFESSIONAL ENGINEER LICENSED TO PRACTISE IN THE PROVINCE OF ONTARIO, WHOSE SEAL AND SIGNATURE SHALL BE ON THE SHOP DRAWINGS.
- DESIGN AND PROVIDE BEARING PLATES FOR A MAXIMUM PRESSURE OF 3.5 MPa ON ENGINEERED MASONRY AND 10MPa ON CONCRETE, BASED ON FACTORED LOADS USING LIMIT STATES DESIGN.
- T.D. SECTIONS ON THE DRAWINGS REFER TO THE TYPICAL DETAILS ON THE DRAWINGS. THEY SHOW STRUCTURAL INTENT RATHER THAN ACTUAL CONDITIONS FOR THIS PROJECT.
- SEE GENERAL SPECIFICATIONS SECTION FOR SHOP DRAWING SUBMISSION REQUIREMENTS IN ADDITION TO NOTES ABOVE.
- VISIT THE SITE TO CONFIRM CONDITIONS AFFECTING THE WORK.

PRODUCTS

- MATERIALS: STRUCTURAL STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING CSA STANDARDS CAN/CSA G40.21 GRADE 350W FOR ALL WIDE FLANGE & HSS SECTIONS, CLASS C FOR HSS, 300W FOR ALL OTHER MATERIALS. FOR EXISTING STEEL ON SITE THAT IS BEING MODIFIED OR CONNECTED TO WITH NEW WORK, BASE DESIGN WORK ON EXISTING GRADES OF CSA G40.21 GRADE 300 W MATERIAL, UNLESS OTHERWISE NOTED. COLD FORMED SHAPES: CAN/CSA S136, MINIMUM THICKNESS 1.2MM. HIGH STRENGTH BOLTS: TO ASTM A325. ANCHOR RODS: TO CAN/CSA STANDARD G40.21 GRADE 300W OR ASTM A307, OR CSA G30.18 GRADE 400W FOR DEFORMED ANCHORS (REBAR) TIE RODS: TO CAN/CSA STANDARD SPECIFICATION 2-75. ZINC-RICH SHOP PRIMER PAINT: TO CGSB 1-GP-181M. GALVANIZING: TO CSA G164 MINIMUM 610G/m2 COATING THICKNESS.
- FABRICATION SHALL CONFORM TO CSA STANDARDS CAN/CSA-S16, W59 AND W55.3.
- ALL STEEL TO BE CLEANED AND SHOP PRIMED UNLESS NOTED. OMIT PRIMER WHERE SURFACES ARE TO BE COVERED WITH A SPRAYED ON FIRE PROOFING PRODUCT, OR WHERE SURFACES ARE TO BE FIELD WELDED, OR ENCASED IN CONCRETE.
- SHELF ANGLES, HANGERS AND LINTELS IN EXTERIOR WALLS AND ALL EXPOSED EXTERIOR STEEL MEMBERS (INCLUDING ALL ANTENNA MOUNTING STEEL, MASTS, ETC.) SHALL BE COMMERCIAL BLAST (MECHANICALLY) CLEANED TO SSPC-SP6. ALL "MILL COATINGS" MUST BE REMOVED BY THE STEEL FABRICATOR. THE FINAL FINISH IS TO BE HOT DIPPED GALVANIZED. REFER TO MANUFACTURER SPECIFICATIONS FOR SURFACE PREPARATION OF GALVANIZED MATERIALS PRIOR TO APPLICATION OF FINISHED PAINTING.

EXECUTION

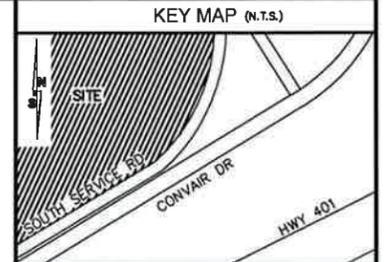
- STORE MATERIALS TO PREVENT DAMAGE AND DISTORTION.
- CHECK SITE CONDITIONS PRIOR TO THE COMMENCEMENT OF STEEL ERECTION TO ENSURE THAT SUPPORTING CONDITIONS ARE WITHIN SATISFACTORY TOLERANCES (BASE PLATE AND ANCHOR BOLT POSITIONS). BRING ALL NON-CONFORMING CONDITIONS TO THE ATTENTION OF THE GENERAL CONTRACTOR FOR RECTIFICATION.
- ERECTION SHALL BE CARRIED OUT BY FORCES OF THE STEEL FABRICATOR. PROVIDE ALL TEMPORARY BRACING TO KEEP THE STRUCTURE STABLE UNTIL THE ENTIRE STRUCTURE IS COMPLETE. PROTECT ALL EXISTING BUILDING COMPONENTS FROM DAMAGE. MAINTAIN SAFE WORKING PRACTICES.
- PROVIDE CONTINUOUS WELDING AT ARCHITECTURALLY EXPOSED JOINTS SUCH AS DOOR JAMBS AND HEADS, AND GRIND SMOOTH. REFER ALSO TO ARCHITECTURAL REQUIREMENTS.
- PROVIDE FRAMING FOR ALL OPENINGS IN METAL DECK GREATER THAN 450MM SQUARE.
- ANCHOR ROOF MEMBERS TO SUPPORTING WALL WITH MINIMUM TWO ANCHOR BOLTS 16MM DIA. X 400 LONG + 50 END HOOKS. SET PLATE 25MM BACK FROM EDGE OF WALL.
- LEVELLING PLATES MAY NOT BE USED FOR COLUMN BASE PLATES WHOSE GREATEST DIMENSION EXCEEDS 300MM.
- DO NOT MODIFY ANY MEMBERS IN THE FIELD UNLESS CHANGES ARE APPROVED BY THE ENGINEER. THE STEEL SUPPLIER IS TO ISSUE ENGINEERED SKETCHES AS REQUIRED.
- FIELD TOUCH UP ALL DAMAGED SURFACES AFTER ERECTION.
- WHENEVER ITEMS ARE TO BE HUNG FROM OWSJ OR TRUSSES, SECUREMENT SHALL BE FROM THE TOP CHORDS AT PANEL POINTS UNLESS OTHERWISE PERMITTED. ENSURE THAT HANGING LOADS HAVE BEEN ACCOUNTED FOR IN THE DESIGN ALLOWANCE. IF IN DOUBT, CONTACT THE ENGINEER FOR APPROVAL.
- INDEPENDENT INSPECTION AND TESTING: THE OWNER, IN CONJUNCTION WITH THE ENGINEER, WILL APPOINT AN INDEPENDENT INSPECTION AND TESTING AGENCY, CERTIFIED BY THE CANADIAN WELDING BUREAU TO CSA STANDARD W178. THE COST OF INSPECTION SHALL BE PAID BY THE OWNER. WORK WILL BE INSPECTED IN THE SHOP AND WHEN ERECTED TO DETERMINE CONFORMANCE WITH THE DRAWINGS AND SPECIFICATIONS.
- THE STEEL ERECTOR IS TO RECTIFY DEFICIENCIES NOTED IN ANY INSPECTION REPORTS AS SOON AS POSSIBLE AFTER NOTIFICATION, AND PRIOR TO THE COMMENCEMENT OF WORK OF OTHER TRADES WHOSE WORK DEPENDS UPON THE INSTALLATION OF THE STRUCTURAL STEEL.
- THE STEEL FABRICATOR IS TO PROVIDE THEIR OWN QUALITY CONTROL MEASURES AND NOT RELY SOLELY ON THE INDEPENDENT INSPECTION REPORTS PROVIDED BY THE OWNER.

CHEMICAL AND MECHANICAL ANCHORS SPECIFICATIONS

- INSTALL CHEMICAL AND MECHANICAL ANCHORS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
- FOR CHEMICAL ANCHORS, ENSURE SUBSTRATE TEMPERATURE IS MAINTAINED AT OR ABOVE 5°C DURING INSTALLATION AND SUBSEQUENT CURING PERIOD.

CONCRETE:

- ALL CONCRETE WORK INCLUDING DESIGN OF COMPONENTS SHALL BE CARRIED OUT IN ACCORDANCE WITH CAN/CSA A23.1/A23.2/CSA A23.3 AND CSA-S37.
- MINIMUM CONCRETE COVER TO REINFORCING STEEL SHALL BE: CONCRETE PLACED ADJACENT TO EARTH = 75mm. FORMED CONCRETE, EXPOSED TO EARTH AND WEATHER = 60mm.
- MINIMUM CONCRETE STRENGTH SHALL BE 25 MPa AT 28 DAYS. CONCRETE EXPOSED TO FREEZE/THAW CYCLES SHALL HAVE ENTRAINED AIR IN ACCORDANCE WITH CAN/CSA A23.1.
- PROVIDE DEFORMED REINFORCING STEEL CONFORMING TO CAN/CSA G30.18. USE GRADE 400R BARS FOR ALL REINFORCING DETAILS. BEND, PLACE AND SUPPORT REINFORCING, STEEL IN CONFORMANCE WITH RSIC MANUAL.



REFERENCE DRAWINGS

NOTES

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1	11/20/2013	ISSUED FOR F.A.P.	K.F.
0	11/11/2013	ISSUED FOR REVIEW	K.L.
No.	DATE	REVISIONS	BY

GENIVAR
 220 Advance Boulevard, Brampton, Ontario L6T 4J5
 Telephone: (905) 799-8220

GENERAL NOTES

DESCRIPTION: **SODAR INSTALLATION**

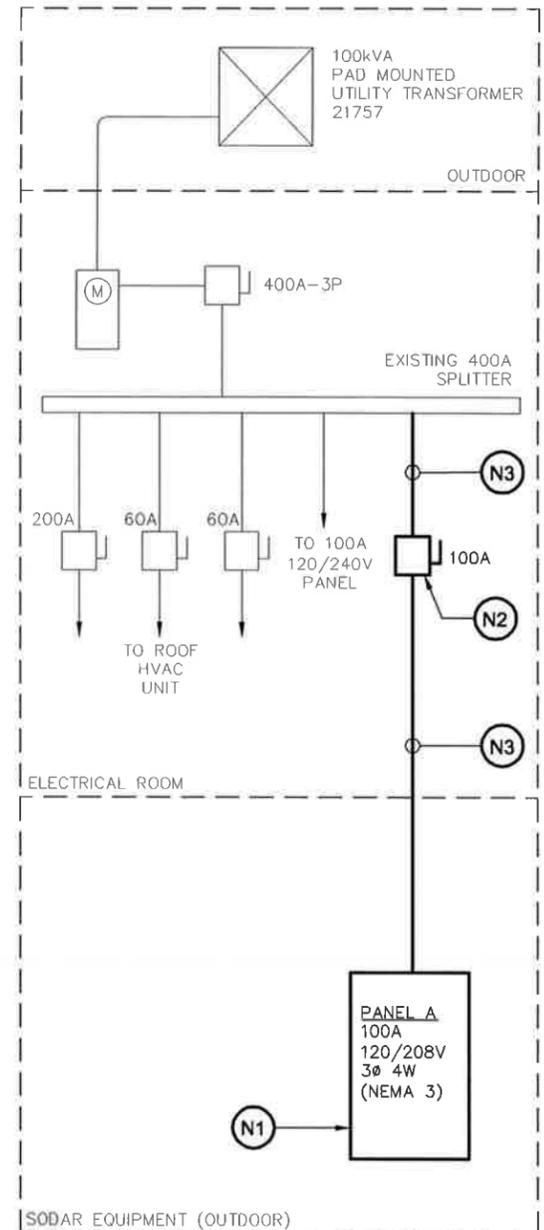
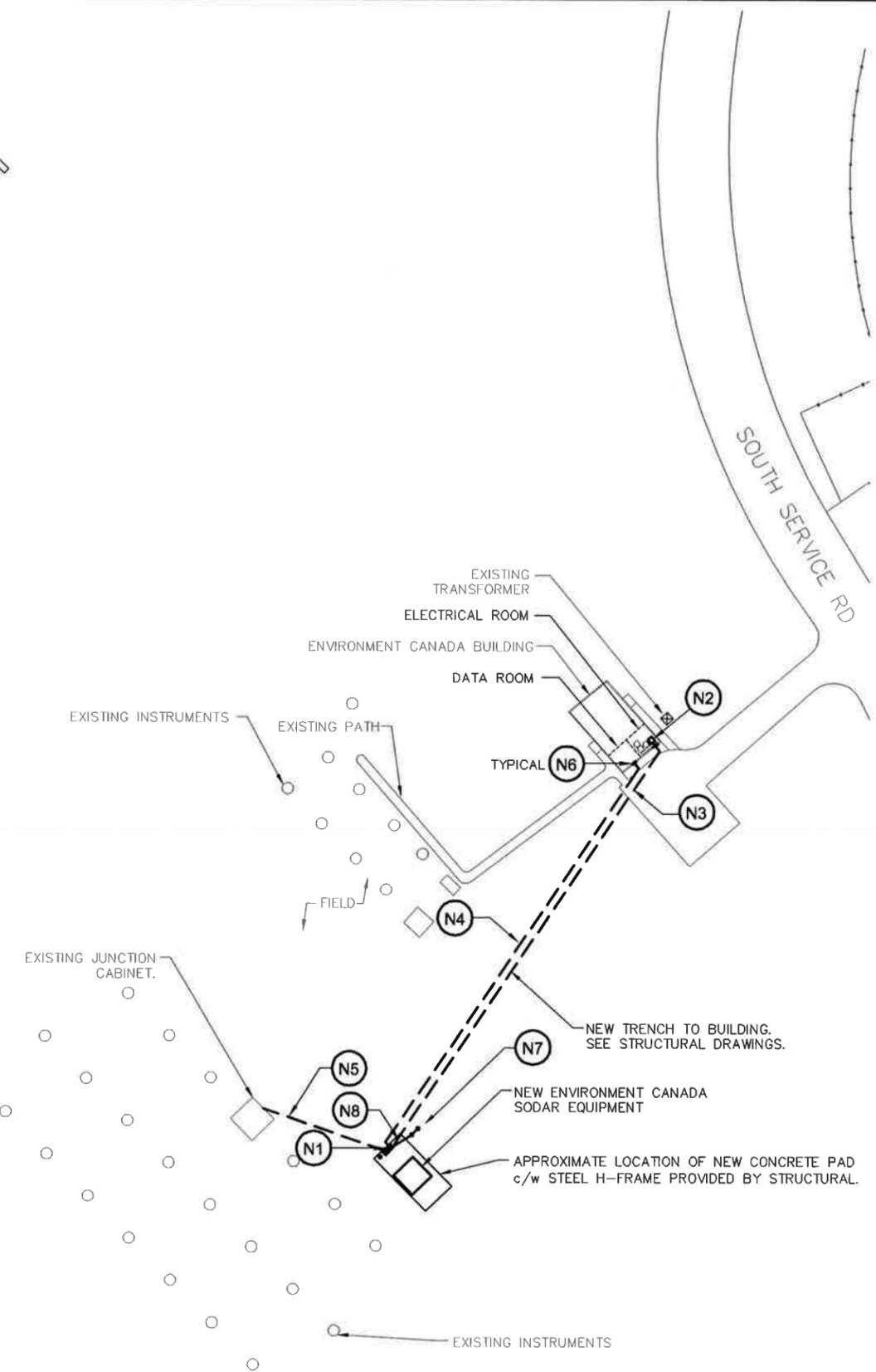
ADDRESS: **N/A**

PLANT DATE: **Nov. 20, 13** SCALE: **AS NOTED**

SITE CODE: **-** DRAWING NO.: **N2**

GENIVAR PROJECT #: **131-23844-00** PAGE NO.: **5**

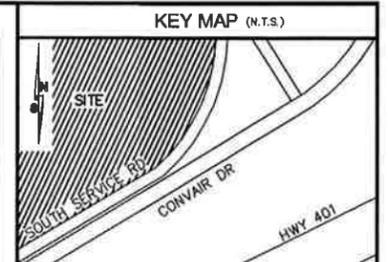
DESIGNED BY: **I.H.** DRAWN BY: **K.F.**



2 SINGLE LINE DIAGRAM
E1 N.T.S.

- ELECTRICAL NOTES:**
- N1 - PROVIDE NEW PANEL A, PANEL SHALL BE MINIMUM 42 CIRCUIT WITH COPPER BUS RATED FOR 100A, 120/208V, 3Ø, 4W WITH A 100A MAIN BREAKER. BRANCH BREAKERS SHALL BE BOLTED TYPE BREAKERS. PROVIDE COMPATIBLE BREAKERS AS REQUIRED TO SUIT BRANCH CIRCUIT REQUIREMENTS. PANEL SHALL BE CUTLER HAMMER POWER-LINE 1 AND RATED FOR OUTDOOR USE (NEMA 3). SECURE PANEL TO THE STEEL FRAME, SEE STRUCTURAL DRAWINGS. CONFIRM MOUNTING HEIGHT WITH CLIENT REPRESENTATIVE PRIOR TO INSTALLATION. PROVIDE A LAMACOID NAMEPLATE FOR ALL NEW EQUIPMENT.
 - N2 - PROVIDE A NEW THREE PHASE 100A NON-FUSIBLE DISCONNECT SWITCH FOR THE NEW POWER SERVICE TO THE SODAR EQUIPMENT.
 - N3 - RUN 3-#2/0 + #8 GRND IN 53mmC FROM THE SPLITTER, THROUGH THE DISCONNECT SWITCH, TO THE NEW PANEL A AS INDICATED.
 - N4 - PROVIDE TWO (2) 150mm (6") HDPE CONDUITS FOR TELEPHONE/FIBRE FROM THE EXISTING DATA ROOM TO THE NEW CONCRETE PAD. THIS CONDUIT SHALL RUN IN PARALLEL TO THE POWER CONDUIT AS INDICATED. PROVIDE A NYLON PULLCORD IN EMPTY CONDUITS. VERIFY LOCATION FOR TERMINATION OF CONDUIT WITH CLIENT REPRESENTATIVE.
 - N5 - PROVIDE A 150mm (6") HDPE CONDUIT AS INDICATED. CONTRACTOR SHALL PROVIDE A SEPARATE PRICE FOR THIS WORK AND SHALL REQUEST APPROVAL FROM THE CLIENTS REPRESENTATIVE PRIOR TO INSTALLATION. COORDINATE ALL WORK WITH ENVIRONMENT CANADA. PROVIDE A NYLON PULLCORD IN EMPTY CONDUIT.
 - N6 - CORE DRILL THROUGH WALLS, SLABS AND OTHER PARTITIONS WITH APPROVAL OF STRUCTURAL ENGINEER FOR ALL CONDUIT RUNS. PROVIDE FIRE RATED PATCH AROUND PENETRATION POINTS FROM ANY LOCATIONS WHERE CONDUITS PASS THROUGH FIRE RATED STRUCTURES. X-RAY AS REQUIRED TO ENSURE AREAS TO BE CORED ARE ACCEPTABLE LOCATIONS.
 - N7 - PROVIDE TWO GROUND RODS SPACED AT NO LESS THAN 3.0m APART. GROUND RODS SHALL BE 19mm X 3.0m AND OF MANUFACTURED GROUNDING ELECTRODE TYPE. THE GROUND RODS SHALL BE BONDED TOGETHER BY #2/0 BARE COPPER GROUND CONDUCTOR AND INSTALLED IN ACCORDANCE WITH OESC AND ESA STANDARDS.
 - N8 - PROVIDE #2/0 GROUND CONNECTION FROM THE GROUND RODS TO PANEL A AS INDICATED.
 - N9 - RUN POWER AND TEL./FIBRE CONDUITS FOR THE NEW ENVIRONMENT CANADA SODAR EQUIPMENT ALONG THE OUTSIDE WALL TO UNDERGROUND AS INDICATED. THE CONDUIT RUN OUTSIDE OF THE BUILDING SHALL BE BURIED PVC CONDUIT IN ACCORDANCE WITH THE ONTARIO ELECTRICAL SAFETY CODE AND ESA REQUIREMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING LANDSCAPE. CONDUIT RUNS INDOOR SHALL BE EMT. RUN CONDUIT CONCEALED, PARALLEL TO BUILDING LINES.
 - N10 - PROVIDE LABELING FOR ALL EQUIPMENT AND EXPOSED CONDUITS AT 15' INTERVALS OR WHERE CONDUITS PASS THROUGH WALLS OR FLOORS. CONDUIT LABELING TO INDICATE "ENVIRONMENT CANADA" AND "POWER" OR "DATA" AS APPLICABLE.
 - N11 - TERMINATE POWER WIRING AND FIBRE CONDUITS TO ENVIRONMENT CANADA'S REQUIREMENTS.
 - N12 - ALL WORK SHALL BE PERFORMED TO ENVIRONMENT CANADA STANDARDS AND IN ACCORDANCE WITH THE ONTARIO BUILDING CODE, ESA AND THE ONTARIO ELECTRICAL SAFETY CODE.
 - N13 - ENDS OF ALL DUCTS AND CONDUITS SHALL BE SEALED TO PREVENT ANY DEBRIS FROM ENTERING.
 - N14 - ESA CERTIFICATE IS REQUIRED AND SHALL BE PROVIDED TO GTAA PM/COORDINATOR.

- GENERAL NOTES:**
- 1 - INDICATED DIMENSIONS ARE IN mm AND ARE APPROXIMATE.
 - 2 - INDICATED LOCATIONS OF NEW EQUIPMENT ARE APPROXIMATE. VERIFY EXACT LOCATIONS ON SITE WITH CLIENT REPRESENTATIVE.
 - 3 - COORDINATE EXACT ROUTING OF NEW CONDUITS FOR POWER AND FIBER ON SITE WITH CLIENT REPRESENTATIVE.



REFERENCE DRAWINGS

NOTES

THE INFORMATION CONTAINED IN THIS SCHEMATIC PLAN IS SOLELY INTENDED AS A GENERIC REPRESENTATION OF EQUIPMENT LOCATION. THESE DRAWINGS ARE COPYRIGHT AND THE PROPERTY OF GENIVAR AND MAY NOT BE USED UNTIL MARKED AS ISSUED FOR CONSTRUCTION. REPRODUCTION OF THESE DRAWINGS WITHOUT THE CONSENT OF THE ENGINEER, IS STRICTLY PROHIBITED. DO NOT SCALE THESE DRAWINGS. ANY ERRORS OR DISCREPANCIES ARE TO BE REPORTED IMMEDIATELY TO THE ENGINEER.

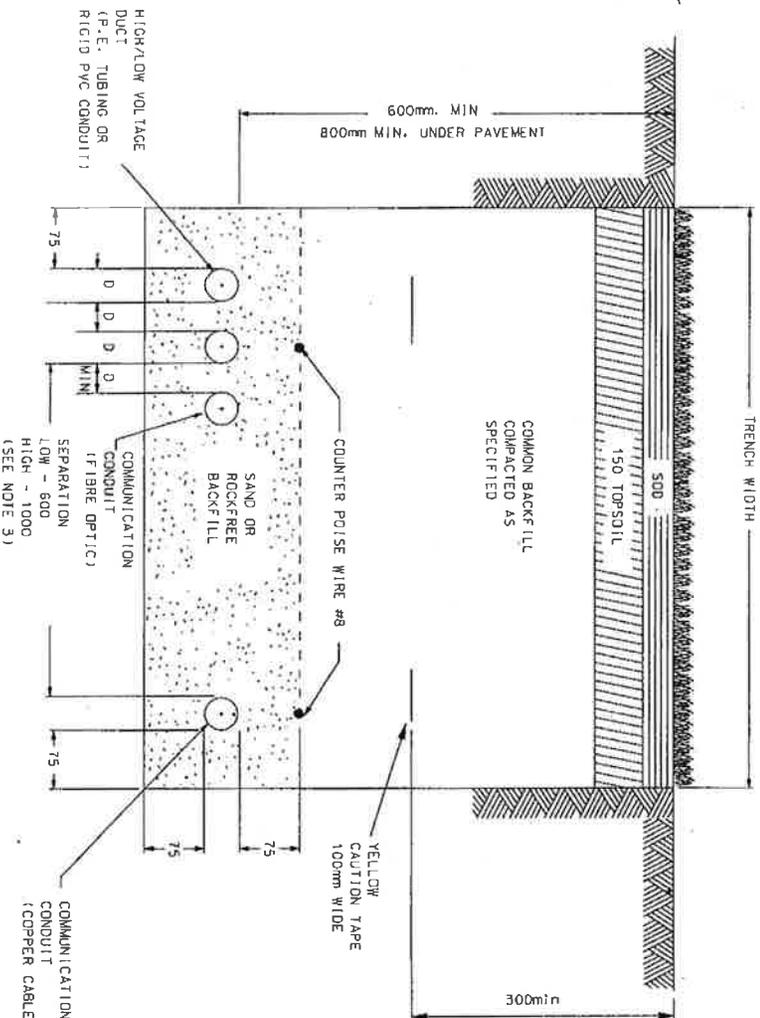


No.	DATE	REVISIONS	BY
3	01/02/2014	NOTES ADDED	J.K.
2	11/26/2013	ISSUED FOR F.A.P.	J.K.
1	11/18/2013	ISSUED FOR REVIEW	J.K.
0	11/15/2013	ISSUED FOR REVIEW	J.K.

GENIVAR
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TITLE: ELECTRICAL	
DESCRIPTION: NEW EQUIPMENT INSTALLATION	
ADDRESS: PEARSON AIRPORT	
PLANT DATE: Jan. 2, 14	SCALE: AS NOTED
SITE CODE: -	DRAWING NO: E1
GENIVAR PROJECT #: 131-23844-00-E1	PAGE NO: 6
DESIGNED BY: J.K.	DRAWN BY: W.A.

1 SITE PLAN
E1 SCALE: N.T.S.



HIGH/LOW VOLTAGE AND COMMUNICATIONS
 IN COMMON TRENCH.

NOTE:

1. FOR FIBRE OPTIC CABLE A GREEN INSULATED #8 GROUND WIRE SHALL BE PLACED IN THE DUCT FOR LOCATING PURPOSES.
2. LOW VOLTAGE: 0-750V HIGH VOLTAGE: 750V+
3. ONE DIAMETER SEPARATION REQUIRED BETWEEN SAME VOLTAGE CLASS CABLES.
4. INSTALL COUNTER POISE WIRE IN A ZIG-ZAG SHAPE AND TERMINATE INSIDE PULPIT OR MAHDL.

1	BP	4.MAR.04	NOTE 3 REVISED
NO.	INT.	DATE	REVISIONS
DRAWN	BY	DESIGNED	APPROVED: A.L./K.F.H

ENGINEERING DATE: FEB 16 2001

DUCT INSTALLATION
 DIRECT BURIED DUCTS FOR POWER
 AND LANDLINE CABLES

SHEET OF FILE:

SD 90 P 0 0 1

TORONTO PEARSON INTERNATIONAL AIRPORT