



CITY OF TORONTO GENERATOR REPLACEMENT (51 DIVISION)

51 PARLIAMENT STREET, TORONTO - ONTARIO

DRAWING LIST:

210248-CVR COVER PAGE

SITE DRAWINGS:

210248-P-200 SITE PLAN

MECHANICAL DRAWINGS:

210248-M-100 NATURAL GAS PIPING PLAN

ELECTRICAL DRAWINGS:

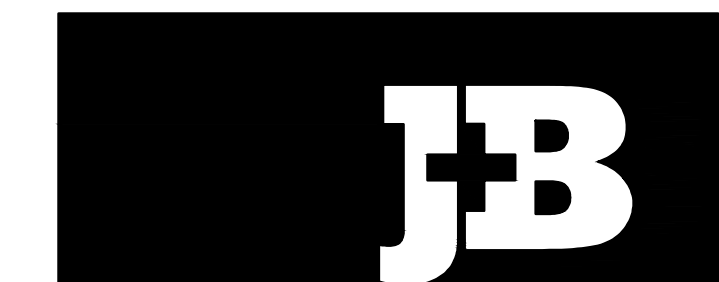
210248-E-100 EXISTING ELECTRICAL SITE PLAN & ELECTRICAL DEMO
210248-E-101 NEW ELECTRICAL SITE PLAN
210248-E-102 EXISTING ELECTRICAL SLD, NEW ELECTRICAL NOTES & DETAILS
210248-E-103 NEW ELECTRICAL SLD & GENERATOR CONTROLS.

STRUCTURAL DRAWINGS:

210248-S100 GENERATOR SLAB PLAN AND DETAILS

PROJECT No. 210248

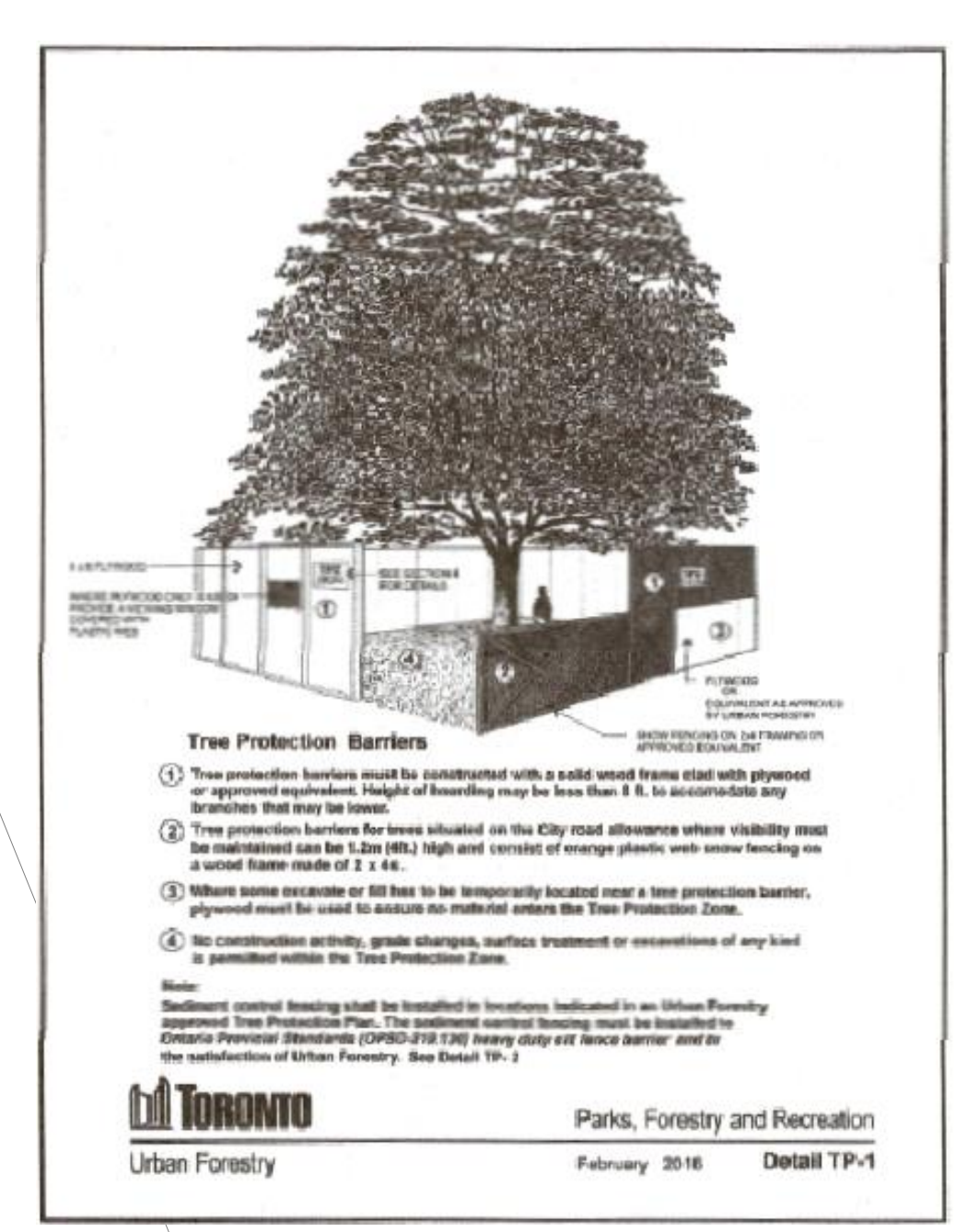
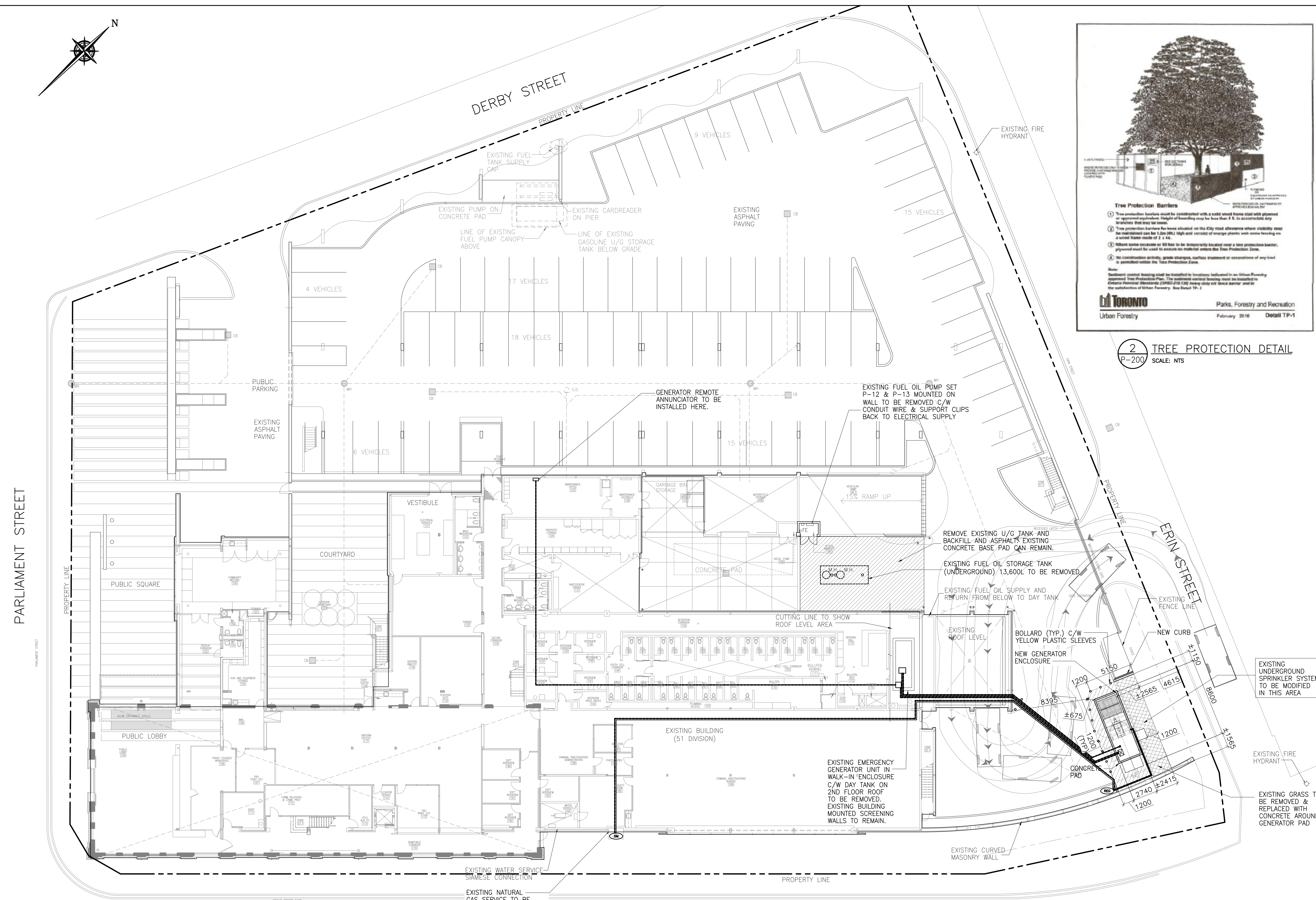
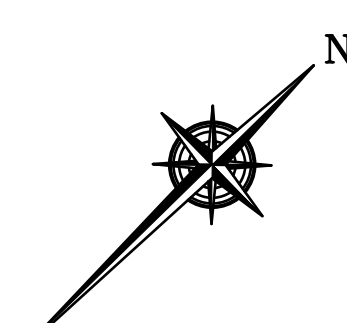
ISSUING DATE: MAY 27, 2024



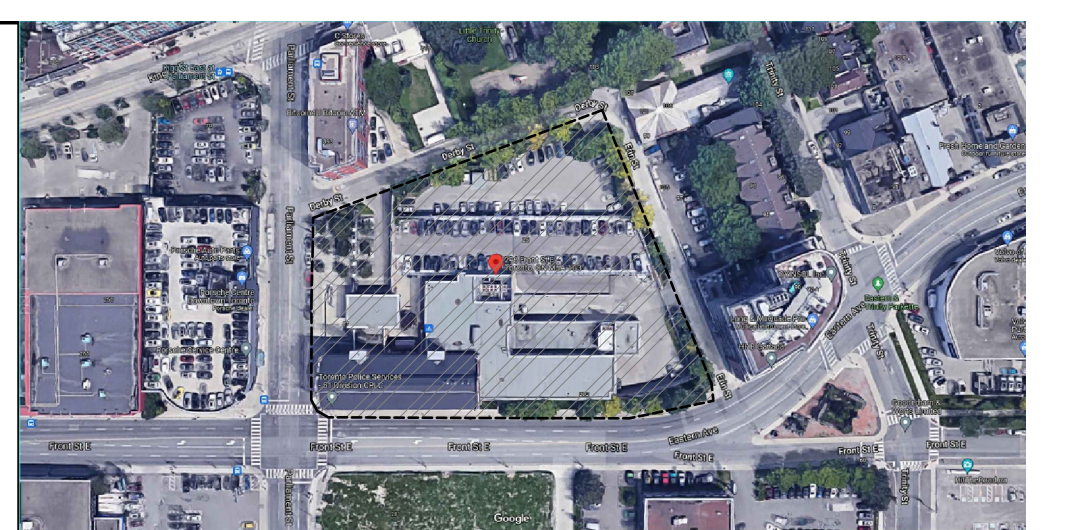
J + B ENGINEERING INC.

TORONTO
25 CENTURIAN DR.
SUITE 201
MARKHAM, ON L3R 5N8
416 229 2836

CALGARY
638-11TH AVE. SW
SUITE 200
CALGARY AB T2R 0E2
403 355 2295



2 TREE PROTECTION DETAIL
SCALE: NTS

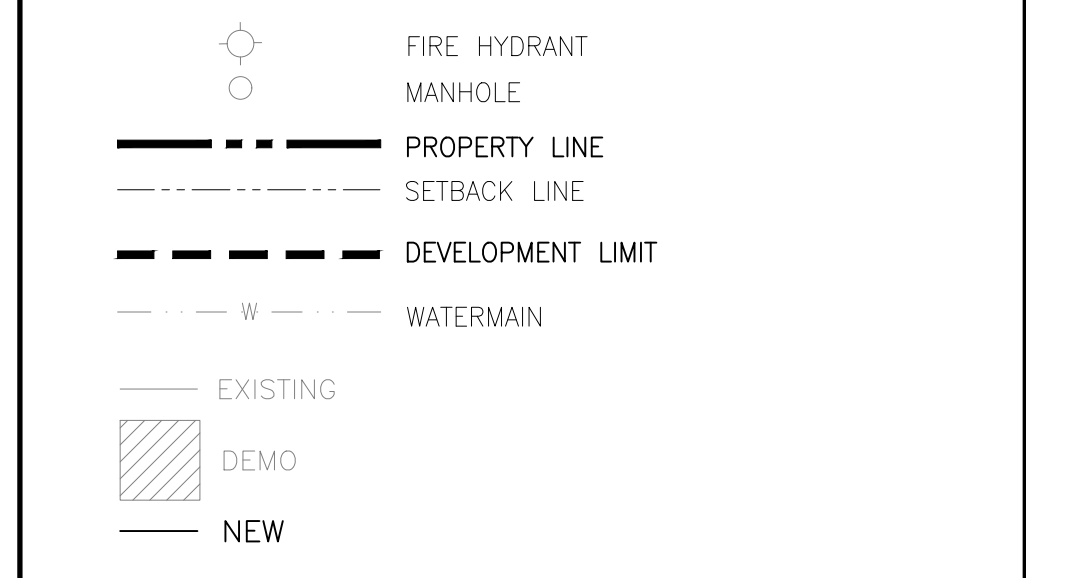


KEY PLAN

GENERAL NOTES:

- VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
- DO NOT SCALE DRAWINGS.
- REPORT ALL DISCOVERIES OF ERRORS, OMISSIONS OR DISCREPANCIES TO THE ARCHITECT OR DESIGN ENGINEER AS APPLICABLE.
- USE ONLY LATEST REVISED DRAWINGS OR THOSE THAT ARE MARKED "ISSUED FOR CONSTRUCTION"
- DESIGN AND CONSTRUCTION OF THIS PROJECT SHALL COMPLY WITH THE PROVINCIAL AND LOCAL BUILDING CODES LATEST EDITION.
- ALL WORKS AND MATERIALS USED SHALL COMPLY AS REQUIRED BY THE O.B.C. LATEST EDITION.
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS & SPECIFICATIONS.
- EVERYTHING IS TO BE CONSIDERED NEW UNLESS SPECIFIED EXISTING OTHERWISE.
- CONTRACTOR TO PROVIDE CONSTRUCTION FENCING AS REQUIRED FOR PUBLIC SAFETY

LEGEND:



No.	Date	Description	Drawn	Checked
11	11 JAN '24	ISSUED FOR BP	EM	DM
10	10 JAN '24	ISSUED FOR TENDER	EM	DM
9	24 NOV '23	FOR REVIEW	EM	DM
8	15 NOV '23	FOR REVIEW	EM	DM
7	07 NOV '23	FOR REVIEW	EM	DM
6	20 JUL '23	FOR REVIEW	EM	DM
5	01 APR '22	FOR REVIEW	EM	DM
4	15 MAR '22	FOR REVIEW	EM	DM
3	08 MAR '22	FOR REVIEW	EM	DM
2	20 DEC '21	FOR REVIEW	EM	DM
1	10 DEC '21	FOR REVIEW	EM	DM
0	25 NOV '21	FOR REVIEW	EM	DM

J+B ENGINEERING INC.
 TORONTO: 25 CENTURIAN DR. SUITE 201 MARKHAM, ON L3R 9N8 416 226 2258
 CALGARY: 6381 17th AVE. SW SUITE 200 CALGARY AB T2R 0E2 403 263 2261

Toronto

OWNER/CLIENT:

Project: COT: GENERATOR REPLACEMENT (51 DIVISION)

SITE PLAN

51 PARLIAMENT STREET TORONTO - ONTARIO

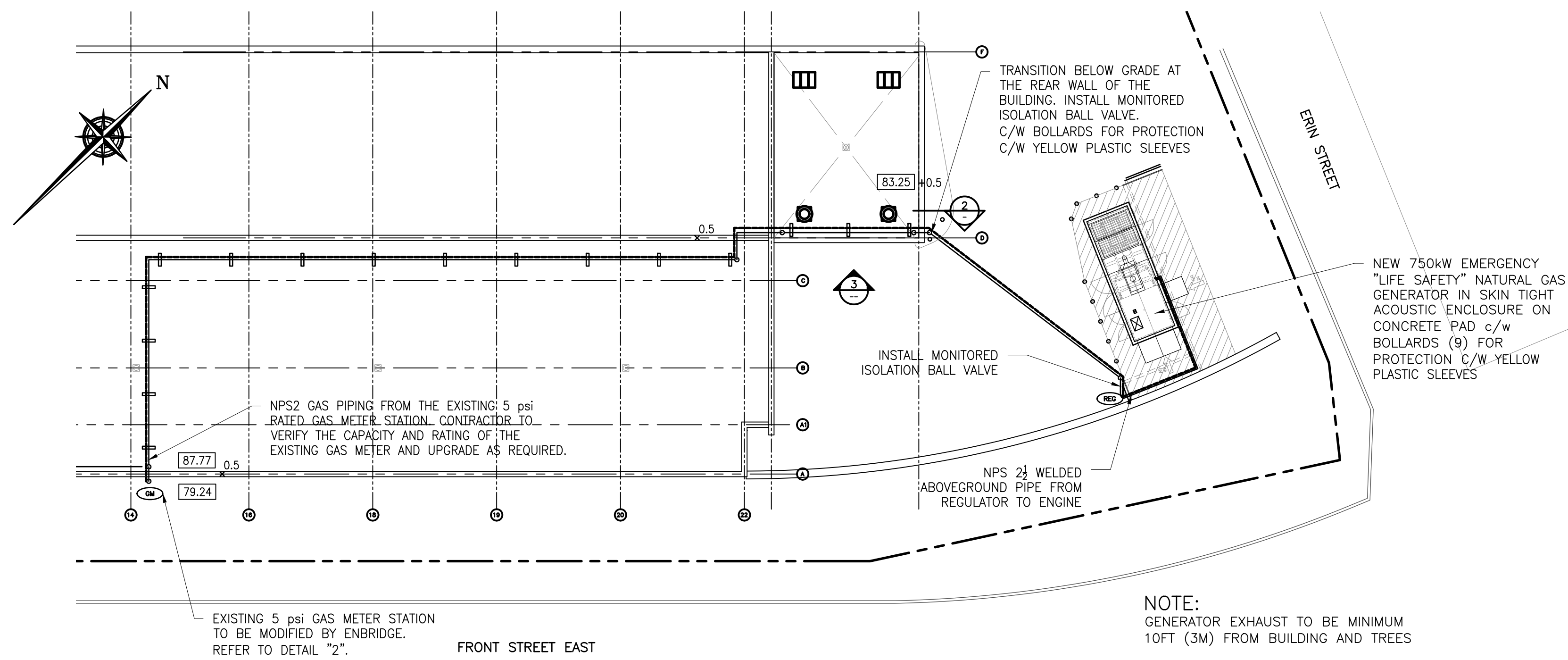
File No: 210248	Date: 12 NOV '21	ACAD INFO
Drawn By: EM	Scale: 1:200	Dwg. File: 210248-P-200
Checked By: DM	Sheet 1 of 1	Plotting Scale: 1:1
Drawing No: P-200		Drawing Size: D

1 SITE PLAN
SCALE: 1:200

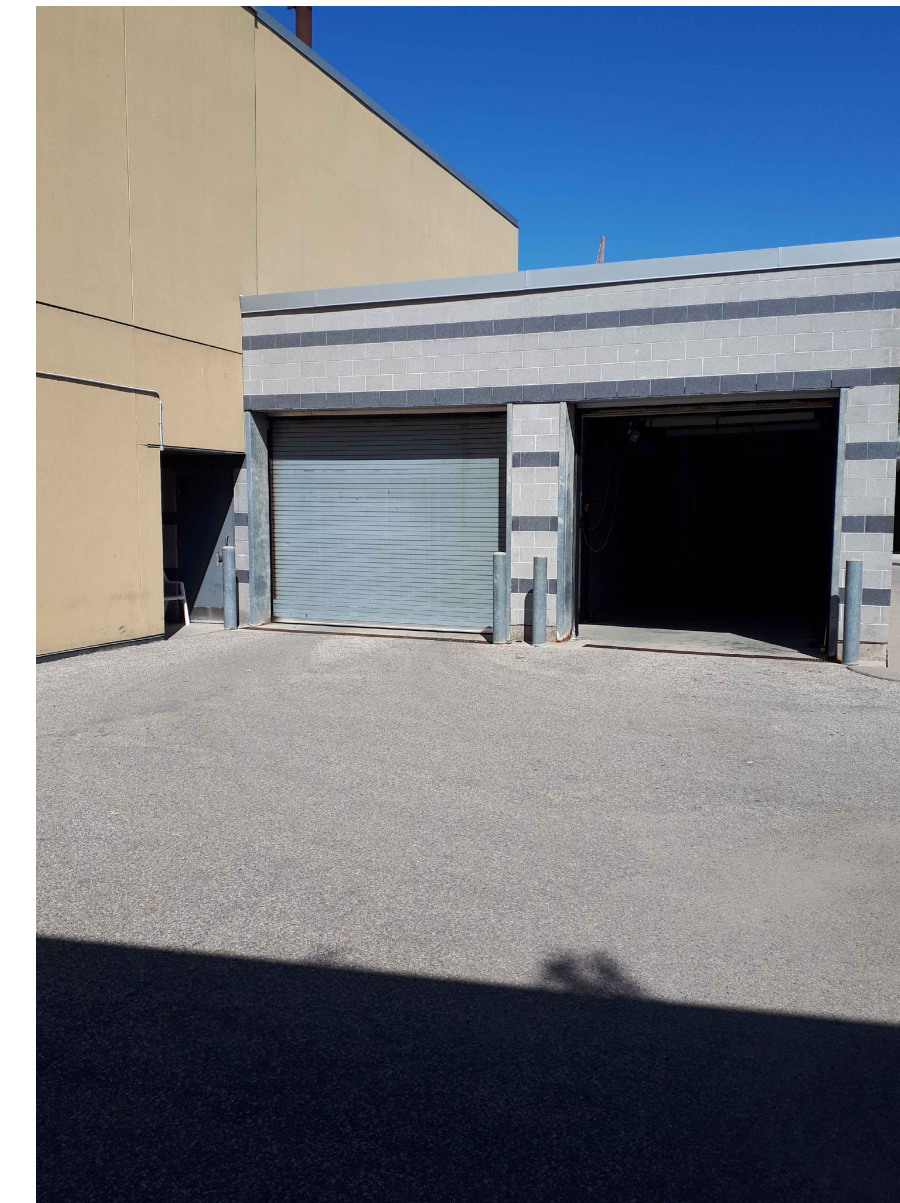
BACKUP GENERATOR:
CONTRACTOR TO INCLUDE THE PRICING FOR THE BACKUP GENERATOR WHEN THE NEW GENERATOR IS BEING INSTALLED, INCLUDING THE FUEL. THE PLACEMENT OF THE TEMPORARY GENERATOR IS TO BE COORDINATED WITH THE COT PM & 51 DIVISION.

CONTRACTOR TO APPLY FOR NEW ENBRIDGE CONNECTION FOR THE HIGHER NATURAL GAS PRESSURE. NATURAL GAS SHUTDOWN FOR THE BUILDING TIE IN WILL BE REQUIRED. BOLLARDS WILL BE REQUIRED FOR PROTECTION OF THE NEW NATURAL GAS STATION.

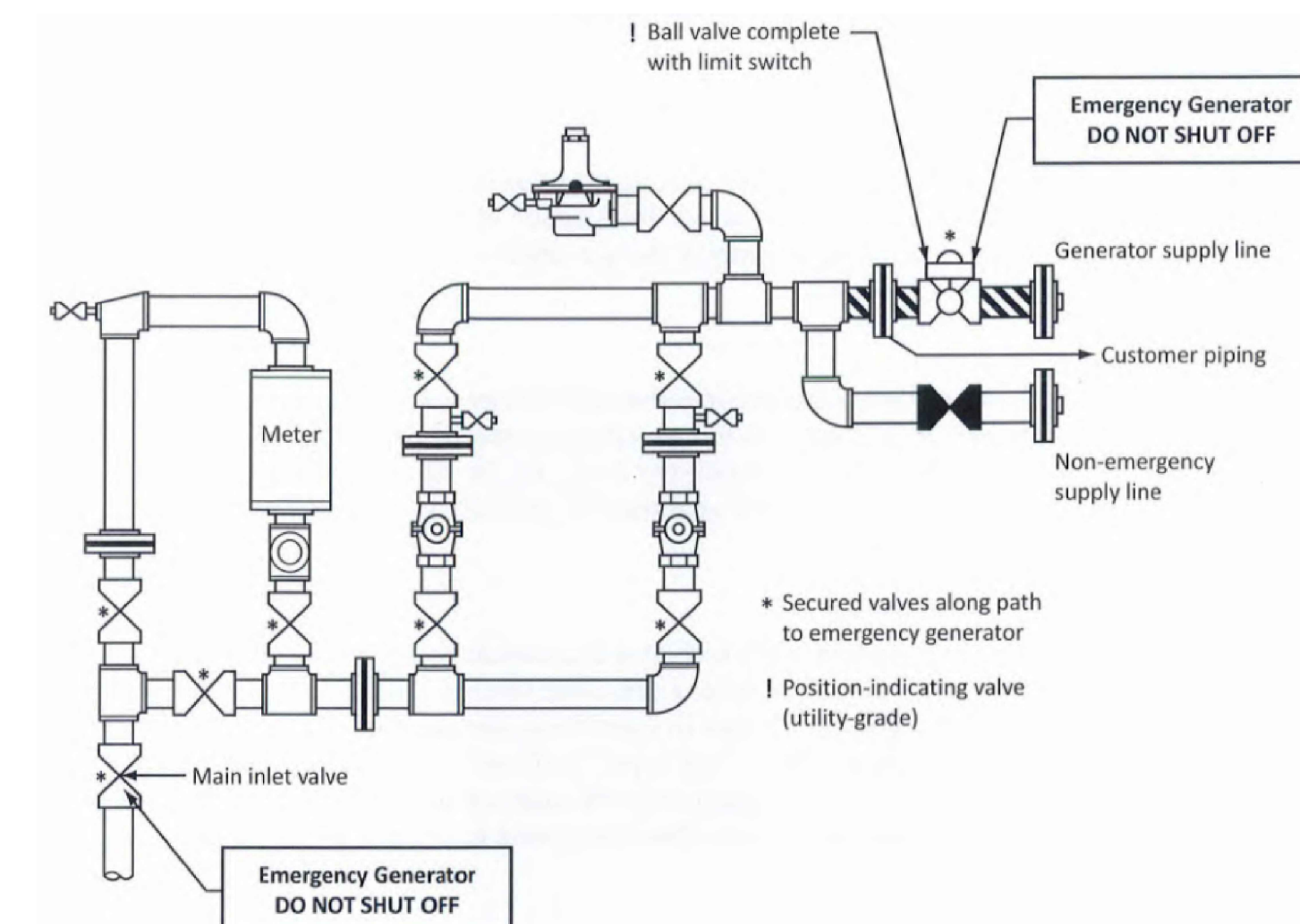
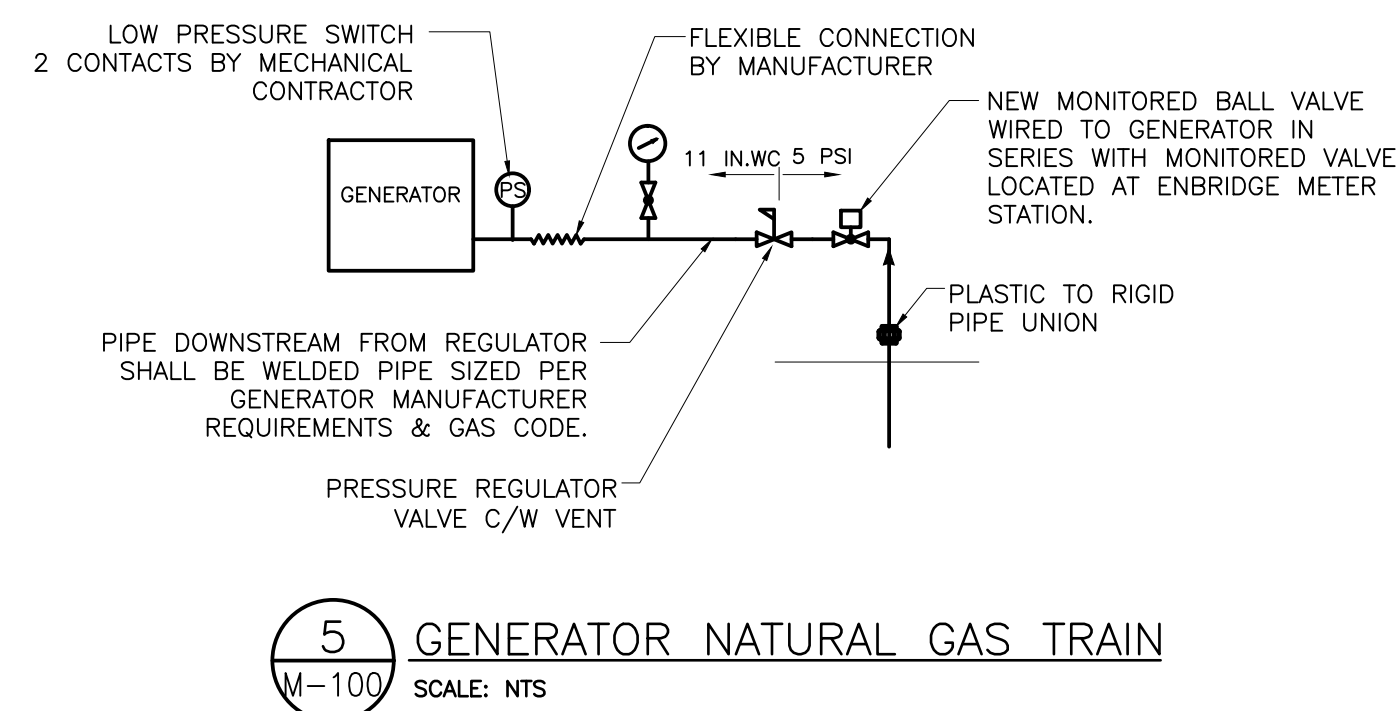
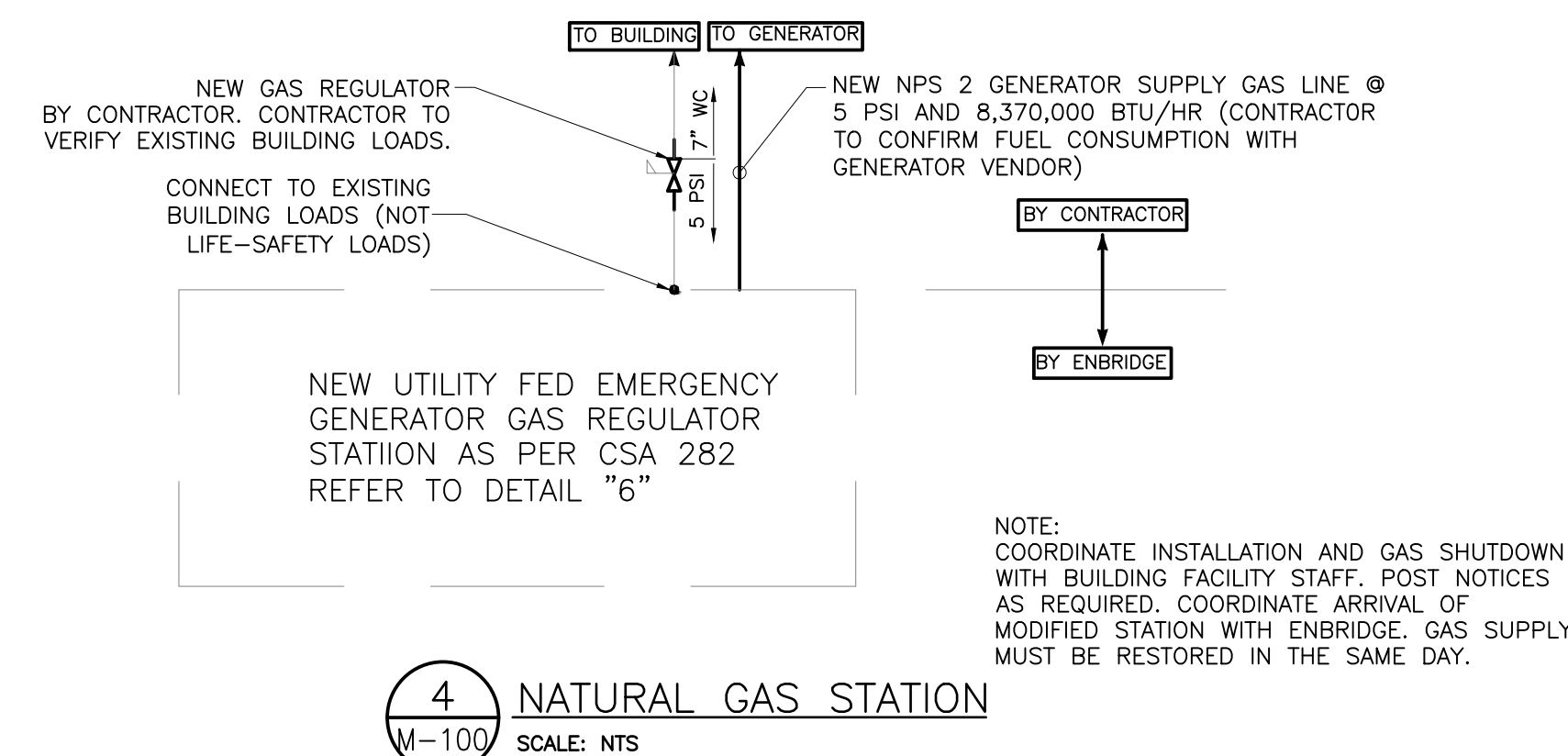
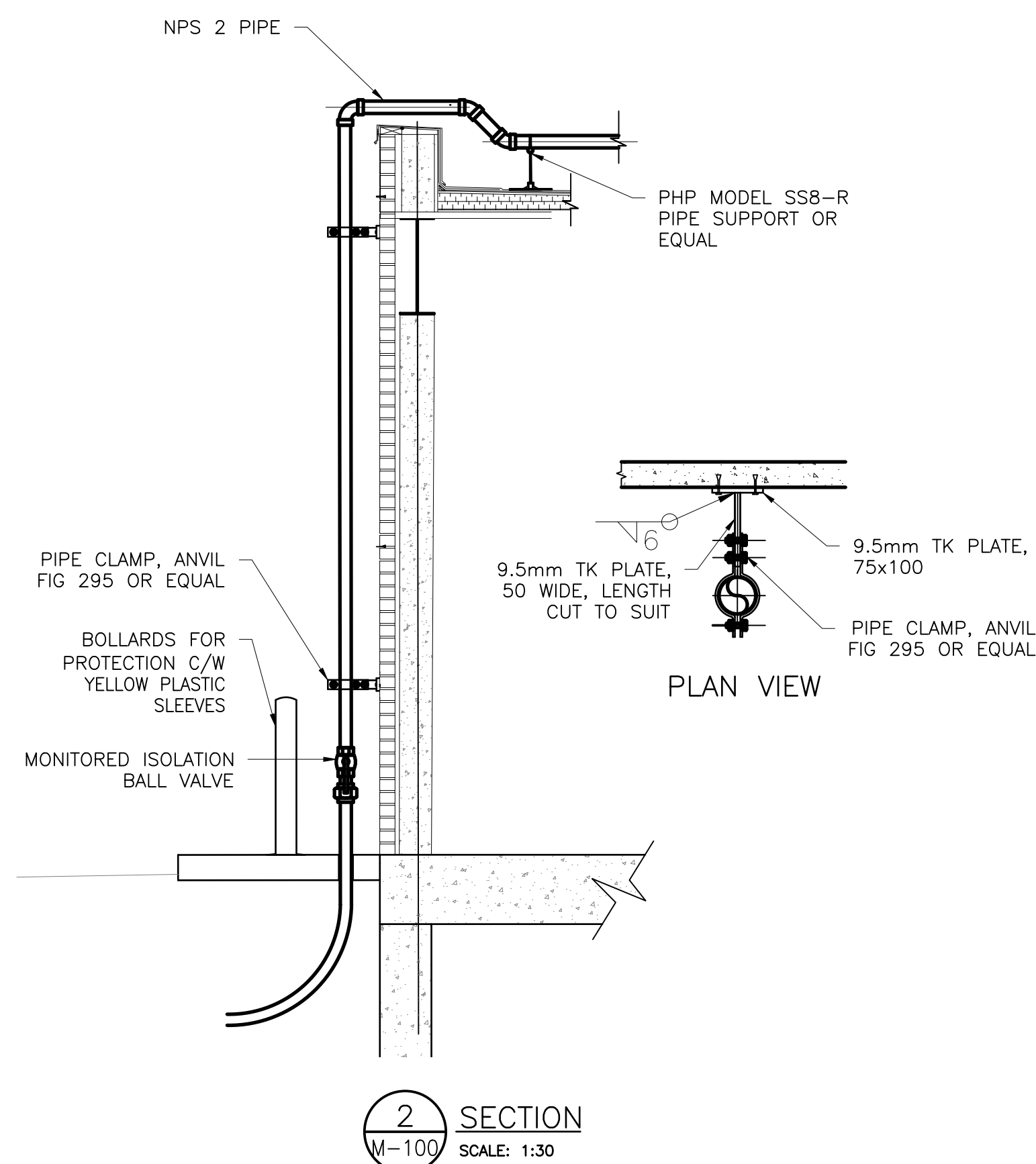
NOTE:
CONTRACTOR TO INCLUDE PRICE FOR ARBORIST REPORT AND TREE PROTECTION PLAN TO BE AS PER CITY OF TORONTO TREE PROTECTION POLICY DETAIL TP-1.
EXISTING SATELLITE DISK—CONTRACTOR TO INCLUDE PRICE TO COORDINATE NEW ROOF OPENING AND REINSTALLATION AS REQUIRED.



1 PIPING PLAN
M-100 SCALE: 1:100

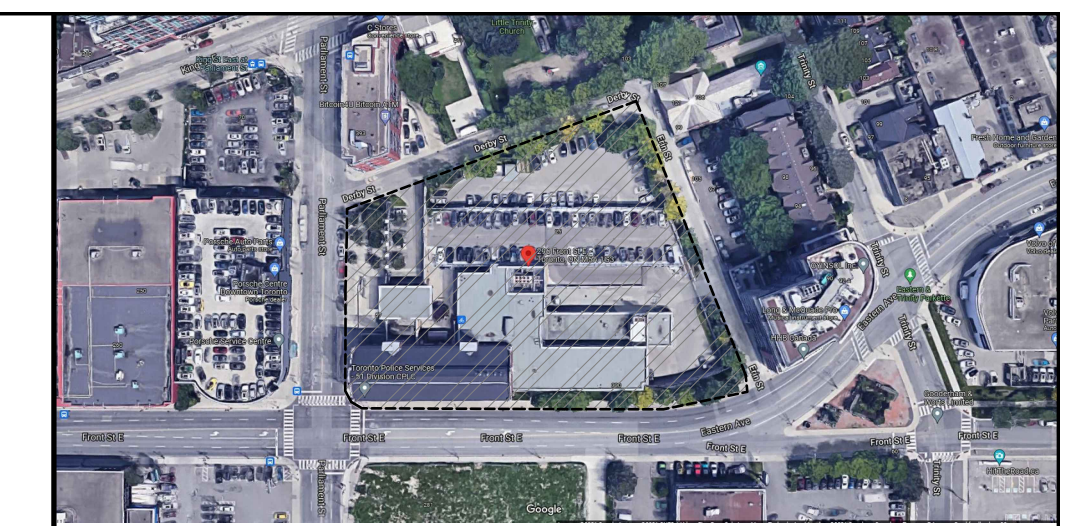


3 VIEW OF TRUCK BAY
M-100 PHOTOGRAPH



GAS PIPING NOTES:

- CONTRACTOR TO PAY AND CO-ORDINATE WITH ENBRIDGE REPLACEMENT/UPGRADE OF THE EXISTING METER STATION WITH NEW 5PSI GAS METER STATION IN ACCORDANCE WITH CSA C282-REFER TO DETAILS IN THIS DRAWING. PROTECTIVE BOLLARDS TO BE INSTALLED AS REQUIRED TO PROTECT METER STATION FROM VEHICLE DAMAGE. REFER TO DWG S-100 FOR BOLLARDS DETAILS.
- CONTRACTOR TO CO-ORDINATE WITH ENBRIDGE THE TERMINATION POINTS OF THE NEW GAS LINE AND EXISTING GAS LINE AT THE NEW/UPGRADED 5 PSI GAS METER STATION. CHECK WITH ENBRIDGE REGARDING CORROSION PROTECTION REQUIREMENTS. SUPPORT PIPE FROM BUILDING WALLS WITH SUITABLE RISER CLAMPS.
- INSTALL NEW GAS LINE FOR GENERATOR FROM ENBRIDGE UPGRADED GAS STATION AS SHOWN ON THE PLAN. THE GAS FUEL CONSUMPTION AT 100% LOAD IS SITE SPECIFIC. VERIFY THIS WITH SHOP DRAWINGS.
- CO-ORDINATE WITH THE GENERATOR MANUFACTURER THE EXACT ENTRY POINT ON THE GENERATOR OF THE NATURAL GAS LINE.
- THE FINAL ROUTE OF NEW GAS LINE FROM UPGRADED GAS METER TO THE NEW GENERATOR TO BE DETERMINED AND VERIFIED BY THE CONTRACTOR.
- CONTRACTOR TO COORDINATE WITH GENERAL CONTRACTOR FOR EXCAVATION, BACKFILLING AND COMPACTION FOR INSTALLATION OF BURIED GAS LINE. GENERAL CONTRACTOR IS RESPONSIBLE TO PERFORM EXCAVATION, BACKFILLING AND COMPACTION. GENERAL CONTRACTOR TO COORDINATE ANY TRENCHING AND INSTALLATION WITH CITY REPRESENTATIVE TO MINIMIZE DISRUPTION TO FACILITY OPERATION.
- GAS SYSTEM SHALL COMPLY WITH THE LATEST EDITION OF CSA B149.1&2, THE ONTARIO GAS UTILIZATION CODE, THE ONTARIO ENERGY ACT AND LOCAL BY-LAWS AND AUTHORITIES HAVING JURISDICTION.
- USE WELDERS QUALIFIED AND LICENSED BY PROVINCIAL AUTHORITIES. FURNISH WELDER'S QUALIFICATIONS UPON REQUEST.
- ALL EQUIPMENT AND MATERIALS TO BE CGA OR CSA CERTIFIED.
- GAS PIPING ABOVE GROUND SHALL BE SCHEDULE 40 STEEL PIPE, BURIED GAS PIPES SHALL BE PLASTIC PIPE.
- FITTINGS SHALL BE 150 PSI BLACK MALLEABLE IRON. USE SCREWED FITTING FOR PIPE UP TO NPS 2" DIAMETER WHERE ACCEPTABLE AND STEEL WELDED FITTINGS FOR PIPE NPS 2 1/2" AND OVER.
- USE CSA AND CGA APPROVED BALL AND LUBRICATED PLUG VALVES WITH LEVER HANDLES.
- TEST ALL GAS PIPING AS REQUIRED BY GAS CODE. SYSTEM SHALL RETAINED THE TEST PRESSURE FOR THE MIN. DURATION OF 1 HOUR WITHOUT LOSS OF PRESSURE.
- JOINTS SHALL BE CHECKED WITH SOAP AND WATER SOLUTION DURING AIR TEST TO ASCERTAIN ANY LEAKS.
- ALL BURIED PIPING SHALL BE TESTED BEFORE BACKFILLING.
- ALL GAS PIPING, INCLUDING PIPING IN CONCEALED SPACES, SHALL BE PAINTED "YELLOW" EXCEPT THE VERTICAL PIPE ON EXTERIOR WALL FACING FRONT STREET WHICH SHALL BE PAINTED GRAY TO MATCH BRICK FACADE.
- PIPE ALL INTERIOR RELIEF VALVES AND GAS VENTS TO THE EXTERIOR OF THE BUILDING.
- MINIMUM GAS PIPE SIZES SHALL BE IN COMPLIANCE WITH GAS UTILIZATION CODE.



KEY PLAN

GENERAL NOTES:

- VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
- DO NOT SCALE DRAWINGS.
- REPORT ALL DISCOVERIES OF ERRORS, OMISSIONS OR DISCREPANCIES TO THE ARCHITECT OR DESIGN ENGINEER AS APPLICABLE.
- USE ONLY LATEST REVISED DRAWINGS OR THOSE THAT ARE MARKED "ISSUED FOR CONSTRUCTION"
- DESIGN AND CONSTRUCTION OF THIS PROJECT SHALL COMPLY WITH THE PROVINCIAL AND LOCAL BUILDING CODES LATEST EDITION.
- ALL WORKS AND MATERIALS USED SHALL COMPLY AS REQUIRED BY THE O.B.C. LATEST EDITION.
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS & SPECIFICATIONS.
- EVERYTHING IS TO BE CONSIDERED NEW UNLESS SPECIFIED EXISTING OTHERWISE.
- CONTRACTOR TO PROVIDE CONSTRUCTION FENCING AS REQUIRED FOR PUBLIC SAFETY

No.	Date	Description	Drawn	Checked
8	27 MAY '24	ADDED NATURAL GAS DETAIL	DW	DW
7	11 JAN '24	ISSUED FOR BP	EM	DW
6	10 JAN '24	ISSUED FOR TENDER	EM	DW
5	24 NOV '23	FOR REVIEW	EM	DW
4	15 NOV '23	FOR REVIEW	EM	DW
3	07 NOV '23	FOR REVIEW	EM	DW
2	01 APR '22	FOR REVIEW	EM	DW
1	15 MAR '22	FOR REVIEW	EM	DW
0	08 MAR '22	PRELIM FOR REVIEW	EM	DW

REVISIONS



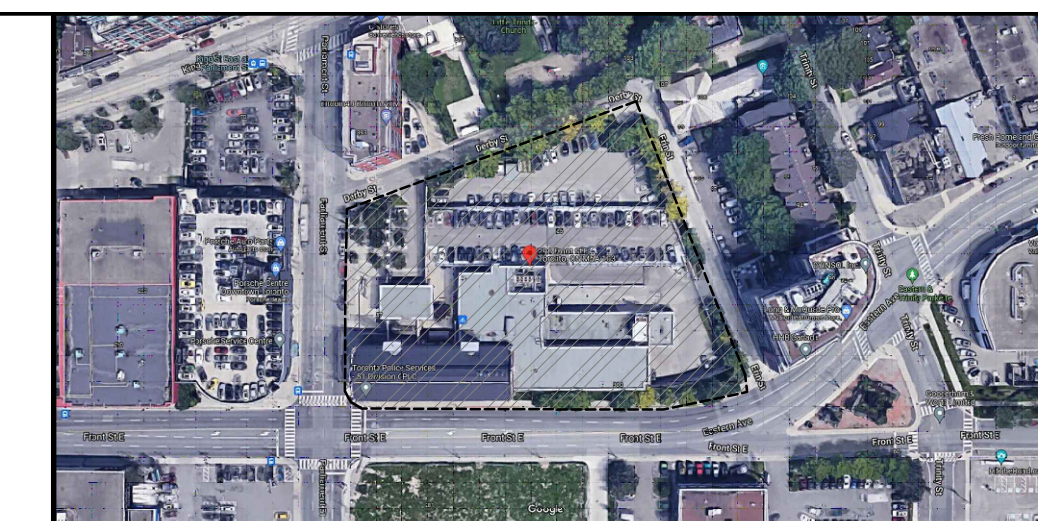
OWNER/CLIENT:



Project: COT: GENERATOR REPLACEMENT (51 DIVISION)

NATURAL GAS PIPING PLAN


File No:	Date:	Scale:	Plotting Scale:
210248	20 SEPT '23	AS SHOWN	1:1
Drawn By: DW	Checked By: DM	Sheet 1 of 1	Drawing Size: D



KEY PLAN

GENERAL NOTES

1. VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
2. DO NOT SCALE DRAWINGS.
3. REPORT ALL DISCOVERIES OF ERRORS, OMISSIONS OR DISCREPANCIES TO THE DESIGN ENGINEER AS APPLICABLE.
4. USE ONLY LATEST REVISED DRAWINGS OR THOSE THAT ARE MARKED "ISSUED FOR CONSTRUCTION".
5. THE DESIGN AND CONSTRUCTION OF THIS PROJECT INCLUDING ALL WORKS AND MATERIALS USED SHALL COMPLY AS REQUIRED IN ACCORDANCE WITH THE LATEST EDITION OF THE BUILDING AND ELECTRICAL CODES.
6. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL PROJECT DRAWINGS, RELEVANT DRAWINGS, & SPECIFICATIONS.
7. THE CONTRACTOR SHALL APPLY FOR, OBTAIN AND PAY FOR ALL PERMITS, LICENCES, INSPECTIONS, EXAMINATIONS AND FEES REQUIRED.
8. EVERYTHING IS TO BE CONSIDERED NEW UNLESS SPECIFIED EXISTING OTHERWISE.
9. CONTRACTOR TO REMOVE AND RELOCATE EXISTING ELECTRICAL SERVICES AS REQUIRED TO COMPLETE THE ELECTRICAL WORK.
10. CONTRACTOR IS RESPONSIBLE TO VERIFY SHORT CIRCUIT RATING BEFORE PURCHASE OF POWER EQUIPMENT.
11. CABLE/CONDUIT ROUTING AND TERMINATIONS ARE DIAGRAMMATIC, SHOWING THE APPROXIMATE ARRANGEMENT. ACTUAL CABLE/CONDUIT POSITIONS SHALL BE DETERMINED TO SUIT FIELD CONDITIONS AND EQUIPMENT LOCATIONS.
12. CONTRACTOR SHALL SIZE ALL FEEDERS ACCORDING TO THE LATEST EDITION OF THE OESC BASED ON FINAL FEEDER LENGTHS AND VOLTAGE DROP.
13. ALL UNDERGROUND CONDUITS TO BE BURIED MIN. 600MM BELOW FINISHED GRADE IN NON-TRAFFIC AREAS AND MIN. 900MM BELOW FINISHED GRADE IN TRAFFIC AREAS. CONTRACTOR TO INSTALL WARNING TAPE AND REFER TO OESC FOR ADDITIONAL REQUIREMENTS.
14. CONTRACTOR TO COORDINATE ALL ACTIVITIES AND POWER DISRUPTIONS WITH OWNER TO AVOID DISRUPTIONS TO TENANTS. CONTRACTOR TO INCLUDE FOR PROVIDING TEMPORARY EMERGENCY POWER INCLUDING DIESEL FUEL DURING THE TRANSITION TO THE NEW EMERGENCY GENERATOR UNDER THIS CONTRACT.
15. EXISTING CONDITIONS ARE BASED ON OBSERVATIONS OF VISIBLE PARTS OF THE ELECTRICAL SYSTEM AND ON EXISTING DOCUMENTS. CONDITIONS SHOWN MAY NOT BE ACCURATE WITH RESPECT TO CIRCUIT USAGE, UNDOCUMENTED MODIFICATIONS MADE AFTER THE DATE OF THE EXISTING DRAWINGS OR CONCEALED CONDITIONS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND ADAPT WORK TO SUIT.

— EXISTING
 DEMO
 — NEW

No.	Date	Description	Drawn	Checked
4	11 JAN '24	ISSUED FOR BP	AM	DM
3	10 JAN '24	ISSUED FOR TENDER	AM	DM
2	24 NOV '23	FOR REVIEW	AM	DM
1	15 NOV '23	FOR REVIEW	AM	DM
0	07 NOV '23	FOR REVIEW	AM	DM

REVISIONS



J + B ENGINEERING INC.
 TORONTO: 25 CENTURIAN DR. SUITE 201 MARKHAM, ON L3R 9N8 416 228 8884
 CALGARY: 636-11TH AVE. SW SUITE 201 CALGARY AB T2R 0E2 403 228 8884

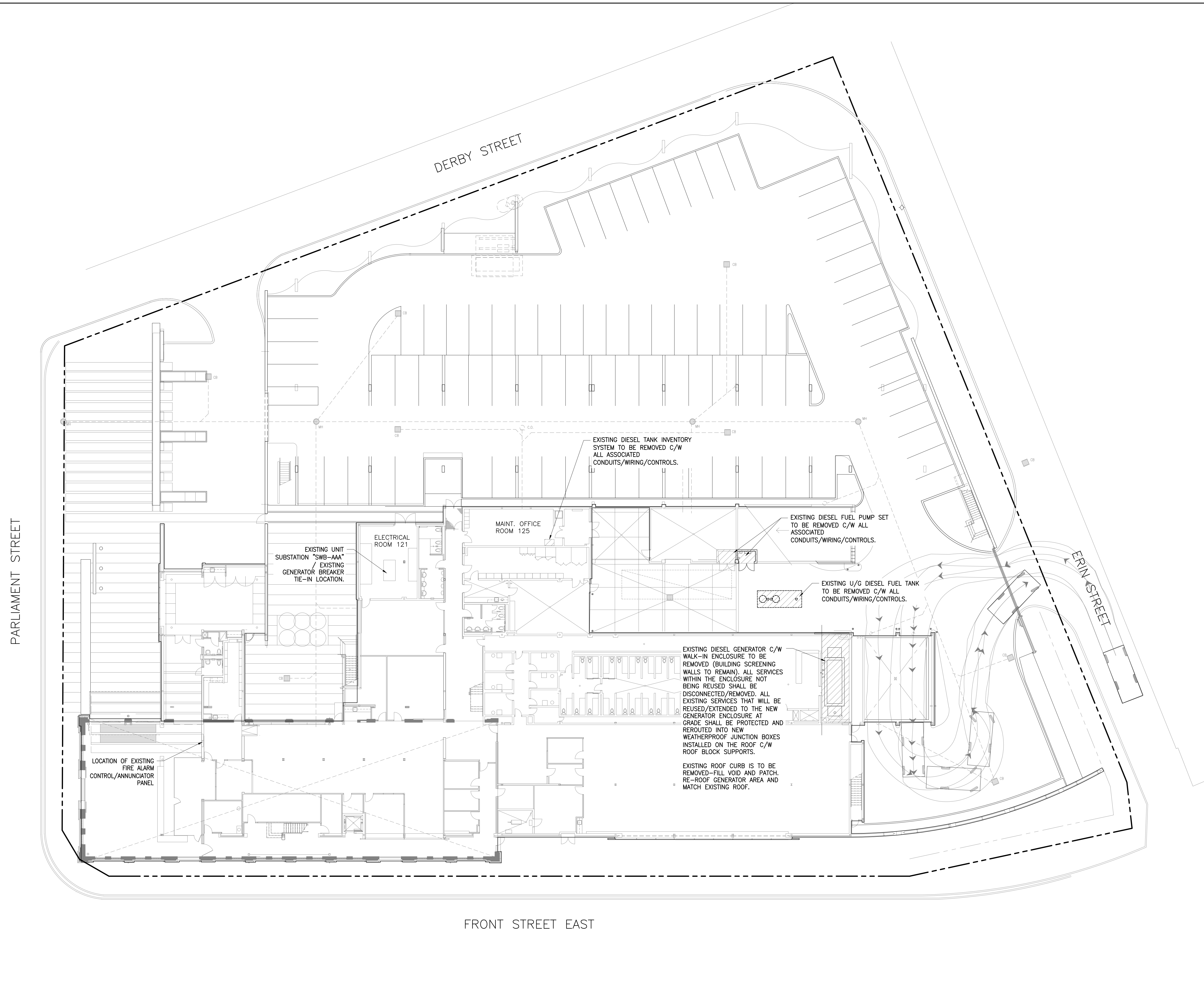
OWNER/CLIENT:

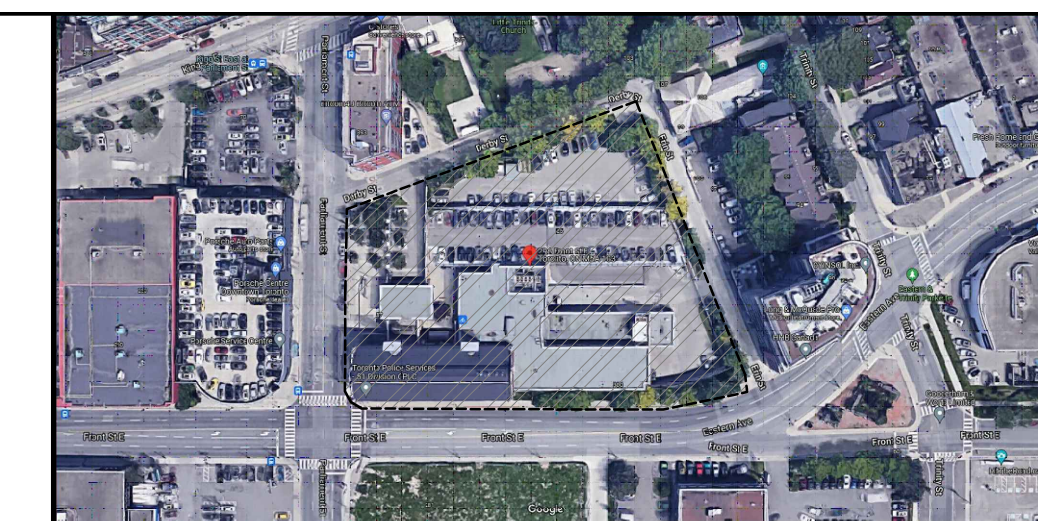


Project: COT: GENERATOR REPLACEMENT (51 DIVISION)

EXISTING ELECTRICAL SITE PLAN & ELECTRICAL DEMO

51 PARLIAMENT STREET		TORONTO - ONTARIO	
File No: 210248	Date: 7 SEPT '23	ACAD INFO	
Drawn By: EM	Scale: 1:200	Dwg. File: 210248-E-100	
Checked By: AM	Sheet 1 of 1	Plotting Scale: 1:1	
Drawing No: E-100		Drawing Size: D	





KEY PLAN

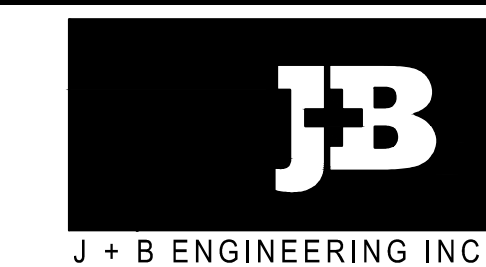
GENERAL NOTES

1. VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
2. DO NOT SCALE DRAWINGS.
3. REPORT ALL DISCOVERIES OF ERRORS, OMISSIONS OR DISCREPANCIES TO THE DESIGN ENGINEER AS APPLICABLE.
4. USE ONLY LATEST REVISED DRAWINGS OR THOSE THAT ARE MARKED "ISSUED FOR CONSTRUCTION".
5. THE DESIGN AND CONSTRUCTION OF THIS PROJECT INCLUDING ALL WORKS AND MATERIALS USED SHALL COMPLY AS REQUIRED IN ACCORDANCE WITH THE LATEST EDITION OF THE BUILDING AND ELECTRICAL CODES.
6. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL PROJECT DRAWINGS, RELEVANT DRAWINGS, & SPECIFICATIONS.
7. THE CONTRACTOR SHALL APPLY FOR, OBTAIN AND PAY FOR ALL PERMITS, LICENCES, INSPECTIONS, EXAMINATIONS AND FEES REQUIRED.
8. EVERYTHING IS TO BE CONSIDERED NEW UNLESS SPECIFIED EXISTING OTHERWISE.
9. CONTRACTOR TO REMOVE AND RELOCATE EXISTING ELECTRICAL SERVICES AS REQUIRED TO COMPLETE THE ELECTRICAL WORK.
10. CONTRACTOR IS RESPONSIBLE TO VERIFY SHORT CIRCUIT RATING BEFORE PURCHASE OF POWER EQUIPMENT.
11. CABLE/CONDUIT ROUTING AND TERMINATIONS ARE DIAGRAMMATIC, SHOWING THE APPROXIMATE ARRANGEMENT. ACTUAL CABLE/CONDUIT POSITIONS SHALL BE DETERMINED TO SUIT FIELD CONDITIONS AND EQUIPMENT LOCATIONS.
12. CONTRACTOR SHALL SIZE ALL FEEDERS ACCORDING TO THE LATEST EDITION OF THE OESC BASED ON FINAL FEEDER LENGTHS AND VOLTAGE DROP.
13. ALL UNDERGROUND CONDUITS TO BE BURIED MIN. 600MM BELOW FINISHED GRADE IN NON-TRAFFIC AREAS AND MIN. 900MM BELOW FINISHED GRADE IN TRAFFIC AREAS. CONTRACTOR TO INSTALL WARNING TAPE AND REFER TO OESC FOR ADDITIONAL REQUIREMENTS.
14. CONTRACTOR TO COORDINATE ALL ACTIVITIES AND POWER DISRUPTIONS WITH OWNER TO AVOID DISRUPTIONS TO TENANTS. CONTRACTOR TO INCLUDE FOR PROVIDING TEMPORARY EMERGENCY POWER INCLUDING DIESEL FUEL DURING THE TRANSITION TO THE NEW EMERGENCY GENERATOR UNDER THIS CONTRACT.
15. EXISTING CONDITIONS ARE BASED ON OBSERVATIONS OF VISIBLE PARTS OF THE ELECTRICAL SYSTEM AND ON EXISTING DOCUMENTS. CONDITIONS SHOWN MAY NOT BE ACCURATE WITH RESPECT TO CIRCUIT USAGE, UNDOCUMENTED MODIFICATIONS MADE AFTER THE DATE OF THE EXISTING DRAWINGS OR CONCEALED CONDITIONS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND ADAPT WORK TO SUIT.

— EXISTING
 DEMO
 NEW

No.	Date	Description	Drawn	Checked
4	11 JAN '24	ISSUED FOR BP	AM	DM
3	10 JAN '24	ISSUED FOR TENDER	AM	DM
2	24 NOV '23	FOR REVIEW	AM	DM
1	15 NOV '23	FOR REVIEW	AM	DM
0	07 NOV '23	FOR REVIEW	AM	DM

REVISIONS



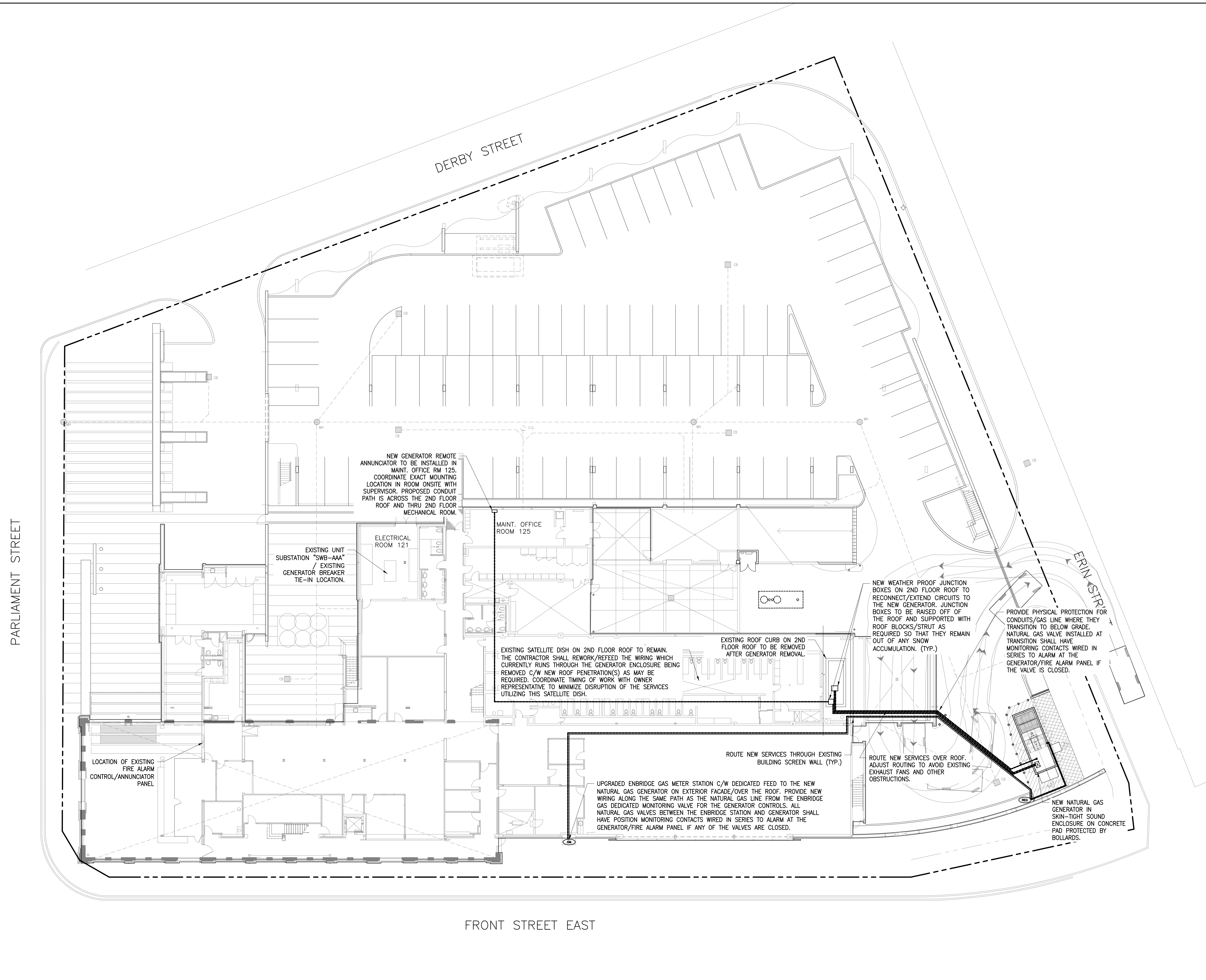
OWNER/CLIENT:



Project: COT: GENERATOR REPLACEMENT (51 DIVISION)

NEW ELECTRICAL SITE PLAN

51 PARLIAMENT STREET		TORONTO - ONTARIO	
File No: 210248	Date: 7 SEPT '23	ACAD INFO	
Drawn By: EM	Scale: 1:200	Dwg. File: 210248-E-101	
Checked By: AM	Sheet 1 of 1	Plotting Scale: 1:1	
Drawing No: E-101		Drawing Size: D	



DERBY STREET

PARLIAMENT STREET

ERIN STR

FRONT STREET EAST

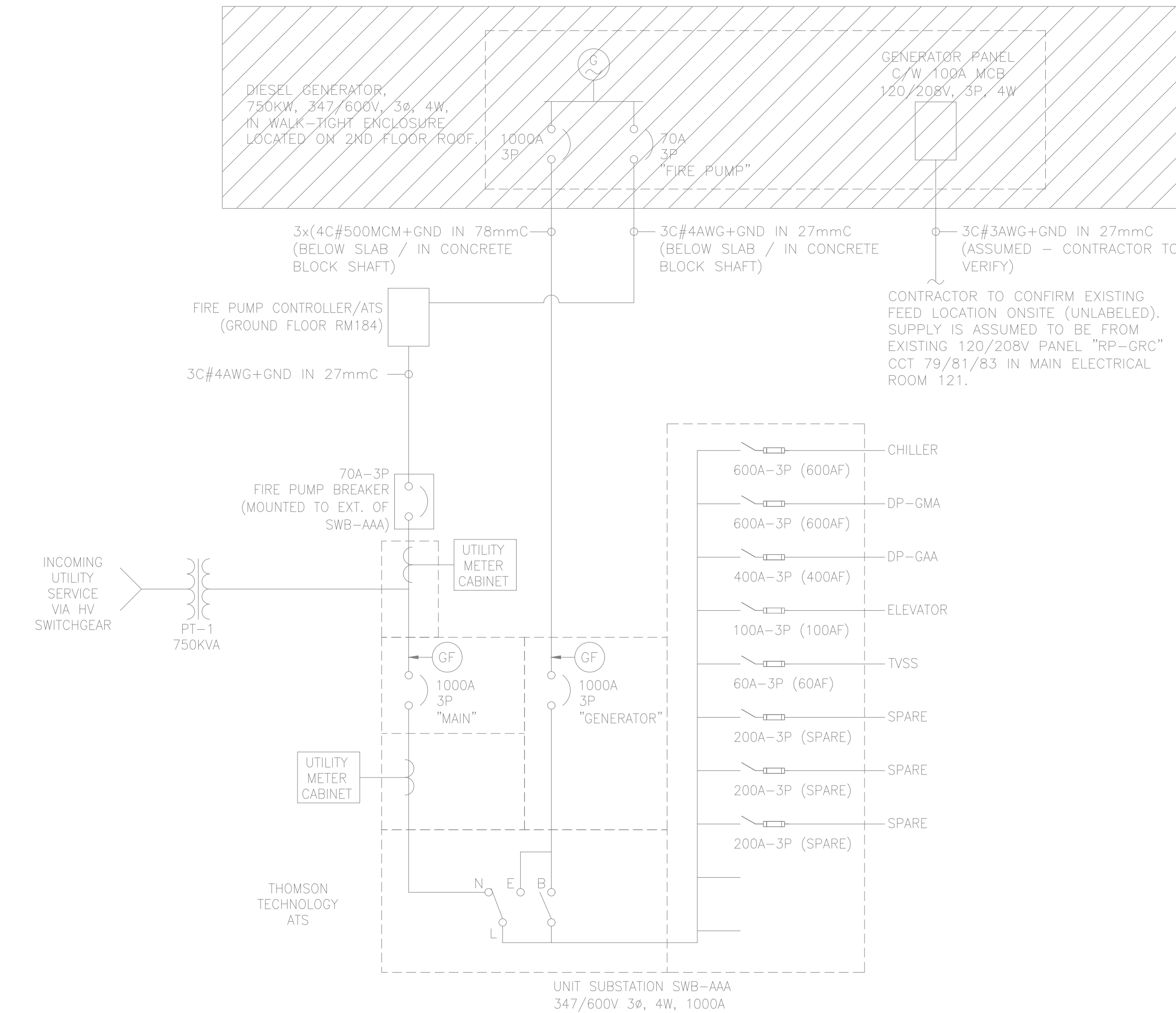
ELECTRICAL NOTES:

IN GENERAL, THE WORK INCLUDES TO FURNISH AND INSTALL A NEW LIFE SAFETY GENERATOR INCLUDING NEW ELECTRICAL, MECHANICAL, CIVIL/STRUCTURAL AND DEMOLITION OF EXISTING SYSTEMS, AS MORE THOROUGHLY DEFINED IN DRAWINGS AND SPECIFICATIONS.

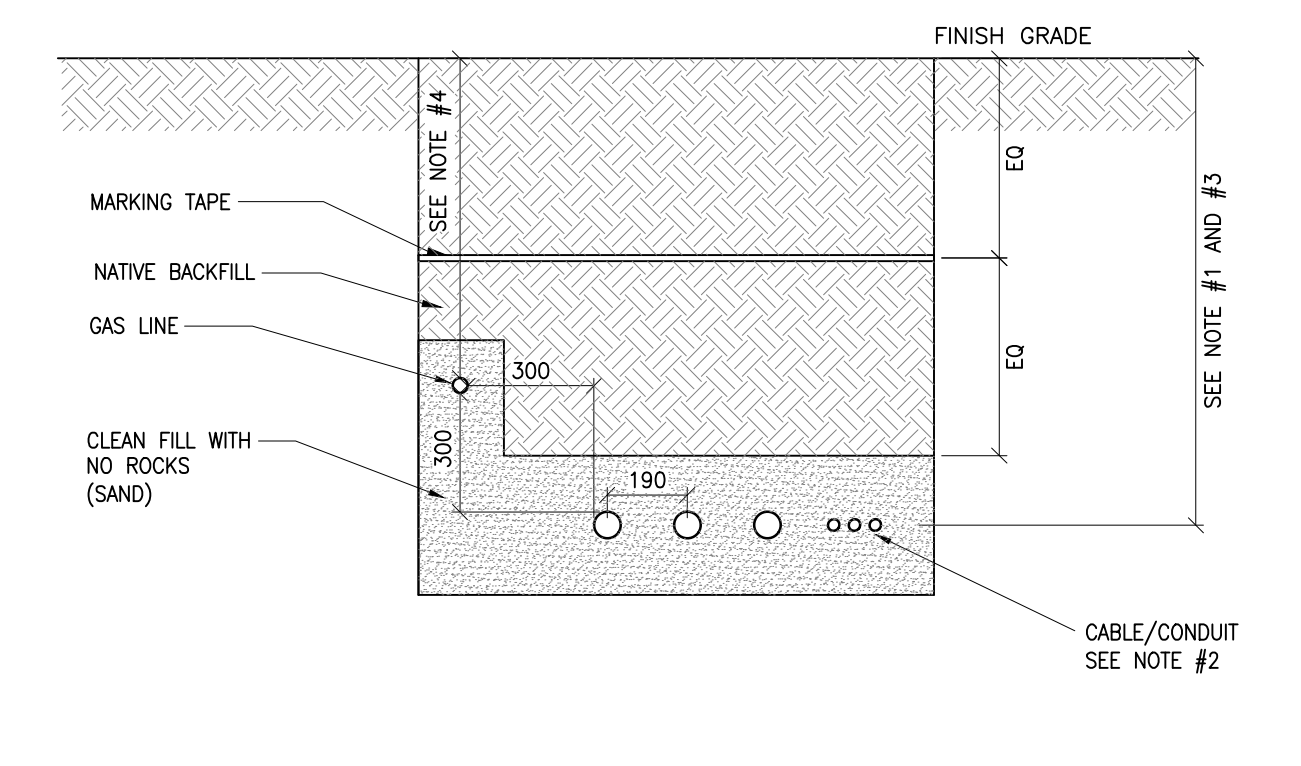
- THIS PROJECT IS NOT A COMPLETE REPLACEMENT/UPGRADE OF THE ELECTRICAL LIFE SAFETY SYSTEMS WITHIN THE BUILDING. THE ELECTRICAL SCOPE OF WORK INCLUDES THE REPLACEMENT OF THE EMERGENCY GENERATOR, ASSOCIATED CONTROL EQUIPMENT, AND THE RECONNECTION OF THE EXISTING EMERGENCY LIFE SAFETY LOADS TO THE NEW GENERATOR AS SHOWN IN THE DRAWING PACKAGE. THE ELECTRICAL SCOPE OF WORK FOR THIS PROJECT DOES NOT EXTEND TO THE REPLACEMENT/UPGRADES OF THE INDIVIDUAL ELECTRICAL LIFE SAFETY DEVICES THROUGHOUT THE BUILDING.
- THE DESIGN AND CONSTRUCTION OF THIS PROJECT INCLUDING ALL WORKS AND MATERIALS USED SHALL COMPLY AS REQUIRED IN ACCORDANCE WITH THE LATEST EDITION OF THE ONTARIO BUILDING CODE, ONTARIO ELECTRICAL SAFETY CODE, AND CSA STANDARD C282 "EMERGENCY ELECTRICAL POWER SUPPLY FOR BUILDINGS".
- BUILDING TEMPORARY POWER IS NOT ANTICIPATED TO BE REQUIRED BY THE CONTRACTOR DURING THE TIME OF RECONNECTION TO THE NEW POWER DISTRIBUTION SYSTEM (CONNECTING NEW GENERATOR FEEDERS/CONTROLS AT NEW ROOF TOP JUNCTION BOXES) WITH THE UNDERSTANDING THAT THE OUTAGE TO THE GENERATOR SYSTEM WOULD BE LESS THAN A SINGLE 4H OUTAGE. CONTRACTOR MUST PROVIDE CITY PM 10 BUSINESS DAY ADVANCE NOTICE OF ANY POWER OUTAGES SO THAT POWER OUTAGES CAN BE RESCHEDULED OR TEMPORARY POWER CAN BE ARRANGED AT AN ADDITIONAL COST IF DEEMED NECESSARY BY THE OWNER/CLIENT.
- ALL MATERIALS AND EQUIPMENT AS HEREINAFTER SPECIFIED AND/OR SHOWN ON THE DRAWINGS SHALL BE FURNISHED AND INSTALLED IN SUCH MANNER AS TO LEAVE EACH OF THE SYSTEMS OF THE VARIOUS TRADES COMPLETE AND IN SATISFACTORY OPERATING CONDITION.
- THE CONTRACTOR SHALL INSTALL AND HAVE THE EQUIPMENT MANUFACTURER(S) COMMISSION THE SYSTEM A WHOLE TO PROVIDE A COMPLETE READY TO OPERATE EMERGENCY (LIFE-SAFETY) POWER SYSTEM CAPABLE OF OPERATING UNDER ALL APPLICABLE REGULATORY/CODE REQUIREMENTS (CSA 282, MOE, ESA, TSSA, BUILDING CODE, ETC.). MAJOR EQUIPMENT FAT RESULTS SHALL BE PROVIDED TO CONSULTANT AND OWNER FOR REVIEW/APPROVAL PRIOR TO EQUIPMENT DELIVERY ON SITE.
- CONTRACTOR/EQUIPMENT SUPPLIER TO PROVIDE SHORT CIRCUIT AND COORDINATION STUDY FOR NEW EQUIPMENT AND ADJUST BREAKER SIZE/TRIP SETTINGS OR REPLACE FUSES AS REQUIRED TO ACHIEVE PROPER COORDINATION AND PROTECTION. THE CONTRACTOR IS RESPONSIBLE FOR ALL FIELD VERIFICATIONS REQUIRED TO COMPLETE THE STUDY. EXISTING SLD IS PROVIDED ONLY FOR REFERENCE.
- ALL EXISTING CONDUITS/WIRING MAY ONLY BE REUSED IF APPROPRIATELY SIZED, IN SUITABLE CONDITION FOR REUSE, AND CONDUCTORS PASSED INSULATION TESTS (MEGGER) BY CONTRACTOR. FOR ALL EXISTING WIRING BEING REUSED/RECONNECTED THE CONTRACTOR SHALL COMPLETE INSULATION TESTS (MEGGER) TO ENSURE THAT THE EXISTING WIRING PASSES PRIOR TO RECONNECTING / PUTTING THE WIRING BACK IN SERVICE.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL REQUIRED EQUIPMENT TO COMPLETE THE GENERATOR INSTALLATION AS FURTHER DEFINED IN THE PROJECT SPECIFICATIONS WHICH INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:
 - NEW 750KW 347/600V 3PH 4W, FLOATING NEUTRAL, NATURAL GAS POWERED GENERATOR C/W WEATHERPROOF SOUND RATED ENCLOSURE EQUIPPED IN ACCORDANCE WITH CSA C282;
 - NEW MONITORING AND PROTECTION SYSTEMS FOR GENERATOR OPERATION INCLUDING REMOTE GENERATOR ANNUNCIATOR IN THE MAINTENANCE OFFICE ROOM 125;
 - CONNECTION OF THE NEW GENERATOR TO THE EXISTING FIRE ALARM PANEL (USE SPARE ZONES AS NEEDED) C/W ALL REQUIRED PROGRAMING AND UPDATING OF LABELS ON REMOTE ANNUNCIATOR(S) FOR THE NEW CONNECTIONS AS REQUIRED AND THE REMOVAL OF THE OLD GENERATOR ENCLOSURE FIRE ALARM ZONE/POINTS.
 - CONTRACTOR TO RETAIN A MANUFACTURER AUTHORIZED SERVICE PROVIDER TO COMMISSION THE EXISTING THOMSON TECHNOLOGY ATS WITH ONCE CONNECTED TO THE NEW GENERATOR SYSTEM TO ENSURE PROPER OPERATION OF THE COMPLETE SYSTEM.
 - NEW LED EMERGENCY LIGHTING UNITS IN THE NEW GENERATOR ENCLOSURE AND IN THE ELECTRICAL ROOM AROUND THE EXISTING TRANSFER SWITCH TO PROVIDE A MINIMUM LIGHTING LEVEL OF 50 LUX FOR 2 HOURS AS PER CSA 282.
 - RELOCATE ANY EXISTING EQUIPMENT/CONDUITS WHERE NOTED AND/OR REQUIRED TO ACCOMMODATE THE NEW INSTALLATION;
 - VERIFY EXISTING ELECTRICAL EQUIPMENT INFORMATION SHOWN ON DRAWING WITH SITE CONDITION PRIOR TO START OF WORK;
 - EXISTING DISTRIBUTION SYSTEM SHOWN IS DIAGRAMMATIC TO SHOW THE DESIGN INTENT. CONTRACTOR IS RESPONSIBLE TO CONFIRM/VERIFY IT PRIOR TO FABRICATION OR ROUGH-IN AND ENSURE ALL EXISTING LOADS ARE RE-CONNECTED AND BALANCED BY THE NEW ELECTRICAL DISTRIBUTION SYSTEM. CONTRACTOR TO PROVIDE ALL ASSOCIATED ACCESSORIES AS REQUIRED TO FACILITATE THE NEW INSTALLATION COMPLETELY.
 - CONDUCTORS AND CONDUITS TO BE OVERSIZED TO SUIT VOLTAGE DROP AS PER OESC WHERE REQUIRED.
 - ALL FEEDER AND CONTROL CABLES FORMING PART OF THE LIFE SAFETY EMERGENCY POWER SYSTEM INSTALLED OUTSIDE OF THE FIRE RATED ELECTRICAL ROOM SHALL BE ULC S139 LISTED WITH A 2 HOUR FIRE RATING UNLESS THE CABLES ARE LOCATED OUTSIDE OF THE BUILDING ENVELOPE (ON THE ROOF / UNDERGROUND).
- COMPLETE ALL FIRE ALARM RELATED WORK INCLUDING BUT NOT LIMITED TO:
 - REMOVAL OF OLD FIRE ALARM WIRING/ZONES FOR THE OLD WALK-IN GENERATOR ENCLOSURE.
 - NEW FIRE ALARM WIRING FOR GENERATOR AS PER ELECTRICAL SLD / DETAILS (GENERATOR COMMON TROUBLE, GENERATOR RUNNING, GENERATOR LOW FUEL).
 - CONTRACTOR SHALL INCLUDE ADDING ANY ADDITIONAL ZONES / MODULES AS MAY BE REQUIRED TO THE MAIN FIRE ALARM PANEL TO ACCOMMODATE THE FIRE ALARM SYSTEM ADDITIONS UNDER THIS CONTRACT.
 - NEW AND/OR RELOCATED FIRE ALARM SYSTEM/DEVICES TO BE INSTALLED PER CAN/ULC-S524-01 AND VERIFIED PER CAN/ULC-S537-04. CONTRACTOR SHALL COMPLETE INTEGRATED SYSTEMS TESTING OF THE FIRE PROTECTION AND LIFE SAFETY SYSTEMS IN ACCORDANCE WITH CAN/ULC-S1001. A COPY OF THE VERIFICATION CERTIFICATES MUST BE SUBMITTED TO THE CONSULTANTS PRIOR TO ISSUING FINAL ACCEPTANCE LETTER TO THE CITY AS PER O.B.C. REQUIREMENTS.
- THE CONTRACTOR SHALL DISCONNECT, DEMOLISH, REMOVE AND/OR RECONNECT EXISTING EQUIPMENT WHERE NOTED AND/OR REQUIRED TO COMPLETE THE INSTALLATION. ALL EQUIPMENT/CONDUITS WHICH IS NOT BEING REUSED SHALL BE REMOVED. WHEN ELECTRICAL EQUIPMENT (LIGHTING, POWER, AND SYSTEMS) IS SHOWN TO BE REMOVED OR RELOCATED, BLANK-OFF EXISTING JUNCTION BOX, CUT BACK EXISTING UNUSED CONDUIT AND WIRING, MAKE SAFE. SHOULD ANY CIRCUITS BE ABANDONED, THE CONDUCTORS TO THESE CIRCUITS MUST BE REMOVED OR PROPERLY TERMINATED AS DETAILED IN OESC RULE 2-130, RULE 12-144, RULE 12-300D, AND BULLETIN 12-25-*. REMOVED ALL UNUSED ELECTRICAL EQUIPMENT AND CONSULT WITH OWNER IF EQUIPMENT IS TO BE DISPOSED OF OR TURNED BACK TO THE OWNER.
- CONTRACTOR SHALL COORDINATE CABLE TERMINATIONS WITH EQUIPMENT MANUFACTURERS TO ENSURE THE EQUIPMENT LUGS WILL ACCOMMODATE THE FEEDERS.
- CONTRACTOR SHALL SUPPLY AND INSTALL UPDATED LAMACOID LABELS AND PANEL SCHEDULES FOR ALL EXISTING/NEW ELECTRICAL EQUIPMENT MODIFIED/INSTALLED UNDER THIS CONTRACT. CONTRACTOR SHALL UPDATE AND SUPPLY LAMINATED AS-BUILT ELECTRICAL SLD AND MOUNT IN THE MAIN ELECTRICAL ROOM. CONTRACTOR SHALL UPDATE AND SUPPLY A NEW FIRE ALARM DIRECTORY AND FLOOR PLAN AT THE ANNUNCIATOR PANEL TO MATCH EXISTING THAT IS UPDATED TO REFLECT THE REMOVAL OF THE OLD GENERATOR ENCLOSURE ZONES/POINTS AND THE NEW GENERATOR MONITORING POINTS.
- CONTRACTOR TO PROVIDE POWER AND CONTROLS AS REQUIRED BY MECHANICAL TRADE AND RELOCATE ANY EXISTING POWER / CONTROLS AS REQUIRED BY THE MECHANICAL TRADE.
- CONTRACTOR SHALL PROVIDE PROJECT AS-BUILT DOCUMENTATION ACCORDING TO CITY REQUIREMENTS.

GROUNDING NOTES:

- ALL GROUNDING AND BONDING SHALL BE IN ACCORDANCE WITH THE LATEST OESC EDITION AND ALL LOCAL ELECTRICAL INSPECTION AUTHORITY REQUIREMENTS.
- ALL INSTALLED EQUIPMENT INCLUDING ANY INSTALLED BOLLARDS OR METAL FENCING AROUND THE GENERATOR SHALL BE GROUNDED/BONDED BY THE CONTRACTOR IN ACCORDANCE WITH OESC LATEST EDITION AS MAY BE REQUIRED. FOR FENCE GROUNDING/BONDING REFER TO OESC SECTION 10 AND OESC 26-300 THRU 26-324.
- IF REQUIRED, THE CONTRACTOR SHALL UPGRADE THE EXISTING GROUNDING SYSTEM AND INSTALL ARTIFICIAL GROUNDING ELECTRODES AS REQUIRED TO MEET THE REQUIREMENTS OF THE OESC LATEST EDITION.
- AS THE EXISTING TRANSFER SWITCHES ARE 3-POLE THE NEW NATURAL GAS GENERATOR SHALL HAVE A FLOATING NEUTRAL AS PER BULLETIN 10-10-*, RULE 2-100, RULE 10-210, RULE 20-212.

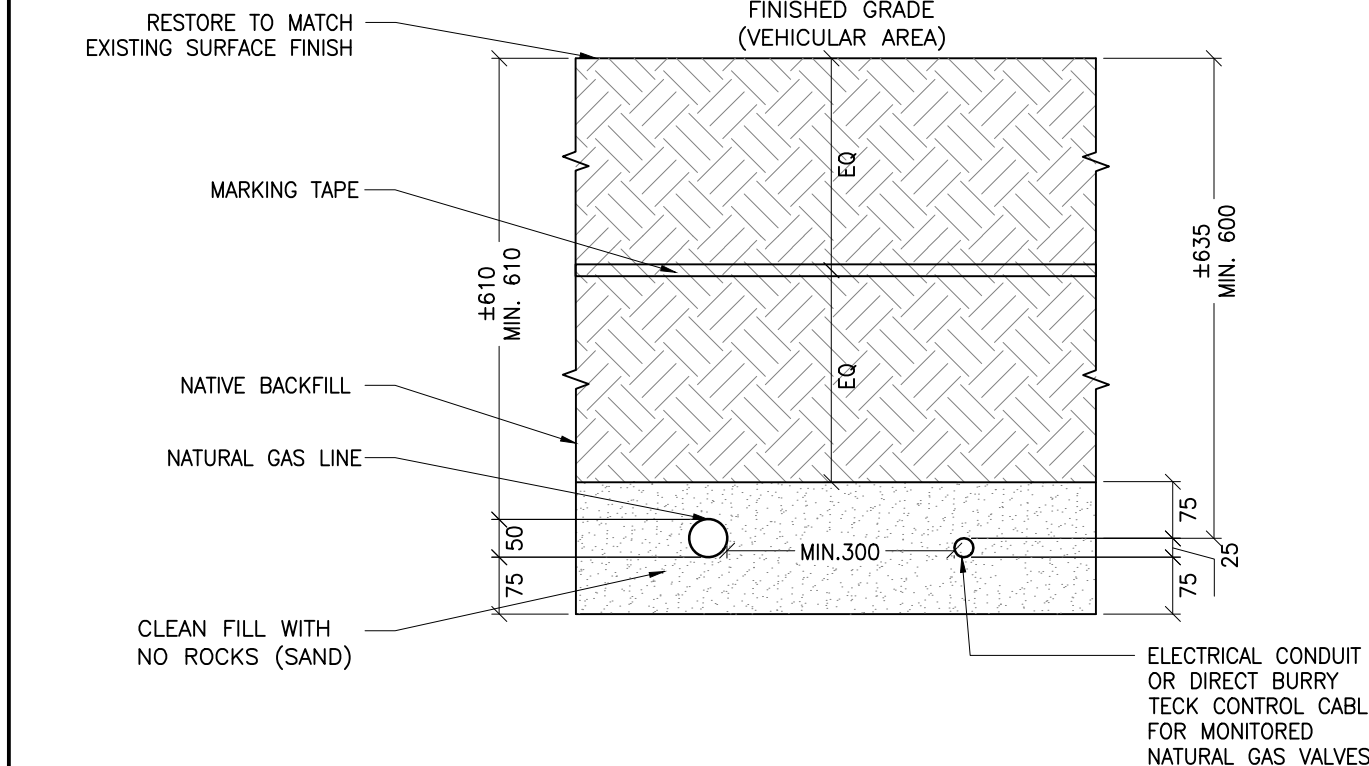


1 EXISTING PARTIAL ELECTRICAL SLD
SCALE N.T.S.



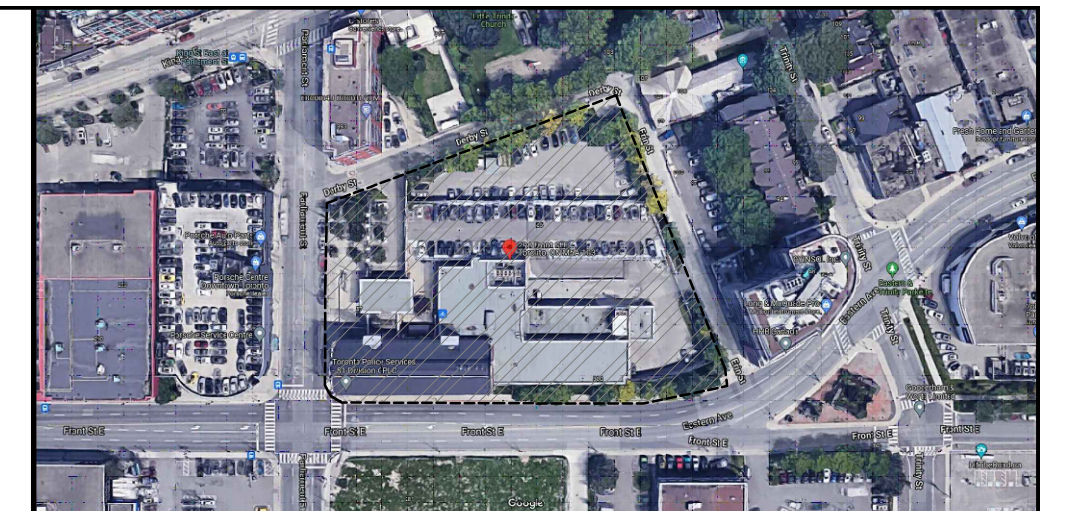
- NOTES:**
- DIRECT BURIED CONDUCTORS, CABLES, OR RACEWAYS SHALL BE INSTALLED TO MEET THE MINIMUM COVER REQUIREMENTS OF TABLE 53 FROM THE LATEST EDITION OF OESC. PROVIDE ADDITIONAL PROTECTION WHERE REQUIRED FOR REDUCED COVER PER OESC 12-012.
 - DIRECT BURIED CONDUCTORS, CABLES OR RACEWAYS SHALL BE INSTALLED SO THAT THEY RUN ADJACENT TO EACH OTHER SPACED A MINIMUM OF 1 DIAMETER APART AND DO NOT CROSS OVER EACH OTHER.
 - NATURAL GAS PIPING SHALL MAINTAIN A MINIMUM HORIZONTAL SEPARATION OF 300MM FROM ALL CONDUITS AND MAINTAIN A MINIMUM 300MM VERTICAL CLEARANCE AT ANY CROSSINGS. DEPTH OF ELECTRICAL CONDUCTORS/CABLES/RACEWAYS SHALL BE INCREASED IF REQUIRED TO ACCOMMODATE THE REQUIRED GAS LINE CLEARANCES AT CROSSINGS. REFER TO OESC BULLETIN 12-2-20 AND CSA 22.3 NO.7 FOR ADDITIONAL REQUIREMENTS.
 - DEPTH OF NATURAL GAS PIPE TO BE IN ACCORDANCE WITH CSA B149.1 (MINIMUM 400MM IN NON VEHICULAR AREAS AND MINIMUM 610MM IN VEHICULAR AREAS). REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
 - PROVIDE MINIMUM 50MM OF CLEAN BEDDING WITHOUT ROCKS (SAND) ALL AROUND U/G SERVICES WHEN BACKFILLING.

2 TYPICAL U/G CONDUIT SECTION
SCALE N.T.S.



- NOTES:**
- DIRECT BURIED CONDUCTORS, CABLES, OR RACEWAYS SHALL BE INSTALLED TO MEET THE MINIMUM COVER REQUIREMENTS OF TABLE 53 FROM THE LATEST EDITION OF OESC. PROVIDE ADDITIONAL PROTECTION WHERE REQUIRED FOR REDUCED COVER PER OESC 12-012.
 - DIRECT BURIED CONDUCTORS, CABLES OR RACEWAYS SHALL BE INSTALLED SO THAT THEY RUN ADJACENT TO EACH OTHER SPACED A MINIMUM OF 1 DIAMETER APART AND DO NOT CROSS OVER EACH OTHER.
 - NATURAL GAS PIPING SHALL MAINTAIN A MINIMUM HORIZONTAL SEPARATION OF 300MM FROM ALL CONDUITS AND MAINTAIN A MINIMUM 300MM VERTICAL CLEARANCE AT ANY CROSSINGS. DEPTH OF ELECTRICAL CONDUCTORS/CABLES/RACEWAYS SHALL BE INCREASED IF REQUIRED TO ACCOMMODATE THE REQUIRED GAS LINE CLEARANCES AT CROSSINGS. REFER TO OESC BULLETIN 12-2-20 AND CSA 22.3 NO.7 FOR ADDITIONAL REQUIREMENTS.
 - DEPTH OF NATURAL GAS PIPE TO BE IN ACCORDANCE WITH CSA B149.1 (MINIMUM 400MM IN NON VEHICULAR AREAS AND MINIMUM 610MM IN VEHICULAR AREAS). REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
 - PROVIDE MINIMUM 50MM OF CLEAN BEDDING WITHOUT ROCKS (SAND) ALL AROUND U/G SERVICES WHEN BACKFILLING.

3 TYP. U/G GAS & CONTROL SECTION (TRAFFIC)
SCALE N.T.S.



KEY PLAN

GENERAL NOTES

- VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
- DO NOT SCALE DRAWINGS.
- REPORT ALL DISCOVERIES OF ERRORS, OMISSIONS OR DISCREPANCIES TO THE DESIGN ENGINEER AS APPLICABLE.
- USE ONLY LATEST REVISED DRAWINGS OR THOSE THAT ARE MARKED "ISSUED FOR CONSTRUCTION".
- THE DESIGN AND CONSTRUCTION OF THIS PROJECT INCLUDING ALL WORKS AND MATERIALS USED SHALL COMPLY AS REQUIRED IN ACCORDANCE WITH THE LATEST EDITION OF THE BUILDING AND ELECTRICAL CODES.
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL PROJECT DRAWINGS, RELEVANT DRAWINGS, & SPECIFICATIONS.
- THE CONTRACTOR SHALL APPLY FOR, OBTAIN AND PAY FOR ALL PERMITS, LICENCES, INSPECTIONS, EXAMINATIONS AND FEES REQUIRED.
- EVERYTHING IS TO BE CONSIDERED NEW UNLESS SPECIFIED EXISTING OTHERWISE.
- CONTRACTOR TO REMOVE AND RELOCATE EXISTING ELECTRICAL SERVICES AS REQUIRED TO COMPLETE THE ELECTRICAL WORK.
- CONTRACTOR IS RESPONSIBLE TO VERIFY SHORT CIRCUIT RATING BEFORE PURCHASE OF POWER EQUIPMENT.
- CABLE/CONDUIT ROUTING AND TERMINATIONS ARE DIAGRAMMATIC, SHOWING THE APPROXIMATE ARRANGEMENT. ACTUAL CABLE/CONDUIT POSITIONS SHALL BE DETERMINED TO SUIT FIELD CONDITIONS AND EQUIPMENT LOCATIONS.
- CONTRACTOR SHALL SIZE ALL FEEDERS ACCORDING TO THE LATEST EDITION OF THE OESC BASED ON FINAL FEEDER LENGTHS AND VOLTAGE DROP.
- ALL UNDERGROUND CONDUITS TO BE BURIED MIN. 600MM BELOW FINISHED GRADE IN NON-TRAFFIC AREAS AND MIN. 900MM BELOW FINISHED GRADE IN TRAFFIC AREAS. CONTRACTOR TO INSTALL WARNING TAPE AND REFER TO OESC FOR ADDITIONAL REQUIREMENTS.
- CONTRACTOR TO COORDINATE ALL ACTIVITIES AND POWER DISRUPTIONS WITH OWNER TO AVOID DISRUPTIONS TO TENANTS. CONTRACTOR TO INCLUDE FOR PROVIDING TEMPORARY EMERGENCY POWER INCLUDING DIESEL FUEL DURING THE TRANSITION TO THE NEW EMERGENCY GENERATOR UNDER THIS CONTRACT.
- EXISTING CONDITIONS ARE BASED ON OBSERVATIONS OF VISIBLE PARTS OF THE ELECTRICAL SYSTEM AND ON EXISTING DOCUMENTS. CONDITIONS SHOWN MAY NOT BE ACCURATE WITH RESPECT TO CIRCUIT USAGE, UNDOCUMENTED MODIFICATIONS MADE AFTER THE DATE OF THE EXISTING DRAWINGS OR CONCEALED CONDITIONS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND ADAPT WORK TO SUIT.



No.	Date	Description	Drawn	Checked
4	11 JAN '24	ISSUED FOR BP	AM	DM
3	10 JAN '24	ISSUED FOR TENDER	AM	DM
2	24 NOV '23	FOR REVIEW	AM	DM
1	15 NOV '23	FOR REVIEW	AM	DM
0	07 NOV '23	FOR REVIEW	AM	DM

REVISIONS

J+B
J + B ENGINEERING INC.

TORONTO: 25 CENTURIAN DR. SUITE 201 MARKHAM, ON L3R 9N8 416.299.9294
CALGARY: 598-11TH AVE. SW SUITE 201 CALGARY AB T2R 0E2 403.299.9294

OWNER/CLIENT:



Project: COT: GENERATOR REPLACEMENT (51 DIVISION)

EXISTING ELECTRICAL SLD, NEW ELECTRICAL NOTES & DETAILS

51 PARLIAMENT STREET TORONTO - ONTARIO

File No: 210248	Date: 7 SEPT '23	ACAD INFO
Drawn By: EM	Scale: 1:200	Dwg. File: 210248-E-102
Checked By: AM	Sheet 1 of 1	Plotting Scale: 1:1
Drawing No: E-102		Drawing Size: D

NEW 750KW/938KVA, 347/600V, 3ø, 4W, FLOATING NEUTRAL, NATURAL GAS GENERATOR IN SKIN-TIGHT ENCLOSURE EQUIPPED PER CSA C282 AND LOCATED AT GRADE. (GENERAC SG750 OR APPROVED EQUAL). REFER TO TECHNICAL SPECIFICATION FOR ADDITIONAL DETAILS.

PROVIDE WEATHER PROOF JUNCTION BOXES ON 2ND FLOOR ROOF WHERE EXISTING GENERATOR IS BEING REMOVED TO RECONNECT/EXTEND CIRCUITS TO THE NEW GENERATOR. JUNCTION BOXES TO BE RAISED OFF OF THE ROOF AND SUPPORTED WITH ROOF BLOCKS/STRUT AS REQUIRED SO THAT THEY REMAIN OUT OF ANY SNOW ACCUMULATION. (TYP.)

3x(4C#500MCM+GND IN 78mmC (BELOW SLAB / IN CONCRETE BLOCK SHAFT)

FIRE PUMP CONTROLLER/ATS (GROUND FLOOR RM184)

3C#4AWG+GND IN 27mmC

70A-3P FIRE PUMP BREAKER (MOUNTED TO EXT. OF SWB-AAA)

UTILITY METER CABINET

INCOMING UTILITY SERVICE VIA HV SWITCHGEAR

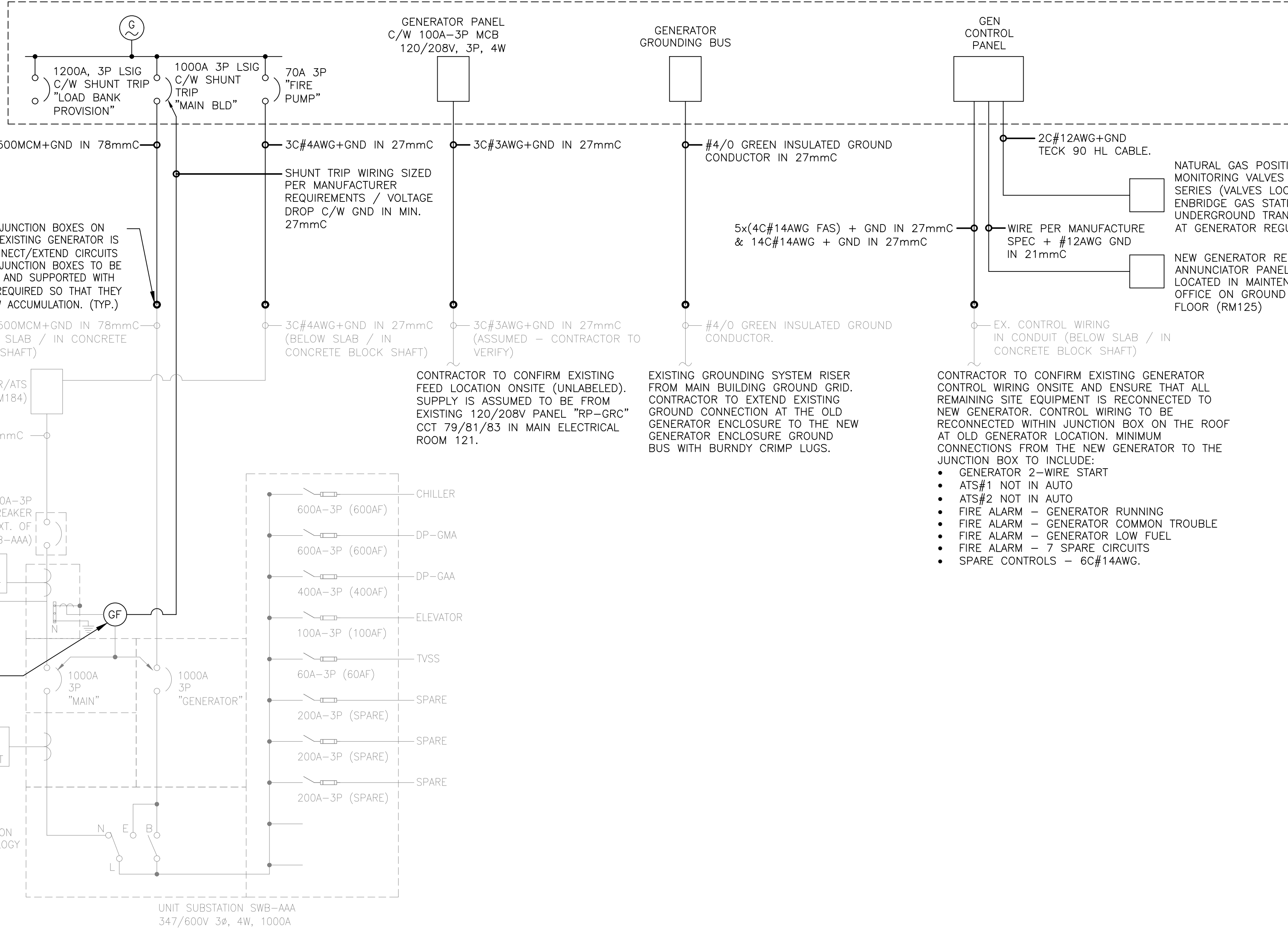
PT=1 750KVA

EXISTING GROUND FAULT PROTECTION SCHEME TO BE VERIFIED IN THE FIELD UNDER THIS CONTRACT (ASSUMED TO BE GROUND STRAP SENSING). THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE EXISTING SYSTEM BONDING JUMPER AND ENSURE THAT ONLY ONE SYSTEM BONDING JUMPER IS PRESENT. CONFIRM THAT THE GROUND FAULT SENSOR CT IS LOCATED ON THIS SINGLE SYSTEM BONDING JUMPER PER OESC BULLETIN 14-6-6 DIAGRAM B4 WITH THE GROUND FAULT RELAY ACTING ON BOTH THE 1000A "MAIN" AND "GENERATOR" BREAKERS SHUNT TRIPS IN THE MAIN SWITCHBOARD. CONTRACTOR SHALL INSTALL NEW GROUND FAULT PROTECTION/INTERPOSING RELAY C/W REQUIRED POWER SUPPLY AND WIRING FOR THE GROUND FAULT PROTECTION TO ALSO SHUNT TRIP THE NEW MAIN GENERATOR BREAKER LOCATED WITHIN IN THE NEW OUTDOOR GENERATOR ENCLOSURE.

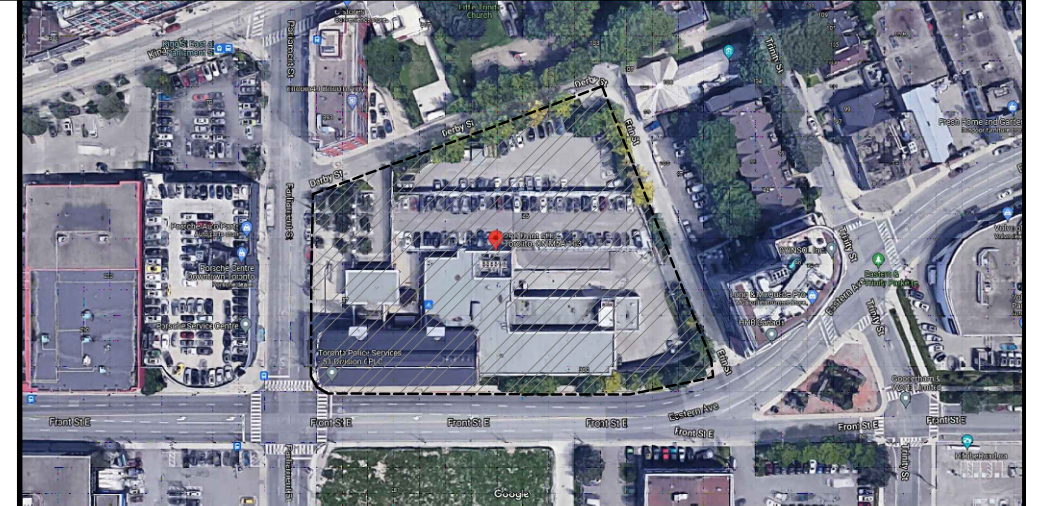
UTILITY METER CABINET

THOMSON TECHNOLOGY ATS

UNIT SUBSTATION SWB-AAA 347/600V 3ø, 4W, 1000A



EXISTING
DEMO
NEW

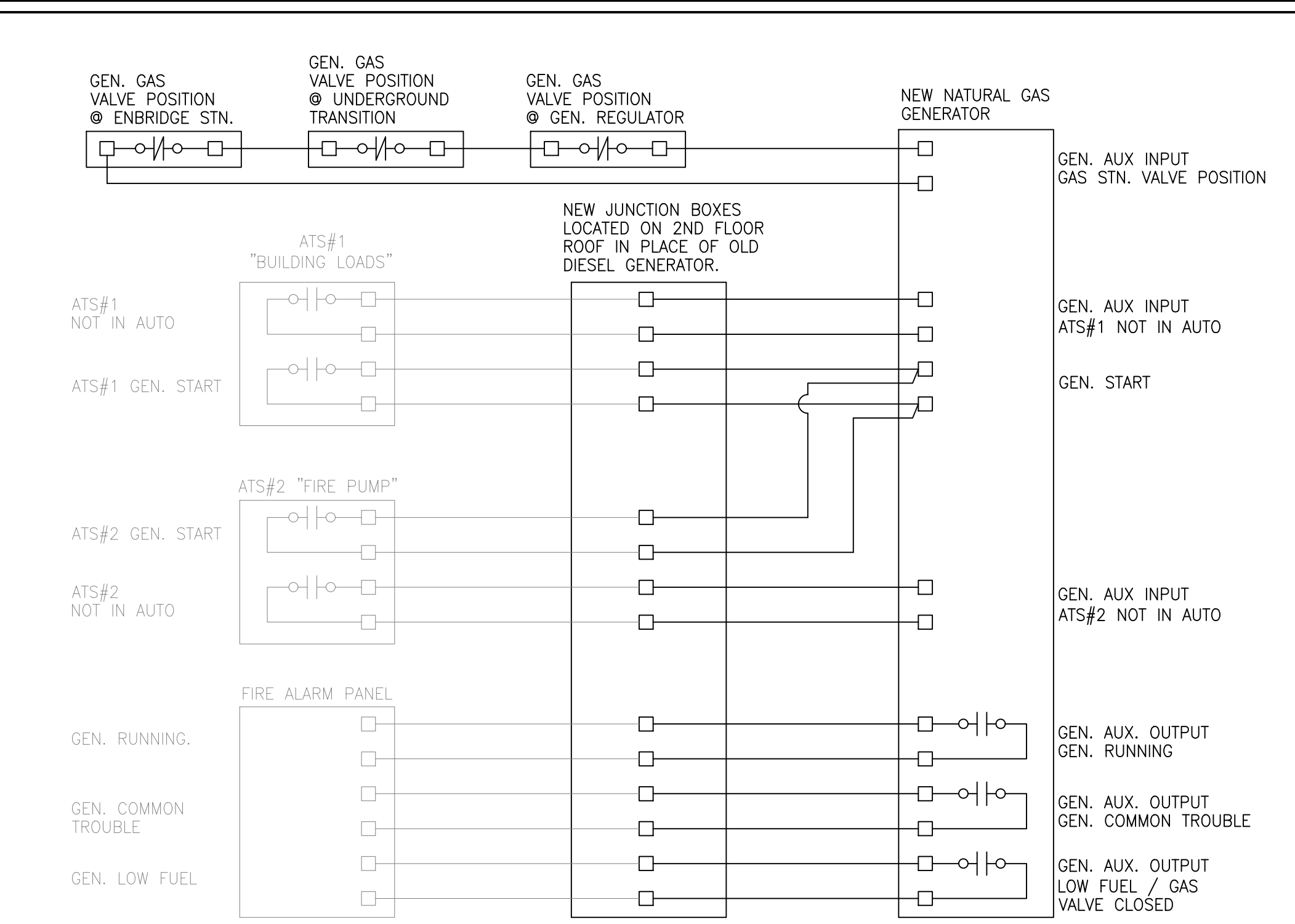


KEY PLAN

GENERAL NOTES

- VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
- DO NOT SCALE DRAWINGS.
- REPORT ALL DISCOVERIES OF ERRORS, OMISSIONS OR DISCREPANCIES TO THE DESIGN ENGINEER AS APPLICABLE.
- USE ONLY LATEST REVISED DRAWINGS OR THOSE THAT ARE MARKED "ISSUED FOR CONSTRUCTION".
- THE DESIGN AND CONSTRUCTION OF THIS PROJECT INCLUDING ALL WORKS AND MATERIALS USED SHALL COMPLY AS REQUIRED IN ACCORDANCE WITH THE LATEST EDITION OF THE BUILDING AND ELECTRICAL CODES.
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL PROJECT DRAWINGS, RELEVANT DRAWINGS, & SPECIFICATIONS.
- THE CONTRACTOR SHALL APPLY FOR, OBTAIN AND PAY FOR ALL PERMITS, LICENCES, INSPECTIONS, EXAMINATIONS AND FEES REQUIRED.
- EVERYTHING IS TO BE CONSIDERED NEW UNLESS SPECIFIED EXISTING OTHERWISE.
- CONTRACTOR TO REMOVE AND RELOCATE EXISTING ELECTRICAL SERVICES AS REQUIRED TO COMPLETE THE ELECTRICAL WORK.
- CONTRACTOR IS RESPONSIBLE TO VERIFY SHORT CIRCUIT RATING BEFORE PURCHASE OF POWER EQUIPMENT.
- CABLE/CONDUIT ROUTING AND TERMINATIONS ARE DIAGRAMMATIC, SHOWING THE APPROXIMATE ARRANGEMENT. ACTUAL CABLE/CONDUIT POSITIONS SHALL BE DETERMINED TO SUIT FIELD CONDITIONS AND EQUIPMENT LOCATIONS.
- CONTRACTOR SHALL SIZE ALL FEEDERS ACCORDING TO THE LATEST EDITION OF THE OESC BASED ON FINAL FEEDER LENGTHS AND VOLTAGE DROP.
- ALL UNDERGROUND CONDUITS TO BE BURIED MIN. 600MM BELOW FINISHED GRADE IN NON-TRAFFIC AREAS AND MIN. 900MM BELOW FINISHED GRADE IN TRAFFIC AREAS. CONTRACTOR TO INSTALL WARNING TAPE AND REFER TO OESC FOR ADDITIONAL REQUIREMENTS.
- CONTRACTOR TO COORDINATE ALL ACTIVITIES AND POWER DISRUPTIONS WITH OWNER TO AVOID DISRUPTIONS TO TENANTS. CONTRACTOR TO INCLUDE FOR PROVIDING TEMPORARY EMERGENCY POWER INCLUDING DIESEL FUEL DURING THE TRANSITION TO THE NEW EMERGENCY GENERATOR UNDER THIS CONTRACT.
- EXISTING CONDITIONS ARE BASED ON OBSERVATIONS OF VISIBLE PARTS OF THE ELECTRICAL SYSTEM AND ON EXISTING DOCUMENTS. CONDITIONS SHOWN MAY NOT BE ACCURATE WITH RESPECT TO CIRCUIT USAGE, UNDOCUMENTED MODIFICATIONS MADE AFTER THE DATE OF THE EXISTING DRAWINGS OR CONCEALED CONDITIONS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND ADAPT WORK TO SUIT.

1 NEW PARTIAL ELECTRICAL SLD
SCALE N.T.S.



2 NEW GENERATOR PARTIAL CONTROL SCHEMATIC
SCALE N.T.S.

No.	Date	Description	Drawn	Checked
6	26 MAR '24	GENERATOR BREAKER OFI SHUNT TRIP ADDED PER ESA PLAN REVIEW	AM	DM
5	19 MAR '24	ADDED CLARIFICATION ON EXISTING GROUND FAULT PROTECTION PER ESA	AM	DM
4	11 JAN '24	ISSUED FOR BP	AM	DM
3	10 JAN '24	ISSUED FOR TENDER	AM	DM
2	24 NOV '23	FOR REVIEW	AM	DM
1	15 NOV '23	FOR REVIEW	AM	DW
0	07 NOV '23	FOR REVIEW	AM	DM

REVISIONS

J+B
J + B ENGINEERING INC.

TORONTO: 25 CENTURIAN DR. SUITE 201 MARKHAM, ON L3R 9N8 416 298 9294

CALGARY: 6911TH AVE. SW SUITE 201 CALGARY AB T2R 0E2 403 298 9295

OWNER/CLIENT:

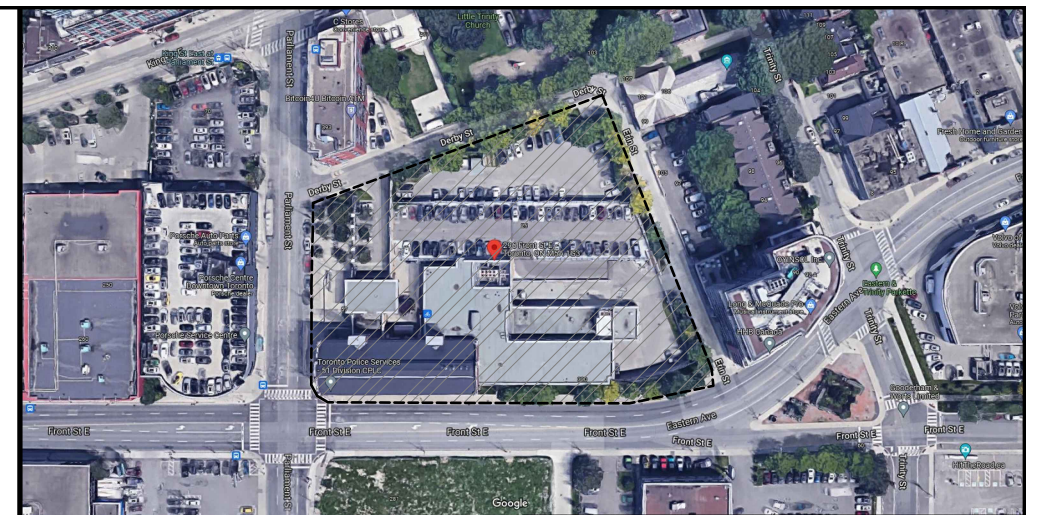
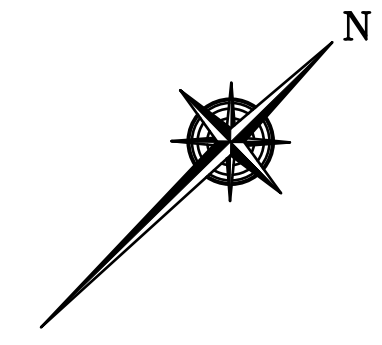
Toronto

Project: COT: GENERATOR REPLACEMENT (51 DIVISION)

NEW ELECTRICAL SLD & GENERATOR CONTROLS

51 PARLIAMENT STREET TORONTO - ONTARIO

File No: 210248	Date: 7 SEPT '23	ACAD INFO
Drawn By: EM	Scale: 1:200	Dwg. File: 210248-E-103
Checked By: AM	Sheet 1 of 1	Plotting Scale: 1:1
Drawing No: E-103		Drawing Size: D



KEY PLAN

- GENERAL NOTES:**
1. VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION. DO NOT SCALE DRAWINGS.
 2. REPORT ALL DISCOVERIES OF ERRORS, OMISSIONS OR DISCREPANCIES TO OWNER OR DESIGN ENGINEER AS APPLICABLE.
 3. USE ONLY LATEST REVISED DRAWINGS OR THOSE THAT ARE MARKED "ISSUED FOR CONSTRUCTION".
 4. DESIGN AND CONSTRUCTION OF THIS PROJECT SHALL COMPLY WITH THE PROVINCIAL AND LOCAL BUILDING CODES LATEST EDITION.
 5. ALL WORKS AND MATERIALS USED SHALL COMPLY AS REQUIRED BY THE NATIONAL AND APPLICABLE PROVINCIAL BUILDING CODE, LATEST EDITION.
 6. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS & SPECIFICATIONS.
 7. EVERYTHING IS TO BE CONSIDERED NEW UNLESS SPECIFIED OTHERWISE.

A. EXCAVATION AND FILL REQUIREMENTS

1. EXCAVATE TO THE REQUIRED LINES, LEVELS, AND GRADES. DO NOT OVER EXCAVATE OR DISTURB BEYOND THE REQUIRED LINES, LEVELS, AND GRADES UNLESS OTHERWISE REQUESTED BY THE ENGINEER.
2. IF THE REQUIRED LINES, LEVELS, AND GRADES ARE NOT DEFINED, EXCAVATE AS NECESSARY FOR THE ITEMS THAT ARE TO BE PLACED INTO THE EXCAVATION.
3. DO NOT PLACE FILL UNTIL SUBGRADE HAS BEEN COMPACTED TO NO LESS THAN 95% OF STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
4. DO NOT COVER OR WORK ON ANY SUBGRADE UNTIL AUTHORIZED BY THE ENGINEER, OTHERWISE PLACE THE FILL AS SOON AS POSSIBLE.
5. REMOVE ALL DISTURBED OR UNSUITABLE MATERIAL AS RECOMMENDED BY THE GEOTECHNICAL CONSULTANT, AND ALL MATERIAL THAT HAS BECOME UNSUITABLE DUE TO INADEQUATE PROTECTION. REPLACE SUCH MATERIAL WITH APPROVED GRANULAR MATERIAL, AND COMPACT IN LAYERS AS PER GEOTECHNICAL CONSULTANT RECOMMENDATIONS.
6. 150mm OF GRANULAR "A" MATERIAL SHALL BE PLACED IN ONE LIFT UNDER ALL SLAB-ON-GRADE, AND COMPACTED TO NO LESS THAN 100% OF STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).

B. CONCRETE

1. ALL MIXING AND PLACING OF CONCRETE MIXES SHALL CONFORM TO CSA STANDARD CAN3-A23.1-M94 (LATEST EDITION) WITH A MINIMUM CONCRETE STRENGTH AT 28 DAYS OF 32MPa FOR GENERATOR SLAB.
2. CEMENT SHALL BE TYPE 10, NORMAL (UNLESS NOTED OTHERWISE).
3. SLUMP SHALL BE IN ACCORDANCE WITH CAN3-A23.1-M (CLAUSE 14) AND MAXIMUM WATER/CEMENT RATIO SHALL BE 0.55 & 0.50 RESPECTIVELY.
4. AIR ENTRAINMENT SHALL BE IN ACCORDANCE WITH CAN3-A23.1-M94 (CLAUSE 14, TABLES 7 & 8) TO MEET THE FOLLOWING EXPOSURE CONDITIONS: - CLASS C1 FOR ALL EXPOSED AND UNHEATED AREAS.
5. CONCRETE COVER FOR REINFORCING STEEL SHALL CONFORM TO CAN3-A23.1-M94. MINIMUM CONCRETE COVER TO STEEL: - 50mm, UNLESS NOTED OTHERWISE.
6. REINFORCING STEEL SHALL CONFORM TO CSA STANDARD G30.18-M (LATEST EDITION), GRADE 400MPa. WWF SHALL CONFORM TO CSA G30.5, GRADE 400MPa.
7. THE CONCRETE PAD REINFORCING TO BE VERIFIED BY DESIGN ENGINEER OR HIS REPRESENTATIVE PRIOR TO POURING CONCRETE.

C. GENERATOR PAD:

1. THE CONCRETE PAD SHALL BE FOUNDED ON UNDISTURBED SOIL (OTHERWISE ON ENGINEERED FILL) AS RECOMMENDED BY SOIL'S CONSULTANT TO ACHIEVE A MINIMUM ALLOWABLE BEARING CAPACITY OF 100kPa(SLS). THE ACTUAL MINIMUM SOIL CAPACITY TO BE CONFIRMED BY A QUALIFIED GEOTECHNICAL ENGINEER IN THE FIELD.

No.	Date	Description	Drawn	Checked
6	11 JAN '24	ISSUED FOR BP	EM	DW
5	10 JAN '24	ISSUED FOR TENDER	EM	DW
4	24 NOV '23	FOR REVIEW	EM	DW
3	15 NOV '23	FOR REVIEW	EM	DW
2	06 NOV '23	FOR REVIEW	EM	DW
1	01 APR '22	FOR REVIEW	EM	DW
0	25 MAR '22	FOR REVIEW	EM	DW

REVISIONS

J+B
J + B ENGINEERING INC.

TORONTO: 25 CENTURIAN DR. SUITE 101 MARKHAM, ON L3R 9S8 416 226 2038
CALGARY: 707-10TH AVE. SW SUITE 100 CALGARY AB T2R 0B3 403 355 2266

OWNER/CLIENT:

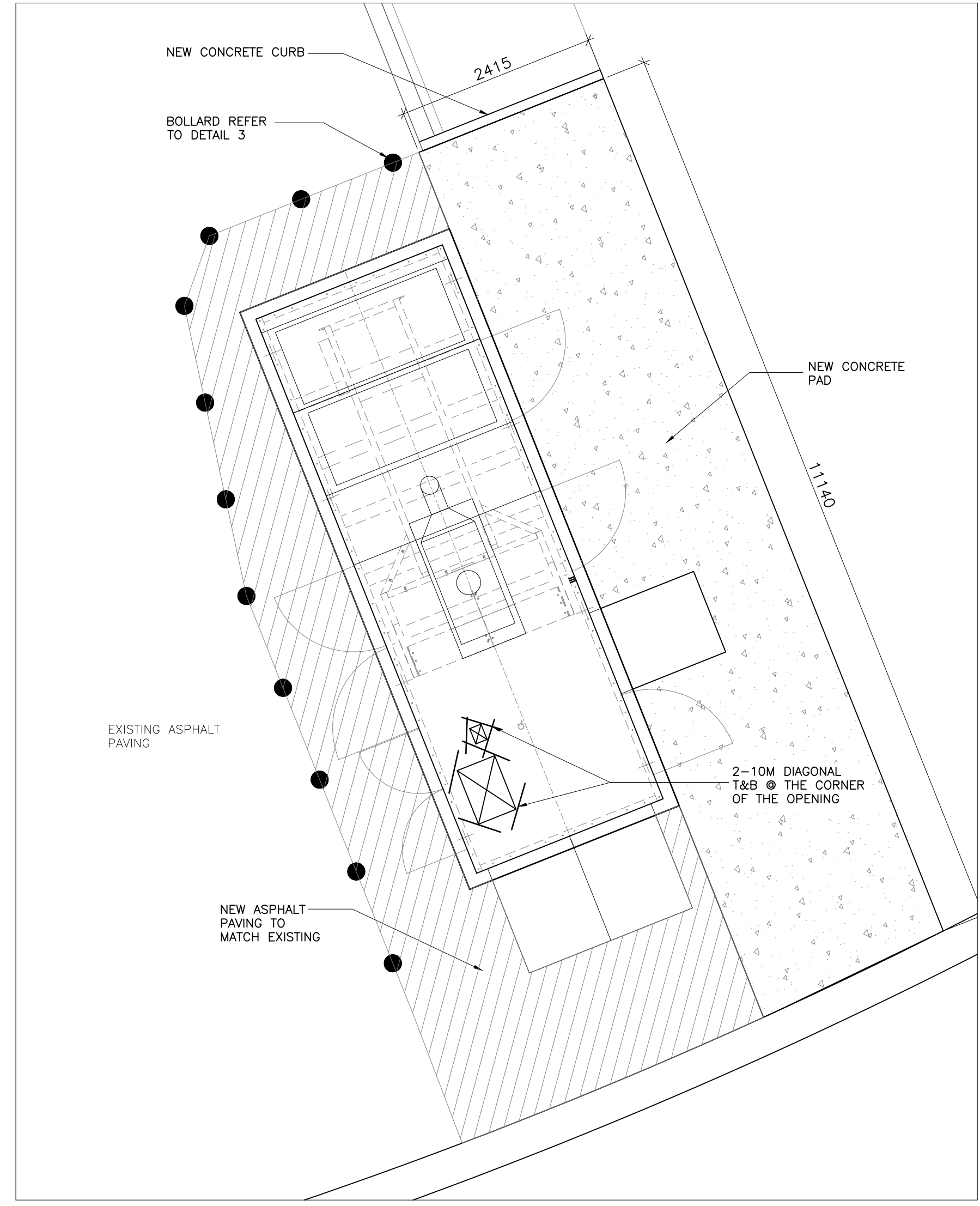
Toronto

Project: COT: GENERATOR REPLACEMENT (51 DIVISION)

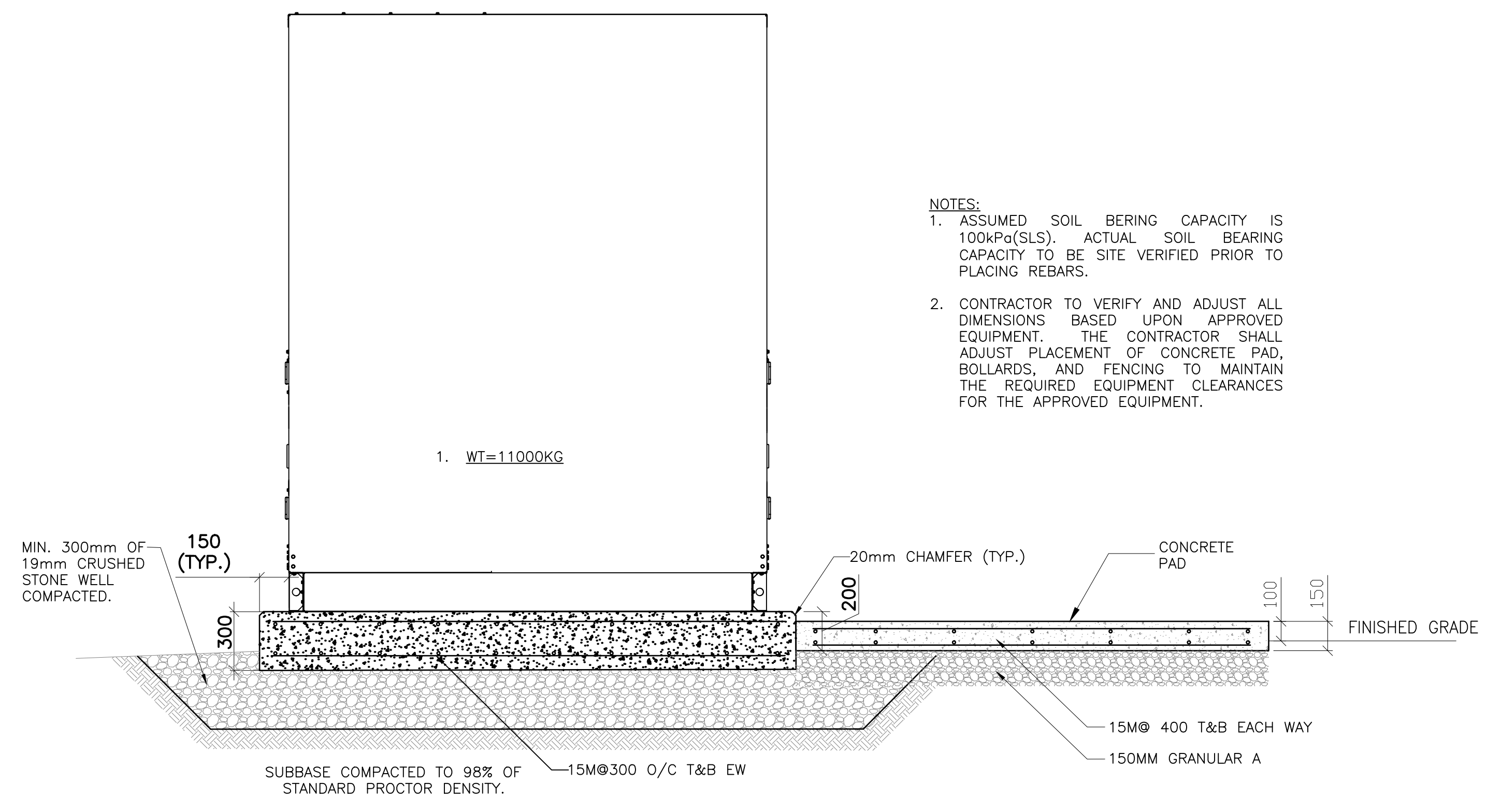
GENERATOR SLAB PLAN AND DETAILS

51 PARLIAMENT STREET TORONTO - ONTARIO

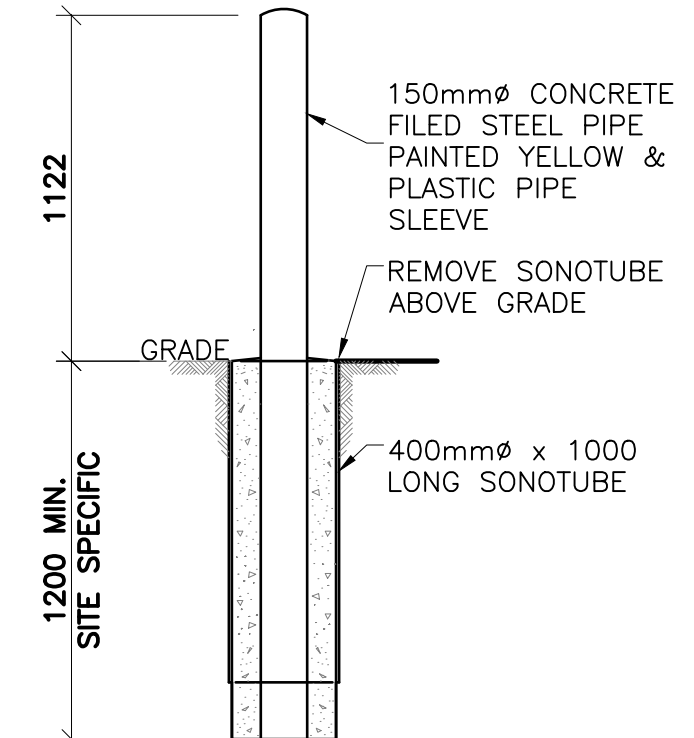
File No: 210248	Date: 04 MAR '22	ACAD INFO
Drawn By: EM	Scale: AS SHOWN	Dwg. File: 210248-S-100
Checked By: DM	Sheet 1 of 1	Plotting Scale: 1:1
Drawing No: S-100		Drawing Size: D



1 GENERATOR SLAB PLAN
SCALE: 1:50



2 GENERATOR SLAB SECTION
SCALE: 1:30

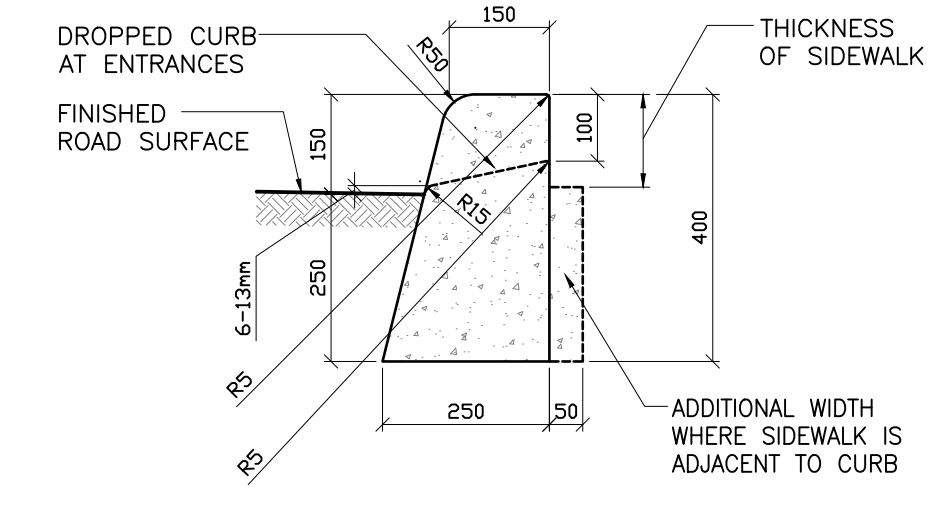


3 BOLLARD DETAILS
SCALE: 1:20

PAVING SCHEDULE			
ITEM NO.	MATERIAL DESCRIPTION	PAVEMENT THICKNESS	COMPACTION REQUIREMENTS
1	ASPHALT HL-3 (WEARING COURSE)	40mm	> 97% (MBD)
2	ASPHALT HL-8 (BINDING COURSE)	50mm	> 97% (MBD)
3	GRANULAR 'A' (BASE)	150mm	> 100% (SPMDD)
4	GRANULAR 'B' (SUB-BASE)	200mm	> 100% (SPMDD)
5	SUBGRADE (TO BE RESHAPED)	VARIES	> 95% (SPMDD)

MBD: MARSHALL BULK DENSITY
SPMDD: STANDARD PROCTOR MAX. DRY DENSITY
PAVEMENT STRUCTURE TO BE CONFIRMED BY GEO-TECH REPORT

4 TYP. SECTION THROUGH PAVEMENT
SCALE: NTS



5 TYP. TYPE 'A' CURB SECT.
SCALE: NTS