

1371 AIR INTAKE AIR INTAKE AIR INTAKE -150mmø CONCRETE FILLED STEEL PIPE C/W HDPE PLASTIC BOLLARD SLEEVE. COLOUR: YELLOW WITH RED TAPE. REMOVE SONOTUBE ABOVE GRADE GRADE -400mmø x 1000 LONG SONOTUBE 100 TYP. — 20mm CHAMFER (TYP.) 15M@300 O/C T&B EACH WAY REINSTATED LANDSCAPING GRANULAR

SCALE : 1:20

EMERGENCY GENERATOR PAD DETAILS

TYP. BOLLARD DETAIL

SCALE : 1:20

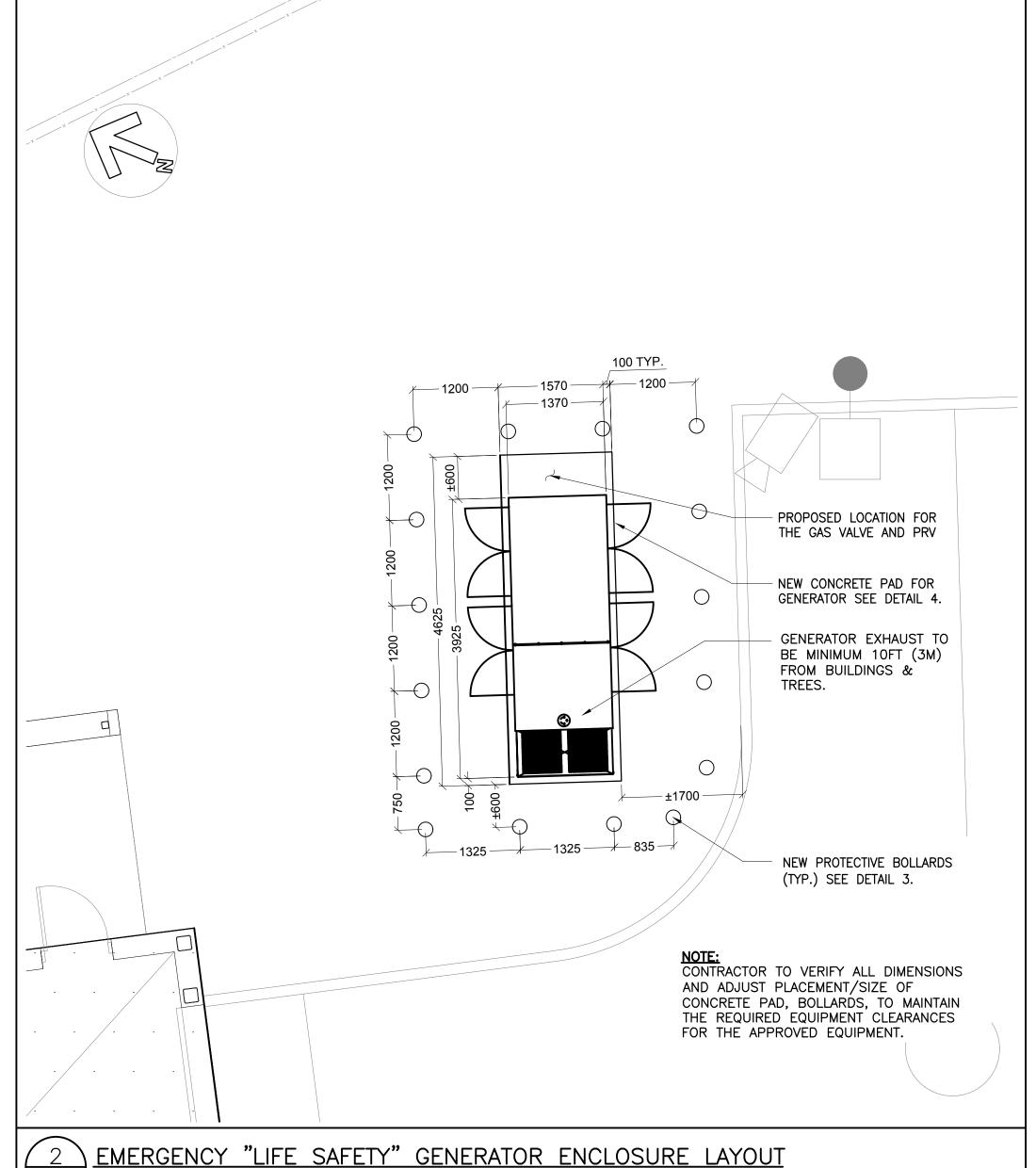
NOTES:

1. ASSUMED SOIL BERING CAPACITY IS 75kPa.
ACTUAL SOIL BERING CAPACITY TO BE SITE
VERIFIED BY A LICENSED SOIL ENGINEER PRIOR
TO PLACING REBARS.

P-200

- 2. CONTRACTOR TO VERIFY AND ADJUST ALL DIMENSIONS BASED UPON APPROVED EQUIPMENT. THE CONTRACTOR SHALL ADJUST PLACEMENT OF CONCRETE PAD, AND BOLLARDS TO MAINTAIN THE REQUIRED EQUIPMENT CLEARANCES FOR THE APPROVED EQUIPMENT.
- 3. THE CONCRETE PAD DESIGNED IS BASED ON A 200kW "GENERAC" GENERATOR WITH A WEIGHT OF 8,632lbs AND DIMENSIONS OF 3922mm x 1372mm x 2552mm (LxWxH).
- 4. THE MINIMUM THICKNESS OF THE SLAB SHALL BE 300MM, AND OVER 6" WELL COMPACTED 3/4"
- CRUSHED STONE

  5. THE 28 DAYS COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE 32 MPa W/ 4-7% AIR ENTRAINMENT.







## 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 RELEVANT DRAWINGS & SPECIFICATIONS.
- 7. THE CONTRACTOR SHALL APPLY FOR, OBTAIN AND PAY FOR ALL PERMITS, LICENCES, INSPECTIONS, EXAMINATIONS AND FEES REQUIRED.
- 8. THE CONTRACTOR SHALL PROVIDE ALL LABOUR, MATERIAL AND EQUIPMENT (UNLESS OTHERWISE INDICATED) NECESSARY TO COMPLETE ALL ELECTRICAL WORK AS SHOWN.
- 9. 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.
- 10. CONTRACTOR TO REMOVE AND RELOCATE EXISTING ELECTRICAL SERVICES AS REQUIRED TO COMPLETE THE ELECTRICAL WORK.
- 11. CONTRACTOR SHALL SIZE ALL FEEDERS ACCORDING TO THE LATEST EDITION OF THE OESC CODE BASED ON FINAL FEEDER LENGTHS AND VOLTAGE DROP.
- 12. CONTRACTOR TO COORDINATE ALL ACTIVITIES AND POWER DISRUPTIONS WITH OWNER/CITY PERSONNEL TO AVOID DISRUPTIONS TO TENANTS.

#### NOTE

THE DRAWING WAS PREPARED BASED ON CITY OF TORONTO MAPS V2 DATA AND CLIENT PROVIDED RECORD DRAWINGS. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR STARTING CONSTRUCTION.

3	JULY 06 '23	ISSUED FOR TENDER	JK	JK/HF
2	JUNE 30 '23	ISSUED FOR BP	JK	JK/HF
1	MAR 12 '23	ISSUED FOR 100% REVIEW	JK	JK/HF
0	JAN 09 '23	ISSUED FOR 75% REVIEW	AM	JK
No.	Date	Description	Drawn	Checked
REVISIONS				

JB

J + B ENGINEERING INC.

TORONTO CALGARY
25 CENTURIAN DR. 707-10TH AVE. SW
SUITE 201 SUITE 150
MARKHAM, ON L3R 5N8 CALGARY AB T2R 0B3
416 229 2636 403 355 2295

OWNER/CLIENT:



Project: EMERGENCY GENERATOR REPLACEMENT/UPGRADE

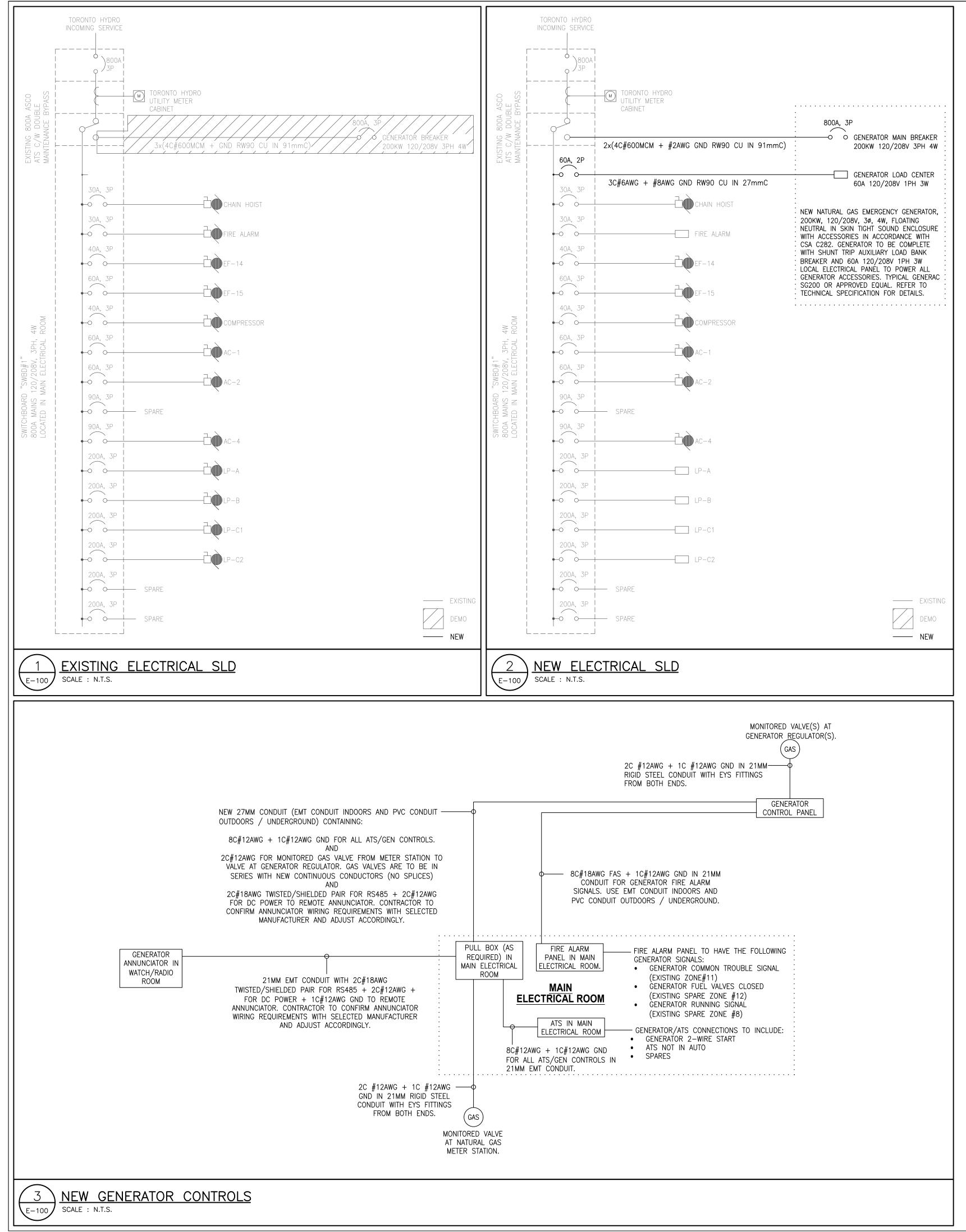
## SITE PLAN

8500 SHEPPARD AVE. E.
210240 Date: 27 OCT '21 AC

File No: 210240 Date: 27 OCT '21 ACAD INFO
Drawn By: EM Scale: AS SHOWN Dwg. File: 210240-P-200
Checked By: AM Sheet 1 of 1 Plotting Scale: 1=1
Drawing No: P-200 Date: 27 OCT '21
ACAD INFO
Dwg. File: 210240-P-200
Plotting Scale: 1=1
Drawing Size: D

TORONTO, ON

PROPOSED EMERGENCY "LIFE SAFETY" GENERATOR LOCATION (PHOTO #1)
SCALE : NTS



### **ELECTRICAL NOTES:**

- IN GENERAL, THE WORK INCLUDES TO FURNISH AND INSTALL A NEW GENERATOR INCLUDING NEW ELECTRICAL, MECHANICAL, CIVIL/STRUCTURAL AND DEMOLITION OF EXISTING SYSTEMS, AS MORE THOROUGHLY DEFINED IN DRAWINGS AND SPECIFICATIONS.
- 1. 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.
- 2. 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".
- 3. 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 AT THE EXISTING ATS) WITH THE UNDERSTANDING THAT THE OUTAGE WOULD BE LESS THAN 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.
- 4. 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.
- 5. 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.
- 6. 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:
- a. NEW 200KW 120/208V 3PH 4W NATURAL GAS POWERED GENERATOR C/W WEATHERPROOF SOUND RATED ENCLOSURE EQUIPPED IN ACCORDANCE WITH
- CSA C282;
  b. NEW MONITORING AND PROTECTION SYSTEMS FOR GENERATOR OPERATION INCLUDING REMOTE GENERATOR ANNUNCIATOR IN THE FIRE HALL RADIO/WATCH
- c. CONNECTION OF THE NEW GENERATOR TO THE EXISTING FIRE ALARM PANEL (USE SPARE ZONES) C/W ALL REQUIRED PROGRAMING AND UPDATING OF LABELS ON REMOTE ANNUNCIATOR(S) FOR THE NEW CONNECTIONS AS REQUIRED.
- d. CONTRACTOR TO RETAIN A MANUFACTURER AUTHORIZED SERVICE PROVIDER TO PERFORM AN INSPECTION, PREVENTATIVE MAINTENANCE INCLUDING CLEANING/LUBRICATION/ADJUSTMENTS OF THE EXISTING ASCO DOUBLE BYPASS ATS. THE AUTHORIZED SERVICE PROVIDER SHALL ALSO COMMISSION THE
- ATS WITH ONCE CONNECTED TO THE NEW GENERATOR SYSTEM TO ENSURE PROPER OPERATION OF THE COMPLETE SYSTEM.

  e. 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.
- f. PROVIDE AND INSTALL THREE NEW 4' LED STRIP FIXTURES THE EXISTING MAIN ELECTRICAL ROOM AND THREE NEW 4' LED STRIP FIXTURES THE EXISTING GENERATOR ROOM AS A REPLACEMENT FOR THE EXISTING LIGHTING FIXTURES WITHIN THESE ROOMS, LIGHT FIXTURES LOCATIONS & HEIGHT SHALL BE ADJUSTED TO SUIT THE NEW EQUIPMENT INSTALLATIONS / LAYOUT.
- g. RELOCATE ANY EXISTING EQUIPMENT/CONDUITS WHERE NOTED AND/OR REQUIRED TO ACCOMMODATE THE NEW INSTALLATION; h. VERIFY EXISTING ELECTRICAL EQUIPMENT INFORMATION SHOWN ON DRAWING WITH SITE CONDITION PRIOR TO START OF WORK:
- i. EXISTING DISTRIBUTION SYSTEM SHOWN IS DIAGRAMMATIC TO SHOW THE DESIGN INTENT. CONTRACTOR IS BE 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.

  j. CONDUCTORS AND CONDUITS TO BE OVERSIZED TO SUIT VOLTAGE DROP AS PER OESC WHERE REQUIRED.
- K. 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).
- 7. 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 12-3000, 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.
- 8. CONTRACTOR SHALL COORDINATE CABLE TERMINATIONS WITH EQUIPMENT MANUFACTURES TO ENSURE THE EQUIPMENT LUGS WILL ACCOMMODATE THE FEEDERS.
- 9. 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 FIRE HALL ELECTRICAL ROOM.
- 10. CONTRACTOR TO PROVIDE POWER AND CONTROLS AS REQUIRED BY MECHANICAL TRADE AND RELOCATE ANY EXISTING POWER / CONTROLS AS REQUIRED BY THE MECHANICAL TRADE.
- 11. CONTRACTOR SHALL PROVIDE PROJECT AS-BUILT DOCUMENTATION ACCORDING TO CITY REQUIREMENTS.

## **GROUNDING NOTES:**

- 1. ALL GROUNDING AND BONDING SHALL BE IN ACCORDANCE WITH THE LATEST OESC EDITION AND ALL LOCAL ELECTRICAL INSPECTION AUTHORITY
- 2. 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.
- 3. 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.



#### KEY PLAN: N.T.S.

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- 5. CONTRACTOR IS RESPONSIBLE TO VERIFY SHORT CIRCUIT RATING BEFORE PURCHASE OF POWER EQUIPMENT.
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- 11. THE ELECTRICAL CONTRACTOR TO VERIFY IN FIELD EXISTING UNDERGROUND SERVICES BEFORE EXCAVATING AND REPAIR ANY DAMAGES DURING CONSTRUCTION AT NO COST TO OWNER.
- 12. CONTRACTOR TO REMOVE AND RELOCATE EXISTING ELECTRICAL SERVICES AS REQUIRED TO COMPLETE THE ELECTRICAL WORK.
- 13. CONTRACTOR SHALL SIZE ALL FEEDERS ACCORDING TO THE LATEST EDITION OF THE OESC CODE BASED ON FINAL FEEDER LENGTHS AND VOLTAGE DROP.
- 14. 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 CEC FOR ADDITIONAL REQUIREMENTS.
- 15. CONTRACTOR TO COORDINATE ALL ACTIVITIES AND POWER DISRUPTIONS WITH OWNER TO AVOID DISRUPTIONS TO TENANTS.
- 16. 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

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No.	Date	Description	Drawn	Checked
REVISIONS				



J + B ENGINEERING INC.

TORONTO
25 CENTURIAN DR.

CALGARY
707-10TH AVE. SW

MARKHAM, ON L3R 5N8 CALGARY AB T2R 0B3
416 229 2636 403 355 2295

OWNER/CLIENT:



Project: EMERGENCY GENERATOR REPLACEMENT/UPGRADE

8500 SHEPPARD AVE. E.

ELECTRICAL SLD AND PUMP/CABLE ROOM LAYOUT

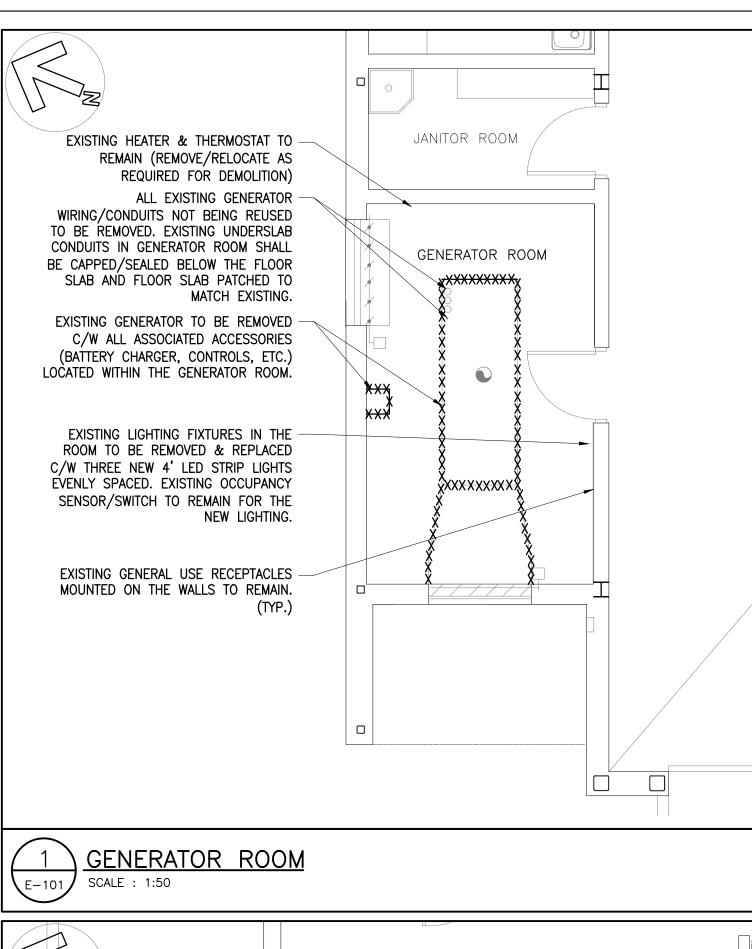
TORONTO, ON

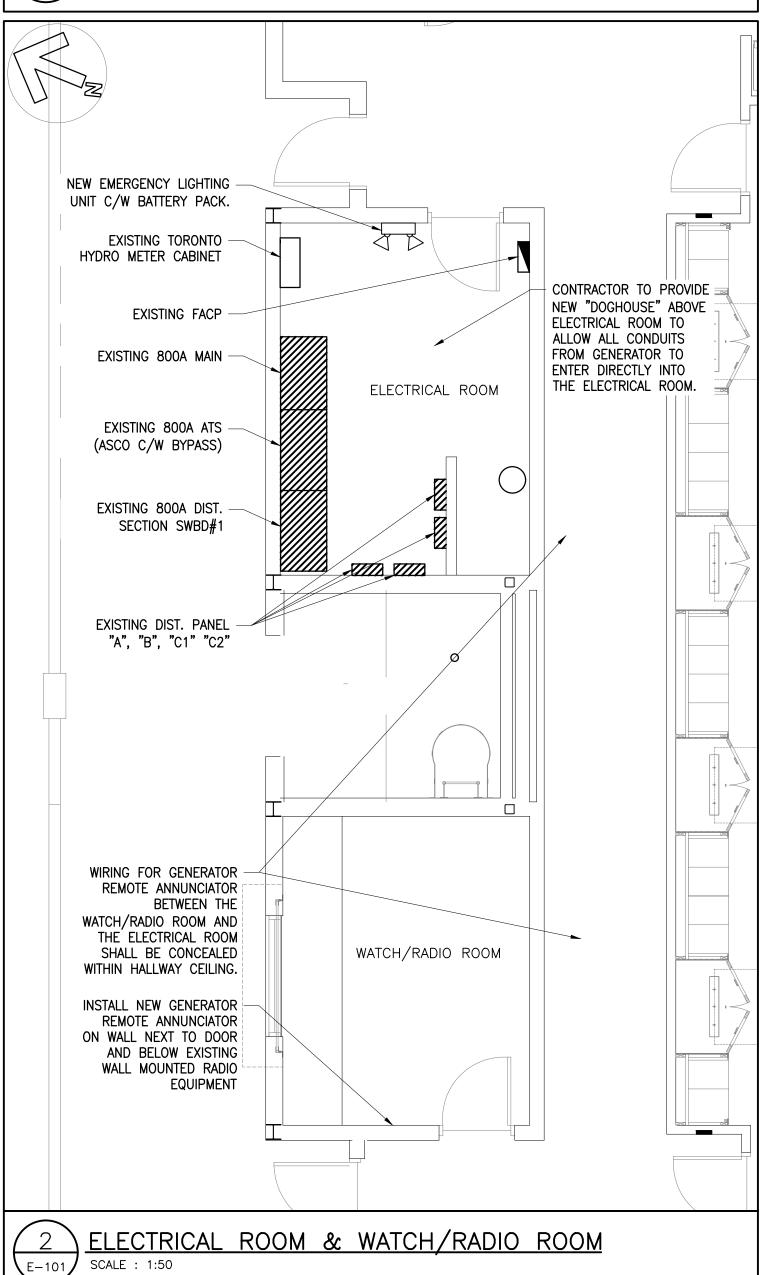
 File No:
 210240
 Date:
 28 OCT '21
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 AS SHOWN
 Dwg. File:
 210240-E-100

 Checked By:
 AM
 Sheet 1 of 1
 Plotting Scale:
 1=1

 Drawing No:
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 Drawing Size:
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# KEY PLAN:

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SUITE 201 SUITE 150
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OWNER/CLIENT:

File No: 210240

Drawn By: AM

# **I**TORONTO

Project: EMERGENCY GENERATOR REPLACEMENT/UPGRADE

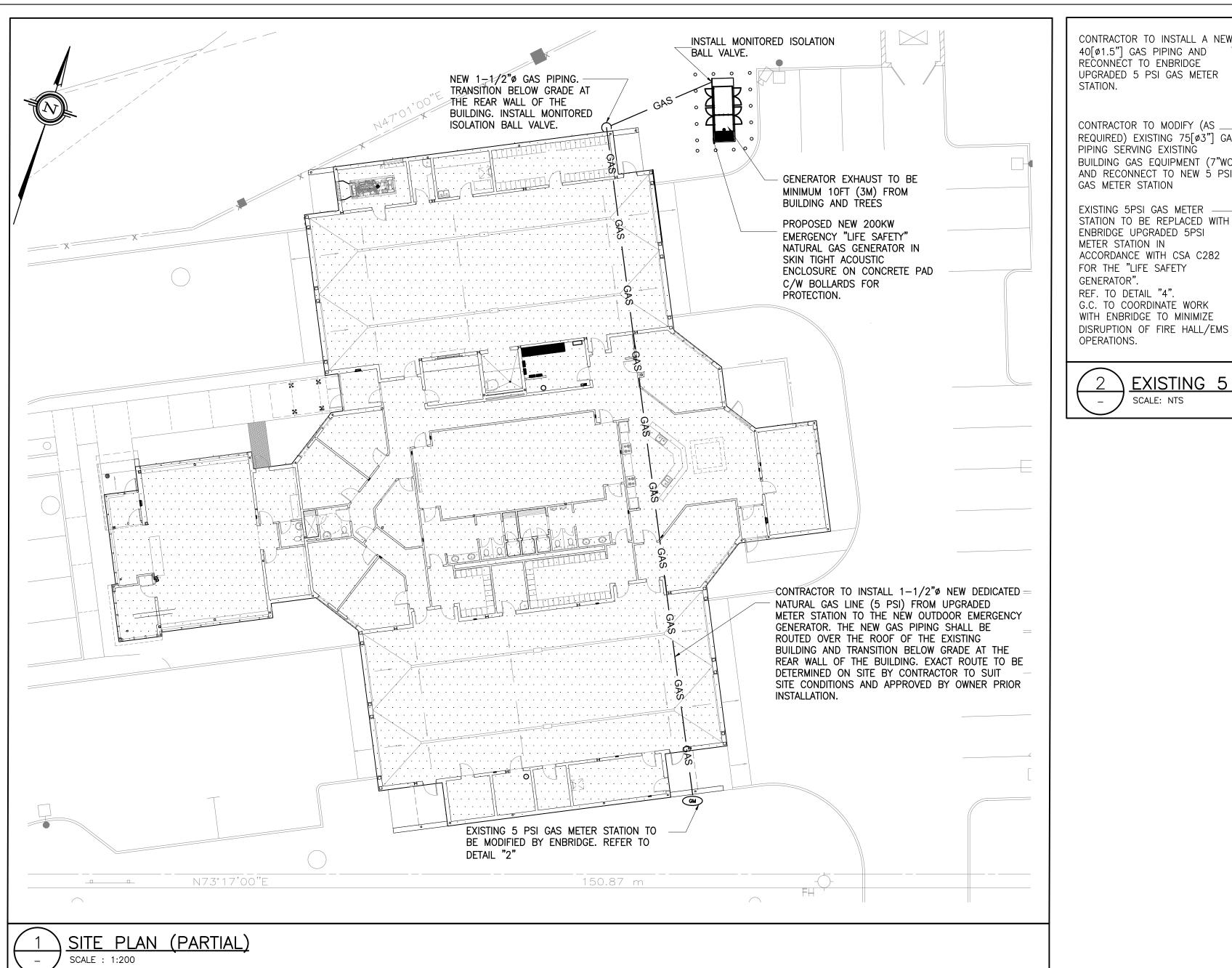
GEN. RM LAYOUT, COMM./CONTROL, & ELECTRICAL DÉMOLITION

8500 SHEPPARD AVE. E.

TORONTO, ON Date: 28 OCT '21 ACAD INFO Dwg. File: 210240-E-101 Scale: AS SHOWN Sheet 1 of 1 Plotting Scale: 1=1

Checked By: AM

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TO NEW EMERGENCY NAT. GAS

"-11"WC 5 PSI

TO EXISTING BULDING NAT. GAS FIRED

APPROXIMATE TOTAL EXIST. GAS LOAD

TO BE CONFIRMED BY CONTRACTOR

EQUIPMENT (RATED 7" WC)

CONNECT TO EXISTING-

NEW PRESSURE GAS-

REGULATOR C/W VENT

NEW ENBRIDGE FED 5PSI

REFER TO DETAIL "4"

CSA 282-15

EMERGENCY GENERATOR GAS REGULATOR STATION AS PER

GAS PIPING [3"ø]

1,637,000 BTU/HR.

REGULATOR VALVE C/W

UNDERGROUND BETWEEN THE BUILDING AND GENERATOR

BY CONTRACTOR

BY ENBRIDGE

COORDINATE INSTALLATION AND GAS

HALL/EMS REPRESENTATIVE. POST NOTICES AS REQUIRED. COORDINATE

ARRIVAL OF MODIFIED STATION WITH ENBRIDGE. GAS SUPPLY MUST BE

SHUTDOWN WITH CITY/FIRE

RESTORED IN THE SAME DAY.

MONITORED BALL

(TYP. 2)

-NEW 1-1/2"ø GAS LINE

EMERGENCY GENERATOR.

REFER TO SITE PLAN "1"

FROM THE UPGRADED GAS METER STATION TO

VALVE ABOVE GROUND

NEW LOAD 2,500,000BTU/HR

NEW GENERATOR C/W WITH GAS LOW

PRESSURE SWITCH

SCALE: NTS

**GENERATOR** 

CONTRACTOR TO INSTALL A NEW 40[ø1.5"] GAS PIPING AND RECONNECT TO ENBRIDGE UPGRADED 5 PSI GAS METER STATION.

CONTRACTOR TO MODIFY (AS REQUIRED) EXISTING 75[ø3"] GAS PIPING SERVING EXISTING BUILDING GAS EQUIPMENT (7"WC) AND RECONNECT TO NEW 5 PSI GAS METER STATION

EXISTING 5PSI GAS METER STATION TO BE REPLACED WITH ENBRIDGE UPGRADED 5PSI METER STATION IN ACCORDANCE WITH CSA C282 FOR THE "LIFE SAFETY GENERATOR". REF. TO DETAIL "4". G.C. TO COORDINATE WORK



**EXISTING 5 PSI GAS METER STATION** SCALE: NTS

### GAS PIPING NOTES:

- CONTRACTOR TO PAY AND CO-ORDINATE WITH ENBRIDGE REPLACEMENT/UPGRADE OF THE EXISTING 5PSI METER STATION WITH NEW 5PSI GAS METER STATION IN ACCORDANCE WITH CSA C282-REF. TO DETAIL IN THIS DRAWING. PROTECTIVE BOLLARDS TO BE INSTALLED AS REQUIRED TO PROTECT METER STATION FROM VEHICLE DAMAGE. REFER TO P-200 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 THE INSTALLATION OF PIPING METHOD OF CORROSION PROTECTION (IF REQUIRED). SUPPORT PIPE FROM BUILDING STRUCTURE.
- 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.
- 6. CONTRACTOR TO COORDINATE WITH GENERAL CONTRACTOR FOR EXCAVATION, BACKFILLING AND COMPACTION FOR INSTALLATION OF BURIED GAS LINE (AS REQUIRED/SITE SPECIFIC). 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.
- 7. 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.
- 8. USE WELDERS QUALIFIED AND LICENSED BY PROVINCIAL AUTHORITIES. FURNISH WELDER'S QUALIFICATIONS UPON REQUEST.
- 9. ALL EQUIPMENT AND MATERIALS TO BE C.G.A. OR C.S.A. CERTIFIED.
- 10. GAS PIPING ABOVE GROUND SHALL BE SCHEDULE 40 STEEL PIPE, BURIED GAS PIPES SHALL BE YELLOW JACKET STEEL PIPE OR PLASTIC PIPE.
- 11. FITTINGS SHALL BE 150 PSI BLACK MALLEABLE IRON. USE SCREWED FITTING FOR PIPE UP TO 2" DIAMETER WHERE ACCEPTABLE AND STEEL WELDED FITTINGS FOR PIPE OVER 50mm DIAMETER.
- 12. USE C.S.A AND C.G.A. APPROVED BALL AND LUBRICATED PLUG VALVES WITH LEVER HANDLES.
- 13. 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.
- 14. JOINTS SHALL BE CHECKED WITH SOAP AND WATER SOLUTION DURING AIR TEST TO ASCERTAIN ANY LEAKS.
- 15. ALL BURIED PIPING SHALL BE TESTED BEFORE BACKFILLING.
- 16. ALL GAS PIPING, INCLUDING PIPING IN CONCEALED SPACES SHALL BE PAINTED "YELLOW" AS PER DEPARTMENT OF ENERGY AND RESOURCES REQUIREMENTS.
- 17. PIPE ALL RELIEF VALVES AND GAS VENTS TO THE EXTERIOR OF THE BUILDING AS DETAILED ON THE DRAWINGS OR AS SPECIFIED.

LEGEND

MONITORED BALL VALVE

LOW PRESSURE SWITCH

18. MINIMUM GAS PIPE SIZE SHALL BE IN COMPLIANCE WITH GAS UTILIZATION CODE.

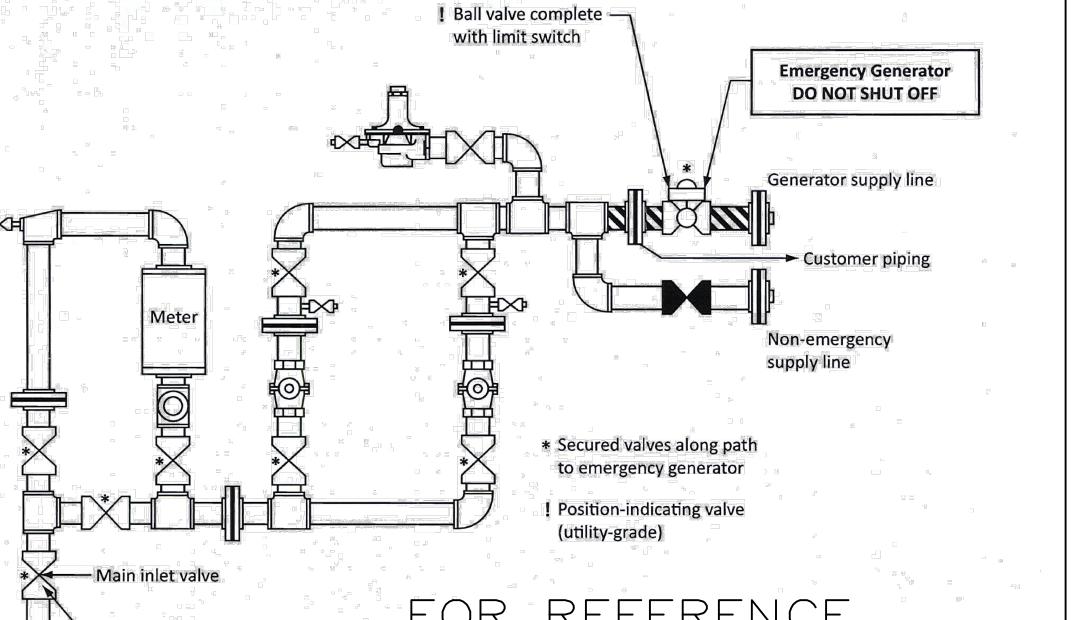
GAS LINE

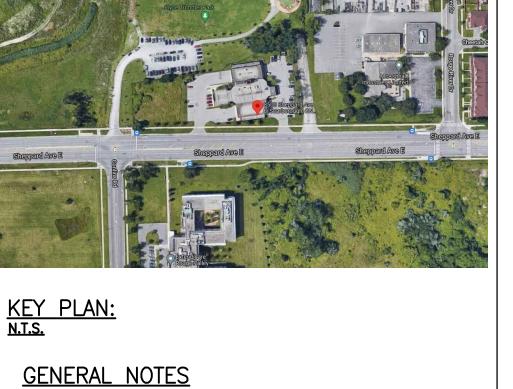
PLUG VALVE

→D✓> GATE VALVE

→ BALL VALVE

<u>GM−1</u> GAS METER





N.T.S.

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- 2. ALL DIMENSIONS AND ELEVATIONS ARE METRIC, UNLESS NOTED OTHERWISE.
- 3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS & SPECIFICATIONS.
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- 5. USE ONLY LATEST REVISED DRAWINGS OR THOSE THAT ARE

AND ANY OTHER AUTHORITIES HAVING JURISDICTION.

BY THE CONTRACTOR AT HIS OWN COST.

- MARKED "ISSUED FOR CONSTRUCTION". 6. DESIGN AND CONSTRUCTION OF THIS PROJECT SHALL COMPLY WITH THE ONTARIO BUILDING CODE, GAS CODE, CSA, ULC, TSSA
- 7. ALL EQUIPMENT, ETC. TO BE REUSED SHALL BE CAREFULLY REMOVED AND STORED. ANY PIECE OF EQUIPMENT OR FITTING ACCESSORY, ETC., WHICH FORMS A PART OF THE EQUIPMENT TO BE REUSED WHICH IS LOST OR DAMAGED SHALL BE REPLACED
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- 10. ALL WELDING SHALL BE IN ACCORDANCE WITH CWB AND AUTHORITIES HAVING JURISDICTION.
- 11. CONTRACTOR TO COORDINATE ALL UNIT CONTROL REQUIREMENT WITH MANUFACTURER OF THE UNIT TO ENSURE CO-ORDINATION OF CONTROLS AND UNITS.

THE DRAWING WAS PREPARED BASED ON CITY OF TORONTO MAPS V2 DATA AND CLIENT PROVIDED RECORD DRAWINGS. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR STARTING CONSTRUCTION.

3	JULY 05 '23	ISSUED FOR TENDER	JK	JK
2	JUNE 30 '23	ISSUED FOR BP	JK	JK
1	MAR 12 '23	ISSUED FOR 100% REVIEW	JK	JK
0	JAN 09 '23	ISSUED FOR 75% REVIEW	JK	JK
No.	Date	Description	Drawn	Checked
		REVISIONS	-	



J + B ENGINEERING INC. 25 CENTURIAN DR.

CALGARY 707-10TH AVE. SW SUITE 150 MARKHAM, ON L3R 5N8 CALGARY AB T2R 0B3
416 229 2636 403 355 2295

OWNER/CLIENT:

Drawing No: M-100



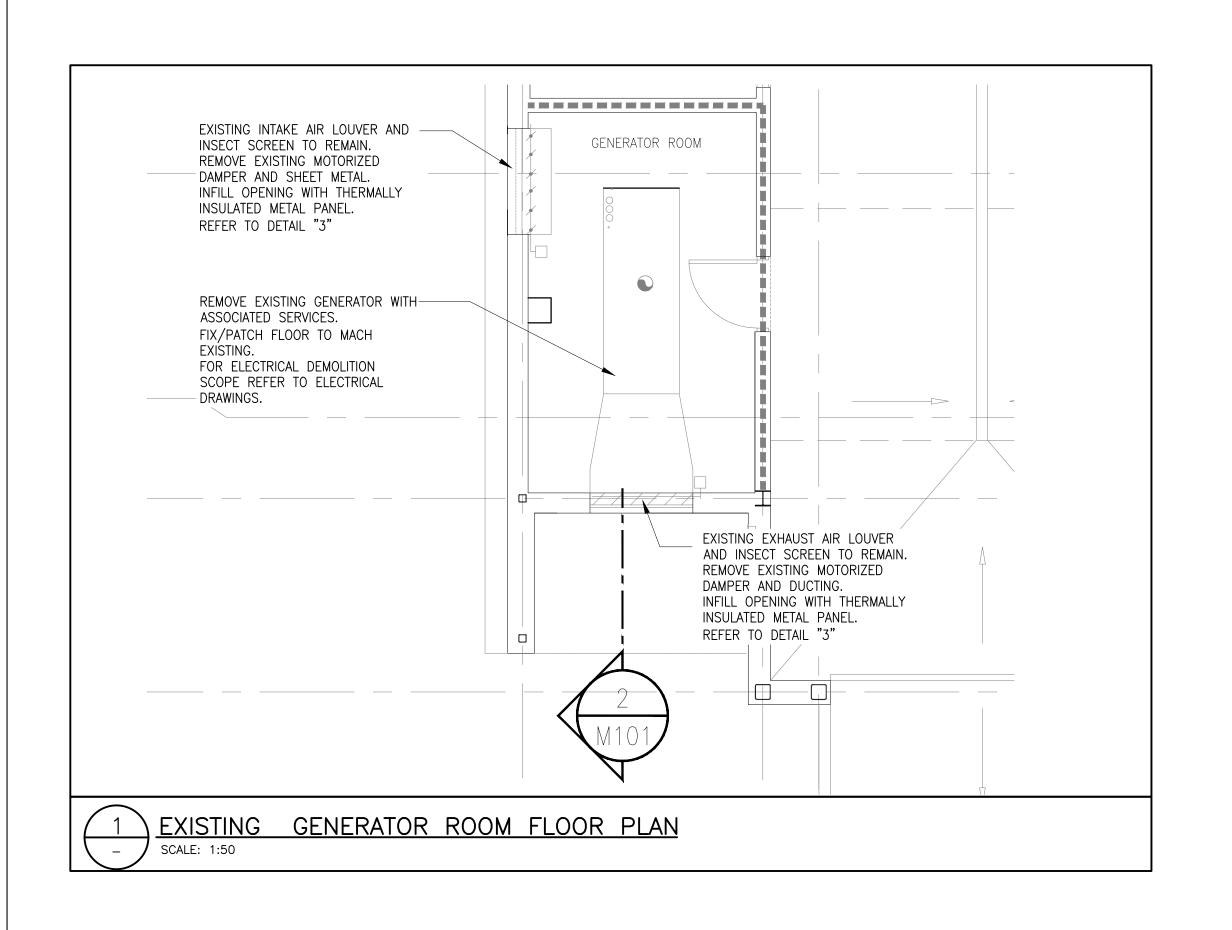
Project: EMERGENCY GENERATOR REPLACEMENT/UPGRADE

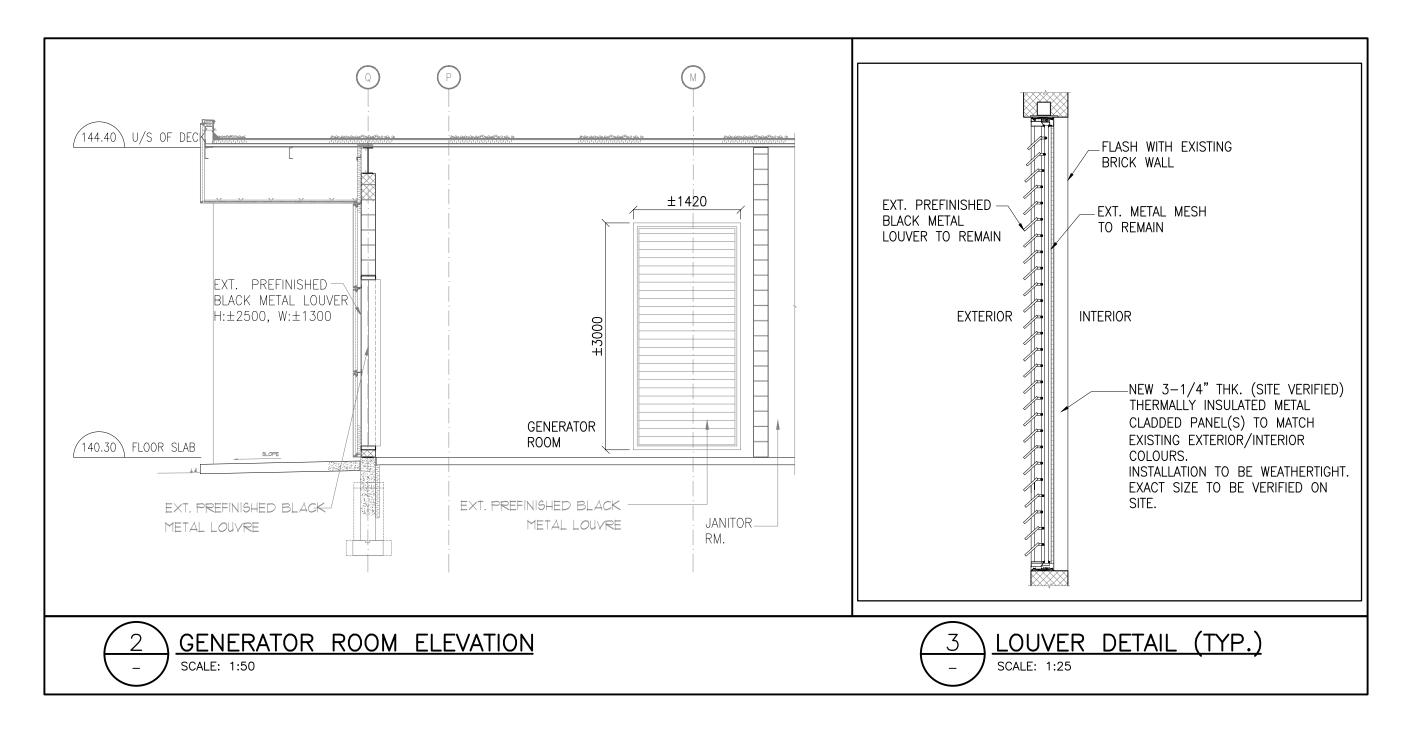
#### SITE PLAN NATURAL GAS GENERATOR

8500 SHEPPARD	TORONTO, ON			
File No: 210240	Date: 28 OCT '21	ACAD INFO		
Drawn By: <b>JK</b>	Scale: AS SHOWN	Dwg. File <b>210240-M-100</b>		
Checked By: JK	Sheet 1 of 1	Plotting Scale: 1=1		

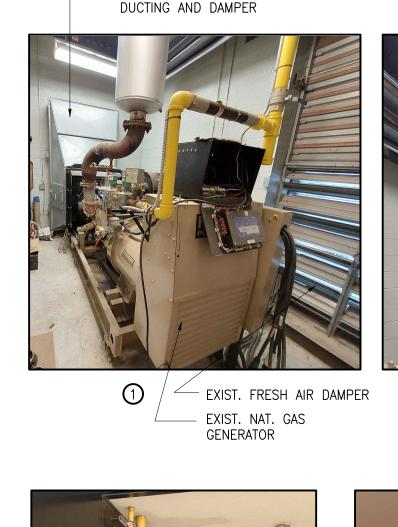
1=1 Drawing Size: D

FOR REFERENCE **Emergency Generator** DO NOT SHUT OFF NEW ENBRIDGE UPGRADED 5PSI EMERGENCY GAS REGULATOR STATION/PIPING CSA C282-15, FIG B.1 UTILITY FED EMERGENCY GENERATOR GAS REGULATOR STATION





- 1. REMOVE AND DISPOSE EXISTING GENERATOR WITH ALL ASSOCIATED SERVICES, INCLUDING EXHAUST AIR DUCTING SYSTEM. FIX/PATCH THE FLOOR TO MAKE EXISTING. CONFIRM WITH CITY THE DISPOSED EQUIPMENT PRIOR TO ITS REMOVAL.
- 2. DISCONNECT SILENCER AND FLEX PIPE FROM GENERATOR AND REMOVE/DISPOSE ENTIRE GENERATOR FLUE VENT LINE. EXISTING ROOF OPENING TO BE "WEATERTIGHT" CAPPED. 12613
- 3. REMOVE AND DISPOSE GAS PIPING ASSOCIATED WITH EXISTING GENERATOR FROM THE GENERATOR ROOM. MAKE GOOD WALL/CEILING TO MATCH EXISTING AT PIPE REMOVAL. 123
- 4. REMOVE AND DISPOSE EXISTING INTAKE AND EXHAUST AIR DAMPERS C/W WIRING POWER AND CONTROLS. INFILL OPENINGS WITH THERMALLY INSULATED METAL CLADDED PANEL(S). REFER TO DETAILS ON THIS DRAWING. 1234
- 5. EXISTING INFRA-RED SPACE HEATING SYSTEM TO REMAIN IN OPERATION. IT INCLUDES POWER, CONTROLS AND SEPARATE 7"WC GAS (18) E.
- 6. REMOVE AND DISPOSE ALL DUCTWORK ASSOCIATED WITH EXISTING GENERATOR.
- 7. DISCONNECT AND REMOVE EXISTING NATURAL GAS PIPING SYSTEM (C/W ASSOCIATED VALVES, PRESSURE REGULATOR AND SUPPORTS) SERVING THE EXISTING NATURAL GAS GENERATOR WITH EXCEPTION OF GAS PIPING LOCATED INSIDE THE EMS AND FIRE HALL GARAGE BAYS. 89010
- 8. EXISTING GAS PIPING INSIDE THE GARAGE BAY TO REMAIN. (14)
- 9. EXISTING PIPING TO BE CUT AND CAPPED (OUTDOOR) AT THE WALLS PENETRATION OPENINGS. 890112
- 10. EXISTING WALL/ROOF OPENINGS TO BE "WEATHERTIGHT" CAPPED. 89010



EXIST. EXHAUST AIR





EXIST. SILENCER (PART OF

THE GENERATOR CHIMNEY)





EXIST. FRESH AIR DAMPER



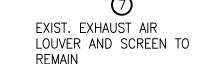
AND SCREEN TO REMAIN



EXIST. EXHAUST AIR

DUCTING AND DAMPER







8 EXIST. 3"Ø NAT. GAS (7"WC) LOW PRESSURE PIPING FOR BUILDING LOAD TO REMAIN

EXIST. 1-1/2" NAT. GAS PIPING

BE REMOVED AND REPLACED WITH

NEW.

5PSI RATED (SERVING GENERATOR) TO

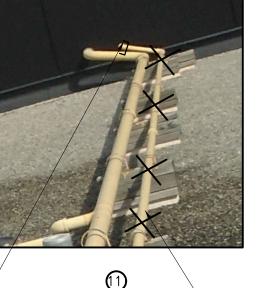
MECHANICAL DEMOLITION AREAS



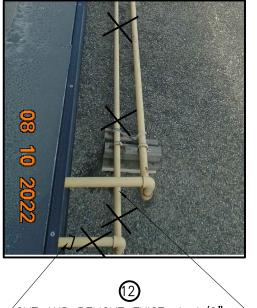
- CUT AND REMOVE EXIST. 1-1/2"ø NAT. GAS PIPING SERVING GENERATOR. -CAP PIPING ON THE OUTSIDE SIDE OF THE WALL. (TYPICAL ALL)



**(1)** ─ CUT AND REMOVE EXIST. 1-1/2"ø NAT. GAS PIPING SERVING GENERATOR. CAP PIPING ON THE OUTSIDE SIDE OF -THE WALL. (TYPICAL ALL)



 $\bigcirc$ CUT AND REMOVE EXIST. -1-1/2"ø NAT. GAS PIPING SERVING GENERATOR.



 $^{\prime}$ CUT AND REMOVE EXIST. 1-1/2"ø $\longrightarrow$ NAT. GAS PIPING SERVING GENERATOR. CAP PIPING ON THE OUTSIDE SIDE OF THE WALL. (TYPICAL ALL)



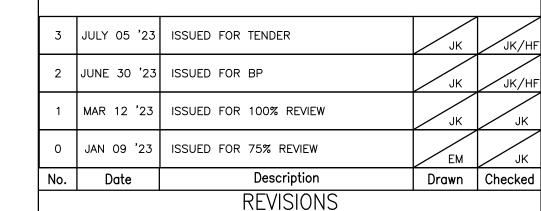
"WEATERTIGHT" CAPPED. (TYP.)

EXISTING GENERATOR CHIMNEY TO BE REMOVED.

EXISTING NATURAL GAS PIPING INSIDE THE EMS AND FIRE HALL BAYS TO BE PURGED OF GAS CUT/CAPPED (OUTDOOR) AND LEFT IN PLACE. PIPING LEFT INSIDE THE BAYS TO BE LABELED "NOT IN USE"

**GENERAL NOTES** 

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25 CENTURIAN DR. 707-10TH AVE. SW
SUITE 201 SUITE 150
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416 229 2636 403 355 2295

OWNER/CLIENT:



Project: EMERGENCY GENERATOR REPLACEMENT/UPGRADE

DEMOLISHING SCOPE

TORONTO, ON

8500 SHEPPARD AVE. E. File No: 210240 Date: 29 OCT '21 ACAD INFO Dwg. File: 210240-M-101 Drawn By: **EM** Sheet 1 of 1 Plotting Scale: 1=1 Checked By: JK Drawing No: M-101Drawing Size: **D**