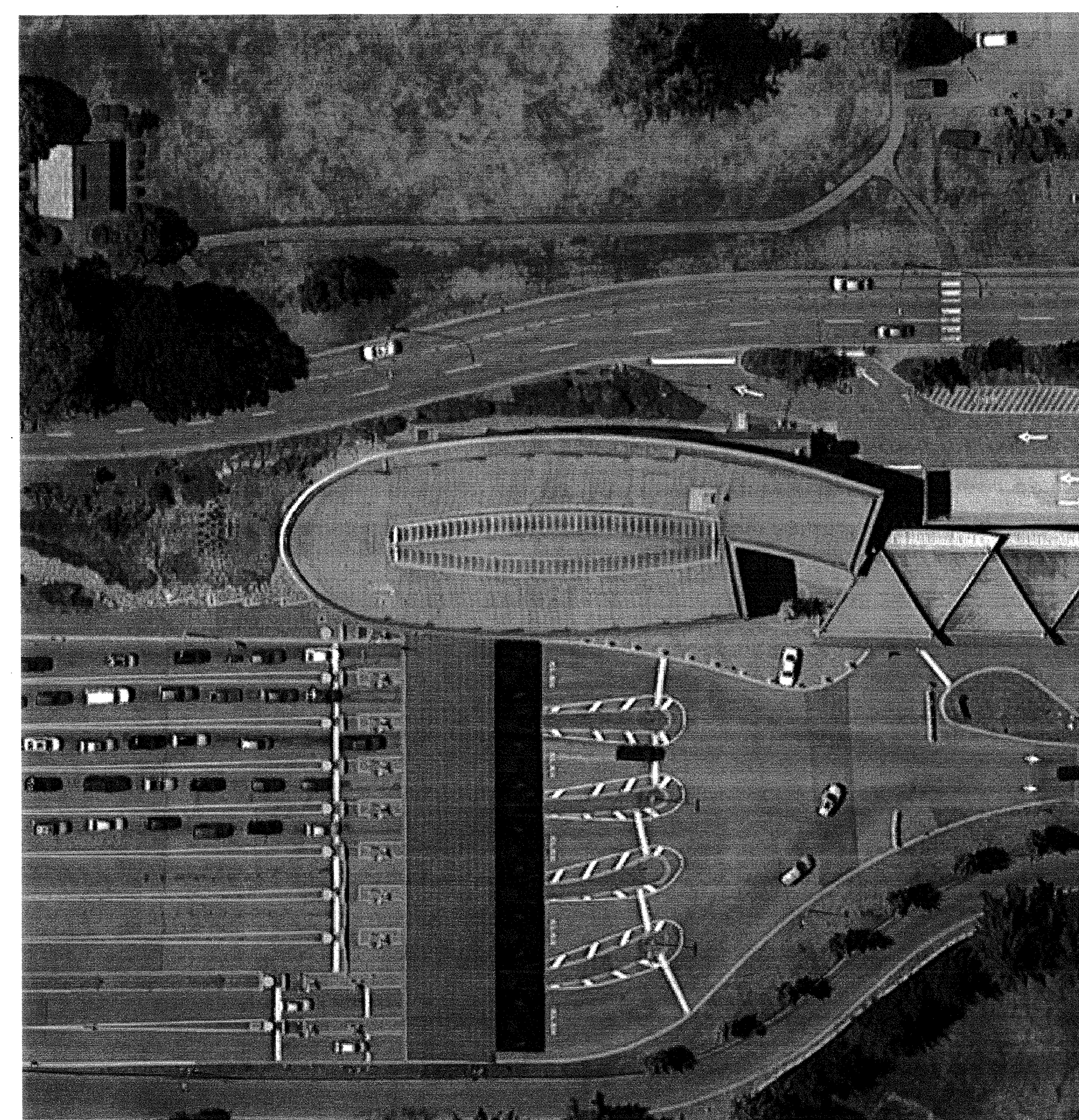


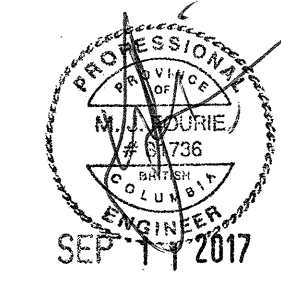


CANADA BORDER SERVICES AGENCY GENERATOR POWER SYSTEM UPGRADE

Surrey, B.C.
PR. #R.087312.001



PROJECT NORTH
1 DOUGLAS PORT OF ENTRY SITE PLAN
E-00 SCALE NTS



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0	ISSUED FOR TENDER	17/08/01
Revision/	Description/Description	Date/Date

Client/client
CANADA BORDER SERVICES AGENCY (CBSA)

Project title/Titre du projet
**SURREY, B.C., V3Z 9N7
220 HIGHWAY 99
LAND BORDER FACILITY
Douglas Port of Entry
Generator Power System Upgrade**

Consultant Signature Box Only

Designed by/Concept par
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N. NADERI
PWSSC Regional Manager, Architectural and Engineering Services/
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Drawing title/Titre du dessin
**COVER SHEET, SITE PLAN,
SYMBOLS LEGEND AND
DRAWING LIST**

Project No./No. du projet	Sheet/Fauille	Revision no./ La Révision no.
R.087312.001	E-00	0
	01 OF 05	

SCHEMATIC SYMBOLS	
	LOW VOLTAGE CIRCUIT BREAKER
	DISCONNECT SWITCH
	FUSE
	TRANSFORMER
	CURRENT TRANSFORMERS (# = NO. OF CTs IN GROUP)
	POTENTIAL TRANSFORMERS (# = NO. OF PTs IN GROUP)
	TRANSFER SWITCH
	GENERATOR
	REVENUE METER
	DIGITAL METER SYSTEM
	DELTA CONNECTION
	WYE CONNECTION
	GROUND CONNECTION
	CAPACITOR
	PANELBOARD
	UNINTERRUPTIBLE POWER SUPPLY
	DUPLEX 5-15R RECEPTACLE
	MOTOR c/w DISCONNECT SWITCH
	COMBINATION DISCONNECT AND MAGNETIC MOTOR STARTER

POWER PLAN SYMBOLS	
	TRANSFORMER
	CEILING MOUNTED JUNCTION BOX
	WALL MOUNTED JUNCTION BOX
	FLOOR MOUNTED JUNCTION BOX
	POWER PANELBOARD
	PANEL (TYPE AS INDICATED)
	GROUND BUS BAR
	MOTOR
	MOTOR c/w DISCONNECT SWITCH
	COMBINATION DISCONNECT AND MAGNETIC MOTOR STARTER
	DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	CONDUIT STUB
	CONDUIT UP
	CONDUIT DOWN

DRAWING LIST	
E-00	COVER SHEET, SITE PLAN, SYMBOL LEGENDS AND DRAWING LIST
E-01	EXISTING SINGLE LINE DIAGRAM, FEEDER AND TEMP. POWER SCHEDULE AND LINE LEGEND
E-02	EXISTING SINGLE LINE DIAGRAM-RELOCATED LOADS, FEEDER SCHEDULES AND LINE LEGEND
E-03	PARKADE POWER LAYOUT, LEVEL 1 - TEMP. PROVISIONS, AND CONDUIT MOUNTING DETAIL
E-04	SITE PHOTOS





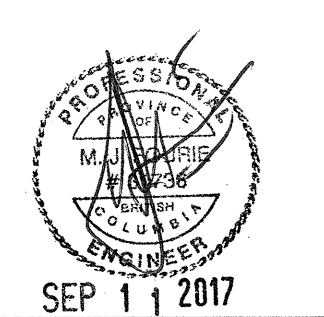
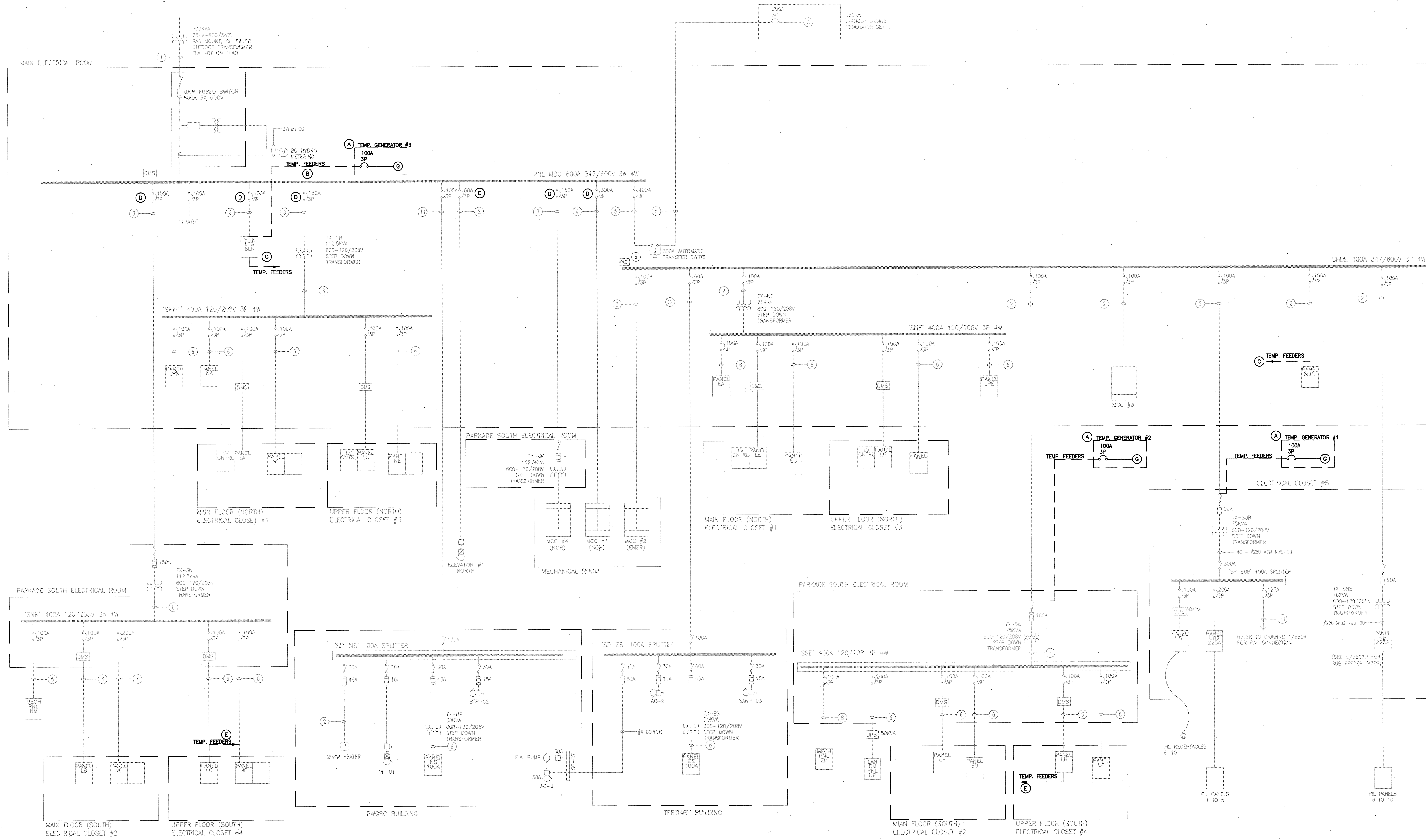
TEMP. POWER SCHEDULE	
PANEL	GENERAL LOAD DESCRIPTION
LB	MAIN FLOOR LIGHTS
LD	ATRIUM LIGHTS
LF	MAIN FLOOR LIGHTS
SP-SUB	PILS PANEL 1 TO 5; UB1 PANEL (PILS RECEPTACLE 1 TO 6)
6LPE	EM. LIGHTING
6LN	SITE LIGHTING

LINE LEGEND	
LINE	DESCRIPTION
---	NEW FEEDER OR EQUIPMENT
---	EXISTING FEEDER
---	TEMPORARY FEEDERS AND POWER REMOVE UPON COMPLETION OF PROJECT

KEY NOTE	
TAG	DESCRIPTION
(A)	PROVIDE THREE TEMPORARY GENERATORS AND FEEDERS AS SHOWN TO MAINTAIN LOADS DURING SHUTDOWN. FINAL LOCATIONS IN PARKADE TO BE COORDINATED WITH DEPARTMENT REP. COORDINATE SHUTDOWN TO TIE INTO EXISTING EQUIPMENT. ALL LOCK-OUT PROCEDURES ARE TO BE FOLLOWED TO PREVENT FEEDBACK TO SYSTEMS.
(B)	CONNECTION TO TEMPORARY POWER FOR SITE LIGHTING MUST BE COMPLETED DURING THE DAY. ALL SITE LIGHTING MUST BE OPERATIONAL 1 HOUR BEFORE SUNSET. CONTRACTOR TO INCLUDE ALL COSTS TO OPERATE TEMPORARY GENERATOR FOR THIS DURATION IN BID PRICE.
(C)	PROVIDE TEMPORARY POWER TO PANEL '6LPE' FROM A NEW 60A-3P BREAKER IN PANEL '6LN' TO REPLACE EXISTING SUPPLY FEEDER FOR DURATION OF SHUTDOWN TO PANEL 'SHDE'. AFTER COMPLETION OF WORK, REMOVE TEMPORARY FEEDER, RECONNECT PANEL 'LD' TO ORIGINAL FEEDER AND LEAVE NEW 60A-3P BREAKER IN PANEL '6LN' AS SPARE. ALL LOCK-OUT PROCEDURES ARE TO BE FOLLOWED TO PREVENT FEEDBACK TO SYSTEMS.
(D)	EXISTING LOAD FROM THIS BREAKER WILL BE RE-FED FROM NEW BREAKER IN PANEL 'SHDE'. EXISTING BREAKER IN PANEL MDC TO BE LEFT AS SPARE. REFER TO DRAWING E-02 FOR RELOCATED LOADS.

KEY NOTE	
TAG	DESCRIPTION
(E)	PROVIDE TEMPORARY POWER TO PANEL 'LD' FROM A NEW 60A-3P BREAKER IN PANEL 'LF' TO REPLACE EXISTING SUPPLY FEEDER FOR DURATION OF SHUTDOWN TO PANEL 'SHDE'. AFTER COMPLETION OF WORK, REMOVE TEMPORARY FEEDER, RECONNECT PANEL 'LD' TO ORIGINAL FEEDER AND LEAVE NEW 60A-3P BREAKER IN PANEL 'LF' AS SPARE. ALL LOCK-OUT PROCEDURES ARE TO BE FOLLOWED TO PREVENT FEEDBACK TO SYSTEMS.

EXISTING FEEDER SCHEDULE	
TAG	FEEDER
1	2 @ (#350MCM XLPE RW90 Cu & GROUND - 103mm)
2	4#2 Cu + GROUND - TECK-90
3	4#4/0 Cu + GROUND - TECK-90
4	4#350 MCM Cu + GROUND - TECK-90
5	2 @ (#4/0 Cu + GROUND - TECK-90)
6	4#2 XLPE RW90 Cu + GROUND - 41mmC
7	4#4/0 XLPE RW90 Cu + GROUND - 63mmC
8	4#300 MCM XLPE RW90 Cu + GROUND - 78mmC
9	3#2 XLPE RW90 + GROUND - 53mmC
10	4#1/0 XLPE RW90 + GROUND - 53mmC
11	4#250 MCM Cu + GROUND - RWU-90
12	4#2 Cu + GROUND - RWU-90
13	4#4/0 Cu + GROUND - RWU-90



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Revision	Description	Date

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CANADA BORDER SERVICES AGENCY (CBSA)

Project title/Titre du projet
**SURREY, B.C., V3Z 9N7
220 HIGHWAY 99
LAND BORDER FACILITY
Douglas Port of Entry
Generator Power System
Upgrade**

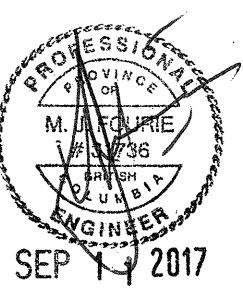
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P. PAUL

Drawing title/Titre du dessin
**EXISTING SINGLE LINE DIAGRAM,
FEEDER AND TEMPORARY POWER
SCHEDULE AND LINE LEGEND**

1 EXISTING ELECTRICAL SINGLE LINE DIAGRAM -- TEMPORARY POWER
E-01 SCALE NTS

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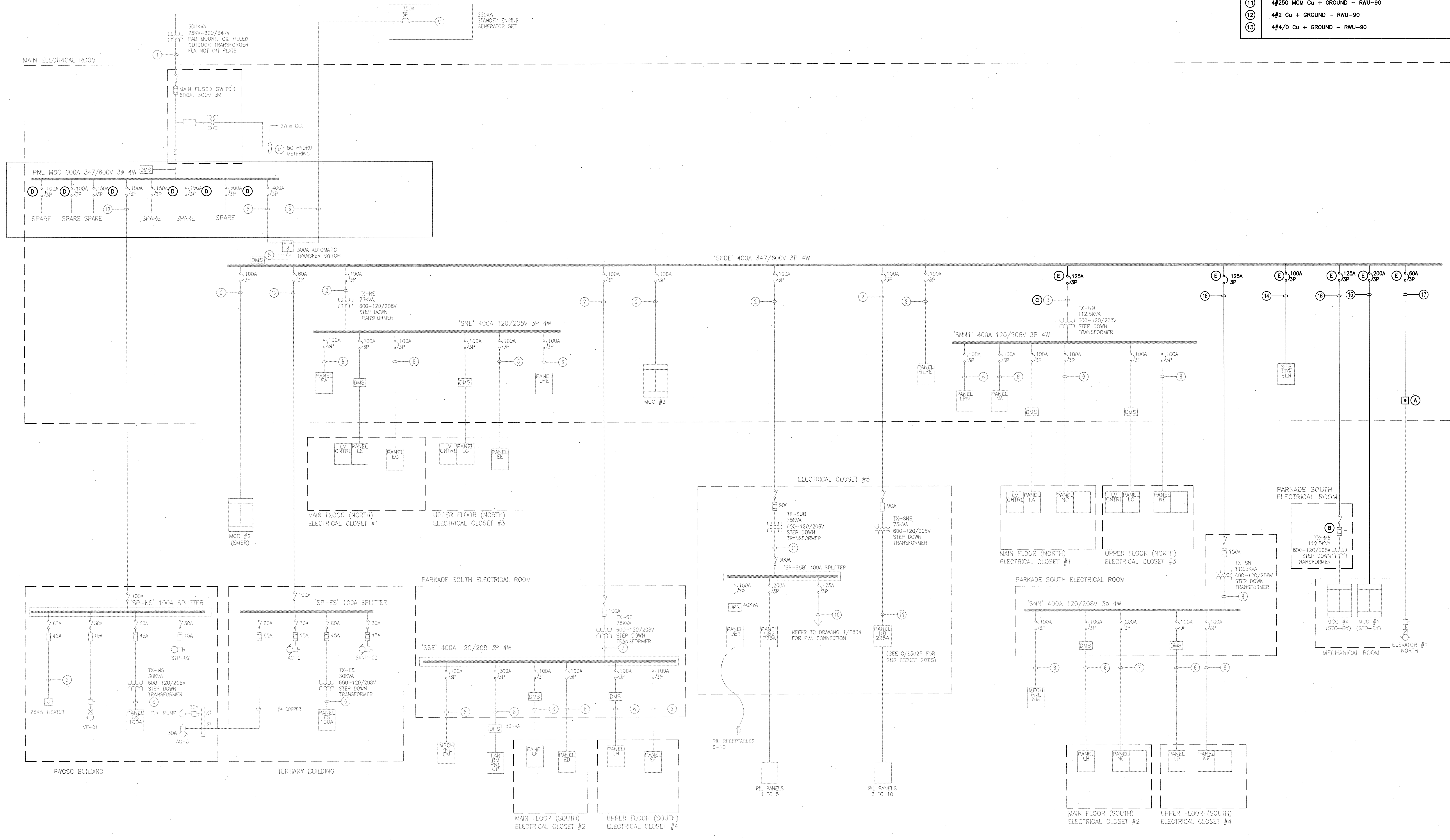


LINE LEGEND	
LINE	DESCRIPTION
—	NEW FEEDER OR EQUIPMENT
- - -	EXISTING FEEDER
- · - · -	EXISTING FEEDER TO BE REFEED FROM NEW BREAKER

KEY NOTE	
TAG	DESCRIPTION
(A)	PROVIDE BARREL COMPRESSOR SPLICE KIT TO FOR ELEVATOR CONDUCTOR
(B)	CONTRACTOR TO CONFIRM FUSE TYPE AND RATING ON SITE. INCLUDE INFORMATION ON AS-BUILT DRAWINGS.
(C)	EXISTING FEEDER TO BE REUSED. RE-FEED FROM NEW BREAKER.
(D)	EXISTING BREAKERS MADE SPARE AS A RESULT OF RELOCATING LOADS TO PANEL 'SHOE'. PROVIDE NEW LAMACOID LABEL FOR 'SPARE'. LABELS TO MATCH EXISTING BUILDING STANDARDS.
(E)	PROVIDE NEW LAMACOID LABEL FOR NEW BREAKERS. LABELS TO MATCH EXISTING BUILDING STANDARDS.

NEW ADDITION FEEDER SCHEDULE	
TAG	FEEDER
(14)	4#3 Cu + GROUND(100A) - TECK-90
(15)	4#3/0 XLPE RW90 + GROUND(200A) - 53mmC
(16)	4#1/0 XLPE RW90 + GROUND - 53mmC
(17)	4#2 Cu + GROUND - TECK-90

EXISTING FEEDER SCHEDULE	
TAG	FEEDER
(1)	2 @ (4#350MCM XLPE RW90 Cu & GROUND - 103mm)
(2)	4#2 Cu + GROUND - TECK-90
(3)	4#4/0 Cu + GROUND - TECK-90
(4)	4#350 MCM Cu + GROUND - TECK-90
(5)	2 @ (4#4/0 Cu + GROUND - TECK-90)
(6)	4#2 XLPE RW90 Cu + GROUND - 41mmC
(7)	4#4/0 XLPE RW90 Cu + GROUND - 63mmC
(8)	4#300 MCM XLPE RW90 Cu + GROUND - 78mmC
(9)	3#2 XLPE RW90 + GROUND - 53mmC
(10)	4#1/0 XLPE RW90 + GROUND - 53mmC
(11)	4#250 MCM Cu + GROUND - RWU-90
(12)	4#2 Cu + GROUND - RWU-90
(13)	4#4/0 Cu + GROUND - RWU-90



1 EXISTING ELECTRICAL SINGLE LINE DIAGRAM -- RELOCATED LOADS
E-02 SCALE NTS

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Client/client
CANADA BORDER SERVICES AGENCY (CBSA)

Project title/Titre du projet
**SURREY, B.C., V3Z 9N7
220 HIGHWAY 99
LAND BORDER FACILITY
Douglas Port of Entry
Generator Power System
Upgrade**

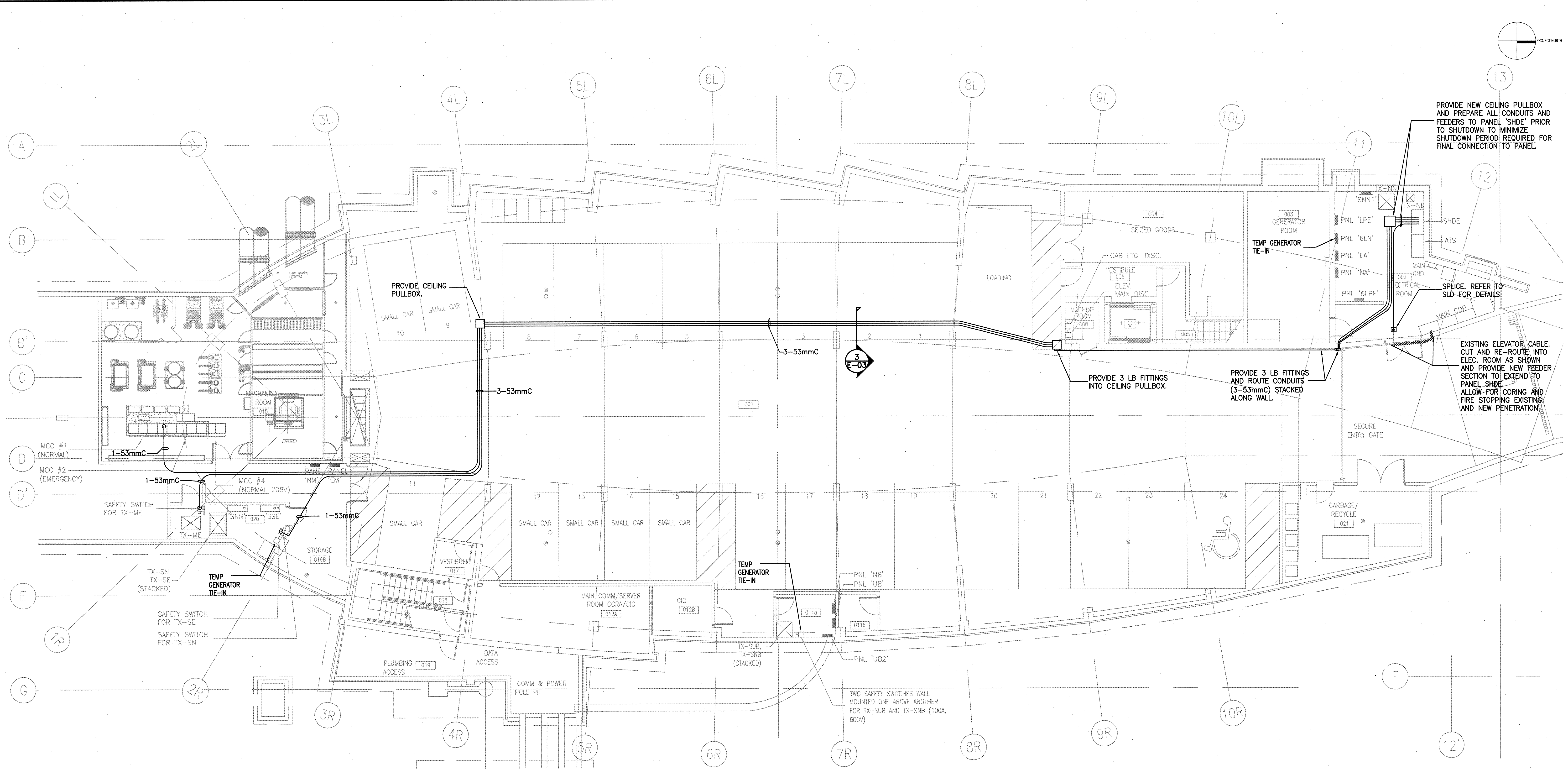
Consultant Signature Box Only
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Drawing title/Titre du dessin
**EXISTING SINGLE LINE DIAGRAM -
RELOCATED LOADS,
FEEDER SCHEDULES AND
LINE LEGEND**

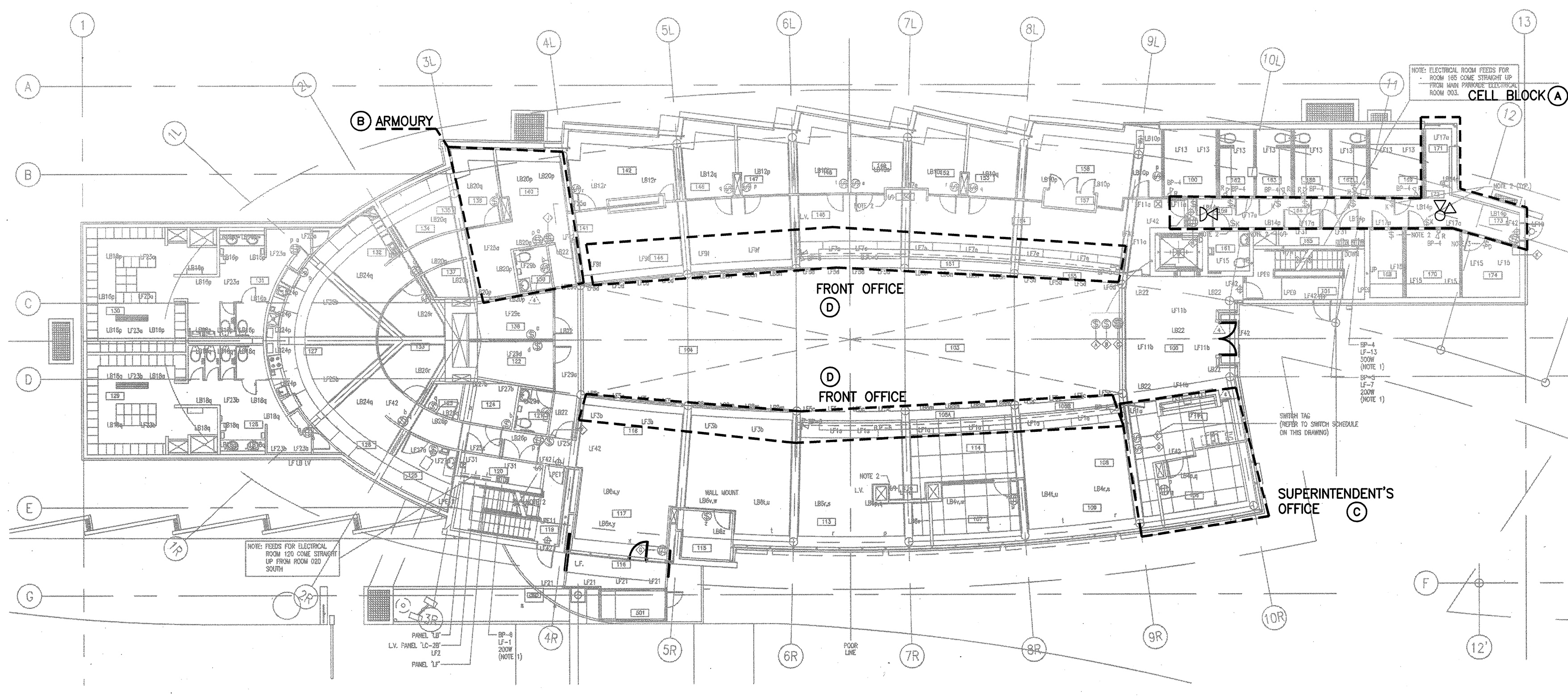
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		03 OF 05

Stantec Proj. #11561710
The Contractor shall verify and be responsible for all dimensions. DO NOT SCALE THE DRAWING.
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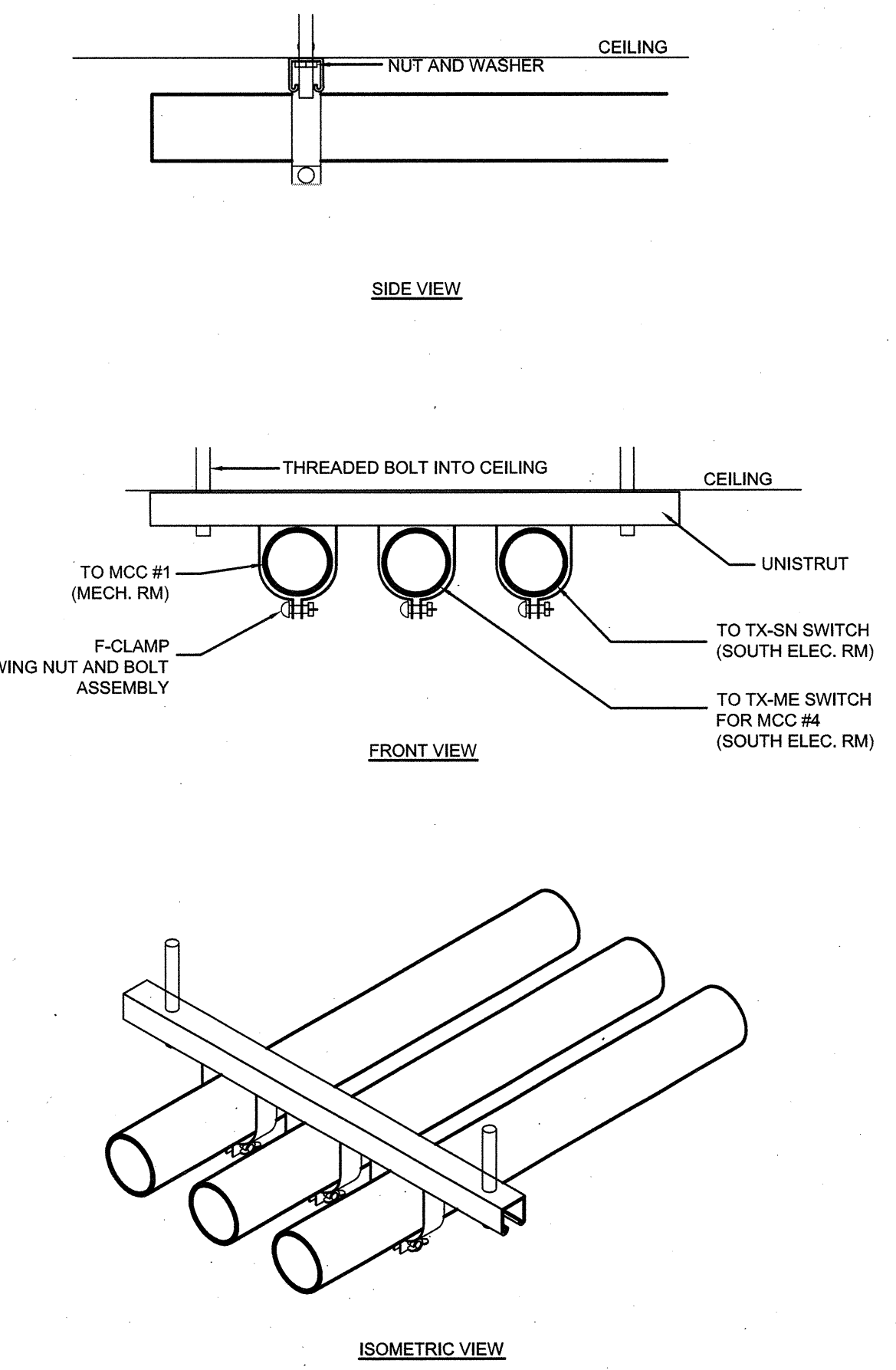
1 PARKADE POWER PLAN - CONDUIT ROUTING AND TEMP. POWER.
SCALE 1:100



2 LEVEL 1 - TEMPORARY POWER, HEATING, AND LIGHTING PLAN
SCALE 1:200

KEY NOTE	
TAG	DESCRIPTION
(A)	CELL BLOCK PROVIDE TEMPORARY LIGHTING WITH BATTERY BACKUP IN CELL BLOCK AREA TO ILLUMINATE ENTIRE CORRIDOR DURING TRANSITION OF LIGHTING PANEL TO TEMPORARY GENERATOR POWER - REFER TO SLD. CORRIDOR MUST REMAIN ILLUMINATED ALL ALL TIMES.
(B)	ARMOURY PROVIDE TEMPORARY LIGHTING WITH BATTERY BACKUP IN ARMOURY TO ILLUMINATE ENTIRE SPACE DURING TRANSITION OF LIGHTING PANEL TO TEMPORARY GENERATOR POWER. ARMOURY MUST REMAIN ILLUMINATED AT ALL TIME.
(C)	SUPERINTENDENT'S OFFICE ALL LIGHTING AND POWER TO REMAN ON WITHIN THIS OFFICE DURING SHUTDOWNS.
(D)	FRONT OFFICE PROVIDE BATTERY OPERATED TEMPORARY LIGHTING DURING TRANSITION OF LIGHTING PANEL TO TEMPORARY GENERATOR POWER - REFER TO SLD. PROVIDE PORTABLE ELECTRIC HEATERS (MIN. 6) DURING SHUTDOWNS.

GENERAL NOTE	
1.	ALL NEW PENETRATIONS MUST BE SCANNED PRIOR TO CORING.
2.	ALL EXISTING AND NEW PENETRATIONS THROUGH FIRE WALLS WHICH ARE IMPACTED BY THIS PROJECT MUST BE FIRE STOPPED AND CAULKED TO MAINTAIN EXISTING FIRE RATINGS.
3.	UPON COMPLETION OF WORK IN PARKADE CEILING, REINSTATE ALL FIRE PROOFING SPRAY TO MAINTAIN EXISTING FIRE RATING.
4.	ALL EXISTING EXPOSED CABLING IN-SLAB WHICH ARE NO LONGER UTILIZED AS A RESULT OF THIS PROJECT ARE TO BE TERMINATED SAFELY, COILED, TIED-BACK AND MADE SAFE.
5.	ALL EXISTING CABLING IN-SLAB WHICH STUB INTO SWITCHGEAR AND ARE NO LONGER UTILIZED AS A RESULT OF THIS PROJECT ARE TO BE TERMINATED SAFELY AND LEFT COILED IN SWITCHGEAR. TAG CABLE ON BOTH ENDS AS SPARE WITH A UNIQUE CABLE TAG DESCRIPTION. E.G. SPARE CABLE FROM MCC TO MCC #1.
6.	ALL CONDUITS SHOWN ARE INDICATIVE ONLY TO SHOW ROUTING. CONTRACTOR TO ALLOW FOR ALL FINAL FITTINGS, CONNECTORS, ETC.



3 CONDUIT MOUNTING DETAIL
SCALE NTS
NOTE: SEISMIC RESTRAINTS NOT SHOWN

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Revision/	Description/Description	Date/Date

Client/client
CANADA BORDER SERVICES AGENCY (CBSA)

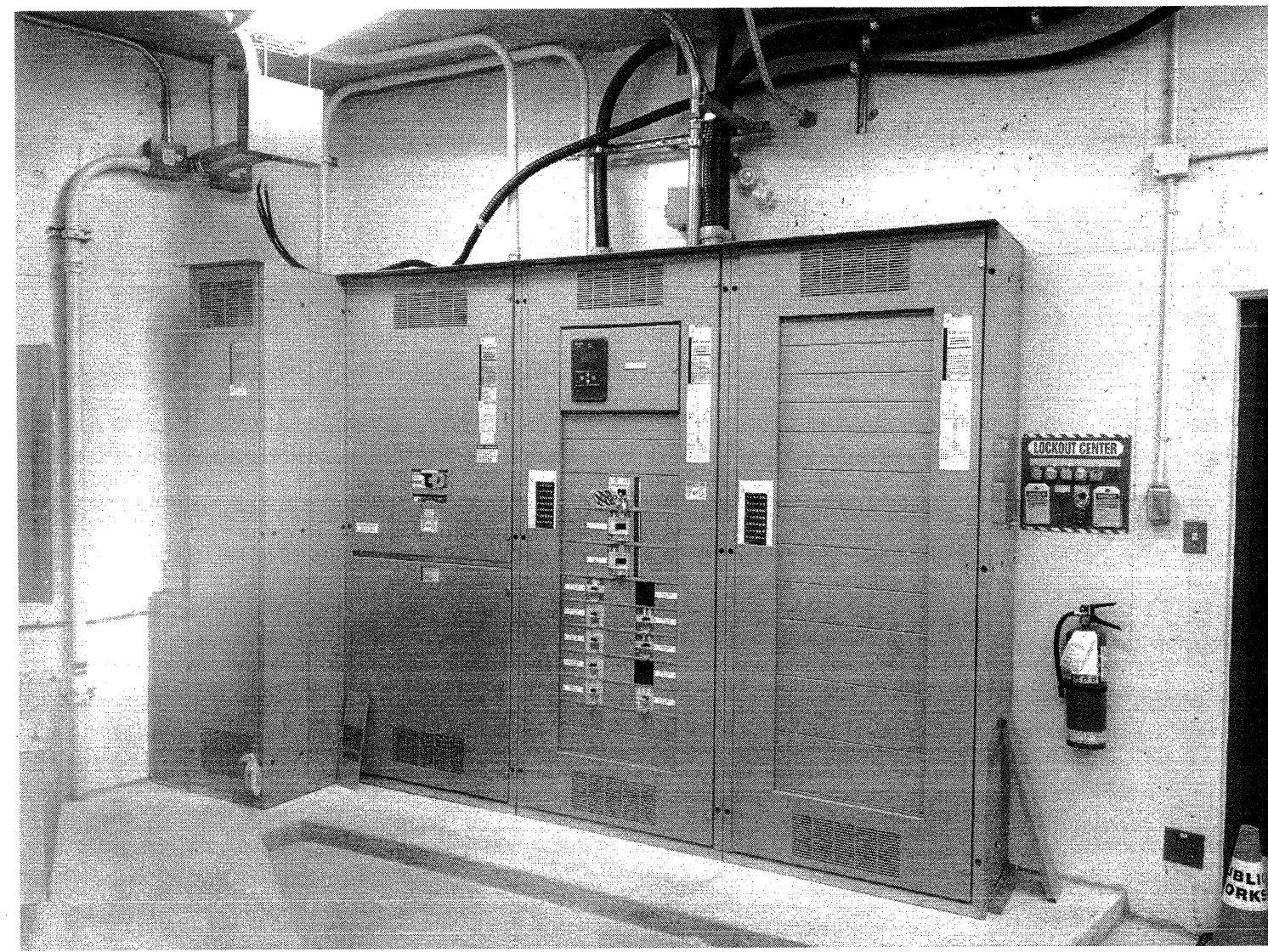
Project title/Titre du projet
**SURREY, B.C., V3Z 9N7
220 HIGHWAY 99
LAND BORDER FACILITY
Douglas Port of Entry
Generator Power System Upgrade**

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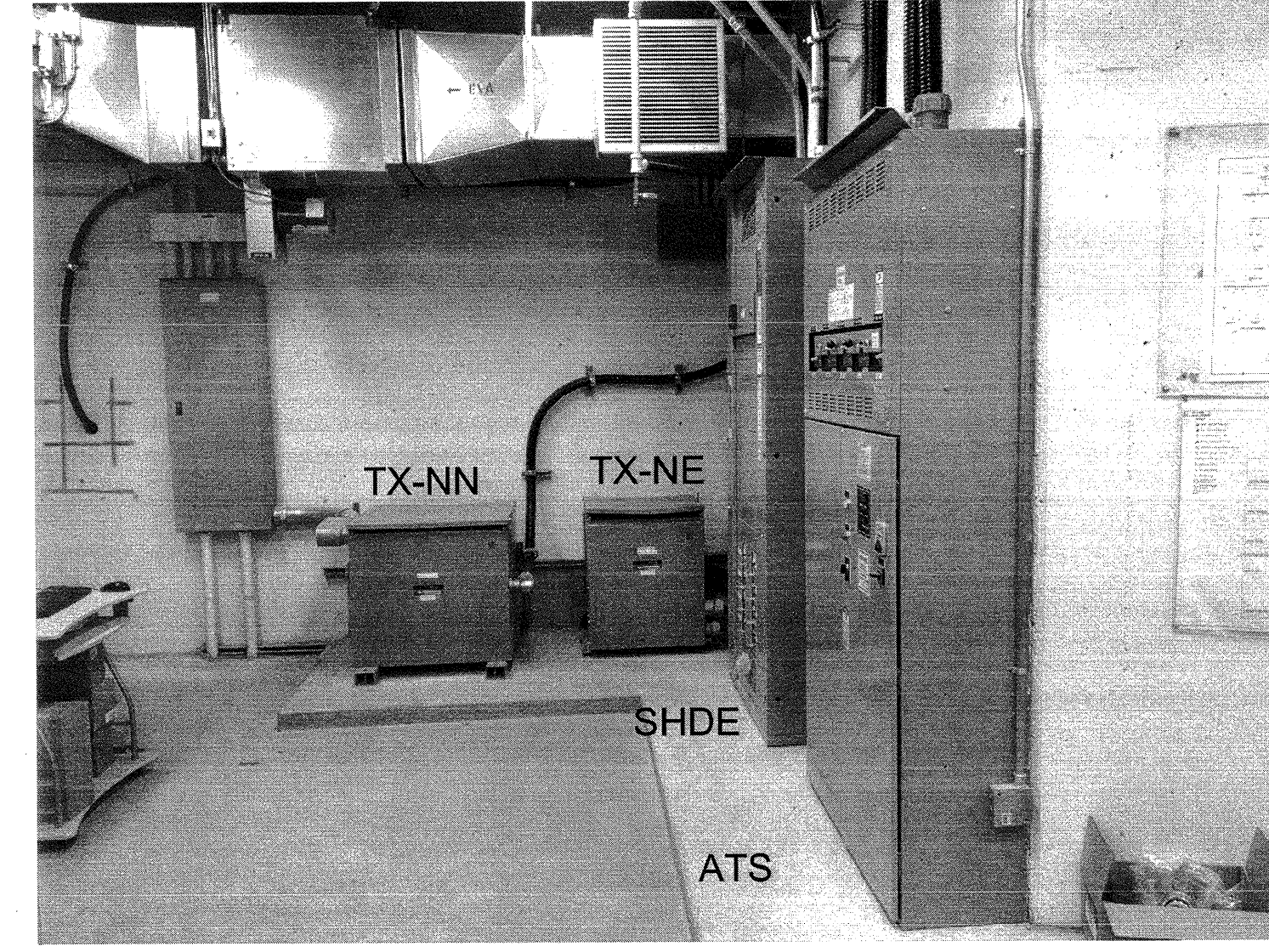
Drawing title/Titre du dessin
**PARKADE POWER LAYOUT,
LEVEL 1 - TEMP. PROVISIONS,
AND CONDUIT MOUNTING DETAIL**

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	04 OF 05	





1 PANEL MDC -- MAIN DISTRIBUTION CENTRE
E-04 SCALE NTS



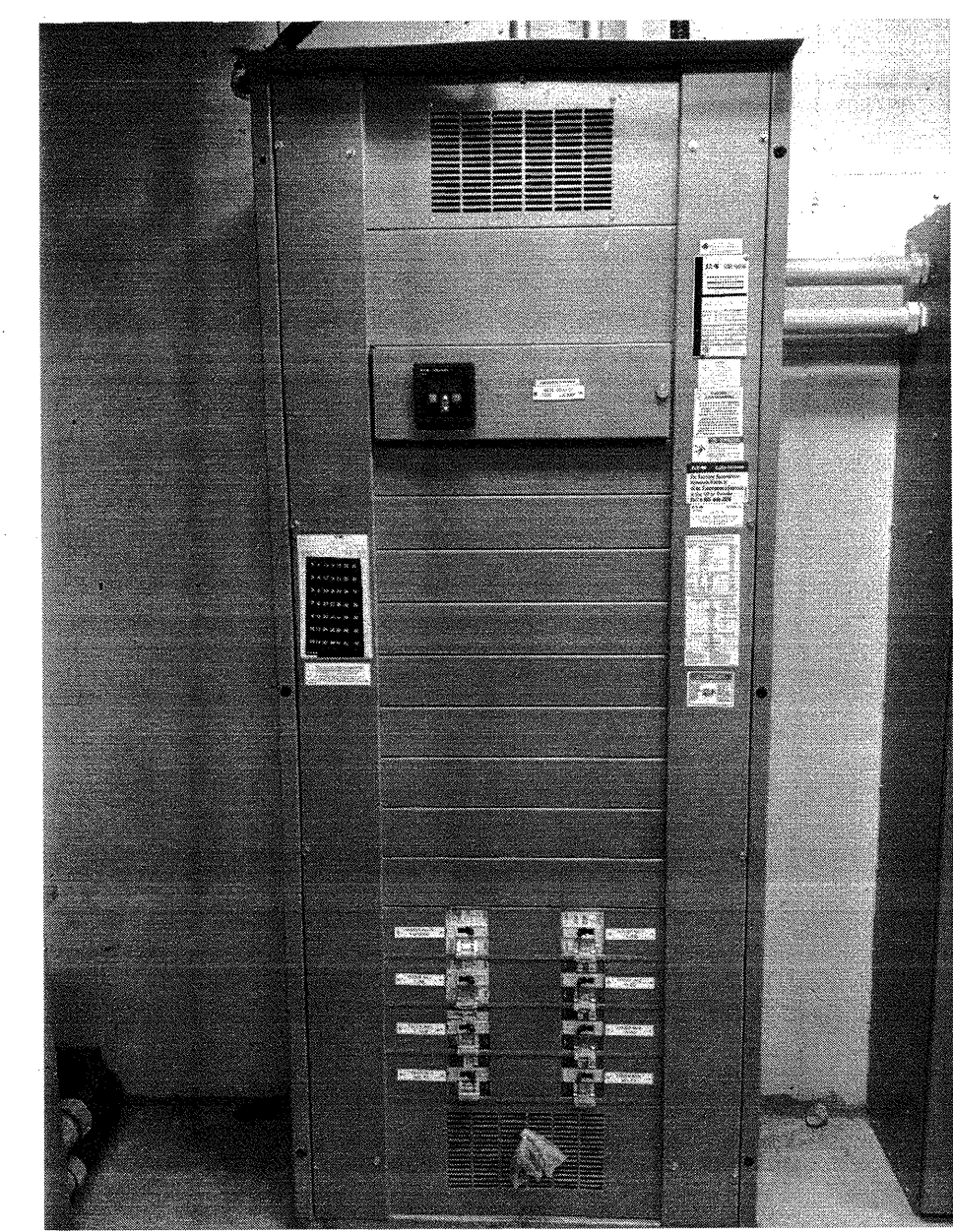
2 ATS, PANEL SHDE, TRANSFORMER TX-NN, TX-NE
E-04 SCALE NTS



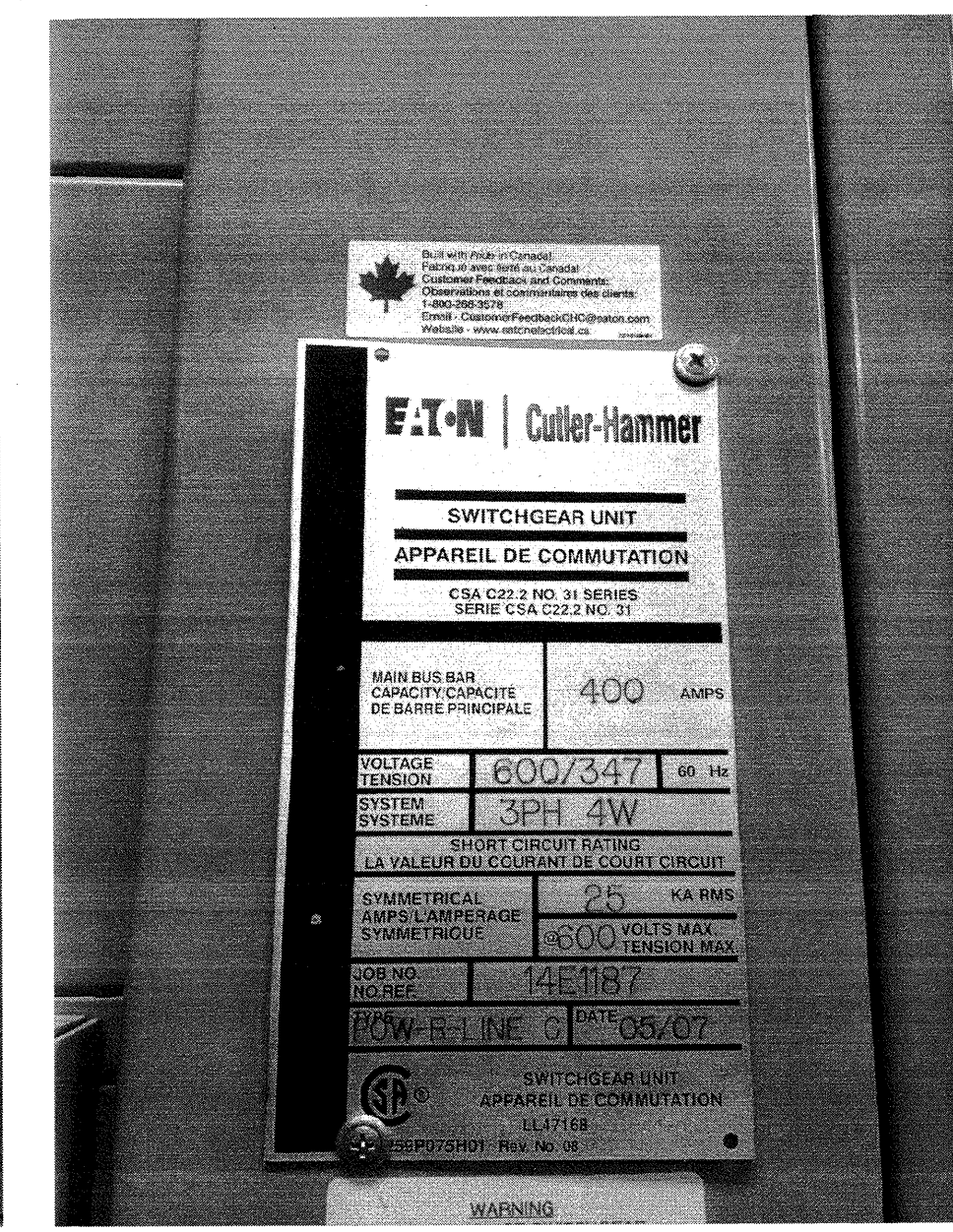
3 SKETCH OF CEILING MOUNTED PULLBOX AND CONDUIT
E-04 SCALE NTS

ALLOW FOR RELOCATION OF LIGHTS TO NEW LOCATION TO AVOID NEW CONDUITS.

NEW CONDUITS TO NOT BLOCK EXISTING HVAC.



4 PANEL SHDE AND NAMEPLATE
E-04 SCALE NTS



WALL MOUNT NEW CONDUITS FOLLOWING EXISTING CONDUITS.

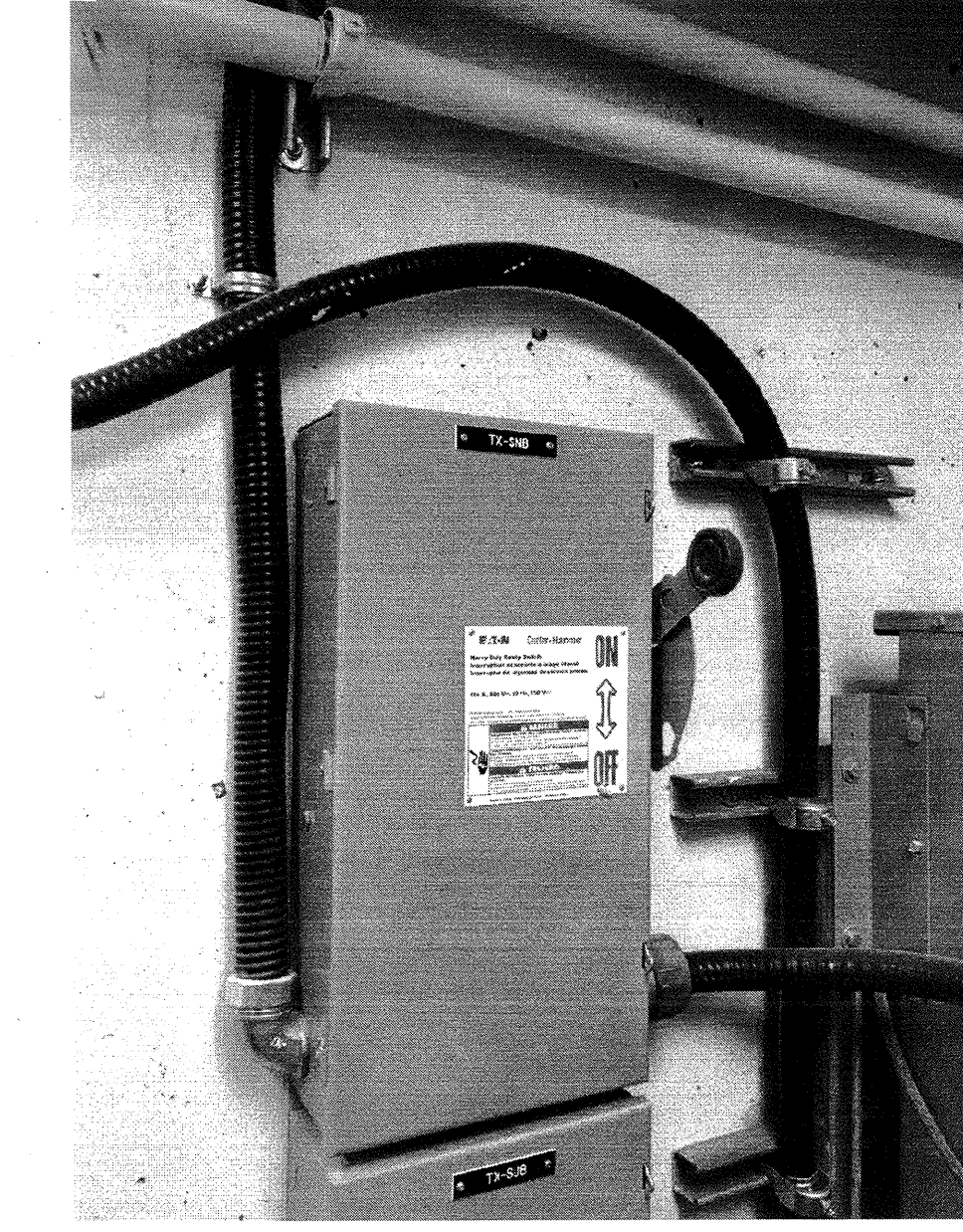
5 ELEC. RM. WALL TO PENETRATE NEW CONDUITS
E-04 SCALE NTS



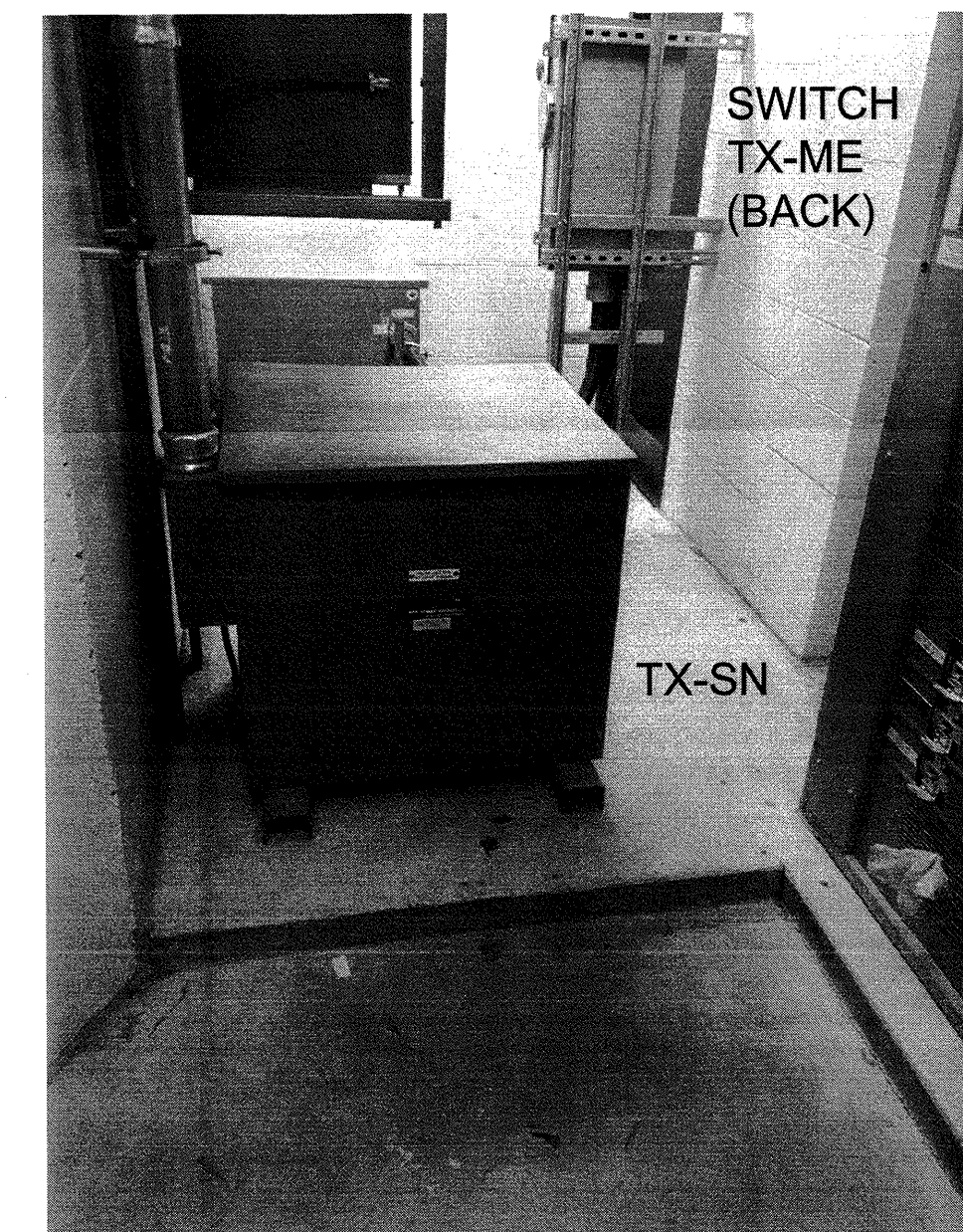
WALL PENETRATION FOR NEW CONDUITS TO SOUTH AREA OF PARKADE
EXISTING ELEVATOR FEEDER CABLE (WHITE)



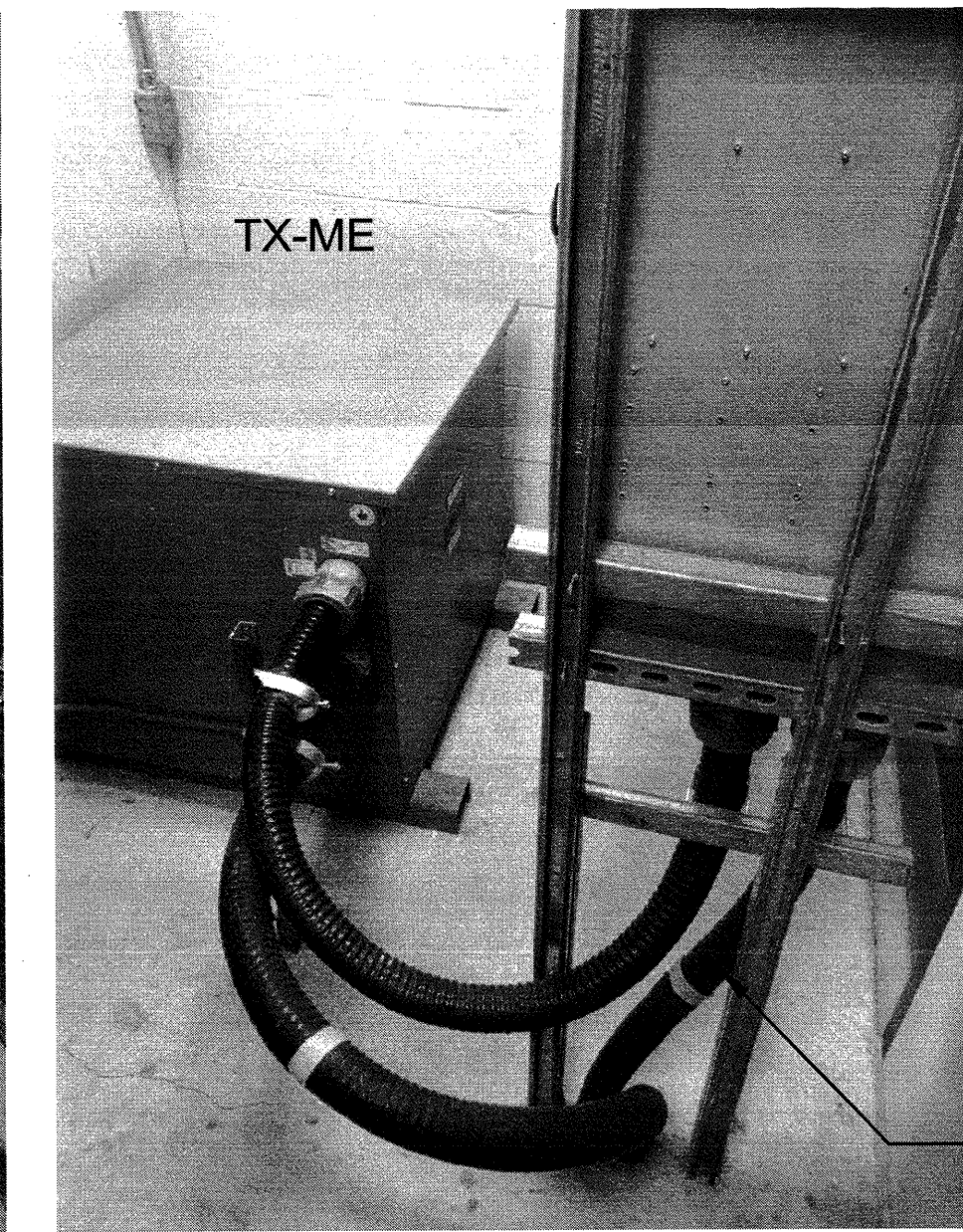
6 PARKADE CEILING
E-04 SCALE NTS



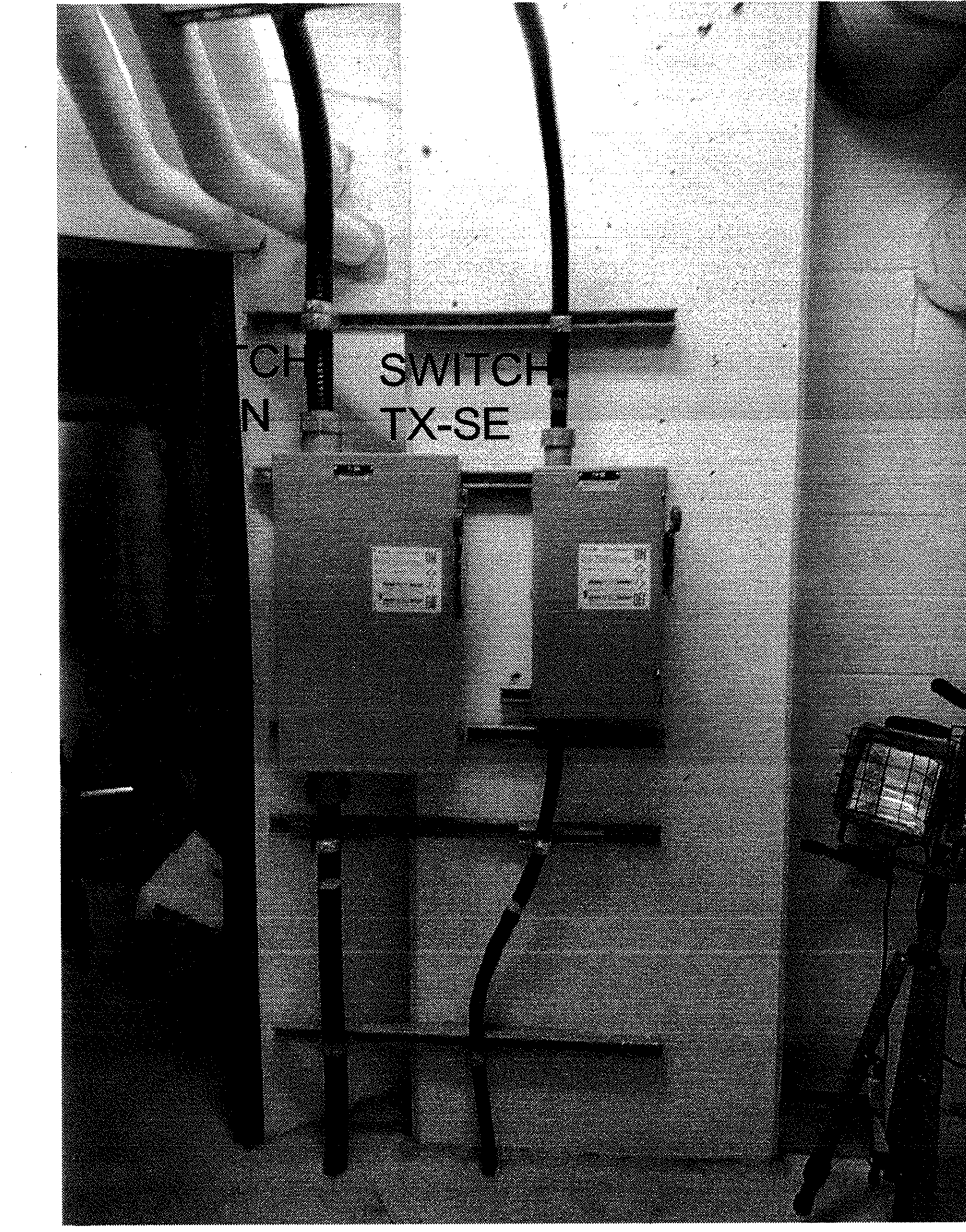
7 SAFETY SWITCH FOR TX-SNB
E-04 SCALE NTS



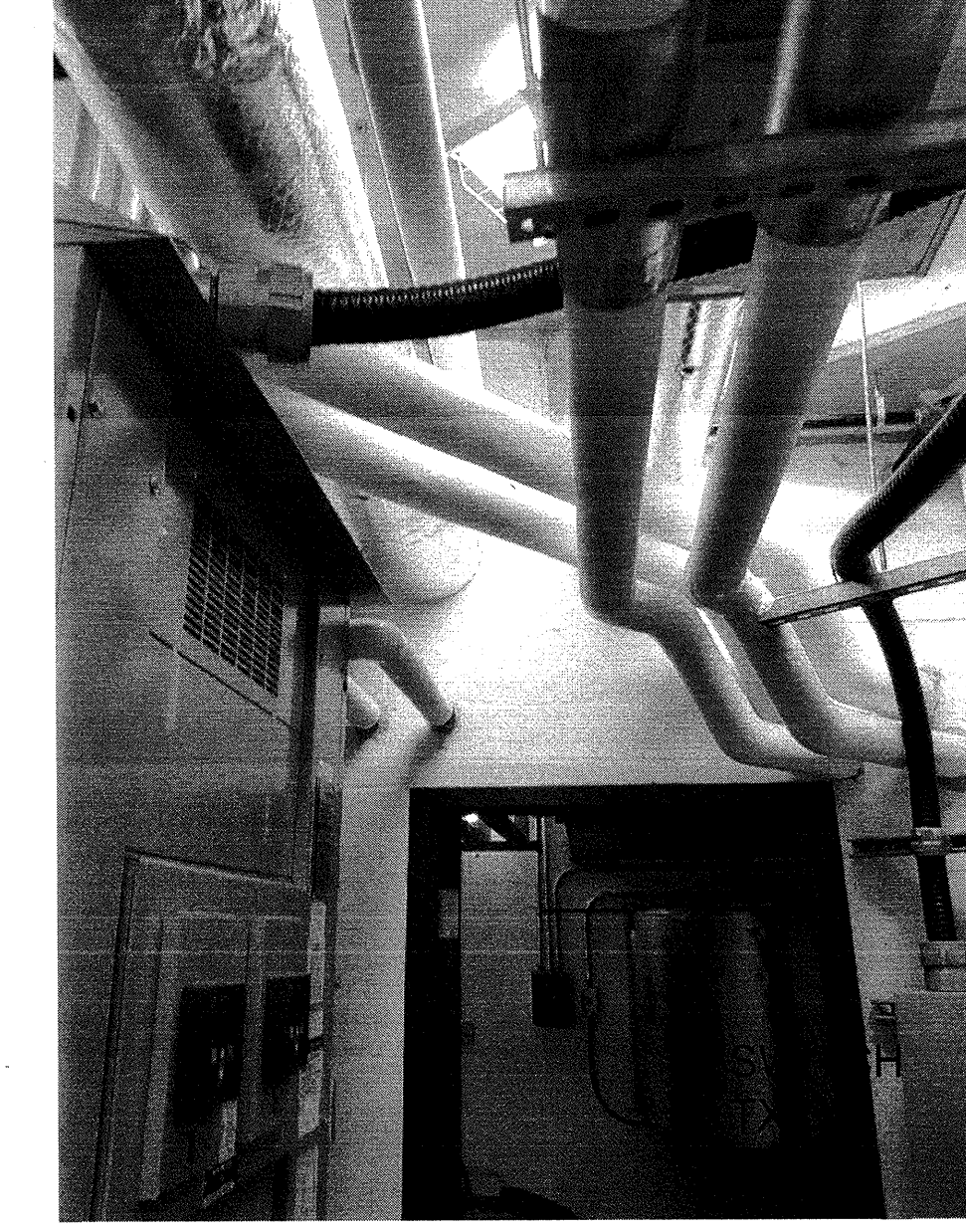
8 SAFETY SWITCH FOR TX-ME
E-04 SCALE NTS



FEEDER TO TERMINATED SAFELY AND TIED BACK.



9 SAFETY SWITCH FOR TX-SN AND TX-SE AND CEILING SPACE ABOVE
E-04 SCALE NTS



10 MCC MODEL AND TYPE
E-04 SCALE NTS

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Revision		

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SITE PHOTOS		
Project No./No. du projet	Sheet/Feuille	Revision no./La Révision no.
R.087312.001	E-04	0
05 OF 05		

