

**CORECTIONAL
SERVICE
CANADA**

Project title/Titre du projet
METCHOSIN, BC

**WILLIAM HEAD INSTITUTION
BUILDING 106
H.V. UPGRADE (PHASE 1 OF 2)**

Consultant Signature Box Only
Designed by/Conçu par
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Drawn by/Dessiné par
Project Manager/Administrateur de Projets
P. Paul
Drawing title/Titre du dessin
**SITE PLAN, SYMBOL LEGEND,
AND ELECTRICAL DETAILS**

Project No./No. du projet R.069376.001	Sheet/Feuille E000	Revision No./ No. de Révision
	1 of 5	

SCHEMATIC SYMBOLS

	BREAK OUT LOW VOLTAGE CIRCUIT BREAKER
	LOW VOLTAGE CIRCUIT BREAKER
	BREAK OUT HIGH VOLTAGE CIRCUIT BREAKER
	LOAD BREAK SWITCH
	DISCONNECT SWITCH
	FUSE
	TRANSFORMER
	AUTO TRANSFORMER
	CURRENT TRANSFORMERS (I INDICATES NUMBER OF CTs IN GROUP)
	ZERO SEQUENCE CURRENT TRANSFORMER
	POTENTIAL TRANSFORMERS (I INDICATES NUMBER OF PTs IN GROUP)
	TRANSFER SWITCH
	FOUR POSITION 1-BLUE SWITCH
	MOTOR OPERATOR FOR LOAD BREAK SWITCH
	SHUNT TRIP
	RELAY CONTACT
	AUTOMATIC TRANSFER SWITCH C/W SINGLE ISOLATION/BYPASS
	AUTOMATIC TRANSFER SWITCH C/W DUAL ISOLATION/BYPASS
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED CONTACT
	GENERATOR
	REVERSE METER
	DIGITAL INFORMATION METER
	DELTA CONNECTION
	WYE CONNECTION
	GROUND CONNECTION
	HIGH VOLTAGE STRESS RELIEF CORE
	POTHEAD
	CAPACITOR
	SURGE PROTECTIVE DEVICE
	LIGHTNING ARRESTOR
	PANEL BOARD
	PUSH PULL SWITCH
	GROUND BUS
	OHMMETER
	KEY SWITCH/KEY INTERLOCK
	VOLTMETER
	CONNECTION
	MAGNETIC MOTOR STARTER
	MANUAL MOTOR STARTER
	MOTOR OVERLOAD
	BREAK LINE
	CONTINUATION BREAK

POWER PLAN SYMBOLS

	COMBINATION DISCONNECT AND MAGNETIC MOTOR STARTER
	DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	MAGNETIC MOTOR STARTER
	CONDUIT STUB
	CONDUIT UP
	CONDUIT DOWN

GENERAL SYMBOLS

	NOTE REFERENCE
	EQUIPMENT REFERENCE
	REVISION NUMBER
	WORKING HOLE HOLE

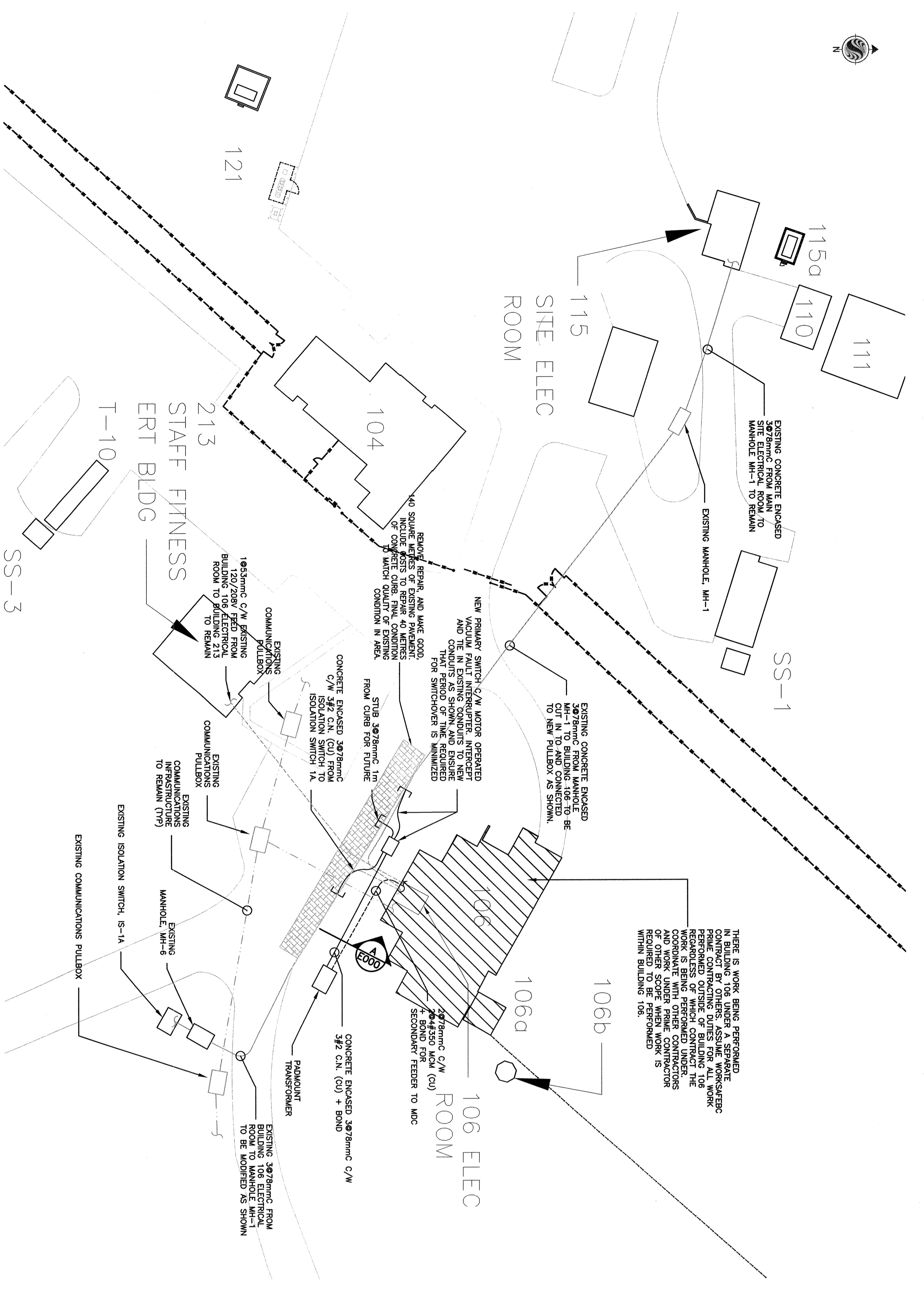
ABBREVIATIONS

EX	EXISTING DEVICE TO REMAIN
RE	REMOVE EXISTING DEVICE
RP	REPLACE EXISTING DEVICE WITH NEW DEVICE
RL	RELOCATE EXISTING DEVICE
ER	EXISTING DEVICE IN RELOCATED POSITION
TP	TYPICAL
WP	WEATHERPROOF

DRAWING LIST

E000	SITE PLAN, SYMBOL LEGEND, AND ELECTRICAL DETAILS
E001	SINGLE LINE DIAGRAM AND ELECTRICAL DETAILS
E200	ELECTRICAL FLOOR PLAN AND ELECTRICAL DETAILS
E201	EXISTING WHI SINGLE LINE DIAGRAM
E201	TEMPORARY POWER SUPPLY DETAILS

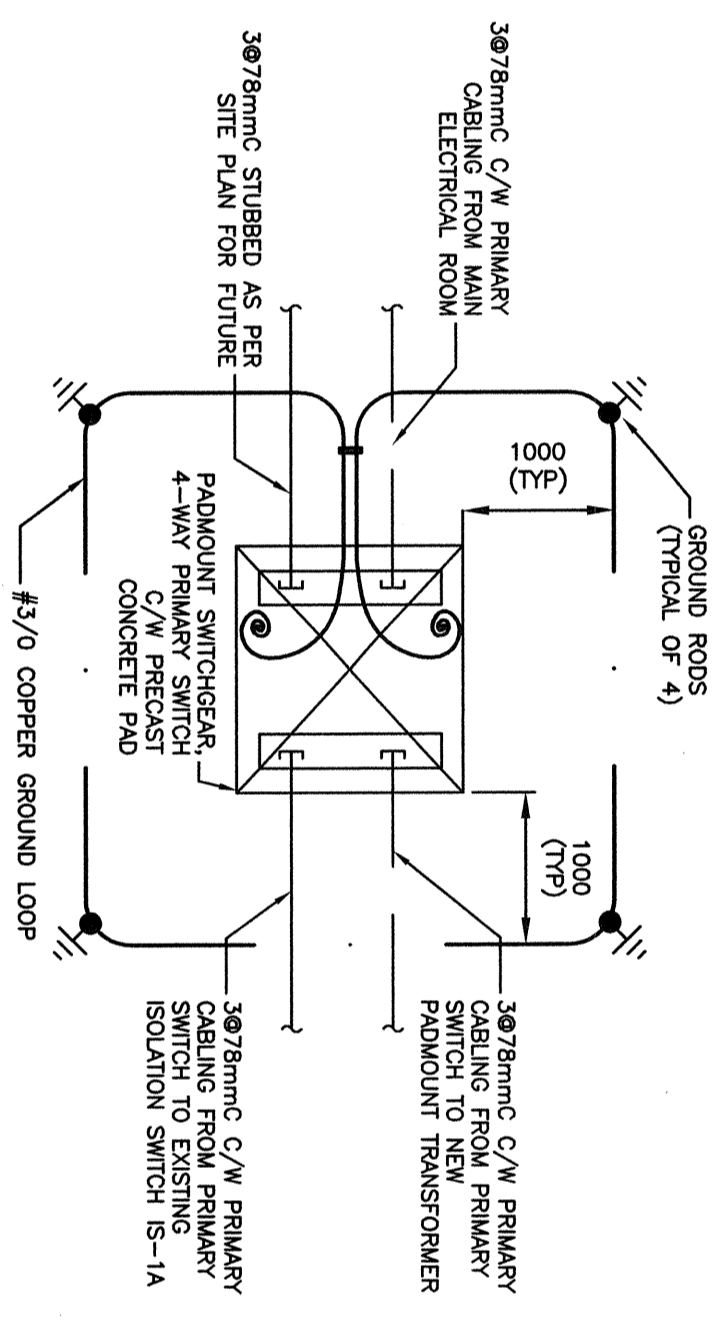
- GENERAL NOTES:**
- ASSUME PRIME CONTRACTOR DUTIES (AS REQUIRED BY WORKSHEET REGULATIONS) FOR SCOPE OF WORK. CONTRACTOR SHALL VERIFY ALL WORK IS COMPLETED OUTSIDE OF BUILDING 106. PRIME CONTRACTOR FOR WORK DONE WITHIN BUILDING 106 TO BE HVAC CONTRACTOR FOR HVAC REPLACEMENT PROJECT.
 - PROVIDE NON-DESTRUCTIVE CABLE TESTING USING VERY LOW FREQUENCY METHOD. TEST FOR CABLES BETWEEN MAIN ELECTRICAL ROOM AND NEW PRIMARY TRANSFORMER. FROM PRIMARY SWITCH TO MH-6, FROM PADMOUNT TRANSFORMER TO BUILDING 106, AND FROM BUILDING 106 TO BUILDING 213. PROVIDE TEST REPORTS PRIOR TO RECONNECTING CABLES.
 - PRIOR TO EXCAVATING, USE GROUND PENETRATING RADAR TO IDENTIFY ALL UNDERGROUND SERVICES THAT WILL BE AFFECTED BY THE WORK AND PROVIDE LOCATIONS AS SHOWN TO WHICH EXISTING SERVICES ARE TO BE RECONNECTED. CONTRACTORS OF OTHER SERVICES BY HAND WHERE APPROPRIATE EXPOSE SERVICES BY HAND WHERE APPROPRIATE.
 - WHERE UNDERGROUND SERVICES ARE ENCOUNTERED TO BE TAKEN TO MAINTAIN THESE SERVICES (PIPS, CABLES, ETC.) - AND IF ACCIDENTALLY BROKE, ARE TO BE REPAIRED UNDER THIS CONTRACTOR'S SCOPE OF WORK, TO THE SATISFACTION OF THE ENGINEER.
 - CONTRACTOR SHALL FIELD VERIFY AS NECESSARY, TO ASSESS THE EXTENT OF ARCHITECTURAL WORK REQUIRED FOR THE ELECTRICAL SCOPE BEFORE WORKING AS SHOWN TO WHICH EXISTING SERVICES WALLS/FLOORS/FOUNDATIONS AND MISCELLANEOUS INSULATION, BARRIER MEMBRANE SYSTEMS ETC. THAT ARE AFFECTED TO CARRY OUT THE SCOPE OF THE PROJECT.
 - NO INSTALLED DUCTS IN TRENCHES TO BE LEFT OPEN OVERNIGHT. ALL OPEN TRENCHES IN ROADS SHALL BE COVERED WITH STEEL PLATES.
 - RESTORE ALL LANDSCAPING IN AFFECTED AREAS TO MATCH ORIGINAL LANDSCAPE CONDITIONS.
- SUGGESTED PHASING NOTES:**
- PROVIDE TEMPORARY, PRIME POWER RATED, 300KW TRANSFORMER FOR ESSENTIAL SERVICE TEMPORARY POWER SUPPLY INTENDED TO BRIDGE DISRUPTION IN SITE POWER WHILE PAD-MOUNTED SWITCHGEAR IS BEING TIED INTO MAIN SUPPLY. REFER TO DRAWING E-201 FOR DETAILS.
 - GENERATOR TO BE SKID-MOUNTED AND COMPLETE WITH CRITICAL GRADE, SOUND ATTENUATION, WEATHERPROOF ENCLOSURE.
 - PROVIDE SAFETY MEANS AND LOCKOUT TO PREVENT UNDESIRABLE REVERSE FEED



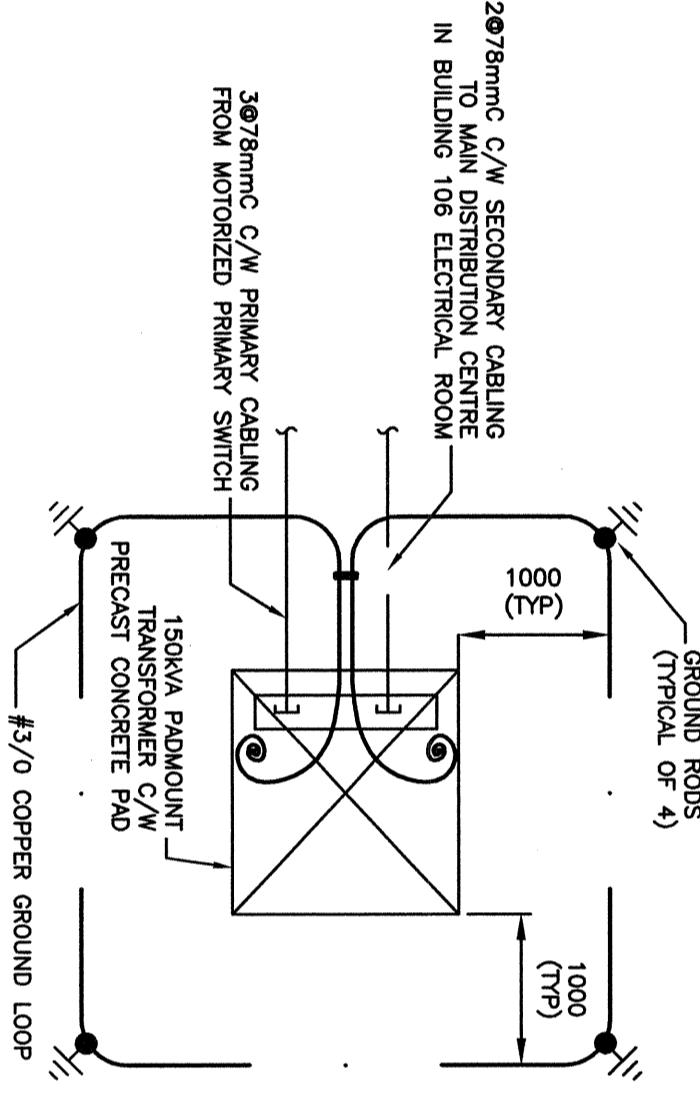
2 BUILDING 106 SITE PLAN
1:400

1 KEY PLAN
1:5000

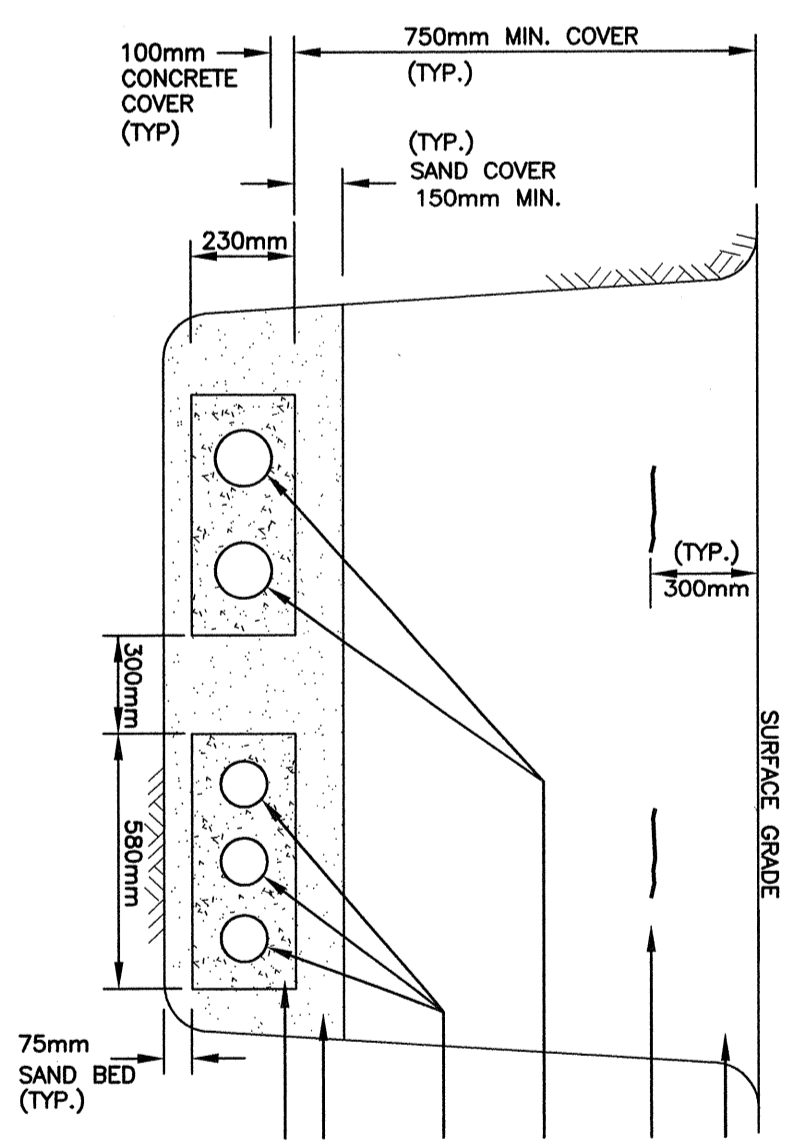
4 PADMOUNT SWITCHGEAR
E000 NTS

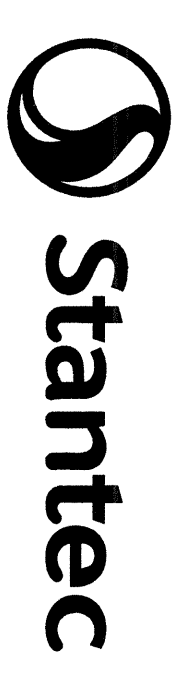


3 BUILDING 106 PADMOUNT TRANSFORMER
E000 NTS



5 TRENCH SECTION 'A'
E000 NTS





Project No./No. du projet	099376.001	Sheet/Feuille	E-001
Revision/		Date/Date	11/13/15
Client/Client	ISSUED FOR TENDER		

CORRECTIONAL SERVICE CANADA

Project Site/Titre du projet
WILLIAM HEAD INSTITUTION BUILDING 106
H.V. UPGRADE (PHASE 1 OF 2)

Consultant Signature Box Only
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 Drawing Title/Titre du dessin
SINGLE LINE DIAGRAM AND DETAILS

FEEDER SCHEDULE					
FEEDER AMPLACITY	3 WIRE	CROSS SECTION (mm ²)	FEEDER AMPLACITY	4 WIRE	CROSS SECTION (mm ²)
20	3#12	21	20	4#10	21
35	3#10	21	35	4#10	21
50	3#8	27	50	4#8	27
65	3#6	27	65	4#6	35
85	3#4	35	85	4#4	35
100	3#3	35	100	4#3	41
115	3#2	35	115	4#2	41
130	3#1	41	130	4#1	53
150	3#1/0	53	150	4#1/0	53
175	3#2/0	53	175	4#2/0	53
200	3#3/0	53	200	4#3/0	63
230	3#4/0	63	230	4#4/0	63
255	3#500MCM	63	255	4#500MCM	78
285	3#500MCM	78	285	4#500MCM	78
310	3#500MCM	78	310	4#500MCM	78
335	3#400MCM	78	335	4#400MCM	78
360	3#500MCM	103	360	4#500MCM	103
400	2#3/0	2X53	400	2#4#3/0	2X63
510	2#3#250MCM	2X63	510	2#4#250MCM	2X78
570	2#3#200MCM	2X78	570	2#4#200MCM	2X78
620	2#3#250MCM	2X78	620	2#4#250MCM	2X78
855	3#3#200MCM	3X78	855	3#4#200MCM	3X78
1005	3#4#200MCM	3X103	1005	3#4#200MCM	3X103
1140	4#3#200MCM	4X103	1140	4#4#200MCM	4X103

1. CONTRACTOR SHALL INCLUDE BONDING AND GROUNDING WIRES AS REQUIRED BY CEC.

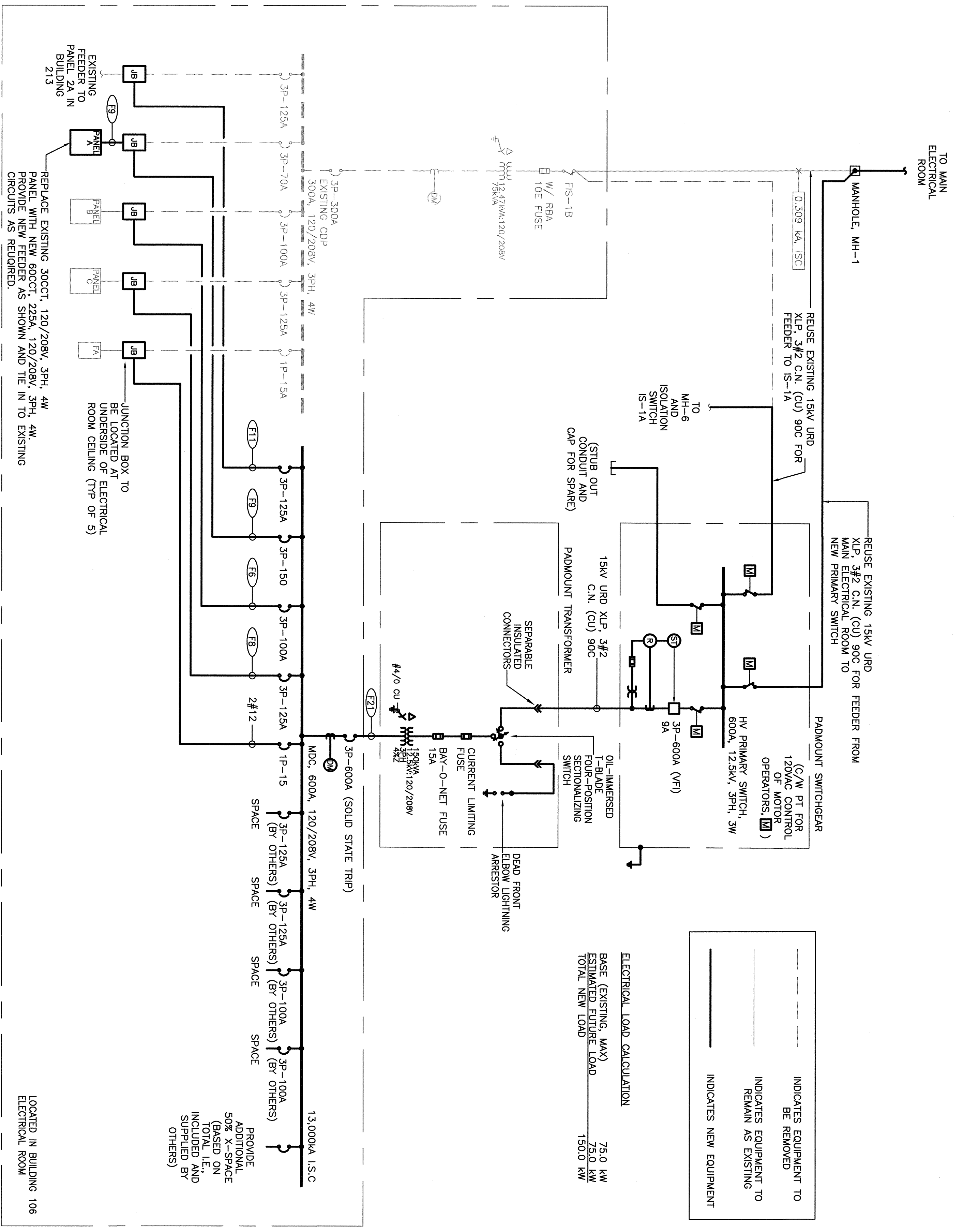
- GENERAL NOTES:
- REFER TO DRAWINGS E900 AND E100 FOR ADDITIONAL PHYSICS DETAILS.
 - DIGITAL METER TO BE DOC COMPATIBLE.
 - PROVIDE FIRE ALARM VERIFICATION IMMEDIATELY AFTER EXISTING EDWARDS 6500 FIRE ALARM PANEL IS RECONNECTED TO NEW MAIN DISTRIBUTION CENTRE. SUBMIT VERIFICATION REPORT.
 - PROVIDE 24-HOUR GENERATOR WATCH FOR TEMPORARY POWER SUPPLY (GENERATOR AND TRANSFORMER AT S-14) WATCH PERIOD IS TO COVER TIME WHEN NORMAL POWER IS RE-CONNECTED, INTERRUPTED TO WHEN NORMAL POWER IS RE-CONNECTED.
 - RECONNECT ALL EXISTING GROUND BUSES IN BUILDING TO NEW DISTRIBUTION.
 - PROVIDE PROTECTIVE DEVICE COORDINATION STUDY WITH ALL NEW AND EXISTING DEVICES TO SHOW THAT DEVICES ARE SELECTIVELY COORDINATED WITH ALL NEW AND EXISTING UPSTREAM DEVICES. SHOP DRAWINGS WILL BE REJECTED IF COORDINATION STUDY IS NOT INCLUDED.
 - TURN OVER EXISTING DIGITAL METER TO PMSCC.

PANEL: "A"

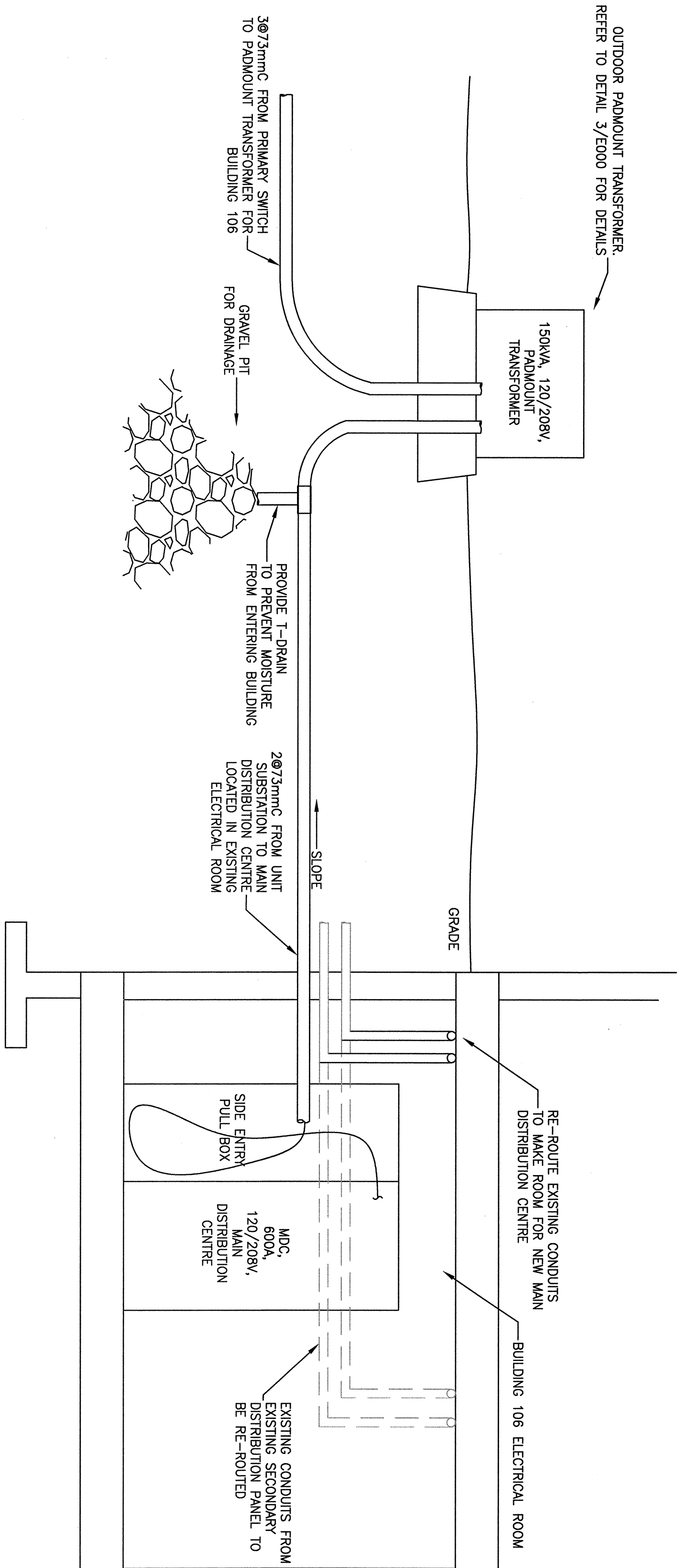
NOTE TYPE	DESCRIPTION	BRKR	CCT	PHASE	CCT	BRKR	DESCRIPTION	LOCATION
E	PALM FREQUID	1P15A	1	A	2	1P20A	RECEPTACLE-103	229A, 720/208V, 3PH, 4W
E	PALM FREQUID	1P15A	3	B	4	1P15A	LIGHTING-102, 103, 104, 111	
E	PALM FREQUID	1P15A	5	C	6	1P15A	LIGHTING-102, 103, 112, 113, 11	
L	LIGHTING-102, 103, 104, 111	1P15A	7	A	7	1P15A	LIGHTING-108, 109, 110, 115, HALL L	
L	LIGHTING-102, 103, 104, 111	1P15A	8	B	8	1P15A	LIGHTING-108, 109, 110, 115, HALL L	
L	LIGHTING-102, 103, 104, 111	1P15A	9	C	9	1P15A	LIGHTING-108, 109, 110, 115, HALL L	
R	RECEPTACLE-105, 110, 115, 117	1P15A	11	A	12	1P15A	RECEPTACLE-108	
R	RECEPTACLE-105, 110, 115, 117	1P15A	13	A	14	1P15A	RECEPTACLE-108	
R	RECEPTACLE-105, 110, 115, 117	1P15A	15	B	16	1P15A	CANTEN	
R	RECEPTACLE-105, 110, 115, 117	1P15A	17	C	18	1P15A	CANTEN	
R	RECEPTACLE-105, 110, 115, 117	1P15A	19	A	20	1P15A	CANTEN	
R	RECEPTACLE-105, 110, 115, 117	1P15A	21	B	22	1P15A	RECEPTACLE-108	
R	RECEPTACLE-105, 110, 115, 117	1P15A	23	C	24	1P15A	RECEPTACLE-108	
R	RECEPTACLE-105, 110, 115, 117	1P15A	25	A	26	1P15A	HEATER UPS	
R	RECEPTACLE-105, 110, 115, 117	1P15A	27	B	28	1P15A	LIGHTING-SQUARE	
R	RECEPTACLE-105, 110, 115, 117	1P15A	29	C	30	1P15A	HEATER UPS	
L	EXT LIGHT	1P15A	31	A	32	1P15A	HEATER UPS	
L	EXT LIGHT	1P15A	33	B	34	1P15A	HEATER UPS	
L	EXT LIGHT	1P15A	35	C	36	1P15A	HEATER UPS	
L	EXT LIGHT	1P15A	37	A	38	1P15A	HEATER UPS	
L	EXT LIGHT	1P15A	39	B	40	1P15A	HEATER UPS	
L	EXT LIGHT	1P15A	41	C	42	1P15A	HEATER UPS	
L	EXT LIGHT	1P15A	43	A	44	1P15A	HEATER UPS	
L	EXT LIGHT	1P15A	45	B	46	1P15A	HEATER UPS	
L	EXT LIGHT	1P15A	49	A	50	1P15A	HEATER UPS	
L	EXT LIGHT	1P15A	51	B	52	1P15A	HEATER UPS	
L	EXT LIGHT	1P15A	53	C	54	1P15A	HEATER UPS	
L	EXT LIGHT	1P15A	55	A	56	1P15A	HEATER UPS	
L	EXT LIGHT	1P15A	57	B	58	1P15A	HEATER UPS	
L	EXT LIGHT	1P15A	59	C	60	1P15A	HEATER UPS	

PANEL "A" SHOWING EXISTING CIRCUIT

GENERAL NOTES:
 1. CIRCUITS SHOWN ARE EXISTING. REMOVE AND RE-TERMINATE EACH CIRCUIT TO NEW PANEL.



PARTIAL SINGLE LINE DIAGRAM - BUILDING 106



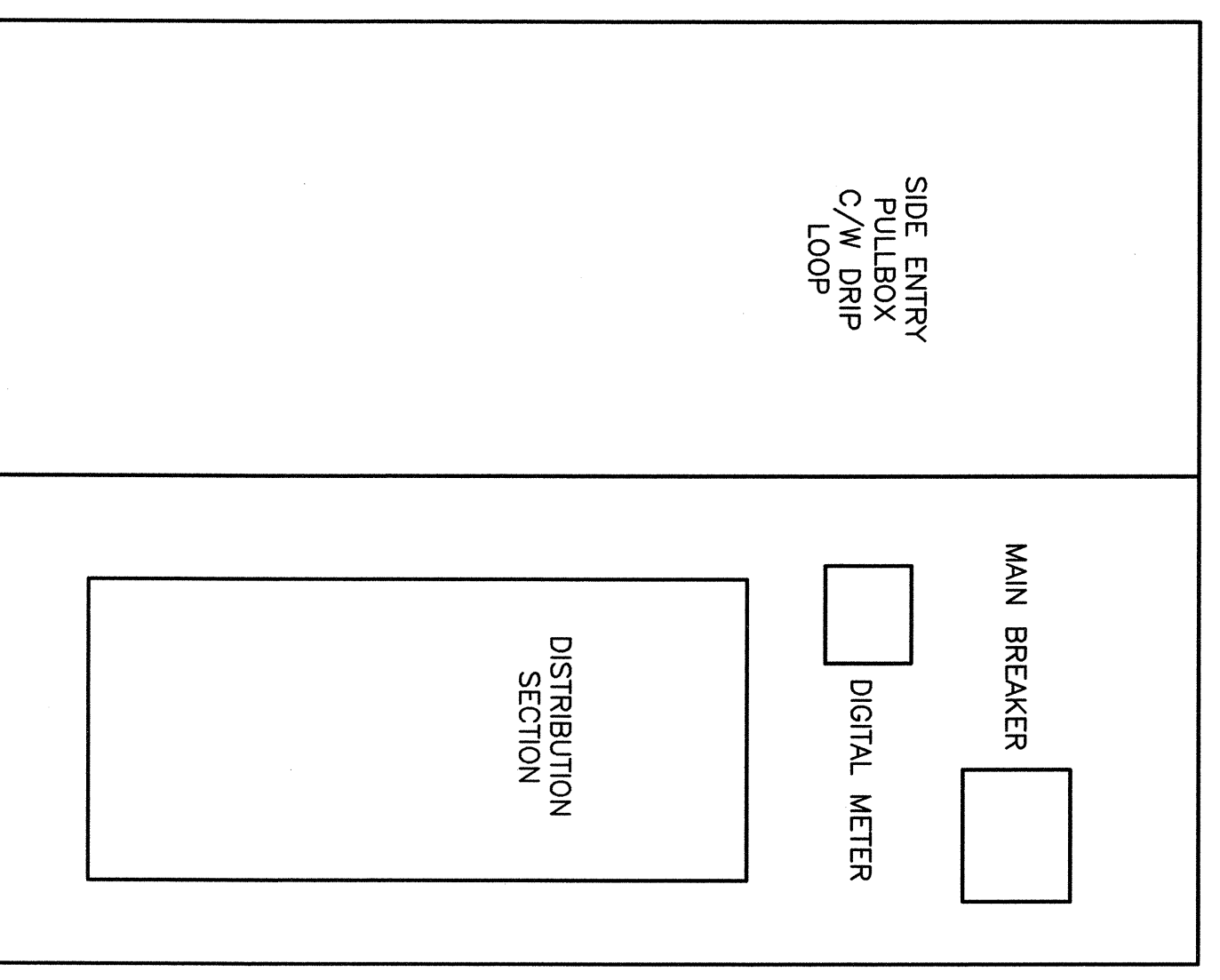
OUTDOOR UNIT SUBSTATION AND BUILDING 106 FEEDER PROFILE

GENERAL NOTES:
 1. CIRCUITS SHOWN ARE EXISTING. REMOVE AND RE-TERMINATE EACH CIRCUIT TO NEW PANEL.

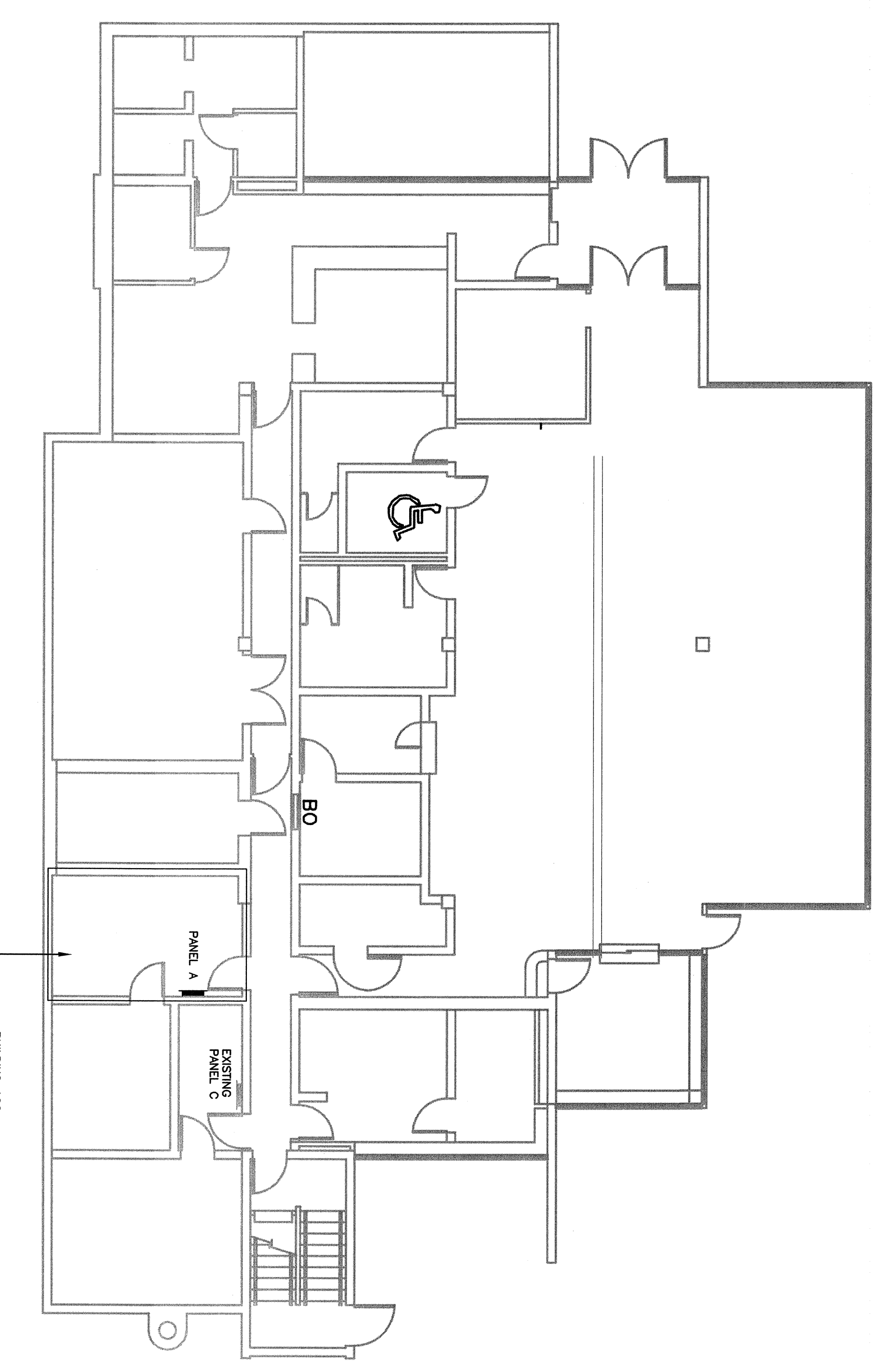


Unit 106 ADMINISTRATION Lower floor	102 ENTRANCE	103 VISITING	104 V&C OFFICE	105 ADMIN & DISCHARGE	106 WOMENS WASHROOM	107 MENS WASHROOM	108 KITCHENETTE	109 CANTINEEN	110 JANITOR	111 STORAGE ROOM	112 LAVATORY	113 SHOWER	114 URINALYSIS	115 CORRIDOR	116 STORAGE INMATE EFFECTS	118 VAULT	119 ELECTRICAL EQUIPMENT	120 TELEPHONE EQUIPMENT	121 STORAGE	122 BOILER ROOM	*123 B.F. WASHROOM	124 WAITING SUN ROOM	125 WAITING AREA	126 CHILDREN PLAY AREA	127 STORAGE	128 CHANGE ROOM	129 STORAGE-1A	130 I/T ROOM
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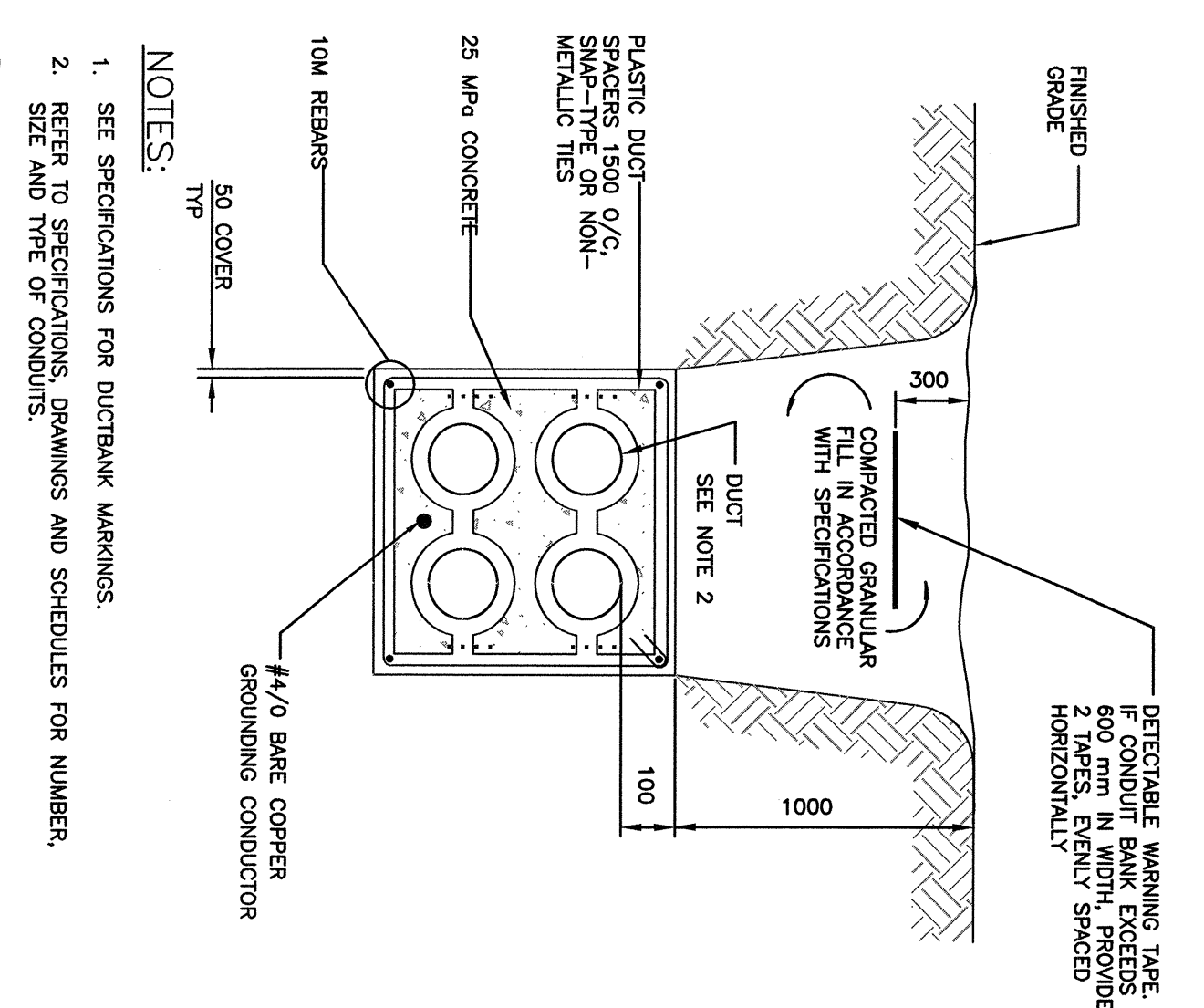
BO = BLOCKED OFF
* = BARRIER FREE



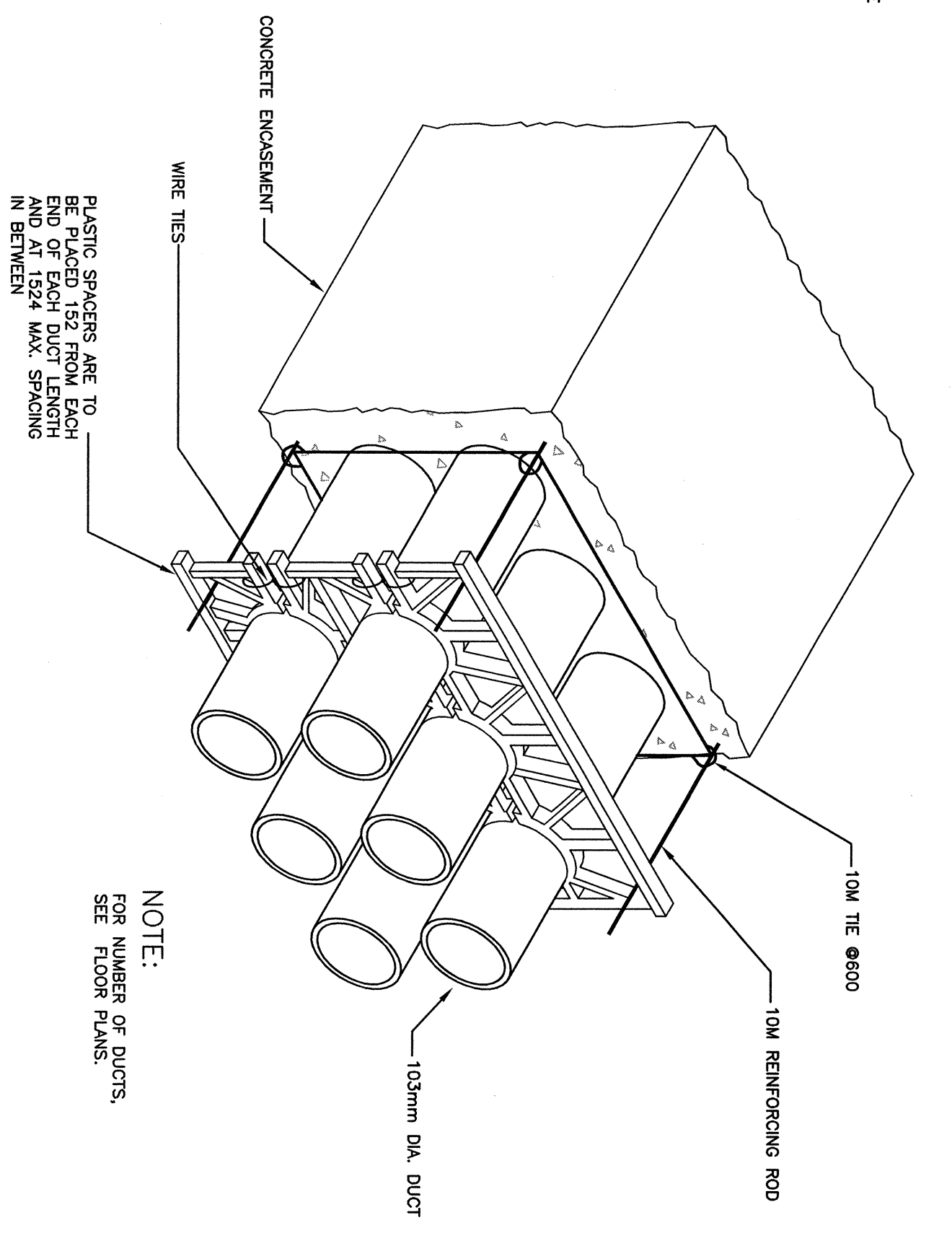
4 MAIN DISTRIBUTION CENTRE ELEVATION
1:50



1 LOWER FLOOR PLAN - EXISTING
1:100



3 TYPICAL - UNDERGROUND CONCRETE ENCASED DUCT BANK DETAILS
1:50



2 EXISTING ELECTRICAL ROOM DETAIL
1:50

- GENERAL NOTES:**
1. EXISTING AND TERMINATE NEW FEEDERS TO EXISTING ELECTRICAL EQUIPMENT IN DISTRIBUTION ROOMS.
 2. PROVIDE TEMPORARY BRACING FOR EXISTING BOARD AND NEW BRACING FOR NEW DISTRIBUTION BOARD.
 3. PROVIDE TEMPORARY BRACING FOR EXISTING BOARD AND NEW BRACING FOR NEW DISTRIBUTION BOARD.
 4. REPAIR EXISTING PANEL A WITH NEW LOCATION. REFER TO SINGLE LINE FOR DETAILS.
 5. REPAIR EXISTING PANEL A WITH NEW LOCATION. REFER TO SINGLE LINE FOR DETAILS.
 6. REPAIR EXISTING PANEL A WITH NEW LOCATION. REFER TO SINGLE LINE FOR DETAILS.
 7. REPAIR EXISTING PANEL A WITH NEW LOCATION. REFER TO SINGLE LINE FOR DETAILS.
 8. REPAIR EXISTING PANEL A WITH NEW LOCATION. REFER TO SINGLE LINE FOR DETAILS.
 9. REPAIR EXISTING PANEL A WITH NEW LOCATION. REFER TO SINGLE LINE FOR DETAILS.
 10. REPAIR EXISTING PANEL A WITH NEW LOCATION. REFER TO SINGLE LINE FOR DETAILS.

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METCHOSIN, BC

**WILLIAM HEAD INSTITUTION
BUILDING 106
H.V. UPGRADE (PHASE 1 OF 2)**

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Designed by/Concepteur par
PH

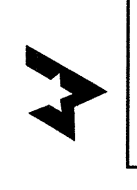
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PH

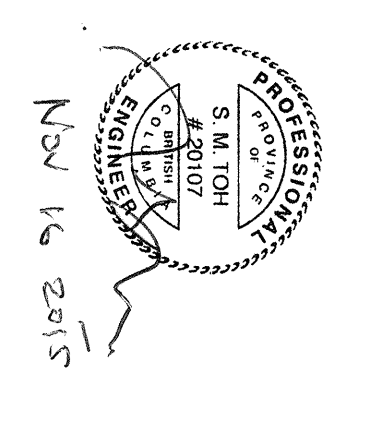
Project Manager/Administrateur de Projet: TFS/C

P-Training
Project Manager/Administrateur de Projet: TFS/C

P-Peak
Project Manager/Administrateur de Projet: TFS/C

Project No./No. du projet R 069376.001	Sheet/Feuille E-100	Revision No./ No. de révision
	3 of 5	





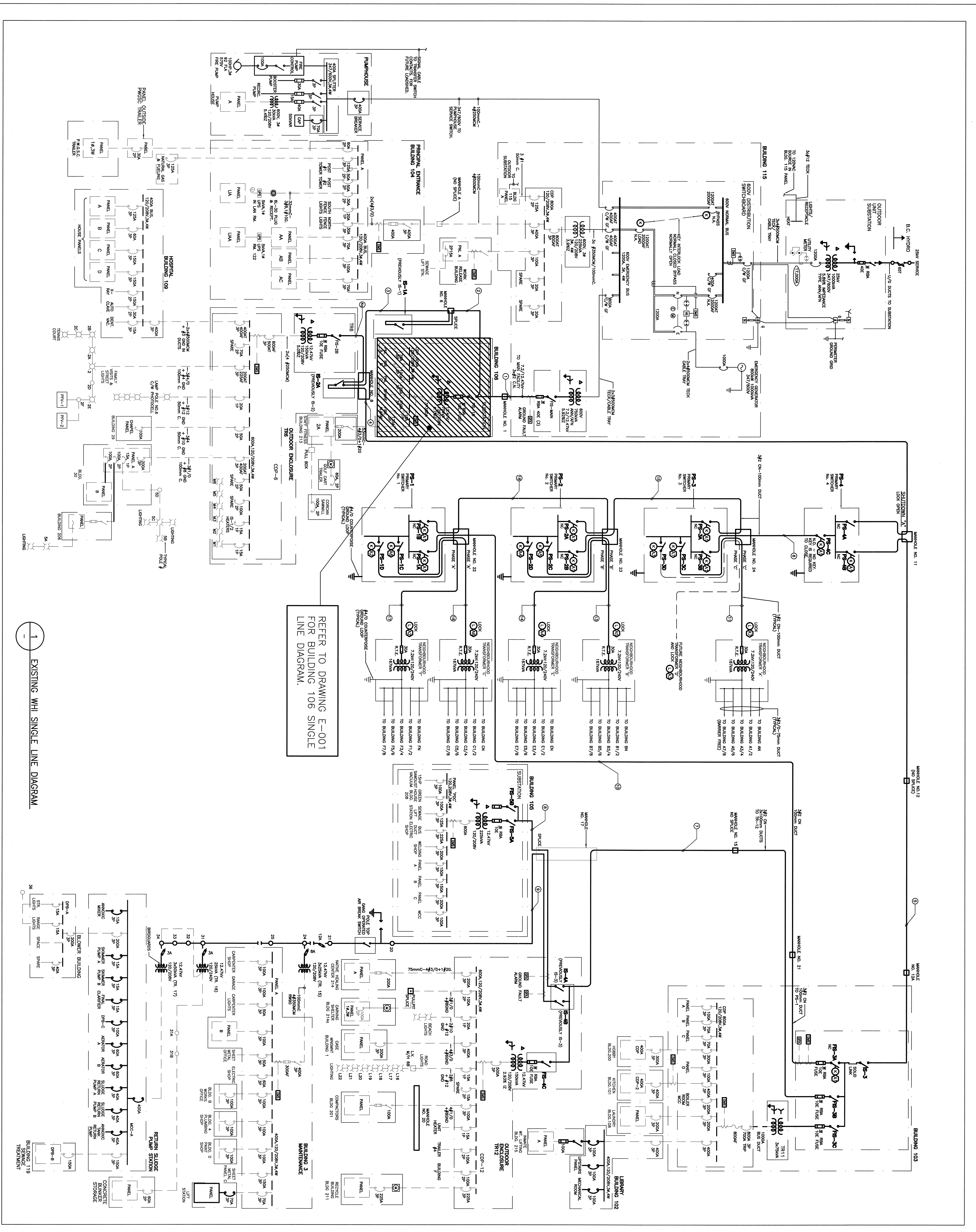
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SERVICE
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**WILLIAM HEAD INSTITUTION
BUILDING 106
H.V. UPGRADE (PHASE 1 OF 2)**

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P-Troung
P-Paul
Drawing title/Titre du dessin
**EXISTING WHI
SINGLE LINE DIAGRAM**

Project No./No. du projet
R.069376.001
Sheet/Feuille
E-200
Revision No./No. de Révision
4 OF 5



1 EXISTING WHI SINGLE LINE DIAGRAM

