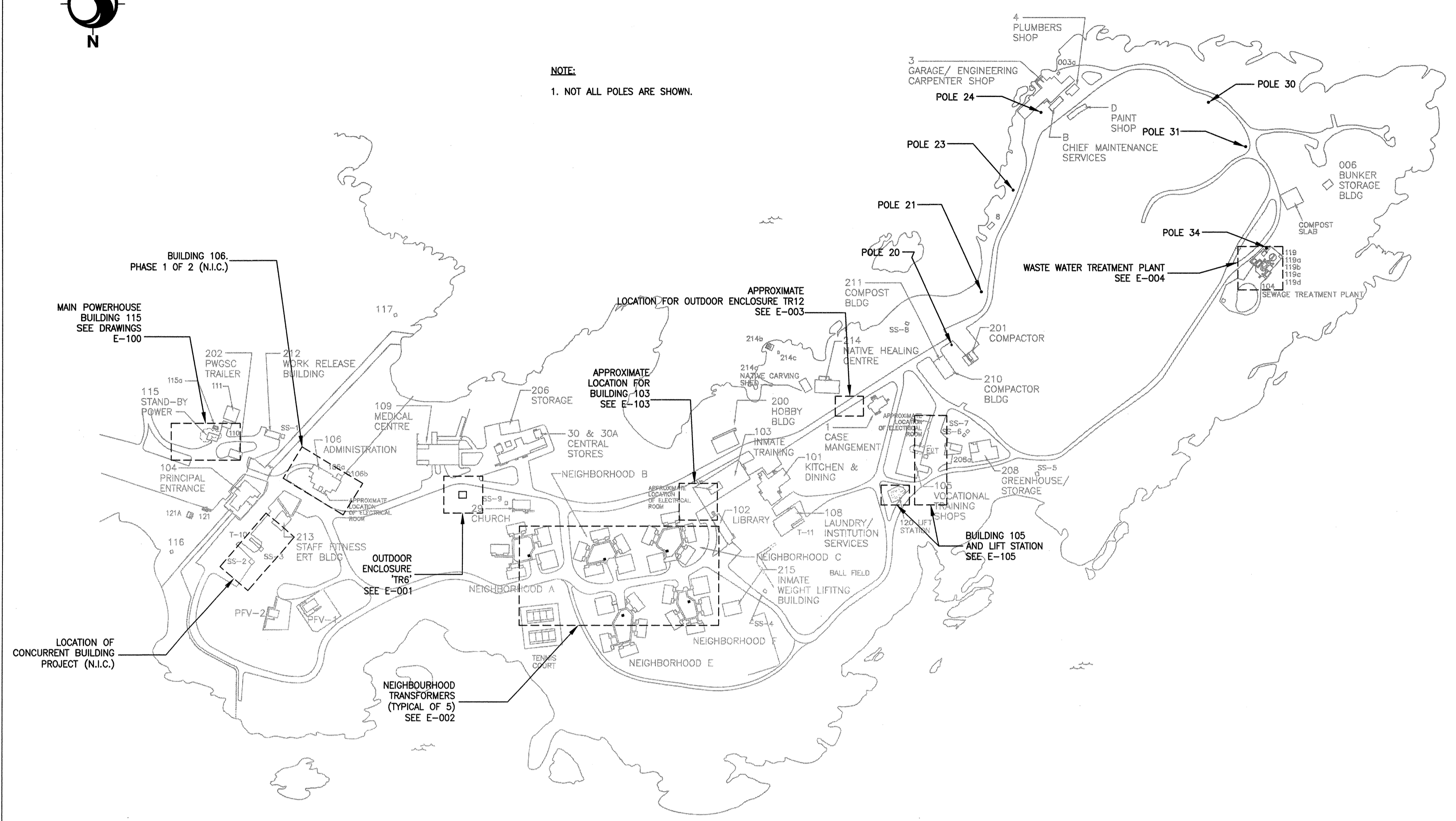


NOTE:
1. NOT ALL POLES ARE SHOWN.



1 SITE KEY PLAN
1:3000

DRAWING LIST	
E-000	KEY PLAN AND SYMBOL LEGEND
E-001	OUTDOOR ENCLOSURE TR6
E-002	NEIGHBOURHOODS 'A', 'B', 'C', 'E', 'F'
E-003	OUTDOOR ENCLOSURE TR12
E-004	WASTE WATER TREATMENT PLANT
E-100	MAIN POWER HOUSE (BLDG. 115) SINGLE LINE AND ELECTRICAL DETAILS
E-101	MAIN POWER HOUSE (BLDG. 115) DECONSTRUCTION PLAN
E-102	MAIN POWER HOUSE (BLDG. 115) FLOOR PLAN
E-103	BUILDING 103 - PARTIAL SITE AND FLOOR PLANS
E-104	BUILDING 103 - SINGLE LINE AND ELECTRICAL DETAILS
E-105	BUILDING 105 - PARTIAL SITE AND FLOOR PLANS
E-106	BUILDING 105 - SINGLE LINE AND ELECTRICAL DETAILS
E-200	ELECTRICAL DETAILS
E-201	ELECTRICAL DETAILS
E-202	UPDATED PARTIAL SITE PLAN: HIGH VOLTAGE FEEDER REPLACEMENT
E-203	MAIN POWER HOUSE (BLDG. 115) PHASING NOTES
E-204	BUILDING 103 PHASING NOTES
E-205	BUILDING 105 PHASING NOTES
E-206	WASTE WATER TREATMENT PLANT PHASING NOTES
E-400	EXISTING SITE SINGLE LINE DIAGRAM
E-401	SITE SINGLE LINE DIAGRAM - NEW (1 OF 2)
E-402	SITE SINGLE LINE DIAGRAM - NEW (2 OF 2)

LEGEND	
—	PRIMARY UG LINE - NEW TO REMAIN
---	PRIMARY UG LINE - EXISTING
- - - -	PRIMARY UG LINE - TO BE REMOVED
---	SECONDARY UG LINE - NEW TO REMAIN
---	SECONDARY UG LINE - EXISTING
- - - -	SECONDARY UG LINE - TO BE REMOVED
---	COMMUNICATION UG LINE - EXISTING

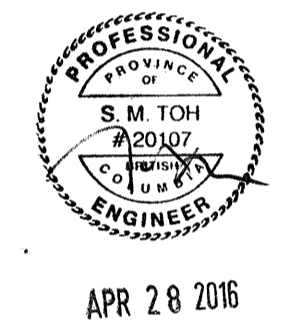
- GENERAL PROJECT NOTES:
- PROVIDE COORDINATED OVERCURRENT PROTECTIVE DEVICES THAT MITIGATE ARC FLASH INCIDENT ENERGY LEVELS BELOW 8 CAL/CM2.
 - PROVIDE NON-DESTRUCTION CABLE TESTING USING VERY LOW FREQUENCY METHOD FOR ALL PRIMARY FEEDERS. PROVIDE TEST RESULTS TO DEPARTMENTAL REPRESENTATIVE.
 - PRIOR TO EXCAVATING, USE GROUND PENETRATING RADAR TO IDENTIFY ALL UNDERGROUND SERVICES THAT WILL BE AFFECTED BY THE WORK AND PROVIDE DIMENSIONED LAYOUT TO DEPARTMENTAL REPRESENTATIVE. CAREFULLY EXPOSE SERVICES BY HAND WHERE APPROPRIATE.
 - WHERE UNDERGROUND SERVICES ARE ENCOUNTERED DURING EXCAVATION FOR DUCTS, PRECAUTIONS ARE TO BE TAKEN TO MAINTAIN THESE SERVICES - PIPES, CABLES, ETC. - AND IF BROKEN DURING THE PROCESS, ARE TO BE REPAIRED UNDER THIS CONTRACTOR'S SCOPE OF WORK, TO THE SATISFACTION OF THE DEPARTMENTAL REPRESENTATIVE.
 - CONTRACTOR SHALL FIELD VERIFY, TO ASSESS THE EXTENT OF ARCHITECTURAL WORK REQUIRED FOR THE ELECTRICAL SCOPE BEFORE PROCEEDING WITH THE WORK. CONTRACTOR SHALL MAKE GOOD AS NEW TO MATCH EXISTING, ANY WALLS/FLOORS/FOUNDATIONS AND MISCELLANEOUS BUILDING ENVELOPE PENETRATIONS, INCLUDING INSULATION, BARRIER MEMBRANE SYSTEMS, ETC. THAT WERE 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.
 - ALL NEW 200A OR LARGER CIRCUIT BREAKERS ARE TO BE LSI ELECTRONIC TRIP CIRCUIT BREAKERS.
 - THE TRANSFER SWITCH (WHETHER NOTED AS OPEN TRANSITION OR CLOSED TRANSITION) THAT IS TO BE PROVIDED WILL INITIALLY BE CONNECTED IN AN OPEN TRANSITION. HOWEVER, IT WILL ULTIMATELY BE CONFIGURED AS A CLOSED TRANSITION TRANSFER SWITCH.

SCHEMATIC SYMBOLS	
	DRAW OUT LOW VOLTAGE CIRCUIT BREAKER
	LOW VOLTAGE CIRCUIT BREAKER
	HIGH VOLTAGE CIRCUIT BREAKER
	DRAW OUT HIGH VOLTAGE CIRCUIT BREAKER
	LOAD BREAK SWITCH
	DISCONNECT SWITCH
	FUSE
	TRANSFORMER
	AUTOTRANSFORMER
	CURRENT TRANSFORMERS (# INDICATES NUMBER OF CTs IN GROUP)
	ZERO SEQUENCE CURRENT TRANSFORMER
	POTENTIAL TRANSFORMERS (# INDICATES NUMBER OF PTs IN GROUP)
	TRANSFER SWITCH
	FOUR POSITION, T-BLADE 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
	REVENUE METER
	DIGITAL INFORMATION METER
	DELTA CONNECTION
	WYE CONNECTION
	GROUND CONNECTION
	HIGH VOLTAGE STRESS RELIEF CONE
	POTHEAD
	CAPACITOR
	SURGE PROTECTIVE DEVICE
	LIGHTNING ARRESTOR
	PANELBOARD
	PUSH PULL SWITCH
	MANHOLE
	GROUND BUS
	OHMMETER
	KEY SWITCH/KEY INTERLOCK
	VOLTMETER
	CONNECTION
	MAGNETIC MOTOR STARTER
	MANUAL MOTOR STARTER
	MOTOR OVERLOAD
	BREAK LINE
	CONTINUATION BREAK
	CABLE FAULT INDICATOR (# INDICATES TYPE. REFER TO DRAWING NOTES)
	DEAD BREAK SEPARABLE INSULATED CONNECTORS

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
	WIRING HOME RUN

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
TYP	TYPICAL
WP	WEATHERPROOF



0	ISSUED FOR TENDER	04/20/16
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Client/client
CORRECTIONAL SERVICE CANADA

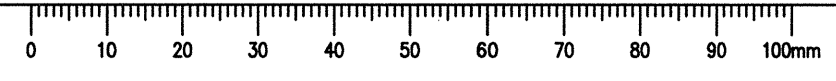
Project title/Titre du projet
METCHOSIN, BC

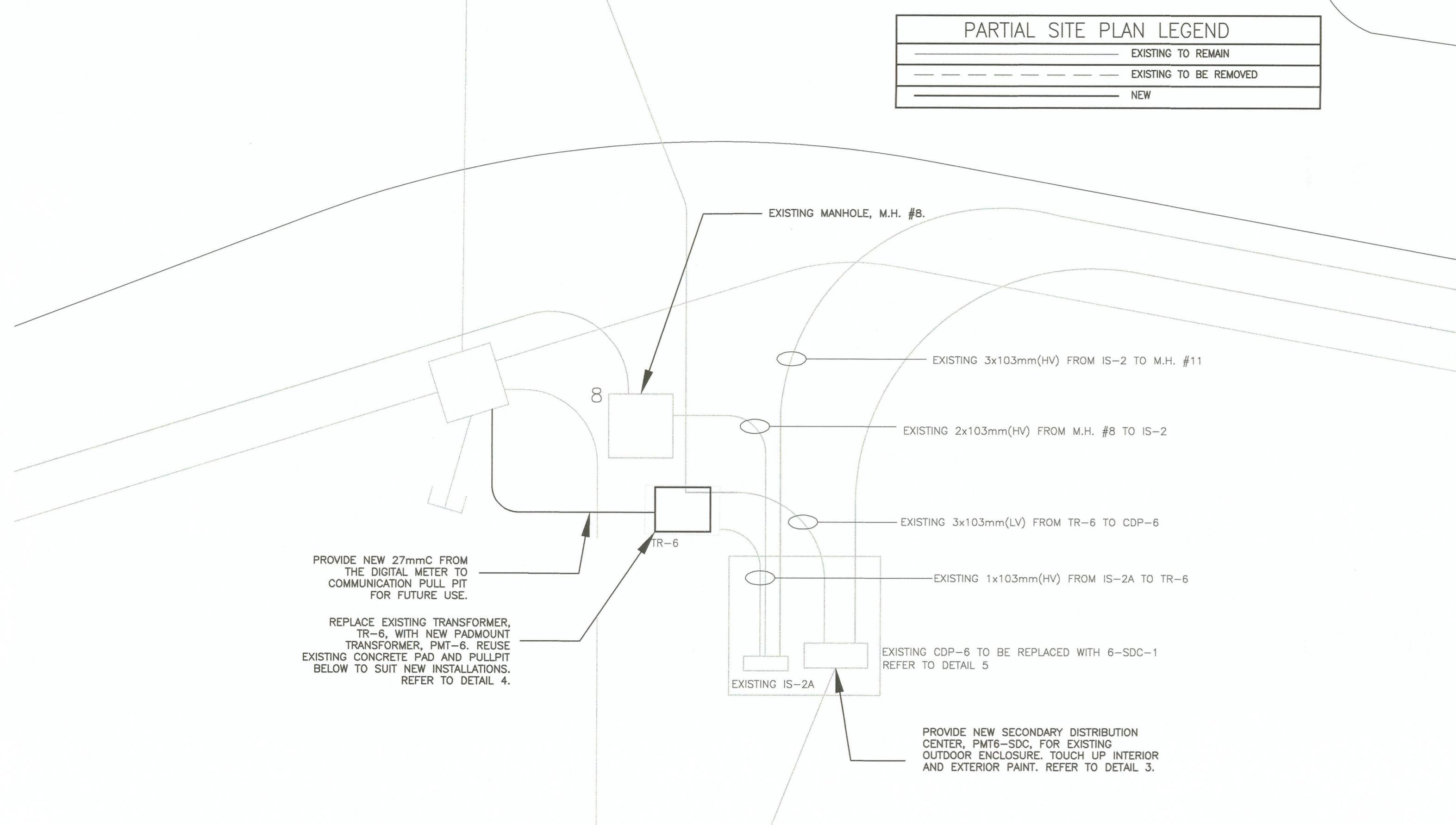
WILLIAM HEAD INSTITUTION ELECTRICAL HIGH VOLTAGE UPGRADE (PHASE 2 OF 2)

Consultant Signature Box Only
Designed by/Concept par
PN
Drawn by/Dessiné par
PN
PWGSC Project Manager/Administrateur de Projets TPSCC
P. Truong
PWGSC, Regional Manager, Architectural and Engineering Services/
Gestionnaire régionale, Services d'architecture et de génie, TPSCC
P. Paul

Drawing title/Titre du dessin
KEY PLAN AND SYMBOL LEGEND

Project No./No. du projet R.069376.001	Sheet/Feuille E-000	Revision no./ La Révision no. 1 of 22
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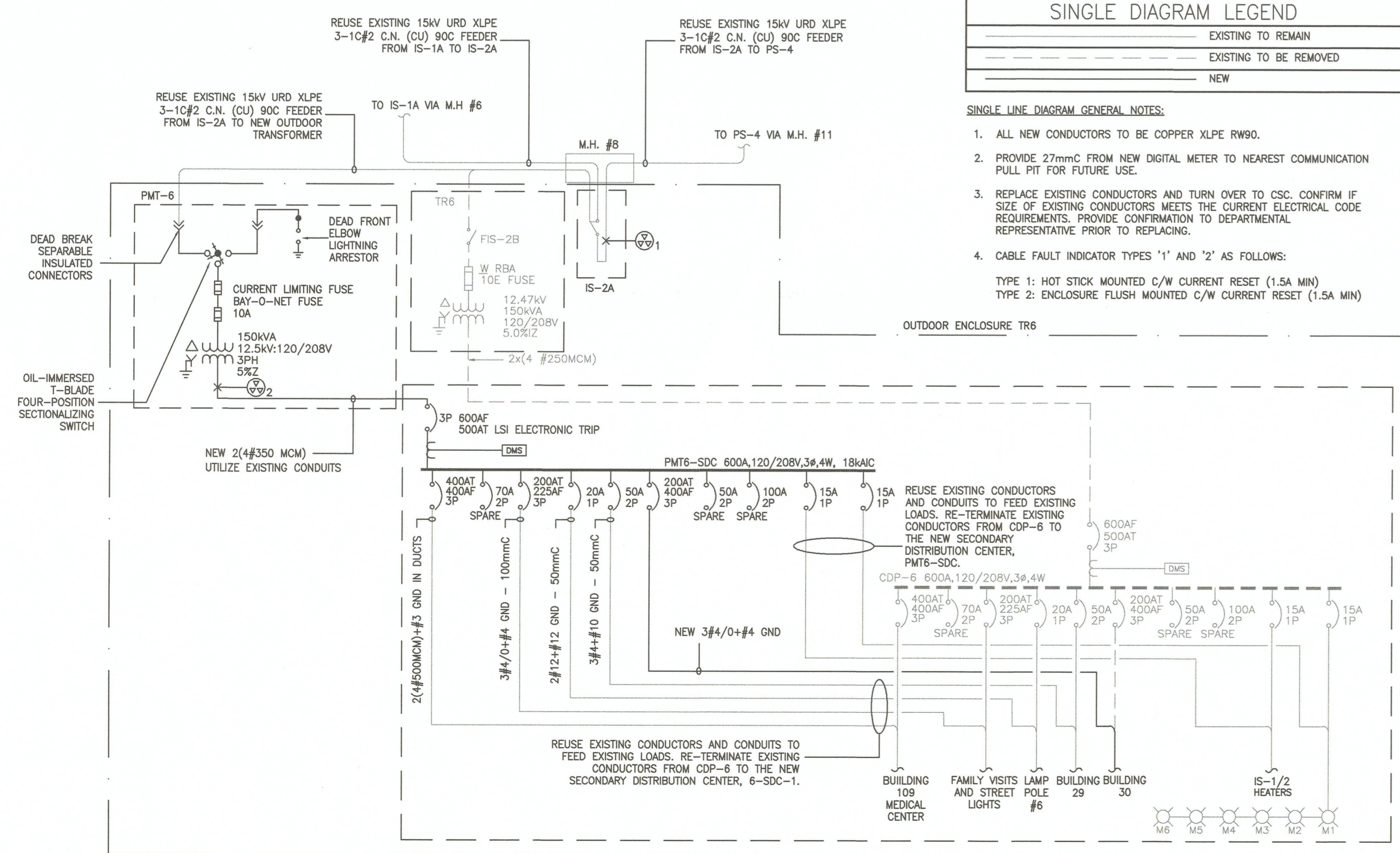


1 PARTIAL SITE PLAN
000 1:100

- SUGGESTED PHASING NOTES:**
- ARRANGE POWER SHUTDOWN TO CDP-6. PROVIDE TEMPORARY GENERATOR TO POWER MEDICAL CENTER BUILDING 109. INTERRUPT POWER TO TRANSFORMER 6, TR6.
 - REMOVE EXISTING TRANSFORMER 6, TR 6, AND INSTALL A NEW PAD MOUNT TRANSFORMER, PMT-6, IN THE SAME LOCATION.
 - REMOVE CDP-6 AND REPLACE WITH NEW SECONDARY DISTRIBUTION CENTER, PMT6-SDC.
 - UTILIZE EXISTING CONDUITS AND REPLACE EXISTING SECONDARY CONDUCTORS WITH NEW SECONDARY CONDUCTORS FROM NEW PADMOUNT TRANSFORMER, PMT-6, TO NEW SECONDARY DISTRIBUTION CENTER, PMT6-SDC.
 - CUT OVER AND THE ALL EXISTING LOADS ONE BY ONE FED BY THE TEMPORARY GENERATOR TO THE NEW SECONDARY DISTRIBUTION CENTER, PMT6-SDC. REPLACE EXISTING CONDUCTORS. CONFIRM IF SIZE OF EXISTING CONDUCTORS MEETS THE CURRENT ELECTRICAL CODE REQUIREMENTS. PROVIDE CONFIRMATION TO DEPARTMENTAL REPRESENTATIVE PRIOR TO REPLACING. CONDUCTORS TO BE TURNED OVER TO CSC.
 - REMOVE EXISTING DISTRIBUTION EQUIPMENT NOT REQUIRED FOR LAYOUT.
 - REMOVE TEMPORARY GENERATORS AND COMPLETE ELECTRICAL INSTALLATION.
- TEMPORARY GENERATOR NOTES:**
- PROVIDE THE FOLLOWING WITH TEMPORARY PRIME POWER RATED GENERATORS FOR BACK-UP:
 - 1.1 BUILDING 109, MEDICAL CENTER - 150kW, 120/208V, 3Ø
 SUPPLY ALL DIESEL FUEL REQUIRED TO RUN GENERATORS AT FULL LOAD WHILE TRANSFORMER 6, TR6, AND CDP-6 IS BEING REPLACED. TIME PERIOD TO EXTEND UNTIL NEW PADMOUNT TRANSFORMER, PMT-6, AND SECONDARY DISTRIBUTION CENTER, 6-SDC-1, IS COMMISSIONED AND SUPPLYING POWER TO MEDICAL CENTER BUILDING 109.
 - GENERATORS TO BE SKID-MOUNTED AND COMPLETE WITH CRITICAL GRADE MUFFLE AND SOUND ATTENUATED, WEATHERPROOF ENCLOSURES.
 - SAFETY MEANS, PROTECTION AND LOCKOUT TO BE PROVIDED TO PREVENT UNDESIRABLE REVERSE FEED. PROVIDE WARNING LABELS AT ALL CONNECTION POINTS AND AS WELL AS EMERGENCY PLAN & CONTACTS.

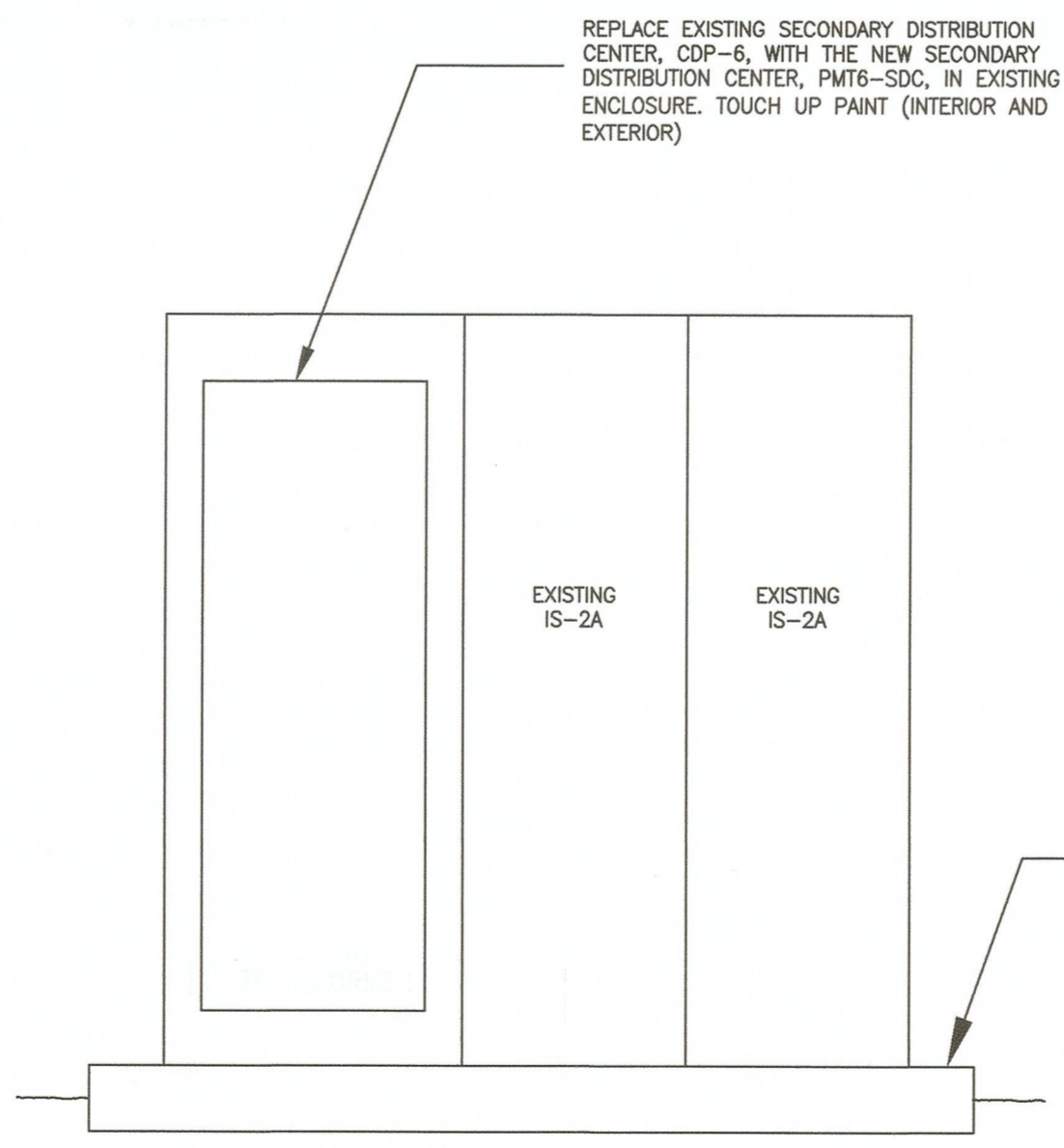


5 EXISTING CDP-6
- N.T.S.

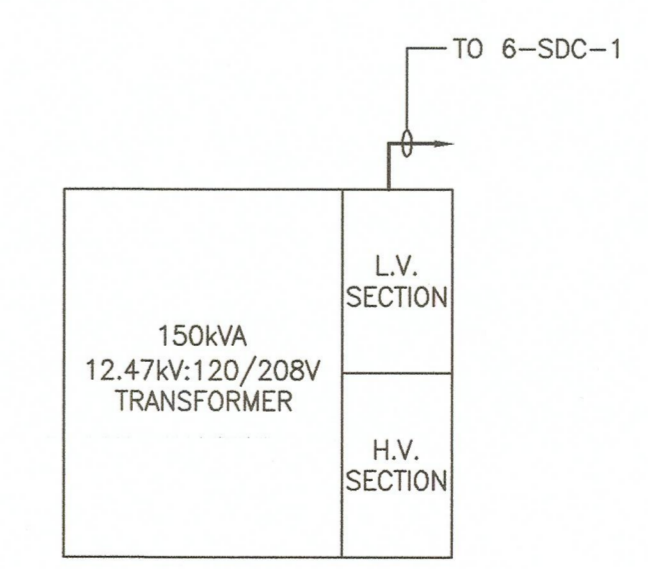


2 PARTIAL SINGLE LINE DIAGRAM
- N.T.S.

- SINGLE LINE DIAGRAM GENERAL NOTES:**
- ALL NEW CONDUCTORS TO BE COPPER XLPE RW90.
 - PROVIDE 27mm² FROM NEW DIGITAL METER TO NEAREST COMMUNICATION PULL PIT FOR FUTURE USE.
 - REPLACE EXISTING CONDUCTORS AND TURN OVER TO CSC. CONFIRM IF SIZE OF EXISTING CONDUCTORS MEETS THE CURRENT ELECTRICAL CODE REQUIREMENTS. PROVIDE CONFIRMATION TO DEPARTMENTAL REPRESENTATIVE PRIOR TO REPLACING.
 - CABLE FAULT INDICATOR TYPES "1" AND "2" AS FOLLOWS:
TYPE 1: HOT STICK MOUNTED C/W CURRENT RESET (1.5A MIN)
TYPE 2: ENCLOSURE FLUSH MOUNTED C/W CURRENT RESET (1.5A MIN)



3 OUTDOOR ENCLOSURE IS-2A & 6-SDC-1 ELEVATION DETAIL
- N.T.S.



4 PMT-6 - PADMOUNT TRANSFORMER PLAN VIEW
- N.T.S.

Revision/Revisions	Description/Descriptions	Date/Date
0	ISSUED FOR TENDER	04/20/16

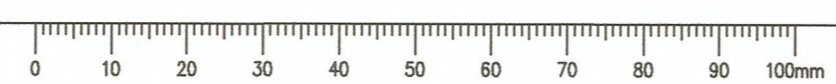
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CORRECTIONAL SERVICE CANADA

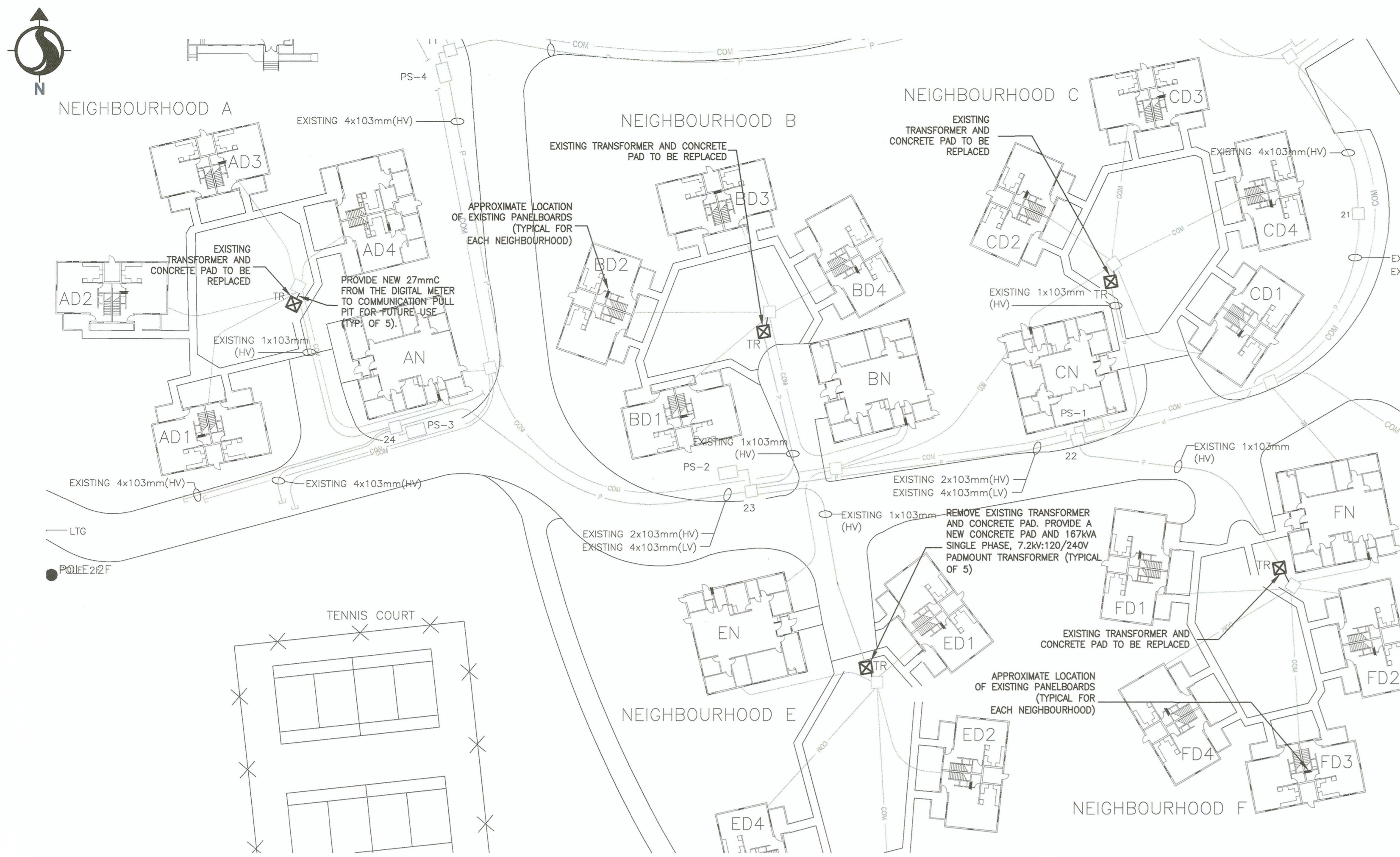
Project title/Titre du projet
METCHOSIN, BC
WILLIAM HEAD INSTITUTION ELECTRICAL HIGH VOLTAGE UPGRADE (PHASE 2 OF 2)

Consultant Signature Box Only
Designed by/Concept par
PN
Drawn by/Dessiné par
PN
PWGSC Project Manager/Administrateur de Projets TPSGC
P. Truong
PWGSC, Regional Manager, Architectural and Engineering Services /
Généraliste régionale, Services d'architecture et de génie, TPSGC
P. Paul

Drawing title/Titre du dessin
OUTDOOR ENCLOSURE TR6

Project No./No. du projet	Sheet/Feuille	Revision no./ de Revision
R.069376.001	E-001	2 OF 22





— P —	PRIMARY U/G LINE - NEW
— P —	PRIMARY U/G LINE - EXISTING TO REMAIN
--- P ---	PRIMARY U/G LINE - TO BE REMOVED
— S —	SECONDARY U/G LINE - NEW
— S —	SECONDARY U/G LINE - EXISTING TO REMAIN
--- S ---	SECONDARY U/G LINE - TO BE REMOVED
— COM —	COMMUNICATION U/G LINE - EXISTING

1 PARTIAL SITE PLAN
1:500

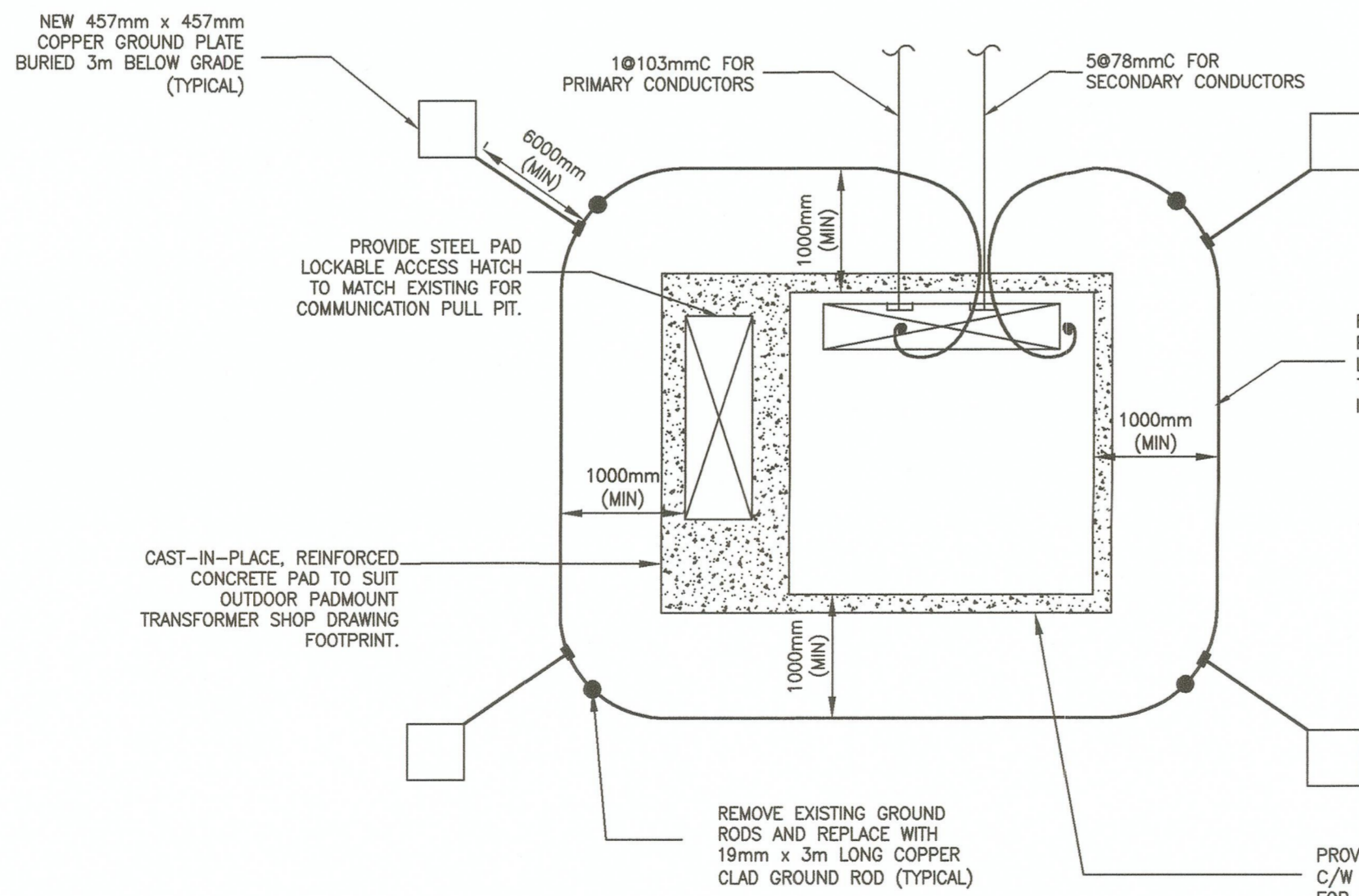
GENERAL NOTES:
1. REFER TO DRAWING E-202 TO LOCATE PRIMARY CONDUCTORS BEING REMOVED OR INSTALLED.

- SUGGESTED PHASING NOTES:**
- ARRANGE POWER SHUT DOWN TO THE NEIGHBOURHOOD TRANSFORMER, PROVIDE TEMPORARY GENERATOR TO POWER THE EXISTING NEIGHBOURHOOD, INTERRUPT POWER TO NEIGHBOURHOOD TRANSFORMER.
 - REMOVE EXISTING CONCRETE PAD AND NEIGHBOURHOOD TRANSFORMER.
 - INSTALL NEW CONCRETE PAD TO FIT THE NEW PADMOUNT TRANSFORMER C/W A STEEL PAD LOCKABLE ACCESS HATCH TO MATCH THE EXISTING COMMUNICATION PULL PIT.
 - INSTALL NEW PADMOUNT TRANSFORMER FOR THE NEIGHBOURHOOD C/W A SECONDARY VOLTAGE SWITCHBOARD.
 - REPLACE EXISTING PRIMARY CONDUCTORS FROM THE PRIMARY SWITCHES TO THE PADMOUNT TRANSFORMER.
 - CUT OVER AND ONE BY ONE PROVIDE NEW SECONDARY FEEDERS TO THE EXISTING LOADS TO THE NEW SECONDARY VOLTAGE SWITCHBOARD, UTILIZE EXISTING DUCTS.
 - REPEAT PROCESS 1 TO 6 FOR OTHER NEIGHBOURHOOD TRANSFORMERS (5 IN TOTAL).
 - REPLACE EXISTING PRIMARY CONDUCTORS BETWEEN PS-4 TO PS-3, PS-3 TO PS-2 AND PS-2 TO PS-1. REFER TO DRAWING E-202 FOR LOCATIONS OF CONDUCTORS.

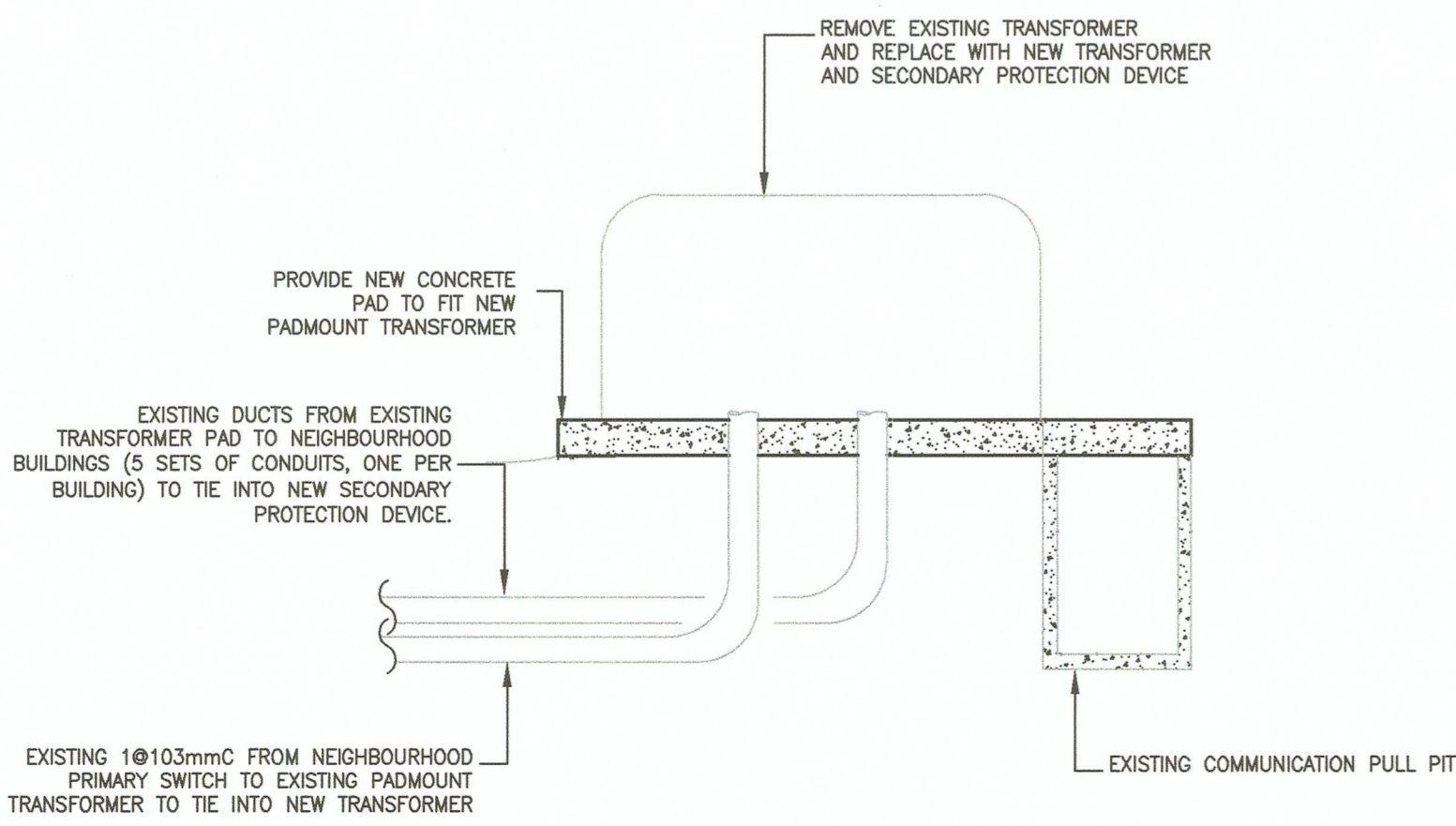
- TEMPORARY GENERATOR NOTES (TYP):**
- PROVIDE THE FOLLOWING WITH TEMPORARY PRIME POWER RATED GENERATORS FOR BACK-UP:
 - 1.1 NEIGHBOURHOOD A, B, C, E, AND F - 167kW, 120/240V, 1Ø
 - GENERATORS TO BE SKID-MOUNTED AND COMPLETE WITH CRITICAL GRADE MUFFLE AND SOUND ATTENUATED, WEATHERPROOF ENCLOSURES.
 - SAFETY MEANS, PROTECTION AND LOCKOUT TO BE PROVIDED TO PREVENT UNDESIRABLE REVERSE FEED. PROVIDE WARNING LABELS AT ALL CONNECTION POINTS AND AS WELL AS EMERGENCY PLAN AND CONTACT.

OUTDOOR PAD MOUNT TRANSFORMER CONCRETE PAD GENERAL NOTES:

- COPPER TO ROD OR PLATE CONNECTION TO BE THERMITE WELDED.
- RETAIN A STRUCTURAL ENGINEER (REGISTERED BY APEBC) TO DESIGN A RE-INFORCED CONCRETE PAD. INCLUDE SEISMIC RESTRAINT ANCHORING.

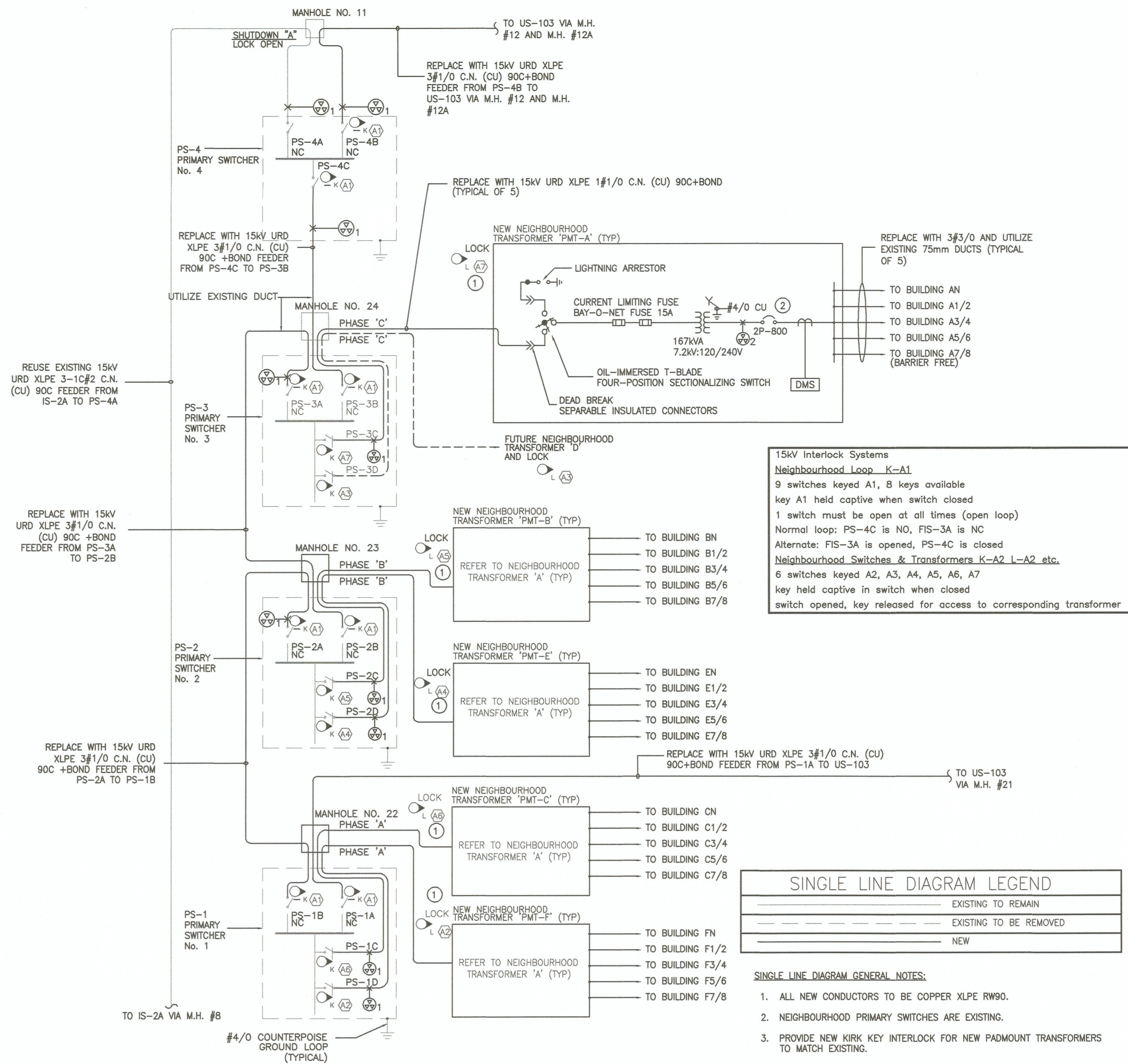


4 TRANSFORMER CONCRETE PAD LAY-OUT PLAN (TYPICAL)
N.T.S.



3 TRANSFORMER PROFILE DETAIL (TYPICAL)
N.T.S.

5 OUTDOOR PADMOUNT TRANSFORMER PLAN VIEW
N.T.S.



2 PARTIAL SINGLE LINE DIAGRAM
N.T.S.

—	EXISTING TO REMAIN
---	EXISTING TO BE REMOVED
—	NEW

- SINGLE LINE DIAGRAM GENERAL NOTES:**
- ALL NEW CONDUCTORS TO BE COPPER XLPE RWGO.
 - NEIGHBOURHOOD PRIMARY SWITCHES ARE EXISTING.
 - PROVIDE NEW KIRK KEY INTERLOCK FOR NEW PADMOUNT TRANSFORMERS TO MATCH EXISTING.
 - PROVIDE 27mmC FROM NEW DIGITAL METERS TO NEAREST COMMUNICATION PULL PIT FOR FUTURE USE (TYP. OF 5).
 - CABLE FAULT INDICATOR TYPES '1' AND '2' AS FOLLOWS:
TYPE 1: HOT STICK MOUNTED C/W CURRENT RESET (1.5A MIN)
TYPE 2: ENCLOSURE FLUSH MOUNTED C/W CURRENT RESET (1.5A MIN)

- SINGLE LINE DIAGRAM KEYNOTES:**
- PROVIDE KEY INTERLOCKS TO MATCH EXISTING PRIMARY SWITCH KEY INTERLOCKS.
 - LSI ELECTRONIC TRIP CIRCUIT BREAKER



6 EXISTING PADMOUNT TRANSFORMER AND CONCRETE PAD
N.T.S.

0	ISSUED FOR TENDER	04/20/16
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CORRECTIONAL SERVICE CANADA

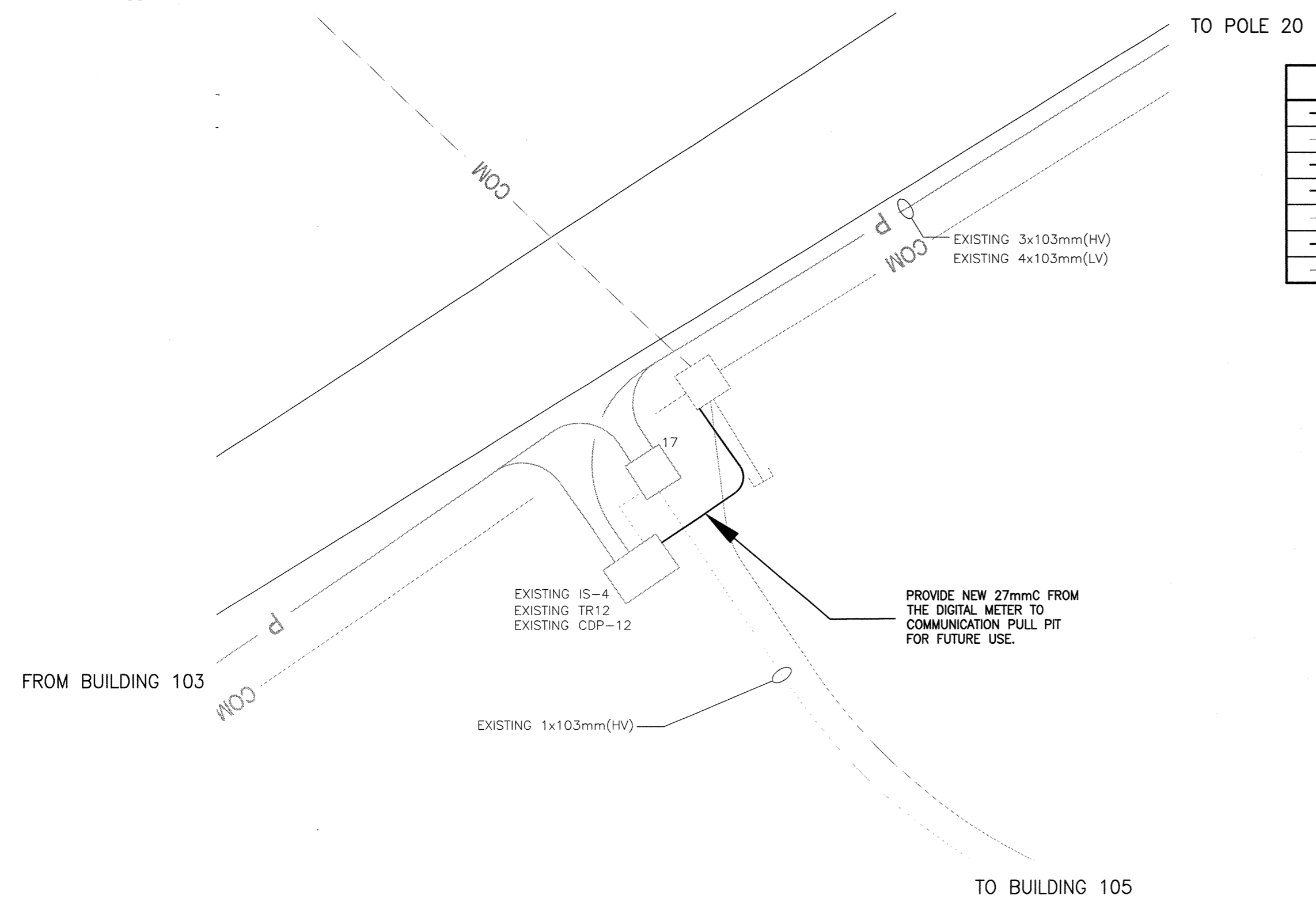
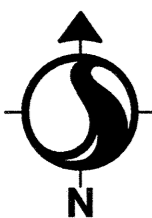
Project Title/Titre du projet
METCHOSIN, BC
WILLIAM HEAD INSTITUTION ELECTRICAL HIGH VOLTAGE UPGRADE (PHASE 2 OF 2)

Designed by/Concept par
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Drawn by/Dessiné par
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PWGSC Project Manager/Administrateur de Projets TPSSC
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PWGSC, Regional Manager, Architecture and Engineering Services/
Généraliste régionale, Services d'architecture et de génie, TPSSC
P. Paul

Drawing Title/Titre du dessin
NEIGHBOURHOODS 'A', 'B', 'C', 'E', 'F'

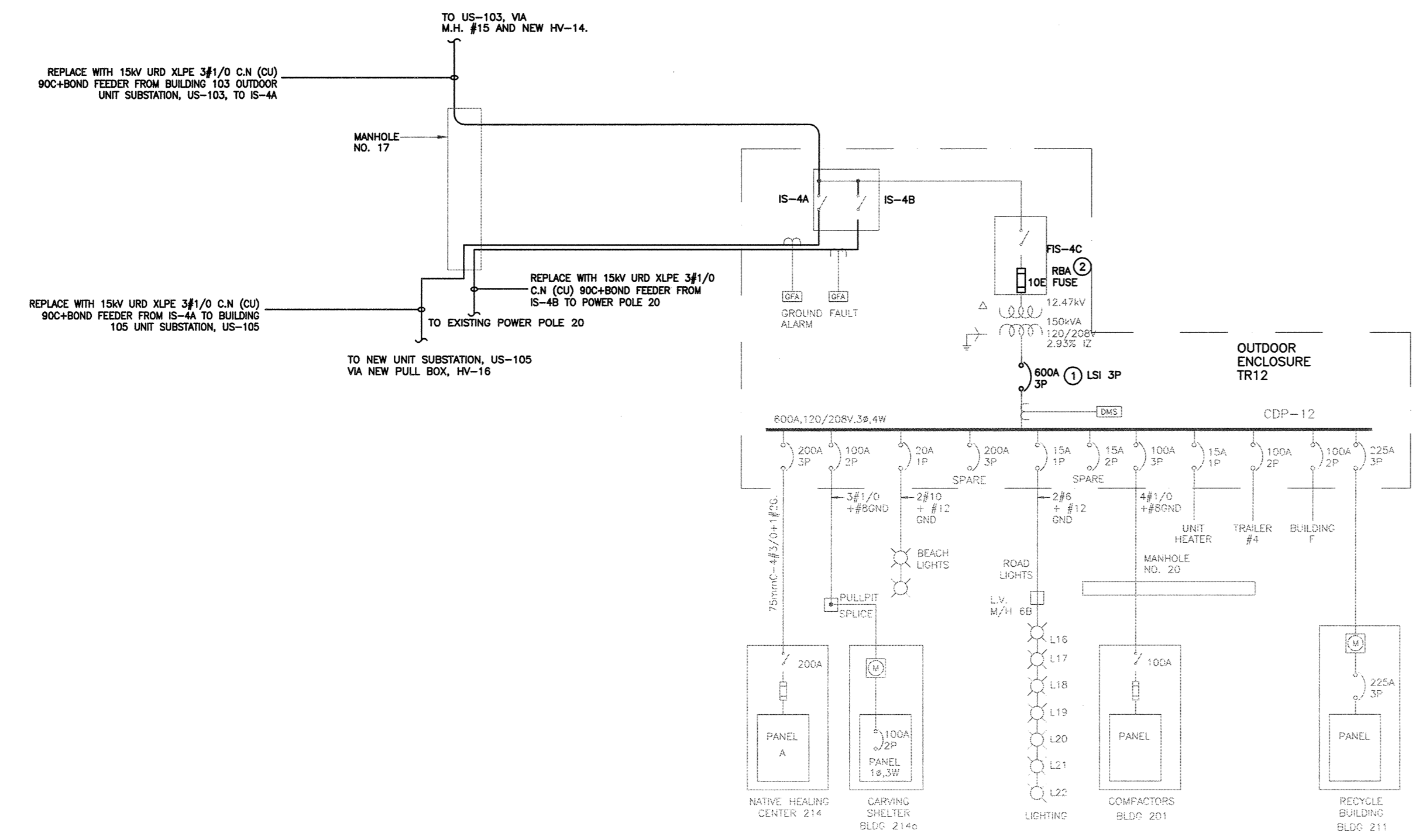
Project No./No. du projet R.069376.001	Sheet/Feuille E-002	Revision no./ No. de Révision 3 OF 22
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— P —	PRIMARY U/G LINE - NEW
— P —	PRIMARY U/G LINE - EXISTING TO REMAIN
--- P ---	PRIMARY U/G LINE - TO BE REMOVED
— S —	SECONDARY U/G LINE - NEW
— S —	SECONDARY U/G LINE - EXISTING TO REMAIN
--- S ---	SECONDARY U/G LINE - TO BE REMOVED
— COM —	COMMUNICATION U/G LINE - EXISTING

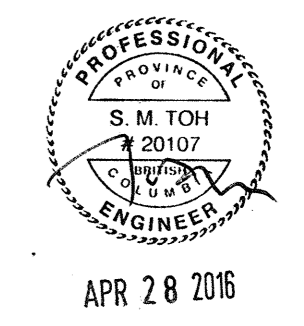
1 PARTIAL SITE PLAN
000 1:200



—	EXISTING TO REMAIN
---	EXISTING TO BE REMOVED
—	NEW

- SINGLE LINE DIAGRAM KEYNOTES:**
- REPLACE EXISTING CIRCUIT BREAKER WITH NEW LSI ELECTRONIC TRIP BREAKER.
 - REPLACE EXISTING FUSE WITH NEW EXPULSION TYPE, STANDARD TIME FUSE AS NOTED.
- SINGLE LINE DIAGRAM GENERAL NOTES:**
- ALL NEW CONDUCTORS TO BE COPPER XLPE RW90.
 - PROVIDE 27mmC FROM NEW DIGITAL METER TO NEAREST COMMUNICATION PULL PIT FOR FUTURE USE.
 - CABLE FAULT INDICATOR TYPES '1' AND '2' AS FOLLOWS:
TYPE 1: HOT STICK MOUNTED C/W CURRENT RESET (1.5A MIN)
TYPE 2: ENCLOSURE FLUSH MOUNTED C/W CURRENT RESET (1.5A MIN)

2 PARTIAL SINGLE LINE DIAGRAM
N.T.S.



0	ISSUED FOR TENDER	04/20/16
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Client/client
CORRECTIONAL SERVICE CANADA

Project title/Titre du projet
METCHOSIN, BC

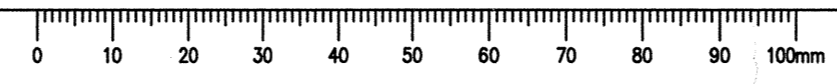
**WILLIAM HEAD INSTITUTION
ELECTRICAL HIGH VOLTAGE
UPGRADE (PHASE 2 OF 2)**

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Designed by/Concept par
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Drawn by/Dessiné par
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P. Truong
PWSSC Regional Manager, Architectural and Engineering Services/
Gestionnaire régionale, Services d'architecture et de génie, TPSSC
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Drawing title/Titre du dessin
OUTDOOR ENCLOSURE TR12

Project No./No. du projet R.069376.001	Sheet/Feuille E-003	Revision no./ La Révision no. 4 of 22
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Revision/Revision	Description/Description	Date/Date
0	ISSUED FOR TENDER	04/20/16

CORRECTIONAL SERVICE CANADA

Project title/Titre du projet
METCHOSIN, BC

WILLIAM HEAD INSTITUTION ELECTRICAL HIGH VOLTAGE UPGRADE (PHASE 2 OF 2)

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Designed by/Concept par
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Drawn by/Dessiné par
PN

PNWSC Project Manager/Administrateur de Projets TPSCG

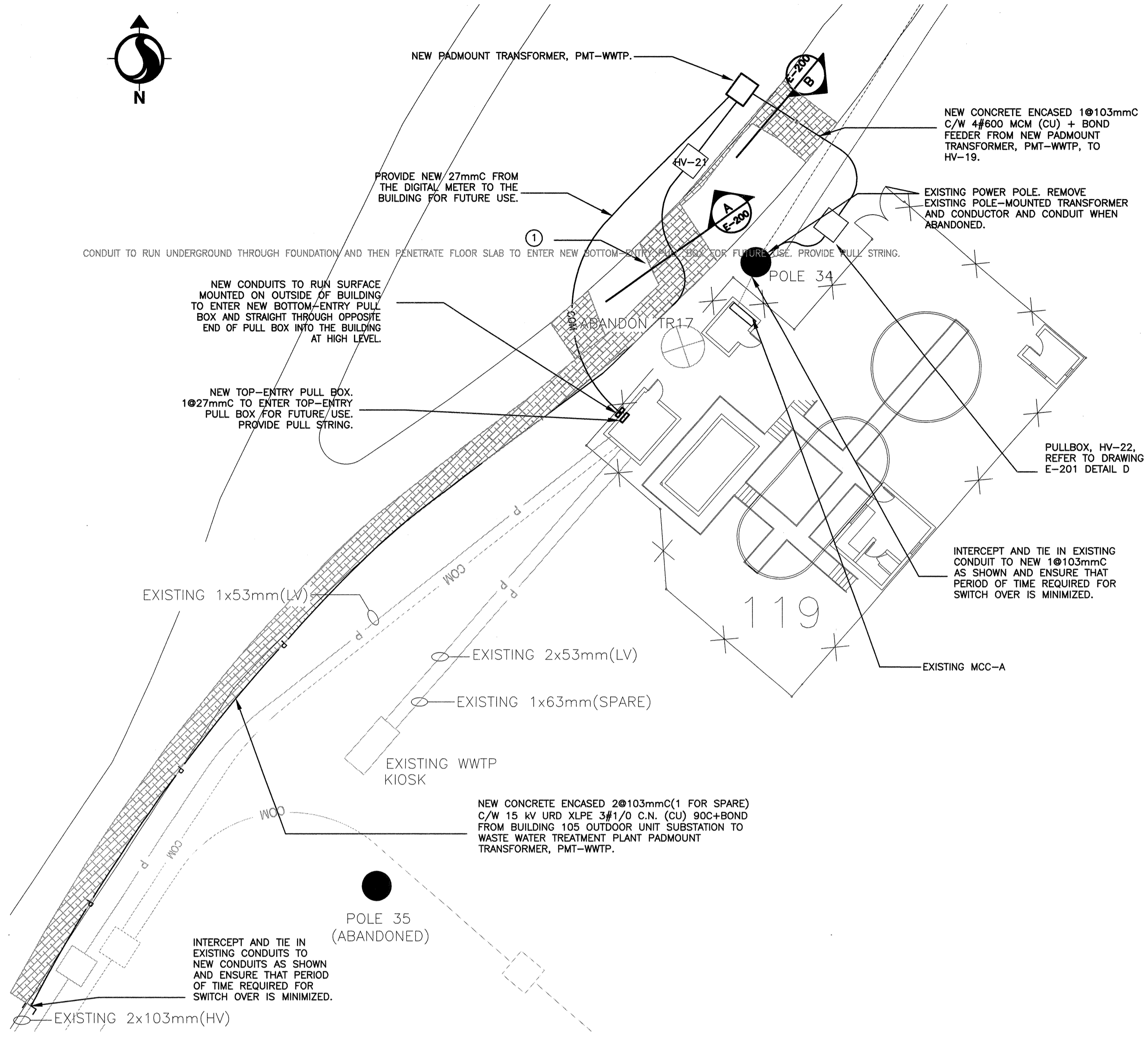
P. Truong

PNWSC Regional Manager, Architectural and Engineering Services/Gestionnaire régionale, Services d'architecture et de génie, TPSCG

P. Paul

Drawing title/Titre du dessin
WASTE WATER TREATMENT PLANT

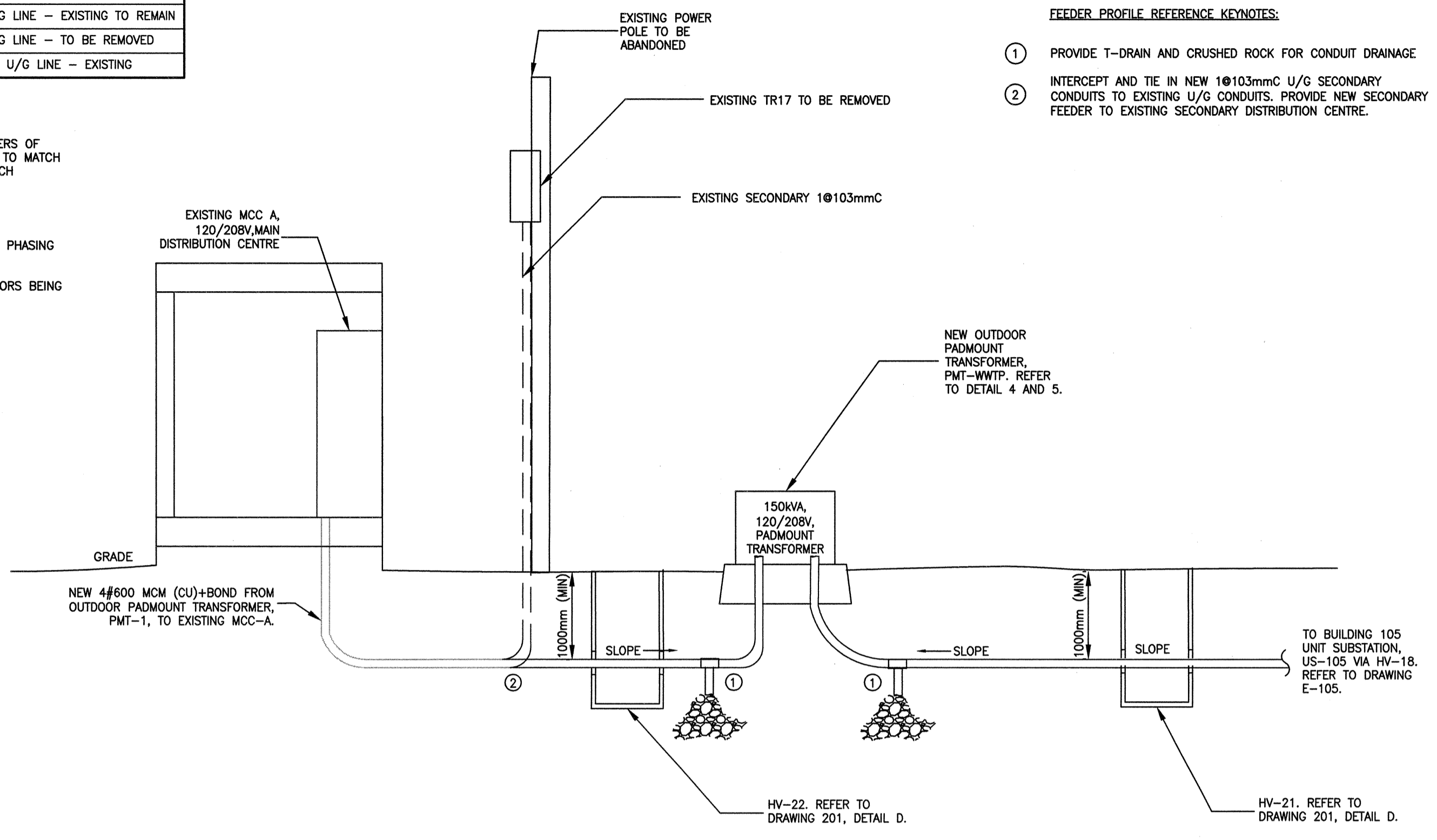
Project No./No. du projet	Sheet/Fauille	Revision no./La Revision no.
R.069376.001	E-004	



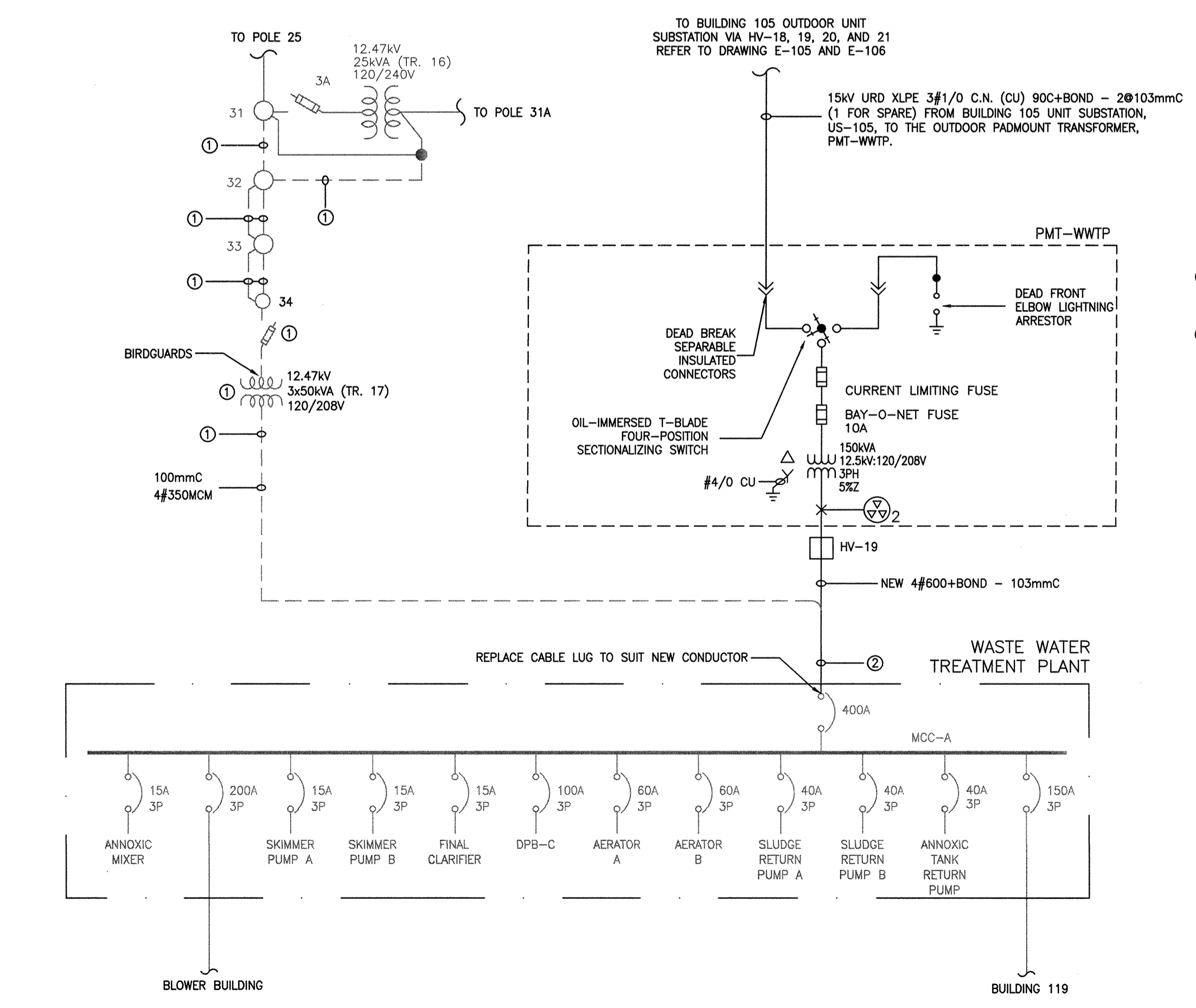
1 PARTIAL SITE PLAN
000 1:200

	PRIMARY U/G LINE - NEW
	PRIMARY U/G LINE - EXISTING TO REMAIN
	PRIMARY U/G LINE - TO BE REMOVED
	SECONDARY U/G LINE - NEW
	SECONDARY U/G LINE - EXISTING TO REMAIN
	SECONDARY U/G LINE - TO BE REMOVED
	COMMUNICATION U/G LINE - EXISTING

- WASTE WATER TREATMENT KEYNOTES:**
- REMOVE, REPAIR, MAKE GOOD, AND RESTORE 130 SQUARE METERS OF ASPHALT PAVEMENT, INCLUDING BASE AND SUB BASE GRAVELS, TO MATCH OR EXCEED THE EXISTING THICKNESS. FINAL CONDITION TO MATCH QUALITY OF EXISTING CONDITION IN AREA.
- GENERAL NOTES:**
- REFER TO DRAWING E-206 FOR WASTE WATER TREATMENT PHASING NOTES.
 - REFER TO DRAWING E-202 TO LOCATE PRIMARY CONDUCTORS BEING REMOVED OR INSTALLED.



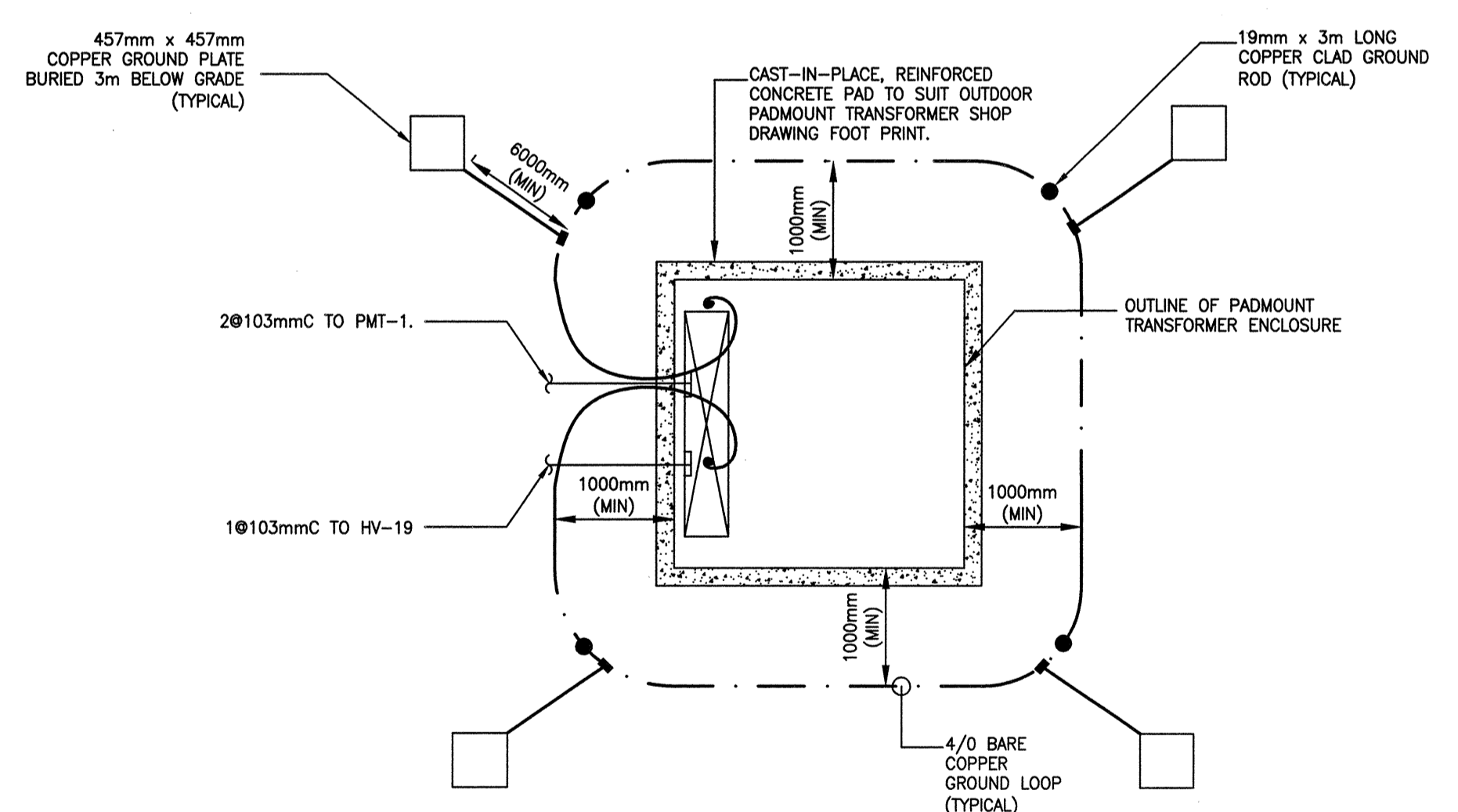
3 OUTDOOR PADMOUNT TRANSFORMER AND WASTE WATER TREATMENT PLANT FEEDER PROFILE
N.T.S.



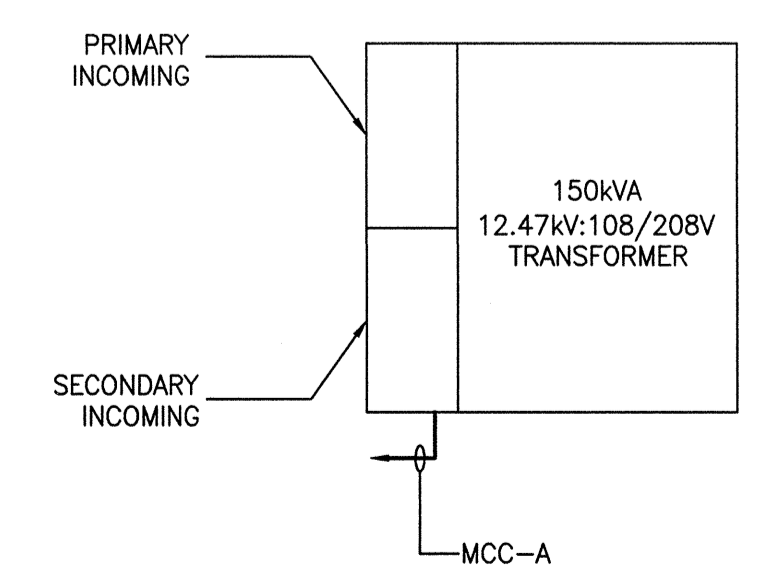
2 PARTIAL SINGLE LINE DIAGRAM
N.T.S.

	EXISTING TO REMAIN
	EXISTING TO BE REMOVED
	NEW

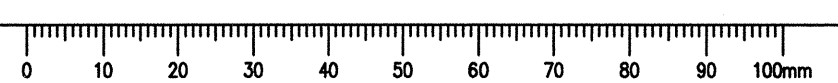
- SINGLE LINE DIAGRAM REFERENCE KEYNOTES:**
- REMOVE EXISTING POLE-MOUNTED TRANSFORMER, EXISTING SECONDARY CONDUCTORS TO WASTE WATER TREATMENT PLANT MCC-A MAIN BREAKER, GANG OPERATED SWITCHES, INSULATORS AND HIGH VOLTAGE AERIAL CABLES.
 - PROVIDE NEW 10103mmC AND TIE INTO EXISTING 10103mmC U/G DUCT FED FROM POLE. PROVIDE NEW 4#600 MCM (CU)+BOND AND TERMINATE IN WASTE WATER TREATMENT PLANT MAIN BREAKER (400A)
- SINGLE LINE DIAGRAM GENERAL NOTES:**
- ALL NEW CONDUCTORS TO BE COPPER XLPE RW90.
 - PROVIDE 27mmC FROM NEW DIGITAL METER TO NEW BOTTOM-ENTRY PULL BOX AND ENTER INTO BUILDING AT HIGH LEVEL. PROVIDE NEW TOP-ENTRY PULL BOX FOR 27mmC TO ENTER. PROVIDE PULL STRING.
 - CABLE FAULT INDICATOR TYPES '1' AND '2' AS FOLLOWS:
TYPE 1: HOT STICK MOUNTED C/W CURRENT RESET (1.5A MIN)
TYPE 2: ENCLOSURE FLUSH MOUNTED C/W CURRENT RESET (1.5A MIN)

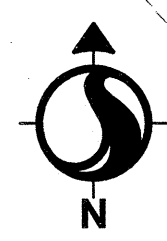


4 OUTDOOR PADMOUNT TRANSFORMER CONCRETE PAD LAY-OUT PLAN
N.T.S.



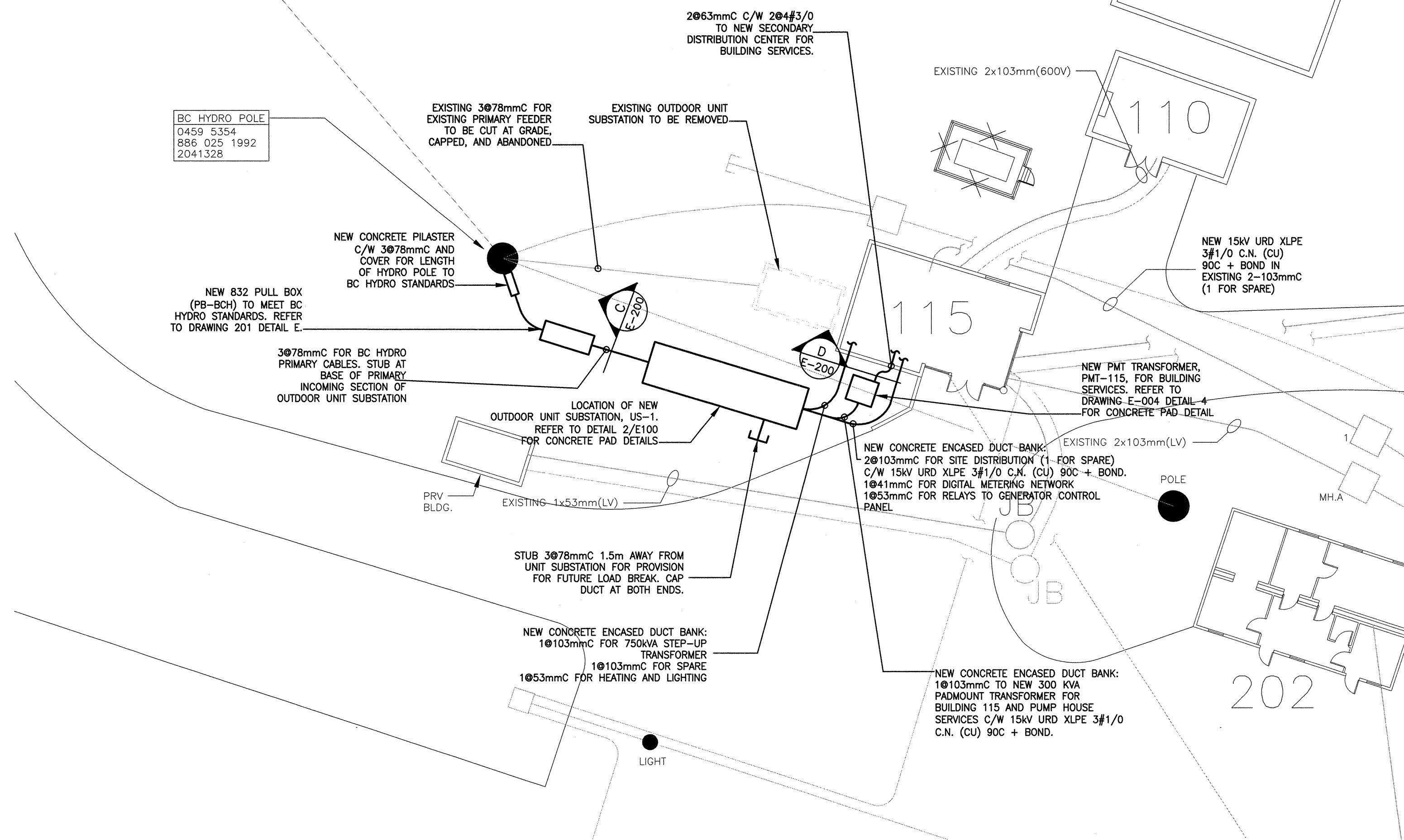
5 OUTDOOR PADMOUNT TRANSFORMER PLAN VIEW
N.T.S.





PARTIAL SITE PLAN LEGEND	
	EXISTING TO REMAIN
	EXISTING TO BE REMOVED
	NEW

SINGLE LINE DIAGRAM LEGEND	
	EXISTING TO REMAIN
	EXISTING TO BE REMOVED
	NEW

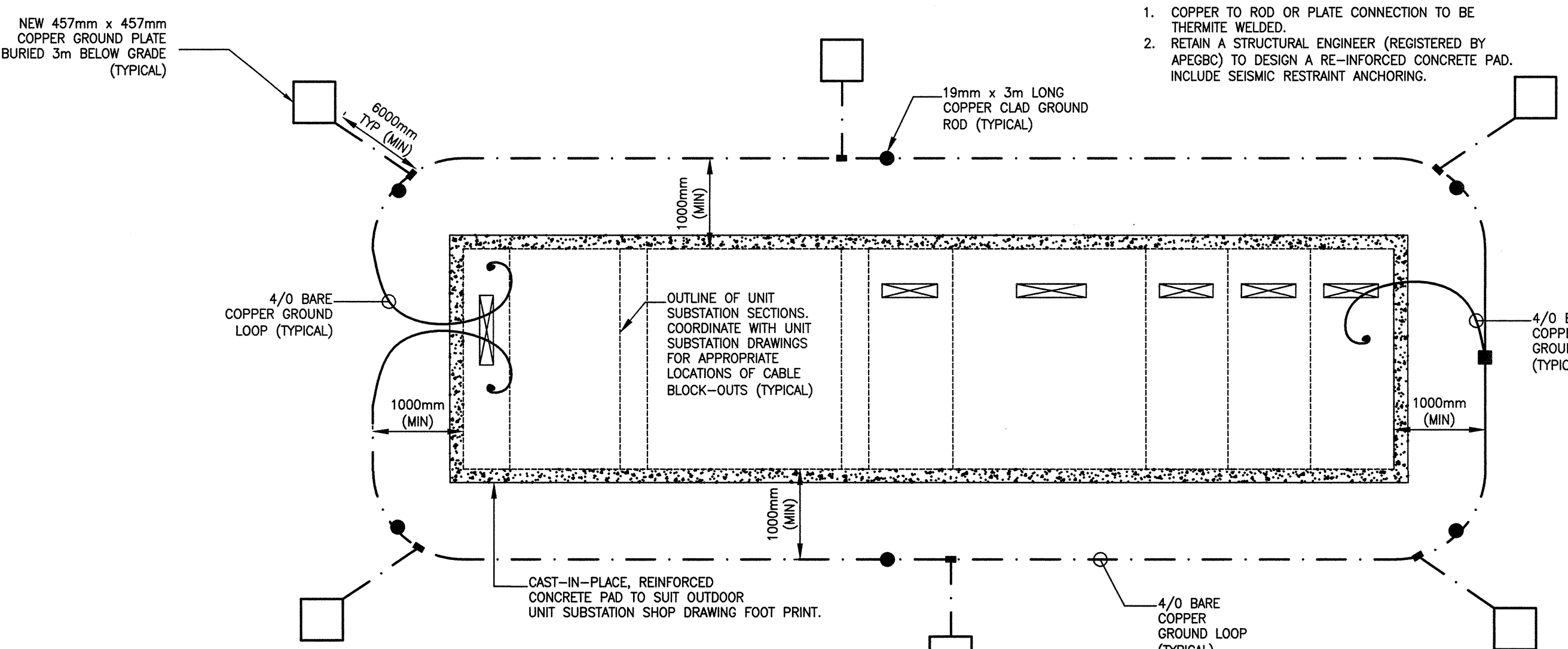


1 MAIN POWER HOUSE (BLDG. 115) - PROPOSED SITE PLAN
1:200

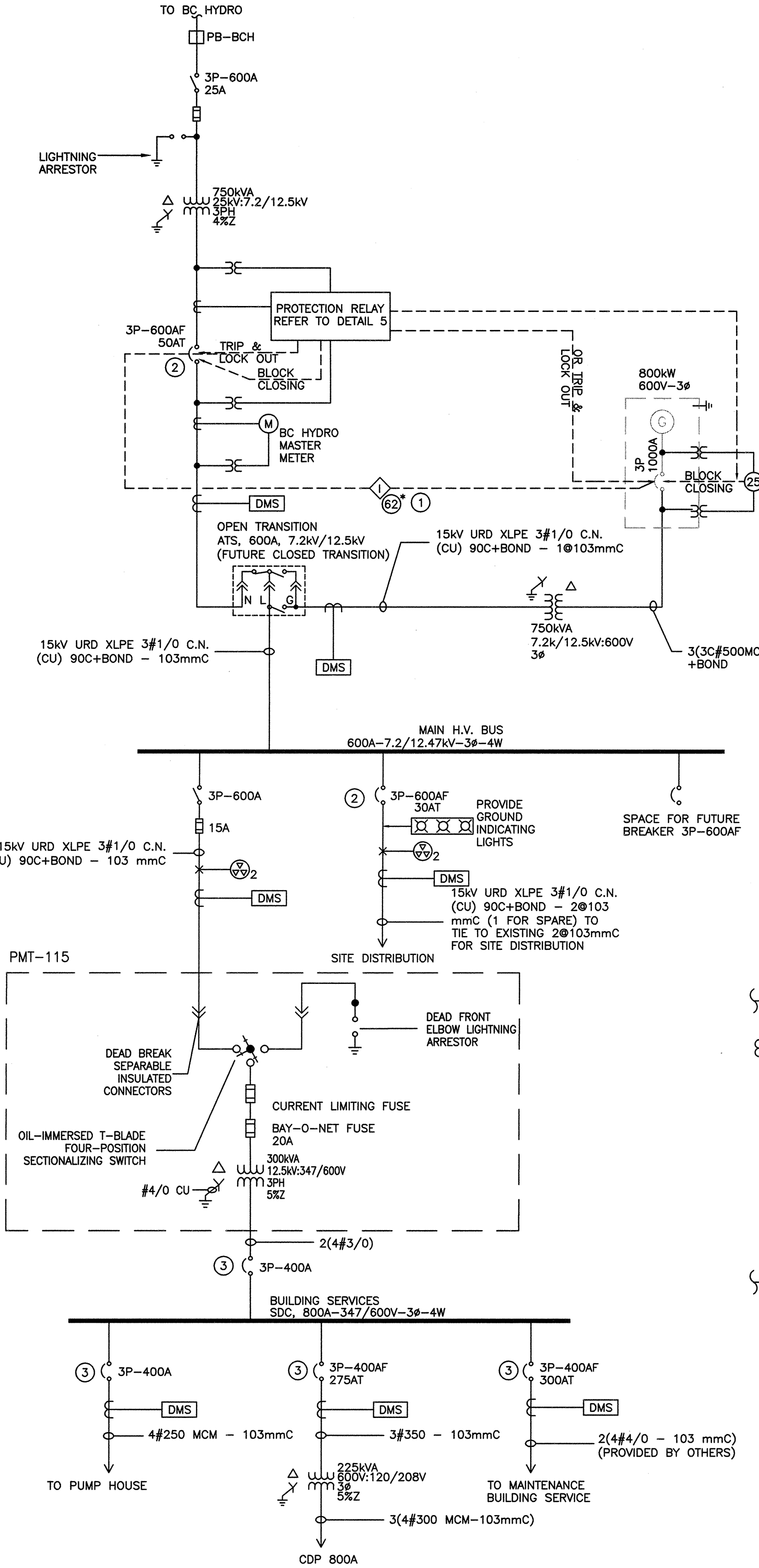
- GENERAL NOTES:
- REFER TO DRAWING E-203 FOR MAIN POWER HOUSE PHASING NOTES.
 - MAINTAIN 90 DEGREE SEPARATION BETWEEN POWER AND COMMUNICATION WIRING ON JOINT USE B.C. HYDRO POLE.

OUTDOOR UNIT SUBSTATION CONCRETE PAD GENERAL NOTES:

- COPPER TO ROD OR PLATE CONNECTION TO BE THERMITE WELDED.
- RETAIN A STRUCTURAL ENGINEER (REGISTERED BY APEZBC) TO DESIGN A RE-INFORCED CONCRETE PAD. INCLUDE SEISMIC RESTRAINT ANCHORING.

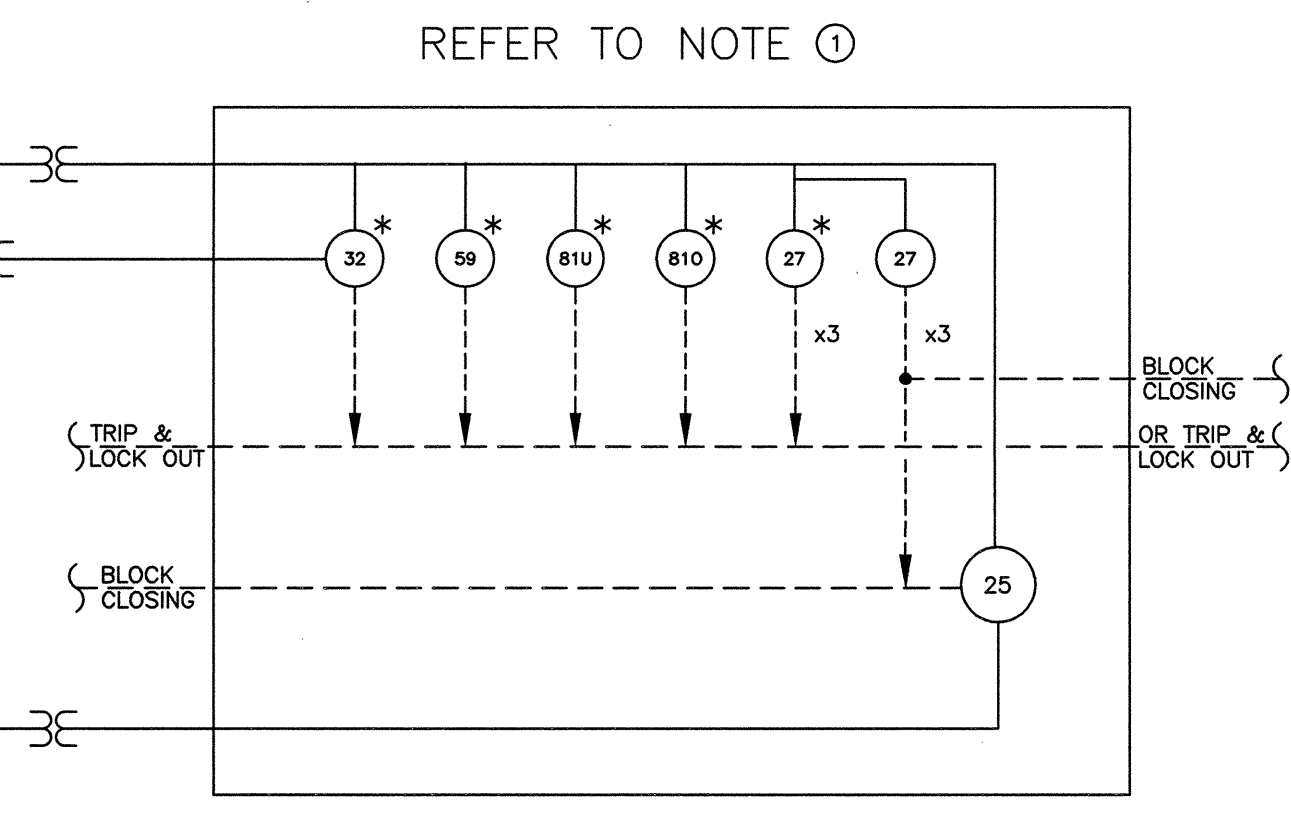


2 OUTDOOR UNIT SUBSTATION (US-1) CONCRETE PAD LAYOUT-PLAN
N.T.S.

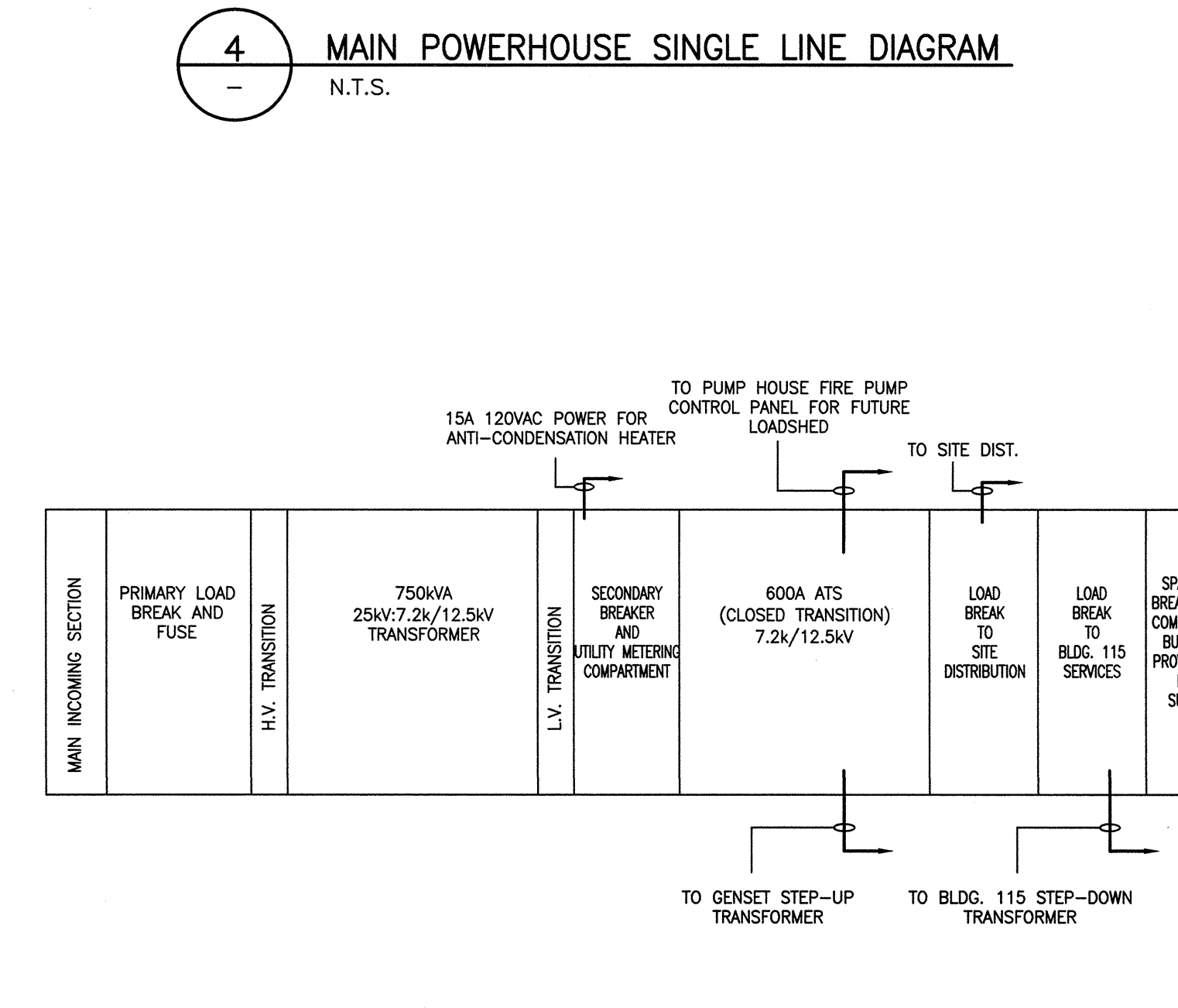


4 MAIN POWERHOUSE SINGLE LINE DIAGRAM
N.T.S.

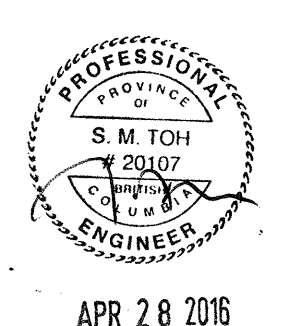
- SITE SINGLE LINE DIAGRAM KEYNOTES:
- PROTECTIVE RELAY FUNCTIONS
 - 25 SYNCHRONISM-CHECK
 - 27 UNDERVOLTAGE
 - 32 DIRECTIONAL POWER
 - 59 OVERVOLTAGE
 - 81U UNDERFREQUENCY
 - 81O OVERFREQUENCY
 - 62 TIME DELAY (BACKUP TIMER)
 - LEGEND
 - (F) FUNCTION ACTIVE DURING PARALLEL OPERATION ONLY
 - (E) ELECTRICAL INTERLOCK
 - PROVIDE INTERLOCK CAPABILITIES BETWEEN TWO CIRCUIT BREAKERS FOR IMPROVED SYSTEM PROTECTION COORDINATION.
 - LSI ELECTRONIC TRIP CIRCUIT BREAKER
- SINGLE LINE DIAGRAM GENERAL NOTES:
- ALL NEW WIRING TO BE XLPE RW90.
 - ALL NEW DIGITAL METERS (DMS) TO CONNECT TO LOCAL PATCH PANEL FOR CONNECTION TO SITE BUILDING MANAGEMENT SYSTEM NETWORK.
 - CABLE FAULT INDICATOR TYPES '1' AND '2' AS FOLLOWS:
TYPE 1: HOT STICK MOUNTED C/W CURRENT RESET (1.5A MIN)
TYPE 2: ENCLOSURE FLUSH MOUNTED C/W CURRENT RESET (1.5A MIN)



5 PROTECTION RELAY DETAIL
N.T.S.



3 OUTDOOR UNIT SUBSTATION (US-1) PLAN VIEW
N.T.S.



Revision/Revisions	Description/Description	Date/Date
0	ISSUED FOR TENDER	04/20/16

Client/client: **CORRECTIONAL SERVICE CANADA**

Project Title/Titre du projet: **METCHOSIN, BC**

WILLIAM HEAD INSTITUTION ELECTRICAL HIGH VOLTAGE UPGRADE (PHASE 2 OF 2)

Designed by/Concept par: **PN**

Drawn by/Dessiné par: **PN**

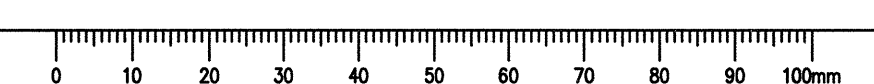
PWGSC Project Manager/Administrateur de Projets: **TPSGC**

PWGSC Regional Manager, Architectural and Engineering Services/Gestionnaire régionale, Services d'architectural et de génie: **TPSGC**

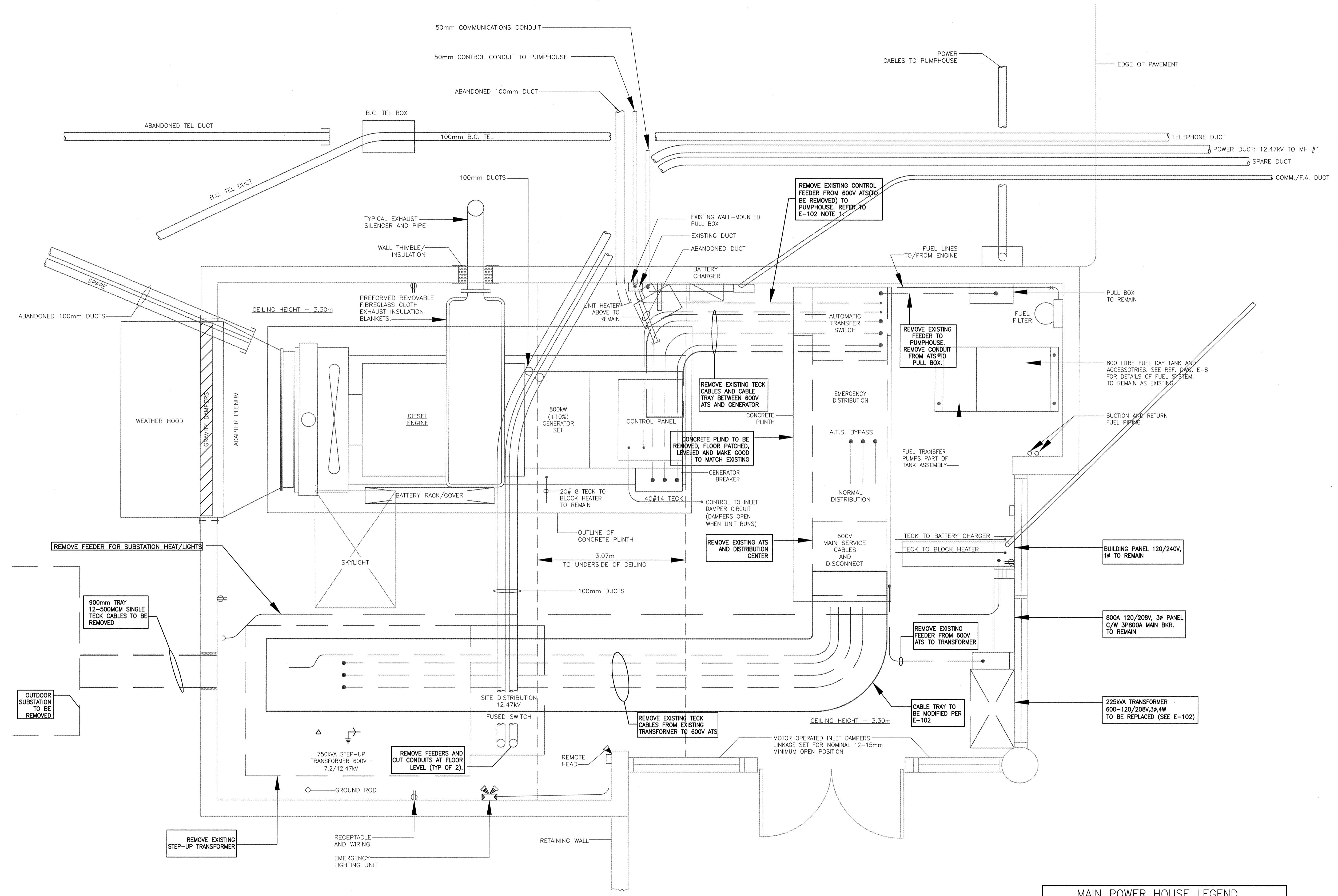
Drawing Title/Titre du dessin: **MAIN POWER HOUSE (BLDG.115) SINGLE LINE AND ELECTRICAL DETAILS**

Project No./No. du projet: **R.069376.001**

Sheet/Feuille: **E-100**
6 OF 22



- MAIN POWER HOUSE GENERAL NOTES:**
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ROOM AND EQUIPMENT LOCATIONS, AS WELL AS CONDUIT ROUTING ON SITE. DO NOT USE DRAWING SCALE FOR MATERIALS TAKE-OFF AND EXACT CONDUIT ENTRY POINTS.
 - COORDINATE NEW ELECTRICAL INSTALLATION WITH EXISTING CEILING PIPING, BUS DUCT, FIRE ALARM, AND LUMINAIRES.
 - INFORMATION SHOWN ON THIS RECORD DRAWING SHALL BE VALIDATED ON SITE PRIOR TO COMMENCEMENT OF CONSTRUCTION.



—	EXISTING TO REMAIN
- - -	EXISTING TO BE REMOVED
—	NEW

1 MAIN POWER HOUSE (BLDG. 115) – DECONSTRUCTION PLAN
1:25



Revision/Revision	Description/Description	Date/Date
0	ISSUED FOR TENDER	04/20/16

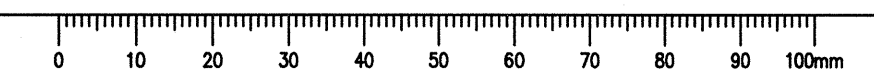
Client/client: **CORRECTIONAL SERVICE CANADA**

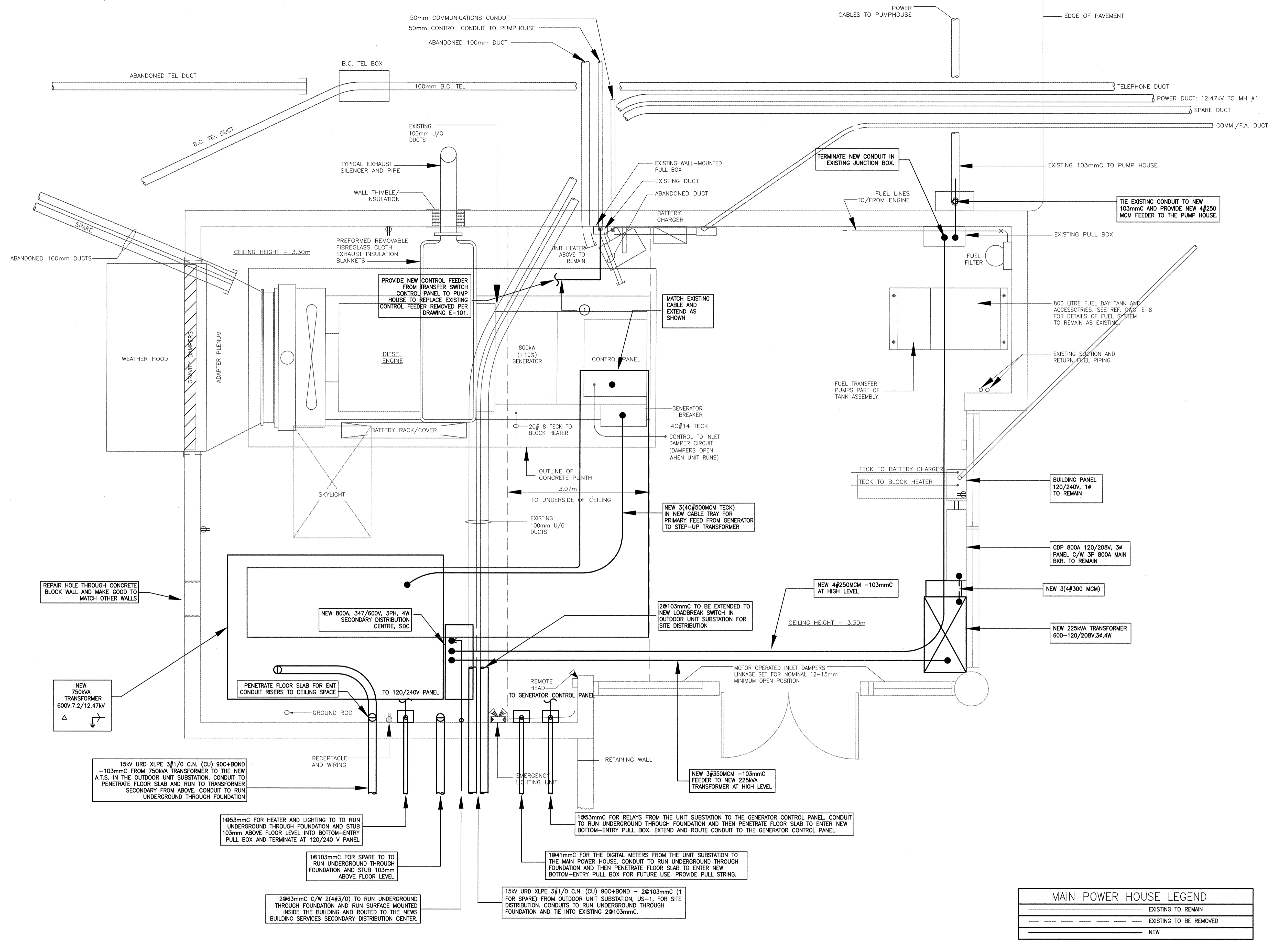
Project title/Titre du projet: **METCHOSIN, BC**
WILLIAM HEAD INSTITUTION ELECTRICAL HIGH VOLTAGE UPGRADE (PHASE 2 OF 2)

Consultant Signature Box Only
Designed by/Concept par: **PN**
Drawn by/Dessiné par: **PN**
PWGSC Project Manager/Administrateur de Projets TPSGC: **P. Truong**
PWGSC Regional Manager, Architectural and Engineering Services/ Gestionnaire régionale, Services d'architecture et de génie, TPSGC: **P. Paul**

Drawing title/Titre du dessin: **MAIN POWER HOUSE (BLDG. 115) DECONSTRUCTION PLAN**

Project No./No. du projet: R.069376.001	Sheet/Feuille: E-101	Revision no./La Révision no.: 7 OF 22
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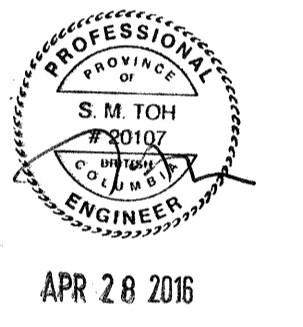




1 MAIN POWER HOUSE (BLDG. 115) - FLOOR PLAN
1:25

- MAIN POWERHOUSE GENERAL NOTES:**
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ROOM AND EQUIPMENT LOCATIONS, AS WELL AS CONDUIT ROUTING ON SITE. DO NOT USE DRAWING SCALE FOR MATERIALS TAKE-OFF AND EXACT CONDUIT ENTRY POINTS.
 - COORDINATE NEW ELECTRICAL INSTALLATION WITH EXISTING CEILING PIPING, BUSDUCT, FIRE ALARM, AND LUMINAIRES.

MAIN POWER HOUSE LEGEND	
	EXISTING TO REMAIN
	EXISTING TO BE REMOVED
	NEW



Revision/	Description/Description	Date/Date
0	ISSUED FOR TENDER	04/20/16

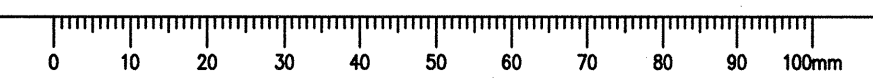
Client/client: **CORRECTIONAL SERVICE CANADA**

Project Title/Titre du projet: **METCHOSIN, BC**
WILLIAM HEAD INSTITUTION ELECTRICAL HIGH VOLTAGE UPGRADE (PHASE 2 OF 2)

Consultant Signature Box Only
Designed by/Concept par: **PN**
Drawn by/Dessiné par: **PN**
PWGSC Project Manager/Administrateur de Projets TPSGC: **P. Truong**
PWGSC Regional Manager, Architectural and Engineering Services / Gestionnaire régionale, Services d'architecture et de génie, TPSGC: **P. Paul**

Drawing Title/Titre du dessin: **MAIN POWER HOUSE (BLDG. 115) FLOOR PLAN**

Project No./No. du projet	Sheet/Feuille	Revision no./No. de Révision
R.069376.001	E-102	
	8 OF 22	

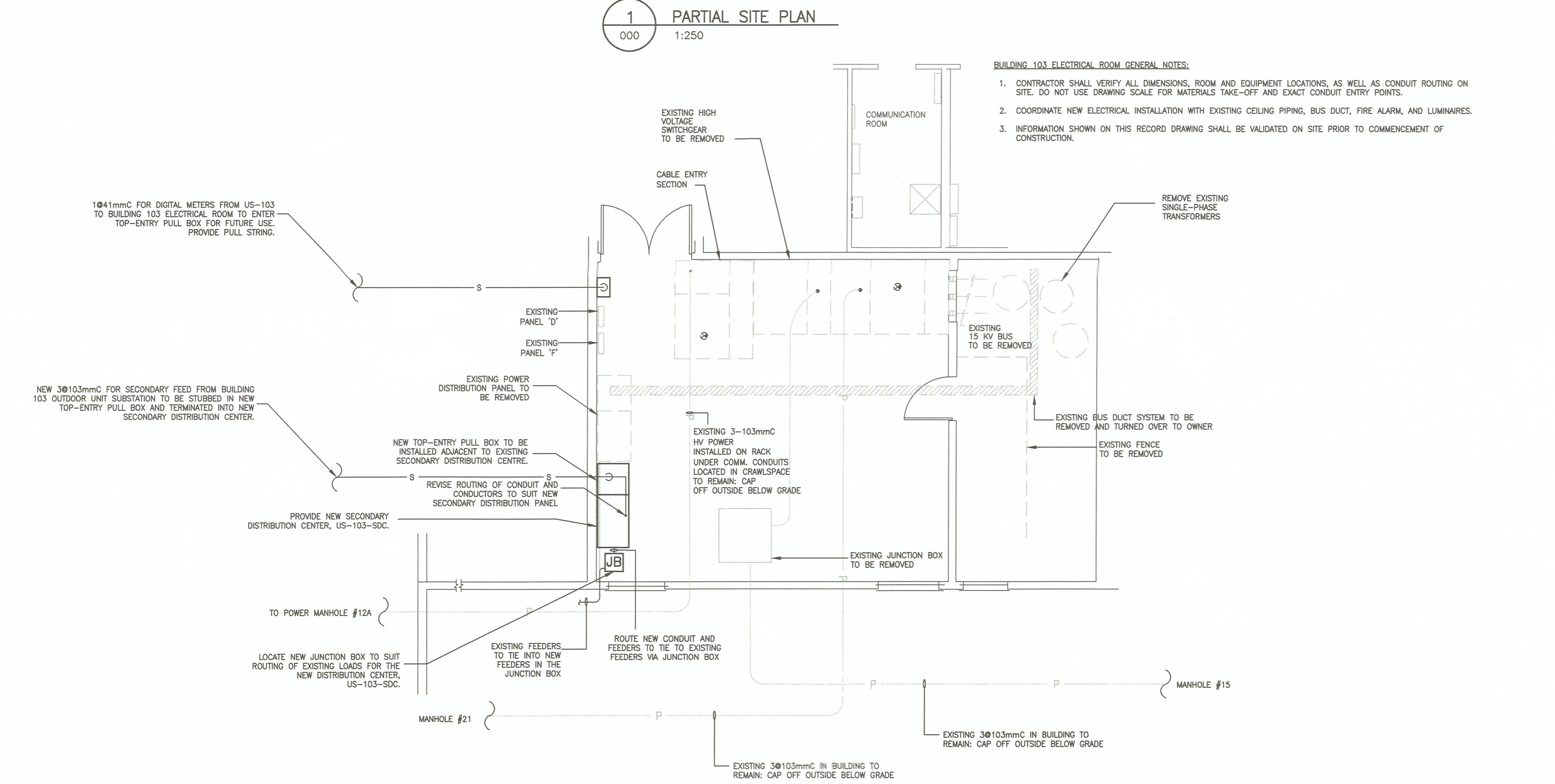




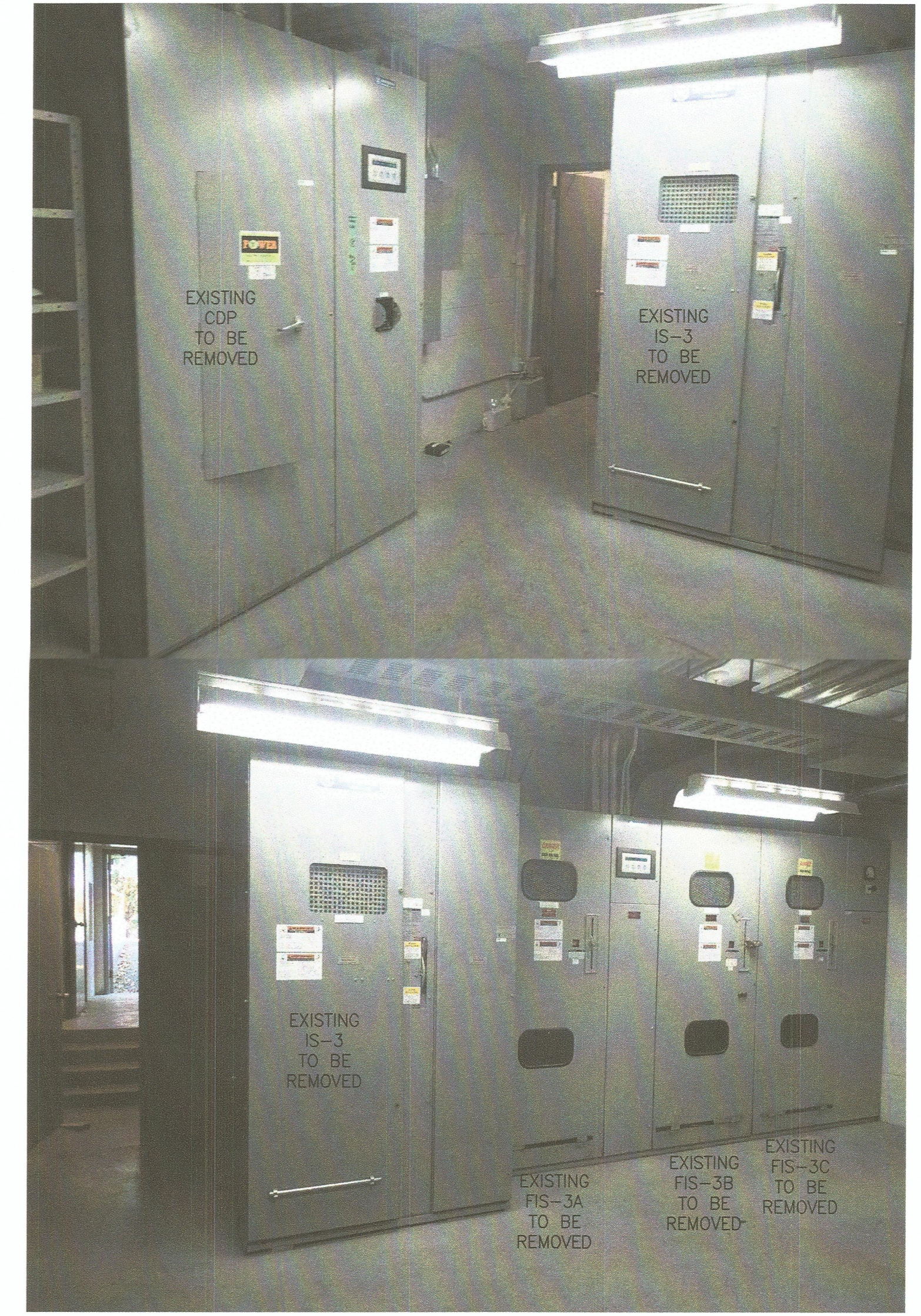
PARTIAL SITE PLAN LEGEND	
	PRIMARY U/G LINE - NEW
	PRIMARY U/G LINE - EXISTING TO REMAIN
	PRIMARY U/G LINE - TO BE REMOVED
	SECONDARY U/G LINE - NEW
	SECONDARY U/G LINE - EXISTING TO REMAIN
	SECONDARY U/G LINE - TO BE REMOVED
	COMMUNICATION U/G LINE - EXISTING

- SITE PLAN KEYNOTES:**
- REMOVE, REPAIR, MAKE GOOD, AND RESTORE 135 SQUARE METERS OF ASPHALT PAVEMENT, INCLUDING BASE AND SUB-BASE GRAVELS, TO MATCH OR EXCEED THE EXISTING THICKNESS. FINAL CONDITION TO MATCH QUALITY OF EXISTING CONDITION IN AREA.
 - CAP OFF AND MARK EXISTING CONDUITS BELOW GRADE.

- GENERAL NOTES:**
- REFER TO DRAWING E-204 FOR BUILDING 103 PHASING NOTES.
 - REFER TO DRAWING E-202 TO LOCATE PRIMARY CONDUCTORS BEING REMOVED OR INSTALLED.



- BUILDING 103 ELECTRICAL ROOM GENERAL NOTES:**
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ROOM AND EQUIPMENT LOCATIONS, AS WELL AS CONDUIT ROUTING ON SITE. DO NOT USE DRAWING SCALE FOR MATERIALS TAKE-OFF AND EXACT CONDUIT ENTRY POINTS.
 - COORDINATE NEW ELECTRICAL INSTALLATION WITH EXISTING CEILING PIPING, BUS DUCT, FIRE ALARM, AND LUMINAIRES.
 - INFORMATION SHOWN ON THIS RECORD DRAWING SHALL BE VALIDATED ON SITE PRIOR TO COMMENCEMENT OF CONSTRUCTION.



3 BUILDING 103 - EXISTING ELECTRICAL ROOM
1:50

- EXISTING ELECTRICAL ROOM NOTES:**
- REFER TO DRAWING E-104 FOR ADDITIONAL DETAILS

2 EXISTING BUILDING 103 - ELECTRICAL AND COMMUNICATION ROOM DETAIL
1:50



Revision/Description	Date
0 ISSUED FOR TENDER	04/20/16

CORRECTIONAL SERVICE CANADA

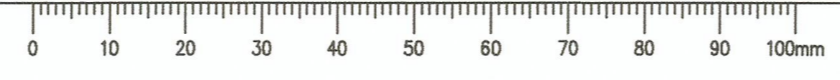
Project Title/Titre du projet
METCHOSIN, BC

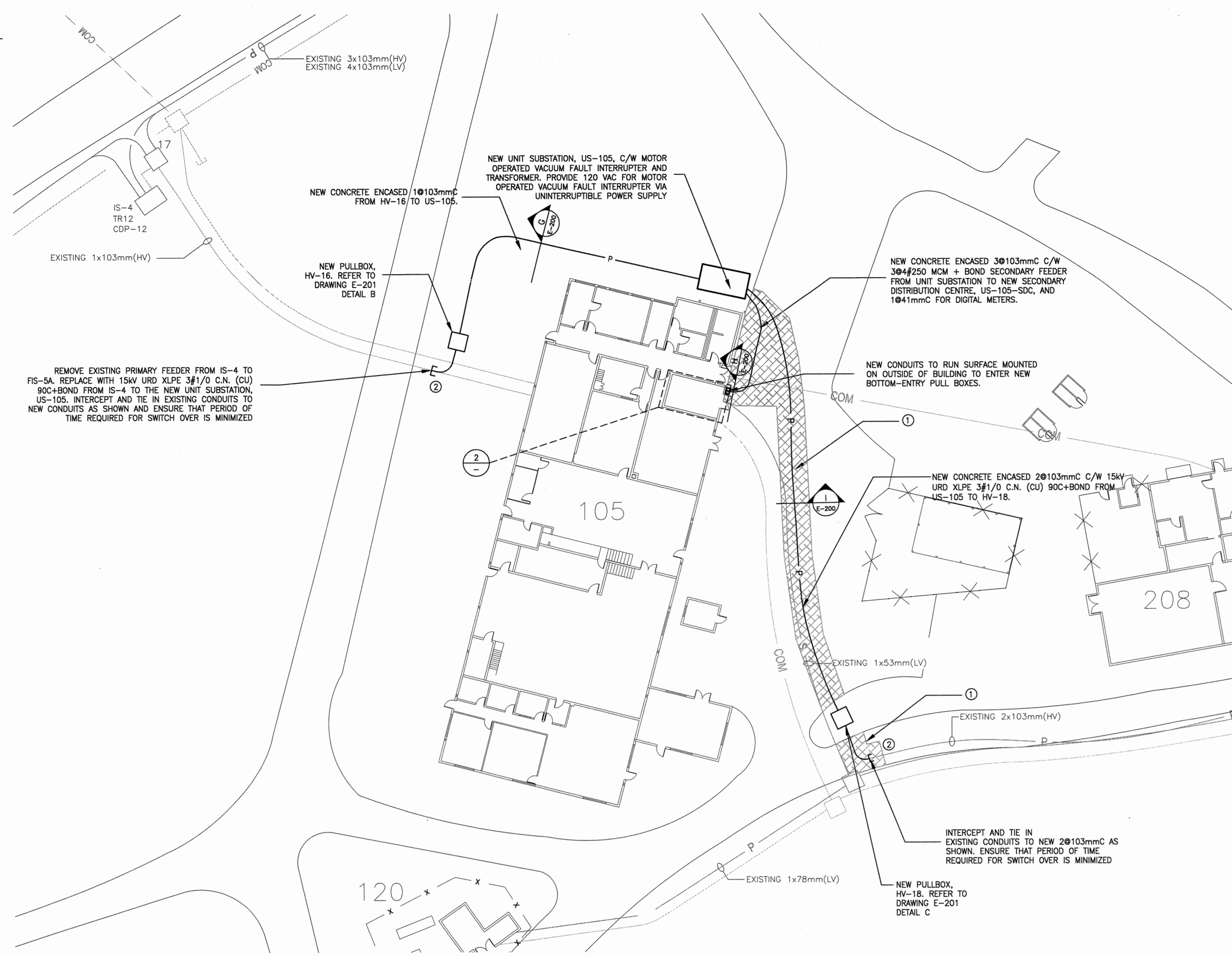
**WILLIAM HEAD INSTITUTION
ELECTRICAL HIGH VOLTAGE
UPGRADE (PHASE 2 OF 2)**

Designed by/Concept par
PN
Drawn by/Designé par
PN
PWGSC Project Manager/Administrateur de Projets TPSSC
P. Truong
PWGSC Regional Manager, Architectural and Engineering Services/
Gestionnaire régionale, Services d'architecture et de génie, TPSSC
P. Paul

Drawing Title/Titre du dessin
**BUILDING 103
PARTIAL SITE AND FLOOR PLANS**

Project No./No. du projet R.069376.001	Sheet/Feuille E-103	Revision no./No. Révision 9 OF 22
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PARTIAL SITE PLAN LEGEND	
— P —	PRIMARY U/G LINE - NEW
— P —	PRIMARY U/G LINE - EXISTING TO REMAIN
— P —	PRIMARY U/G LINE - TO BE REMOVED
— S —	SECONDARY U/G LINE - NEW
— S —	SECONDARY U/G LINE - EXISTING TO REMAIN
— S —	SECONDARY U/G LINE - TO BE REMOVED
— COM —	COMMUNICATION U/G LINE - EXISTING

- SITE PLAN KEYNOTES:**
- REMOVE, REPAIR, MAKE GOOD, AND RESTORE 200 SQUARE METERS OF ASPHALT PAVEMENT, INCLUDING BASE AND SUB BASE GRANULES TO MATCH OR EXCEED THE EXISTING THICKNESS. FINAL CONDITION TO MATCH QUALITY OF EXISTING CONDITION IN AREA.
 - CAP OFF AND MARK EXISTING CONDUITS BELOW GRADE.
- GENERAL NOTES:**
- REFER TO DRAWING E-205 FOR BUILDING 105 PHASING NOTES.
 - REFER TO DRAWING E-202 TO LOCATE PRIMARY CONDUCTORS BEING REMOVED OR INSTALLED.

REMOVE EXISTING PRIMARY FEEDER FROM IS-4 TO FS-5A. REPLACE WITH 15kV URD XLPE 3#1/0 C.N. (CU) 90C-BOND FROM IS-4 TO THE NEW UNIT SUBSTATION. US-105. INTERCEPT AND TIE IN EXISTING CONDUITS TO NEW CONDUITS AS SHOWN AND ENSURE THAT PERIOD OF TIME REQUIRED FOR SWITCH OVER IS MINIMIZED

NEW UNIT SUBSTATION, US-105, C/W MOTOR OPERATED VACUUM FAULT INTERRUPTER AND TRANSFORMER. PROVIDE 120 VAC FOR MOTOR OPERATED VACUUM FAULT INTERRUPTER VIA UNINTERRUPTIBLE POWER SUPPLY

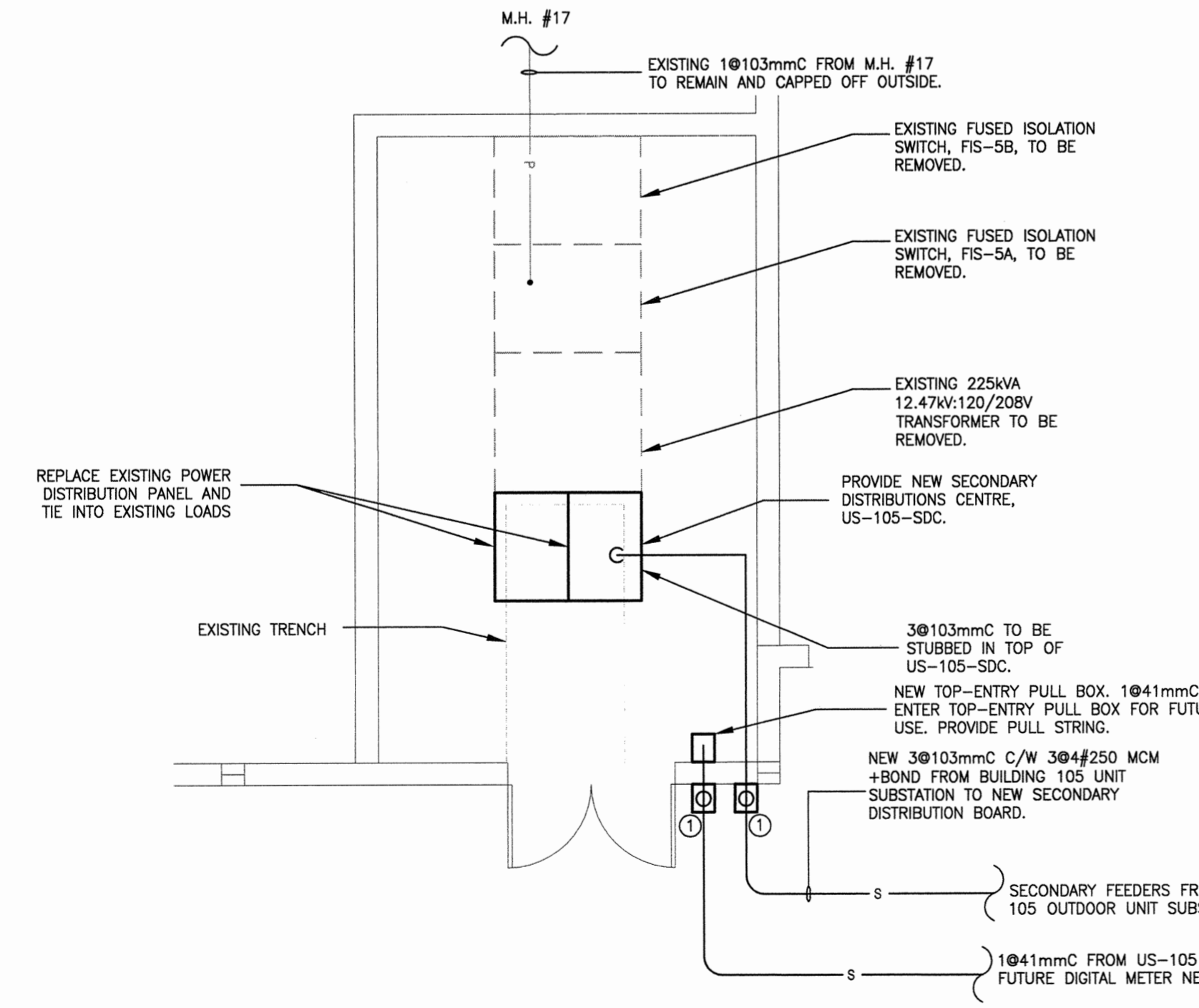
NEW CONCRETE ENCASED 3#103mm C/W 3#4#250 MCM + BOND SECONDARY FEEDER FROM UNIT SUBSTATION TO NEW SECONDARY DISTRIBUTION CENTRE, US-105-SOC, AND 1#41mmC FOR DIGITAL METERS.

NEW CONDUITS TO RUN SURFACE MOUNTED ON OUTSIDE OF BUILDING TO ENTER NEW BOTTOM-ENTRY PULL BOXES.

NEW CONCRETE ENCASED 2#103mmC C/W 15kV URD XLPE 3#1/0 C.N. (CU) 90C-BOND FROM US-105 TO HV-18.

INTERCEPT AND TIE IN EXISTING CONDUITS TO NEW 2#103mmC AS SHOWN. ENSURE THAT PERIOD OF TIME REQUIRED FOR SWITCH OVER IS MINIMIZED

1 PARTIAL SITE PLAN
000 1:300



- ELECTRICAL ROOM NOTES:**
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ROOM AND EQUIPMENT LOCATIONS, AS WELL AS CONDUIT ROUTING ON SITE. DO NOT USE DRAWING SCALE FOR MATERIALS TAKE-OFF AND EXACT CONDUIT ENTRY POINTS.
 - COORDINATE NEW ELECTRICAL INSTALLATION WITH EXISTING CEILING PIPING, BUSDUCT, FIRE ALARM, AND LUMINAIRES.

BUILDING 105 ELECTRICAL ROOM KEYNOTES:

- NEW CONDUITS FROM UNIT SUBSTATION TO STUB UP FROM GRADE AND RUN SURFACE MOUNTED ON OUTSIDE OF BUILDING INTO NEW BOTTOM-ENTRY PULL BOX AND STRAIGHT THROUGH OPPOSITE END OF PULL BOX INTO THE BUILDING AT HIGH LEVEL.

2 EXISTING BUILDING 105 - ELECTRICAL ROOM DETAIL
1:50



Revision/Revision	Description/Description	Date/Date
0	ISSUED FOR TENDER	04/20/16

CORRECTIONAL SERVICE CANADA

Project title/Titre du projet
METCHOSIN, BC

**WILLIAM HEAD INSTITUTION
ELECTRICAL HIGH VOLTAGE
UPGRADE (PHASE 2 OF 2)**

Consultant Signature Box Only

Designed by/Concept par
PN

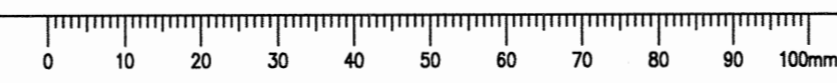
Drawn by/Dessiné par
PN

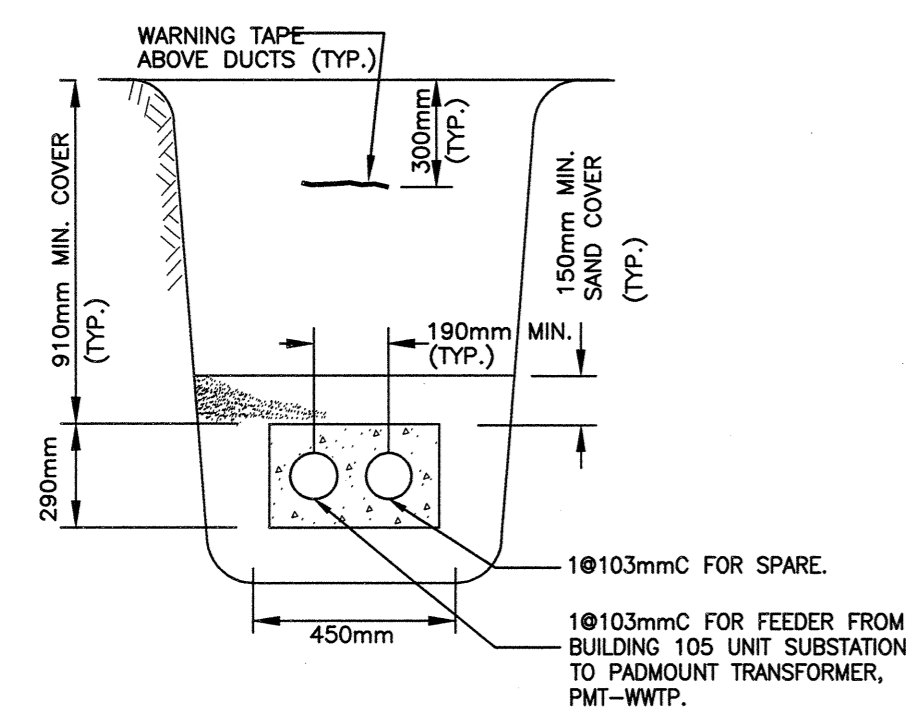
PWSSC Project Manager/Administrateur de Projets TPSSC
P. Truong

PWSSC, Regional Manager, Architectural and Engineering Services/
Gestionnaire régionale, Services d'architecture et d'ingénierie, TPSSC
P. Paul

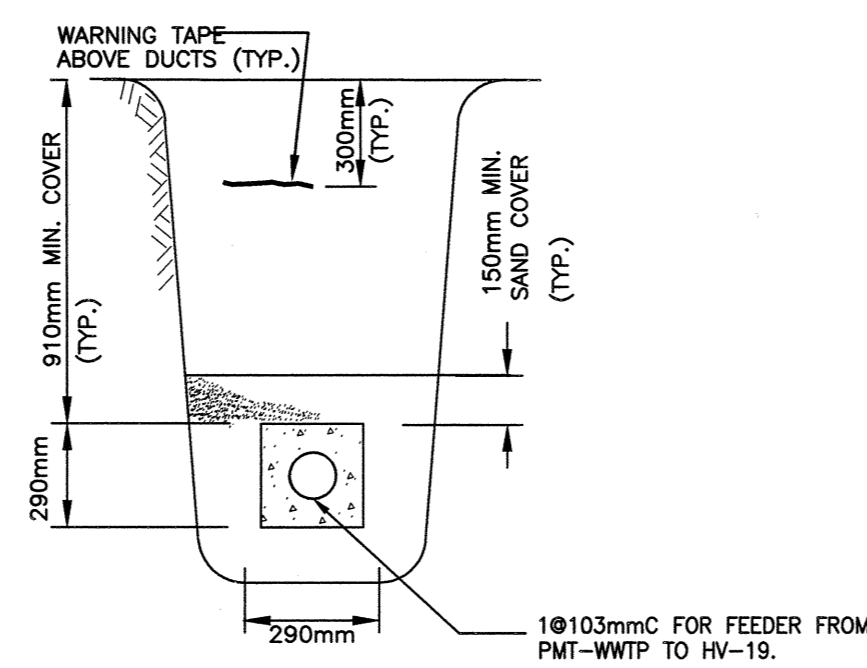
Drawing title/Titre du dessin
**BUILDING 105
PARTIAL SITE AND FLOOR PLANS**

Project No./No. du projet	Sheet/Feuille	Revision no./ La Révision no.
R.069376.001	E-105	
	11	22

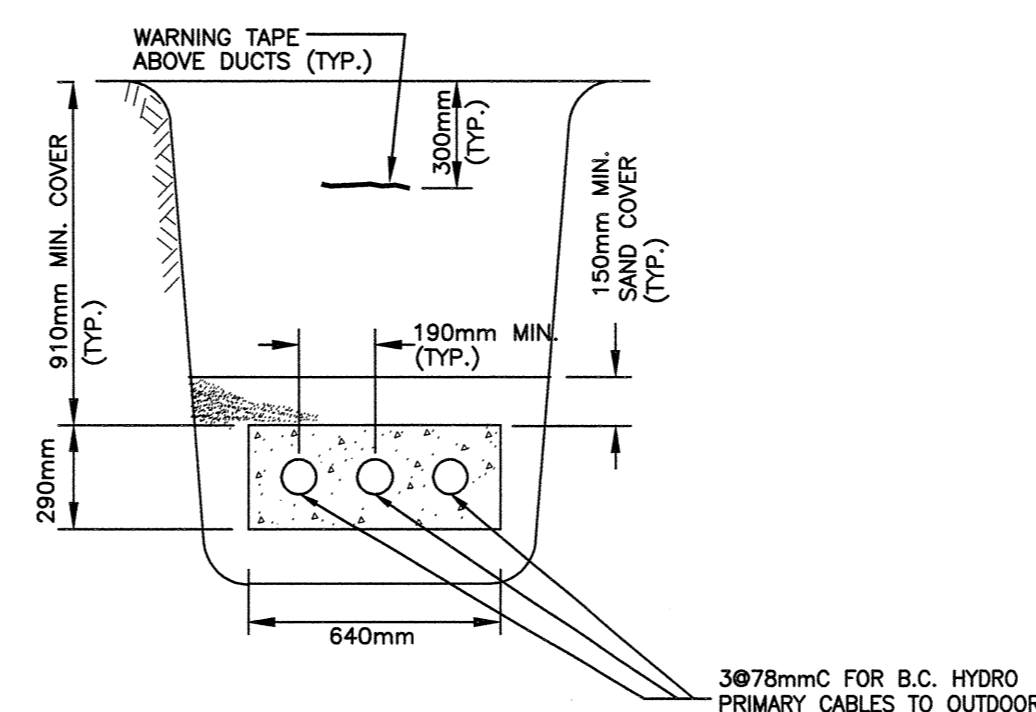




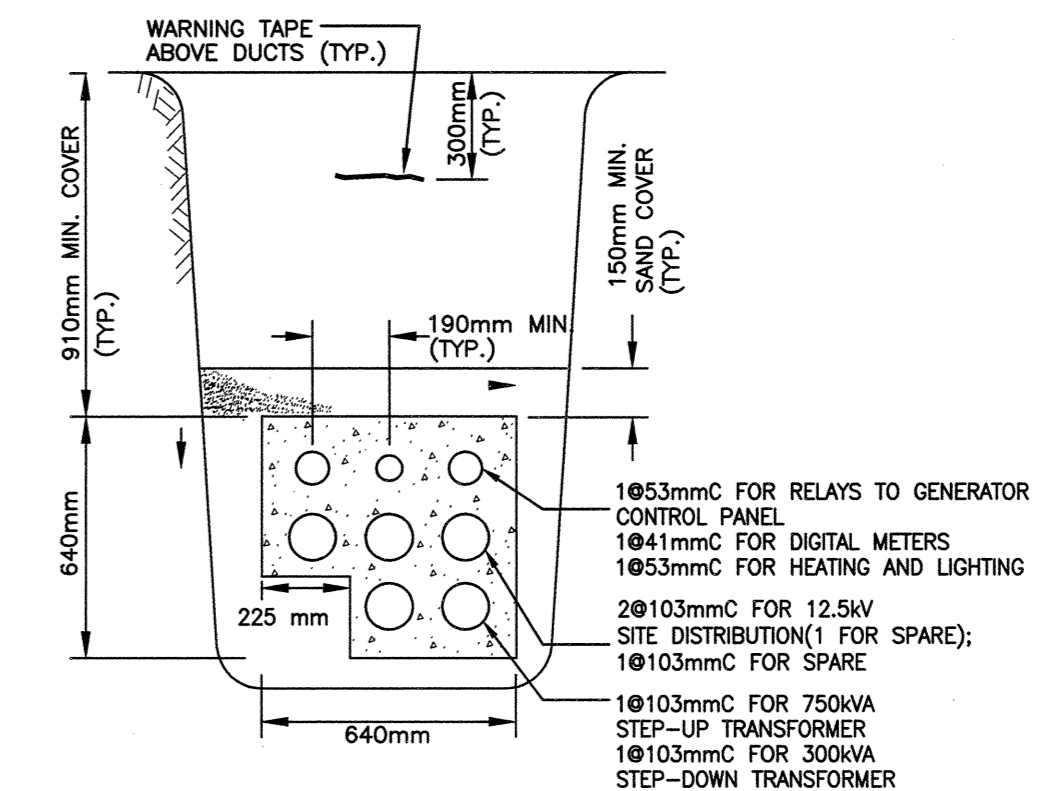
A TRENCH SECTION DETAIL – 105 UNIT SUBSTATION TO PMT-WWTP
E-004 N.T.S.



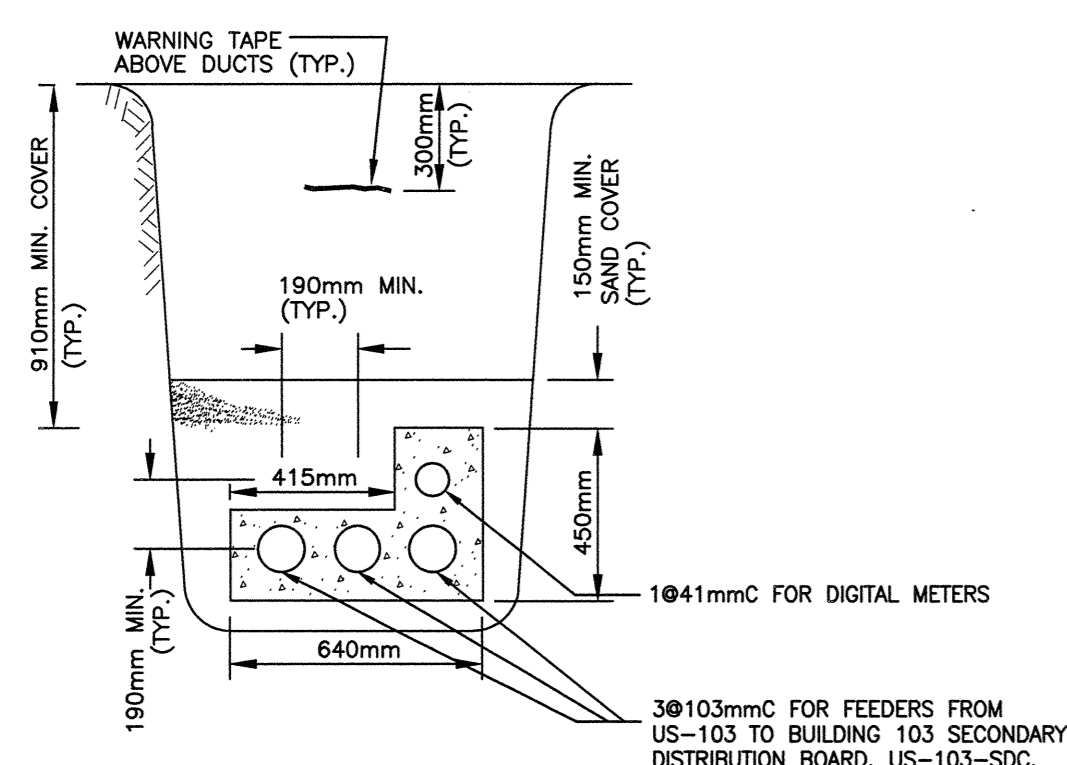
B TRENCH SECTION DETAIL – PMT-WWTP TO HV-19
E-004 N.T.S.



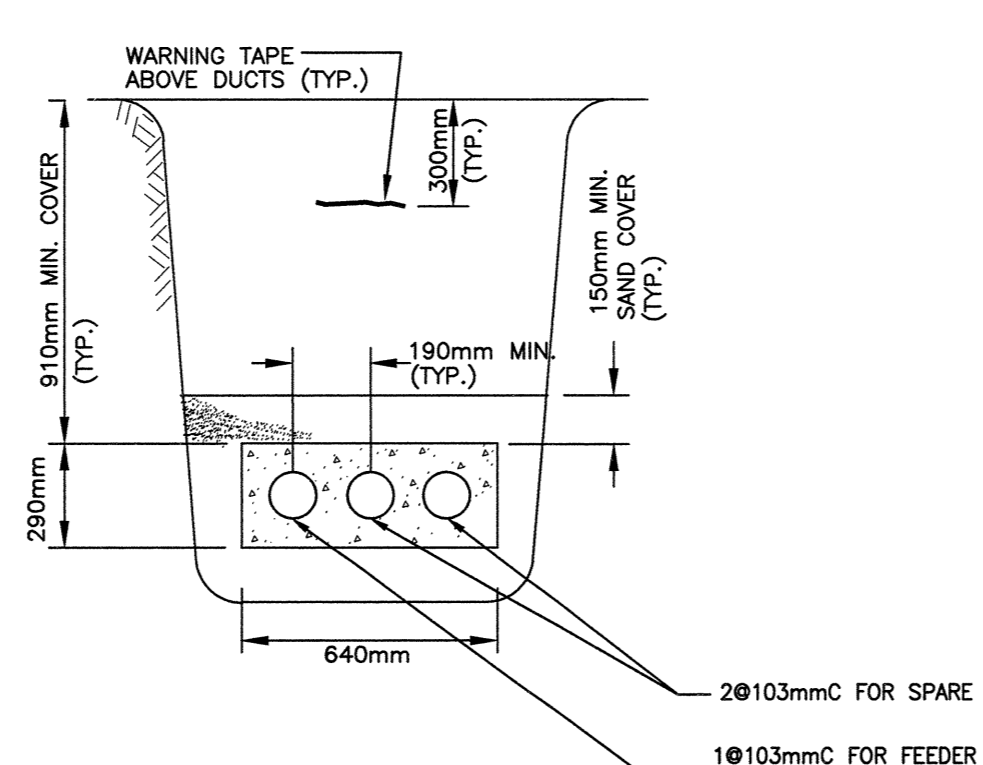
C TRENCH SECTION DETAIL – B.C. HYDRO SERVICE TO US-1
E-100 N.T.S.



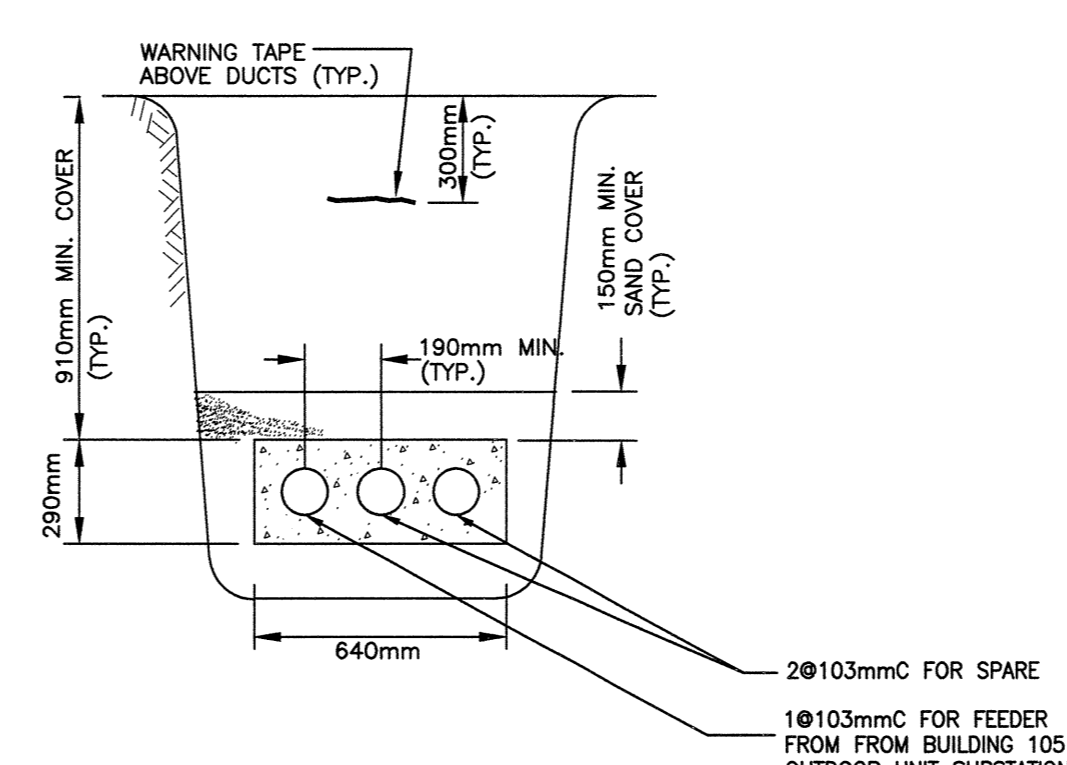
D TRENCH SECTION DETAIL – US-1 TO BUILDING 115
E-100 N.T.S.



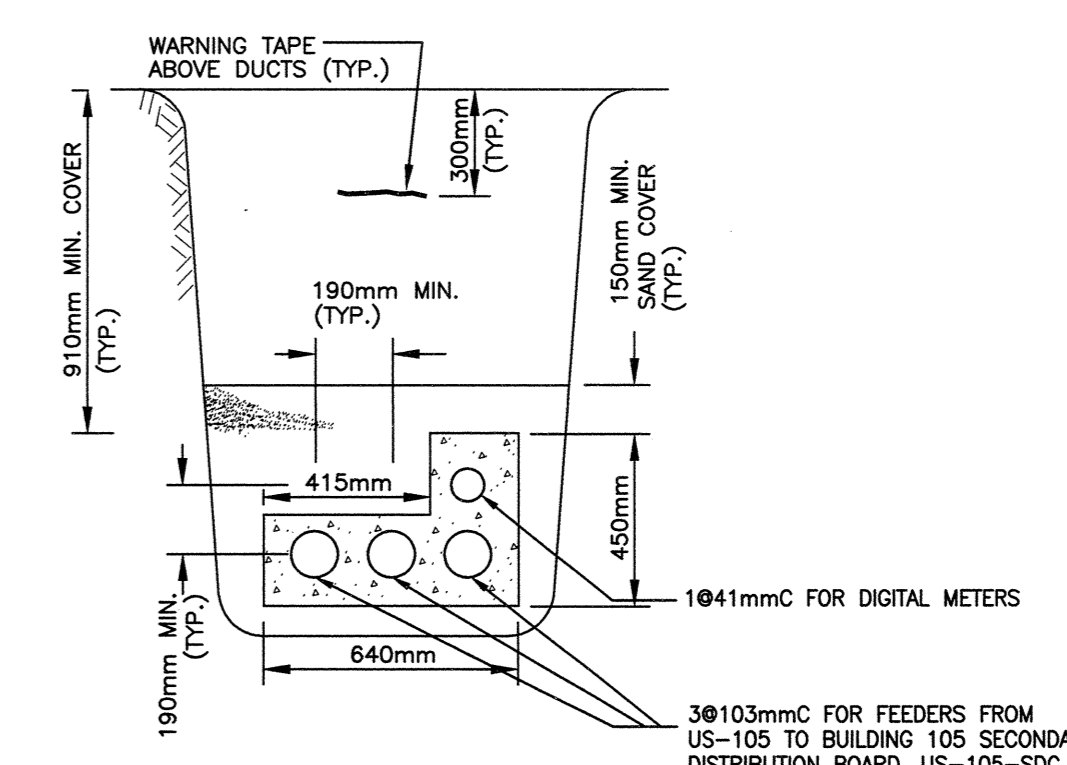
E TRENCH SECTION DETAIL – US-103 TO BUILDING 103
E-103 N.T.S.



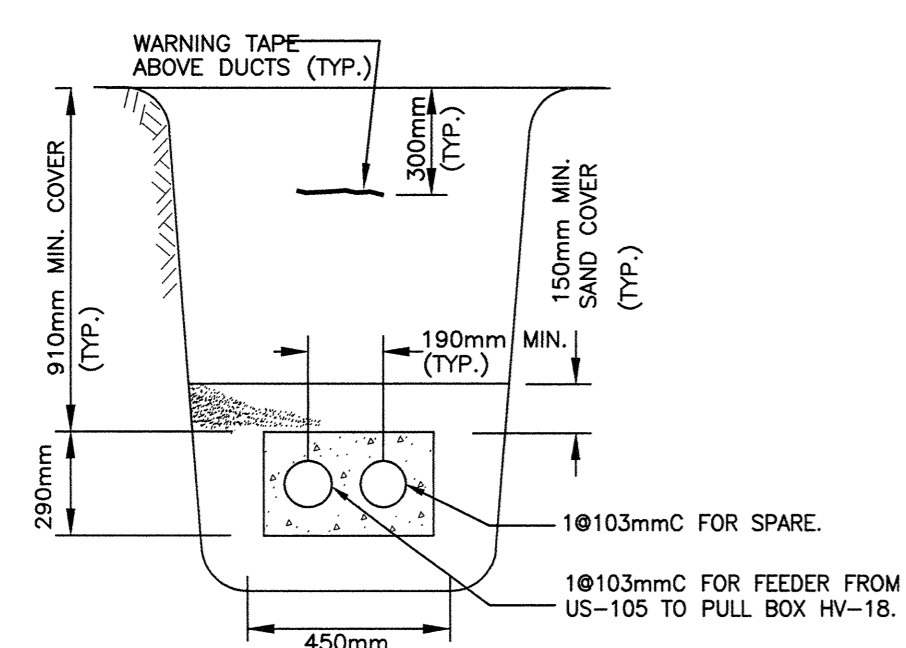
F TRENCH SECTION DETAIL – US-103 TO HV-14
E-103 N.T.S.



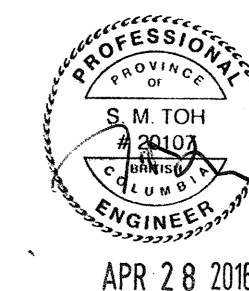
G TRENCH SECTION DETAIL – US-105 TO HV-16
E-105 N.T.S.



H TRENCH SECTION DETAIL – US-105 TO BUILDING 105
E-105 N.T.S.



I TRENCH SECTION DETAIL – US-4 TO HV-18
E-105 N.T.S.



Revision/Revision	Description/Description	Date/Date
0	ISSUED FOR TENDER	04/20/16

Client/client

CORRECTIONAL SERVICE CANADA

Project title/Titre du projet
METCHOSIN, BC

WILLIAM HEAD INSTITUTION ELECTRICAL HIGH VOLTAGE UPGRADE (PHASE 2 OF 2)

Consultant Signature Box Only

Designed by/Concept par
PN

Drawn by/Dessiné par
PN

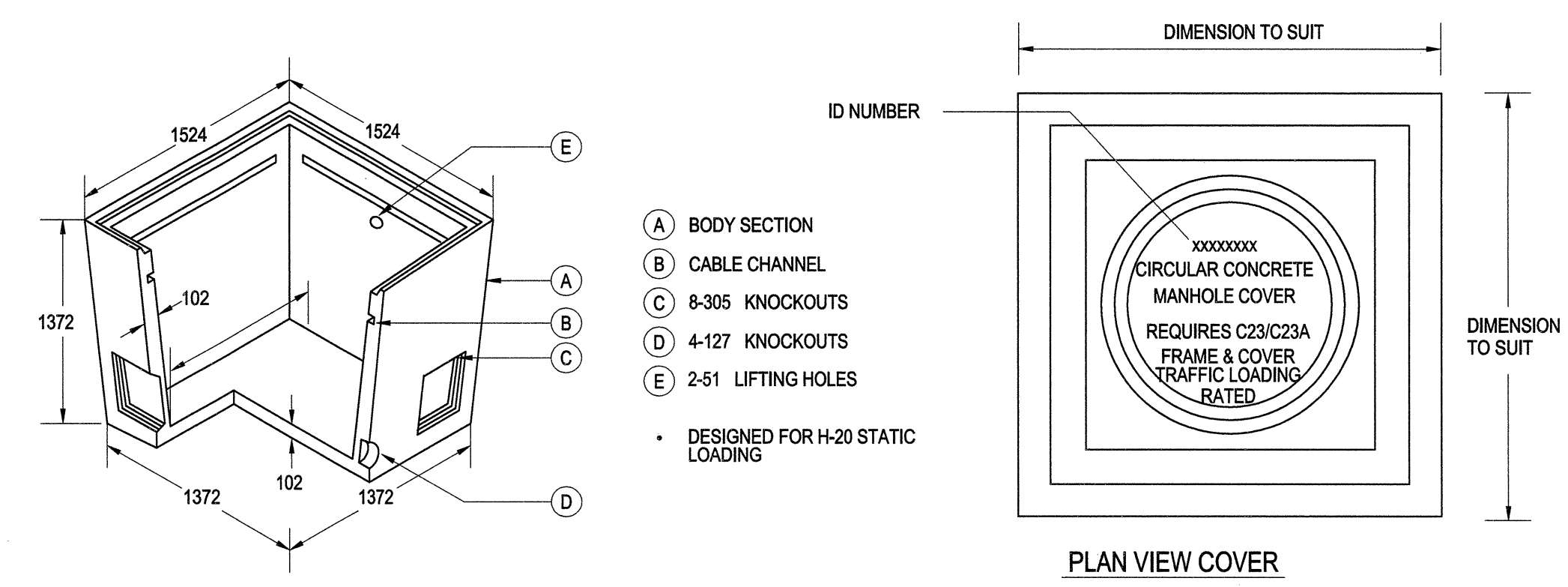
PWGSC Project Manager/Administrateur de Projets TP50C
P. Truong

PWSSC, Regional Manager, Architectural and Engineering Services/ Gestionnaire régionale, Services d'architecture et de génie, TP50C
P. Paul

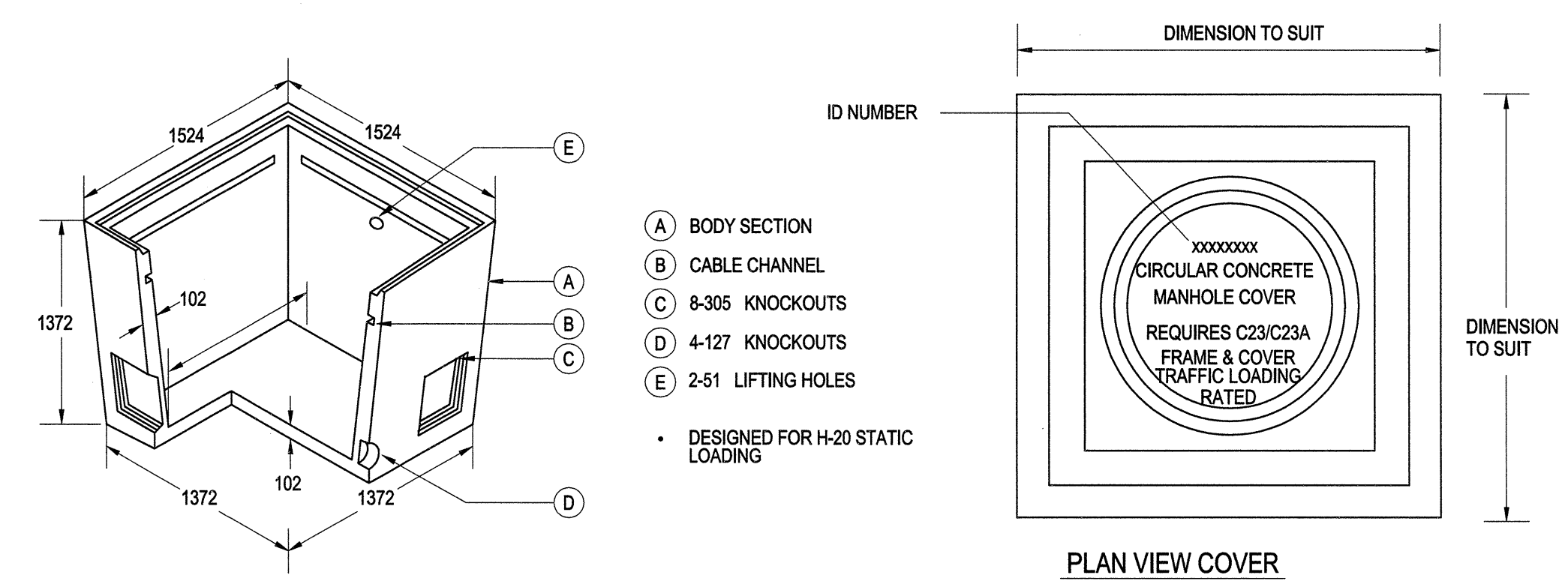
Drawing title/Titre du dessin
ELECTRICAL DETAILS

Project No./No. du projet	Sheet/Feuille	Revision no./La Révision no.
R.069376.001	E-200	

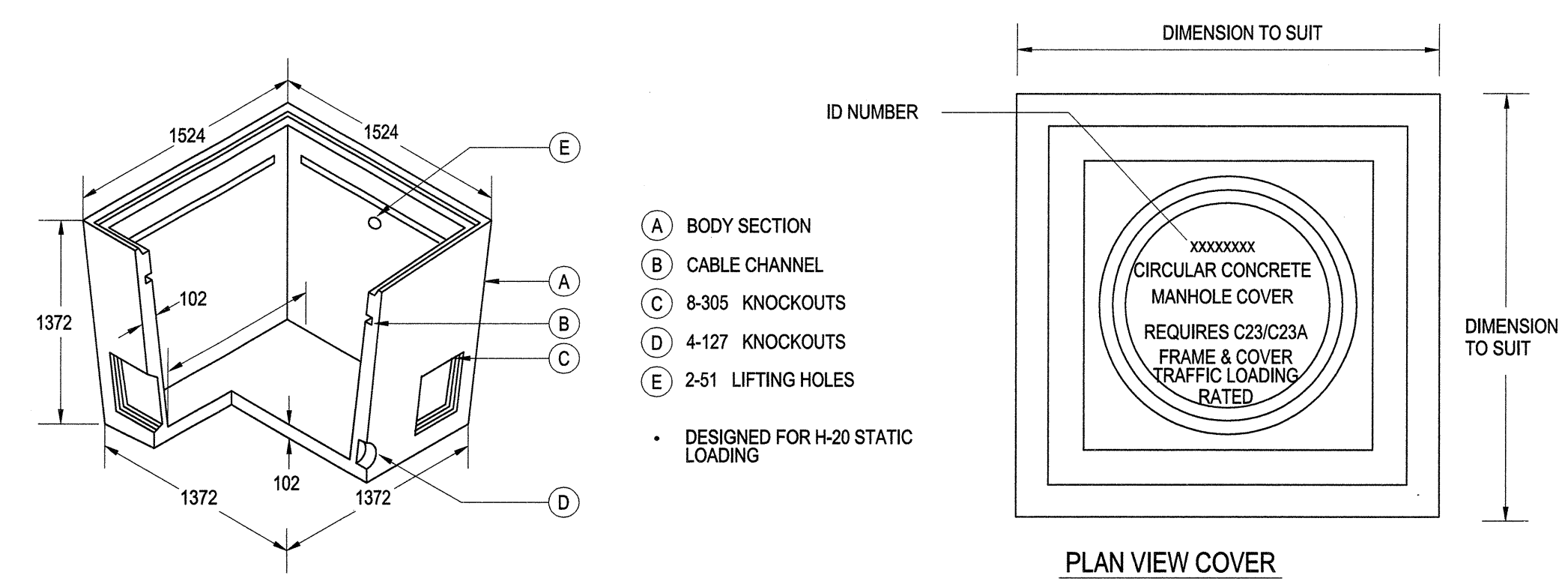




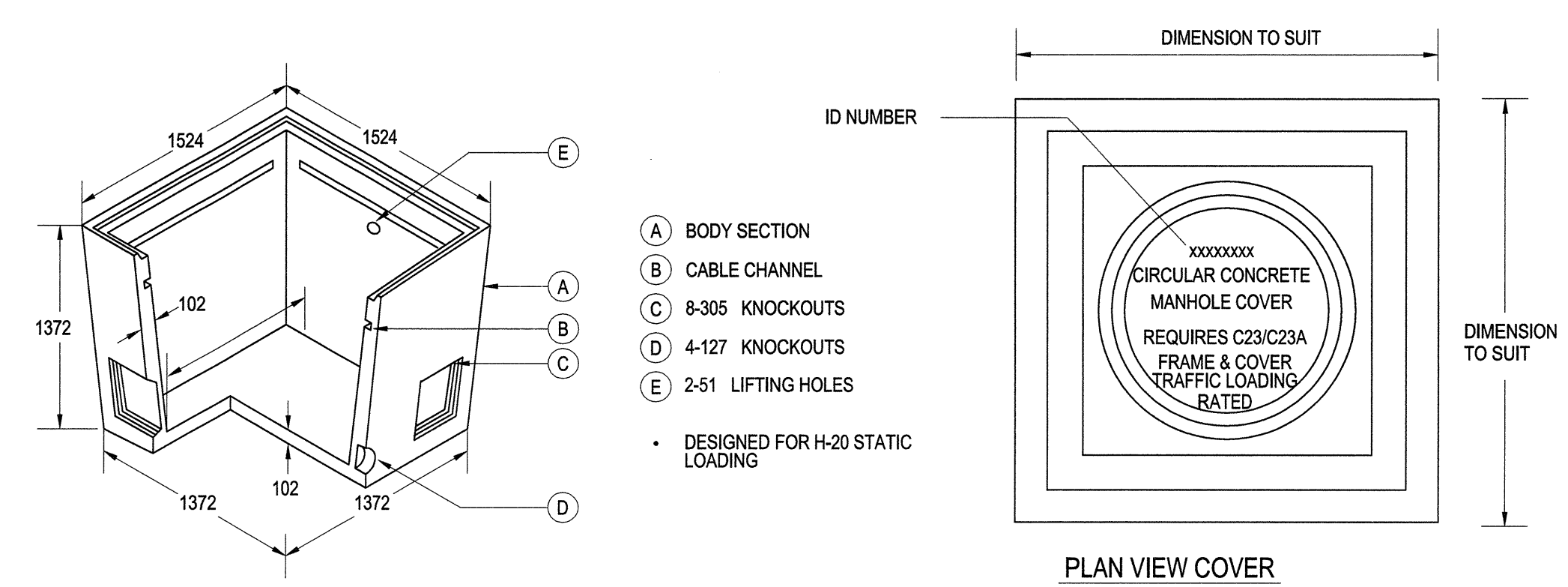
A UNDERGROUND PULLBOX, HV-14
N.T.S.



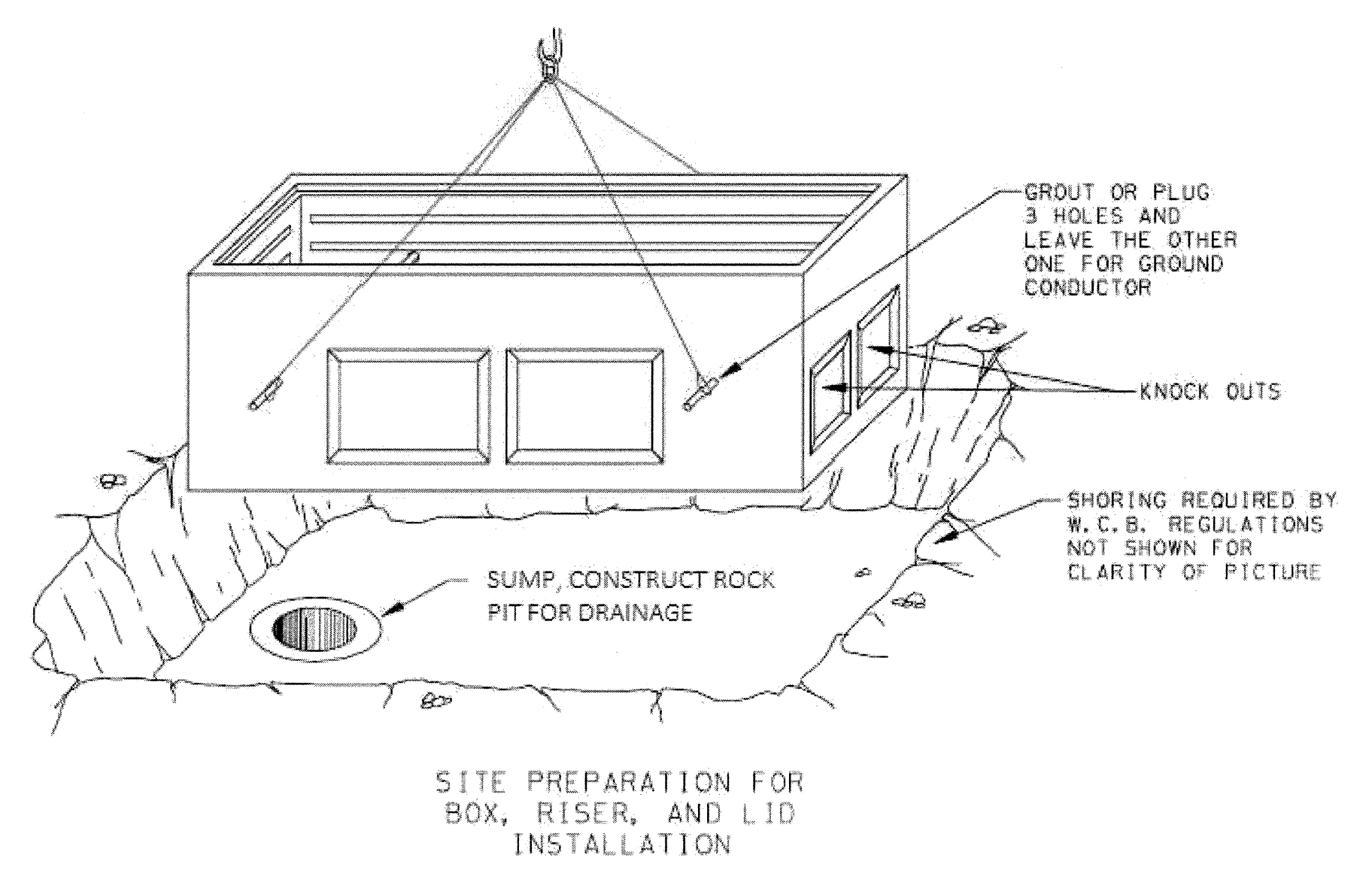
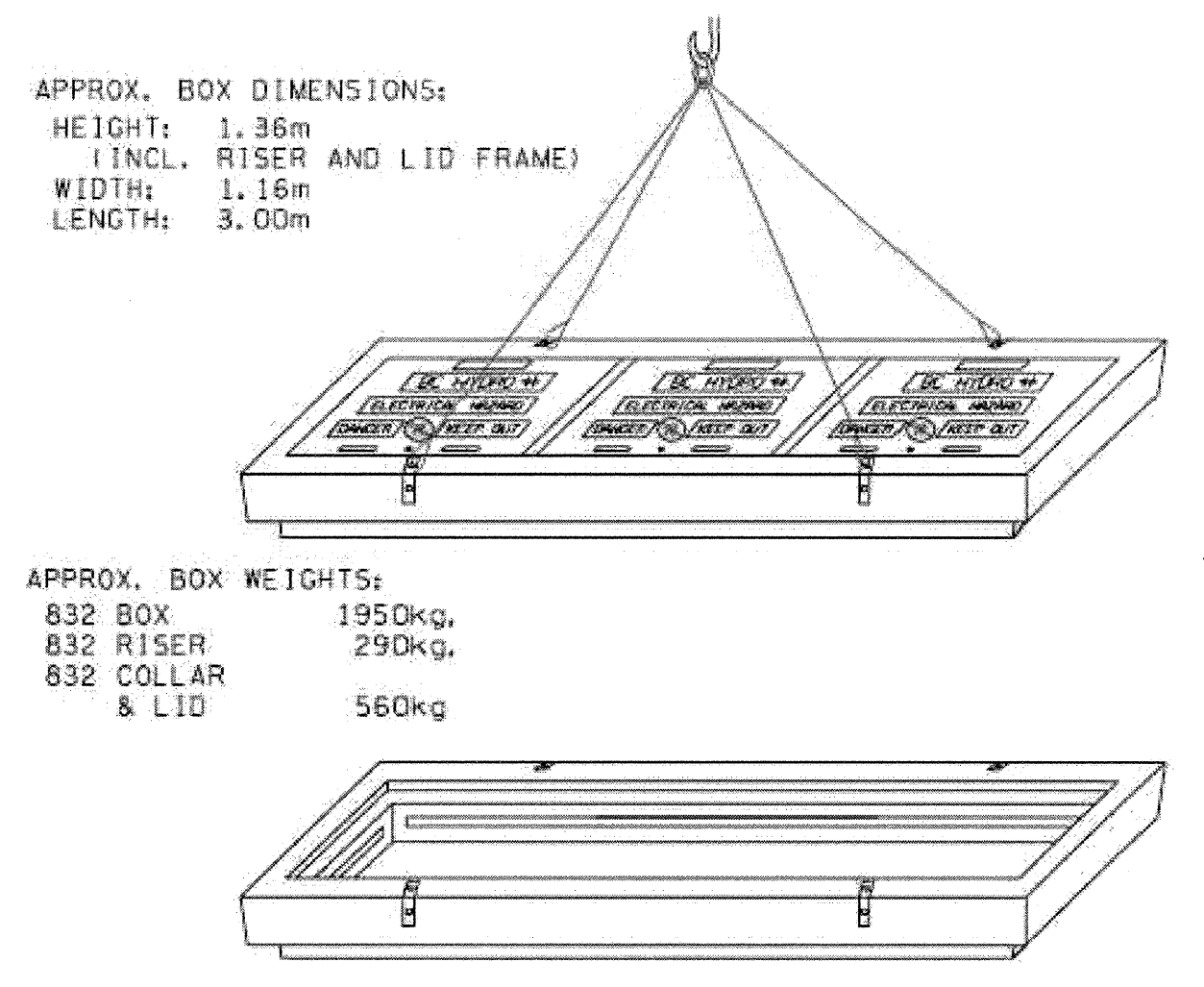
D UNDERGROUND PULLBOX, HV-19, 20, 21, 22
N.T.S.



C UNDERGROUND PULLBOX, HV-18
N.T.S.



B UNDERGROUND PULLBOX, HV-16
N.T.S.



E 832 JUNCTION BOX - PB-BCH
N.T.S.

GENERAL NOTES:
1. WELD MANHOLE ID ON TOP OF LIDS



0	ISSUED FOR TENDER	04/20/16
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Revision/Description Date/Date

Client/client

CORRECTIONAL SERVICE CANADA

Project title/Titre du projet
METCHOSIN, BC

WILLIAM HEAD INSTITUTION ELECTRICAL HIGH VOLTAGE UPGRADE (PHASE 2 OF 2)

Consultant Signature Box Only

Designed by/Concept par
PN

Drawn by/Dessiné par
PN

PWOSC Project Manager/Administrateur de Projets TPSCC
P. Truong

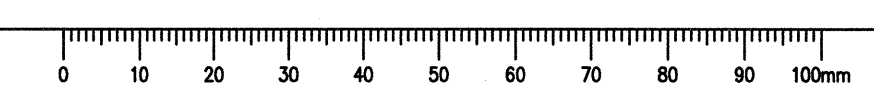
PWOSC, Regional Manager, Architectural and Engineering Services/
Gestionnaire régionale, Services d'architecture et de génie, TPSCC
P. Paul

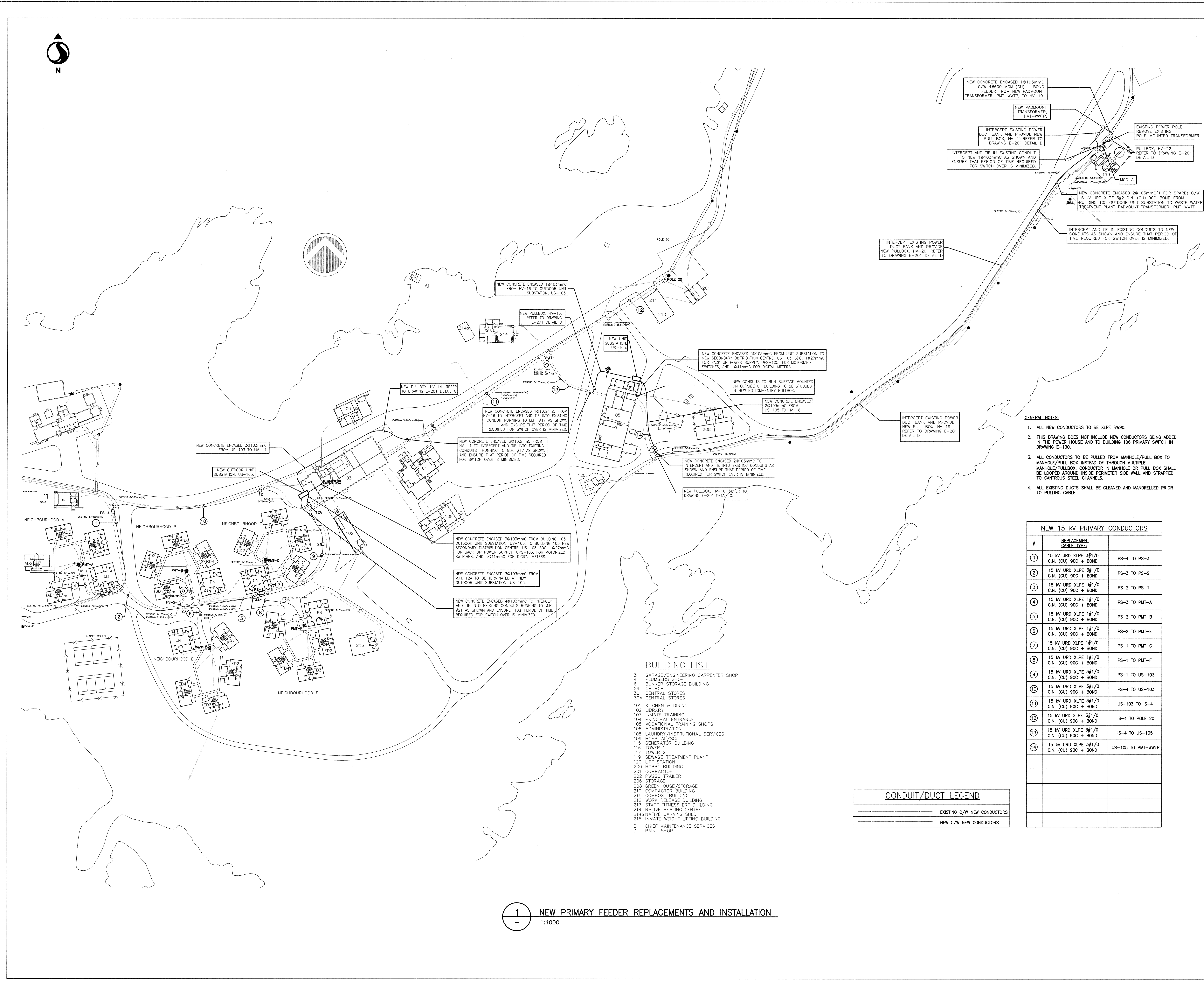
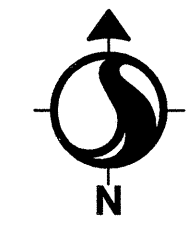
Drawing title/Titre du dessin
ELECTRICAL DETAILS

Project No./No. du projet
R.069376.001

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E-201

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1 NEW PRIMARY FEEDER REPLACEMENTS AND INSTALLATION
1:1000

NEW CONCRETE ENCASED 1Ø103mm² C/W #8@90 NEW (CU) + BOND FEEDER FROM NEW PADMOUNT TRANSFORMER, PMT-WWTP, TO HV-19.

NEW PADMOUNT TRANSFORMER PMT-WWTP.

EXISTING POWER POLE REMOVE EXISTING POLE-MOUNTED TRANSFORMER.

PULLBOX, HV-22, REFER TO DRAWING E-201 DETAIL D.

NEW CONCRETE ENCASED 2Ø103mm² (FOR SPARE) C/W 15 kV URD XLPE 3Ø1/0 C.N. (CU) 90C+ BOND FROM BUILDING 105 OUTDOOR UNIT SUBSTATION TO WASTE WATER TREATMENT PLANT PADMOUNT TRANSFORMER, PMT-WWTP.

INTERCEPT AND TIE IN EXISTING CONDUITS TO NEW CONDUITS AS SHOWN AND ENSURE THAT PERIOD OF TIME REQUIRED FOR SWITCH OVER IS MINIMIZED.

INTERCEPT EXISTING POWER DUCT BANK AND PROVIDE NEW PULLBOX, HV-20, REFER TO DRAWING E-201 DETAIL D.

NEW CONCRETE ENCASED 1Ø103mm² FROM HV-16 TO OUTDOOR UNIT SUBSTATION, US-103.

NEW PULLBOX, HV-16, REFER TO DRAWING E-201 DETAIL B.

NEW UNIT SUBSTATION US-103.

NEW CONCRETE ENCASED 3Ø103mm² FROM UNIT SUBSTATION TO NEW SECONDARY DISTRIBUTION CENTRE, US-105-SDC, 1ØØ2mm² FOR BACK UP POWER SUPPLY, UPS-105, FOR MOTORIZED SWITCHES, AND 1ØØ4mm² FOR DIGITAL METERS.

NEW CONDUITS TO RUN SURFACE MOUNTED ON OUTSIDE OF BUILDING TO BE STUBBED IN NEW BOTTOM-ENTRY PULLBOX.

NEW CONCRETE ENCASED 2Ø103mm² FROM US-105 TO HV-18.

INTERCEPT EXISTING POWER DUCT BANK AND PROVIDE NEW PULLBOX, HV-19, REFER TO DRAWING E-201 DETAIL D.

NEW CONCRETE ENCASED 1Ø103mm² FROM HV-16 TO INTERCEPT AND TIE INTO EXISTING CONDUIT RUNNING TO M.H. #17 AS SHOWN AND ENSURE THAT PERIOD OF TIME REQUIRED FOR SWITCH OVER IS MINIMIZED.

NEW CONCRETE ENCASED 3Ø103mm² FROM HV-14 TO INTERCEPT AND TIE INTO EXISTING CONDUITS RUNNING TO M.H. #17 AS SHOWN AND ENSURE THAT PERIOD OF TIME REQUIRED FOR SWITCH OVER IS MINIMIZED.

NEW CONCRETE ENCASED 3Ø103mm² FROM BUILDING 103 OUTDOOR UNIT SUBSTATION, US-103, TO BUILDING 103 NEW SECONDARY DISTRIBUTION CENTRE, US-103-SDC, 1ØØ2mm² FOR BACK UP POWER SUPPLY, UPS-103, FOR MOTORIZED SWITCHES, AND 1ØØ4mm² FOR DIGITAL METERS.

NEW CONCRETE ENCASED 3Ø103mm² FROM M.H. 12A TO BE TERMINATED AT NEW OUTDOOR UNIT SUBSTATION, US-103.

NEW CONCRETE ENCASED 4Ø103mm² TO INTERCEPT AND TIE INTO EXISTING CONDUITS RUNNING TO M.H. #21 AS SHOWN AND ENSURE THAT PERIOD OF TIME REQUIRED FOR SWITCH OVER IS MINIMIZED.

NEW CONCRETE ENCASED 2Ø103mm² TO INTERCEPT AND TIE INTO EXISTING CONDUITS AS SHOWN AND ENSURE THAT PERIOD OF TIME REQUIRED FOR SWITCH OVER IS MINIMIZED.

NEW PULLBOX, HV-18, REFER TO DRAWING E-201 DETAIL C.

- GENERAL NOTES:**
- ALL NEW CONDUCTORS TO BE XLPE RW90.
 - THIS DRAWING DOES NOT INCLUDE NEW CONDUCTORS BEING ADDED IN THE POWER HOUSE AND TO BUILDING 106 PRIMARY SWITCH IN DRAWING E-100.
 - ALL CONDUCTORS TO BE PULLED FROM MANHOLE/PULL BOX TO MANHOLE/PULL BOX INSTEAD OF THROUGH MULTIPLE MANHOLE/PULLBOX. CONDUCTOR IN MANHOLE OR PULL BOX SHALL BE LOOPED AROUND INSIDE PERIMETER SIDE WALL AND STRAPPED TO CATWALK STEEL CHANNELS.
 - ALL EXISTING DUCTS SHALL BE CLEANED AND MANDEILLED PRIOR TO PULLING CABLE.

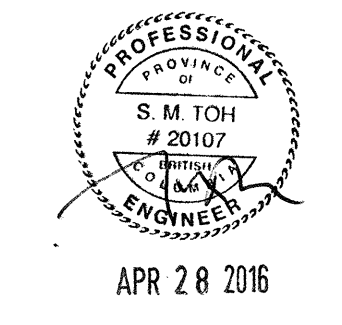
NEW 15 kV PRIMARY CONDUCTORS

#	REPLACEMENT CABLE TYPE	
1	15 kV URD XLPE 3Ø1/0 C.N. (CU) 90C + BOND	PS-4 TO PS-3
2	15 kV URD XLPE 3Ø1/0 C.N. (CU) 90C + BOND	PS-3 TO PS-2
3	15 kV URD XLPE 3Ø1/0 C.N. (CU) 90C + BOND	PS-2 TO PS-1
4	15 kV URD XLPE 1Ø1/0 C.N. (CU) 90C + BOND	PS-3 TO PMT-A
5	15 kV URD XLPE 1Ø1/0 C.N. (CU) 90C + BOND	PS-2 TO PMT-B
6	15 kV URD XLPE 1Ø1/0 C.N. (CU) 90C + BOND	PS-2 TO PMT-E
7	15 kV URD XLPE 1Ø1/0 C.N. (CU) 90C + BOND	PS-1 TO PMT-C
8	15 kV URD XLPE 1Ø1/0 C.N. (CU) 90C + BOND	PS-1 TO PMT-F
9	15 kV URD XLPE 3Ø1/0 C.N. (CU) 90C + BOND	PS-1 TO US-103
10	15 kV URD XLPE 3Ø1/0 C.N. (CU) 90C + BOND	PS-4 TO US-103
11	15 kV URD XLPE 3Ø1/0 C.N. (CU) 90C + BOND	US-103 TO IS-4
12	15 kV URD XLPE 3Ø1/0 C.N. (CU) 90C + BOND	IS-4 TO POLE 20
13	15 kV URD XLPE 3Ø1/0 C.N. (CU) 90C + BOND	IS-4 TO US-105
14	15 kV URD XLPE 3Ø1/0 C.N. (CU) 90C + BOND	US-105 TO PMT-WWTP

CONDUIT/DUCT LEGEND

---	EXISTING C/W NEW CONDUCTORS
---	NEW C/W NEW CONDUCTORS

- BUILDING LIST**
- 3 GARAGE/ENGINEERING CARPENTER SHOP
 - 4 PLUMBERS SHOP
 - 6 BUNKER STORAGE BUILDING
 - 29 CHURCH
 - 30 CENTRAL STORES
 - 30A CENTRAL STORES
 - 101 KITCHEN & DINING
 - 102 LIBRARY
 - 103 INMATE TRAINING
 - 104 PRINCIPAL ENTRANCE
 - 105 VOCATIONAL TRAINING SHOPS
 - 106 ADMINISTRATION
 - 108 LAUNDRY/INSTITUTIONAL SERVICES
 - 109 HOSPITAL/SQU
 - 115 GENERATOR BUILDING
 - 116 TOWER 1
 - 117 TOWER 2
 - 119 SEWAGE TREATMENT PLANT
 - 120 LIFT STATION
 - 200 HOBBY BUILDING
 - 201 COMPACTOR
 - 202 PWSC TRAILER
 - 206 STORAGE
 - 208 GREENHOUSE/STORAGE
 - 210 COMPACTOR BUILDING
 - 211 COMPOST BUILDING
 - 212 WORK RELEASE BUILDING
 - 213 STAFF FITNESS ERT BUILDING
 - 214 NATIVE HEALING CENTRE
 - 214a NATIVE CARVING SHED
 - 215 INMATE WEIGHT LIFTING BUILDING
 - B CHIEF MAINTENANCE SERVICES
 - D PAINT SHOP



0	ISSUED FOR TENDER	04/20/16
Revision/	Description/Description	Date/Date
Client/client		

CORRECTIONAL SERVICE CANADA

Project title/Titre du projet
METCHOSIN, BC

WILLIAM HEAD INSTITUTION ELECTRICAL HIGH VOLTAGE UPGRADE (PHASE 2 OF 2)

Consultant Signature Box Only

Designed by/Concept par
PN

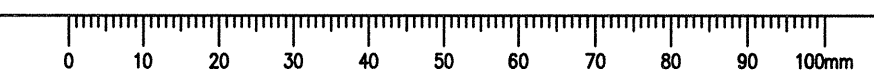
Drawn by/Dessiné par
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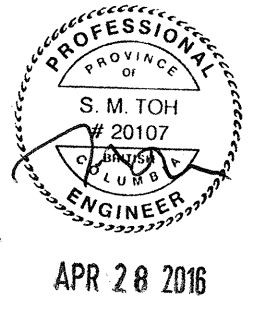
PWSSC Project Manager/Administrateur de Projets TPSSC
P. Truong

PWSSC Regional Manager, Architectural and Engineering Services/Gestionnaire régionale, Services d'architectural et de génie, TPSSC
P. Paul

Drawing title/Titre du dessin
UPDATED PARTIAL SITE PLAN: HIGH VOLTAGE FEEDER REPLACEMENT

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	15 of 22	





Revision/Revisions	Description/Description	Date/Date
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CORRECTIONAL SERVICE CANADA

Project Title/Titre du projet
METCHOSIN, BC

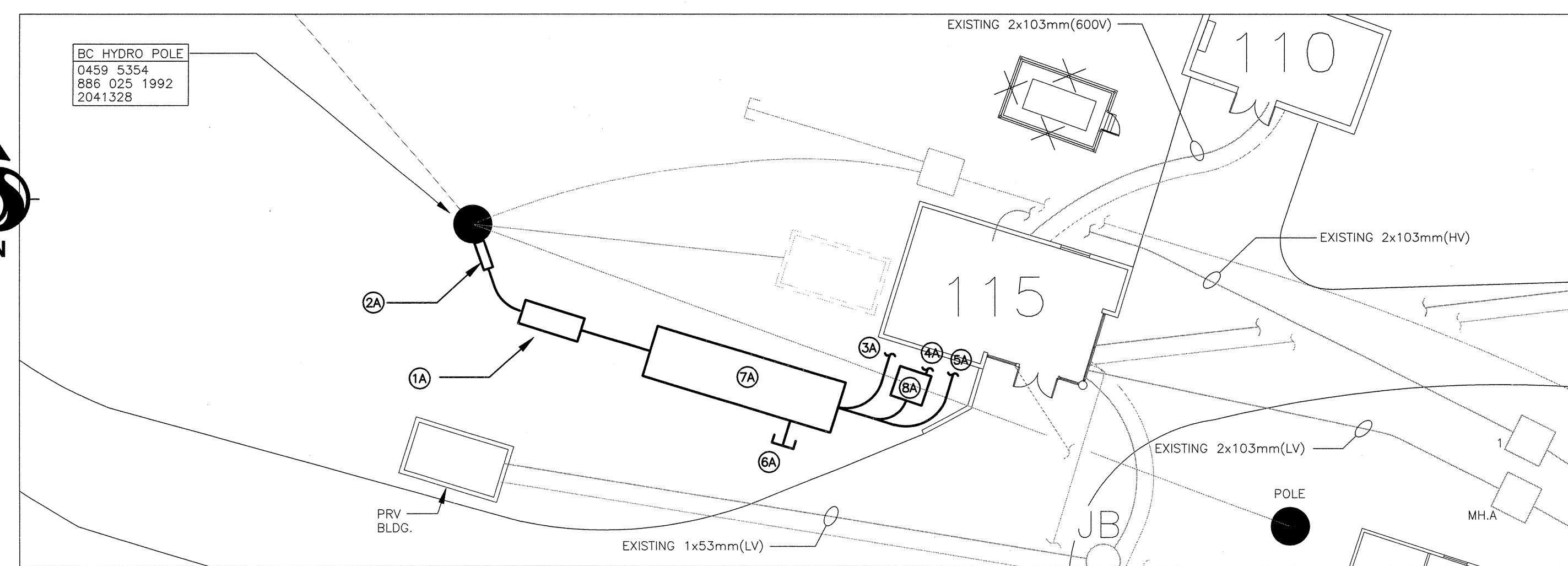
**WILLIAM HEAD INSTITUTION
ELECTRICAL HIGH VOLTAGE
UPGRADE (PHASE 2 OF 2)**

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Designed by/Concept par
PN
Drawn by/Dessiné par
PN
PWGSC Project Manager/Administrateur de Projets TPSCG
P. Truong
PWGSC Regional Manager, Architectural and Engineering Services/
Gestionnaire régionale, Services d'architecture et de génie, TPSCG
P. Paul

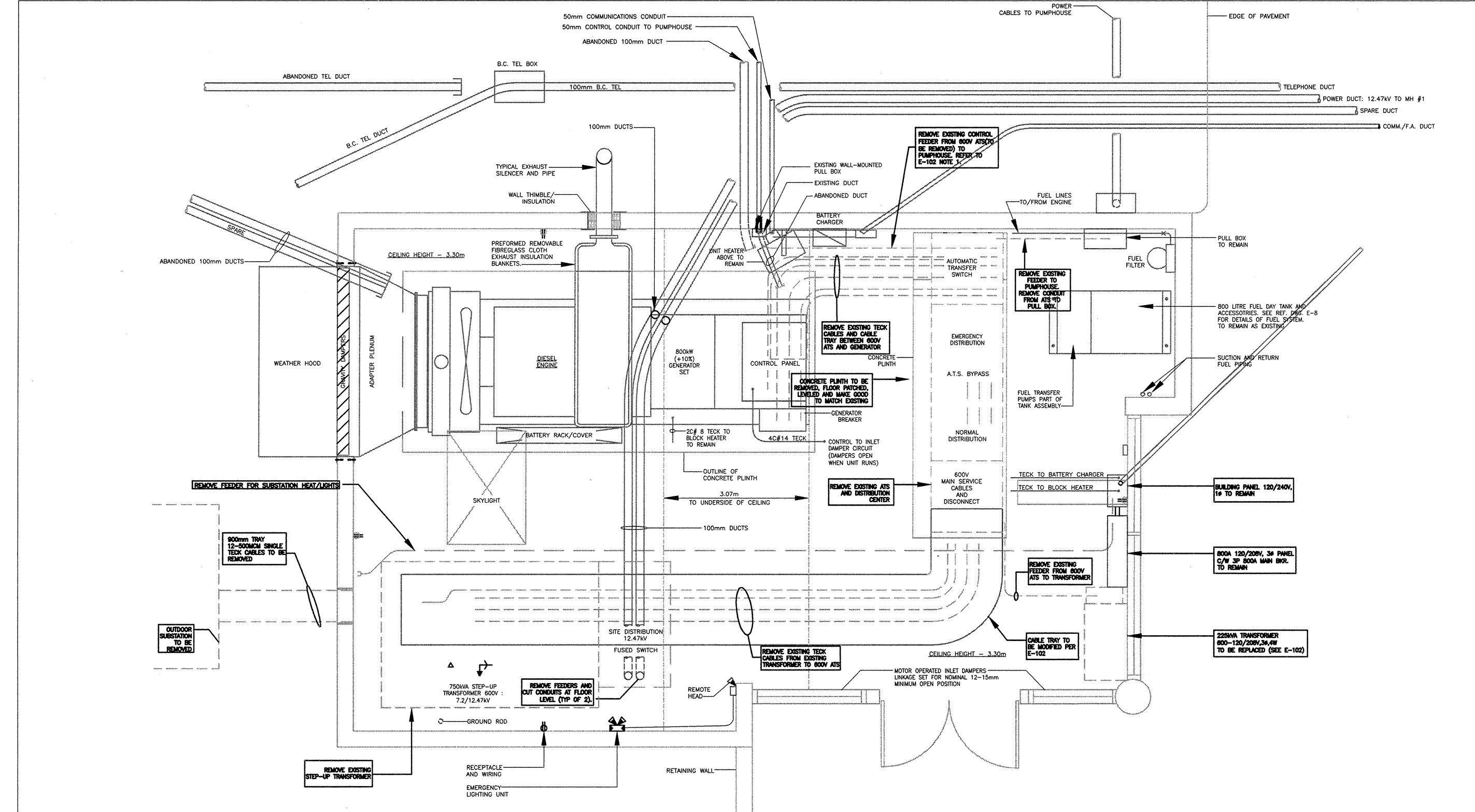
Drawing Title/Titre du dessin
**MAIN POWER HOUSE (BLDG.115)
PHASING NOTES**

Project No./No. du projet	Sheet/Feuille	Revision no./ La Révision no.
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	16	of 22



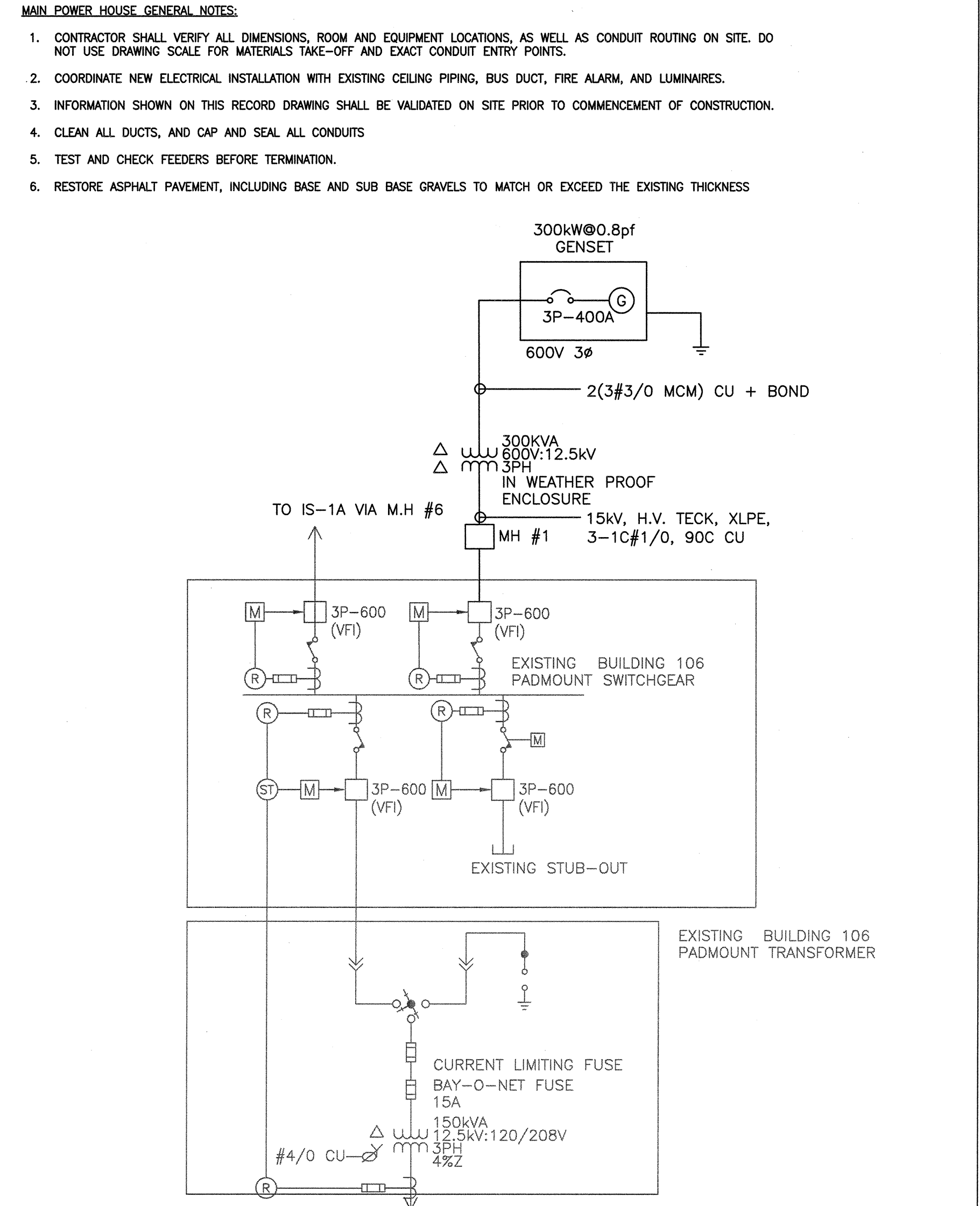
1 PHASE-A
1:200

- SEQUENCE OF WORK - PHASE A - WORK TO INCLUDE THE FOLLOWING:**
- 1A INSTALL NEW 832 PULL BOX, PB-BCH, TO MEET B.C. HYDRO STANDARDS INCLUDING ROCK PIT FOR DRAINAGE.
 - 2A INSTALL NEW CONCRETE PLASTER C/W 3078mmC AND COVER FOR LENGTH OF HYDRO POLE TO BC HYDRO STANDARDS FROM BC HYDRO POLE TO THE NEW UNIT SUBSTATION, US-1.
 - 3A INSTALL NEW CONCRETE ENCASED CONDUITS TO STUB 1.5m AWAY FROM BUILDING FOUNDATION. 10103mmC FOR 750kVA TRANSFORMER, 10103mmC FOR SPARE, AND 1053mmC FOR HEATING AND LIGHTING
 - 4A INSTALL NEW CONCRETE ENCASED CONDUITS 10103mmC FROM US-1 TO 300 kVA TRANSFORMER. INSTALL 10103mmC FROM PMT-15 1.5m AWAY FROM BUILDING FOUNDATION
 - 5A INSTALL NEW CONCRETE ENCASED CONDUITS TO STUB 1.5m AWAY FROM BUILDING FOUNDATION. 20103mmC FOR SITE DISTRIBUTION (1 FOR SPARE), 1041mmC FOR DIGITAL METERING NETWORK AND 1053mmC FOR RELAYS TO GENERATOR CONTROL PANEL.
 - 6A STUB 3078mmC 1.5m AWAY FROM UNIT SUBSTATION FOR PROVISION FOR FUTURE LOAD BREAK. CAP DUCT AT BOTH ENDS.
 - 7A INSTALL THE UNIT SUBSTATION'S CONCRETE PAD AND COMPLETE ALL GROUNDING INSTALLATION OF THE UNIT SUBSTATION, US-1. COMPLETE US-1 INSTALLATION.
 - 8A INSTALL THE PAD MOUNT TRANSFORMER CONCRETE PAD AND COMPLETE ALL GROUNDING INSTALLATION. COMPLETE PMT-115 INSTALLATION.

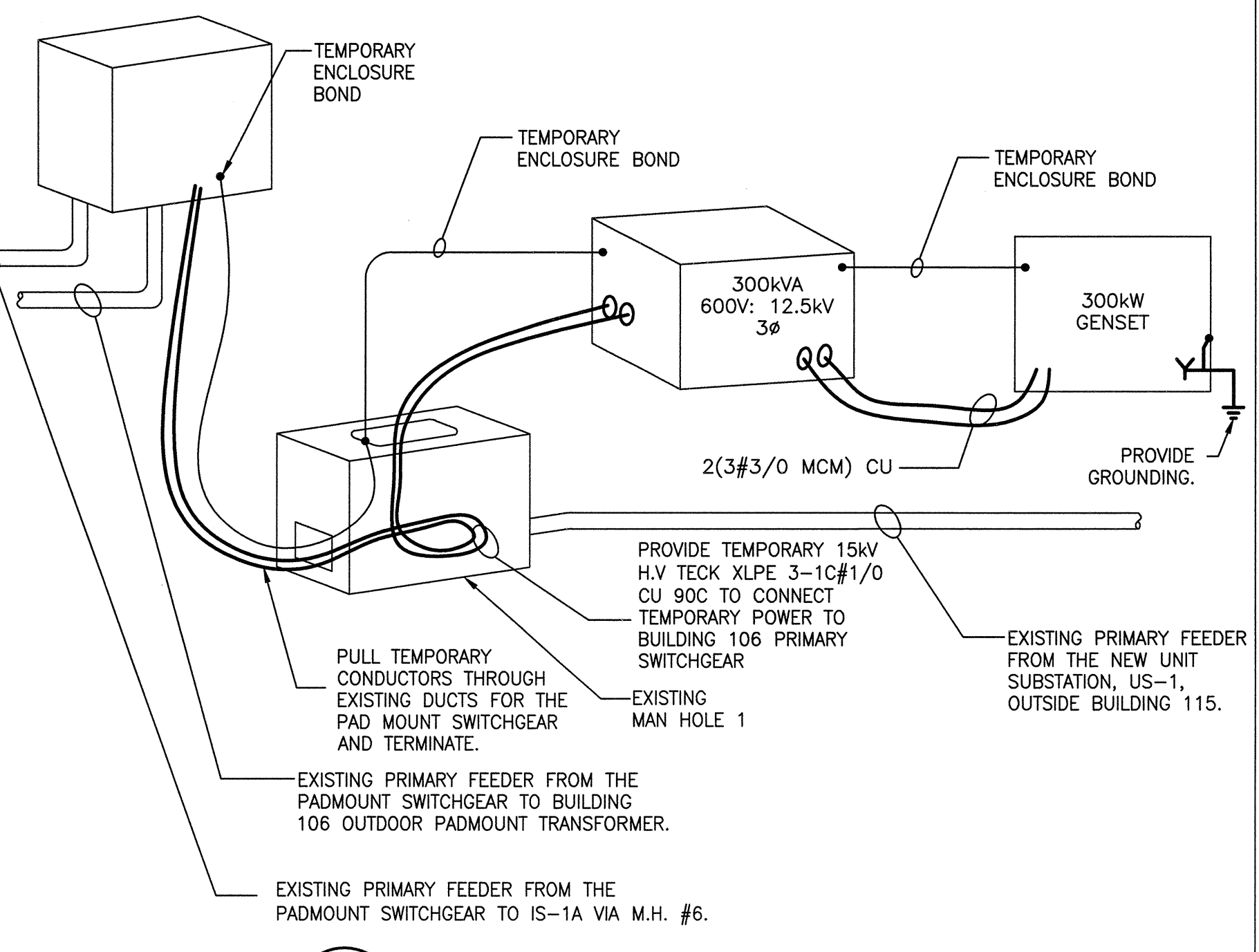


2 PHASE B
1:50

- SEQUENCE OF WORK - PHASE B - WORK TO INCLUDE THE FOLLOWING:**
- 1B ARRANGE POWER SHUTDOWN TO BUILDING 115. PROVIDE TEMPORARY POWER TO THE SITE DISTRIBUTION AT THE PADMOUNT SWITCHGEAR AT BUILDING 106 AT THE PUMP HOUSE AT THE MAIN BREAKER, AND AT EXISTING BODA CDP FOR BUILDINGS NEAR FRONT OF SITE (E.G. PRINCIPLE ENTRANCE AND OTHERS). INTERRUPT POWER TO BUILDING 115. REFER TO DETAIL 4 AND 5 IN DRAWING E-203 FOR ADDITIONAL INFORMATION FOR TEMPORARY SITE POWER.
 - 2B REMOVE EXISTING EQUIPMENT AS SHOWN IN DRAWING 203 DETAIL 2 PHASE B.

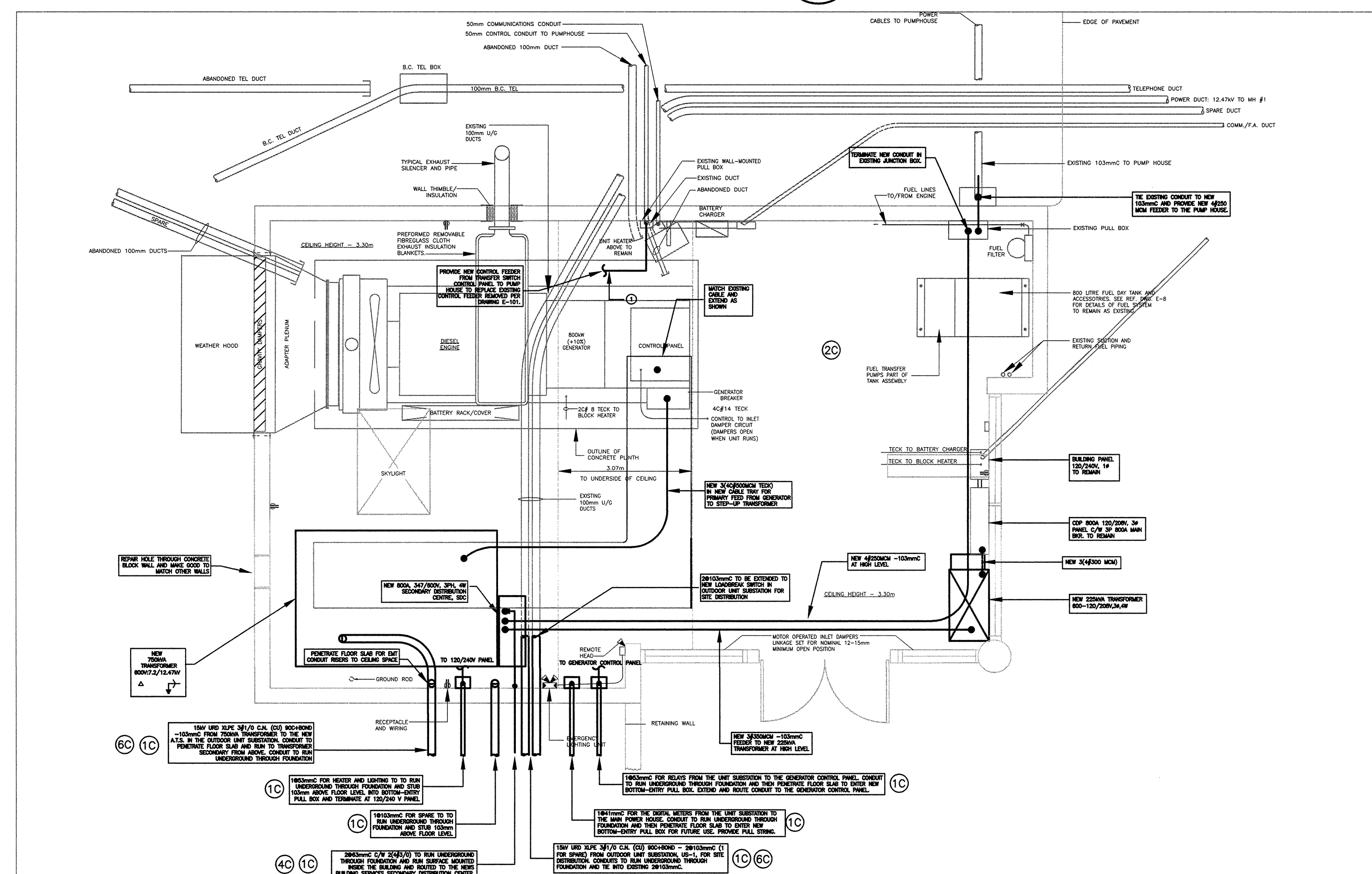


4 TEMPORARY SITE POWER SUPPLY SINGLE LINE
N.T.S.



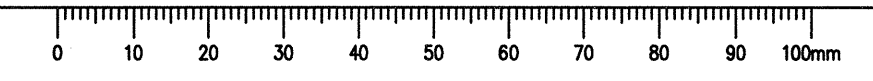
5 TEMPORARY SITE POWER SUPPLY DETAIL
N.T.S.

- TEMPORARY GENERATOR NOTES:**
1. PROVIDE THE FOLLOWING WITH TEMPORARY PRIME POWER RATED GENERATORS FOR BACK-UP:
 - 1.1 PUMP HOUSE - 275kW, 347/600V, 3Ø
 - 1.2 CDP 800A - 225kW, 120/208V, 3Ø
 - 1.3 SITE DISTRIBUTION - 300kW, 347/600V, 3Ø & 300kVA STEP-UP TRANSFORMER (REFER TO DETAILS 4 AND 5)
 SUPPLY ALL DIESEL FUEL REQUIRED TO RUN GENERATORS AT FULL LOAD WHILE SEQUENCE OF WORK IS BEING COMPLETED FOR BUILDING 115. TIME PERIOD TO EXTEND UNTIL SEQUENCE OF WORK IS COMPLETED AND WHEN THE NEW UNIT SUBSTATION, US-1, IS COMMISSIONED AND SUPPLYING POWER TO THE WHOLE SITE.
 2. GENERATORS TO BE SKID-MOUNTED AND COMPLETE WITH CRITICAL GRADE SOUND ATTENUATED, WEATHERPROOF ENCLOSURES.
 3. ERECT TEMPORARY SECURITY FENCING TO ENCLOSE TEMPORARY GENERATOR, TRANSFORMER, AND THE PRIMARY SWITCHGEAR.
 4. PRIMARY SWITCHGEAR AS SHOWN ARE BEING COMPLETED UNDER A SEPARATE CONTRACT BY OTHERS.
 5. GENERATORS TO BE TIED IN TO ELECTRICAL EQUIPMENT AS FOLLOWS:
 - 3.2 MAIN POWER HOUSE - WITH GENERATOR OUTSIDE BUILDING ELECTRICAL ROOM. CABLES TO BE CONNECTED TO MAIN LUGS OF EXISTING CDP 800A IN MAIN POWER HOUSE.
 - 3.1 PUMP HOUSE - WITH GENERATOR OUTSIDE THE PUMP HOUSE. CABLES TO BE CONNECTED TO THE SERVICE BREAKER OF THE PUMP HOUSE.
 - 3.2 SITE DISTRIBUTION - REFER TO DETAILS 4 AND 5 IN DRAWING E-203
 6. SAFETY MEANS AND LOCKOUT TO BE PROVIDED TO PREVENT UNDESIRABLE REVERSE FEED.



3 PHASE C
1:50

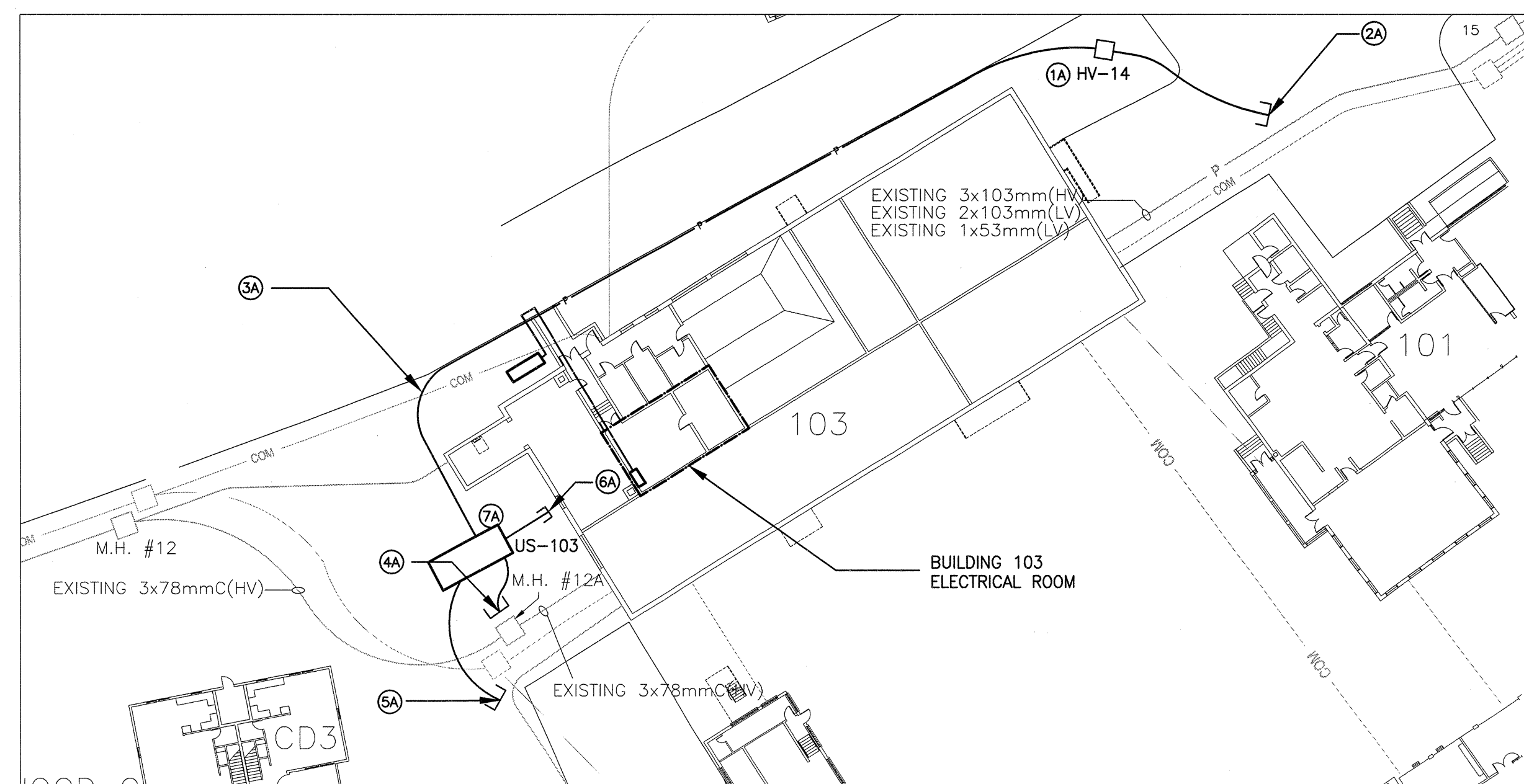
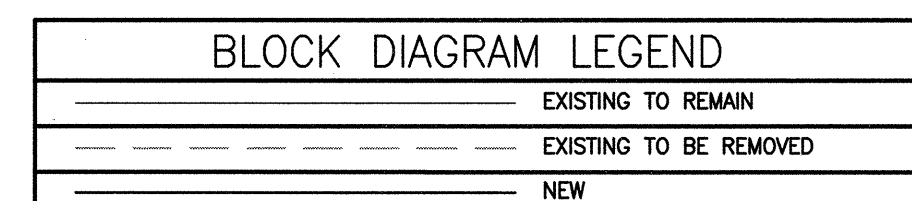
- SEQUENCE OF WORK - PHASE C - WORK TO INCLUDE THE FOLLOWING:**
- 1C EXTEND CONDUITS FROM PERIMETER INTO THE MAIN POWER HOUSE.
 - 2C RESTORE FLOOR LEVEL AND MAKE GOOD TO MATCH EXISTING FINISH FLOOR IN THE MAIN POWER HOUSE.
 - 3C INSTALL NEW ELECTRICAL EQUIPMENT AS NOTED IN DRAWING E-203 DETAIL 3 PHASE C.
 - 4C INSTALL NEW 2(4#3/0) CONDUCTORS FROM PMT-115 TO THE NEW BUILDING SERVICES DISTRIBUTION CENTER.
 - 5C INSTALL NEW 15kV URD XLPE 3#1/0 C.N. (CU) 90C + BOND
 - 6C TIE IN NEW GROUND CABLES FROM THE NEW UNIT SUBSTATION, US-1, TO EXISTING GROUND BAR IN THE MAIN POWER HOUSE.
 - 7C TEST, ENERGIZE AND COMMISSION THE NEW UNIT SUBSTATION, US-1.





BUILDING 103 GENERAL NOTES:

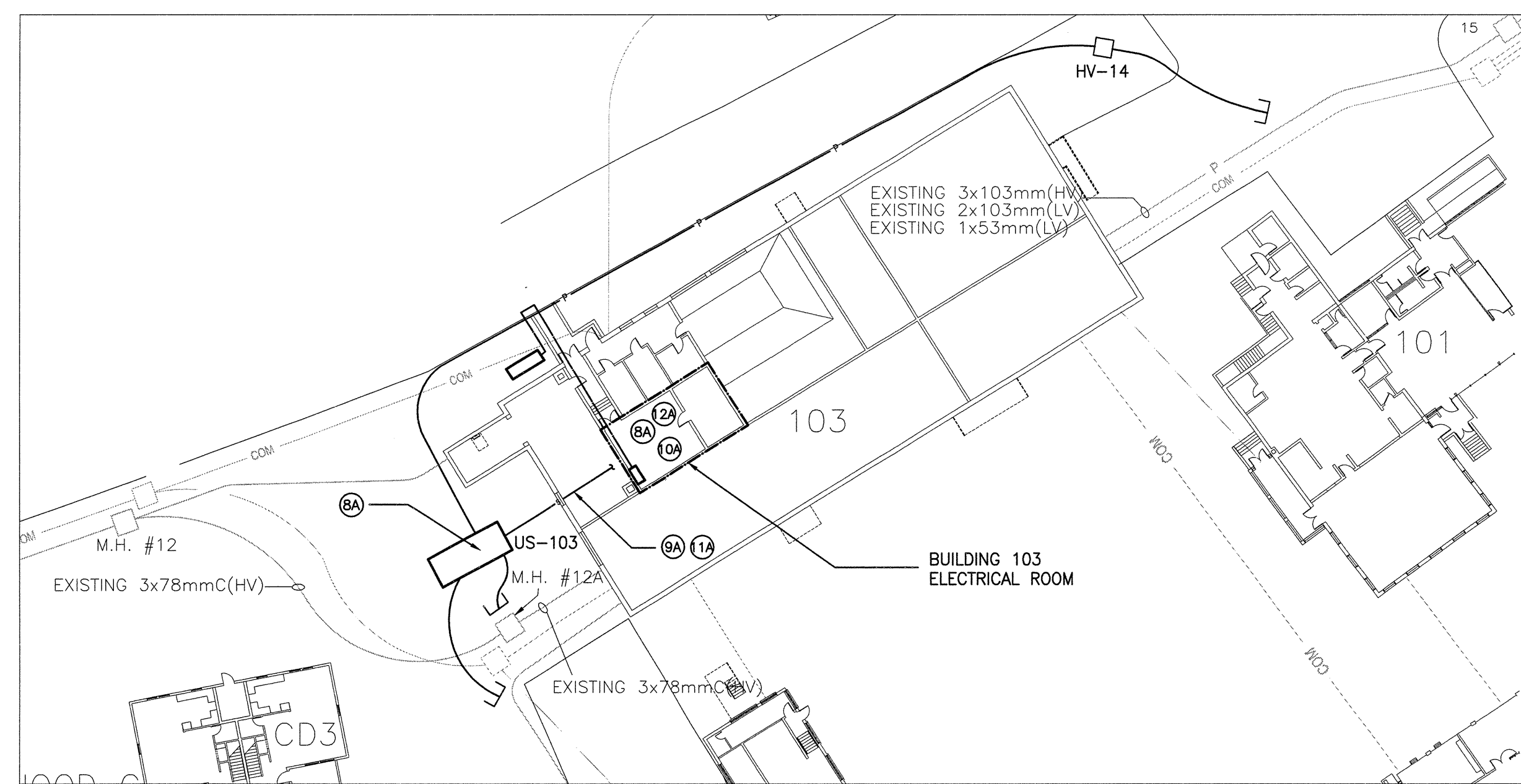
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ROOM AND EQUIPMENT LOCATIONS, AS WELL AS CONDUIT ROUTING ON SITE. DO NOT USE DRAWING SCALE FOR MATERIALS TAKE-OFF AND EXACT CONDUIT ENTRY POINTS.
- COORDINATE NEW ELECTRICAL INSTALLATION WITH EXISTING CEILING PIPING, BUS DUCT, FIRE ALARM, AND LUMINAIRES.
- INFORMATION SHOWN ON THIS RECORD DRAWING SHALL BE VALIDATED ON SITE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- CLEAN ALL DUCTS, AND CAP AND SEAL ALL CONDUITS
- TEST AND CHECK FEEDERS BEFORE TERMINATION.
- RESTORE ASPHALT PAVEMENT, INCLUDING BASE AND SUB BASE GRAVELS TO MATCH OR EXCEED THE EXISTING THICKNESS



1 PRE-PHASE A
000 1:400

SEQUENCE OF WORK - PRE-PHASE A - WORK TO INCLUDE THE FOLLOWING:

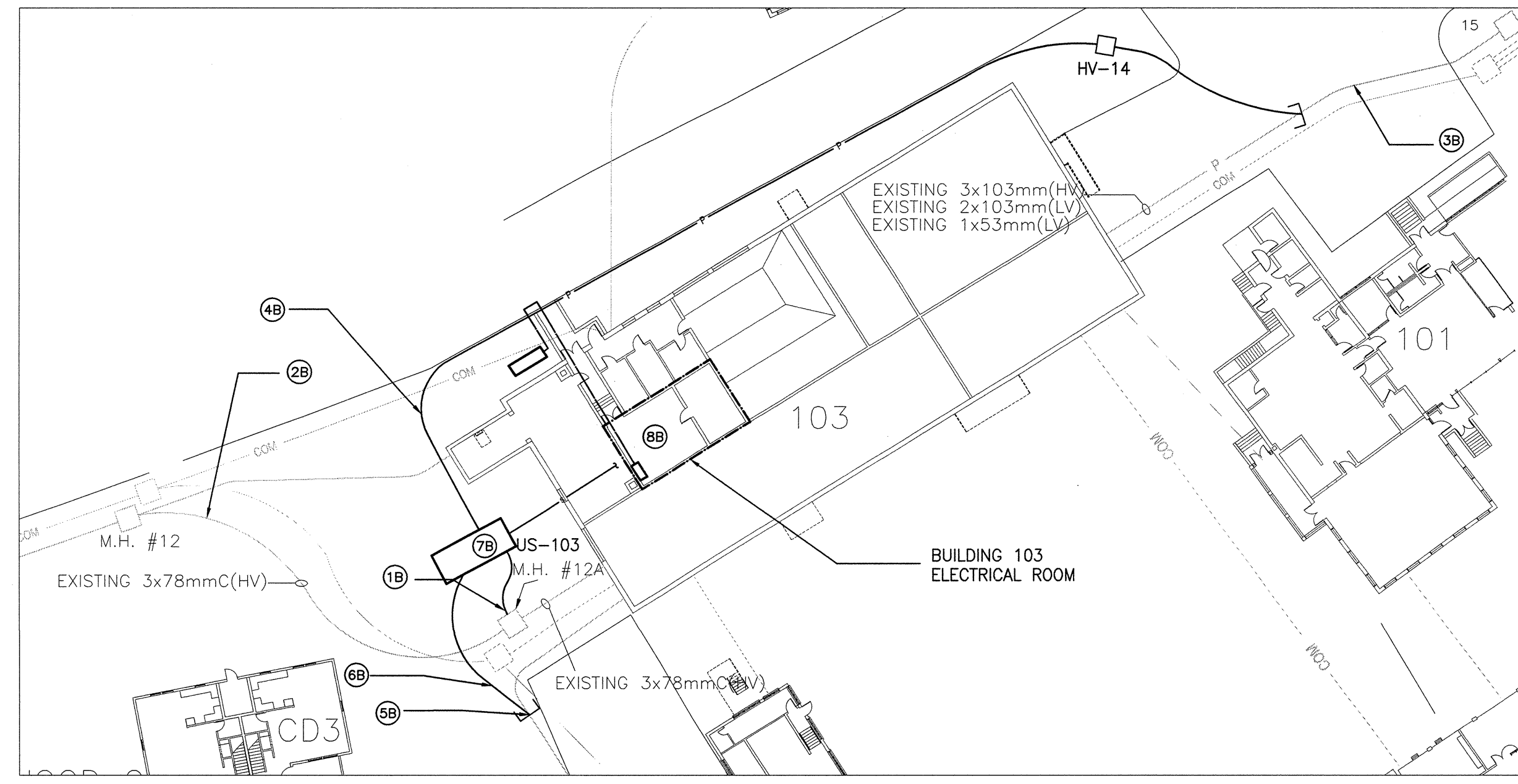
- INSTALL NEW PULL BOX, HV-14.
- INSTALL NEW CONCRETE ENCASED 3Ø103mmC FROM PULL BOX, HV-14, AND STUB-OUT 1m FROM THE EXISTING U/G DUCT TO M.H. #15.
- INSTALL NEW CONCRETE ENCASED 3Ø103mmC FROM PULL BOX, HV-14, TO THE NEW UNIT SUBSTATION, US-103.
- INSTALL NEW CONCRETE ENCASED 3Ø103mmC FROM NEW UNIT SUBSTATION, US-103, AND STUB-OUT 1m FROM THE EXISTING M.H. #12A.
- INSTALL NEW CONCRETE ENCASED 4Ø103mmC FROM NEW UNIT SUBSTATION, US-103, AND STUB-OUT 1m FROM THE EXISTING U/G DUCT TO M.H. #21. REFER TO DRAWING E-002 FOR LOCATION OF M.H. #21.
- INSTALL NEW CONCRETE ENCASED CONDUITS TO STUB 1.5m FROM US-1 TO BUILDING 103 FOUNDATION. 3Ø103mmC FOR THE NEW SECONDARY DISTRIBUTION CENTER, AND 1Ø41mmC FOR THE DIGITAL METERS.
- INSTALL THE CONCRETE PAD AND COMPLETE GROUNDING INSTALLATION OF THE NEW UNIT SUBSTATION, US-103. COMPLETE US-103 INSTALLATION.



2 PHASE A
000 1:400

SEQUENCE OF WORK - PHASE A - WORK TO INCLUDE THE FOLLOWING:

- ARRANGE POWER SHUT DOWN TO BUILDING 103. PROVIDE TEMPORARY POWER TO BUILDING 103 AT THE EXISTING SECONDARY DISTRIBUTION CENTER, BUILDING 105 AT EXISTING DISTRIBUTION CENTER, AND WASTE WATER TREATMENT PLANT AT THE MAIN BREAKER TO MCC-A. DISRUPT POWER TO BUILDING 103 WA. PRIMARY SWITCH 4.
- EXTEND AND ROUTE THE NEW CONDUITS TO BUILDING 103 ELECTRICAL ROOM.
- INSTALL NEW ELECTRICAL EQUIPMENT AND REMOVE AS NOTED IN DRAWING E-103 DETAIL 2.
- THE SECONDARY FEEDERS FROM THE NEW UNIT SUBSTATION TO THE NEW SECONDARY DISTRIBUTION CENTER, US-103-SDC, AND TEST CABLES BEFORE TERMINATION.
- PROVIDE BRANCH WIRING FROM THE NEW SECONDARY DISTRIBUTION CENTER TO THE NEW JUNCTION BOX TO TIE THE EXISTING LOADS IN PHASE B.



3 PHASE B
000 1:400

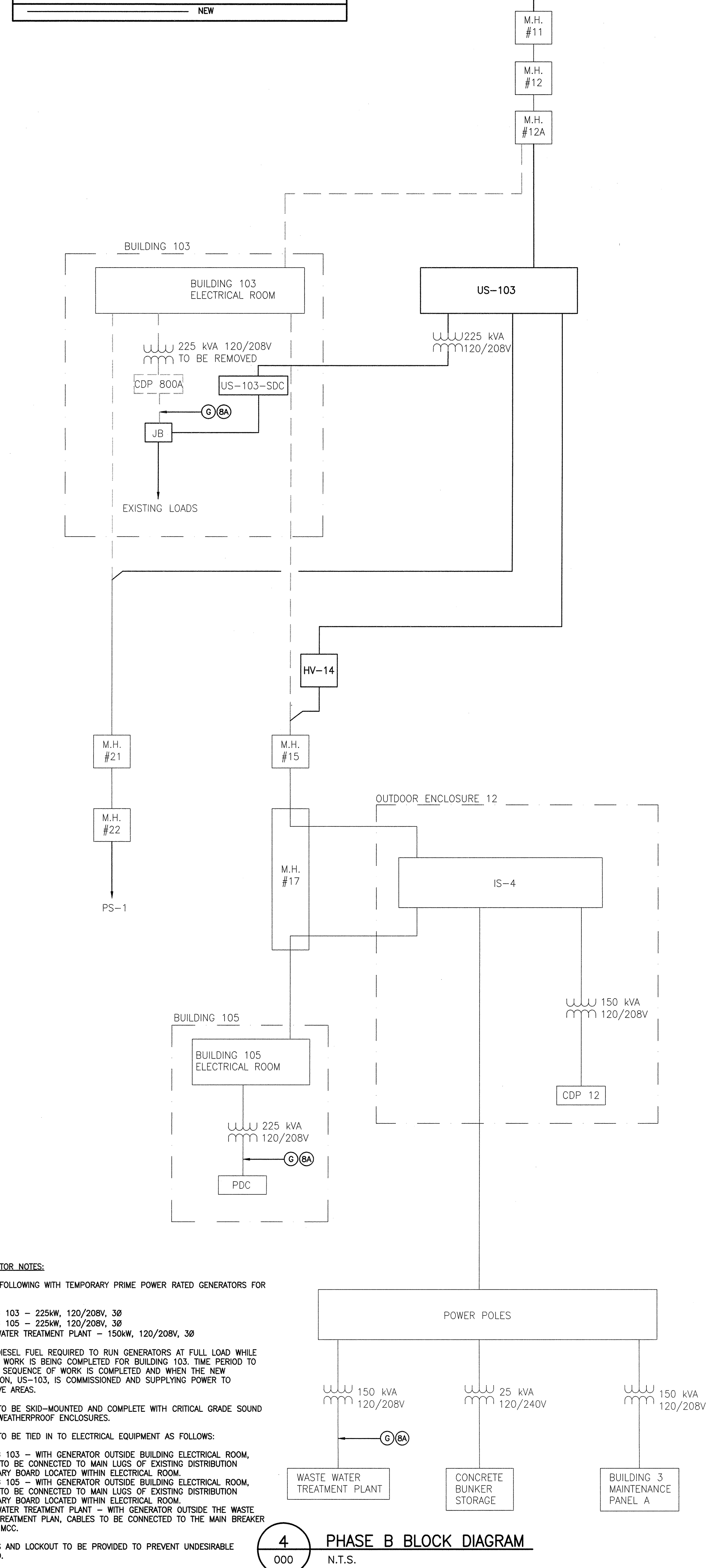
SEQUENCE OF WORK - PHASE B - WORK TO INCLUDE THE FOLLOWING:

- EXTEND THE 3Ø103mmC FROM THE NEW UNIT SUBSTATION, US-103, TO M.H. #12A.
- PULL OUT PRIMARY FEEDER FROM PS-4 TO BUILDING 103 ELECTRICAL ROOM. REPLACE WITH NEW PRIMARY FEEDER FROM PS-4 TO THE NEW UNIT SUBSTATION, US-103. TEST FEEDER BEFORE TERMINATION.
- PULL OUT PRIMARY FEEDER FROM BUILDING 103 TO IS-4. EXTEND THE 3Ø103mmC FROM THE PULL BOX, HV-14 AND TIE INTO THE EXISTING CONDUIT TO M.H. #15.
- PROVIDE NEW FEEDER FROM US-103 TO IS-4. TEST FEEDER BEFORE TERMINATION. REMOVE TEMPORARY GENERATORS FOR BUILDING 105, OUTDOOR ENCLOSURE TRANSFORMER 12, CONCRETE BUNKER STORAGE, BUILDING 103 MAINTENANCE, AND WASTE WATER TREATMENT PLANT.
- PULL OUT PRIMARY FEEDER FROM BUILDING 103 TO PS-1. EXTEND 4Ø103mmC TO TIE INTO EXISTING CONDUIT TO M.H. #21.
- PROVIDE NEW FEEDER FROM US-103 TO PS-1. TEST FEEDER BEFORE TERMINATION.
- TEST, ENERGIZE AND COMMISSION THE UNIT SUBSTATION, US-103.
- CUT OVER AND TIE ALL EXISTING LOADS ONE BY ONE FED BY THE CDP-800A TO THE NEW SECONDARY DISTRIBUTION CENTER, US-103-SDC USING THE NEW JUNCTION BOX. REMOVE BUILDING 103 TEMPORARY GENERATOR. REMOVE EXISTING CDP-800A.

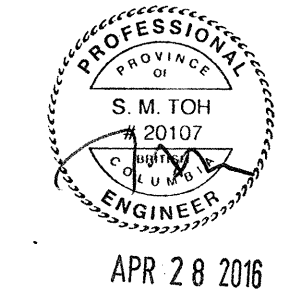
TEMPORARY GENERATOR NOTES:

- PROVIDE THE FOLLOWING WITH TEMPORARY PRIME POWER RATED GENERATORS FOR BACK-UP:
 - BUILDING 103 - 225kW, 120/208V, 3Ø
 - BUILDING 105 - 225kW, 120/208V, 3Ø
 - WASTE WATER TREATMENT PLANT - 150kW, 120/208V, 3Ø

SUPPLY ALL DIESEL FUEL REQUIRED TO RUN GENERATORS AT FULL LOAD WHILE SEQUENCE OF WORK IS BEING COMPLETED FOR BUILDING 103. TIME PERIOD TO EXTEND UNTIL SEQUENCE OF WORK IS COMPLETED AND WHEN THE NEW UNIT SUBSTATION, US-103, IS COMMISSIONED AND SUPPLYING POWER TO ITS RESPECTIVE AREAS.
- GENERATORS TO BE SKID-MOUNTED AND COMPLETE WITH CRITICAL GRADE SOUND ATTENUATED, WEATHERPROOF ENCLOSURES.
- GENERATORS TO BE TIED IN TO ELECTRICAL EQUIPMENT AS FOLLOWS:
 - BUILDING 103 - WITH GENERATOR OUTSIDE BUILDING ELECTRICAL ROOM, CABLES TO BE CONNECTED TO MAIN LUGS OF EXISTING DISTRIBUTION SECONDARY BOARD LOCATED WITHIN ELECTRICAL ROOM.
 - BUILDING 105 - WITH GENERATOR OUTSIDE BUILDING ELECTRICAL ROOM, CABLES TO BE CONNECTED TO MAIN LUGS OF EXISTING DISTRIBUTION SECONDARY BOARD LOCATED WITHIN ELECTRICAL ROOM.
 - WASTE WATER TREATMENT PLANT - WITH GENERATOR OUTSIDE THE WASTE WATER TREATMENT PLAN, CABLES TO BE CONNECTED TO THE MAIN BREAKER OF THE MCC.
- SAFETY MEANS AND LOCKOUT TO BE PROVIDED TO PREVENT UNDESIRABLE REVERSE FEED.
- ERECT TEMPORARY SECURITY FENCING TO ENCLOSE TEMPORARY GENERATOR.



4 PHASE B BLOCK DIAGRAM
000 N.T.S.



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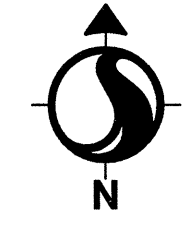
Project title/Titre du projet
METCHOSIN, BC
WILLIAM HEAD INSTITUTION ELECTRICAL HIGH VOLTAGE UPGRADE (PHASE 2 OF 2)

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PWGSC, Regional Manager, Architectural and Engineering Services/
Gestionnaire Régionale, Services d'architecture et de génie, TPSCC
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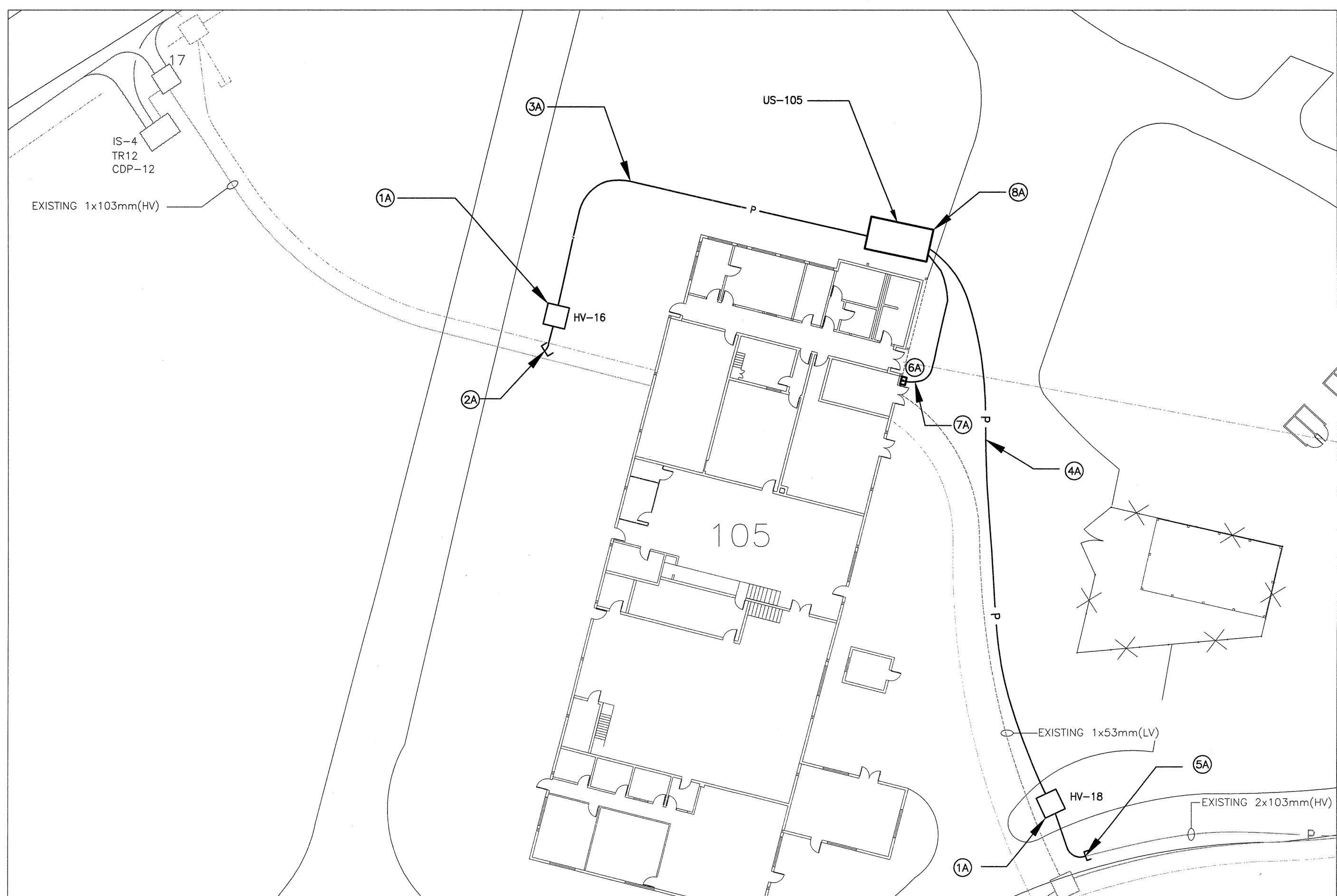
Drawing title/Titre du dessin
BUILDING 103 PHASING NOTES

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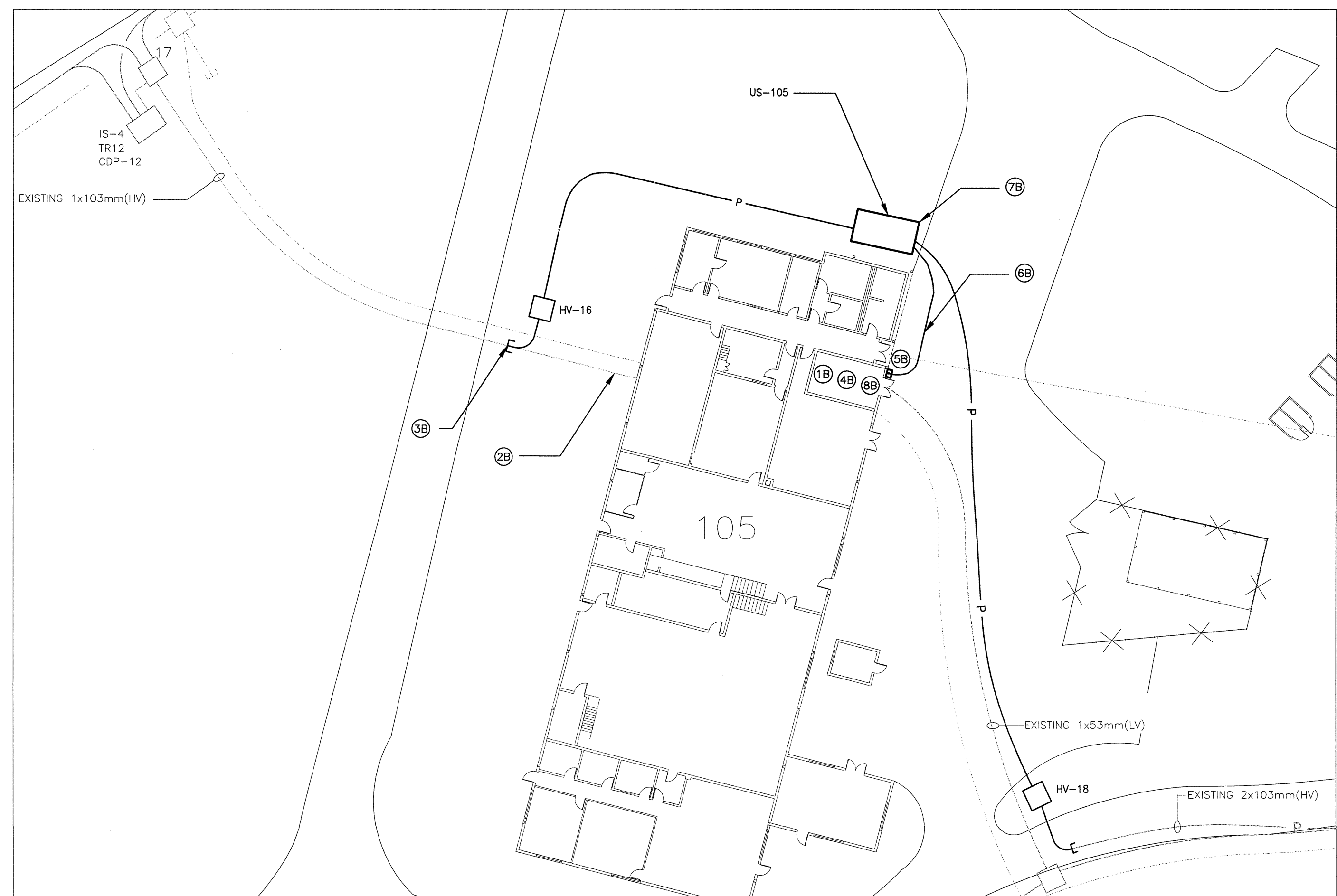


- GENERAL NOTES:**
- CLEAN ALL DUCTS, CAP AND SEAL ALL CONDUITS.
 - TEST AND CHECK FEEDERS BEFORE TERMINATION.
 - RESTORE ASPHALT PAVEMENT, INCLUDING BASE AND SUB BASE GRAVELS, TO MATCH OR EXCEED THE EXISTING THICKNESS.



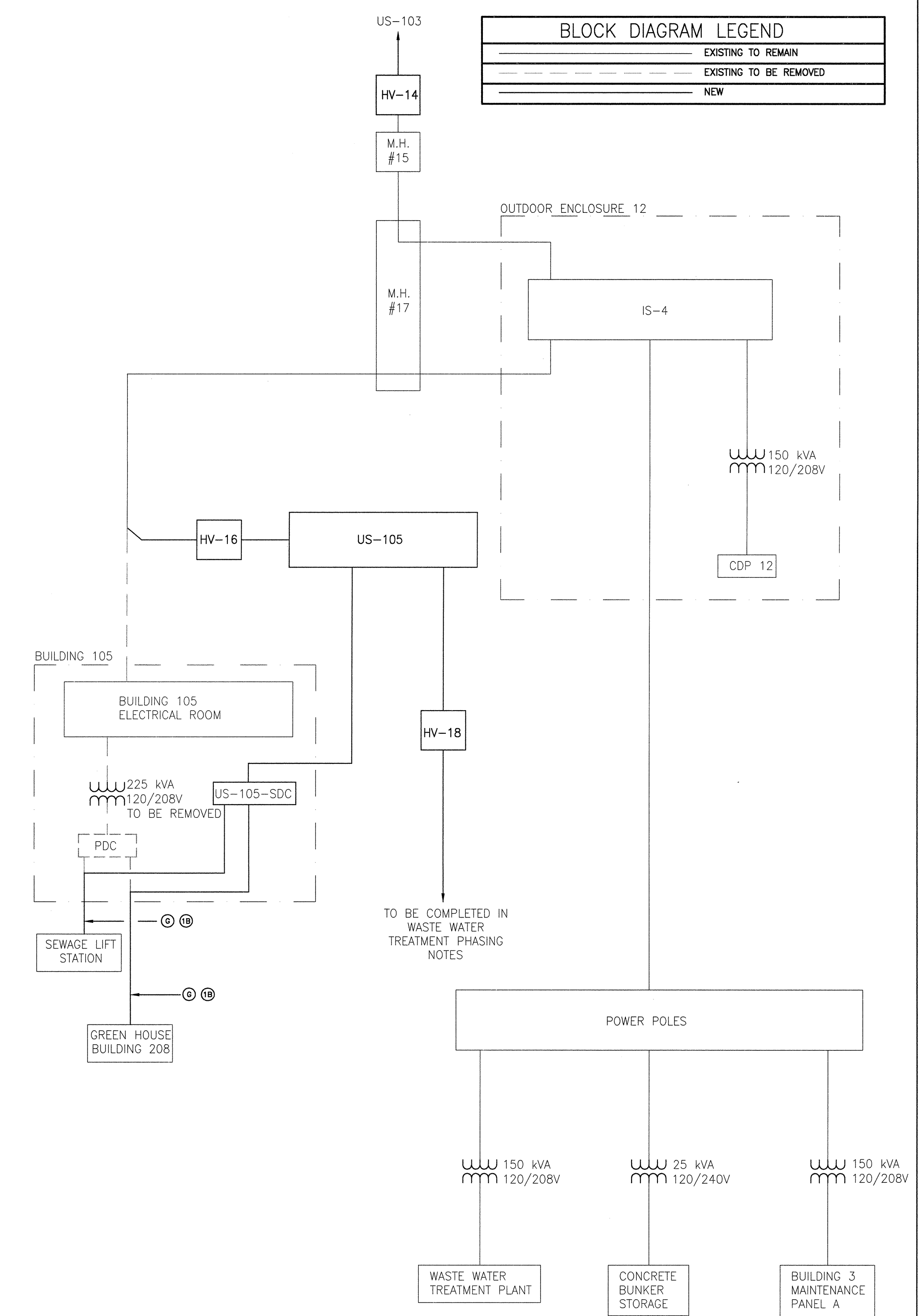
- SEQUENCE OF WORK - PHASE A - WORK TO INCLUDE THE FOLLOWING:**
- INSTALL NEW PULL BOX, HV-16 AND HV-18.
 - INSTALL NEW CONCRETE ENCASED 10103mmC FROM PULL BOX, HV-16, AND STUB-OUT 1m FROM THE EXISTING U/G DUCT FROM M.H. #17 TO BUILDING 105 ELECTRICAL ROOM.
 - INSTALL NEW CONCRETE ENCASED 10103mmC FROM PULL BOX, HV-16, TO THE NEW UNIT SUBSTATION, US-105.
 - INSTALL NEW CONCRETE ENCASED 20103mmC FROM THE NEW UNIT SUBSTATION, US-105, TO THE NEW PULL BOX, HV-18.
 - INSTALL NEW CONCRETE ENCASED 20103mmC FROM THE NEW PULL BOX, HV-18, AND TIE TO THE EXISTING 20103mmC GOING TO THE WASTE WATER TREATMENT PLANT.
 - INSTALL WALL MOUNTED PULL BOXES.
 - INSTALL NEW CONCRETE ENCASED CONDUITS FROM US-1 TO BUILDING 105 FOUNDATION, 30103mmC FOR THE NEW SECONDARY DISTRIBUTION CENTER, AND 1041mmC FOR THE DIGITAL METERS. NEW CONDUITS FROM UNIT SUBSTATION TO STUB UP FROM GRADE AND RUN SURFACE MOUNTED ON OUTSIDE OF BUILDING INTO NEW BOTTOM-ENTRY PULL BOX.
 - INSTALL CONCRETE PAD AND NEW UNIT SUBSTATION, COMPLETE GROUNDING INSTALLATION OF THE NEW UNIT SUBSTATION, COMPLETE US-105 UNIT SUBSTATION INSTALLATION.

1 PHASE A
000 1:300



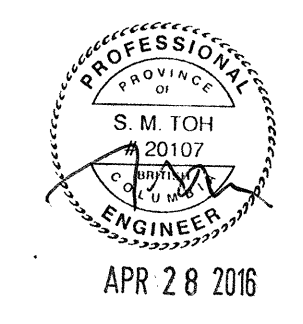
- SEQUENCE OF WORK - PHASE B - WORK TO INCLUDE THE FOLLOWING:**
- ARRANGE POWER SHUTDOWN TO BUILDING 105. PROVIDE TEMPORARY POWER TO THE SEWAGE LIFT STATION AND GREEN HOUSE BUILDING 208 CONNECTED TO THE EXISTING PANEL "PDC". DISRUPT POWER TO BUILDING 105 VIA IS-4A.
 - PULL OUT PRIMARY FEEDER FROM BUILDING 105 ELECTRICAL ROOM TO IS-4.
 - EXTEND THE 10103mmC FROM HV-16 TO TIE INTO THE EXISTING 10103mmC FROM IS-4 TO BUILDING 105 ELECTRICAL ROOM. PROVIDE NEW PRIMARY FEEDER FROM IS-4 TO US-105. TEST FEEDER BEFORE TERMINATION.
 - REMOVE EXISTING TRANSFORMER, DISTRIBUTION BOARD, AND FUSED ISOLATION SWITCHES IN BUILDING 105 ELECTRICAL ROOM. INSTALL THE NEW ELECTRICAL EQUIPMENT AS NOTED IN DRAWING E-105.
 - PENETRATE CONDUITS THROUGH EXTERIOR WALL AT HIGH LEVEL ROUTE CONDUITS AS NOTED IN DRAWING E-105 DETAIL 2.
 - PROVIDE SECONDARY FEEDER FROM US-105 TO THE NEW SECONDARY DISTRIBUTION CENTER. TEST FEEDER BEFORE TERMINATION.
 - COMPLETE TESTING AND COMMISSIONING AND THEN ENERGIZE THE UNIT SUBSTATION, US-105.
 - CUT OVER AND TIE ALL EXISTING LOADS ONE BY ONE FED BY THE TEMPORARY GENERATORS TO THE NEW SECONDARY DISTRIBUTION CENTER, US-105-SDC.

1 PHASE B
000 1:300



3 PHASE B BLOCK DIAGRAM
000 N.T.S.

- TEMPORARY GENERATOR NOTES:**
- PROVIDE THE FOLLOWING WITH TEMPORARY PRIME POWER RATED GENERATORS FOR BACK-UP:
 - SEWAGE LIFT STATION - 55kW, 120/208V, 30
 - GREEN HOUSE BUILDING 208 - 55kW, 120/208V, 30
 - SUPPLY ALL DIESEL FUEL REQUIRED TO RUN GENERATORS AT FULL LOAD WHILE SEQUENCE OF WORK IS BEING COMPLETED FOR BUILDING 105. TIME PERIOD TO EXTEND UNTIL SEQUENCE OF WORK IS COMPLETED AND WHEN THE NEW PADMOUNT TRANSFORMER, PMT-1, IS COMMISSIONED AND SUPPLYING POWER TO THE WASTE WATER TREATMENT PLANT.
 - GENERATORS TO BE SKID-MOUNTED AND COMPLETE WITH CRITICAL GRADE SOUND ATTENUATED, WEATHERPROOF ENCLOSURES.
 - SAFETY MEANS AND LOCKOUT TO BE PROVIDED TO PREVENT UNDESIRABLE REVERSE FEED.



Revision/	Description/Description	Date/Date
0	ISSUED FOR TENDER	04/20/16

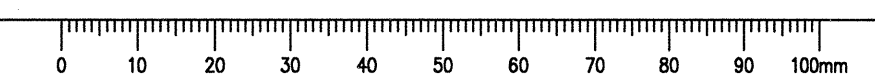
Client/Client: **CORRECTIONAL SERVICE CANADA**

Project Title/Titre du projet: **METCHOSIN, BC**
WILLIAM HEAD INSTITUTION ELECTRICAL HIGH VOLTAGE UPGRADE (PHASE 2 OF 2)

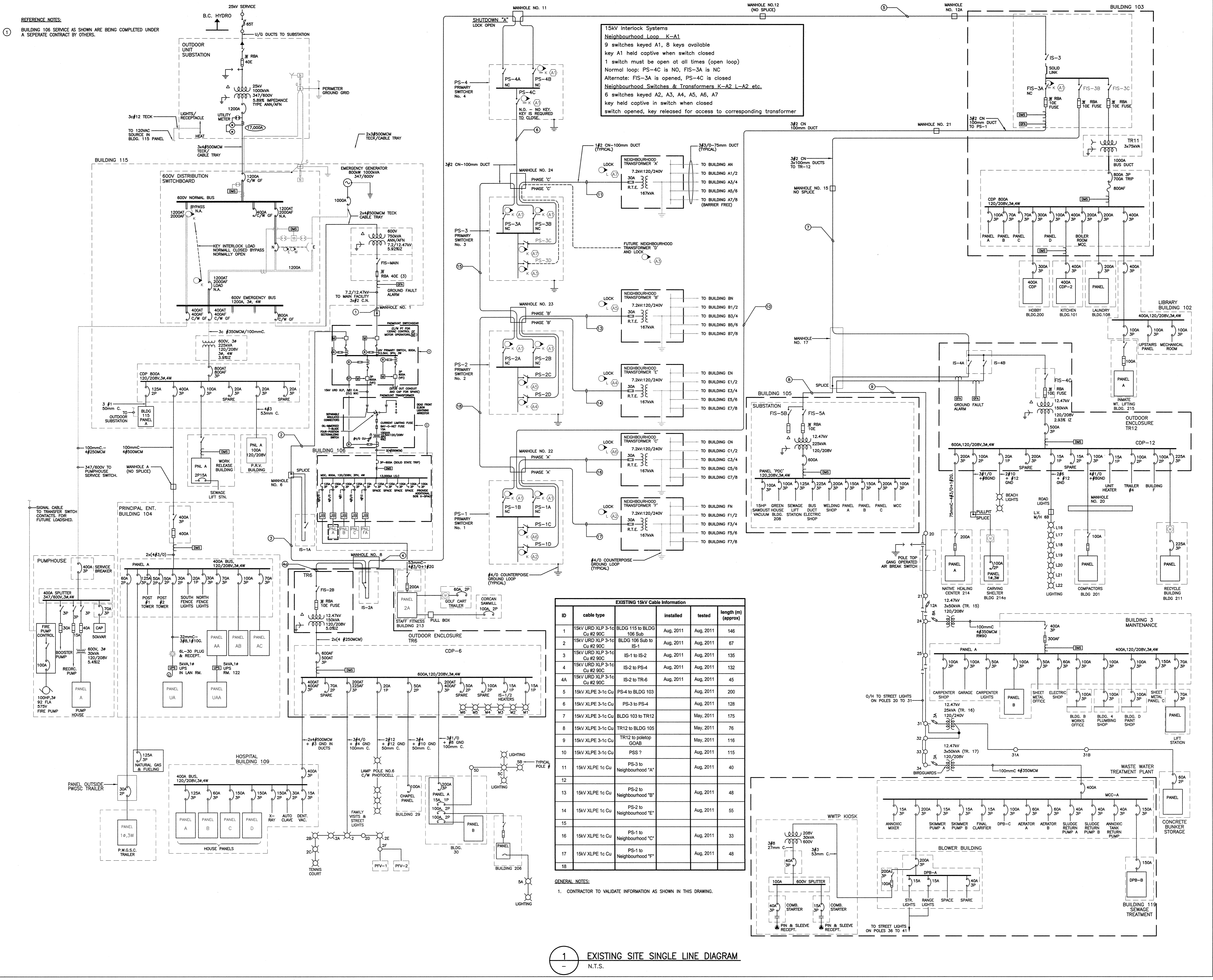
Consultant Signature Box Only
Designed by/Concept par: **PN**
Drawn by/Dessiné par: **PN**
PWSSC Project Manager/Administrateur de Projets TPSSC: **P. Truong**
PWSSC Regional Manager, Architectural and Engineering Services/Gestionnaire régionale, Services d'architecture et de génie, TPSSC: **P. Paul**

Drawing Title/Titre du dessin: **BUILDING 105 PHASING NOTES**

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R.069376.001	E-205	



REFERENCE NOTES:
BUILDING 106 SERVICE AS SHOWN ARE BEING COMPLETED UNDER A SEPARATE CONTRACT BY OTHERS.

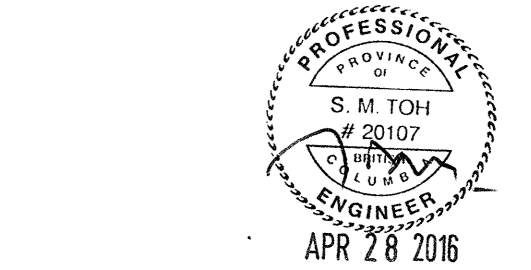


15kV Interlock Systems
Neighbourhood Loop K-A1
9 switches keyed A1, 8 keys available
key A1 held captive when switch closed
1 switch must be open at all times (open loop)
Normal loop: PS-4C is NO, FIS-3A is NC
Alternate: FIS-3A is opened, PS-4C is closed
Neighbourhood Switches & Transformers K-A2 L-A2 etc.
6 switches keyed A2, A3, A4, A5, A6, A7
key held captive in switch when closed
switch opened, key released for access to corresponding transformer

ID	cable type	installed	tested	length (m) (approx)
1	15kV URD XLP 3-1c Cu #2 90C	BLDG 115 to BLDG 106 Sub	Aug. 2011	146
2	15kV URD XLP 3-1c Cu #2 90C	BLDG 106 Sub to IS-1	Aug. 2011	67
3	15kV URD XLP 3-1c Cu #2 90C	IS-1 to IS-2	Aug. 2011	135
4	15kV URD XLP 3-1c Cu #2 90C	IS-2 to PS-4	Aug. 2011	132
4A	15kV URD XLP 3-1c Cu #2 90C	IS-2 to TR-6	Aug. 2011	45
5	15kV XLPE 3-1c Cu	PS-4 to BLDG 103	Aug. 2011	200
6	15kV XLPE 3-1c Cu	PS-3 to PS-4	Aug. 2011	128
7	15kV XLPE 3-1c Cu	BLDG 103 to TR12	May, 2011	175
8	15kV XLPE 3-1c Cu	TR12 to BLDG 105	May, 2011	76
9	15kV XLPE 3-1c Cu	TR12 to poletop GOAB	May, 2011	116
10	15kV XLPE 3-1c Cu	PS-3 to Neighbourhood "A"	Aug. 2011	115
11	15kV XLPE 1c Cu	PS-3 to Neighbourhood "A"	Aug. 2011	40
12				
13	15kV XLPE 1c Cu	PS-2 to Neighbourhood "B"	Aug. 2011	48
14	15kV XLPE 1c Cu	PS-2 to Neighbourhood "E"	Aug. 2011	55
15				
16	15kV XLPE 1c Cu	PS-1 to Neighbourhood "C"	Aug. 2011	33
17	15kV XLPE 1c Cu	PS-1 to Neighbourhood "F"	Aug. 2011	48
18				

GENERAL NOTES:
1. CONTRACTOR TO VALIDATE INFORMATION AS SHOWN IN THIS DRAWING.

1 EXISTING SITE SINGLE LINE DIAGRAM
N.T.S.



0	ISSUED FOR TENDER	04/20/16
Revision/	Description/Description	Date/Date
Client/client		

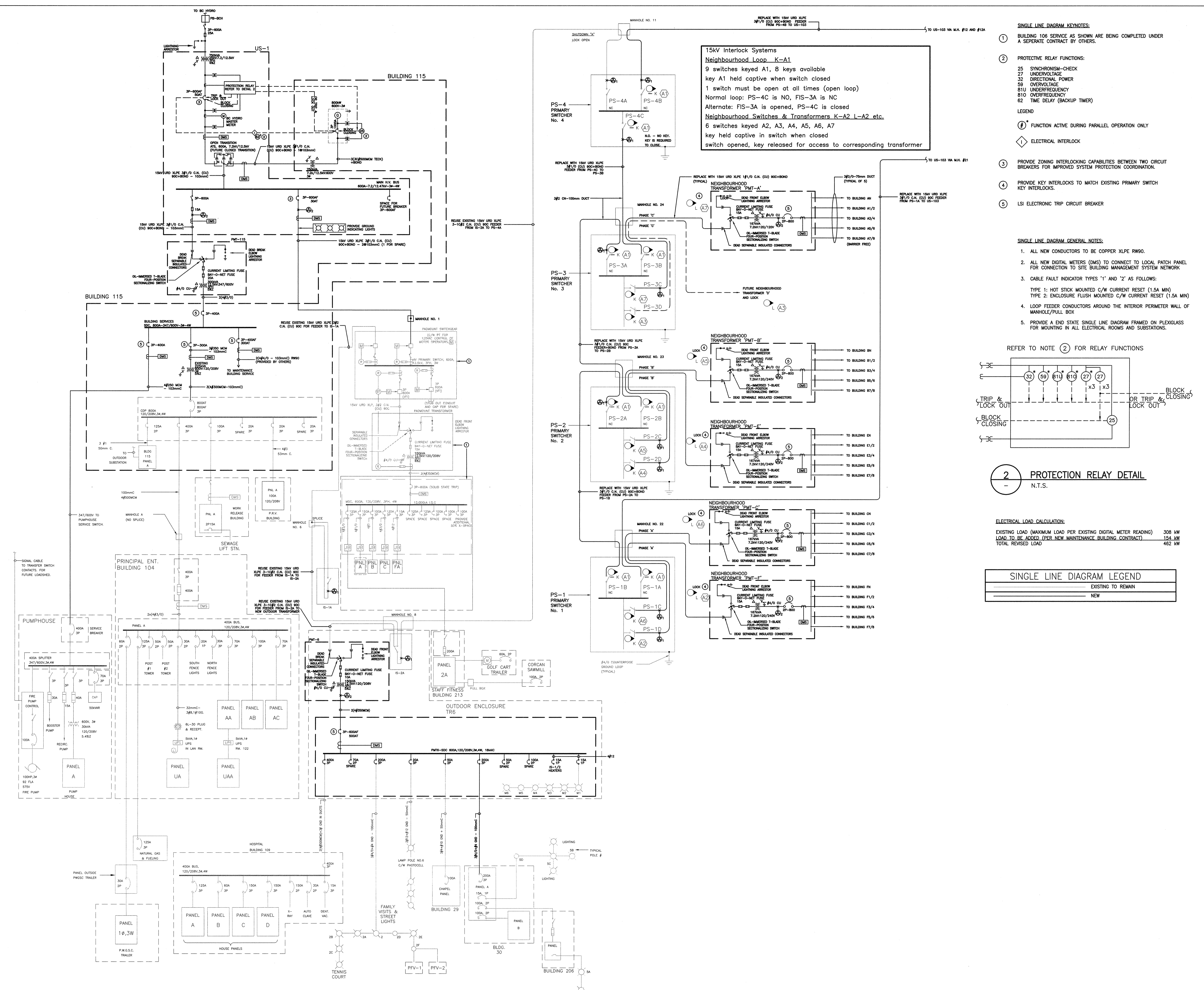
CORRECTIONAL SERVICE CANADA

Project title/Titre du projet
METCHOSIN, BC
WILLIAM HEAD INSTITUTION ELECTRICAL HIGH VOLTAGE UPGRADE (PHASE 2 OF 2)

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PWGSC Project Manager/Administrateur de Projets TPSCG
P. Truong
PWGSC, Regional Manager, Architectural and Engineering Services/
Gestionnaire régional, Services d'architecture et de génie, TPSCG
P. Paul

Drawing title/Titre du dessin
EXISTING SITE SINGLE LINE DIAGRAM

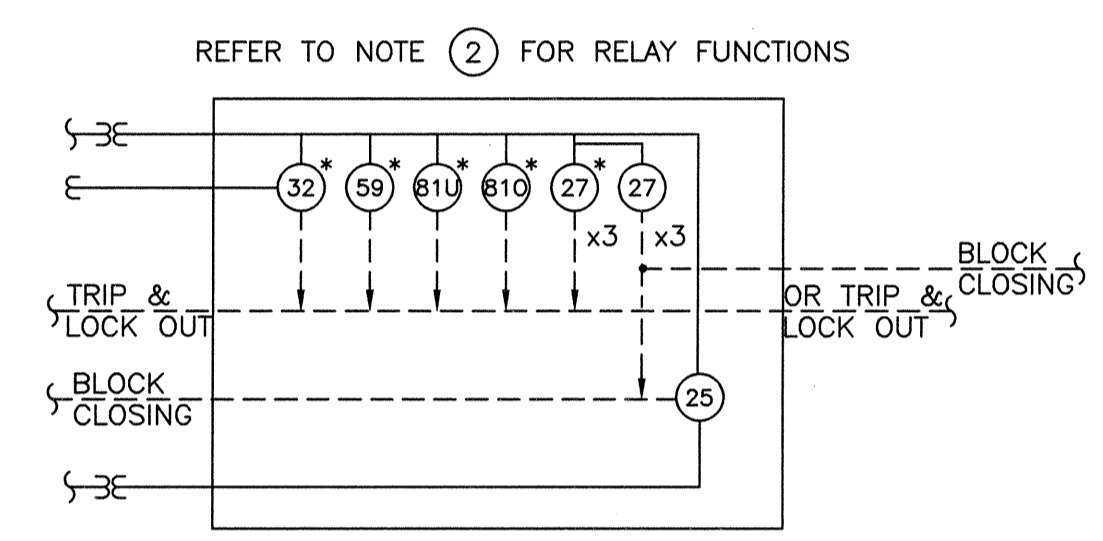
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	20 of 22	



15kV Interlock Systems
Neighbourhood Loop K-A1
9 switches keyed A1, 8 keys available
key A1 held captive when switch closed
1 switch must be open at all times (open loop)
Normal loop: PS-4C is NO, FIS-3A is NC
Alternate: FIS-3A is opened, PS-4C is closed
Neighbourhood Switches & Transformers K-A2 L-A2 etc.
6 switches keyed A2, A3, A4, A5, A6, A7
key held captive in switch when closed
switch opened, key released for access to corresponding transformer

- SINGLE LINE DIAGRAM KEYNOTES:**
- BUILDING 106 SERVICE AS SHOWN ARE BEING COMPLETED UNDER A SEPARATE CONTRACT BY OTHERS.
 - PROTECTIVE RELAY FUNCTIONS:
25 SYNCHRONISM-CHECK
27 UNDERVOLTAGE
32 DIRECTIONAL POWER
59 OVERVOLTAGE
81U UNDERFREQUENCY
81O OVERFREQUENCY
82 TIME DELAY (BACKUP TIMER)
 - LEGEND
Ⓢ FUNCTION ACTIVE DURING PARALLEL OPERATION ONLY
Ⓛ ELECTRICAL INTERLOCK
 - PROVIDE ZONING INTERLOCKING CAPABILITIES BETWEEN TWO CIRCUIT BREAKERS FOR IMPROVED SYSTEM PROTECTION COORDINATION.
 - PROVIDE KEY INTERLOCKS TO MATCH EXISTING PRIMARY SWITCH KEY INTERLOCKS.
 - LSI ELECTRONIC TRIP CIRCUIT BREAKER

- SINGLE LINE DIAGRAM GENERAL NOTES:**
- ALL NEW CONDUCTORS TO BE COPPER XLPE RW90.
 - ALL NEW DIGITAL METERS (DMS) TO CONNECT TO LOCAL PATCH PANEL FOR CONNECTION TO SITE BUILDING MANAGEMENT SYSTEM NETWORK.
 - CABLE FAULT INDICATOR TYPES '1' AND '2' AS FOLLOWS:
TYPE 1: HOT STICK MOUNTED C/W CURRENT RESET (1.5A MIN)
TYPE 2: ENCLOSURE FLUSH MOUNTED C/W CURRENT RESET (1.5A MIN)
 - LOOP FEEDER CONDUCTORS AROUND THE INTERIOR PERIMETER WALL OF MANHOLE/PULL BOX
 - PROVIDE A END STATE SINGLE LINE DIAGRAM FRAMED ON PLEXIGLASS FOR MOUNTING IN ALL ELECTRICAL ROOMS AND SUBSTATIONS.

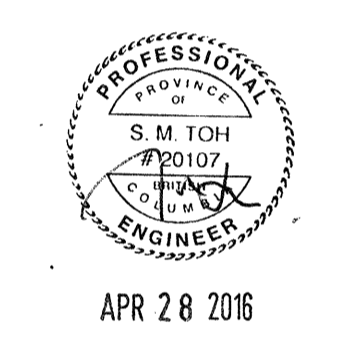


2 PROTECTION RELAY DETAIL
N.T.S.

ELECTRICAL LOAD CALCULATION:
EXISTING LOAD (MAXIMUM LOAD PER EXISTING DIGITAL METER READING) 308 kW
LOAD TO BE ADDED (PER NEW MAINTENANCE BUILDING CONTRACT) 154 kW
TOTAL REVISED LOAD 462 kW

SINGLE LINE DIAGRAM LEGEND

(Solid line)	EXISTING TO REMAIN
(Dashed line)	NEW



1 SITE SINGLE LINE DIAGRAM - NEW
N.T.S.

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Revision/	Description/Description	Date/Date
Client/client		
CORRECTIONAL SERVICE CANADA		
Project title/Titre du projet METCHOSIN, BC		
WILLIAM HEAD INSTITUTION ELECTRICAL HIGH VOLTAGE UPGRADE (PHASE 2 OF 2)		
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PWGSC Project Manager/Administrateur de Projets TPSCG P. Truong		
PWGSC, Regional Manager, Architectural and Engineering Services/ Gestionnaire régionale, Services d'architecture et de génie, TPSCG P. Paul		
Drawing title/Titre du dessin SITE SINGLE LINE DIAGRAM - NEW (1 OF 2)		
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