# DRAWING NOTES:

- PROVIDE (1) 27mm RIGID PVC CONDUIT FROM WOOD POST, 914mm BELOW GRADE TO THE MODULAR VENTILATED SPACE AND STUB UP INSIDE VENTILATED SPACE. TRANSITION TO EMT BELOW FLOOR AND CONNECT TO EMT CONDUIT STUBBING DOWN FROM MODULAR UNIT. PROVIDE PULL TWINE AND CAP CONDUIT AT EACH END. RUN CONDUIT LOCATED AT POST SO THAT IT TERMINATES AT TOP OF POST PROVIDE LARGE RADIUS BENDS TO ALLOW FOR EASE OF CABLE INSTALLATION. POST PROVIDED BY OTHERS.
- PROVIDE SIX CONDUCTOR TECK 90 HL RATED CABLE FROM ELECTRICAL PANEL THROUGH VENTILATED SPACE BELOW MAIN ELECTRICAL ROOM TO FUEL STORAGE COMPOUND PUMP CONTROLLER/ FUEL LEAK SENSOR AND STUB UP AT PUMP LOCATION. TERMINATE CONDUCTORS ON PUMP CONTROLLER AND MAKE FINAL CONNECTION TO PUMP. USE TWO CONDUCTORS FOR LEAK SENSOR ALARM CONNECTION TO SIGNAL DEVICES LOCATED IN ROOM 112. REFER TO FUEL STORAGE DETAIL AND MOTOR SCHEDULE FOR CONDUCTOR SIZES. REFER TO E3.1 FOR ALARM SIGNAL LOCATIONS AND NOTES. CIRCUIT EA1.
- MOUNT RECEPTACLE IN WEATHER PROOF PVC BOX C/W "WHILE IN USE" COVER ON ENCLOSURE FENCE POST UP 900mm A.F.G. RUN RWU90 TECK CABLE ON TOP FENCE RAIL TO BUILDING AND DROP DOWN AND STUB INTO VENTILATED SPACE.
- PROVIDE 50mm FRE CONDUIT C/W PULL TWINE FROM ROOM 150 THROUGH VENTILATED SPACE TO TERMINATION PEDESTAL, RUN IN SHARED TRENCH WITH WATER AND SEWER LINES. PLACE CONDUIT TIGHT TO SIDE OF TRENCH ABOVE WATER LINES 914mm BELOW GRADE OR AS DEEP AS POSSIBLE. REFER TO TELEPHONE COMMUNICATIONS DETAILS, SPECIFICATIONS AND DRAWING E7.1.
- PROVIDE 41mm FRE CONDUIT C/W PULL TWINE FROM TERMINATION PEDESTAL TO THE VENTILATED SPACE OF EACH HOUSING UNIT. REFER TO HOUSING UNIT NOTES. RUN 914mm BELOW FINISHED GRADE IN SHARED TRENCH. REFER TO TELEPHONE COMMUNICATIONS DETAILS AND SPECIFICATIONS.
- 6 PROVIDE AN 600 AMP SERVICE RATED EXTERIOR SPLITTER MOUNTED TO BUILDING FOR INCOMING SASKPOWER SERVICE CONDUCTORS. REFER TO DRAWING E5.1 FOR CONDUIT STUBS AND SECONDARY CONDUCTOR SIZES.
- PROVIDE (2) #10 TECK90 & 10 BOND FROM LIGHTING PANEL TO EACH LIGHT POST. RUN 914mm BELOW FINISHED GRADE.
- 8 EMERGENCY GENERATOR. REFER TO SPECIFICATIONS AND DISTRIBUTION DRAWING E5.1 FOR CONDUIT AND FEEDER SIZES.
- PROVIDE PEDESTAL FOR SASKTEL CABLE TERMINATIONS C/W 19mm PLYWOOD BACKBOARD INSIDE AND BIX BLOCK FOR CABLE TERMINATIONS. PEDESTAL SHALL HAVE LOCKING ACCESS DOOR, GALVANIZED STEEL CONSTRUCTION, GRADE LEVEL MARKED ON PEDESTAL, SEAFOAM GREEN POWDER COAT FINISH, GROUND TERMINATION BAR, GROUND STAKES AND MOUNTING HARDWARE. MANUFACTURER: VALID MANUFACTURING LTD #AJP-0620 (1066mm x 457mm x 305mm). OR APPROVED EQUAL. SHARE TRENCH WITH SITE LIGHTING CIRCUIT.
- PROVIDE WEATHERPROOF MUSHROOM TYPE EMERGENCY STOP BUTTON "RED" MOUNTED TO A 305mm X 305mm ALUMINUM PLATE MOUNTED ON EXTERIOR OF FENCE. PROVIDE ONE NORMALLY OPEN AND ONE NORMALLY CLOSED 120 VOLT CONTACTOR IN ROOM 114 FOR SHUT DOWN OF FUEL PUMP CONTROLLER. LABEL BUTTON "EMERGENCY STOP". (LETTERING SHALL BE RED 75mm HIGH ON LAMICOID).MOUNT BUTTON UP 1200mm A.F.G. BUTTON SHALL BE AN STI SS-2252PS RED KEYED RESET C/W COMPATIBLE CLEAR ACCESSIBLE POLYCARBONATE COVER. REFER TO DRAWING E5.4.

- 100mm X 100mm WOOD POST BY OTHERS. REFER TO ARCHITECTURAL DETAILS AND SITE PLAN.
- POWER FEEDER TO BUILDING 157 PANEL. DO NOT RUN THROUGH AREA OF FUTURE EXPANSION. PROVIDE RIGID GALVANIZED STEEL CONDUIT FOR POWER FEEDER CABLES. REFER TO PANEL SCHEMATICS FOR CONDUIT AND CONDUCTOR SIZES. SHARE TRENCH WITH TELEPHONE CABLE.
- TOTALLY CLOSED CABLE TRAY FOR GENERATOR FEEDS MOUNTED AT TOP OF FRAME. SUPPORT TRAY ON UNISTRUT FRAME FASTENED TO BUILDING SKIRT AND GENERATOR FRAME. REFER TO GENERATOR SPECIFICATIONS AND SINGLE LINE DRAWING. BOND TRAY AS PER CABLE TRAY SPECIFICATIONS.
- SPC PAD MOUNTED TRANSFORMER. REFER TO SINGLE LINE DRAWING FOR SECONDARY CONDUCTOR SIZES. DRAWING E5.1.
- PROVIDE 76mm FRE CONDUIT C/W PULL STRING FROM SASKTEL TERMINATION PEDESTAL TO THE VENTILATED SPACE. RUN 914mm BELOW FINISHED GRADE. STUB UP IN VENTILATED SPACE AND RUN ON UNISTRUT SUPPORTS ON UNDERSIDE OF DECK TO THE TELEPHONE ROOM AND STUB UP INTO ROOM BELOW PLYWOOD. PROVIDE LB FITTING AT EACH END AND PULL BOXES AS REQUIRED BY CODE.
- PROVIDE 41mm FRE CONDUIT C/W PULL TWINE FROM TERMINATION PEDESTAL TO THE FUTURE LOCATION OF EACH HOUSING UNIT AND CAP CONDUIT. REFER TO HOUSING UNIT NOTES. RUN 914mm BELOW FINISHED GRADE IN SHARED TRENCH. REFER TO TELEPHONE COMMUNICATIONS DETAILS AND SPECIFICATIONS.
- PROVIDE (2) #8 TECK90 & 10 BOND FROM LIGHTING PANEL TO EACH LIGHT POST. RUN 914mm BELOW FINISHED GRADE.

# **GENERAL NOTES:**

- 1. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND SERVICES PRIOR TO TRENCHING OR BORING FOR NEW UNDERGROUND FEEDERS.
- 2. ALL UNDERGROUND FEEDERS SHALL BE A MINIMUM OF 914mm BELOW FINISHED GRADE OR TOP OF BEDROCK. INSTALL CONDUITS IN COMMON TRENCH WHERE POSSIBLE. WHERE INSTALLED ON TOP OF BEDROCK, PROVIDE (RGS) RIGID GALVANIZED STEEL CONDUIT.
- 3. REFER TO TRENCH DETAIL ON DRAWING E7.1 FOR UNDERGROUND FEEDERS. COORDINATE WITH SASKPOWER FOR INCOMING SERVICE TRENCH REQUIREMENTS.
- 4. REFER TO DRAWING E3.1 FOR PARKING RECEPTACLE CIRCUITRY.
- 5. CONTRACTOR SHALL PROVIDE TRENCH AND BACKFILL FROM SASKPOWER SERVICE POLE TO NEW SASKPOWER SERVICE PEDESTALS AND TO MODULAR UNITS. PROVIDE TRENCH AND BACKFILL FROM SERVICE POLE TO PADMOUNT TRANSFORMER AND FROM TRANSFORMER TO THE EXTERIOR SPLITTER ON THE BUILDING. COORDINATE WITH SASKPOWER SERVICE DOCUMENTS AND SERVICE INSTALLATION REQUIREMENTS.

SYMBOL SCHEDULE

- —D EMERGENCY STOP, MUSHROOM TYPE, REFER TO DRAWING NOTES AND SPECIFICATIONS.
- JUNCTION BOX/OUTLET BOX.
- CEILING/WALL SURFACE MOUNTED INCANDESCENT OR HIGH INTENSITY DISCHARGE FIXTURE.

RECESSED CEILING MOUNTED FIXTURE

FLUORESCENT FIXTURE, SURFACE MOUNTED OR SUSPENDED.

FLUORESCENT FIXTURE, RECESSED.

FIXTURES SHOWN SHADED DESIGNATE UNIT IS CONNECTED TO EMERGENCY POWER DISTRIBUTION.

ELECTRICAL DISTRIBUTION PANEL, SURFACE/RECESSED.

- MOTOR CONNECTION. COORDINATE FINAL LOCATION ON SITE. 'STP' DESIGNATES MOTOR THERMAL SWITCH MOUNTED AT UNIT.
- COPPER CLAD GROUND ROD 3045mm LONG X 20mm DIAMETER. CONNECTIONS SHALL BE THERMOWELD OR BURNDY HI-GRND. SUFFIX 'BP' INDICATES GROUNDING PLATE.
- MOULDED CASE TYPE CIRCUIT BREAKER, 15 AMP UNLESS OTHERWISE NOTED.
- MOLDED CASE TYPE CIRCUIT BREAKER, GROUND FAULT INTERRUPTER, 15 AMP UNLESS OTHERWISE NOTED.
- MP MOTOR DISCONNECT SWITCH, SUFFIX 'WP' INDICATES WEATHERPROOF.
- S.P.S.T. SWITCH MOUNTED UP 1200mm. SUFFIX INDICATE FIXTURE SWITCHING AND QUANTITY OF SWITCHES, E.G. Sa INDICATES ONE S.P.S.T. SWITCH CONTROLLING FIXTURES WITH CORRESPONDING SUFFIX 'a'. Sa:b:c INDICATES THREE S.P.S.T. SWITCHES, THE FIRST CONTROLLING FIXTURES SUFFIXED 'a', THE SECOND CONTROLLING FIXTURES SUFFIXED 'b', AND THE THIRD CONTROLLING FIXTURES SUFFIXED 'c'. SUFFIX 'F' FOR FAN CONTROL.
- <sup>3</sup>S THREE-WAY SWITCH MOUNTED UP 1200mm.
- CS 3-POSITION CELL LIGHT SWITCH. SWITCH MOUNTED UP 1200mm
- 45 FOUR-WAY SWITCH MOUNTED UP 1200mm.
- KEY OPERATED SWITCH MOUNTED UP 1200mm UNLESS NOTED OTHERWISE. REFER E3.1 AND CCTV / RIOT ALARM SPECIFICATIONS.
- DIMMER SWITCH MOUNTED UP 1200mm, DIMMER SHALL BE SIZED ACCORDING TO LOAD AND SUITABLE FOR 'LED'.
- OCS WALL OR CEILING MOUNTED OCCUPANCY/VACANCY SENSOR UP 1200mm AS DESCRIBED ON DRAWINGS AND SPECIFICATIONS.
- F- FIRE ALARM MANUAL PULL STATION MOUNTED UP 1350mm A.F.F.
- FIRE ALARM SIGNAL DEVICE (HORN/STROBE) SURFACE WALL MOUNTED UP 2290mm
- PHOTO-ELECTRIC TYPE DUCT SMOKE DETECTOR.
- RM FIRE ALARM CONTROL/RELAY MODULE
- FIRE ALARM MONITOR MODULE
- FIRE ALARM SYSTEM COMBINATION TYPE SMOKE DETECTOR CEILING MOUNTED.
- FIRE ALARM SYSTEM HEAT DETECTOR CEILING MOUNTED, COMBINATION 135 DEGREES FIXED TEMP/RATE OF RISE.
- (E) EMERGENCY LIGHTING UNIT. SEE EMERGENCY LIGHTING SPECIFICATIONS FOR DETAILS.
- DUPLEX GROUNDED RECEPTACLE OUTLETS WITH NO SUFFIX SHALL BE MOUNTED UP 450mm. WHERE SUFFIXED, MOUNT AS FOLLOWS: 'a' 250mm. ABOVE COUNTER; 'b' UP 900mm.; 'f' FRIDGE RECEPTACLE UP 450mm; 'HK' 20A RECEPTACLE UP 450mm FOR HOUSE KEEPING; 'm' MICROWAVE RECEPTACLE UP 250mm ABOVE MICROWAVE SHELF. COORDINATE WITH ARCHITECTURE MILLWORK FOR EXACT LOCATION.
- WP 

  DUPLEX GROUNDED RECEPTACLE C/W 'WHILE IN USE' COVER MOUNTED UP 900mm.
  UNLESS NOTED OTHERWISE.
- DUPLEX GROUNDED RECEPTACLE, SPLIT WIRED, PROTECTED BY TWO POLE BREAKER AT PANEL. SEE DRAWINGS FOR MOUNTING HEIGHT.
- DUPLEX GROUNDED RECEPTACLE AND DATA/VOICE OUTLET AND A/V OUTLET MOUNTED IN COMBINATION RECESSED ADJUSTABLE FLUSH FLOOR BOX. NON-METALLIC ROUND BOX, UNIVERSAL CARPET FLANGE AND COVER ASSEMBLY, ALUMINUM FINISH, 8" DIAMETER. MANUFACTURER: HUBBELL S1PFB (BOX), S1CFCAL (COVER) OR APPROVED EQUAL.
- DUPLEX GROUNDED RECEPTACLE, 20 AMP T-SLOT MOUNTED UP 450mm.
- DUPLEX GROUNDED RECEPTACLE MOUNTED UP 450mm FED FROM EMERGENCY POWER SUPPLY. BODY OF RECEPTACLE SHALL BE IMPREGNATED 'RED' COLOUR.
- DUPLEX GROUND FAULT CURRENT INTERRUPTER RECEPTACLE MOUNTED UP 450mm OR AS NOTED. SUFFIX 20A INDICATES A 20 AMP RECEPTACLE 5-20R.
- DATA/VOICE OUTLET MOUNTED UP 450 mm. 100 mm. SQUARE BOX C/W SINGLE GANG EXTENSION AND 27 mm CONDUIT. SUFFIX '1D' INDICATES ONE DATA JACK, '1V' INDICATES ONE VOICE JACK.

  CABLE TYPE SHALL BE TERMINATED AT THE DATA PATCH PANEL AND OUTLET BOX VOICE CABLE TYPE SHALL BE TERMINATED AT THE OUTLET BOX AND BIX BLOCK. NOT MORE THAN TWO WORK STATIONS PER 15 AMP CIRCUIT.
- PL1 -- POLE MOUNTED LUMINAIRE WITH ONE HEAD.
- D/V SUFFIX 'D/V' INDICATES JUNCTION BOX FOR SYSTEMS FURNITURE UP 450mm, SUFFIX 'P' INDICATES POWER, SUFFIX 'EP' INDICATES JUNCTION BOX FED FROM EMERGENCY POWER.
  - WEATHERPROOF 120 VOLT PHOTOCELL TO CONTROL EXTERIOR BUILDING LIGHTING. INTERMATIC 'K' SERIES OR APPROVED EQUAL.
- RECESSED SINGLE GANG BOX MOUNTED UP 900mm, FOR POWER DOOR OPERATOR.
- D DRYER RECEPTACLE, 50 AMP, 125/250 VOLT, 4 WIRE GROUNDED RECEPTACLE C/W COVERPLATE. MOUNT UP 900 mm.

NOTE:
SUBSCRIPT 'CLG' DENOTES DEVICE IS CEILING MOUNTED.
SUBSCRIPT 'MP' DENOTES DEVICE IS MOISTURE PROOF AND COLD TEMPERATURE RATED.

SEPW Architecture Inc.

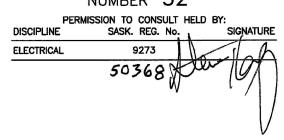
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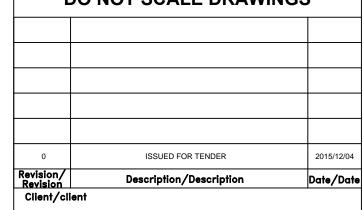


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NUMBER 52



# DO NOT SCALE DRAWINGS



Project title/Titre du projet

NEW MODULAR POLICE BUILDING AND EMPLOYEE HOUSING BLACK LAKE, SASKATCHEWAN

Approved by/Approuve par

Designed by/Concept par

Drawn by/Dessine par

Project Manager/Administrateur de Projets

Architectural and Engineering Resources Manager/Ressources Architectural et de Directeur d'Ingénierie

Drawing title/Titre du dessin

ELECTRICAL SITE PLAN
AND SYMBOL SCHEDULE

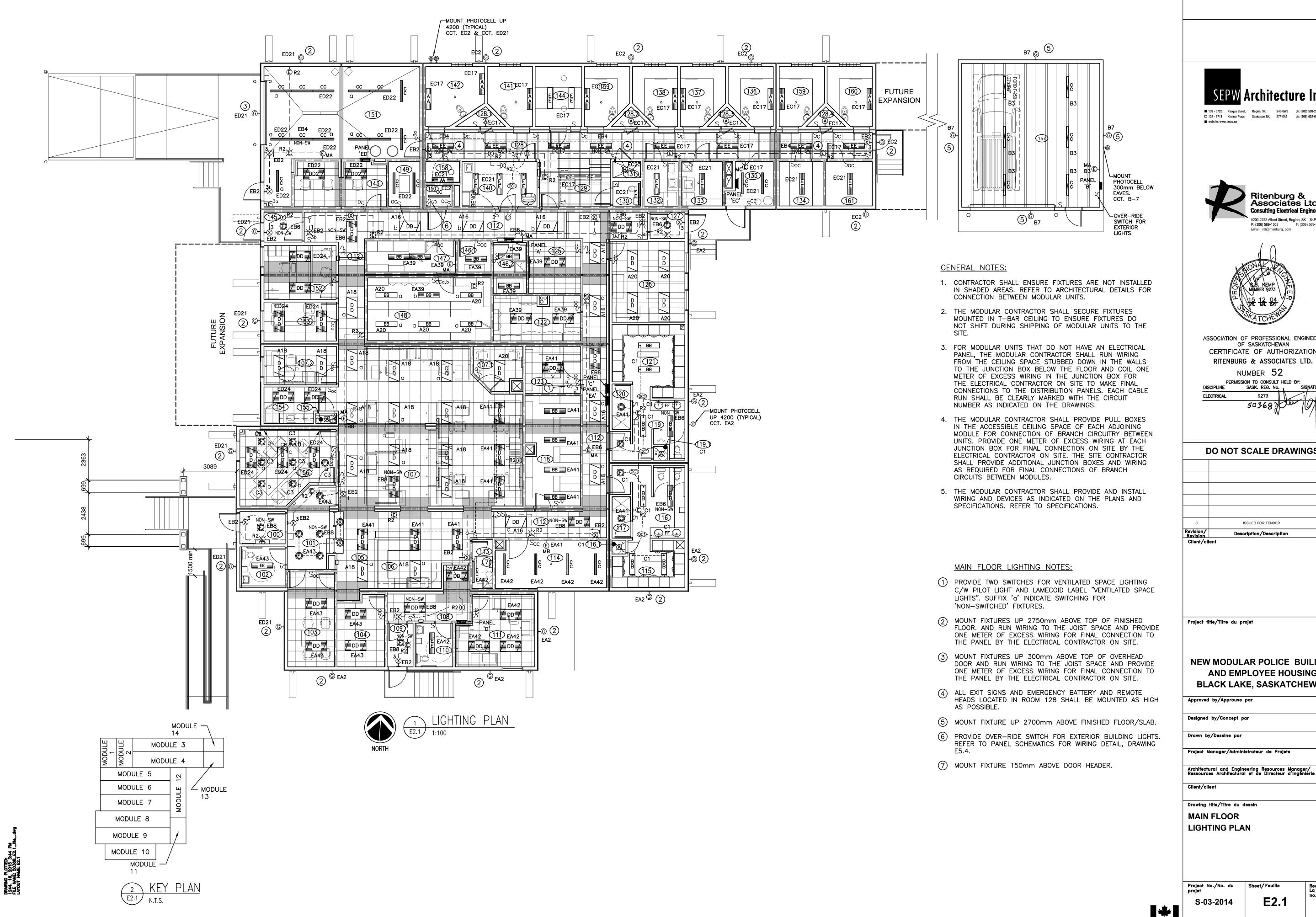
Project No./No. du projet
S-03-2014

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Sheet/Feuille
E1.1

l.1 |ˈ

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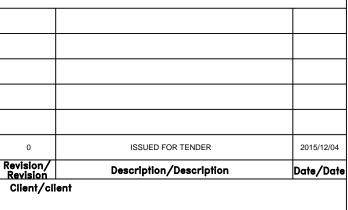




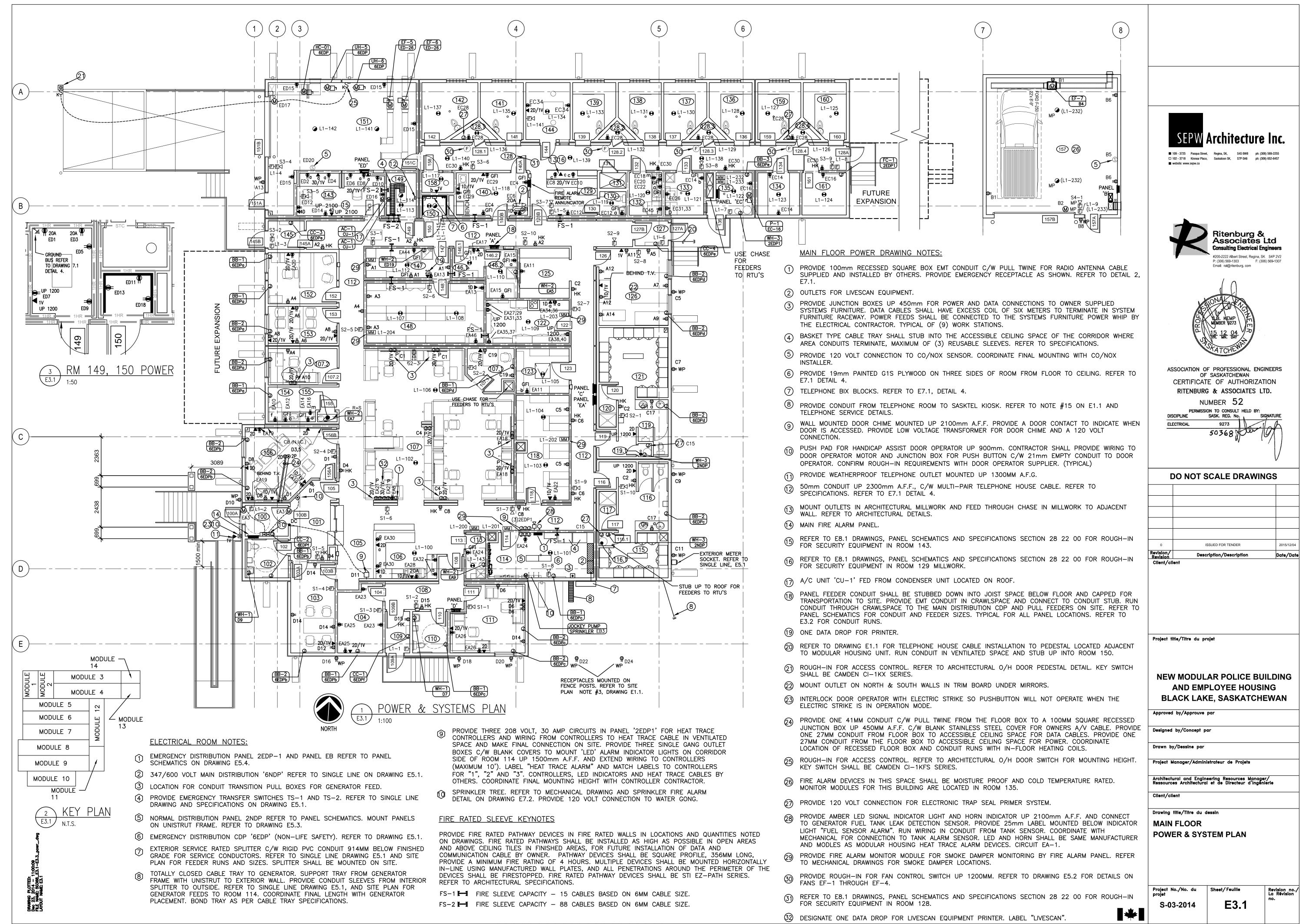
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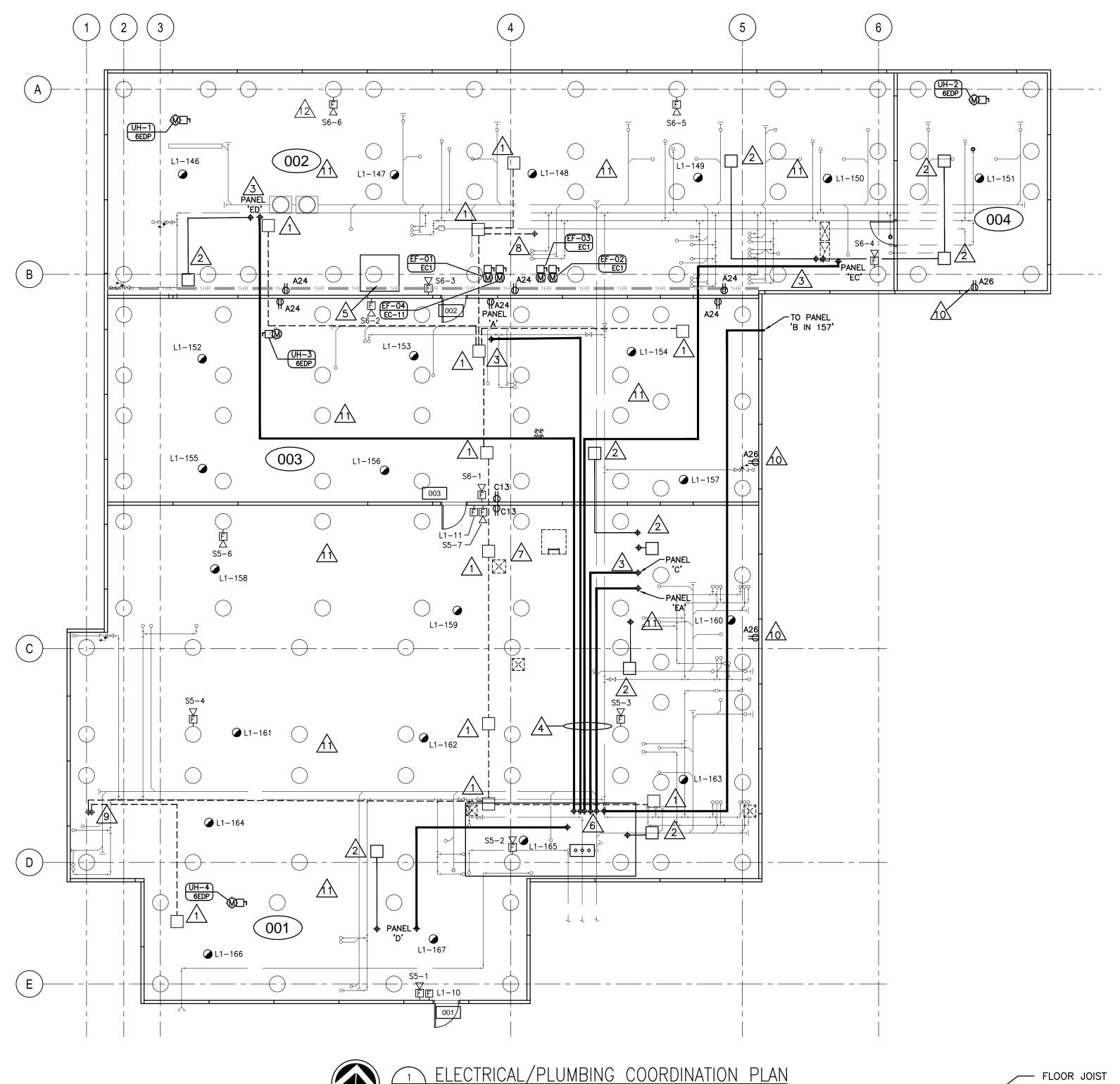
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# **NEW MODULAR POLICE BUILDING** AND EMPLOYEE HOUSING **BLACK LAKE, SASKATCHEWAN**



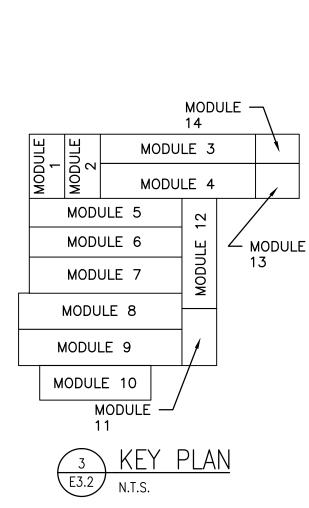


# **GENERAL NOTES:**

- 1. COORDINATE ALL CONDUIT RUNS WITH MECHANICAL DUCTWORK AND PIPING.
- ALL MAIN CONDUIT RUNS SHALL BE SUPPORTED FROM THE STRUCTURAL JOISTS ON A UNISTRUT RACK FASTENED TO THE JOISTS. COORDINATE WITH STRUCTURAL DRAWINGS FOR JOIST LOCATIONS. REFER TO RACK DETAIL AND SPECIFICATIONS FOR SPACING OF SUPPORTS.
- COORDINATE FINAL LOCATIONS OF FIRE ALARM DEVICES WITH MECHANICAL DUCTWORK AND PIPING.
- 4. ALL FIXTURES AND DEVICES SHALL BE INSTALLED AFTER METAL SHEETING IS INSTALLED ON THE UNDERSIDE OF THE FLOOR JOISTS. ALL PENETRATIONS SHALL HAVE FIRE STOPPING PROVIDED.
- 5. RUN FEEDERS FOR ROOF TOP UNITS TO DUCT RISER SHAFT AND RISE UP TO CEILING SPACE. RUN THROUGH CEILING TO ROOF TOP UNIT AND STUB UP INSIDE ROOF CURB. REFER TO POWER PLAN FOR RISER LOCATIONS AND SINGLE LINE DRAWING FOR FEEDER SIZES.

# **VENTILATED SPACE NOTES:**

- 305MM X 305MM PULL BOX (MINIMUM OR SIZED AS PER 2012 CANADIAN ELECTRICAL CODE) MOUNTED TO THE UNDERSIDE OF MODULAR UNIT, BETWEEN FLOOR JOISTS FOR FIRE ALARM CONDUIT TERMINATIONS. PROVIDE CONDUIT RUNS FOR EACH FIRE ALARM DEVICE AND TERMINATE IN PULL BOX. PROVIDE CONDUIT IN CRAWLSPACE BETWEEN EACH PULL BOX BACK TO THE MAIN FIRE ALARM PANEL. FIRE ALARM WIRING SHALL BE INSTALLED ON SITE. THERE SHALL BE NO SPLICING OF FIRE ALARM CABLES. JUNCTION BOXES IN THE VENTILATED SPACE SHALL BE ACCESSIBLE FOLLOWING THE METAL SHEETING INSTALLATION BY PROVIDING ACCESS PANELS IN THE SHEETING.
- 457MM X 457MM PULL BOX (MINIMUM OR SIZED AS PER 2012 CANADIAN ELECTRICAL CODE) MOUNTED TO THE UNDERSIDE OF MODULAR UNIT, BETWEEN FLOOR JOISTS FOR BRANCH CIRCUITRY TERMINATIONS. PROVIDE CONDUIT IN VENTILATED FROM EACH PULL BOX TO THE PANEL LOCATION SIZED TO SUIT BRANCH CIRCUITS FROM EACH MODULE. JUNCTION BOXES IN THE VENTILATED SPACE SHALL BE ACCESSIBLE FOLLOWING THE METAL SHEETING INSTALLATION BY PROVIDING ACCESS PANELS IN THE SHEETING.
- LOCATION OF PANEL FEEDER CONDUITS STUBBED DOWN INTO JOIST SPACE BELOW FLOOR. REFER TO PANEL SCHEMATICS FOR CONDUIT AND FEEDER SIZES. DRAWING E5.2 & E5.3.
- PROVIDE EMT CONDUIT IN CRAWLSPACE AND CONNECT TO CONDUIT STUB FOR NOTE #3. RUN CONDUIT THROUGH VENTILATED SPACE TO THE MAIN DISTRIBUTION CDP AND PULL FEEDERS ON SITE. REFER TO PANEL SCHEMATICS FOR CONDUIT AND FEEDER SIZES. TYPICAL FOR ALL PANEL LOCATIONS. ALL CONDUITS SHALL BE MOUNTED TO UNISTRUT RACK FASTENED TO UNDERSIDE OF FLOOR JOISTS. CONDUITS SHALL NOT BE MOUNTED TO THE UNDERSIDE OF THE FLOOR DECK. REFER TO DETAIL 2, DRAWING E3.2.
- ROOM 150 ABOVE. STUB CONDUIT OUT TO EXTERIOR FOR SASKTEL INCOMING SERVICE CABLES. REFER TO SITE PLAN FOR CONDUIT SIZES.
- ROOM 114 ABOVE. STUB OUT CONDUITS FOR INCOMING MAIN SERVICE CONDUCTORS.
- BRANCH CIRCUITRY FEEDERS SHALL BE INSTALLED IN FACTORY.
  LIGHT FIXTURES SHALL BE INSTALLED ON SITE. COORDINATE
  LOCATION OF LIGHTING FIXTURES WITH MECHANICAL DUCTS AND
  BEAMS. CONDUITS SHALL RUN TIGHT TO THE UNDERSIDE OF BEAMS.
  CONNECT AREA 001 LIGHTING TO SWITCH IN ROOM 123 ADJACENT
  TO ACCESS HATCH.
- STUB UP TO REMOTE FIRE ALARM ANNUNCIATOR PANEL.
- $\frac{1}{2}$  stub up to main fire alarm panel.
- PROVIDE RECEPTACLE FOR FUTURE SOIL GAS EXHAUST SYSTEM. MOUNT ON WALL 300mm BELOW FLOOR STRUCTURE.
- PROVIDE #6 BARE CU. BOND TO METAL SHEETING ON UNDERSIDE OF JOISTS IN VENTILATED SPACE. PROVIDE CONNECTIONS EVERY 15 METERS IN A GRID PATTERN.
- MOUNT HORN STROBE SO TOP OF STROBE IS LOWER THAN THE BOTTOM OF THE MECHANICAL DUCTS FOR OPTIMUM VISIBILITY. (TYPICAL)





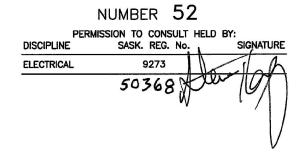
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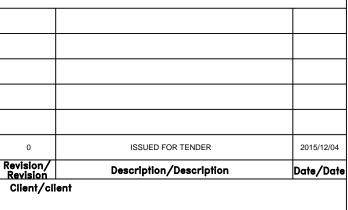
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Project title/Titre du projet

NEW MODULAR POLICE BUILDING AND EMPLOYEE HOUSING BLACK LAKE, SASKATCHEWAN

Approved by/Approuve par

Designed by/Concept par

Drawn by/Dessine par

Project Manager/Administrateur de Projets

Architectural and Engineering Resources Manager/ Ressources Architectural et de Directeur d'Ingénierie

Drawing title/Titre du dessin

ELECTRICAL CONDUIT LAYOUT AND EQUIPMENT CONNECTIONS

Project No./No. du projet
S-03-2014

E3.2

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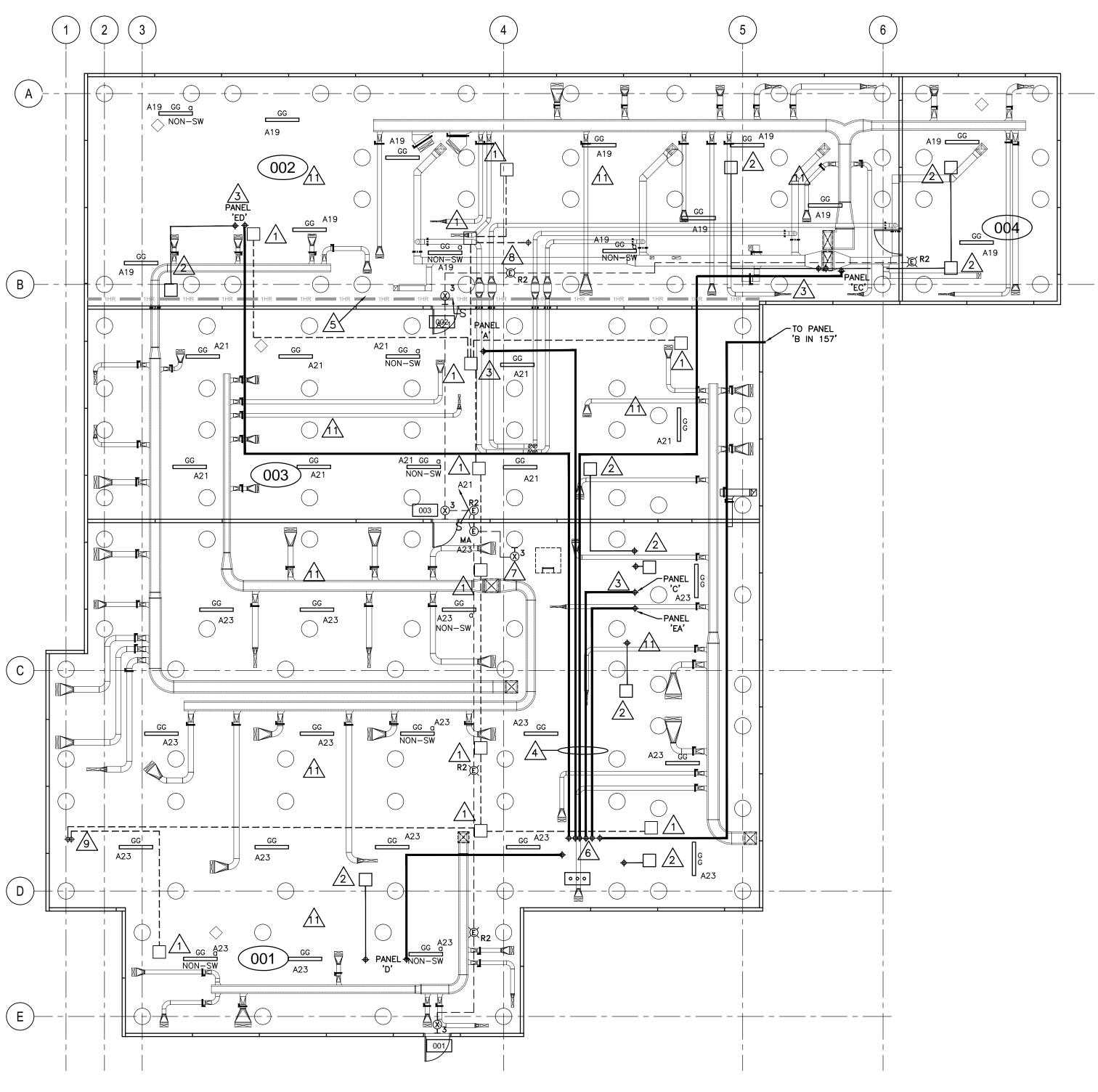
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METAL
SHEETING

METAL
SHEETING

CONDUITS MOUNTED TO UNISTRUT
SUPPORTS WITH CLAMPS. SPACING OF
SUPPORTS SHALL BE AS PER THE
2012 CEC SECTION 12–1010.

MAIN CONDUIT RUN DETAIL



## **GENERAL NOTES:**

- 1. COORDINATE ALL CONDUIT RUNS WITH MECHANICAL DUCTWORK AND PIPING.
- 2. ALL MAIN CONDUIT RUNS SHALL BE SUPPORTED FROM THE STRUCTURAL JOISTS ON A UNISTRUT RACK FASTENED TO THE JOISTS. COORDINATE WITH STRUCTURAL DRAWINGS FOR JOIST LOCATIONS. REFER TO RACK DETAIL AND SPECIFICATIONS FOR SPACING OF SUPPORTS.
- 3. COORDINATE FINAL LOCATIONS OF FIRE ALARM DEVICES WITH MECHANICAL DUCTWORK AND PIPING.
- 4. ALL FIXTURES AND DEVICES SHALL BE INSTALLED AFTER METAL SHEETING IS INSTALLED ON THE UNDERSIDE OF THE FLOOR JOISTS. ALL PENETRATIONS SHALL HAVE FIRE STOPPING
- 5. RUN FEEDERS FOR ROOF TOP UNITS TO DUCT RISER SHAFT AND RISE UP TO CEILING SPACE. RUN THROUGH CEILING TO ROOF TOP UNIT AND STUB UP INSIDE ROOF CURB. REFER TO POWER PLAN FOR RISER LOCATIONS AND SINGLE LINE DRAWING FOR FEEDER SIZES.

# **VENTILATED SPACE NOTES:**

305MM X 305MM PULL BOX (MINIMUM OR SIZED AS PER 2012 CANADIAN ELECTRICAL CODE) MOUNTED TO THE UNDERSIDE OF MODULAR UNIT, BETWEEN FLOOR JOISTS FOR FIRE ALARM CONDUIT TERMINATIONS. PROVIDE CONDUIT RUNS FOR EACH FIRE ALARM DEVICE AND TERMINATE IN PULL BOX. PROVIDE CONDUIT IN CRAWLSPACE BETWEEN EACH PULL BOX BACK TO THE MAIN FIRE ALARM PANEL. FIRE ALARM WIRING SHALL BE INSTALLED ON SITE. THERE SHALL BE NO SPLICING OF FIRE ALARM CABLES. JUNCTION BOXES IN THE VENTILATED SPACE SHALL BE ACCESSIBLE FOLLOWING THE METAL SHEETING INSTALLATION BY PROVIDING ACCESS PANELS IN THE SHEETING.

457MM X 457MM PULL BOX (MINIMUM OR SIZED AS PER 2012 CANADIAN ELECTRICAL CODE) MOUNTED TO THE UNDERSIDE OF MODULAR UNIT, BETWEEN FLOOR JOISTS FOR BRANCH CIRCUITRY TERMINATIONS. PROVIDE CONDUIT IN VENTILATED FROM EACH PULL BOX TO THE PANEL LOCATION SIZED TO SUIT BRANCH CIRCUITS FROM EACH MODULE. JUNCTION BOXES IN THE VENTILATED SPACE SHALL BE ACCESSIBLE FOLLOWING THE METAL SHEETING INSTALLATION BY PROVIDING ACCESS PANELS IN THE SHEETING.

LOCATION OF PANEL FEEDER CONDUITS STUBBED DOWN INTO JOIST SPACE BELOW FLOOR. REFER TO PANEL SCHEMATICS FOR CONDUIT AND FEEDER SIZES. DRAWING E5.2 & E5.3.

PROVIDE EMT CONDUIT IN CRAWLSPACE AND CONNECT TO CONDUIT STUB FOR NOTE #3. RUN CONDUIT THROUGH VENTILATED SPACE TO THE MAIN DISTRIBUTION CDP AND PULL FEEDERS ON SITE. REFER TO PANEL SCHEMATICS FOR CONDUIT AND FEEDER SIZES. TYPICAL FOR ALL PANEL LOCATIONS. ALL CONDUITS SHALL BE MOUNTED TO UNISTRUT RACK FASTENED TO UNDERSIDE OF FLOOR JOISTS. CONDUITS SHALL NOT BE MOUNTED TO THE UNDERSIDE OF THE FLOOR DECK. REFER TO DETAIL 2. DRAWING E3.2.

ROOM 150 ABOVE. STUB CONDUIT OUT TO EXTERIOR FOR SASKTEL INCOMING SERVICE CABLES. REFER TO SITE PLAN FOR CONDUIT

ROOM 114 ABOVE. STUB OUT CONDUITS FOR INCOMING MAIN SERVICE CONDUCTORS.

BRANCH CIRCUITRY FEEDERS SHALL BE INSTALLED IN FACTORY. LIGHT FIXTURES SHALL BE INSTALLED ON SITE. COORDINATE LOCATION OF LIGHTING FIXTURES WITH MECHANICAL DUCTS AND BEAMS. CONDUITS SHALL RUN TIGHT TO THE UNDERSIDE OF BEAMS. CONNECT AREA 001 LIGHTING TO SWITCH IN ROOM 123 ADJACENT TO ACCESS HATCH.

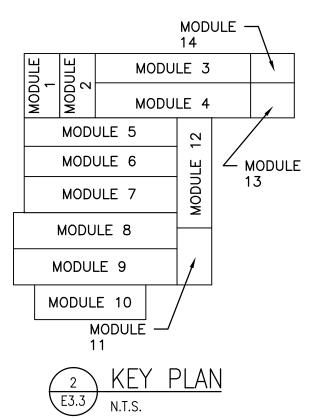
8 STUB UP TO REMOTE FIRE ALARM ANNUNCIATOR PANEL.

9\ STUB UP TO MAIN FIRE ALARM PANEL.

PROVIDE RECEPTACLE FOR FUTURE SOIL GAS LATER MOUNT ON WALL 300mm BELOW FLOOR STRUCTURE. PROVIDE RECEPTACLE FOR FUTURE SOIL GAS EXHAUST SYSTEM.

PROVIDE #6 BARE CU. BOND TO METAL SHEETING ON STREETING OF JOISTS IN VENTILATED SPACE. PROVIDE CONNECTIONS EVERY 15 METERS IN A GRID PATTERN.

MOUNT HORN STROBE SO TOP OF STROBE IS LOWER THAN THE BOTTOM OF THE MECHANICAL DUCTS FOR OPTIMUM VISIBILITY.



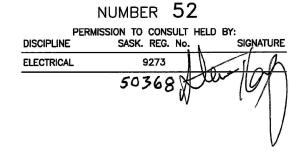


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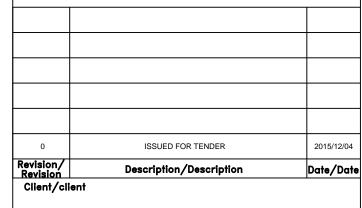




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Project title/Titre du projet

**NEW MODULAR POLICE BUILDING** AND EMPLOYEE HOUSING **BLACK LAKE, SASKATCHEWAN** 

Approved by/Approuve par

Designed by/Concept par Drawn by/Dessine par Project Manager/Administrateur de Projets

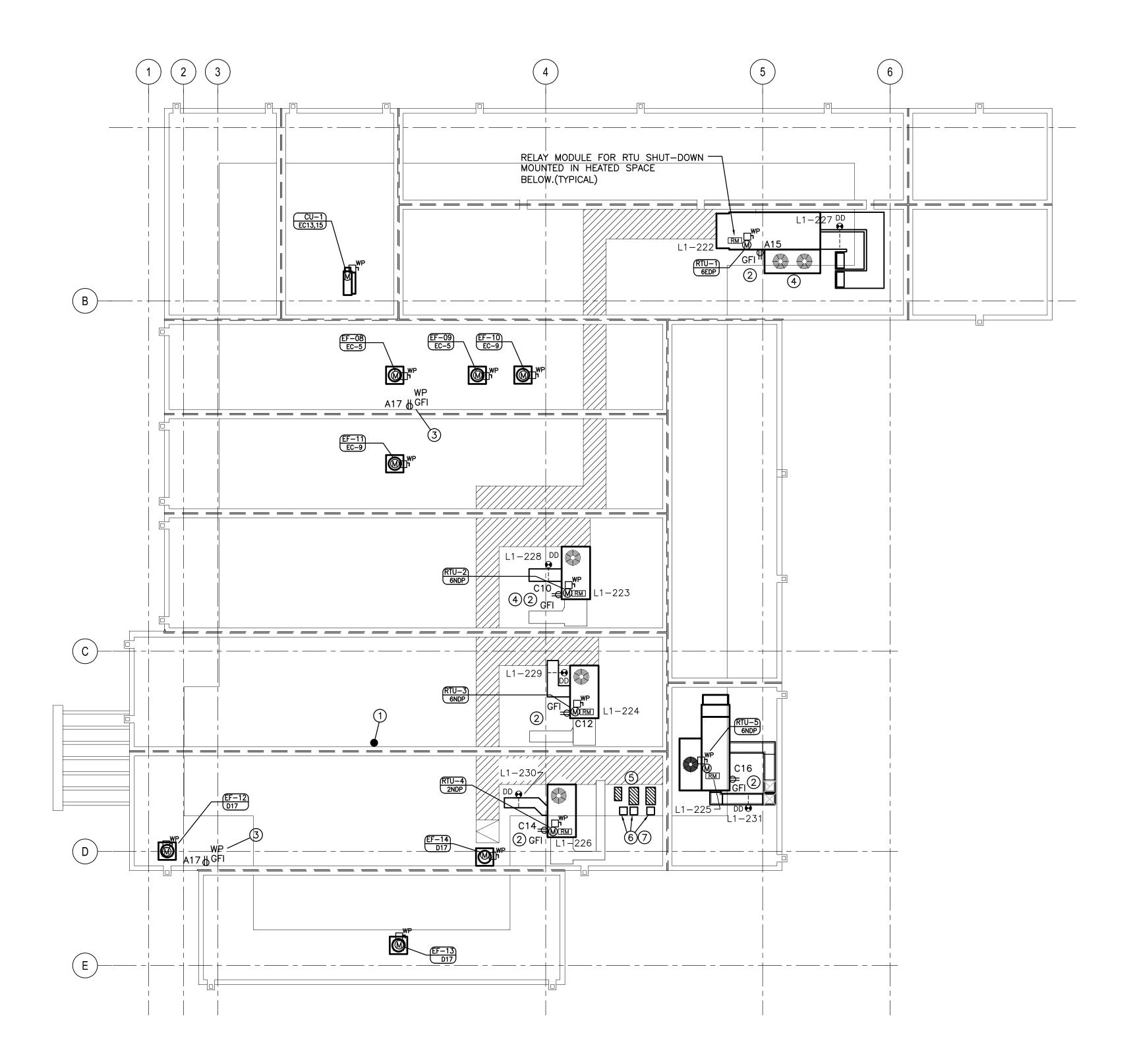
Architectural and Engineering Resources Manager/ Ressources Architectural et de Directeur d'Ingénierie

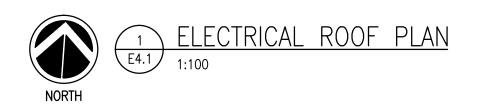
Drawing title/Titre du dessin

**ELECTRICAL CONDUIT LAYOUT** AND EQUIPMENT CONNECTIONS

S-03-2014

Revision no./ La Révision





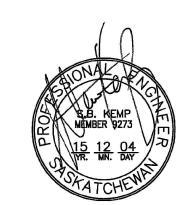


- 1 RADIO ANTENNA LOCATION. REFER TO DRAWING E7.1, DETAIL 2 AND DRAWING E3.1, NOTE 1.
- RECEPTACLES ARE INSTALLED AS PART OF THE MECHANICAL EQUIPMENT. ELECTRICAL SHALL PROVIDE A SEPARATE CIRCUIT C/W GFI BREAKER NOT FED FROM UNIT. RUN WIRING UP TO UNIT INSIDE ROOF CURB.
- MOUNT RECEPTACLE ON BACK SIDE OF PARAPET AS HIGH AS POSSIBLE TO BOTTOM EDGE OF FLASHING.
- RUN FEEDERS FOR ROOF TOP UNITS UP FROM VENTILATED SPACE THROUGH MECHANICAL CHASE AS SHOWN ON POWER PLAN.
- DISTRIBUTION TRANSFORMERS MOUNTED ON CONCRETE PADS.
  RUN FEEDERS THROUGH ROOF CURB INTO ROOM 114 BELOW.
  REFER TO SINGLE LINE DRAWING FOR FEEDER AND CONDUIT
- 6 REFER TO ARCHITECTURAL DETAILS FOR ROOF CURB FOR ACCESS TO ELECTRICAL ROOM BELOW.
- The second of th



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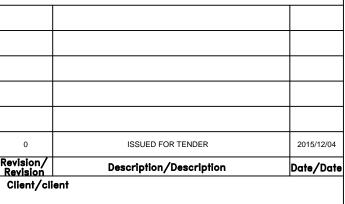
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ELECTRICAL 9273

50368

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Project title/Titre du projet

NEW MODULAR POLICE BUILDING AND EMPLOYEE HOUSING BLACK LAKE, SASKATCHEWAN

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Designed by/Concept par

Drawn by/Dessine par

Architectural and Engineering Resources Manager/ Ressources Architectural et de Directeur d'Ingénierie

Client/client

Drawing title/Titre du dessin

ELECTRICAL
POWER & SYSTEMS ROOF PLAN

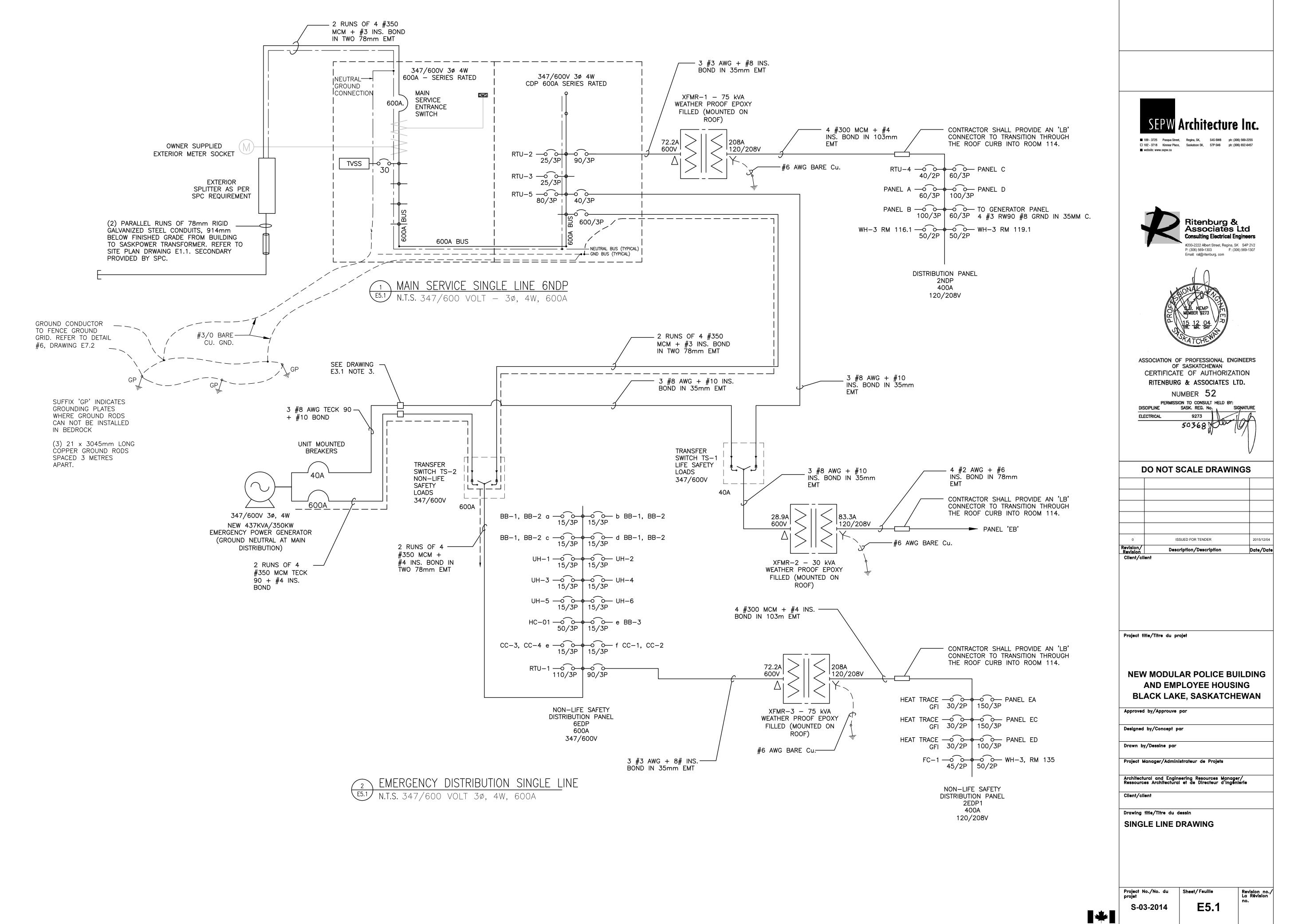
Project No./No. du projet
S-03-2014

E4.1

Revision no./ La Révision no.

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# MOTOR & EQUIPMENT SCHEDULE (DETACHMENT)

TAG INDICATED EQUIPMENT LOCATION ON

| Item                        | Description                | Emerg.<br>(Y/N) | kW    | H.P.  | Volt | Ø | F.L.A. | M.C.A. | Starter (Y/N) Size | Unit Location                              | МОР     | Brkr    | Feeder                        | Source<br>Feed | NOTES   |
|-----------------------------|----------------------------|-----------------|-------|-------|------|---|--------|--------|--------------------|--|---------|---------|-------------------------------|----------------|---|
| RTU-1                       | ROOF TOP UNIT              | YES             |       |       | 600  | 3 | 105    | 107    | Υ                  | ROOF                                       | MOP-110 | 110A-3P | 3 #2 + #6 INS. BOND IN 35C    | 6EDP           | SEE NOTE 1, 2, 3, 5, 6, 10, 11                  |
| RTU-2                       | ROOF TOP UNIT              | N               |       |       | 600  | 3 |        | 22     | Y                  | ROOF                                       | MOP-25  | 25A-3P  | 3 #12 + #10 INS. BOND IN 21C  | 6NDP           | SEE NOTE 1, 2, 3, 5, 6, 11, 12                  |
| RTU-3                       | ROOF TOP UNIT              | N               |       |       | 600  | 3 |        | 21     | Υ                  | ROOF                                       | MOP-25  | 25A-3P  | 3 #12 + #10 INS. BOND IN 21C  | 6NDP           | SEE NOTE 1, 2, 3, 5, 6, 11, 12                  |
| RTU-4                       | ROOF TOP UNIT              | N               |       |       | 208  | 1 |        | 37     | Υ                  | ROOF                                       | MOP-40  | 40A-2P  | 2 #8 + #10 INS. BOND IN 21C   | 2NDP           | SEE NOTE 1, 2, 3, 5, 6, 11, 13                  |
| RTU-5                       | ROOF TOP UNIT              | N               |       |       | 600  | 3 | 66     | 68     | Υ                  |  |         | 80A-3P  | 3 #4 + #8 INS. BOND IN 35C    | 6NDP           | SEE NOTE 1, 2, 3, 5, 6, 10, 11                  |
|                             |                            |                 |       |       |      |   |        |        |                    |  |         |         |                               |                |   |
| WH-1                        | WATER HEATER               | N               | 3.0   |       | 120  | 1 | 25     |        |                    | RM110/102                                  |         | 35A-1P  | 2 #10 + #10 INS. BOND IN 21C  | D              | SEE NOTE 2, 6                                   |
| WH-2                        | WATER HEATER               | YES             | 1.5   |       | 120  | 1 |        |        |                    | RM147/146.2/113/154                        |         | 20A-1P  | 2 #12 + #12 INS. BOND IN 21C  | EA/EC/ED       | SEE NOTE 2, 6                                   |
| WH-3                        | WATER HEATER - 2 ELEMENTS  | N               | 4.5x2 |       | 208  | 1 | 21.6   |        |                    | RM 135 116.1, 119.1                        |         | 30A-2P  | 2 #10 + #6 INS. BOND IN 21C   | 2NDP 2EDP1     | SEE NOTE 2, 6, 16                               |
| WH-4                        | WATER HEATER - 2 ELEMENTS  | N               | 4.5x2 |       | 240  | 1 | 18.8   |        |                    | RM 135 116.1, 119.1                        |         | 30A-2P  | 2 #10 + #6 INS. BOND IN 21C   |                | SEE NOTE 2, 6, 16                               |
|                             |                            |                 |       |       |      |   |        |        |                    |  |         |         |                               |                |   |
| P-1                         | HOT WATER CIRC. PUMP       | YES             | 0.021 | 1/35  | 120  | 1 |        |        |                    | RM135                                      |         | 15A-1P  | 2 #12 + #12 INS. BOND IN 21C  | EC             | SEE NOTE 6                                      |
| HC-01                       | INLINE DUCT COIL           | YES             | 25    |       | 600  | 3 | 24     |        |                    | RM151                                      |         | 30A-3P  | 3 #10 + #10 INS. BOND IN 21C  | 6EDP           | SEE NOTE 1                                      |
|                             |                            |                 |       |       |      |   |        |        |                    |  |         |         |                               |                |   |
| EF-1                        | EXHAUST FAN                | YES             | 0.100 | 1/8   | 120  | 1 |        |        |                    | ROOM 002                                   |         | 15A-1P  | 2 #12 + #12 INS. BOND IN 21C  | EC             | SEE NOTE 6, 14                                  |
| EF-2                        | EXHAUST FAN                | YES             | 0.100 | 1/8   | 120  | 1 |        |        |                    | ROOM 002                                   |         | 15A-1P  | 2 #12 + #12 INS. BOND IN 21C  | EC             | SEE NOTE 6, 14                                  |
| EF-3                        | EXHAUST FAN                | YES             | 0.100 | 1/8   | 120  | 1 |        |        |                    | ROOM 002                                   |         | 15A-1P  | 2 #12 + #12 INS. BOND IN 21C  | EC             | SEE NOTE 6, 14                                  |
| EF-4                        | EXHAUST FAN                | YES             | 0.100 | 1/8   | 120  | 1 |        |        |                    | ROOM 002                                   |         | 15A-1P  | 2 #12 + #12 INS. BOND IN 21C  | EC             | SEE NOTE 6, 14                                  |
| EF-5                        | EXHAUST FAN                | YES             | 0.325 | 1/2   | 120  | 1 |        |        |                    | RM151                                      |         | 15A-1P  | 2 #12 + #12 INS. BOND IN 21C  | ED             | SEE NOTE 6                                      |
| EF-6                        | EXHAUST FAN                | YES             | 0.325 | 1/2   | 120  | 1 |        |        |                    | RM151                                      |         | 15A-1P  | 2 #12 + #12 INS. BOND IN 21C  | ED             | SEE NOTE 6, 8                                   |
| EF-7                        | EXHAUST FAN                | N               | 0.405 | 3/4   | 120  | 1 |        |        |                    | RM157                                      |         | 15A-1P  | 2 #12 + #12 INS. BOND IN 21C  | В              | SEE NOTE 6, 8                                   |
| EF-8                        | EXHAUST FAN                | YES             | 0.01  | 1/100 | 120  | 1 |        |        |                    | ROOF                                       |         | 15A-1P  | 2 #12 + #12 INS. BOND IN 21C  | EC             | SEE NOTE 6, 7                                   |
| EF-9                        | EXHAUST FAN                | YES             | 0.01  | 1/100 | 120  | 1 |        |        |                    | ROOF                                       |         | 15A-1P  | 2 #12 + #12 INS. BOND IN 21C  | EC             | SEE NOTE 6                                      |
| EF-10                       | EXHAUST FAN                | N               | 0.01  | 1/100 | 120  | 1 |        |        |                    | ROOF                                       |         | 15A-1P  | 2 #12 + #12 INS. BOND IN 21C  | EC             | SEE NOTE 6                                      |
| EF-11                       | EXHAUST FAN                | N               | 0.04  | 1/20  | 120  | 1 |        |        | ROOF               |  |         | 15A-1P  | 2 #12 + #12 INS. BOND IN 21C  | EC             | SEE NOTE 6, 7                                   |
| EF-12                       | EXHAUST FAN                | N               | 0.01  | 1/80  | 120  | 1 |        |        |                    | ROOF                                       |         | 15A-1P  | 2 #12 + #12 INS. BOND IN 21C  | D              | SEE NOTE 6                                      |
| EF-13                       | EXHAUST FAN                | N               | 0.01  | 1/80  | 120  | 1 |        |        |                    | ROOF                                       |         | 15A-1P  | 2 #12 + #12 INS. BOND IN 21C  | D              | SEE NOTE 6                                      |
| EF-14                       | EXHAUST FAN                | N               | 0.01  | 1/100 | 120  | 1 |        |        | ROOF               |  |         | 15A-1P  | 2 #12 + #12 INS. BOND IN 21C  | D              | SEE NOTE 6                                      |
|                             |                            |                 |       |       |      |   |        |        |                    |  |         |         |                               |                |   |
| BB-1                        | ELECTRIC BASE BOARD (8)    | YES             | 1.5   |       | 600  | 3 |        |        |                    | RM152, 154, 102, 104, 110, 114, 107.1,     |         | 15A-3P  | 3 #12 + #12 INS. BOND IN 21C. | 6EDP           | SEE NOTE 2, 6                                   |
| BB-2                        | ELECTRIC BASE BOARD (11)   | YES             | 3.0   |       | 600  | 3 |        |        | F                  | RM153, 107.2, 156, 103, 111, 116, 119, 126 |         | 15A-3P  | 3 #12 + #12 INS. BOND IN 21C. | 6EDP           | SEE NOTE 2, 6                                   |
| BB-3                        | ELECTRIC BASE BOARD (1)    | YES             | 4.5   |       | 600  | 3 |        |        |                    | RM 135                                     |         | 15A-3P  | 3 #12 + #12 INS. BOND IN 21C. | 6EDP           | SEE NOTE 2, 6                                   |
| CC-1,2,3,4                  | CABINET CONSOLE HEATER     | YES             | 6.0   |       | 600  | 3 |        |        |                    | RM161/145/100/109/127                      |         | 15A-3P  | 3 #12 + #12 INS. BOND IN 21C  | 6EDP           | SEE NOTE 2, 6                                   |
|                             |                            |                 |       |       |      |   |        |        |                    |  |         |         |                               |                |   |
| FC-1                        | FAN COIL UNIT              | YES             | 6.0   |       | 208  | 1 | 30.55  | 38.19  |                    | RM 161                                     |         | 50A-2P  | 2 #6 + #8 INS. BOND IN 27C    | 2EDP1          | SEE NOTE 2, 6                                   |
|                             |                            |                 |       |       |      |   |        |        |                    |  |         |         |                               |                |   |
| UH-1,3,4,5,6                | CABINET UNIT HEATER (FIVE) | YES             | 10.00 |       | 600  | 3 |        |        |                    | RM151/ROOM 001, 002, 003                   |         | 15A-3P  | 3 #12 + #12 INS. BOND IN 21C  | 6EDP           | SEE NOTE 6                                      |
| UH-2                        | CABINET UNIT HEATER (ONE)  | YES             | 5.00  |       | 600  | 3 |        |        |                    | ROOM 004                                   |         | 15A-3P  | 3 #12 + #12 INS. BOND IN 21C  | 6EDP           | SEE NOTE 6                                      |
| AC-1                        | AIR CONDITIONING UNIT (2)  | YES             | 1.19  |       | 208  | 1 |        | 1.0    |                    | RM 143, 149                                |         |         |                               |                | SEE NOTE 4                                      |
| CU-1                        | CONDENSER UNIT             | YES             |       |       | 208  | 1 |        | 18     |                    | ROOF                                       | MOP-30  | 30A-2P  | 2 #10 + #12 INS. BOND IN 21C. | EC             | SEE NOTE 4, 6, 9                                |
| SPRINKLER<br>JOCKEY<br>PUMP | SPRINKLER JOCKEY PUMP      |                 | 0.25  |       | 115  | 1 |        |        |                    | RM 114                                     |         | 15A-1P  | 2 #12 + #12 INS. BOND IN 21C. | EB             | PROVIDE LOCKING DISCONNECT AT PUMP. SEE NOTE 15 |
| 046                         | GAS DETECTORS "S"          |                 |       |       | 120  | 1 |        |        |                    | RM 151/157                                 |         | 15A-1P  | 2 #12 + #12 INS. BOND IN 21C. | A, B, ED       | SEE NOTE 2                                      |
|                             |                            |                 |       |       |      |   |        |        |                    |  |         |         |                               |                |   |

# MECHANICAL EQUIPMENT SCHEDULE NOTES

- 1. UNIT IS COMPLETE WITH PACKAGED STARTER BY MECHANICAL CONTRACTOR.
- 2. UNIT HAS SINGLE POINT CONNECTION.
- 3. UNIT IS C/W GFIC RECEPTACLE, PROVIDE A 120 VOLT POWER CONNECTION TO UNIT FED FROM A SEPARATE 15A-1P BREAKER.
- 4. RUN 2 #12 AWG + #12 INS. BOND IN 21C. FROM CU-1 TO AC-1. COORDINATE WITH MECHANICAL CONTRACTOR. CONDENSATE PUMP SHALL BE WIRED WITH UNIT.
- 5. PROVIDE A FIRE ALARM CONTROL RELAY TO SHUT UNIT DOWN UPON FIRE ALARM.
- 6. PROVIDE WEATHERPROOF DISCONNECT SWITCH AT UNIT.
- 7. LOCAL SWITCH PROVIDED BY ELECTRICAL CONTRACTOR. MOUNT SWITCH UP 1200mm AS SHOWN ON PLANS.
- 8. UNIT CONTROLLED BY CO/NOX GAS DETECTOR.
- 9. PROVIDE (1) 120 VOLT CIRCUIT FOR RECEPTACLE MOUNTED ON ROOF PARAPET AND PROVIDE WEATHER PROOF "WHILE IN USE " COVER.
- 10. UNIT C/W VARIABLE SPEED SCROLL COMPRESSOR.
- 11. UNIT C/W STAND ALONE CONTROL PANEL.
- 12. UNIT C/W TWO STAGE SCROLL COMPRESSOR.
- 13. UNIT C/W SINGLE STAGE SCROLL COMPRESSOR.
- 14. ON/OFF SWITCH SUPPLIED BY MECHANICAL, INSTALLED AND WIRED BY ELECTRICAL. SWITCHES LOCATED IN ROOM 128.
- 15. PUMP IS C/W AUTO AND MANUAL CONTROL.
- 16. UNIT ELEMENTS ARE NON-SIMULTANIOUS OPERATION.

# ABBREVIATION LEGEND

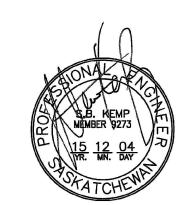
FVNR - FULL VOLTAGE NON-REVERSING STARTER
SEP. COMB. - SEPARATE COMBINATION STARTER/DISCONNECT
TP. SW.- THERMAL SWITCH WITH PILOT LIGHT
1Ø MAG - SINGLE PHASE MAGNETIC STARTER/DISCONNECT

# GENERAL NOTES

- CONDUCTOR/CONDUIT SIZES SHOWN IN THE EQUIPMENT SCHEDULE ARE MINIMUM SIZES BASED ON NO MORE THAN (4)
  CONDUCTORS IN A CONDUIT (NO CORRECTION FACTOR APPLIED).
  FEEDERS SHALL BE ADJUSTED ACCORDINGLY TO LIMIT VOLTAGE DROP TO A MAXIMUM OF 3%.
- ALL EQUIPMENT FEEDER CABLES SHALL BE RW90 IN EMT RACEWAY UNLESS OTHERWISE NOTED.
- ALL LINE VOLTAGE CONTROL WIRING BY ELECTRICAL CONTRACTOR LOW VOLTAGE WIRING BY MECHANICAL CONTRACTOR.
- COORDINATE LOCATION OF STARTERS WITH MECHANICAL CONTRACTOR ON SITE.
- MOTORIZED DAMPER ACTUATORS ARE PROVIDED AND INSTALLED BY MECHANICAL. WIRING BY ELECTRICAL, COORDINATE WITH MECHANICAL DRAWINGS.
- NEW AIR CONDITIONING UNITS AC-1 CONSISTS OF AN OUTDOOR CONDENSER UNIT AND TWO INDOOR UNITS. PROVIDE AN ELECTRICAL CONNECTION TO THE NEW OUTDOOR CONDENSING UNIT ON THE ROOF. CONDENSING UNIT IS RATED AT 208 VOLTS, SINGLE PHASE MINIMUM CIRCUIT AMPS OF 18 AMPS. PROVIDE CONNECTION TO THE NEW INDOOR UNIT AS NOTED IN THE MOTOR SCHEDULE. INDOOR UNIT POWER IS SUPPLIED FROM THE OUTDOOR CONDENSING UNIT, WITH INTERNAL PROTECTION PROVIDED IN THE CONDENSING UNIT, REFER TO NOTE #2. OUTDOOR AND INDOOR UNITS HAVE POLARITIES ENSURE INSTALLATION / CONNECTIONS ARE MADE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.







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| Revision/<br>Revision | Description/Description | Date/Da   |
| 0                     | ISSUED FOR TENDER       | 2015/12/0 |
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Project title/Titre du projet

NEW MODULAR POLICE BUILDING AND EMPLOYEE HOUSING BLACK LAKE, SASKATCHEWAN

Approved by/Approuve par

Designed by/Concept par

Drawn by/Dessine par

Project Manager/Administrateur de Projets

Architectural and Engineering Resources Manager/ Ressources Architectural et de Directeur d'Ingénierie

Drawing title/Titre du dessin

MOTOR EQUIPMENT SCHEDULE

Project No./No. du projet

E5.2

Revision no./ La Révision no.

RM. 156 RECEPT'S.

RM. 156 FLOOR BOX

RM. 156 FLOOR BOX

RM. 156 FLOOR BOX

RM. 110 WH-1

BOX

RM. 156 FLOOR BOX

RM. 110 WH-1

BOX

RM. 156 GENERAL PURPOSE RECEPT

RM. 102 WH-1

BOX

RM. 103 COMPUTER

RM. 103 COMPUTER

RM. 103 GENERAL PURPOSE

HK RECEPT'S

CAR PARKING RECEPTACLE

SPARE

19

20

CAR PARKING RECEPTACLE

SPARE

21

22

CAR PARKING RECEPTACLE

SPARE

23

24

CAR PARKING RECEPTACLE

SPARE

23

24

CAR PARKING RECEPTACLE

SPARE

25

SPACE

S

PANEL C (120/208 V.-3ø-4W) RM 115, 116, 119, 121 LIGHTS 1 2 20 HK RECEPT'S. RM 155 & 156 LIGHTS — 3 4 4 RM 107 COMPUTER RECEPT'S. CAR PARKING RECEPTACLE 5 6 20 HK RECEPT'S. CAR PARKING RECEPTACLE 7 8 20 HK RECEPT'S. CAR PARKING RECEPTACLE

CAR PARKING RECEPTACLE

CAR PARKING RECEPTACLE

10

RTU-2 RECEPT.

ROOM 001, 003 RECEPTACLES

13

RTU-4 RECEPT.

TRAP SEAL PRIMER

15

16

RTU-5 RECEPT. RM 116, 119 COUNTER RECEPTACLES 17 18 SPARE ROOM 107.1 RECEPTACLES 19 20 SPARE SPACE SPACE SPACE SPACE SPACE SPACE **SPACE** SPACE **SPACE** SPACE **SPACE** SPACE **SPACE** SPACE **SPACE** SPACE **SPACE** SPACE 100A BUS

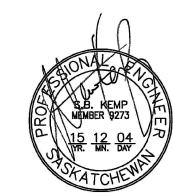
4 #3 RW90 & #8 GRND IN 35MM C

RM 112

SEPW Architecture Inc.

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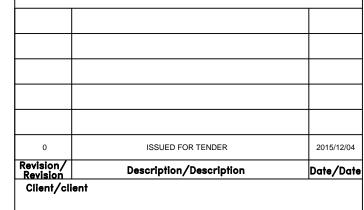




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NEW MODULAR POLICE BUILDING AND EMPLOYEE HOUSING BLACK LAKE, SASKATCHEWAN

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Project Manager/Administrateur de Projets

Architectural and Engineering Resources Manager/ Ressources Architectural et de Directeur d'Ingénierie

Client/client

Drawing title/Titre du dessin

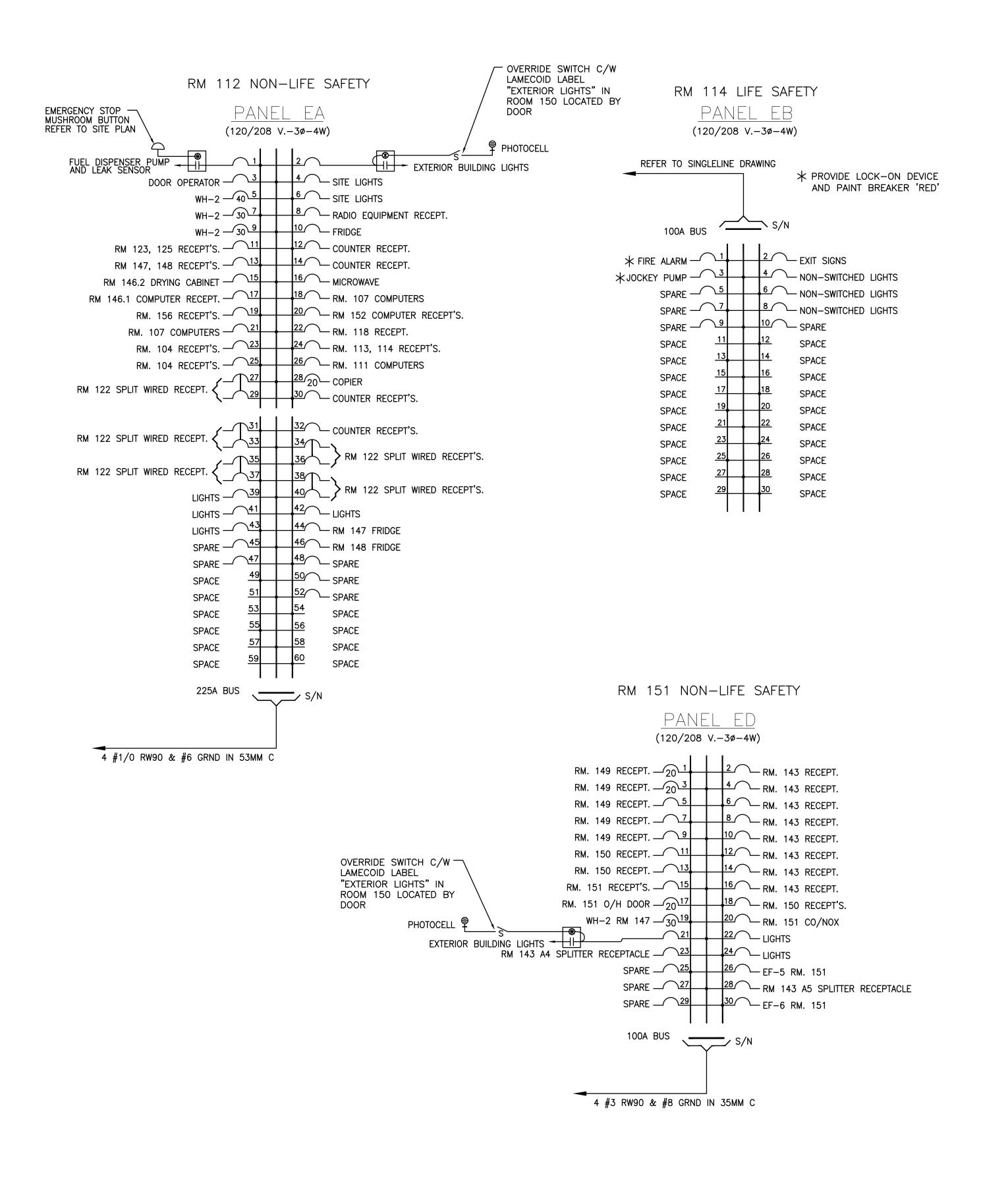
PANEL SCHEMATICS

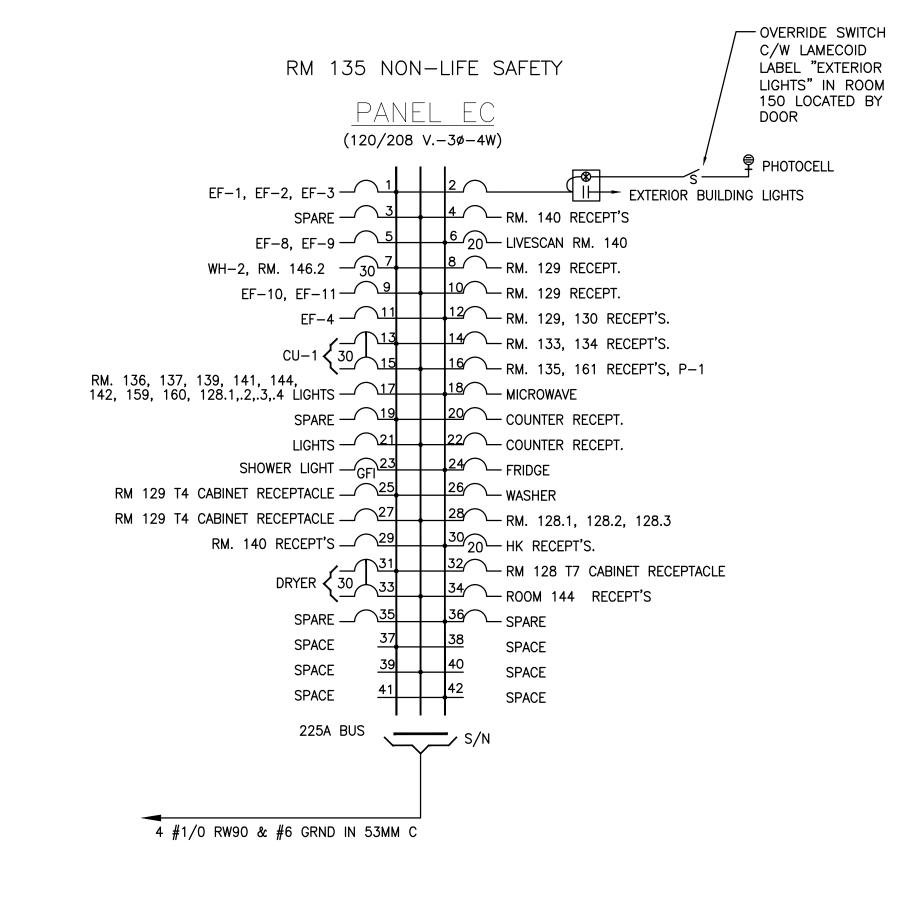
Project No./No. du projet
S-03-2014

E5.3

Revision no./
La Révision no./
no.

4 #3 RW90 & #8 GRND IN 35MM C





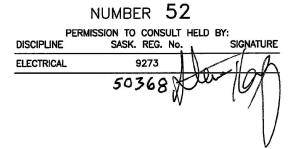


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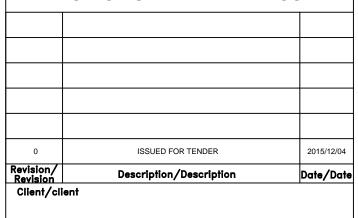




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**NEW MODULAR POLICE BUILDING** AND EMPLOYEE HOUSING **BLACK LAKE, SASKATCHEWAN** 

Designed by/Concept par

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Project Manager/Administrateur de Projets

Architectural and Engineering Resources Manager/ Ressources Architectural et de Directeur d'Ingénierie

Drawing title/Titre du dessin

**EMERGENCY POWER** PANEL SCHEMATICS

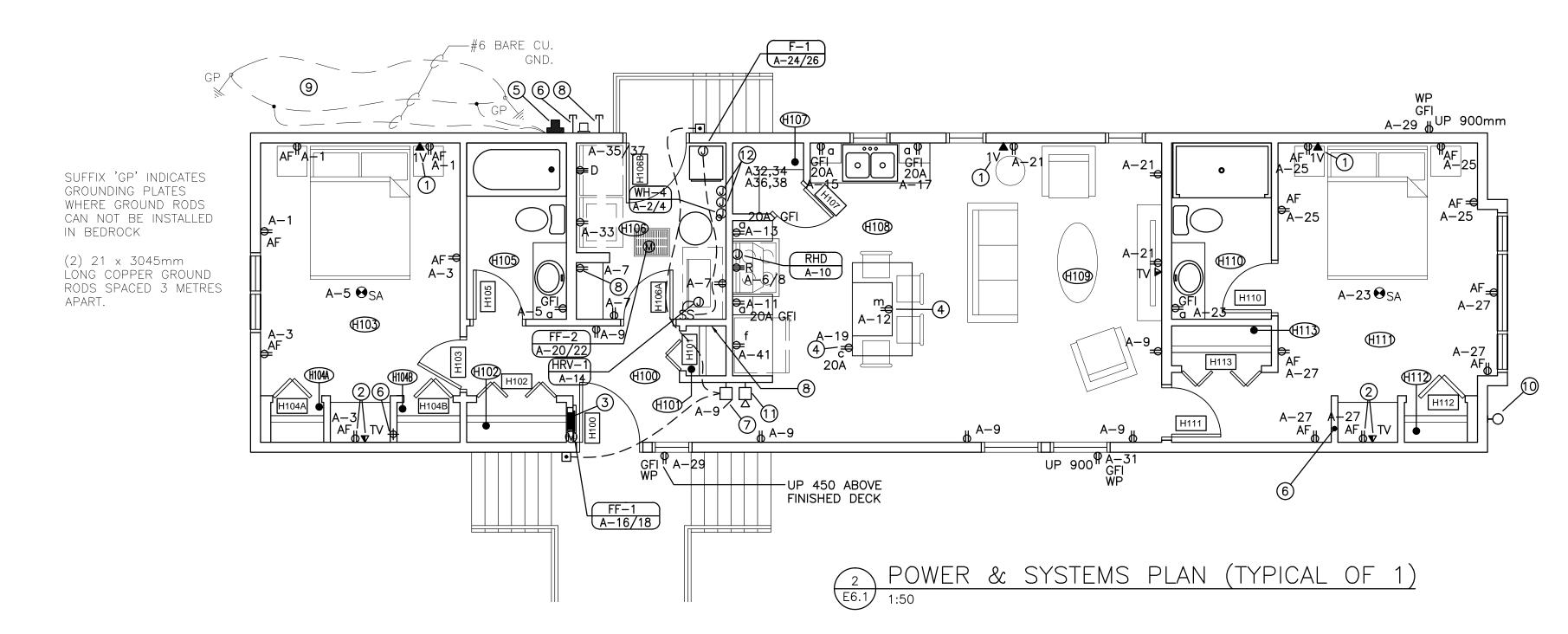
S-03-2014

E5.4

Revision no./ La Révision

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0 10 20 30 40 50 60 70 80 90 100mm



# SYMBOL SCHEDULE

- MOTOR CONNECTION. SEE MECHANICAL DRAWINGS FOR DETAILS AND COORDINATE FINAL LOCATIONS ON SITE.
- JUNCTION BOX/OUTLET BOX.
- RECESSED CEILING MOUNTED FIXTURE
- MOLDED CASE TYPE CIRCUIT BREAKER, 15 AMP UNLESS OTHERWISE NOTED.
- MOLDED CASE TYPE CIRCUIT BREAKER, GROUND FAULT INTERRUPTER 15 AMP UNLESS NOTED OTHERWISE.
- S S.P.S.T. SWITCH MOUNTED UP 1200mm.
- 3S 3-WAY SWITCH MOUNTED UP 1200mm.
- <sup>4</sup>S 4-WAY SWITCH MOUNTED UP 1200mm.
- DS S.P.S.T. SWITCH/DIMMER MOUNTED UP 1200mm. DIMMER SHALL BE SIZED ACCORDING TO LOAD; 500W, 1000W, 1500W.
- DUPLEX GROUNDED RECEPTACLE MOUNTED UP 450MM, UNLESS OTHERWISE STATED BY ONE OF THE FOLLOWING SUFFIXES.
  - a 300mm ABOVE COUNTER c - 150mm BELOW COUNTER, RECESSED IN ARCHITECTURAL
  - MILLWORK. f – 1200mm ABOVE FINISHED FLOOR.
  - m MICROWAVE RECEPTACLE UP 250mm ABOVE MICROWAVE SHELF.
- DUPLEX GROUND FAULT CURRENT INTERRUPTER RECEPTACLE MOUNTED UP 450mm OR AS NOTED. SUFFIX 20A INDICATES A 20 AMP RECEPTACLE
- DUPLEX GFI RECEPTACLE C/W DIECAST ALUMINUM WEATHERPROOF RESISTANT WHILE IN USE COVER. ADAPT FOR FLUSH OR FS BOX MOUNTING MOUNTED UP 900mm.
- RANGE RECEPTACLE, 50 AMP, 125/250 VOLT, 4 WIRE GROUNDED RECEPTACLE C/W COVERPLATE. MOUNT UP 150mm. CORD SET SUPPLIED
- DRYER RECEPTACLE, 30 AMP, 125/250 VOLT, 4 WIRE GROUNDED RECEPTACLE C/W COVERPLATE. MOUNT UP 900mm. CORD SET SUPPLIED WITH DRYER.
- DUPLEX RECEPTACLE WITH ARC FAULT PROTECTION. MOUNTED UP 450mm.
- TV > CABLE TELEVISION OUTLET MOUNTED UP 450mm UNLESS NOTED OTHERWISE. PROVIDE 100mm SQUARE BOX C/W SINGLE GANG EXTENSION RING AND STAINLESS STEEL COVERPLATE WITH TYPE 'F' CONNECTORS. PROVIDE RG6 COAXIAL CABLE IN CONDUIT TO CABLE TV TAP BOX.
- 1V TELEPHONE OUTLET IN 100mm SQUARE BOX C/W SINGLE GANG EXTENSION RING, MOUNTED UP 450mm UNLESS OTHERWISE NOTED. REFER TO SPECIFICATIONS FOR CABLE AND JACKS.
- RECESSED ELECTRICAL PANEL.
- SMOKE ALARM DEVICE C/W WITH BATTERY BACK-UP, HARD WIRED TO 120 VOLT SEPARATE CIRCUIT. CEC 32-110 REQUIRES ALARM TO BE ON A WASHROOM LIGHTING CIRCUIT.

ALL RECEPTACLES LOCATED INSIDE THE MODULAR UNITS SHALL BE TAMPER

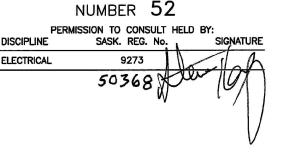


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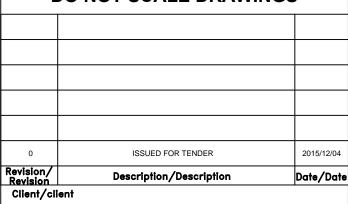




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Project title/Titre du projet

# **NEW MODULAR POLICE BUILDING** AND EMPLOYEE HOUSING **BLACK LAKE, SASKATCHEWAN**

Approved by/Approuve par

Designed by/Concept par

**MODULAR HOUSING TYPE 1** 

Project No./No. du

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E6.1

Drawn by/Dessine par

Project Manager/Administrateur de Projets

Architectural and Engineering Resources Manager/ Ressources Architectural et de Directeur d'Ingénierie Client/client

Drawing title/Titre du dessin

LIGHTING PLAN POWER & SYSTEMS PLAN SYMBOL SCHEDULE

Revision no./ La Révision

# POWER & SYSTEMS DRAWING NOTES (FOR TYPE 1 & TYPE 1 REV)):

- (1) PROVIDE NEW VOICE OUTLET FOR TELEPHONE CONNECTION. INCOMING TELEPHONE HOUSE CABLE FROM TELEPHONE PEDESTAL.
- (2) PROVIDE NEW RECEPTACLE AND TV OUTLET AT APPROXIMATELY 150mm ABOVE SHELF; COORDINATE MOUNTING HEIGHT WITH TV MOUNTING HARDWARE.
- (3) PROVIDE NEW RECESSED PANEL 'A' AT THIS LOCATION. REFER TO PANEL SCHEMATIC FOR FEEDER SIZE AND CIRCUITRY. PANEL SHALL BE FED FROM INCOMING FEED THROUGH THE VENTILATED SPACE BELOW. WALL SHALL BE THICKENED TO ACCEPT PANEL BACK-BOX.
- (4) PROVIDE NEW RECEPTACLE RECESSED IN MILLWORK. RECEPTACLE SHALL BE FED FROM BELOW.
- (5) PROVIDE METER SOCKET C/W INTEGRAL TRANSFER SWITCH AND GENERATOR SERVICE RECEPTACLE GENELINK MA23/24 - N/S, 200AMP RATED. MOUNT SOCKET AS PER SASKPOWER SERVICE REQUIREMENTS. FOR EACH UNIT.
- 6 CONDUIT EMT STUB UP FROM VENTILATED SPACE BELOW FOR SATELLITE CABLES. TERMINATE 150mm ABOVE SHELF IN A RECESSED JUNCTION BOX. PROVIDE RECEPTACLE ADJACENT TO JUNCTION BOX C/W BUSHED STAINLESS STEEL COVERPLATE FOR SATELLITE / TV EQUIPMENT AS SHOWN. REFER TO SITE PLAN FOR CONDUIT SIZE.
- (7) DOOR BELL CHIME MOUNTED UP 2100mm ABOVE FINISHED FLOOR. MOUNT DOOR BELL BUTTON UP 1200mm ABOVE LANDING.
- (8) PROVIDE ONE 53mm RIGID DB2 CONDUIT C/W PULL STRING STUBBED OUT FROM VENTILATED SPACE BELOW H106, ONE METER PAST EXTERIOR WALL FOR INCOMING TELEPHONE HOUSE CABLE. PROVIDE A BIX BLOCK IN THE H106 FOR TERMINATION OF TELEPHONE CABLE. MOUNT BIX BLOCK UP 1830mm A.F.F.. PROVIDE 53mm CONDUIT FROM BIX LOCATION STUBBED INTO VENTILATED SPACE BELOW. TERMINATE VOICE CABLES FROM WALL OUTLETS ON BIX BLOCK, REFER TO SPECIFICATIONS. PROVIDE #6 INSULATED GROUND TO BUILDING GROUND BUS AND A DUPLEX RECEPTACLE ADJACENT TO THE BIX BLOCK AND CONNECT TO NEAREST 120 VOLT GENERAL PURPOSE CIRCUIT.
- (9) PROVIDE BUILDING GROUND LOOP C/W (2) GROUNDING PLATES -4 METERS APART AS SHOWN ON FLOOR PLAN AND CONNECT TO THE PANEL GROUND BUS.

- PROVIDE HEAT TRACE BEACON LIGHT WALL MOUNTED UP 1830mm ABOVE FINISHED FLOOR. CONNECT TO HEAT TRACE CONTROLLER LOCATED IN ROOM H106. STROBE SHALL BE CONNECTED TO CONTROLLER ALARM SIGNAL CONTACTS. BEACON SHALL BE C/W STROBE TUBE LAMP (4,000 HOURS) 100,000 CANDELA PEAK, 'AMBER' DOME, TYPE 3R ENCLOSURE SUITABLE FOR WET LOCATIONS. OPERATING TEMPERATURE -31°, PROVIDE WALL MOUNTING BRACKETS, 120 VOLT CONNECTION TO CONTROLLER. COORDINATE WITH CONTROLLER SHOP DRAWINGS AND WIRING SCHEMATICS. PROVIDE ALL COMPONENTS FOR FINAL CONNECTION. MANUFACTURER: FEDERAL SIGNAL CORP. SERIES ELECTRAFLASH '141ST' SERIES.
- (1) PROVIDE HEAT TRACE AUDIBLE SIGNAL DEVICE MOUNTED UP 2100mm ABOVE FINISHED FLOOR. CONNECT TO HEAT TRACE CONTROLLER. HORN SHALL BE CONNECTED TO CONTROLLER ALARM SIGNAL CONTACTS. MOUNT TO A RECESSED 100mm SQUARE OUTLET BOX. BUILT-IN GAIN CONTROL, ADJUSTIBLE BETWEEN 64dBA TO 88dBA AT 10'. 120 VOLT CONNECTOR KIT FOR CONNECTION TO CONTROLLER.

MANUFACTURER: FEDERAL SIGNAL CORP. SERIES SELECTONE '50GC SERIES.

12 PROVIDE FINAL CONNECTION TO HEAT TRACE CONTROLLERS MOUNTED UP 1200mm A.F.F.. CONTROLLERS PROVIDED AND INSTALLED BY OTHERS. COORDINATE FINAL LOCATION WITH SUPPLIER. WIRING FROM THE CONTROLLERS TO THE HEAT TRACE CABLE LOOP IN THE VENTILATED SPACE SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. RUN WIRING IN THE HEATED SPACE OF THE FLOOR AND STUB DOWN INTO THE VENTILATED SPACE AT THE INCOMING WATER SERVICE. PROVIDE AN EXCESS COIL OF WIRING FOR FINAL CONNECTIONS TO HEAT TRACE CABLES. THE ELECTRICAL CONTRACTOR SHALL COMPLETE THE FINAL WRAPPING OF THE HEAT TRACE CABLE ON THE PIPES ON SITE. AFTER THE FINAL CONNECTIONS THE CONTRACTOR SHALL ENSURE INSULATION OF THE PIPES IS COMPETED. COORDINATE WITH THE MECHANICAL CONTRACTOR ON SITE. REFER TO THE MECHANICAL DRAWINGS AND CIVIL DRAWINGS FOR DETAILS FOR HEAT TRACE CABLE INSTALLATION AND FINAL LOCATIONS OF THE INCOMING WATER LINES.

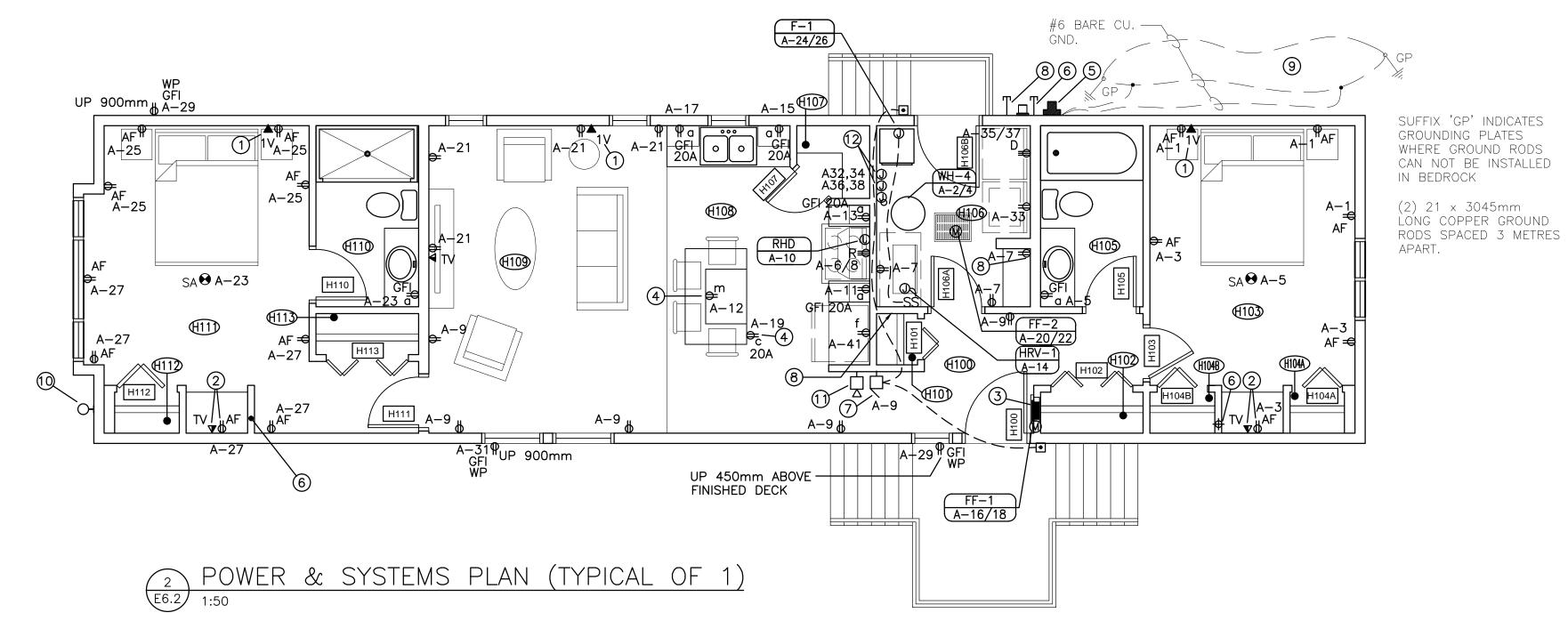
# LIGHTING DRAWING NOTES (FOR TYPE 1 & TYPE 1 REV):

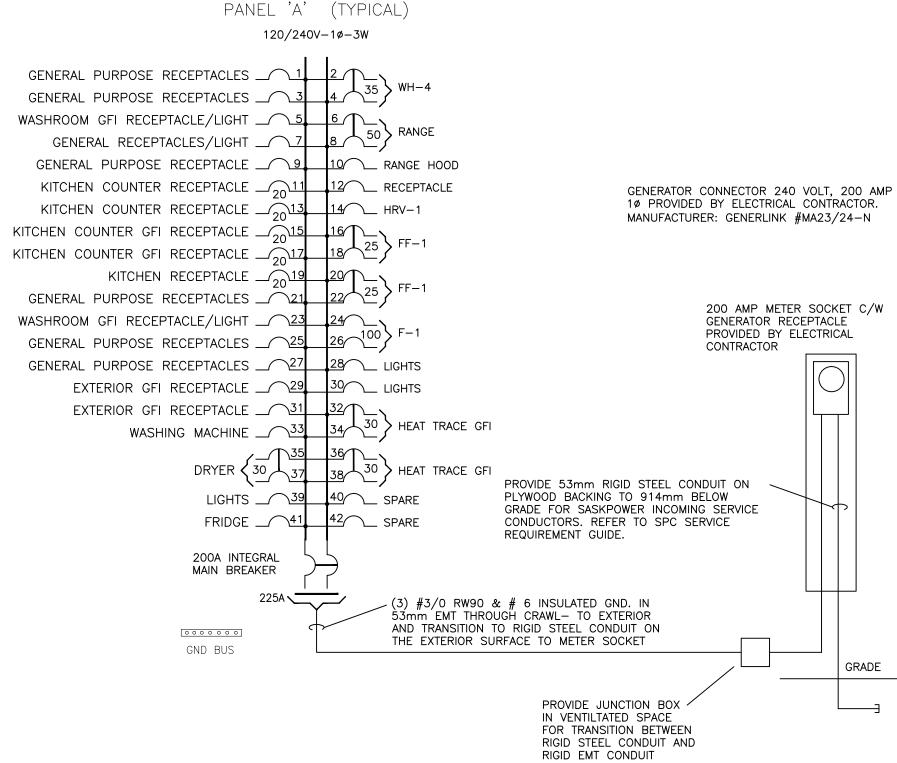
- 1) FIXTURE SHALL BE INSTALLED IN FRONT OF TUB/SHOWER ENCLOSURE MINIMUM 200mm IN FRONT OF BULKHEAD. LIGHTING CIRCUIT SHALL BE PROVIDED FROM A GFCI CIRCUIT.
- 2 PROVIDE NEW CEILING FAN & LIGHT COMBINATION AT THIS LOCATION. REFER TO TYPE 'C' FIXTURE IN LIGHTING SPECIFICATIONS.
- 3 PROVIDE A SEPARATE SPEED CONTROL SWITCH FOR FAN CONTROL.
- 4 MOUNT FIXTURE UP 2050mm ABOVE TOP OF DECK.
- 5 PROVIDE RECESSED CONTACT IN DOOR HEADER FOR ON/OFF CONTROL OF FIXTURE.
- 6 COORDINATE LOCATION OF FIXTURE WITH MECHANICAL DUCT AND FORCE FLOW UNIT.
- EMERGENCY LIGHT CONNECTED TO NON-SWITCHED LEG OF H100 LIGHTING CONTROL CIRCUIT.

# GENERAL NOTES (FOR TYPE 1 & TYPE 1 REV):

- 1. LIGHTING AND POWER/SYSTEMS SHOWN ARE TYPICAL FOR TWO MODULAR UNITS ON NORTH SIDE OF PROPERTY, BL3 AND BL4. REFER TO DRAWING E1.1.
- 2. MODULAR CONTRACTOR SHALL PROVIDE CONDUIT STUB FROM EACH OUTLET BOX TO VENTILATED SPACE BELOW FOR TELEPHONE AND TELEVISION CABLES. CABLES, JACKS, TERMINATIONS AND FACEPLATES BY CONTRACTOR ON SITE.
  - 3. PROVIDE CONNECTION TO HEAT TRACE ON MECHANICAL PIPING IN THE VENTILATED SPACE. COORDINATE WITH MECHANICAL DRAWINGS.

LIGHTING PLAN (TYPICAL OF 1)





PANEL SCHEMATICS (TYPICAL)



website: www.sepw.ca

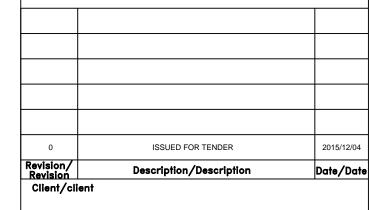




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Project title/Titre du projet

**NEW MODULAR POLICE BUILDING** AND EMPLOYEE HOUSING **BLACK LAKE, SASKATCHEWAN** 

Designed by/Concept par

Architectural and Engineering Resources Manager/ Ressources Architectural et de Directeur d'Ingénierie

Drawing title/Titre du dessin

**MODULAR HOUSING TYPE 1 REV** LIGHTING PLAN POWER & SYSTEMS PLAN PANEL SCHEMATIC AND MOTOR **EQUIPMENT SCHEDULE (TYPICAL)** 

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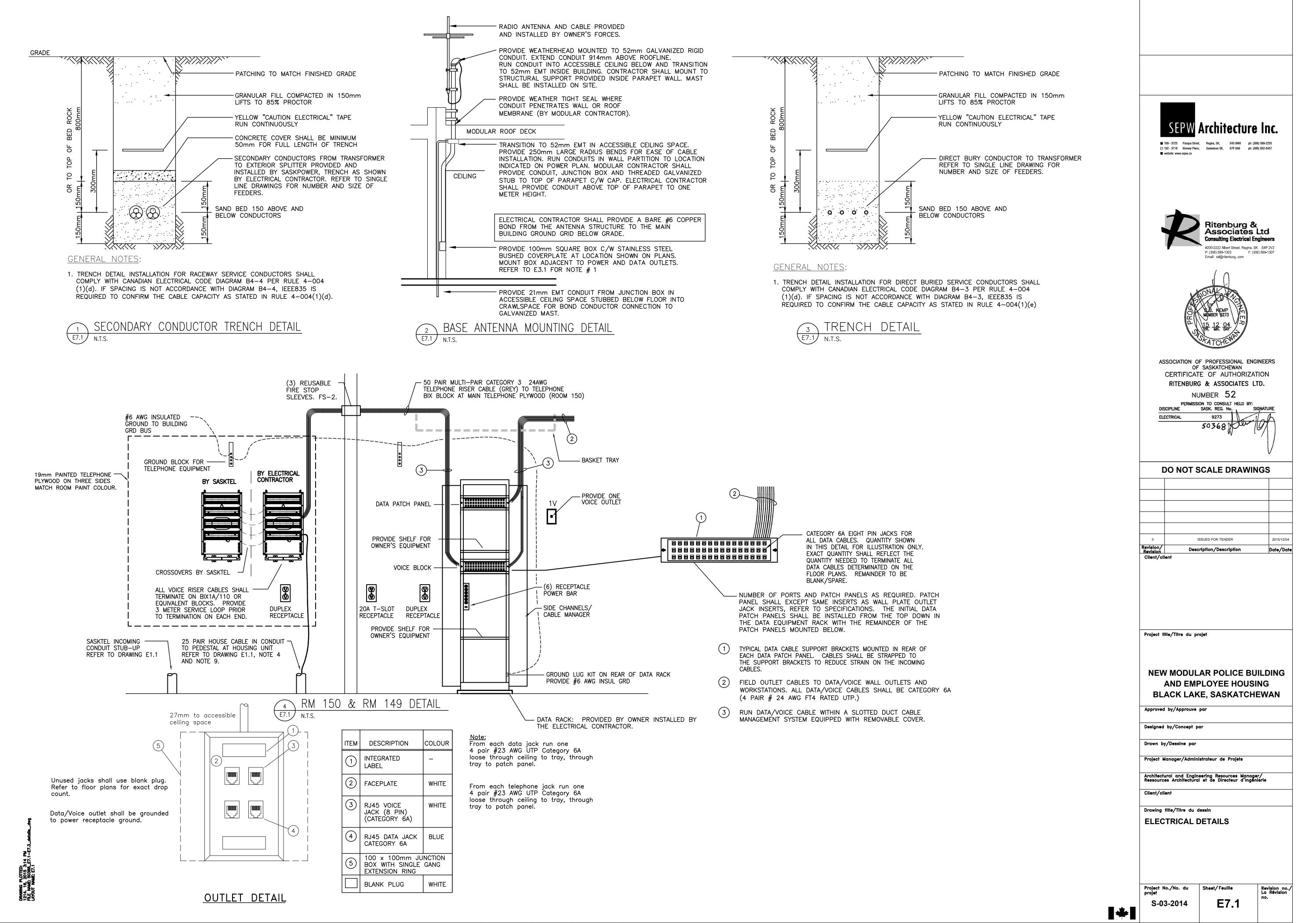
E6.2

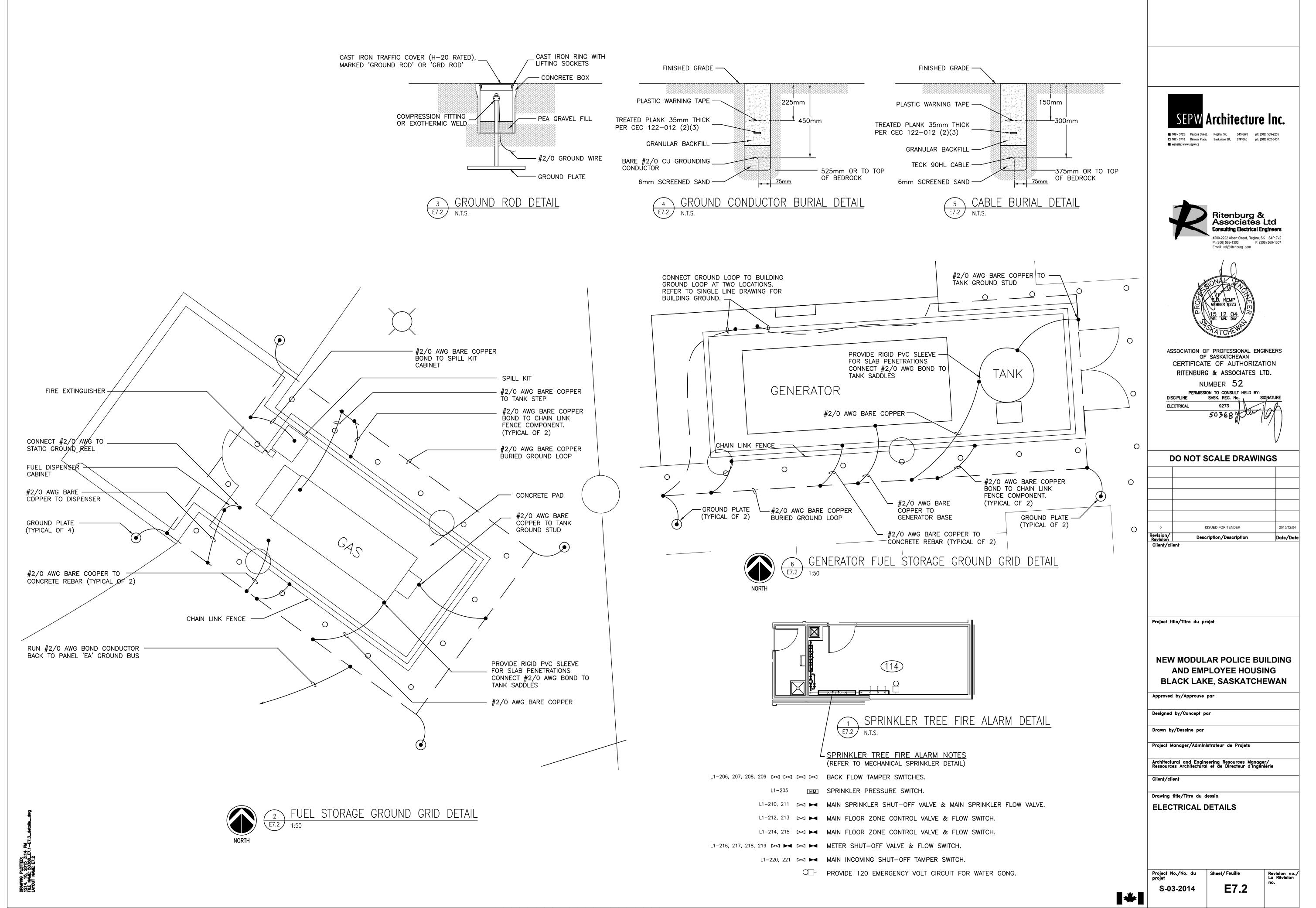
# MOTOR & EQUIPMENT SCHEDULE (HOUSING UNITS TYPICAL)

| ltem  | Description                   | kW   | H.P. | Volt | ø | F.L.A. M.C. | A. Starter (Y/N) | Unit Location | Brkr    | Feeder                        | Panel | NOTES            |
|-------|-------------------------------|------|------|------|---|-------------|------------------|---------------|---------|-------------------------------|-------|------------------|
| F-1   | FURNACE                       | 18   |      | 240  | 1 | 76          | N                | H106          | 100A-2P | 2 #3 + #8 INS. BOND IN 27C    | Α     | SEE NOTE 1, 3, 4 |
| HRV-1 | HEAT RECOVERY VENTILATOR      | 0.11 | FR   | 120  | 1 | 1.25 –      | N                | H106          | 15A-1P  | 2 #12 + #12 INS. BOND IN 21C. | Α     | SEE NOTE 2, 4    |
| WH-4  | WATER HEATER C/W TWO ELEMENTS | 4.5  | _    | 240  | 1 |             | N                | H106          | 35A-2P  | 2 #10 + #10 INS. BOND IN 21C  | Α     | SEE NOTE 2, 4    |
| RHD   | RANGE HOOD                    |      |      | 120  | 1 |             | N                | H108          | 15A-1P  | 2 #12 + #12 INS. BOND IN 21C. | Α     | SEE NOTE 2, 4    |
| FF-1  | FORCE FLOW                    | 4.0  | _    | 240  | 1 |             | _                | _             | 25-2P   | 2 #12 + #12 INS. BOND IN 21C  | Α     | SEE NOTE 2, 4    |
| FF-2  | FORCE FLOW                    | 4.0  | _    | 240  | 1 |             | _                | -             | 25-2P   | 2 #12 + #12 INS. BOND IN 21C  | Α     | SEE NOTE 2, 4    |
|       |                               |      |      |      |   |             |                  |               |         |                               |       |                  |

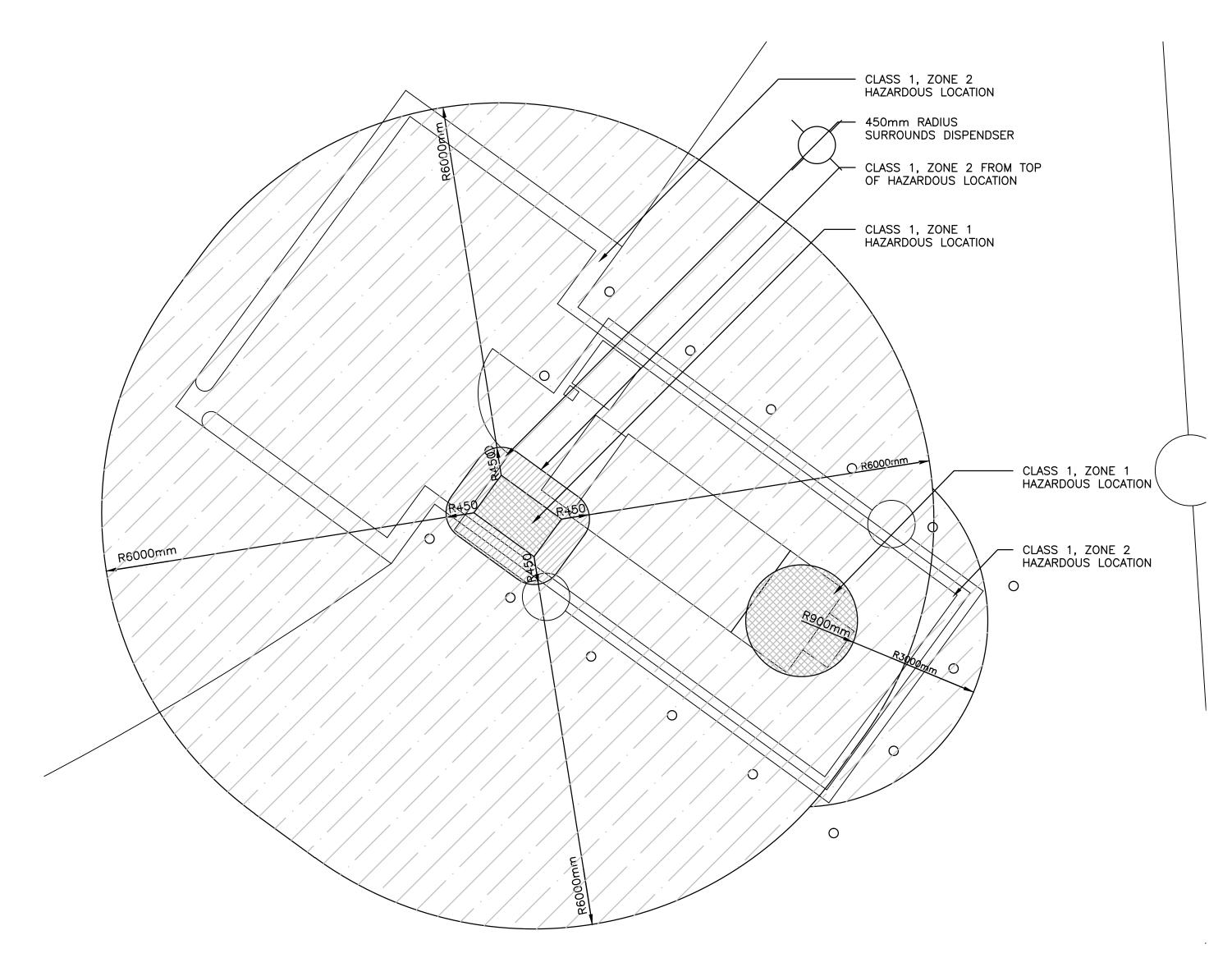
# MECHANICAL EQUIPMENT SCHEDULE NOTES

- 1. PROVIDE THERMAL DISCONNECT SWITCH ADJACENT TO MECHANICAL UNIT.
- 2. DIRECT CONNECT.
- 3. PROVIDE SWITCH FOR FURNACE AS PER BUILDING CODE.
- 4. ALL CONTROL WIRING SHALL LOW VOLTAGE AND LINE VOLTAGE SHALL BE SUPPLIED AND INSTALLED BY THE MECHANICAL CONTROLS CONTRACTOR.



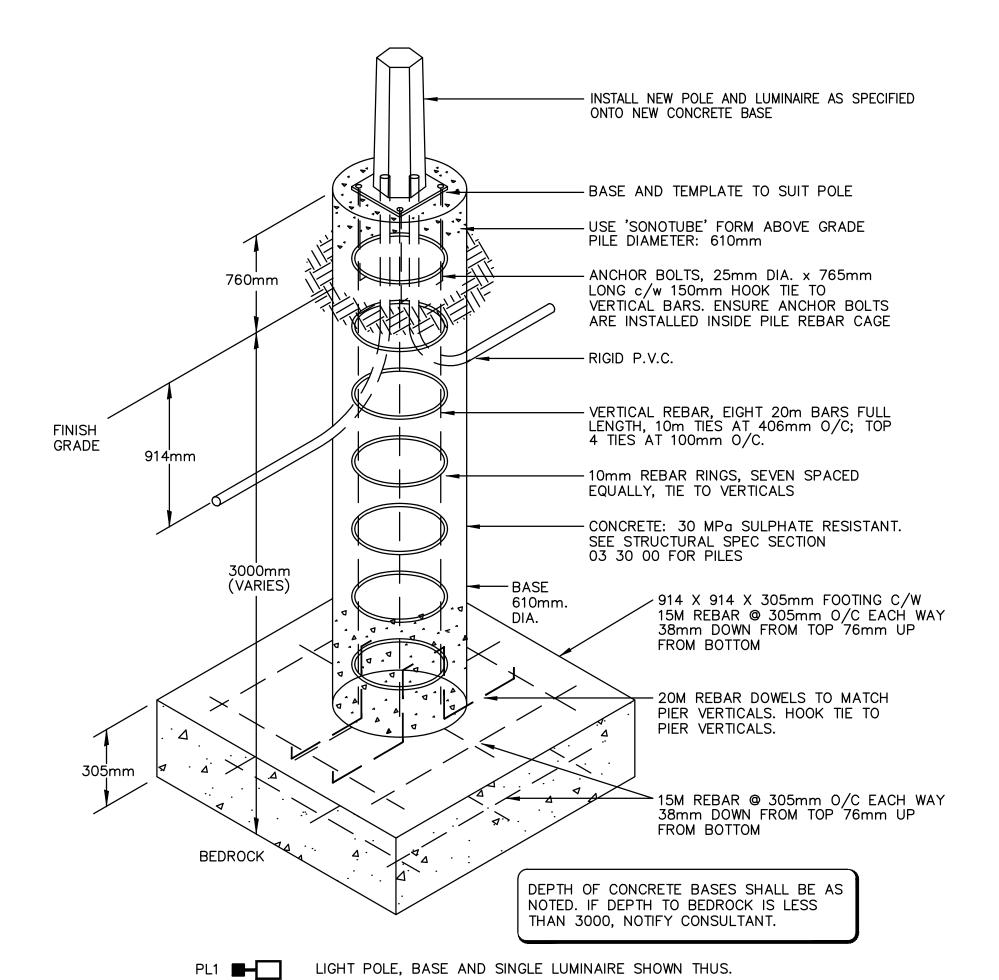


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FUEL STORAGE HAZARDOUS AREA CLASSIFICATION

1 FUEL STORAGE HAZARDOUS AREA CLASSIFICATION



2 SIIE E7.3 N.T.S.

SITE LIGHTING POST & BASE DETAIL DO NOT SCALE DRAWINGS

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Project title/Titre du projet

NEW MODULAR POLICE BUILDING AND EMPLOYEE HOUSING BLACK LAKE, SASKATCHEWAN

Approved by/Approuve par

Designed by/Concept par

Drawn by/Dessine par

Project Manager/Administrateur de Projets

Architectural and Engineering Resources Manager/ Ressources Architectural et de Directeur d'Ingénierie

Client/client

Drawing title/Titre du dessin

**ELECTRICAL DETAILS** 

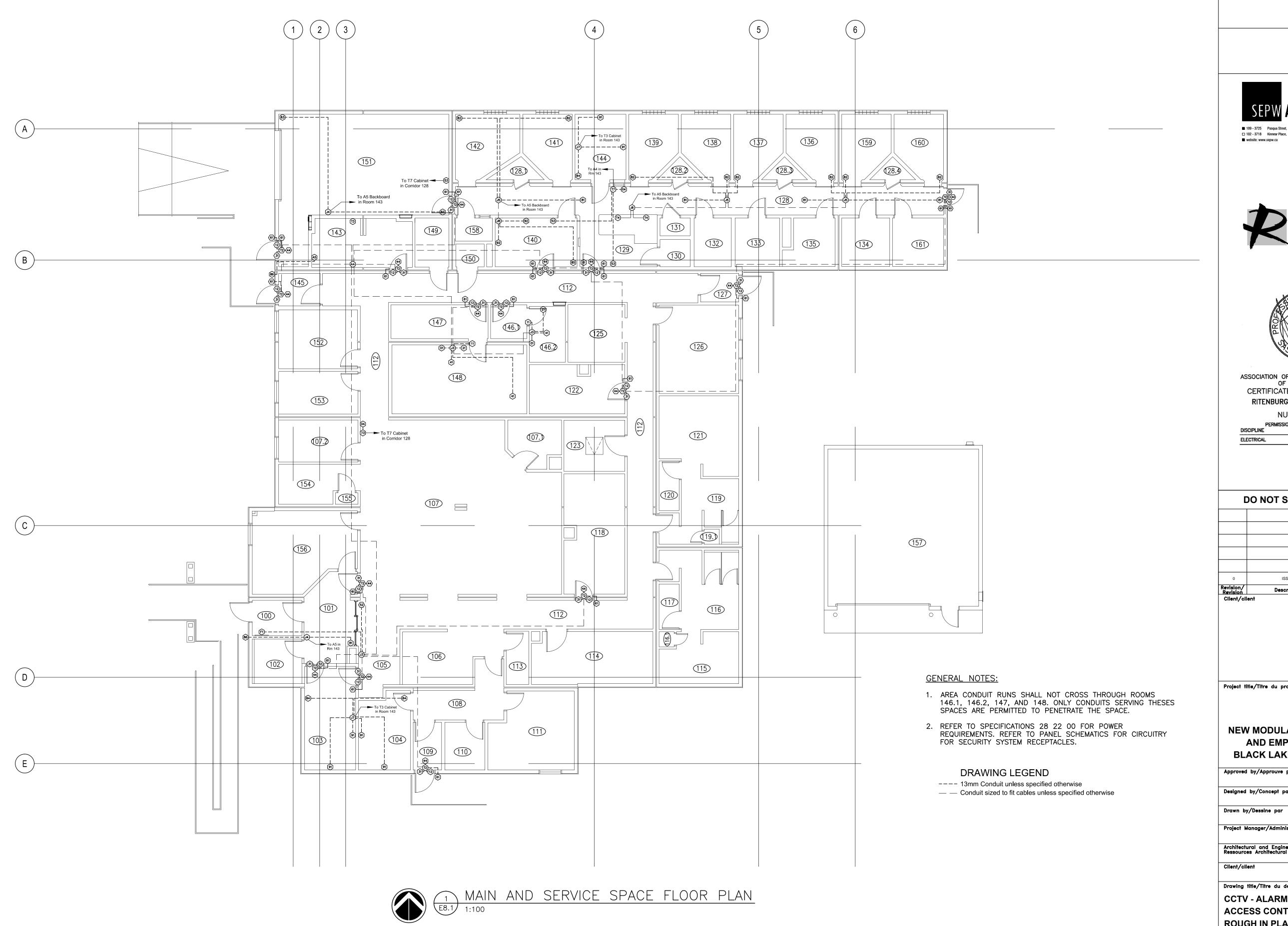
Project No./No. du projet
S-03-2014

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Sheet/Feuille E7.3

Revision no./ La Révision no.

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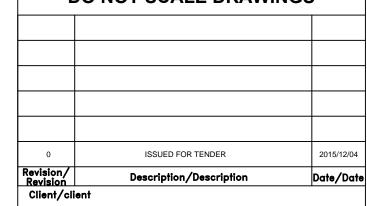




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Project title/Titre du projet

NEW MODULAR POLICE BUILDING AND EMPLOYEE HOUSING **BLACK LAKE, SASKATCHEWAN** 

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**CCTV - ALARM SYSTEMS AND ACCESS CONTROL CONDUIT ROUGH IN PLAN** 

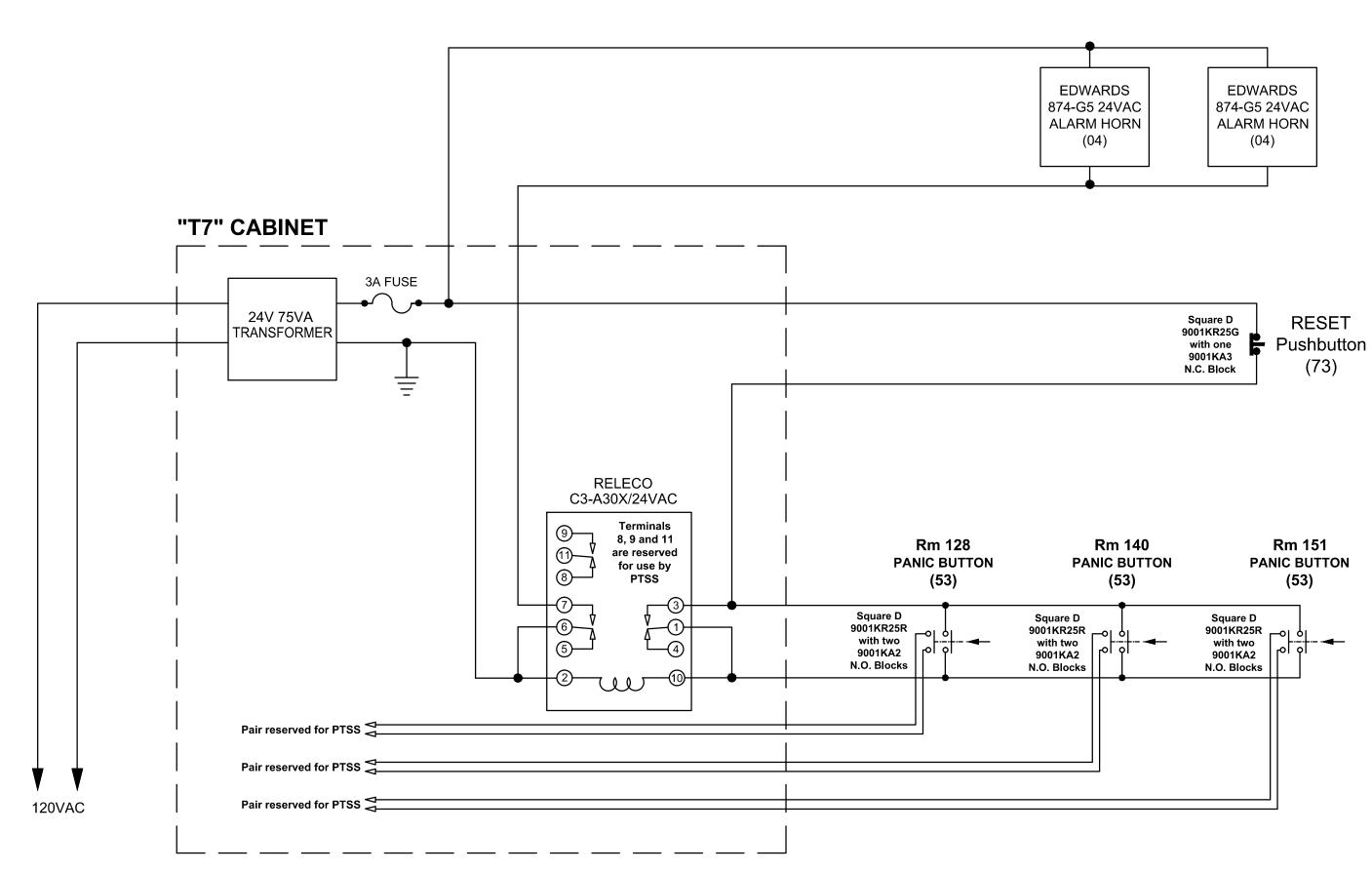
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# SCHEMATIC - RIOT ALARM



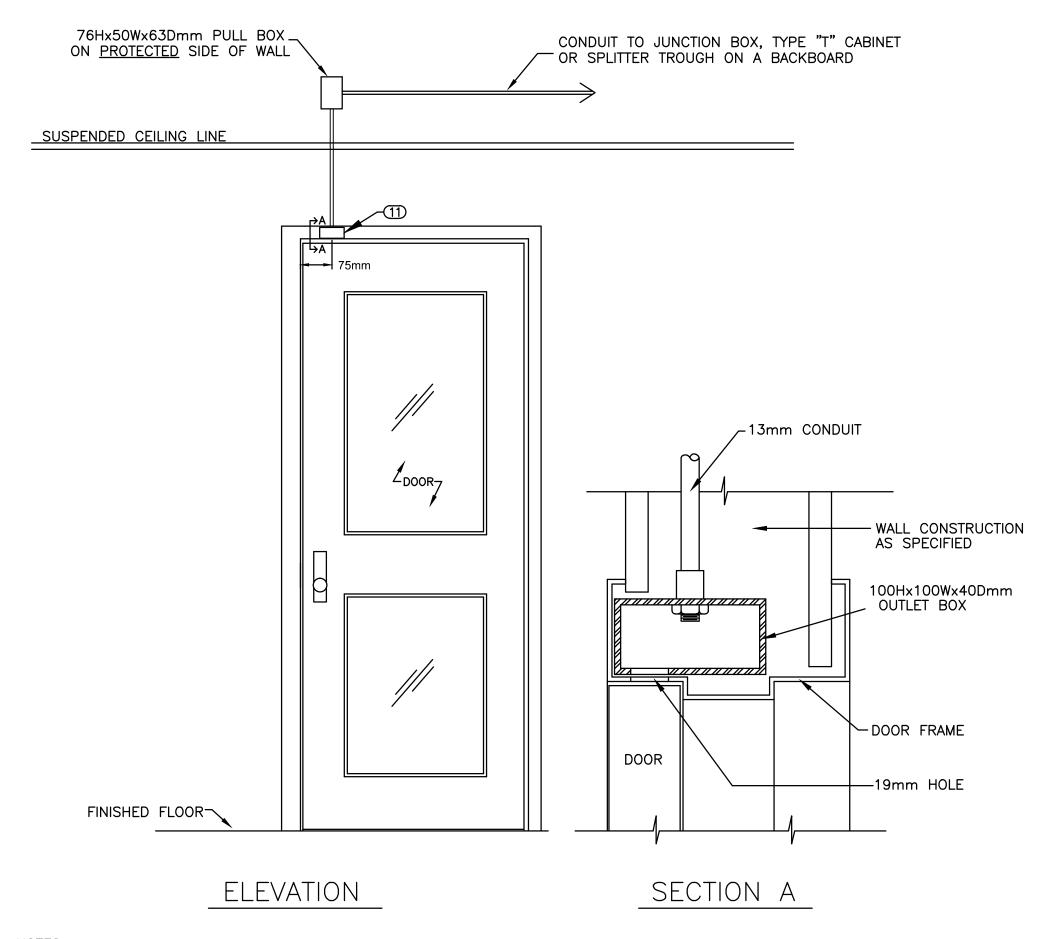
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SCHEMATIC — RIOT ALARM

1 SCHEMATIC — RIOT ALARM

1 N.T.S.

# PROTECTED DOOR - ELEVATION OF SINGLE DOOR WITH DOOR CONTACT



NOTES:

CONDUIT CONNECTOR TO BE MOUNTED AND FASTENED TO THE OUTLET BOX BY DOOR FRAME FABRICATOR.

OUTLET BOX TO BE SPOT WELDED IN PLACE BY DOOR FRAME FABRICATOR.

DRILL A 19MM HOLE AT 75MM (CENTER POINT) FROM THE EDGE OF THE DOOR CASING TO ALLOW FOR DOOR SWITCH INSTALLATION AND ACCESS TO WIRING.

SCALE: N.T.S.

ELEVATION OF SINGLE DOOR WITH DOOR CONTACT

N.T.S.







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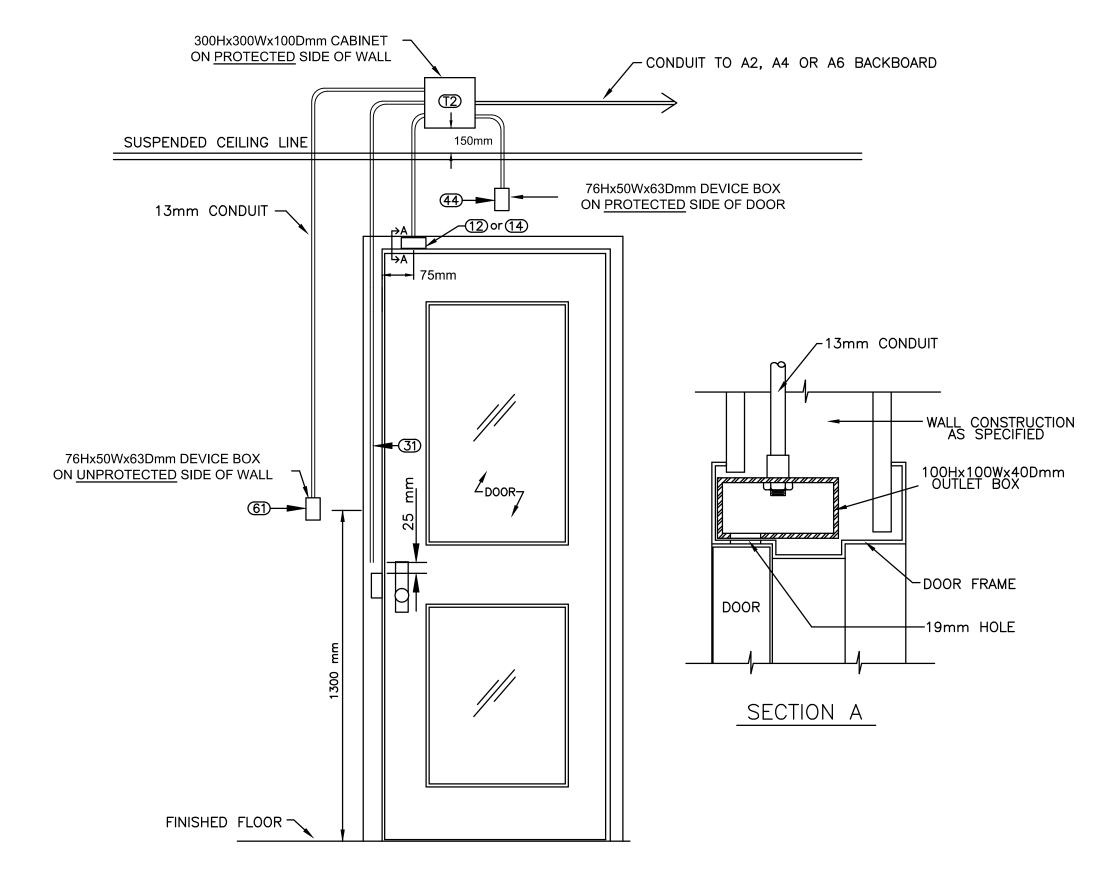
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**CCTV - ALARM SYSTEMS AND ACCESS CONTROL DETAILS** 

S-03-2014

E8.2

# ACCESS CONTROL — ELEVATION OF SINGLE DOOR WITH DOOR CONTACT, WALL MOUNTED READER AND ELECTRIC STRIKE



# ELEVATION

NOTES:

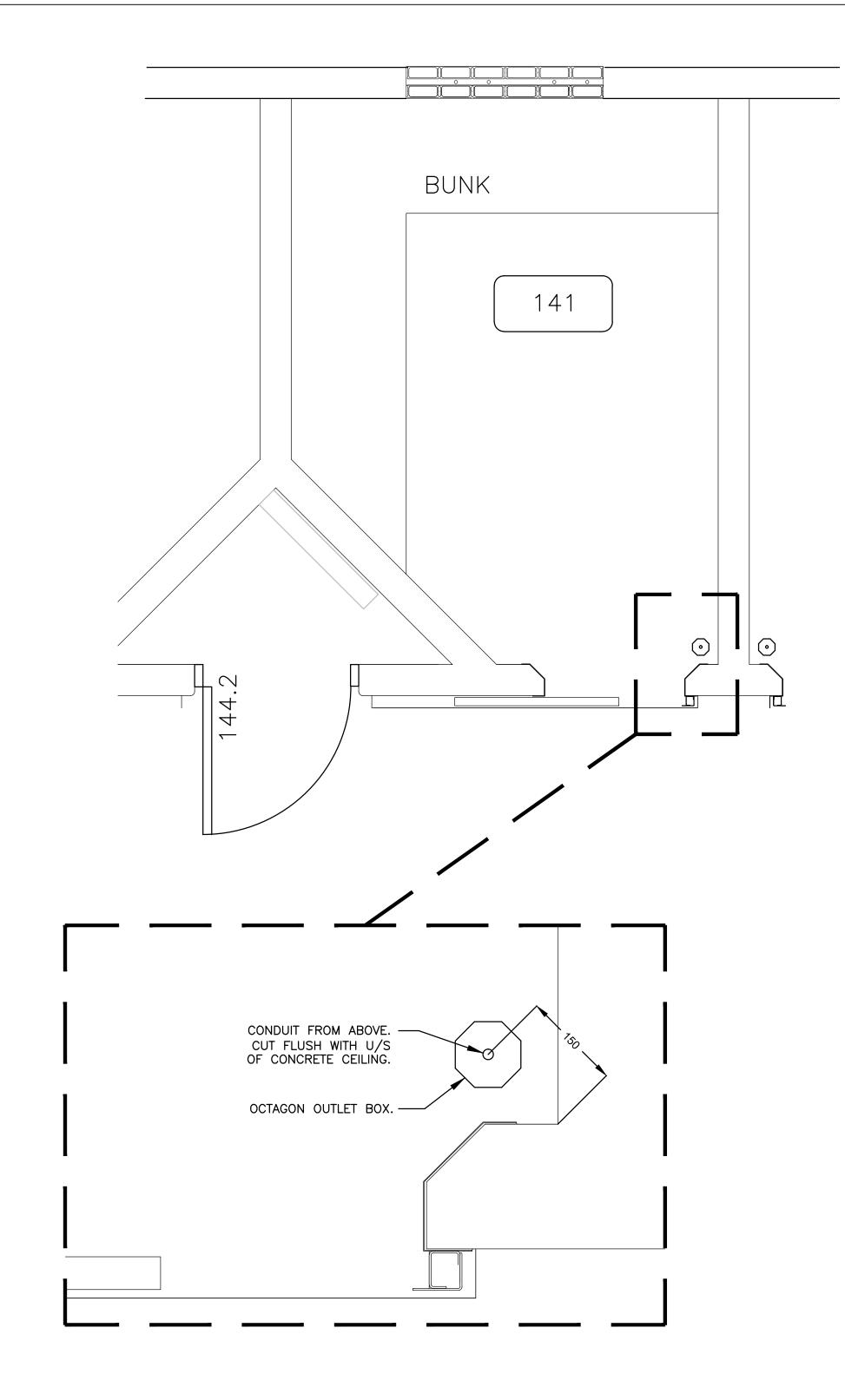
CONDUIT CONNECTOR TO BE MOUNTED AND FASTENED TO OUTLET BOX BY DOOR FRAME FABRICATOR.

OUTLET BOX TO BE SPOT WELDED IN PLACE BY DOOR FRAME FABRICATOR.

DRILL A 19MM HOLE AT 75MM (CENTER POINT) FROM THE EDGE OF THE DOOR CASING TO ALLOW FOR DOOR SWITCH INSTALLATION AND ACCESS TO WIRING.

SCALE: N.T.S.

1 ACCESS CONTROL DETAIL
E8.3 N.T.S.



CCTV — OCTAGON BOX FOR CORNER MOUNT DOME CAMERA

8.3 N.T.S.







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CCTV - ALARM SYSTEMS AND ACCESS CONTROL DETAILS

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S-03-2014

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E8.3

4 E8.3