



**1 DIESEL TANK REPLACEMENT PHASE 2 - GROUND FLOOR**  
 M2 SCALE: 1:50



00	ISSUED FOR TENDER	2014/12/01
0A	ISSUED FOR 80% REVIEW	2014/10/29
Revision	Description	Date
Client		client

**CORRECTIONAL SERVICE CANADA**  
**BOWDEN INSTITUTION**  
 INNISFAIL, ALBERTA

Project title: **ELECTRICAL SUBSTATION** / Proj: **SECONDARY TANK COMPLIANCE**

DRAWING NOTES	
1	NEW SKID-MOUNTED 17,200 L DOUBLE WALL DIESEL FUEL TANK (ST-1). DOUBLE WALL CONTAINMENT TO BE DESIGNED FOR 100% OF TANK CAPACITY.
2	NEW DIESEL FUEL TANK EXTERNAL FILL BOX CONNECTED TO NEW 75ø FILL LINE. WALL PENETRATION TO BE WEATHERPROOFED UPON COMPLETION OF INSTALLATION. FILL BOX TO BE MOUNTED 2620mm ABOVE GRADE. REFER TO FILL BOX DETAIL ON DRAWING M3.
3	NEW 5 KG WALL-MOUNTED DRY CHEMICAL FIRE EXTINGUISHER. REFER TO SPECIFICATION SECTION 10 44 16.19. EXTINGUISHER TO BE MOUNTED AT A HEIGHT ALLOWING EASY ACCESS.
4	NEW 400x300mm WALL LOUVRE C/W BIRDSCREEN. BOTTOM OF WALL LOUVRE INSTALLED NO HIGHER THAN 300mm ABOVE FINISHED FLOOR OF ROOM 101. LOUVRE MUST BE INSTALLED AT MINIMUM 3m PERIMETER DISTANCE FROM DOORS TO ROOM 101.
5	NEW 75ø VENT PIPE FOR ST-1 ROUTED THROUGH ROOM 101 AND TERMINATING THROUGH REAR WALL OF ROOM 101. REFER TO DETAIL 4 ON DRAWING M4 FOR INSTALLATION REQUIREMENTS.
6	CONTRACTOR IS TO INSTALL A PLACARD ON THE EXTERIOR SIDE OF THE DOOR TO ROOM 101 INDICATING LIQUID STORED AND CAPACITY OF DIESEL TANK IN ROOM. PLACARD LETTERING TO BE 50mm TALL.

DRAWING NOTES	
7	NEW DUPLEX FUEL PUMP SET TO BE INSTALLED IN ROOM 102 ON NEW 150mm HOUSEKEEPING PAD. PAD TO BE 750mm x 750mm. REFER TO DETAIL 5 ON DRAWING S1 FOR PAD REINFORCING DETAIL. REFER TO DRAWING M3 FOR PUMP PIPING SCHEMATIC.
8	NEW 150ø VENT PIPE FOR ST-1 ROUTED THROUGH ROOM 101 AND TERMINATING THROUGH REAR WALL OF ROOM 101. REFER TO DETAIL 4 ON DRAWING M4 FOR INSTALLATION REQUIREMENTS.
9	UPON COMPLETION OF ST-1 INSTALLATION AND COMMISSIONING, DEMOLISH ST-T, FMS-T, P-T, COMPLETE WITH ALL TEMPORARY PIPING, SUPPORTS, BARRIERS, AND ACCOUTREMENTS. LOUVRE PENETRATIONS FOR TEMPORARY PIPING ARE TO BE REPAIRED AND MADE GOOD. CAP TEMPORARY PIPING INSIDE ROOM 102 WHERE SHOWN.
10	NEW 150mm HIGH REINFORCED HOUSEKEEPING PAD FOR ST-1. PAD IS TO BE 150mm LARGER THAN SKID BASE ALL AROUND. REFER TO DETAIL 5 ON DRAWING S1 FOR HOUSEKEEPING PAD DETAIL.
11	NEW FUEL MANAGEMENT SYSTEM FMS-1 FOR TEMPORARY INSTALLATION. FMS-1 TO BE WALL-MOUNTED AT 1200mm ABOVE FINISHED FLOOR. REFER TO TABLE ON DRAWING M2 FOR DIVISION RESPONSIBILITIES FOR CONNECTIONS TO DEVICES. CONTRACTOR IS TO ENSURE A MINIMUM CLEARANCE OF 1m IN FRONT OF PANEL.

DRAWING NOTES	
12	EXISTING FENCEPOST, GATE, AND FENCING TO BE TEMPORARILY REMOVED TO ALLOW FOR SUFFICIENT CLEARANCE TO TRANSPORT ST-1 INTO ROOM 101. FENCEPOST, GATE, AND ASSOCIATED FENCING TO BE REINSTATED UPON COMPLETION OF WORK. REFER TO DETAIL 1 ON DRAWING S3 FOR FENCEPOST TEMPORARY DISPLACEMENT DETAIL. FENCE DISPLACEMENT WORK TO BE DONE BY OTHERS.
13	NEW WALL OPENING TO BE SEALED AND FIRESTOPPED UPON COMPLETION OF WORK. REFER TO DETAIL 4 ON DRAWING M4 FOR VENT INSTALLATION REQUIREMENTS.
14	NEW 3-HR FIRE RATED WALL PENETRATION. REFER TO SPECIFICATION SECTION 07 84 00 FOR FIRESTOPPING REQUIREMENTS.
15	NEW WALL-MOUNTED ALARM LIGHT FOR DIESEL TANK SYSTEM. REFER TO DRAWING E1 FOR ALARM LIGHT OPERATION AND POWER DETAIL. ALARM LIGHT TO BE INSTALLED AND CONNECTED BY OTHERS.
16	EXISTING JOHNSON CONTROLS BAS PANEL. REFER TO SPECIFICATION SECTION 23 11 13 FOR CONNECTION REQUIREMENTS TO EXISTING BAS SYSTEM.

GENERAL NOTES	
1.	NEW TANK INSTALLATION WITHIN BUILDING TO MAINTAIN A MINIMUM CLEARANCE OF 550mm BETWEEN TANK AND WALL.
2.	ALL WALL PENETRATIONS BETWEEN ROOMS 101 AND 102 ARE TO BE FIRESTOPPED FOR A 3 HR FIRE RATING. REFER TO SPECIFICATION SECTION 07 84 00 FOR FIRESTOPPING REQUIREMENTS.
3.	ALL EQUIPMENT DEMOLITION TO BE DONE IN AN ENVIRONMENTALLY SAFE MANNER. REFER TO SPECIFICATION SECTIONS 01 35 43 AND 02 65 00 FOR REQUIREMENTS.

PHASING	
1.	INSTALL DT-1 IN ROOM 102.
2.	CONNECT FUEL-OIL PIPING FROM DT-1 TO EXISTING GENERATOR PIPING.
3.	INSTALL ST-T, FMS-T, AND P-T, ALONG WITH ALL ASSOCIATED PIPING, SUPPORTS, AND ACCOUTREMENTS.
4.	DEMOLISH EXISTING SUMP PIT AND IN-FILL AS PER DRAWING NOTE 13 ON DRAWING M1.
5.	DEMOLISH EXISTING FUEL TANK ALONG WITH ALL ASSOCIATED PIPING, SUPPORTS, AND ACCOUTREMENTS. ALL REMAINING FUEL IN EXISTING FUEL TANK IS TO BE TRANSFERRED TO ST-T PRIOR TO DEMOLITION.
6.	INSTALL ST-1, P-1, P-2, FMS-1, ALONG WITH ALL ASSOCIATED PIPING, SUPPORTS, AND ACCOUTREMENTS. REFER TO DRAWING M2 FOR LOCATION OF EQUIPMENT.
7.	CONNECT NEW DIESEL FUEL PIPING TO EXISTING GENERATOR PIPING, AND COMMISSION NEW SYSTEM.
8.	DEMOLISH ST-T, FMS-T, AND P-T, ALONG WITH ALL ASSOCIATED PIPING, SUPPORTS, AND ACCOUTREMENTS. ALL FUEL REMAINING IN ST-T IS TO BE TRANSFERRED TO ST-1 PRIOR TO DEMOLITION.

FMS-1 CONNECTION REQUIREMENTS				
DEVICE	CONDUIT BY DIVISION	WIRING BY DIVISION	CONNECTION TO FMS-1 BY DIVISION	CONNECTION TO DEVICE BY DIVISION
FIRE ALARM PANEL	26	26	23	26
POWER SUPPLY	26	26	26	26
PUMP P-1	26	26	23	26
PUMP P-2	26	26	23	26
BAS	23	23	23	23
ALARM BEACON	26	26	23	26
FILL BOX	23	23	23	23
OTHER FIELD DEVICES	23	23	23	23

NOTES:  
 1 - COORDINATE WITH OTHER DIVISIONS TO ENSURE SYSTEM IS PROPERLY INSTALLED AND SEAMLESSLY INTEGRATED WITH EXISTING SYSTEMS.