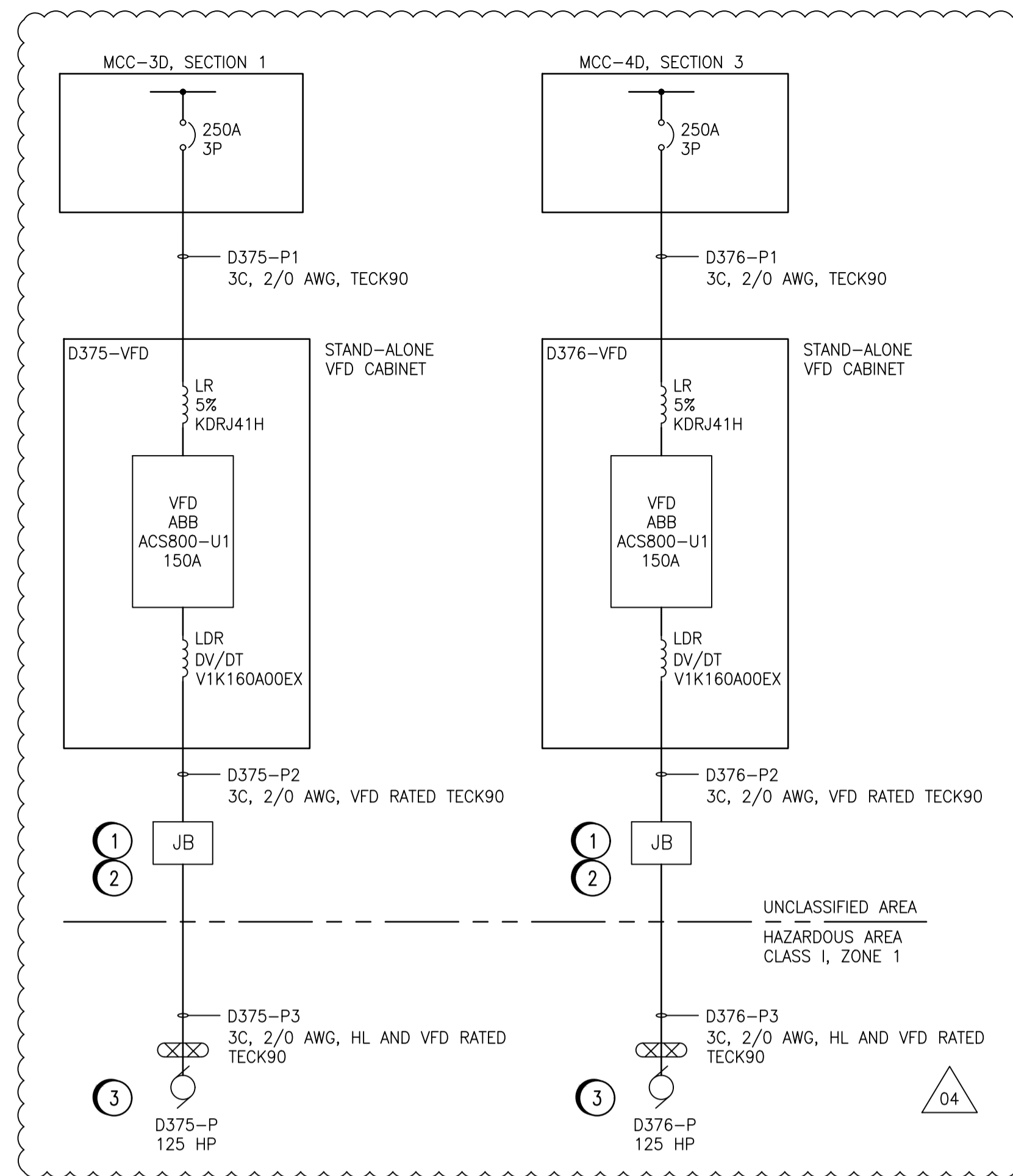


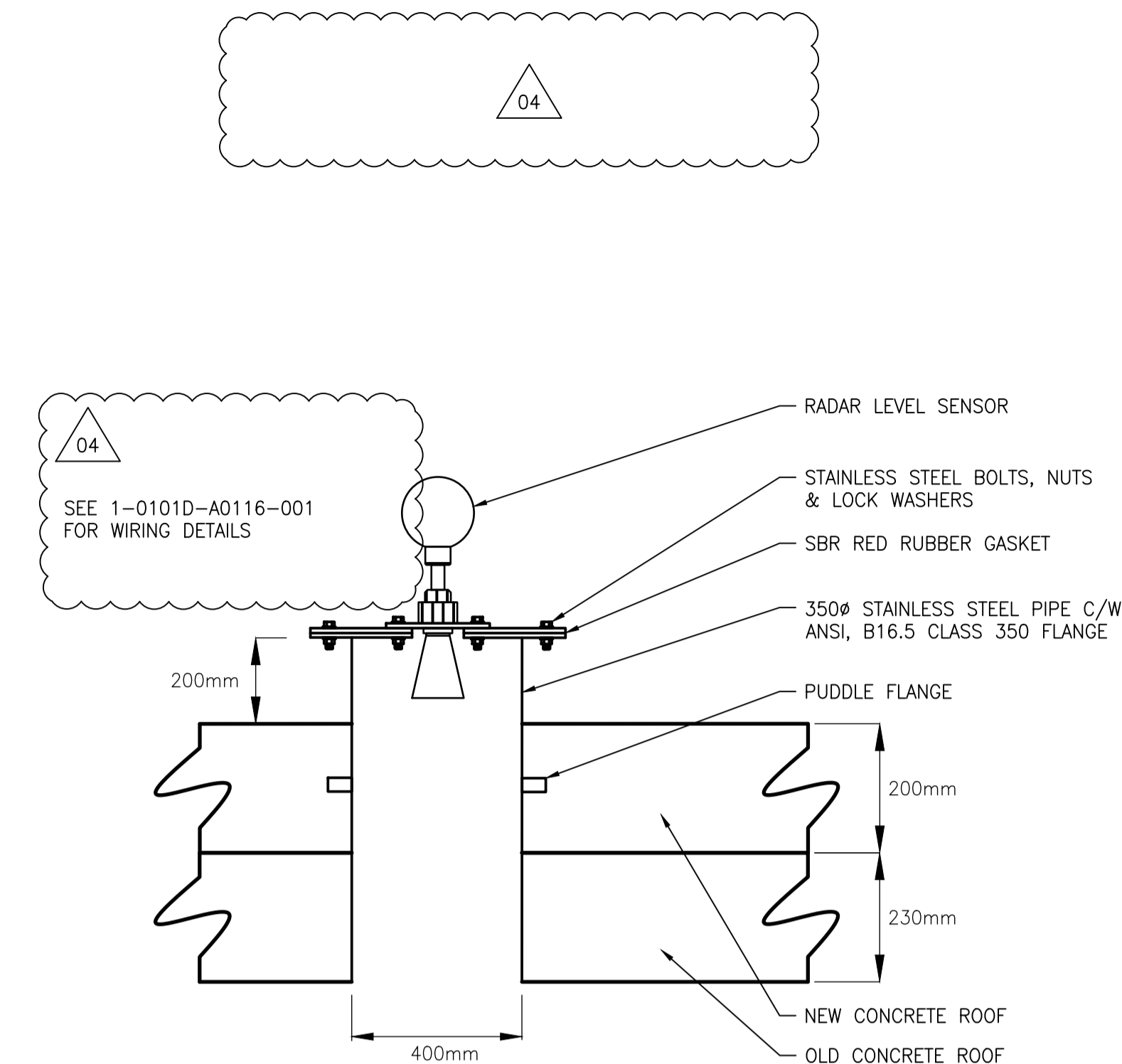
**EXISTING CONTROL PANEL MODIFICATIONS**  
N.T.S

**PANEL LEGEND**

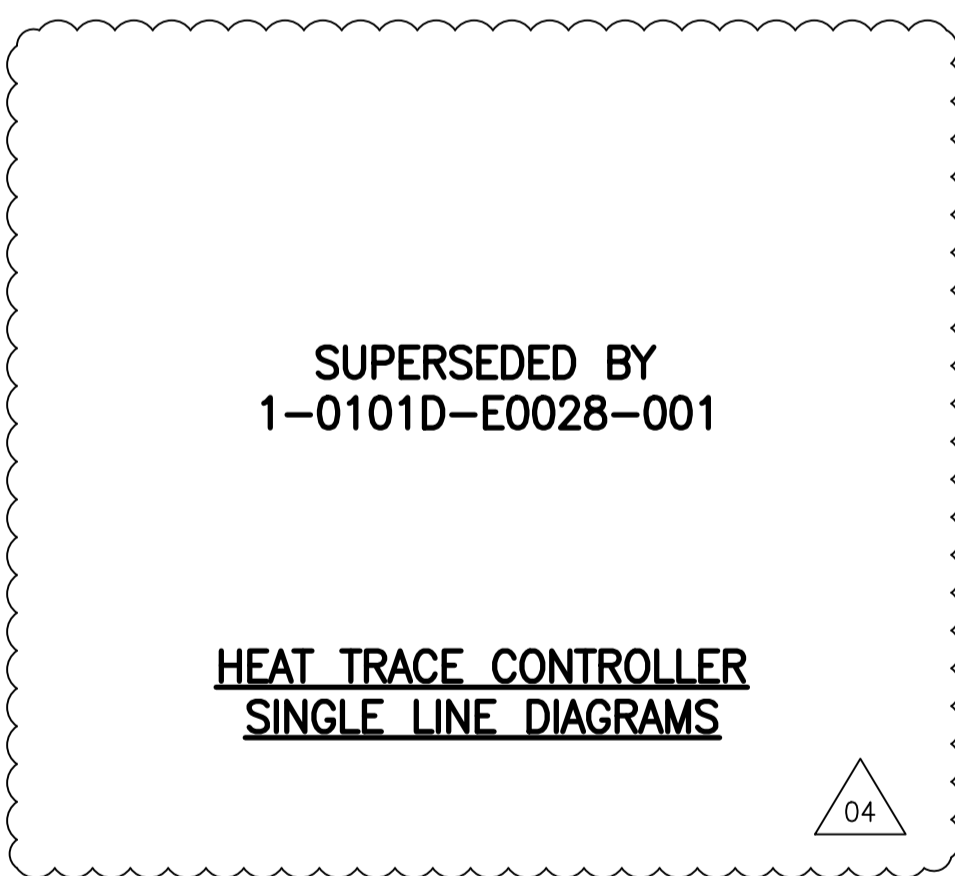
- EXISTING M340 POWER SUPPLY AND 12 SLOT CHASSIS
- EXISTING M340 PLC
- EXISTING PLC I/O CARDS
- NEW 24VDC DI CARD
- NEW AI CARD
- NEW ETHERNET CARD
- NEW M340 POWER SUPPLY AND 12 SLOT CHASSIS c/w BACKPLANE EXTENDER AND CABLES
- NEW RELAY OUTPUT CARD
- SPARE SLOTS
- NEW MOXA 8 PORT ETHERNET SWITCH



**PARTIAL SINGLE LINE DIAGRAM**



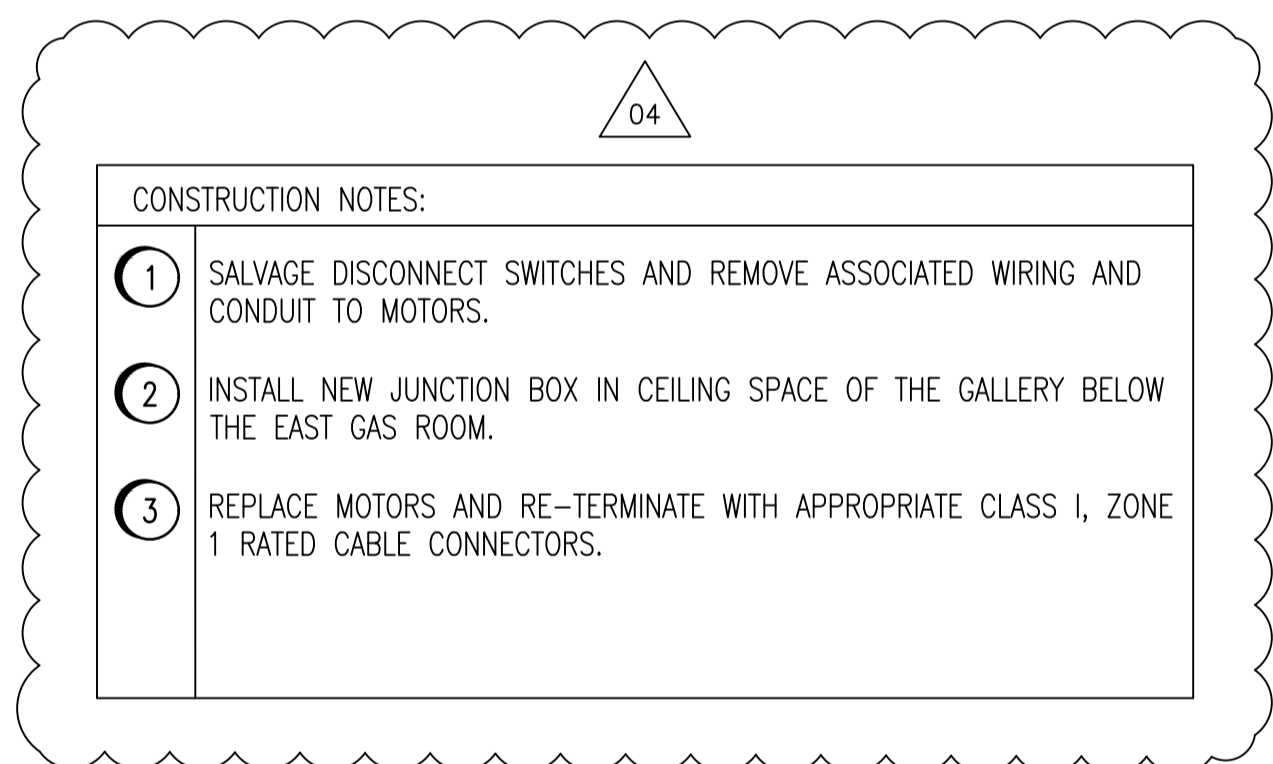
**RADAR LEVEL SENSOR MOUNTING DETAIL**  
N.T.S.



**HEAT TRACE CONTROLLER SINGLE LINE DIAGRAMS**

MCC 3D					MCC 4D							
SECTION	SECTION 1	SECTION 2	SECTION 3	SECTION 4	SECTION 1	SECTION 2	SECTION 3	SECTION 4	SECTION	SECTION		
D333-P	FAN D608-3DF32 2HP	SLUDGE PUMP D313-3DP7 NOT USED	FAN D620-3DF40 3HP	INCOMING SUPPLY	INCOMING SUPPLY	FAN D610-4DF33 2HP	FAN D600-4DF41 3HP	FAN D604-4DF43 0.5HP	D332-P	D331-P		
	ACR SRUBER DF35A 1HP	FAN D606-3DF34 5HP	FAN D602-3DF42 0.5HP	347-600V LIGHTING PANEL M	POWER SUPPLY 20-208 75kW	FAN D616-4DF35 1.5HP	VFD BLOWER D332-P	VFD BLOWER D331-P 40HP				
	VFD D333-P 40HP	FAN D614-3DF36 2HP	RECIRC PUMP D116-3DP19 15HP	WELD. OUTL. 60A	COND. UNIT D616-3DUC1	WELD. OUTL. 60A	FAN D612-4DF37 2HP	HOT W. PUMP D115-4DP6 10HP			VFD D332-P 40HP	VFD D331-P 40HP
	SLUDGE MIXING PUMP D375-P 250A, 3P BREAKER	20 KVAR	RECIRC PUMP D116-3DP13 15HP	LIGHTING PANEL R	AIR SCRUBER H.COIL 1HP	NOT USED	FAN D618-4DF39 3HP	SLUDGE PUMP D115-4DP12 15HP			GAS BOOSTER	
BLANK	BLANK	GAS COMP. D450-3DR5 30kW	SUMP PUMP D948-3DP45 5HP	SUMP PUMP D948-4DP46 5HP	SUMP PUMP D460-4DR6 30kW	GAS COMP. D460-4DR6 30kW	SLUDGE MIXING PUMP D376-P 250A, 3P BREAKER	COMP. D400-4DP10 30kW				
BLANK	BLANK	BLANK	SUMP PUMP D949-3DP43 2HP	SUMP PUMP D949-4DP44 2HP	BLANK	BLANK	BLANK	BLANK				

**EXISTING MOTOR CONTROL CENTRES LAYOUT**  
N.T.S.



DESIGNED BY: C. REIMER		CHECKED BY: C. REIMER	
DRAWN BY: S. FUNK		APPROVED BY: C. REIMER	
DATE: 2019-08-01			



**METRIC**  
WHOLE NUMBERS INDICATE MILLIMETRES  
DECIMALIZED NUMBERS INDICATE METRES

**ENGINEERS GEOSCIENTISTS MANITOBA**  
Certificate of Authorization  
**CENGYS Ltd.**  
No. 6983

LOCATION APPROVED UNDERGROUND STRUCTURES		B.M. ELEV.	
SUPV. U/G STRUCTURES COMMITTEE	DATE		
NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.			
NO.	REVISIONS	DATE	BY
04	ISSUED FOR CONSTRUCTION	2019-08-01	SLF
3.	REVISED TO ASBUILT	17.11.01	K.R.
2.	ISSUED FOR TENDER	12.11.01	D.K.G.
1.	ISSUED FOR 60% REVIEW	12.07.25	D.K.G.

**Stantec Consulting Ltd.**  
905 Waverley Street, Winnipeg, Manitoba  
Tel 204-489-5900 Fax 204-453-9012

DESIGNED BY: B.S.J.	CHECKED BY: S.T.
DRAWN BY: D.K.G.	APPROVED BY: S.K.B.
HOR. SCALE: -	RELEASED FOR CONSTRUCTION: -
VERTICAL: -	DATE: 2012.01.23

**ENGINEER'S SEAL**

**THE CITY OF WINNIPEG**  
WATER AND WASTE DEPARTMENT

**NORTH END WATER POLLUTION CONTROL CENTRE**  
REHABILITATION OF DIGESTER No. 11, SLUDGE HOLDING TANKS No. 5 AND No. 7  
SINGLE LINE DIAGRAM, MCC LAYOUT AND CONTROL PANEL DETAILS

BID OPPORTUNITY NO. 630-2019	CITY DRAWING NUMBER 1-0101D-E0011-001	SHEET 4 OF 44
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