

# SEWER PROTECTION UPGRADES PRELIMINARY DESIGN REPORT

JANUARY 2021

Project Number: 1101-26069

NOT FOR CONSTRUCTION



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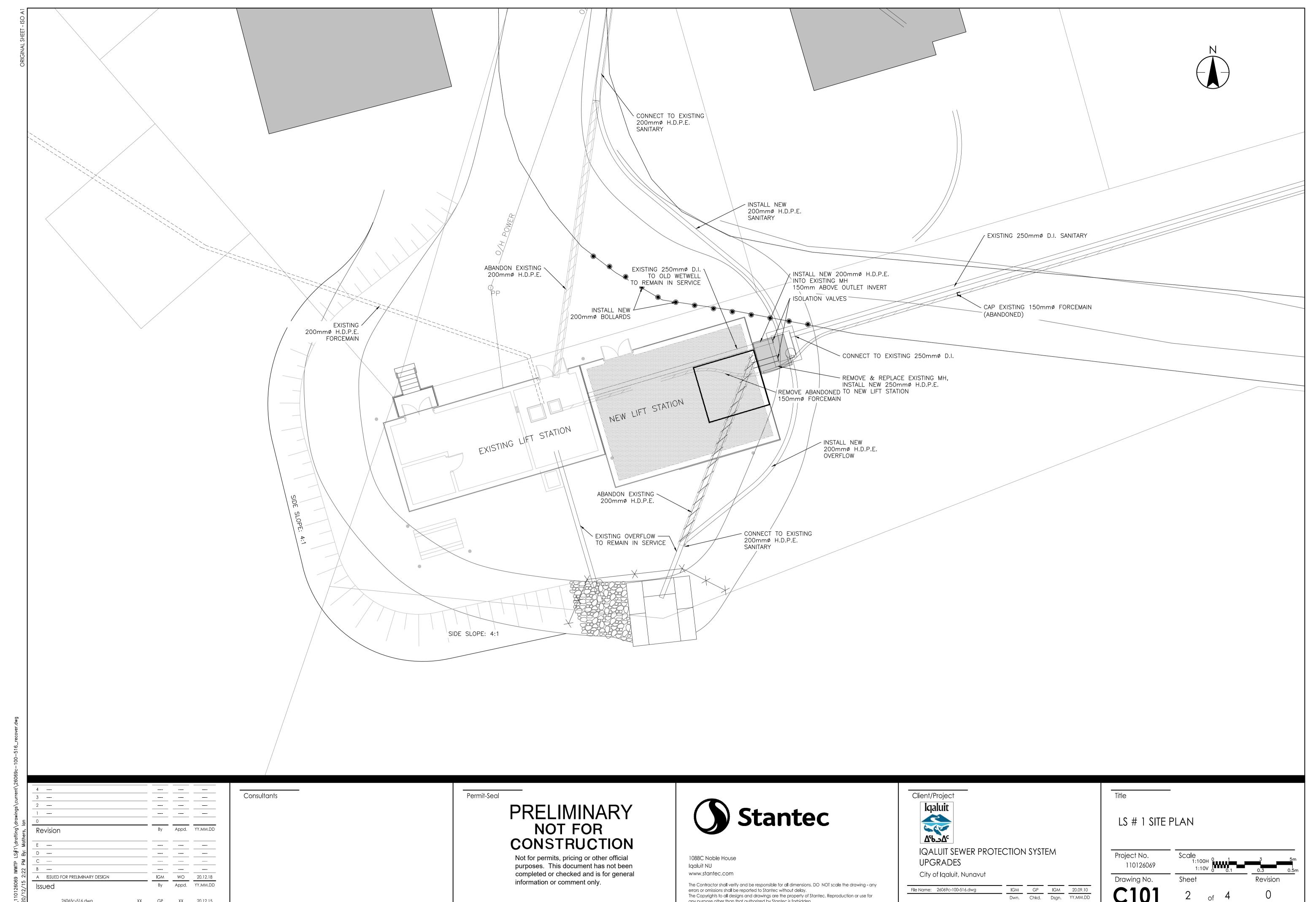
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110126069

Drawing No.

C100

City of Iqaluit, Nunavut

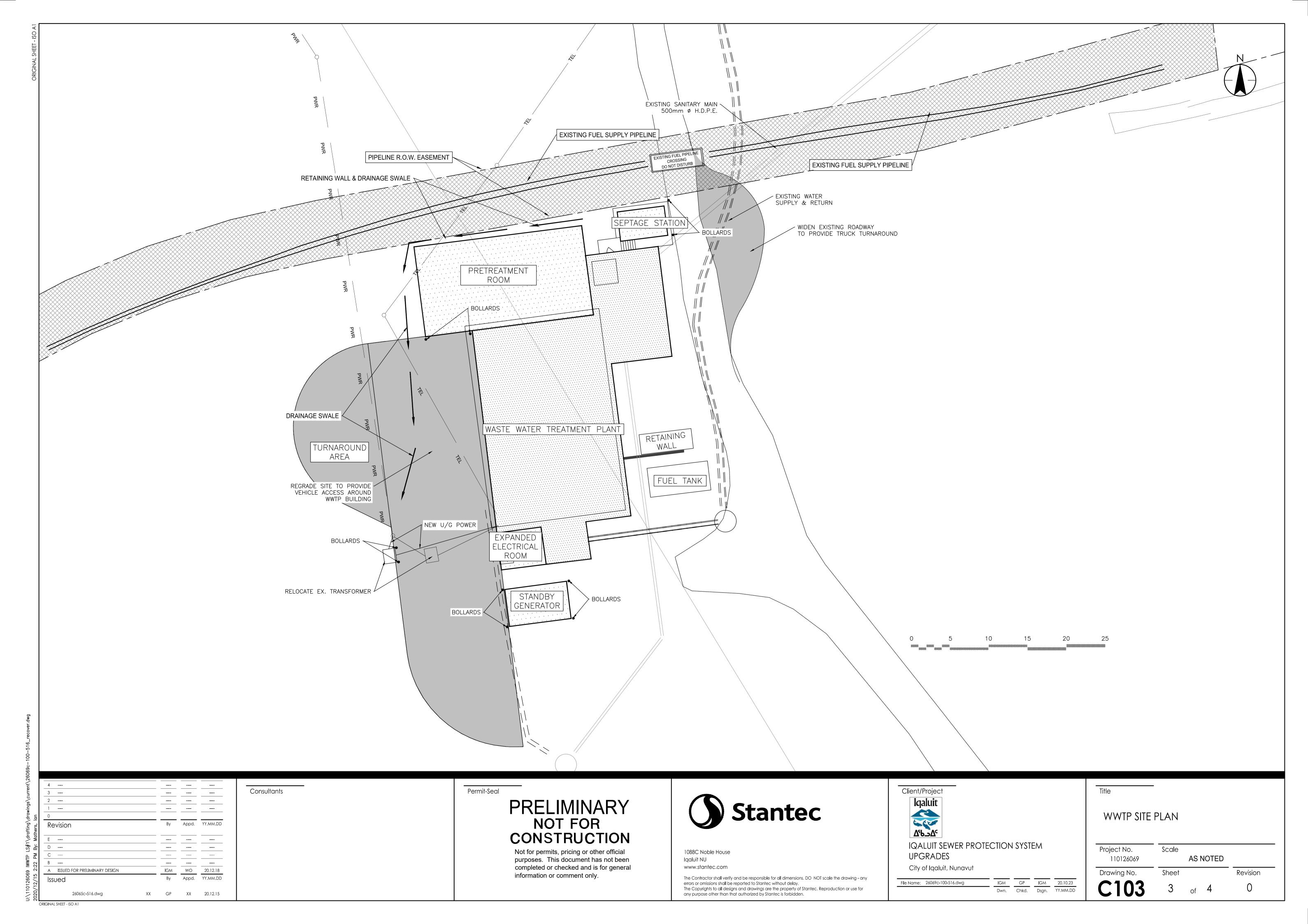


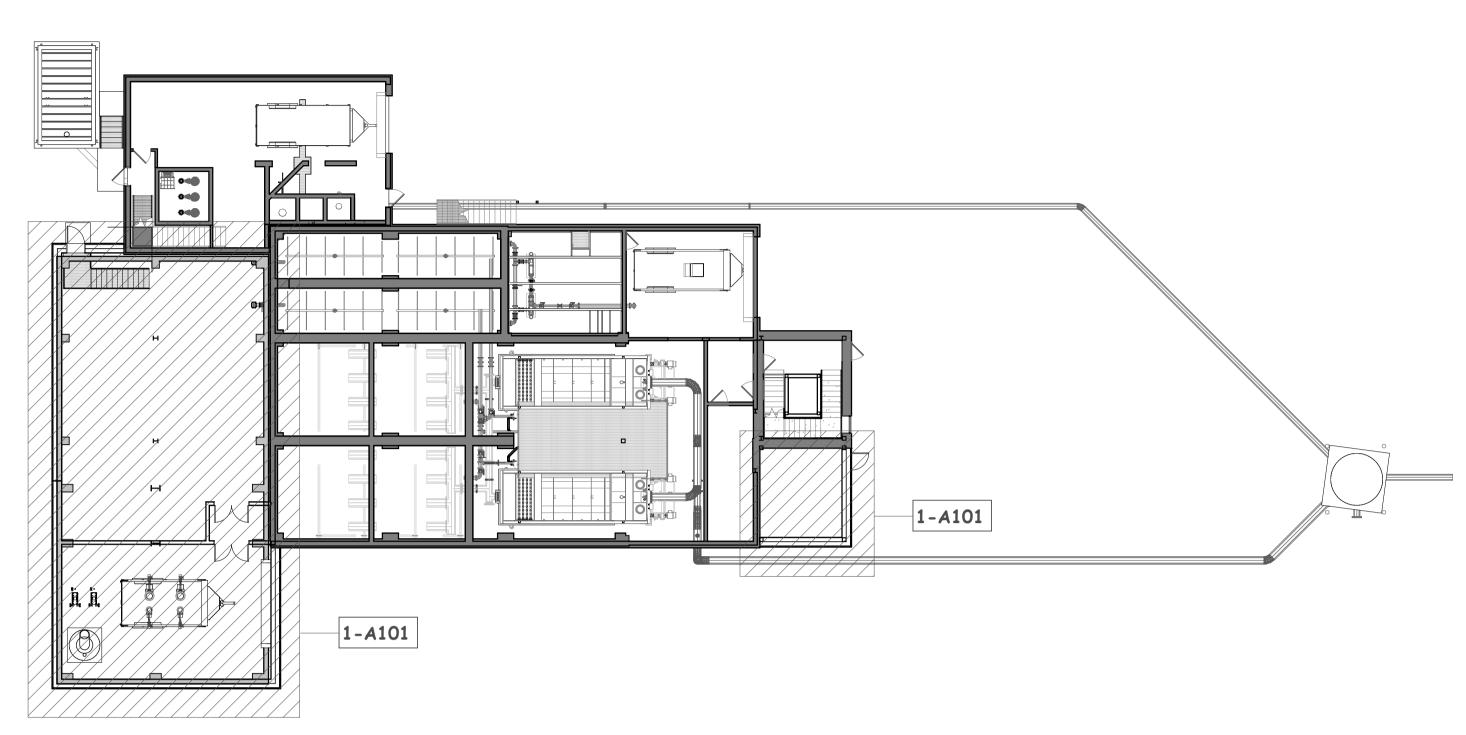
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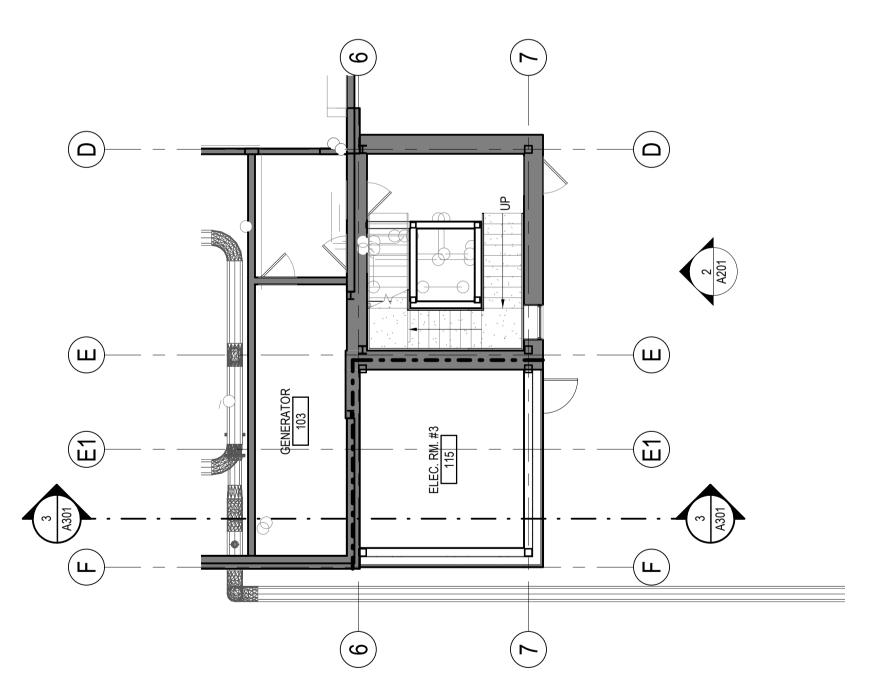
ORIGINAL SHEET - ISO A1

XX GP XX 20.12.15





LOWER FLOOR HEADWORKS - KEY PLAN





0 ISSUED FOR PRELMINARY DESIGN



SM JA 2020.12.18

By Appd YYYY.MM.DD

LOWER FLOOR HEADWORKS - ELECTRICAL ROOM ADDITION 3 LOV 1:100



**NOT FOR** CONSTRUCTION

Consultant

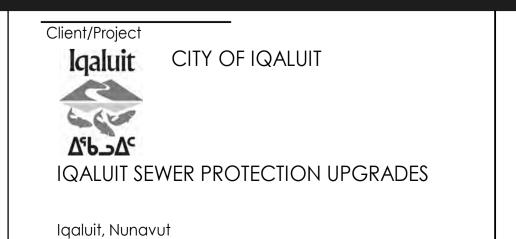
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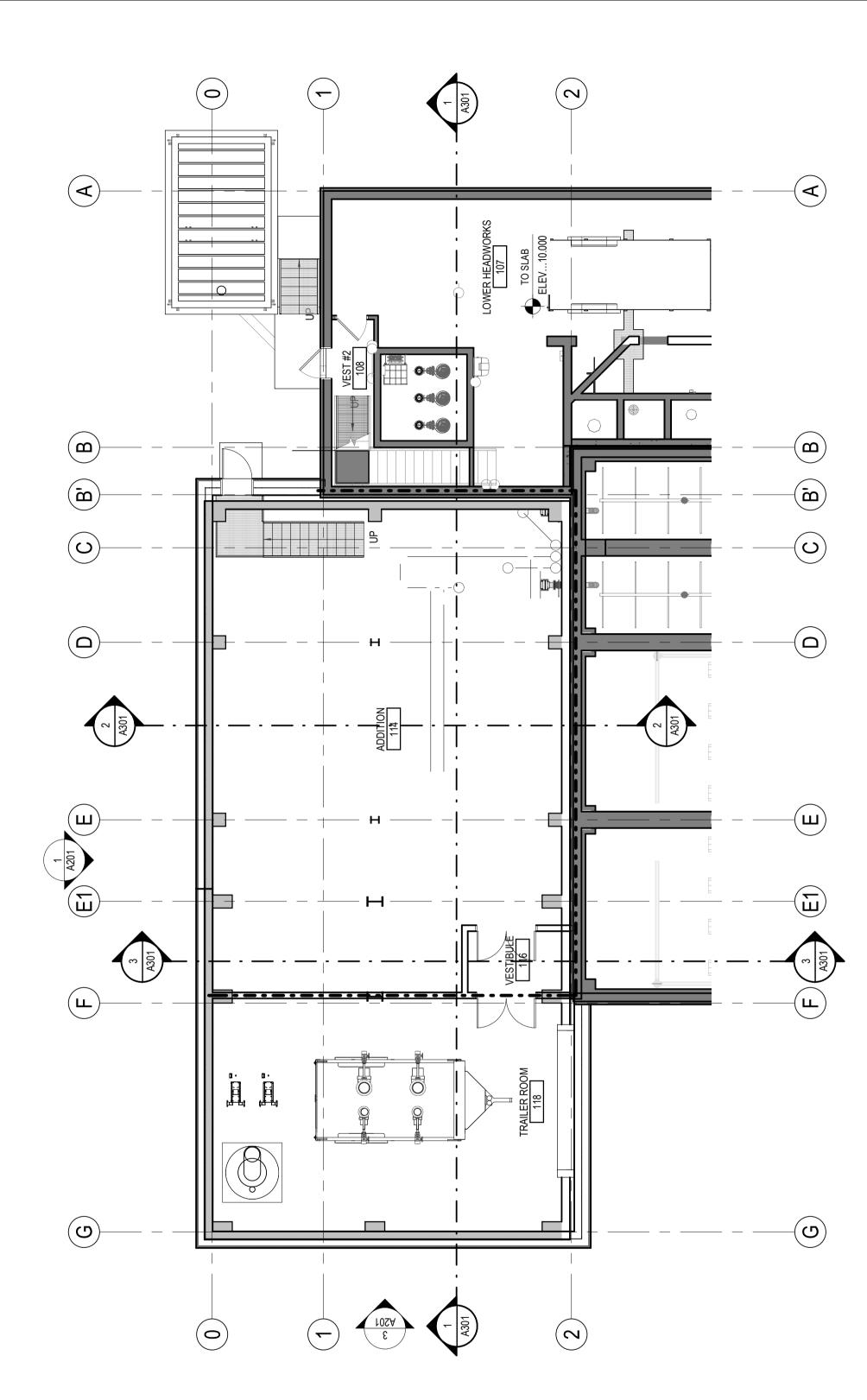


LOWER FLOOR PLAN - HEADWORKS Project No. Scale 110126069 As indicated Revision Drawing No. A101 SM/CE Designer Checker 2020.10.30
Dwn. Dsgn. Chkd. YYYY.MM.DD

ORIGINAL SHEET - ISO A1

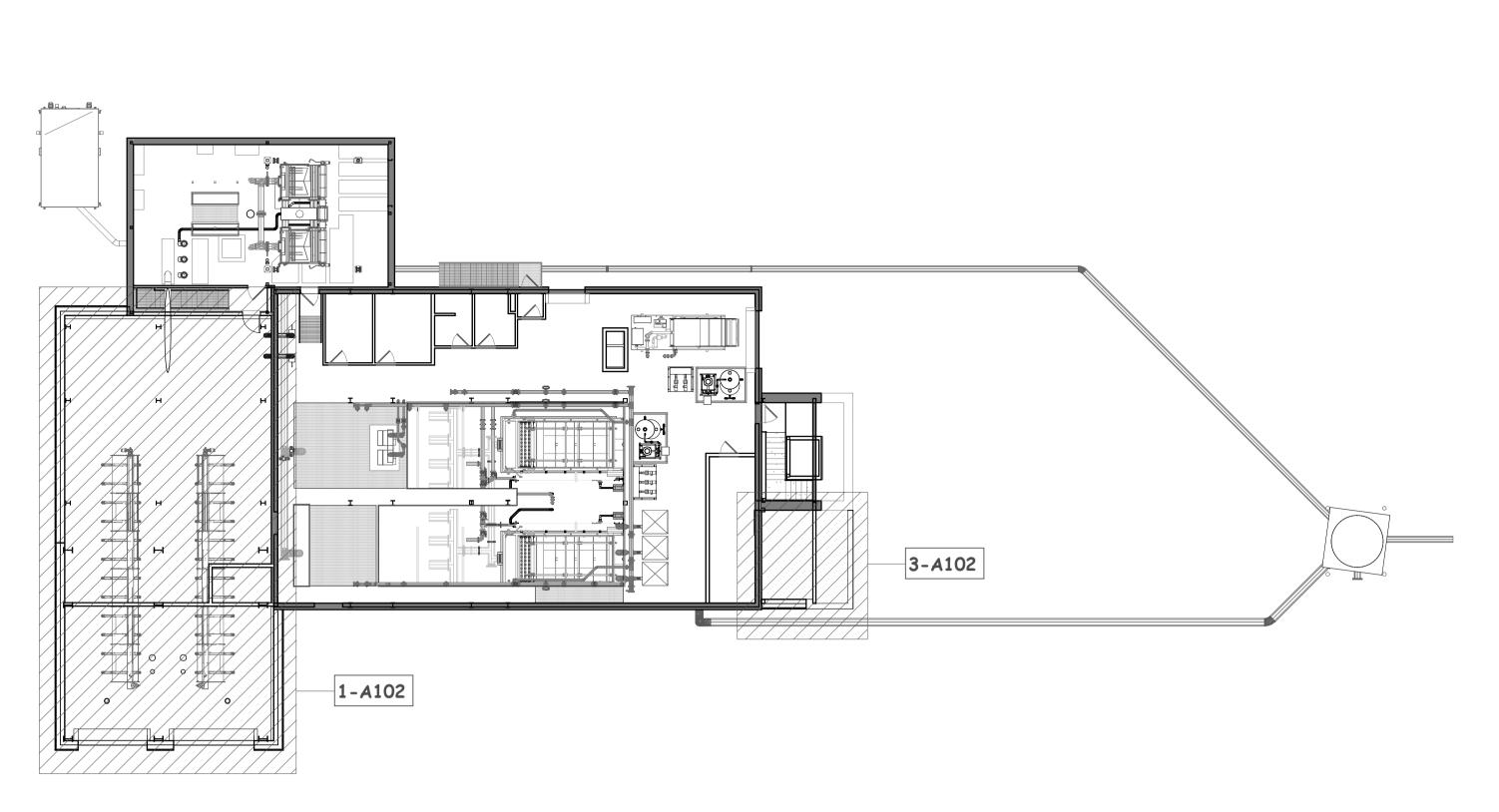
Issued

Revision

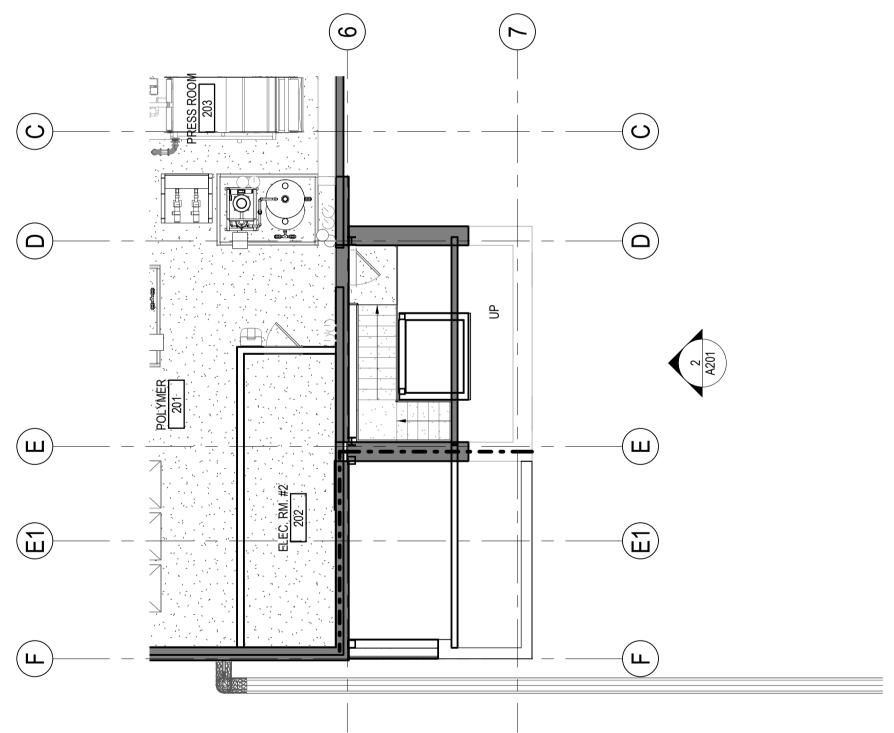


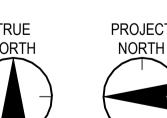
LOWER FLOOR HEADWORKS - PRE-TREATMENT ADDITION A101 1:100

File Name: N/A



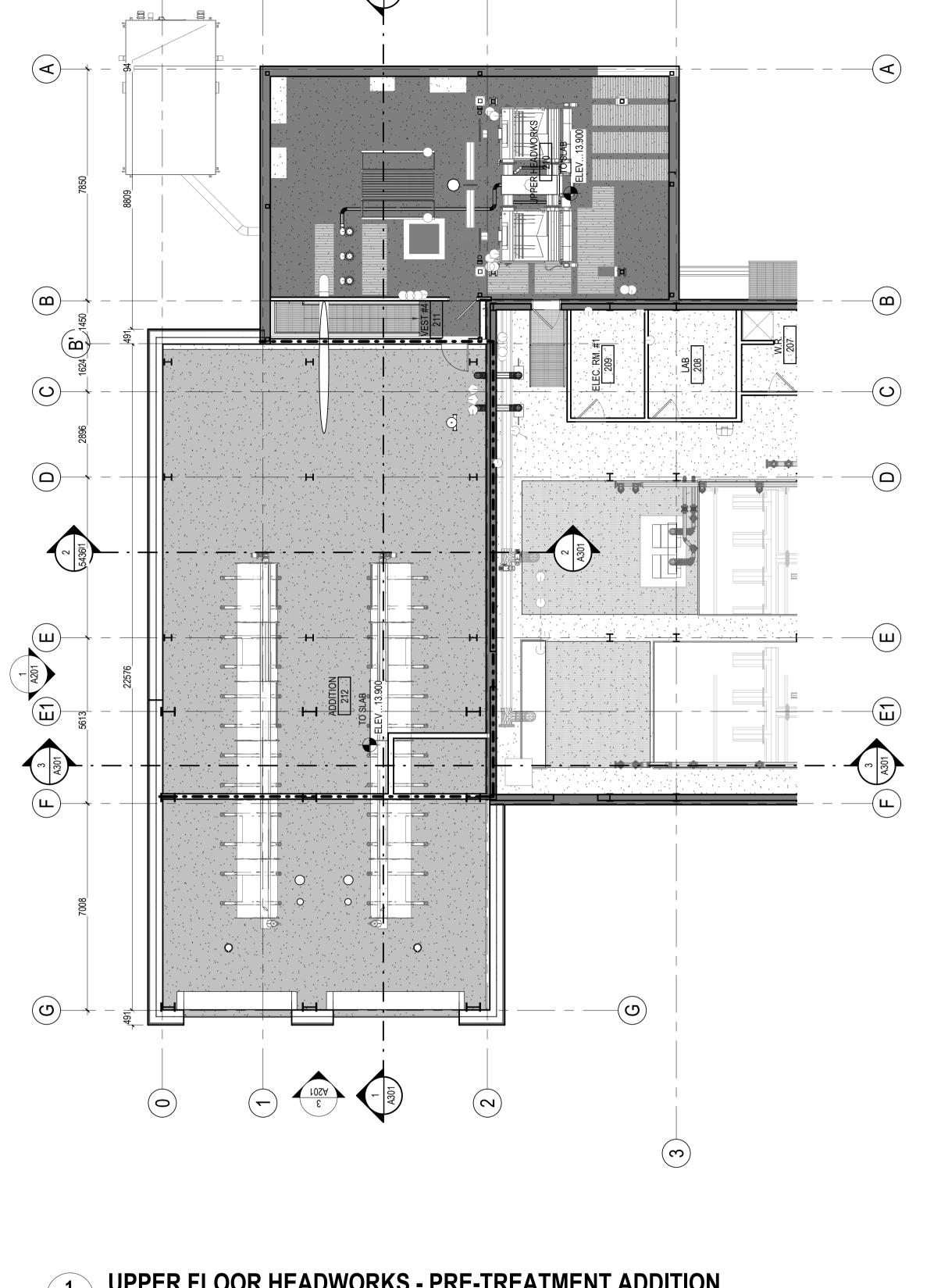
UPPER FLOOR HEADWORKS - KEY PLAN
1:200







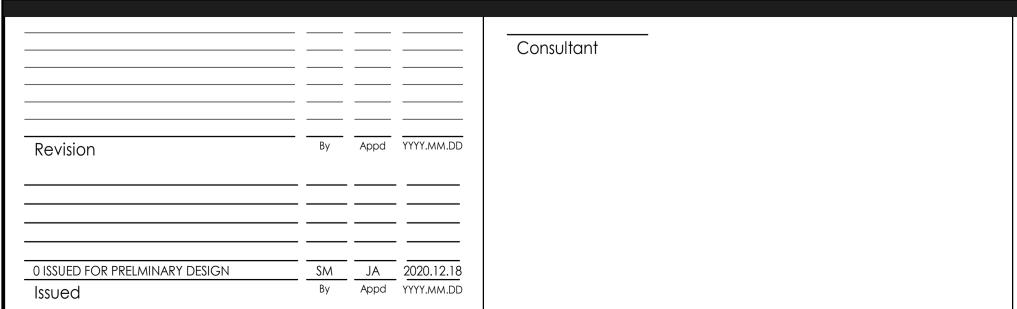
**UPPER FLOOR HEADWORKS - ELECTRICAL ROOM ADDITION** 3 A102 1:100



**UPPER FLOOR HEADWORKS - PRE-TREATMENT ADDITION 1** A102

Iqaluit, Nunavut

File Name: N/A



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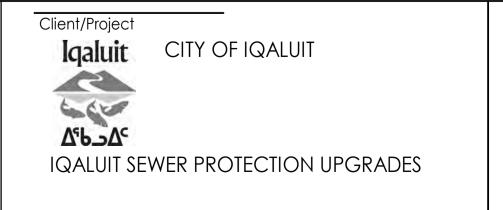
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Author Designer Checker 2020.10.30

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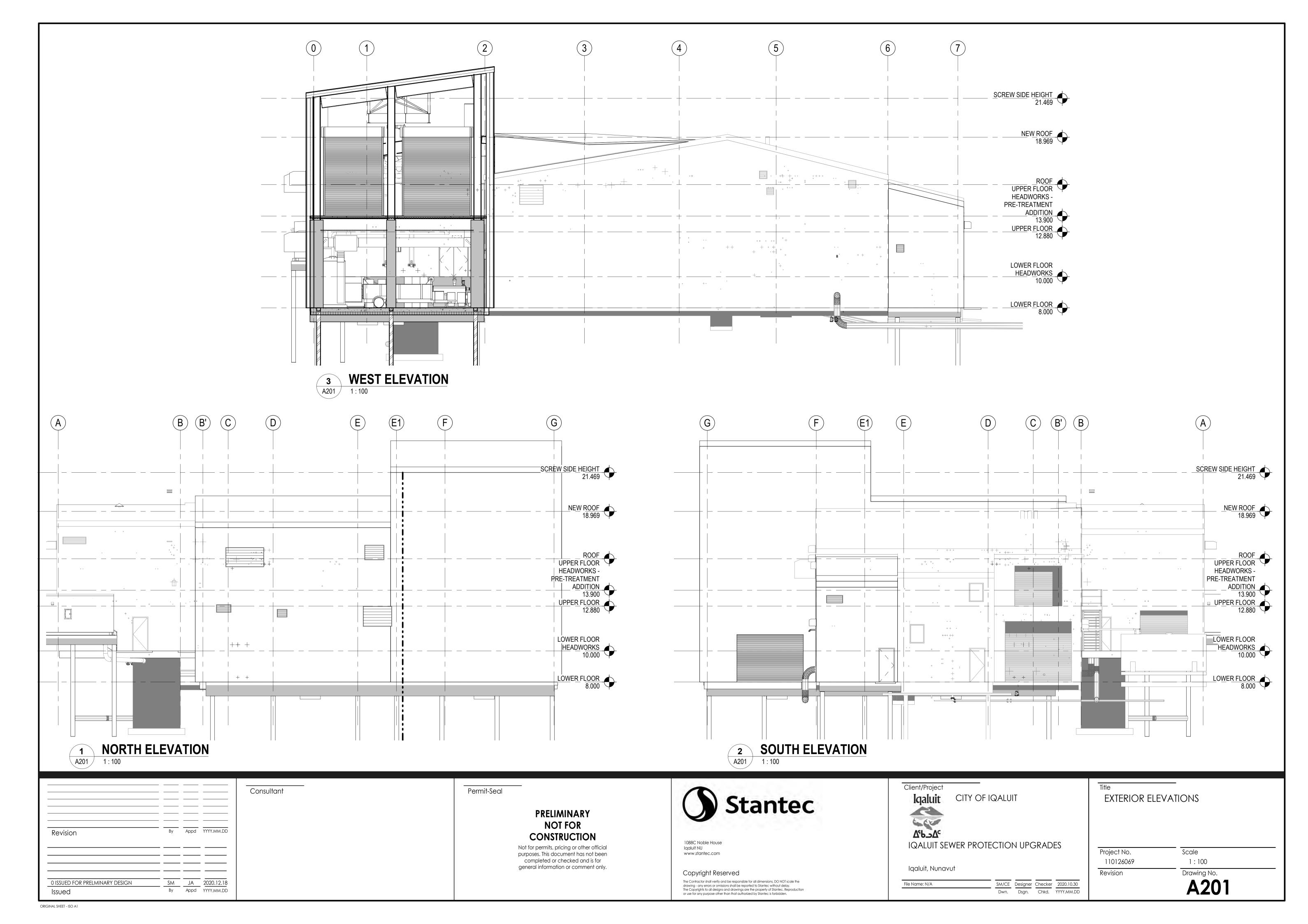
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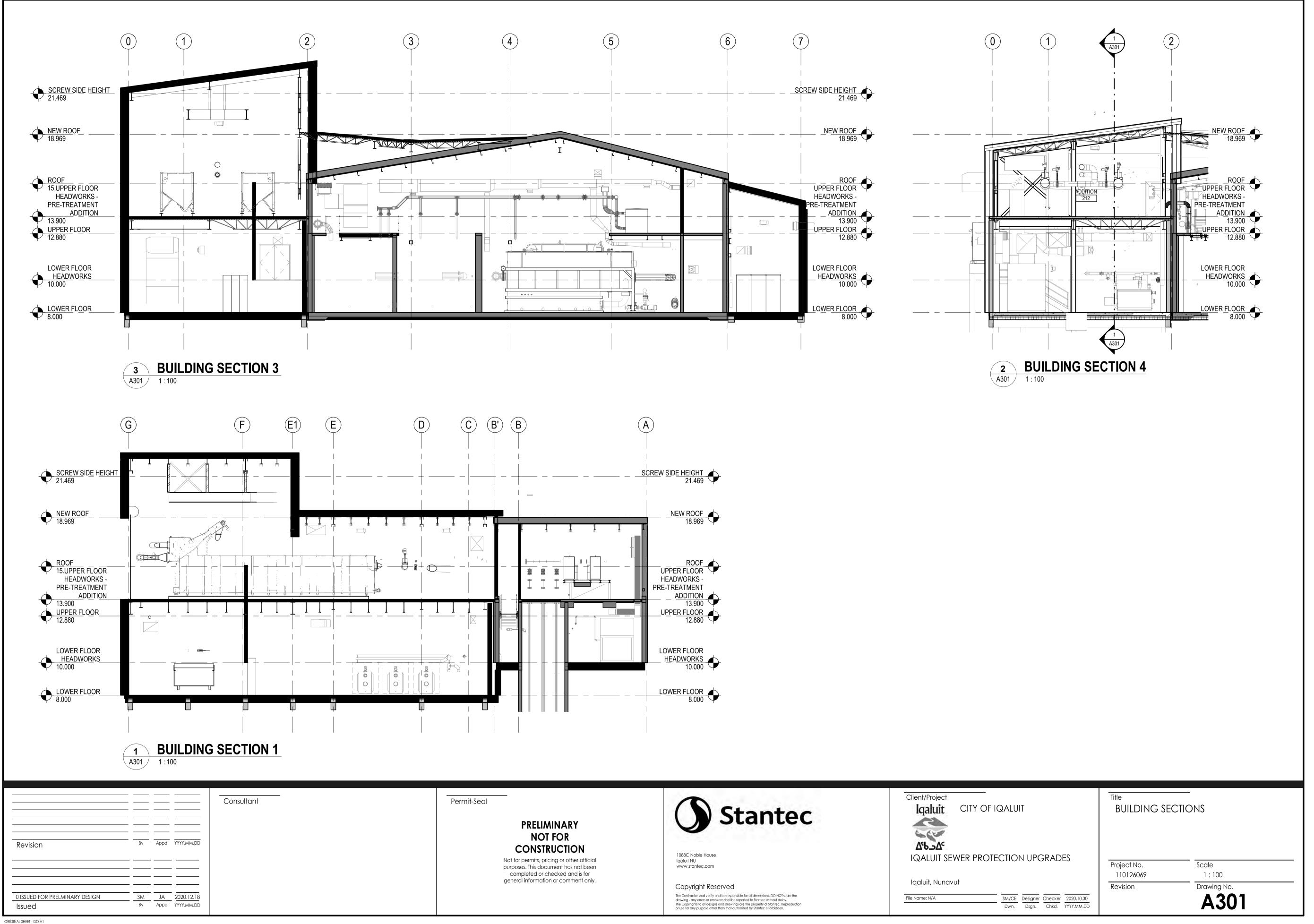
Project No. 110126069 Revision

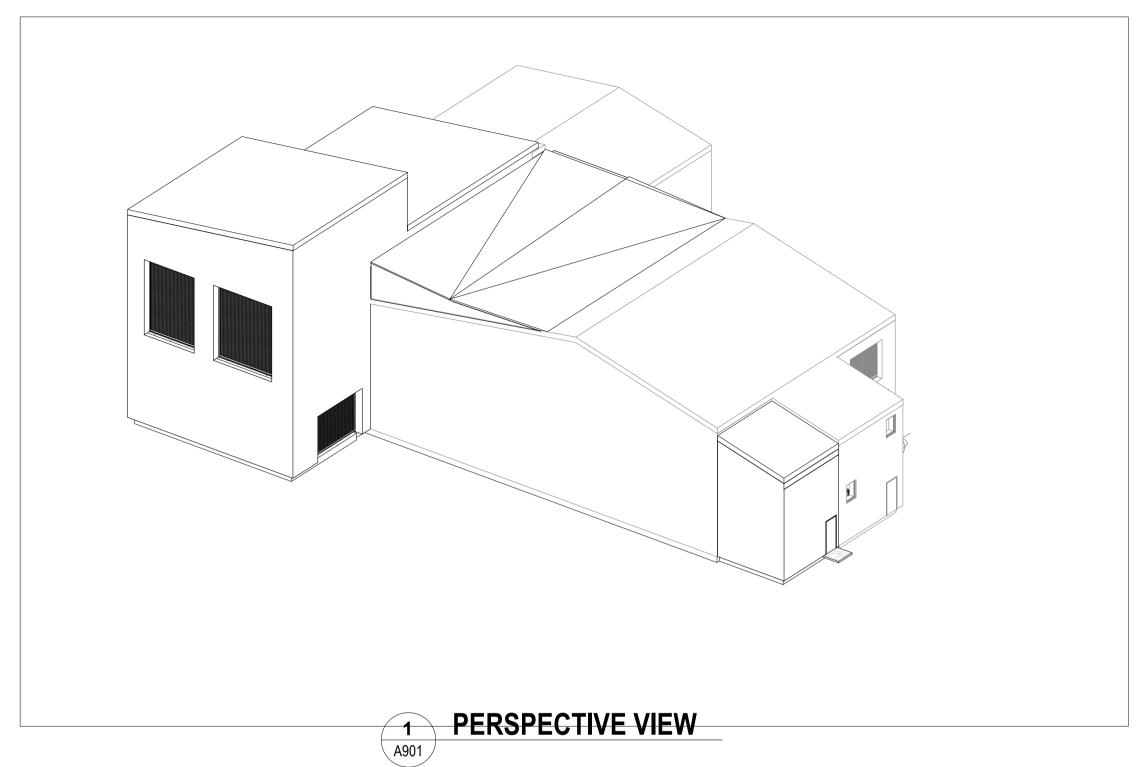
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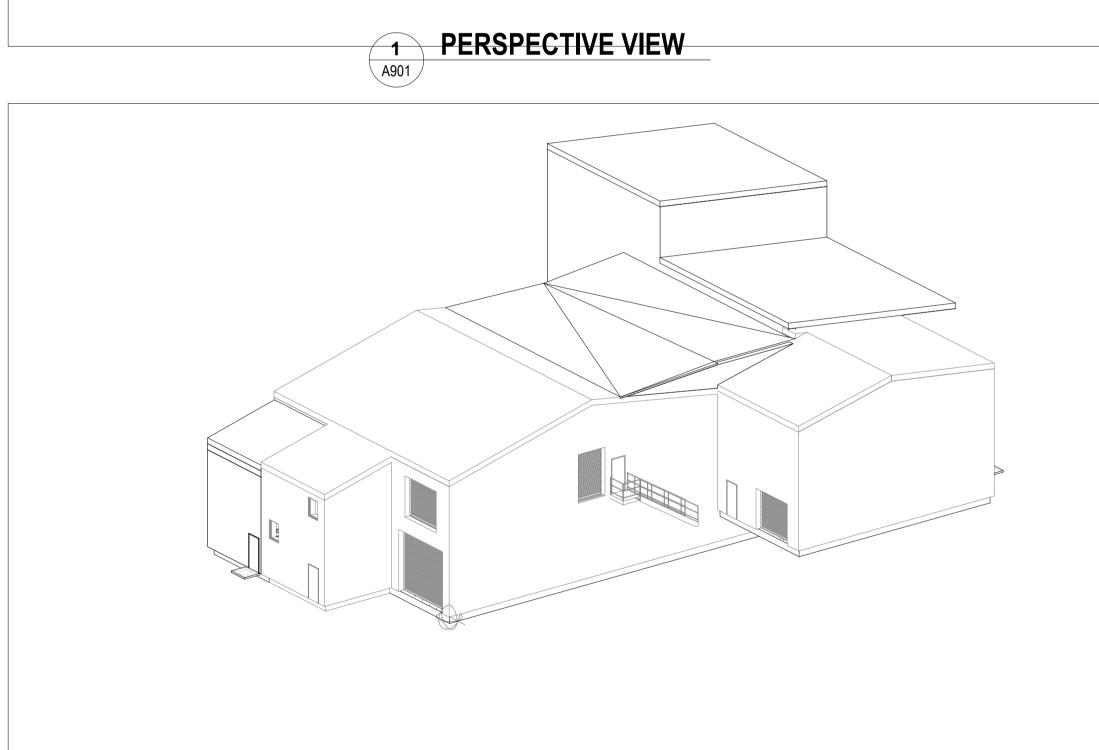
Drawing No. A102

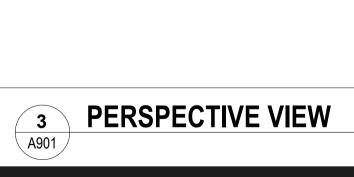
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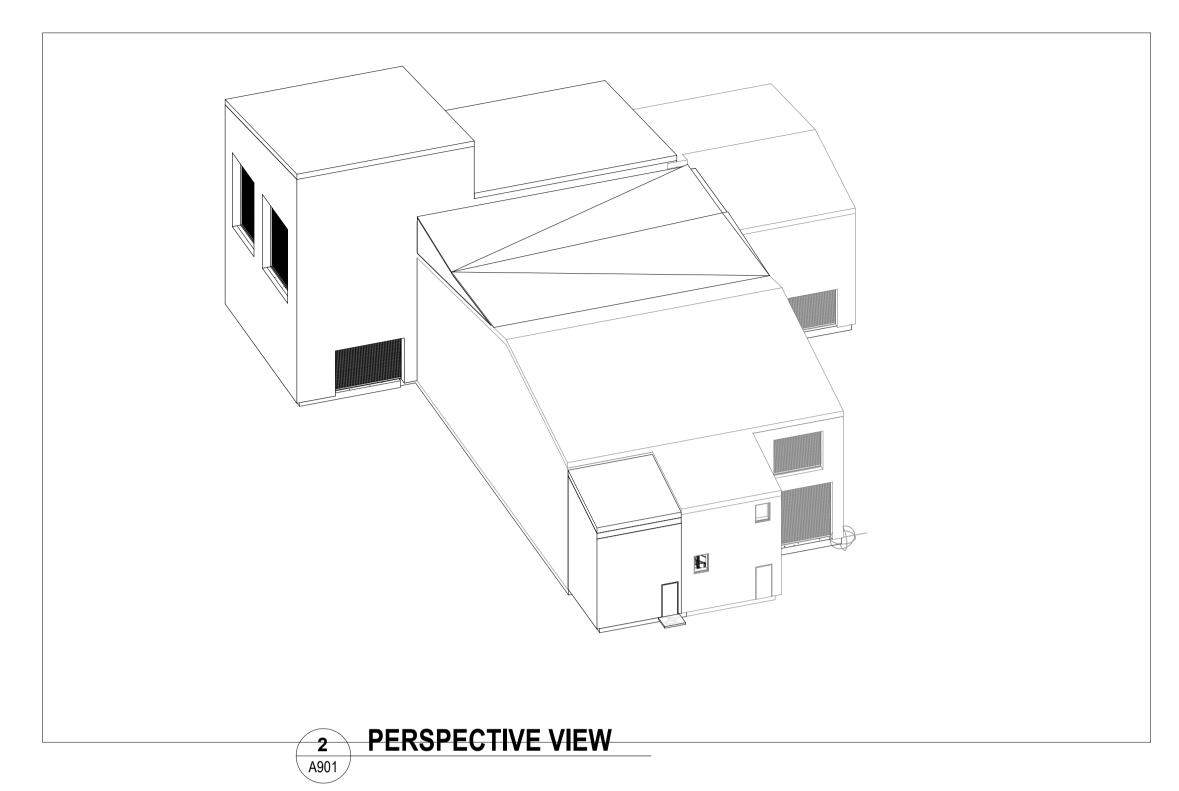


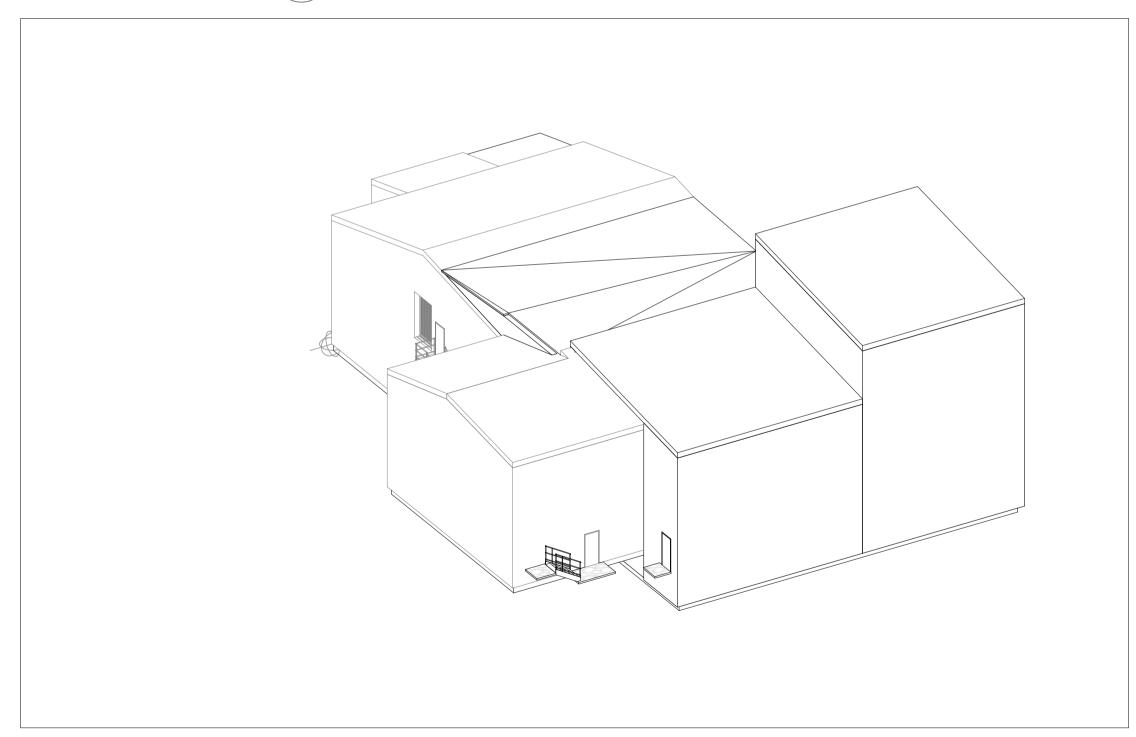






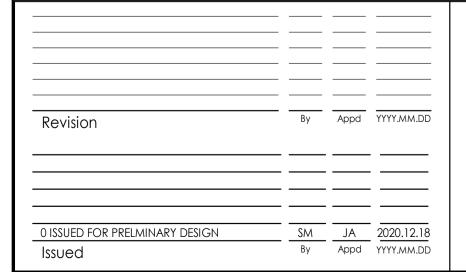






PERSPECTIVE VIEW

A901



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Client/Project CITY OF IQALUIT

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IQALUIT SEWER PROTECTION UPGRADES

Iqaluit, Nunavut

File Name: N/A

SM/CE
Designer
Checker
2020.10.30

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Dsgn.
Chkd.
YYYY.MM.DD

Title

3D REPRESENTATIONS, PERSPECTIVES

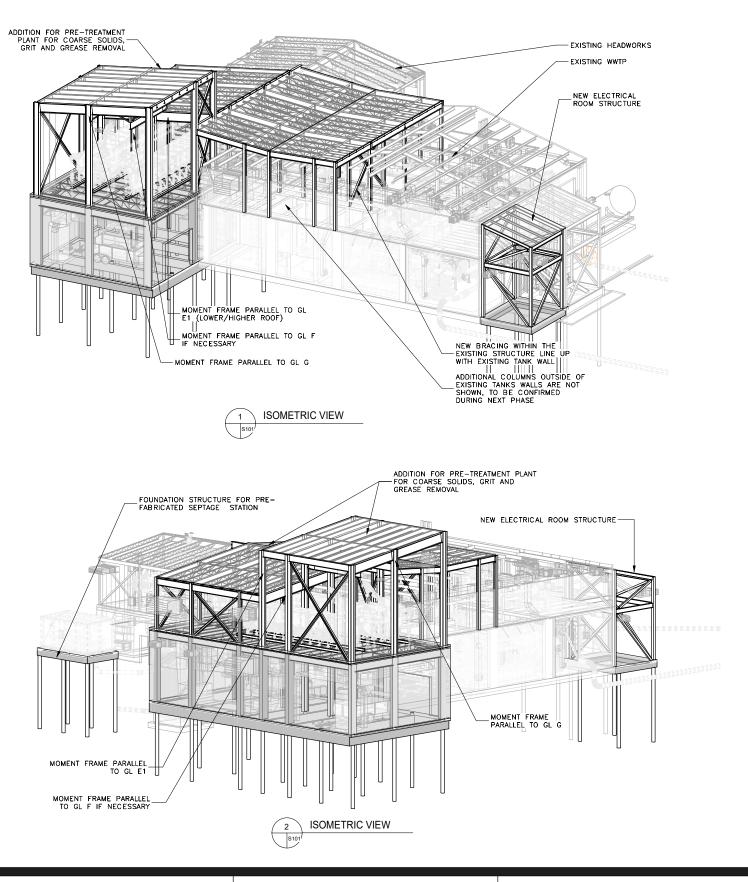
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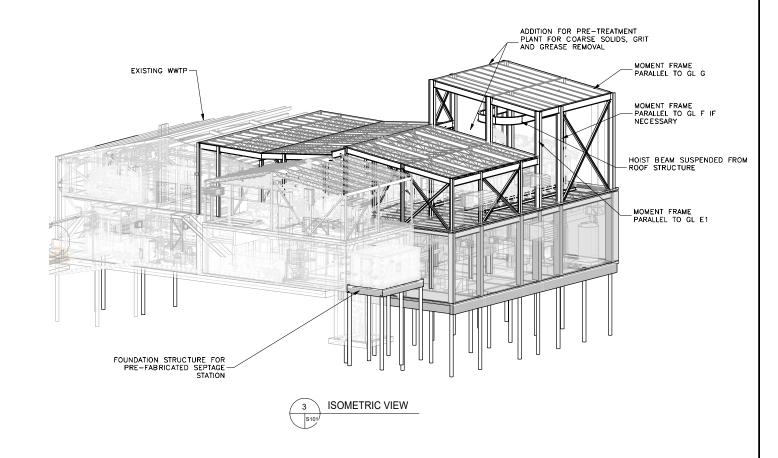
Project No. 110126069 Revision

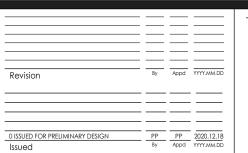
o. Scale 69

Drawing No.

A901







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Client/Project

Iqaluit

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IQALUIT SEWER PROTECTION

Iqaluit, Nunavut

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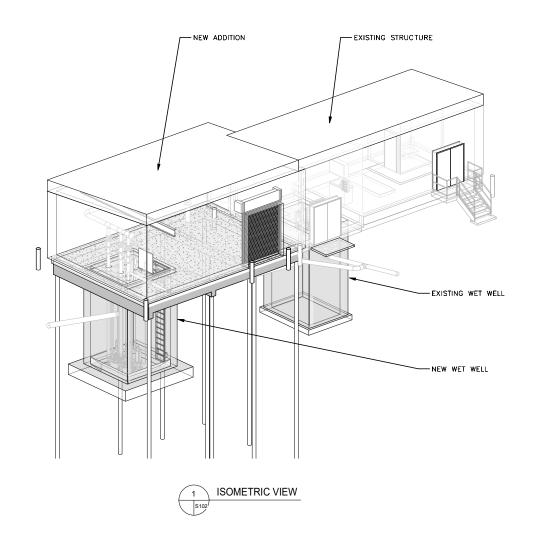
Project No. Scale
110126069

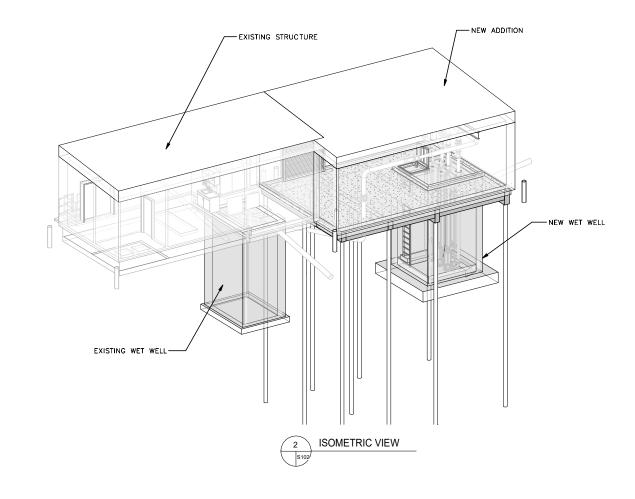
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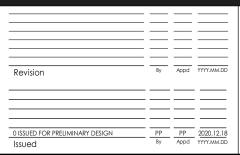
1 of 2

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ORIGINAL SHEET - ISO A1







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**IQALUIT SEWER PROTECTION** 

Iqaluit, Nunavut

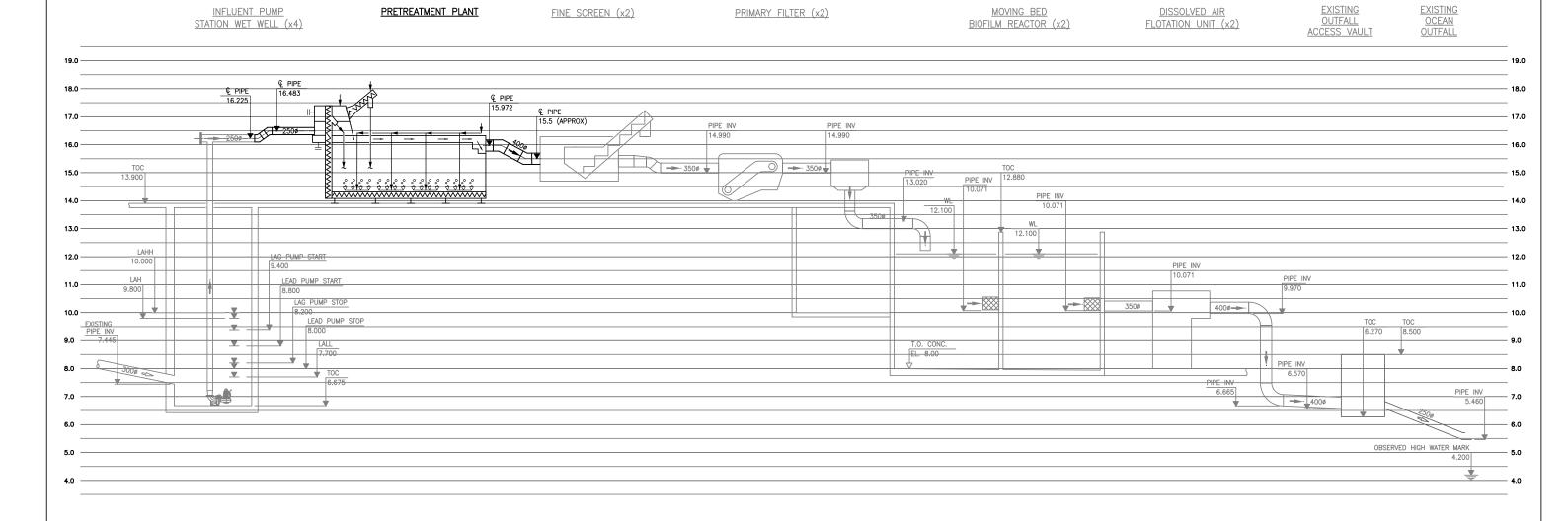
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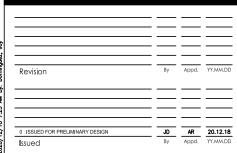
LS #1 ISOMETRIC VIEWS

Scale

Project No. 110126069 Drawing No. Sheet Revision S102 2 of 2



<u>FLOW</u>	<u>CURRENT</u>	YEAR 2041
ANNUAL AVERAGE FLOW L/s	38.5	50.3
MAXIMUM MONTH FLOW L/s	46.2	60.4
PEAK HOUR FLOW L/s	115.5	151.0



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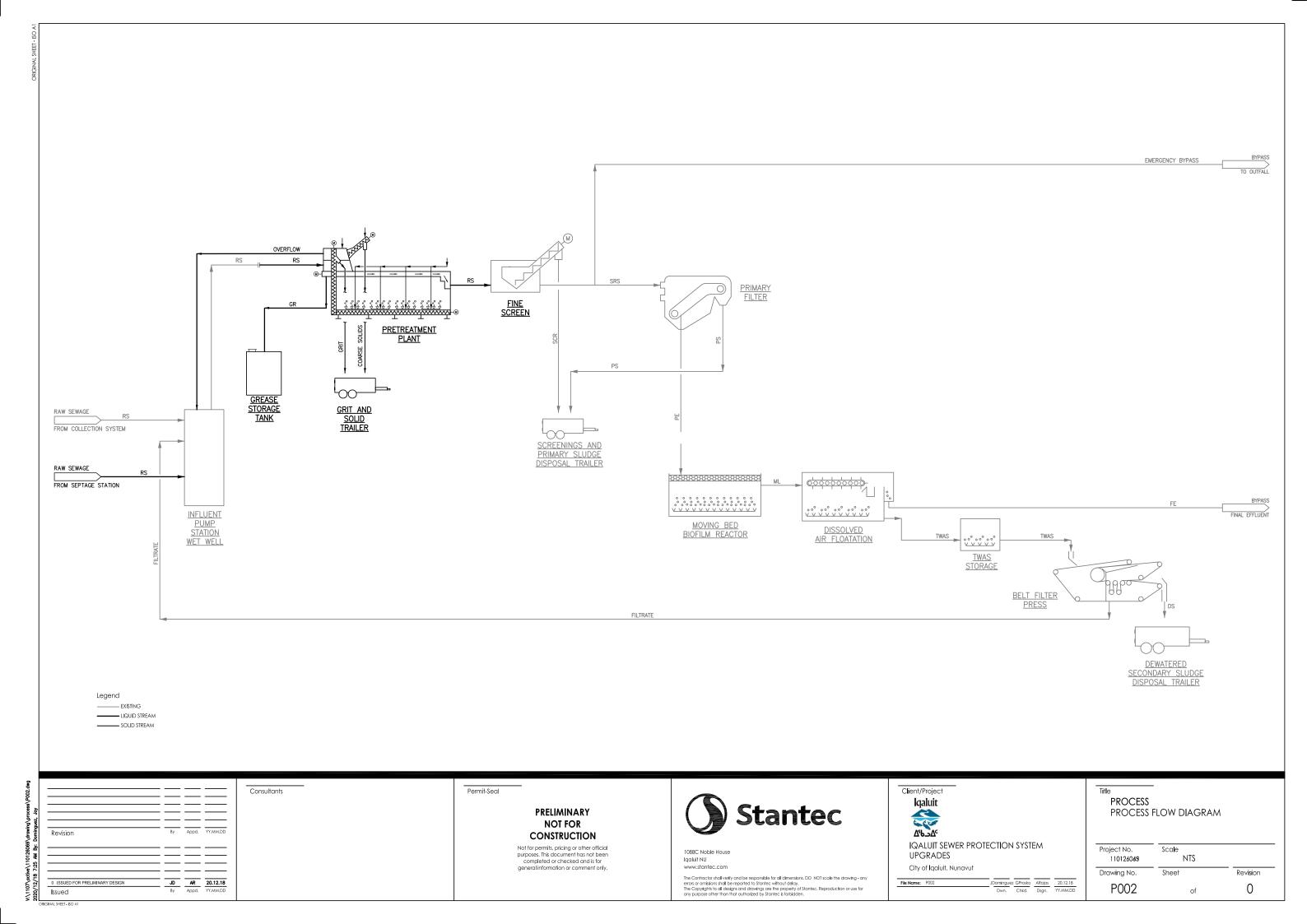
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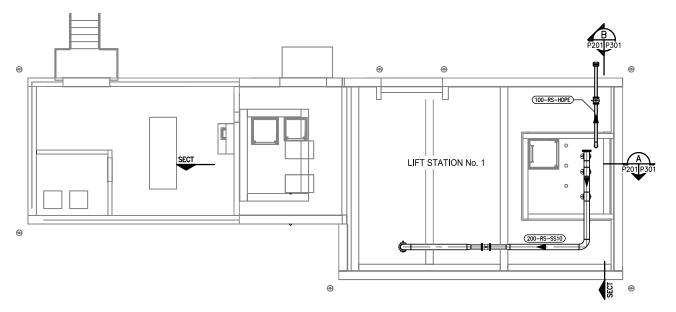
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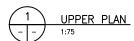
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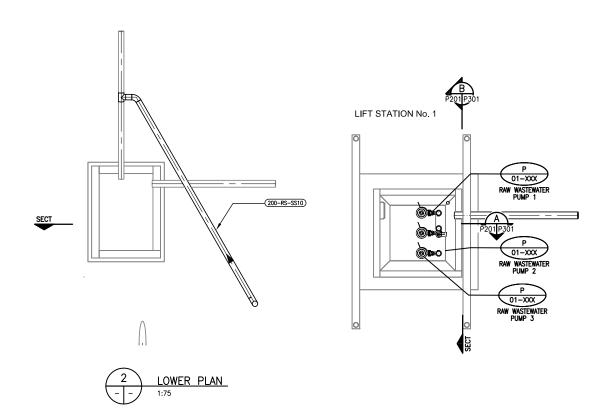
Project No. NTS 110126069 Drawing No. Sheet Revision P001 0











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Revision	By	Appd.	YY.MM.DD
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Client/Project
<b>l</b> qaluit
43
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IQALUIT SEWER PROTECTION SYSTEM **UPGRADES** 

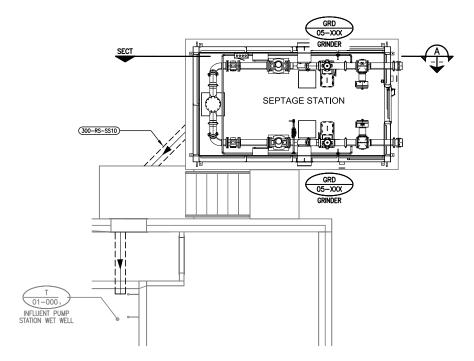
City of Iqaluit, Nunavut

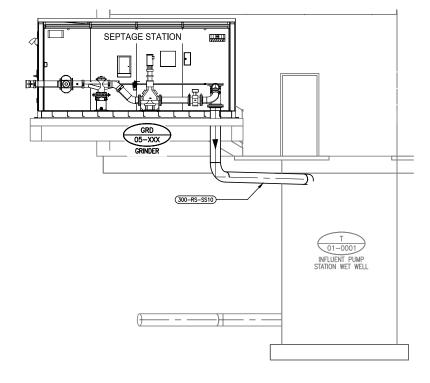
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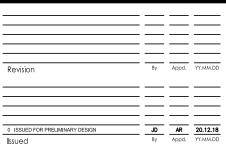
PROCESS LIFT STATION No. 1 PLANS

Scale 0 750 1:75 Project No. 110126069 Drawing No. Sheet Revision P201 0









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IQALUIT SEWER PROTECTION SYSTEM **UPGRADES** 

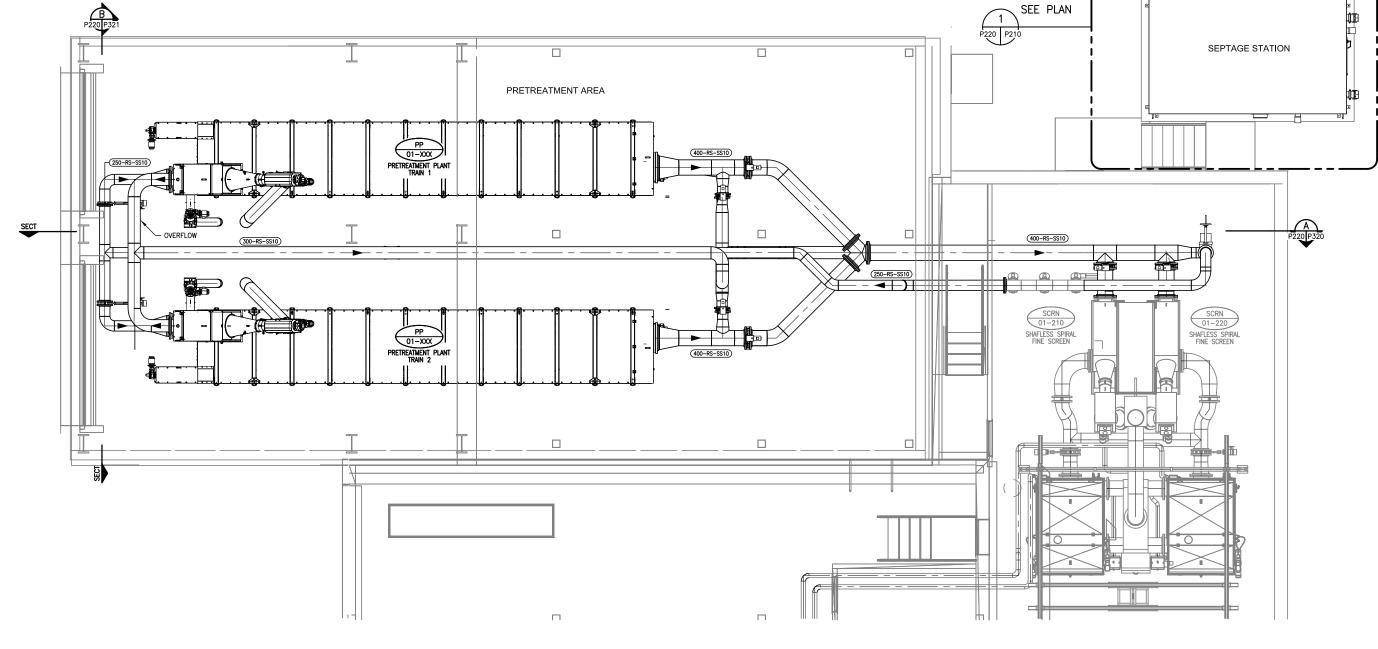
City of Iqaluit, Nunavut

File Name: P210

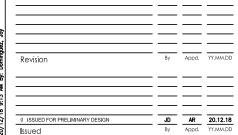
PROCESS SEPTAGE STATION PLAN AND SECTION

Scale 0 500 1500 Project No. 110126069 Drawing No. Sheet Revision P210 0









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Client/Project Iqaluit

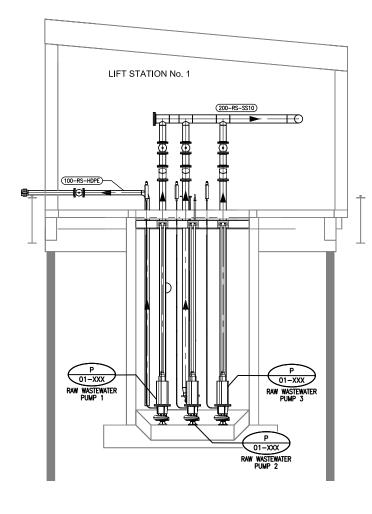
IQALUIT SEWER PROTECTION SYSTEM **UPGRADES** 

City of Iqaluit, Nunavut

File Name: P220

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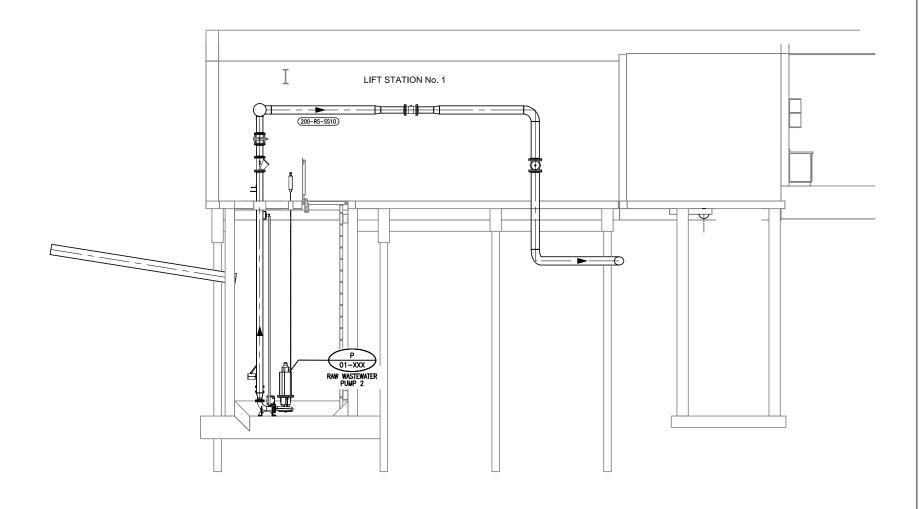
Scale 0 500 1500 Project No. 110126069 Drawing No. Sheet Revision P220 0





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 20.12.18

 By
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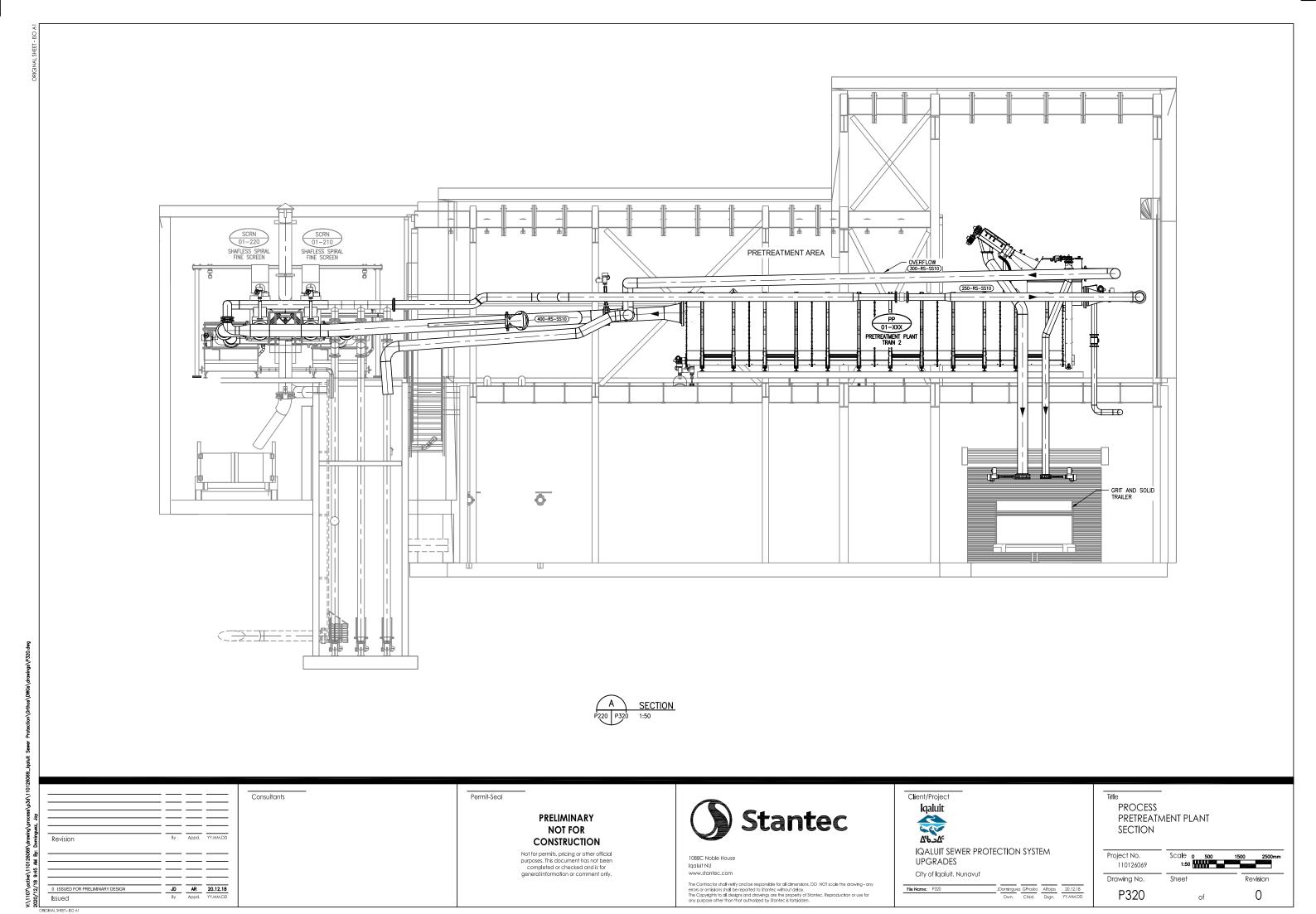
City of Iqaluit, Nunavut

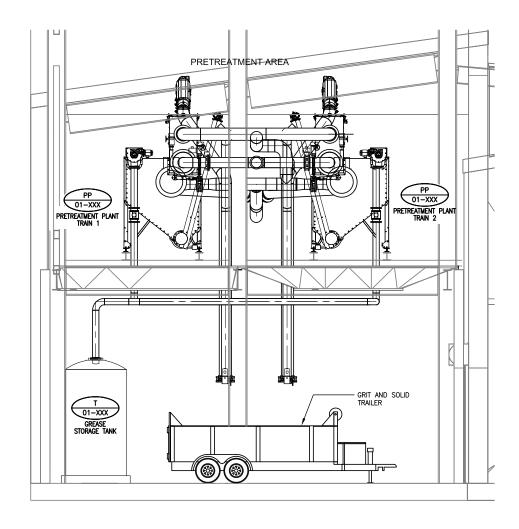
File Name: P301

PROCESS LIFT STATION No. 1 SECTIONS

Scale o 750 225 Project No. 110126069 Draw**i**ng No. Sheet Revision P301 0

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 20.12.18

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Client/Project Iqaluit

IQALUIT SEWER PROTECTION SYSTEM **UPGRADES** 

City of Iqaluit, Nunavut

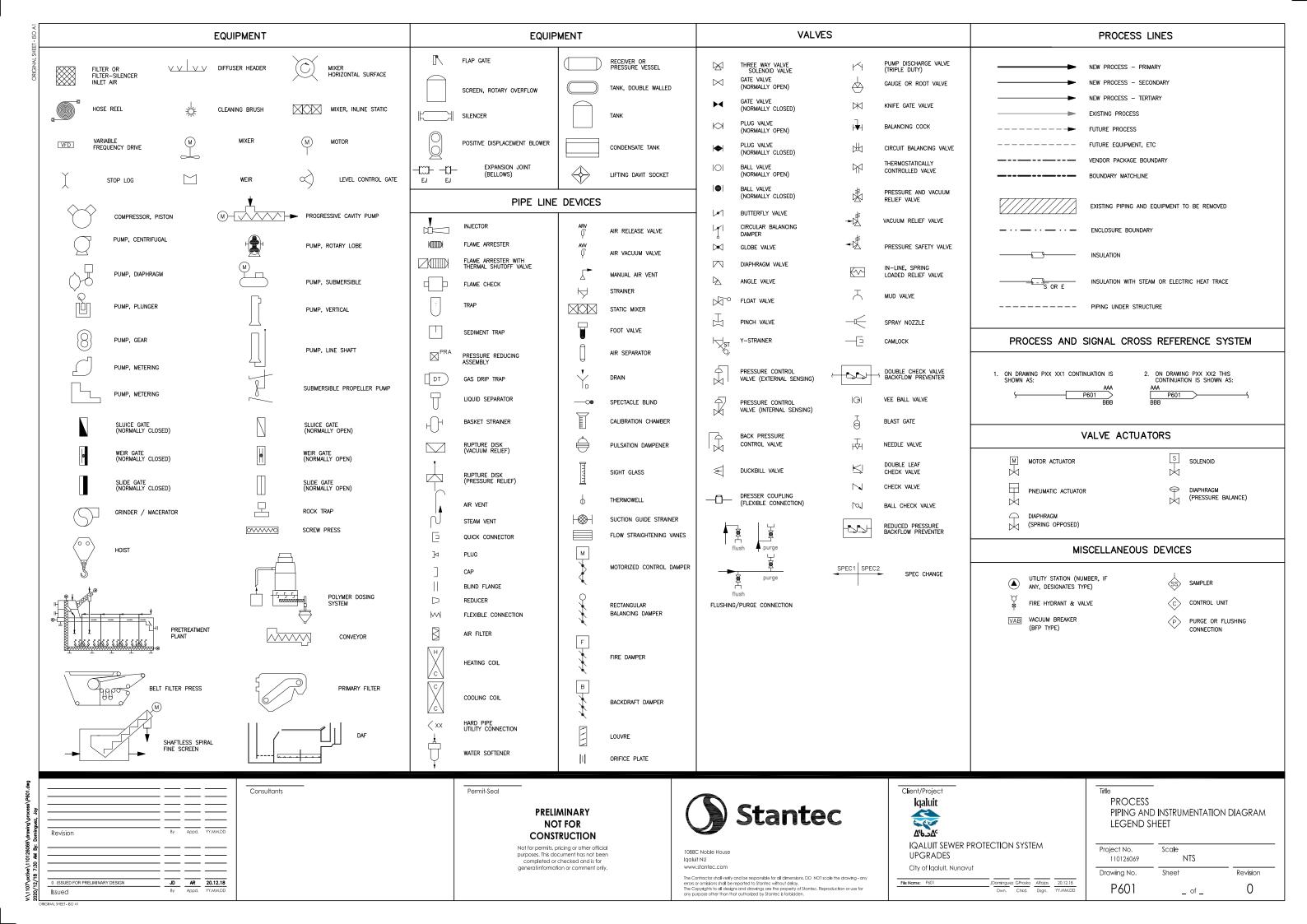
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PROCESS PRETREATMENT PLANT SECTION

Project No. 110126069 Drawing No.

P321

Scale 0 500 1500 Sheet Revision 0 of



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**UPGRADES** 

File Name: P602

City of Iqaluit, Nunavut

Project No.

Drawing No.

110126069

P602

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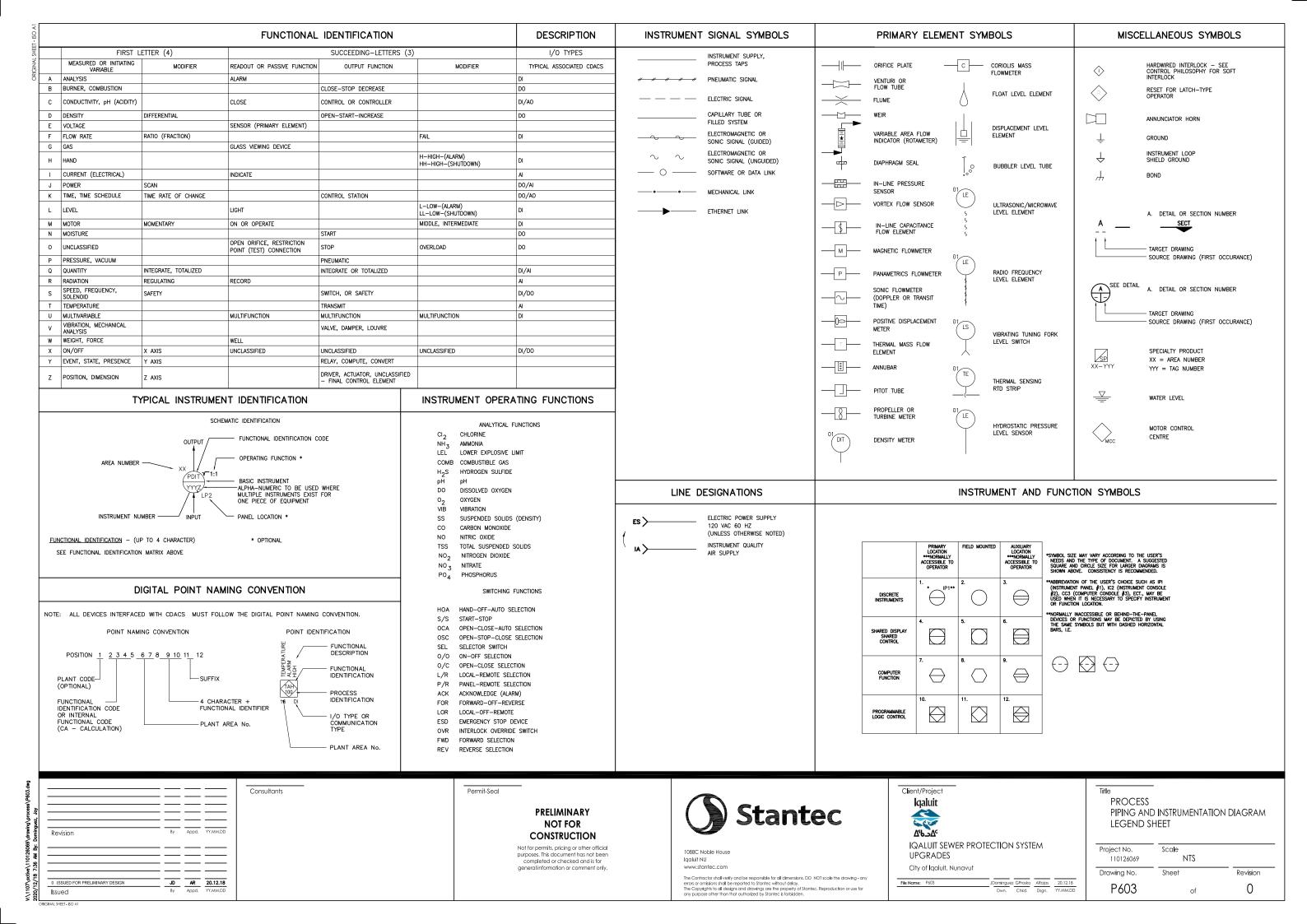
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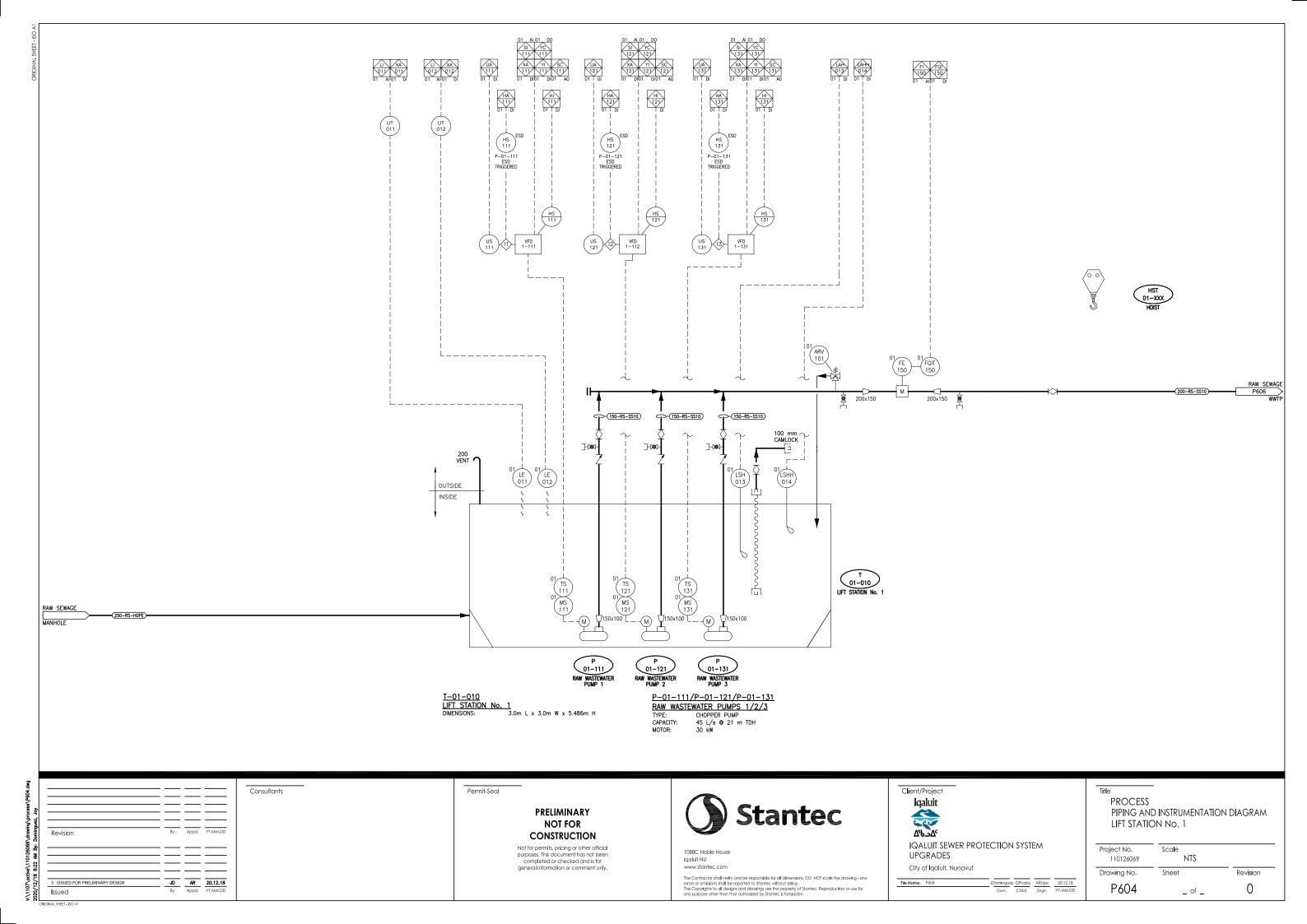
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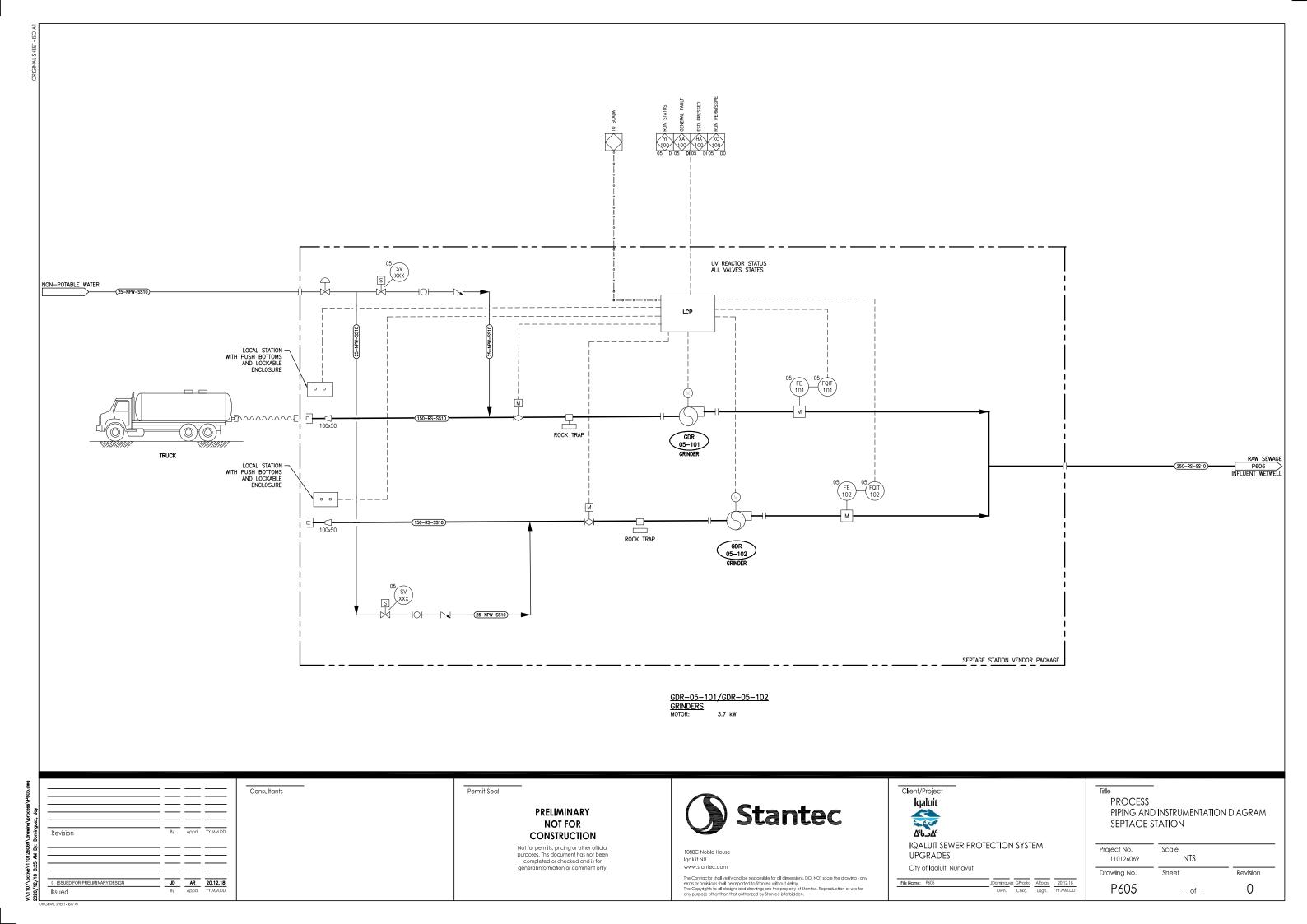
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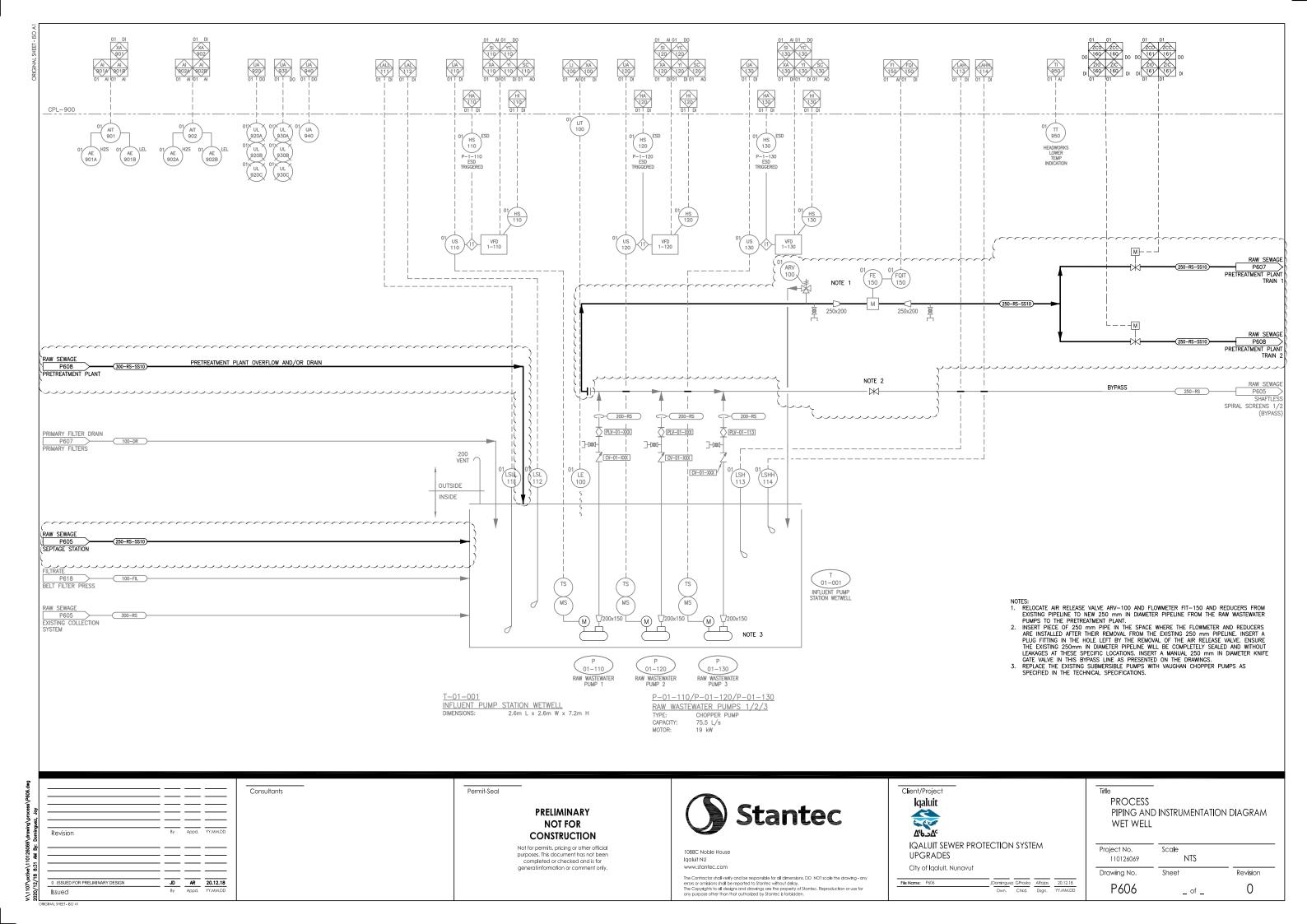
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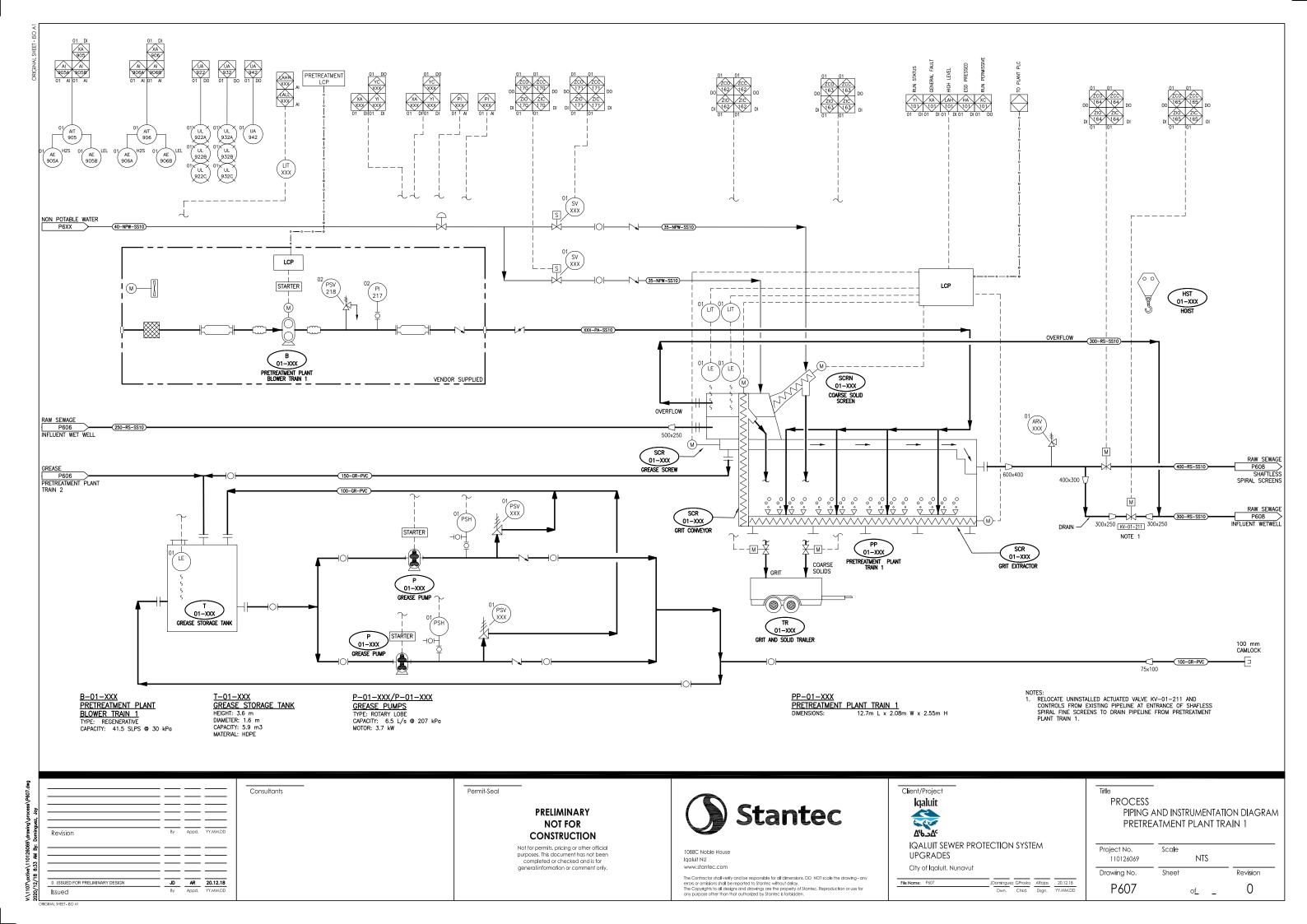
JD AR 20.12.18

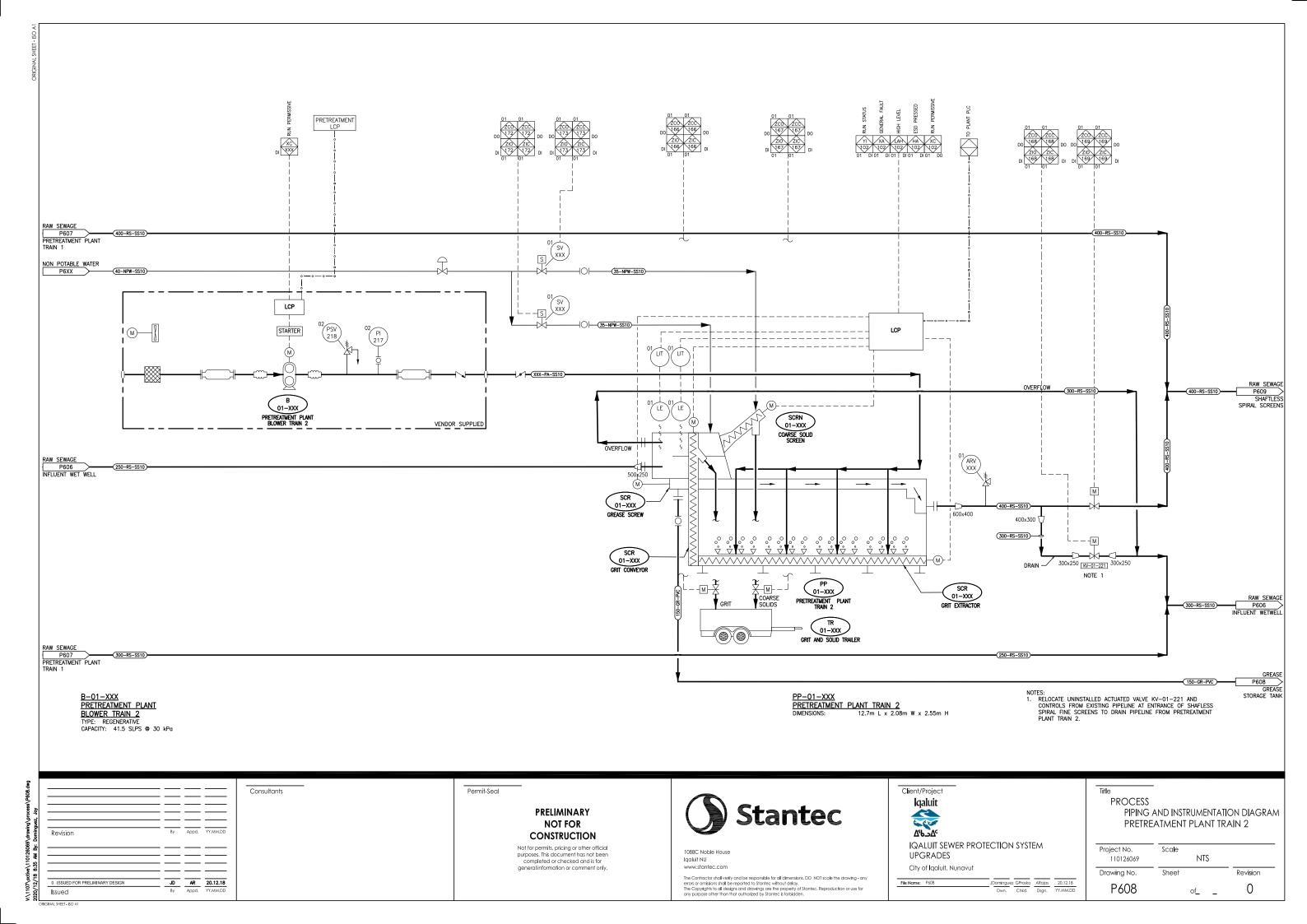


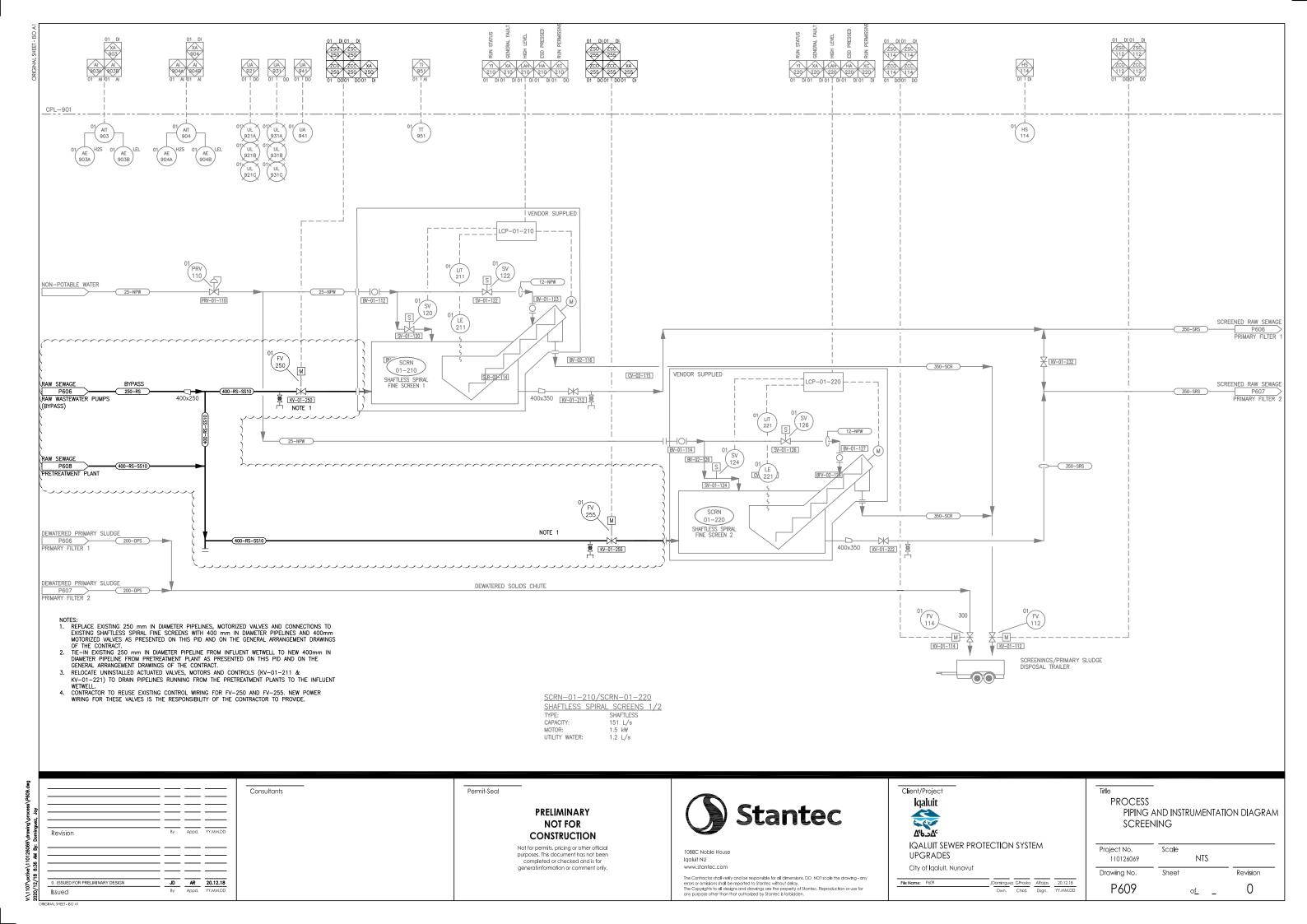


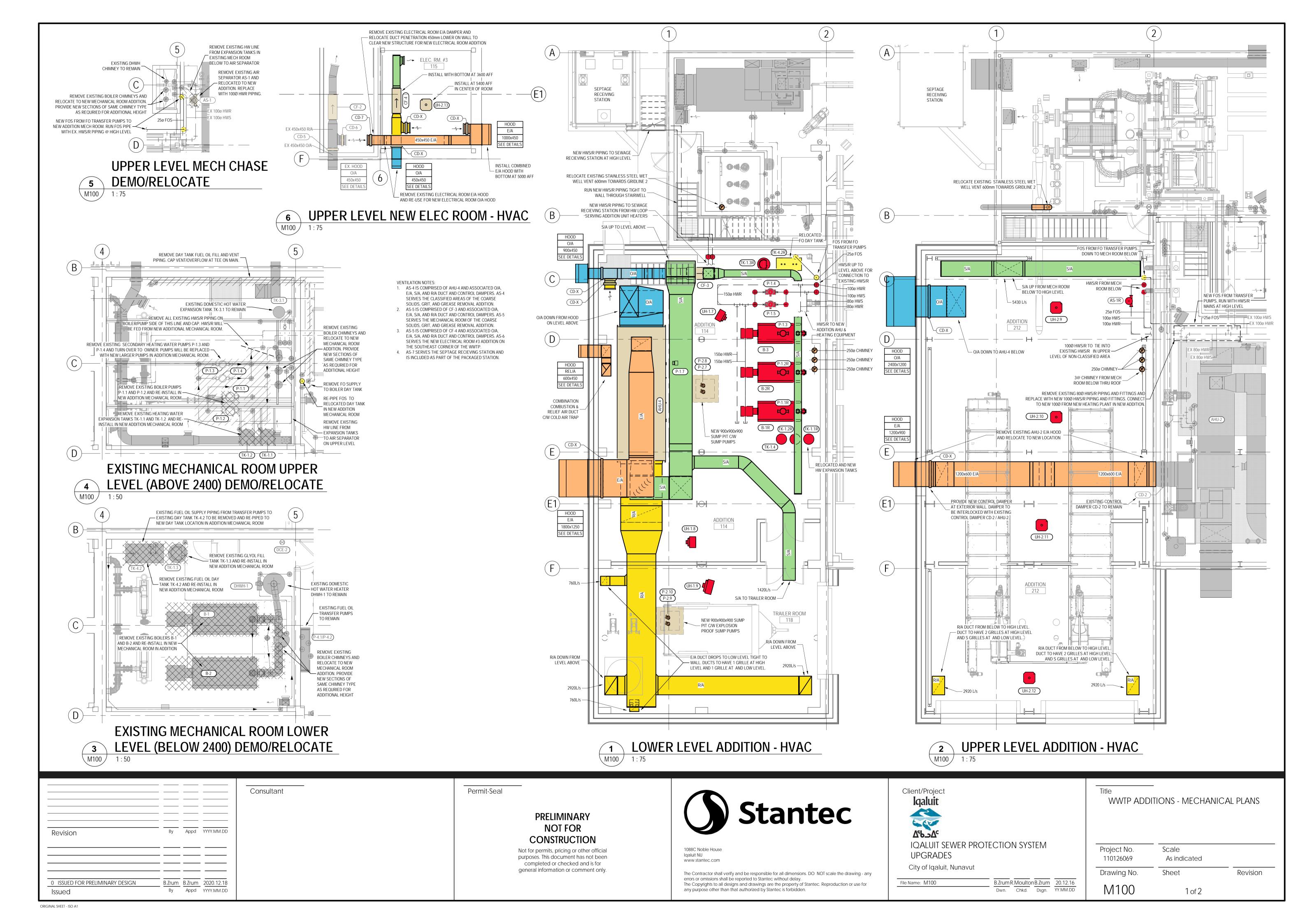


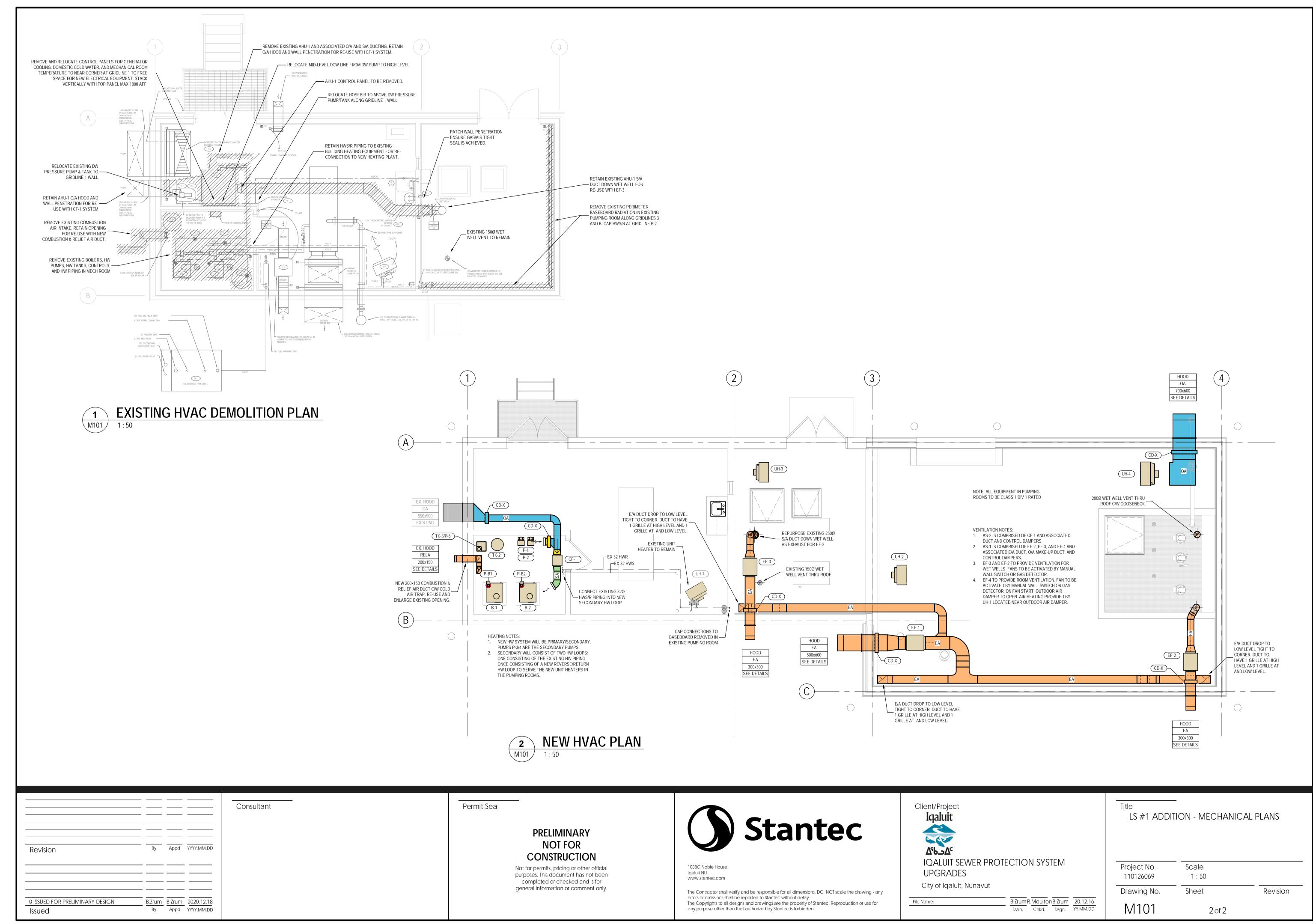






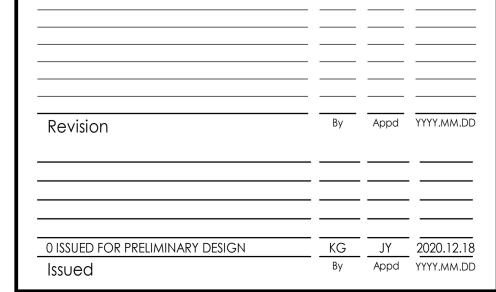












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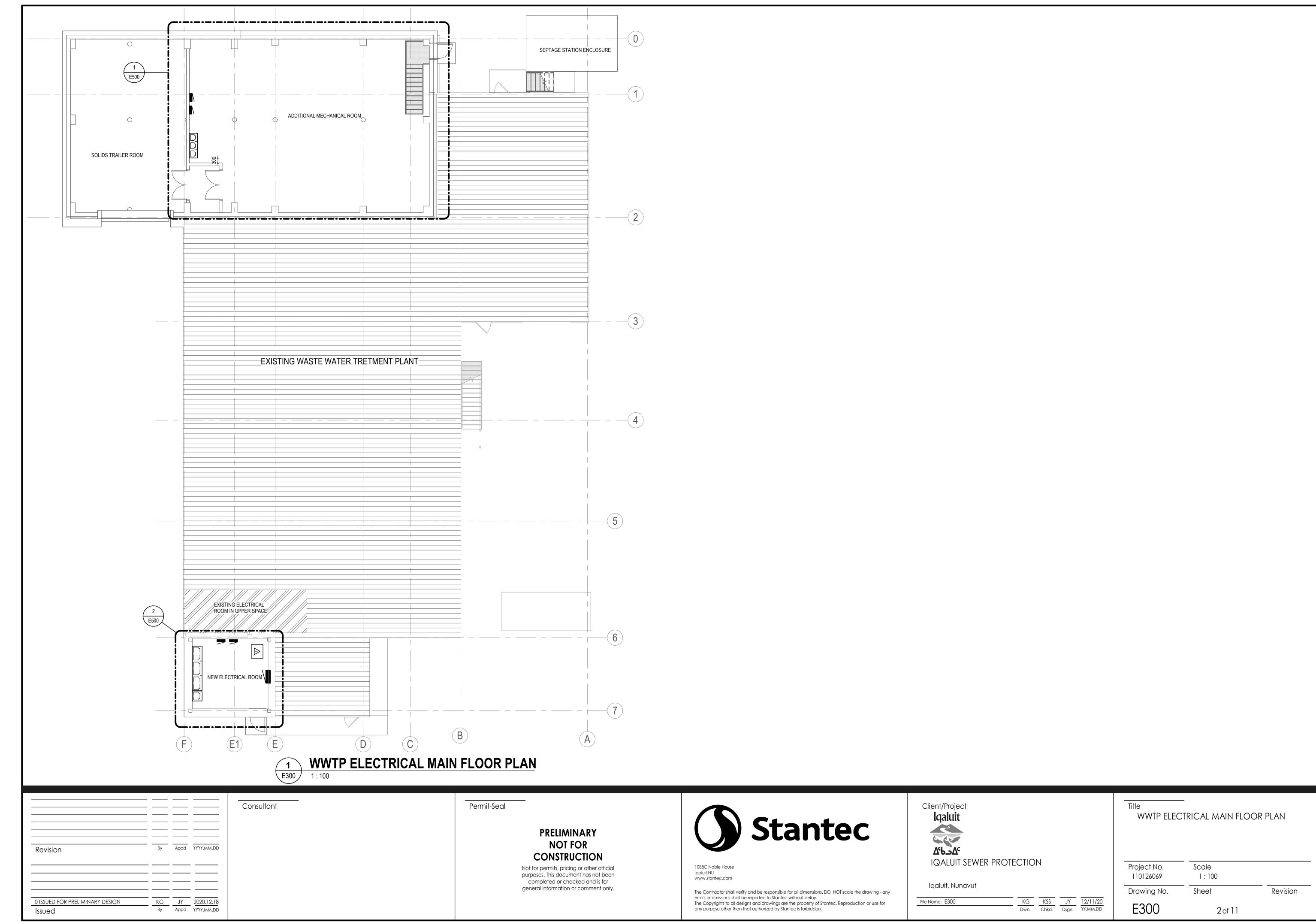
Iqaluit, Nunavut

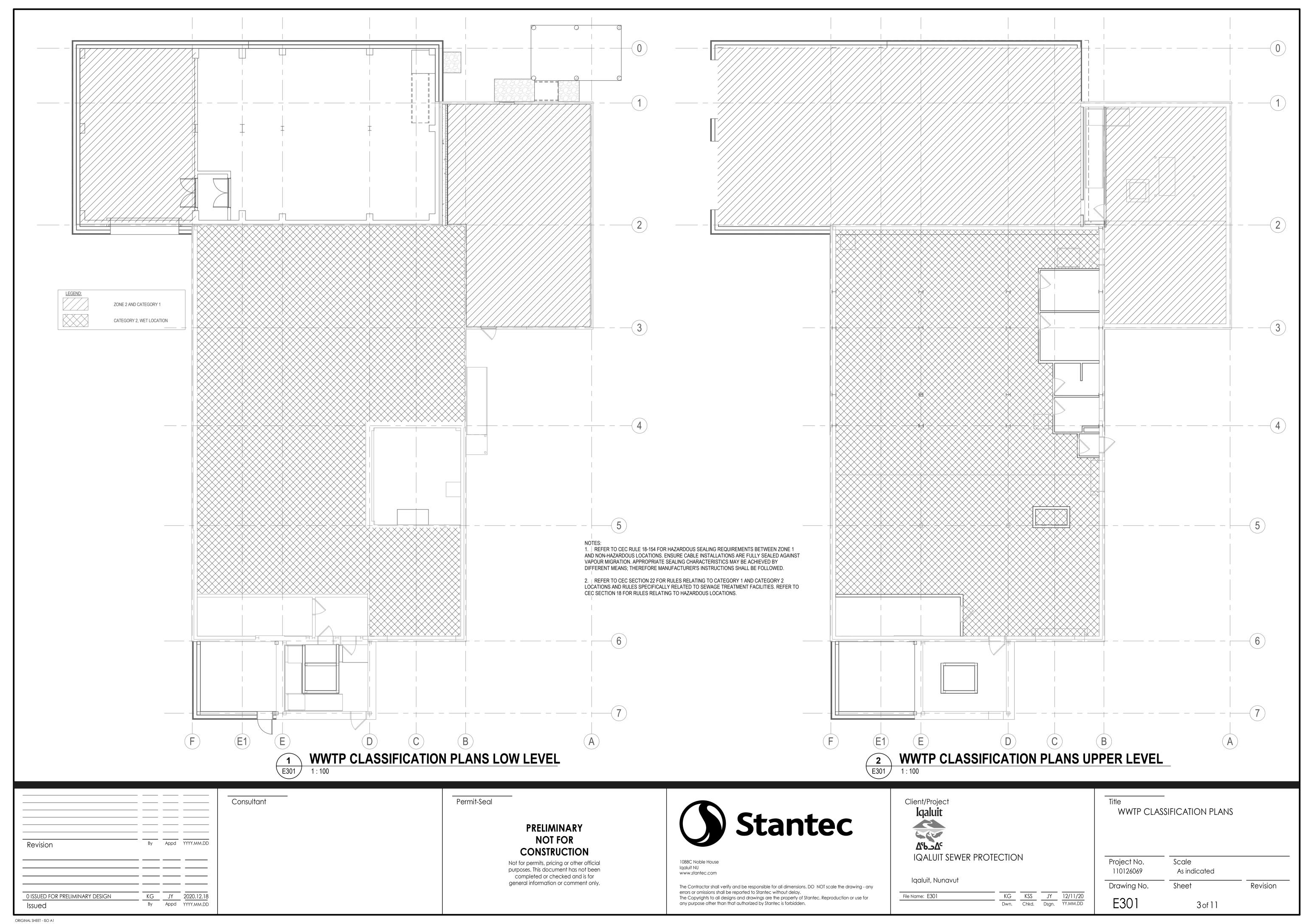
KG KSS JY 12/16/20
Dwn. Chkd. Dsgn. YY.MM.DD File Name: E010

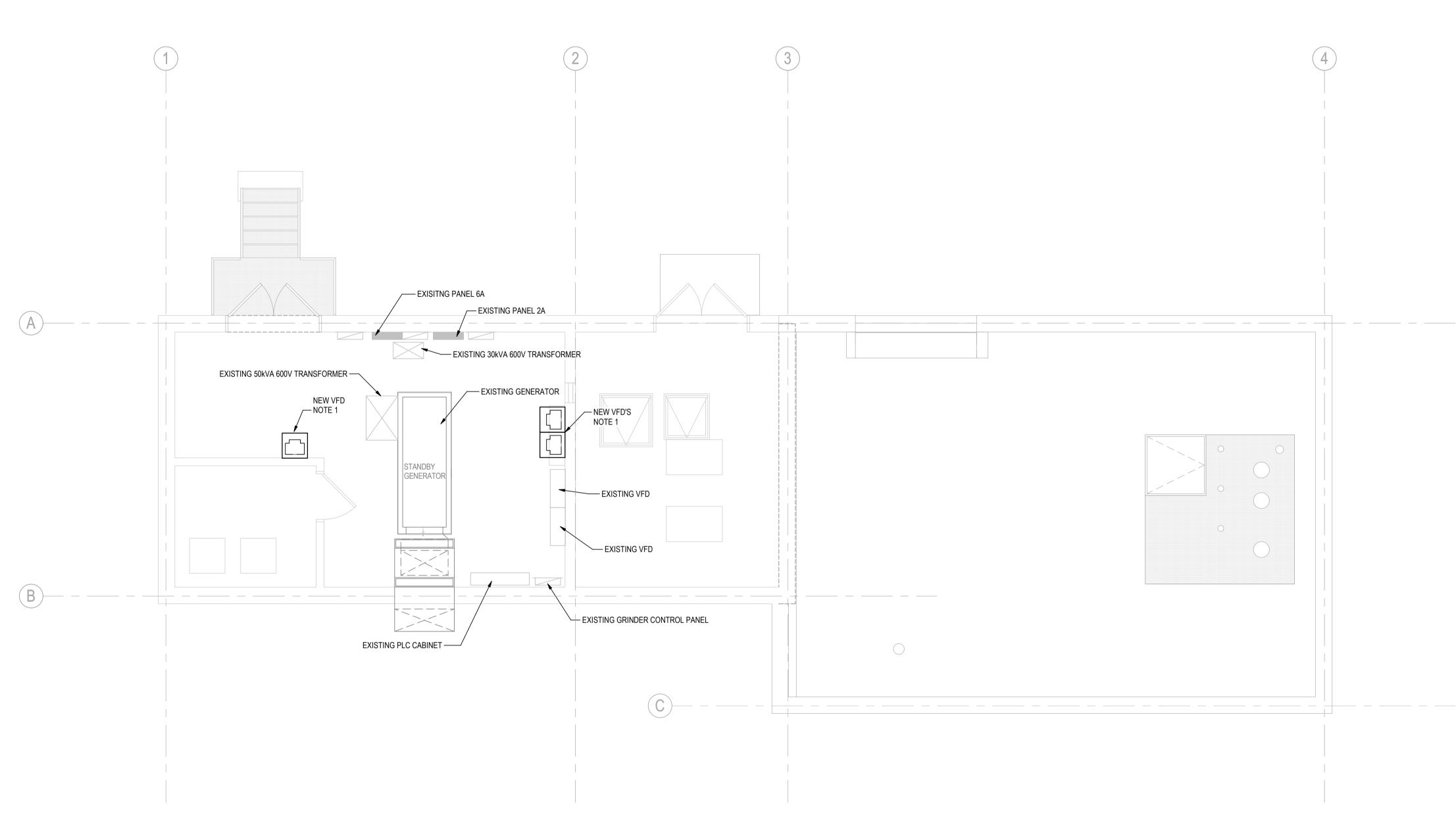
NEW ELECTRICAL SITE PLAN

Project No. Scale 110126069 1:200 Drawing No. Sheet Revision E010

1 of 11







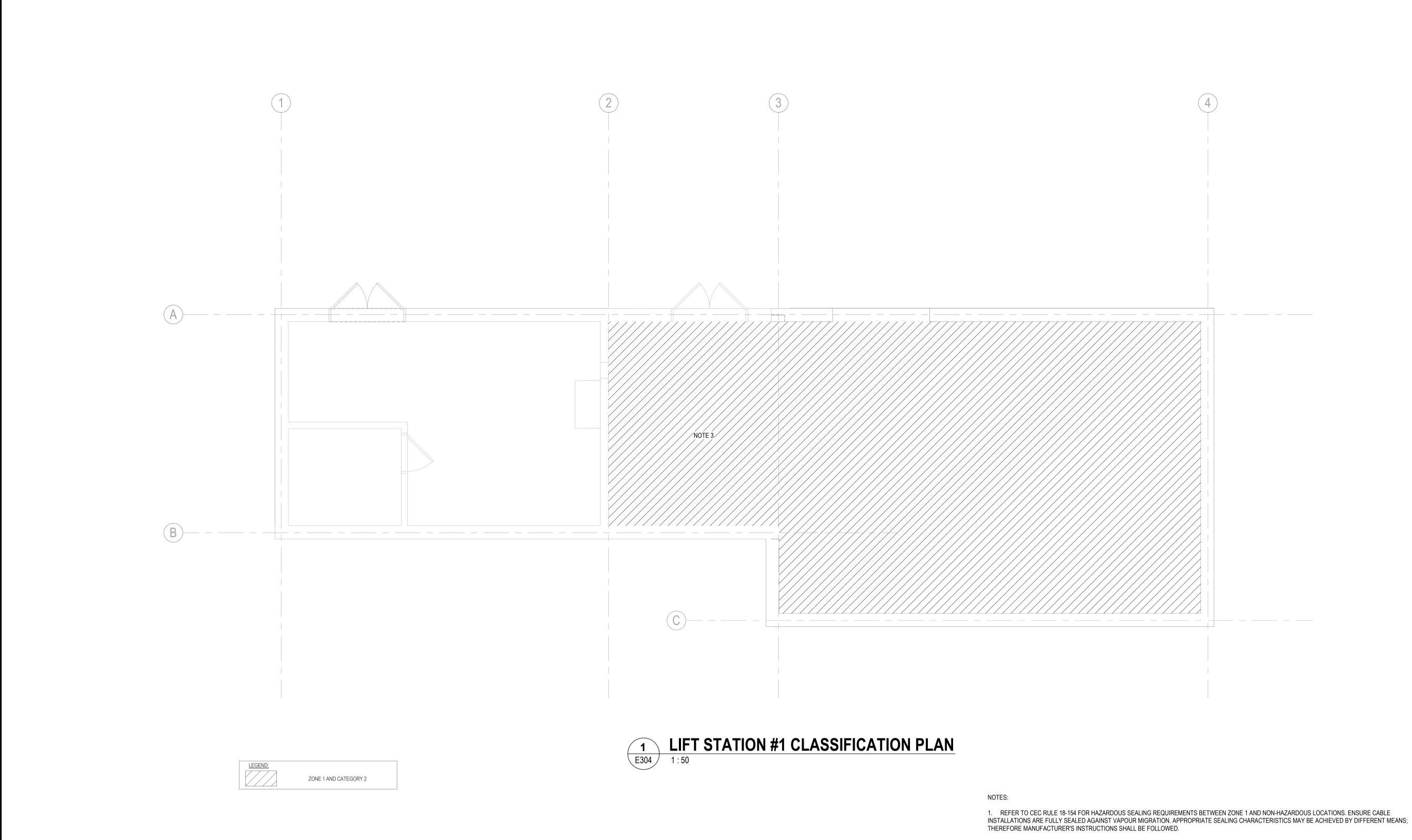
LIFT STATION #1 NEW POWER PLAN
1:50

NOTE:

 EXISTING MECHANICAL EQUIPMENT TO BE RELOCATED TO MAKE ROOM FOR NEW VFD'S.

Permit-Seal Consultant LIFT STATION #1 ELECTRICAL PLAN **PRELIMINARY NOT FOR** Revision CONSTRUCTION Scale Project No. Not for permits, pricing or other official purposes. This document has not been 1088C Noble House Iqaluit NU www.stantec.com 1:50 completed or checked and is for general information or comment only. Drawing No. Sheet Revision The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay. 
 KG
 KSS
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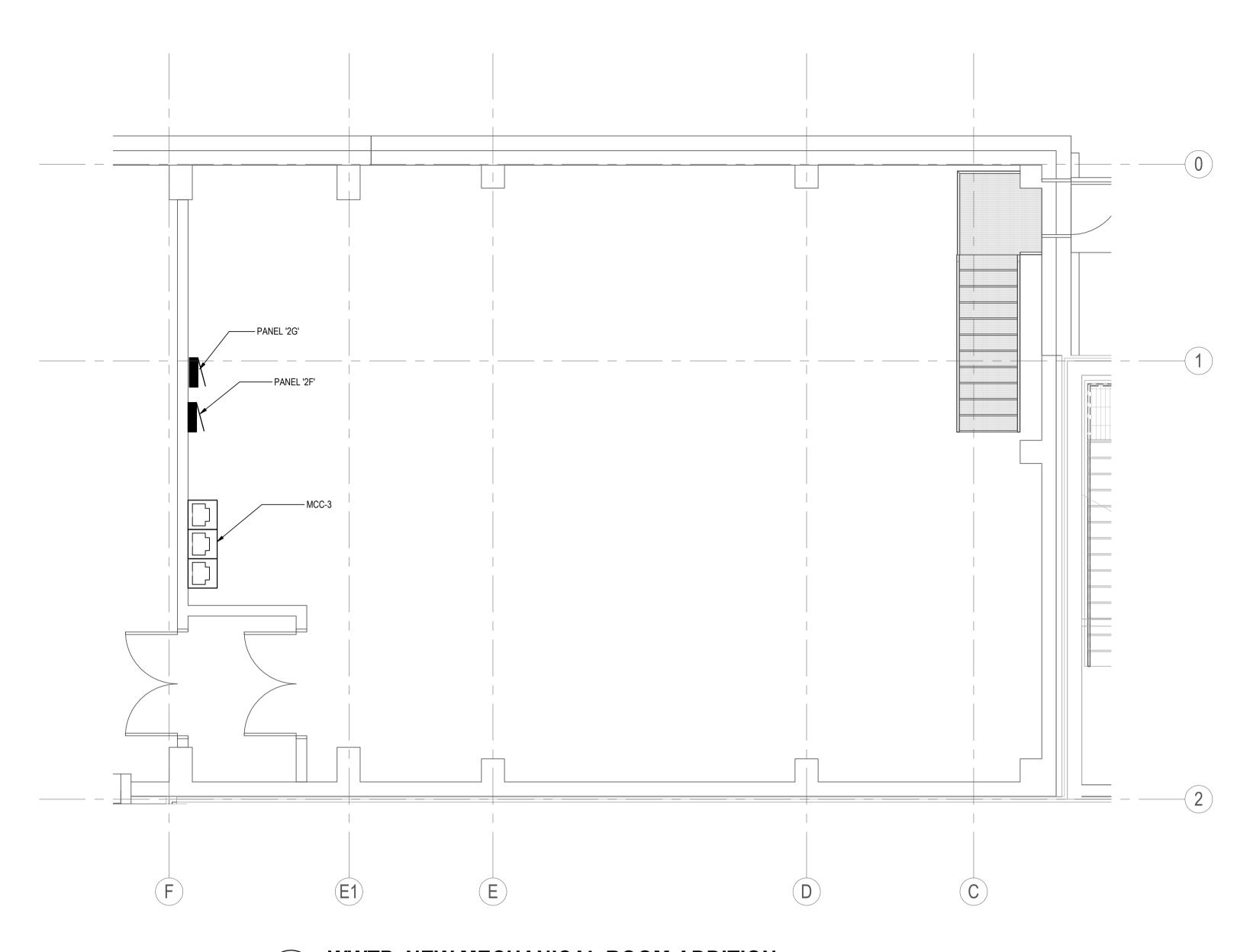
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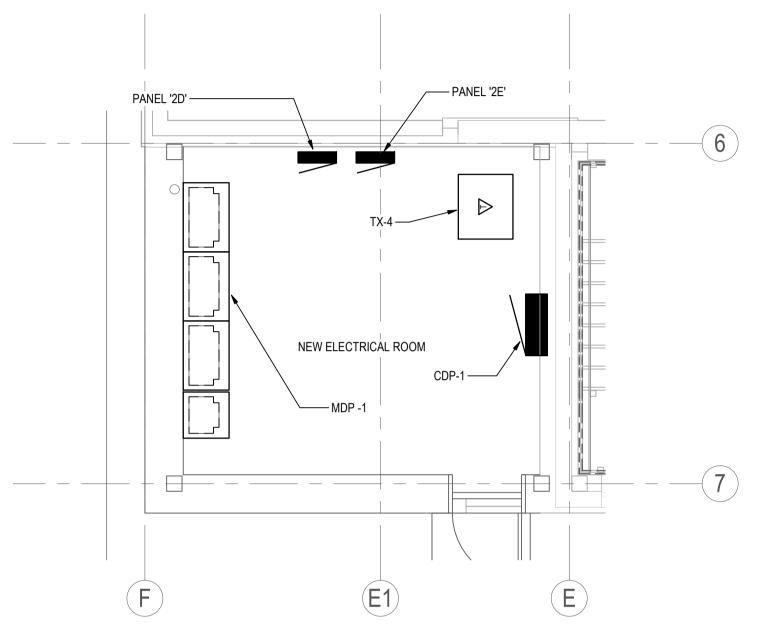


2. REFER TO CEC SECTION 22 FOR RULES RELATING TO CATEGORY 1 AND CATEGORY 2 LOCATIONS AND RULES SPECIFICALLY RELATED TO SEWAGE TREATMENT FACILITIES. REFER TO CEC SECTION 18 FOR RULES RELATING TO HAZARDOUS LOCATIONS.

3. ANY EXISTING EQUIPMENT IN ORIGINAL WET WELL ROOM THAT IS NOT RATED FOR ZONE 1 TO BE REPLACED WITH EQUIPMENT RATED FOR ZONE 1.

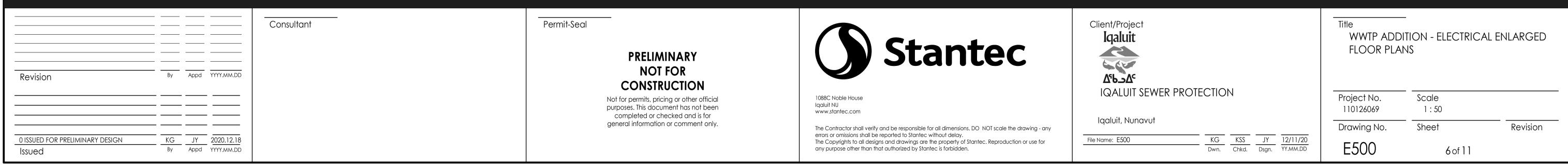


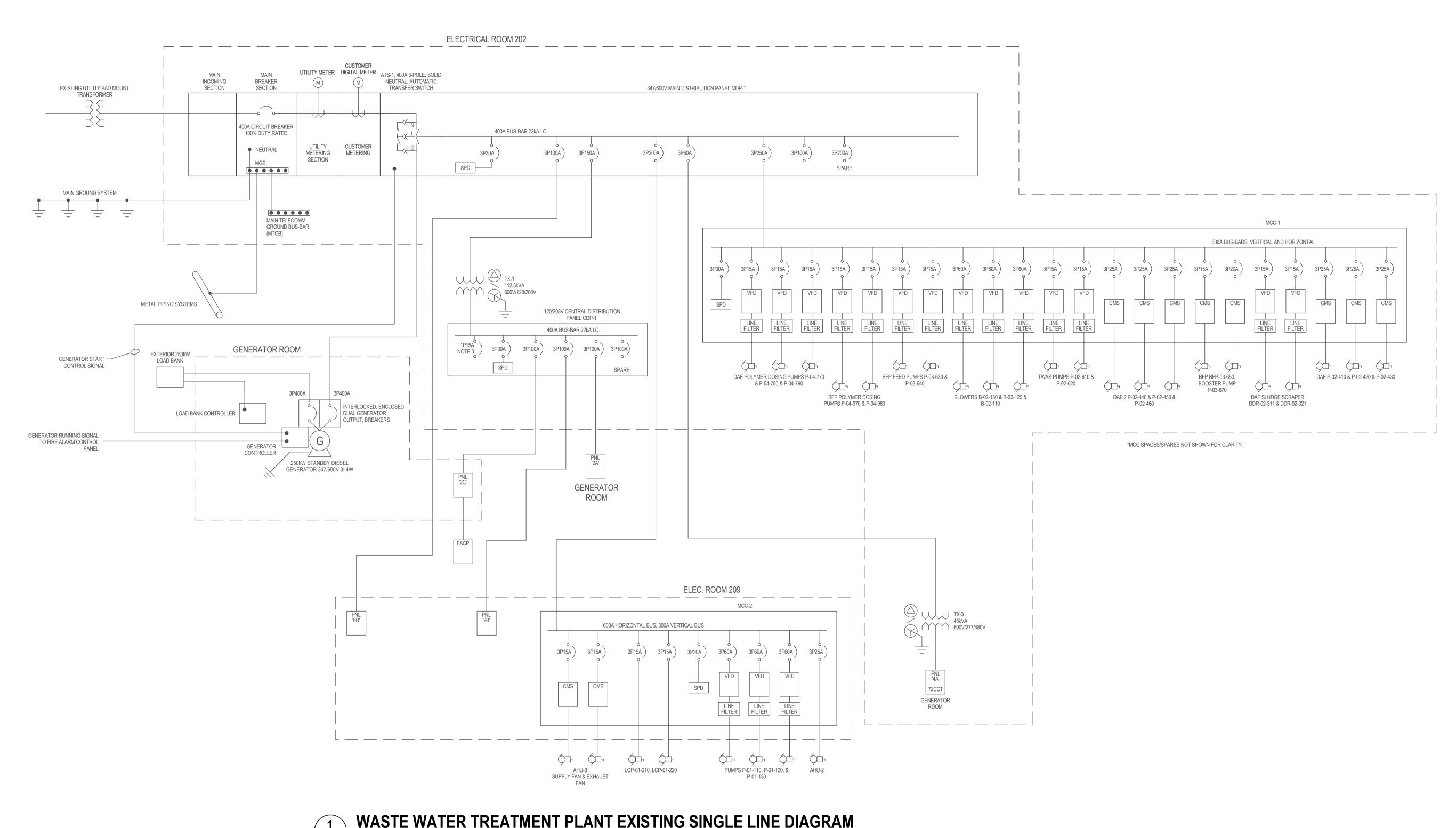




**WWTP NEW ELECTRICAL ROOM ADDITION**1:50



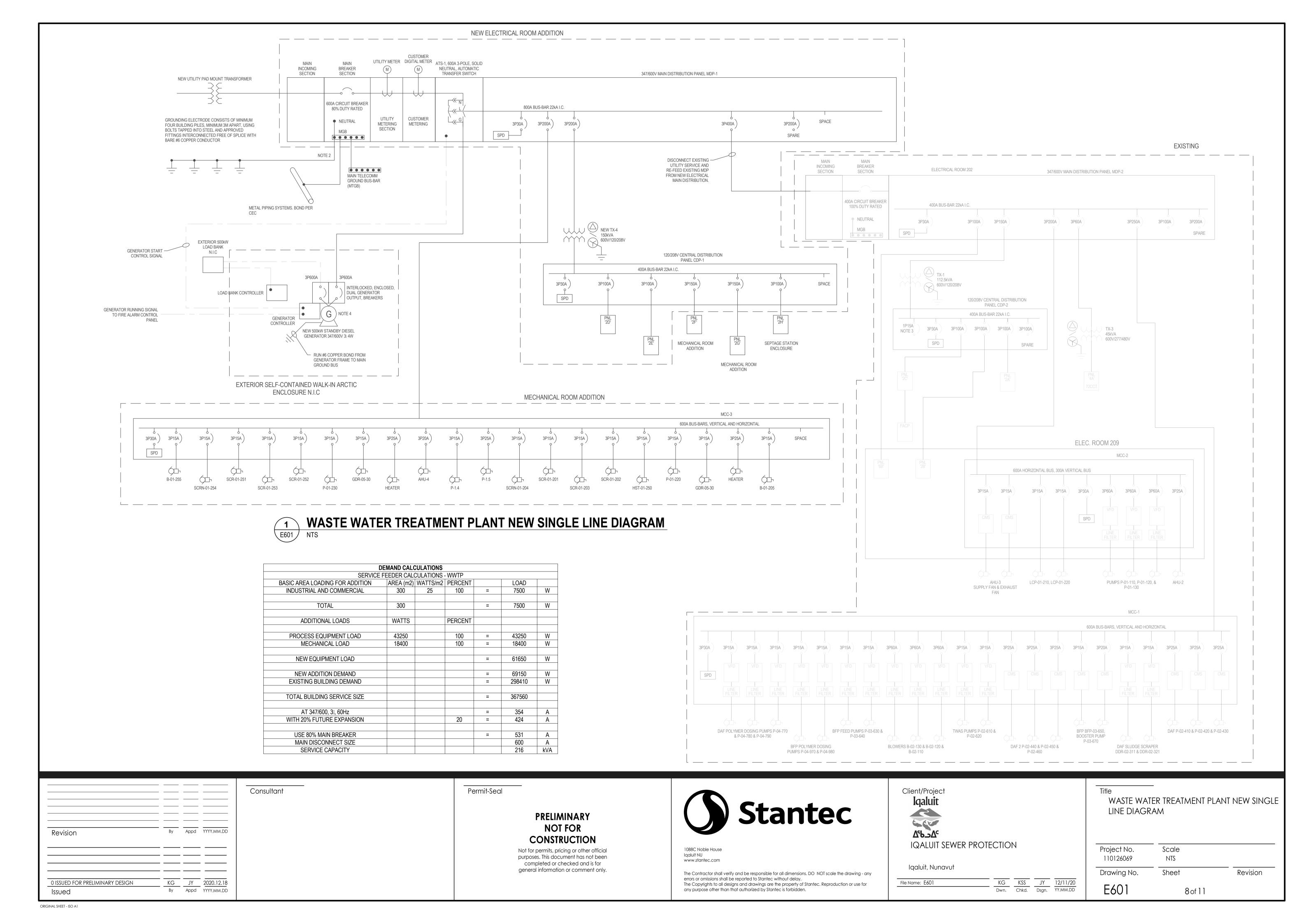


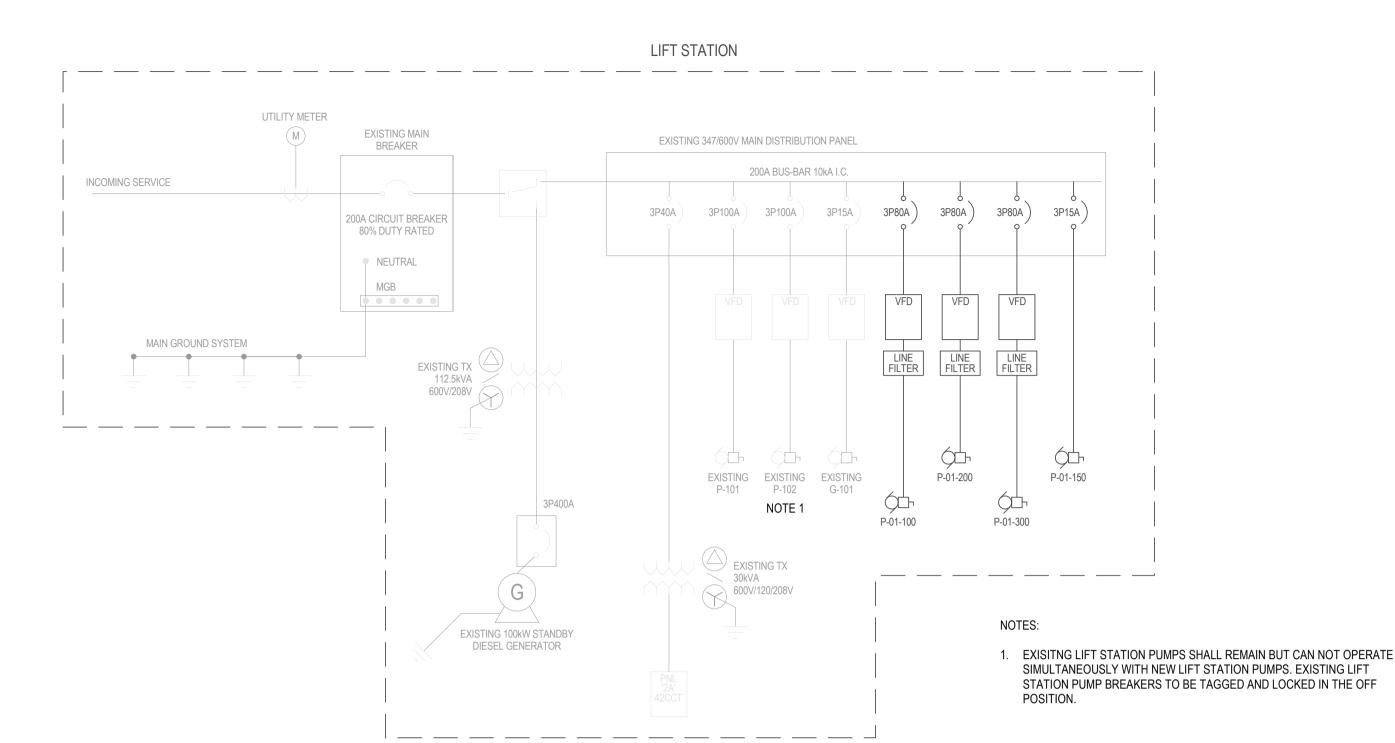


WASTE WATER TREATMENT PLANT EXISTING SINGLE LINE DIAGRAM E600

Client/Project **Iqaluit** Permit-Seal Consultant WASTE WATER TREATMENT PLANT EXISTING Stantec SINGLE LINE DIAGRAM **PRELIMINARY NOT FOR** Appd YYYY.MM.DD ᠫᢆ᠘ Revision CONSTRUCTION **IQALUIT SEWER PROTECTION** Scale Project No. Not for permits, pricing or other official 1088C Noble House Iqaluit NU purposes. This document has not been 110126069 NTS www.stantec.com completed or checked and is for Iqaluit, Nunavut general information or comment only. Drawing No. Sheet Revision The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay. 
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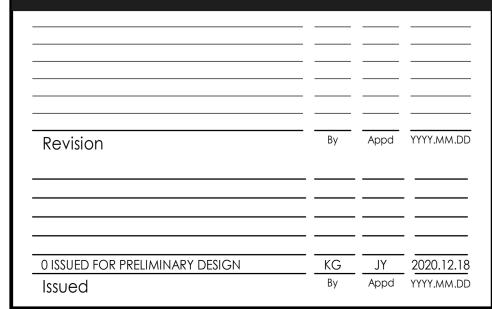




LIFT STATION #1 NEW SINGLE LINE DIAGRAM E602 NTS

Consultant

	DEMAND CALO					
SERVICE FEED	ER CALCULATION	<u> NS - IQALUI</u>	T LIFT STATIC	DN		
	AREA (m2)	WATTS/m2	PERCENT		LOAD	
INDUSTRIAL AND COMMERCIAL	150	25	100	=	3750	W
TOTAL	150			=	3750	W
ADDITIONAL LOADS	WATTS		PERCENT			
PROCESS EQUIPMENT LOAD	61500		100	=	61500	l w
MECHANICAL LOAD	6390		100	=	6390	W
TOTAL ADDITIONAL LOAD				=	67890	M
TOTAL BUILDING SERVICE SIZE				=	71640	W
AT 347/600, 31, 60Hz				=	69	A
WITH 10% FUTURE EXPANSION			10	=	76	А
USE 80% MAIN BREAKER				=	95	A
MAIN DISCONNECT SIZE					100	A
SERVICE CAPACITY					36	kV



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Client/Project **Iqaluit**  $\nabla_{c}$ 

**IQALUIT SEWER PROTECTION** 

Iqaluit, Nunavut

KG KSS JY 12/11/20
Dwn. Chkd. Dsgn. YY.MM.DD File Name: E602

LIFT STATION #1 SINGLE LINE DIAGRAM

Project No. Scale 110126069 NTS Drawing No. Sheet Revision E602

9 of 11

		BUIL	DING ME	ECHANI	CAL MO	TOR,	CON	ITROL AND EQUIPMENT SCHEDULE				
EQUIPMENT	DESCRIPTION	LOCATION	HP	kW	VOLTS F	PH FI	LA	FEEDER	BREAKER	SOURCE	CONTROL	NOTES
B-1	RELOCATED HW BOILER	ADDITIONAL MECH ROOM	0.75	-	208	3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	LRD	
B-1	RELOCATED HW BOILER CONTROLS	ADDITIONAL MECH ROOM	-	0.016	120	1	-	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	BREAKER	
B-2	RELOCATED HW BOILER	ADDITIONAL MECH ROOM	0.75	-	208	3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	LRD	
B-2	RELOCATED HW BOILER CONTROLS	ADDITIONAL MECH ROOM	-	0.016	120	1	-	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	BREAKER	
B-3	NEW HW BOILER	ADDITIONAL MECH ROOM	0.75	-	208	3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	LRD	
B-3	NEW HW BOILER CONTROLS	ADDITIONAL MECH ROOM	-	0.016	120	1	-	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	BREAKER	
P-1.1	RELOCATED PRIMARY HW PUMP (B-1)	ADDITIONAL MECH ROOM	1	-	208	3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	MMP/R/HOA	
P-1.2	RELOCATED PRIMARY HW PUMP (B-2)	ADDITIONAL MECH ROOM	1	-	208	3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	MMP/R/HOA	
P-1.3	PRIMARY HW PUMP (B-3)	ADDITIONAL MECH ROOM	1	-		3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	MMP/R/HOA	
P-1.4	SECONDARY HW PUMP	ADDITIONAL MECH ROOM	5	-		3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	VFD BY MECH	
P-1.5	SECONDARY HW PUMP	ADDITIONAL MECH ROOM	5	-		3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	VFD BY MECH	
P-1.7	AHU-2 PHC PUMP	ADDITIONAL MECH ROOM	0.75	-		3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	CMS/R/HOA	CORD CONNECTED EQUIPMENT
P-1.8	RELOCATED GLYCOL FILL TANK	ADDITIONAL MECH ROOM	-	-	120	1 0	1.7	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	GFI RECEPTACLE	
CTL-P-2.7/2.8	DUPLEX SUMP PUMP CONTROL PANEL FOR P-2.7/2.8	ADDITIONAL MECH ROOM	-	-	208	3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	BREAKER	
P-2.7	SUMP PUMP	ADDITIONAL MECH ROOM	0.6	-		3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	-	-	CTL-P-2.7/2.8	NOTE 6
P-2.8	SUMP PUMP	ADDITIONAL MECH ROOM	0.6	-		3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	-	-	CTL-P-2.7/2.8	NOTE 6
CTL-P-2.9/2.10	DUPLEX SUMP PUMP CONTROL PANEL FOR P-2.9/2.10	SOLIDS TRAILER ROOM	-	-	208	1	-	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	BREAKER	
P-2.9	SUMP PUMP	SOLIDS TRAILER ROOM	0.5	-	208	1	-	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	2P20	-	CTL-P-2.9/2.10	NOTE 6
P-2.10	SUMP PUMP	SOLIDS TRAILER ROOM	0.5	-	208	1	-	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	2P20	-	CTL-P-2.9/2.10	NOTE 6
AHU-4	SUPPLY FAN	ADDITIONAL MECH ROOM	15	-			-	3#8 Cu RW90 + #10 Cu BOND IN 27mm CONDUIT	3P40	_	VFD BY MECH	SINGLE POINT CONNECTION. 2x3HP MOTORS
AHU-4	RETURN FAN	ADDITIONAL MECH ROOM	15	-	600	3	-	ONO OUTTO OU BOND IN ZIMIN CONDON	01 40		VI D DI IVILOIT	CHACLET CHAT CONTRECTION. EXCIT MICTORG
AHU-4	CONTROLS POWER	ADDITIONAL MECH ROOM	1.5	-	120	1	-	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	BREAKER	
CF-3	MECH ROOM COOLING FAN	ADDITIONAL MECH ROOM	0.5	-	120	1	-	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	MMP/R/HOA	
CF-4	ELECTRICAL ROOM COOLING FAN	NEW ELECTRICAL ROOM	0.5	-	120	1	-	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	MMP/R/HOA	
UH-1.7	UNIT HEATER	ADDITIONAL MECH ROOM	0.05	-	120	1	-	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	MMP	
UH-1.8	UNIT HEATER	ADDITIONAL MECH ROOM	0.05	-	120	1	-	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	MMP	
UH-1.9	UNIT HEATER	SOLIDS TRAILER ROOM	0.08	-	120	1	-	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	MMP	
UH-2.9	UNIT HEATER	GRIT/SOLIDS SCREENING ROOM	0.05	-	120	1	-	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	MMP	
UH-2.10	UNIT HEATER	GRIT/SOLIDS SCREENING ROOM	0.05	-	120	1	-	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	MMP	
UH-2.11	UNIT HEATER	GRIT/SOLIDS SCREENING ROOM	0.08	-	120	1	-	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	MMP	
UH-2.12	UNIT HEATER	GRIT/SOLIDS SCREENING ROOM	0.08	-	120	1	-	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	MMP	

1. MOTOR SCHEDULE IS FOR ESTIMATING PURPOSES ONLY. CONFIRM ALL MOTOR FULL LOAD CURRENTS WITH NAMEPLATES AND SIZE MOTOR

DISCONNECTS, BREAKERS, FUSES AND OVERLOADS ACCORDINGLY.

2. CONFIRM MECHANICAL EQUIPMENT LOCATIONS WITH MECHANICAL DIVISION.

3. ELECTRICAL CONTRACTOR SHALL COORDINATE THE LOCATIONS OF ALL LINE VOLTAGE PILOT DEVICES WITH MECHANICAL DIVISION AND

PROVIDE CONDUIT AND WIRING AS NECESSARY.

4. PROVIDE POWER SUPPLY TO CONTROL TRANSFORMERS PROVIDED BY DIV 21. COORDINATE EXACT LOCATIONS OF POWER SUPPLY WITH

MECHANICAL PRIOR TO ROUGH-IN.

5. PROVIDE POWER TO OTHER MECHANICAL EQUIPMENT AS SHOWN ON PANEL SCHEDULE. 6. DUPLEX PUMPS PROVIDED WITH CONTROL PANEL SUPPLIED BY MECHANICAL, INSTALLED AND WIRED BY ELECTRICAL. CONTROL PANELS TO BE

Consultant

LOCATED ON SITE IN AN ACCESSIBLE LOCATION WITHIN LINE-OF-SIGHT TO PUMPS.

7. WHERE REQUIRED BY C.E.C. PROVIDE LOCAL DISCONNECT AT EACH MOTOR LOCATION. PROVIDE EXPLOSION PROOF DISCONNECT WHERE

REQUIRED.

CONTROL DEVICE LEGEND LRD - LOAD RATED DISCONNECT MAG - MAGNETIC STARTER CMS - MAGNETIC STARTER WITH DISCONNECT MMP - MANUAL MOTOR PROTECTION VFD - VARIABLE FREQUENCY DRIVE MCC - MOTOR CONTROL CENTRE /R - WITH LOAD RATED RELAY /HOA - WITH H-O-A SWITCH /K - KEYED /P - PILOT LIGHT

/SS - SOFT STARTER

		PROCES	S MO	TOR, C	ONTROL AND	EQ	JIPMENT SCHEDULE				
EQUIPMENT	DESCRIPTION	LOCATION	HP	kW	VOLTS PH FL	LA	FEEDER	BREAKER	SOURCE	CONTROL	OPERATION
B-01-205	PRE-TREATMENT PLANT BLOWER TRAIN 1	PRELIMINARY TREATMENT-UPPER	-	5.5	575 3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	LRD	DUTY
SCRN-01-204	COARSE SOLIDS SCREEN - PRE-TREATMENT TRAIN 1	PRELIMINARY TREATMENT-UPPER	-	1.5	575 3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	CMS/LRD	DUTY
SCR-01-201	GRIT CONVEYOR	PRELIMINARY TREATMENT-UPPER	-	1.5	575 3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	LRD	DUTY
SCR-01-203	GRIT EXTRACTOR	PRELIMINARY TREATMENT-UPPER	-	0.5	575 3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	LRD	DUTY
SCR-01-202	GREASE SCREW	PRELIMINARY TREATMENT-UPPER	-	0.55	575 3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	CMS/LRD	DUTY
B-01-255	PRE-TREATMENT PLANT BLOWER TRAIN 2	PRELIMINARY TREATMENT-UPPER	-	5.5	575 3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	LRD	STANDBY
SCRN-01-254	COARSE SOLIDS SCREEN - PRE-TREATMENT TRAIN 2	PRELIMINARY TREATMENT-UPPER	-	1.5	575 3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	LRD	STANDBY
SCR-01-251	GRIT CONVEYOR	PRELIMINARY TREATMENT-UPPER	-	1.5	575 3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	CMS/LRD	STANDBY
SCR-01-253	GRIT EXTRACTOR	PRELIMINARY TREATMENT-UPPER	-	0.5	575 3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	LRD	STANDBY
SCR-01-252	GREASE SCREW	PRELIMINARY TREATMENT-UPPER	-	0.55	575 3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	CMS/LRD	STANDBY
HST-01-250	HOIST	PRELIMINARY TREATMENT-UPPER	-	5	575 3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	LRD	DUTY
P-01-220	GREASE PUMP	PRELIMINARY TREATMENT-LOWER	-	3.7	575 3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	LRD	DUTY
P-01-230	GREASE PUMP	PRELIMINARY TREATMENT-LOWER	-	3.7	575 3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	LRD	STANDBY
GDR-05-30	GRINDER 1 - PORT 1	SEPTAGE STATION ENCLOSURE	-	3.7	575 3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	LRD	DUTY
GDR-05-30	GRINDER 2 - PORT 2	SEPTAGE STATION ENCLOSURE	-	3.7	575 3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	LRD	STANDBY
	HEATER	SEPTAGE STATION ENCLOSURE	-	10	575 3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P25	-	LRD	DUTY
	HEATER	SEPTAGE STATION ENCLOSURE	-	10	575 3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P25	-	LRD	DUTY
	NO.	<u>TES</u>						CONTROL D	DEVICE LEGE	ND	
A MOTOR COUR	EDITIE IS EOD ESTIMATING DUDDOSES, ONLY, CONFIDMA	NE MOTOR FULL LOAD CURRENTS WI	TII	ACDLATE	C AND CIZE MOTO	ΩD			DATED DISC	ONNECT	

Revision	Ву	Appd	YYYY.MM.DD
0 ISSUED FOR PRELIMINARY DESIGN	KG		2020.12.18
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**IQALUIT SEWER PROTECTION** 

Iqaluit, Nunavut

KG KSS JY 12/11/20
Dwn. Chkd. Dsgn. YY.MM.DD File Name: E700

WWTP AND SEPTAGE RECEIVING STATION MOTOR SCHEDULES

Project No. 110126069	Scale	
Drawing No.	Sheet	Revision

E700 10 of 11

	LIFT STATION MECHANICAL MOTOR, CONTROL AND EQUIPMENT SCHEDULE													
EQUIPMENT	DESCRIPTION	LOCATION	HP	kW	VOLTS PH FLA	FEEDER	BREAKER	SOURCE	CONTROL	NOTES				
B-1	HW BOILER	MECH ROOM	0.13	-	120 1 -	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	LRD					
B-2	HW BOILER	MECH ROOM	0.13	-	120 1 -	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	LRD					
P-1	PRIMARY HW PUMP	MECH ROOM	0.17	-	120 1 -	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	MMP/R/HOA					
P-2	PRIMARY HW PUMP	MECH ROOM	0.17	-	120 1 -	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	MMP/R/HOA					
P-3	SECONDARY HW PUMP	MECH ROOM	-	0.44	120 1 -	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	MMP/R/HOA					
P-4	SECONDARY HW PUMP	MECH ROOM	-	0.44	120 1 -	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	MMP/R/HOA					
P-5	GLYCOL FILL TANK	MECH ROOM	-	0.05	120 1 -	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	GFI RECEPTACLE					
BC-1	BOILER CONTROLLER	MECH ROOM		0.01	120 1 -	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	BREAKER					
EF-1	PUMPING ROOM EXHAUST FAN	NEW PUMPING ROOM	0.5	-	120 1 -	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	MMP/R/HOA					
EF-2	NEW WET WELL EXHAUST FAN	NEW PUMPING ROOM	0.5	-	120 1 -	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	MMP/R/HOA					
EF-3	EXISTING WET WELL EXHAUST FAN	EXISTING PUMPING ROOM	0.25	-	120 1 -	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	MMP/R/HOA					
CF-1	MECH ROOM COOLING FAN	ADDITIONAL MECH ROOM	0.06	-	120 1 -	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	MMP/R/HOA					
UH-1	UNIT HEATER	NEW PUMPING ROOM	0.17	-	120 1 -	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	MMP					
UH-2	UNIT HEATER	NEW PUMPING ROOM	0.05	-	120 1 -	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	MMP					
UH-3	UNIT HEATER	EXISTING PUMPING ROOM	0.05	-	120 1 -	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P15	-	MMP					
	CONTROLS POWER	PUMPING ROOMS	-	-	120 1 -	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P16	-	BREAKER					
	CONTROLS POWER	PUMPING ROOMS	-	-	120 1 -	2#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	1P17	-	BREAKER					

1. MOTOR SCHEDULE IS FOR ESTIMATING PURPOSES ONLY. CONFIRM ALL MOTOR FULL LOAD CURRENTS WITH NAMEPLATES AND SIZE MOTOR

DISCONNECTS, BREAKERS, FUSES AND OVERLOADS ACCORDINGLY.

2. CONFIRM MECHANICAL EQUIPMENT LOCATIONS WITH MECHANICAL DIVISION.

3. ELECTRICAL CONTRACTOR SHALL COORDINATE THE LOCATIONS OF ALL LINE VOLTAGE PILOT DEVICES WITH MECHANICAL DIVISION AND PROVIDE CONDUIT AND WIRING AS NECESSARY.

4. PROVIDE POWER SUPPLY TO CONTROL TRANSFORMERS PROVIDED BY DIV 21. COORDINATE EXACT LOCATIONS OF POWER SUPPLY WITH MECHANICAL PRIOR TO ROUGH-IN.

5. PROVIDE POWER TO OTHER MECHANICAL EQUIPMENT AS SHOWN ON PANEL SCHEDULE.

6. WHERE REQUIRED BY C.E.C. PROVIDE LOCAL DISCONNECT AT EACH MOTOR LOCATION. PROVIDE EXPLOSION PROOF DISCONNECT WHERE

REQUIRED.

LRD - LOAD RATED DISCONNECT MAG - MAGNETIC STARTER CMS - MAGNETIC STARTER WITH DISCONNECT MMP - MANUAL MOTOR PROTECTION VFD - VARIABLE FREQUENCY DRIVE MCC - MOTOR CONTROL CENTRE /R - WITH LOAD RATED RELAY /HOA - WITH H-O-A SWITCH /K - KEYED /P - PILOT LIGHT /SS - SOFT STARTER

CONTROL DEVICE LEGEND

LIFT STATION PROCESS MOTOR, CONTROL AND EQUIPMENT SCHEDULE												
EQUIPMENT	DESCRIPTION	LOCATION	HP	kW	VOLTS PH	l FLA	FEEDER	BREAKER	SOURCE	CONTROL	OPERATION	
P-01-100	RAW WASTEWATER PUMP 1	LIFT STATION #1	-	30	575 3	-	3#4 Cu RW90 + #8 Cu BOND IN 35mm CONDUIT	3P80	-	VFD/LRD	DUTY	
P-01-200	RAW WASTEWATER PUMP 2	LIFT STATION #2	-	30	575 3	-	3#4 Cu RW90 + #8 Cu BOND IN 35mm CONDUIT	3P80	-	VFD/LRD	DUTY	
P-01-300	RAW WASTEWATER PUMP 3	LIFT STATION #3	-	30	575 3	-	3#4 Cu RW90 + #8 Cu BOND IN 35mm CONDUIT	3P80	-	VFD/LRD	STANDBY	
P-01-150	HOIST	LIFT STATION #4	-	5	575 3	-	3#12 Cu RW90 + #12 Cu BOND IN 21mm CONDUIT	3P15	-	LRD	DUTY	
<u>NOTES</u>								CONTROL D	DEVICE LEGE	<u>ND</u>		
A. MOTOR SCHEDUL	E IS FOR ESTIMATING PURPOSES ONLY. CONFIRM A	L MOTOR FULL LOAD CURRENTS	WITH NA	MEPLATE	S AND SIZE N	OTOR		LRD - LOAD	RATED DISC	ONNECT		
DISCONNECTS, BREA	AKERS, FUSES AND OVERLOADS ACCORDINGLY.							MAG - MAGNETIC STARTER				
										ER WITH DISCONNE	ECT	
B. CONFIRM MECHAI	NICAL EQUIPMENT LOCATIONS WITH MECHANICAL DI	/ISION.								PROTECTION		
								VFD - VARIABLE FREQUENCY DRIVE				
	TRACTOR SHALL COORDINATE THE LOCATIONS OF A	LL LINE VOLTAGE PILOT DEVICES	WITH ME	CHANICA	L DIVISION A	ND			OR CONTROL			
PROVIDE CONDUIT A	ND WIRING AS NECESSARY								OAD RATED R			
									HH-O-A SWIT	JH		
		/K - KEYED										
								/P - PILOT L /SS - SOFT S				
								133 - 30FT	SIARIER			

Revision	Ву	Appd	YYYY.MM.DD
0 ISSUED FOR PRELIMINARY DESIGN	KG	JY	2020.12.18
Issued	Ву	Appd	YYYY.MM.DD

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Iqaluit, Nunavut

 
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LIFT STATION #1 MOTOR SCHEDULES					
Project No. 110126069	Scale				
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