



Public Works
Government Services
Canada

Architectural and
Engineering Services

Ontario Region

Travaux publics
Services gouvernementaux
Canada

Services d'architecture
et de génie

Région de l'Ontario

KINGSTON, ONTARIO. JOYCEVILLE INSTITUTION

WATER TREATMENT PLANT GAC TANK REPAIR

PWGSC Proj. No.: 450-2431

Canada



LIST OF DRAWINGS

ARCHITECTURAL

ELECTRICAL

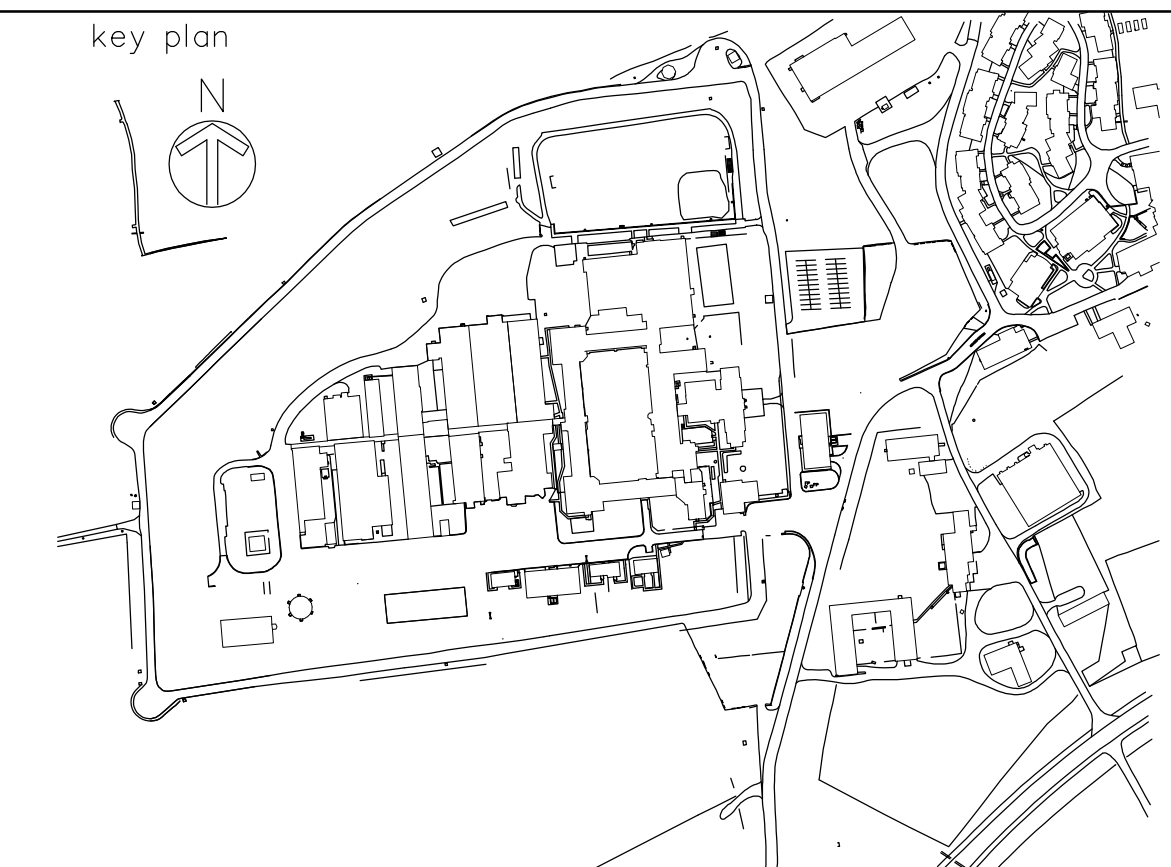
E500	BASEMENT & GROUND FLOOR REMOVALS & UPGRADE PLANS
E501	BASEMENT & GROUND FLOOR ELECTRICAL LAYOUT
E502	MCC LAYOUT AND DETAILS
E502	MCC LAYOUT AND DETAILS

PROCESS

P001	PROCESS FLOW DIAGRAM
P101	BASEMENT & GROUND FLOOR REMOVALS & UPGRADE PLANS
P201	CROSS-SECTION A & B PLANS
P301	PIPING SUPPORTS & DETAILS

STRUCTURAL

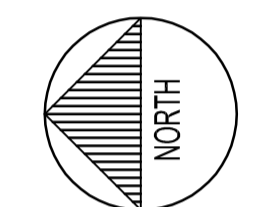
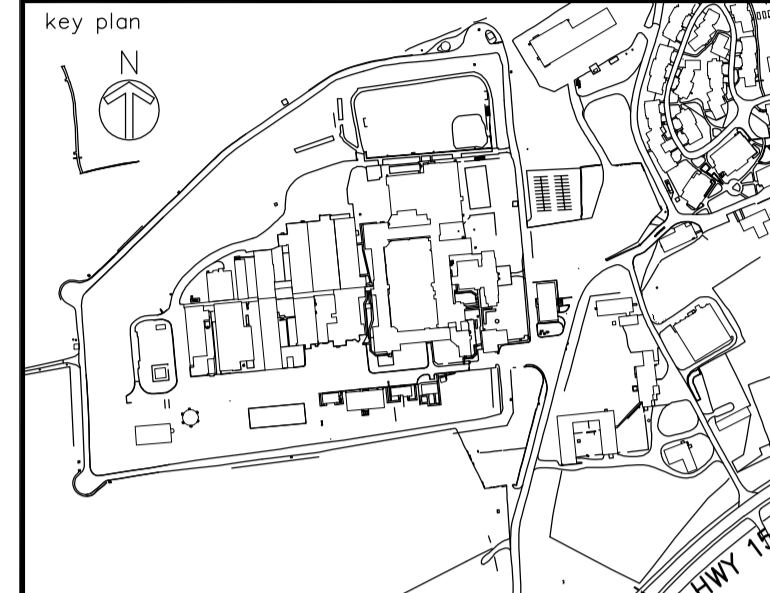
SITE



1224 GARDINERS ROAD, SUITE 201
KINGSTON, ONTARIO
CANADA K7P 0G2
PHONE: 613-634-7373 FAX: 613-634-3523
WWW.WSPGROUP.COM



1345 ROSEMOUNT AVENUE
CORNWALL, ONTARIO
CANADA K6J 5E5
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04		
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02	ISSUED FOR TENDER	28/04/2017
01	ISSUED FOR PWGSC REVIEW	02/01/2017
revision		date

Do not scale drawings. Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A	Detail No.
B	drawing no. - where detail required
C	drawing no. - where detailed

project title
titre du projet
KINGSTON Ontario
CORRECTIONAL SERVICE OF CANADA
JOYCEVILLE INSTITUTION
HIGHWAY 15, NO. 378
**WATER TREATMENT PLANT
GAC TANK REPAIR**

drawing title
titre du dessin
**ELECTRICAL
BASEMENT & GROUND FLOOR
REMOVALS & UPGRADE PLANS**

drawn by
dessiné par **ML**

designed by
conçu par **GL**

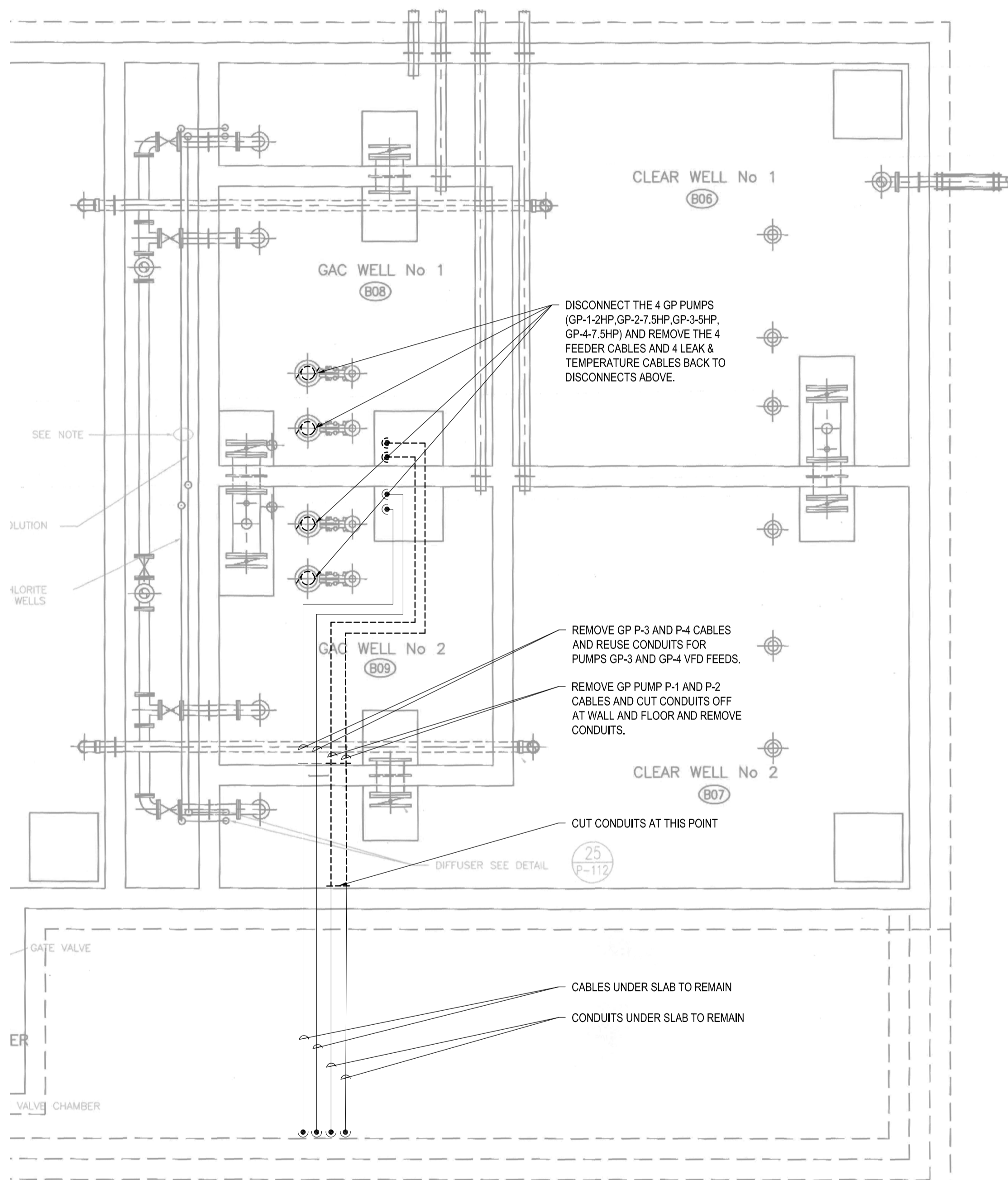
approved by
approuvé par **GL**

bid
offre project manager
administrateur de projets

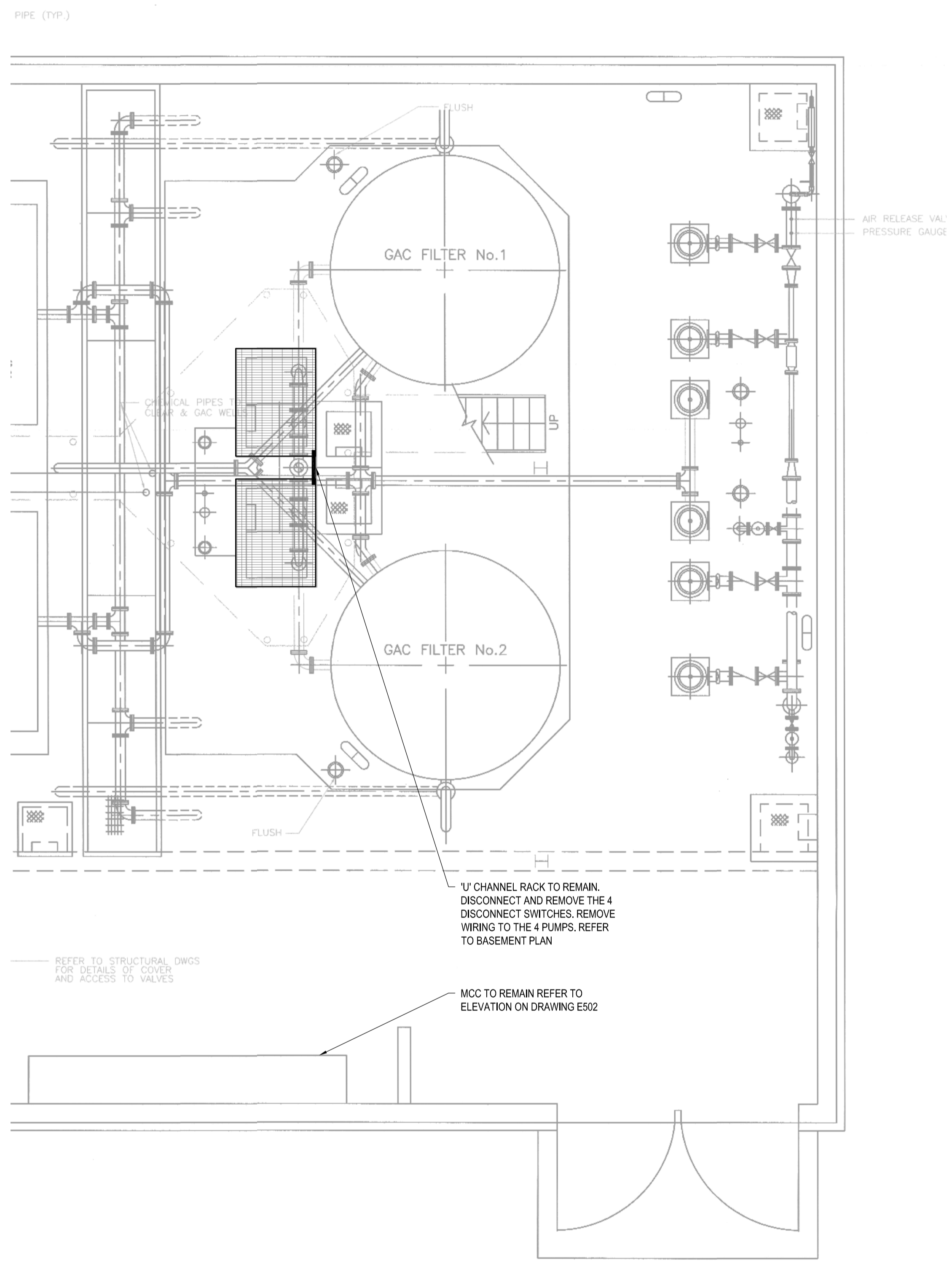
project date
date du projet **APRIL 2017**

project no.
no. du projet **450-2431**

drawing no.
dessiné no. **E500**

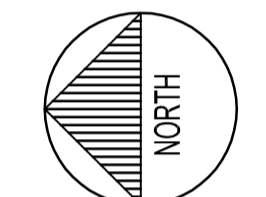
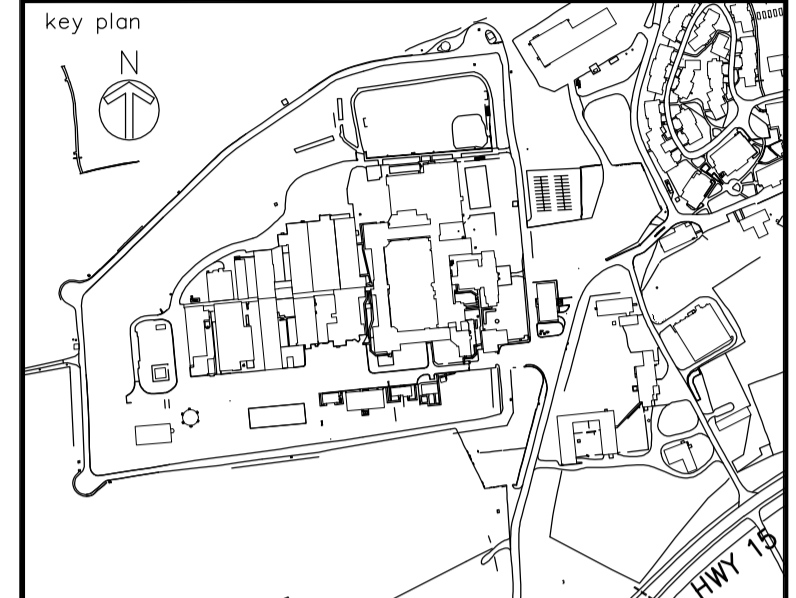


PART BASEMENT DEMOLITION PLAN
SCALE: 1:50



PART GROUND FLOOR DEMOLITION PLAN
SCALE: 1:50

M:\2016\181-10630-00_Joyceville_GAC_Tank_Repair\BLO_Dwg\Electrical\181-10630-00-E500.dwg May 05, 2017 12:26pm BY: (daniel.janku)



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titre du dessin
**BASEMENT & GROUND FLOOR
ELECTRICAL LAYOUT**

drawn by
dessiné par **ML**

designed by
conçu par **GL**

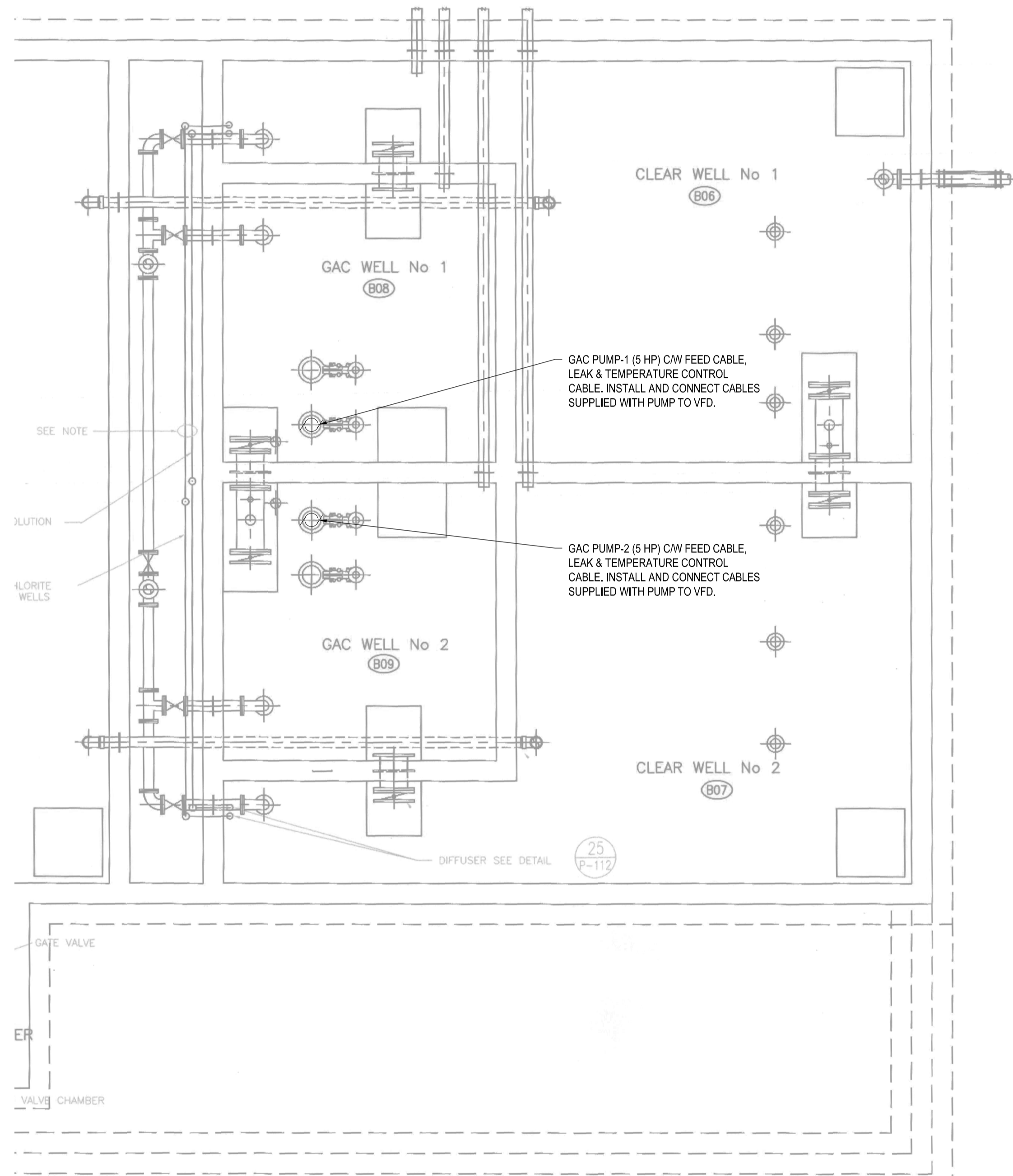
approved by
approuvé par **GL**

bid
offre project manager
administrateur de projets

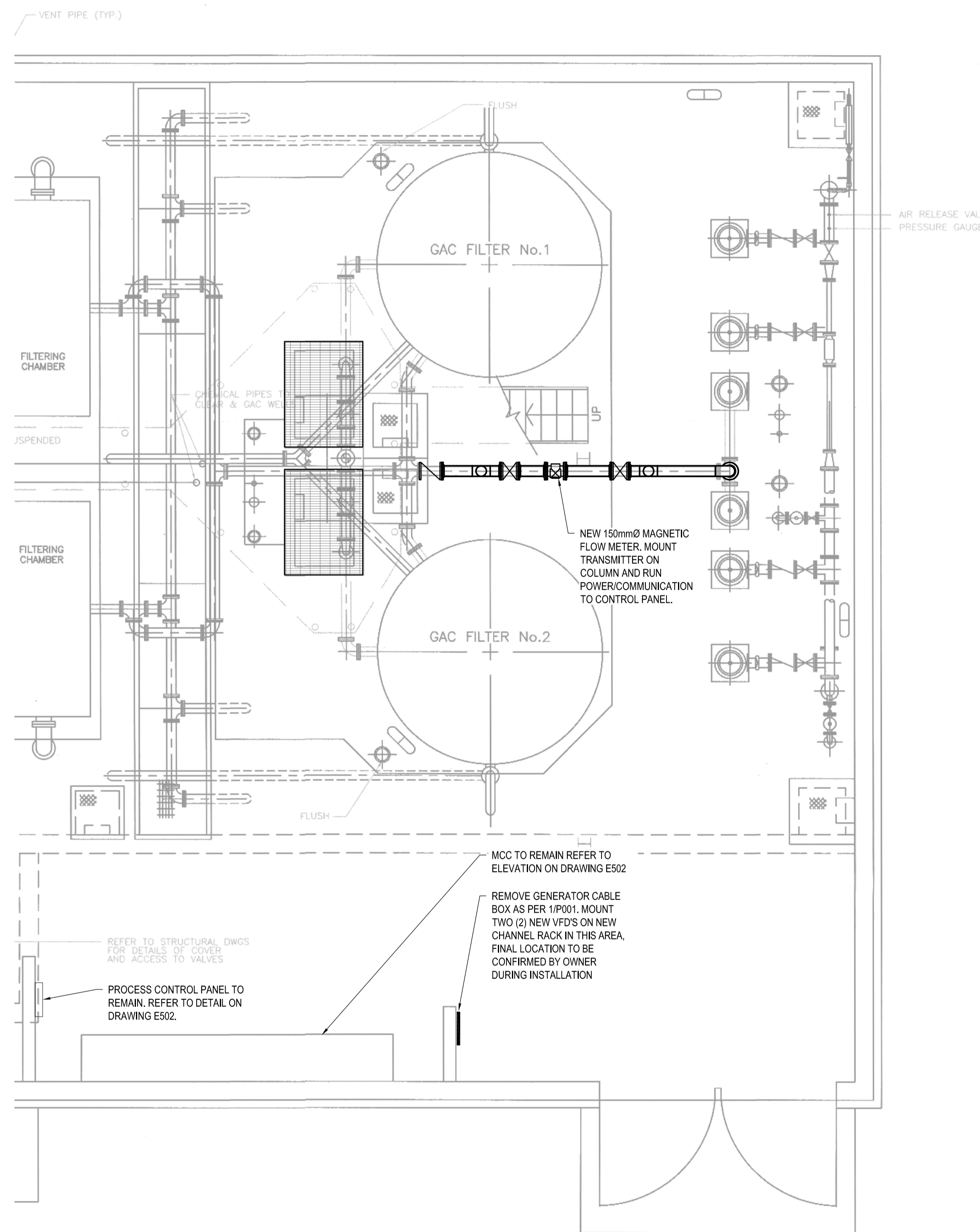
project date
date du projet **APRIL 2017**

project no.
no. du projet **450-2431**

drawing no.
dessiné no. **E501**



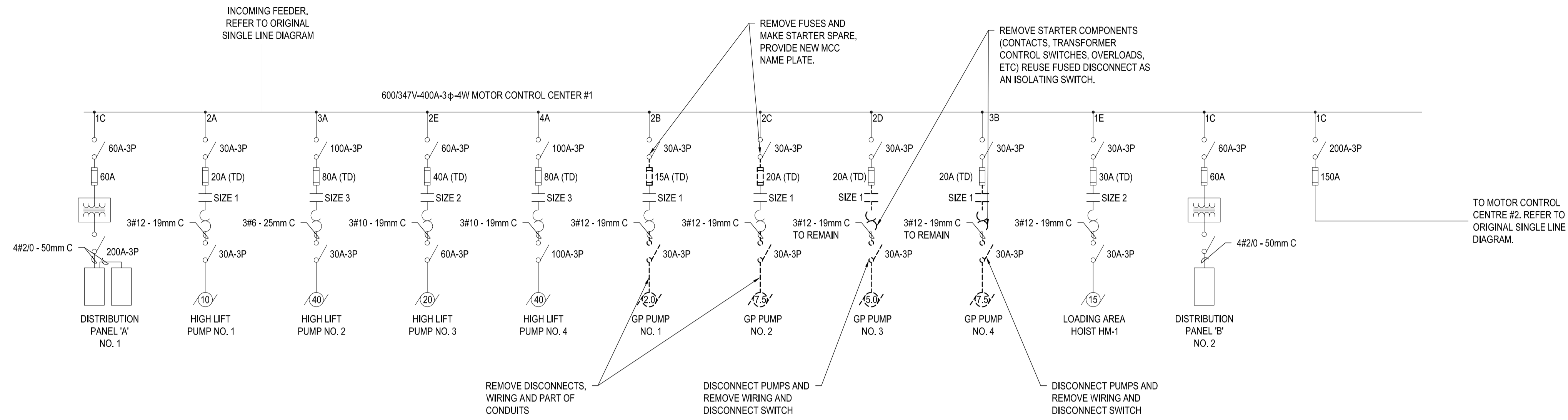
PART BASEMENT PLAN
SCALE: 1:50



PART GROUND FLOOR PLAN
SCALE: 1:50

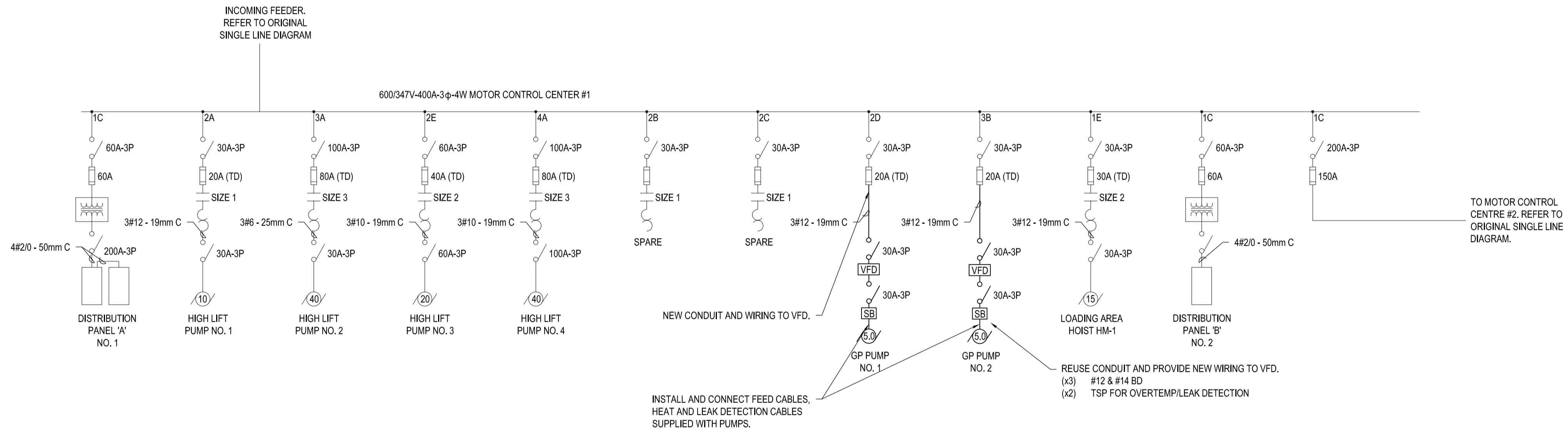
LINE TYPE LEGEND

- DEMOLITION
- _____ TO REMAIN
- _____ PROVIDE



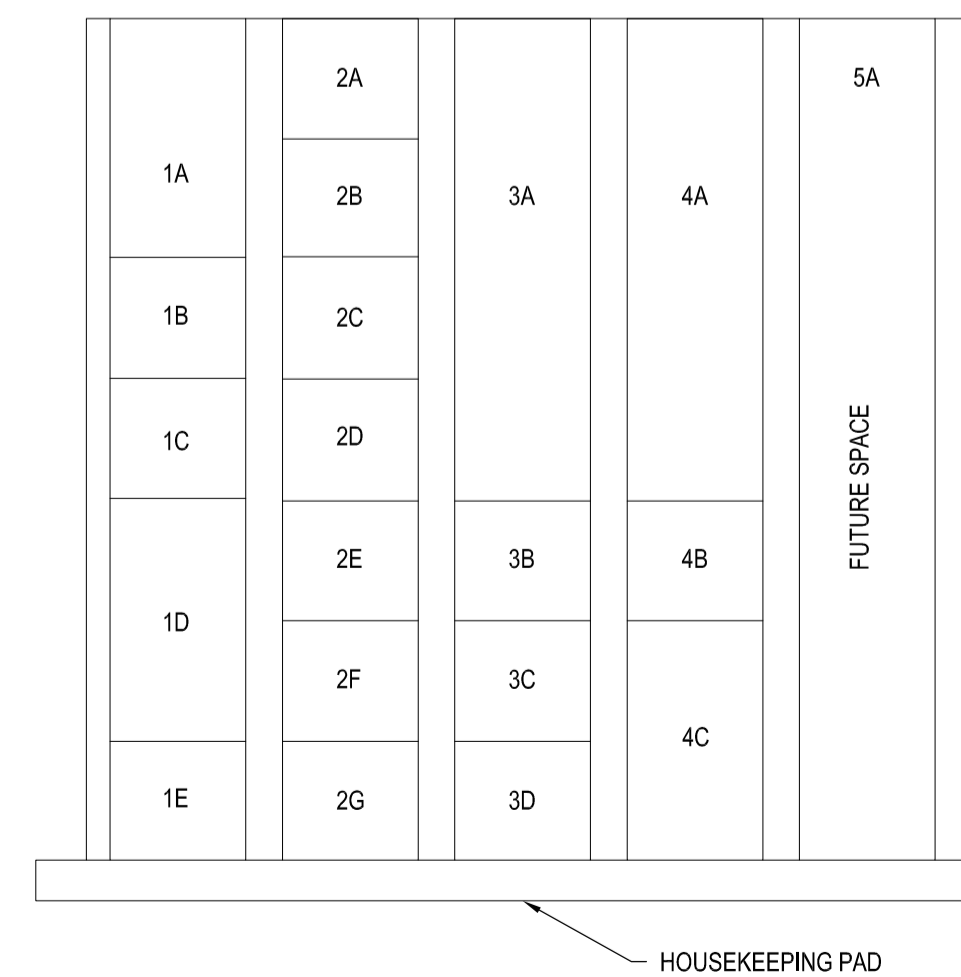
PARTIAL DEMOLITION SINGLE LINE DIAGRAM

SCALE: NTS

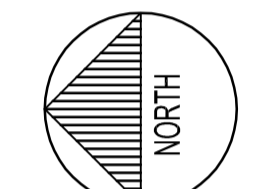
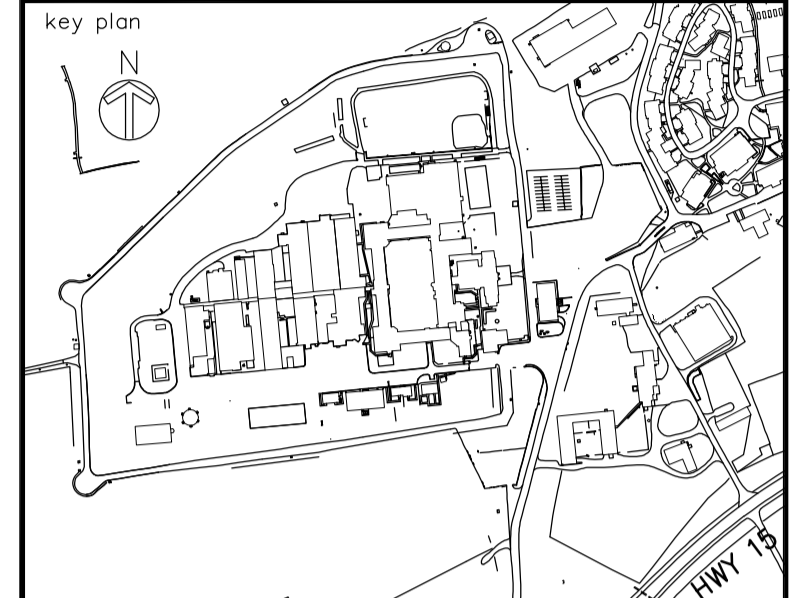


PARTIAL SINGLE LINE DIAGRAM

SCALE: NTS



MCC #1 LAYOUT
SCALE: NTS



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AND DETAILS**

drawn by / dessiné par **ML**

designed by / conc par **GL**

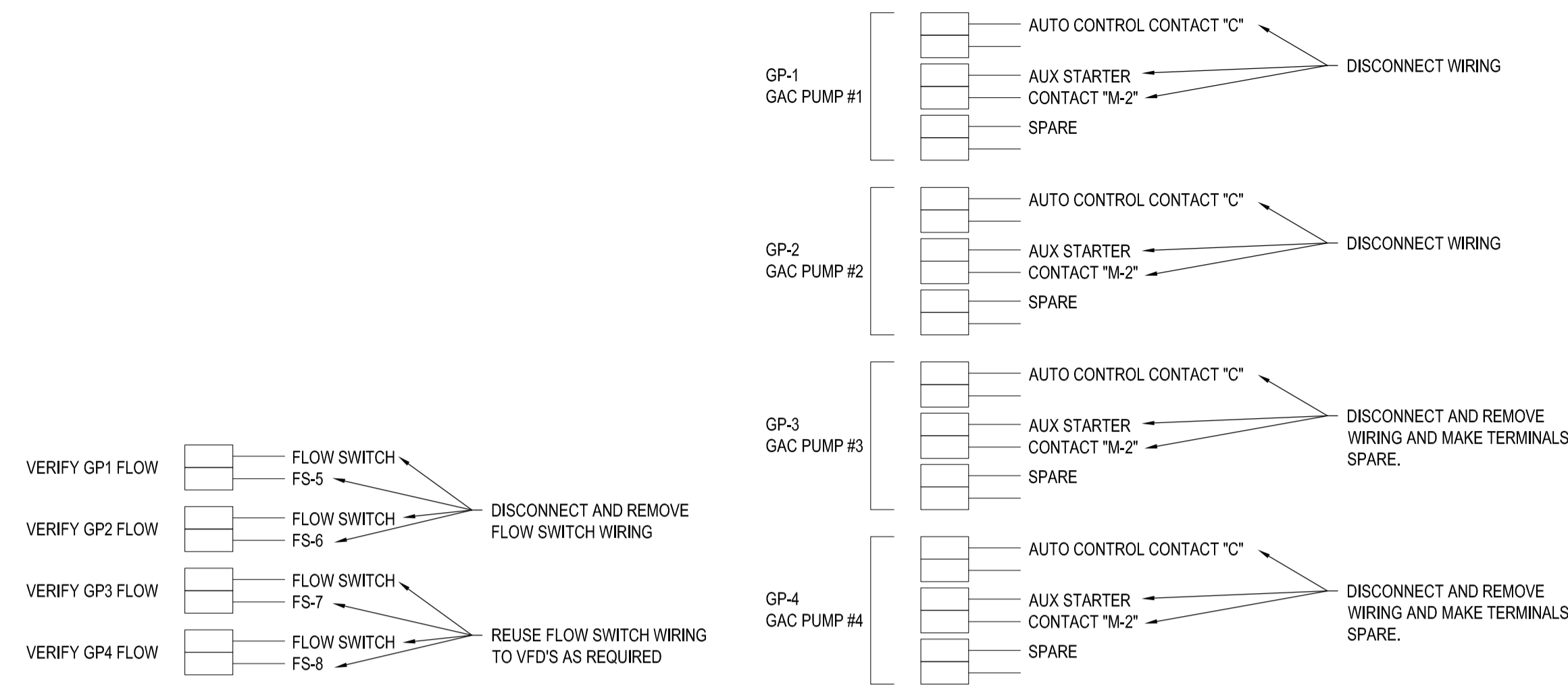
approved by / approuvé par **GL**

bid / offre project manager / administrateur de projets

project date / date du projet **APRIL 2017**

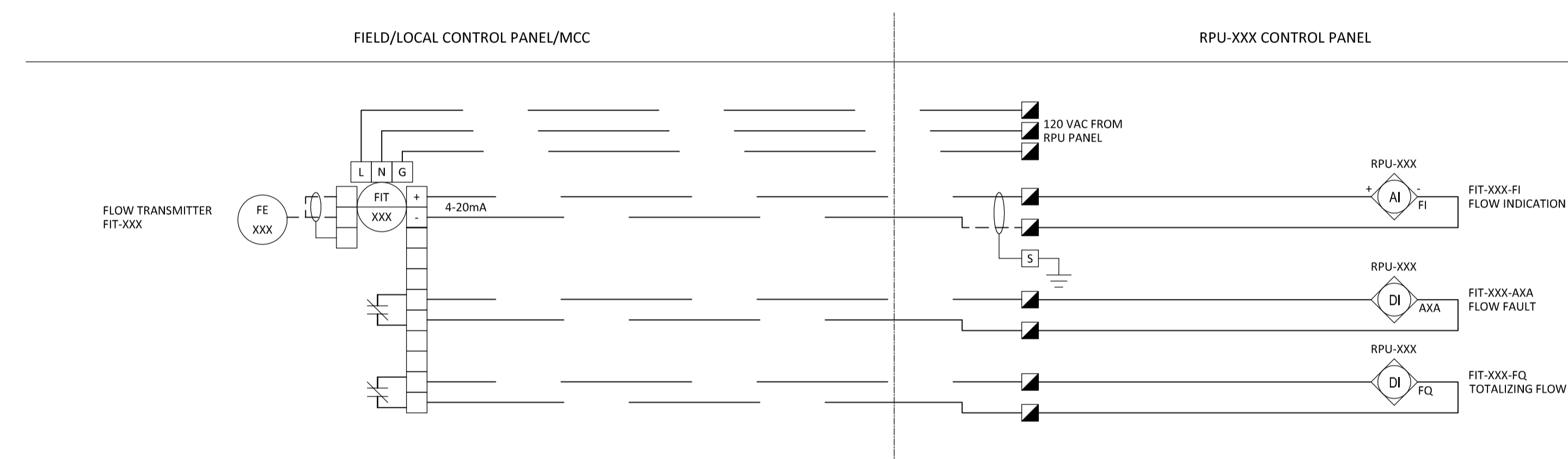
project no. / no. du projet **450-2431**

drawing no. / dessiné no. **E502**



PARTIAL PROCESS CONTROL PANEL TERMINAL BLOCK LAYOUT WATER TREATMENT PLANT

SCALE: NTS



MAGNETIC FLOW TRANSMITTER

SCALE: NTS

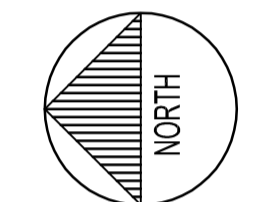
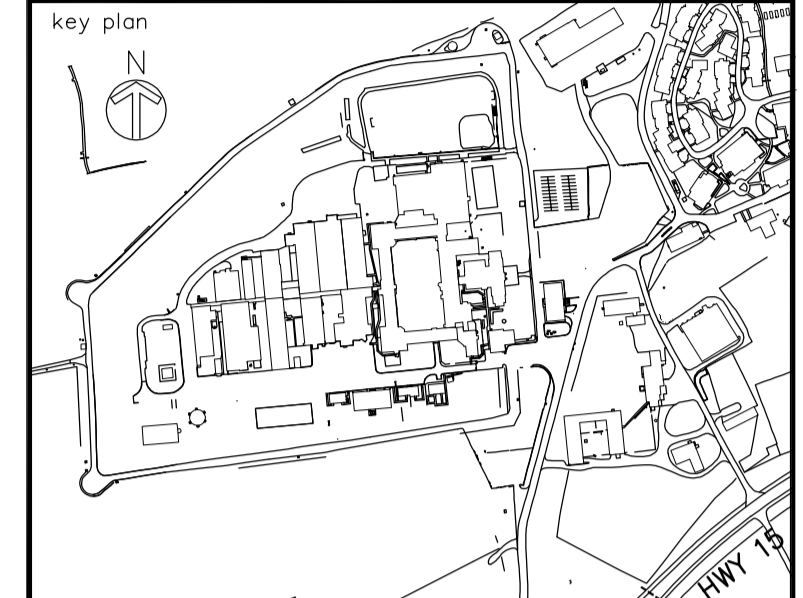
1.0 GRANULAR ACTIVATED CARBON (GAC) FEED PUMP CONTROL

- 1.1 THE TWO (2) NEW GAC PUMPS ARE OF EQUAL SIZE AND CONTROLLED BY THE VARIABLE SPEED DRIVE. THE TWO PUMPS WILL BE OF STANDARD ROTATION AND SUBSTITUTION. THE DUTY PUMP IS CALLED TO RUN BASED ON THE CLEARWELL LEVEL.
- 1.2 DUTY CONTROL RANGE
WHEN THE CLEARWELL LEVEL REMAINS BELOW AN OPERATOR ADJUSTABLE SETPOINT FOR AN OPERATOR ADJUSTABLE TIME, THE DUTY CONTROL RANGE WILL BE INCREASED. WHEN THE CLEARWELL LEVEL REMAINS ABOVE AN OPERATOR ADJUSTABLE SETPOINT FOR AN OPERATOR ADJUSTABLE TIME, THE DUTY CONTROL RANGE WILL BE DECREASED

THE DUTY PUMP WILL SPEED UP AND SLOW DOWN BASED ON A PID LOOP BETWEEN THE OPERATOR ADJUSTABLE START LEVEL AND THE OPERATOR ADJUSTABLE STOP LEVEL AS MEASURED BY THE CLEARWELL LEVEL TRANSMITTER. THE LEVEL TRANSMITTER WILL PROVIDE THE START AND STOP SIGNAL AS WELL AS THE 4-20mA SIGNAL TO THE GAC PUMP VFD, RELAYED THROUGH THE PROCESS CONTROL PANEL.
- 1.3 PUMP INTERLOCKS
ALL GAC PUMPS WILL BE STOPPED ON PUMPS HIGH PRESSURE ALARM, PLANT SHUT-DOWN, POWER FAILURE, GAC LEVEL LOW LOW ALARM, CLEARWELL HIGH HIGH LEVEL ALARM.

PROCESS CONTROL NARRATIVE

SCALE: NTS



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drawing title
titre du dessin
**MCC LAYOUT
AND DETAILS**

drawn by dessiné par	ML
designed by conçu par	GL
approved by approuvé par	GL

bid
offre

project manager
administrateur de projets

project date
date du projet
APRIL 2017

project no.
no. du projet
450-2431

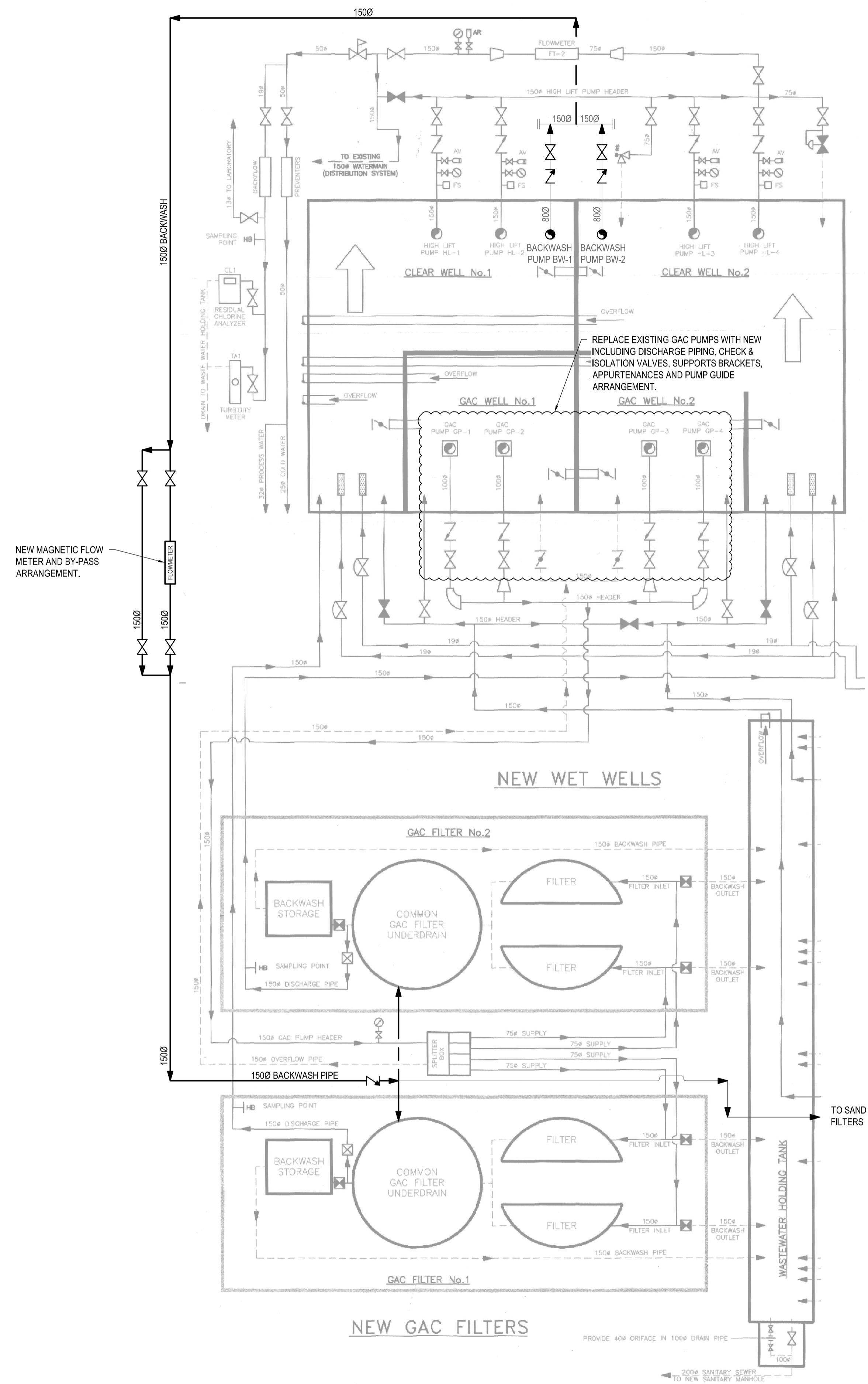
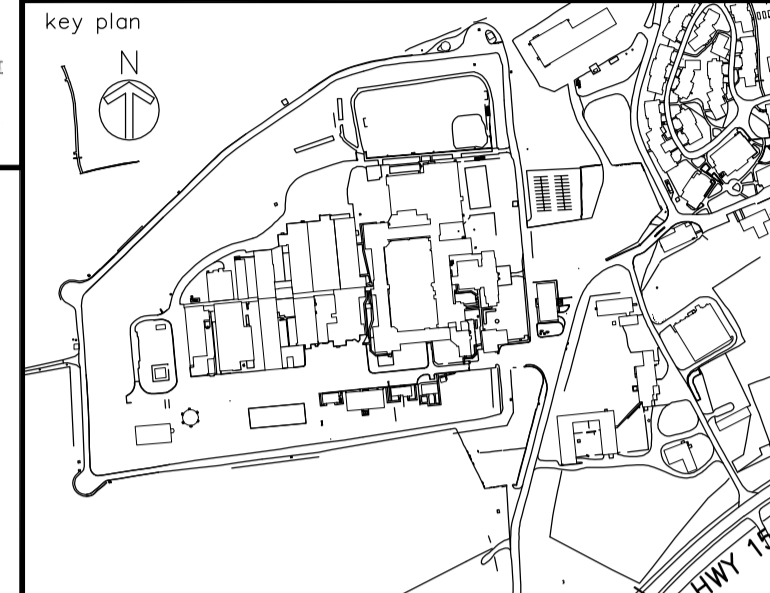
drawing no.
dessiné no.
E503



Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada



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CORNWALL, ONTARIO
CANADA K6J 5K5
PHONE: 613-833-5602 FAX: 613-838-0335
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1 P001 GENERATOR CABLE BOX REMOVAL/RELOCATION
SCALE: N.T.S.



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GAC TANK REPAIR**

drawing title / titre du dessin
**PROCESS
PROCESS FLOW DIAGRAM**

drawn by / dessiné par **K.B.W.**

designed by / conçu par **J.B.**

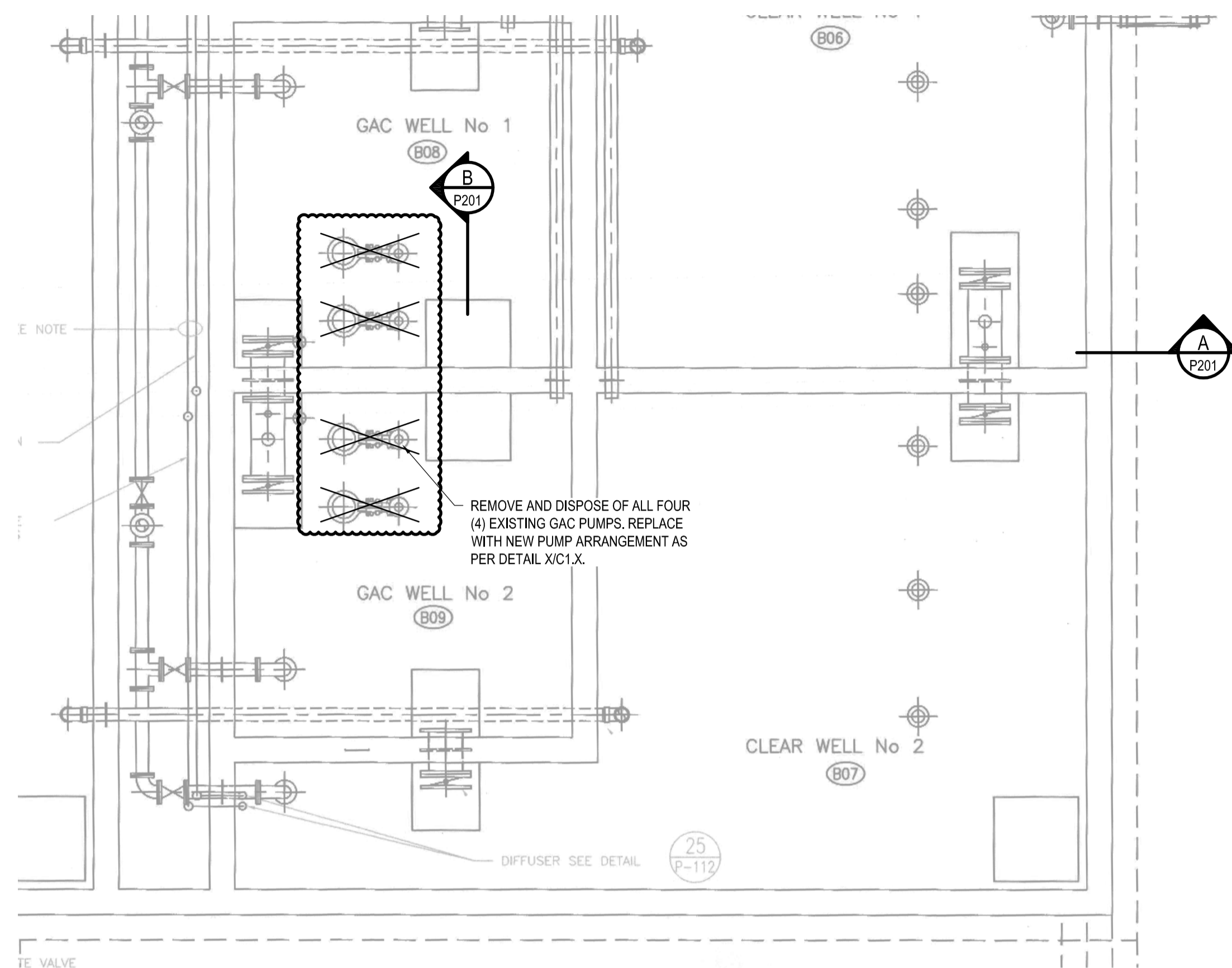
approved by / approuvé par **J.B.**

bid / offre project manager / administrateur de projets

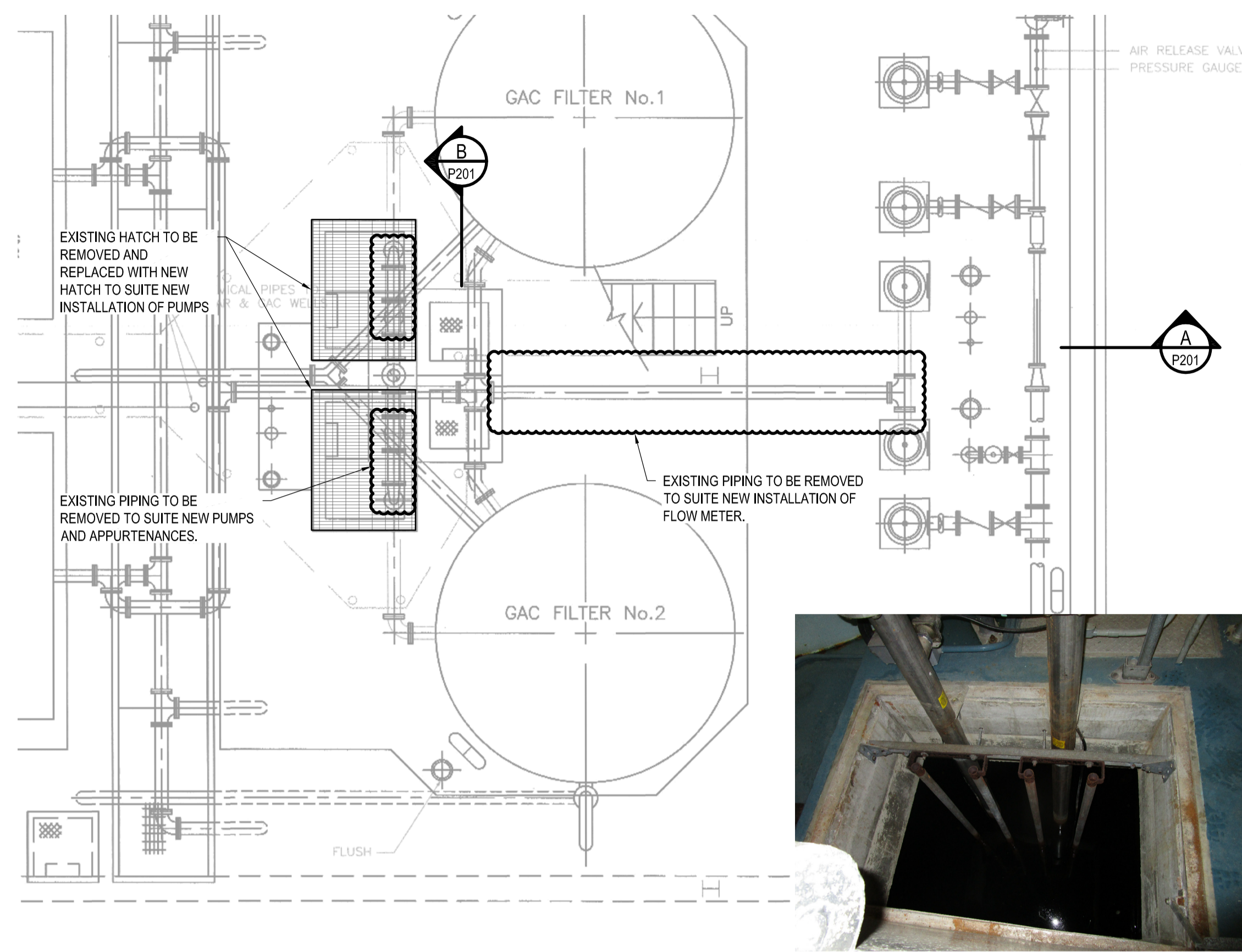
project date / date du projet **APRIL 2017**

project no. / no. du projet **450-2431**

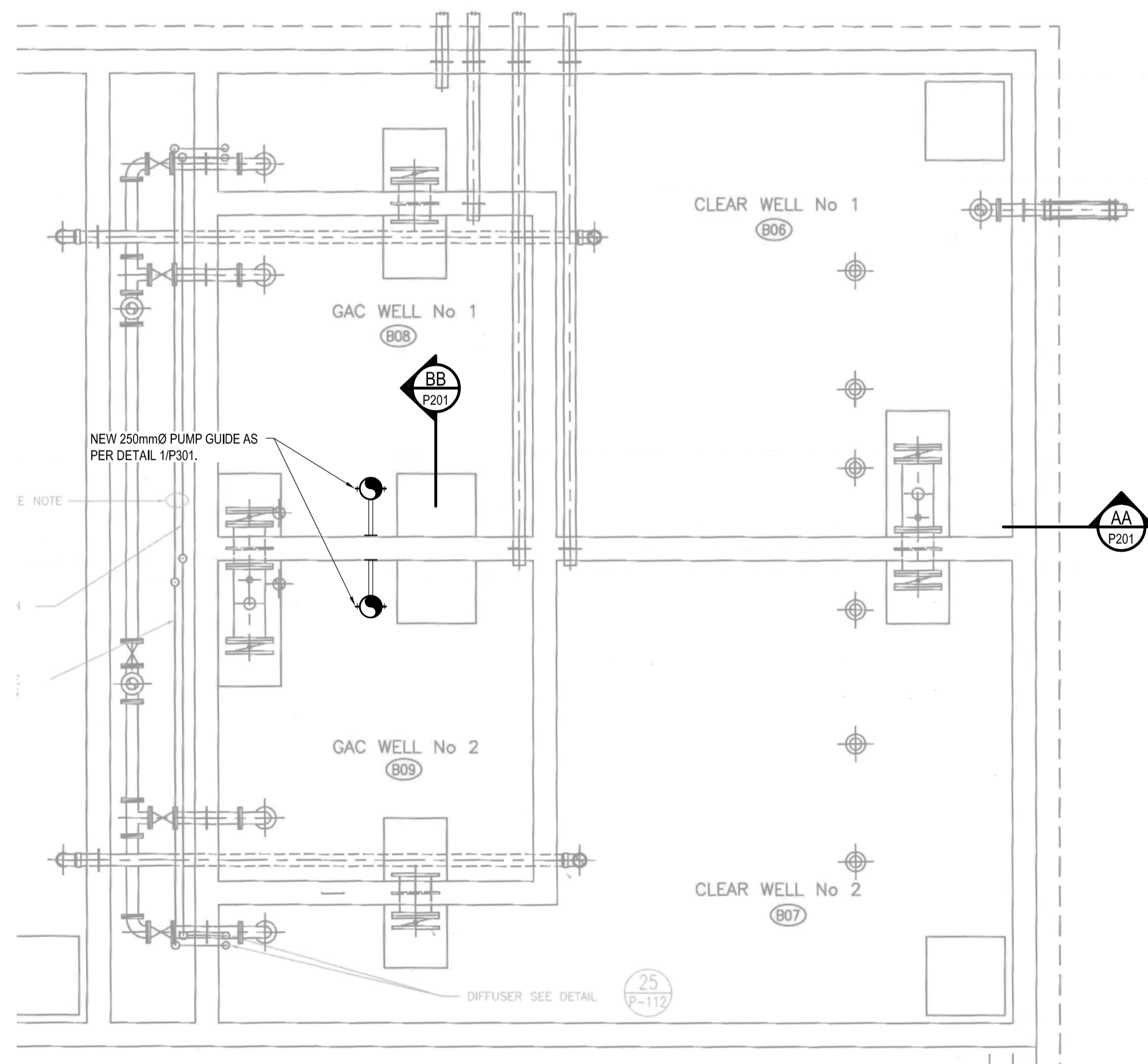
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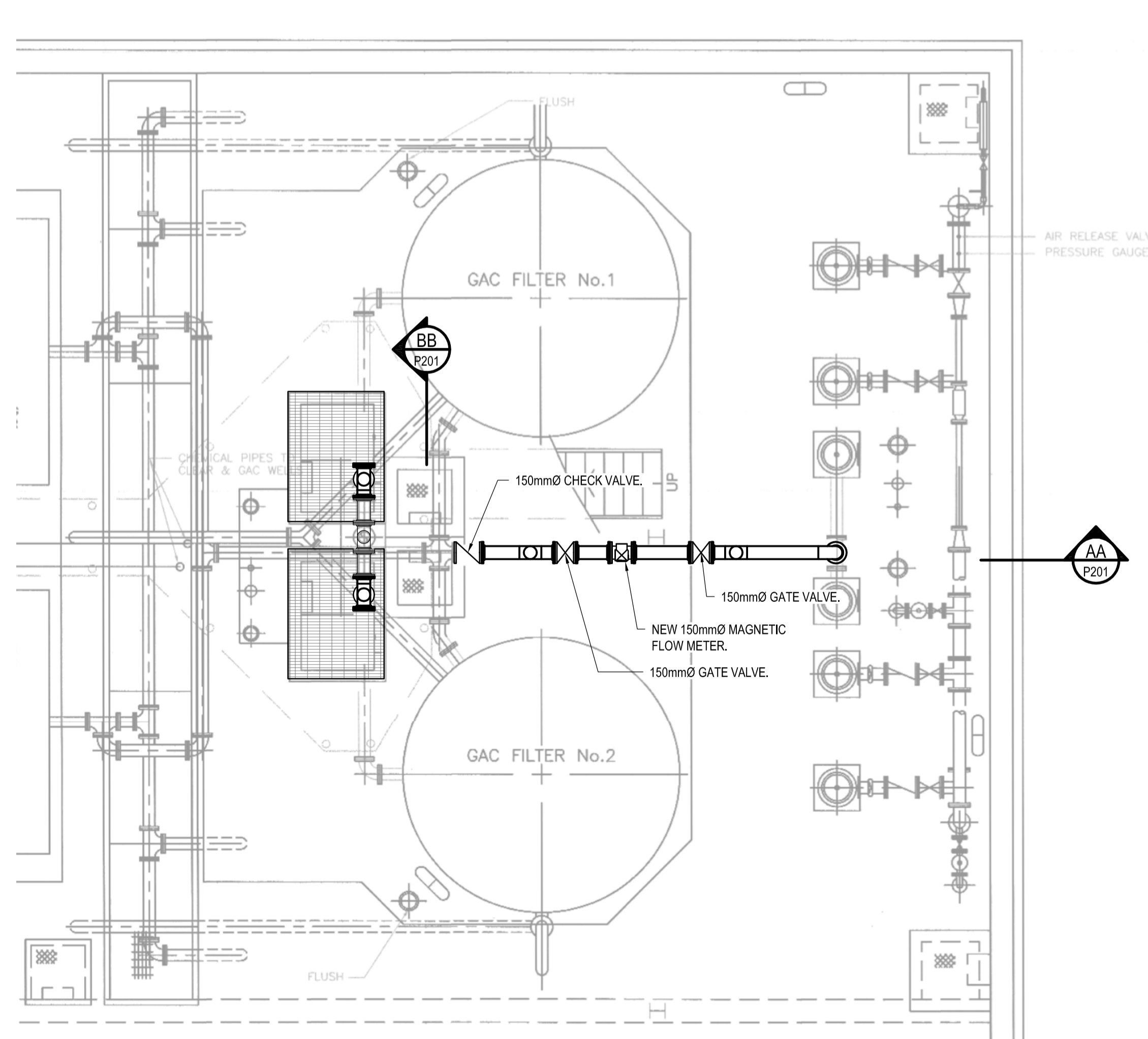
BASEMENT PLAN - REMOVALS
SCALE: 1:50



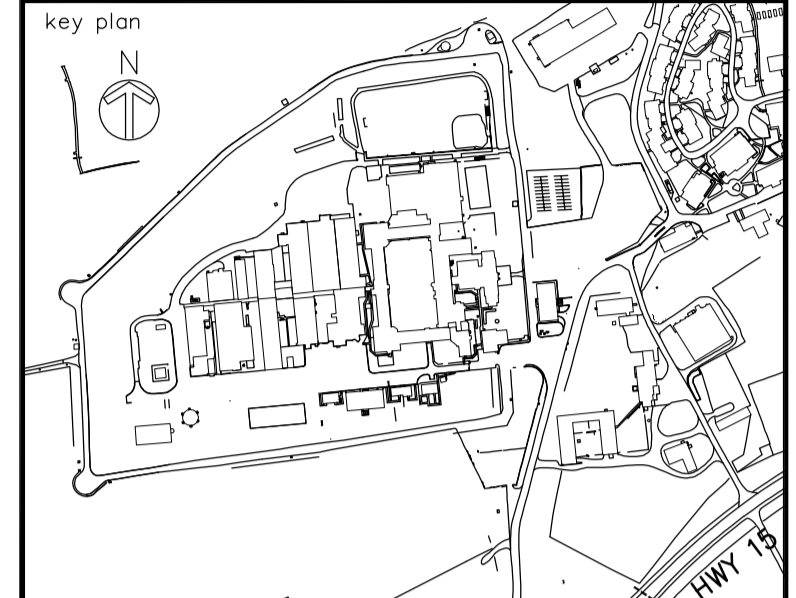
GROUND FLOOR PLAN - REMOVALS
SCALE: 1:50



BASEMENT PLAN - UPGRADES
SCALE: 1:50



GROUND FLOOR PLAN - UPGRADES
SCALE: 1:50



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BASEMENT & GROUND FLOOR
REMOVALS & UPGRADE PLANS**

drawn by / dessiné par **K.B.W.**

designed by / conçu par **J.B.**

approved by / approuvé par **J.B.**

bid / offre project manager / administrateur de projets

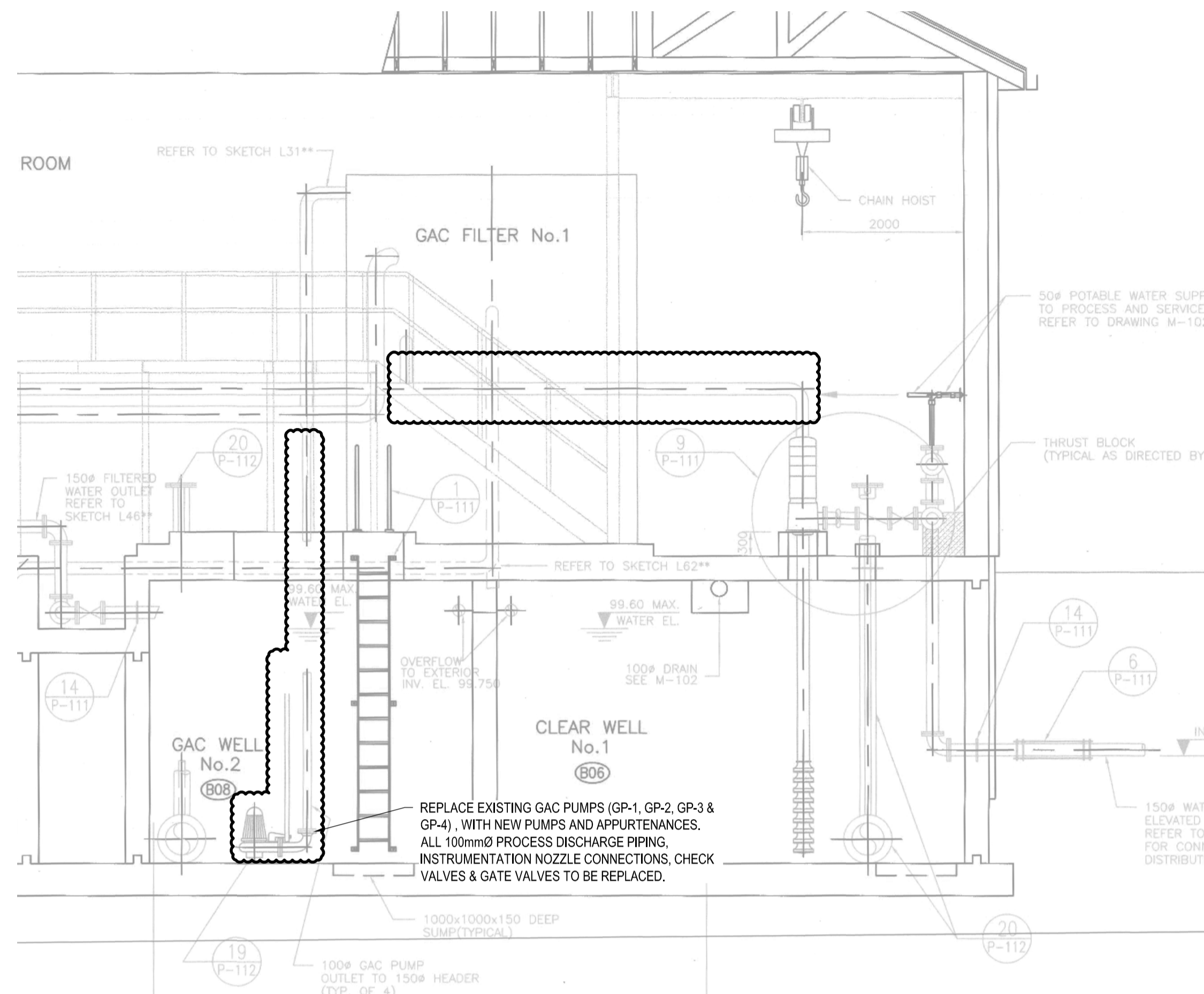
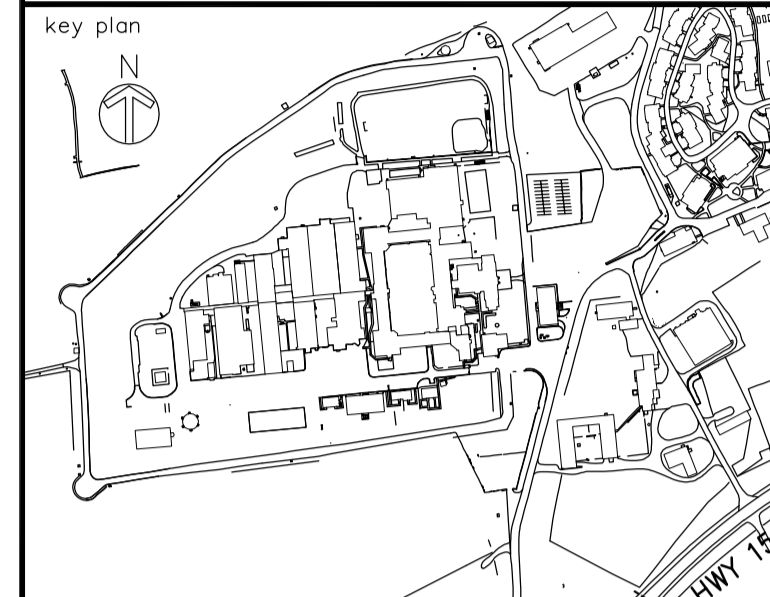
project date / date du projet **APRIL 2017**

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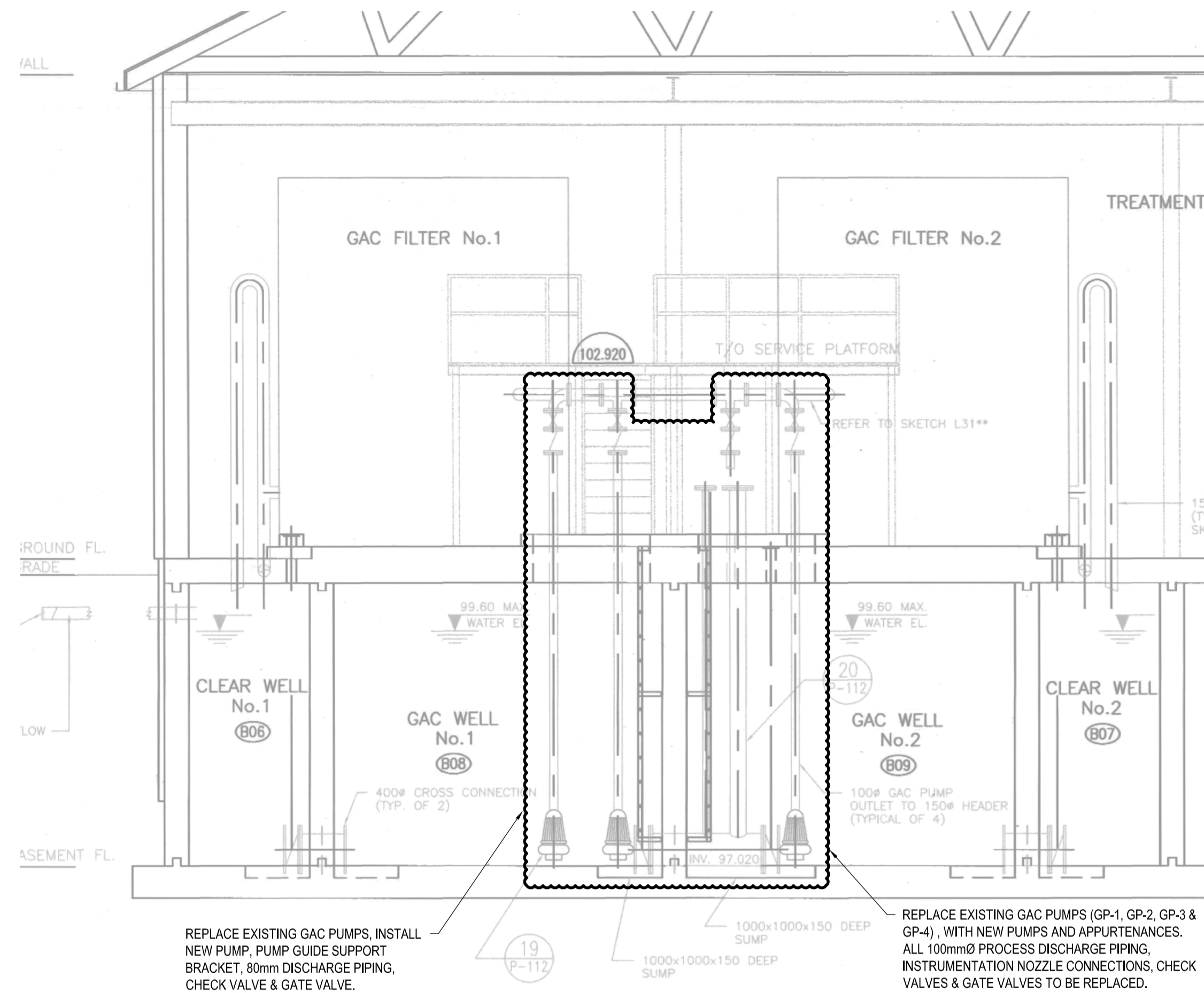
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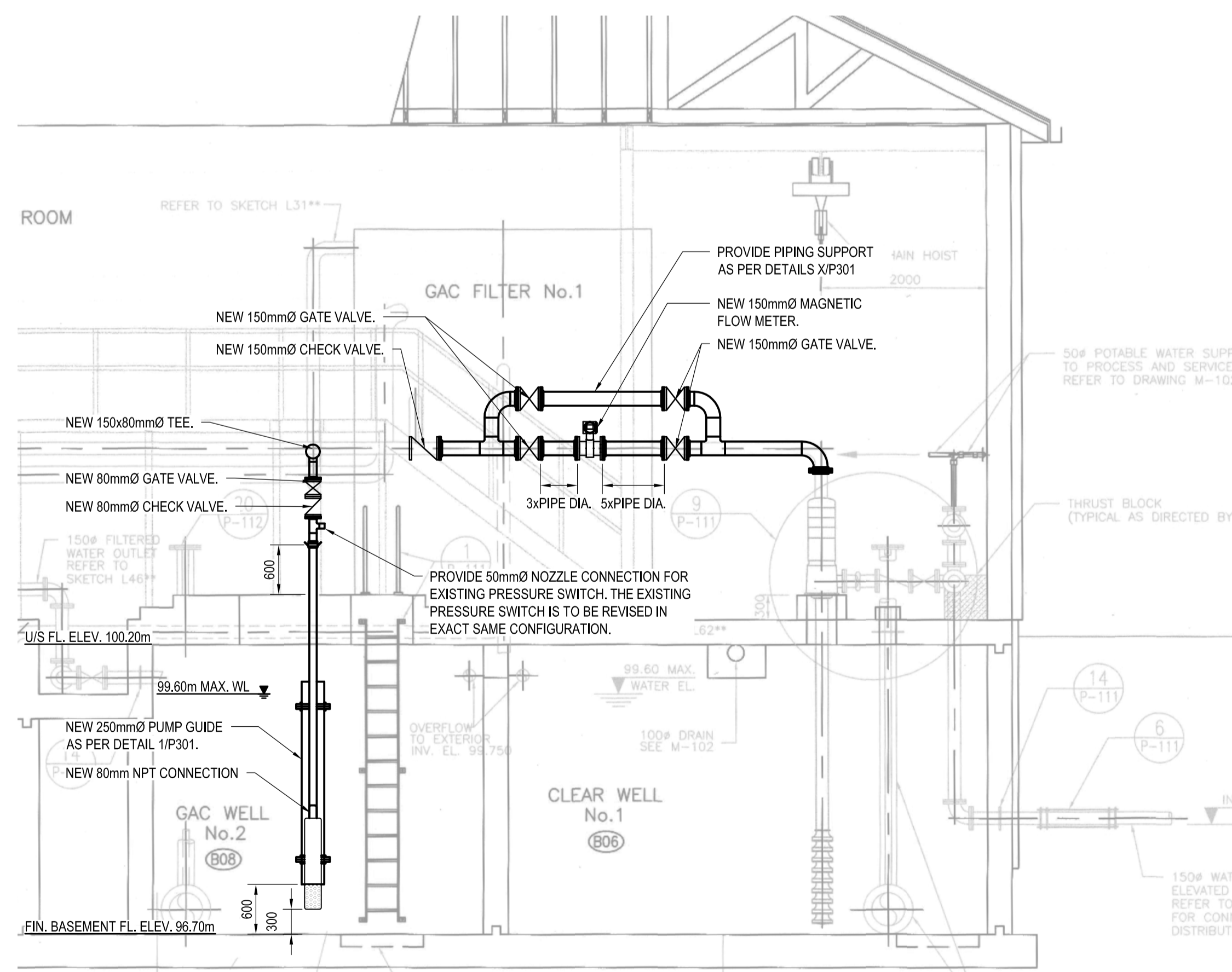
1345 ROSEMOUNT AVENUE
CORNWALL, ONTARIO
CANADA K6J 5E5
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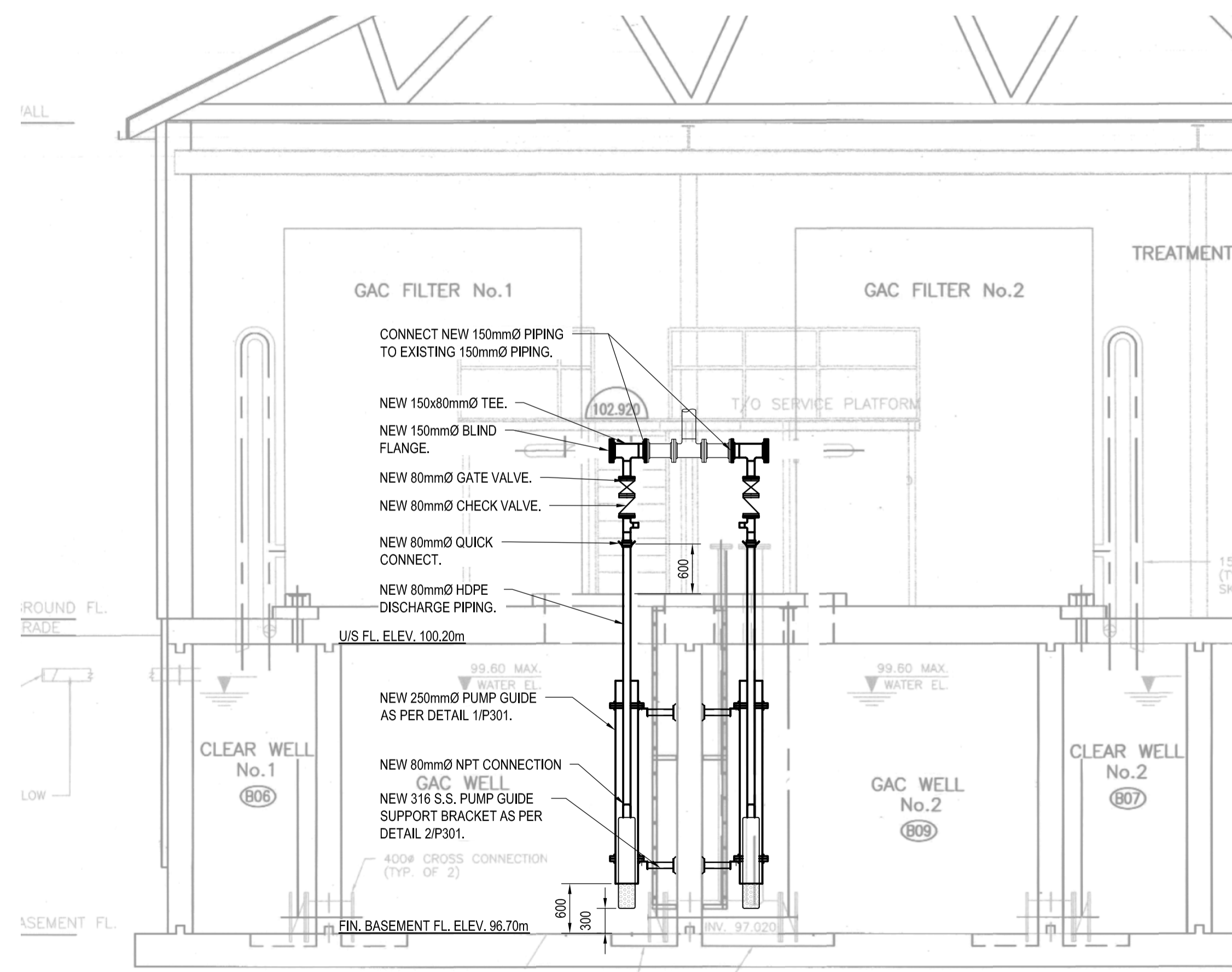
A SECTION A
SCALE: 1:50



B SECTION B
SCALE: 1:50



AA SECTION AA
SCALE: 1:50



BB SECTION BB
SCALE: 1:50

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CROSS-SECTION A & B
PLANS**

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designed by
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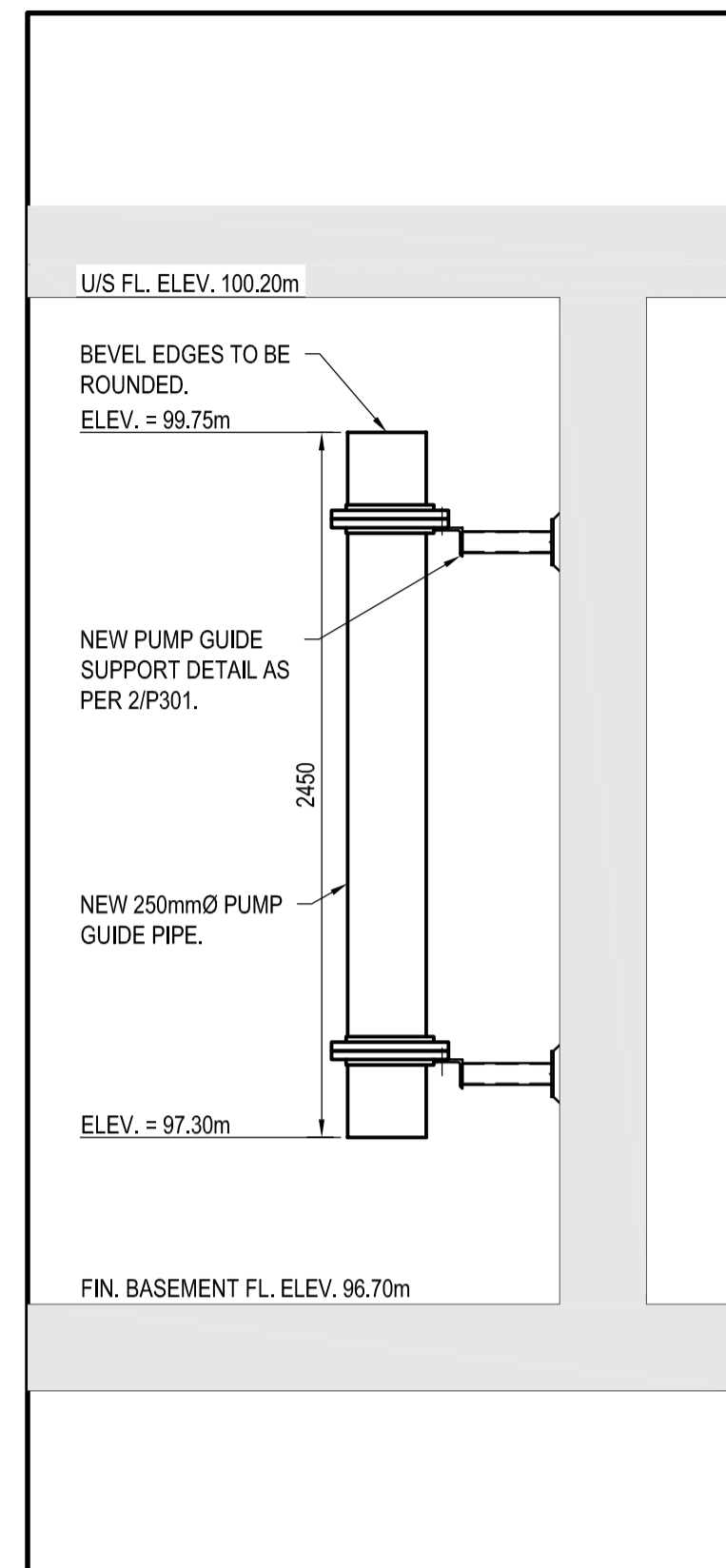
approved by
approuvé par **J.B.**

bid offer
offre de projet **project manager
administrateur
de projets**

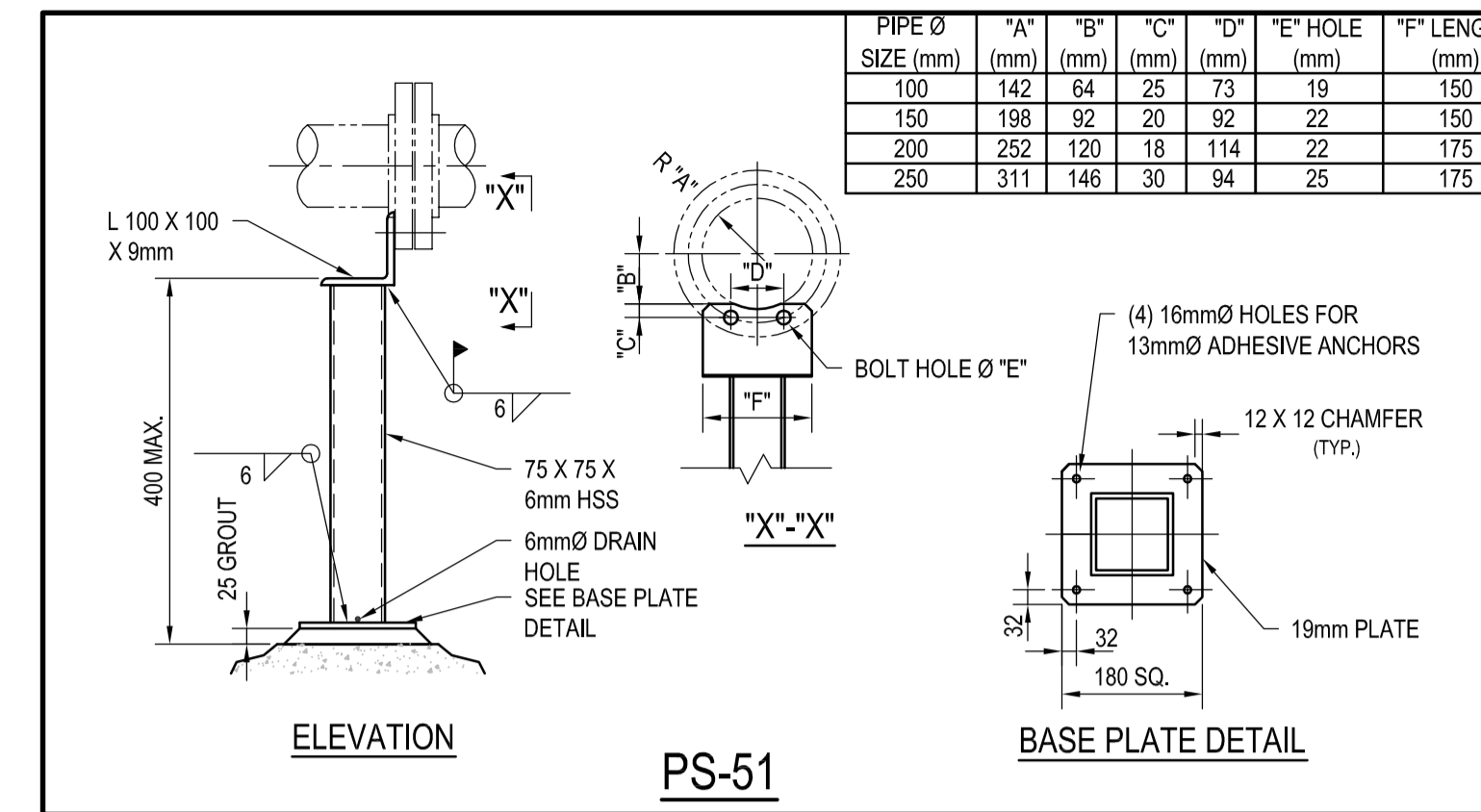
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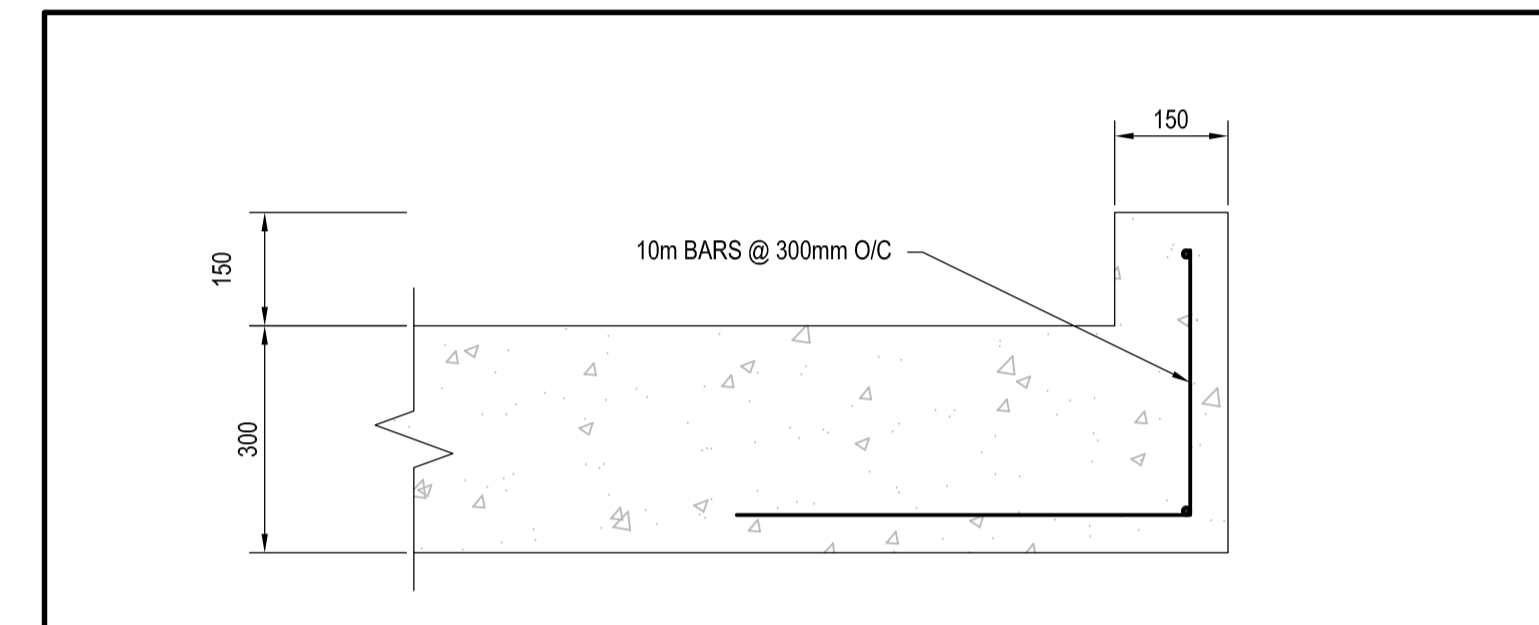
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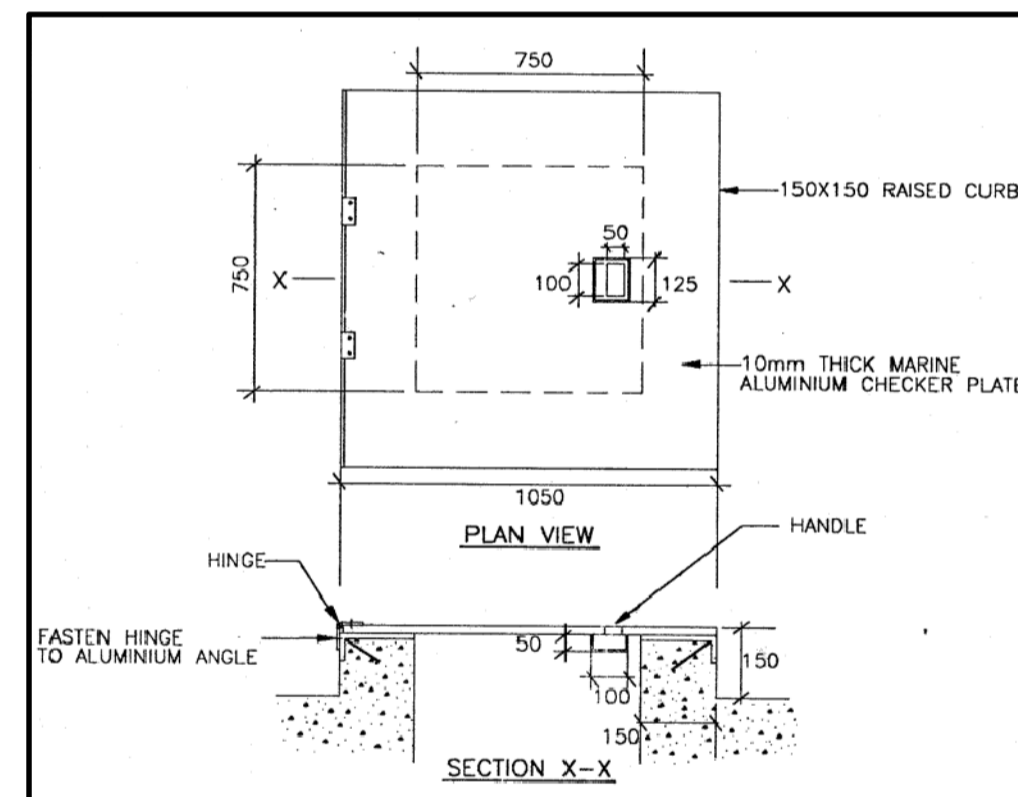
1 PUMP GUIDE DETAIL
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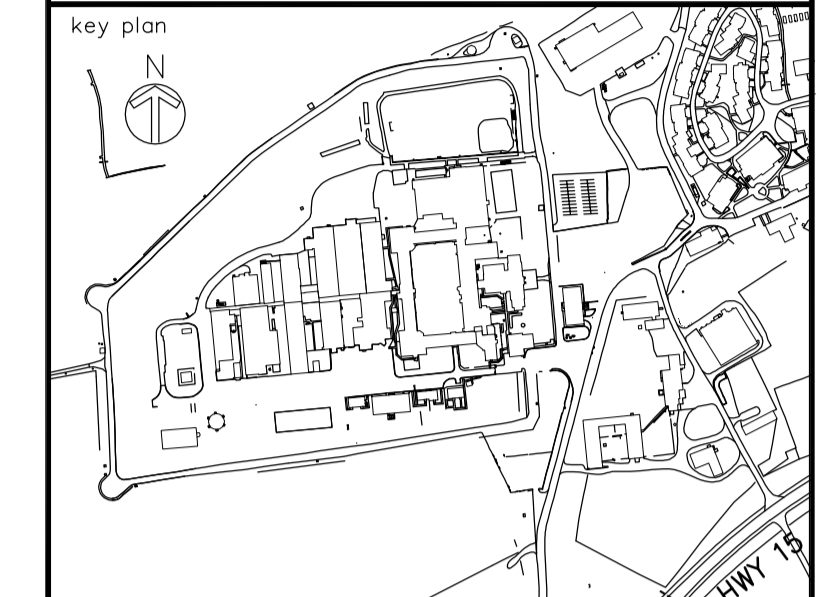
2 PIPE SUPPORT DETAIL PS-51
SCALE: 1:10



3 CURB DETAIL AT HATCHES
SCALE: 1:10



4 ACCESS HATCH DETAIL
SCALE: N.T.S.



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PIPING SUPPORTS & DETAILS**

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designed by
conc par **J.B.**

approved by
approuvé par **J.B.**

bid offer project manager
offre administrateur de projets

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date du projet **APRIL 2017**

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no. du projet **450-2431**

drawing no.
dessiné no. **P301**