

McElhanney Cover D - 2024-02-05
DATE: 2025-07-24, 15:17 FILE: \\corpl\TAL\cadd\2241\2501403 GOSPER Sewer and Uganda LS Upgrades\07 DRAWINGS\01 Sheets\25014-00-000 - UGANDA.dwg

CLIENT

TOWNSHIP OF ESQUIMALT

ADDRESS / CONTACT INFO.

1229 ESQUIMALT RD, ESQUIMALT, CB V9A 3P1

PROJECT NAME

GOSPER SEWER AND UGANDA LS UPGRADES

DESCRIPTION

UGANDA PUMP STATION UPGRADES

McELHANNEY PROJECT

2241-25014-00

STATUS

ISSUED FOR TENDER



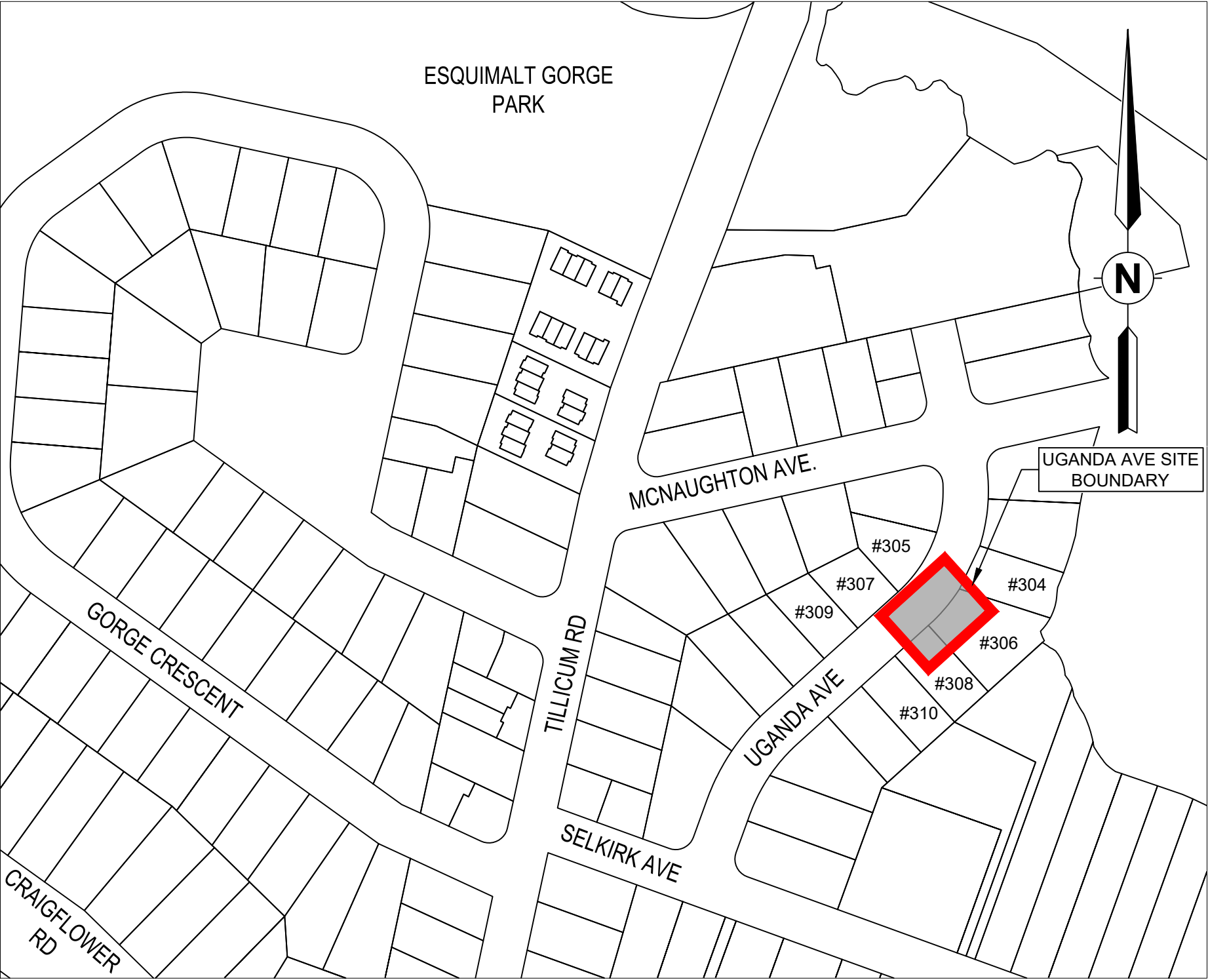
McElhanney

500 - 3960 Quadra Street,
Victoria BC V8X 4A3
Tel. 250 370 9221

DRAWING LIST								
SHEET #	SHEET TITLE	REVISIONS						
		PA	PB	PC	0	1	2	3
C-000	COVER PAGE				X			
C-001	GENERAL NOTES & LEGEND				X			
C-101	UGANDA LS SITE PLAN				X			
E-001	SYMBOLS & DRAWING INDEX				X			
E-002	ELECTRICAL SITE PLAN				X			
E-003	SINGLE LINE DIAGRAM				X			
E-004	KIOSK ELEVATIONS				X			
E-005	GENERATOR AND KIOSK DETAILS				X			
E-900	SPECIFICATIONS				X			
P-100	SCHEMATIC				X			
P-101	PIPE PLAN AND PROFILE				X			
S-000	SPECIFICATIONS				X			
S-001	SPECIFICATIONS				X			
S-100	PLANS				X			
S-300	SECTIONS				X			
S-500	DETAILS				X			
S-501	EQUIPMENT SLAB DETAILS				X			



KEY PLAN
N.T.S.



LOCATION PLAN
1:2000

DATE: 2025-07-24, 22:49 FILE: U:\n\T\TAL-25014\1\Projects\22412501403 Gagep Sewer and Uganda LS Upgrade\07 DRAWINGS\01 Sheets\25014-00-001 - UGANDA.dwg McElhanney ANS D - 2025-01-10

GENERAL NOTES:

1. CODES AND STANDARDS REFERENCED ON THE DRAWINGS SHALL BE THE EDITIONS LISTED IN TABLE 1.3.1.2. OF DIVISION B OF THE CURRENT EDITION OF THE BUILDING CODE UNLESS NOTED OTHERWISE. CODES AND STANDARDS NOT LISTED IN THE BUILDING CODE SHALL BE THE LATEST EDITIONS UNLESS NOTED OTHERWISE.
2. CONSTRUCTION SHALL COMPLY WITH THE CODES AND STANDARDS LISTED ON THE DRAWINGS AS WELL AS ALL APPLICABLE FEDERAL, PROVINCIAL AND MUNICIPAL REGULATIONS AND BYLAWS.
3. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS BEFORE COMMENCING ANY WORK AND NOTIFY THE ENGINEER OF ANY ERRORS OR OMISSIONS.
4. THE CONTRACTOR SHALL COMPARE ALL RELATED DRAWINGS BEFORE COMMENCING ANY WORK AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR INCONSISTENCIES BETWEEN DRAWINGS.
5. DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. ELEVATIONS ARE IN METRES UNLESS NOTED OTHERWISE.
6. ONLY USE WRITTEN DIMENSIONS. DO NOT SCALE OFF THE DRAWINGS.
7. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION UNLESS MARKED ISSUED FOR CONSTRUCTION (IFC) AND SEALED BY A PROFESSIONAL ENGINEER.
8. THESE NOTES SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS. THE MOST STRINGENT SPECIFICATIONS SHALL BE USED IF DISCREPANCIES OR INCONSISTENCIES ARE FOUND BETWEEN THE DRAWINGS AND OTHER CONTRACT DOCUMENTS, UNLESS APPROVED BY THE ENGINEER.
9. MATERIALS SHALL BE NEW AND BE PROTECTED FROM DAMAGE DURING SHIPPING, HANDLING, STORAGE AND INSTALLATION.
10. THESE DRAWINGS ARE FOR THE COMPLETED STRUCTURE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR DEMOLITION PROCEDURES, LIFT PLANS AND TEMPORARY SUPPORTS REQUIRED TO SUPPORT CONSTRUCTION LOADS AND TO KEEP THE STRUCTURE PLUMB AND LEVEL DURING CONSTRUCTION. THE CONTRACTOR'S RESPONSIBILITIES INCLUDE, BUT ARE NOT LIMITED TO THE DESIGN, INSTALLATION AND INSPECTION OF ALL TEMPORARY BRACING, FALSEWORK, FORMWORK, SHORING, AND RESHORING. DEMOLITION PROCEDURES, LIFT PLANS AND TEMPORARY SUPPORTS SHALL COMPLY WITH THE OCCUPATIONAL HEALTH AND SAFETY REGULATION (OSHR).
11. MATERIALS SHALL BE ORDERED IN A TIMELY MANNER TO ENSURE PROCUREMENT TIMES DO NOT NEGATIVELY IMPACT THE PROJECT SCHEDULE.
12. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL COMPONENTS AND THEIR ATTACHMENT DESIGNED BY THE CONTRACTOR'S ENGINEER TO THE ENGINEER FOR REVIEW AT LEAST TWO WEEKS PRIOR TO FABRICATION. THE DRAWINGS SHALL BE SEALED BY THE CONTRACTOR'S ENGINEER. THE SHOP DRAWINGS SHALL SHOW ALL DETAILS, MATERIAL SPECIFICATIONS AND DESIGN LOADS. THE CONTRACTOR'S ENGINEER SHALL PROVIDE SCHEDULES S-B FOR THEIR SCOPE OF WORK.
13. THE REVIEW OF SHOP DRAWINGS BY THE ENGINEER IS FOR THE SOLE PURPOSE OF REVIEWING GENERAL CONFORMANCE WITH THE DESIGN CONCEPTS ONLY. THE DETAILED DESIGN REMAINS THE RESPONSIBILITY OF THE FABRICATOR/CONTRACTOR. ALL PORTIONS SHALL BE ERECTED AND ASSEMBLED IN ACCORDANCE WITH APPROVED SHOP AND ERECTION DRAWINGS. NO FABRICATION OR ERECTION SHALL TAKE PLACE WITHOUT THE ENGINEER HAVING REVIEWED AND APPROVED THE SHOP AND ERECTION DRAWINGS.
14. THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE CORRECTION OF DEFICIENCIES, AS DIRECTED BY THE ENGINEER.
15. DO NOT INSTALL OPENINGS, SET INSERTS, DRILL OR ATTACH TO STRUCTURAL ELEMENTS WITHOUT AUTHORIZATION FROM THE ENGINEER, UNLESS NOTED ON DRAWINGS.

FIELD REVIEWS:

1. THE ENGINEER SHALL BE NOTIFIED OF THE CONSTRUCTION SCHEDULE IN ORDER TO SCHEDULE FIELD REVIEWS. IF THE ENGINEER IS NOT AFFORDED THE OPPORTUNITY TO REVIEW THE STRUCTURAL WORKS PRIOR TO CONCEALMENT, THEN FINAL CERTIFICATION OF THE PROJECT WILL NOT BE ISSUED.
2. THE ENGINEER SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE FOR FIELD REVIEWS OF THE FOLLOWING:

CONCRETE CUTTING, AFTER CUTTING
STRUCTURAL STEEL, AFTER INSTALLATION BEFORE GROUTING

3. ALL WORK SHALL BE MADE ACCESSIBLE FOR FIELD REVIEWS. FAILURE TO GIVE THE REQUIRED NOTIFICATION AND ACCESSIBILITY MAY RESULT IN THE ENGINEER REQUIRING THE REMOVAL AND REPLACEMENT OF THE WORK AT THE CONTRACTOR'S EXPENSE.
4. THE CONTRACTOR SHALL REVIEW SUB-CONTRACTORS' WORK PRIOR TO THE ENGINEER'S FIELD REVIEW.
5. FIELD REVIEWS ARE PROVIDED ONLY FOR THE WORK SHOWN ON THE STRUCTURAL DRAWINGS PREPARED BY THE ENGINEER. REVIEWS ARE PERIODIC, AND AT THE PROFESSIONAL JUDGEMENT OF THE ENGINEER TO DETERMINE THAT THE WORK IS IN GENERAL CONFORMANCE WITH THE DRAWINGS AND CONTRACT DOCUMENTS, AND TO FACILITATE COMPLETION OF THE LETTERS OF ASSURANCE REQUIRED BY THE AUTHORITY HAVING JURISDICTION (AHJ).
6. FIELD REVIEWS SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY AND OBLIGATION TO COMPLY WITH DRAWINGS AND CONTRACT DOCUMENTS. QUALITY CONTROL REMAINS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
7. MANUFACTURERS OF ELEMENTS DESIGNED BY THEIR ENGINEER, FOR EXAMPLE TRUSSES, SHALL PROVIDE SEALED CERTIFICATION FOR THEIR MANUFACTURE AND INSTALLATION PRIOR TO CONCEALMENT.
8. ADDITIONAL FIELD REVIEWS THAT ARE REQUIRED DUE TO DEFICIENT OR INCOMPLETE WORK SHALL BE AT THE CONTRACTOR'S EXPENSE.

CONCRETE NOTES

1. NO CONCRETE WORKS SHALL BE ALLOWED IF THE CURRENT TEMPERATURE ON SITE IS BELOW 5°C OR ABOVE 32°C.
2. IF TEMPERATURES ARE EXPECTED TO DROP BELOW FREEZING WITHIN THE 5 DAY WINDOW FOLLOWING A CONCRETE POUR A THERMO BLANKET WILL BE REQUIRED TO MAINTAIN CONCRETE TEMPERATURES.
3. IF CONCRETE IS POURED AT TEMPERATURES ABOVE 25°C IT SHALL BE SPRAYED WITH WATER 5 TIMES PER DAY AT REASONABLE INCREMENTS BETWEEN THE HOURS OF 10am AND 3pm.
4. CONCRETE WORKS TO BE COMPLETED DURING RAIN EVENTS MAY BE ALLOWED AT THE DISCRETION OF THE CONTRACT ADMINISTRATOR. IN THE EVENT THAT CONCRETE IS POURED OCCURRED DURING A RAIN EVENT THE CONTRACTOR SHALL PROVIDE A PLASTIC COVERING THAT IS MAINTAINED TO PROTECT THE CONCRETE FOR A MINIMUM OF 24 HOURS.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE MONITORING OF FRESHLY POURED CONCRETE TO ENSURE NO DAMAGE IS CAUSED. ANY DAMAGE OR DEFACEMENT OF FRESHLY POURED SURFACES SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

ENVIRONMENTAL NOTES

1. ALL INLET STRUCTURES IN PROXIMITY TO TRENCH WORK OR EXPOSED ROAD BASE WILL BE FITTED WITH MANUFACTURED INLET CONTROL DEVICES AND/OR 'FILTER SACK' TYPE CATCHBASIN CONTROL (OR APPROVED ALTERNATIVE). CONTROL DEVICES TO BE MAINTAINED AT A REASONABLE INTERVAL TO ACHIEVE A FULLY FUNCTIONAL STATE AT ALL TIMES.
2. INLET CONTROL DEVICES (I.E. FILTER SACKS) MUST HAVE A MINIMUM 8" DROP FROM SURFACE OF THE CATCHBASIN.
3. UNDER NO CIRCUMSTANCES ARE CATCHBASINS TO BE FITTED WITH GEOTEXTILE SHEATHS CUT FROM STOCKPILE ROLLS.
4. AVOID EARTH-DISTURBING ACTIVITIES DURING SUBSTANTIAL RAIN EVENTS.
5. AVOID STOCKPILING SOILS, SANDS AND OTHER ERODIBLE MATERIALS ONSITE. IT IS PREFERABLE TO 'HOT-LOAD' SOIL DIRECTLY INTO TRUCKS FOR OFFSITE DISPOSAL. IF TEMPORARY WASTE OR SOIL STOCKPILES ARE NECESSARY, MAKE SURE THEY ARE FULLY COVERED WITH TARPS AND WEIGHTED WITH SANDBAGS.
6. TRACKING OF SEDIMENT, SOIL AND/OR ROADBASE FROM WORKSITE TO VEHICLE TRAVEL LANES MUST BE PREVENTED.
7. ROADS MUST BE SWEEP CLEAN OF SOIL, LOOSE ROAD BASE, EARTH AND SEDIMENT. MECHANICAL SWEEPING IS PREFERRED TO MANUAL SWEEPING; HOWEVER, FREQUENT HAND SWEEPING IS PREFERABLE TO ONCE DAILY MECHANICAL SWEEPING.
8. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT NO SEDIMENT OR SEDIMENT-LADEN WATER IS DISCHARGED FROM THE WORKS TO THE OWNER'S DRAINAGE SYSTEM.
9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DEVELOP AND PROVIDE TO THE OWNER ONGOING ENVIRONMENTAL SUBMITTALS WITHIN 15 DAYS AFTER NOTICE OF AWARD:

9.1 AN EMERGENCY PLAN THAT PROVIDES WRITTEN SAFE WORK PROCEDURES IN THE EVENT OF A SPILL.

9.1.1 AN EMERGENCY SPILL KIT WILL BE KEPT ONSITE AT ALL TIMES THE CONTRACTOR IS OPERATING. SPILL KITS MUST INCLUDE BOOMS, SPILL PADS, GLOVES, AND CATCHBASIN BARRIERS. A SPILL KIT WITH AT LEAST 125 LITRES ABSORBENCY IS RECOMMENDED. SANDBAGS AND A SUPPLY OF SAND MUST BE KEPT ONSITE.
- 9.2 AN EROSION AND SEDIMENT CONTROL PLAN (ESC).
10. THE CONTRACTOR IS TO HAVE ONSITE SODIUM THIOSULPHATE TO TREAT CHLORINATED WATER IN THE EVENT OF A WATER MAIN BREAK.
11. CONTRACTOR TO APPLY FOR AND OBTAIN ALL REGULATORY AND OPERATIONAL PERMITS. ROAD OCCUPATION PERMITS (ROPs) MUST BE APPLIED FOR. FEE FOR ROP PERMIT WILL BE WAIVED.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF ALL EXCAVATED MATERIAL UNSUITABLE FOR REUSE AT A SUITABLE OFF-SITE DISPOSAL AREA, IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.
13. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY EXISTING ROAD SURFACES, SERVICES, SIGNS, LANDSCAPING, DRIVEWAY LETDOWNS, PRIVATE LANDSCAPING, OR PRIVATE IMPROVEMENTS THAT MAY BE DAMAGED AS A RESULT OF CONSTRUCTION. REPAIRS TO EXISTING TOWN SERVICES SUCH AS WATER, SANITARY SEWER, STORM SEWER, AND STREET OR TRAFFIC LIGHTING MAY BE MADE BY THE OWNER AT COST TO THE CONTRACTOR. REPAIRS TO EXISTING SURFACE WORKS MAY BE DONE BY THE CONTRACTOR AT THE DISCRETION OF THE CONTRACT ADMINISTRATOR.
14. THE LOCATION OF EXISTING UTILITIES IS COMPILED FROM OWNER AND UTILITY SUPPLIED RECORD DRAWINGS AND ARE CONSIDERED APPROXIMATE ONLY. THE EXACT LOCATION AND EXTENT OF UTILITIES SHOULD BE DETERMINED BY CONSULTING THE LOCAL AUTHORITIES AND UTILITY COMPANIES CONCERNED.
15. REPORT ANY DISCREPANCIES TO THE CONTRACT ADMINISTRATOR A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION TO ENSURE THAT THE LINE AND GRADE OF THE PROPOSED WORK CAN BE ADJUSTED TO SUIT FIELD CONDITIONS AS REQUIRED.
16. RESTORATION OF EXISTING DRIVEWAYS, CURBS, STAIRS AND WALKWAYS TO CONFORM TO TOWNSHIP OF ESQUIMALT SPECIFICATIONS AND TO BE INCIDENTAL TO UNIT PRICES IN THE CONTRACT.

LEGEND

LEGAL PROPERTY		DESCRIPTION
EXISTING	PROPOSED	EASEMENT
		PROPERTY LINES

ROAD		DESCRIPTION
EXISTING	PROPOSED	EDGE OF PAVEMENT

SANITARY SEWER		DESCRIPTION
EXISTING	PROPOSED	GRAVITY SEWER MAIN
		FORCE MAIN
		SERVICE CONNECTION
		SEWER MANHOLE
		INSPECTION CHAMBER
		CLEANOUT

STORM SEWER		DESCRIPTION
EXISTING	PROPOSED	GRAVITY STORM MAIN/INVERT
		CULVERT
		CB LEAD
		STORM MANHOLE
		INSPECTION CHAMBER
		CATCHBASIN
		CLEANOUT

WATER		DESCRIPTION
EXISTING	PROPOSED	WATERMAIN
		SERVICE CONNECTION
		WATER HYDRANT
		CAP
		VALVE
		WATER MANHOLE

THIRD PARTY UTILITIES		DESCRIPTION
EXISTING	PROPOSED	OVERHEAD ELECTRICAL
		GAS
		OVERHEAD TEL
		FIBRE-OPTIC
		POWER POLE
		GUY ANCHOR POLE
		GUY ANCHOR

SITE		DESCRIPTION
EXISTING	PROPOSED	SIGN

BENCHMARK

ALL ELEVATION REFER TO CONTROL MONUMENT : 84H0219 (GCM 914705)
LOCATED AT : N 5385476.074, E 470263.308
ELEVATION: 14.199

NOT TO SCALE

ORIGINAL DWG SIZE: ANSI D (22" x 34")



McElhanney

500 - 3960 Quadra Street,
Victoria BC V8X 4A3
Tel. 250 370 9221

PERMIT TO PRACTICE
McElhanney Ltd.
PERMIT NUMBER: 1003299
Engineers and Geoscientists of BC

NOT FOR
CONSTRUCTION

Approved Sealed

TOWNSHIP OF ESQUIMALT

1229 ESQUIMALT RD, ESQUIMALT, CB V9A 3P1

UGANDA PUMP STATION UPGRADES
CIVIL
GENERAL NOTES AND LEGEND

Drawing No.

C-001

Project Number

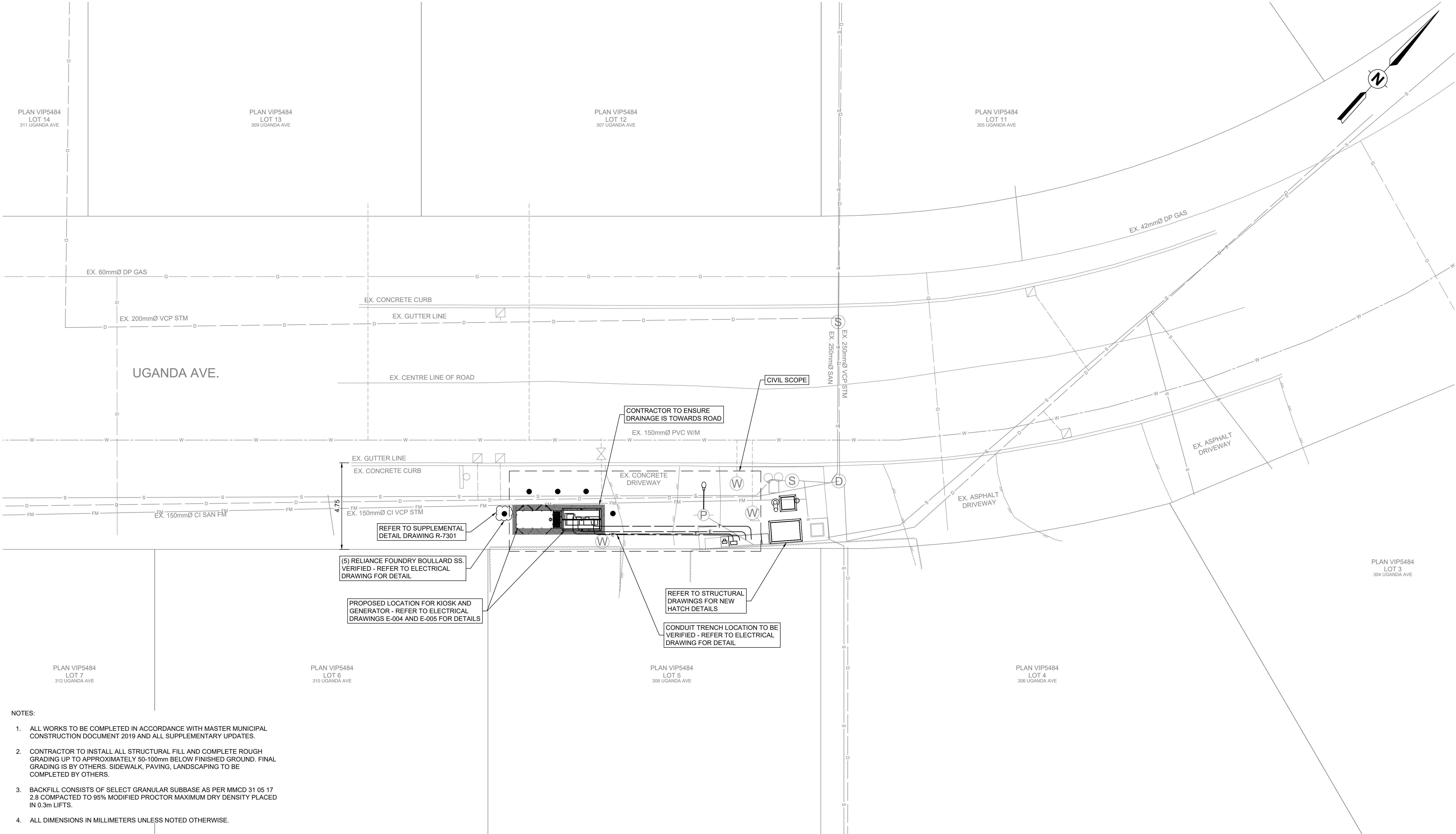
2241-25014-00

Rev.

0

DESTROY ALL PRINTS BEARING PREVIOUS REVISION

McElhanney ANS D - 2025-01-10
DATE: 2025-07-24, 22:18 FILE: \\victoria\IT\AutoCAD\2024\Projects\22412501403 Gaspar Sewer and Uganda LS Upgrades\07 DRAWINGS\01 Sheets\25014-03-101 - UGANDA.dwg



DATE: 2025-07-24, 12:18 FILE: \cwp\p\2241-25014-00.dwg										THIS DRAWING AND DESIGN IS THE PROPERTY OF McELHANNEY AND SHALL NOT BE USED, REUSED OR REPRODUCED WITHOUT THE CONSENT OF McELHANNEY. McELHANNEY WILL NOT BE HELD RESPONSIBLE FOR THE IMPROPER OR UNAUTHORIZED USE OF THIS DRAWING AND DESIGN.										BENCHMARK ALL ELEVATION REFER TO CONTROL MONUMENT: 84H0219 (GCM 914705) LOCATED AT: N 5365476.074, E 470263.308 ELEVATION: 14.199										 500 - 3960 Quadra Street, Victoria BC V8X 4A3 Tel. 250 370 9221										PERMIT TO PRACTICE McElhanney Ltd. PERMIT NUMBER: 1003299 Engineers and Geoscientists of BC										NOT FOR CONSTRUCTION										TOWNSHIP OF ESQUIMALT 1229 ESQUIMALT RD, ESQUIMALT, CB V9A 3P1 UGANDA PUMP STATION UPGRADES CIVIL UGANDA LS SITE PLAN										Drawing No. C-101																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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ORIGINAL DWG SIZE: ANSI D (22" x 34")										Approved Sealed																				Project Number 2241-25014-00										Rev. 0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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DESTROY ALL PRINTS BEARING PREVIOUS REVISION

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THIS DRAWING IS THE PROPERTY OF MUELLHANNEN AND SHALL NOT BE USED, REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN CONSENT OF MUELLHANNEN. MUELLHANNEN WILL NOT BE HELD RESPONSIBLE FOR ANY DAMAGE, LOSS, OR INJURY RESULTING FROM THE USE OF THIS DRAWING FOR ANY PURPOSE OTHER THAN THAT AUTHORIZED BY THE DESIGN AND DESIGNER.

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UNDERGROUND FACILITIES MAY NOT BE COMPLETE OR ACCURATE. ENGINEERS AND DIRECTORS ARE NOT RESPONSIBLE NOR LIABLE FOR THE LOCATION, DEPTH, OR CONDITION OF UNDERGROUND FACILITIES, PIPES, CABLES OR OTHER FACILITIES. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL EXPOSE ALL UNDERGROUND FACILITIES BY HAND DIGGING OR HYDROVAC AND ADVISE THE ENGINEER OF ANY DISCREPANCIES.

ORIGINAL DWG SIZE: ANSI D (22" x 34")

PANEL A

MOUNTING - WALL
LOCATION - ELECTRICAL KIOSK
FEEDER PANEL - 208V SPLITTER
FEEDER BKR - 100A 2P

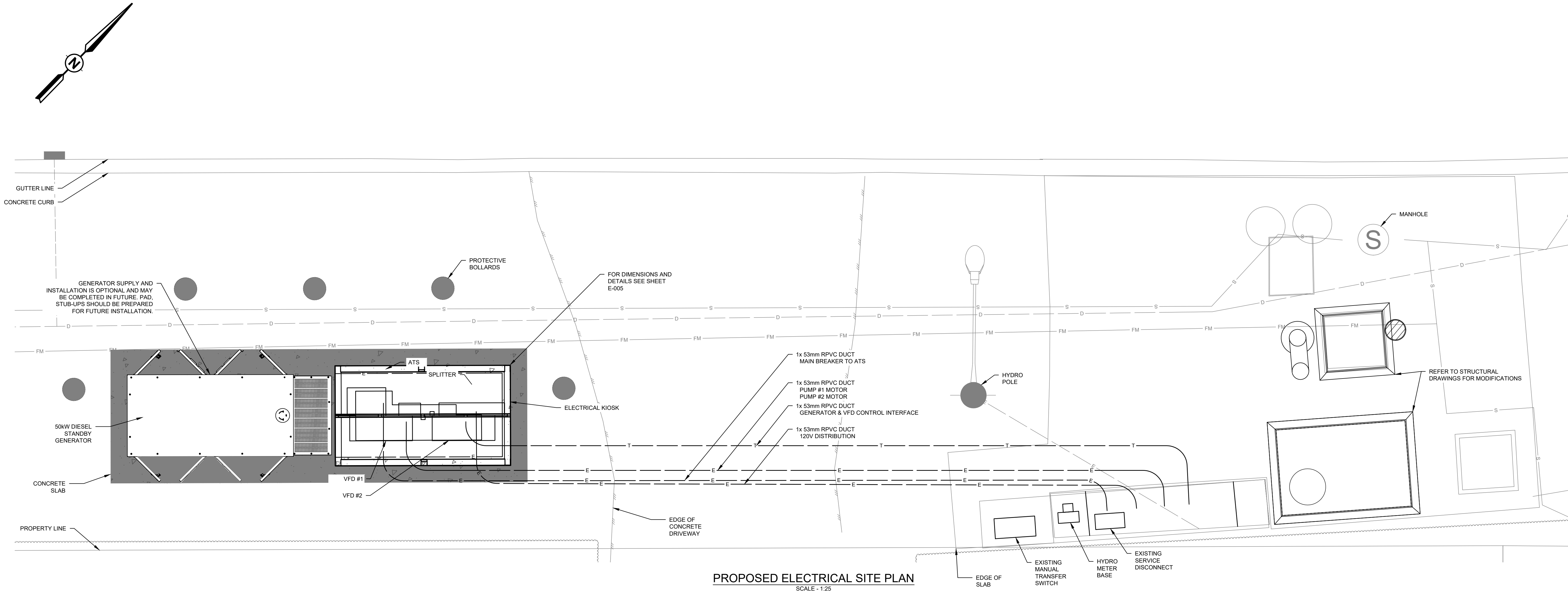
FEEDER SIZE - 3c #3
VOLTAGE - 120/208 1Ø 3W
MAIN BUS - 100A
MAIN BREAKER - N/A

NOTE	DESCRIPTION	BKR	CIRCUIT	BKR	DESCRIPTION	NOTE
..	KIOSK LIGHTS & RECEPTACLES	15 01	—	02 15	SPARE	..
..	KIOSK HEATER	15 03	—	04 15	KIOSK HEATER	..
..	KIOSK COOLING FAN	15 07	—	08 15	KIOSK COOLING FAN	..
..	GENERATOR AUXILIARY LOAD	40 09	—	10 15	SPARE	..
..	CENTER	40 11	—	12 15	SPARE	..
..	CONTROL PANEL	15 13	—	14 15	CONTROL PANEL UPS	..
..	..	15 15	—	16 15	..	..
..	..	15 17	—	18 15	..	..
..	..	15 19	—	20 15	..	..
..	..	15 21	—	22 15	..	..
..	..	15 23	—	24 15	..	..
..	..	15 25	—	26 15	..	..
..	..	15 27	—	28 15	..	..
..	..	15 29	—	30 15	EMERGENCY LIGHTS	..



TOWNSHIP OF ESQUIMALT 1229 ESQUIMALT ROAD, ESQUIMALT, BC V9A 3P1 UGANDA PUMP STATION UPGRADES ELECTRICAL SYMBOLS & DRAWING INDEX	Drawing No. E-00
	Project Number 2241-25014-00

DATE: 2025-07-24, 2:07 FILE: X:\2241\Projects\22412501400 Gaspar Sewer and Upgrade\LS Upgrade\07_DRAWINGS\01_Sheets\2241-25014-00_Elect.dwg
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01:251

ORIGINAL DWG SIZE: ANSI D (22" x 34")

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TOWNSHIP OF ESQUIMALT
1229 ESQUIMALT ROAD, ESQUIMALT, BC V9A 3P1

UGANDA PUMP STATION UPGRADES
ELECTRICAL
ELECTRICAL SITE PLAN

Drawing No.

E-002

Project Number

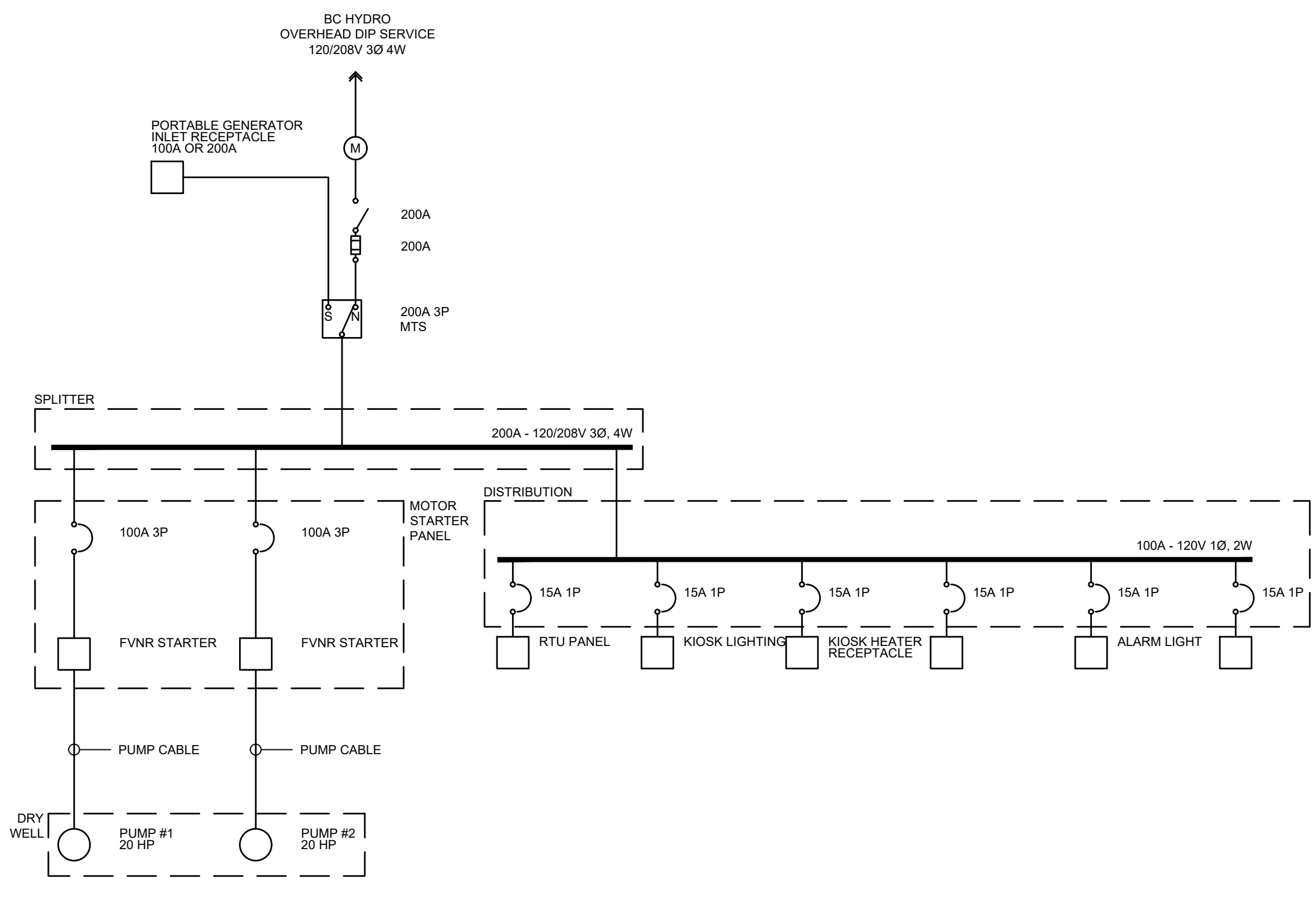
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Rev.

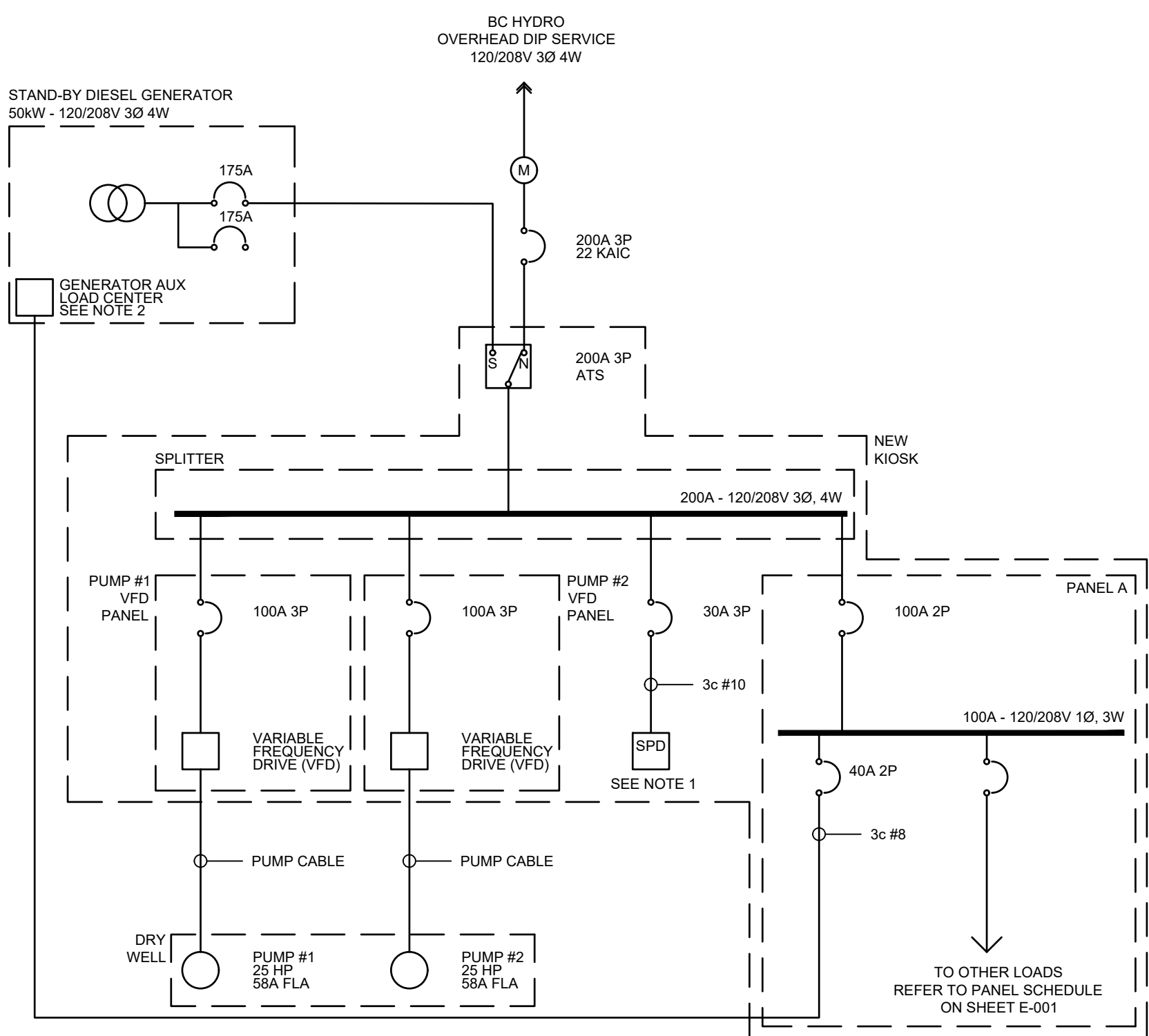
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DESTROY ALL PRINTS BEARING PREVIOUS REVISION

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EXISTING SINGLE LINE DIAGRAM
SCALE - NTS



PROPOSED SINGLE LINE DIAGRAM
SCALE - NTS

SINGLE LINE DIAGRAM NOTES:

1. SURGE PROTECTION DEVICE TO BE TOTAL PROTECTION SOLUTIONS TK-ST160-3Y208 OR APPROVED EQUAL.
2. GENERATOR ENCLOSURE SHALL COME WITH LOAD CENTER. ALL ENCLOSURE AUXILIARY LOADS (HEATER, LIGHTS, PLUG, DAMPERS, BATTERY CHARGER ETC.) TO BE WIRED TO GENERATOR LOAD CENTER.

INSTALLATION SEQUENCING NOTES:

1. NEW PUMPS TO BE INSTALLED AND RUN FROM EXISTING FULL VOLTAGE, NON-REVERSING MOTOR STARTERS IN EXISTING KIOSK.
2. EITHER MAIN SERVICE DISCONNECT TO BE REPLACED WITH SERVICE ENTRANCE RATED BREAKER IN EXISTING KIOSK, TO FEED ATS, OR MAIN SERVICE BREAKER INSTALLED IN NEW KIOSK (AS SHOWN ON E-004).
3. IF GENERATOR IS NOT INITIALLY INSTALLED, THE MTS COULD BE RE-PURPOSED FOR USE IN THE NEW KIOSK TEMPORARILY UNTIL THE GENERATOR AND ATS ARE PROCURED AND INSTALLED.
4. ALONGSIDE THE INSTALLATION AND COMMISSIONING OF THE VFDs IN THE NEW KIOSK (POTENTIALLY AFTER THE RAINY SEASON ONCE THE NEW PUMPS HAVE BEEN OPERATING SUCCESSFULLY), CONTROL PANEL HMI TO BE UPGRADED AND CONTROLS TO BE INTEGRATED WITH VFDs.

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TOWNSHIP OF ESQUIMALT
1229 ESQUIMALT ROAD, ESQUIMALT, BC V9A 3P1

UGANDA PUMP STATION UPGRADES
ELECTRICAL
SINGLE LINE DIAGRAM

Drawing No.

E-003

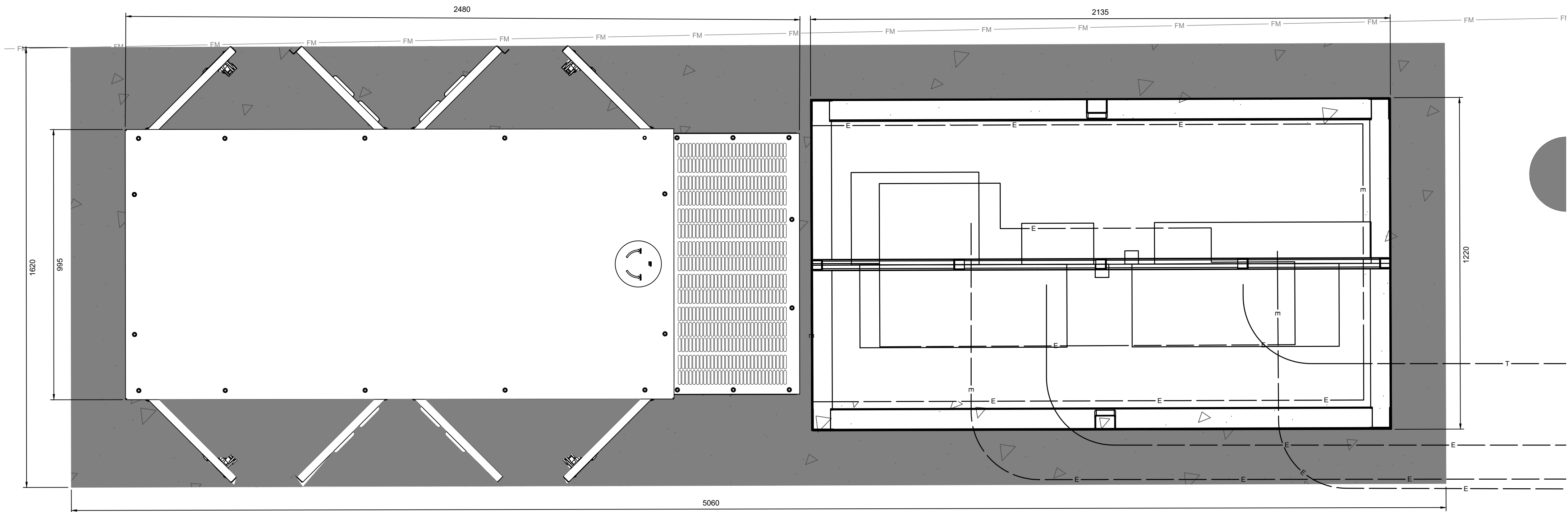
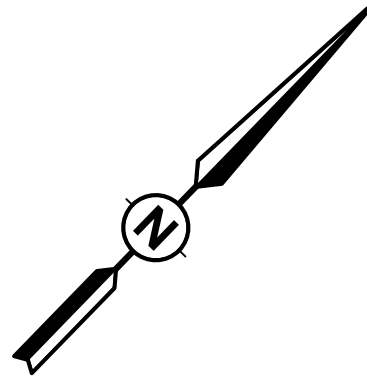
Project Number	Rev
2241-25014-00	0

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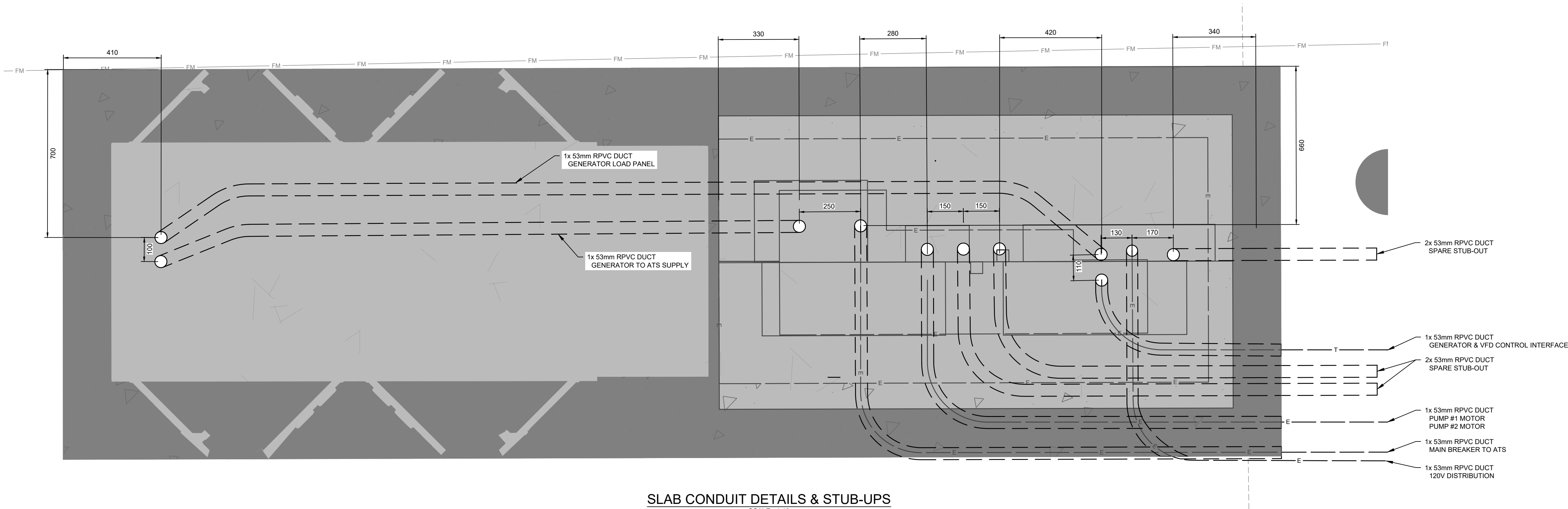


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0	2025-07-24	ISSUED FOR TENDER	SD	MB	MH	ORIGINAL DWG SIZE: ANSI D (22" x 34")			Project Number 2241-25014-00			Rev. 0				
Rev	Date	Description	Drawn	Design	App'd											

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PROPOSED GENERATOR AND KIOSK
SCALE - 1:10



SLAB CONDUIT DETAILS & STUB-UPS
SCALE - 1:10

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ORIGINAL DWG SIZE: ANSI D (22" x 34")

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TOWNSHIP OF ESQUIMALT
1229 ESQUIMALT ROAD, ESQUIMALT, BC V9A 3P1

UGANDA PUMP STATION UPGRADES
ELECTRICAL
GENERATOR & KIOSK DETAILS

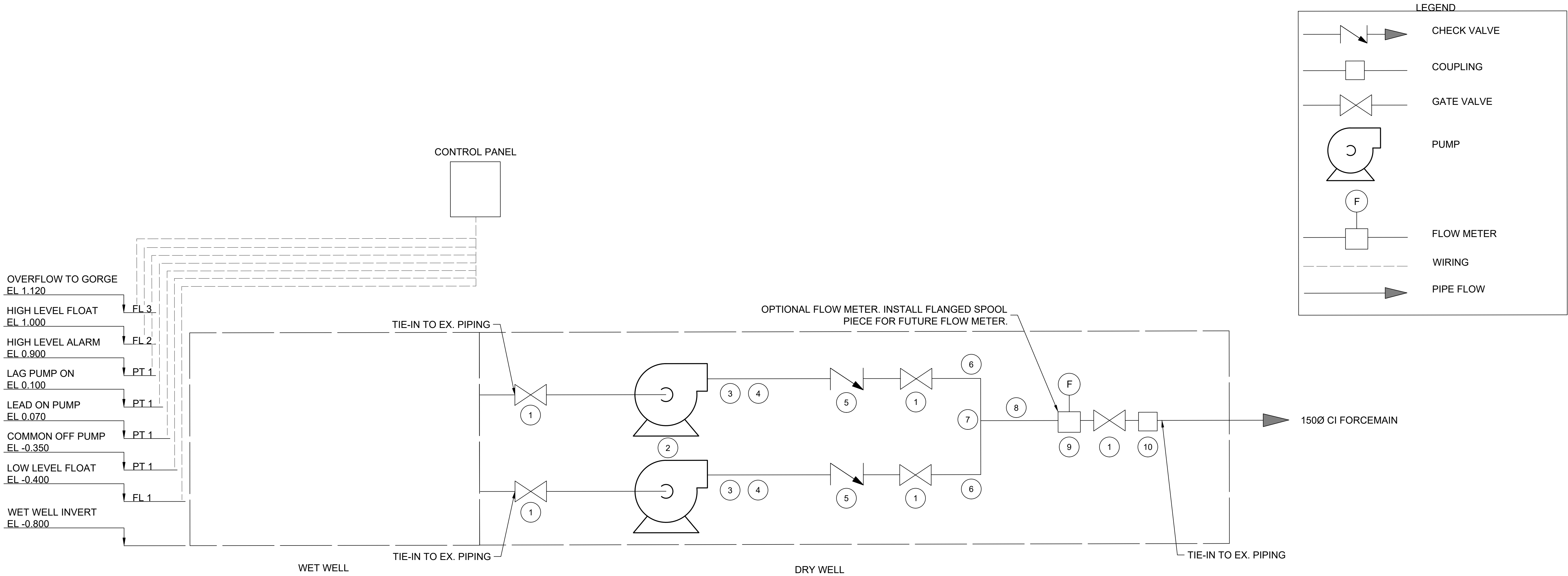
Drawing No. **E-005**

Project Number 2241-25014-00 Rev. 0

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MATERIALS LIST		
NO.	QTY	DESCRIPTION
1	5	150mm DEZURIK ECCENTRIC PLUG VALVE
2	2	FLYGT NT 3153 SH 3~ 275
3	2	80mm fxf 90 ELBOW
4	2	150mmx80mm REDUCER
5	2	150mm fxf VALMATIC 506C.3 SWING CHECK VALVE
6	2	150mm fxf 90 ELBOW
7	1	150mmx150mmx150mm fxfxf TEE
8	1	150mm 316 SS SCH 40 PIPE - LENGTHS TO SUIT
9	1	150mm fxf PROMAG W400 FLOW METER
10	1	150mm COUPLING - SS TO CI

NOTES:

1. DRAWING NOT TO SCALE.

2. DRAWING TO BE USED AS REFERENCE FOR PROCESS FLOW.

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BENCHMARK
ALL ELEVATION REFER TO CONTROL MONUMENT: 84H0219 (GCM 914705)
LOCATED AT: N 5385476.074, E 470263.308
ELEVATION: 14.199

ORIGINAL DWG SIZE: ANSI D (22" x 34")

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TOWNSHIP OF ESQUIMALT
1229 ESQUIMALT RD, ESQUIMALT, CB V9A 3P1

UGANDA PUMP STATION UPGRADES

**PROCESS
SCHEMATIC**

Drawing No.

P-100

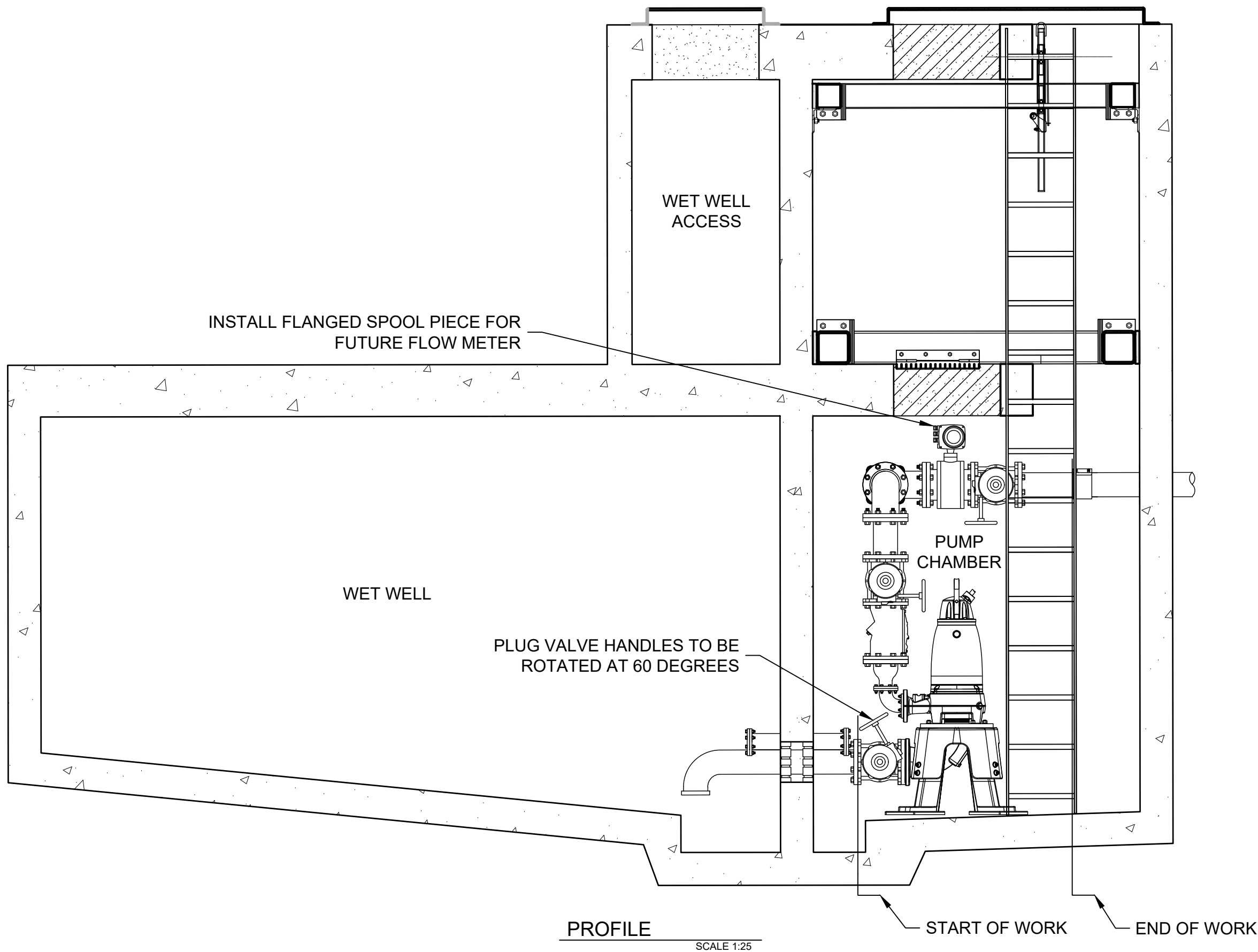
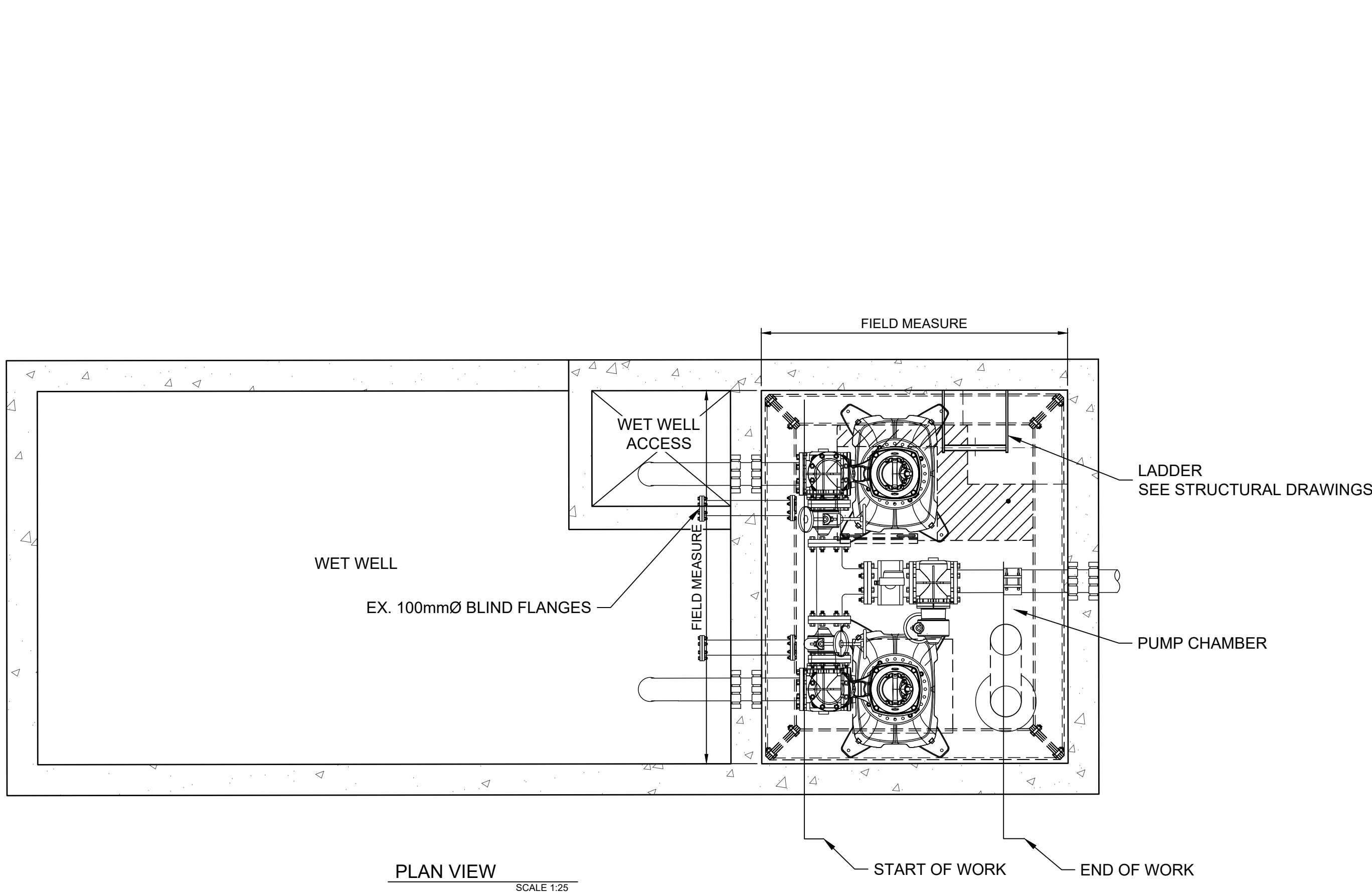
Project Number
2241-25014-00

Rev.
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McElhanney ANS D - 2025-01-10

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- NOTES:
1. CONTRACTOR TO FIELD VERIFY DIMENSIONS.
 2. CONTRACTOR TO CONFIRM IN FIELD.
 3. PIPING LAYOUT NOT FOR CONSTRUCTION AND TO BE USED AS REFERENCE. LAYOUT SUBJECT TO CHANGE BASED ON CONTRACTOR MEASUREMENTS.
 4. PUMPS AND PIPE SUPPORTS TO BE SECURED TO FLOOR, CEILING, OR WALLS WHEN REQUIRED.
 5. EXISTING GATE VALVES BETWEEN WET WELL AND PUMPS TO BE REMOVED.
 6. NEW PLUG VALVES TO BE INSTALLED ON EXISTING FLANGE. BELIEVED TO BE 150 lb BOLT PATTERN, CONTRACTOR TO CONFIRM.

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HR	KW	MH	
Drawn	Design	App'd	

BENCHMARK ALL ELEVATION REFER TO CONTROL MONUMENT: 84H0219 (GCM 914705) LOCATED AT: N 5385476.074, E 470263.308 ELEVATION: 14.199	
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TOWNSHIP OF ESQUIMALT
1229 ESQUIMALT RD, ESQUIMALT, CB V9A 3P1

UGANDA PUMP STATION UPGRADES
PROCESS
PIPE PLAN AND PROFILE

Drawing No.	
P-101	
Project Number	Rev.
2241-25014-00	0

McElhanney ANS D - 2024-02-05

FILE: X:\2024\Projects\2241\2501440 Gaspar Sewer and Uganda LS Upgrades\07 DRAWINGS\09A_Models\Structural\2241-2501440-S.rvt

DATE: 2025-07-23 15:50 PM

DESIGN CRITERIA:

1. REFERENCE DRAWINGS:

ToE RECORD DRAWINGS:

UGANDA PUMP STATION COMPOSITE PLAN OF PROPOSED & EXISTING DATED DEC 1974
UGANDA PUMP STATION SECTIONS A-A, B-B & C-C DATED 1983
UGANDA SEWAGE LIFT STATION DRAWING 12-86 DATED JUL 1986
2. DESIGN STANDARDS:

LOADS:
CONCRETE: BRITISH COLUMBIA BUILDING CODE 2024
STEEL: CSA A23.3:19
CSA S16:19
3. CLIMATE & SEISMIC SITE DATA:

IMPORTANCE CATEGORY: POST-DISASTER

SITE DESIGNATION: E (ASSUMED)

SPECTRAL ACCELERATION (0.2 s): 1.890
SPECTRAL ACCELERATION (0.5 s): 2.000
SPECTRAL ACCELERATION (1.0 s): 1.440
PEAK GROUND ACCELERATION (PGA): 0.818

THE PEAK GROUND ACCELERATIONS ARE ADJUSTED FOR THE SITE DESIGNATION.

SEISMIC CATEGORY: SC4
4. IMPORTANCE FACTORS:

EARTHQUAKE LOAD:

ULS	SLS
1.5	1.0
5. DESIGN LOADS PUMP STATION:

LIVE LOAD:

12 kPa (250 psf) GROUND
7.2 kPa (150 psf) ROOF HATCHES
3.6 kPa (75 psf) INTERMEDIATE PLATFORM

CONCENTRATED LIVE LOAD:

1.3 kN (300 lbs) OVER 200 mm (8") SQUARE (ROOF HATCHES & INT. PLATFORM)

6. DESIGN LOADS GENERATOR:

GENERATOR WEIGHT: 1,500 kg (3,300 lbs) EXCL. FUEL

NOTE: THE GENERATOR SLAB IS ONLY DESIGNED TO WITHSTAND DEAD AND WIND LOADS. IT IS NOT DESIGNED TO WITHSTAND EARTHQUAKE LOADS WITHOUT THE RISK OF SLIDING AND OVERTURNING DUE TO SITE CONSTRAINTS.
7. GEOTECHNICAL PARAMETERS PUMP STATION:

UNIT WEIGHT OF SOIL: 20 kN/m³ (127 pcf) (ASSUMED)
ANGLE OF INTERNAL FRICTION OF SOIL: 50 ° (ASSUMED)
AT-REST EARTH PRESSURE COEFFICIENT: 0.50
SITE ADJUSTED PGA: 0.82

THE STATIC AND SEISMIC EARTH PRESSURES ON THE LIFT STATION WERE DETERMINED IN ACCORDANCE WITH SECTION 18.3.7 OF THE CANADIAN FOUNDATION ENGINEERING MANUAL, 5TH EDITION, USING THE ASSUMED PARAMETERS LISTED ABOVE.
8. GEOTECHNICAL PARAMETERS GENERATOR:

FACTORED BEARING RESISTANCE: 50 kPa SLS (ASSUMED)
70 kPa ULS (ASSUMED)
MODULUS OF SUBGRADE REACTION: 54 MPa/m (100 psi/in) (ASSUMED)

THE ENGINEER SHALL BE NOTIFIED IF THE ENCOUNTERED PARAMETERS ARE LESS THAN THE VALUES LISTED ABOVE.
9. THE CONTRACTOR SHALL ENSURE THAT CONSTRUCTION LOADS DO NOT EXCEED THE DESIGN LOADS LISTED ABOVE.

GENERAL:

1. CODES AND STANDARDS REFERENCED ON THE DRAWINGS SHALL BE THE EDITIONS LISTED IN TABLE 1.3.1.2, OF DIVISION B OF THE CURRENT EDITION OF THE BUILDING CODE UNLESS NOTED OTHERWISE. CODES AND STANDARDS NOT LISTED IN THE BUILDING CODE SHALL BE THE LATEST EDITIONS UNLESS NOTED OTHERWISE.
2. CONSTRUCTION SHALL COMPLY WITH THE CODES AND STANDARDS LISTED ON THE DRAWINGS AS WELL AS ALL APPLICABLE FEDERAL, PROVINCIAL AND MUNICIPAL REGULATIONS AND BYLAWS.
3. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS BEFORE COMMENCING ANY WORK AND NOTIFY THE ENGINEER OF ANY ERRORS OR OMISSIONS.
4. THE CONTRACTOR SHALL COMPARE ALL RELATED DRAWINGS BEFORE COMMENCING ANY WORK AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR INCONSISTENCIES BETWEEN DRAWINGS.
5. DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. ELEVATIONS ARE IN METRES UNLESS NOTED OTHERWISE.
6. ONLY USE WRITTEN DIMENSIONS. DO NOT SCALE OFF THE DRAWINGS.
7. DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION UNLESS MARKED ISSUED FOR CONSTRUCTION (IFC) AND SEALED BY A PROFESSIONAL ENGINEER.
8. THESE NOTES SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS. THE MOST STRINGENT SPECIFICATIONS SHALL BE USED IF DISCREPANCIES OR INCONSISTENCIES ARE FOUND BETWEEN THE DRAWINGS AND OTHER CONTRACT DOCUMENTS, UNLESS APPROVED BY THE ENGINEER.
9. MATERIALS SHALL BE NEW AND BE PROTECTED FROM DAMAGE DURING SHIPPING, HANDLING, STORAGE AND INSTALLATION.
10. THESE DRAWINGS ARE FOR THE COMPLETED STRUCTURE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR DEMOLITION PROCEDURES, LIFT PLANS AND TEMPORARY SUPPORTS REQUIRED TO SUPPORT CONSTRUCTION LOADS AND TO KEEP THE STRUCTURE PLUMB AND LEVEL DURING CONSTRUCTION. THE CONTRACTOR'S RESPONSIBILITIES INCLUDE, BUT ARE NOT LIMITED TO THE DESIGN, INSTALLATION AND INSPECTION OF ALL TEMPORARY BRACING, FALSEWORK, FORMWORK, SHORING, AND RESHORING. DEMOLITION PROCEDURES, LIFT PLANS AND TEMPORARY SUPPORTS SHALL COMPLY WITH THE OCCUPATIONAL HEALTH AND SAFETY REGULATION (OHSR).
11. MATERIALS SHALL BE ORDERED IN A TIMELY MANNER TO ENSURE PROCUREMENT TIMES DO NOT NEGATIVELY IMPACT THE PROJECT SCHEDULE.
12. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL COMPONENTS AND THEIR ATTACHMENT DESIGNED BY THE CONTRACTOR'S ENGINEER TO THE ENGINEER FOR REVIEW AT LEAST TWO WEEKS PRIOR TO FABRICATION. THE DRAWINGS SHALL BE SEALED BY THE CONTRACTOR'S ENGINEER. THE SHOP DRAWINGS SHALL SHOW ALL DETAILS, MATERIAL SPECIFICATIONS AND DESIGN LOADS. THE CONTRACTOR'S ENGINEER SHALL PROVIDE SCHEDULES S-B FOR THEIR SCOPE OF WORK.
13. THE REVIEW OF SHOP DRAWINGS BY THE ENGINEER IS FOR THE SOLE PURPOSE OF REVIEWING GENERAL CONFORMANCE WITH THE DESIGN CONCEPTS ONLY. THE DETAILED DESIGN REMAINS THE RESPONSIBILITY OF THE FABRICATOR/CONTRACTOR. ALL PORTIONS SHALL BE ERCTED AND ASSEMBLED IN ACCORDANCE WITH APPROVED SHOP AND ERECTION DRAWINGS. NO FABRICATION OR ERECTION SHALL TAKE PLACE WITHOUT THE ENGINEER HAVING REVIEWED AND APPROVED THE SHOP AND ERECTION DRAWINGS.
14. THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE CORRECTION OF DEFICIENCIES, AS DIRECTED BY THE ENGINEER.
15. DO NOT INSTALL OPENINGS, SET INSERTS, DRILL OR ATTACH TO STRUCTURAL ELEMENTS WITHOUT AUTHORIZATION FROM THE ENGINEER, UNLESS NOTED ON DRAWINGS.

FIELD REVIEWS:

1. THE ENGINEER SHALL BE NOTIFIED OF THE CONSTRUCTION SCHEDULE IN ORDER TO SCHEDULE FIELD REVIEWS. IF THE ENGINEER IS NOT AFFORDED THE OPPORTUNITY TO REVIEW THE STRUCTURAL WORKS PRIOR TO CONCEALMENT, THEN FINAL CERTIFICATION OF THE PROJECT WILL NOT BE ISSUED.
2. THE ENGINEER SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE FOR FIELD REVIEWS OF THE FOLLOWING:

FOUNDATION SOILS, BEFORE CONCRETING
REINFORCING STEEL, BEFORE CONCRETING
CONCRETE CUTTING, AFTER CUTTING
STRUCTURAL STEEL, AFTER INSTALLATION BEFORE GROUTING
3. ALL WORK SHALL BE MADE ACCESSIBLE FOR FIELD REVIEWS. FAILURE TO GIVE THE REQUIRED NOTIFICATION AND ACCESSIBILITY MAY RESULT IN THE ENGINEER REQUIRING THE REMOVAL AND REPLACEMENT OF THE WORK AT THE CONTRACTOR'S EXPENSE.
4. THE CONTRACTOR SHALL REVIEW SUB-CONTRACTORS' WORK PRIOR TO THE ENGINEER'S FIELD REVIEW.
5. FIELD REVIEWS ARE PROVIDED ONLY FOR THE WORK SHOWN ON THE STRUCTURAL DRAWINGS PREPARED BY THE ENGINEER. REVIEWS ARE PERIODIC, AND AT THE PROFESSIONAL JUDGEMENT OF THE ENGINEER TO DETERMINE THAT THE WORK IS IN GENERAL CONFORMANCE WITH THE DRAWINGS AND CONTRACT DOCUMENTS, AND TO FACILITATE COMPLETION OF THE LETTERS OF ASSURANCE REQUIRED BY THE AUTHORITY HAVING JURISDISDICTION (AHJ).
6. FIELD REVIEWS SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY AND OBLIGATION TO COMPLY WITH DRAWINGS AND CONTRACT DOCUMENTS. QUALITY CONTROL REMAINS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
7. MANUFACTURERS OF ELEMENTS DESIGNED BY THEIR ENGINEER, FOR EXAMPLE TRUSSES, SHALL PROVIDE SEALED CERTIFICATION FOR THEIR MANUFACTURE AND INSTALLATION PRIOR TO CONCEALMENT.
8. ADDITIONAL FIELD REVIEWS THAT ARE REQUIRED DUE TO DEFICIENT OR INCOMPLETE WORK SHALL BE AT THE CONTRACTOR'S EXPENSE.

REINFORCING STEEL:

1. REINFORCING STEEL SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH CSA-A23.1 AND THE RISC MANUAL OF STANDARD PRACTICE.
2. REINFORCING STEEL SHALL CONFORM TO CSA-G30.18 GRADE 400 UNLESS NOTED OTHERWISE.
3. REINFORCING STEEL SHALL BE CLEAN AND FREE OF MUD, OIL, EXCESSIVE RUST, MILL SCALE OR DAMAGE.
4. REINFORCING STEEL SHALL BE ACCURATELY PLACED, SECURED, AND SUPPORTED TO ENSURE PROPER CONCRETE COVER AND SPACING WITHIN ALLOWABLE TOLERANCES BEFORE AND DURING CONCRETING. THE WIRES SHALL BE 1.3 mm DIAMETER (16 ga) BLACK ANNEALED WIRE. REINFORCING STEEL IN SLABS SHALL BE SUPPORTED BY SUITABLE SUPPORTS AT MAXIMUM 1.2 m (4'-0") ON CENTRE. BAR SUPPORTS SHALL BE MADE OF PRECAST CONCRETE, PLASTIC OR STEEL.
5. PROVIDE CLEAR CONCRETE COVER FOR REINFORCING STEEL IN CAST-IN-PLACE CONCRETE AS FOLLOWS, UNLESS NOTED OTHERWISE:

CONCRETE CAST AGAINST GROUND: 75 mm (3")
EXPOSED TO CHLORIDES/SEWAGE/MANURE: 60 mm (2 3/8")
EXPOSED TO FREEZING/THAWING/SULPHATE: 40 mm (1 1/2")
6. REINFORCING STEEL SHALL BE PLACED WITHIN THE FOLLOWING TOLERANCES:

BAR SPACING: ± 30 mm (1 1/8")
LOCATION OF BAR ENDS & BENDS: ± 50 mm (2")
CONCRETE COVER: ± 20 mm (3/4") AT DISCONTINUED BARS
± 12 mm (1/2")

CONCRETE COVER SHALL NOT BE REDUCED BY MORE THAN 1/3 OF THE SPECIFIED COVER.
7. REINFORCING STEEL SHALL BE CONTINUOUS, AND ADEQUATELY LAPPED AT SPLICES.
8. MINIMUM LAP LENGTHS SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:

10M: 450 mm (1'-6")
15M: 600 mm (2'-0")
9. OPENINGS IN WALLS AND SLABS WITH A MAXIMUM DIMENSION LARGER THAN 150 mm (6") SHALL HAVE (1) ADDITIONAL BAR ON EACH SIDE OF THE OPENING, WHICH EXTENDS 600 mm (24") PAST THE OPENING, AND (4) ADDITIONAL 1,200 mm (48") LONG DIAGONAL BARS ARRANGED IN A DIAMOND SHAPE IN EACH LAYER UNLESS NOTED OTHERWISE. THE DIAMETER OF THE ADDITIONAL BARS SHALL MATCH THE DIAMETER OF THE REINFORCING STEEL MAT.
10. REINFRANT CORNERS IN WALLS AND SLABS SHALL HAVE AN ADDITIONAL 1,200 mm (48") LONG DIAGONAL BAR IN EACH LAYER UNLESS NOTED OTHERWISE. THE DIAMETER OF THE ADDITIONAL BARS SHALL MATCH THE DIAMETER OF THE REINFORCING STEEL MAT.
11. CONCRETE OR GROUT SHALL NOT BE POURED UNTIL REINFORCING STEEL HAS BEEN REVIEWED BY THE ENGINEER AND FOUND TO BE IN GENERAL CONFORMANCE WITH THE DRAWINGS AND CONTRACT DOCUMENTS.

CAST-IN-PLACE CONCRETE:

1. CONCRETE SHALL BE MIXED, PLACED, FINISHED AND CURED IN ACCORDANCE WITH CSA-A23.1.
2. CONCRETE SHALL BE NORMAL WEIGHT CONCRETE, CONTAIN MAXIMUM 20 mm (3/4") AGGREGATE, EXCEPT CONCRETE SLABS ON STEEL DECKING SHALL CONTAIN MAXIMUM 12 mm (1/2") AGGREGATE, AND CONFORM TO THE FOLLOWING SPECIFICATIONS UNLESS NOTED OTHERWISE:

ELEMENT	EXPOSURE	STRENGTH	MAX W/C	SLUMP*	AIR	CURING TYPE
EXTERIOR SLABS- ON-GRADE	C-2	32 MPa	0.45	25–75 mm	5–8%	2

* SUPERPLASTICIZER SHALL BE ADDED AFTER SLUMP HAS BEEN MEASURED.
3. THE CONTRACTOR SHALL SUBMIT MIX DESIGNS TO THE ENGINEER FOR REVIEW AT LEAST TWO WEEKS PRIOR TO PLACING.
4. THE USE OF ADMIXTURES OTHER THAN AIR ENTRAINMENT, STANDARD WATER REDUCERS, OR SUPER PLASTICIZERS IS NOT PERMITTED UNLESS SPECIFIED OR AUTHORIZED BY THE ENGINEER.
5. WATER SHALL NOT BE ADDED TO THE CONCRETE AFTER LEAVING THE BATCH PLANT.
6. CONCRETE SHALL BE COMPLETELY DISCHARGED WITHIN 120 MINUTES OF INITIAL MIXING. CONCRETE SHALL BE REJECTED IF THIS TIME LIMIT CANNOT BE MET.
7. LAITANCE SHALL BE REMOVED. AGGREGATE SHALL BE PARTIALLY EXPOSED, AND THE SURFACE SHALL BE ROUGHENED TO A FULL AMPLITUDE OF AT LEAST 5 mm (3/16") WHERE FRESH CONCRETE IS CAST AGAINST HARDENED CONCRETE. THE HARDENED CONCRETE SHALL BE SATURATED WITH WATER AND BE IN A DAMP CONDITION WITH NO FREE SURFACE WATER (SATURATED SURFACE DRY) IMMEDIATELY BEFORE PLACING FRESH CONCRETE.
8. VERTICAL AND HORIZONTAL CONCRETE ELEMENTS SHALL BE PLUMB AND LEVEL WITH A TOLERANCE OF 1:400, BUT NO MORE THAN 40 mm (1 1/2") OVER THE TOTAL HEIGHT OR LENGTH OF THE STRUCTURE. THE AVERAGE THICKNESS OF SLABS ON GRADE SHALL BE WITHIN ± 10 mm (3/8"). CROSS-SECTIONAL DIMENSIONS OF CONCRETE ELEMENTS OTHER THAN SLABS ON GRADE SHALL BE WITHIN THE FOLLOWING:

LESS THAN 0.3 m (12") THICK: ± 8 mm (5/16")
0.3 m (12") TO 1 m (39") THICK: ± 12 mm (1/2")
MORE THAN 1 m (39") THICK: ± 20 mm (3/4")
9. ALL EXPOSED CONCRETE EDGES SHALL HAVE A 20 mm (3/4") CHAMFER UNLESS NOTED OTHERWISE. STAIR NOSINGS SHALL HAVE A 6 mm (1/4") TO 10 mm (3/8") CHAMFER OR FILLET.
10. CONCRETE SHALL BE CONSOLIDATED USING MECHANICAL VIBRATORS.
11. OPENINGS, BLOCKOUTS, OR EMBEDDED HARDWARE SHALL NOT BE INSTALLED UNLESS SPECIFIED OR AUTHORIZED BY THE ENGINEER.
12. AIR-ENTRAINED CONCRETE SHALL BE FINISHED WITH A FLOAT OR BROOM. AIR-ENTRAINED CONCRETE SHALL NOT BE FINISHED WITH A STEEL TROWEL.
13. CONCRETE FINISHES SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:

EXTERIOR SLABS: BROOM FINISH
14. CONCRETE CURING TYPE 1 SHALL BE CURED FOR A MINIMUM OF 3 DAYS OR UNTIL THE CONCRETE HAS REACHED 40% OF ITS DESIGN STRENGTH. CONCRETE CURING TYPE 2 SHALL BE CURED FOR A MINIMUM OF 7 DAYS OR UNTIL THE CONCRETE HAS REACHED 70% OF ITS DESIGN STRENGTH. REFER TO THE CONCRETE SPECIFICATION TABLE ON THIS DRAWING FOR SPECIFIED CURING TYPES.
15. CONCRETE CURING SHALL COMMENCE USING ONE OF THE FOLLOWING METHODS AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY:

CURING COMPOUNDS
PONDING OR CONTINUOUS SPRINKLING WITH WATER
APPLYING WATER AND COVERING WITH LAPPED POLYETHYLENE SHEETS
APPLYING WATER AND COVERING WITH ABSORPTIVE BURLAP FABRIC
FORMS IN CONTACT WITH CONCRETE SURFACE

COLD WEATHER CONCRETING:

1. COLD WEATHER CONCRETING, I.E. WHEN THERE IS A PROBABILITY OF THE AIR TEMPERATURE FALLING BELOW 5 °C WITHIN 24 HOURS OF PLACING, SHALL BE CARRIED OUT IN ACCORDANCE WITH CSA-A23.1, ACI 306R AND THE SPECIFICATIONS LISTED BELOW.
2. SNOW AND ICE SHALL BE REMOVED FROM ALL SURFACES THAT CONCRETE WILL BE PLACED AGAINST. DE-ICING SALTS SHALL NOT BE USED.
3. CONCRETE SHALL HAVE A MINIMUM TEMPERATURE OF 10°C, WHICH SHALL BE MAINTAINED FOR THE DURATION OF THE REQUIRED CURING PERIOD. AGGREGATE AND MIXING WATER SHALL BE HEATED AS REQUIRED. THE CONTRACTOR SHALL COVER, INSULATE AND HEAT THE CONCRETE AS REQUIRED.
4. CONCRETE SHALL NOT BE PLACED AGAINST SURFACES OR REINFORCING STEEL WITH A TEMPERATURE OF LESS THAN 5 °C. SLABS THINNER THAN 1 m (40") SHALL NOT BE PLACED AGAINST SURFACES OR REINFORCING STEEL WITH A TEMPERATURE OF LESS THAN 10 °C.
5. COVERS SHALL NOT BE REMOVED AFTER THE HEATING IS SHUT OFF UNTIL THE CONCRETE HAS COOLED DOWN TO NO MORE THAN 12 °C ABOVE AIR TEMPERATURE.

HOT WEATHER CONCRETING:

1. HOT WEATHER CONCRETING, I.E. WHEN THERE IS A PROBABILITY OF THE AIR TEMPERATURE RISING ABOVE 27 °C DURING THE PLACING, SHALL BE CARRIED OUT IN ACCORDANCE WITH CSA-A23.1, ACI 305 AND THE SPECIFICATIONS LISTED BELOW.
2. THE CONCRETE TEMPERATURE SHALL KEPT AS CLOSE AS POSSIBLE TO THE MINIMUM TEMPERATURE OF 10°C AND SHALL NOT EXCEED THE FOLLOWING MAXIMUM TEMPERATURES DURING THE PLACING. IN NO CASE SHALL THE TEMPERATURE OF HIGH-PERFORMANCE CONCRETE EXCEED 25 °C.

THICKNESS OF CONCRETE	MAXIMUM TEMPERATURE
< 0.3 m (1')	32 °C
≥ 0.3 m (1') & < 1.0 m (3'-3")	30 °C
≥ 1.0 m (3'-3") & < 2.0 m (6'-6")	25 °C
≥ 2.0 m (6'-6")	20 °C
3. ALL MATERIALS AND EQUIPMENT NEEDED FOR ADEQUATE PROTECTION SHALL BE ON HAND AND READY FOR USE BEFORE COMMENDING PLACEMENT.
4. FRESHLY PLACED CONCRETE SHALL BE PROTECTED AGAINST HIGH TEMPERATURES USING ONE OR MORE OF THE FOLLOWING MEASURES:

LOWERING THE CONCRETE TEMPERATURE
PLACING AND FINISHING CONCRETE AT NIGHT OR EARLY IN THE MORNING
MODIFYING THE CONCRETE MIX TO IMPROVE SURFACE BLEEDING
APPLYING FINE MIST WATER FOG SPRAY IMMEDIATELY AFTER PLACEMENT AND BETWEEN FINISHING OPERATIONS
BEGINNING CURING IMMEDIATELY AFTER FINAL FINISHING
REDUCING EXPOSURE OF FRESH CONCRETE TO DIRECT SUNLIGHT AND/OR WIND

CONCRETE TESTING:

1. CONCRETE SHALL BE TESTED IN ACCORDANCE WITH CSA-A23.2 BY A TESTING AGENCY CERTIFIED IN ACCORDANCE WITH CSA-A283.
2. THE CONTRACTOR SHALL COOPERATE WITH, AND PROVIDE CONCRETE FOR, THE CONCRETE TESTING.
3. SLUMP SHALL BE TESTED BEFORE SUPER PLASTICIZER IS ADDED ON SITE.
4. A MINIMUM OF 1 SET OF 3 TEST CYLINDERS SHALL BE CAST FOR EVERY 100 m³ (130 yd³) OF EACH TYPE OF CAST-IN-PLACE CONCRETE, PER SUPPLIER, PER DAY. 1 CYLINDER SHALL BE TESTED AT 7 DAYS, AND 2 SHALL BE TESTED AT 28 DAYS. COPIES OF THE TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEER AND SHALL IDENTIFY THE LOCATION WITHIN THE STRUCTURE WHERE THE CONCRETE WAS PLACED.
5. CONCRETE TESTING, INCLUDING SUBSEQUENT TESTING REQUIRED BECAUSE OF SUBSTANDARD CONCRETE, SHALL BE CARRIED OUT AT THE CONTRACTOR'S EXPENSE.

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TRM

SF

MH

Drawn

Design

App'd

ORIGINAL DWG SIZE: ANSI D (22" x 34")



McElhanney

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PERMIT TO PRACTICE

McElhanney Ltd.

PERMIT NUMBER: 1003299

Engineers and Geoscientists of BC

TOWNSHIP OF ESQUIMALT

1229 EQUIMALT ROAD, ESQUIMALT, BC V9A 3P1

UGANDA PUMP STATION UPGRADES

STRUCTURAL SPECIFICATIONS

Drawing No.

S-000

Project Number

2241-25014-00

Rev.

0

DESTROY ALL PRINTS BEARING PREVIOUS REVISION

McElhanney ANS D - 2024-02-05

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STRUCTURAL STEEL:

1. STRUCTURAL STEEL SHALL BE DESIGNED, FABRICATED AND INSTALLED IN ACCORDANCE WITH CSA-S16 AND THE CISC CODE OF STANDARD PRACTICE.

2. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS NOTED OTHERWISE:

BARS & PLATES:

BEAMS & TEES:

HSS:

ANGLES & CHANNELS:

PIPES:

STRUCTURAL BOLTS:

ANCHOR BOLTS:

CSA-G40.21 GRADE 300W

CSA-G40.21 GRADE 350W OR ASTM A992

CSA-G40.21 GRADE 350W OR ASTM A1085

CSA-G40.21 GRADE 350W

ASTM A53 GRADE B

ASTM F3125 GRADE A325

ASTM F1554 GRADE 36

3. STRUCTURAL STEEL SHALL BE WELDED IN ACCORDANCE WITH CSA-W59 BY COMPANIES AND WELDERS CERTIFIED TO CSA-W47.1 BY CWB.

4. WELDS SHALL BE MADE USING E49XX (E70XX) ELECTRODES OR BETTER UNLESS NOTED OTHERWISE.

5. FILLET WELDS SHALL HAVE THE FOLLOWING MINIMUM THICKNESSES, BUT NEED NOT EXCEED THE THICKNESS OF THE THINNER PART JOINED:

t ≤ 12 mm (1/2")

12 mm (1/2") < t ≤ 20 mm (3/4")

20 mm (3/4") < t

5 mm (3/16")

6 mm (1/4")

8 mm (5/16")

6. FIELD WELDING IS NOT PERMITTED UNLESS SPECIFIED OR AUTHORIZED BY THE ENGINEER.

7. WELDS SHALL BE INSPECTED BY A WELDING INSPECTION ORGANIZATION CERTIFIED TO CSA-W178.1 AND A WELDING INSPECTOR CERTIFIED TO CSA-W178.2 AS FOLLOWS:

ALL WELDS:

THE TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEER.

100% VISUAL

8. STRUCTURAL STEEL SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH CSA-G164 UNLESS NOTED OTHERWISE. GALVANIZED STRUCTURAL STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE AGA DESIGN GUIDE TO ALLOW PROPER DRAINAGE AND VENTING.

9. FASTENERS SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A153.

10. DAMAGED GALVANIZING SHALL BE TOUCHED UP WITH TWO COATS OF LANCO GALVACON GC-243 COLD GALVANIZING COMPOUND OR APPROVED EQUIVALENT IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.

11. HSS SECTIONS SHALL BE PROVIDED WITH SEAL-WELDED CAP PLATES AT OPEN ENDS AND DRAIN HOLES AT THE BASE.

12. BEARING PLATES AND BASE PLATES SUPPORTED BY CONCRETE SHALL BE GROUTED SOLID WITH NON-METALLIC, NON-SHRINK GROUT HAVING A 7-DAY COMPRESSIVE STRENGTH OF AT LEAST 40 MPa (5,800 psi) IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.

13. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL STRUCTURAL STEEL TO THE ENGINEER FOR REVIEW AT LEAST TWO WEEKS PRIOR TO FABRICATION. THE DRAWINGS OF STRUCTURAL COMPONENTS NOT DESIGNED BY THE ENGINEER SHALL BE SEALED BY THE FABRICATOR'S ENGINEER. THE SHOP DRAWINGS SHALL SHOW ALL DETAILS, MATERIAL SPECIFICATIONS AND DESIGN LOADS.

14. THE CONTRACTOR SHALL SUBMIT MILL CERTIFICATES FOR ALL STRUCTURAL STEEL TO THE ENGINEER.

15. THE CONTRACTOR SHALL REVIEW THE ARCHITECTURAL DRAWINGS FOR MISCELLANEOUS STEEL COMPONENTS. ALL STEEL COMPONENTS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE CONSIDERED SECONDARY COMPONENTS. REFER TO NOTES FOR "SECONDARY COMPONENTS AND THEIR ATTACHMENTS".
- STAINLESS STEEL:
1. STAINLESS STEEL SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH THE AISC STEEL DESIGN GUIDE 27.

2. STAINLESS STEEL SHALL CONFORM TO THE FOLLOWING UNLESS NOTED OTHERWISE:

PLATES:

BARS & STRUCTURAL SHAPES:

HSS:

BOLTS & RODS:

ASTM A240 TYPE UNS30403 (304L)

ASTM A276 TYPE UNS30403 (304L)

ASTM A269 TYPE UNS30403 (304L)

ASTM F593 OR ASTM B193

3. STAINLESS STEEL SHALL BE CUT AND GROUND WITH CONSUMABLES SUITABLE FOR STAINLESS STEEL.

4. STAINLESS STEEL SHALL BE WELDED IN ACCORDANCE WITH CSA-W59 AND AWS D1.6 BY COMPANIES AND WELDERS CERTIFIED TO CSA-W47.1 ANNEX K BY CWB.

5. FILLET WELDS SHALL HAVE THE FOLLOWING MINIMUM THICKNESSES, BUT NEED NOT EXCEED THE THICKNESS OF THE THINNER PART JOINED:

t ≤ 12 mm (1/2")

12 mm (1/2") < t ≤ 20 mm (3/4")

20 mm (3/4") < t

5 mm (3/16")

6 mm (1/4")

8 mm (5/16")

6. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL STAINLESS STEEL TO THE ENGINEER FOR REVIEW AT LEAST TWO WEEKS PRIOR TO FABRICATION. THE DRAWINGS SHALL BE SEALED BY THE FABRICATOR'S ENGINEER. THE SHOP DRAWINGS SHALL SHOW ALL DETAILS, MATERIAL SPECIFICATIONS AND DESIGN LOADS.

7. STAINLESS STEEL SHALL BE DEGREASED AND PICKLED AFTER FABRICATION AND PRIOR TO SHIPPING.

8. STAINLESS STEEL SHALL BE RIGGED AND BLOCKED WITH STAINLESS STEEL OR NON-FERROUS MATERIAL TO ELIMINATE THE RISK OF EMBEDDING IRON INTO THE SURFACE. STAINLESS STEEL SHALL NOT BE IN DIRECT CONTACT WITH MILD STEEL.

9. DISSIMILAR METALS IN CONTACT WITH STAINLESS STEEL SHALL BE PROTECTED FROM CORROSION WHERE THEY ARE EXPOSED TO AGGRESSIVE ENVIRONMENTS OR IN MOIST CONDITIONS.

ALUMINUM:

1. ALUMINUM SHALL BE DESIGNED IN ACCORANCE WITH CSA-S157.

2. ALUMINUM SHALL BE FABRICATED IN ACCORANCE WITH CSA-S16, EXCEPT AS MODIFIED BY CSA-S157 AND THE FOLLOWING NOTES.

3. ALUMINUM SHALL CONFORM TO THE FOLLOWING UNLESS NOTED OTHERWISE:

PLATES:

BARS & STRUCTURAL SHAPES:

TUBES & PIPES:

BAR GRATING:

LADDER RUNGS:

ASTM B209 TYPE 6061-T6 OR -T651

ASTM B308 TYPE 6061-T6

ASTM B429 TYPE 6061-T6

ASTM B221 TYPE 6063-T5 & -T6

ASTM B209 TYPE 6052 H32

4. FASTENERS FOR ALUMINUM SHALL CONFORM TO THE FOLLOWING UNLESS NOTED OTHERWISE:

GALVANIZED BOLTS:

STAINLESS STEEL BOLTS:

ASTM F3125 GRADE 325 & ASTM A153

ASTM F593 OR ASTM B193

5. ALUMINUM SHALL BE WELDED IN ACCORDANCE WITH CSA-W59.2 BY COMPANIES CERTIFIED TO CSA-W47.2.

6. WELDS SHALL BE MADE USING 4043 OR 5356 WELD FILLER METAL UNLESS NOTED OTHERWISE.

7. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL ALUMINUM TO THE ENGINEER FOR REVIEW AT LEAST TWO WEEKS PRIOR TO FABRICATION. THE DRAWINGS SHALL BE SEALED BY THE FABRICATOR'S ENGINEER. THE SHOP DRAWINGS SHALL SHOW ALL DETAILS, MATERIAL SPECIFICATIONS AND DESIGN LOADS.

8. ALUMINUM SHALL BE PROTECTED FROM CORROSION WHERE IT IS EXPOSED TO AGGRESSIVE ENVIRONMENTS OR IN CONTACT WITH DISSIMILAR METALS IN MOIST CONDITIONS. ALUMINUM IN CONTACT WITH OR EMBEDDED IN CONCRETE SHALL BE COATED WITH A HEAVY COAT OF ALKALI-RESISTANT BITUMINOUS PAINT LIKE COAL TAR EPOXY.

POST-INSTALLED ANCHORS:

1. POST-INSTALLED ANCHORS SHALL BE BY HILTI, SIKA, SIMPSON STRONG-TIE OR APPROVED EQUIVALENT.

2. POST-INSTALLED ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.

3. ADHESIVE ANCHORS SHALL BE INSTALLED BY CERTIFIED INSTALLERS. THE CONTRACTOR SHALL SUBMIT CERTIFICATION FOR PERSONNEL WHO INSTALL ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCLINED AND SUBJECTED TO SUSTAINED TENSION LOADS TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS. THE CONTRACTOR MAY ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ADHESIVE ANCHORS.

4. ADHESIVE ANCHORS SHALL HAVE THE FOLLOWING MINIMUM EMBEDMENT UNLESS NOTED OTHERWISE:

10 mm (3/8") THREADED ROD:

13 mm (1/2") THREADED ROD:

16 mm (5/8") THREADED ROD:

19 mm (3/4") THREADED ROD:

22 mm (7/8") THREADED ROD:

25 mm (1") THREADED ROD:

32 mm (1 1/4") THREADED ROD:

75 mm (3")

100 mm (4")

125 mm (5")

150 mm (6")

175 mm (7")

200 mm (8")

250 mm (10")

FIXED LADDERS:

1. FIXED LADDERS AND THEIR ATTACHMENT SHALL BE DESIGNED AND FABRICATED TO ANSI-ASC A14.3, PIP STE05501 AND STF05501, EXCEPT THAT REFERENCES SHALL BE REPLACED WITH APPLICABLE CANADIAN STANDARDS.

2. LADDERS EXCEEDING 6 m (20') IN HEIGHT SHALL HAVE LADDER CAGES.

3. LADDERS BELOW FLOOR AND ROOF HATCHES SHALL HAVE RETRACTABLE SAFETY EXTENSIONS EXTENDING 1,070 mm (42") ABOVE THE LADDER.

4. INTERIOR LADDERS INCLUDING HARDWARE AND ACCESSORIES SUBMERGED IN POTABLE WATER SHALL BE TYPE 304 STAINLESS STEEL UNLESS NOTED OTHERWISE.

ROOF HATCHES:

1. ROOF HATCHES SHALL BE BY BILCO, USF FABRICATION, XYLEM OR APPROVED EQUIVALENT.

2. ROOF HATCHES SHALL BE DESIGNED, MANUFACTURED, TESTED AND INSTALLED IN ACCORDANCE WITH ASTM C1802.

3. ROOF HATCHES SHALL BE ALUMINUM WITH TYPE 316 STAINLESS STEEL HARDWARE.

4. ROOF HATCHES SHALL BE RATED FOR A MINIMUM LIVE LOAD OF 7.2 kPa (150 psf) UNLESS NOTED OTHERWISE.

5. ROOF HATCHES SHALL HAVE A WEATHER TIGHT EXTRUDED RESILIENT ELASTOMERIC GASKET WITH FULL RECOVERY AFTER 50% COMPRESSION.

6. ROOR HATCHES WITH EXTERNAL MOUNTING SECURED SHALL BE FASTENED WITH TAMPER PROOF FASTENERS.

7. ROOF HATCHES SHALL HAVE THE FOLLOWING ACCESSORIES:

LATCH:

HOLD OPEN DEVICE:

LIFT ASSIST:

FALL THROUGH PROTECTION:

INSULATION:

RECESSED CYLINDER LOCK OPERABLE FROM OUTSIDE AND INSIDE

HOLD OPEN OPERATING ARM WITH VINYL GRIP HANDLE

ALLOWING ONE HANDED RELEASE

GAS SHOCK

SAFETY GRATE WITH HOLD OPEN DEVICE

SAFETY ORANGE FINISH

COMPLYING WITH OCCUPATIONAL HEALTH AND SAFETY (OHS) REGULATION

NOT REQUIRED

8. ROOF HATCHES SHALL BE INSTALLED WITH A CONTINUOUS BUTYL SEALANT BETWEEN THE HATCH FLANGE AND THE MOUNTING SURFACE.

SECONDARY COMPONENTS & THEIR ATTACHMENT:

1. SECONDARY COMPONENTS AND THEIR ATTACHMENT, INCLUDING, BUT NOT LIMITED TO THE FOLLOWING, SHALL BE DESIGNED IN ACCORDANCE WITH PART 4 OF THE BUILDING CODE BY THE CONTRACTOR'S ENGINEER AT THE CONTRACTOR'S EXPENSE:

LADDERS

ANCHORAGE & SEISMIC RESTRAINTS OF ARCHITECTURAL, MECHANICAL AND ELECTRICAL ELEMENTS

2. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL SECONDARY COMPONENTS AND THEIR ATTACHMENT TO THE ENGINEER FOR REVIEW AT LEAST TWO WEEKS PRIOR TO FABRICATION. THE DRAWINGS SHALL BE SEALED BY THE CONTRACTOR'S ENGINEER. THE SHOP DRAWINGS SHALL SHOW ALL DETAILS, MATERIAL SPECIFICATIONS AND DESIGN LOADS. THE CONTRACTOR'S ENGINEER SHALL CARRY OUT FIELD REVIEWS AND CERTIFY THAT THE WORK WAS COMPLETED IN ACCORDANCE WITH THE SHOP DRAWINGS AND ALL OTHER STRUCTURAL REQUIREMENTS.

3. THE CONTRACTOR'S ENGINEER IS RESPONSIBLE FOR THE PROTECTION OF CONNECTIONS OF DISSIMILAR METALS FROM CORROSION.

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ORIGINAL DWG SIZE: ANSI D (22" x 34")

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TOWNSHIP OF ESQUIMALT
1229 EQUIMALT ROAD, ESQUIMALT, BC V9A 3P1

UGANDA PUMP STATION UPGRADES
STRUCTURAL
SPECIFICATIONS

Drawing No.

S-001

Project Number

2241-25014-00

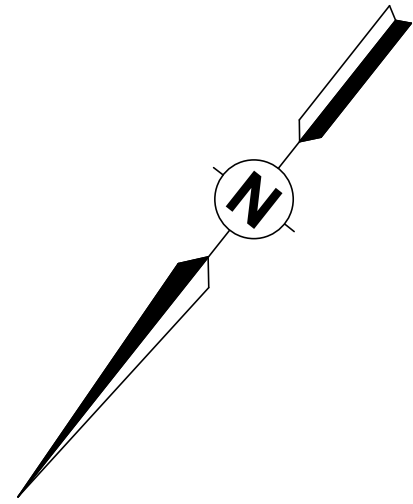
Rev.

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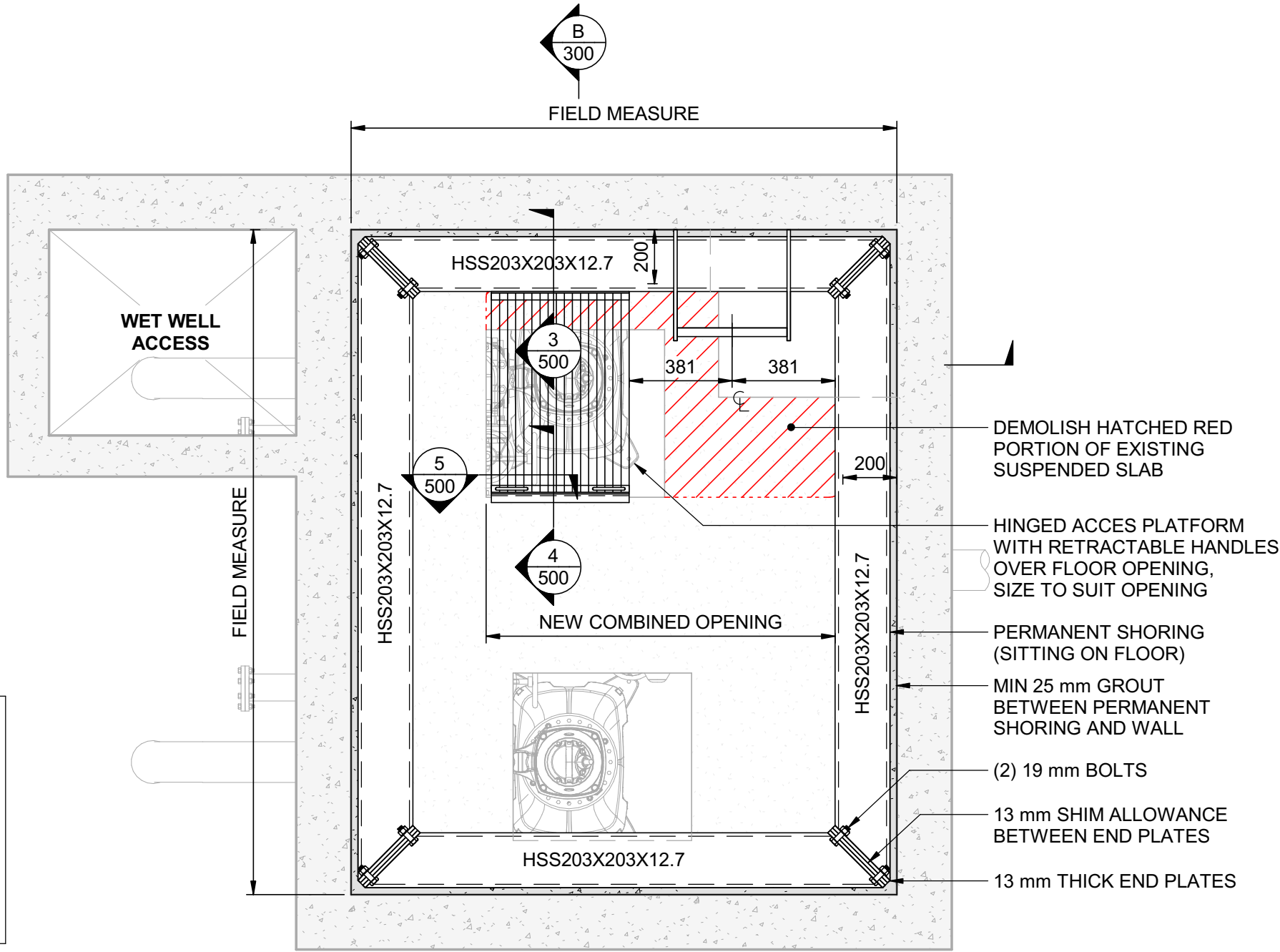
DESTROY ALL PRINTS BEARING PREVIOUS REVISION

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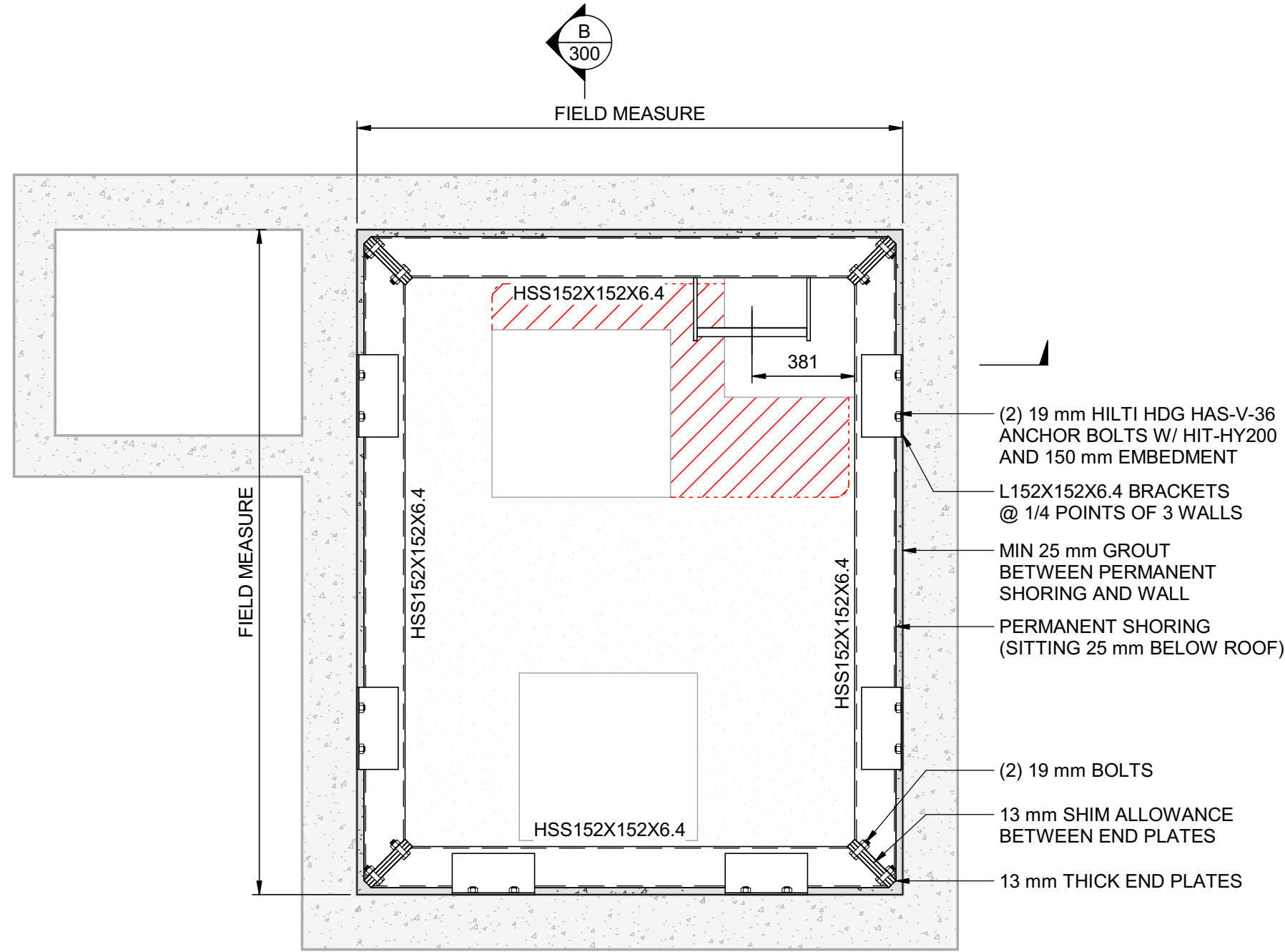
NOTES:

1. CONTRACTOR TO CONFIRM DIMENSIONS IN THE FIELD AND SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO COMMENCING FABRICATION.
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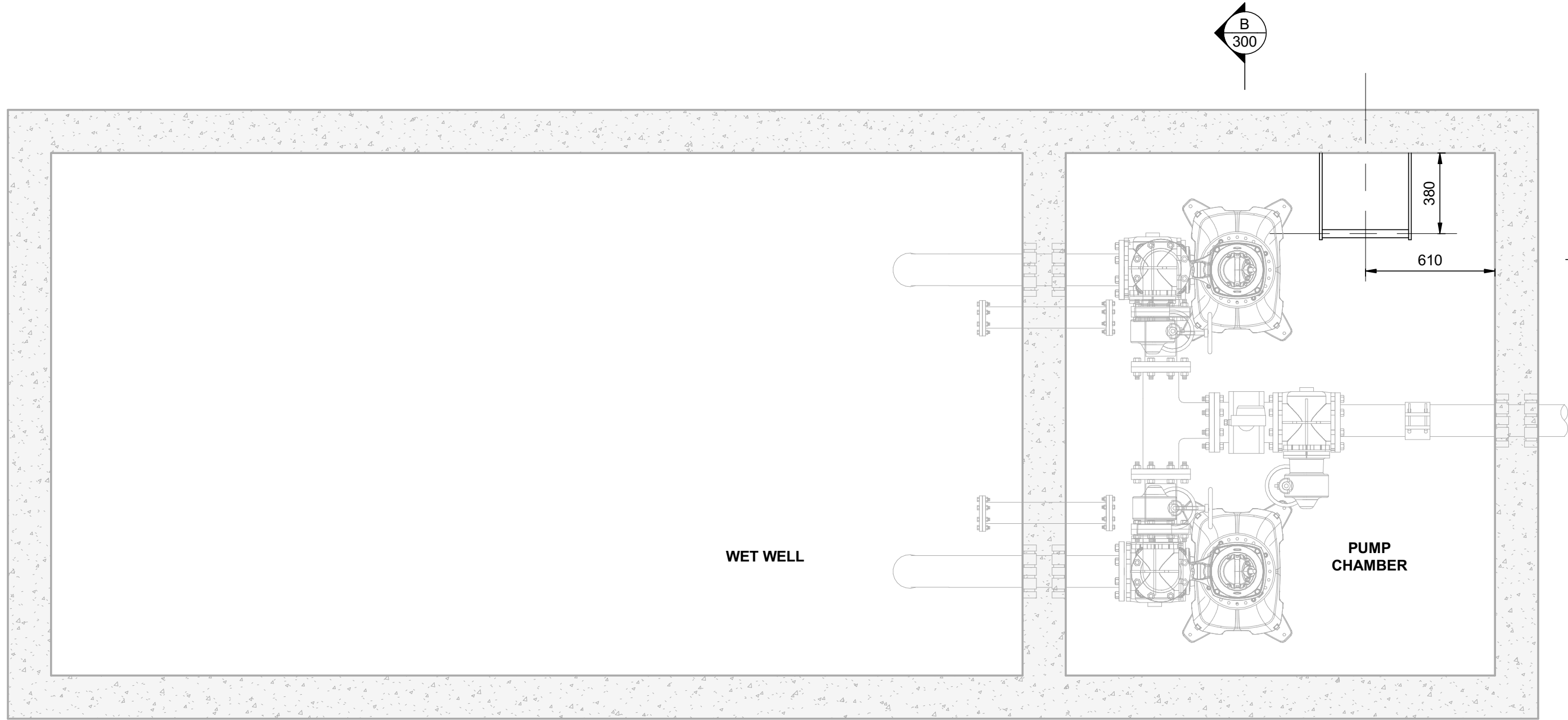
INTERMEDIATE FLOOR PLAN

SCALE 1:20



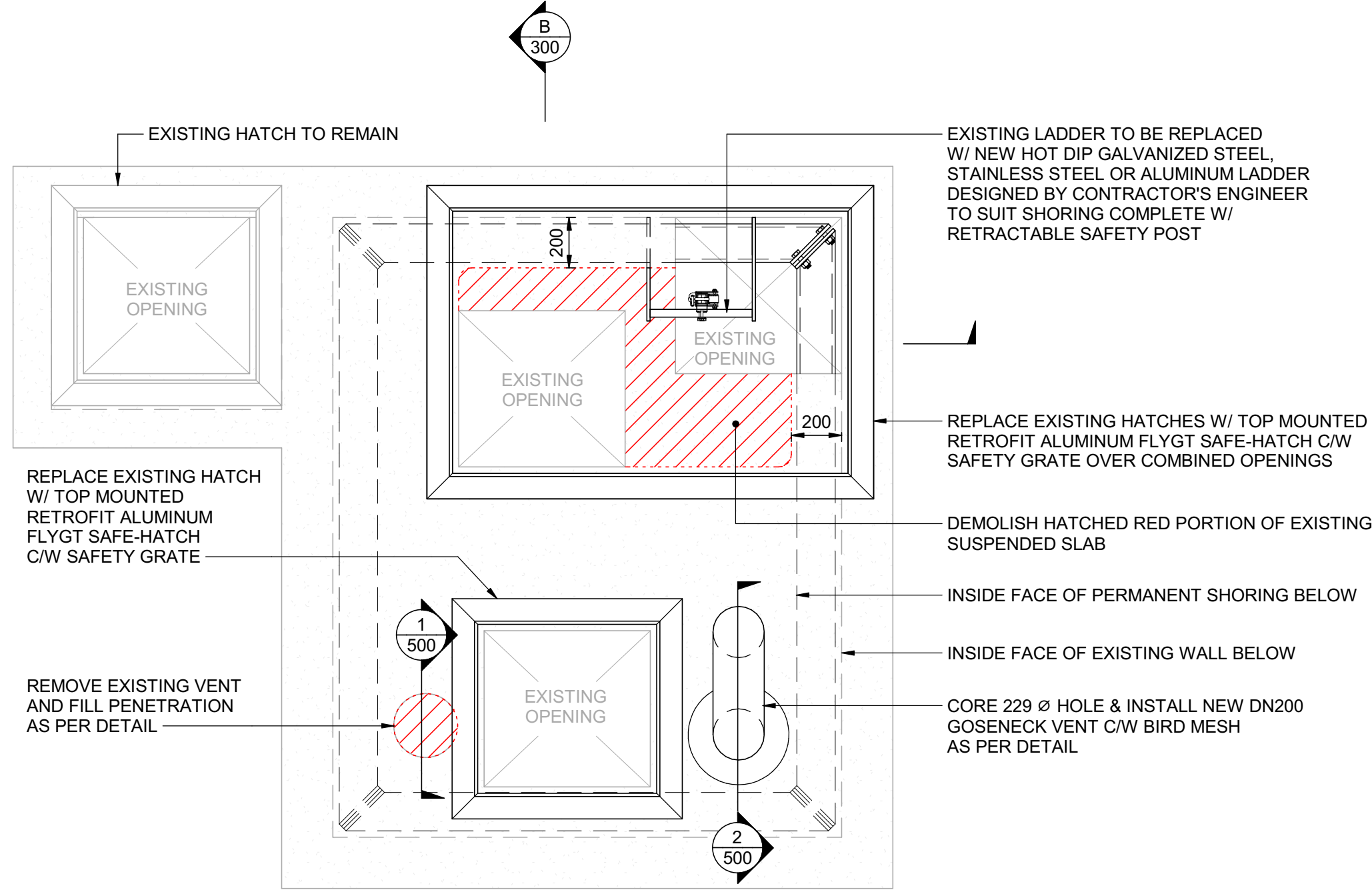
REFLECTED CEILING PLAN

SCALE 1:20



LOWER FLOOR PLAN

SCALE 1:20



ROOF PLAN

SCALE 1:20

Rev	Date	Description	Drawn	Design	App'd
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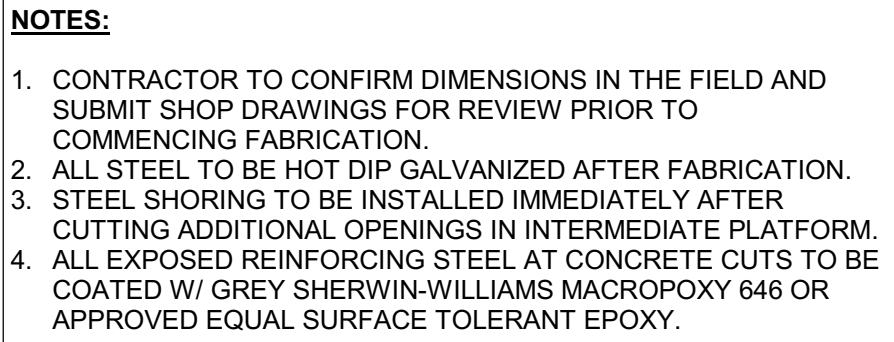
UGANDA PUMP STATION UPGRADES
STRUCTURAL
PLANS

Drawing No.
S-100

Project Number
2241-25014-00

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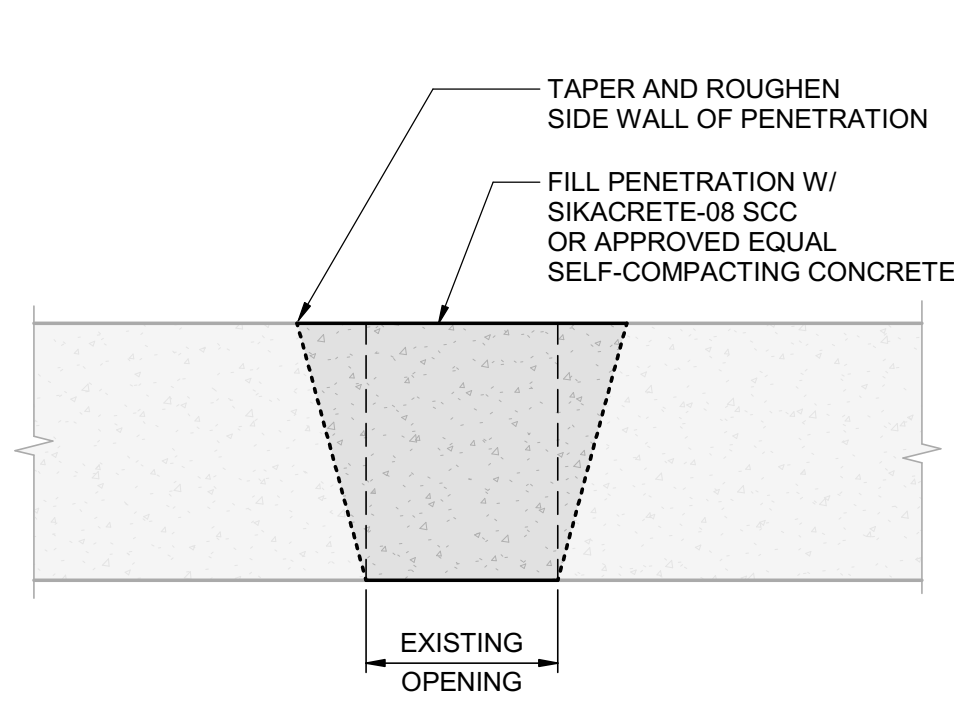


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0 2025-07-24 ISSUED FOR TENDER			TRM SF MH												SECTIONS								
Rev Date Description			Drawn Design App'd												Approved Sealed								

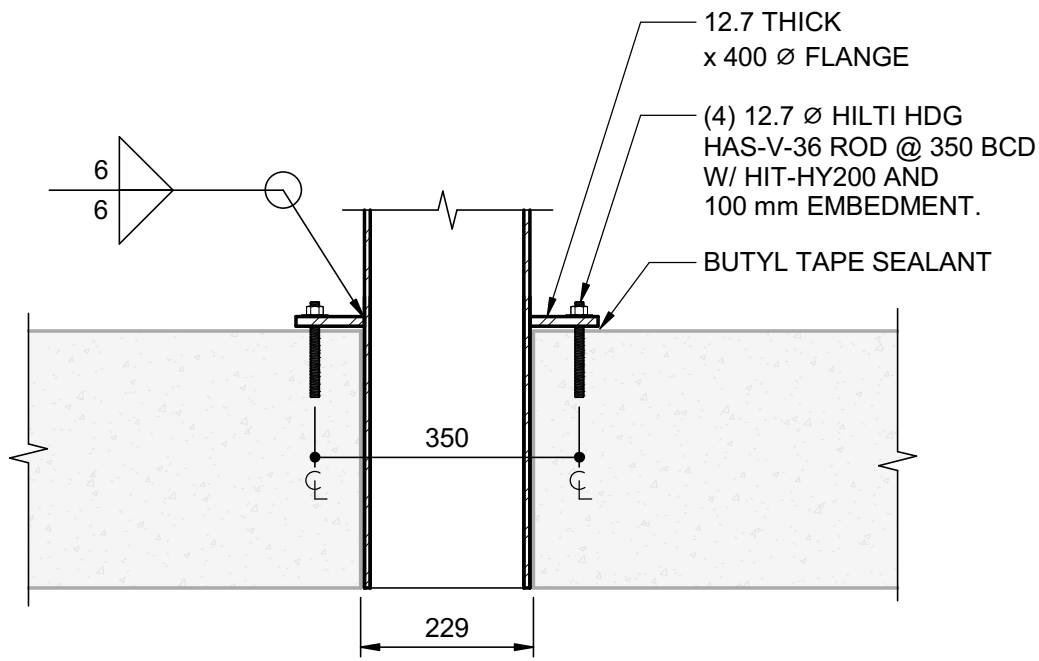
McElhanney ANS D - 2024-02-05

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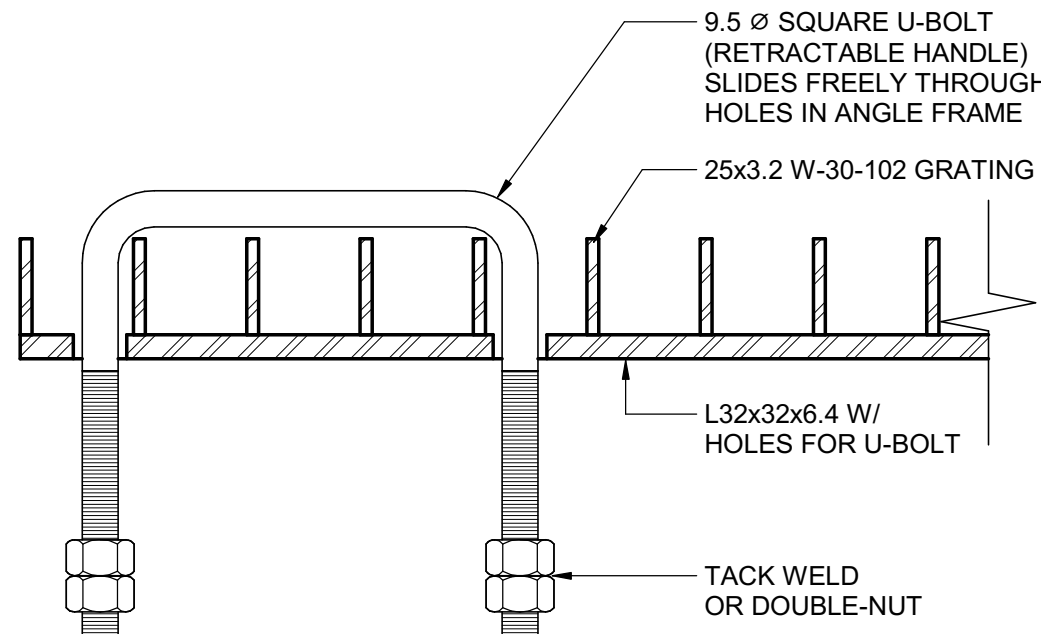


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PLUG DETAIL

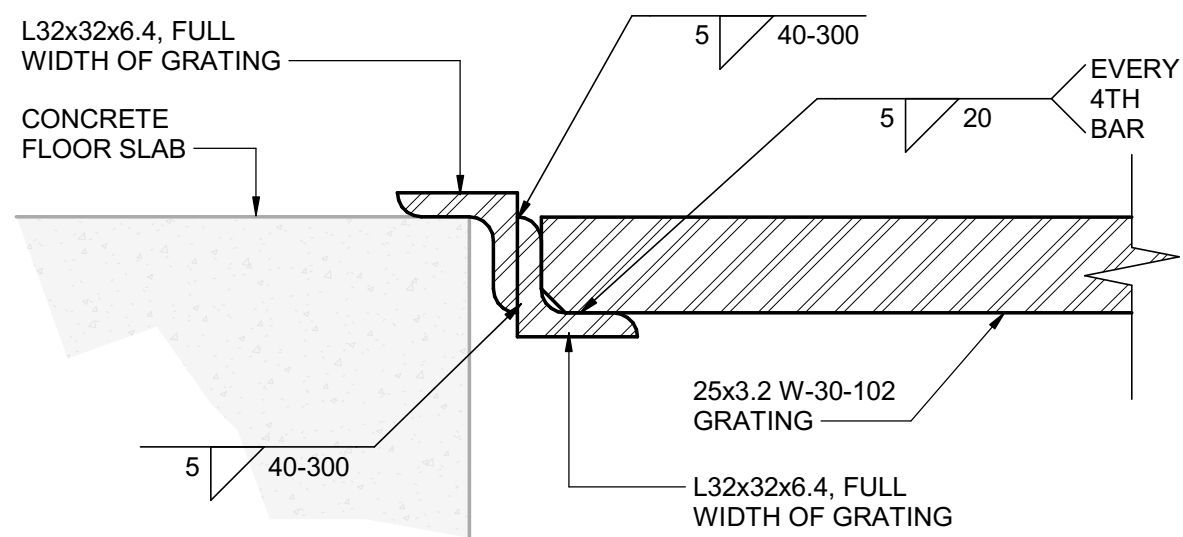


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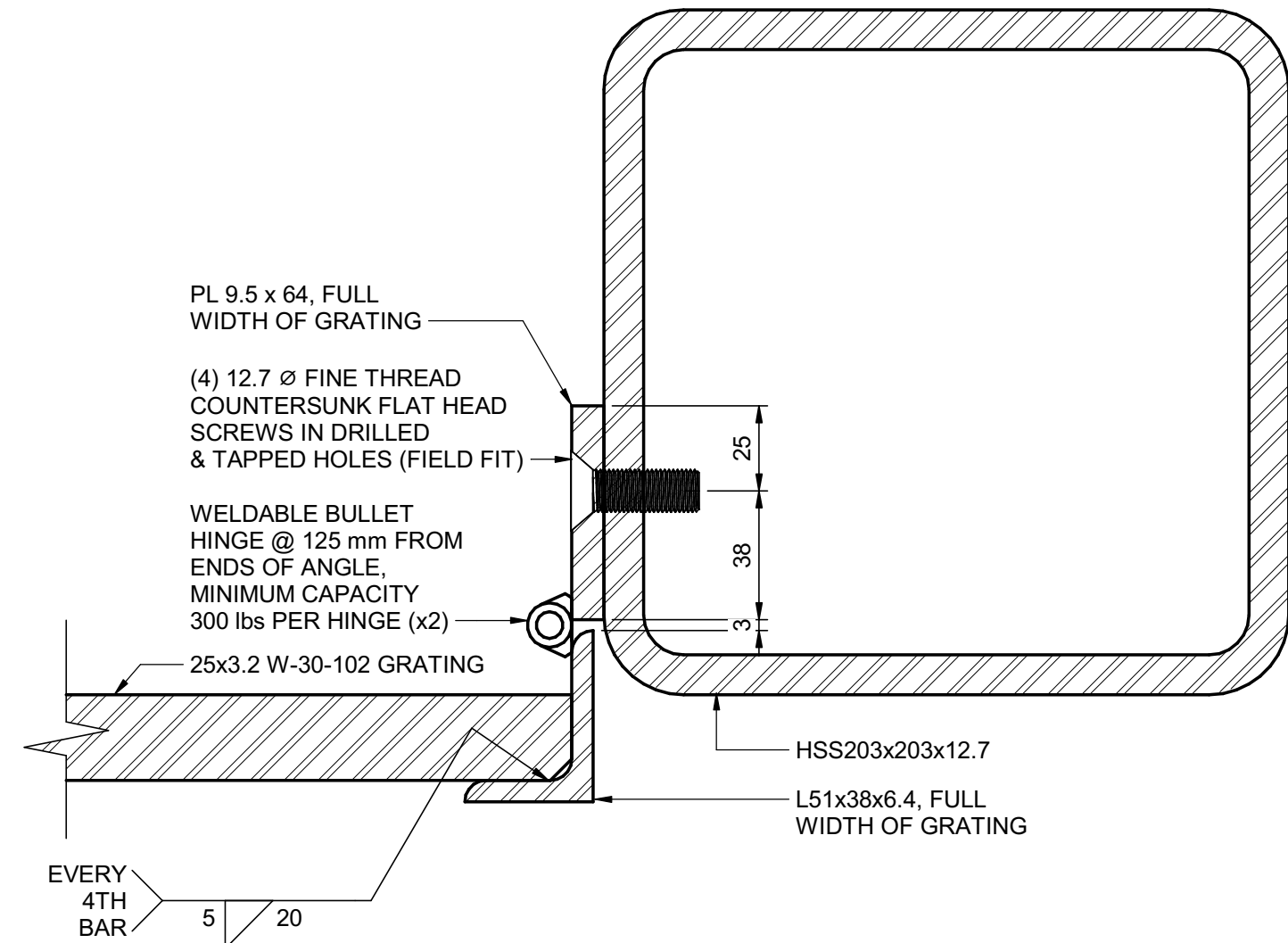
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5
100
SCALE 1:2
HANDLE DETAIL



4
100
SCALE 1:2
BEARING EDGE DETAIL



3
100
SCALE 1:2
HINGE DETAIL

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ORIGINAL DWG SIZE: ANSI D (22" x 34")

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UGANDA PUMP STATION UPGRADES
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Drawing No.
S-500

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