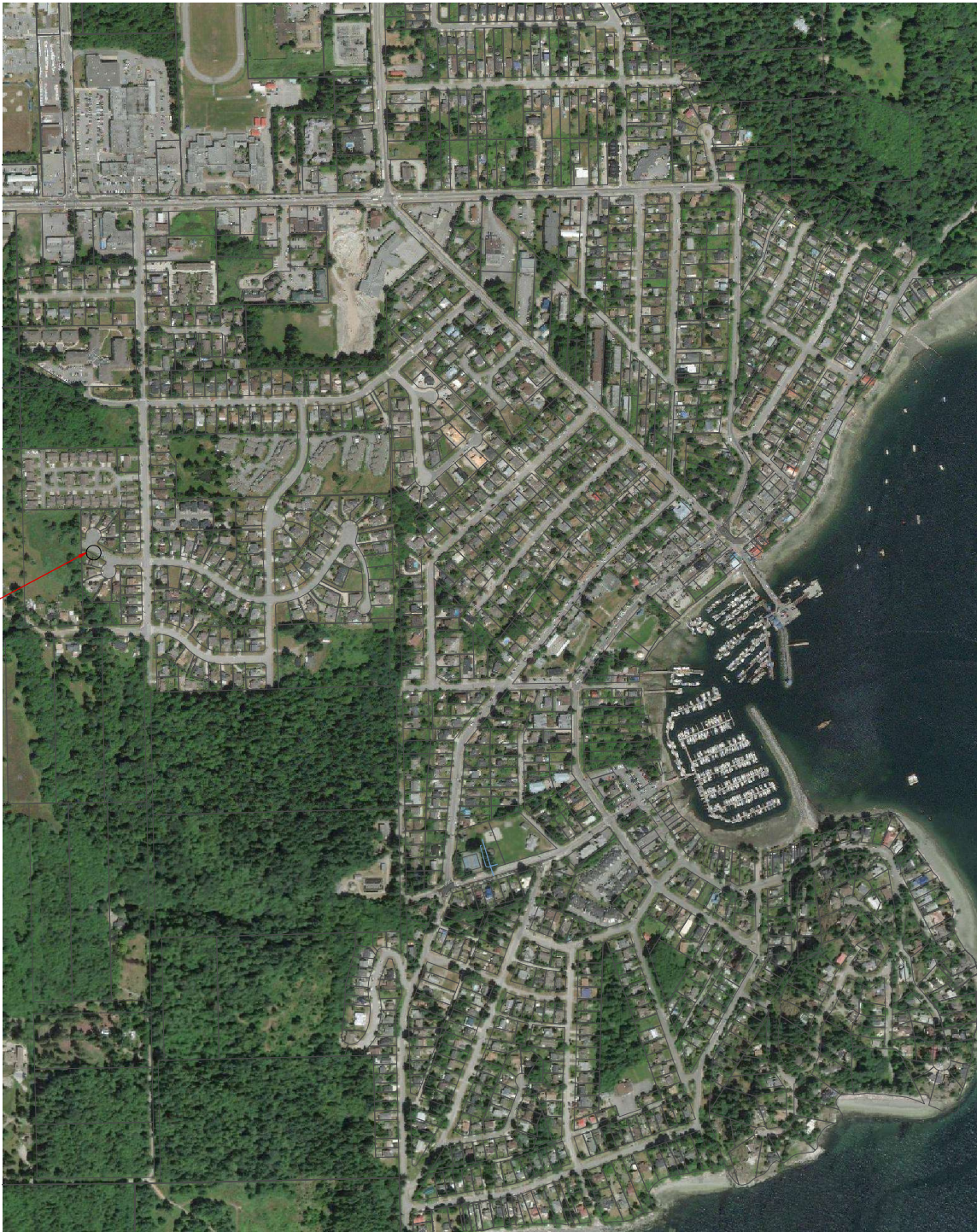




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AREA OF WORK
(OCEANMOUNT BLVD)



TOWN OF GIBSONS SITE LOCATION
NOT TO SCALE

GROUNDWATER WELL No. 6

DRAWING LIST

No DRAWING TITLE

CIVL

C00 CIVIL LEGEND
C01 SITE PLAN

PROCESS MECHANICAL

P00 PROCESS LEGEND
P01 PROCESS MECHANICAL SITE PLAN
P02 PROCESS MECHANICAL SITE SECTIONS AND DETAILS
P03 PUMP ROOM LAYOUT DETAILS
P04 WELL DETAILS AND PUMP AND SYSTEM CURVES

ARCHITECTURAL

A01 FLOOR PLANS
A02 EXTERIOR ELEVATIONS
A03 BUILDING SECTIONS AND DETAILS

STRUCTURAL

S01 GENERAL REQUIREMENTS
S02 LAYOUT PLANS AND SECTIONS

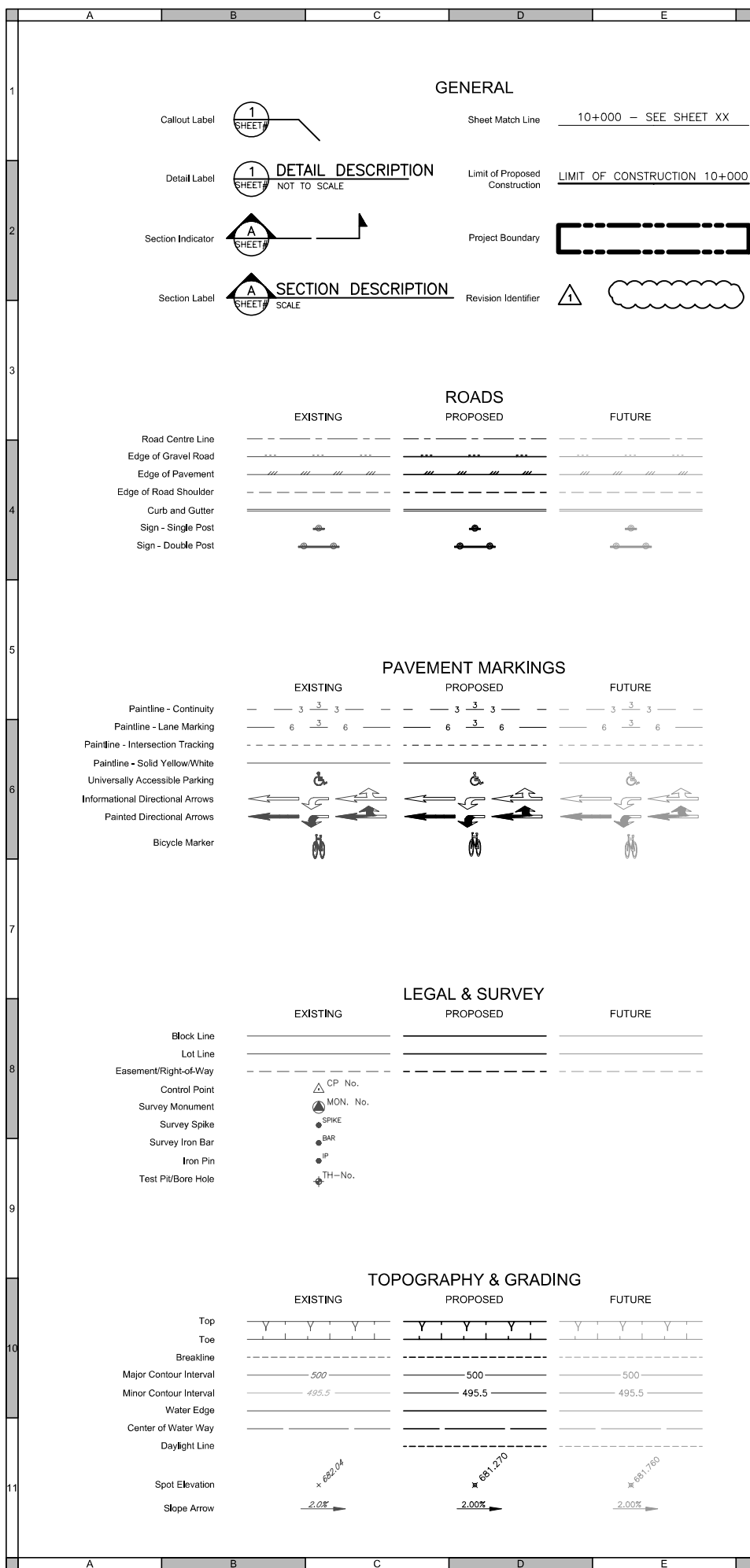
ELECTRICAL

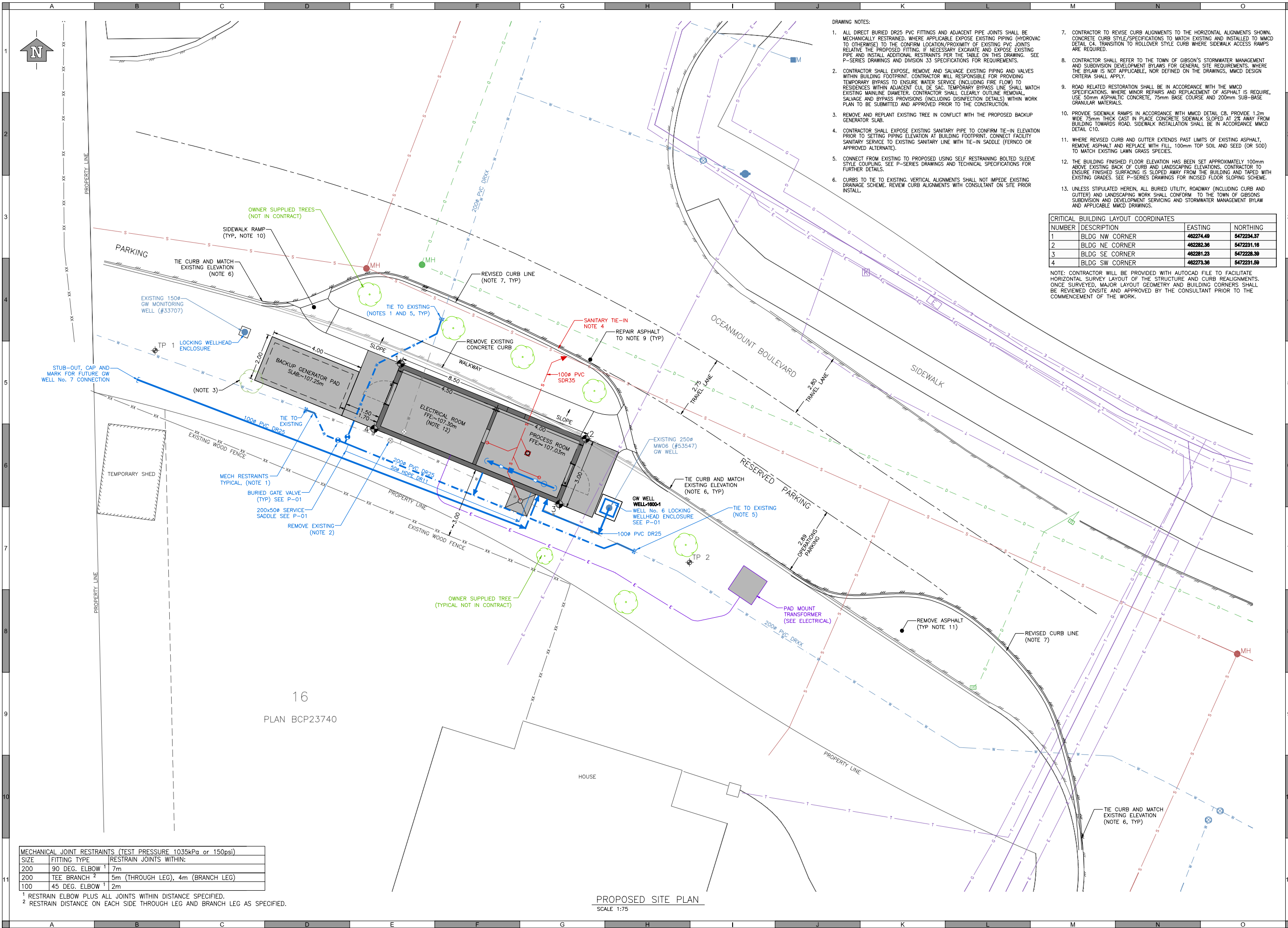
E01 ELECTRICAL SINGLE LINE DIAGRAM, KEY PLAN & MCC LAYOUT
E02 ELECTRICAL SITE PLAN & DETAILS
E03 ELECTRICAL BLOCK DIAGRAMS
E04 ELECTRICAL BUILDING PLAN & PANELBOARD SCHEDULE
E05 ELECTRICAL SCHEMATIC DIAGRAM
E06 ELECTRICAL SCHEMATIC DIAGRAM
E07 ELECTRICAL SCHEMATIC DIAGRAM
E08 ELECTRICAL HVAC SCHEMATIC DIAGRAM & CONTROL PANEL LAYOUTS

BUILDING MECHANICAL

ME01 BUILDING MECHANICAL PLAN







- DRAWING NOTES:
- ALL DIRECT BURIED DR25 PVC FITTINGS AND ADJACENT PIPE JOINTS SHALL BE MECHANICALLY RESTRAINED. WHERE APPLICABLE EXPOSE EXISTING PIPING (HYDROVAC TO OTHERWISE) TO THE CONFIRM LOCATION/PROXIMITY OF EXISTING PVC JOINTS RELATIVE TO THE PROPOSED FITTING. IF NECESSARY EXCAVATE AND EXPOSE EXISTING PIPE AND INSTALL ADDITIONAL RESTRAINTS PER THE TABLE ON THIS DRAWING. SEE P-SERIES DRAWINGS AND DIVISION 33 SPECIFICATIONS FOR REQUIREMENTS.
 - CONTRACTOR SHALL EXPOSE, REMOVE AND SALVAGE EXISTING PIPING AND VALVES WITHIN BUILDING FOOTPRINT. CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING TEMPORARY BYPASS TO ENSURE WATER SERVICE (INCLUDING FIRE FLOW) TO RESIDENCES WITHIN ADJACENT CUL DE SAC. TEMPORARY BYPASS LINE SHALL MATCH EXISTING MAINLINE DIAMETER. CONTRACTOR SHALL CLEARLY OUTLINE REMOVAL, SALVAGE AND BYPASS PROVISIONS (INCLUDING DISINFECTION DETAILS) WITHIN WORK PLAN TO BE SUBMITTED AND APPROVED PRIOR TO THE CONSTRUCTION.
 - REMOVE AND REPLANT EXISTING TREE IN CONFLICT WITH THE PROPOSED BACKUP GENERATOR SLAB.
 - CONTRACTOR SHALL EXPOSE EXISTING SANITARY PIPE TO CONFIRM TIE-IN ELEVATION PRIOR TO SETTING PIPING ELEVATION AT BUILDING FOOTPRINT. CONNECT FACILITY SANITARY SERVICE TO EXISTING SANITARY LINE WITH TIE-IN SADDLE (FERROD OR APPROVED ALTERNATE).
 - CONNECT FROM EXISTING TO PROPOSED USING SELF RESTRAINING BOLTED SLEEVE STYLE COUPLING. SEE P-SERIES DRAWINGS AND TECHNICAL SPECIFICATIONS FOR FURTHER DETAILS.
 - CURBS TO TIE TO EXISTING. VERTICAL ALIGNMENTS SHALL NOT IMPEDE EXISTING DRAINAGE SCHEME. REVIEW CURB ALIGNMENTS WITH CONSULTANT ON SITE PRIOR INSTALL.
 - CONTRACTOR TO REVISE CURB ALIGNMENTS TO THE HORIZONTAL ALIGNMENTS SHOWN. CONCRETE CURB STYLE/SPECIFICATIONS TO MATCH EXISTING AND INSTALLED TO MMCD DETAIL C4. TRANSITION TO ROLLOVER STYLE CURB WHERE SIDEWALK ACCESS RAMPS ARE REQUIRED.
 - CONTRACTOR SHALL REFER TO THE TOWN OF GIBSON'S STORMWATER MANAGEMENT AND SUBDIVISION DEVELOPMENT BYLAWS FOR GENERAL SITE REQUIREMENTS. WHERE THE BYLAW IS NOT APPLICABLE, NOR DEFINED ON THE DRAWINGS, MMCD DESIGN CRITERIA SHALL APPLY.
 - ROAD RELATED RESTORATION SHALL BE IN ACCORDANCE WITH THE MMCD SPECIFICATIONS. WHERE MINOR REPAIRS AND REPLACEMENT OF ASPHALT IS REQUIRED, USE 50mm ASPHALTIC CONCRETE, 75mm BASE COURSE AND 200mm SUB-BASE GRANULAR MATERIALS.
 - PROVIDE SIDEWALK RAMPS IN ACCORDANCE WITH MMCD DETAIL C8. PROVIDE 1.2m WIDE 75mm THICK CAST IN PLACE CONCRETE SIDEWALK SLOPED AT 2% AWAY FROM BUILDING TOWARDS ROAD. SIDEWALK INSTALLATION SHALL BE IN ACCORDANCE MMCD DETAIL C10.
 - WHERE REVISED CURB AND GUTTER EXTENDS PAST LIMITS OF EXISTING ASPHALT, REMOVE ASPHALT AND REPLACE WITH FILL, 100mm TOP SOIL AND SEED (OR SOD) TO MATCH EXISTING LAWN GRASS SPECIES.
 - THE BUILDING FINISHED FLOOR ELEVATION HAS BEEN SET APPROXIMATELY 100mm ABOVE EXISTING BACK OF CURB AND LANDSCAPING ELEVATIONS. CONTRACTOR TO ENSURE FINISHED SURFACING IS SLOPED AWAY FROM THE BUILDING AND TAPED WITH EXISTING GRADES. SEE P-SERIES DRAWINGS FOR INCISED FLOOR SLOPING SCHEME.
 - UNLESS STIPULATED HEREIN, ALL BURIED UTILITY, ROADWAY (INCLUDING CURB AND GUTTER) AND LANDSCAPING WORK SHALL CONFORM TO THE TOWN OF GIBSON'S SUBDIVISION AND DEVELOPMENT SERVING AND STORMWATER MANAGEMENT BYLAW AND APPLICABLE MMCD DRAWINGS.

CRITICAL BUILDING LAYOUT COORDINATES			
NUMBER	DESCRIPTION	EASTING	NORTHING
1	BLDG NW CORNER	482274.49	5472234.37
2	BLDG NE CORNER	482282.38	5472231.16
3	BLDG SE CORNER	482281.23	5472228.39
4	BLDG SW CORNER	482273.36	5472231.66

NOTE: CONTRACTOR WILL BE PROVIDED WITH AUTOCAD FILE TO FACILITATE HORIZONTAL SURVEY LAYOUT OF THE STRUCTURE AND CURB REALIGNMENTS. ONCE SURVEYED, MAJOR LAYOUT GEOMETRY AND BUILDING CORNERS SHALL BE REVIEWED ON-SITE AND APPROVED BY THE CONSULTANT PRIOR TO THE COMMENCEMENT OF THE WORK.

MECHANICAL JOINT RESTRAINTS (TEST PRESSURE 1035kPa or 150psi)		
SIZE	FITTING TYPE	RESTRAIN JOINTS WITHIN:
200	90 DEG. ELBOW ¹	7m
200	TEE BRANCH ²	5m (THROUGH LEG), 4m (BRANCH LEG)
100	45 DEG. ELBOW ¹	2m

¹ RESTRAIN ELBOW PLUS ALL JOINTS WITHIN DISTANCE SPECIFIED.
² RESTRAIN DISTANCE ON EACH SIDE THROUGH LEG AND BRANCH LEG AS SPECIFIED.

PROPOSED SITE PLAN
SCALE 1:75

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SURVEY INFORMATION
Prepared by: Bennett Land Surveying
Coordinate System: UTM NAD83 Zone 10
Compilation Date:

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2021-12-17
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Signature: *John Bacher*
Date: 2021-12-17
PERMIT NUMBER: 1000527
Engineers and Geoscientists BC (EGBC)

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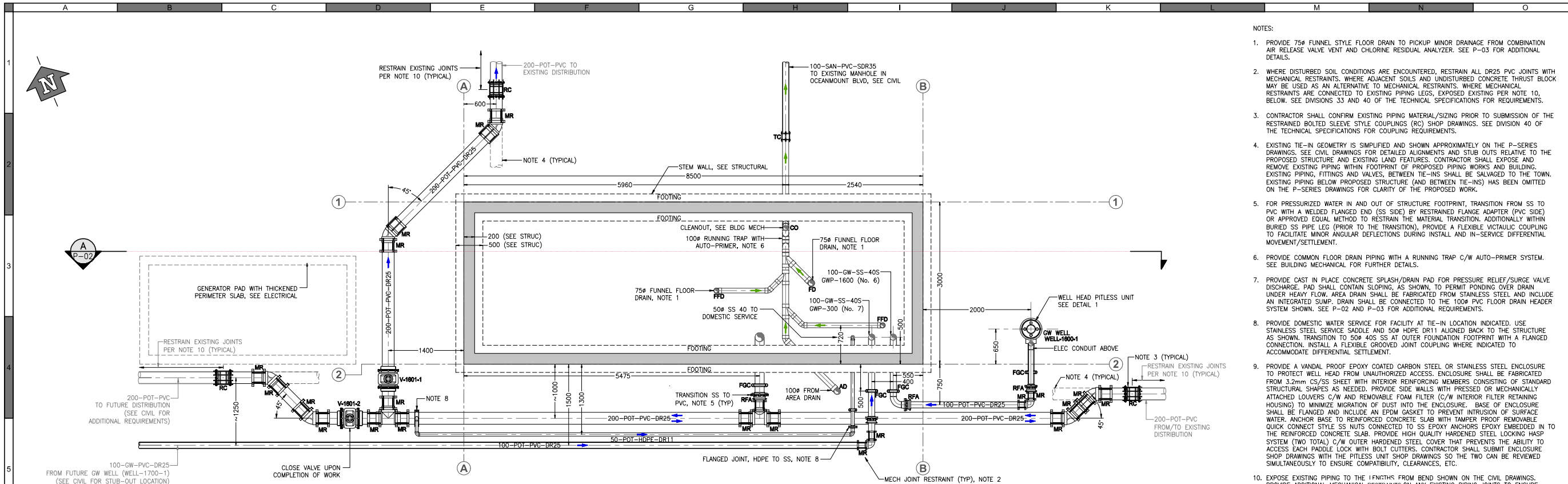
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Designed by SD/SB
Drawn by SD

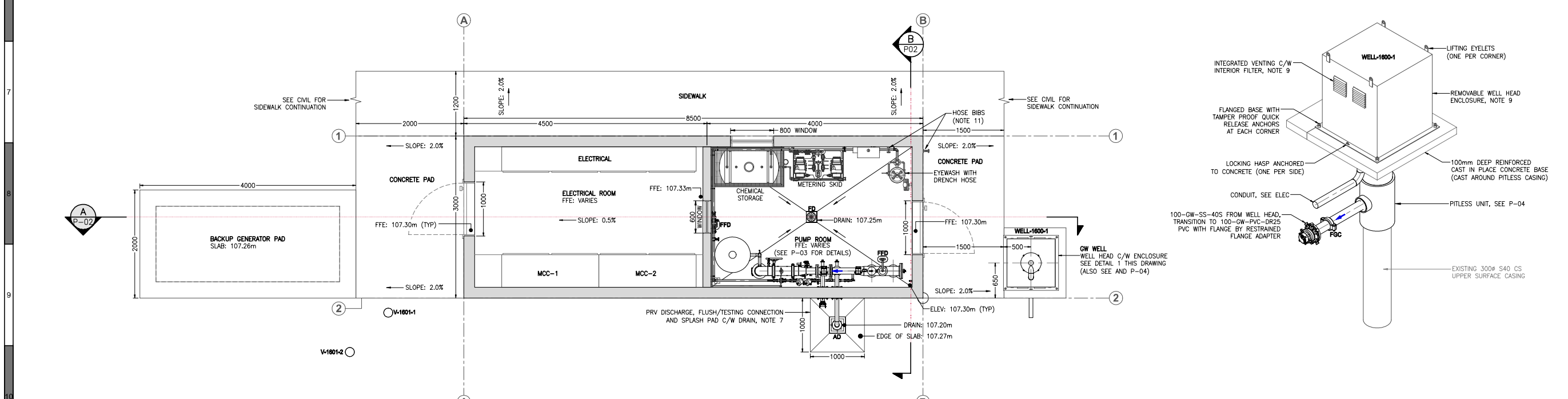
WELL No. 6
SITE PLAN

Sheet Number 2 of 2
Project Number 1300.124.02
Drawing Number C01
Revision 0

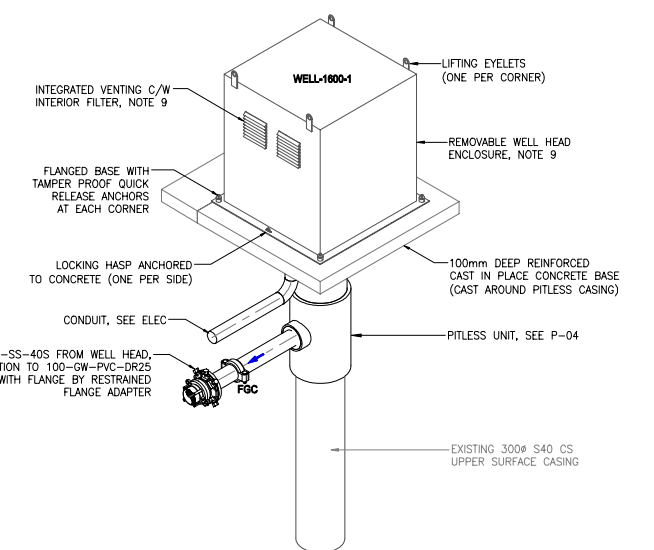
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PLAN - FOUNDATION LEVEL (107.10m)
SCALE - 1:40



PLAN - MAIN FLOOR LEVEL (110.00m)
SCALE - 1:40



ISOMETRIC DETAIL - WELL HEAD No. 6 ENCLOSURE
SCALE 1:25 (ISOMETRIC)

- NOTES:
- PROVIDE 75# FUNNEL STYLE FLOOR DRAIN TO PICKUP MINOR DRAINAGE FROM COMBINATION AIR RELEASE VALVE VENT AND CHLORINE RESIDUAL ANALYZER. SEE P-03 FOR ADDITIONAL DETAILS.
 - WHERE DISTURBED SOIL CONDITIONS ARE ENCOUNTERED, RESTRAIN ALL DR25 PVC JOINTS WITH MECHANICAL RESTRAINTS. WHERE ADJACENT SOILS AND UNDISTURBED CONCRETE THRUST BLOCK MAY BE USED AS AN ALTERNATIVE TO MECHANICAL RESTRAINTS. WHERE MECHANICAL RESTRAINTS ARE CONNECTED TO EXISTING PIPING LEGS, EXPOSED EXISTING PER NOTE 10, BELOW. SEE DIVISIONS 33 AND 40 OF THE TECHNICAL SPECIFICATIONS FOR REQUIREMENTS.
 - CONTRACTOR SHALL CONFIRM EXISTING PIPING MATERIAL/SIZING PRIOR TO SUBMISSION OF THE RESTRAINED BOLTED SLEEVE STYLE COUPLINGS (RC) SHOP DRAWINGS. SEE DIVISION 40 OF THE TECHNICAL SPECIFICATIONS FOR COUPLING REQUIREMENTS.
 - EXISTING TIE-IN GEOMETRY IS SIMPLIFIED AND SHOWN APPROXIMATELY ON THE P-SERIES DRAWINGS. SEE CIVIL DRAWINGS FOR DETAILED ALIGNMENTS AND STUB OUTS RELATIVE TO THE PROPOSED STRUCTURE AND EXISTING LAND FEATURES. CONTRACTOR SHALL EXPOSE AND REMOVE EXISTING PIPING WITHIN FOOTPRINT OF PROPOSED PIPING WORKS AND BUILDING. EXISTING PIPING, FITTINGS AND VALVES, BETWEEN TIE-INS SHALL BE SALVAGED TO THE TOWN. EXISTING PIPING BELOW PROPOSED STRUCTURE (AND BETWEEN TIE-INS) HAS BEEN OMITTED ON THE P-SERIES DRAWINGS FOR CLARITY OF THE PROPOSED WORK.
 - FOR PRESSURIZED WATER IN AND OUT OF STRUCTURE FOOTPRINT, TRANSITION FROM SS TO PVC WITH A WELDED FLANGED END (SS SIDE) BY RESTRAINED FLANGE ADAPTER (PVC SIDE) OR APPROVED EQUAL METHOD TO RESTRAIN THE MATERIAL TRANSITION. ADDITIONALLY WITHIN BURIED SS PIPE LEG (PRIOR TO THE TRANSITION), PROVIDE A FLEXIBLE VICTAULIC COUPLING TO FACILITATE MINOR ANGULAR DEFLECTIONS DURING INSTALL AND IN-SERVICE DIFFERENTIAL MOVEMENT/SETTLEMENT.
 - PROVIDE COMMON FLOOR DRAIN PIPING WITH A RUNNING TRAP C/W AUTO-PRIMER SYSTEM. SEE BUILDING MECHANICAL FOR FURTHER DETAILS.
 - PROVIDE CAST IN PLACE CONCRETE SPLASH/RAIN PAD FOR PRESSURE RELIEF/SURGE VALVE DISCHARGE. PAD SHALL CONTAIN SLOPING, AS SHOWN, TO PERMIT PONDING OVER DRAIN UNDER HEAVY FLOW. AREA DRAIN SHALL BE FABRICATED FROM STAINLESS STEEL AND INCLUDE AN INTEGRATED SUMP. DRAIN SHALL BE CONNECTED TO THE 100# PVC FLOOR DRAIN HEADER SYSTEM SHOWN. SEE P-02 AND P-03 FOR ADDITIONAL REQUIREMENTS.
 - PROVIDE DOMESTIC WATER SERVICE FOR FACILITY AT TIE-IN LOCATION INDICATED. USE STAINLESS STEEL SERVICE SADDLE AND 50# HDPE DR11 ALIGNED BACK TO THE STRUCTURE AS SHOWN. TRANSITION TO 50# 40S SS AT OUTER FOUNDATION FOOTPRINT WITH A FLANGED CONNECTION. INSTALL A FLEXIBLE GROOVED JOINT COUPLING WHERE INDICATED TO ACCOMMODATE DIFFERENTIAL SETTLEMENT.
 - PROVIDE A VANDAL PROOF EPOXY COATED CARBON STEEL OR STAINLESS STEEL ENCLOSURE TO PROTECT WELL HEAD FROM UNAUTHORIZED ACCESS. ENCLOSURE SHALL BE FABRICATED FROM 3.2mm CS/SS SHEET WITH INTERIOR REINFORCING MEMBERS CONSISTING OF STANDARD STRUCTURAL SHAPES AS NEEDED. PROVIDE SIDE WALLS WITH PRESSED OR MECHANICALLY ATTACHED LOUVERS C/W AND REMOVABLE FOAM FILTER (C/W INTERIOR FILTER RETAINING HOUSING) TO MINIMIZE MIGRATION OF DUST INTO THE ENCLOSURE. BASE OF ENCLOSURE SHALL BE FLANGED AND INCLUDE AN EPDM GASKET TO PREVENT INTRUSION OF SURFACE WATER. ANCHOR BASE TO REINFORCED CONCRETE SLAB WITH TAMPER PROOF SURFACE QUICK CONNECT STYLE SS NUTS CONNECTED TO SS EPOXY ANCHORS EPOXY EMBEDDED IN TO THE REINFORCED CONCRETE SLAB. PROVIDE HIGH QUALITY HARDENED STEEL LOCKING HASP SYSTEM (TWO TOTAL) C/W OUTER HARDENED STEEL COVER THAT PREVENTS THE ABILITY TO ACCESS EACH PADLOCK WITH BOLT CUTTERS. CONTRACTOR SHALL SUBMIT ENCLOSURE SHOP DRAWINGS WITH THE PITLESS UNIT SHOP DRAWINGS SO THE TWO CAN BE REVIEWED SIMULTANEOUSLY TO ENSURE COMPATIBILITY, CLEARANCES, ETC.
 - EXPOSE EXISTING PIPING TO THE LENGTHS FROM BEND SHOWN ON THE CIVIL DRAWINGS. PROVIDE ADDITIONAL MECHANICAL RESTRAINTS ON ANY EXISTING PIPING JOINTS TO ENSURE ADEQUATE SYSTEM RESTRAINT TO THE TEST PRESSURE OF 150PSI. USE HYDROVAC METHOD WHERE APPLICABLE TO EXPOSE EXISTING PIPE (AND CONFIRM LOCATION OF EXISTING JOINTS) TO MINIMIZE DAMAGE TO EXISTING SURFACING.
 - PROVIDE ONE (1) EXTERIOR FROST FREE HOSE BIB AND ONE (1) INTERIOR HOSE BIB WHERE INDICATED. SEE BUILDING MECHANICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

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PROFESSIONAL
ENGINEER
B.C. REG. NO. 12345
J. B. BACCHER

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Date: 2021-12-17
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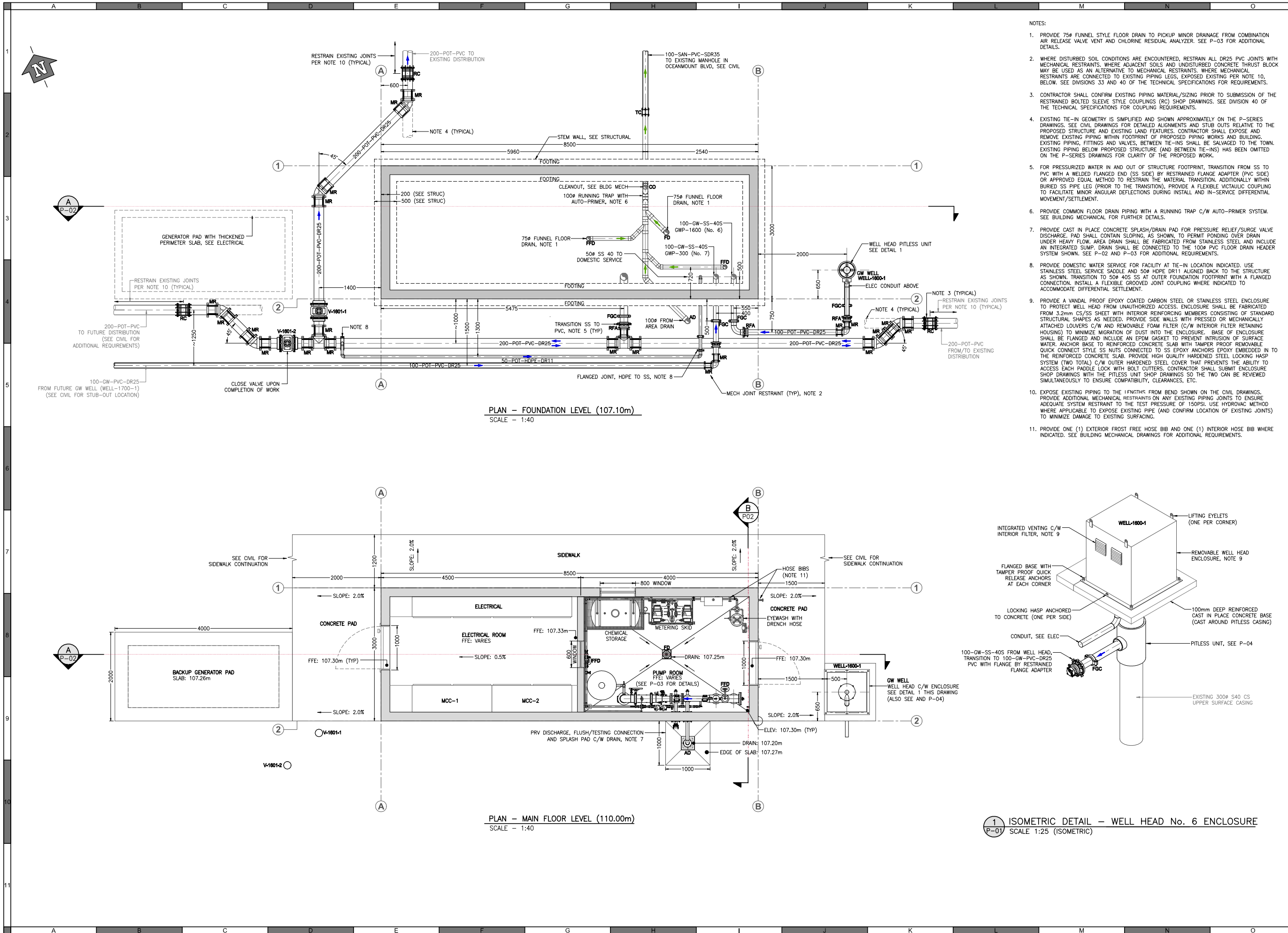
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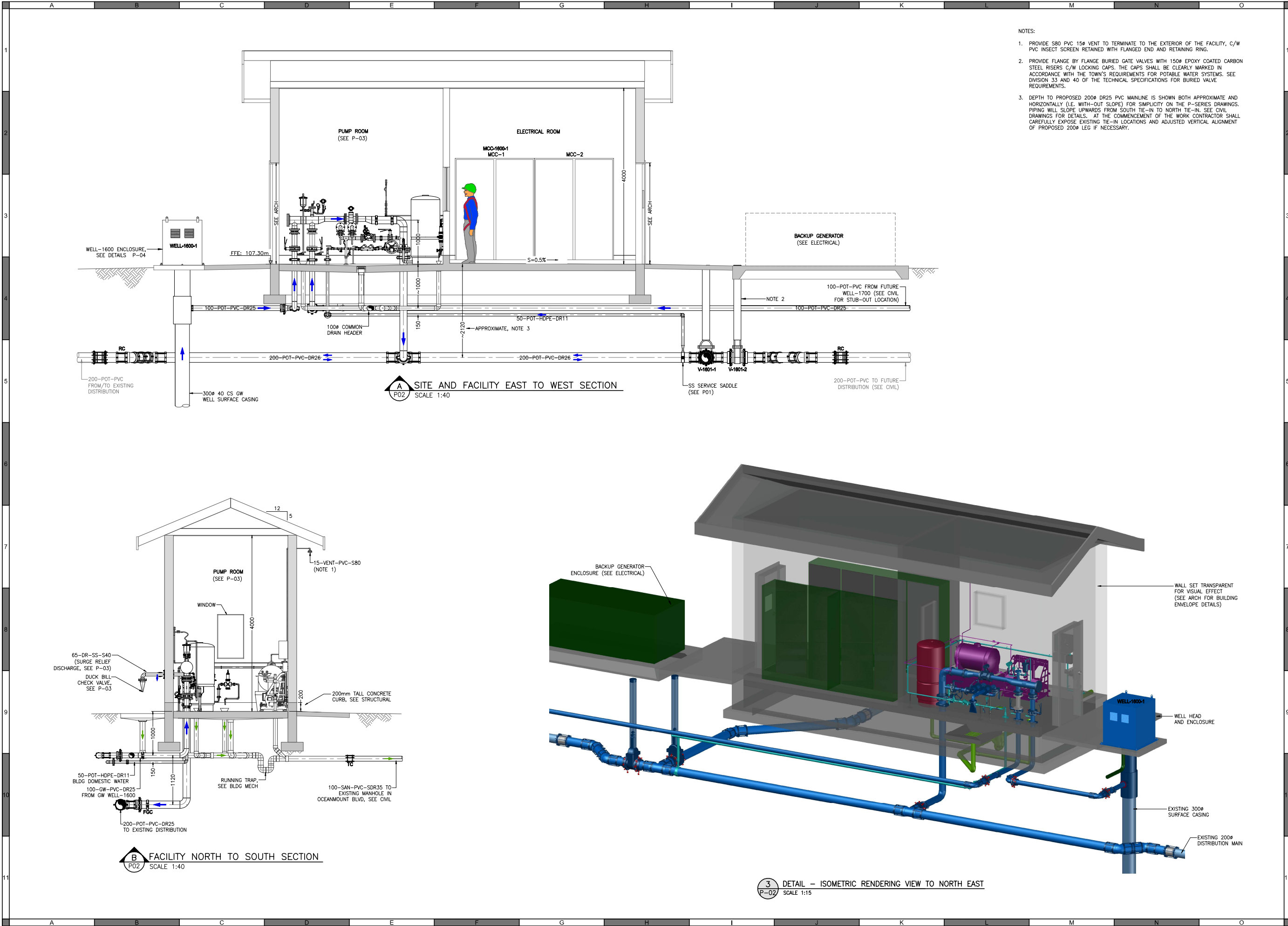
Quality Control by SB
Designed by SD/SB
Drawn by SD

Town of Gibsons
Well No. 6 Pump Station
Process Mechanical Site Plan

Sheet Number 2 of 5
Project Number 1300.0124.02
Drawing Number P-01
Revision 0

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- NOTES:
1. PROVIDE 580 PVC 15" VENT TO TERMINATE TO THE EXTERIOR OF THE FACILITY, C/W PVC INSECT SCREEN RETAINED WITH FLANGED END AND RETAINING RING.
 2. PROVIDE FLANGE BY FLANGE BURIED GATE VALVES WITH 150# EPOXY COATED CARBON STEEL RISERS C/W LOCKING CAPS. THE CAPS SHALL BE CLEARLY MARKED IN ACCORDANCE WITH THE TOWN'S REQUIREMENTS FOR POTABLE WATER SYSTEMS. SEE DIVISION 33 AND 40 OF THE TECHNICAL SPECIFICATIONS FOR BURIED VALVE REQUIREMENTS.
 3. DEPTH TO PROPOSED 200# DR25 PVC MAINLINE IS SHOWN BOTH APPROXIMATE AND HORIZONTALLY (I.E. WITH-OUT SLOPE) FOR SIMPLICITY ON THE P-SERIES DRAWINGS. PIPING WILL SLOPE UPWARDS FROM SOUTH TIE-IN TO NORTH TIE-IN. SEE CIVIL DRAWINGS FOR DETAILS. AT THE COMMENCEMENT OF THE WORK CONTRACTOR SHALL CAREFULLY EXPOSE EXISTING TIE-IN LOCATIONS AND ADJUSTED VERTICAL ALIGNMENT OF PROPOSED 200# LEG IF NECESSARY.

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Engineers and Geoscientists BC
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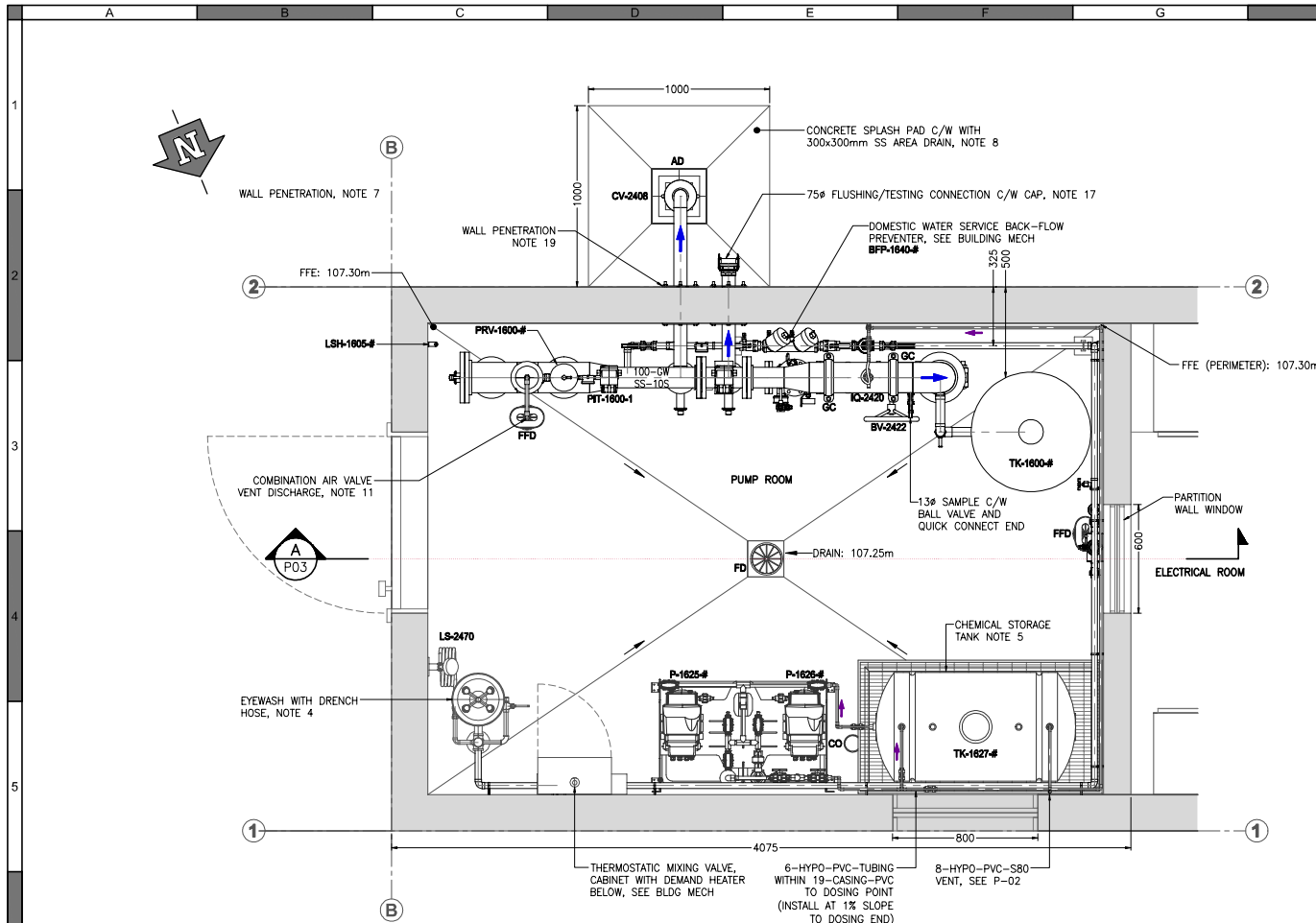
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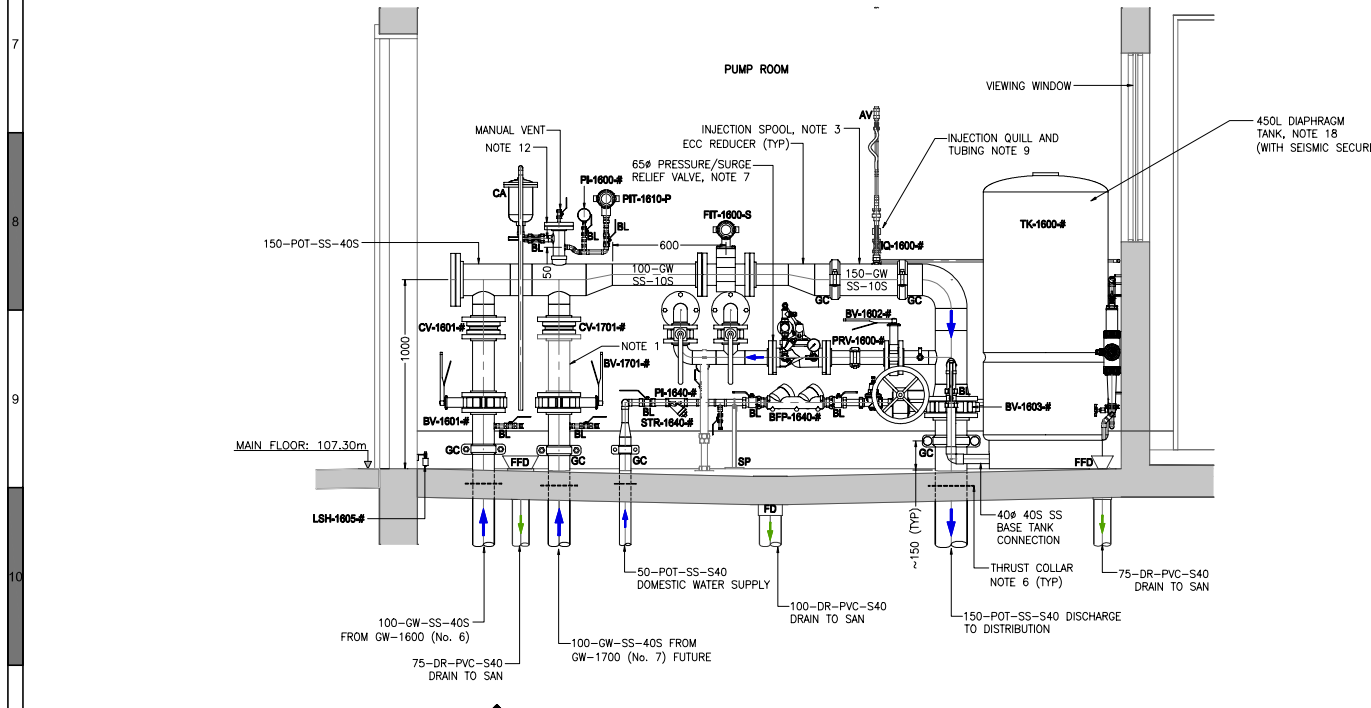
Town of Gibsons
Well No. 6 Pump Station
Process Mechanical Site
Sections and Rendering

Sheet Number 3 of 5
Project Number 1300.0124.02
Drawing Number P-02
Revision 0

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1 DETAIL - PUMP ROOM HORIZONTAL LAYOUT (EYE: 109.30m)
SCALE 1:15

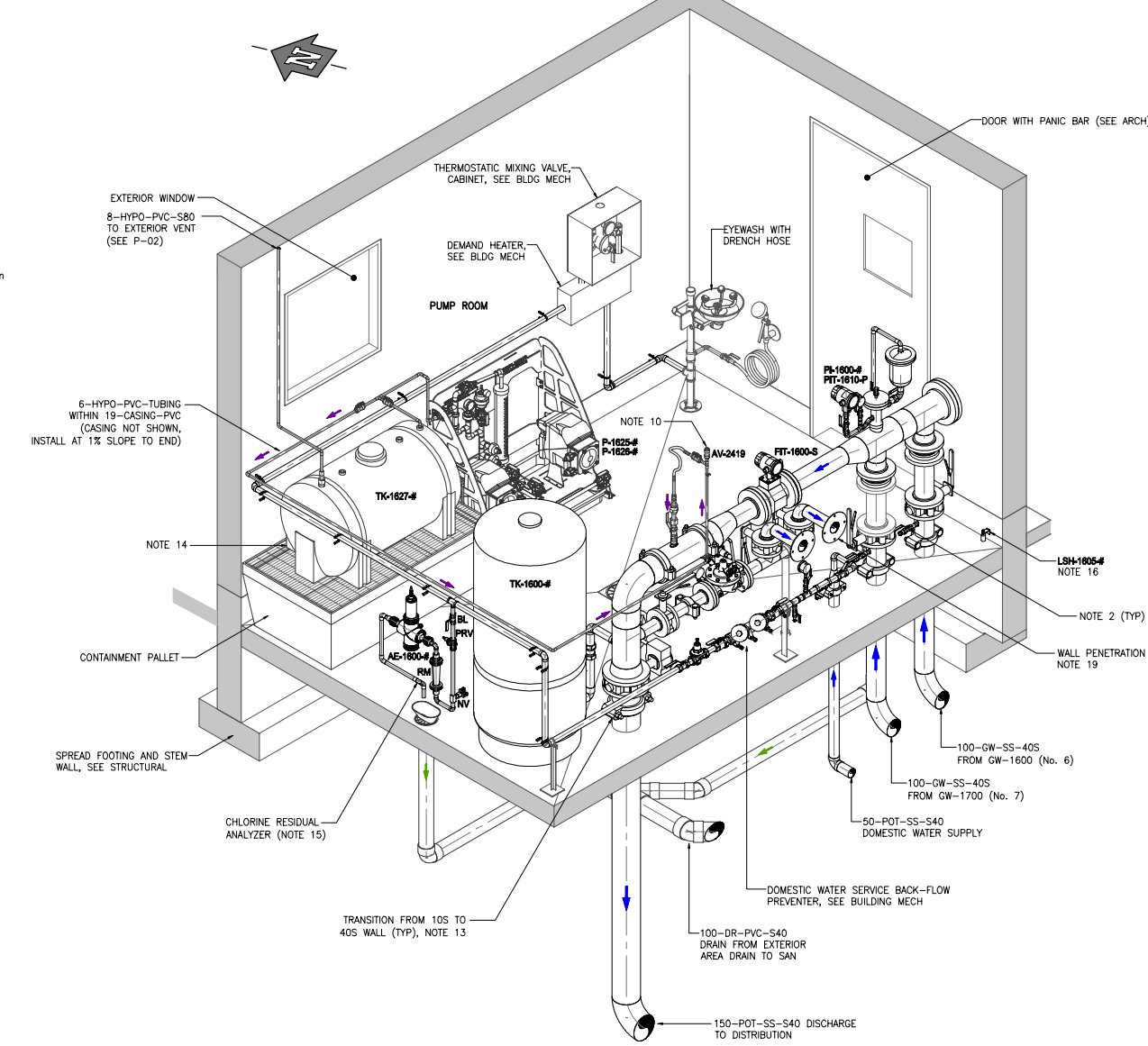


A SECTION - PUMP ROOM EAST TO WEST VERTICAL LAYOUT
SCALE 1:40

NOTES:

- CONTRACTOR SHALL PROVIDE SPOOL BETWEEN BUTTERFLY VALVE AND CHECK VALVE AS SHOWN TO DEMONSTRATE PIPING ALIGNMENTS CONNECT AND SEAL AS INTENDED. HOWEVER, AFTER SUCCESSFUL PRESSURE TESTING, CONTRACTOR SHALL REMOVE THE FLANGED SPOOL AND INSTALL SS BUND FLANGES ON EACH VALVE AS INDICATED. COORDINATE SPOOL STORAGE LOCATION ON SITE WITH TOWN. SPOOL SHALL BE RE-INSTALLED UPON THE COMPLETION OF THE FUTURE WELL PUMP No. 7.
- PROVIDE 13# DRAIN/VENT/SAMPLE CONNECTION C/W N.C. BALL VALVE AND MALE QUICK CONNECT END UPSTREAM OF EACH GW PUMP FEED ISOLATION BUTTERFLY VALVE AS SHOWN.
- AT SODIUM HYPOCHLORITE INJECTION, PROVIDE THE HEAVIER WALL 40S TYPE 304 SS BETWEEN THE GROOVED JOINT COUPLINGS PLACED WHERE INDICATED TO ALLOW PIPE SPOOL TO BE EASILY REPLACED IF EVER NECESSARY.
- PROVIDE EYEWASH STATION C/W DRENCH HOSE INSTALLED ROUGHLY AS SHOWN. SEE BUILDING MECHANICAL DRAWINGS FOR REQUIREMENTS AND SPECIFICATIONS.
- PROVIDE 200L HORIZONTAL STYLE POLYETHYLENE CHEMICAL STORAGE TANK INSTALLED ON A SPILL CONTAINMENT PALLET AS SHOWN. TANK TO INCLUDE A LOW LEVEL SWITCH AND A LOW-LEVEL SWITCH WIRED CONNECTED DIRECTLY TO THE DOSING PUMP CONTROL PANEL TO PROVIDE A HARD INTERLOCK TO PREVENT PUMP RUN-DRY CONDITION. LOW LEVEL SWITCH TO BE SET AT 25% VOLUME REMAINING AND WIRED DIRECTLY TO THE PLC.
- ALL SS PIPE PENETRATIONS SHALL BE CAST IN PLACE C/W THRUST COLLARS FABRICATED TO AWWA M11 TABLE 7.7E FOR 200PSI SERVICE CONDITION AND FILLET WELDED TO EXTERIOR OF PIPE WALL. ENSURE COLLAR DETAILS ARE CLEARLY SHOWN IN THE FABRICATION SPOOL SHOP DRAWINGS. PROVIDE EACH SPOOL WITH WATER-STOP (SIKASWELL S2 OR APPROVED EQUAL) APPLIED TO EACH SIDE OF COLLAR.
- PROVIDE GLOBE STYLE PRESSURE RELIEF/SUSTAINING VALVE, FACTORY SET TO 80psi. VALVE SHALL BE SUPPLIED WITH STEM POSITION INDICATOR, PILOT AIR RELIEF OPTION AND ANTI-CAVITATION TRIM. ENSURE PRV PLACEMENT DOES NOT CONFLICT WITH ABOVE PIPING WITH STEM INDICATOR FULLY EXTENDED. PROVIDE PRV DISCHARGE HEADER WITH ISOLATION BUTTERFLY VALVES AND ROUTE EACH DISCHARGE THROUGH EXTERIOR WALL AS SHOWN. DIRECT EXTERIOR PIPING TO SPLASH PAD. TERMINATE DISCHARGE 300mm ABOVE SPLASH PAD C/W DUCK BILL STYLE CHECK VALVE. SEE DIVISION 40 OF THE TECHNICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- PROVIDE CAST IN PLACE DRAINAGE/SPLASH PAD, C/W 300x300mm SS AREA STYLE DRAIN AS SHOWN. AREA DRAIN SHALL BE CONNECTED TO UNDER-SLAB DRAINAGE SYSTEM. SEE P-01 FOR DRAIN CONTINUATION.
- PROVIDE RETRACTABLE STYLE INJECTION QUILL (PVC SOLUTION TUBE) C/W FLEXIBLE REINFORCED PVC HOSE AND ISOLATION BALL VALVE WHERE INDICATED TO PERMIT EASY REMOVAL AND INSPECTION OF QUILL.
- PROVIDE TEE FITTING TO ALLOW TRANSITION FROM 6# 150PSI PVC TUBING TO RIGID 13# PVC TO FACILITATE AIR VALVE CONNECTION. SECURE CHEMLINE AIR RELEASE VALVE AT HIGH POINT OF INJECTION LINE TO ENSURE HYPO INJECTION LEG FROM DOSING PUMPS REMAINS PRIMED AT ALL TIMES. TERMINATE SECONDARY CONTAINMENT TUBING WITH BULKHEAD CONNECTIONS TO ENSURE CONTAINMENT PIPING REMAINS FULLY SEALED AND SEPARATED FROM CARRIER TUBING FOR THE FULL LENGTH OF THE ALIGNMENT.

2 DETAIL - ISOMETRIC VIEW PUMP ROOM (LOOKING NE)
SCALE 1:20 (ISOMETRIC)



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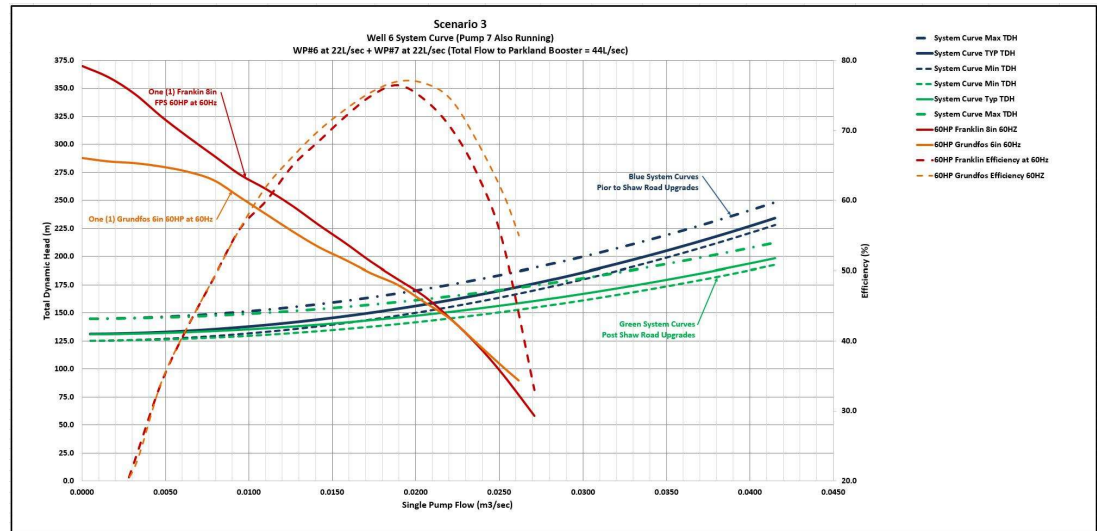
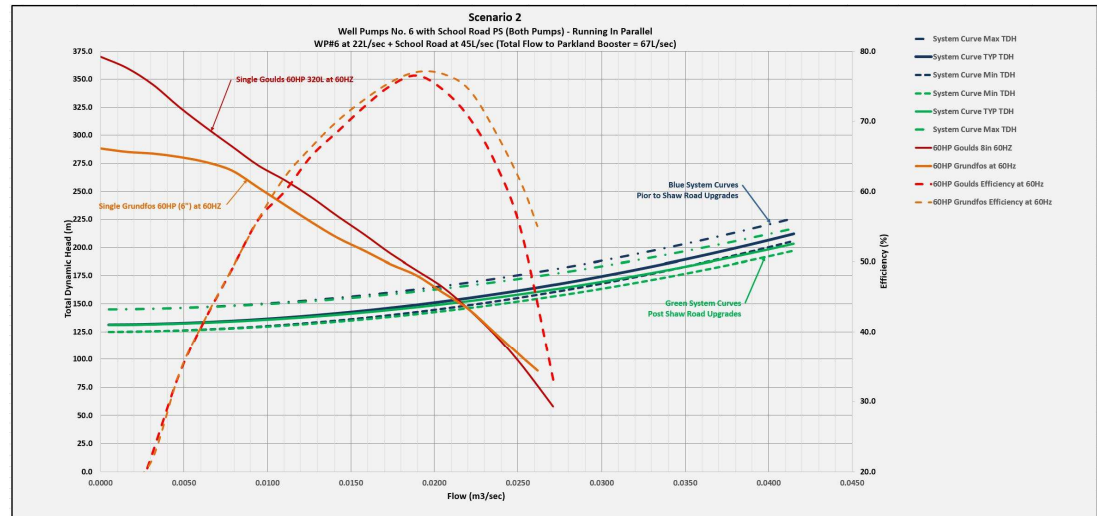
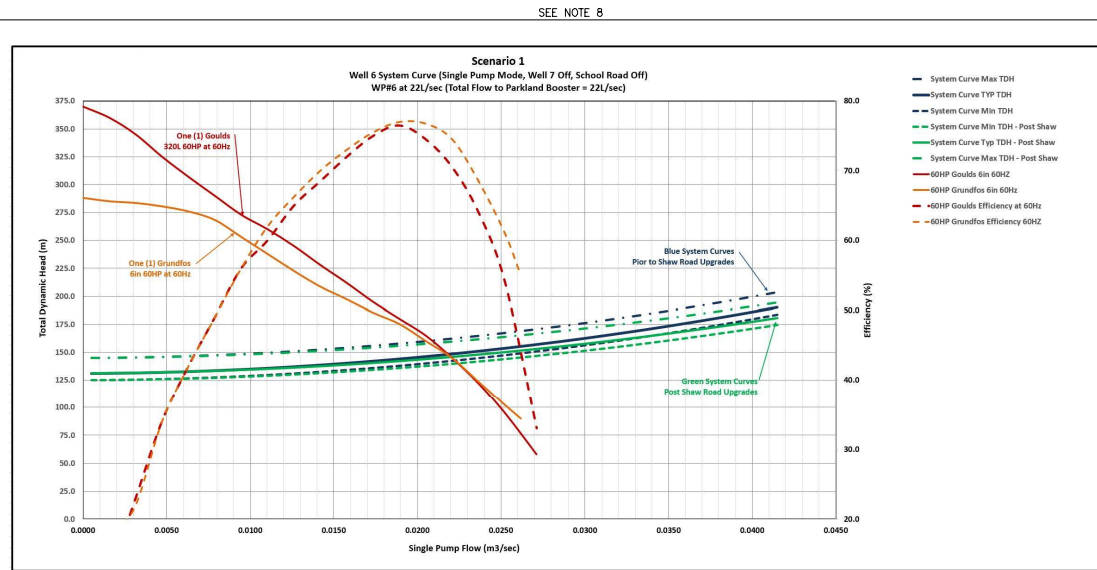
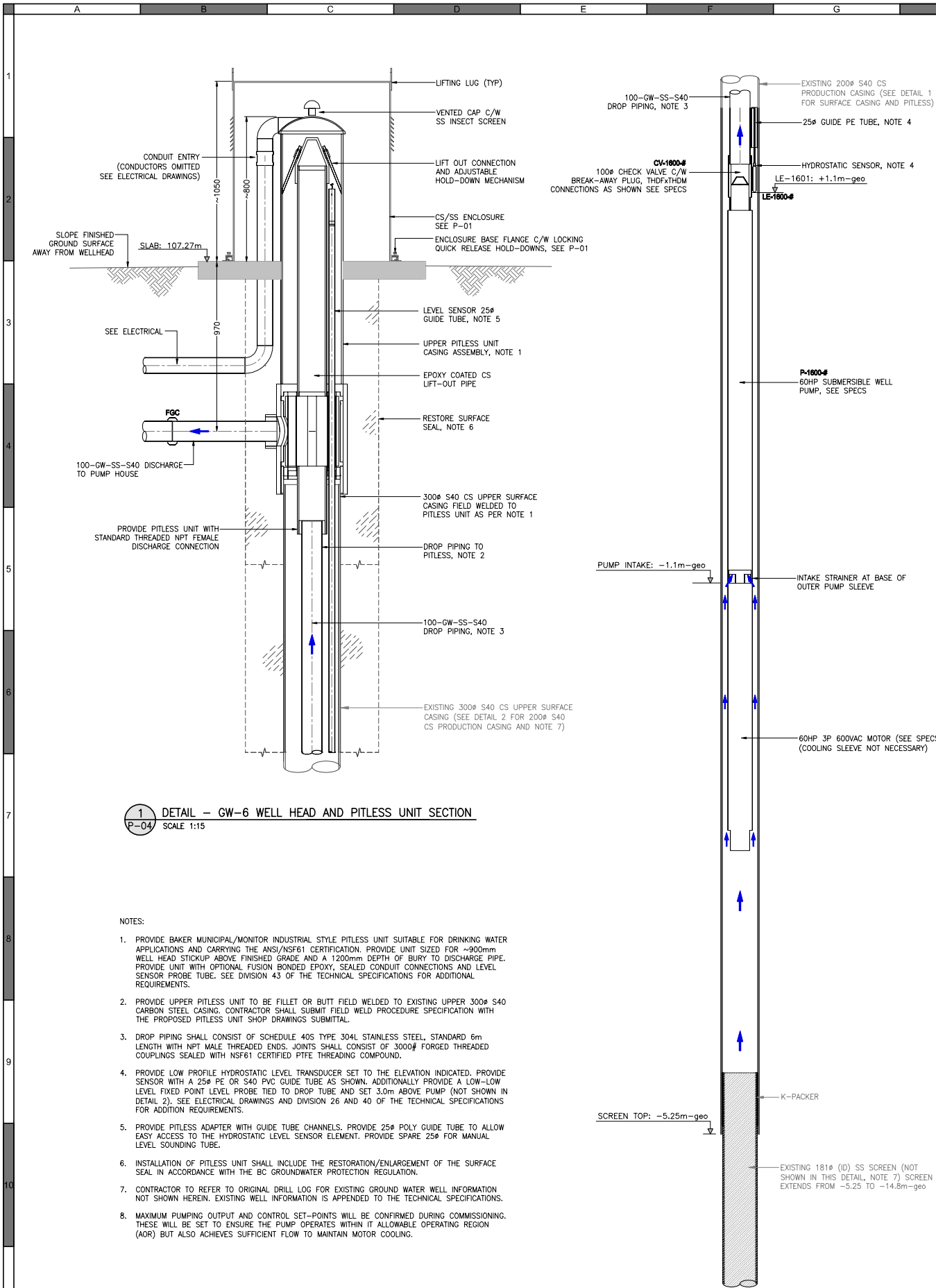
Scale AS SHOWN

Quality Control by SB
Designed by SD/SB
Drawn by SD

Town of Gibsons
Well No. 6 Pump Station
Pump Room Layout Details

Sheet Number 4 of 5
Project Number Drawing Number Revision
1300.0124.02 P-03 0

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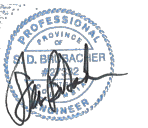


ATTENTION
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No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing. All underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work, Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

Issued For
Tender
2021-12-17
urbansystems.ca

Professional Seals



PERMIT TO PRACTICE
URBAN SYSTEMS LTD.
Signature: *[Signature]*
Date: 2021-12-17
PERMIT NUMBER: 1000527
Engineers and Geoscientists BC (EGBC)

#	Date	Issue / Revision	App
1	-	-	-
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-
6	-	-	-
7	-	-	-
8	-	-	-



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Scale AS SHOWN

Quality Control by SB
Designed by SD/SB
Drawn by SD

Town Of Gibsons
Well No. 6 Pump Station
Well Details and
Pump/System Curves

Sheet Number 5 of 5
Project Number 1300.0124.02
Drawing Number P-04
Revision 0

NOT FOR CONSTRUCTION

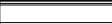
ASSEMBLIES LEGEND

PLAN



WALL ASSEMBLIES

W1 - EXTERIOR 39mm x 152.4mm STUD WALL
JAMES HARDIE HARDIEPLANK LAP SIDING (COLOUR TBD)
13mm PLYWOOD SHEATHING
39mm x 152.4mm STUD LAYER
R24 BATT INSULATION
6 mil VAPOUR BARRIER
13mm PAINTED PLYWOOD

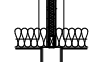


W1a - EXTERIOR 39mm x 152.4mm STUD WALL - w/ SOUND DAMPENING
JAMES HARDIE HARDIEPLANK LAP SIDING (COLOUR TBD)
13mm PLYWOOD SHEATHING
39mm x 152.4mm STUD LAYER
R24 BATT INSULATION
6 mil VAPOUR BARRIER
SONOPAN SOUND DAMPENING PANELS
13mm PAINTED PLYWOOD



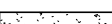
W2 - INTERIOR 39mm x 152.4mm STUD WALL
(MIN 1hr FRR - MODIFIED W1a ASSEMBLY FROM TABLE 9.10.3.1-A)
13mm PAINTED AND TREATED PLYWOOD SHEATHING
15.9mm TYPE "X" GYPSUM WALL BOARD, TAPED AND FILLED
SONOPAN SOUND DAMPENING PANELS (ELECTRICAL ROOM SIDE)
39mm x 152.4mm STUD LAYER
15.9mm TYPE "X" GYPSUM WALL BOARD, TAPED AND FILLED
13mm PAINTED AND TREATED PLYWOOD SHEATHING

SECTION

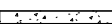


W3 - FIRE SEPARATION AT ROOF SPACE - TRUSSES PERPENDICULAR
1HR FIRE RATED TO U/S OF ROOF SHEATHING
15.9mm TYPE "X" GYPSUM WALL BOARD, TAPED AND FILLED ON EACH SIDE OF PRE-ENGINEERED ROOF TRUSS CONSTRUCTED WITH 39mm x 63.5mm OR 39mm x 88.9mm STUDS, TURNED FLATWISE @ 600mm O.C. CENTERED OVER W2 WALL ASSEMBLY. NO TRUSSES TO PENETRATE REQ'D ROOF SEPARATION. PROVIDE CONTINUOUS FIRE BLOCKS T/O W2 WALL AS PER BCBC

SECTION



F1 - CONCRETE SLAB ON GRADE
CONCRETE SEALANT AS PER SPECIFICATION
100mm CONCRETE
76.2mm COMPACTED GRANULAR FILL



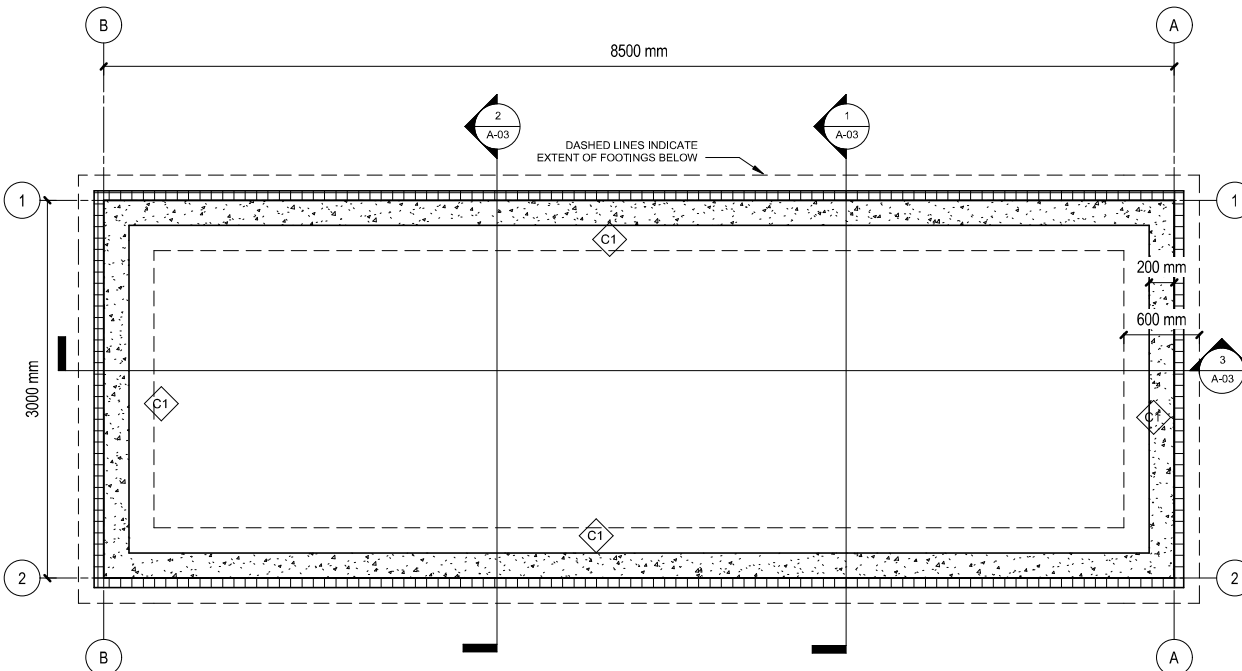
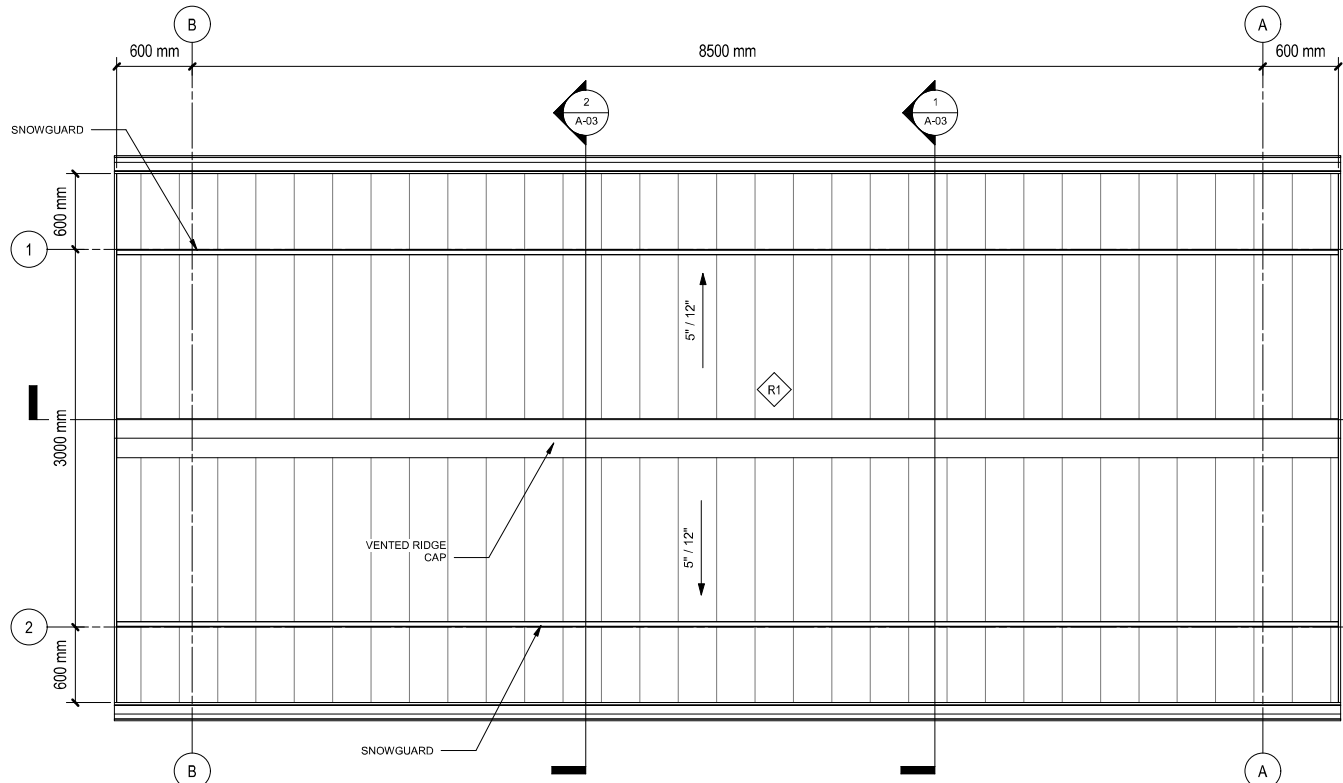
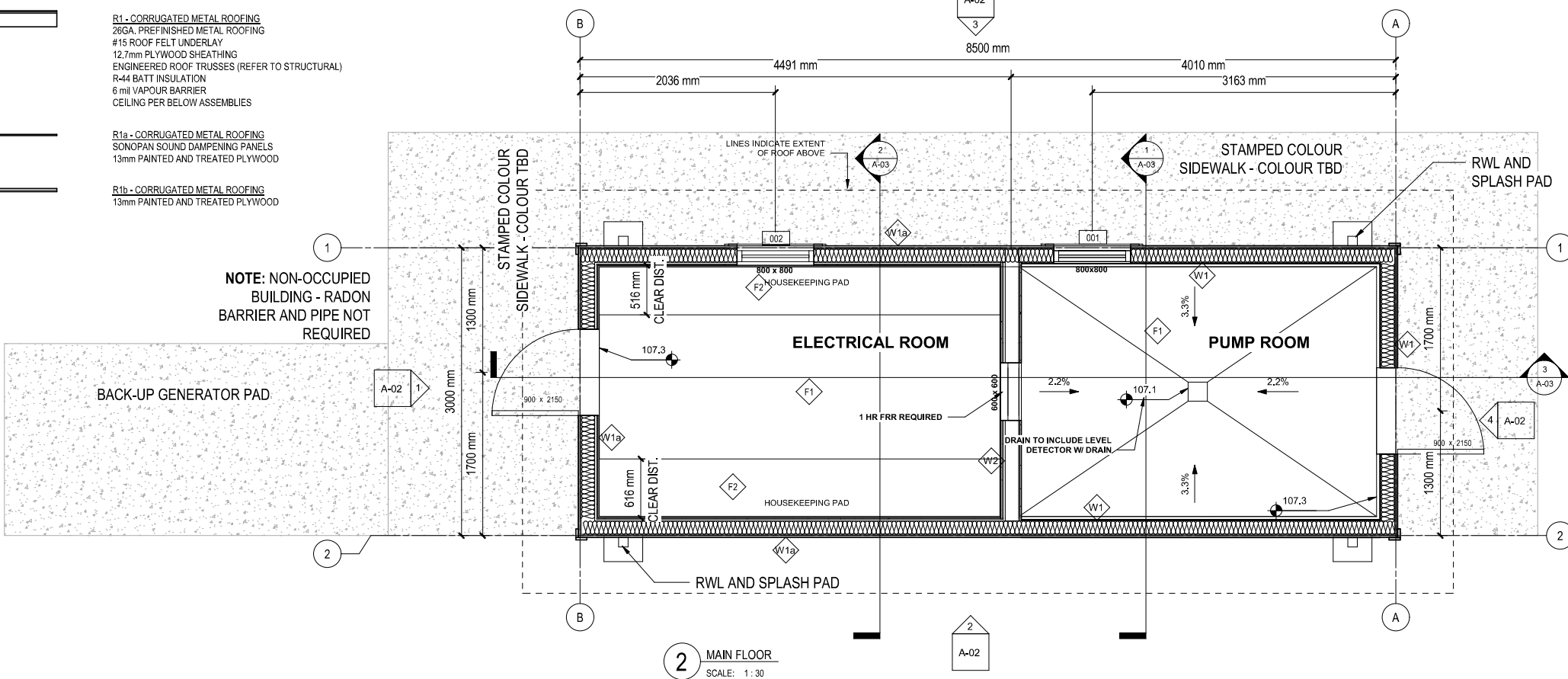
F2 - CONCRETE HOUSEKEEPING PAD
CONCRETE SEALANT AS PER SPECIFICATION
100mm CONCRETE

ROOF ASSEMBLIES

R1 - CORRUGATED METAL ROOFING
26GA. PREFINISHED METAL ROOFING
#15 ROOF FELT UNDERLAY
12.7mm PLYWOOD SHEATHING
ENGINEERED ROOF TRUSSES (REFER TO STRUCTURAL)
R-44 BATT INSULATION
6 mil VAPOUR BARRIER
CEILING PER BELOW ASSEMBLIES

R1a - CORRUGATED METAL ROOFING
SONOPAN SOUND DAMPENING PANELS
13mm PAINTED AND TREATED PLYWOOD

R1b - CORRUGATED METAL ROOFING
13mm PAINTED AND TREATED PLYWOOD



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All work shall be carried out in accordance with Canadian standards, specifications, B.C. Building Code (2018 edition) and local authority by-laws and regulations.
Tabular scales refer to ANSI D size drawings sheet.
This drawing must not be scaled.
Contractors shall verify all dimensions prior to commencement of work.
Any omissions or discrepancies shall be reported to the architect.



Professional Seals



2021-06-11

#	Date	Issue / Revision	App
20201109	ISSUED FOR 50%		
20210222	ISSUED FOR 90%		
20210611	ISSUED FOR 100%		



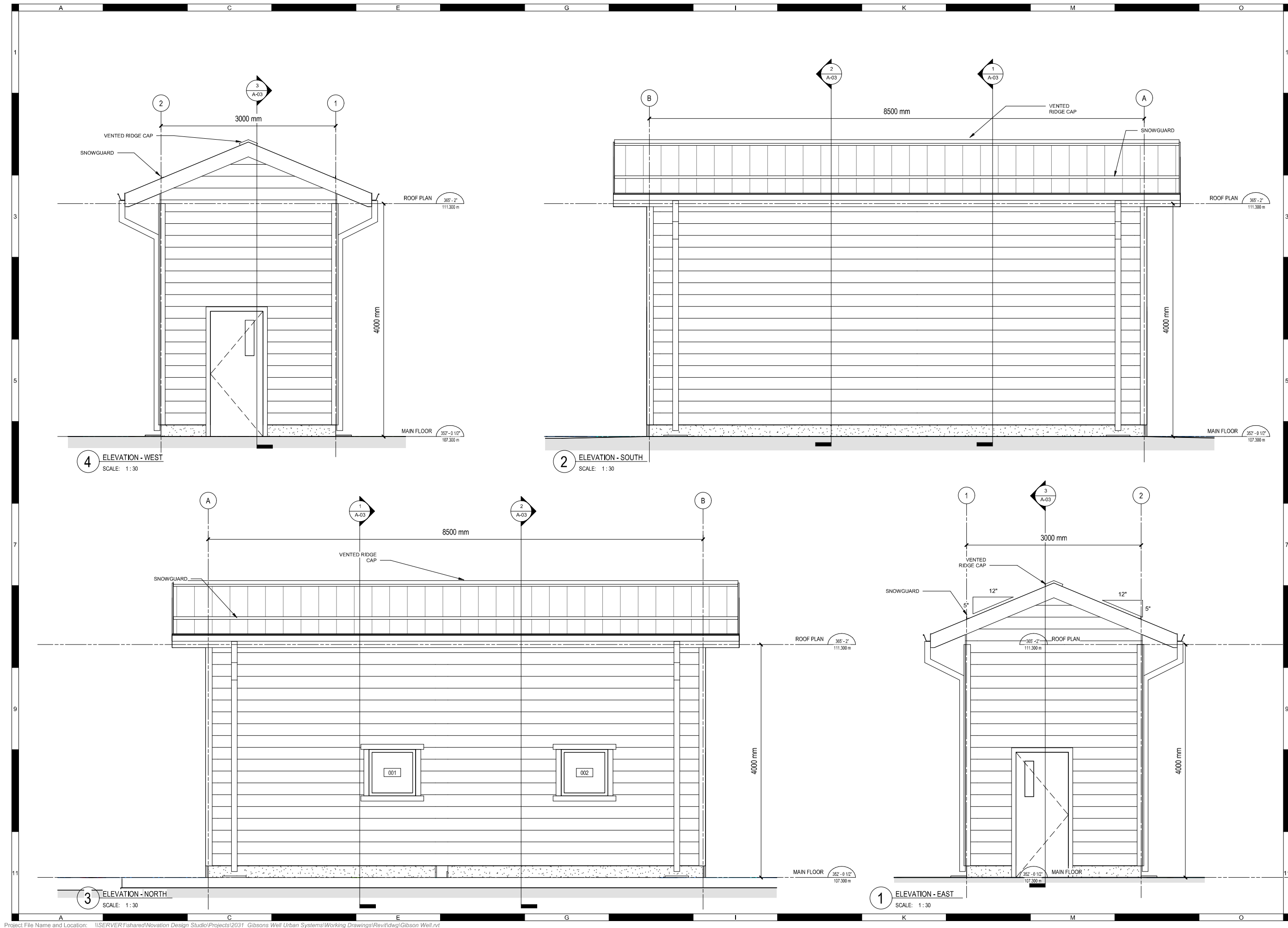
URBAN
systems

Scale
As indicated

Quality Control by PS
Designed by PS
Drawn by MC

TOWN OF GIBSON
WELL NO. 6 PUMP STATION
FLOOR PLANS

Sheet Number
Project Number 2031
Drawing Number A-01
Revision



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Table/notes scales refer to ANSI/D size drawings sheet.

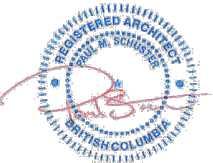
This drawing must not be scaled.

Contractors shall verify all dimensions prior to commencement of work.

Any omissions or discrepancies shall be reported to the architect.



Professional Seals



2021-06-11

#	Date	Issue / Revision	App
20201109	ISSUED FOR 50%		
20210222	ISSUED FOR 90%		
20210611	ISSUED FOR 100%		



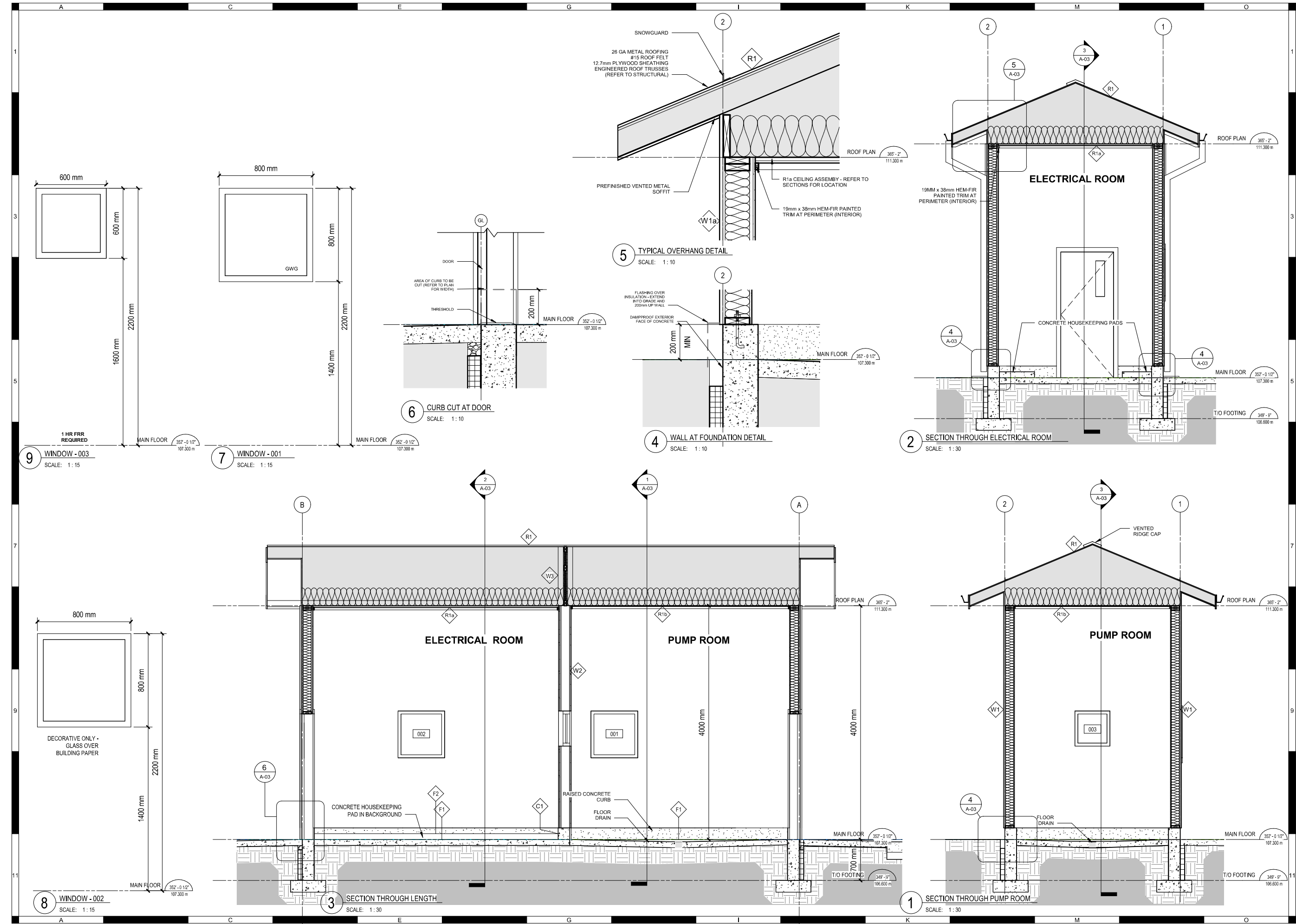
URBAN
systems

Scale 1 : 30

Quality Control by PS
Designed by PS
Drawn by MC

TOWN OF GIBSON
WELL NO. 6 PUMP STATION
EXTERIOR ELEVATIONS

Sheet Number
Project Number 2031
Drawing Number A-02
Revision



#	Date	Issue / Revision	App
20201109	ISSUED FOR 50%		
20210222	ISSUED FOR 90%		
20210611	ISSUED FOR 100%		



GENERAL

1. THE CONTENTS OF THESE DRAWINGS HAVE BEEN PREPARED BY ELEMENTAL STRUCTURAL ENGINEERS LTD. IN ACCORDANCE WITH THE BRITISH COLUMBIA BUILDING CODE (BCBC) 2018.
2. THESE DRAWINGS AND SPECIFICATIONS SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONSULTANT'S DRAWINGS, CONTRACT DOCUMENTS AND SPECIFICATIONS.
3. IN THE EVENT OF DISCREPANCIES IN THE SPECIFICATIONS, DRAWINGS OR CONTRACT DOCUMENTS, THE MORE STRINGENT REQUIREMENT SHALL APPLY. NOTIFY 'ELEMENTAL' OF THE DISCREPANCY AND TO OBTAIN CLARIFICATION.
4. CONSTRUCT TO BRITISH COLUMBIA BUILDING CODE REQUIREMENTS, ALL REFERENCE STANDARDS ARE TO THE EDITION LISTED IN DIVISION B PART 1 OF BCBC 2018, UNLESS NOTED OTHERWISE.
5. STRUCTURAL DIMENSIONS CONTROLLED BY OR RELATED TO ELECTRICAL, MECHANICAL AND PROCESS EQUIPMENT ARE TO BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. REPORT DISCREPANCIES TO 'ELEMENTAL' AND OBTAIN APPROVAL PRIOR TO PROCEEDING WITH CONSTRUCTION.
6. 'ELEMENTAL' ARE NOT RESPONSIBLE FOR THE DESIGN OF ANY TEMPORARY WORKS REQUIRED TO CONSTRUCT THE COMPLETED STRUCTURE SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL RETAIN THE SERVICES OF A BC REGISTERED P.E.N.G. TO DESIGN ALL FALSEWORK, SHORING, TEMPORARY BRACING, FALL PROTECTION ETC. IN ACCORDANCE WITH THE REQUIREMENTS SET OUT BY THE WORKERS' COMPENSATION BOARD OF BRITISH COLUMBIA AND ANY OTHER APPLICABLE STANDARDS AND CODES OF PRACTICE THAT MAY BE NECESSARY TO ENSURE THE SAFETY OF, BUT NOT LIMITED TO, THE PUBLIC, SITE PERSONNEL, EQUIPMENT AND ANY EXISTING STRUCTURES OR SERVICES AT AND AROUND THE JOBSITE.

FIELD REVIEW

1. ELEMENTAL STRUCTURAL ENGINEERS LTD. PROVIDES FIELD REVIEWS ONLY FOR THE WORK PREPARED BY 'ELEMENTAL' AND SHOWN ON THE STRUCTURAL DRAWINGS. THESE FIELD REVIEWS CONSIST OF A PERIODIC REVIEW AT THE PROFESSIONAL JUDGEMENT OF 'ELEMENTAL' WITH THE PURPOSE OF VERIFYING THAT THE WORK UNDERTAKEN BY THE CONTRACTOR IS IN CONFORMANCE WITH THE STRUCTURAL DOCUMENTS AND DRAWINGS PREPARED BY 'ELEMENTAL'. FURTHERMORE THESE REVIEWS ARE NECESSARY TO FULFIL THE OBLIGATIONS OF THE LETTERS OF ASSURANCE REQUIRED BY THE BUILDING CODE AND AUTHORITY HAVING JURISDICTION.
2. FIELD REVIEWS ARE NOT CARRIED OUT FOR THE BENEFIT OF THE CONTRACTOR, NOR DOES THE FIELD REVIEW MAKE 'ELEMENTAL' THE GUARANTOR OF THE CONTRACTOR'S WORK. THE CONTRACTOR IS RESPONSIBLE FOR THEIR OWN QUALITY CONTROL AND SHALL EXECUTE THE WORK TO A LEVEL OF WORKMANSHIP THAT IS EXPECTED BY ANY REASONABLY QUALIFIED CONTRACTOR AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY NON-CONFORMING WORK SHALL BE RECTIFIED BY THE CONTRACTOR AT THEIR OWN EXPENSE. AT THE DISCRETION OF 'ELEMENTAL' THE COST OF ANY RE-INSPECTION FOR WORK FOUND TO BE NON-CONFORMING MAY BE CHARGED TO THE CONTRACTOR.
3. THE CONTRACTOR SHALL PROVIDE MINIMUM 72 HOURS NOTICE TO ELEMENTAL STRUCTURAL ENGINEERS LTD. TO REVIEW WORK DETECTED ON THE STRUCTURAL DRAWINGS. PHOTOGRAPHS OF CERTAIN COMPONENTS MAY BE SUBMITTED BY THE CONTRACTOR IN LIEU OF A PHYSICAL INSPECTION AT THE DISCRETION OF 'ELEMENTAL', AND THE CONTRACTOR SHALL ONLY PROCEED WITH WORK UPON RECEIVING APPROVAL FROM 'ELEMENTAL'.
4. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE WORK IS COMPLETE, ACCURATE AND IN CONFORMANCE WITH THE STRUCTURAL DRAWINGS PRIOR TO FIELD REVIEW BY 'ELEMENTAL'.
5. ANY WORK THAT IS FOUND TO BE INCOMPLETE, CONTAINS ERRORS OR OMISSIONS, IS POORLY EXECUTED OR CONTAINS DEVIATIONS FROM THE STRUCTURAL DRAWINGS AND THEREFORE WARRANTS RE-INSPECTION OR RE-DESIGN BY THE ENGINEER SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
6. ALL WORK SHALL BE MADE ACCESSIBLE FOR REVIEW. FAILURE TO PROVIDE THE NECESSARY NOTIFICATION OR IF WORK HAS BEEN COVERED PRIOR TO THE FIELD REVIEW MAY RESULT IN THE ENGINEER REQUIRING THE CONTRACTOR, AT THEIR OWN EXPENSE, TO EXPOSE THE STRUCTURE FOR REVIEW AND MAKE GOOD ONCE THE REVIEW IS COMPLETE.

SHOP DRAWINGS

1. SUBMIT SHOP DRAWINGS FOR SPECIALTY COMPONENTS SUCH AS PRECAST CONCRETE, PRE-MANUFACTURED LUMBER PRODUCTS, AND FOR ANY OTHER COMPONENTS AND PRODUCTS SPECIFIED IN THE PRIME CONSULTANTS DRAWINGS AND SPECIFICATIONS AS REQUIRING SHOP DRAWINGS.
2. ALL SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A B.C. REGISTERED PROFESSIONAL ENGINEER EXPERIENCED IN THE DESIGN OF SUCH A COMPONENT AND BE IN GOOD STANDING WITH E.G.B.C. UPON COMPLETION OF CONSTRUCTION OR INSTALLATION OF THE COMPONENT THE SPECIALTY ENGINEER SHALL SUBMIT A SIGNED AND SEALED LETTER OF ASSURANCE TO THE GENERAL CONTRACTOR AND ENGINEER OF RECORD CERTIFYING THAT THE WORK IS COMPLETE AND IS IN GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS.
3. SUBMIT A PDF COPY OF THE SHOP DRAWINGS, COMPLETE WITH THE SIGNATURE AND SEAL OF THE SPECIALTY ENGINEER AND ALLOW MINIMUM 10 WORKING DAYS FOR REVIEW BY 'ELEMENTAL'.
4. THE SHOP DRAWING REVIEW UNDERTAKEN BY 'ELEMENTAL' SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF COMPLETING THEIR OWN REVIEW, PROVIDING PROPER ENGINEERING DESIGN, METHODS OF CONSTRUCTION, EQUIPMENT, WORKMANSHIP AND NECESSARY SAFETY PRECAUTIONS.
5. THE SUPPLIER, SUBCONTRACTOR AND SPECIALTY ENGINEER ARE RESPONSIBLE FOR DIMENSIONS, ENGINEERING DESIGN, DETAILING AND FIELD INSPECTIONS OF THE INSTALLED COMPONENTS.

DESIGN LOADS

1. THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH PART 4 OF THE BRITISH COLUMBIA BUILDING CODE 2018 USING THE FOLLOWING DESIGN LOADS:
- UNIFORMLY DISTRIBUTED LOADS**
- | LOCATION | DEAD LOAD | LIVE LOAD | SNOW LOAD |
|----------|---------------|-----------|-----------|
| ROOF | 1.0 kPa | 1.0 kPa | 2.3 kPa |
| WALLS | ACTUAL WEIGHT | - | |
- POINT LOADS**
- | LOCATION | LIVE LOAD |
|----------|-----------|
| ROOF | 1.3 kN |
- UNIFORM LIVE LOAD AND POINT LOADS ARE NOT APPLIED SIMULTANEOUSLY. USE WORST CASE EFFECT FOR DESIGN OF STRUCTURAL COMPONENT.
- CLIMATIC DATA**
- | | | |
|---------|---|--|
| SNOW | Ss = 1.0 kPa
+ SNOW BUILD-UP CALCULATED IN ACCORDANCE WITH CODE | Sr = 0.4 kPa
Is = 1.25 (ULS)
Is = 0.9 (SLS) |
| WIND | (1/10) q = 0.38 kPa
(1/50) q = 0.48 kPa | Iw = 1.25 (ULS)
Iw = 0.75 (SLS) |
| SEISMIC | Sa(0.2) = 0.842
Sa(2.0) = 0.261
P.G.A. = 0.367
SITE CLASS 'C'
CONVENTIONAL CONSTRUCTION | Sa(0.5) = 0.756
Sa(5.0) = 0.084
P.G.V. = 0.556
Rd = 1.5
Ro = 1.3
Ie = 1.5 (ULS) |

FOUNDATIONS AND SITE PREPARATION

1. THE FOUNDATIONS FOR THIS STRUCTURE ARE TO BE PREPARED IN ACCORDANCE WITH THE RECOMMENDATIONS AND GUIDELINES GIVEN IN THE GEOTECHNICAL REPORT PREPARED BY THURBER ENGINEERING LTD, DATED 11-09-2020 AND ALL SUBSEQUENT REVISIONS, MEMOS AND SUPPLEMENTARY INFORMATION PROVIDED BY THE GEOTECHNICAL CONSULTANT. THE GEOTECHNICAL ENGINEER IS RESPONSIBLE FOR THE SPECIFICATION OF FILL MATERIALS AND BACKFILLING PROCEDURES, COMPACTION REQUIREMENTS, FROST COVER AND PROTECTION FOR FOOTINGS SHOWN ON THESE DRAWINGS:
- | | | |
|-------------------------|---------------|--------------|
| SOIL BEARING CAPACITY : | STRIP FOOTING | 50 kPa (SLS) |
| | PAD FOOTING | 50 kPa (SLS) |
| | SEISMIC | 75 kPa (ULS) |
- FROST PROTECTION : 500mm TO UNDERSIDE OF FOOTING
2. ELEMENTAL STRUCTURAL ENGINEERS LTD. IS NOT RESPONSIBLE FOR THE STABILITY OF SLOPES AND EXCAVATIONS, NOR THE DESIGN OF UNDERPINNING, BRACING AND TEMPORARY SUPPORT OF ADJACENT STRUCTURES AFFECTED BY CONSTRUCTION. THE CONTRACTOR IS TO HIRE A SUITABLY QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA TO ENSURE THAT ALL TEMPORARY WORKS MEASURES ARE IN DESIGNED IN ACCORDANCE WITH WORKSAFE BC REGULATIONS AND ARE INSPECTED PRIOR TO USE OR PROCEEDING WITH WORK.
3. REFER TO ARCHITECTURAL DRAWINGS FOR GROUND ELEVATIONS AND DRAINAGE SLOPES. ELEVATIONS SHOWN ON THESE DRAWINGS ARE FOR REFERENCE AND BIDDING PURPOSES ONLY AND MAY VARY ACCORDING TO SITE CONDITIONS. REFER TO GEOTECHNICAL ENGINEER FOR CONFIRMATION OF SUITABLE BEARING CONDITIONS.
4. FOOTING ELEVATIONS ARE TO BE VARIED WHERE REQUIRED TO ACCOUNT FOR SOIL CONDITIONS ENCOUNTERED DURING EXCAVATION, OR TO ACCOMMODATE MECHANICAL AND ELECTRICAL SERVICES. CONTRACTOR TO FOLLOW TYPICAL STEPPED FOOTING DETAIL TO ENSURE FOOTING EXTENDS TO SUITABLE BEARING LAYER.
5. FOOTINGS ARE NOT TO BE POURED ON FROZEN OR WATERLOGGED SOILS. PROTECT BEARING SURFACES FROM FREEZING AND WATER INFILTRATION PRIOR TO POURING, AND DURING CURING OF FOOTINGS.
6. SOILS ARE TO BE INSPECTED AND APPROVED BY A GEOTECHNICAL ENGINEER WITHIN 24 HOURS OF PLACING CONCRETE.
7. CENTRE ALL FOOTINGS BENEATH WALLS UNLESS NOTED OTHERWISE ON THESE DRAWINGS.
8. DOWELS AND STARTER BARS FOR WALLS SHALL BE TIED PRIOR TO PLACING CONCRETE. INSTALLATION SHALL BE COMPLETE AND WORK INSPECTED AT THE SAME TIME AS THE FOOTING REINFORCEMENT.
9. FOUNDATION WALLS ARE NOT TO BE BACKFILLED UNTIL CONCRETE HAS CURED FOR AT LEAST 7 DAYS, OR HAS ATTAINED SUFFICIENT STRENGTH AS JUDGED BY 'ELEMENTAL' TO SUPPORT THE LATERAL EARTH PRESSURE LOADS. ALL BACKFILLING MATERIALS AND PROCEDURES ARE TO BE APPROVED BY THE GEOTECHNICAL ENGINEER.
10. REFER TO ARCHITECTURAL DRAWINGS FOR CONCRETE SEALING, WATERPROOFING AND MEMBRANES REQUIRED TO ENSURE WATER-TIGHTNESS.

CONCRETE

GENERAL

1. ALL CONCRETE DESIGN IS IN ACCORDANCE WITH CSA A23.1.
2. CONCRETE MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO CSA A23.1 AND A23.2
3. CONCRETE IS SPECIFIED AS PER THE 'PERFORMANCE' ALTERNATE AS OUTLINED IN TABLE 5 OF A23.1.
4. PORTLAND CEMENT SHALL BE TYPE GU FOR GENERAL CONCRETE CONSTRUCTION UNLESS NOTED OTHERWISE.
5. CONCRETE SHALL BE NORMAL DENSITY WITH A UNIT WEIGHT OF 23.5kN/m³ UNLESS NOTED OTHERWISE.
6. TYPE 'F' FLYASH MAY BE PROVIDED AS A SUPPLEMENTARY CEMENTING MATERIAL TO A MAXIMUM OF 10% OF THE TOTAL CEMENT WEIGHT APPORTIONED PER THE CONCRETE SPECIFICATIONS.
7. SUBMIT CONCRETE MIX DESIGNS TO ELEMENTAL STRUCTURAL ENGINEERS LTD. AND A MATERIALS TESTING AGENCY RETAINED BY THE OWNER FOR REVIEW PRIOR TO POURING ANY CONCRETE. EACH MIX DESIGN SHALL CONFORM TO THE PERFORMANCE REQUIREMENTS LISTED BELOW.
8. CONCRETE AND MATERIALS TESTING AGENCY IS TO BE CCIL CERTIFIED. SUBMIT ALL TEST RESULTS AND DATA TO ELEMENTAL STRUCTURAL ENGINEERS LTD. FOR REVIEW.
9. SLUMP AND AGGREGATE SIZE IS TO BE DETERMINED BY THE GENERAL CONTRACTOR AND CONCRETE SUPPLIER TO MEET PLACEMENT AND FINISHING REQUIREMENTS WITHOUT SEGREGATION WHILST MEETING ALL PERFORMANCE AND OWNER SPECIFICATIONS.
10. THE AIR CONTENT AND MAXIMUM WATER/CEMENT RATIO SHALL MEET THE REQUIREMENTS FOR THE EXPOSURE CLASS OF THE SPECIFIC ELEMENT UNDER CONSIDERATION AS LISTED BELOW, AND GIVEN IN TABLES 2, 4, AND 20 OF CSA A23.1.
11. AIR-ENTRAINING AND CHEMICAL ADMIXTURES, INCLUDING SUPERPLASTICIZERS SHALL BE COMPATIBLE AND SUITABLE FOR FINISHING. THE COST OF ADMIXTURES ARE TO BE INCLUDED IN THE CONCRETE PRICE.
12. CURING OF CONCRETE SHALL MEET THE REQUIREMENTS OF THE GIVEN EXPOSURE CLASS AS PER TABLES 2 AND 20 OF CSA A23.1.

CONCRETE MIX REQUIREMENTS

ELEMENT DESCRIPTION	COMPRESSIVE STRENGTH (28d) (MPa)	EXPOSURE CLASS
FOOTINGS	25	F-2
EXTERIOR WALLS	25	F-2
INTERIOR SLAB-ON-GRADE	25	C-2
EXTERIOR SLAB-ON-GRADE	32	C-2

FORMING AND EXECUTION

1. DESIGN AND CONSTRUCT FORMWORK TO CSA S269 SERIES OF STANDARDS AND WORKSAFE BC REGULATIONS FOR DESIGN, CONSTRUCTION, AND INSPECTION IN A MANNER SUITABLE FOR THE TOLERANCES AND FINISHES REQUIRED FOR THE CONCRETE. FORMWORK, SHORING AND RE-SHORING DESIGN IS TO BE SEALED BY A BC REGISTERED P.E.N.G. AND SUBMITTED TO 'ELEMENTAL' FOR REVIEW.
2. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PROCESS DRAWINGS FOR LOCATIONS AND SIZES OF ALL OPENINGS THROUGH WALLS AND SLABS, CURBS, UPSTANDS, DOWNTURNS, AND HOUSEKEEPING PADS.
3. REFER TO ARCHITECTURAL DRAWINGS FOR CHAMFERS, REVEALS RECESSES AND OTHER FINISHES NOT SHOWN ON THESE DRAWINGS.
4. REFER TO CSA A23.1 FOR CONSTRUCTION TOLERANCES. CLOSER TOLERANCES MAY BE REQUIRED WHERE ARCHITECTURAL, STRUCTURAL OR CONSTRUCTION DETAILS DICTATE.
5. SLAB-ON-GRADE CONTROL JOINTS TO BE 1x THICKNESS OF SLAB, SPACED AT 4.5m ON CENTRE MAXIMUM, WITH EVERY 2ND BAR CUT BACK 50mm FROM CONTROL JOINT. FILL JOINT WITH FLEXIBLE SEALANT TO PREVENT WATER INGRESS.
6. ALL ANCHOR BOLTS, DOWELS, EMBEDDED PLATES, HANGERS AND INSERTS ARE TO BE CAREFULLY LOCATED AND POSITIONED BASED UPON THESE STRUCTURAL DRAWINGS, AND DRAWINGS/SPECIFICATIONS FROM OTHER CONSULTANTS, AND CAST INTO CONCRETE.
7. CONDUITS, PIPES, AND SLEEVES EMBEDDED IN CONCRETE SHALL BE INSTALLED IN ACCORDANCE WITH CSA A23.1, THE ELECTRICAL DRAWINGS AND SPECIFICATIONS, AND THE FOLLOWING REQUIREMENTS. EMBEDDED ITEMS SHALL BE RELOCATED OR REPOSITIONED IF DIRECTED BY 'ELEMENTAL' TO AVOID ADVERSELY IMPACTING THE STRENGTH OR INTEGRITY OF THE STRUCTURAL ELEMENT CONCERNED.
- WALLS:
- | |
|---|
| HORIZONTAL RUNS ARE NOT PERMITTED |
| PROVIDE MINIMUM OF 4x DIAMETER CLEAR SPACING BETWEEN EMBEDDED ITEMS |
| MAXIMUM DIAMETER 1x WALL THICKNESS |
| ENSURE MINIMUM 50mm CLEAR COVER |
8. PROTECT CONCRETE FOR HOT WEATHER CONDITIONS WHEN AIR TEMPERATURE IS 27°C OR HIGHER, AND FOR COLD WEATHER CONDITIONS WHEN AIR TEMPERATURE IS 5°C OR LOWER (OR EXPECTED TO FALL BELOW 5°C WITHIN 24 HOURS OF PLACING), FOLLOWING THE REQUIREMENTS OF CSA A23.1. CONCRETE TEMPERATURE SHALL BE MAINTAINED ABOVE 10°C FOR AT LEAST 7-DAYS OR UNTIL THE CONCRETE REACHES 70% OF THE SPECIFIED STRENGTH.
9. FORMWORK FOR WALLS SHALL ONLY BE REMOVED ONCE THE CONCRETE HAS ATTAINED A COMPRESSIVE STRENGTH OF 10MPa AND HAS CURED FOR AT LEAST 24 HOURS.

CONCRETE REINFORCEMENT

1. REINFORCEMENT SHALL CONFORM TO THE FOLLOWING STANDARDS:

10M REBAR AND LARGER	CSA G30.18R	GRADE 400W
WELDED WIRE REINFORCEMENT	CSA G30.5	GRADE 400W
WELDED REBAR	CSA G30.18W	GRADE 400W
EPOXY COATED REBAR	ASTM A775M AND ASTM D3963	

2. THE MINIMUM CLEAR COVER TO REINFORCING BARS:

ELEMENT	EXPOSURE CLASS			
	N	F-1, F-2	C-1, C-2, C-3, C-4	
FOOTINGS (AGAINST GROUND/EARTH)	-	75	75	
-ON-GRADE WALLS	20	40	65	65

NOTES: TOLERANCE IS ± 6mm
LARGEST COVER GOVERNS

3. HOOKS AND BENDS ARE TO FOLLOW STANDARD DETAILING AND CURTAILMENT RULES PER CSA A23.1. STANDARD HOOK LENGTH IS 12x THE DIAMETER OF THE BAR.
4. MINIMUM LAPS OF REINFORCEMENT UNLESS NOTED OTHERWISE:
- | BAR SIZE | COMPRESSION | TENSION | SPLICE | | |
|----------|-------------|---------|--------|-------|-------|
| | SPLICE | 20MPa | 25MPa | 30MPa | 35MPa |
| 10M | 300 | 350 | 450 | 450 | 300 |
| 15M | 500 | 500 | 600 | 600 | 400 |
5. CONTRACTOR SHALL PROVIDE REINFORCING FOR ALL CONCRETE ELEMENTS SHOWN ON ALL DRAWINGS AND SPECIFICATIONS, AS WELL AS CARRYING BARS FOR BAR PLACEMENT. REINFORCING SHALL ALSO BE PROVIDED IN ALL UNSPECIFIED CONCRETE ELEMENTS, SUCH AS, BUT NOT LIMITED TO SLABS-ON-GRADE, AND PLANTERS.
6. ACCURATELY PLACE ALL REINFORCING AS SPECIFIED ON THE DRAWINGS, CHAIRED TO PROVIDE THE REQUIRED COVER AND SECURELY TIED TO PREVENT DISPLACEMENT.
7. USE ONLY NON-CORRODING CHAIRS FOR REINFORCING IN EXPOSED SOFFITS OR OTHER VISIBLE AREAS EXPOSED TO WEATHER, CHEMICALS, DE-ICING SALTS, AND SEA OR SALT WATER.
8. PROVIDE CORNER BARS OR HOOKED BARS TO TIE ALL HORIZONTAL BARS IN ADJOINING WALLS.
9. ALL HORIZONTAL REINFORCING SHALL START 50mm OFF TOP OF FOOTING, CONTINUE AT THE SPACING SPECIFIED, AND END WITHIN 100mm OF THE TOP OF THE WALL.

WOOD PRODUCTS

1. ALL TIMBER FRAMING SHALL BE IN ACCORDANCE WITH PART 9 OF THE 2018 BRITISH COLUMBIA BUILDING CODE.
2. PREFABRICATED TRUSSES, JOISTS, AND OTHER PROPRIETARY LUMBER PRODUCTS SHALL BE DESIGNED BY THE MANUFACTURER IN ACCORDANCE WITH CSA-086.1 FOR LOADS SHOWN ON THE DRAWINGS. MAXIMUM LIVE LOAD DEFLECTION OF L/360 FOR FLOORS, AND L/360 FOR ROOFS WITH CAMBER FOR FULL DEAD LOAD, BRACING, BRIDGING, AND ADDITIONAL HARDWARE (STIFFENERS, WOOD-FRAME CONNECTORS, ETC) SHALL BE DESIGNED AND SUPPLIED BY THE MANUFACTURER. SEALED DRAWINGS MUST BE SUBMITTED AS PER THE SHOP DRAWING SUBMISSION PROCEDURE. NO MODIFICATIONS OR SUBSTITUTIONS ARE PERMITTED WITHOUT APPROVAL FROM 'ELEMENTAL'.
- INSTALLATION OF ALL ENGINEERED WOOD PRODUCTS AND STRUCTURAL CONNECTIONS SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
3. ALL LUMBER MATERIAL IS TO CONFORM TO N.L.G.A. GRADING RULES, AND CSA-086.1 OSB SHALL CONFORM TO CSA/CAN3-0437.0 OR 0325. PLYWOOD SHALL CONFORM TO CSA 0121.
4. DIMENSION LUMBER SHALL BE AS FOLLOWS:
- | | |
|---|-------------------------|
| FLOOR AND ROOF JOISTS | SPF #2 |
| STUDS (<9'-0" TALL) | SPF #3 |
| POSTS AND BEAMS (HEAVY TIMBER) | D.FIR #1 |
| PLIES IN BUILT-UP BEAMS | SPF #2 |
| SILLS/LEDGERS TO CONCRETE/MASONRY WALLS | PRESSURE-TREATED SPF #2 |
- PLYWOOD SHALL BE DOUGLAS FIR PLYWOOD, SHEATHING GRADE.
- ROOF SHEATHING SHALL BE MINIMUM 1/2" PLYWOOD OR OSB WITH H-CLIPS FOR SLOPES >3:12, AND MINIMUM 3/4" TONGUE-AND-GROOVE JOINTED (T&G) PLYWOOD OR OSB FOR SLOPES >3:12 FOR JOISTS SPACED UP TO 24" ON CENTRE. FLOOR SHEATHING SHALL BE MINIMUM 3/4" T&G PLYWOOD OR OSB FOR JOISTS TO 19'2" ON CENTRE, AND MINIMUM 1/2" T&G PLYWOOD FOR JOISTS TO 24" ON CENTRE. EXTERIOR WALL SHEATHING SHALL BE MINIMUM 3/4" PLYWOOD OR OSB.
5. ROOF, FLOOR, AND WALL SHEATHING SHALL BE FASTENED AT PANEL EDGES WITH NAILS SPACED AT 6" ON CENTRE MAXIMUM, AND AT INTERMEDIATE FRAMING MEMBERS WITH NAILS AT 12" ON CENTRE MAXIMUM. 2.5" LONG 8d NAILS SHALL BE USED FOR SHEATHING UP TO 1/2" THICK, AND 3" LONG 10d NAILS TO 3/4" THICK. UNBLOCKED ROOF OR FLOOR SHEATHING SHALL BE FASTENED TO ALL EXTERIOR WALLS AND SHEARWALLS WITH NAILS AT 6" ON CENTRE MAXIMUM.
6. CONNECTIONS:
- ALL BOLTS AND ANCHOR BOLTS SHALL CONFORM TO ASTM A307
 - ALL BOLTS AND NUTS MUST BE FITTED WITH CUT STEEL WASHERS
 - ALL STEEL PLATE USED IN CONNECTION DETAILS SHALL BE GRADE 300W
 - ALL NAILING SHALL BE WITH COMMON WIRE NAILS TO CSA B111 IF PNEUMATIC NAILS ARE INTENDED AS A SUBSTITUTION, SUBMIT INFORMATION TO 'ELEMENTAL' FOR REVIEW AND APPROVAL PRIOR TO USE
 - BOLT HOLES SHALL NOT BE MORE THAN 1/4" LARGER THAN THE BOLT DIAMETER
 - BOLTS IN WOOD SHALL NOT BE LESS THAN 7x DIAMETER FROM THE END, AND 4x DIAMETER FROM THE EDGE
 - LAG SCREWS SHALL BE PRE-DRILLED WITH A BIT SIZE OF 65% OF THE SHANK DIAMETER FOR THE THREADED PORTION. LEAD HOLES SHALL BE THE SAME LENGTH AS THE UNTHREADED PORTION, AND THE SAME DIAMETER AS THE SHANK. SCREW ALL LAGS INTO PLACE. CUT WASHERS SHALL BE PROVIDED UNDER HEADS WHICH BEAR ON TO WOOD.
 - NO CHECKS OR SPLITS PERMITTED AT AREAS TO BE BOLTED OR LAGGED
 - ALL EXPOSED BOLTS AND WASHERS SHALL BE GALVANIZED, OR AS SPECIFIED BY THE ARCHITECT
 - ALL FRAMING CONNECTION HARDWARE INCLUDING HOLD-DOWN CONNECTORS, JOIST/BEAM HANGERS, STRAPS, ANGLES, ETC. SHALL BE 'SIMPSON' OR APPROVED EQUAL
 - NAILS SHALL NOT BE PLACED LESS THAN 3/4" FROM THE PANEL EDGE AND SHALL NOT BE OVER-DRIVEN MORE THAN 15% OF THE PANEL THICKNESS
7. PROVIDE 2x BLOCKING AT MID-HEIGHT OF STUDS OVER 8'-0" IN HEIGHT TO MAX. 8'-0" ON CENTRE
8. FULL-HEIGHT BLOCKING OR EQUIVALENT BRACING SHALL BE PLACED BETWEEN ALL TRUSSES AT BEARING SUPPORTS. FULL-HEIGHT 1-JOIST BLOCKING OR 125" ENGINEERED WOOD RIM BOARD OR EQUIVALENT BRACING SHALL BE PLACED BETWEEN ALL JOISTS AT BEARING SUPPORTS. FULL-HEIGHT BLOCKING OR EQUIVALENT BRACING SHALL BE PLACED BETWEEN ALL ROOF JOISTS AT MID-SPAN FOR SPANS OVER 10'-0", AND 10'-0" ON CENTRE FOR SPANS OVER 20'-0". FULL HEIGHT 1-JOIST BLOCKING OR 125" ENGINEERED WOOD RIM BOARD SHALL BE PLACED BETWEEN ALL FLOOR JOISTS AT MID-SPAN FOR SPANS OVER 8'-0", AND AT 8'-0" ON CENTRE FOR SPANS OVER 16'-0".
9. ALL EXTERIOR AND LOAD-BEARING WALL SILL PLATES SHALL BE ANCHORED TO THE CONCRETE FOUNDATION OR SLAB WITH MINIMUM 3/4" DIAMETER A307 ANCHOR BOLTS SPACED AT 4'-0" ON CENTRE, MINIMUM 6" EMBEDMENT.
10. ALL METAL HARDWARE (NAILS, BOLTS, HANGERS, ETC.) IN CONTACT WITH PRESSURE-TREATED WOOD PRODUCTS REQUIRES BOTH TO BE COMPATIBLE, WHETHER A PARTICULAR HARDWARE METAL OR GALVANIZING PRODUCT IS CHOSEN, OR A PARTICULAR WOOD TREATMENT PROCESS IS USED. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING PRODUCT COMPATIBILITY.
11. ENSURE ALL JAMBS, CRIPPLES, AND POSTS ARE SUPPORTED CONTINUOUSLY WITH MINIMUM EQUAL MEMBERS AT LEVELS BELOW, INCLUDING WITHIN FLOOR DEPTHS AND HEADER/BEAM LOCATIONS.
12. ENGINEERED WOOD PRODUCTS INDICATED ON THESE STRUCTURAL DRAWINGS ARE 'WEYERHAEUSER' PRODUCTS. 'LVL' REFERS TO LAMINATED VENEER LUMBER, 'LSL' REFERS TO LAMINATED STRAND LUMBER, AND 'PSL' REFERS TO PARALLEL STRAND LUMBER. NO SUBSTITUTIONS ARE PERMITTED WITHOUT APPROVAL FROM 'ELEMENTAL'. ADDITIONAL COSTS INCURRED BY 'ELEMENTAL' FOR THESE ALTERNATIVES MAY BE CHARGED TO THE CONTRACTOR.
13. ALL TOP AND BOTTOM PLATES ARE TO BE FASTENED TO EACH 2x6 WALL, JAMB, OR CRIPPLE STUD WITH MINIMUM 3-3" LONG 10d NAILS THROUGH END GRAIN. USE 2-3" 10d NAILS FOR 2x4 STUDS. ALL SILL MEMBERS ARE TO BE FASTENED TO THE ADJACENT 2x6 CRIPPLE OR JAMB STUD WITH MINIMUM 3-3" LONG 10d NAILS THROUGH END GRAIN. USE 2-3" 10d NAILS FOR 2x4 SILLS.
- ALL 10" NOMINAL DEPTH HEADERS ARE TO BE FASTENED TO THE ADJACENT JAMB STUD WITH MINIMUM 4-3" LONG 10d NAILS THROUGH END GRAIN PER 15" WIDTH OF HEADER, WITH SAME NAILING PATTERN TO FASTEN EACH ADDITIONAL JAMB STUD. USE 3-10d NAILS FOR HEADERS <8" NOMINAL DEPTH, 5-10d NAILS FOR HEADERS < 12" NOMINAL DEPTH, 6-10d NAILS FOR HEADERS <16" NOMINAL DEPTH, AND 7-10d NAILS FOR HEADERS < 20" NOMINAL DEPTH.
14. FOR UPLIFT RESISTANCE, USE MINIMUM ONE 'SIMPSON' HI SEISMIC/HURRICANE TIE TO ANCHOR ALL ROOF MEMBERS TO EACH BEARING WALL, UNLESS NOTED OTHERWISE ON THE APPROVED TRUSS OR JOIST MANUFACTURER'S SHOP DRAWINGS. THESE UPLIFT CONNECTORS CAN BE ELIMINATED AT THE DISCRETION OF 'ELEMENTAL' FOR LOCATIONS WHERE CONTINUOUS WALL SHEATHING IS FASTENED DIRECTLY TO THE TRUSS.
15. ALL EXPOSED EXTERIOR WOOD POSTS ARE TO BE MADE OF A PRODUCT THAT CAN ADEQUATELY RESIST DETERIORATION FROM WATER, UV AND OTHER AGENTS ASSOCIATED WITH SUCH EXPOSURE. DIMENSION LUMBER IS TO BE PRESSURE TREATED. TREAT ALL CUT ENDS, HOLES, ETC., AND USE ELEVATED POST BASES.

ABBREVIATIONS

TYP.	TYPICAL	BOT.	BOTTOM
CONT.	CONTINUOUS	T&B	TOP AND BOTTOM
SIM.	SIMILAR	UNO	UNLESS NOTED OTHERWISE
OPP.	OPPOSITE	MIN.	MINIMUM
THK.	THICK	MAX.	MAXIMUM
DP.	DEEP	R/W	REINFORCED WITH
CLR.	CLEAR	O/C	ON CENTRE
PL.	PLATE	C/W	UNDERSIDE
G/L.	GRID LINE	C/W	COMPLETE WITH
E/W.	EACH WAY	NTS	NOT TO SCALE
E/F.	EACH FACE	SOG	SLAB-ON-GRADE
N/S.	NEAR SIDE	TOS	TOP OF STEEL
LG.	LONG	CP	CAST-IN-PLACE
STAG.	STAGGERED	P/C	PRECAST CONCRETE
ALT.	ALTERNATE		



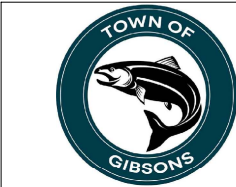
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2	2021-02-18	90% REVIEW	GD
3	2021-06-10	100% DESIGN	GD
4	2021-12-17	ISSUED FOR TENDER	GD



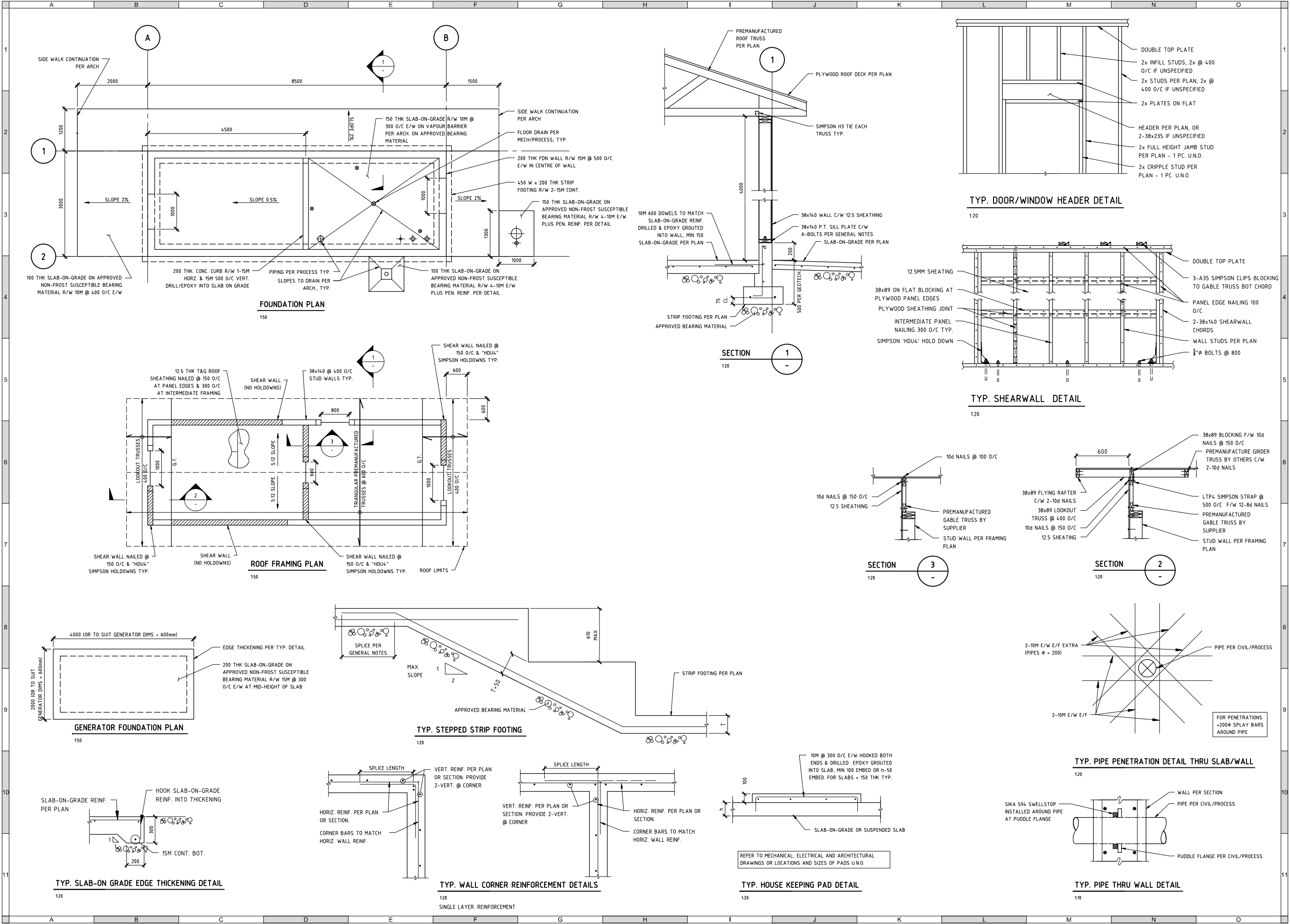
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GIBSON WELL 6

Sheet Number	Drawing Number	Revision
20-124	S - 0 1	4

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GIBSON WELL 6

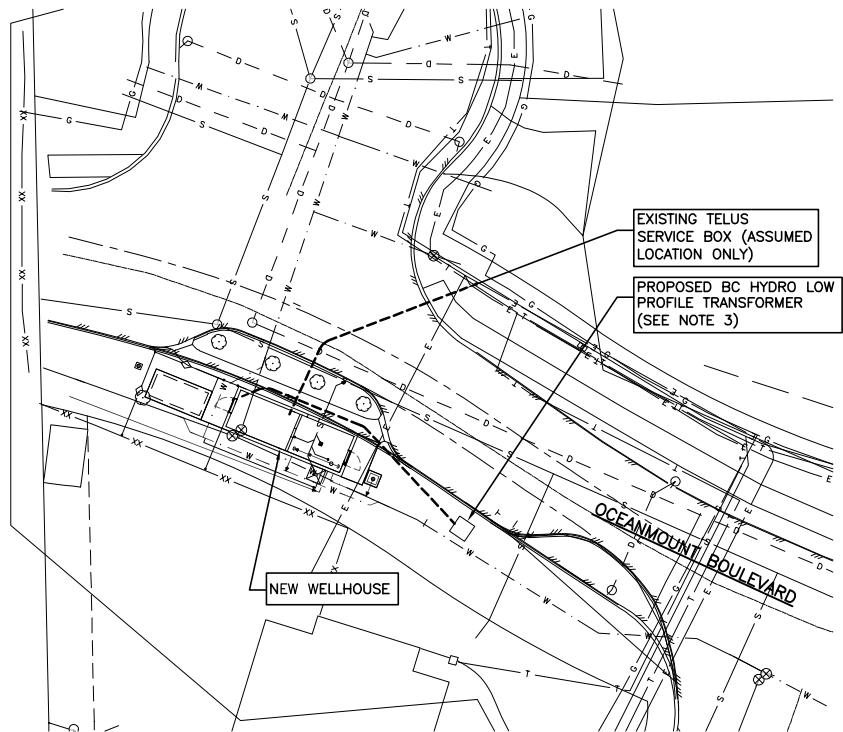
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Project Number
20-124

Drawing Number
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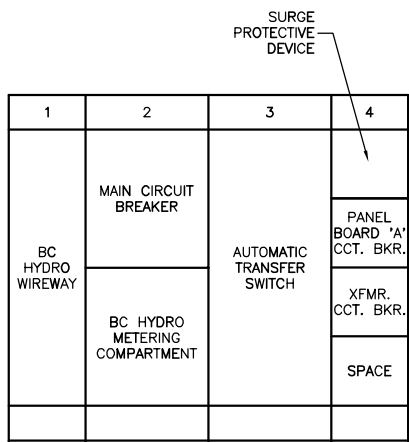
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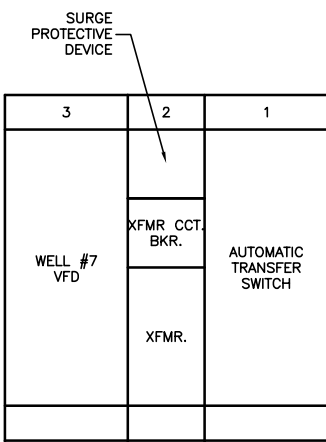
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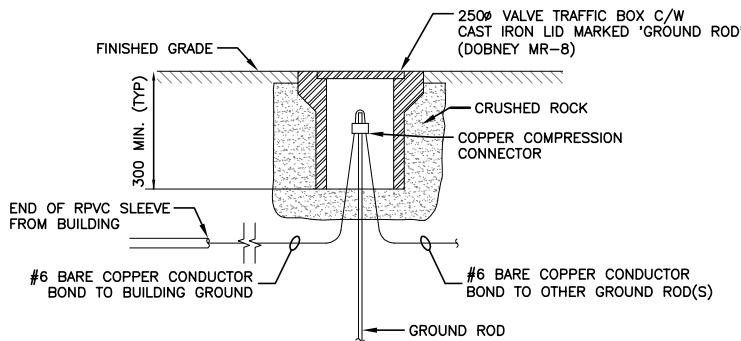
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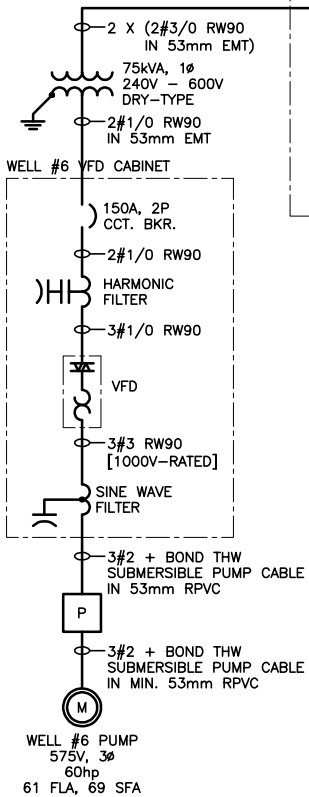
MCC LAYOUT
1:25



FUTURE MCC LAYOUT
1:25



GROUND ROD INSPECTION WELL DETAIL
NTS



SINGLE LINE DIAGRAM
NTS

NOTES:

1. THE ELECTRICAL INSTALLATION SHALL BE PERFORMED BY A REGISTERED ELECTRICAL CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE CANADIAN ELECTRICAL CODE, THE B.C. ELECTRICAL SAFETY ACT, AND MUNICIPAL BYLAWS.
2. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE DIVISION 26 ELECTRICAL SPECIFICATIONS WHICH FORM AN INTEGRAL PART OF THIS CONTRACT.
3. THE CONTRACTOR SHALL CONFIRM EXACT BC HYDRO SERVICE LOCATION PRIOR TO CONSTRUCTION. SEE BC HYDRO DRAWINGS FOR SERVICE CONDUITS & CONNECTION DETAILS.
4. THE GENERATOR WILL BE SUPPLIED BY THE TOWN OF GIBSONS. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF THE GENERATOR AND SUPPLY, INSTALLATION AND TERMINATION OF ASSOCIATED CONDUITS AND WIRING. THE CONTRACTOR SHALL CONFIRM THE ACTUAL GENERATOR AND CIRCUIT BREAKER RATINGS PRIOR TO CONSTRUCTION AND ADJUST THE WIRE & CONDUIT SIZES ACCORDINGLY. THE GENERATOR OUTPUT CIRCUIT BREAKER RATING SHALL NOT EXCEED 600A.
5. CONFIRM GENERATOR DIMENSIONS AND CONDUIT STUB-UP LOCATIONS WITH GENERATOR SUPPLIER PRIOR TO FORMING CONCRETE MOUNTING PAD. SEE CIVIL DRAWINGS FOR DETAILS OF THE GENERATOR'S CONCRETE PAD & ANCHOR BOLTS.
6. THE BRANCH CIRCUIT BREAKERS AT PANELBOARD 'A' SHALL BE SERIES-RATED WITH THE UPSTREAM FEEDER BREAKER FOR MINIMUM 18 KAIC SYMMETRICAL.

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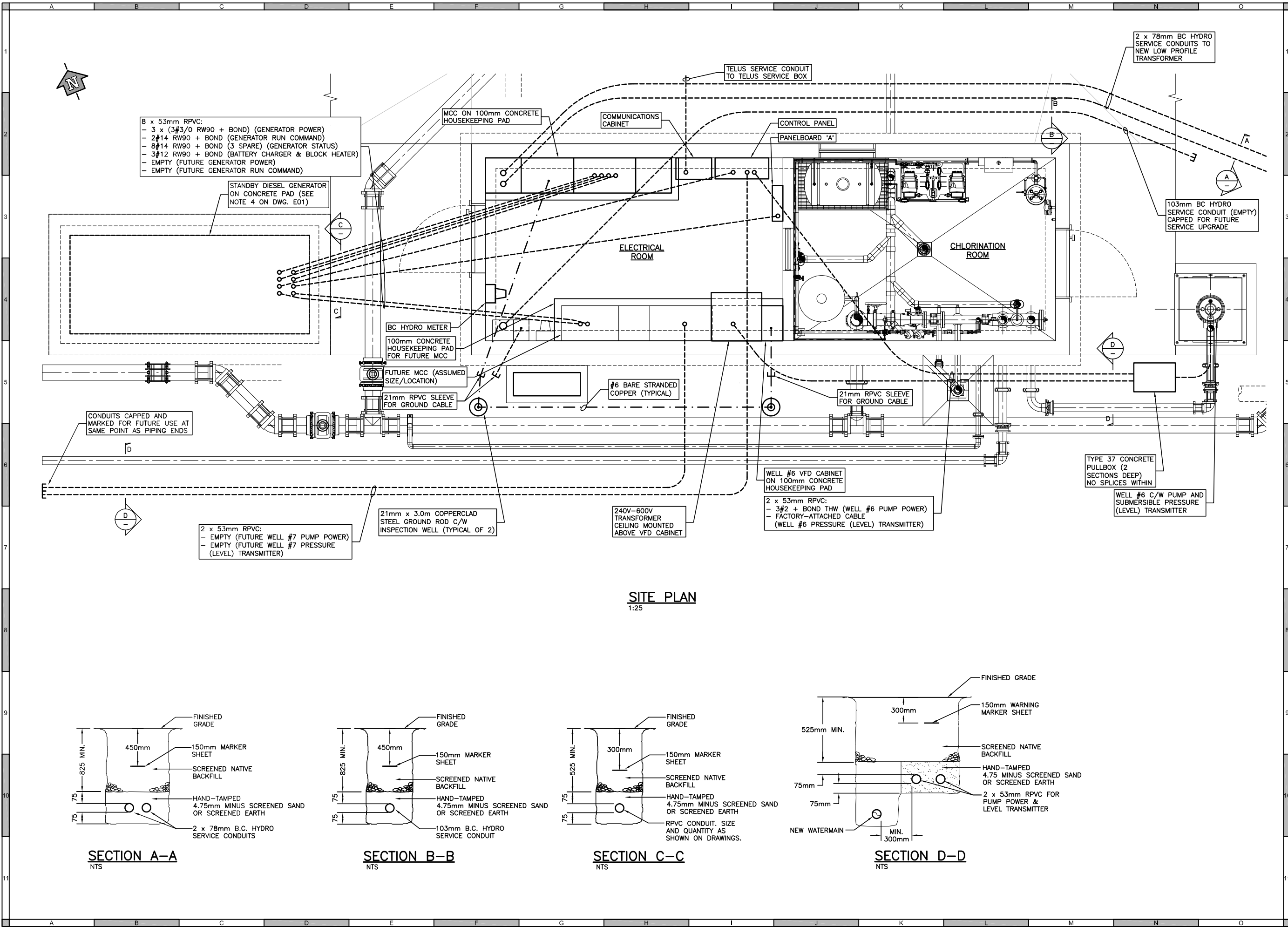
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WELL No. 6
ELECTRICAL
SINGLE LINE DIAGRAM,
KEY PLAN & MCC LAYOUT

Sheet Number 1 of 8
Project Number 1300.124.02
Drawing Number E01
Revision 3

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SITE PLAN
1:25

SECTION A-A
NTS

SECTION B-B
NTS

SECTION C-C
NTS

SECTION D-D
NTS

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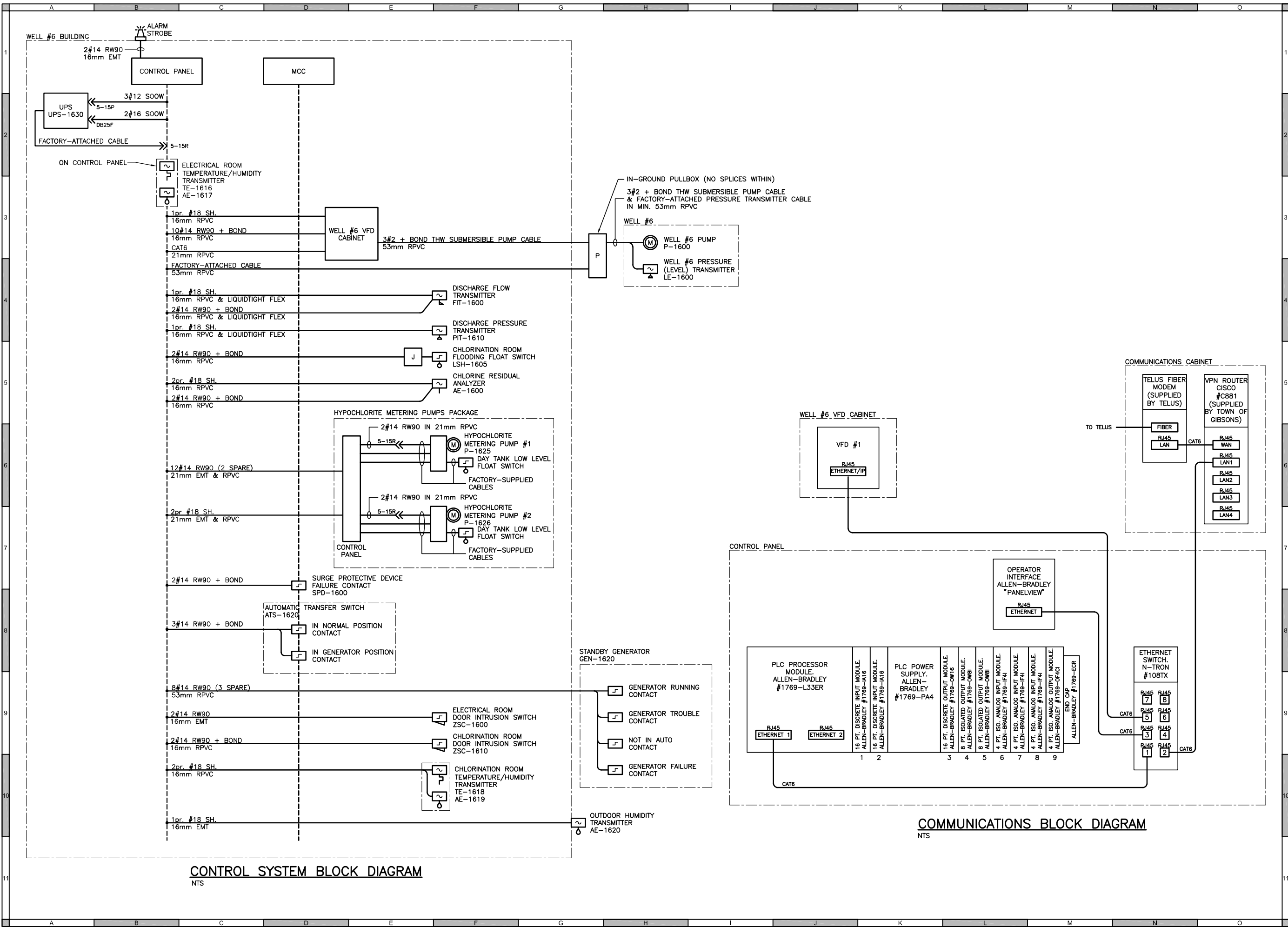
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WELL No. 6
ELECTRICAL
SITE PLAN & DETAILS

Sheet Number: 2 of 8
Project Number: 1300.124.02
Drawing Number: E02
Revision: 3

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TOWN OF GIBSONS

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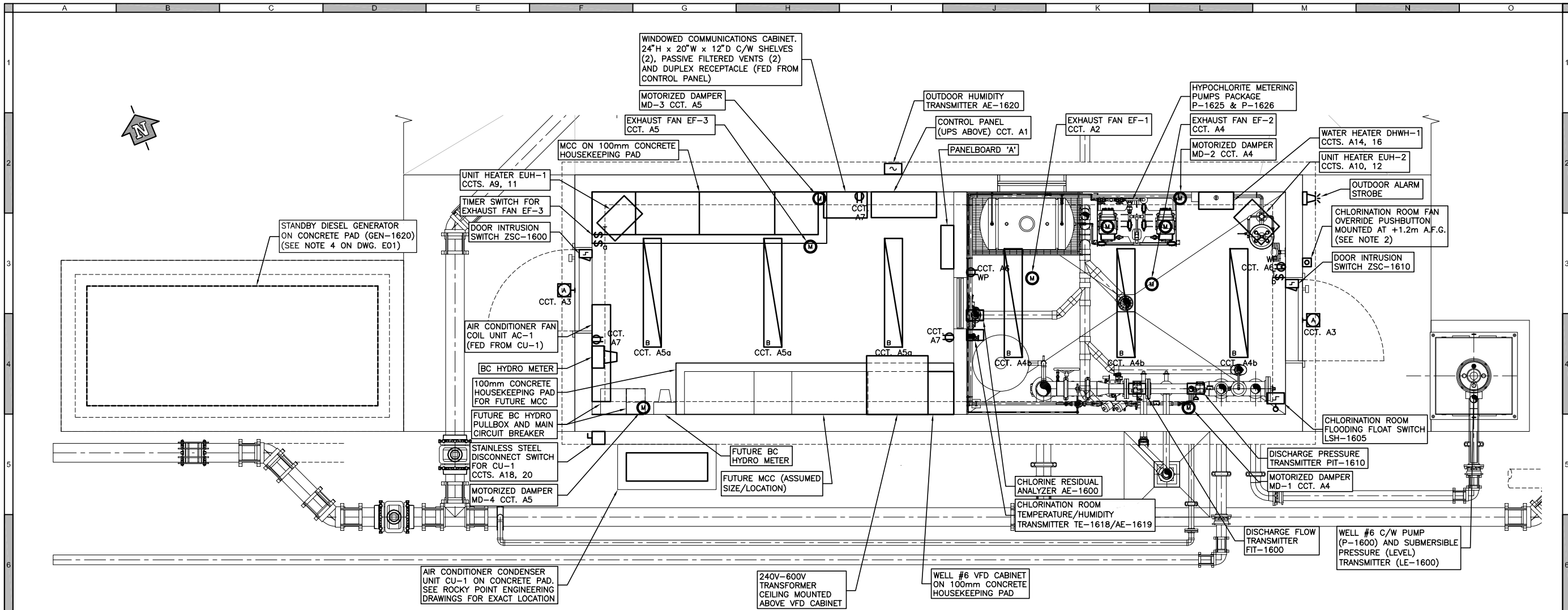
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WELL No. 6
ELECTRICAL
BLOCK DIAGRAMS

Sheet Number	3 of 8	
Project Number	Drawing Number	Revision
1300.124.02	E03	2

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BUILDING PLAN
1:25

PANELBOARD 'A'					
LOAD VA L1 L2	DESCRIPTION	BKR	CIRCUIT NUMBER	BKR	DESCRIPTION
1000	CONTROL PANEL	15	1	15	CHLORINATION ROOM
60	EXTERIOR LIGHTING	15	3	15	EXHAUST FAN EF-1
900	ELECTRICAL ROOM LIGHTING, EF-3, MD-3 & MD-4	15	5	15	CHLORINATION ROOM LIGHTING, EF-2, MD-1 & MD-2
3	ELECTRICAL ROOM RECEPTACLES	15	7	15	CHLORINATION ROOM RECEPTACLES
1500	ELECTRICAL ROOM HEATER EUH-1	15	9	15	CHLORINATION ROOM HEATER EUH-2
1500		20	11	40	
2000	ELECTRICAL ROOM AIR CONDITIONER AC-1 & CU-1	15	13	14	ELECTRIC WATER HEATER DHW-1
2000		30	15	30	
200	GENERATOR BATTERY CHARGER	15	17	18	
1000	GENERATOR BLOCK HEATER	15	19	20	
		21	22		
		23	24		
		25	26		
		27	28		
		30	30		
*DENOTES GFCI CIRCUIT BREAKER WITH 30mA TRIP					
VOLTS AND PHASE: 120/240V, 1Ø, 3W AMPS: 225 BREAKER SYM. I.C. 18 kA					
LOCATION: BOOSTER STATION MCC MOUNTING: MCC					
MAKE AND TYPE:					
CONNECTED LOAD (VA)	12170	11560			
ESTIMATED LOAD (VA)	500	750			
TOTAL LOAD (VA)	12670	12310	24980 VA TOTAL		

NOTES:

- ALL CONDUIT, FITTINGS, OUTLET BOXES & JUNCTION BOXES IN THE CHLORINATION ROOM SHALL BE RPVC.
- AT THE CHLORINATION ROOM FAN OVERRIDE PUSHBUTTON, INSTALL A RED LAMACOID NAMEPLATE WITH WHITE LETTERING TO READ: "CHLORINATION ROOM FAN OVERRIDE. PRESS FOR 10 MINUTES FAN OPERATION."

LEGEND:

- MOTOR
- FLOW TRANSMITTER
- PRESSURE TRANSMITTER
- FLOAT SWITCH
- LIMIT SWITCH
- TEMPERATURE TRANSMITTER
- HUMIDITY TRANSMITTER
- WALL-MOUNTED OUTDOOR LIGHT FIXTURE C/W PHOTOCELL - 26W LED
- CORROSION RESISTANT, CEILING-MOUNTED INDOOR LIGHT FIXTURE - 45W LED
- SINGLE POLE SWITCH
- SINGLE POLE TIMER SWITCH
- 5-15R DUPLEX RECEPTACLE
- 5-15R DUPLEX RECEPTACLE WITH WHILE-IN-USE COVER

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WELL No. 6
ELECTRICAL
BUILDING PLAN &
PANELBOARD SCHEDULE

Sheet Number 4 of 8
Project Number 1300.124.02
Drawing Number E04
Revision 2

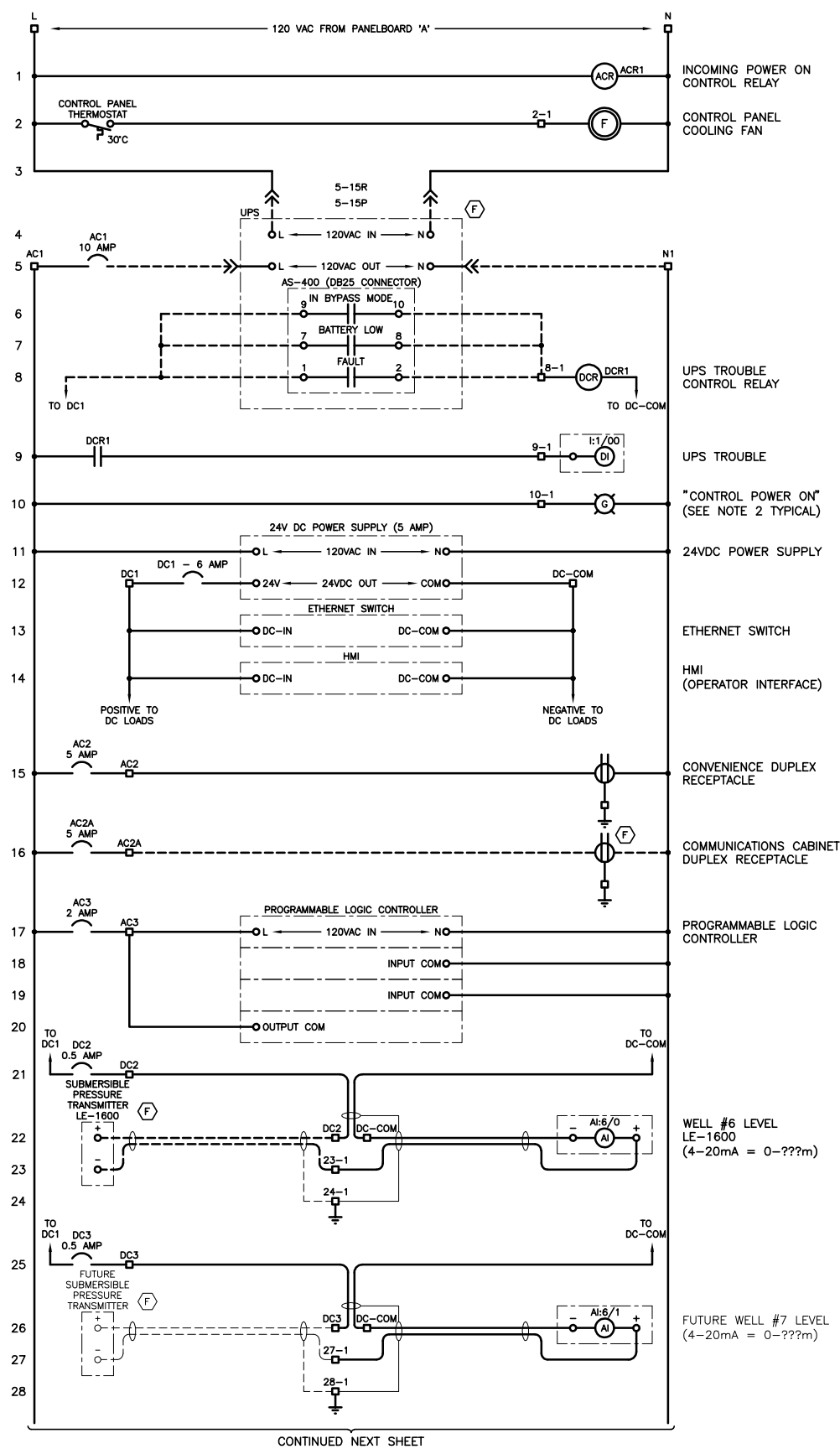
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LEGEND:

- | | |
|----------|----------------------------------|
| ○ | DEVICE TERMINAL |
| □ | CONTROL PANEL TERMINAL |
| ▽ | MCC TERMINAL |
| ⊙
ATR | AC TIMING RELAY |
| ⊙
DCR | DC CONTROL RELAY |
| ⊙
ACR | AC CONTROL RELAY |
| ⊙
R | INDICATING LIGHT |
| NOTC | NORMALLY OPEN, TIMED CLOSING |
| NCTO | NORMALLY CLOSED, TIMED OPENING |
| — | WIRING WITHIN CONTROL PANEL |
| --- | WIRING EXTERNAL TO CONTROL PANEL |
| ⬡
F | EQUIPMENT LOCATED IN FIELD |
| ⬡
M | EQUIPMENT LOCATED IN MCC |

NOTES:

1. WIRE NUMBERS SHALL MATCH
TERMINAL NUMBERS, UNLESS NOTED
OTHERWISE.
2. ALL INDICATING LAMPS SHALL BE
PUSH-TO-TEST TYPE.
3. ALL SPARE PLC I/O's SHALL BE
WIRED TO TERMINAL BLOCKS.
TERMINAL BLOCK & WIRE NUMBERS
SHALL CORRESPOND TO I/O ADDRESS



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WARNING
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Coordinate System:
Compilation Date:

WATANABE ENGINEERING LTD.

ELECTRICAL CONSULTING ENGINEERS

PERMIT TO PRACTICE No. 1001228

PROJECT No. 2848

Issued For
Tender
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Professional Seals

#	Date	Issue / Revision	Appr
0	2021-02-19	ISSUED FOR 90% REVIEW	BF
1	2021-06-11	ISSUED FOR 100% REVIEW	BF
2	2021-12-16	ISSUED FOR TENDER	BF
• •	-	-	-
• •	-	-	-
• •	-	-	-
• •	-	-	-
• •	-	-	-



URBAN
SYSTEM

Scale AS SHOWN

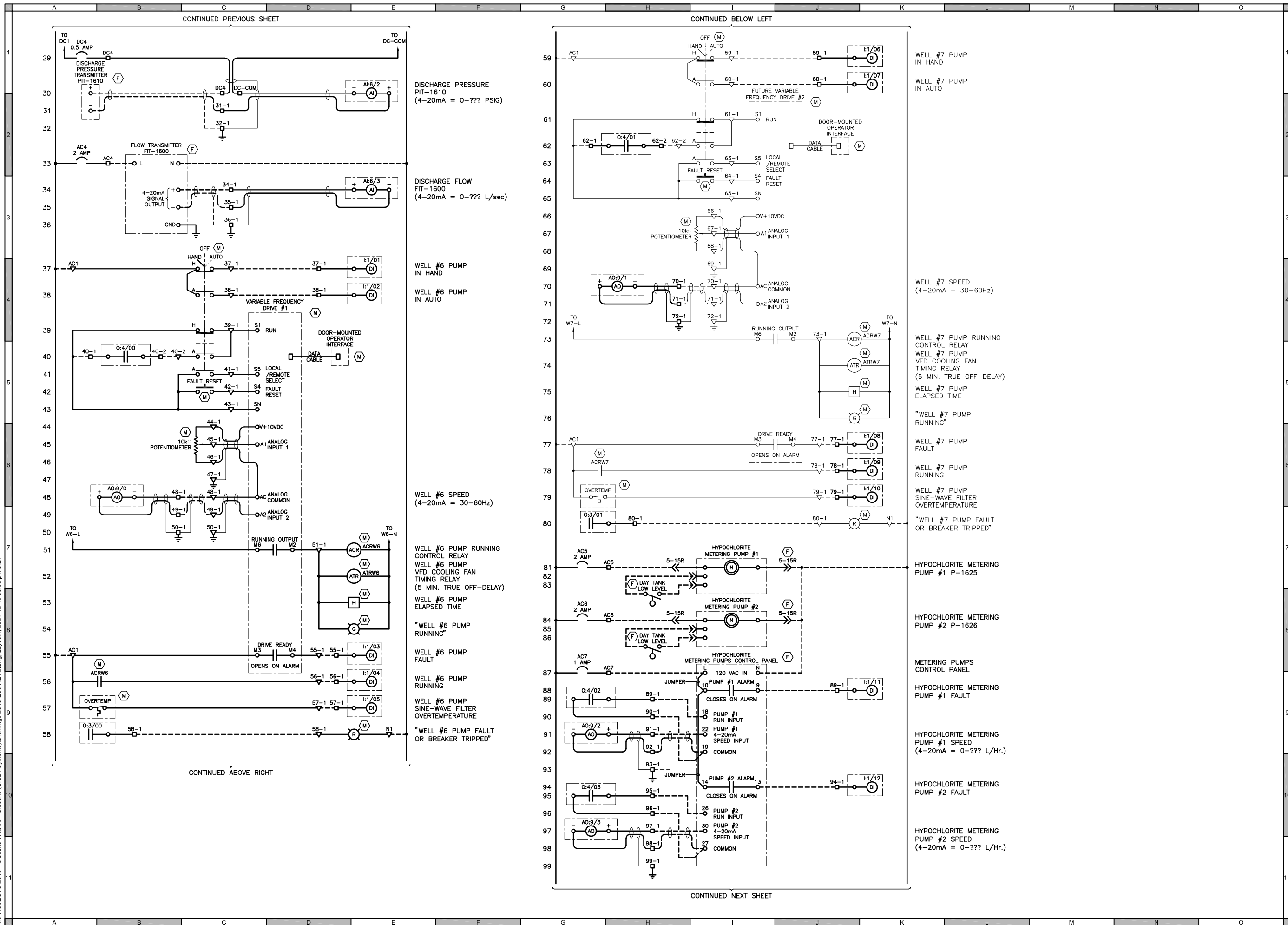
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WELL No. 6
ELECTRICAL
SCHEMATIC DIAGRAM

Sheet Number	5 of 8	
Project Number	Drawing Number	Revision
1300.124.02	E05	2

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N:\PROJECTS\2848 - Gibsons Well #6 - Gibsons (Urban Systems)\Drawings\2848-E06 REV2.dwg, Layout1, 2021-12-16 03:56 pm tlfair



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**URBAN
SYSTEMS**

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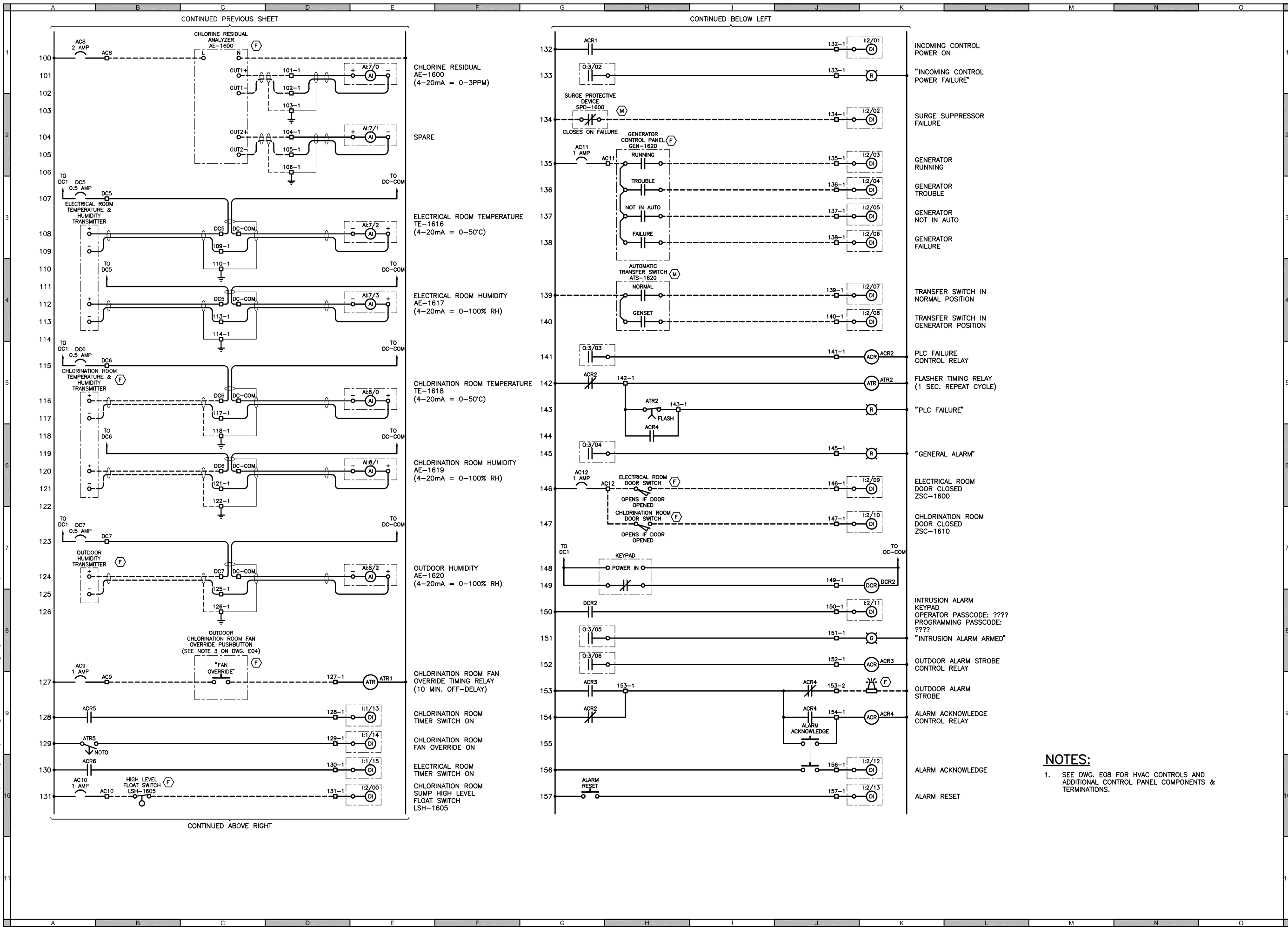
Quality Control by TW
Designed by BF
Drawn by BF

WELL No. 6
ELECTRICAL
SCHEMATIC DIAGRAM

Sheet Number 6 of 8
Project Number 1300.124.02
Drawing Number E06
Revision 2

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N:\PROJECTS\2848 - Gibsons Well #6 - Gibsons (Urban Systems)\Drawings\2848-E07 REV2.dwg, Layout1, 2021-12-16 03:58 pm tlfair



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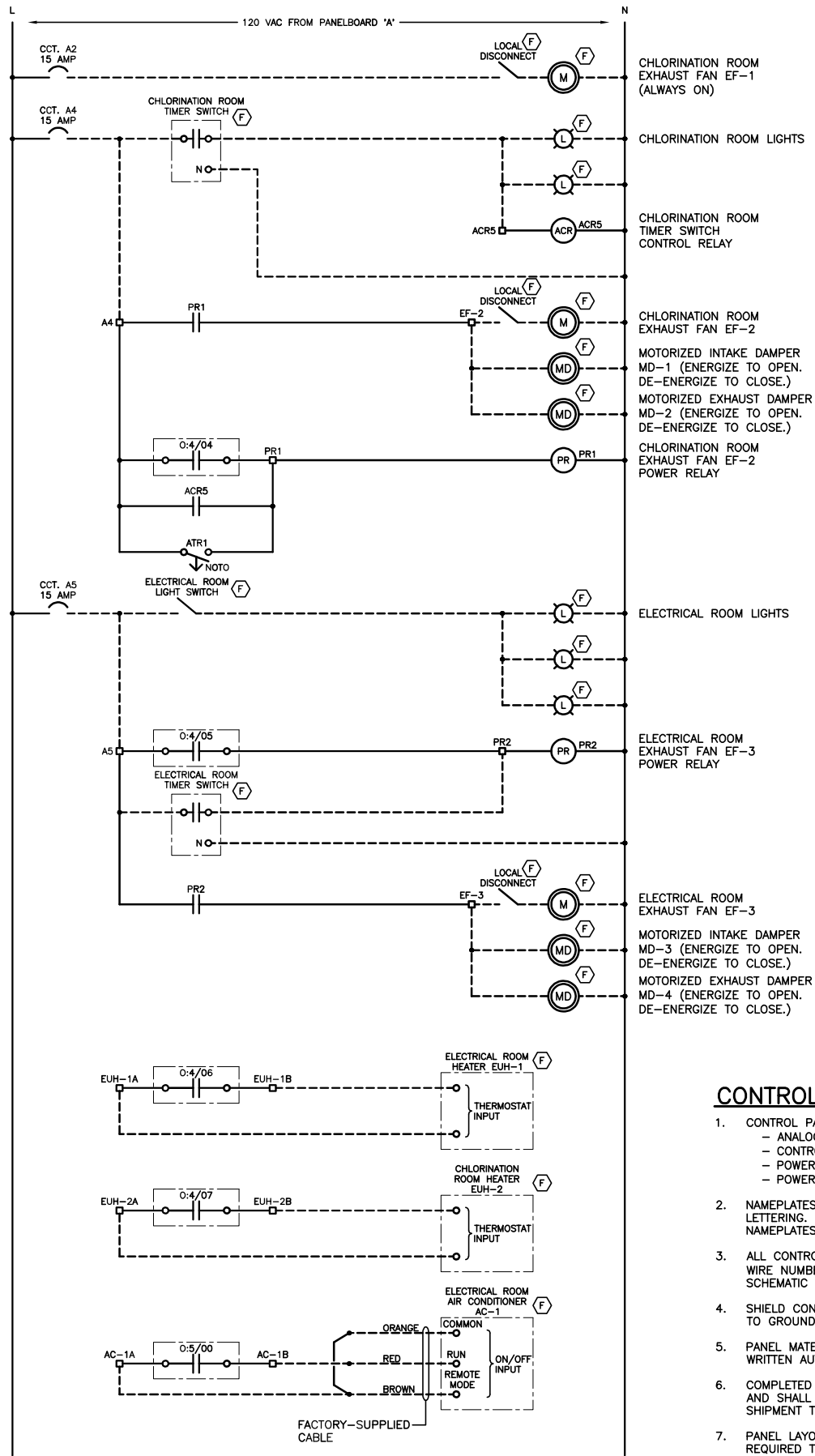
Quality Control by TW
Designed by BF
Drawn by BF

WELL No. 6
ELECTRICAL
SCHEMATIC DIAGRAM

Sheet Number 7 of 8
Project Number 1300.124.02
Drawing Number E07
Revision 2

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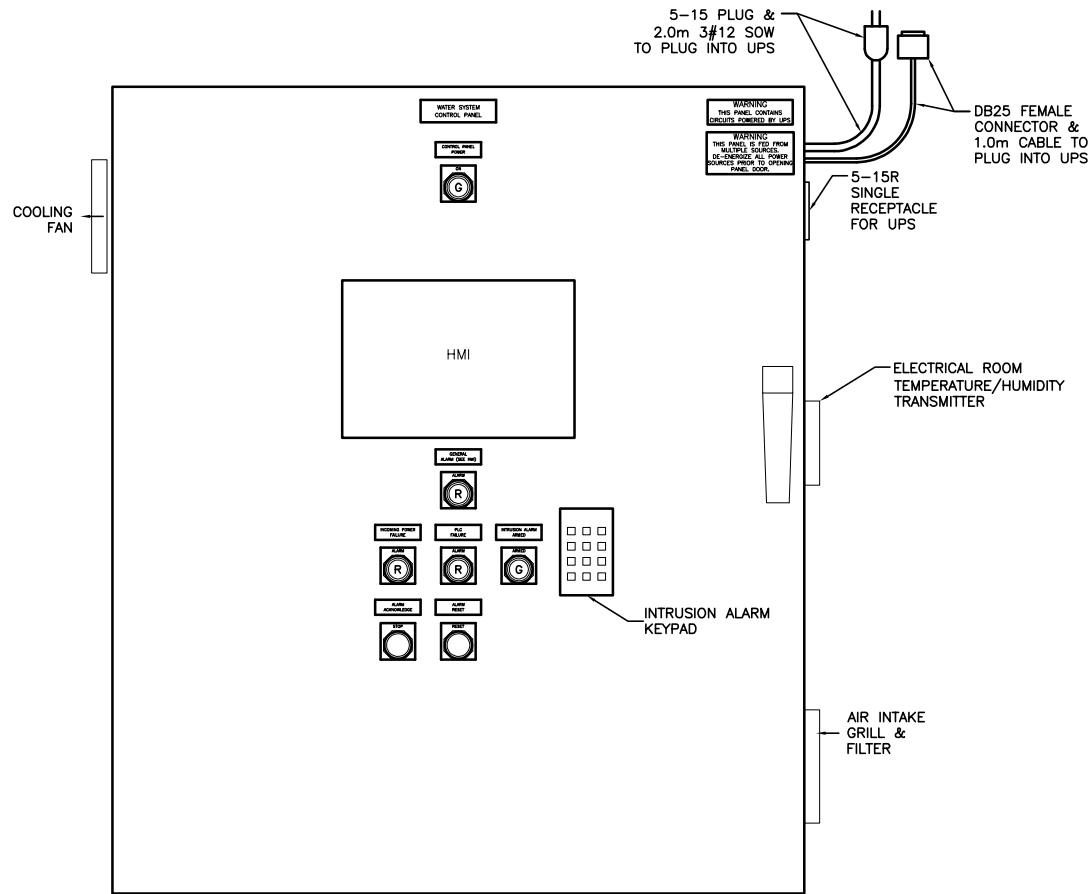
**HVAC CONTROLS
SCHEMATIC DIAGRAM**
NTS

HVAC CONTROLS NOTES:

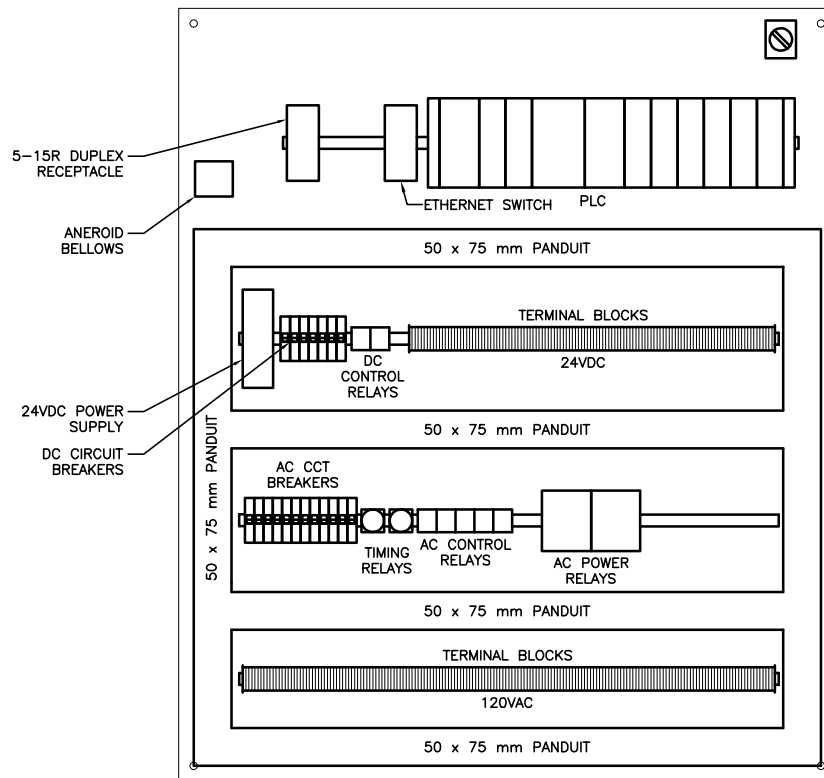
1. THE HVAC POWER RELAYS & CONTROL RELAY SHALL BE MOUNTED IN THE MAIN CONTROL PANEL

CONTROL PANEL NOTES:

1. CONTROL PANEL INTERNAL WIRING SHALL BE AS FOLLOWS:
 - ANALOG WIRING: #18 AWG CU, SHIELDED, TWISTED PAIR
 - CONTROL WIRING: #16 AWG CU, 19 STRAND, TYPE TEW.
 - POWER WIRING: #12 - #10 AWG CU, 19 STRAND, TYPE TEW.
 - POWER WIRING: #8 AWG OR LARGER, CU STRANDED, TYPE RW90 (XLPE).
2. NAMEPLATES SHALL BE THREE-PLY LAMACOID, WHITE WITH BLACK ENGRAVED LETTERING. 80mm X 20mm WITH 3.5mm LETTERING AS SHOWN ON DRAWING. NAMEPLATES SHALL BE SCREWED TO PANEL.
3. ALL CONTROL PANEL INTERNAL WIRING SHALL BE MARKED AT BOTH ENDS WITH WIRE NUMBERS. (WIRE NUMBER = CONTROL PANEL TERMINAL NUMBER) SEE SCHEMATIC DIAGRAM FOR DETAILS.
4. SHIELD CONDUCTORS ON ANALOG TWISTED PAIR CABLES SHALL BE CONNECTED TO GROUND AT ONE END ONLY. SEE SCHEMATIC DIAGRAM FOR DETAILS.
5. PANEL MATERIALS, LAYOUT OR WIRING SHALL NOT BE MODIFIED WITHOUT WRITTEN AUTHORIZATION FROM ENGINEER.
6. COMPLETED PANEL SHALL BEAR A CSA OR EQUIVALENT INSPECTION STICKER AND SHALL BE INSPECTED AT FABRICATION SHOP BY ENGINEER PRIOR TO SHIPMENT TO SITE.
7. PANEL LAYOUT AND SIZING IS APPROXIMATE ONLY AND SHALL BE ADJUSTED AS REQUIRED TO SUIT ACTUAL EQUIPMENT SIZES.
8. THE PANEL BACKPAN AND ENCLOSURE SHALL BE BONDED VIA A BONDING LUG.
9. ALL WIRES SHALL HAVE FERRULES CRIMPED ON BOTH ENDS.



CONTROL PANEL EXTERIOR LAYOUT
SCALE 1:5



CONTROL PANEL INTERIOR LAYOUT
SCALE 1:5

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Designed by BF
Drawn by BF

WELL No. 6
ELECTRICAL
**HVAC SCHEMATIC DIAGRAM &
CONTROL PANEL LAYOUTS**

Sheet Number 8 of 8
Project Number Drawing Number Revision
1300.124.02 E08 2

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