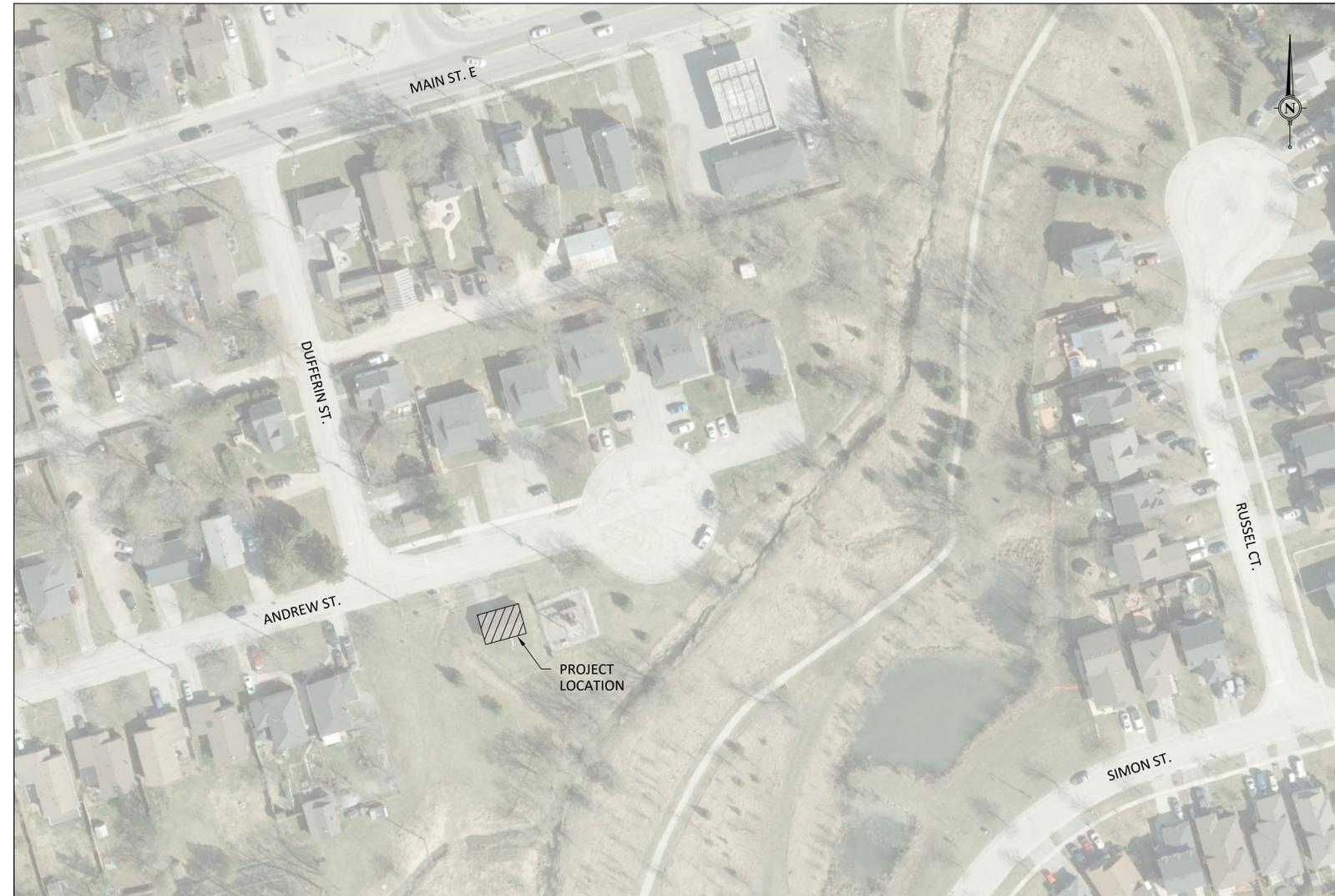


TOWN OF SHELBURNE WELL No.1 PUMPHOUSE UPGRADES



ISSUED FOR TENDER

DATE ISSUED: 11-DEC-2025

PREPARED FOR:

TOWN OF SHELBURNE
203 MAIN ST E,
SHELBURNE
ON L9V 3K4

PROJECT No. M20051



S. BURNETT & ASSOCIATES LTD.
ENGINEERING AND ENVIRONMENTAL SERVICES
210 BROADWAY, UNIT 203
ORANGEVILLE, ON
L9W 5G4
T: 519-941-2949
F: 519-941-2036
www.sbaengineering.com

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CLIENT	TOWN OF SHELburne
PROJECT	WELL No.1 PUMPHOUSE UPGRADES
DRAWING TITLE	DRAWING INDEX

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	DESIGNED BY C.M.	DRAWN BY S.M.
SCALE N.T.S.	PROJECT No. M20051	DRAWING No. G0.1

PROF. STAMP

CIVIL DRAWING INDEX

- C0.1 CIVIL DRAWING INDEX & NOTES
- C2.1 EXISTING SITE PLAN & REMOVALS
- C2.2 PROPOSED SITE PLAN
- C2.3 PROPOSED GRADING PLAN
- C5.1 STANDARD DETAILS

CIVIL NOTES

GENERAL NOTES:

1. ALL BENCHMARKS, UTILITIES, SIZES, MATERIALS AND SERVICE LOCATIONS TO BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORK, AND ANY DAMAGE TO SUCH BE REPAIRED AT THE CONTRACTOR'S COST AND ANY COMPENSATION TO THE UTILITY OWNERS TO BE PAID BY THE CONTRACTORS.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE UNDERGROUND UTILITIES. THE CONTRACTOR IS LIABLE TO ANY DAMAGE TO THE UTILITIES AND IS TO COMPENSATE THE RESPECTIVE OWNER.
3. ALL ELEVATIONS AND DIMENSIONS ARE IN METRIC UNITS UNLESS OTHERWISE INDICATED.
4. ALL WORK TO CONFORM TO ONTARIO PROVINCIAL STANDARD DRAWINGS AND SPECIFICATIONS (OPSD AND OPSS)
5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM HIMSELF OF THE EXACT LOCATION OF, AND ASSUME ALL LIABILITY FOR DAMAGE TO, ALL UTILITIES, SERVICES AND STRUCTURES WHETHER ABOVE GROUND OR BELOW GRADE BEFORE COMMENCING THE WORK. SUCH INFORMATION IS NOT NECESSARILY SHOWN ON THE DRAWINGS, AND WHERE SHOWN, THE ACCURACY CAN NOT BE GUARANTEED.
6. ALL DIMENSIONS AND ALL INFORMATION SHALL BE CHECKED AND VERIFIED ON THE JOB AND ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEER BEFORE COMMENCING THE WORK.
7. NO RECYCLED MATERIAL TO BE USED IN ASPHALT PAVEMENT OR GRANULAR MATERIALS, UNLESS APPROVED BY THE ENGINEER.
8. CONTRACTOR TO OBSERVE ALL LOCAL ZONING BY-LAW, ONTARIO BUILDING CODE AND ALL OTHER APPLICABLE LAWS DURING THE COURSE OF CONSTRUCTION.
9. CONTRACTOR TO OBTAIN ALL THE NECESSARY PERMITS FOR COMPLETION OF WORK.

CONSTRUCTION NOTES:

1. CONSTRUCTION EQUIPMENT AND MATERIALS SHALL NOT BE STORED ON THE RIGHT OF WAY.
2. ROAD TO BE CLEANED AND SWEEPED UP AS REQUESTED BY ENGINEER.
3. TRAFFIC CONTROL (AS PER MTO TRAFFIC CODE BOOK) TO BE MANAGED BY CONTRACTOR DURING COURSE OF CONSTRUCTION.
4. PEDESTRIAN WALKWAYS AND DRIVEWAYS TO BE MAINTAINED AT ALL TIMES DURING THE PROJECT TO ENSURE RESIDENTS SAFE ACCESS TO THEIR PROPERTIES.

EARTHWORKS AND GRADING:

1. STRIP EXISTING TOPSOIL AND EXCAVATE TO SUBGRADE FOR STRUCTURES, FOR PAVEMENT AND GRANULAR SURFACE, AND TRENCHING FOR SERVICES. DISPOSE OF EXCESS MATERIAL OFFSITE AT CONTRACTORS EXPENSE.
2. PROOF ROLL AND CONFIRM COMPACTION AND ACCEPTABILITY OF SUBGRADE PRIOR TO BACKFILL OR CONSTRUCTION COMPACTION. TO BE VERIFIED BY GEOTECHNICAL TESTING AT CONTRACTORS COST.
3. REFER TO SEDIMENT AND EROSION CONTROL PLAN FOR FURTHER NOTES.
4. ALL WORK DONE IN THE ROAD RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH O.P.S.S. AND CONTRACT SPECIFICATIONS.
5. PROPOSED GRADES AT THE PROPERTY LINE MUST MATCH EXISTING.
6. MAINTAIN POSITIVE DRAINAGE AT ALL TIMES.
7. ROOT STRUCTURES FOR EXISTING TREES TO BE MAINTAINED AND PROTECTED DURING EXCAVATION.

ROADWAY AND BOULEVARD:

1. STREETS AND ROADWAYS DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED TO MEET OR EXCEED CURRENT CONDITION. ASPHALT ROAD MINIMUM REPAIR SHALL BE 450mm GRANULAR B, 150mm GRANULAR A, 60mm HL#4 AND 40mm HL#3.
2. GRAVEL ROAD RESTORATION SHALL BE REPAIRED TO MEET OR EXCEED CURRENT CONDITION, MINIMUM REPAIR SHALL BE 450mm GRANULAR B, 150mm GRANULAR A.
3. ROADWAY CUTS SHALL BE COMPLETED WITH STRAIGHT LINE SAW CUTS PRIOR TO ASPHALT REMOVAL.
4. BOULEVARD AREAS TO BE REINSTATED WITH A MINIMUM 100mm TOPSOIL AND HYDROSEED.
5. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT VEGETATION TAKES HOLD INCLUDING WATERING ETC.
6. DRIVEWAY REINSTATEMENT:
 - GRANULAR: MINIMUM 300mm GRANULAR B, 150mm GRANULAR A
 - ASPHALT: MINIMUM 300mm GRANULAR B, 150mm GRANULAR A, 50mm HL#3

EROSION AND SEDIMENT ESC CONTROL PLAN:

ESC GENERAL NOTES

1. ALL CONSTRUCTION EQUIPMENT TO USE MAIN ACCESS POINT LOCATED AT COMMUNITY ACCESS ROAD AS INDICATED ON THIS DRAWING. MUD MAT TO BE CONSTRUCTED AT ACCESS POINT.
2. NO MAINTENANCE FOR REPAIR WORK ON CONSTRUCTION EQUIPMENT IS ALLOWED WITH IN 30 METRES OF AN EXISTING WATER COURSE OR DITCH.
3. ALL SEDIMENT AND EROSION CONTROL FACILITIES AND WORKS ARE TO BE CONSTRUCTED AND IN PLACE TO THE APPROVAL OF THE SITE ENGINEER PRIOR TO ANY GRADING OPERATIONS COMMENCING. TYPICAL WORKS INCLUDE SILT FENCES, INTERCEPTOR SWALES, AND STRAW BALE CHECK DAMS.
4. ALL TEMPORARY TOPSOIL STOCKPILES ARE TO BE PROVIDED WITH THE NECESSARY SEDIMENT AND EROSION CONTROL FEATURES AND PLACED MORE THAN 3M AWAY FROM ANY PROPERTY LINE, WATERCOURSE OR DITCH. IF STOCKPILES ARE TO REMAIN FOR A PERIOD LONGER THAN 30 DAYS, STOCKPILES SHALL BE HYDROSEEDED AND SURROUNDED WITH SILT FENCE.
5. ALL INTERCEPTOR SWALES ARE TO BE SEEDED TO STABILIZE THEIR BANKS IMMEDIATELY FOLLOWING CONSTRUCTION.
6. ALL EROSION CONTROL ARE TO BE INSPECTED REGULARLY AND CLEARED OR REPLACED, AS REQUIRED. PERIMETER EROSION CONTROLS ARE TO BE KEPT IN PLACE AND FUNCTIONAL UNTIL THE SITE HAS STABILIZED (LOT GRADING AND SODDING COMPLETE).
7. NO ALTERNATIVE EROSION CONTROL METHODS SHALL BE PERMITTED UNLESS APPROVED BY SITE ENGINEER.
8. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SEDIMENTS FROM THE ROADWAY AT THE END OF EACH WORK DAY.

ESC MAINTENANCE AND OPERATIONS OF SEDIMENT CONTROLS SILT FENCE

1. ALL SILT FENCES ARE AS PER O.P.S.D. 219.110 & 219.130. EROSIONS AND SEDIMENT CONTROLS TO BE ERECTED PRIOR TO COMMENCEMENT OF ANY GRADING OPERATIONS TO PREVENT SILT AND DEBRIS FROM ENTERING DRAINAGE SYSTEM IN CONSTRUCTION AREA.
2. SILT FENCE MUST BE INSPECTED WEEKLY FOR RIPS OR TEARS, BROKEN STAKES, BLOW-OUTS, AND ACCUMULATION OF SEDIMENT.
3. SILT FENCE MUST BE INSPECTED FOLLOWING ALL 15MM OR GREATER RAIN EVENT OR AS DIRECTED BY SITE ENGINEER.
4. SEDIMENT MUST BE REMOVED FROM SILT FENCE WHEN ACCUMULATION REACHES 50% OF THE HEIGHT OF THE FENCE.
5. ALL SILT FENCES MUST BE REMOVED ONLY WHEN THE ENTIRE SITE IS STABILIZED AND AS DIRECTED BY THE SITE ENGINEER.

ESC DECOMMISSIONING

1. FOLLOWING COMPLETION OF CONSTRUCTION AND AS DIRECTED BY SITE ENGINEER, ALL EROSION AND SEDIMENT CONTROL WORKS ARE TO BE REMOVED INCLUDING ANY ACCUMULATED SEDIMENT.
2. ALL WORKS LOCATED ON LAND OUTSIDE THE PROPOSED DEVELOPMENT AREA ARE TO BE GRADED TO MATCH EXISTING GROUNDING AND HYDROSEEDED.

ESC ORDER OF OPERATION

1. CONSTRUCTION SEDIMENT CONTROL FENCE IN ACCESSIBLE LOCATIONS AND ADJACENT TO DITCH. ENGINEER TO PROVIDE APPROVAL OF ESC MEASURES PRIOR TO CONTINUING CONSTRUCTION.
2. CLEAR AND GRUB SITE
3. COMPLETE INSTALLATION OF SEDIMENT CONTROL FENCING
4. STRIP AND STOCKPILE TOPSOIL

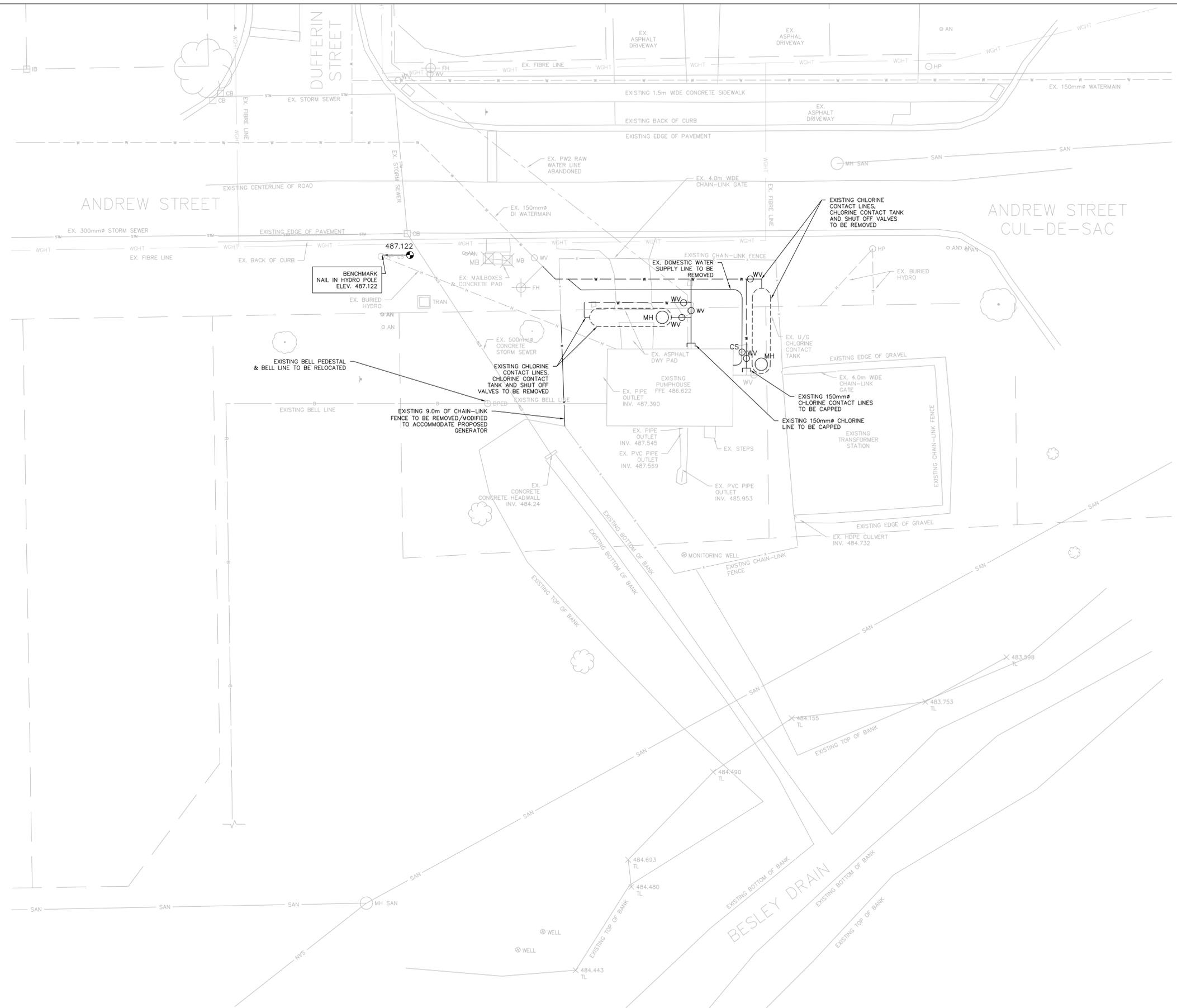
M:\M - MUNICIPAL\ARCHIVAL - 2020\202001 - SHELburne PWG AIR ENTRAPMENT\DRAWING\03 - SBA CAD & DESIGN\03\0201 - C0.1 - 24 - 2021-07-13.dwg

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CLIENT	TOWN OF SHELburne
PROJECT	WELL No.1 PUMPHOUSE UPGRADES
DRAWING TITLE	CIVIL DRAWING INDEX & GENERAL NOTES

 S. BURNETT & ASSOCIATES LIMITED ENGINEERING AND ENVIRONMENTAL SERVICES 210 BROADWAY, UNIT 203 ORANGEVILLE, ONTARIO L9W 5G4 TELEPHONE: 519-941-2949 FAX: 519-941-2036	DESIGNED BY	C.M.	DRAWN BY	S.M.	VERIFIED BY	S.B.	DRAWING No.	C0.1
	SCALE	N.T.S.	PROJECT No.	M20051				



- LEGEND:**
- DETAIL CALLOUT, DETAIL NUMBER
 - PROPOSED (AS SPECIFIED)
 - EXISTING (AS SPECIFIED)
 - PROPERTY LINE
 - CHAIN-LINK FENCE
 - CENTERLINE (AS SPECIFIED)
 - TREE LINE
 - TREE (STAND ALONE) (SEE LANDSCAPING)
 - WATERMAIN
 - WATER SERVICE & CURB STOP
 - FIRE HYDRANT & VALVE ASSEMBLY
 - SHUT OFF VALVE & BOX
 - GRAVITY SANITARY SEWER
 - SANITARY MAINTENANCE HOLE/CATCH BASIN
 - MAINTENANCE HOLE
 - CATCH BASIN
 - CULVERT
 - CENTERLINE OF DITCH/SWALE
 - HYDRO POLE
 - TRANSFORMER (SEE ELECTRICAL)
 - TELECOMMUNICATION PEDESTAL
 - BOLLARD
 - SPOT ELEVATION
 - SLOPE PERCENTAGE
 - CONTOUR



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DRAWING TITLE
EXISTING SITE & REMOVAL PLAN

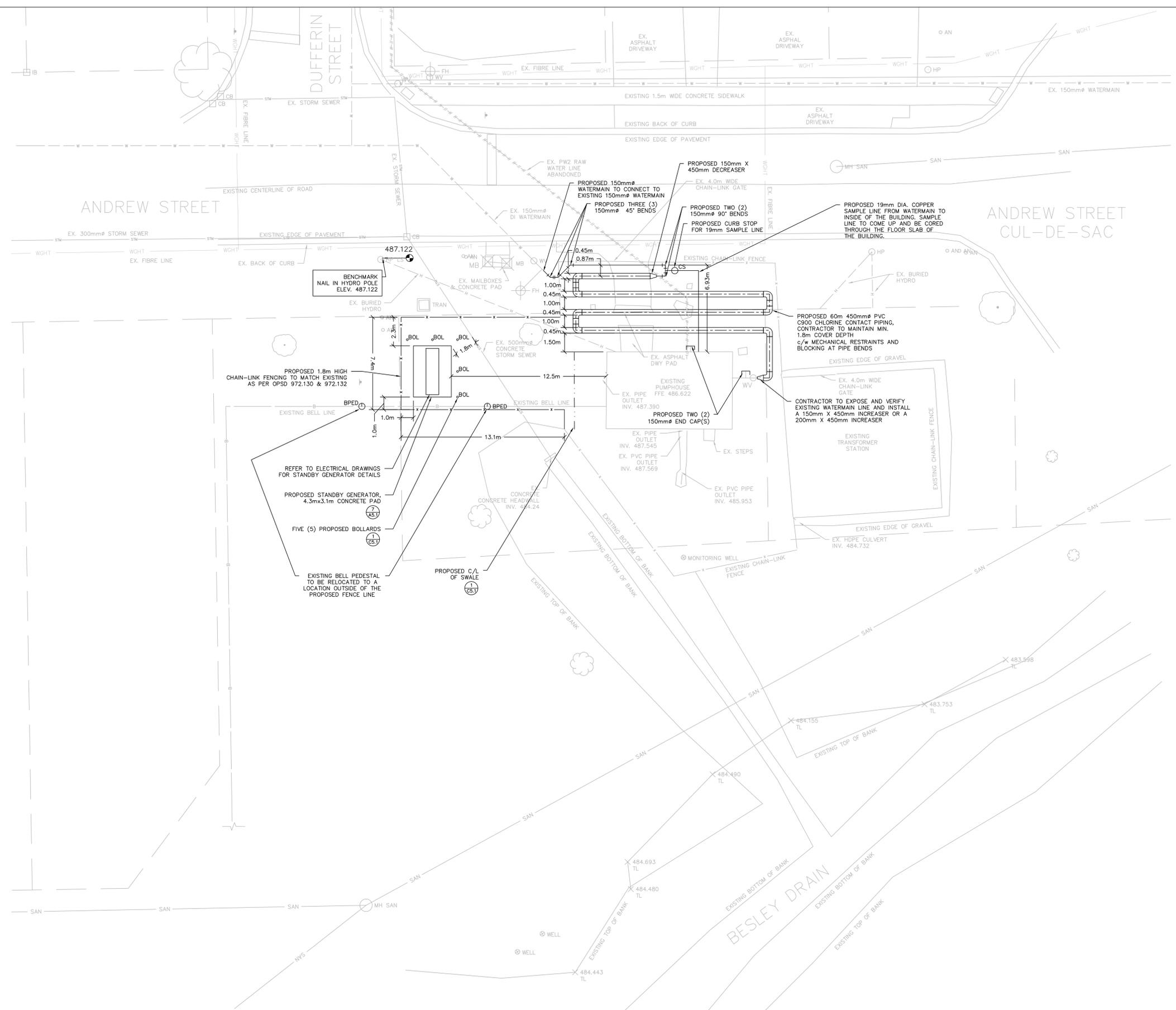
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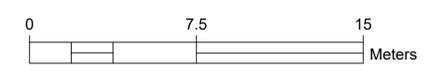
SCALE: 1:150 PROJECT NO.: M20051

DRAWING NO.: **C2.1**

PROF. STAMP



- LEGEND:**
- DETAIL CALLOUT, DETAIL NUMBER
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 - EXISTING (AS SPECIFIED)
 - PROPERTY LINE
 - CHAIN-LINK FENCE
 - CENTERLINE (AS SPECIFIED)
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 - SPOT ELEVATION
 - SLOPE PERCENTAGE
 - CONTOUR



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DRAWING TITLE
PROPOSED SITE PLAN

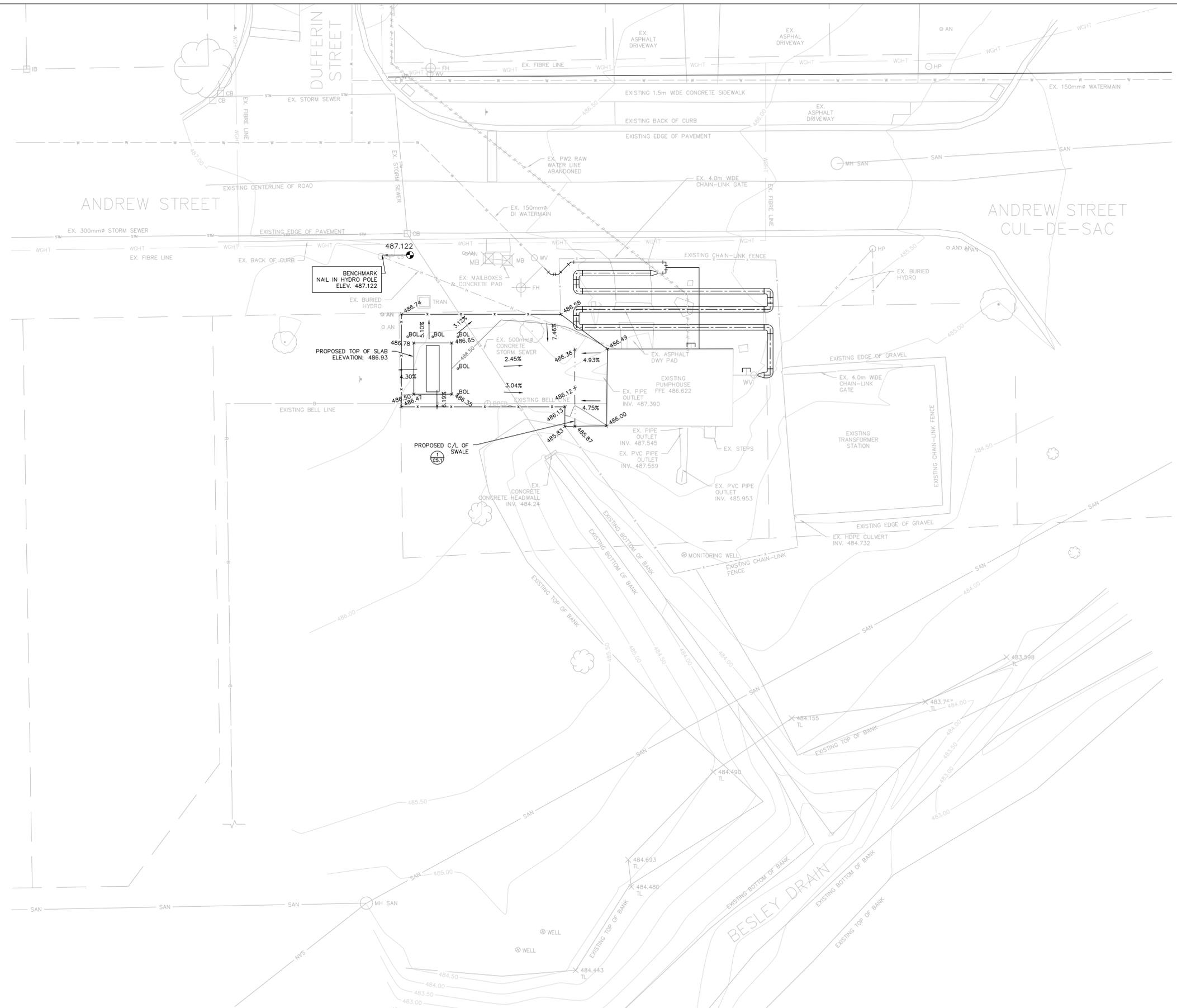
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SCALE: 1:150 PROJECT NO.: M20051

DRAWING NO.: **C2.2**

PROF. STAMP



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 - CHAIN-LINK FENCE
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 - SPOT ELEVATION
 - SLOPE PERCENTAGE
 - 100.00 CONTOUR



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PROPOSED GRADING PLAN

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PROF. STAMP

PROCESS DRAWING INDEX

W0.1	PROCESS NOTES
W1.1	EXISTING PROCESS & INSTRUMENTATION DIAGRAM AND REMOVAL
W1.2	PROPOSED PROCESS & INSTRUMENTATION DIAGRAM
W2.1	EXISTING FLOOR & REMOVAL PLAN
W2.2	PROPOSED FLOOR PLAN
W4.1	WELL 1: BUILDING SECTION
W5.1	STANDARD DETAILS

NOTES

PROCESS PIPING:

1. ALL WATER TREATMENT PROCESS PIPING MATERIALS AND CONSTRUCTION METHODS MUST CORRESPOND TO THE CURRENT ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS.
2. ALL PROPOSED PROCESS PIPING TO BE TYPE 316 L STAINLESS STEEL PIPING WITH SUFFICIENT GAUGE TO MEET 1035 KPA WORKING PRESSURE. PIPING TO BE INSULATED AND COVERED AS PER SPECIFICATIONS. REFER TO SPECIFICATIONS FOR DETAIL INFORMATION.
3. ALL PROPOSED PROCESS PIPING MUST BE ISOLATED FROM EXISTING LINES IN ORDER TO ALLOW INDEPENDENT PRESSURE TESTING AND CHLORINATION OF SYSTEM.
4. FLUSHING PROCESS PIPING IS REQUIRED PRIOR TO TESTING AND MUST BE COMPLETED AS PER CURRENT STANDARDS.
5. TESTING AND DISINFECTION PROCEDURES TO STRICTLY ADHERE TO AWWA C651-99 AND OPSS 701 PLUS SPECIFICATIONS OUTLINED IN SPECIAL PROVISIONS. COORDINATE ALL TESTING AND SAMPLING WITH OPERATOR.
6. PROVIDE PIPE SUPPORTS AS REQUIRED.
7. WALL SUPPORT BRACKETS TO BE GRINNEL OR EQUAL.
8. COORDINATE WITH OTHER TRADES, THE DIMENSIONAL REQUIREMENTS.
9. CONTRACTOR SHALL AS PART OF THEIR SCOPE OF WORK CHECK AND VERIFY, LOCATE, PROVIDE AND REINFORCE AS NECESSARY ALL AREAS FOR THE MECHANICAL & ELECTRICAL UPGRADES.

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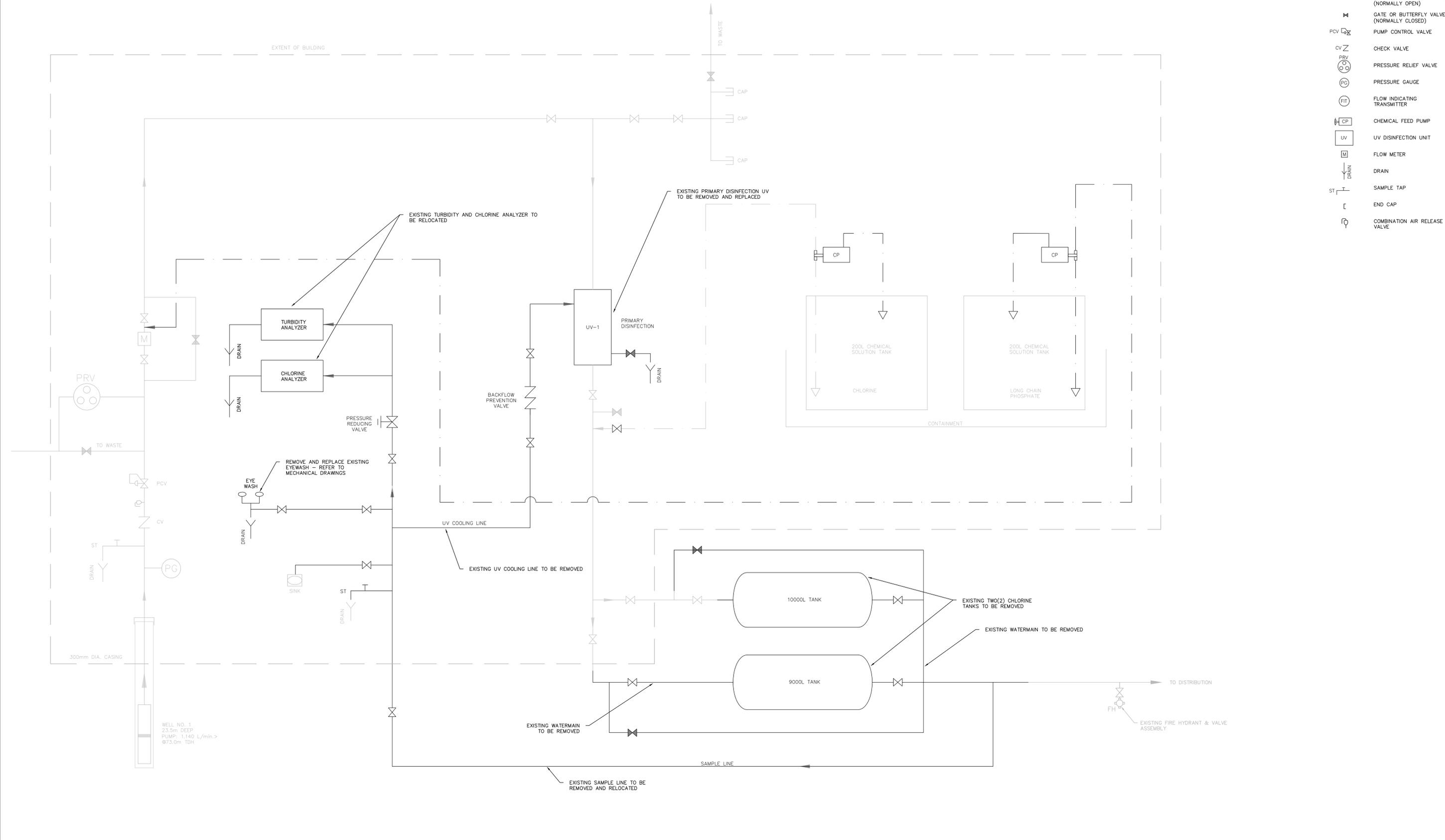
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SCALE NTS	PROJECT No. M20051	DRAWING No. W0.1

PROF. STAMP

LEGEND	
—	EXISTING
—	PROPOSED (AS SPECIFIED)
⊗	GATE OR BUTTERFLY VALVE (NORMALLY OPEN)
⊘	GATE OR BUTTERFLY VALVE (NORMALLY CLOSED)
PCV	PUMP CONTROL VALVE
CV	CHECK VALVE
PRV	PRESSURE RELIEF VALVE
PG	PRESSURE GAUGE
FIT	FLOW INDICATING TRANSMITTER
CP	CHEMICAL FEED PUMP
UV	UV DISINFECTION UNIT
M	FLOW METER
DR	DRAIN
ST	SAMPLE TAP
EC	END CAP
CA	COMBINATION AIR RELEASE VALVE



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WELL NO. 1
2.3.5m DEEP
PUMP: 1.140 L/min.
@73.0m TDH

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TOWN OF SHELburnE

PROJECT
WELL No.1 PUMPHOUSE UPGRADES

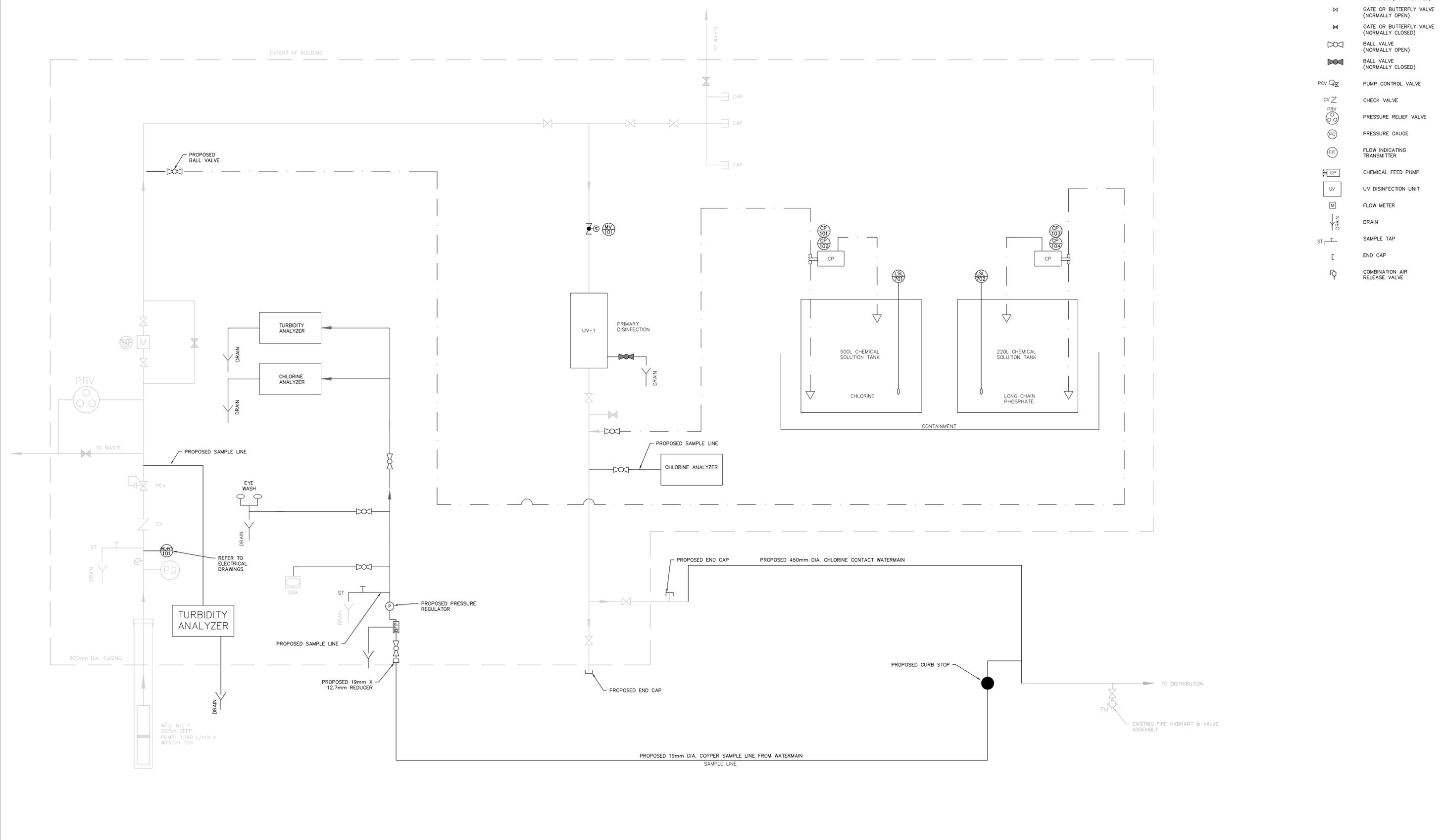
DRAWING TITLE
EXISTING PROCESS & INSTRUMENTATION DIAGRAM AND REMOVAL

		S. BURNETT & ASSOCIATES LIMITED ENGINEERING AND ENVIRONMENTAL SERVICES 210 BROADWAY, UNIT 203 ORANGEVILLE, ONTARIO L9W 5G4 TELEPHONE: 519-941-2949 FAX: 519-941-2036	
DESIGNED BY C.M.	DRAWN BY S.M.	VERIFIED BY S.B.	DRAWING No.
SCALE NTS		PROJECT No. M20051	
			W1.1

M:\M - MUNICIPAL\2025\2025-0001 - SHELburnE PWG AIR ENTRAPMENT\DRAWING\03_SBA CAD & DESIGN\PROCESSING\DWG\W1.1_17_24_2025.rvt (3)

LEGEND

- EXISTING
- PROPOSED (AS SPECIFIED)
- ⊗ GATE OR BUTTERFLY VALVE (NORMALLY OPEN)
- ⊘ GATE OR BUTTERFLY VALVE (NORMALLY CLOSED)
- ⊙ BALL VALVE (NORMALLY OPEN)
- ⊚ BALL VALVE (NORMALLY CLOSED)
- PCV [Symbol] PUMP CONTROL VALVE
- CV [Symbol] CHECK VALVE
- PRV [Symbol] PRESSURE RELIEF VALVE
- PG [Symbol] PRESSURE GAUGE
- FIT [Symbol] FLOW INDICATING TRANSMITTER
- CP [Symbol] CHEMICAL FEED PUMP
- UV [Symbol] UV DISINFECTION UNIT
- M [Symbol] FLOW METER
- DR [Symbol] DRAIN
- ST [Symbol] SAMPLE TAP
- EC [Symbol] END CAP
- CR [Symbol] COMBINATION AIR RELEASE VALVE



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2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, LEVELS AND DATUMS ON-SITE AND REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO CONSTRUCTION.

3. THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WITH ALL OTHER PLANS AND DOCUMENTS APPLICABLE TO THIS PROJECT.

4. DO NOT SCALE THE DRAWINGS.

WELL NO. 1
2.3.5m DEEP
PUMP: 1.140 L/min.
@73.0m TDH

No.	DATE	ISSUE/REVISION	No.	DATE	ISSUE/REVISION
1.	29-OCT-2024	ISSUED FOR 99% REVIEW			
2.	11-DEC-2025	ISSUED FOR TENDER			

CLIENT: TOWN OF SHELBURNE

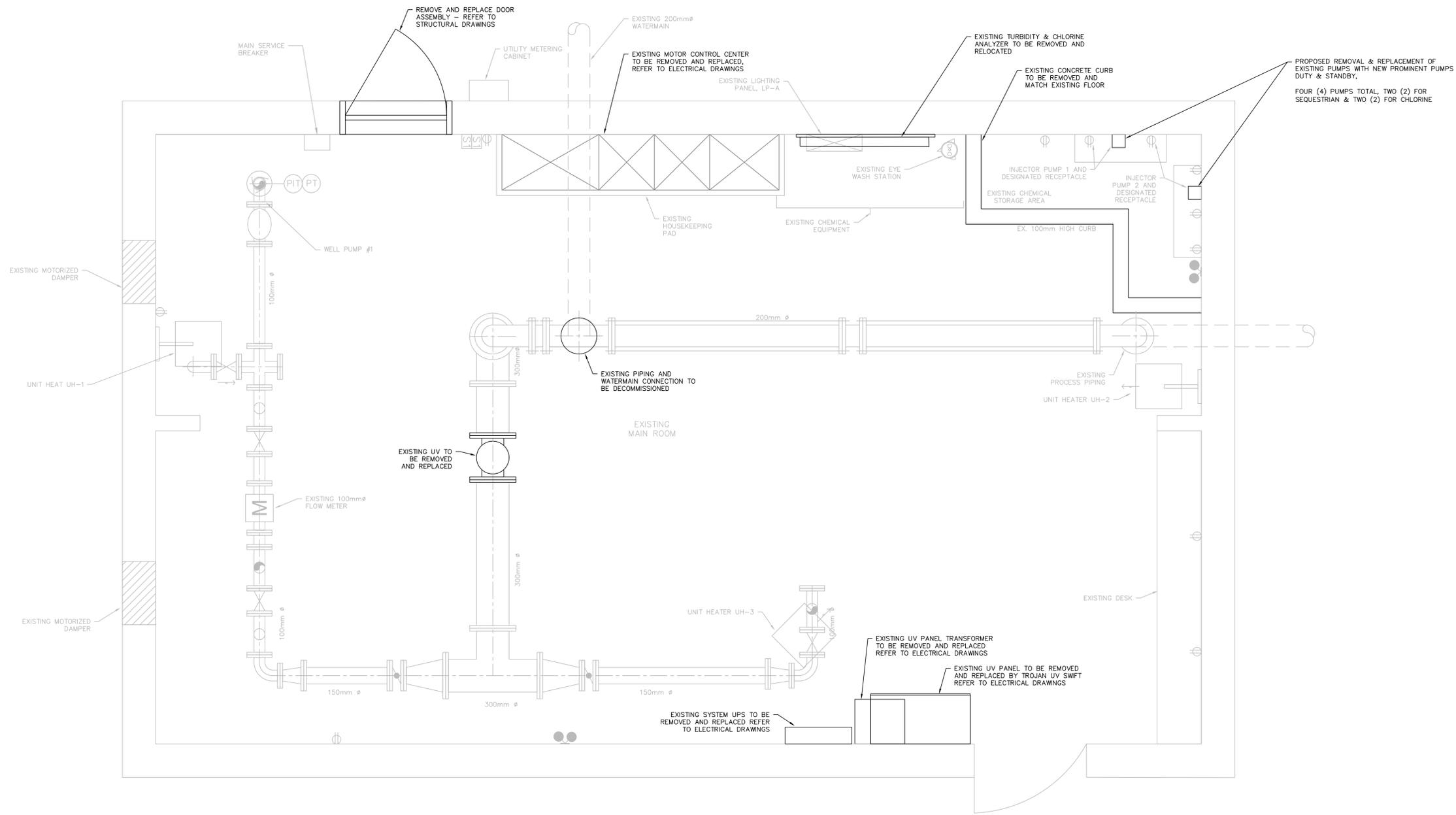
PROJECT: WELL No.1 PUMPHOUSE UPGRADES

DRAWING TITLE: PROPOSED PROCESS & INSTRUMENTATION DIAGRAM

S. BURNETT & ASSOCIATES LIMITED
ENGINEERING AND ENVIRONMENTAL SERVICES
210 BROADWAY, UNIT 203
ORANGEVILLE, ONTARIO L9W 5G4
TELEPHONE: 519-941-2949 FAX: 519-941-2036

DESIGNED BY: C.M.	DRAWN BY: S.M.	VERIFIED BY: S.B.	DRAWING No.:
SCALE: NTS		PROJECT No.:	W1.2
		M20051	

M:\M - MUNICIPAL\2025\2025-0001 - SHELBURNE PWG AIR ENTRAPMENT\DWG\W001_31A.CAD & DESIGN\PROCESSING\DWG001_31A_V12_24_2025-11-01.DWG



PROPOSED REMOVAL & REPLACEMENT OF EXISTING PUMPS WITH NEW PROMINENT PUMPS DUTY & STANDBY, FOUR (4) PUMPS TOTAL, TWO (2) FOR SEQUESTRIAN & TWO (2) FOR CHLORINE

NOTE:
EXISTING CHEMICAL TANKS TO BE REMOVED AND REPLACED

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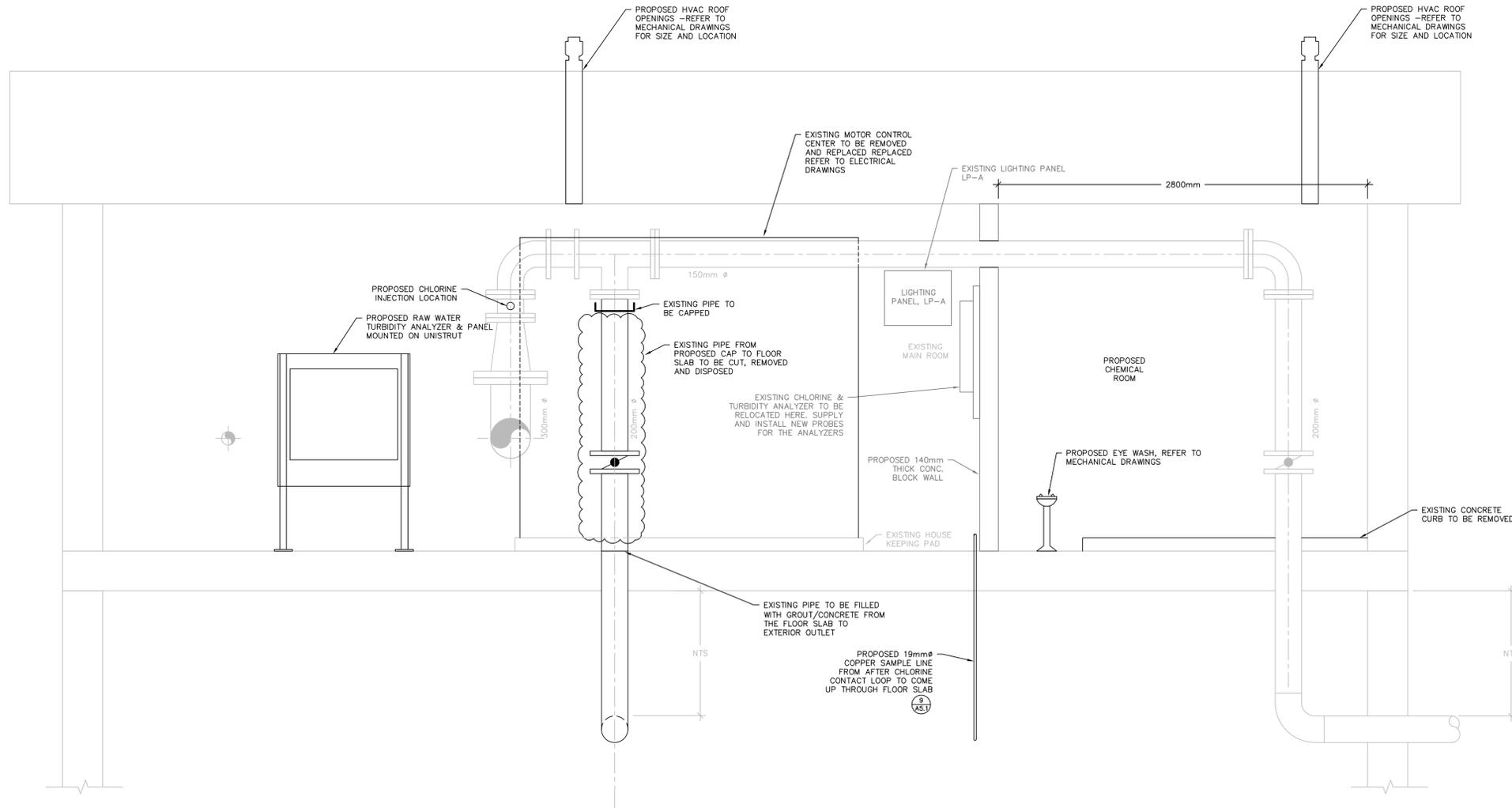
CLIENT
TOWN OF SHELBURNE

PROJECT
WELL No.1 PUMPHOUSE UPGRADES

DRAWING TITLE
EXISTING FLOOR & REMOVAL PLAN

		S. BURNETT & ASSOCIATES LIMITED ENGINEERING AND ENVIRONMENTAL SERVICES 210 BROADWAY, UNIT 203 ORANGEVILLE, ONTARIO L9W 5G4 TELEPHONE: 519-941-2949 FAX: 519-941-2036	
DESIGNED BY C.M.	DRAWN BY S.M.	VERIFIED BY S.B.	DRAWING No.
SCALE 1:20		PROJECT No. M20051	W2.1

M:\M - MUNICIPAL\FUNCTIONAL - 2025\M20051 - SHELBURNE PWS LAB ENHANCEMENT\DRAWINGS\03_SBA\CAD & DESIGN\PROCESSING\DWG\M20051_W2.1.dwg, DATE: 2025-11-11 10:00 AM



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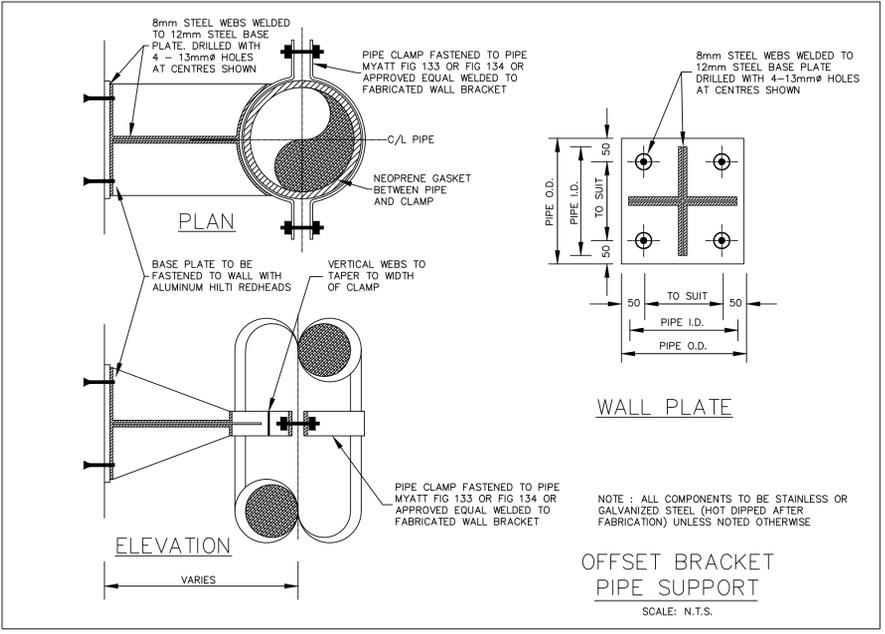
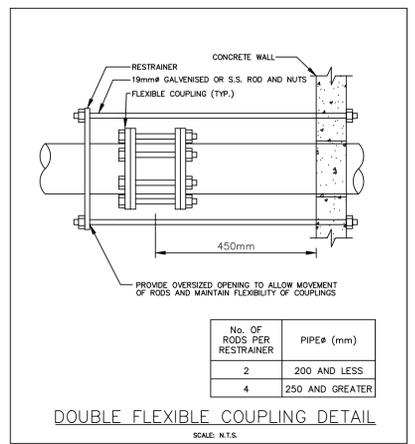
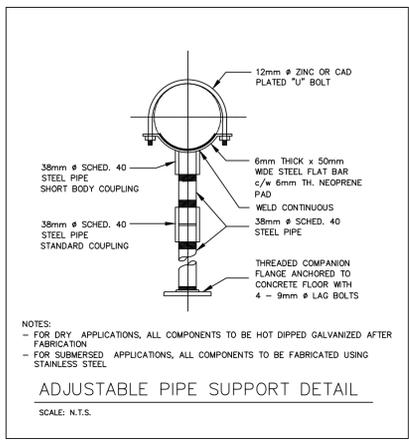
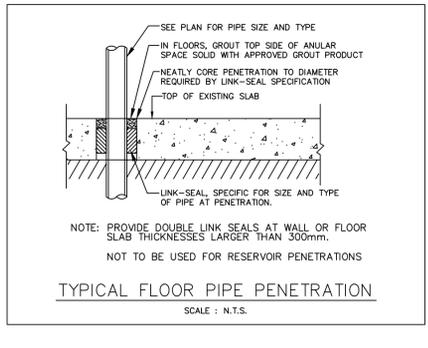
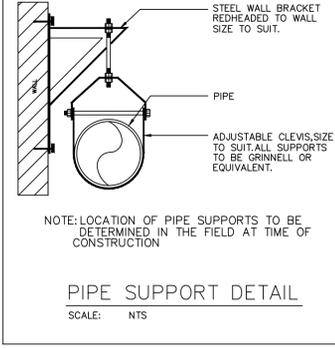
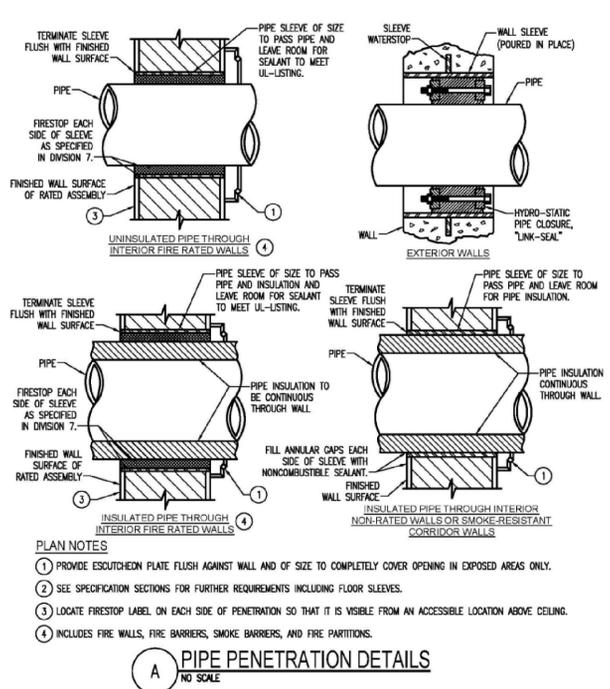
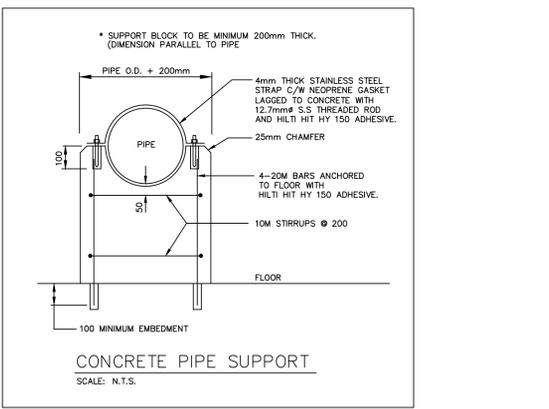
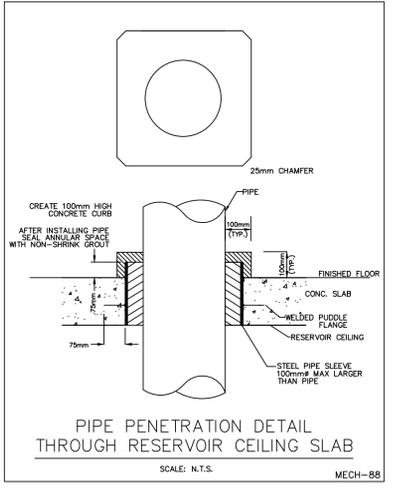
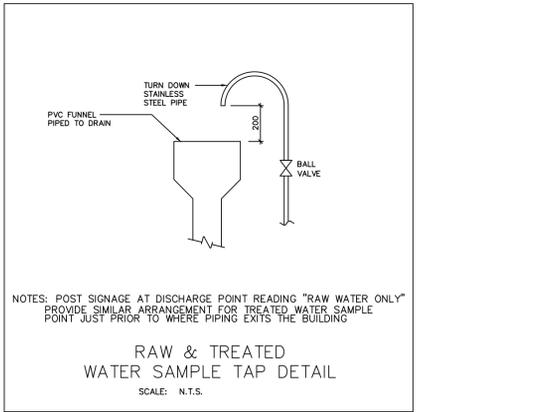
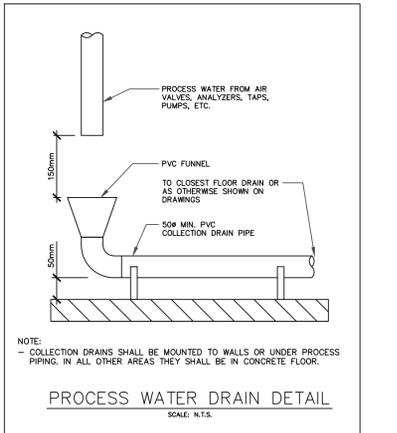
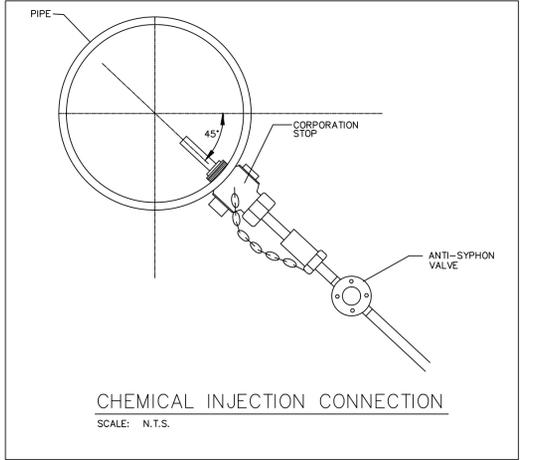
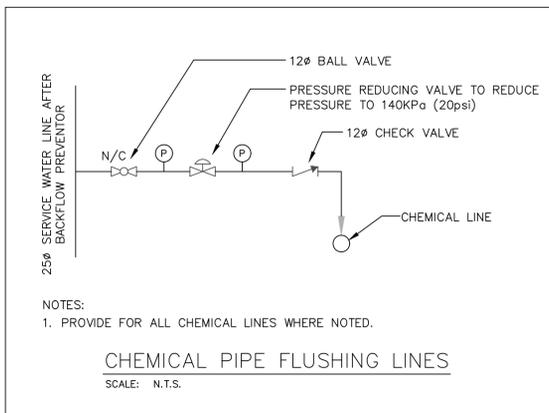
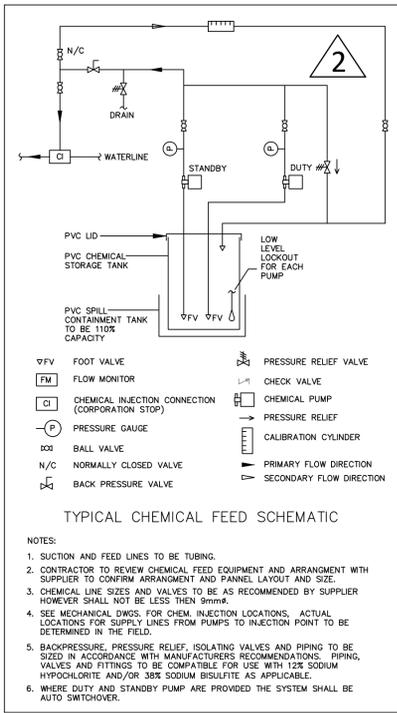
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PROF. STAMP

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CLIENT: TOWN OF SHELBOURNE
 PROJECT: WELL No.1 PUMPHOUSE UPGRADES
 DRAWING TITLE: PROPOSED BUILDING SECTION

S. BURNETT & ASSOCIATES LIMITED <small>ENGINEERING & ENVIRONMENTAL</small>		S. BURNETT & ASSOCIATES LIMITED <small>ENGINEERING AND ENVIRONMENTAL SERVICES</small> <small>210 BROADWAY, UNIT 203 ORANGEVILLE, ONTARIO L9W 5G4 TELEPHONE: 519-941-2949 FAX: 519-941-2036</small>	
DESIGNED BY C.M.	DRAWN BY D.S./S.M.	VERIFIED BY S.B.	DRAWING No. W4.1
SCALE NTS		PROJECT No. M20051	



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CLIENT: TOWN OF SHELburnE

PROJECT: WELL No.1 PUMPHOUSE UPGRADES

DRAWING TITLE: STANDARD DETAILS

SCALE: N.T.S.

PROJECT No: M20051

DESIGNED BY: C.M. DRAWN BY: S.M. VERIFIED BY: S.B.

S. BURNETT & ASSOCIATES LIMITED
 ENGINEERING AND ENVIRONMENTAL SERVICES
 210 BROADWAY, UNIT 203
 ORANGEVILLE, ONTARIO L9W 5G4
 TELEPHONE: 519-941-2949 FAX: 519-941-2036

W5.1

SHEET INDEX		
SHEET NO.	SHEET TITLE	DRAWING NO.
1	SHEET INDEX, ABBREVIATIONS & GENERAL NOTES	A0.1
2	SCHEDULES AND CONSTRUCTION ASSEMBLIES	A1.1
3	PROPOSED MAIN FLOOR PLAN	A2.1
4	BUILDING SECTION	A4.1
5	DETAILS	A5.1

ABBREVIATIONS		OH	OPPOSITE HAND
AB	ANCHOR BOLT	OPNG	OPENING
A.F.F.	ABOVE FINISHED FLOOR	PDF	POWER-DRIVEN FASTENER
ARCH	ARCHITECTURAL	PT	PRESSURE TREATED
@	AT_ON CENTRE	REIN	REINFORCING
BLDG	BUILDING	REQ'D	REQUIRED
BM	BEAM	RET	RETAINING
B.O.	BOTTOM OF	RO	ROUGH OPENING
BRG	BEARING	S.A.D.	SEE ARCHITECTURAL DRAWINGS
BTWN	BETWEEN	SCHED	SCHEDULE
CL, ☉	CENTRE LINE	SHTG	SHEATHING
CLG	CEILING	SIM	SIMILAR
COL	COLUMN	S.O.G.	SLAB ON GRADE
CONC	CONCRETE	SPEC	SPECIFICATIONS
CONN	CONNECTION	SO	SQUARE
CONT	CONTINUOUS	SS	STAINLESS STEEL
DBL	DOUBLE	SSD	SEE STRUCTURAL DRAWINGS
DET	DETAIL	STD	STANDARD
DIA	DIAMETER	T&B	TOP AND BOTTOM
DIAG	DIAGONAL	T.P.	TOP OF
DIAM(S)	DIMENSION(S)	TYP	TYPICAL
DWG	DRAWING	U.P.N.	UNLESS OTHERWISE NOTED
EA	EACH	VERT	VERTICAL
EF	EACH FACE	WP	WORKING POINT
EMBED	EMBEDMENT	WT	WEIGHT
EQUIP	EQUIPMENT	WWM	WELDED WIRE MESH
EW	EACH WAY	W/	WITH
EXP	EXPANSION		
EXT	EXTERIOR		
FD	FLOOR DRAIN		
FDN	FOUNDATION		
F.F.E.	FINISHED FLOOR ELEVATION		
F.G.	FINISHED FLOOR		
FLR	FLOOR		
F.P.	FACE OF		
FS	FAR SIDE		
GA, ga	GAUGE		
CALV	GALVANIZED		
GR	GRADE		
GYP BD	GYPNUM BOARD		
HDG	HOT-DIPPED GALVANIZED		
HORIZ	HORIZONTAL		
INFO	INFORMATION		
INSUL	INSULATION		
INT	INTERIOR		
MAX	MAXIMUM		
MECH	MECHANICAL		
MFR	MANUFACTURER		
MIN	MINIMUM		
(N)	NEW OR PROPOSED		
NA	NOT APPLICABLE		
NO, #	NUMBER		
NS	NEAR SIDE		
NTS	NOT TO SCALE		
O/	OVER		
OC	ON CENTRE		

GENERAL NOTES

- DESIGN AND CONSTRUCTION OF THIS PROJECT SHALL COMPLY WITH THE ONTARIO BUILDING CODE, LATEST EDITION AND NATIONAL BUILDING CODE LATEST EDITION.
- CONTRACTOR SHALL CHECK ALL DIMENSIONS ON WORKING DRAWINGS AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK. ANY CHANGES, ALTERATIONS OR REVISIONS MUST BE REPORTED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK. DRAWINGS SHALL NOT BE SCALED.
- THESE DESIGN DOCUMENTS ARE PREPARED SOLELY FOR THE USE BY THE PARTY WITH WHOM THE DESIGN PROFESSIONAL HAS ENTERED INTO A CONTRACT AND THERE ARE NO REPRESENTATIONS OF ANY KIND MADE BY THE DESIGN PROFESSIONAL TO ANY PARTY WITH WHOM THE DESIGN PROFESSIONAL HAS NOT ENTERED INTO A CONTRACT.
- UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS, NO PROVISION HAS BEEN MADE IN THE DESIGN FOR CONDITIONS OCCURRING DURING THE CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BRACING AND SHORING REQUIRED FOR THE STRESSES AND INSTABILITY OCCURRING FROM ALL SUCH MEASURES. IT SHALL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL NECESSARY BRACING, SHORING, SHEET, PILING OR STRUCTURES AFFECTED BY THIS WORK.
- DESIGN LIVE LOADS SHALL NOT BE EXCEEDED DURING CONSTRUCTION.
- ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS - O.REG.213/91.
- THESE DRAWINGS SHALL BE COORDINATED AND READ IN CONJUNCTION WITH PROCESS, MECHANICAL AND ELECTRICAL DRAWINGS.
- WHERE THERE IS A CONFLICT IN THE SPECS AND/OR DRAWINGS THE MORE STRINGENT SHALL APPLY UNLESS APPROVED OTHERWISE IN WRITING BY THE ENGINEER.
- ALL SPECIFICATIONS LISTED ARE TO LATEST EDITIONS IN FORCE AT TIME OF TENDERING.
- 0.5% TO 2% SLOPE IN INTERIOR SLAB. CONTRACTOR TO ENSURE THAT THERE IS NO STANDING WATER ON ANY INTERIOR FLOOR SURFACE.

STEEL

- STEEL DESIGN AND CONSTRUCTION SHALL CONFIRM TO CSA S16.
- ALL STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:
 - WIDE FLANGE SHAPE (W): ASTM A992 OR ASTM A572 GRADE 50
 - HSS SQUARE, RECTANGULAR SHAPE: CAN/CSA G40.21 350W CLASS C
 - HSS ROUND: ASTM 500 GRADE C
 - C, L, 2L SHAPE: CAN/CSA G40.21 350W
 - PLATE: CAN/CSA G40.21 300W
- STEEL BOLTS TO CONFORM TO THE FOLLOWING:
 - HIGH STRENGTH BOLTS: ASTM F3125 GRADE A325/A325M
 - COMMON BOLTS: ASTM A307
 - ANCHOR RODS: ASTM F1554, GRADE 36
- POST-INSTALLED ANCHOR RODS TO BE MINIMUM $\frac{1}{4}$ " DIA. SIMPSON WEDGE-ALL ANCHORS OR EQUIVALENT, UNLESS OTHERWISE NOTED.
- ALL STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH CSA G164-M OR SHOP PRIMED AND PAINTED FOR PROTECTION FOR CORROSIVE ENVIRONMENT OR WEATHER, UNLESS OTHERWISE NOTED.

CONCRETE

- EPOXY FOR DOWEL REINFORCING AND ANCHOR RODS:
 - HILTI HY-200 OR APPROVED EQUIVALENT
- CONCRETE MATERIALS AND WORKMANSHIP SHALL CONFORM TO CSA A23.1 AND CSA A23.2.
- CONCRETE DESIGN AND CONSTRUCTION SHALL CONFIRM TO CSA A23.3.
- FORMWORK SHALL CONFORM TO THE CSA A23.1 AND FALSE WORK SHALL CONFORM TO CSA S269.1.
- SLOPE ALL FLOORS AS SHOWN ON ARCHITECTURAL OR MECHANICAL DRAWINGS.
- NON-SHRINK GROUT SHALL BE AN APPROVED PREMIXED PROPRIETARY PRODUCT.
- DRY-PACKED GROUT SHALL BE 1 PART PORTLAND CEMENT TO 1.5 PARTS OF SAND TO 2 PARTS OF 9 MM (3/8") PEA GRAVEL WITH ONLY SUFFICIENT WATER TO DAMPEN THE MIXTURE. COMPRESSIVE STRENGTH SHALL BE 50 MPa AT 28 DAYS.
- EXISTING CONCRETE SHOULD BE MOISTENED THOROUGHLY BEFORE PLACEMENT OF FRESH CONCRETE, BUT POOLS OF WATER SHOULD NOT BE LEFT STANDING ON THE WETTED SURFACE AT THE TIME OF PLACEMENT.

CONCRETE MIX

- HOUSEKEEPING PAD:
 - CSA EXPOSURE CLASS: F-1.
 - 28 DAY COMPRESSIVE STRENGTH OF 35 MPa.
- ALL CONCRETE FORMS TO BE WET THOROUGHLY BEFORE POURING CONCRETE.
- DO NOT ADD WATER TO CONCRETE ON SITE UNLESS WRITTEN APPROVAL GIVEN BY THE ENGINEER, IF HIGHER SLUMP CONCRETE IS DESIRED. CONCRETE SUPPLIER SHALL DESIGN AND SUPPLY ACCORDINGLY. MIX MUST BE SUBMITTED AND APPROVED BY DESIGN ENGINEER PRIOR TO INSTALLATION.
- WATER CURING OF CONCRETE SLAB ON GRADE IS REQUIRED, MIN. 7 DAYS.
- REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR REQUIRED FINISH TO EXPOSED CONCRETE. FLOOR FINISHES SHALL CONFORM TO CSA A23.1 CLASS A FINISH UNLESS NOTED OTHERWISE.
- ALL HONEYCOMBING SHALL BE CUT OUT AND FILLED TO THE SATISFACTION OF THE ENGINEER BY SIKA OR EQUIVALENT SHOP DRAWING.
- APPLY A HARDENER AS SPECIFIED TO ALL CONCRETE FLOOR SLABS THAT ARE TO REMAIN EXPOSED AS NOTED. APPLY CURING/SEALING COMPOUND, CONFORMING TO ASTM C309, AS SPECIFIED TO ALL FLOOR SLABS UNLESS A TOPPING IS TO BE APPLIED.

REINFORCING STEEL

- REINFORCEMENT STEEL DETAILING TO BE IN ACCORDING WITH RSJO MANUAL OF STANDARD PRACTICE AND WITH THE LATEST EDITION OF CSA A23.1.
- REINFORCEMENT SHALL BE DEFORMED BARS AND CONFORM TO CAN/CSA G30.18, GRADE 400 MPa.
- REINFORCING STEEL SHALL BE DETAILED, BENT, PLACED AND SUPPORTED TO CONFORM TO ACI STANDARDS 315 AND THE MANUAL OF STANDARD PRACTICE PUBLISHED BY THE REINFORCING STEEL INSTITUTE OF ONTARIO.
- WELDING OF REINFORCING STEEL SHALL NOT BE PERMITTED.
- ALL REINFORCING STEEL FABRICATION AND PLACEMENT DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW BEFORE FABRICATION.
- CONCRETE COVER FOR REINFORCEMENT SHALL CONFORM TO CSA A23.1 AS FOLLOWS, UNLESS OTHERWISE NOTED.
 - CAST AGAINST EARTH: 75 MM (3")
 - BEAMS, GRIDERS, COLUMNS, SLABS AND WALLS: 40 MM (1 1/2")
- LAP TEMPERATURE REINFORCEMENT (CLASS "B" LAP) BUT NOT LESS THAN 300 MM. STAGGER LAPS OR LAP AT SUPPORTS.
- PROVIDE CHAIRS, SPACER BARS, SUPPORT BARS AND OTHER ACCESSORIES TO SUPPORT REINFORCING IN ACCORDANCE WITH THE LATEST EDITIONS OF CSA A23.1 AND A23.3. CHAIRS TO BE PLASTIC, PLASTIC TIPPED OR CONCRETE. ALL TIE WIRE, CHAIRS AND BAR SUPPORTS USED FOR COATED REINFORCING SHALL BE NON-METALLIC OR PROTECTED WITH AN ACCEPTABLE COATING.
- CHAIRS SHALL BE SPACED AT 1200MM O.C. MAXIMUM. PROVIDE CONTINUOUS CHAIRS WHERE POSSIBLE.

REINFORCED MASONRY

- MATERIALS USED IN CONCRETE MASONRY SHALL CONFORM TO CSA A165 SERIES, LATEST EDITION
- CONCRETE BLOCKS SHALL BE NORMAL WEIGHT UNITS W/ MINIMUM STRENGTH $f'_c = 20MPa$.
- TYPE S MORTAR SHALL BE USED FOR LOAD BEARING AND PARTITION WALLS. TYPE N MORTAR SHALL BE USED FOR EXTERIOR CLADDING (SPLIT BLOCK).
- MASONRY MORTAR TYPE S W/ MINIMUM STRENGTH $f'_m = 10 MPa$ & MAXIMUM STRENGTH $f'_m = 12 MPa$ AT 28 DAYS
- MASONRY MORTAR TYPE N W/ MINIMUM STRENGTH $f'_m = 3.5 MPa$ & MAXIMUM STRENGTH $f'_m = 7.0 MPa$ AT 28 DAYS
- MORTAR MIX SHALL BE ACCORDING TO CSA A179, LATEST EDITION. MORTAR MIX SHALL BE TESTED FOR STRENGTH & APPROVED BY THE ENGINEER PRIOR TO USE IN CONSTRUCTION.
- MASONRY GROUT SHALL HAVE MINIMUM STRENGTH OF $f'_m = 12.5MPa$.
- CONNECTION USED IN CONCRETE MASONRY SHALL CONFORM TO CSA A370, LATEST EDITION.
- CONSTRUCTION OF MASONRY SHALL BE IN ACCORDANCE W/ CSA A371, LATEST EDITION
- ALL MASONRY WALLS SHALL BE PROPERLY SHORED DURING CONSTRUCTION UNTIL STRUCTURAL STEEL, HORIZONTAL FLOOR OR ROOF FRAMING, OR GROUT HAS BEEN INSTALLED AND SET.
- ALL MASONRY WALLS SHALL BE CONSTRUCTED W/ FULL MORTAR JOINTS.
- PROVIDE CLEANOUTS FOR ALL CELLS TO BE REINFORCED AND FILLED WITH GROUT. KEEP CLEAR AND CLEAN OF MORTAR.
- INSTALL HORIZONTAL REINFORCEMENT (LADDERS) PER MANUFACTURER'S RECOMMENDATIONS
- HORIZONTAL REINFORCEMENT FOR EXTERIOR WALLS SHALL BE HOT-DIPPED GALVANIZED, AND SHALL BE DUR-O-WALL LADDER DESIGN, OR AN APPROVED EQUAL.
- NO MASONRY WORK SHALL BE PERMITTED W/ TEMPERATURES BELOW 5°Celsius UNLESS PROVISIONS ARE MADE FOR HEATING THE MATERIAL AND PROTECTING THE WORK
- DO NOT CUT HOLES THROUGH MASONRY BEARING WALLS, OTHER THAN THOSE HOLES SHOWN ON STRUCTURAL DRAWINGS, UNLESS APPROVED BY THE ENGINEER.
- TESTING:
 - MORTAR & GROUT SHALL BE TESTED IN ACCORDANCE W/ CSA A179
 - CONCRETE MASONRY UNITS SHALL BE TESTED IN ACCORDANCE W/ CSA STANDARD A165, LATEST EDITION.

ROUGH CARPENTRY (WOOD)

- WOOD DESIGN AND CONSTRUCTION SHALL CONFIRM TO CSA O86.
- MOISTURE CONTENT SHALL BE "DRY" FOR VERTICAL FRAMING (19% MAXIMUM). FINISHES SHALL NOT BE INSTALLED OVER DIMENSIONAL LUMBER FRAMING UNTIL MOISTURE CONTENT IS BELOW 12% MAXIMUM.
- SILLS OR PLATES SHALL BE BOLTED TO CONCRETE WITH MINIMUM 15mm (5/8") DIAMETER BOLTS WITH 75mmX75mmX6mm (3"x3"x1/2") WASHERS, EMBEDDED MINIMUM 180mm (7") AT 1200mm MAXIMUM ON CENTRE, UNLESS OTHERWISE NOTED.
- FRAMING MEMBERS EXPOSED TO WEATHER OR IN CONTACT WITH CONCRETE, BUT NO IN CONTACT WITH THE GROUND, SHALL BE PRESSURE TREATED IN ACCORDANCE WITH CSA O80.1, USE CATEGORY UC2 AND UC3. FIELD CUTS AND HOLES SHALL BE FIELD TREATED IN ACCORDANCE WITH CSA O80.1.
- I-JOISTS AND LVL BEAMS SHALL BE MANUFACTURED BY WEYERHAEUSER OR EQUIVALENT. SUPPLIER IS RESPONSIBLE FOR THE DESIGN OF ALL CONNECTIONS.
- METAL HANGERS AND CONNECTIONS SHALL BE SIMPSON STRONG-TIE OR EQUIVALENT.
- DIMENSIONAL LUMBER AND TIMBER SHALL CONFORM TO NLGA STANDARD GRADING RULES FOR CANADIAN LUMBER AND SHALL BE SPRUCE-PINE-FIR (SPF) NO.2, UNLESS OTHERWISE NOTED.
- FASTENERS FOR INTERIOR APPLICATIONS PENETRATING PRESSURE-TREATED LUMBER SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH MINIMUM G185 IN ACCORDANCE WITH ASTM A653 OR STAINLESS STEEL (TYPE 304 OR 316). FASTENERS EXPOSED TO WEATHER INCLUDING EXTERIOR APPLICATIONS OF PRESSURE-TREATED LUMBER, SHALL USE STAINLESS STEEL FASTENERS.
- WOOD MEMBERS THAT ARE NOT PRESSURE TREATED AND ARE IN CONTACT WITH CONCRETE THAT IS LESS THAN 150mm (6") ABOVE GROUND OR SLAB, PROVIDE 6 mil POLYETHYLENE FILM OR NO. 50 (45lb) ROLL ROOFING DAMPPROOFING BETWEEN WOOD AND CONCRETE.

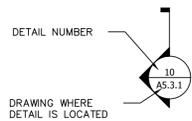
WATERPROOFING

- ALL INTERIOR FLOOR SLAB AND HOUSEKEEPING PADS SHALL BE WATERPROOFED WITH EPOXY.

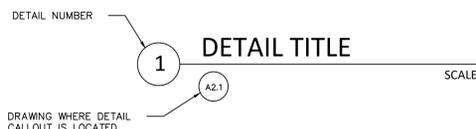
KEYED NOTES

- 107 ROOM NUMBER. SEE ROOM FINISH SCHEDULE
- 102 WINDOW NUMBER. SEE WINDOW SCHEDULE
- 115 DOOR NUMBER. SEE DOOR SCHEDULE
- P1 CONSTRUCTION ASSEMBLY TYPE. SEE CONSTRUCTION ASSEMBLY TABLES
- L# LINTEL BEAM TYPE. SEE DETAIL LINTEL BEAM SCHEDULE

A2.0 SERIES
A3.0 SERIES
A4.0 SERIES



A5.0 SERIES



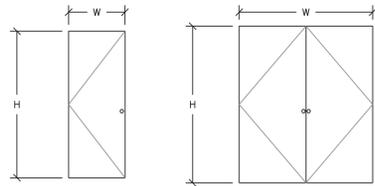
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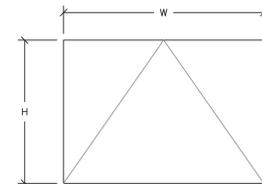
No.	DATE	ISSUE/REVISION	No.	DATE	ISSUE/REVISION
1.	28-OCT-2024	ISSUED FOR 99% REVIEW			
2.	11-DEC-2025	ISSUED FOR TENDER			

CLIENT		
TOWN OF SHELBURNE		
PROJECT		
WELL No.1 PUMPHOUSE UPGRADES		
DRAWING TITLE		
SHEET INDEX, ABBREVIATIONS & GENERAL NOTES		

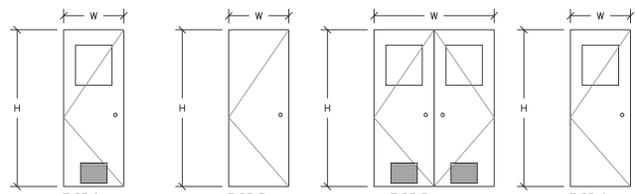
		S. BURNETT & ASSOCIATES LIMITED ENGINEERING AND ENVIRONMENTAL SERVICES 210 BROADWAY, UNIT 203 ORANGEVILLE, ONTARIO L9W 5G4 TELEPHONE: 519-941-2949 FAX: 519-941-2036	
DESIGNED BY	V.S.	DRAWN BY	S.M.
VERIFIED BY	S.B.	DRAWING NO.	A0.1
SCALE	AS NOTED	PROJECT NO.	M20051



TYPE A ANTI-THEFT HINGES & LOCKS
TYPE B ANTI-THEFT HINGES & LOCKS

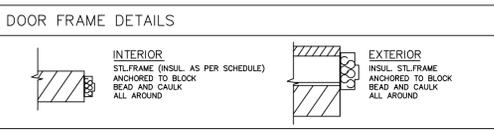
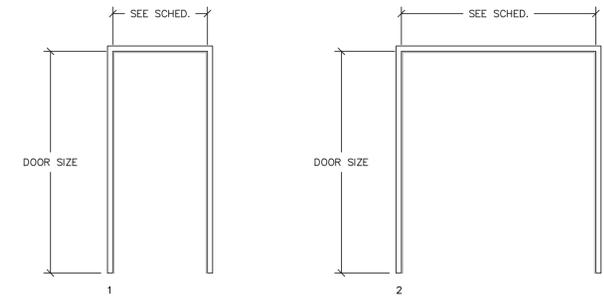


TYPE C



TYPE D WIRED WINDOW BOTTOM DOOR VENT
TYPE E WIRED WINDOW
TYPE F WIRED WINDOW BOTTOM DOOR VENT
TYPE G WIRED WINDOW

1 DOOR TYPES



- FRAME NOTES:**
1. ALL EXTERIOR FRAMES TO BE THERMALLY-BROKEN UNITS.
 2. CONTRACTOR TO FILL FRAME VOIDS w/INSULATION.
 3. MIN. 6 3/4" JAMB DEPTH TO BE USED IN ALL EXTERIOR DOORS.
 4. DO NOT USE KNOCK-DOWN HOLLOW METAL FRAMES.
 5. PROVIDE A CONTINUOUS BEAD OF SEALANT AT ALL EXTERIOR INTERSECTIONS WITH ADJACENT SURFACES.

2 DOOR FRAME TYPES

DOOR SCHEDULE											
DOOR NUMBER	QTY	DOOR TYPE	LOCATION	SIZE			FRAME		FIRE RATING	FINISH	HARDWARE
				WIDTH, W (mm)	HEIGHT, H (mm)	MATERIAL	TYPE	MATERIAL			
101	1	G	CHEMICAL ROOM	914	2134	HM	1	HM-BUTT		PAINTED	DS, CL, OHS, PH, LOCKSET
102	1	A	MAIN ROOM TO EXTERIOR	914	2134	HMI	1	HMI-BUTT		PAINTED	W, DS, TH, CL, OHS, TP, PH, LOCKSET, PANIC, LG, ANTI-THEFT HINGES AND LOCK

- AST - SECURITY ASTRAGAL
CC - CRASH CHAIN
CH - COAT HOOK
CL - DOOR CLOSER W/ HOLD OPEN ARM (HEAVY DUTY COMMERCIAL)
CSB - CENTRE SLIDE TOP & BOTTOM
DB - DEADBOLT
DH - BUMMY HANDLE
DS - DOOR SWEEP
EY - DOOR VIEWER
FS - FLOOR STOP
HM - HOLLOW METAL
HMI - HOLLOW METAL INSULATED
HS - HINGE STOP
KD - KNOCK DOWN FRAME
KP - KICK PLATE
LG - LATCH GUARD
LH - LEVER HANDLE (BARRIER-FREE)
LH - LEVER HANDLE (BARRIER-FREE)
OHS - OVERHEAD STOP
PANIC - TOUCH PAD PANIC BAR
PDO - POWER DOOR OPERATOR
PH - PULL HANDLE
PLAM - SCW/LAMINATE FINISH
PP - PUSH PLATE
RCM - REMOVABLE CENTRE MULLION
SCM - SOLID CORE MASONITE
SCW - SOLID CORE WOOD
TH - THRESHOLD
TP - THUMB PIECE
W - WEATHER STRIPPING
WS - WALL STOP

- NOTES:**
1. DIMENSIONS TO BE VERIFIED IN FIELD BY CONTRACTOR.
 2. DOOR DIMENSIONS IN TABLE DO NOT INCLUDE FRAMING. CONTRACTOR TO VERIFY ROUGH OPENINGS PRIOR TO INSTALLATION.
 3. MIN. 6 3/4" JAMB DEPTH TO BE USED IN ALL EXTERIOR DOORS.
 4. ALL DOORS TO BE GALVANNEALED.
 5. ALL RATED GLAZED DOORS TO HAVE MINIMUM 6mm (1/4") APPROVED GEORGIAN WIRED GLASS IN ALL DOOR LITES AS SHOWN. ALL LITES TO BE MAXIMUM 0.6m² IN AREA PER DOOR.

ROOM FINSH SCHEDULE										
ROOM NUMBER	ROOM NAME	FLOOR		WALLS				CEILING		REMARKS
		MATERIAL	FINISH	NORTH	EAST	SOUTH	WEST	MATERIAL	FINISH	
101	PROPOSED CHEMICAL ROOM	CONCRETE	CLEAR, SATIN W/ STEEL TROWEL & EPOXY FINISH	EXISTING EXPOSED CONCRETE BLOCK, PAINTED	EXISTING EXPOSED CONCRETE BLOCK, PAINTED	EXPOSED CONCRETE BLOCK, PAINTED	EXPOSED CONCRETE BLOCK, PAINTED	EXISTING METAL CEILING	PRE-FINISHED, PAINTED	

WALL CONSTRUCTION ASSEMBLIES			
MARK	ASSEMBLY	CONSTRUCTION	REFERENCES & REMARKS
P1		- PAINT FINISH - 140mm CONCRETE BLOCK - PAINT FINISH	

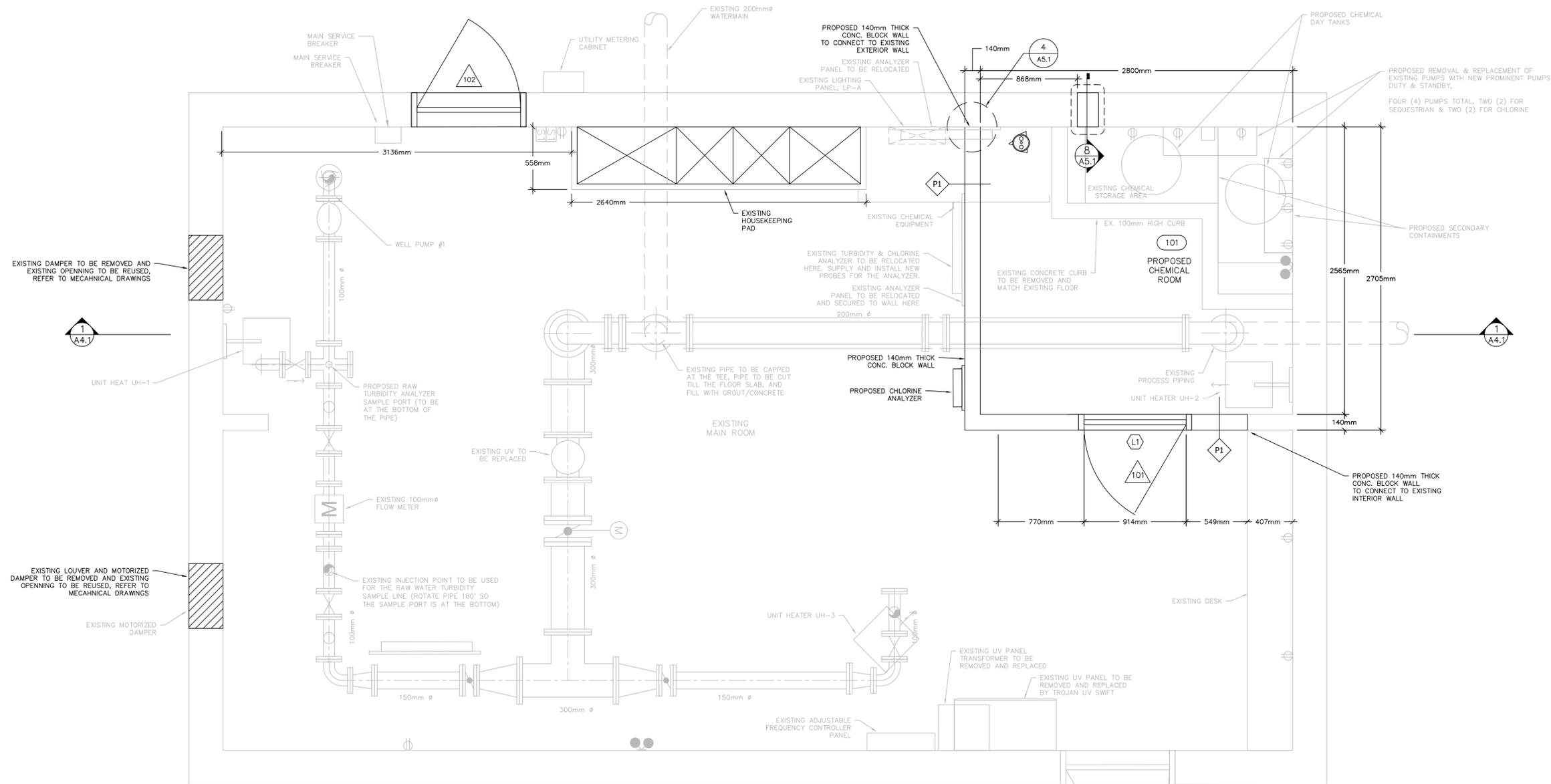
M:\M - MUNICIPAL\PROJECTS\2025\2025-0001 - SHELburne PWG AIR ENTRAPMENT\DRAWINGS\3. SBA CAD & DESIGN\2025\2025-0001 - SHELburne PWG AIR ENTRAPMENT\DRAWINGS\3. SBA CAD & DESIGN\2025-10-22.DWG

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CLIENT	TOWN OF SHELburne
PROJECT	WELL No.1 PUMPHOUSE UPGRADES
DRAWING TITLE	SCHEDULES AND CONSTRUCTION ASSEMBLIES

S. BURNETT & ASSOCIATES LIMITED ENGINEERING AND ENVIRONMENTAL SERVICES 210 BROADWAY, UNIT 203 ORANGEVILLE, ONTARIO L9W 5G4 TELEPHONE: 519-941-2949 FAX: 519-941-2036							
DESIGNED BY	V.S.	DRAWN BY	S.M.	VERIFIED BY	S.B.	DRAWING No.	A1.1
SCALE	AS NOTED	PROJECT No.	M20051				



PROPOSED MAIN FLOOR PLAN

LINTEL BEAM SCHEDULE		
LINTEL SYMBOL	CONCRETE BLOCK	FACE BLOCK
L1	2 - L64X64X6.4	-

- NOTES:
- MIN. 150mm END BEARING SUPPORT.
 - FULLY GROUT MASONRY CELLS AT THE END OF BEARING.

15/10/2024 (MUNICIPAL) 2024/10/15 - SHELBURNE PUMP AIR ENTRANCE/MECHANICAL DRAWINGS - SBA, CAC & S.B.

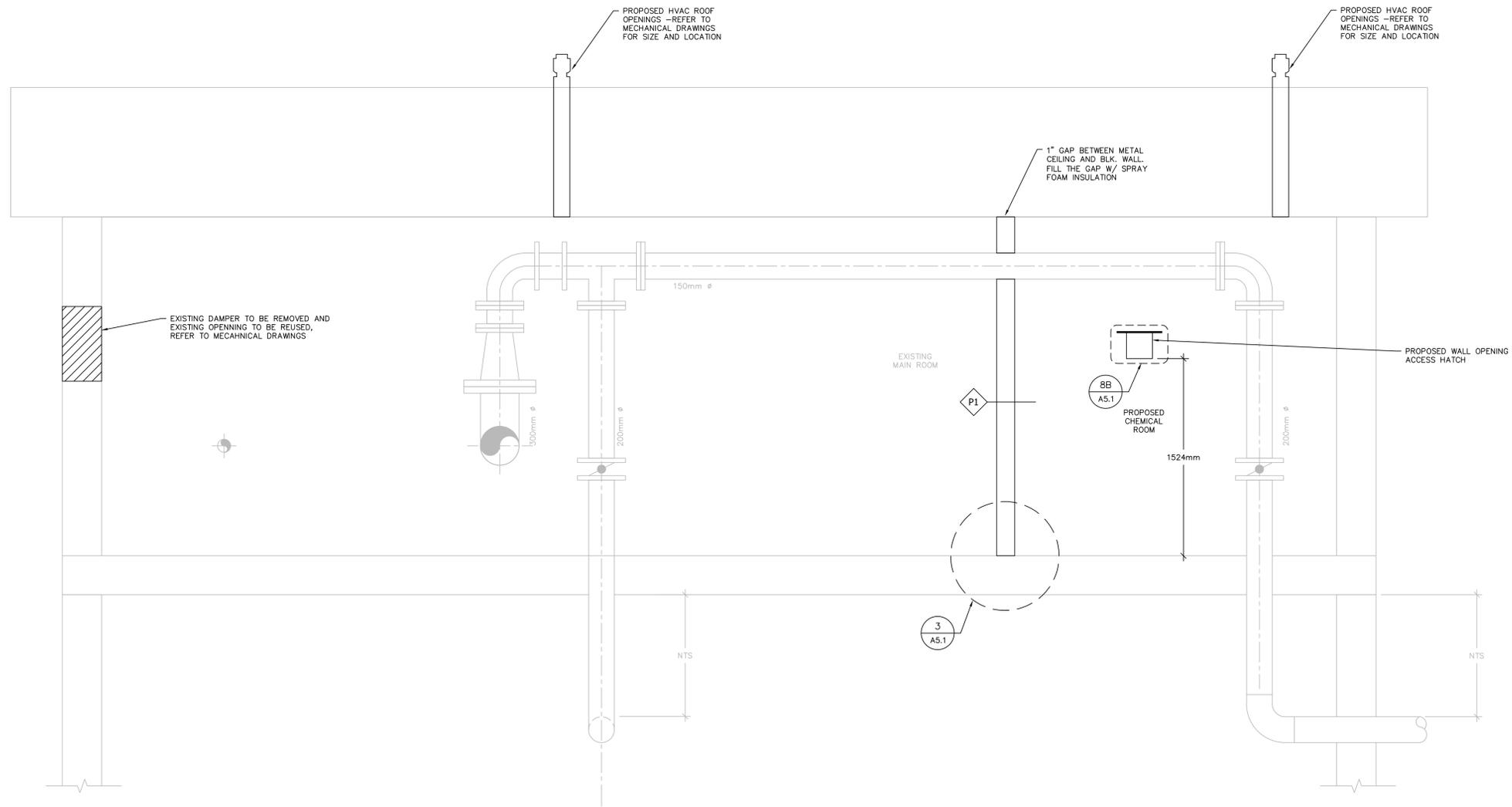
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PROF. STAMP

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CLIENT	TOWN OF SHELBURNE
PROJECT	WELL No. 1 PUMPHOUSE UPGRADES
DRAWING TITLE	PROPOSED MAIN FLOOR PLAN

		S. BURNETT & ASSOCIATES LIMITED ENGINEERING AND ENVIRONMENTAL SERVICES 210 BROADWAY, UNIT 203 ORANGEVILLE, ONTARIO L9W 5G4 TELEPHONE: 519-941-2949 FAX: 519-941-2036	
DESIGNED BY	V.S.	DRAWN BY	S.M.
VERIFIED BY	S.B.	PROJECT No.	M20051
SCALE			1:20
DRAWING No.			A2.1



1 BUILDING SECTION
A4.1 1:20

15/11/2024 10:00 AM (MUNICIPAL) - 2024/10/28 - SHELBURNE PUMP ARE ENTRAINMENT DRAWING(S) 1, SBA, CAD & 2024/12/11

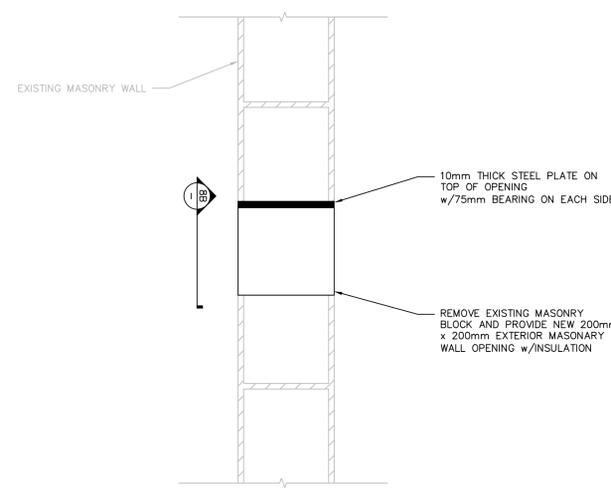
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PROF. STAMP

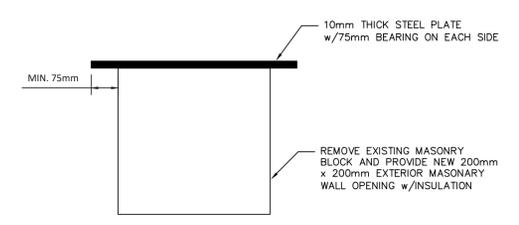
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CLIENT	TOWN OF SHELBURNE
PROJECT	WELL No.1 PUMPHOUSE UPGRADES
DRAWING TITLE	BUILDING SECTION

 S. BURNETT & ASSOCIATES LIMITED ENGINEERING & ENVIRONMENTAL SERVICES 210 BROADWAY, UNIT 203 ORANGEVILLE, ONTARIO L9W 5G4 TELEPHONE: 519-941-2949 FAX: 519-941-2036		S. BURNETT & ASSOCIATES LIMITED ENGINEERING AND ENVIRONMENTAL SERVICES 210 BROADWAY, UNIT 203 ORANGEVILLE, ONTARIO L9W 5G4 TELEPHONE: 519-941-2949 FAX: 519-941-2036					
DESIGNED BY	V.S.	DRAWN BY	S.M.	VERIFIED BY	S.B.	DRAWING No.	A4.1
SCALE	1:20	PROJECT No.	M20051				

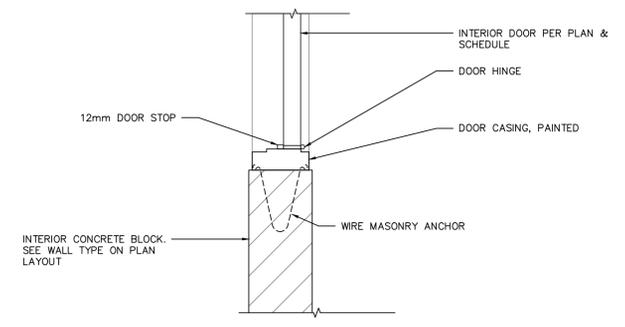


DETAIL 8A

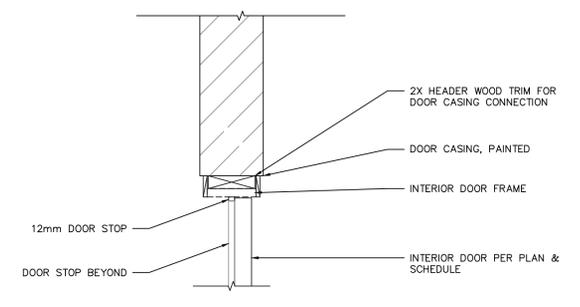


DETAIL 8B

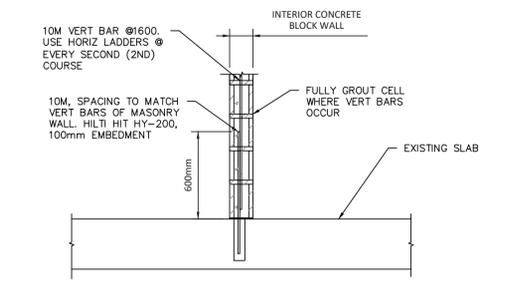
8 EXTERIOR MASONRY WALL OPENING DETAIL N.T.S.



6 DOOR JAMB PLAN DETAIL AT INTERIOR N.T.S.

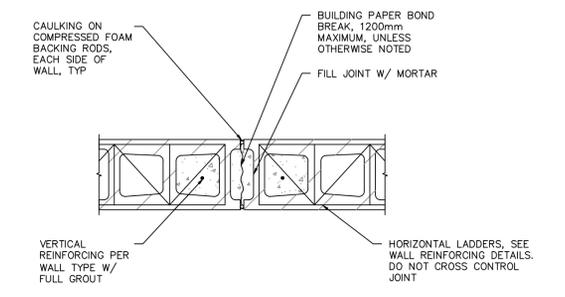


5 DOOR HEAD SECTION DETAIL AT INTERIOR N.T.S.



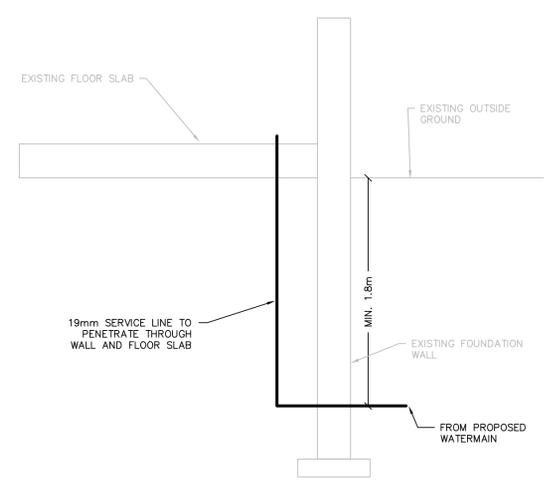
3 BOTT CONN. - 140mm CON. BLOCK INTERIOR WALL N.T.S.

- NOTES:
1. PROVIDE SPECIFIED BARS IN GROUT-FILLED BLOCK CORES AT ALL CORNERS, OPENINGS, AND AT BEARING POINTS OF ROOFS, UNLESS OTHERWISE NOTED.
 2. GROUT SHALL HAVE MINIMUM COMPRESSIVE STRENGTH $f_{gr} = 12.5 \text{ MPa}$
 3. HORIZONTAL REINFORCING: REINFORCE WITH GALVANIZED HORIZ LADDERS @ EVERY SECOND (2ND) COURSE. INSTALL REINFORCING IN FIRST & SECOND JOINT.
 4. LAP HORIZ LADDERS W/ MINIMUM 250MM LENGTH.

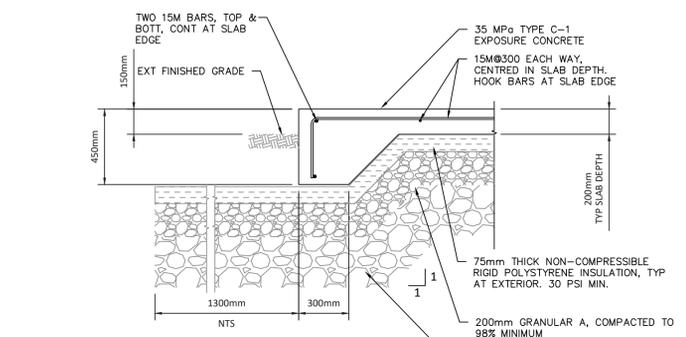


- NOTES:
1. PROVIDE INTERIOR CONTROL JOINTS @ 8m MAXIMUM
 2. PROVIDE EXTERIOR CONTROL JOINTS @ 8m MAXIMUM

2 TYP CONCRETE BLOCK CONTROL JOINT N.T.S.

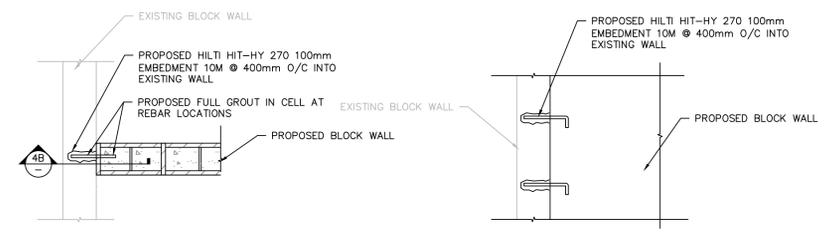


9 WATER SERVICE WALL/FLOOR PENETRATION N.T.S.



- NOTES:
1. SEE CIVIL/ELECTRICAL DRAWINGS FOR DIMENSIONS AND DETAILS OF EXTERIOR CONCRETE PAD, TRANSFORMER, GENERATOR, OR PROPANE TANK.
 2. ALL PROPOSED CONCRETE SLABS AT EXTERIOR ENTRANCES TO INCLUDE 10M EPOXY-COATED REBAR @ 305mm o/c EMBEDDED INTO EXTERIOR FOUNDATION WITH STANDARD HOOK (REFER TO STRUCTURAL DRAWINGS).
 3. INSULATION OUTSIDE OF SLAB EDGE MAY BE PLACED HORIZONTALLY, VERTICALLY, OR BOTH, PROVIDED TOTAL LENGTH MATCHES THAT SHOWN IN THE DETAIL.

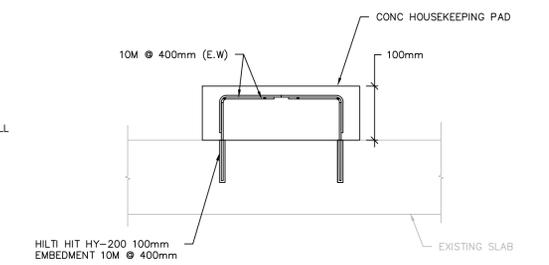
7 TYPICAL EXTERIOR SLAB ON GRADE FOR GENERATOR N.T.S.



DETAIL 4A

DETAIL 4B

4 EXISTING TO PROPOSED WALL CONNECTION N.T.S.



1 CONCRETE HOUSEKEEPING PAD DETAIL N.T.S.

M:\M - MUNICIPAL\ARCH\2025\20250101 - SHELburne PWG AIR ENTRANCE\DWG\DWG003_18A.CAD & DESIGN\DWG\DWG003_18A.CAD, 2025-10-22 09:02

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CLIENT: TOWN OF SHELburne
 PROJECT: WELL No.1 PUMPHOUSE UPGRADES
 DRAWING TITLE: DETAILS

S. BURNETT & ASSOCIATES LIMITED
 ENGINEERING AND ENVIRONMENTAL SERVICES
 210 BROADWAY, UNIT 203
 ORANGEVILLE, ONTARIO L9W 5G4
 TELEPHONE: 519-941-2949 FAX: 519-941-2036

DESIGNED BY: V.S. DRAWN BY: S.M. VERIFIED BY: S.B. DRAWING No.: A5.1
 SCALE: AS NOTED PROJECT No.: M20051

SINGLE LINE SYMBOLS AND CONTROL DIAGRAMS	
SYMBOL	DESCRIPTION
	CIRCUIT BREAKER, MOULDED CASE WITH THERMAL & MAGNETIC TRIPS
	MOTOR CIRCUIT PROTECTOR (MCP) STYLE BREAKER, WITH MAGNETIC TRIPS ONLY
	NEMA SIZE 1 STARTER WITH THERMAL OVERLOAD TRIP
	VARIABLE FREQUENCY DRIVE, C/W BYPASS MOTOR STARTER/CONTACTOR AND CONTROL TRANSFORMER
	CURRENT TRANSFORMER
	CAPACITOR
	CONTROL POWER TRANSFORMER (CPT)
	FUSE
	FUSIBLE DISCONNECT SWITCH
	NON-FUSIBLE DISCONNECT SWITCH
	DRY-TYPE POWER TRANSFORMER (INDOOR)
	OIL-FILLED POWER TRANSFORMER (OUTDOOR)
	SEAL (EYS) FITTING C/W CHICO POWDER
	MOTOR STARTER (MS) COIL, WITH COIL SUPPRESSOR
	PILOT LIGHT, WHERE "X" INDICATES LENS COLOR: R=RED, W=WHITE, G=GREEN
	PUSH TO TEST STYLE PILOT LIGHT
	ELAPSE TIME METER, IN HOURS
	CONTROL RELAY (# DENOTES RELAY NUMBER)
	TERMINAL BLOCK
	SOLENOID VALVE
	TEMPERATURE SWITCH, N.O AND N.C.
	LIMIT OR POSITION SWITCH, N.O AND N.C.
	PRESSURE SWITCH, N.O AND N.C.
	LEVEL OR FLOAT SWITCH, N.O AND N.C.
	PUSHBUTTON DEVICE, N.O AND N.C.
	CONTACT, N.O. AND N.C.
	SELECTOR SWITCH, 2-POSITION & 3-POSITION

LIGHTING AND POWER ELECTRICAL SYMBOLS	
SYMBOL	DESCRIPTION
	1'x4' FLUORESCENT LUMINAIRE. "X" DENOTES LUMINAIRE TYPE (REFER TO LUMINAIRE SCHEDULE).
	DENOTES SWITCH LEG
	DENOTES BRANCH CIRCUIT NUMBER
	DENOTES PANEL DESIGNATION
	2'x4' FLUORESCENT LUMINAIRE. "X" DENOTES LUMINAIRE TYPE (REFER TO LUMINAIRE SCHEDULE)
	CEILING MOUNTED LUMINAIRE - "X" DENOTES TYPE
	WALL MOUNTED LUMINAIRE - "X" DENOTES TYPE
	EXIT LIGHT - "X" DENOTES TYPE
	LIGHT SWITCH C/W BACK BOX: - "S" INDICATES 2-WIRE SWITCH - "S3" INDICATES 3-WIRE SWITCH - "S4" INDICATES 4-WIRE SWITCH - "D" INDICATES DIMMER (SIZE TO SUIT)
	EMERGENCY REMOTE HEADS
	EMERGENCY BATTERY UNIT WITH REMOTE HEADS AND CHARGER (BU#)
	EMERGENCY REMOTE HEADS: EXPLOSION PROOF - DIV. 1 ZONE 1
	ELECTRICAL PANEL/ENCLOSURE
	IVORY, 15A, 120V, 1#, DUPLEX RECEPTACLE, WALL MOUNTED
	IVORY, 15A, 120V, 1#, GFI DUPLEX RECEPTACLE, WALL MOUNTED
	IVORY, 20A, 120V, 1#, GFI DUPLEX RECEPTACLE "T-SLOT", 5-20R, WEATHER PROOF C/W IN-USE COVER
	IVORY, 15A, 120V, 1#, SIMPLEX RECEPTACLE, WALL MOUNTED
	SINGLE PHASE MOTOR
	THREE PHASE MOTOR
	SINGLE PHASE MANUAL STARTER SWITCH WITH LOCK-OFF AND PILOT LIGHT
	CONTROL STATION OR PANEL
	JUNCTION BOX
	UNAUTHORIZED ENTRY KEYPAD UNIT
	MAGNETIC REED DOOR SWITCH
	MOTION SENSOR
	SMOKE DETECTOR
	TELEPHONE OUTLET
	JUNCTION BOX
	THERMOSTAT
	THERMOSTAT (VENTILATION)

GENERAL SYMBOLS	
	DETAIL SYMBOL: X = DETAIL NUMBER YZ = DRAWING NUMBER
	EQUIPMENT SUPPLIED BY ANOTHER DIVISION, INSTALLATION, WIRING AND CONDUIT BY DIVISION 26
	EQUIPMENT NOT SUPPLIED UNDER THIS CONTRACT, INSTALLATION, WIRE AND CONDUIT BY DIVISION 26
	SYMBOL INDICATES A DEVICE LOCATION, SEE BELOW (# DENOTES LOCATION NUMBER)
	SYMBOL INDICATES MODIFICATION OR NEW WORK NOTE (# DENOTES NOTE NUMBER)

DEVICE LOCATIONS	
	DEVICE LOCATED AT PLC PANEL
	DEVICE LOCATED WITHIN BUILDING, FIELD OR NEAR MOTOR
	DEVICE LOCATED IN MCC

DRAWING LIST - ELECTRICAL	
E.1	LEGEND AND DUCTBANKS DETAILS
E.2	SITE PLAN
E.2.1	EXISTING SINGLE LINE DIAGRAM, MCC ARRANGEMENT AND LIGHTING PANEL SCHEDULE
E.2.2	PROPOSED SINGLE LINE DIAGRAM, MCC ARRANGEMENT AND LIGHTING PANEL SCHEDULE
E.2.3	WIRING AND ELEMENTARY CONTROL DIAGRAMS
E.2.4	EXHAUST FAN ELEMENTARY CONTROL DIAGRAMS
E.2.5	UV SYSTEM ELEMENTARY CONTROL DIAGRAM
E.3	INSTRUMENTATION LOOP DIAGRAMS SHEET 1
E.3.2	INSTRUMENTATION LOOP DIAGRAMS SHEET 2
E.3.3	PLC PANEL DETAILS
E.4	EXISTING BUILDING LAYOUT
E.4.2	PROPOSED BUILDING LAYOUT - POWER & LIGHTING
E.4.3	PROPOSED BUILDING LAYOUT - INSTRUMENTATION
E.4.4	BUILDING EXTERIOR PICTURES
E.4.5	BUILDING INTERIOR PICTURES

MASTER ELECTRICAL LEGEND

ALL SYMBOLS/DEVICES/ABBREVIATIONS LISTED MAY NOT APPLY

CONTRACTOR MUST VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME. ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEER BEFORE COMMENCING WORK. DRAWINGS ARE NOT TO BE SCALED.

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STANDARD ABBREVIATIONS - ELECTRICAL	
ABBREVIATION	DESCRIPTION
A	AMPERES (CONTINUOUS)
AC	ALTERNATING CURRENT
ASYM	ASYMMETRICAL
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AWG	AMERICAN WIRE GAUGE
BU	BATTERY UNIT (EMERGENCY)
°C	DEGREE CELSIUS
C	CONDUCTOR
CCT	CIRCUIT
CEC	CANADIAN ELECTRICAL CODE
CH	COUNTER TOP HEIGHT
CL	CENTRELINE
C/W	COMPLETE WITH
CPT	CONTROL POWER TRANSFORMER
CSA	CANADIAN STANDARDS ASSOCIATION
CSTE	CUSTOMER SERVICE TERMINATION EQUIPMENT
CT	CURRENT TRANSFORMER
Cu	COPPER
CUST	CUSTOMER
DC	DIRECT CURRENT
DISC	DISCONNECT
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
EEMAC	ELECTRICAL AND ELECTRONIC MANUFACTURERS ASSOCIATION OF CANADA
EP	EXPLOSION PROOF (SUITABLE FOR CLASS I, DIV. 1)
ETM	ELAPSED TIME METER
ESA	ELECTRICAL SAFETY AUTHORITY
FLA	FULL LOAD CURRENT
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
H/O/A	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HSCI	HIGH SPEED COUNTER INPUT
HSCO	HIGH SPEED COUNTER OUTPUT
Hz	HERTZ
IEEE	INSTITUTE OF ELECTRICAL & ELECTRONIC ENGINEERS
INST	INSTANTANEOUS
I/O	INPUT/OUTPUT
ISB	INTRINSIC SAFETY BARRIER
JB	JUNCTION BOX
KAIC	KILO-AMP INTERRUPTING CAPACITY
kVA	KILOVOLTAMPERE
kW	KILOWATT
kWh	KILOWATT HOUR
LA	LIGHTNING ARRESTOR
LUC	LOCAL UTILITY COMPANY - HYDRO ONE
MAN	MANUAL
MCC	MOTOR CONTROL CENTRE
MH	MANHOLE
mm	MILLIMETRE
MOT	MOTOR
N	NEUTRAL
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
N/A	NON AUTOMATIC
N.O.	NORMALLY OPEN
N.C.	NORMALLY CLOSED
NP	NAMEPLATE
NTS	NOT TO SCALE
O/H	OVERHEAD
O/L	OVERLOAD
PB	PUSHBUTTON
PH. OR Ø	PHASE OR DIAMETER
PLC	PROGRAMMABLE LOGIC CONTROLLER
PS	PHOTO SENSOR
REM	REMOTE
RGS	RIGID GALVANIZE STEEL
RPVC	RIGID PVC CONDUIT
SV	SOLENOID VALVE
SN	SOLID NEUTRAL
SPD	SURGE PROTECTION DEVICE
SLD	SINGLE LINE DIAGRAM
SPDT	SINGLE POLE DOUBLE THROW
SPST	SINGLE POLE SINGLE THROW
SW	SWITCH
SYM	SYMMETRICAL
TC	THERMOCOUPLE
TDC	TIME DELAY ON CLOSING
TDDO	TIME DELAY ON DROP-OUT
TDO	TIME DELAY ON OPENING
TDPU	TIME DELAY ON PICK-UP
TRANS	TRANSFORMER
TYP.	TYPICAL
U/G	UNDERGROUND
VA	VOLT-AMPERE
VD	VARIABLE FREQUENCY DRIVE
VT	VOLTAGE TRANSFORMER (FORMER PT)
WP	WEATHERPROOF

4 UTILITY POLE INTERFACE DETAIL

NTS, DIMENSIONS SHOWN IN MILLIMETRES (mm)
SIMILAR DETAIL FOR COMMUNICATION DUCT(S)

5 TYPICAL BOLLARD DETAIL

NTS, DIMENSIONS SHOWN IN MILLIMETRES (mm)

1 1X2 UNDERGROUND DUCTBANK

NTS, DIMENSIONS AS SHOWN

2 1X1 UNDERGROUND DUCTBANK

NTS, DIMENSIONS AS SHOWN

3 2X2 UNDERGROUND DUCTBANK

NTS, DIMENSIONS AS SHOWN

6 HAND HOLE DETAIL, TYPICAL

NTS, DIMENSIONS SHOWN IN MILLIMETRES (mm)
REFERENCE OPSD 2112.02 AND 2117.02 STANDARDS

NOTES

GENERAL DUCTBANK NOTES:

- DIMENSIONS SHOWN IN mm.
- ALL DUCTS ARE 53mmØ, UNLESS OTHERWISE NOTED. USE RIGID PVC CONDUIT FOR DIRECT BURIED DUCTS AND FOR EXPOSED CONDUIT INSTALLATIONS.
- PROVIDE 915mm RADIUS "LONG SWEEP BENDS" FOR ALL BENDS: 90°, 45° AND 22.5° BENDS.
- PROVIDE FISH ROPE IN EACH SPARE DUCT.
- INSTALL SPACERS EVERY 1524mm TO ASSEMBLE DUCTBANK. OFFSET OR STAGGER SPACERS.
- GLUE ALL PVC JOINTS.
- PROVIDE END-BELLS WHEN FINISHING DUCTS IN CHAMBERS OR WALLS.
- WHERE DUCTBANKS ARE LOCATED AT SHALLOW DEPTHS, PROVIDE A CONCRETE SLAB AT GRADE LEVEL DIRECTLY ABOVE DUCTBANK. REFER TO OESC RULING 12-012 (8). CONCRETE SLABS SHALL BE 32mpa, AIR ENTRAINED CONCRETE CONSTRUCTED TO OPSD 310.010. MINIMUM SLAB THICKNESS TO BE:
 - GRASED AREAS: 125mm
 - ASPHALT/CURB AREAS: 200mm

CONTRACTOR TO COORDINATE FINAL LOCATION OF UTILITY POLE INTERFACE WITH LUC.

BOLLARD NOTES:

- PROVIDE TWO FOAM SPACER STRIPS ACROSS THE TOP BETWEEN THE STEEL GUARD POST AND HDPE COVER.
- BOLLARDS AROUND GENERATOR:
 - SPACE BOLLARDS NOT MORE THAN 1340mm APART, CENTER-TO-CENTER
 - BOLLARDS TO BE LOCATED MINIMUM 1000mm FROM GENERATOR, UNLESS OTHERWISE INDICATED ON SITE PLAN.
- BOLLARD ALTERNATIVE: PRE-CAST BOLLARD BY UTILICON, PART No.UB69PPE C/W YELLOW HDPE COVER AND TWO RED BANDS.

DISCLAIMER AND COPYRIGHT

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16066F-02

No.	DATE	ISSUE/REVISION	No.	DATE	ISSUE/REVISION
1.	12-01-2023	ISSUED FOR CLIENT REVIEW			
2.	07-18-2025	ISSUED FOR CLIENT REVIEW			
3.	12-09-2025	ISSUED FOR TENDER			

CLIENT: TOWN OF SHELBURNE

PROJECT: WELL #1 PUMPHOUSE EXPANSION

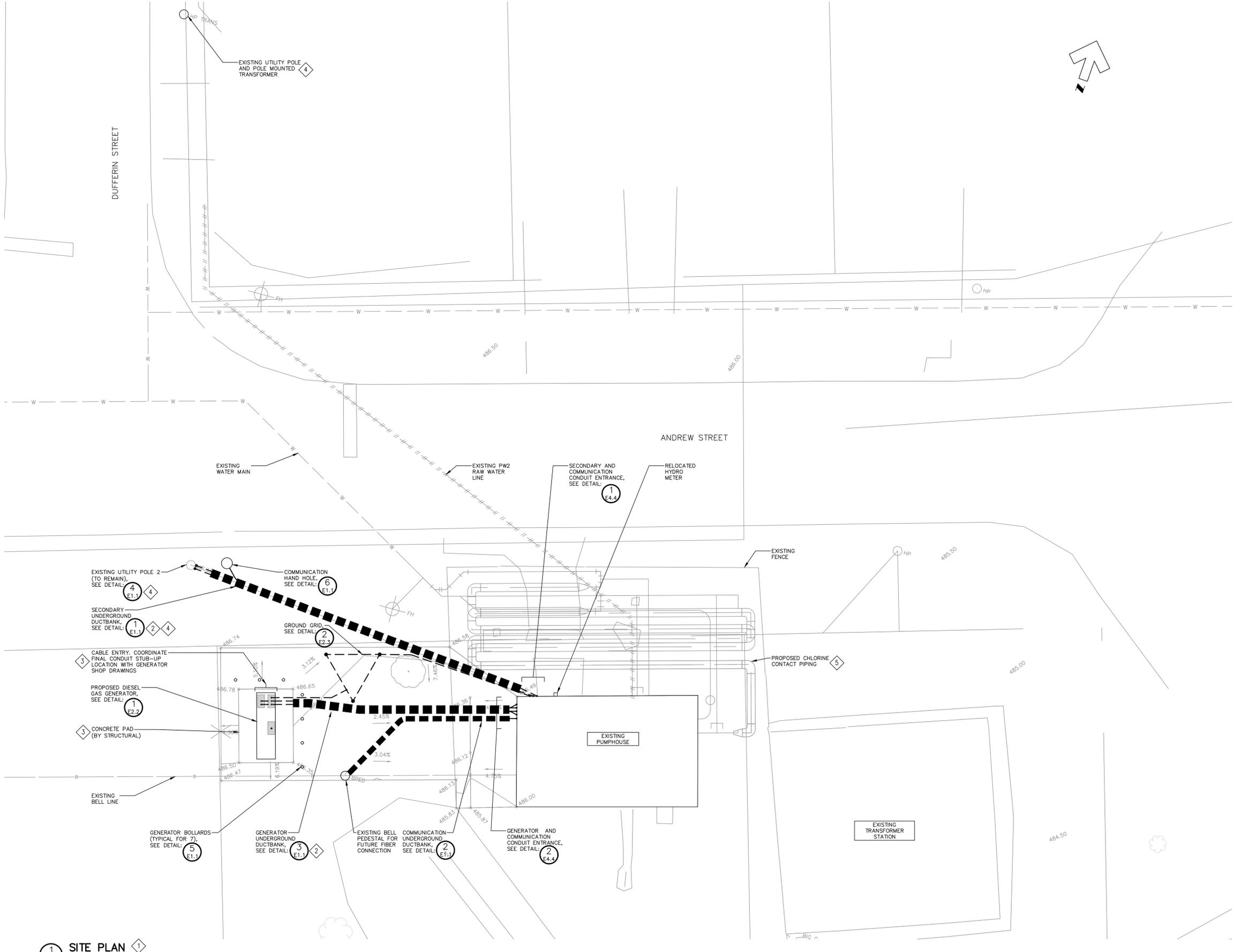
DRAWING TITLE: LEGEND AND DUCTBANK DETAILS

S. BURNETT & ASSOCIATES LIMITED
ENGINEERING AND ENVIRONMENTAL SERVICES
2310 BROADWAY, UNIT 203
ORANGEVILLE, ONTARIO L9W 5G4
TELEPHONE: 519-941-2949 FAX: 519-941-2036

DESIGNED BY: S.R.T.
DRAWN BY: M.C.G.
VERIFIED BY: G.G.R.

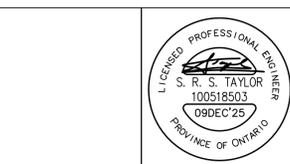
SCALE: AS SHOWN PROJECT No. 16066F-02 DRAWING No. E1.1

- NOTES**
- 1 CONTRACT DRAWINGS DO NOT PORTRAY THE LOCATION OF ALL EXISTING UNDERGROUND SERVICES. PRIOR TO PERFORMING ANY TRENCHING OR DIGGING WORK, CONTRACTOR IS REQUIRED TO CONTACT ALL LOCAL UTILITIES AND REQUEST A STAKING OR MARKING OF ALL SEWERS, WATERMANS, GAS MAINS AND ALL TYPES OF CABLES AND CONDUITS. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE TO PAY FOR DAMAGES OR DISTURBANCES CAUSED TO ANY EXISTING UTILITY.
 - 2 DUCTBANK ROUTE IS APPROXIMATE. CONTRACTOR TO COORDINATE ROUTING WITH EXISTING CONDITIONS. COORDINATE CONDUITS AT GENERATOR WITH CONTRACTOR INSTALLING CONCRETE PAD AND WITH GENERATOR SHOP DRAWINGS.
 - 3 GENERATOR IS NEW. GENERATOR TO BE LOCATED MINIMUM 3m FROM A BUILDING AND 3m FROM A PROPERTY LINE. CONCRETE PAD TO EXTEND 1m AROUND ENTIRE GENERATOR. DIMENSIONS BASED ON CUMMINS C80D6C MODEL (80kW) AND ARE 1046mm W X 4352mm L X 2039mm H. COORDINATE STUB UP AREAS FOR CONDUITS WITH EQUIPMENT SHOP DRAWINGS.
 - 4 REFER TO SINGLE LINE DIAGRAMS SHOWN ON DRAWINGS E2.1 AND E2.2 AS WELL AS APPLICABLE NOTES FOR ADDITIONAL INFORMATION. PROPOSED SECONDARY DUCTBANK SHOWN ON TOP OF EXISTING AS STATION WILL BE SHUTDOWN DURING CONSTRUCTION.
 - 5 EXISTING CHLORINE CONTACT TANKS TO BE REMOVED AND REPLACED WITH CHLORINE CONTACT PIPING. REFER TO PROCESS DRAWINGS FOR ADDITIONAL INFORMATION.



1 SITE PLAN 1
E1.2 - SCALE 1:100

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CLIENT: TOWN OF SHELBURNE
 PROJECT: WELL #1 PUMPHOUSE EXPANSION
 DRAWING TITLE: SITE PLAN

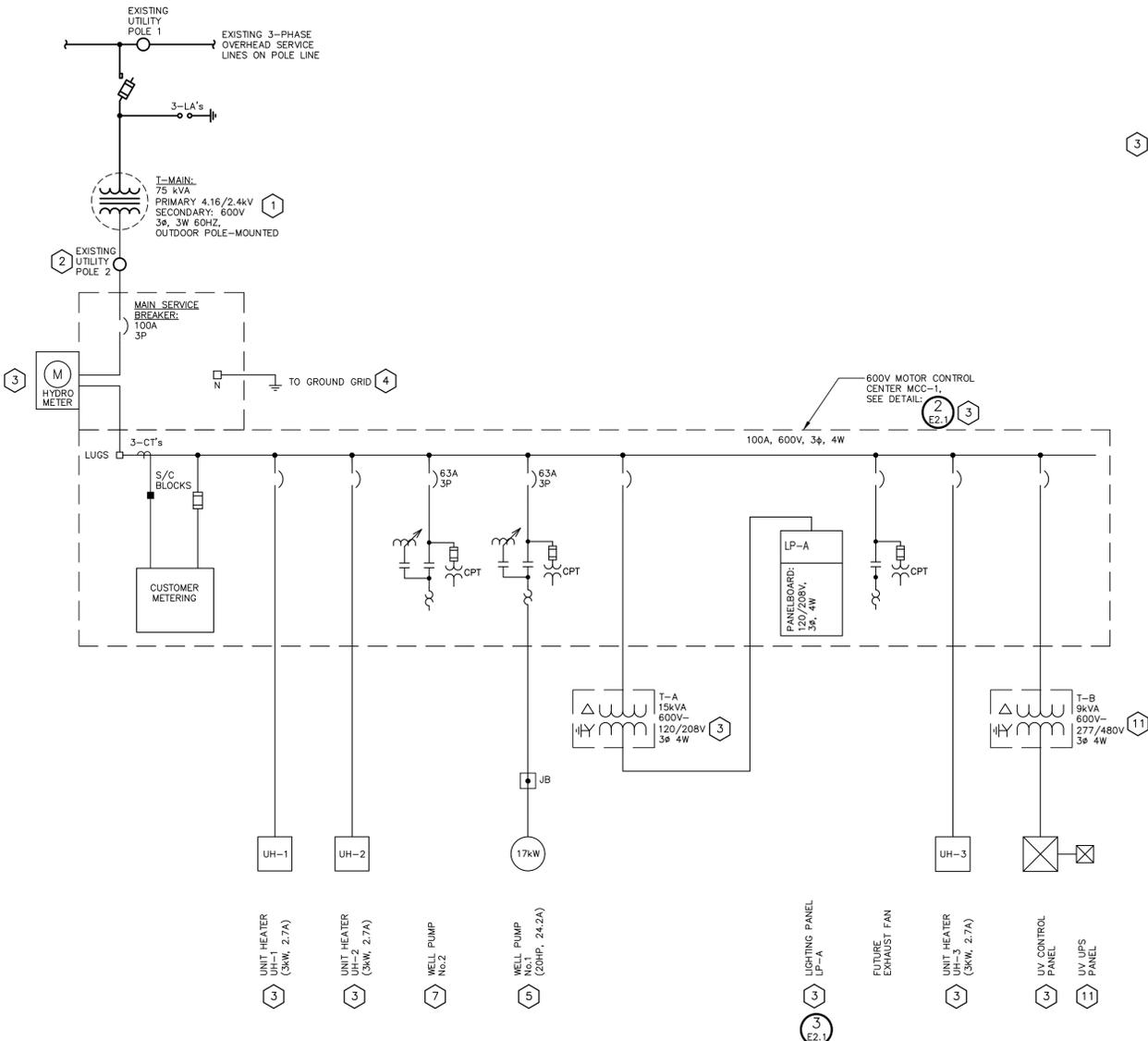
S. BURNETT & ASSOCIATES LIMITED
 ENGINEERING AND ENVIRONMENTAL SERVICES
 210 BROADWAY, UNIT 203
 ORANGEVILLE, ONTARIO L9W 5G4
 TELEPHONE: 519-941-2949 FAX: 519-941-2036

DESIGNED BY: S.R.T. DRAWN BY: M.C.G. VERIFIED BY: G.G.R. DRAWING No.: E1.2
 SCALE: AS SHOWN PROJECT No.: 16066F-02

PANEL TAG NAME: 'LP-A'		120/208V, 3ø, 4W				MOUNTING: PANELBOARD	
		MAINS: 225A				LOCATION: WET WELL #1 PUMPHOUSE	
LOAD-W		MAIN LUGS ONLY				LOAD-W	
CIRCUIT DESCRIPTION	PROT.	CIRCUITS	PROT.	CIRCUIT DESCRIPTION			
LIGHTS	15A	1 A	2 15A	OUTSIDE LIGHTS			
CHEM. INJECT (RECEPTACLE)	15A	3 B	4 15A	RECEPTACLES			
CHEM. INJECT (RECEPTACLE)	15A	5 C	6 15A	CONTROLLER			
SPARE	20A	7 A	8 15A	VENTILATION			
CHEM. INJECT (RECEPTACLE)	15A	9 B	10 15A	EMERGENCY LIGHTING			
CHEM. INJECT (RECEPTACLE)	15A	11 C	12 20A	SPARE			
SIGNAL DEVICE RECEPTACLE	15A	13 A	14 30A	HOT WATER TANK			
RECEPTACLES	15A	15 B	16 2P				
RECEPTACLES	15A	17 C	18	SPACE			
RECEPTACLES	15A	19 A	20	SPACE			
RECEPTACLES	15A	21 B	22	SPACE			
SPARE	15A	23 C	24	SPACE			
SPARE	15A	25 A	26	SPACE			
SPACE		27 B	28	SPACE			
SPACE		29 C	30	SPACE			

EXISTING LP-A LIGHTING PANEL SCHEDULE

- NTS



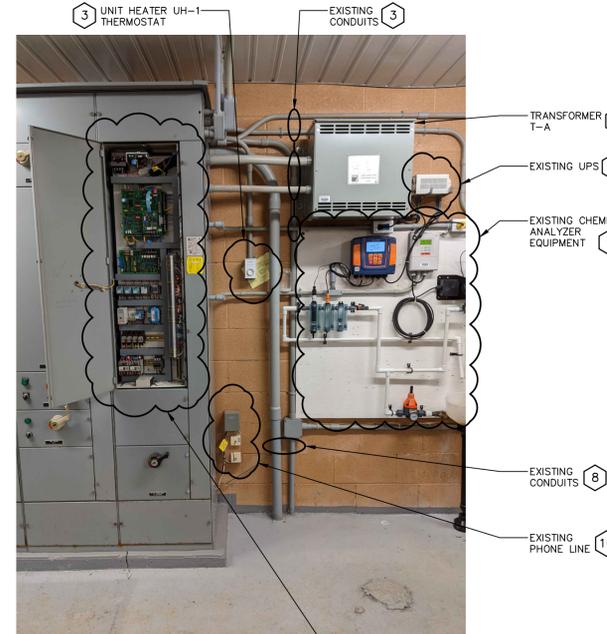
EXISTING SINGLE LINE DIAGRAM

- NTS



EXISTING RECEPTACLE

EXISTING UTILITY METER (LOCATED ON SIDE OF MCC-1)



EXISTING CONDUITS

TRANSFORMER T-A

EXISTING UPS

EXISTING CHEMICAL ANALYZER EQUIPMENT

EXISTING CONDUITS

EXISTING PHONE LINE



EXISTING MCC

EXISTING PLC PANEL

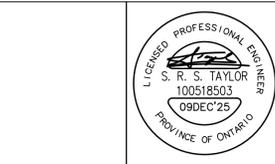
REMOVAL NOTES

- GENERAL NOTES FOR ALL REMOVAL WORKS:
- WELL #1 PUMP HOUSE TO BE SHUTDOWN FOR CONSTRUCTION WORK. CONTRACTOR TO PROVIDE ALL NECESSARY TEMPORARY POWER REQUIRED TO PERFORM WORK.
 - UNLESS OTHERWISE NOTED, "REMOVE" OR "REMOVED" INDICATES CONTRACTOR TO DISCONNECT, REMOVE AND DISPOSE OF ELECTRICAL EQUIPMENT AND/OR DEVICE INCLUDING POWER FEED CONDUCTORS, CONDUIT AND/OR CABLE. CONTRACTOR TO CONFIRM WITH OWNER IF EQUIPMENT TO BE SAVED OR DISPOSED. CONTRACTOR TO DISPOSE OF EQUIPMENT AS DIRECTED.
 - CONTRACTOR TO PREPARE AN ELECTRICAL REMOVAL SCHEDULE FOR REVIEW WITH ENGINEER AND OWNER PRIOR TO BEGINNING ANY SHUT DOWN WORK.
 - ALL REMOVAL WORK SCHEDULES REQUIRED BY THE CONTRACTOR ARE TO BE APPROVED BY ENGINEER AND OWNER TEN (10) WORKING DAYS PRIOR TO ANY POWER SHUTDOWN.
 - CONTRACTOR IS TO INCLUDE ALL NECESSARY PREMIUM LABOUR TIME TO PERFORM REMOVAL WORK ON WEEKENDS, NIGHTS OR OTHER "NON-REGULAR" TIMES AS DIRECTED BY THE OWNER/OPERATOR.
 - CONTRACTOR TO COORDINATE REMOVAL WORK AND COMMISSIONING OF ALL EQUIPMENT (NEW AND EXISTING) WITH THE INTEGRATOR AND OWNER.
- EXISTING TRANSFORMER TO BE REPLACED AND UTILITY POLE RE-WORKED BY LUC. NEW TRANSFORMER TO BE 3x25kVA, 2.4/4.16kV - 347/600V.
 - EXISTING UTILITY RISER TO REMAIN. EXISTING SECONDARY RISER TO BE REMOVED AND NEW SECONDARY RISER TO BE INSTALLED BY LUC. CONTRACTOR TO REMOVE EXISTING UNDERGROUND SECONDARY AND PROVIDE NEW UNDERGROUND SECONDARY. REFER TO E2.2 AND APPLY NOTES FOR ADDITIONAL INFORMATION. COORDINATE ALL WORK WITH LUC. REFER TO LUC LAYOUT FOR ADDITIONAL INFORMATION.
 - EXISTING EQUIPMENT, CONDUIT AND WIRING TO BE REMOVED AND REPLACED WITH NEW. REFER TO CONTRACT DRAWINGS FOR ADDITIONAL INFORMATION.
 - DETAILS OF EXISTING GROUND GRID ARE UNKNOWN. CONTRACTOR TO LOCATE AND REMOVE. NEW GROUND GRID TO BE PROVIDED WITH NEW EQUIPMENT.
 - EXISTING EQUIPMENT TO REMAIN AND BE RE-CONNECTED TO NEW MCC. EXISTING CONDUIT AND WIRING TO BE REMOVED AND REPLACED WITH NEW. REFER TO DRAWING CONTRACT DRAWINGS FOR ADDITIONAL INFORMATION.
 - EXISTING EQUIPMENT TO REMAIN AND BE RE-CONNECTED TO NEW LIGHTING PANEL. EXISTING CONDUIT AND WIRING TO BE REMOVED AND REPLACED WITH NEW.
 - EXISTING WELL PUMP No.2 NO LONGER EXISTS. ALL ASSOCIATED EQUIPMENT, CONDUIT AND WIRING TO BE REMOVED.
 - EXISTING CONDUITS APPEAR TO BE POWER AND CONTROL FOR WELL 2. SMALLER CONDUIT INCLUDES WIRING FOR PRESSURE TRANSDUCER. CONTRACTOR TO REVIEW EXISTING CONDITIONS AND DISCUSS WITH ENGINEER DURING CONSTRUCTION TO CONFIRM DIRECTION. CONTRACTOR TO ACCOUNT FOR REMOVAL OF CONDUIT AND WIRING AS PART OF SCOPE OF WORK.
 - EXISTING CHEMICAL ANALYZER EQUIPMENT TO BE RELOCATED TO NEW CHEMICAL ROOM. EXISTING RECEPTACLES FOR CONNECTED INSTRUMENTATION TO REMAIN AND BE RE-WIRED TO NEW PLC PANEL UPS.
 - EXISTING PHONE LINE APPEARS TO ENTER THE BUILDING UNDER THE MCC. THE CONTRACTOR IS TO COORDINATE THE RELOCATION OF THE EXISTING SERVICE WITH THE OWNER AND PROVIDER (WIGHTMAN). PROVISIONS FOR A NEW COMMUNICATION SERVICE ARE INCLUDED IN THE CONTRACT DRAWINGS. FINAL DIRECTION REGARDING NEW OR RELOCATION TO BE CONFIRMED DURING CONSTRUCTION, AS COORDINATED BY THE CONTRACTOR.
 - EXISTING EQUIPMENT TO BE REMOVED AND REPLACED AND CONNECTED TO NEW UV CONTROL PANEL. WIRING REQUIREMENTS OF UPS TO BE CONFIRMED WITH NEW UV CONTROL PANEL SHOP DRAWINGS. CONTRACTOR TO COORDINATE WITH UV EQUIPMENT SUPPLIER AND ADVISE AS PART OF SHOP DRAWING SUBMISSION.

EXISTING MCC-1 LAYOUT

- NTS

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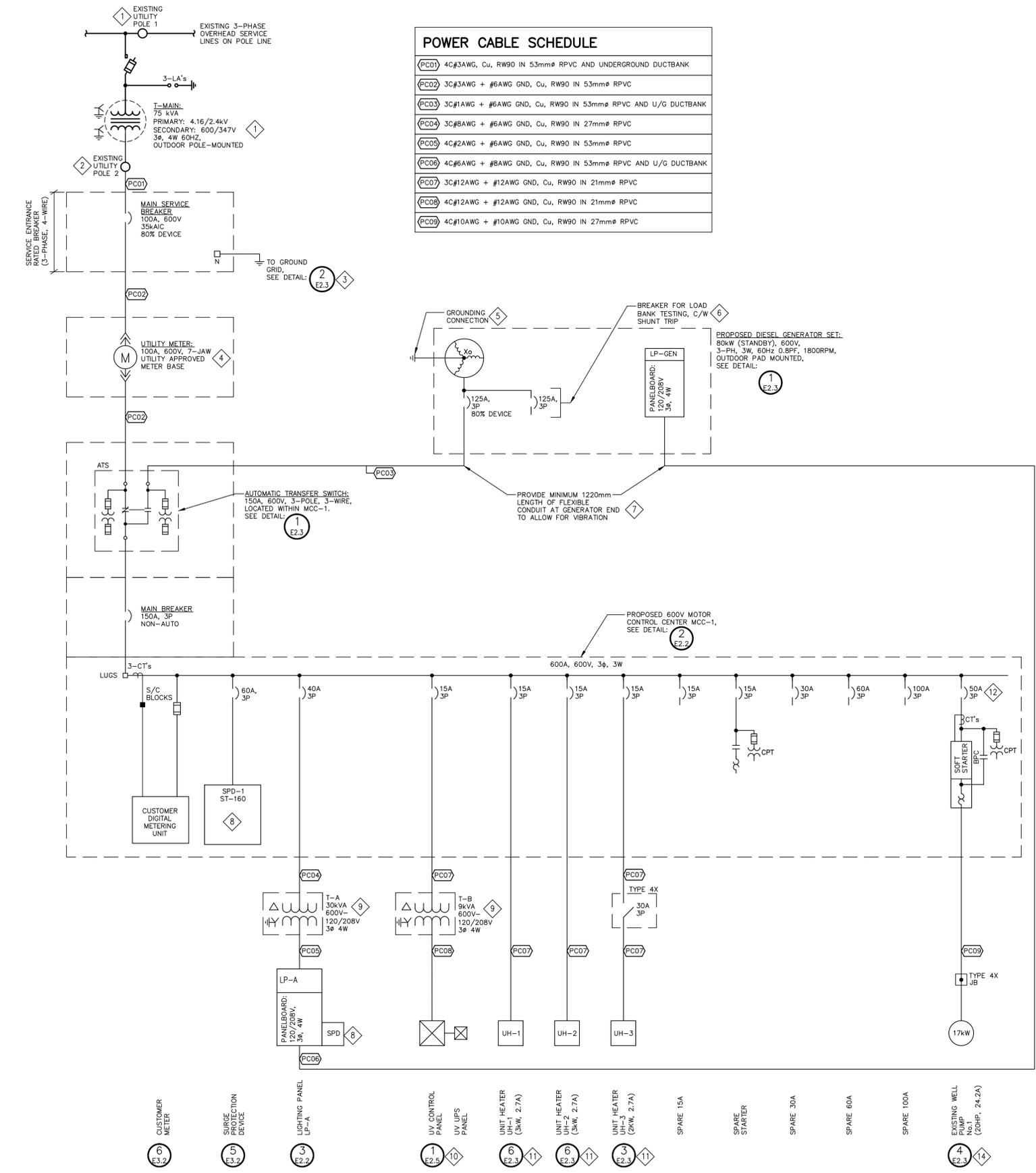
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CLIENT: TOWN OF SHELBURNE
 PROJECT: WELL #1 PUMPHOUSE EXPANSION
 DRAWING TITLE: EXISTING SINGLE LINE DIAGRAM, MCC ARRANGEMENT AND LIGHTING PANEL SCHEDULE

S. BURNETT & ASSOCIATES LIMITED
 ENGINEERING AND ENVIRONMENTAL SERVICES
 230 BRADWAY UNIT 203
 ORANGEVILLE, ONTARIO L9W 5G4
 TELEPHONE: 519-941-2949 FAX: 519-941-2036

DESIGNED BY: S.R.T. DRAWN BY: M.C.G. VERIFIED BY: G.G.R.
 SCALE: AS SHOWN PROJECT No.: 16066F-02

E2.1

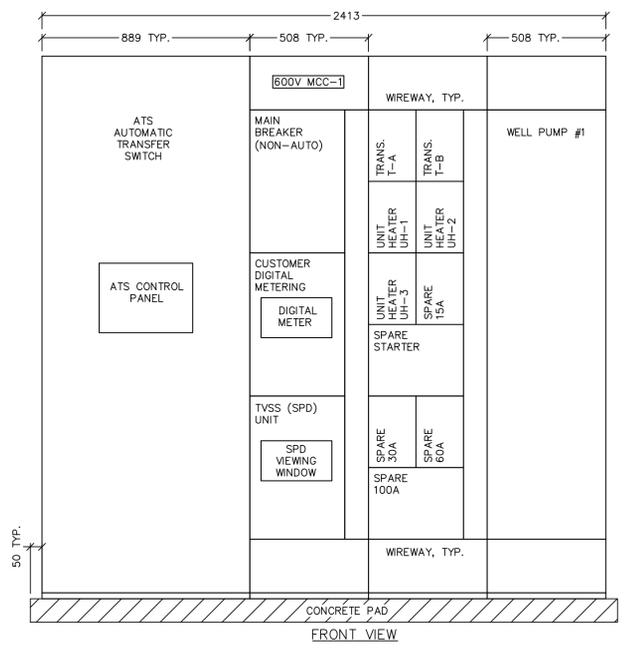


1 E2.2 - NTS
PROPOSED SINGLE LINE DIAGRAM

PANEL TAG NAME: 'LP-A'

LOAD-W	CIRCUIT DESCRIPTION	120/208V, 3 ϕ , 4W				LOAD-W		
		PROT.	CIRCUITS	PROT.	CIRCUIT DESCRIPTION			
600	LIGHTS - CONTROL ROOM	15A	1	A	2	15A	OUTSIDE LIGHTS	400
200	CHEM. INJECT (RECEPTACLE)	15A	3	B	4	15A	EMERGENCY LIGHTING (RECEPTACLE)	50
200	CHEM. INJECT (RECEPTACLE)	15A	5	C	6	15A	LIGHTS - CHEMICAL ROOM	100
1125	FORCED FAN HEATER (FFH-1)	15A	7	A	8	15A	ELECTRONIC TRAP SEAL PRIMER (TSP-1)	
		2P	9	B	10	15A	SPARE	
	SPARE	15A	11	C	12	30A	PLC PANEL	2000
	SPARE	15A	13	A	14	30A		
	SPARE	15A	15	B	16	2P	HOT WATER TANK	3000
200	INTERIOR RECEPTACLES	15A	17	C	18	60A		
200	INTERIOR RECEPTACLES	15A	19	A	20	3P	LP-GEN	
200	COUNTER RECEPTACLES	15A	21	B	22			
342	VENTILATION CONTROL PANEL (CP-EF1)	15A	23	C	24	30A		
342	VENTILATION CONTROL PANEL (CP-EF2)	15A	25	A	26			
	MOTORIZED VALVE MV-101	15A	27	B	28	3P		
	SPARE	15A	29	C	30	15A	UV SYSTEM OPTIVIEW PANEL	250
	SPARE	15A	31	A	32	15A		
	SPARE	15A	33	B	34	20A		
	SPARE	15A	35	C	36	20A		
	SPARE	60A	37	A	38	20A		
	SPARE	3P	39	B	40	20A		
	SPARE		41	C	42	30A		

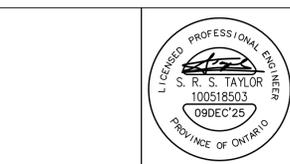
3 E2.2 - NTS
PROPOSED LP-A LIGHTING PANEL SCHEDULE



- NOTES**
- EXISTING UTILITY POLE TO BE RE-WORKED BY LUC TO ACCEPT NEW TRANSFORMER. EXISTING SECONDARY BETWEEN UTILITY POLE 1 AND UTILITY POLE 2 TO REMAIN.
 - CONTRACTOR TO COORDINATE ALL WORK WITH LUC. REFER TO LUC LAYOUT FOR ADDITIONAL INFORMATION. CONTRACTOR TO PROVIDE THE FOLLOWING FOR INSTALLATION BY LUC:
 - RIGID PVC CONDUIT UP ALONG UTILITY POLE C/W WEATHER HEAD FITTING AND STEEL GAIRD COVERING CONDUIT (MINIMUM 3M).
 - SUFFICIENT LENGTH OF SECONDARY CONDUCTORS FOR TERMINATION BY LUC.
 - TRANSFORMER SECONDARY LUGS.
 - PROVIDE ALL NECESSARY SAND AND BACKFILL TO LUC SPECIFICATIONS.
 - SOLIDLY GROUND NEUTRAL BUS (IN SERVICE ENTRANCE MAIN BREAKER ENCLOSURE) TO PROPOSED GROUND GRID AND BOND TO MCC GROUND BUS.
 - HYDRO ONE TO SUPPLY METERBASE, METER AND ENCLOSURE. CONTRACTOR TO COORDINATE WITH HYDRO ONE FOR INSTALLATION OF METERING EQUIPMENT. METERING TO BE "FEED-THROUGH" METERING. LUC LAYOUT INDICATES METER TO BE LOCATED OUTSIDE BUILDING. CONTRACTOR TO CONFIRM FINAL LOCATION WITH LUC.
 - ENSURE NEUTRAL POINT AND FRAME OF GENERATOR IS CONNECTED TO MCC GROUND BUS AS A 3-WIRE SYSTEM. PROVIDE GENERATOR TO GROUND CONNECTION TO SYSTEM GROUND (SEPARATE GROUND PLATE OR CONNECT TO GROUND GRID), PER OESC 10-206 AND OESC BULLETIN 10-10-8 FIGURE B3.
 - LOAD BANK BREAKER TO BE SHUNT TRIPPED (S/T) FROM ATMS WHEN LOSS OF NORMAL POWER IS DETECTED.
 - CONTRACTOR TO PROVIDE CONDUIT INSTALLATION AT GENERATOR END TO ALLOW FOR VIBRATION IN HORIZONTAL AND VERTICAL DIRECTIONS.
 - CONNECT POWER LEADS "AS SHORT AS POSSIBLE" BETWEEN MCC-1 AND TVSS SURGE SUPPRESSION PANEL (SPD) MODEL NO: TK-ST160-600NN-FL BY INNOSYS POWER. PROVIDE LOW IMPEDANCE CABLE AS SPECIFIED IN SPECIFICATION 16400.
 - CONNECT POWER LEADS "AS SHORT AS POSSIBLE" BETWEEN LP-A AND TVSS SURGE SUPPRESSION PANEL (SPD) MODEL NO: TK-ST080-3Y208-FL BY INNOSYS POWER. PROVIDE LOW IMPEDANCE CABLE AS SPECIFIED IN SPECIFICATION 16400.
 - TRANSFORMER: KVA RATING AS INDICATED. 600-120/208V, 3-PHASE, 60HZ. PROVIDE A BARE COPPER GROUND CONNECTION FROM TRANSFORMER'S (X0) TO MCC-1 GROUND BUS AS PER OESC.
 - CONTRACTOR TO PROVIDE NEW CONDUIT AND WIRING FROM MCC TO NEW TRANSFORMER AND FROM NEW TRANSFORMER TO NEW UV CONTROL PANEL. UV UPS PANEL IS NEW. REFER TO DETAIL REFERENCES FOR ADDITIONAL INFORMATION.
 - PROVIDE NEW POWER FEEDS FROM MCC FOR RELOCATED AND NEW EQUIPMENT. CONTRACTOR TO PROVIDE NEW CONDUIT AND WIRING FROM MCC TO EQUIPMENT.
 - CONTRACTOR TO CONFIRM SIZE OF BREAKER WITH EQUIPMENT MANUFACTURER. CIRCUIT BREAKER TO HAVE A CURRENT RATING NOT LESS THAN 115% OF THE FULL LOAD CURRENT RATING OF THE CONNECTED LOAD IN FULL LOAD AMPS, AS PER OESC 28-602. DISCONNECT TO BE LOCKABLE FROM OUTSIDE OF THE MCC AND CLEARLY LABELLED TO DESCRIBE THE LOAD CONNECTED, AS PER OESC 28-604 (1)(b)(i).
 - 3-POLE BREAKER IN LP-A FOR OUTDOOR GENERATOR SHORE POWER.
 - EXISTING WELL PUMP TO REMAIN AND BE RE-CONNECTED TO SOFTSTARTER IN NEW MCC. CONTRACTOR TO PROVIDE NEW CONDUIT, JUNCTION BOX AND WIRING FROM MCC TO WELL PUMP. PROVIDE NEW FLEXIBLE CONNECTION FROM JUNCTION BOX TO WELL HEAD.
 - PANELBOARD NOTES:
 - BREAKER SIZES LISTED ARE PROVIDED AS A GENERAL GUIDE. PRIOR TO INSTALLATION, CONTRACTOR TO CONFIRM ALL BREAKER SIZES WITH FINAL EQUIPMENT LOADS.
 - CONTRACTOR TO SIZE ALL FEEDER CONDUCTORS AND CONDUIT BASED ON ONTARIO ELECTRICAL SAFETY CODE - LATEST EDITION.

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PROJECT: WELL #1 PUMPHOUSE EXPANSION
DRAWING TITLE: PROPOSED SINGLE LINE DIAGRAM, MCC ARRANGEMENT AND LIGHTING PANEL SCHEDULE

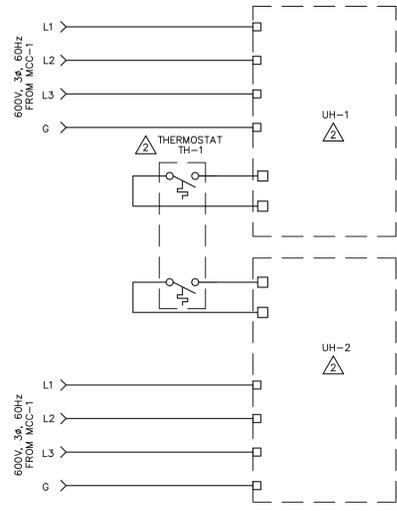
S. BURNETT & ASSOCIATES LIMITED
ENGINEERING AND ENVIRONMENTAL SERVICES
210 BROADWAY, UNIT 203
STRANGEVILLE, ONTARIO L5W 5G4
TELEPHONE: 519-941-2949 FAX: 519-941-2036

DESIGNED BY: S.R.T. DRAWN BY: M.C.G. VERIFIED BY: G.G.R.
SCALE: AS SHOWN PROJECT NO.: 16066F-02

E2.2

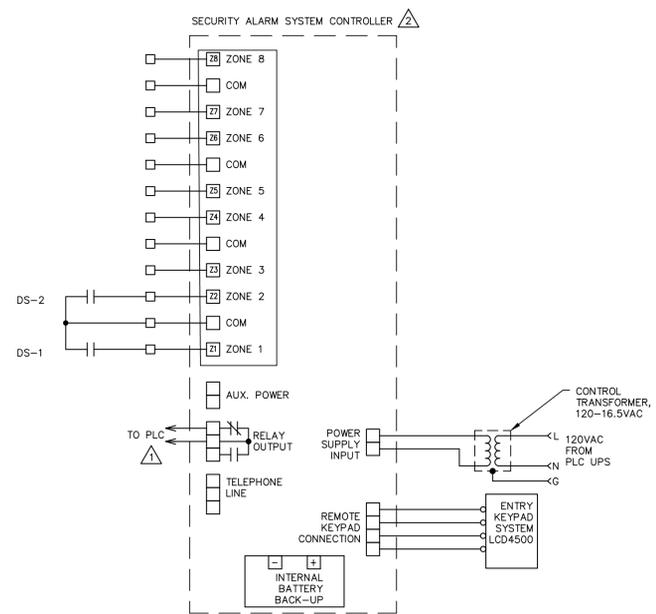
NOTES

1. LOAD BANK BREAKER TO BE SHUNT TRIPPED (S/T) BY LOAD SHED SIGNAL OF ATS WHEN LOSS OF NORMAL POWER IS DETECTED.
2. PANEL LP-G IS SUPPLIED AND INSTALLED INSIDE GENERATOR ENCLOSURE BY GENERATOR MANUFACTURER. CONFIRM FEEDER REQUIREMENT WITH MANUFACTURER.
3. SS INTENDED SEQUENCE OF OPERATION:
 1. LOCAL MODE:
 - 1.1. SS STARTED/STOPPED BY SS HMI.
 2. REMOTE MODE:
 - 2.1. UTILIZE ETHERNET COMMUNICATIONS TO START/STOP VFD.
 - 2.2. SS LOCAL/REMOTE/READY/RUNNING/FAULT COMMUNICATED TO PLC VIA ETHERNET.
 3. SS MUST COMMUNICATE WITH ROCKWELL COMPACT LOGIX PLC.
 4. AFTER A POWER OUTAGE CONDITION OR LOSS OF COMMUNICATIONS, SS UNIT MUST RESET AUTOMATICALLY UPON RESTORATION OF POWER SOURCE OR COMMUNICATIONS.
 5. SS WIRING AS SHOWN IS CONCEPT ONLY. SS MANUFACTURER TO PROVIDE ALL NECESSARY CONTROL WIRING MODIFICATIONS TO ENSURE INTENDED SEQUENCE OF OPERATION IS ACHIEVED.

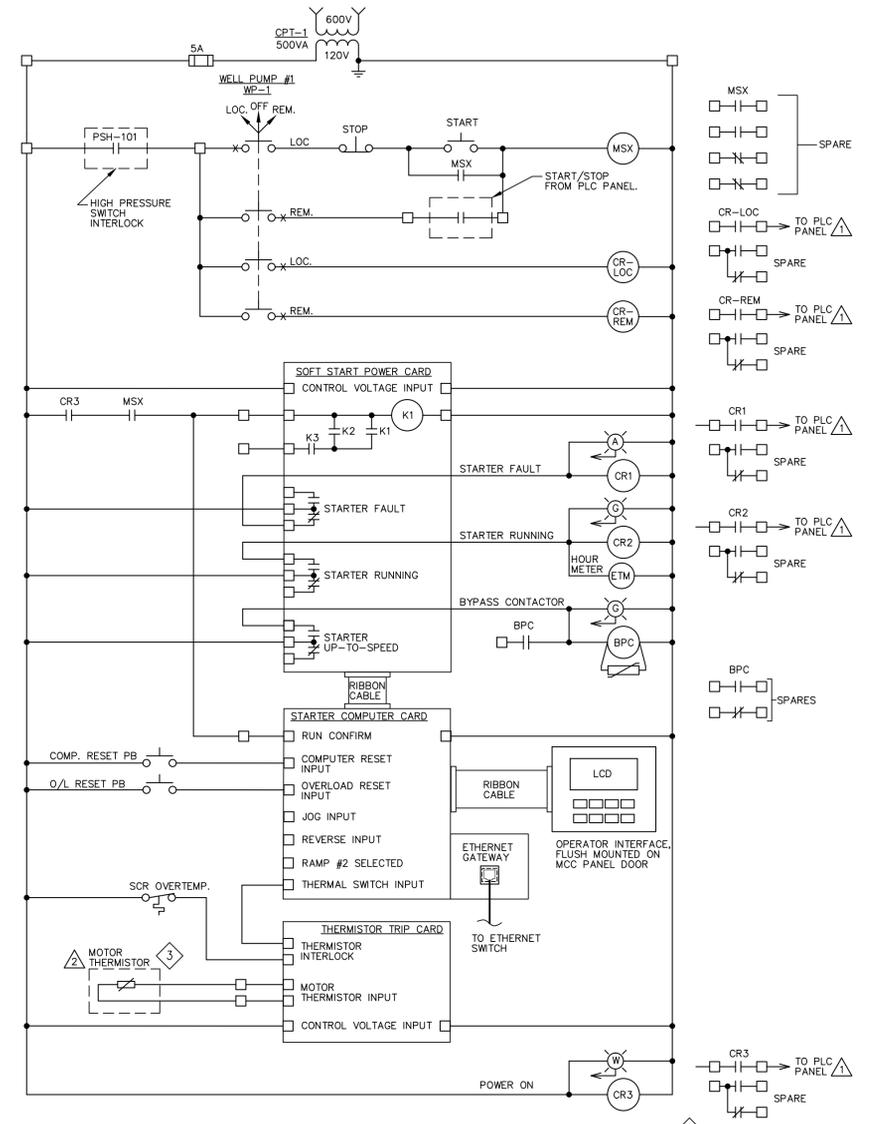
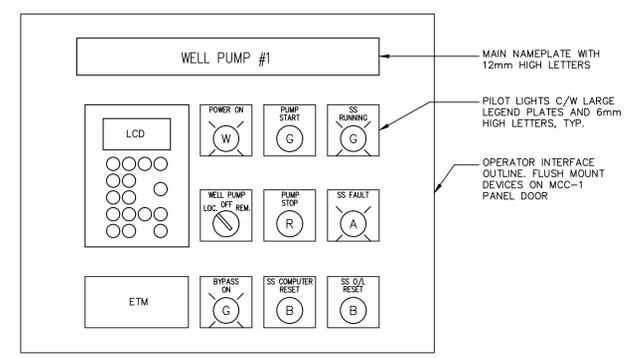


6 UNIT HEATER ELEMENTARY WIRING DIAGRAM
E2.3 - DIAGRAM FOR WELL #1 PUMPHOUSE UNIT HEATERS UH-1 & UH-2

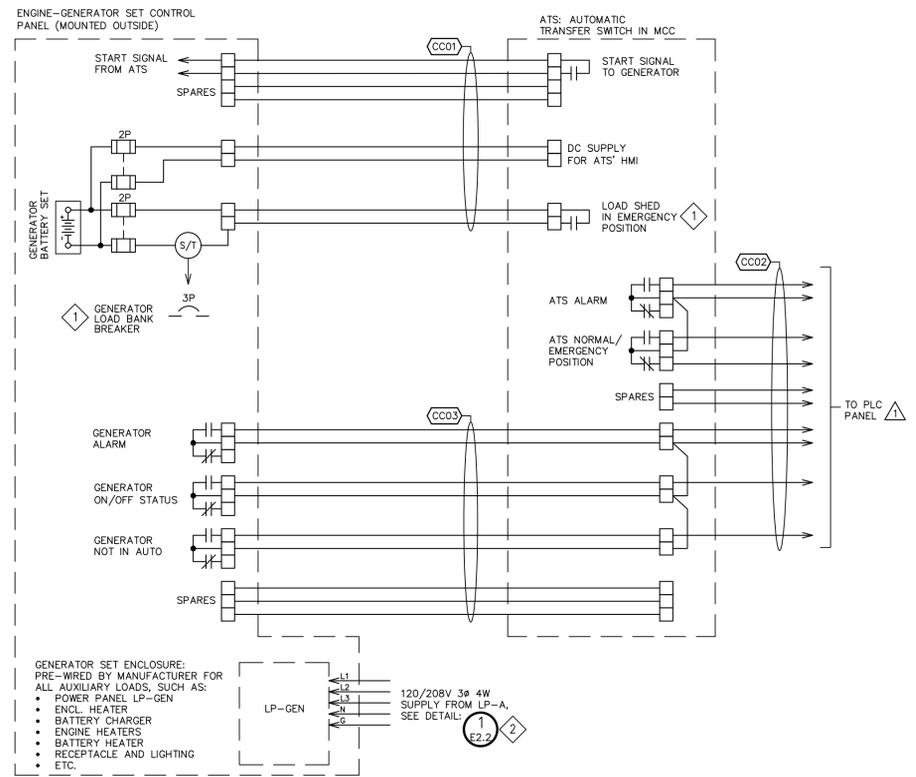
CONTROL CABLE SCHEDULE	
CC01	8C#12AWG + GND, Cu, RW90 IN 41mmØ RPVC AND U/G DUCT
CC02	10C#14AWG + GND, Cu, RW90 IN 27mmØ RPVC
CC03	10C#14AWG + GND, Cu, RW90 IN 41mmØ RPVC AND U/G DUCT



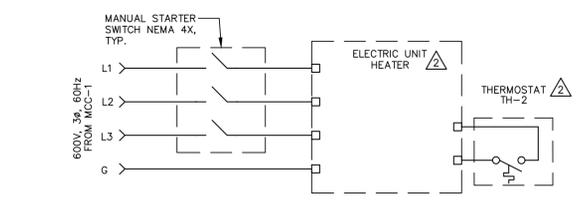
5 ACCESS CONTROL SECURITY SYSTEM
E2.3 - ALL FIELD DEVICE WIRING TO BE 4C#22AWG,Cu,STRANDED OR 2C#22AWG,Cu,STRANDED IN PVC CONDUIT PROVIDE "END OF LINE" RESISTORS AS PER MANUFACTURER'S RECOMMENDATIONS



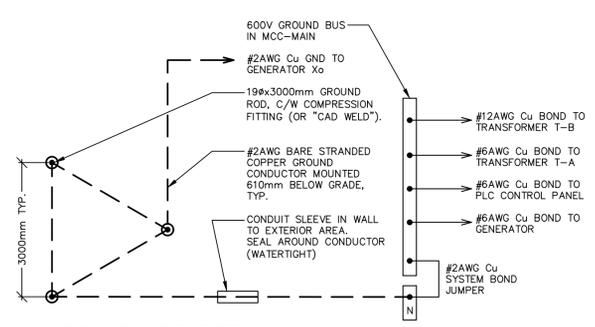
4 SOFTSTARTER ELEMENTARY CONTROL DIAGRAM
E2.3 - NTS, UNMARKED DEVICES LOCATED IN MCC ENCLOSURE
- DIAGRAM FOR WELL #1 PUMP.
- CONCEPT DRAWING ONLY.



1 GENSET & ATS: CONTROL WIRING INTERFACE WIRING DIAGRAM
E2.3 - NTS



3 UNIT HEATER ELEMENTARY WIRING DIAGRAM
E2.3 - DIAGRAM FOR WELL #1 PUMPHOUSE UNIT HEATER, UH-3
- UNIT HEATER UH-3 IS LOCATED IN THE CHEMICAL ROOM AND IS TO INCLUDE LOCAL DISCONNECT, PER OESC.



2 GROUND GRID DETAIL
E2.3 - NTS, DIMENSIONS SHOWN IN mm
- ONLY MAIN ELECTRICAL EQUIPMENT SHOWN

DISCLAIMER AND COPYRIGHT
CONTRACTOR MUST VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME. ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEER BEFORE COMMENCING WORK. DRAWINGS ARE NOT TO BE SCALED.
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No.	DATE	ISSUE/REVISION	No.	DATE	ISSUE/REVISION
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2.	07-18-2025	ISSUED FOR CLIENT REVIEW			
3.	12-09-2025	ISSUED FOR TENDER			

CLIENT: TOWN OF SHELburne
PROJECT: WELL #1 PUMPHOUSE EXPANSION
DRAWING TITLE: WIRING AND ELEMENTARY CONTROL DIAGRAMS

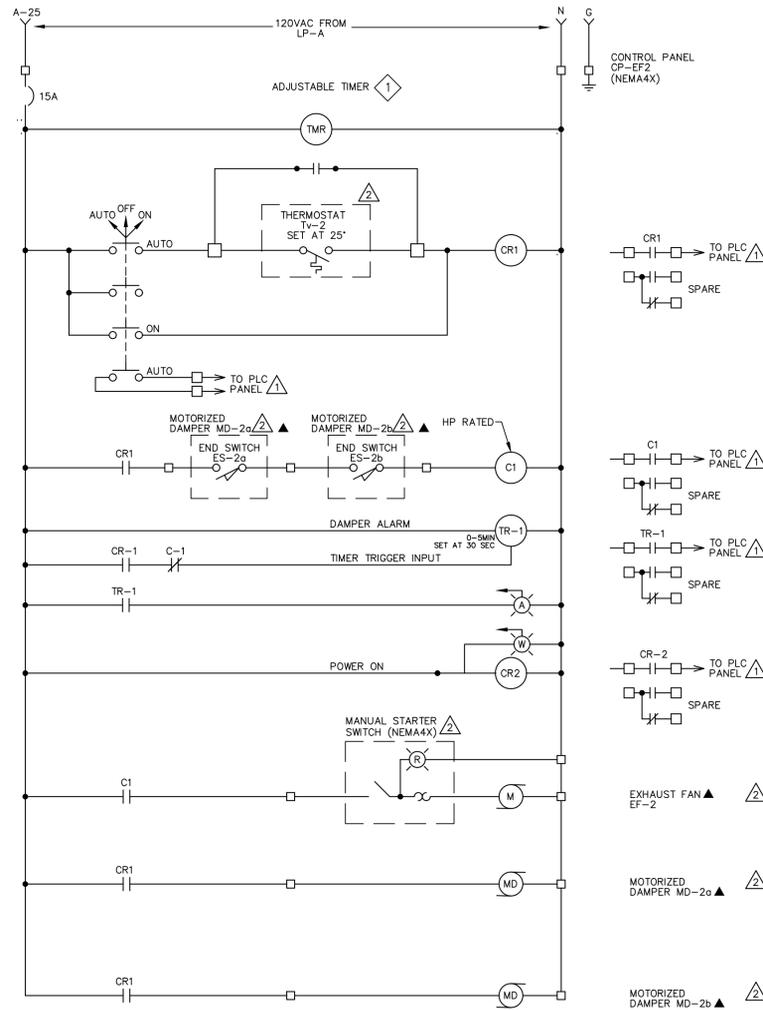
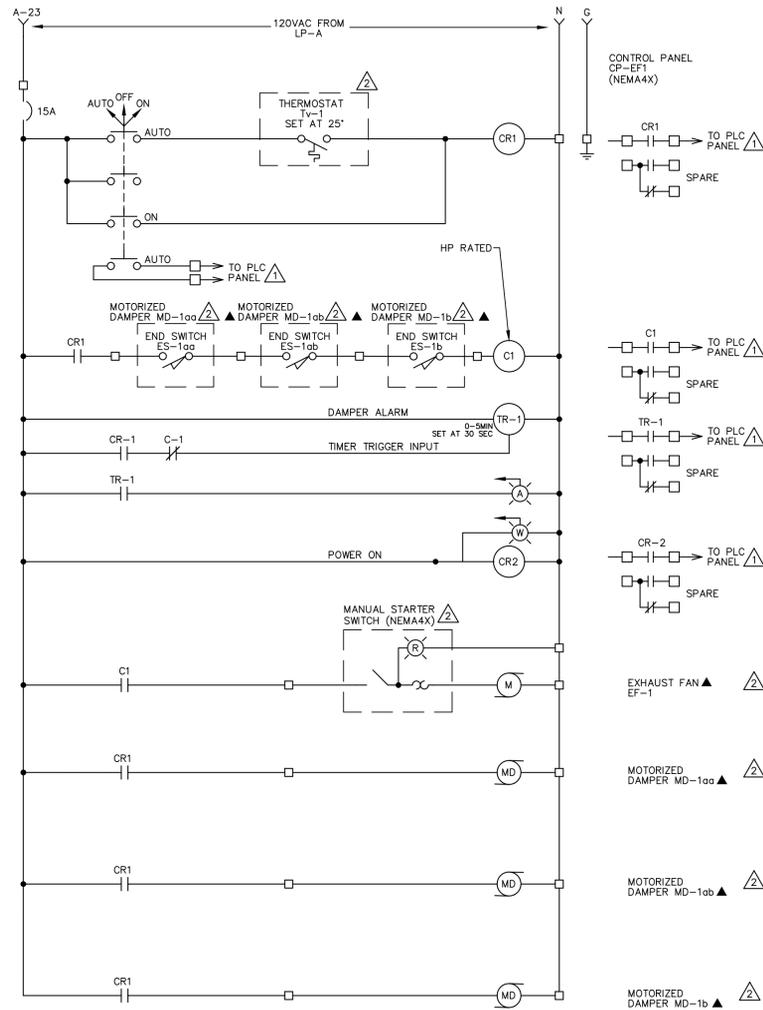
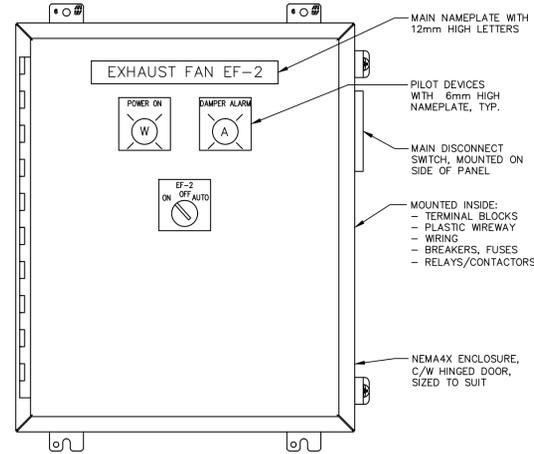
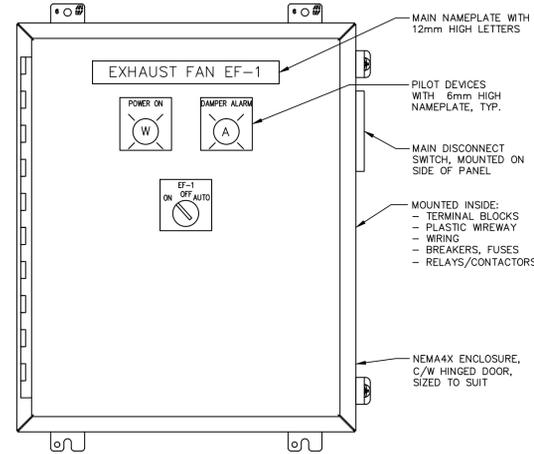
S. BURNETT & ASSOCIATES LIMITED
ENGINEERING AND ENVIRONMENTAL SERVICES
210 BROADWAY, UNIT 203
ORANGEVILLE, ONTARIO L9W 5G4
TELEPHONE: 519-941-2949 FAX: 519-941-2036

DESIGNED BY: S.R.T. DRAWN BY: M.C.G. VERIFIED BY: G.G.R.
SCALE: AS SHOWN PROJECT No.: 16066F-02

E2.3

NOTES

1 PROVIDE A TIMER TO CONTROL EXHAUST FAN TO RUN 10 MINUTES EVERY HOUR. THE RUN TIME IS TO BE ADJUSTABLE. EQUAL TO ALLEN BRADLEY TYPE 700-HX SERIES (REPEAT CYCLE).



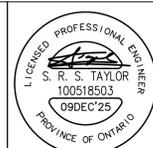
1 EXHAUST FAN EF-1 ELEMENTARY CONTROL DIAGRAM

2 EXHAUST FAN EF-2 ELEMENTARY CONTROL DIAGRAM

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16066F-02



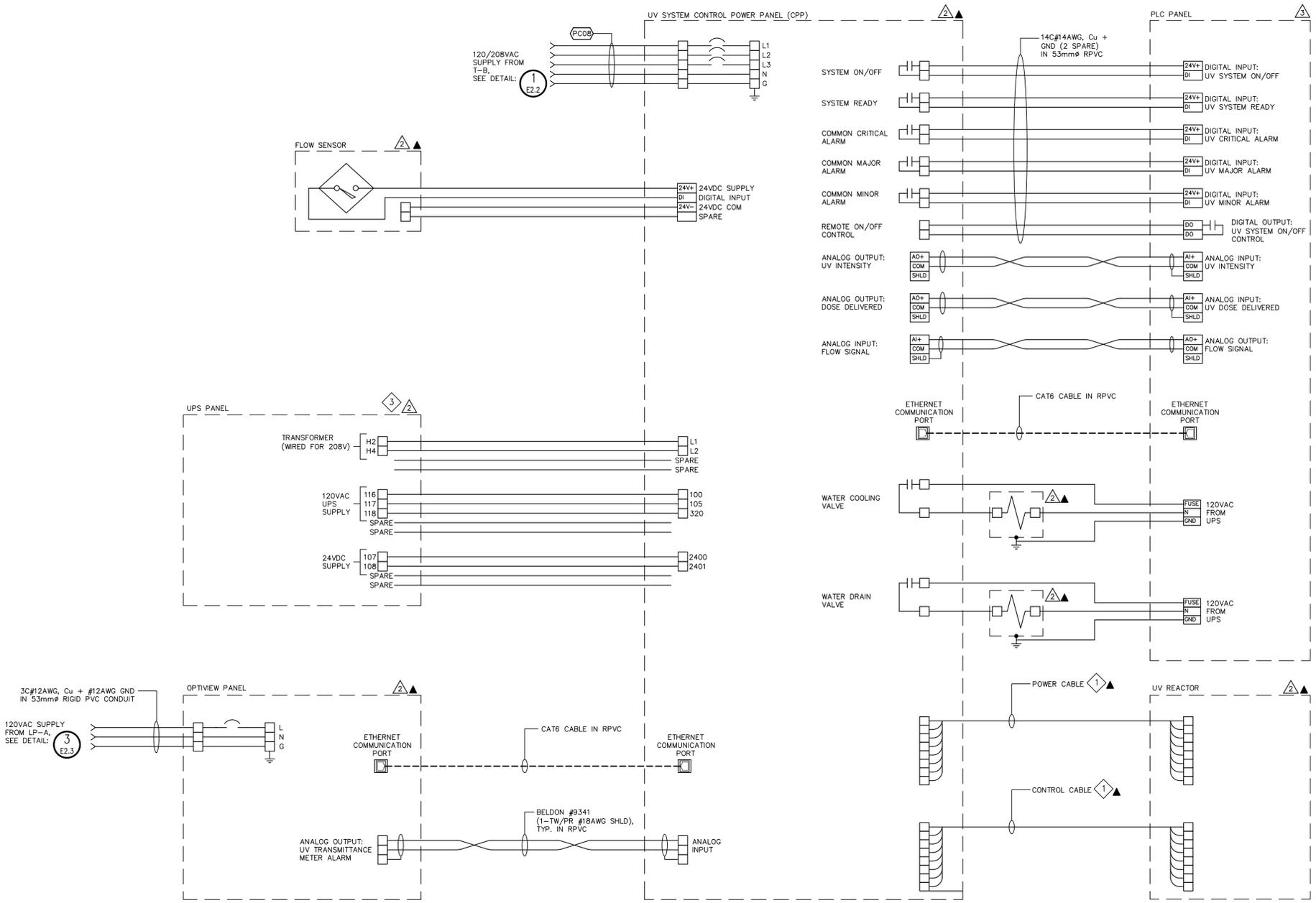
No.	DATE	ISSUE/REVISION	No.	DATE	ISSUE/REVISION
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3.	12-09-2025	ISSUED FOR TENDER			

CLIENT	TOWN OF SHELburne
PROJECT	WELL #1 PUMPHOUSE EXPANSION
DRAWING TITLE	EXHAUST FAN ELEMENTARY CONTROL DIAGRAMS

		S. BURNETT & ASSOCIATES LIMITED ENGINEERING AND ENVIRONMENTAL SERVICES 210 BROADWAY, UNIT 203 ORANGEVILLE, ONTARIO L9W 5G4 TELEPHONE: 519-941-2949 FAX: 519-941-2036	
DESIGNED BY	S.R.T.	DRAWN BY	M.C.G.
VERIFIED BY	G.G.R.	PROJECT No.	16066F-02
SCALE	AS SHOWN	DRAWING No.	E2.4

NOTES

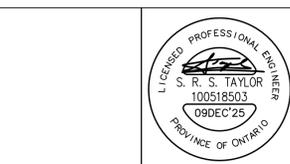
- 1 POWER AND CONTROL CABLES SUPPLIED BY UV EQUIPMENT MANUFACTURER. CABLES TO BE ROUTED IN SEPARATE RPVC RACEWAYS TO UV EQUIPMENT. QUANTITY OF WIRES WITHIN CABLES IS UNCERTAIN. CONTRACTOR TO PROVIDE ALL TERMINATIONS REQUIRED AS INDICATED IN EQUIPMENT SHOP DRAWINGS AND AS DIRECTED BY EQUIPMENT MANUFACTURER. POWER AND CONTROL CABLES TO BE 6M (20ft). CONTRACTOR TO ENSURE ROUTING OF CABLES DOES NOT EXCEED PROVIDED CABLE LENGTHS.
- 2 FLOW SENSOR, MODEL IFM S15000, INCLUDES M12, 4-PIN CONNECTOR. CONTRACTOR TO COORDINATE REQUIRED CABLE AND LENGTH FROM EQUIPMENT SUPPLIER AND ENSURE ADEQUATE LENGTH OF CABLE. CABLE TO BE INSTALLED WITHIN RPVC CONDUIT.
- 3 WIRING INDICATED BASED ON PROPOSED CONDITIONS. WIRING REQUIREMENTS OF NEW UPS PANEL TO NEW UV CONTROL PANEL TO BE CONFIRMED DURING CONSTRUCTION WITH MANUFACTURER AND EQUIPMENT SHOP DRAWINGS.



1 UV SYSTEM CONTROL WIRING INTERFACE DIAGRAM

- NTS
- DIAGRAM BASED ON TROJAN UV SYSTEM AS SUPPLIED BY H2FLOW
- FINAL WIRING REQUIREMENTS TO BE CONFIRMED WITH EQUIPMENT SHOP DRAWINGS
- CONTRACTOR TO REVIEW SUPPLIERS SHOP DRAWINGS AND CONSULT WITH SUPPLIER PRIOR TO INSTALLATION

DISCLAIMER AND COPYRIGHT
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3.	12-09-2025	ISSUED FOR TENDER			

CLIENT: TOWN OF SHELburne
 PROJECT: WELL #1 PUMPHOUSE EXPANSION
 DRAWING TITLE: UV SYSTEM ELEMENTARY CONTROL DIAGRAM

S. BURNETT & ASSOCIATES LIMITED
 ENGINEERING AND ENVIRONMENTAL SERVICES
 210 BROADWAY, UNIT 203
 ORANGEVILLE, ONTARIO L9W 5G4
 TELEPHONE: 519-941-2949 FAX: 519-941-2036

DESIGNED BY: S.R.T. DRAWN BY: M.C.G. VERIFIED BY: G.G.R.
 SCALE: AS SHOWN PROJECT No.: 16066F-02

E2.5

LOCATED IN FIELD

MAIN PLC PANEL

NOTES

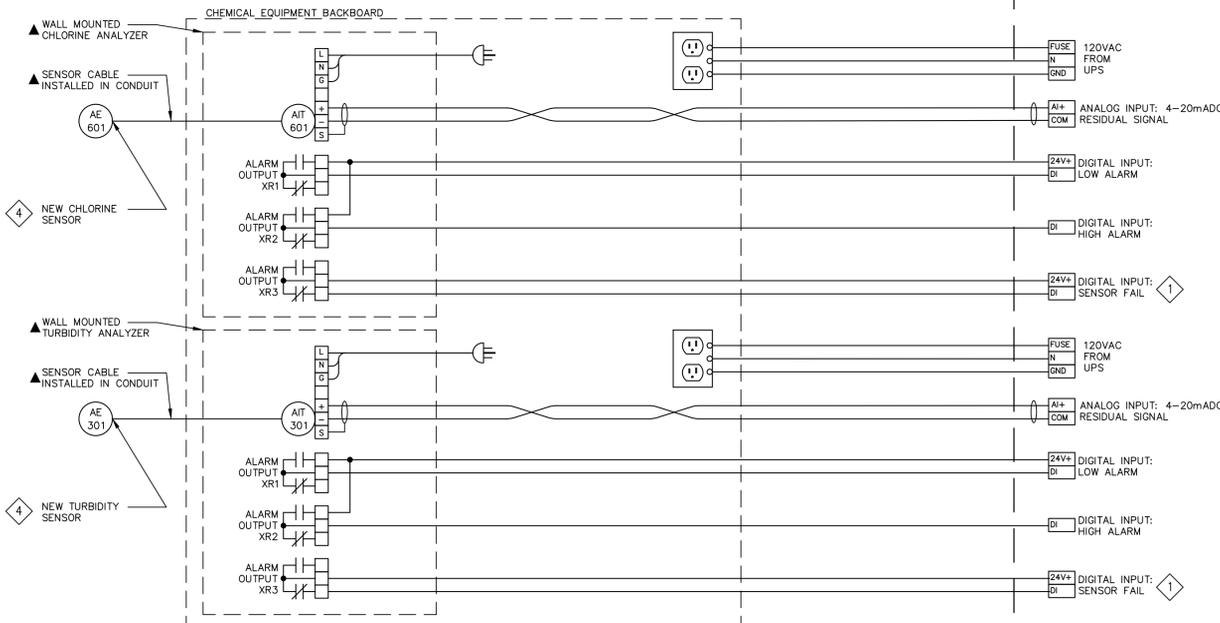
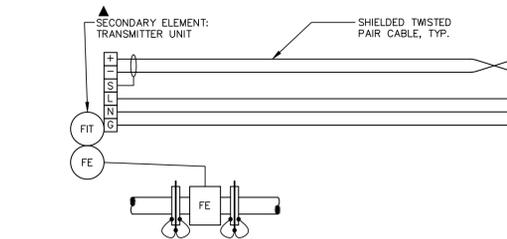
- 1 CONNECT ALL ALARM SIGNALS AS FAIL SAFE FROM FIELD DEVICE TO PLC PANEL (i.e. ALARM SIGNAL TO OPERATE WHEN CONTACT SIGNAL OPENS OR AN OPEN WIRE CONDITION).
2 EQUIPMENT IS EXISTING AND IS TO BE RE-CONNECTED TO NEW PLC PANEL. CONTRACTOR TO REVIEW EXISTING WIRING IN RELATION TO CONTRACT DRAWINGS AND DISCUSS WITH ENGINEER. COORDINATE REQUIRED WIRING WITH PLC SHOP DRAWING SUBMISSION. CONTRACTOR TO REMOVE EXISTING CONDUIT AND WIRING. PROVIDE NEW CONDUIT AND WIRING FROM FIELD DEVICE TO NEW PLC PANEL. CHEMICAL AND TURBIDITY ANALYZERS TO BE RELOCATED TO PROPOSED CHEMICAL ROOM.
3 PROVIDE TYPE 4X JUNCTION BOX, SIZED TO SUIT. PROVIDE COMPRESSION CONNECTIONS COMPLETE WITH HEAT SHRINK AND WRAPPED WITH VULCANIZING TAPE TO "MAKE-SAFE" ALL WIRING CONNECTIONS AS REQUIRED BY DESC.
4 CONTRACTOR TO PROVIDE NEW SENSOR COMPATIBLE WITH EXISTING TRANSMITTER EQUIPMENT.

LOCATED IN FIELD

MAIN PLC PANEL

1 PLANT FLOW INSTRUMENT LOOP DIAGRAM

E3.1 - FLOW METER: FE/FIT-1



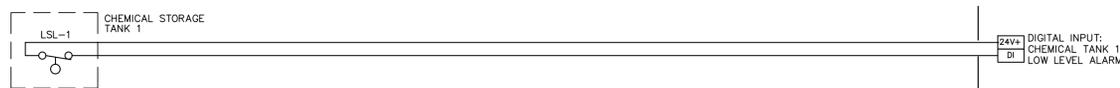
2 TURBIDITY AND CHLORINE ANALYZER INSTRUMENT LOOP DIAGRAM

E3.1 - DIAGRAM FOR CHLORINE AND TURBIDITY MONITOR



3 PRESSURE TRANSDUCER LEVEL INSTRUMENT LOOP DIAGRAM

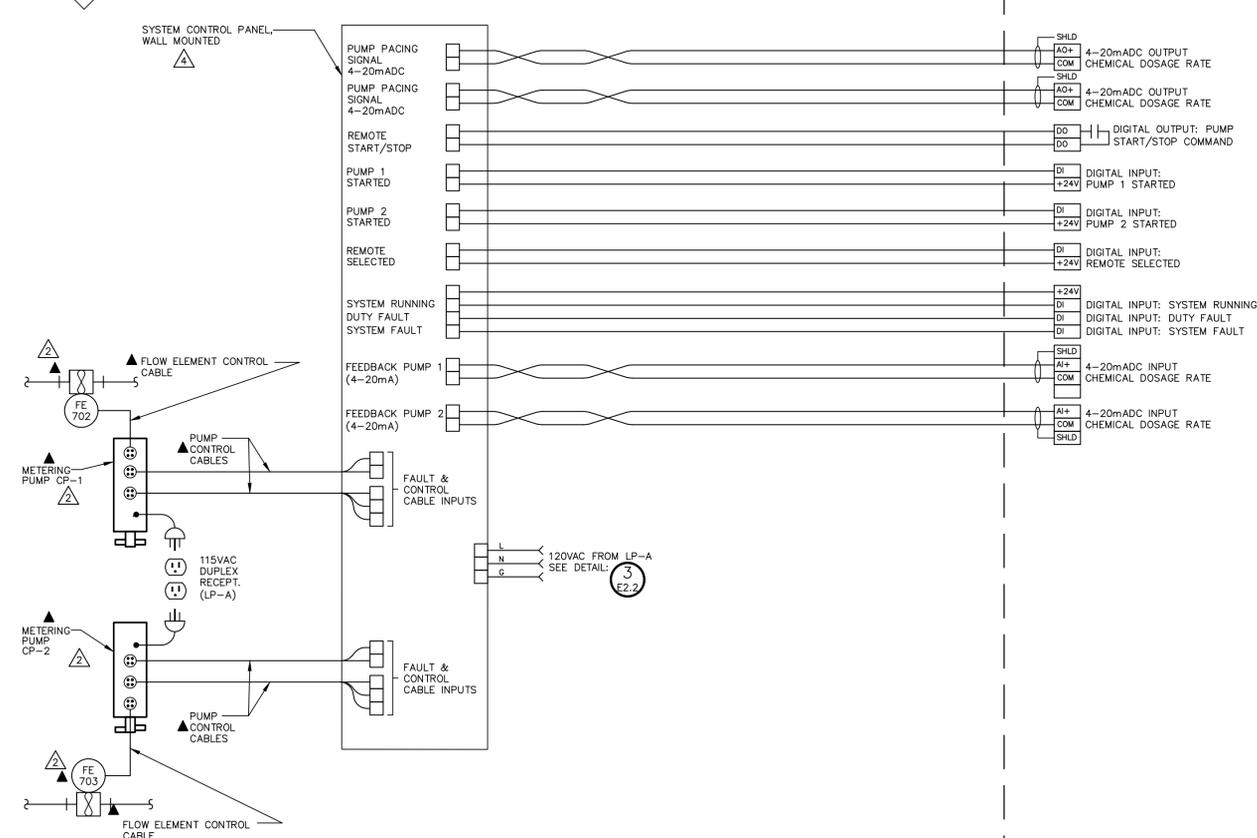
E3.1 - DIAGRAM FOR WELL PUMP LEVEL: PT-1



4 CHEMICAL STORAGE TANK WIRING INTERFACE DIAGRAM

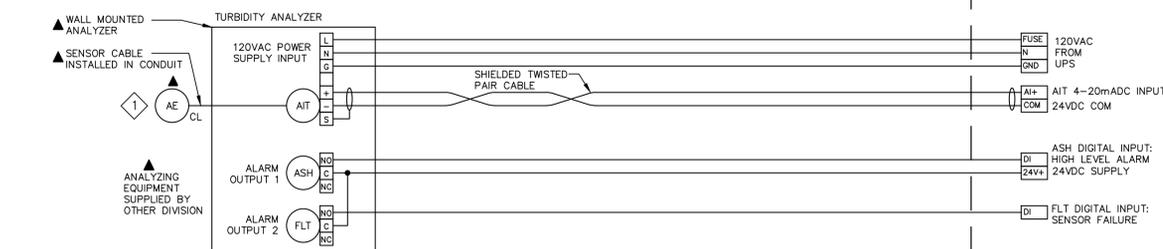
E3.1 - DIAGRAM FOR CHEMICAL STORAGE TANK 1 AND LSL-1 - SIMILAR DIAGRAM FOR CHEMICAL STORAGE TANK 2 AND LSL-2

3 LOCATE SENSOR AS PER MANUFACTURERS RECOMMENDATIONS.



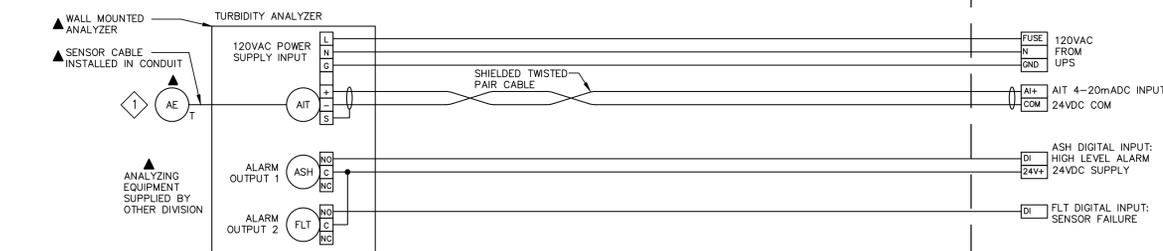
5 CHEMICAL FEED SYSTEM WIRING INTERFACE DIAGRAM

E3.1 - DIAGRAM FOR DISTRIBUTION CHLORINATION INJECTION SYSTEM: CP-1 & CP-2 - SIMILAR DIAGRAM FOR CP-3 & CP-4



6 CHLORINE ANALYZER INSTRUMENT LOOP DIAGRAM

E3.1 - DIAGRAM FOR RAW WATER CHLORINE ANALYZER: AE/AIT-501, ASH-501 & FLT-501



7 TURBIDITY ANALYZER INSTRUMENT LOOP DIAGRAM

E3.1 - DIAGRAM FOR RAW WATER TURBIDITY ANALYZER: AE/AIT-101, ASH-101 & FLT-101

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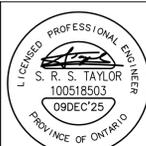


Table with 4 columns: No., DATE, ISSUE/REVISION, No., DATE, ISSUE/REVISION. Contains revision history for the drawing.

TOWN OF SHELBURNE WELL #1 PUMPHOUSE EXPANSION INSTRUMENTATION LOOP DIAGRAMS SHEET 1

Client information: S. BURNETT & ASSOCIATES LIMITED, 210 BROADWAY, UNIT 203, ORANGEVILLE, ONTARIO L9W 5G4. Includes designer (S.R.T.), drafter (M.C.G.), checker (G.G.R.), and scale (AS SHOWN). Drawing number: 16066F-02.

E3.1

LOCATED IN FIELD

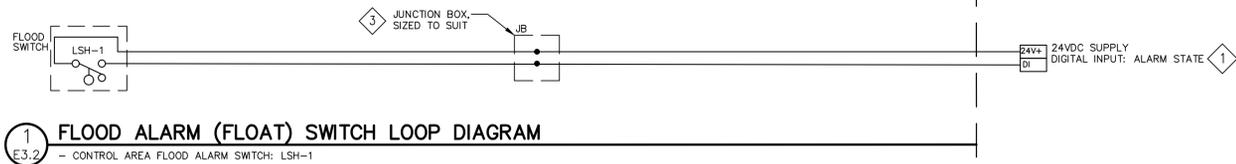
MAIN PLC PANEL

NOTES

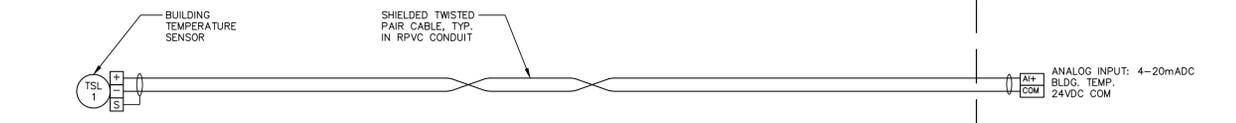
- 1. CONNECT ALL ALARM SIGNALS AS FAIL SAFE FROM FIELD DEVICE TO PLC PANEL (i.e. ALARM SIGNAL TO OPERATE WHEN CONTACT SIGNAL OPENS OR AN OPEN WIRE CONDITION).
- 2. AUTODIALER IS NEW. CONTRACTOR TO INSTALL AUTODIALER IN WELL #1 PUMPHOUSE BUILDING AND PROVIDE ALL NECESSARY CONDUIT AND WIRING. CONTRACTOR TO PROVIDE ALL REQUIRED PROGRAMMING FOR ALARMS, ALARMS TO BE CONFIRMED DURING CONSTRUCTION.
- 3. PROVIDE TYPE 4X JUNCTION BOX, SIZED TO SUIT. PROVIDE COMPRESSION CONNECTIONS COMPLETE WITH HEAT SHRINK AND WRAPPED WITH VULCANIZING TAPE TO "MAKE-SAFE". ALL WIRING CONNECTIONS AS REQUIRED BY CESC.

LOCATED IN FIELD

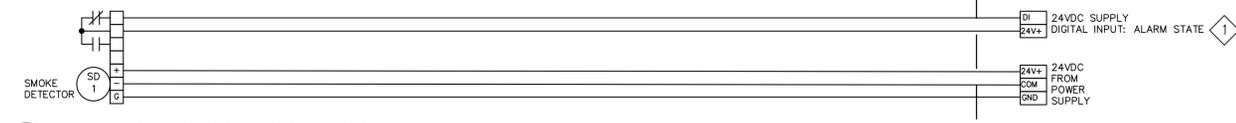
MAIN PLC PANEL



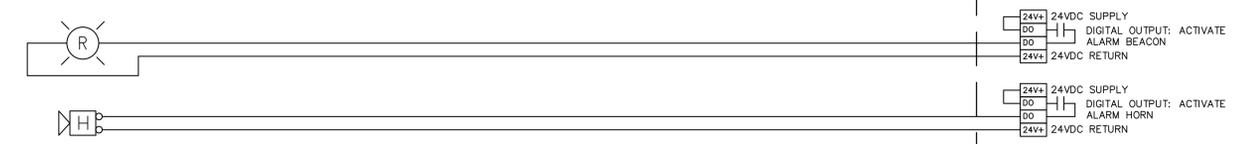
1 FLOOD ALARM (FLOAT) SWITCH LOOP DIAGRAM
- CONTROL AREA FLOOD ALARM SWITCH: LSH-1



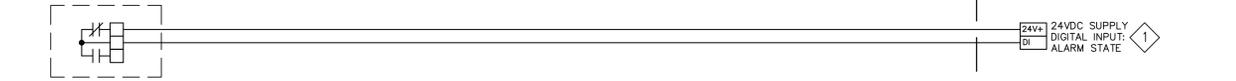
2 BUILDING TEMPERATURE SENSOR INSTRUMENT LOOP DIAGRAM
- TEMPERATURE SENSOR FOR WELL #1 PUMPHOUSE



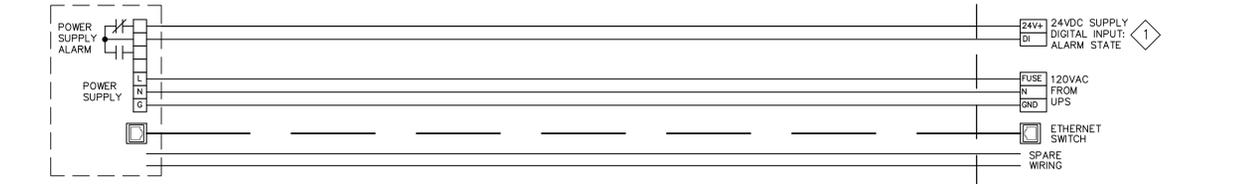
3 SMOKE DETECTOR LOOP DIAGRAM
- WELL #1 PUMPHOUSE SMOKE DETECTOR: SD-1
- SIMILAR DIAGRAM FOR CHEMICAL ROOM SMOKE DETECTOR (SD-2)



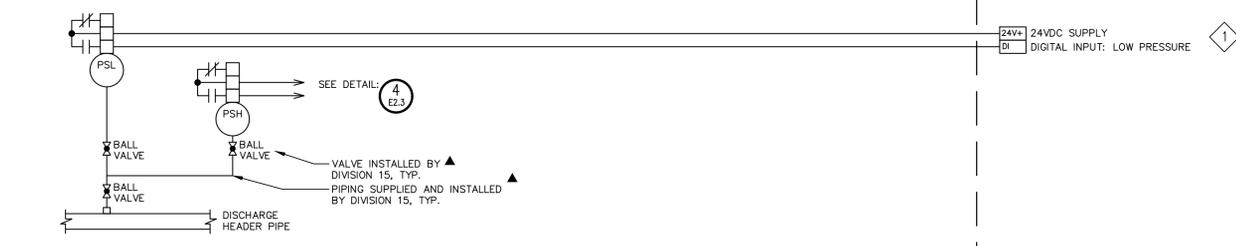
4 ALARM CONTROL WIRING INTERFACE DIAGRAM
- DEVICES MOUNTED ON EXTERIOR WALL, SEE DRAWING E4.3



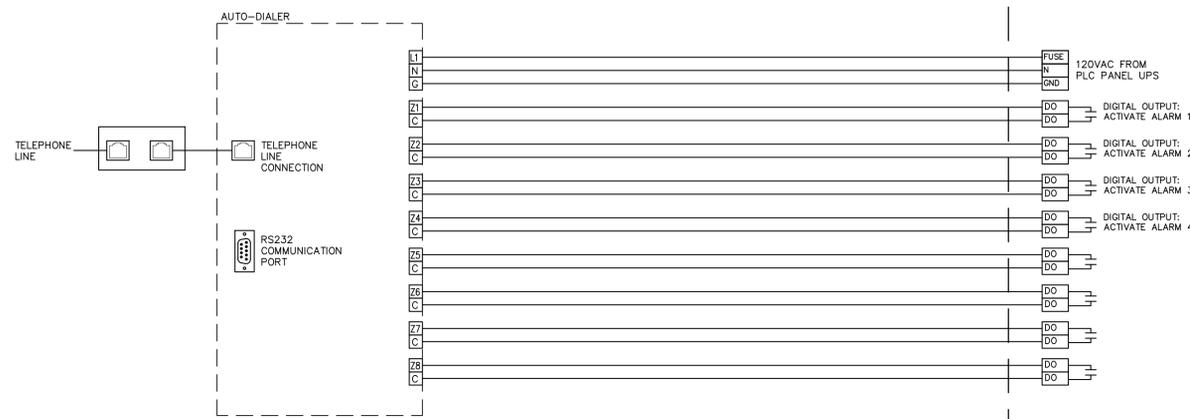
5 SPD: SURGE PROTECTION DEVICE ALARM LOOP DIAGRAM
- DIAGRAM FOR PROPOSED MCC SPD UNIT
- SIMILAR DIAGRAM FOR LIGHTING PANEL LP-A



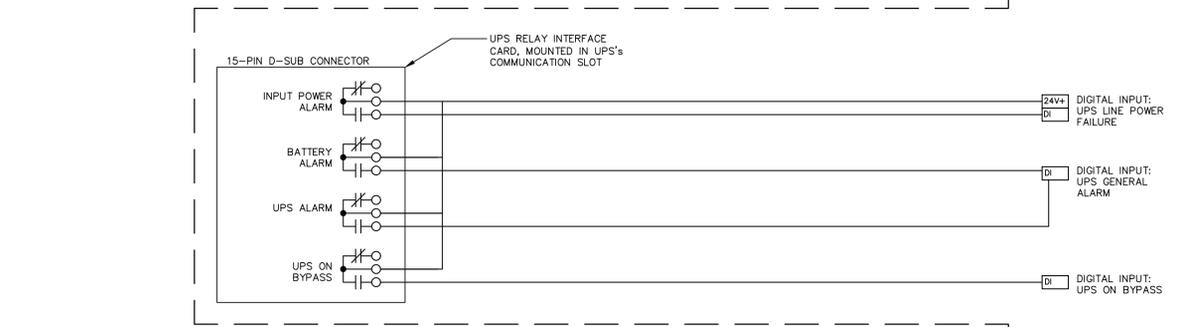
6 MCC POWER METERING UNIT LOOP DIAGRAM
- METERING UNIT LOCATED IN 600V MCC



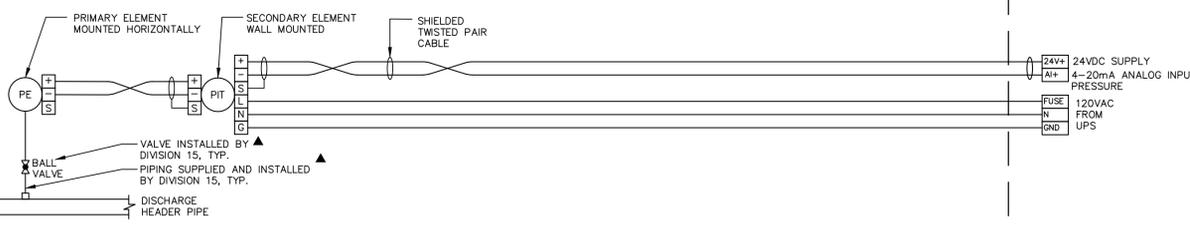
11 PRESSURE SWITCHES INSTRUMENT LOOP DIAGRAM
- DIAGRAM FOR LOW PRESSURE SWITCH PSL-101 AND HIGH PRESSURE SWITCH PSH-101.



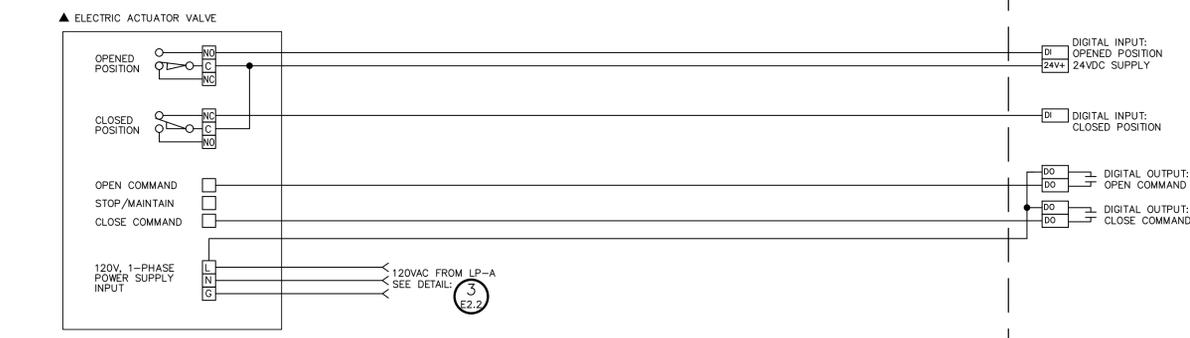
7 AUTODIALER WIRING DIAGRAM
- NTS
- PROVIDE SPARE WIRING FOR ALL UNASSIGNED ALARMS TO PLC PANEL



8 PLC PANEL UPS WIRING INTERFACE DIAGRAM
- NTS
- UPS LOCATED IN PLC PANEL



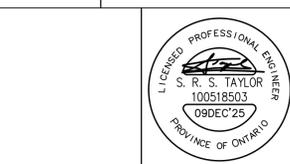
9 PRESSURE TRANSMITTER INSTRUMENT LOOP DIAGRAM
- DIAGRAM FOR PLANT DISTRIBUTION PRESSURE TRANSMITTER: PE/PIT-101



10 ELECTRIC ACTUATED VALVE WIRING DIAGRAM
- DIAGRAM FOR MV-101

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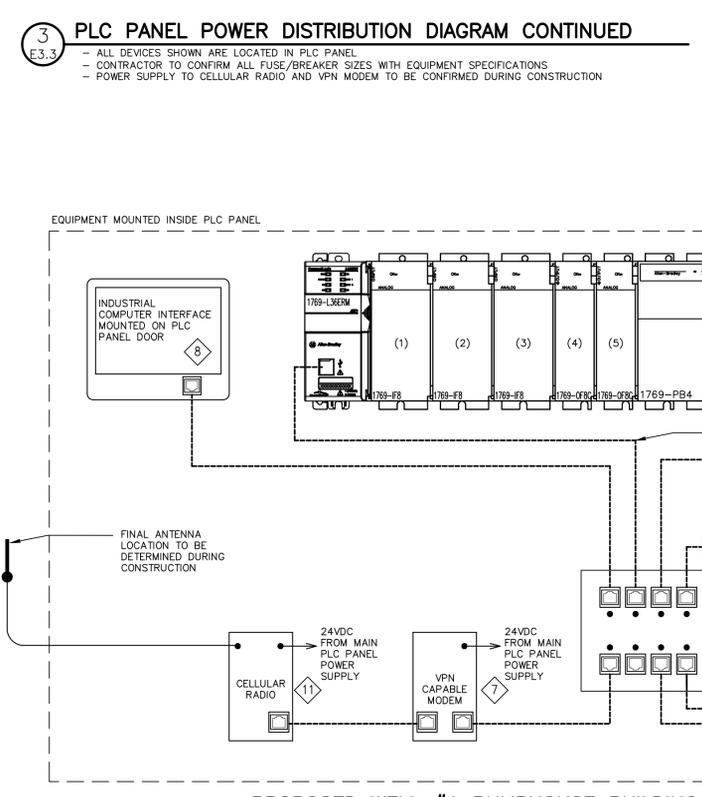
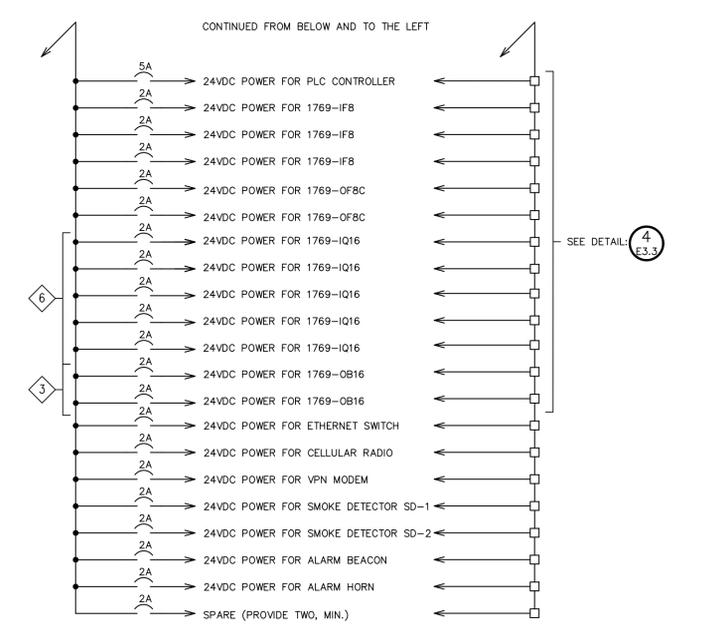
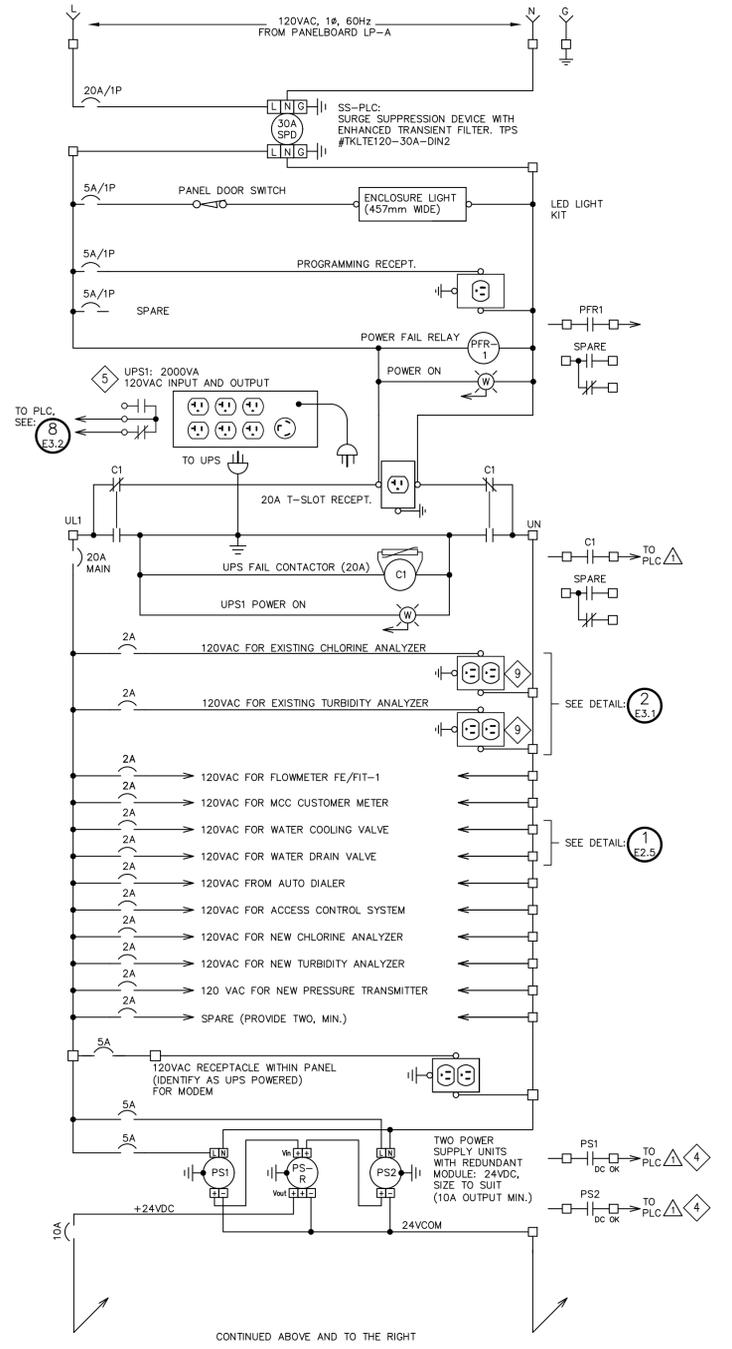
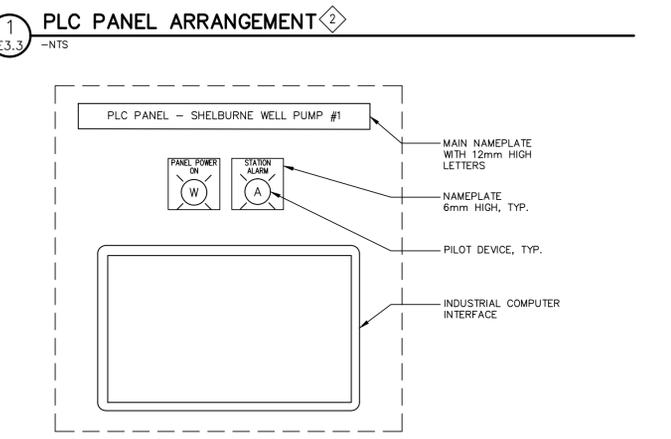
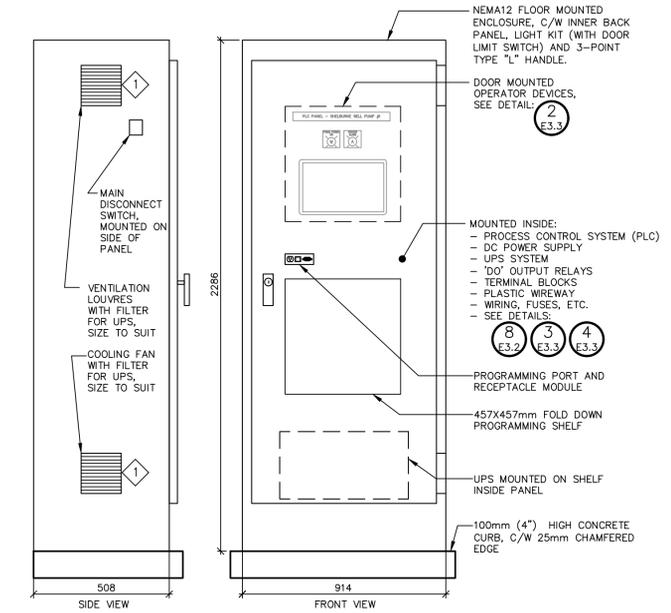
CLIENT: TOWN OF SHELburne
PROJECT: WELL #1 PUMPHOUSE EXPANSION
DRAWING TITLE: PLC INSTRUMENTATION LOOP DIAGRAMS SHEET 2

S. BURNETT & ASSOCIATES LIMITED
ENGINEERING AND ENVIRONMENTAL SERVICES
210 BROADWAY, UNIT 203
ORANGEVILLE, ONTARIO L9W 5G4
TELEPHONE: 519-941-2949 FAX: 519-941-2036

DESIGNED BY: S.R.T. DRAWN BY: M.C.G. VERIFIED BY: G.G.R. DRAWING No.: E3.2

SCALE: AS SHOWN PROJECT No.: 16066F-02

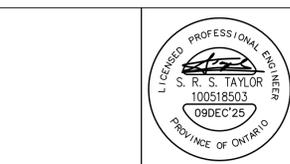
- NOTES**
- CONTRACTOR TO PROVIDE PLC PANEL CIRCULATION VENTS, FAN AND FILTERS PER PANEL MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR TO REPLACE FILTERS AS PART OF COMMISSIONING DAY ACTIVITIES.
 - CONTRACTOR TO CONFIRM SIZE OF PLC PANEL AND INFORM ENGINEER OF ANY CHANGES BEFORE PURCHASE OF EQUIPMENT.
 - PROVIDE A TERMINAL BLOCK STYLE "CONTROL RELAY" FOR EACH PLC DIGITAL OUTPUT.
 - POWER SUPPLY FLOATING SWITCH CONTACT IS NORMALLY OPEN ENERGIZED CLOSED AND WILL OPEN WHEN POWER SUPPLY ALARM EXISTS.
 - INCLUDE AN ALARM CONTACT MODULE FOR UPS UNIT TO MONITOR FOR: LOSS OF NORMAL POWER, BATTERY ALARM, UPS ALARM AND UPS ON BYPASS.
 - PROVIDE MONITORING OF DIGITAL INPUT CARD POWER SUPPLY FOR EACH DIGITAL INPUT CARD. CONNECT TO LAST DIGITAL INPUT ON EACH CARD.
 - COMMUNICATION PROVIDER TO PROVIDE MODEM. CONTRACTOR TO PROVIDE SHELF WITHIN PLC PANEL FOR MOUNTING OF MODEM. PROVIDE ALL NECESSARY WIRING FOR MODEM INCLUDING POWER CONNECTIONS AND PHONE JACKS.
 - PROVIDE INDUSTRIAL COMPUTER INTERFACE. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
 - RECEPTACLES LOCATED ON ANALYZER EQUIPMENT BACKBOARD.
 - CONTRACTOR TO COORDINATE WITH COMMUNICATIONS PROVIDER FOR FINAL LOCATION OF INCOMING TELEPHONE LINE CONNECTION. COORDINATE ALL WORK WITH ENGINEER AND MUNICIPALITY.
 - CONTROL SYSTEMS INTEGRATOR TO PROVIDE PHOENIX CONTACT CELLULAR RADIO AND ANTENNA. RADIO TO BE DIN RAIL MOUNTED WITHIN PLC PANEL. PROVIDE ALL NECESSARY WIRING INCLUDING POWER CONNECTIONS. RADIO FOR COMMUNICATION WITH THE MUNICIPALITY'S SCADA SYSTEM. FINAL MOUNTING OF ANTENNA TO BE CONFIRMED DURING CONSTRUCTION.



DISCLAIMER AND COPYRIGHT

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CLIENT: TOWN OF SHELBURNE

PROJECT: WELL #1 PUMPHOUSE EXPANSION

DRAWING TITLE: PLC PANEL DETAILS

S. BURNETT & ASSOCIATES LIMITED

ENGINEERING AND ENVIRONMENTAL SERVICES

210 BROADWAY, UNIT 203
ORANGEVILLE, ONTARIO L9W 5G4
TELEPHONE: 519-941-2949 FAX: 519-941-2036

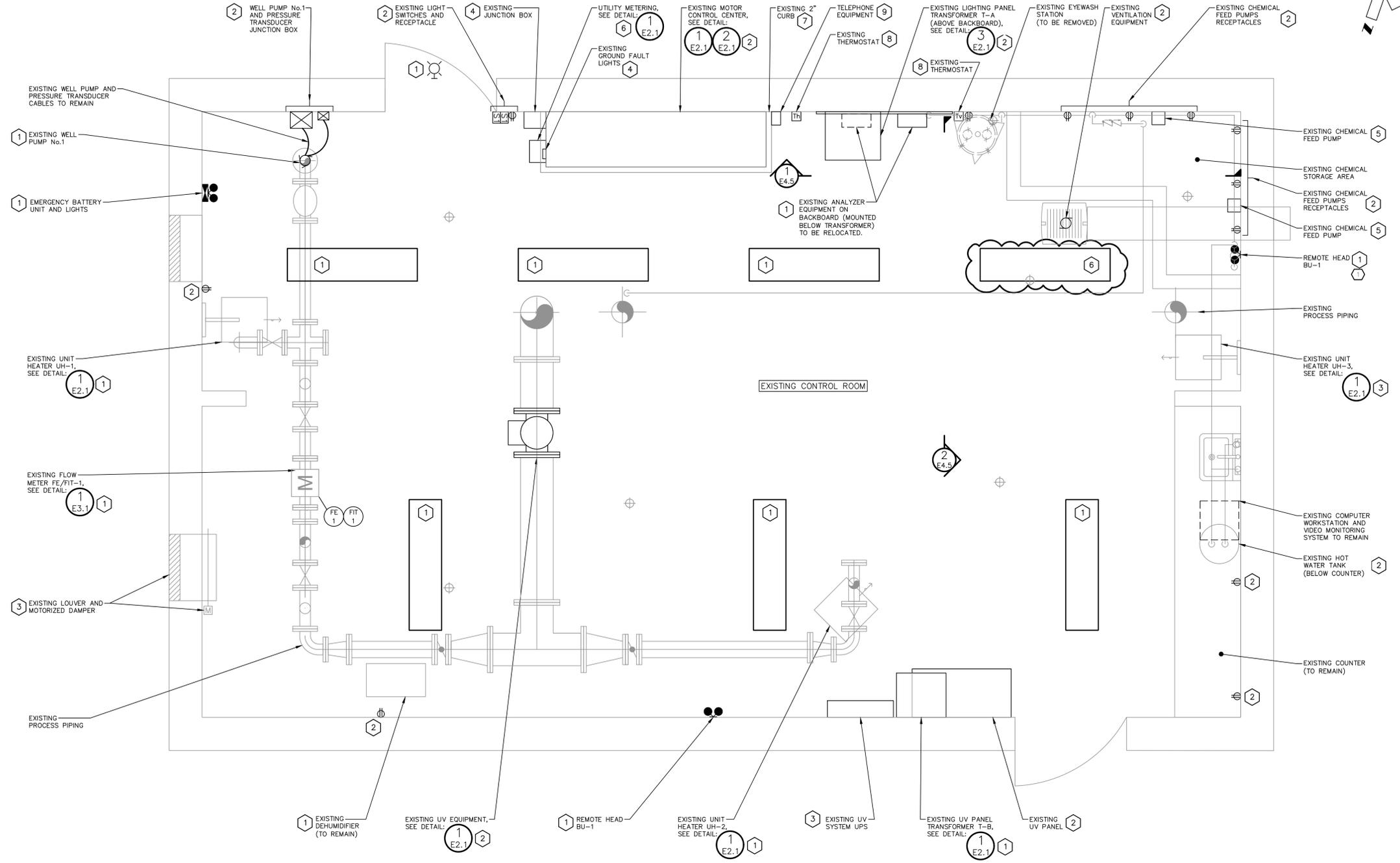
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E3.3

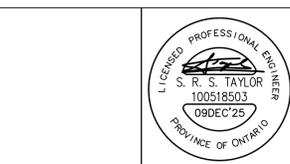
REMOVAL NOTES

- 1 EXISTING EQUIPMENT TO REMAIN, EXISTING CONDUIT AND WIRING TO BE REMOVED AND REPLACED WITH NEW.
- 2 EXISTING EQUIPMENT, CONDUIT AND WIRING TO BE REMOVED AND REPLACED WITH NEW. REFER TO CONTRACT DRAWINGS FOR ADDITIONAL INFORMATION.
- 3 CONTRACTOR TO INVESTIGATE EXISTING CONDITIONS AND DISCUSS WITH ENGINEER PRIOR TO PERFORMING WORK. IT IS ANTICIPATED EQUIPMENT TO REMAIN AND BE RE-CONNECTED TO NEW UV PANEL WITH NEW CONDUIT AND WIRING.
- 4 CONTRACTOR TO INVESTIGATE EXISTING CONDITIONS AND DISCUSS WITH ENGINEER PRIOR TO PERFORMING WORK TO CONFIRM DIRECTION. IT IS ANTICIPATED EQUIPMENT TO BE REMOVED. CONTRACTOR TO INCLUDE REMOVALS OF EQUIPMENT IN SCOPE OF WORK.
- 5 EXISTING CHEMICAL FEED PUMPS TO REMAIN AND BE PLUGGED IN TO NEW RECEPTACLES.
- 6 EXISTING EQUIPMENT TO REMAIN AND BE RELOCATED. PROVIDE NEW CONDUIT AND WIRING TO EQUIPMENT, ONCE RELOCATED.
- 7 EXISTING CONCRETE PAD TO BE RE-WORKED TO SUIT NEW MCC.
- 8 CONTRACTOR TO INVESTIGATE EXISTING CONDITIONS AND DISCUSS WITH ENGINEER PRIOR TO PERFORMING WORK TO CONFIRM DIRECTION. IT IS ANTICIPATED EQUIPMENT TO BE RELOCATED IN AN ALTERNATE LOCATION WITHIN CONTROL ROOM. CONTRACTOR TO INCLUDE RELOCATION OF EQUIPMENT IN SCOPE OF WORK. EXISTING THERMOSTAT TO OPERATE EXISTING UNIT HEATERS UH-1 AND UH-2. UH-3 TO BE PROVIDED WITH NEW THERMOSTAT.
- 9 CONTRACTOR TO COORDINATE THE RELOCATION OF THE EXISTING TELEPHONE EQUIPMENT WITH THE TOWN AND SERVICE PROVIDER. LOCATION TO BE CONFIRMED DURING CONSTRUCTION. LOCATION TO BE WITHIN CONTROL ROOM AND IS TO BE INCLUDED IN CONTRACTORS SCOPE OF WORK.



1 BUILDING LAYOUT – EXISTING CONDITIONS
E4.1 – NTS

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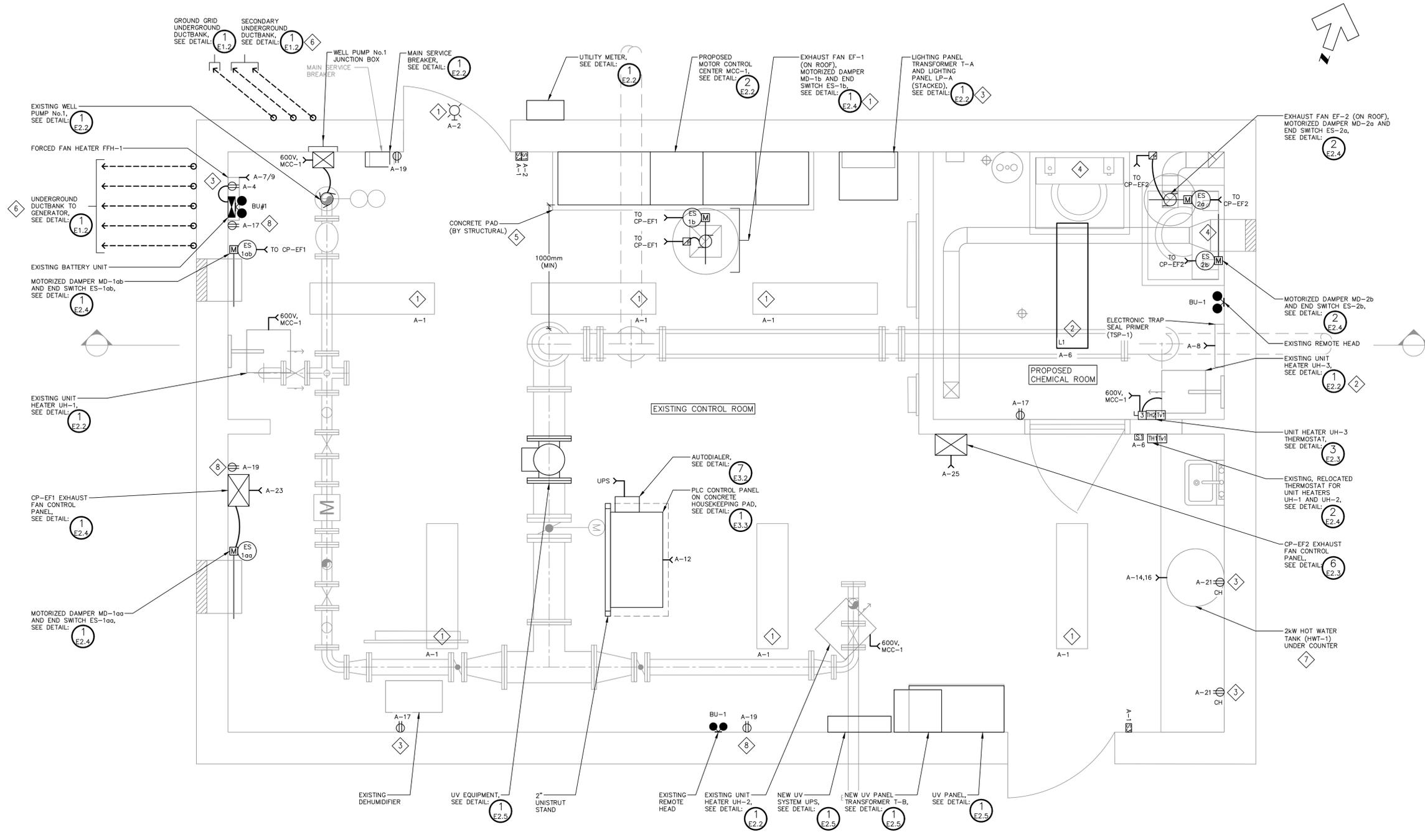


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CLIENT: TOWN OF SHELBURNE
PROJECT: WELL #1 PUMPHOUSE EXPANSION
DRAWING TITLE: EXISTING BUILDING LAYOUT

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ENGINEERING AND ENVIRONMENTAL SERVICES
210 BROADWAY, UNIT 203
ORANGEVILLE, ONTARIO L9W 5G4
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SCALE: AS SHOWN PROJECT No.: 16066F-02



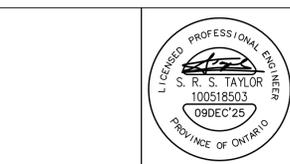
- NOTES**
- 1 EXISTING EQUIPMENT TO REMAIN, PROVIDE NEW CONDUIT AND WIRE AND CONNECT TO NEW LIGHTING PANEL.
 - 2 EXISTING EQUIPMENT TO BE RELOCATED, RELOCATE AND PROVIDE NEW CONDUIT AND WIRE AND CONNECT TO NEW LIGHTING PANEL.
 - 3 EXISTING EQUIPMENT, CONDUIT AND WIRING TO BE REMOVED AND REPLACED WITH NEW. REFER TO CONTRACT DRAWINGS FOR ADDITIONAL INFORMATION.
 - 4 CHEMICAL FEED PUMPS TO REMAIN AND BE PLUGGED IN TO NEW RECEPTACLES. SEE DWG E4.3
 - 5 CONCRETE PAD TO BE RE-WORKED TO SUIT NEW MCC.
 - 6 CONTRACTOR TO COORDINATE THE RELOCATION OF THE EXISTING TELEPHONE EQUIPMENT WITH THE TOWN AND SERVICE PROVIDER. LOCATION IS APPROXIMATE AND TO BE CONFIRMED DURING CONSTRUCTION.
 - 7 EQUIPMENT INSTALLED BY DIVISION 15 WITH CONDUIT AND WIRING PROVIDED BY DIVISION 16.
 - 8 EQUIPMENT IS NEW, PROVIDE NEW CONDUIT AND WIRING TO NEW EQUIPMENT FROM LIGHTING PANEL.
 - 9 EXISTING EQUIPMENT TO REMAIN, PROVIDE NEW CONDUIT AND WIRE AND CONNECT TO NEW PLC PANEL.

LUMINAIRE SPECIFICATIONS

LUMINAIRE LABEL:	L1
MANUFACTURER:	ILP
MODEL:	WTZ AMAZON SERIES
MODEL NUMBER:	WTZ4-6L-U-40-RAFL-SS-SP10
VOLTAGE:	120V
LUMINAIRE LUMENS:	4000
WATTAGE:	47W
COLOR TEMPERATURE:	3000K
MOUNTING:	CEILING SURFACE
COLOR:	WHITE
OPTIONS:	STAINLESS STEEL BRACKETS

1 BUILDING LAYOUT – POWER & LIGHTING PROPOSED CONDITIONS
 E4.2 – SCALE: 1:20

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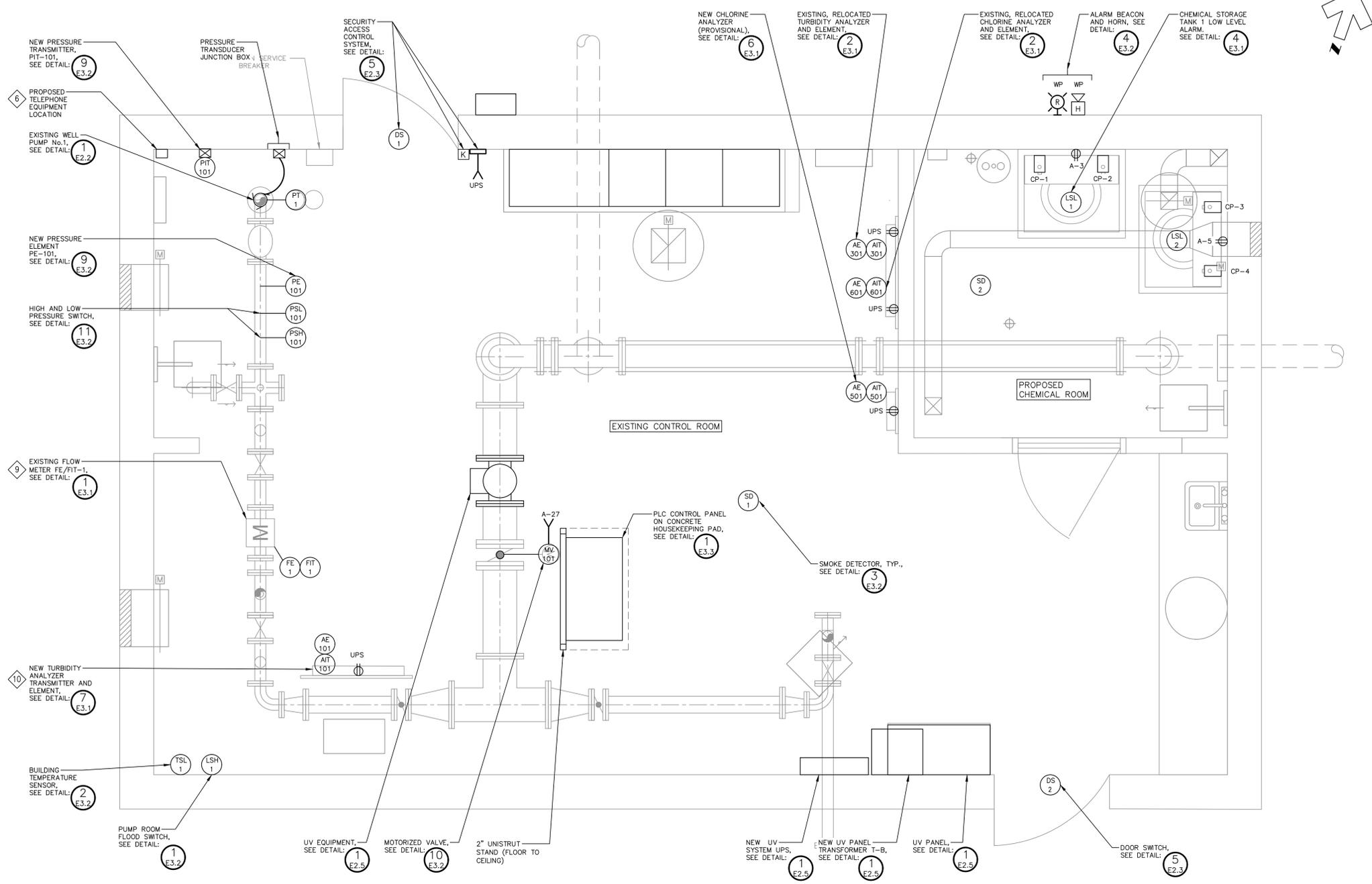
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CLIENT: TOWN OF SHELBURNE
 PROJECT: WELL #1 PUMPHOUSE EXPANSION
 DRAWING TITLE: PROPOSED BUILDING LAYOUT - POWER & LIGHTING

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 ENGINEERING AND ENVIRONMENTAL SERVICES
 210 BROADWAY, UNIT 203
 ORANGEVILLE, ONTARIO L9W 5G4
 TELEPHONE: 519-941-2949 FAX: 519-941-2036

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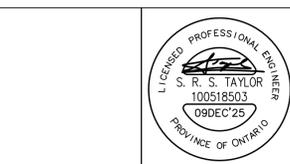
E4.2



- NOTES**
- 1 EXISTING EQUIPMENT TO REMAIN. PROVIDE NEW CONDUIT AND WIRE AND CONNECT TO NEW LIGHTING PANEL.
 - 2 EXISTING EQUIPMENT TO BE RELOCATED. RELOCATE AND PROVIDE NEW CONDUIT AND WIRE AND CONNECT TO NEW LIGHTING PANEL.
 - 3 EXISTING EQUIPMENT, CONDUIT AND WIRING TO BE REMOVED AND REPLACED WITH NEW. REFER TO CONTRACT DRAWINGS FOR ADDITIONAL INFORMATION.
 - 4 CHEMICAL FEED PUMPS TO REMAIN AND BE PLUGGED IN TO NEW RECEPTACLES.
 - 5 CONCRETE PAD TO BE RE-WORKED TO SUIT NEW MCC.
 - 6 CONTRACTOR TO COORDINATE THE RELOCATION OF THE EXISTING TELEPHONE EQUIPMENT WITH THE TOWN AND SERVICE PROVIDER. LOCATION IS APPROXIMATE AND TO BE CONFIRMED DURING CONSTRUCTION.
 - 7 EQUIPMENT INSTALLED BY DIVISION 15 WITH CONDUIT AND WIRING PROVIDED BY DIVISION 16.
 - 8 EQUIPMENT IS NEW, PROVIDE NEW CONDUIT AND WIRING TO NEW EQUIPMENT FROM LIGHTING PANEL.
 - 9 EXISTING EQUIPMENT TO REMAIN. PROVIDE NEW CONDUIT AND WIRE AND CONNECT TO NEW PLC PANEL.
 - 10 FINAL LOCATION OF CHLORINE AND TURBIDITY SENSORS TO BE CONFIRMED DURING CONSTRUCTION.

1 BUILDING LAYOUT – INSTRUMENTATION PROPOSED CONDITIONS
E4.3 – SCALE 1:20

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 PROJECT: WELL #1 PUMPHOUSE EXPANSION
 DRAWING TITLE: PROPOSED BUILDING LAYOUT - INSTRUMENTATION

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 210 BROADWAY, UNIT 203
 ORANGEVILLE, ONTARIO L9W 5G4
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E4.3

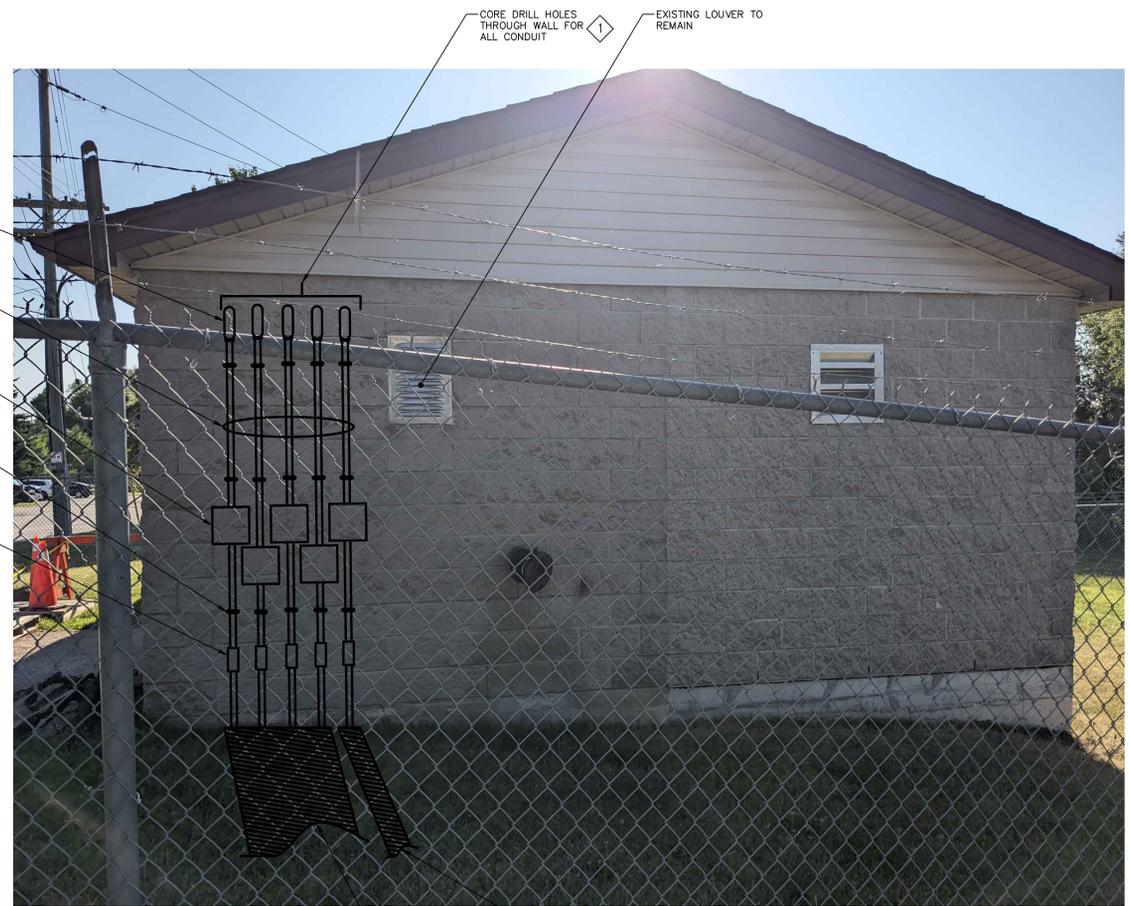
NOTES

1 CORE DRILL HOLE THROUGH WALL AVOIDING WOOD STUDS, WHERE APPLICABLE. PROVIDE WATERPROOF SEALANT AROUND DUCTS TO INSULATE CONTROL ROOM FROM BUILDING EXTERIOR. REFER TO STRUCTURAL FOR ADDITIONAL INFORMATION.

2 CONDUIT ENTRY INTO EXISTING CONTROL BUILDING TO BE COORDINATED DURING CONSTRUCTION TO SUIT INSTALLATION AND INTERFERENCES WITH EXISTING EQUIPMENT.



1 BUILDING SECTION VIEW – NORTH WALL
E4.4 – NTS

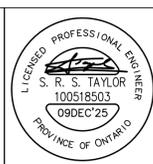


2 BUILDING SECTION VIEW – EAST WALL
E4.4 – NTS

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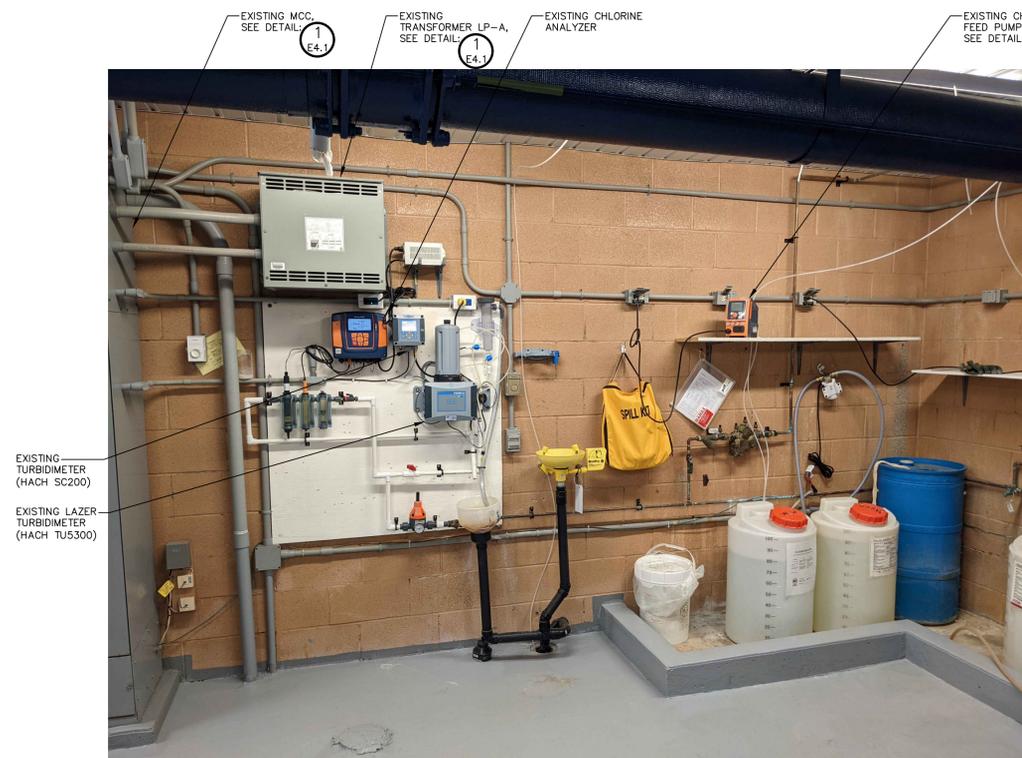
PROJECT: WELL #1 PUMPHOUSE EXPANSION

DRAWING TITLE: BUILDING EXTERIOR PICTURES

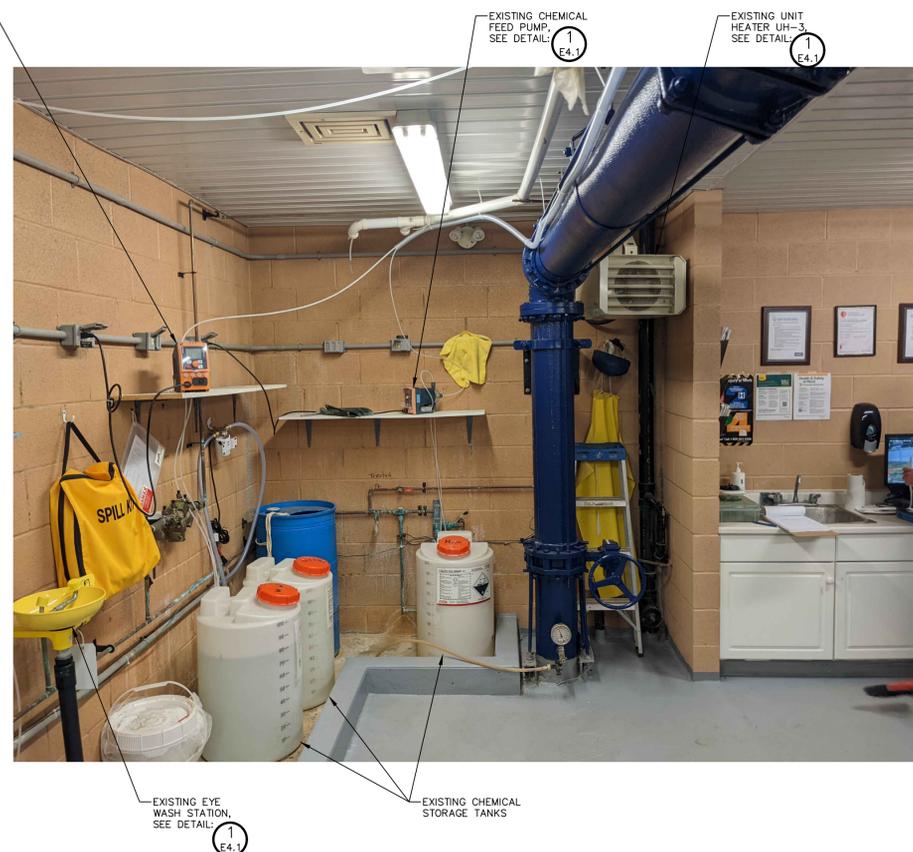
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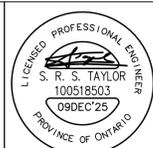


1 E4.5 - NTS
CHEMICAL EQUIPMENT PICTURE - NORTH WALL



2 E4.5 - NTS
CHEMICAL EQUIPMENT PICTURE - EAST WALL

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CLIENT	TOWN OF SHELBURNE
PROJECT	WELL #1 PUMPHOUSE EXPANSION
DRAWING TITLE	BUILDING INTERIOR PICTURES

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VERIFIED BY	G.G.R.	DRAWING No.	E4.5
SCALE	AS SHOWN	PROJECT No.	16066F-02