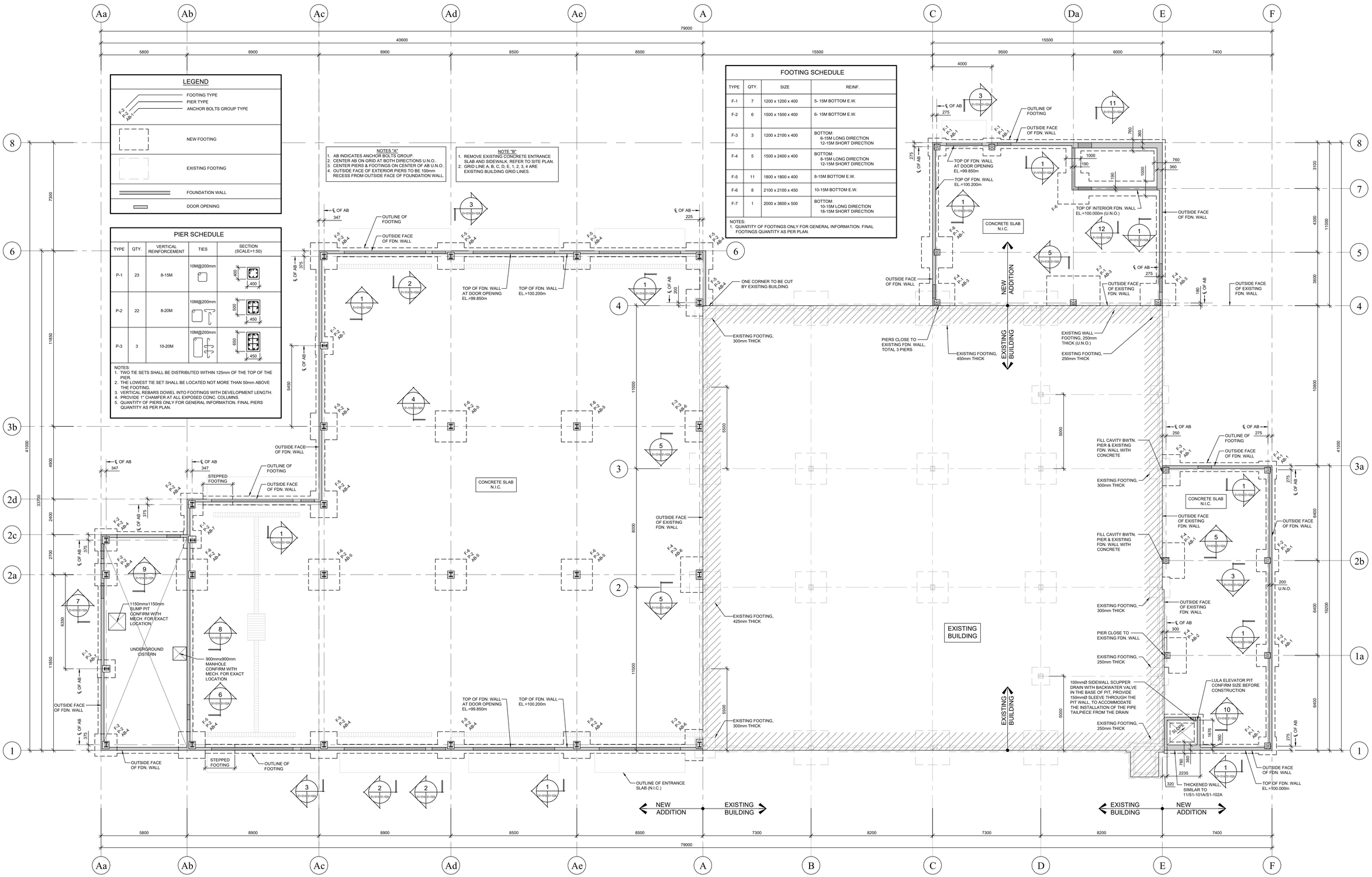

1 PLAN - FOUNDATION
1:100

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PROFESSIONAL ENGINEER
Naomi Lawen
344
07 Oct 2021
Date
PROVINCE OF PRINCE EDWARD ISLAND

Client
PEI Department of Transportation & Infrastructure

Project Title
KCHD Bridgetown Upgrades
Depot Building
Bridgetown, Kings County
Prince Edward Island

Sheet Title
Foundation Plan

No.	Description	Date
0	Issued for Tender	2021-Oct-07

Date: October 7, 2021
Drn By: K.C.
Chk By: N.L. P. Eng.
Revision: 0
Project Number: 211120
Drawing Number: S1-101A

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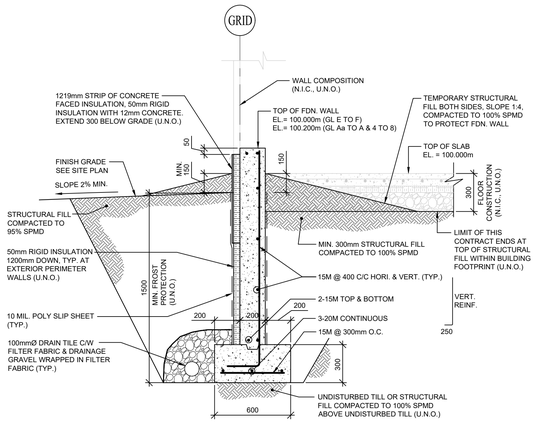
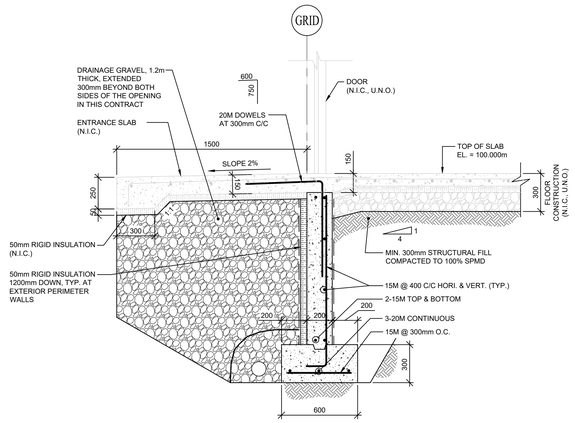
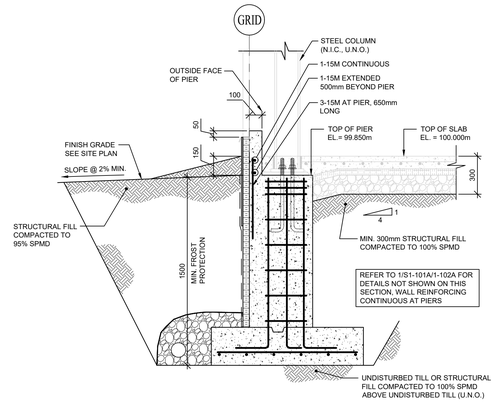


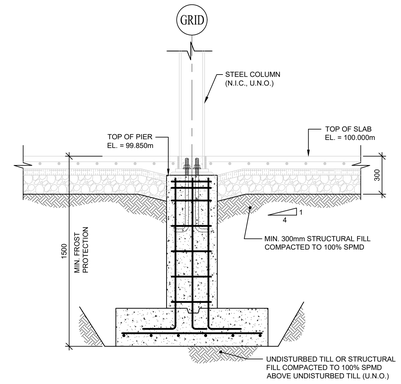
1 SECTION - EXTERIOR FOUNDATION WALL
1:20



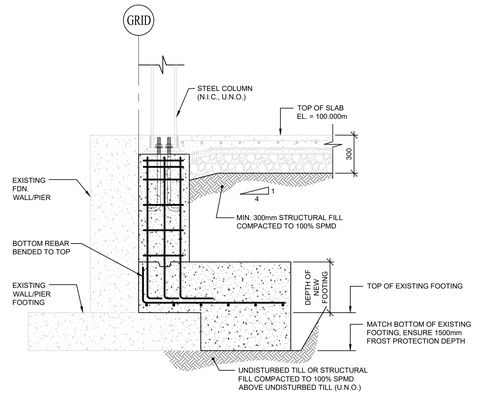
2 SECTION - ENTRANCE SLAB
1:20



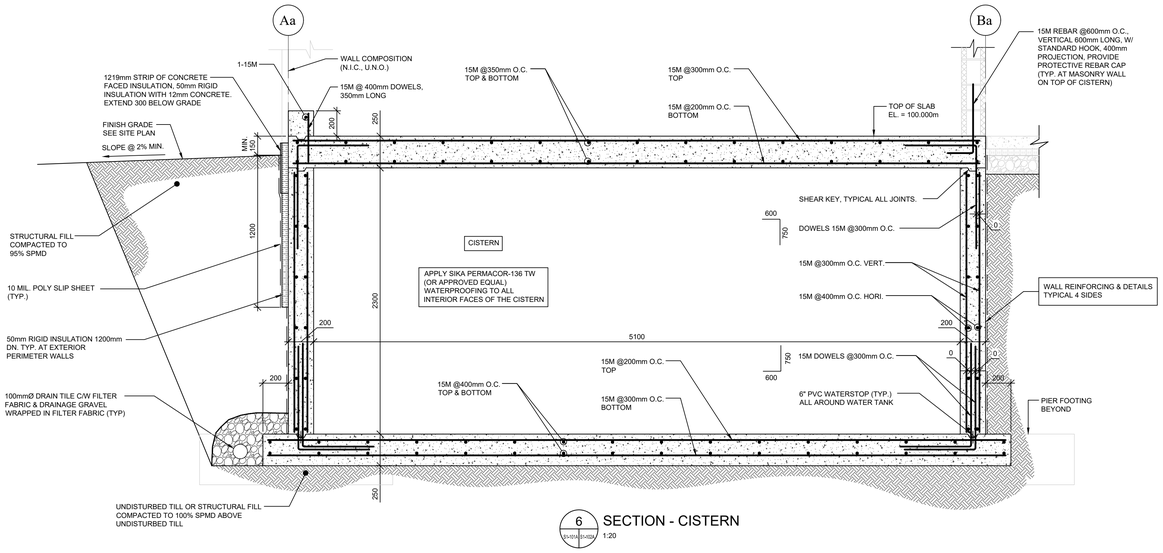
3 SECTION - EXTERIOR PIER
1:20



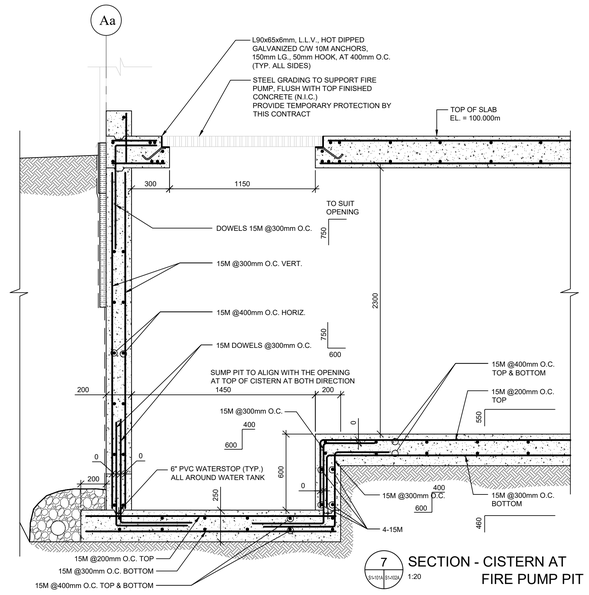
4 SECTION - INTERIOR PIER
1:20



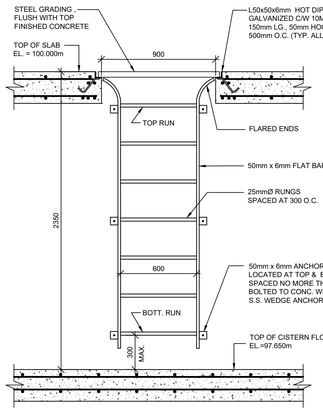
5 SECTION - NEW & EXISTING FOOTING (TYPICAL)
1:20



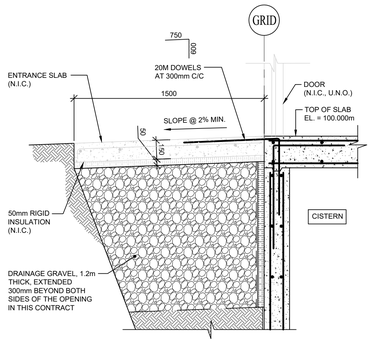
6 SECTION - CISTERN
1:20



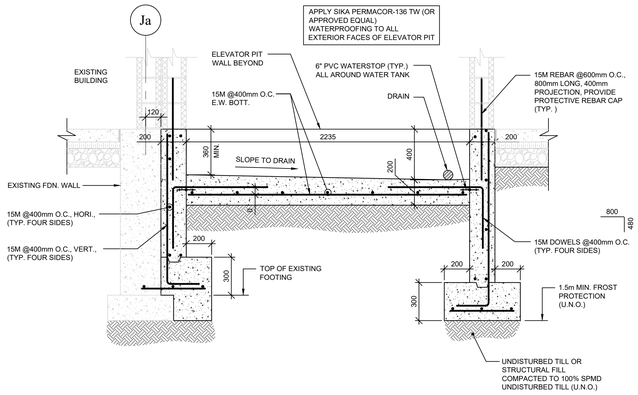
7 SECTION - CISTERN AT FIRE PUMP PIT
1:20



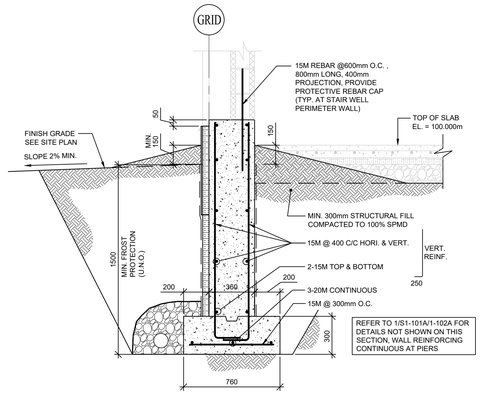
8 SECTION - CISTERN LADDER AT MANHOLE
1:20



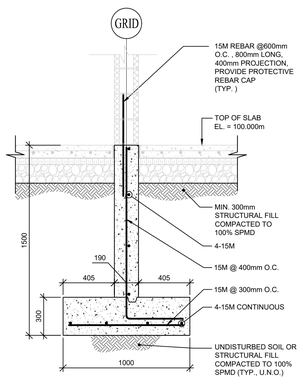
9 SECTION - ENTRANCE SLAB AT CISTERN
1:20



10 SECTION - ELEVATOR PIT
1:20



11 SECTION - EXTERIOR FOUNDATION WALL
1:20



12 SECTION - FOOTING AT INTERIOR LOAD-BEARING WALL
1:20

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PROFESSIONAL ENGINEER — PROVINCE OF PRINCE EDWARD ISLAND — Nizam Lawen 344 — 07 OCT 2021

Client: PEI Department of Transportation & Infrastructure

Project Title: KCHD Bridgetown Upgrades
Depot Building
Bridgetown, Kings County
Prince Edward Island

Sheet Title: Sections & Details

No.	Description	Date
0	Issued for Tender	2021-Oct-07

Date: October 7, 2021
Drn By: K.C.
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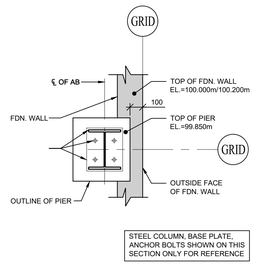
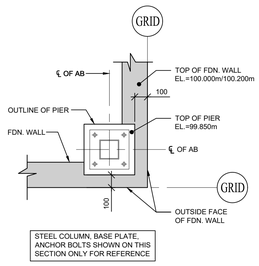
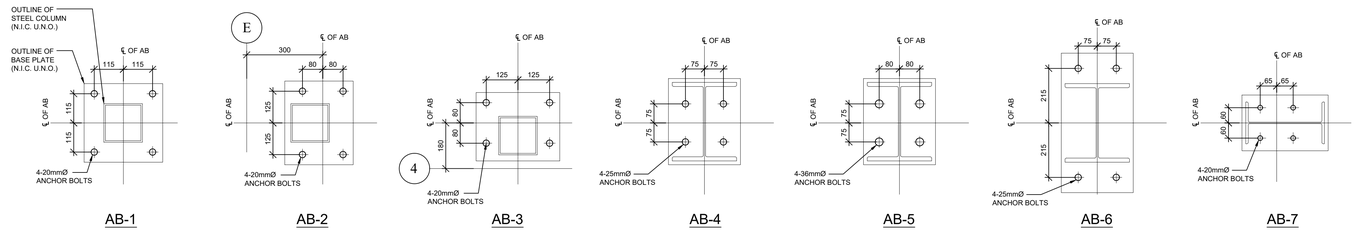


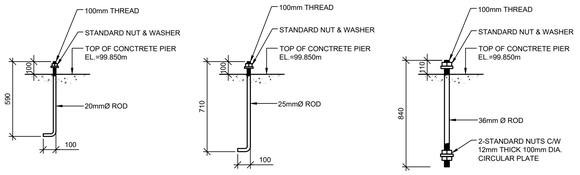
1 DETAIL - EXTERIOR PIER (TYP.)
EX-103A EX-103A 1:20



2 DETAIL - EXTERIOR PIER AT CORNER (TYP.)
EX-103A EX-103A 1:20



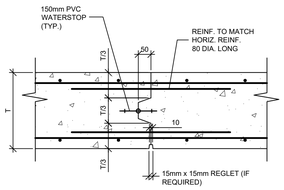
3 DETAIL - ANCHOR BOLTS
EX-103A EX-103A 1:20



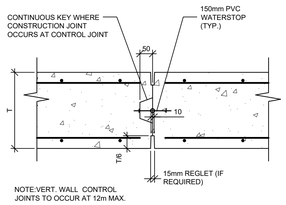
NOTES:

1. ALL ANCHOR BOLTS ARE TO BE G40.21 350W AND ASTM A307 OR EQUAL.
2. PLATE WASHERS TO BE SAW CUT OR GAS CUT.
3. ANCHOR PLACEMENT TOLERANCES MUST MEET CSA S16 ANNEX "A" .

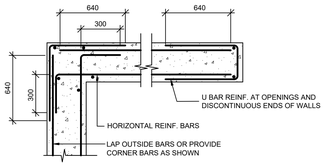
4 DETAIL - ANCHOR ROD
EX-103A EX-103A 1:20



5 DETAIL - TYPICAL VERTICAL WALL CONSTRUCTION JOINT
EX-103A EX-103A N.T.S.

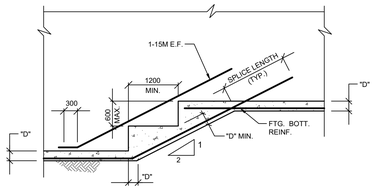


6 DETAIL - TYPICAL VERTICAL WALL CONTROL JOINT
EX-103A EX-103A N.T.S.

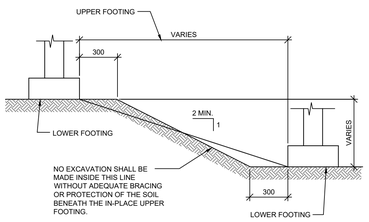


ALL WALLS INCLUDING FOUNDATION WALL, CISTERN WALL, PIT WALL, ETC., SHALL CONFORM TO THIS DETAIL.

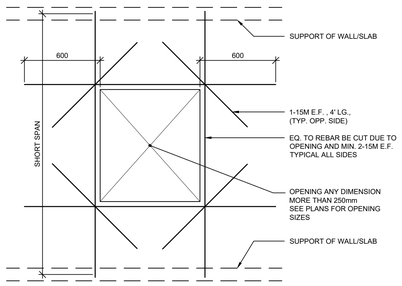
7 DETAIL - WALL CORNER & END
EX-103A EX-103A N.T.S.



8 DETAIL - STEPPED STRIP FOOTING
EX-103A EX-103A N.T.S.



9 DETAIL - SLOPE BETWEEN FOOTING AND ADJACENT CONSTRUCTION
EX-103A EX-103A N.T.S.



10 DETAIL - OPENING AT CONC. WALL/SLAB
EX-103A EX-103A N.T.S.

GENERAL NOTES:

1. THE WORK SHALL BE IN ACCORDANCE WITH NATIONAL BUILDING CODE OF CANADA (NBCC), 2015 REVISION, TO THE SATISFACTION OF THE ENGINEER UNLESS NOTED OTHERWISE ON THE DRAWING OR IN THE SPECIFICATIONS.
2. COMPLY WITH ALL LOCAL, MUNICIPAL, AND PROVINCIAL BY-LAWS AND REGULATIONS.
3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH PEI OCCUPATIONAL HEALTH & SAFETY ACT, WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM AND APPLICABLE LABOR CODES.
4. CONTRACTOR MUST VISIT THE SITE AND BE FAMILIAR WITH EXISTING CONDITIONS, VERIFY EXACT LOCATION OF ALL EXISTING UTILITIES AND SERVICES WITHIN THE CONTRACT LIMIT.
5. CONTRACTOR SHALL COORDINATE WORK AND COOPERATE WITH OWNER AND AGENCIES HAVING JURISDICTION.
6. REPORT ANY DOUBTFUL CONDITIONS REQUIRING DECISIONS AND SECURE DIRECTIONS FROM THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
7. CONTRACTOR TO EXERCISE EXTREME CAUTION. DESIGN AND PROVIDE ADEQUATE SUPPORT AND CONNECTIONS TO EXISTING STRUCTURES, UTILITIES AND SERVICES. MOVE, ADJUST AND RECONNECT ALL VISIBLE AND CONCEALED ITEMS AFFECTED BY THE SCOPE OF WORK.
8. VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
9. ALL DIMENSIONS AND ELEVATIONS ARE IN METRIC UNITS UNLESS NOTED OTHERWISE.
10. THE CONTRACTOR TO INCLUDE IN THE CONTRACT PRICE COSTS ASSOCIATED WITH OVER EXCAVATION, BACKFILLING AND REINSTATEMENT.
11. PROPERLY DISPOSE AND REMOVE OFFSITE ALL DEBRIS AND MATERIALS TO BE REMOVED.
12. N.I.C. INDICATES NOT IN THIS CONTRACT.

FOUNDATION NOTES:

1. FOOTINGS SHALL NOT BE PLACED ON SOIL SOFTENED BY WATER.
2. ALL FOOTINGS SHALL BE PLACED ON SOIL HAVING A MINIMUM BEARING CAPACITY OF 150 kN/SQ.m.
3. ALL FOOTINGS SHALL HAVE A MINIMUM OF 1500mm (5'-0") FROST PROTECTION.
4. ALL FOOTINGS SHALL BE REVIEWED BY THE ENGINEER BEFORE CONCRETE IS PLACED. NOTIFY 24 HRS BEFORE PLACING CONCRETE.
5. VERIFY ALL CONCRETE FORMWORK LINES ARE LEVEL, PLUMB, SQUARE AND TRUE.
6. CONCRETE FORMWORK PLYWOOD SHEETS TO THE REQUIREMENTS OF CSA 0121. USE NEW MATERIAL, CLEAN, SOUND, FREE FROM DEFECTS DETRIMENTAL TO THE QUALITY OF FINISHED CONCRETE SURFACES. ARRANGE PLYWOOD SHEETS TO A UNIFORM JOINT PATTERN. CONSTRUCT FORMWORK TO RESIST FLUID PRESSURE FROM WET CONCRETE AND ALL OTHER CONSTRUCTION LOADINGS WITHOUT BULGING, MOVEMENT OR DISTORTION. REUSE OF FORMWORK SUBJECT TO THE REQUIREMENTS OF CSA A23.1.
7. OPENINGS IN FOUNDATION & BUILDING WALLS SHALL BE PROVIDED AS SHOWN ON ARCHITECTURAL, MECHANICAL & ELECTRICAL DRAWINGS. ANY ADDITIONAL OPENINGS MUST BE APPROVED BY ENGINEER. OPENINGS SHALL BE SLEEVED.
8. ALL WALL AND SLAB OPENINGS AND ENDS SHALL HAVE MINIMUM (2)-15M ALL SIDES.
9. LOCATION OF CONSTRUCTION JOINTS TO BE APPROVED BY ENGINEER BEFORE CONCRETE IS PLACED.
10. ANCHOR RODS AND EMBEDDED STEEL ITEMS WILL BE INSTALLED BY THE FOUNDATION CONTRACTOR. SET ANCHOR RODS, INSERT PLATES, SLEEVES AND OTHER MISCELLANEOUS ITEMS EMBEDDED IN CONCRETE ACCURATELY, USING TEMPLATES, TO EXACT GRADE AND LOCATION SHOWN ON PROJECT DRAWINGS OR AS DIRECTED BY ENGINEER. SECURE TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT. DO NOT CUT OR RELOCATE REINFORCING STEEL FOR PLACEMENT OF EMBEDDED PARTS. IF INSERTS CANNOT BE LOCATED AS SPECIFIED, OBTAIN APPROVAL OF ALL MODIFICATIONS FROM ENGINEER BEFORE PLACING.
11. ALL BASE AND BEARING PLATES TO BE GROUTED USING 50 MPa (7,200psi) NON-SHRINK GROUT. CURE NON-SHRINK GROUT AND PROTECT FROM FREEZING TEMPERATURES IN ACCORDANCE WITH CSA U.N.O.
12. THE FILL SHALL BE PLACED SIMULTANEOUSLY ON BOTH SIDES OF THE FOUNDATION WALL. PROVIDE LATERAL SUPPORT TO WALLS PRIOR TO BACKFILLING.

CONCRETE NOTES:

1. ALL CONCRETE WORK AND MATERIAL SHALL BE CARRIED OUT IN ACCORDANCE WITH LATEST CSA A23.1 AND NBCC 2015.
2. MIX DESIGN: TYPE 10 PORTLAND CEMENT.
3. FOOTINGS, PIERS AND FOUNDATION WALLS:
   a. COMPRESSIVE STRENGTH (28D): 25MPa (3600psi)
   b. CLASS OF EXPOSURE: F-2
   c. NOMINAL AGGREGATE SIZE: 20mm (3/4")
   d. SLUMP: 80mm (3-1/4") ±20mm (3/4")
   e. AIR CONTENT: 4-7%
   f. WATER CEMENT RATIO: 0.5 MAX
4. INTERIOR SLABS:
   a. COMPRESSIVE STRENGTH (28D): 25MPa (3600psi)
   b. CLASS OF EXPOSURE: N
   c. NOMINAL AGGREGATE SIZE: 20mm (3/4")
   d. SLUMP: 80mm (3-1/4") ±20mm (3/4")
   e. AIR CONTENT: NONE
   f. WATER CEMENT RATIO: 0.45 MAX
5. EXTERIOR SLABS:
   a. COMPRESSIVE STRENGTH (28D): 35MPa (5000psi)
   b. CLASS OF EXPOSURE: C-2
   c. NOMINAL AGGREGATE SIZE: 20mm (3/4")
   d. SLUMP: 80mm (3-1/4") ±20mm (3/4")
   e. AIR CONTENT: 5-8%
   f. WATER CEMENT RATIO: 0.40 MAX
6. CONCRETE MIX DESIGN SHALL BE SUBMITTED FOR REVIEW BY THE ENGINEER MINIMUM 48 HRS PRIOR TO CASTING.
7. USE OF CALCIUM CHLORIDE IS NOT PERMITTED.
8. NO CONCRETE SHALL BE POURED WITHOUT THE PRIOR KNOWLEDGE AND APPROVAL OF ENGINEER.
9. ALL CONCRETE SHALL BE TESTED, TESTING SHALL CONFORM TO CSA A23.2. RECORD TESTS FOR SLUMP, AIR CONTENT AND COMPRESSIVE STRENGTH.
10. ALL CONCRETE SHALL BE VIBRATED USING HIGH FREQUENCY VIBRATORS. VIBRATION PRACTICES TO BE IN ACCORDANCE WITH ACI 309R.
11. COLD WEATHER CONCRETE SHALL BE PLACED AND PROTECTED IN ACCORDANCE WITH THE REQUIREMENTS OF CSA A23.1 AND TO THE REQUIREMENTS OF ACI-306R. PROVIDE HEATED ENCLOSURES AND/OR INSULATED TARPS AS REQUIRED TO MAINTAIN MINIMUM 10°C CONCRETE SURFACE TEMPERATURE FOR A PERIOD OF 5 DAYS FOLLOWING CONCRETE PLACEMENT. PROVIDE CONTROLLED COOL DOWN PERIOD TO PREVENT SURFACE CRACKING AT END OF PROTECTION PERIOD. ENSURE THAT NO CONCRETE IS PLACED ON OR AGAINST FROZEN SUBGRADE, FORMWORK, OR REINFORCING STEEL.
12. LEAVE FORMWORK IN PLACE FOR THE FOLLOWING MINIMUM PERIODS OF TIME AFTER PLACING CONCRETE:
   a. 72 HR. FOR WALLS
   b. 72 HR. FOR FOOTINGS
13. APPLY CURING COMPOUND TO WALLS AND PILASTERS IF EXPOSED TO DRYING CONDITIONS PRIOR TO COMPLETION OF FULL 7 DAY MOIST CURING PERIOD. USE LIQUID MEMBRANE CONCRETE CURING COMPOUND.

REINFORCING STEEL NOTES:

1. ALL REINFORCING STEEL SHALL BE NEW BILLET TO CSA G30.18, WWM REINFORCING TO CSA G30.5.
2. MINIMUM REINFORCING STEEL YIELD STRENGTH SHALL BE 400 MPa.
3. REINFORCING STEEL SHALL BE DETAILED, CUT, BENT, FABRICATED AND PLACED IN ACCORDANCE WITH REINFORCING MANUAL OF STANDARD PRACTICE (REINFORCING STEEL INSTITUTE OF CANADA); CAN3-A23.3 AND CSA-A23.1.
4. THE GENERAL CONTRACTOR SHALL INSPECT ALL THE REINFORCING STEEL BEFORE PLACEMENT OF THE CONCRETE.
5. THE GENERAL CONTRACTOR SHALL NOTIFY THE ENGINEER 24 HOURS PRIOR TO THE PLACEMENT OF THE CONCRETE.
6. THE POSITION OF ALL REINFORCING STEEL SHALL BE MAINTAINED DURING THE POURING OPERATION BY DIRECT SUPERVISION OF THE REINFORCING STEEL CONTRACTOR.
7. SUBMIT SHOP DRAWINGS STAMPED BY AN ENGINEER LICENSED TO PRACTICE IN PEI FOR REVIEW PRIOR TO FABRICATING REINFORCING STEEL. CLEARLY INDICATE BAR SIZES, SPACING, LOCATION, QUANTITY , CHAIRS, SPACERS, ETC WITH IDENTIFYING CODE MARKS TO PERMIT PLACEMENT.
8. ALL FOOTING REINFORCING SHALL CONTINUE THROUGH COLUMN FOOTINGS AND SHALL CONTINUE TO THE ENDS OF THE FOOTINGS WHERE FOOTINGS CHANGE DIRECTION OR STOP.
9. ALL WALL REINFORCING SHALL CONTINUE THROUGH PIER/COLUMN REINFORCING.
10. CONCRETE COVER (UNLESS NOTED OTHERWISE):
   a. POURED AGAINST THE GROUND: 75mm (3")
   b. FORMED SURFACE AGAINST GROUND: 50mm (2")
   c. FORMED SURFACE EXPOSED TO WEATHER:50mm (2")
   d. FORMED SURFACE PROTECTED:
   - BEAMS: 40mm (1-1/2")
   - COLUMNS: 40mm (1-1/2")
   - WALLS: 25mm (1")
11. USE SPACERS, CHAIRS, TEMPLATES AND DIRECT SUPERVISION OF THE REINFORCING STEEL CONTRACTOR TO ACCURATELY LOCATE & SUPPORT REINFORCING STEEL & SECURE IN POSITION TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT.

ABBREVIATION

AB	= ANCHOR BOLTS GROUP
ARCH.	= ARCHITECTURAL
BLDG.	= BUILDING
BOTT.	= BOTTOM
BTWN.	= BETWEEN
C.C.	= CENTER TO CENTER
CMU	= CONCRETE MASONRY UNIT
CONC.	= CONCRETE
CONT.	= CONTINUOUS
CR.	= CENTER
C/W	= COMPLETED WITH
DIA.	= DIAMETER
DWGS	= DRAWINGS
E.F.	= EACH FACE
EL.	= ELEVATION
ELEC.	= ELECTRICAL
E.W.	= EACH WAY
EQ	= EQUAL
FDN.	= FOUNDATION
FTG.	= FOOTING
GALV.	= GALVANIZED
HORI.	= HORIZONTAL
H.P.	= HIGH POINT
LG	= LONG
L.L.H.	= LONG LEG HORIZONTAL
L.L.V.	= LONG LEG VERTICAL
L.P.	= LOW POINT
MAX.	= MAXIMUM
M.C.	= MOMENT CONNECTION
MECH.	= MECHANICAL
MIN.	= MINIMUM
N.I.C.	= NOT IN CONTRACT
O.C.	= ON CENTER
OWSJ	= OPEN WEB STEEL JOIST
QTY.	= QUANTITY
REIN.	= REINFORCING
R/W	= REINFORCED WITH
S..J.	= SAW CUT JOINT
SPMD	= STANDARD PROCTOR MAXIMUM DRY DENSITY
T.J.	= TIE JOIST
T.O.S.	= TOP OF STEEL
TYP.	= TYPICAL
U.N.O.	= UNLESS NOTED OTHERWISE
U/S	= UNDERSIDE
VERT.	= VERTICAL
WWM	= WELDED WIRE MESH
W/	= WITH
℄	= CENTER LINE

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Naomi Lawen
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PROVINCE OF PRINCE EDWARD ISLAND

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Project Number: 211120
Drawing Number: S1-103A

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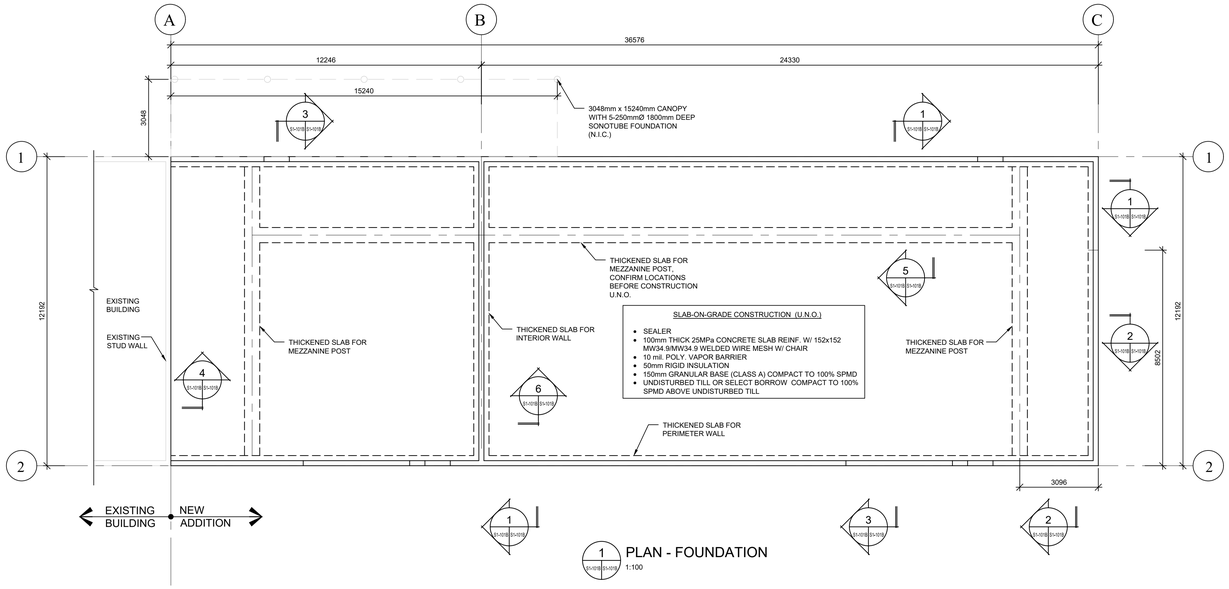


1 PLAN - FOUNDATION
1:100

GENERAL NOTES:

1. THE WORK SHALL BE IN ACCORDANCE WITH NATIONAL BUILDING CODE OF CANADA (NBCC), 2015 REVISION, TO THE SATISFACTION OF THE ENGINEER UNLESS NOTED OTHERWISE ON THE DRAWING OR IN THE SPECIFICATIONS.
2. COMPLY WITH ALL LOCAL, MUNICIPAL, AND PROVINCIAL BY-LAWS AND REGULATIONS.
3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH PEI OCCUPATIONAL HEALTH & SAFETY ACT, WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM AND APPLICABLE LABOR CODES.
4. CONTRACTOR MUST VISIT THE SITE AND BE FAMILIAR WITH EXISTING CONDITIONS, VERIFY EXACT LOCATION OF ALL EXISTING UTILITIES AND SERVICES WITHIN THE CONTRACT LIMIT.
5. CONTRACTOR SHALL COORDINATE WORK AND COOPERATE WITH OWNER AND AGENCIES HAVING JURISDICTION.
6. REPORT ANY DOUBTFUL CONDITIONS REQUIRING DECISIONS AND SECURE DIRECTIONS FROM THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
7. CONTRACTOR TO EXERCISE EXTREME CAUTION. DESIGN AND PROVIDE ADEQUATE SUPPORT AND CONNECTIONS TO EXISTING STRUCTURES, UTILITIES AND SERVICES. MOVE, ADJUST AND RECONNECT ALL VISIBLE AND CONCEALED ITEMS AFFECTED BY THE SCOPE OF WORK.
8. VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
9. ALL DIMENSIONS AND ELEVATIONS ARE IN METRIC UNITS UNLESS NOTED OTHERWISE.
10. THE CONTRACTOR TO INCLUDE IN THE CONTRACT PRICE COSTS ASSOCIATED WITH OVER EXCAVATION, BACKFILLING AND REINSTATEMENT.
11. PROPERLY DISPOSE AND REMOVE OFFSITE ALL DEBRIS AND MATERIALS TO BE REMOVED.
12. N.I.C. INDICATES NOT IN THIS CONTRACT.

FOUNDATION NOTES:

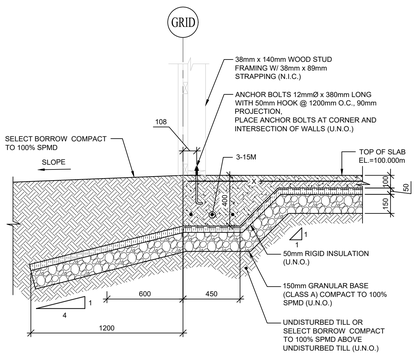
1. FOOTINGS SHALL NOT BE PLACED ON SOIL SOFTENED BY WATER.
2. ALL FOOTINGS SHALL BE PLACED ON SOIL HAVING A MINIMUM BEARING CAPACITY OF 150 kN/SQ.m.
3. THICKENED SLABS ARE PROVIDED AS FOOTING.
4. ALL FOOTINGS SHALL BE REVIEWED BY THE ENGINEER BEFORE CONCRETE IS PLACED. NOTIFY 24 HRS BEFORE PLACING CONCRETE.
5. VERIFY ALL CONCRETE FORMWORK LINES ARE LEVEL, PLUMB, SQUARE AND TRUE.
6. CONCRETE FORMWORK PLYWOOD SHEETS TO THE REQUIREMENTS OF CSA 0121. USE NEW MATERIAL, CLEAN, SOUND, FREE FROM DEFECTS DETRIMENTAL TO THE QUALITY OF FINISHED CONCRETE SURFACES. ARRANGE PLYWOOD SHEETS TO A UNIFORM JOINT PATTERN. CONSTRUCT FORMWORK TO RESIST FLUID PRESSURE FROM WET CONCRETE AND ALL OTHER CONSTRUCTION LOADINGS WITHOUT BULGING, MOVEMENT OR DISTORTION. REUSE OF FORMWORK SUBJECT TO THE REQUIREMENTS OF CSA A23.1.
7. OPENINGS IN FOUNDATION & BUILDING WALLS SHALL BE PROVIDED AS SHOWN ON ARCHITECTURAL, MECHANICAL & ELECTRICAL DRAWINGS. ANY ADDITIONAL OPENINGS MUST BE APPROVED BY ENGINEER. OPENINGS SHALL BE SLEEVED.
8. ALL WALL AND SLAB OPENINGS AND ENDS SHALL HAVE MINIMUM (2)-15M ALL SIDES.
9. LOCATION OF CONSTRUCTION JOINTS TO BE APPROVED BY ENGINEER BEFORE CONCRETE IS PLACED.
10. ANCHOR RODS AND EMBEDDED STEEL ITEMS WILL BE INSTALLED BY THE FOUNDATION CONTRACTOR. SET ANCHOR RODS, INSERT PLATES, SLEEVES AND OTHER MISCELLANEOUS ITEMS EMBEDDED IN CONCRETE ACCURATELY, USING TEMPLATES, TO EXACT GRADE AND LOCATION SHOWN ON PROJECT DRAWINGS OR AS DIRECTED BY ENGINEER. SECURE TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT. DO NOT CUT OR RELOCATE REINFORCING STEEL FOR PLACEMENT OF EMBEDDED PARTS. IF INSERTS CANNOT BE LOCATED AS SPECIFIED, OBTAIN APPROVAL OF ALL MODIFICATIONS FROM ENGINEER BEFORE PLACING.
11. ALL BASE AND BEARING PLATES TO BE GROUTED USING 50 MPa (7,200psi) NON-SHRINK GROUT. CURE NON-SHRINK GROUT AND PROTECT FROM FREEZING TEMPERATURES IN ACCORDANCE WITH CSA U.N.O.
12. THE FILL SHALL BE PLACED SIMULTANEOUSLY ON BOTH SIDES OF THE FOUNDATION WALL. PROVIDE LATERAL SUPPORT TO WALLS PRIOR TO BACKFILLING.

CONCRETE NOTES:

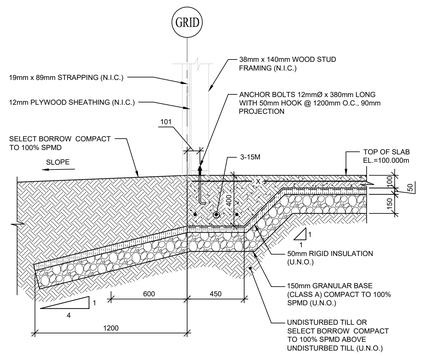
1. ALL CONCRETE WORK AND MATERIAL SHALL BE CARRIED OUT IN ACCORDANCE WITH LATEST CSA A23.1 AND NBCC 2015.
2. MIX DESIGN: TYPE 10 PORTLAND CEMENT.
3. EXTERIOR SLABS:
   a. COMPRESSIVE STRENGTH (28D): 35MPa (5000psi)
   b. CLASS OF EXPOSURE: C-2
   c. NOMINAL AGGREGATE SIZE: 20mm (3/4")
   d. SLUMP: 80mm (3-1/4") ±20mm (3/4")
   e. AIR CONTENT: 5-8%
   f. WATER CEMENT RATIO: 0.40 MAX
4. CONCRETE MIX DESIGN SHALL BE SUBMITTED FOR REVIEW BY THE ENGINEER MINIMUM 48 HRS PRIOR TO CASTING.
5. USE OF CALCIUM CHLORIDE IS NOT PERMITTED.
6. NO CONCRETE SHALL BE POURED WITHOUT THE PRIOR KNOWLEDGE AND APPROVAL OF ENGINEER.
7. ALL CONCRETE SHALL BE TESTED, TESTING SHALL CONFORM TO CSA A23.2. RECORD TESTS FOR SLUMP, AIR CONTENT AND COMPRESSIVE STRENGTH.
8. ALL CONCRETE SHALL BE VIBRATED USING HIGH FREQUENCY VIBRATORS. VIBRATION PRACTICES TO BE IN ACCORDANCE WITH ACI 309R.
9. COLD WEATHER CONCRETE SHALL BE PLACED AND PROTECTED IN ACCORDANCE WITH THE REQUIREMENTS OF CSA A23.1 AND TO THE REQUIREMENTS OF ACI-306R. PROVIDE HEATED ENCLOSURES AND/OR INSULATED TARPS AS REQUIRED TO MAINTAIN MINIMUM 10°C CONCRETE SURFACE TEMPERATURE FOR A PERIOD OF 5 DAYS FOLLOWING CONCRETE PLACEMENT. PROVIDE CONTROLLED COOL DOWN PERIOD TO PREVENT SURFACE CRACKING AT END OF PROTECTION PERIOD. ENSURE THAT NO CONCRETE IS PLACED ON OR AGAINST FROZEN SUBGRADE, FORMWORK, OR REINFORCING STEEL.
10. LEAVE FORMWORK IN PLACE FOR THE FOLLOWING MINIMUM PERIODS OF TIME AFTER PLACING CONCRETE:
    a. 72 HR. FOR WALLS
    b. 72 HR. FOR FOOTINGS
11. APPLY CURING COMPOUND TO WALLS AND PILASTERS IF EXPOSED TO DRYING CONDITIONS PRIOR TO COMPLETION OF FULL 7 DAY MOIST CURING PERIOD. USE LIQUID MEMBRANE CONCRETE CURING COMPOUND.

REINFORCING STEEL NOTES:

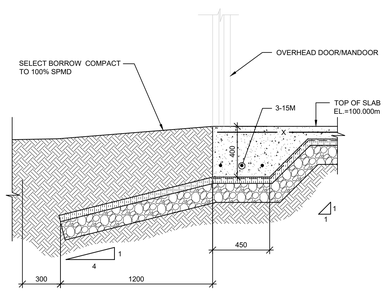
1. ALL REINFORCING STEEL SHALL BE NEW BILLET TO CSA G30.18, WWM REINFORCING TO CSA G30.5.
2. MINIMUM REINFORCING STEEL YIELD STRENGTH SHALL BE 400 MPa.
3. REINFORCING STEEL SHALL BE DETAILED, CUT, BENT, FABRICATED AND PLACED IN ACCORDANCE WITH REINFORCING MANUAL OF STANDARD PRACTICE (REINFORCING STEEL INSTITUTE OF CANADA); CAN3-A23.3 AND CSA-A23.1.
4. THE GENERAL CONTRACTOR SHALL INSPECT ALL THE REINFORCING STEEL BEFORE PLACEMENT OF THE CONCRETE.
5. THE GENERAL CONTRACTOR SHALL NOTIFY THE ENGINEER 24 HOURS PRIOR TO THE PLACEMENT OF THE CONCRETE.
6. THE POSITION OF ALL REINFORCING STEEL SHALL BE MAINTAINED DURING THE POURING OPERATION BY DIRECT SUPERVISION OF THE REINFORCING STEEL CONTRACTOR.
7. SUBMIT SHOP DRAWINGS STAMPED BY AN ENGINEER LICENSED TO PRACTICE IN PEI FOR REVIEW PRIOR TO FABRICATING REINFORCING STEEL. CLEARLY INDICATE BAR SIZES, SPACING, LOCATION, QUANTITY, CHAIRS, SPACERS, ETC WITH IDENTIFYING CODE MARKS TO PERMIT PLACEMENT.
8. ALL FOOTING REINFORCING SHALL CONTINUE THROUGH COLUMN FOOTINGS AND SHALL CONTINUE TO THE ENDS OF THE FOOTINGS WHERE FOOTINGS CHANGE DIRECTION OR STOP.
9. ALL WALL REINFORCING SHALL CONTINUE THROUGH PIER/COLUMN REINFORCING.
10. CONCRETE COVER (UNLESS NOTED OTHERWISE):
    a. POURED AGAINST THE GROUND: 75mm (3")
    b. FORMED SURFACE AGAINST GROUND: 50mm (2")
    c. FORMED SURFACE EXPOSED TO WEATHER:50mm (2")
    d. FORMED SURFACE PROTECTED:
    - BEAMS: 40mm (1-1/2")
    - COLUMNS: 40mm (1-1/2")
    - WALLS: 25mm (1")
11. USE SPACERS, CHAIRS, TEMPLATES AND DIRECT SUPERVISION OF THE REINFORCING STEEL CONTRACTOR TO ACCURATELY LOCATE & SUPPORT REINFORCING STEEL & SECURE IN POSITION TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT.



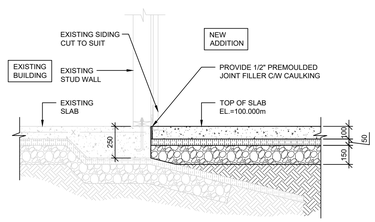
1 SECTION - PERIMETER THICKENED SLAB
1:20



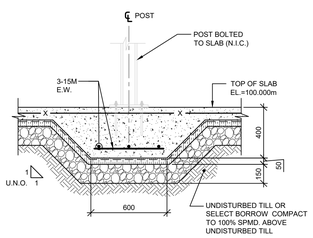
2 SECTION - PERIMETER THICKENED SLAB AT MECHANICAL ROOM
1:20



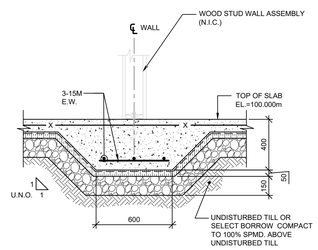
3 SECTION - PERIMETER THICKENED SLAB AT OVERHEAD DOOR
1:20



4 SECTION - NEW SLAB AT EXISTING
1:20



5 SECTION - THICKENED SLAB UNDER POST
1:20



6 SECTION - THICKENED SLAB UNDER INTERIOR STUD WALL
1:20

ABBREVIATION

AB	= ANCHOR BOLTS GROUP
ARCH.	= ARCHITECTURAL
BLDG.	= BUILDING
BOTT.	= BOTTOM
BTWN.	= BETWEEN
C.C.	= CENTER TO CENTER
CMU	= CONCRETE MASONRY UNIT
CONC.	= CONCRETE
CONT.	= CONTINUOUS
CR.	= CENTER
C/W	= COMPLETED WITH
DIA.	= DIAMETER
DWGS	= DRAWINGS
E.F.	= EACH FACE
EL.	= ELEVATION
ELEC.	= ELECTRICAL
E.W.	= EACH WAY
EQ	= EQUAL
FDN.	= FOUNDATION
FTG.	= FOOTING
GALV.	= GALVANIZED
HORI.	= HORIZONTAL
H.P.	= HIGH POINT
LG	= LONG
L.L.H.	= LONG LEG HORIZONTAL
L.L.V.	= LONG LEG VERTICAL
L.P.	= LOW POINT
MAX.	= MAXIMUM
M.C.	= MOMENT CONNECTION
MECH.	= MECHANICAL
MIN.	= MINIMUM
N.I.C.	= NOT IN CONTRACT
O.C.	= ON CENTER
OWSJ	= OPEN WEB STEEL JOIST
QTY.	= QUANTITY
REIN.	= REINFORCING
R/W	= REINFORCED WITH
S..J.	= SAW CUT JOINT
SPMD	= STANDARD PROCTOR MAXIMUM DRY DENSITY
T.J.	= TIE JOIST
T.O.S.	= TOP OF STEEL
TYP.	= TYPICAL
U.N.O.	= UNLESS NOTED OTHERWISE
U/S	= UNDERSIDE
VERT.	= VERTICAL
WWM	= WELDED WIRE MESH
W/	= WITH
℄	= CENTER LINE

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PROFESSIONAL ENGINEER
Naomi Lawen
344
07 Oct 2021
Date
PROVINCE OF PRINCE EDWARD ISLAND

Client
PEI Department of Transportation & Infrastructure

Project Title
KCHD Bridgetown Upgrades
Warehouse Building
Bridgetown, Kings County
Prince Edward Island

Sheet Title
Foundation Plan
Sections, Details & Notes

No.	Description	Date
0	Issued for Tender	2021-Oct-07

Date: October 7, 2021
Drn By: K.C.
Chk By: N.L. P. Eng.
Revision: 0
Project Number: 211120
Drawing Number: S1-101B

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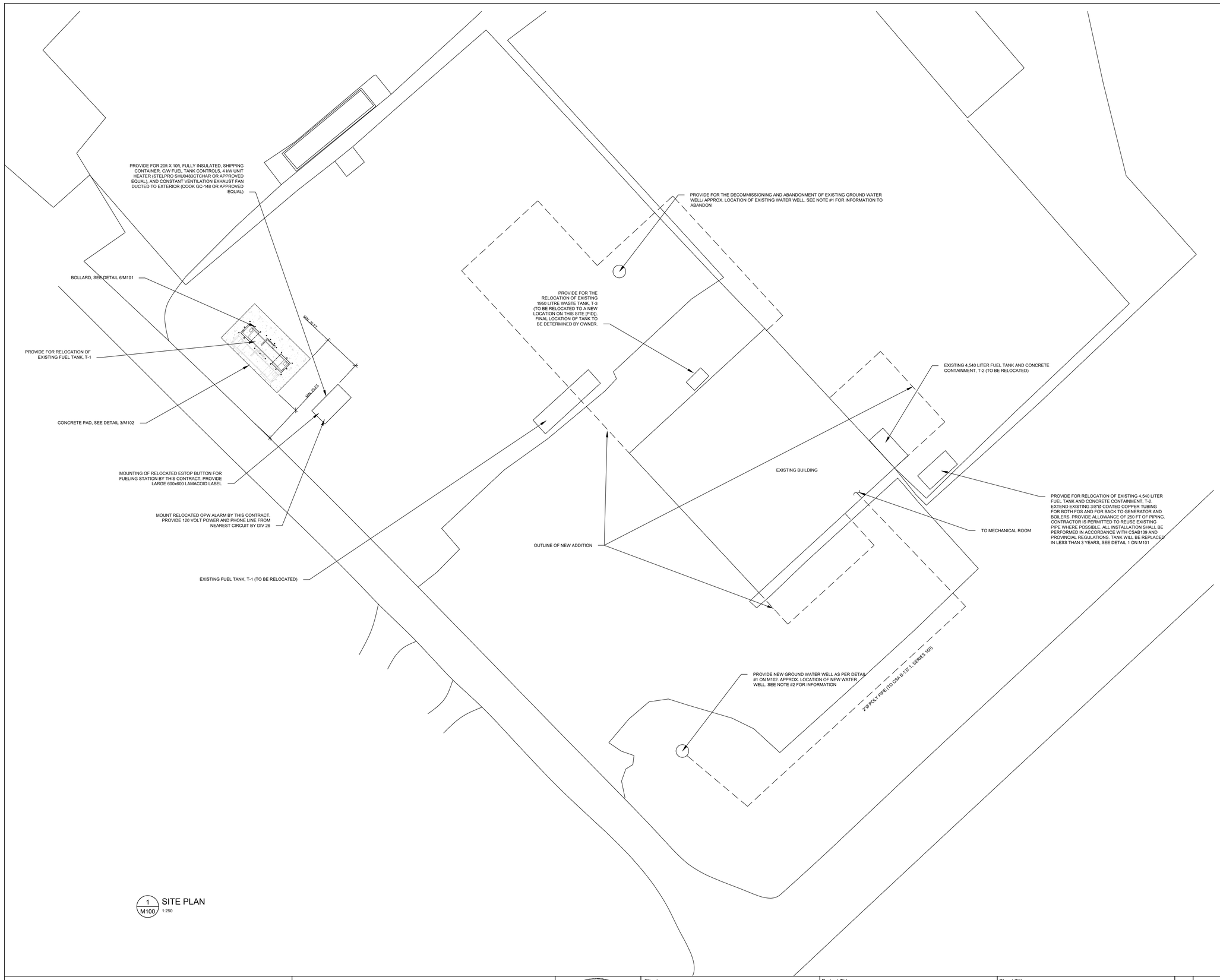

1 / M100 SITE PLAN
1:250

NOTES:
AS PER THE "ENVIRONMENTAL PROTECTION ACT WATER WELL REGULATIONS" (EPA WWR):

1. ABANDONED WELLS. IF LEFT OPEN OR IF INSUFFICIENTLY COVERED OR FILLED, CAN BE A POTENTIAL SOURCE OF GROUNDWATER CONTAMINATION. IN ADDITION, WELLS DUG BY HAND POSE A POTENTIAL SAFETY HAZARD TO THE PUBLIC, LIVESTOCK, AND WILDLIFE. THE METHODS DESCRIBED BELOW ARE METHODS APPROVED BY THE DEPARTMENT FOR THE ABANDONMENT OF WATER WELLS AS REQUIRED BY SECTION 12 OF REGULATIONS. DRILLED WELLS MUST BE ABANDONED BY A WELL CONTRACTOR OR PLUMBER.
   - 1.1. DRILLED WELLS
     - 1.1.1. ALL OBSTRUCTIONS IN THE WELL MUST BE REMOVED PRIOR TO FILLING THE WELL. THE WELL SHOULD THEN BE FILLED WITH ALTERNATING LAYERS OF BENTONITE OR CEMENT AND CLEAN FILL (CLAY TILL OR SAND). THE BOTTOM 3m (10 ft) OF THE BORE HOLE MUST BE FILLED WITH THE BENTONITE OR CEMENT. THE THICKNESS OF THE INDIVIDUAL LAYERS OF BENTONITE SHALL NOT BE LESS THAN 0.3m (1 ft) THICK. THE THICKNESS OF CLEAN FILL LAYERS SHALL NOT EXCEED 1.5m (5 ft).
     - 1.1.2. THIS PLUGGING PROCEDURE IS INTENDED TO PREVENT THE VERTICAL MOVEMENT OF CONTAMINATION DOWN THE WELL BORE HOLE. IN ADDITION, IF THE PORTION OF THE CASING WHICH IS ABOVE GROUND BECOMES AN EYESORE OR SAFETY CONCERN, IT CAN BE CUT OFF BELOW THE GROUND SURFACE.
   - 1.2. UNUSED WELLS
     - 1.2.1. AN OWNER THAT HAS AN UNUSED WELL ON HIS OR HER PROPERTY SHALL HAVE THE WELL FILLED BY A WELL CONTRACTOR OR PLUMBER IN ACCORDANCE WITH SUBSECTION (2) WITHIN 30 DAYS OF SURRENDERING THE USE OF THE WELL OR OF DISCOVERING THE UNUSED WELL.
   - 1.3. WELL FILLED BY WELL CONTRACTOR
     - 1.3.1. NO PERSON SHALL FILL AND UNUSED WELL UNLESS THE PERSON
       - 1.3.1.1. IS A WELL CONTRACTOR OR A PLUMBER; AND
       - 1.3.1.2. FILLS THE WELL USING A METHOD DESCRIBED IN 1.2.
2. NEW WELLS:
   - 2.1. LOCATION
     - 2.1.1. SUBJECT TO SECTION 5 OF THE EPA WWR, NO WELL CONTRACTOR OR WELL DRILLER SHALL CONSTRUCT A WELL AT A LOCATION
       - 2.1.1.1. WHERE THE CENTRE LINE OF THE WELL, EXTENDED VERTICALLY, DOES NOT CLEAR A PROJECTION FROM ANY BUILDING BY AT LEAST 3m
       - 2.1.1.2. INSIDE A FOUNDATION OR STRUCTURE; OR
       - 2.1.1.3. IN A LOCATION WHERE SURFACE WATER OTHER THAN RAINWATER WILL PASS OVER THE TOP OF THE WELL
   - 2.2. DISTANCE FROM CONTAMINANT SOURCES
     - 2.2.1. NO WELL CONTRACTOR OR WELL DRILLER SHALL CONSTRUCT A WELL AT A LOCATION THAT IS WITHIN
       - 2.2.1.1. 3m OF A SEWER LINE
       - 2.2.1.2. 6m OF A SEWER COLLECTION MAIN
       - 2.2.1.3. 100m OF A WASTEWATER TREATMENT SYSTEM
       - 2.2.1.4. 15m OF A SEPTIC TANK
       - 2.2.1.5. 15m OF A SEWAGE DISPOSAL FIELD
       - 2.2.1.6. 15m OF A ROCK PIT
       - 2.2.1.7. 90m OF A MANURE STORAGE FACILITY
       - 2.2.1.8. 150m OF A SOLID WASTE DISPOSAL SITE
       - 2.2.1.9. 5m OF A PETROLEUM STORAGE TANK SYSTEM 1,200 LITRES OR LESS IN SIZE
       - 2.2.1.10. 15m OF A PETROLEUM STORAGE TANK SYSTEM GREATER THAN 1,200 LITRES IN SIZE
       - 2.2.1.11. 45m OF COMMERCIAL CHEMICAL STORAGE FACILITY; OR
       - 2.2.1.12. 6m OF AN EXISTING OR ABANDONED WELL

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PROFESSIONAL ENGINEER
211120
Sean W. Wheeler
No. 652
PRINCE EDWARD ISLAND

Client
PEI Department of Transportation & Infrastructure

Project Title
KCHD Bridgetown Upgrades
Depot Building
Bridgetown, Kings County
Prince Edward Island

Sheet Title
Mechanical
Site Plan

No.	Description	Date
1	Issued for Tender	2021-10-08

Date: October, 2021
Drn By: A.E.M., E.I.T.
Chk By: S.W.W., P.Eng
Revision: -
Project Number: 211120
Drawing Number: M1-100

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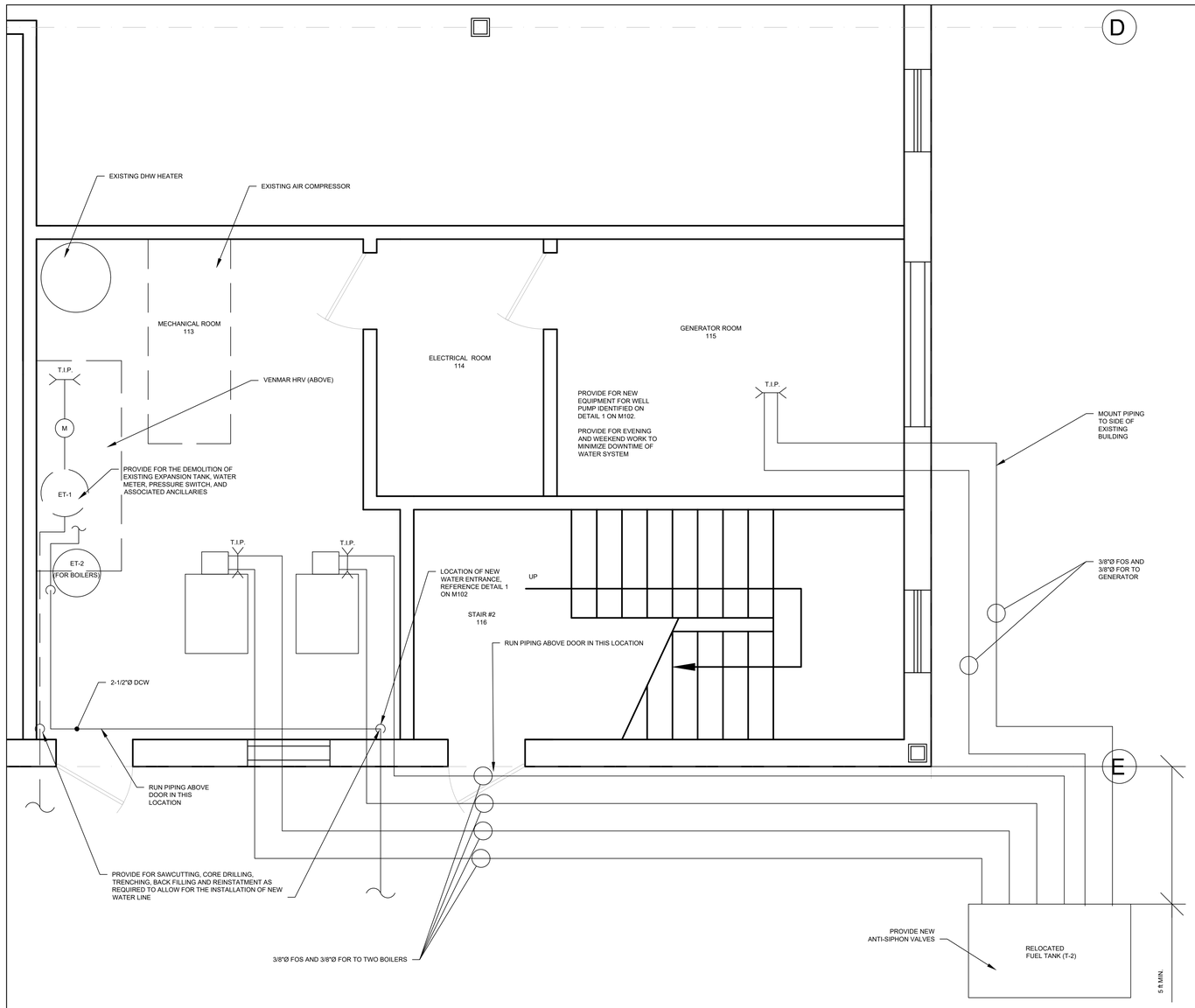
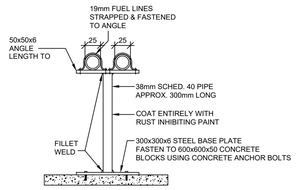
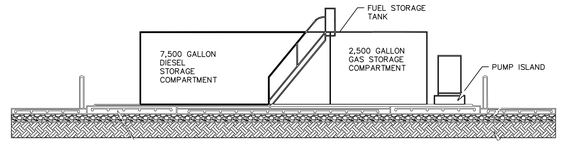


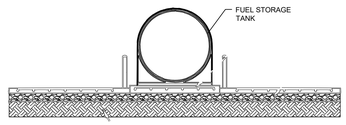
1 M101 EXISTING FUEL TANK RELOCATION PLAN
N.T.S.



2 M101 OUTSIDE FUEL OIL SUPPORT
N.T.S.



3 M101 FUEL TANK SECTION
N.T.S.



4 M101 FUEL TANK SECTION 2
N.T.S.

FUEL OIL TANK SCHEDULE

TAG	FUEL TYPE	LOCATION	CAPACITY (LIT)	SIZE		APPROX WEIGHT (KG)	PAD SIZE (L x W x Th) (m)	MANUFACTURER	MODEL	NOTES
				LENG. (m)	DIA(m)					
T1	GAS AND DIESEL FUEL	OUTDOOR	37,854	5.89	2.0	45,453	6.8 x 2.9 x 0.3	DESJARDINS	S601	HORIZONTAL, SPLIT TANK

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Client
PEI Department of Transportation & Infrastructure

Project Title
KCHD Bridgetown Upgrades
Depot Building
Bridgetown, Kings County
Prince Edward Island

Sheet Title
Mechanical
Fuel Tank Relocation & Details

No.	Description	Date
1	Issued for Tender	2021-10-08

Date: October, 2021
Drn By: A.E.M., E.I.T.
Chk By: SWW, P.Eng.
Revision -
Project Number: 211120
Drawing Number: M1-101

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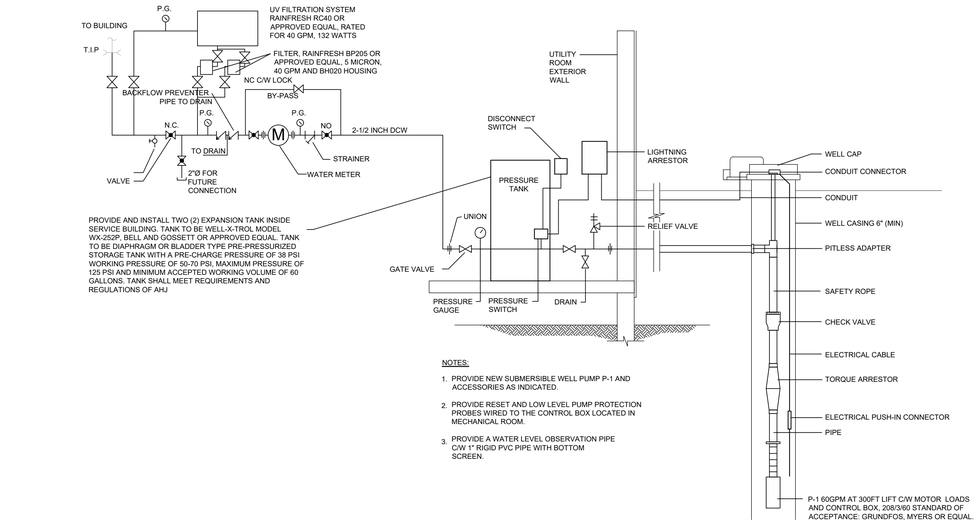
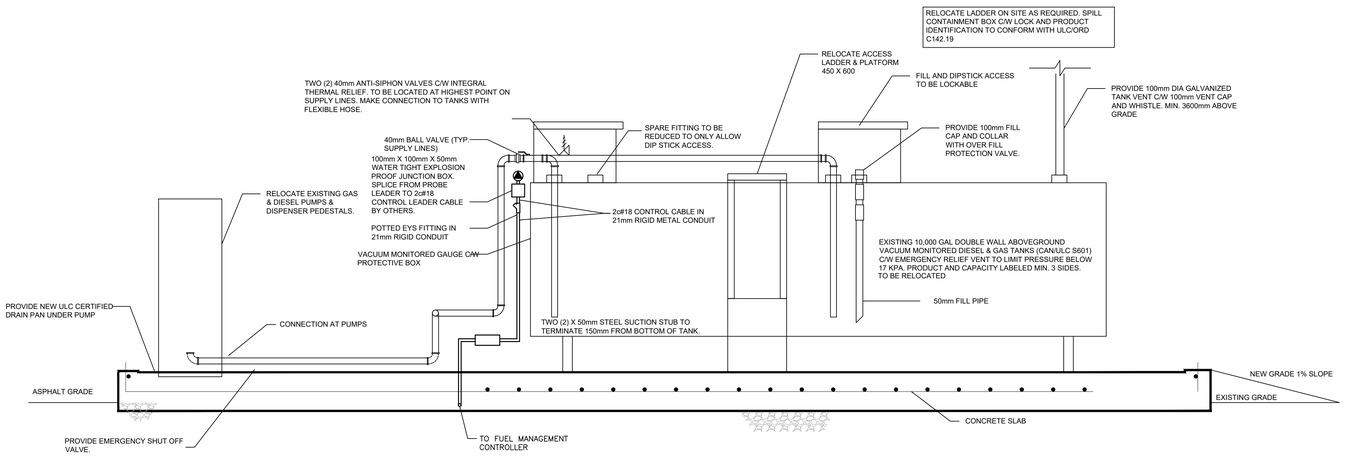


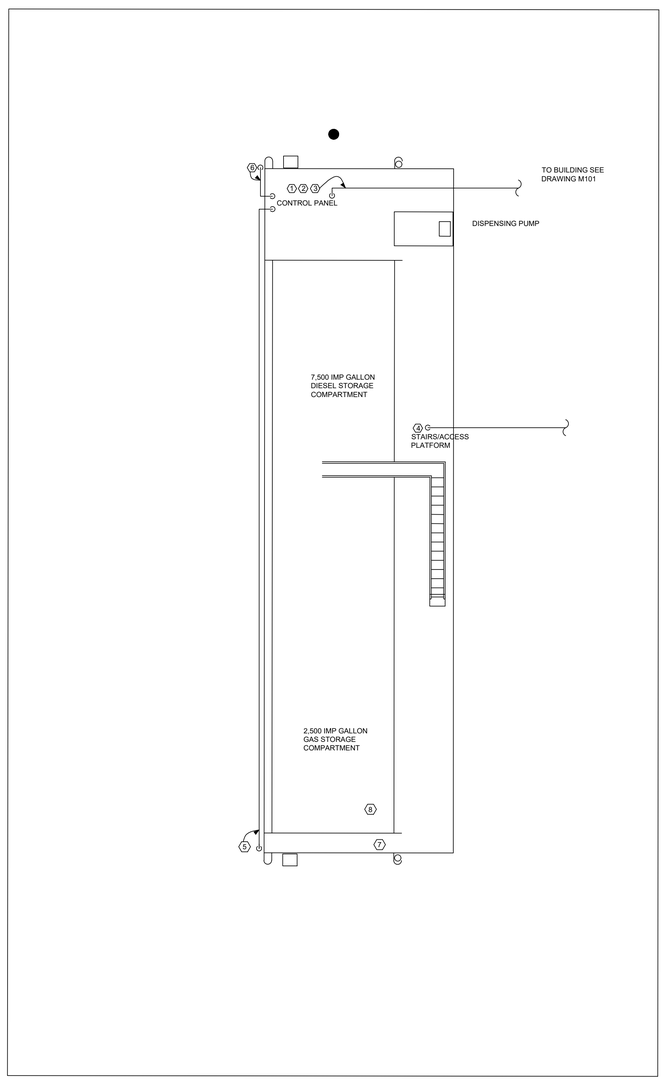
NOTES:

1. PROVIDE NEW SUBMERSIBLE WELL PUMP P-1 AND ACCESSORIES AS INDICATED.
2. PROVIDE RESET AND LOW LEVEL PUMP PROTECTION PROBES WIRED TO THE CONTROL BOX LOCATED IN MECHANICAL ROOM.
3. PROVIDE A WATER LEVEL OBSERVATION PIPE C/W 1" RIGID PVC PIPE WITH BOTTOM SCREEN.

1 / M102 DETAIL: SUBMERSIBLE WELL PUMP
N.T.S.



2 / M101 FUEL TANK DETAIL
N.T.S.



3 / M102 FUEL TANK PLAN
N.T.S.

RELOCATE EXISTING ABOVE GROUND 10,000 IMP GALLON, DOUBLE WALL/DOUBLE COMPARTMENT FUEL STORAGE TANK, STAIRS/ACCESS PLATFORM, CONTROL PANELS, OPW SYSTEM, DISPENSING PUMPS AS SHOWN ON DRAWING M100 DETAIL #1. CONTRACTOR IS RESPONSIBLE FOR DISCONNECT OF EXISTING POWER AND CONTROLS, LOADING, UNLOADING, TRANSPORT, POSITIONING ON SITE, MOUNTING, AND INSTALLATION. CONTRACTOR TO COORDINATE TIMING OF RELOCATION WITH OWNER. CONTRACTOR IS TO PROVIDE FOR THE FUEL TO BE POLISHED TO ISO STANDARDS, STORED AND TRANSFERRED FROM EXISTING LOCATION TO THE NEW LOCATION. PROVIDE FOR COMMISSIONING AND PROGRAMMING OF INVENTORY MANAGEMENT SYSTEM (OPW) AT NEW LOCATION WITH CANTECH PROXIMITY CARD SYSTEM. COORDINATE WITH DIVISION 26, DIVISION 27 AND OWNER ON SITE.

1/ 7,500/2,500 SPLIT C/W DUAL BULKHEADS, TWO SEISMIC SUPPORT SADDLES C/W LIFTING LUGS, EMERGENCY VENTS, VACUUM MONITORING GAUGE IN PROTECTIVE COVER, INTERSTITIAL RELIEF VALVE, ONE ACCESS SIDE STAIRCASE AND FILL PLATFORM, TWO LOCKABLE CONTAINMENT BOXES, DIPSTICK AND CHART, TWO 2 INCH OVERFILL PREVENTION VALVES, TWO GALVANIZED VENT PIPES AND RAIN CAPS.
2/ ONE ONLY DOUBLE PRODUCT PUMP WITH DUAL HOSES AS FOLLOWS:LITRE REGISTRATION, TWO PULSARS, LIGHT, TWO INTERNAL FILTER ADAPTERS AND STANDARD FILTERS, TWO 20 FT HOSES AND AUTO NOZZLES, SUCTION PIPE, ANTI-SIPHON AND SHUT-OFF VALVE, SHEAR VALVE AND FLEX PIPE IN CONTAINMENT BOX, ALL FACTORY PRE-PIPED AND ASSEMBLED TO THE 7,500 GALLON COMPARTMENT AND 2,500 GALLON COMPARTMENT. COMPUTROL PUMP CONTROL UNITS C/W 48 INCH PEDISTALS, PROFUEL SOFTWARE AND 20 PROXIMITY KEYFOB.
5/ ONE OPW INVENTORY MONITORING PANEL COMPLETE WITH THE FOLLOWING: CONSOLE, PRINTER, FOUR PROBE INTERFACE, LIQUID SENSOR INPUT MODULE, RELAY OUTPUT MODULE, TWO 9FT MAGPLUS INVENTORY ONLY PROBES, TWO FLOAT KITS, TWO SUMP SENSORS, AUDIBLE AND VISUAL OVERFILL ALARMS.
6/ FIRE EXTINGUISHER
7/ EMERGENCY STOPS.

WIRING SCHEDULE BY DIVISION 26:

1. 4#12 TEW + 2 BOND POWER FROM ELECTRICAL ROOM TO MASTER CONTROL PANEL, 2X15A-1P BREAKERS, SEE DRAWING M201
2. 2 CAT S CABLES, 18/3 FT4 SHIELDED CABLE + BONUS DATA TO CONTROL PANEL. SEE DRAWING M201.
3. 10#10 TEW, 2#12 TEW +BOND. 4#10 PUMP POWER, 4#10 POLE LIGHTS, 2#10 SPARE,2#12 E-STOP, 2X20A-2P, 2X15A-1P, 15A-1P BREAKERS, SEE DRAWING M201
4. 6 18/ 3 FT4 SHIELDED CABLES+ BOND, ALARM PANEL TO TANK SENSORS. SEE DRAWING M201
5. 4#10 TEW+ BOND, POWER FOR LIGHT POLES. REUSE EXISTING.
6. 2#10 TEW+ BOND, POWER FOR LIGHT POLES. REUSE EXISTING.
7. 1 CAT5 CABLE, 1 18/ 3 FT4 SHIELDED CABLE+BOND, DATA TO SLAVE CONTROL PANEL. REUSE EXISTING
8. 1X 18/3 FT4 SHIELDED CABLES+ BOND. CABLES TO TANK SENSORS FOR ALARM SYSTEM. REUSE EXISTING.

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PROFESSIONAL ENGINEER 211120 Sean W. Wheeler No. 657 PRINCE EDWARD ISLAND

Client: PEI Department of Transportation & Infrastructure

Project Title: KCHD Bridgetown Upgrades
Depot Building
Bridgetown, Kings County
Prince Edward Island

Sheet Title: Mechanical Details

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