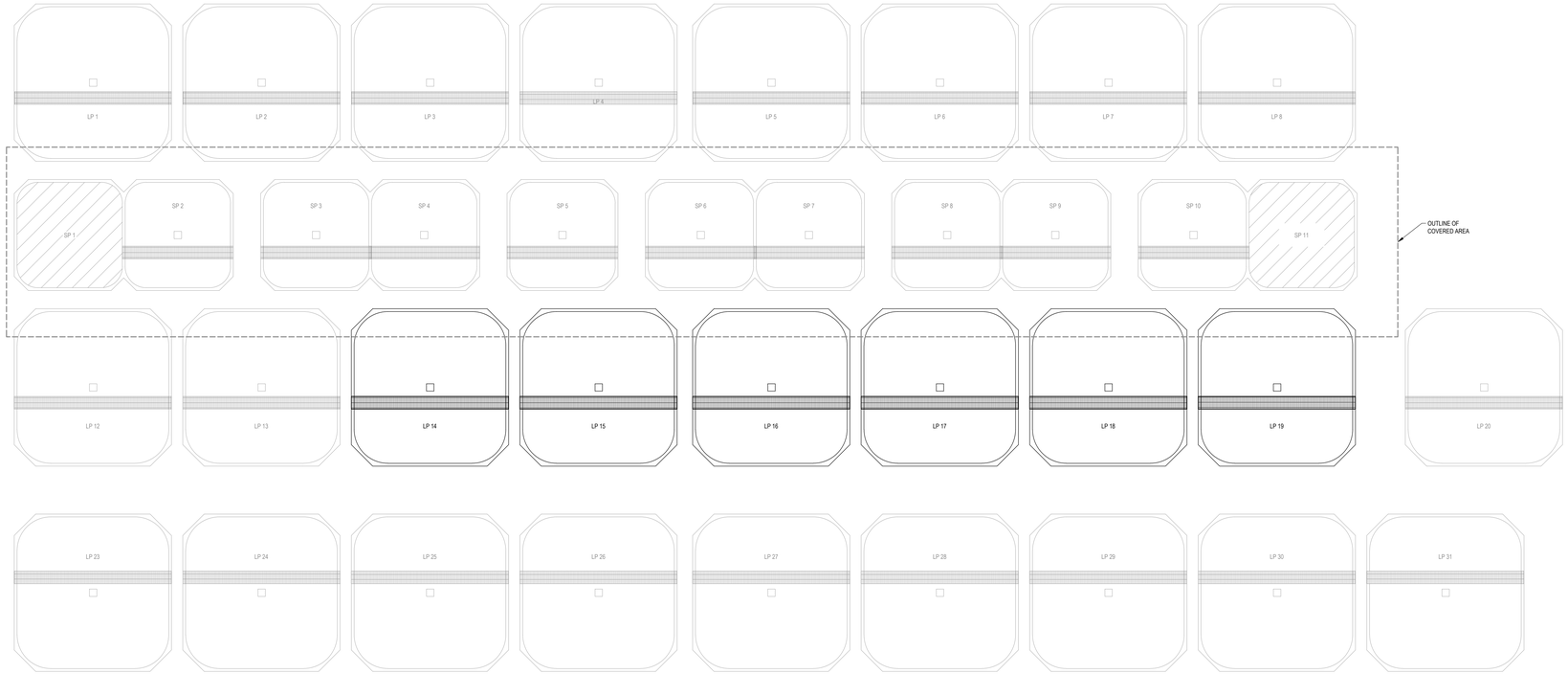

PARTIAL PLAN - TANK GENERAL ARRANGEMENT

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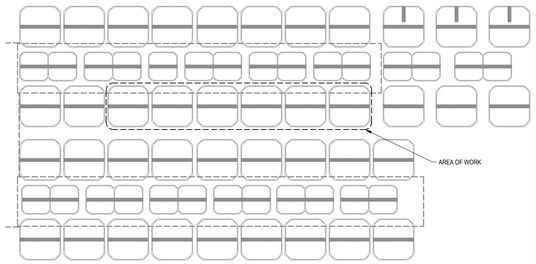

KEY PLAN

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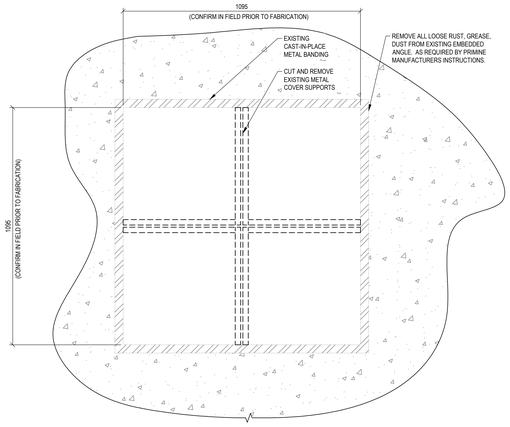

PLAN - TYPICAL TANK DRAIN DEMO

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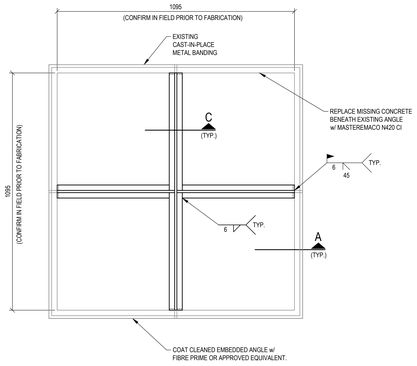


PLAN - TYPICAL TANK DRAIN

1:10

FISH TANK COATING SPECIFICATIONS:

PART 1 GENERAL

1.1 QUALITY ASSURANCE:
- .1 PREPARE SITE SAMPLE APPROXIMATELY 1220 MM X 1220 MM. THIS SAMPLE WILL BE REGARDED AS MINIMUM STANDARD OF WORKMANSHIP ACCEPTABLE FOR PROJECT.
- .2 MAINTAIN A RECORD OF BATCH NUMBERS OF ALL MATERIALS SUPPLIED FOR PROJECT.

1.2 PRE-CONSTRUCTION MEETING:
- .1 CONVENE PRE-CONSTRUCTION MEETING, ONE WEEK PRIOR TO COMMENCING WORK OF THIS SECTION, TO REVIEW INSTALLATION PROCEDURES.
- .2 MANUFACTURER'S TECHNICAL REPRESENTATIVE, GENERAL CONTRACTOR AND CONSULTANT TO BE IN ATTENDANCE.

1.3 ACTION AND INFORMATIONAL SUBMITTALS:
- .1 SUBMIT MANUFACTURER'S PRODUCT DATA AND APPLICATION INSTRUCTIONS.

PART 2 PRODUCTS

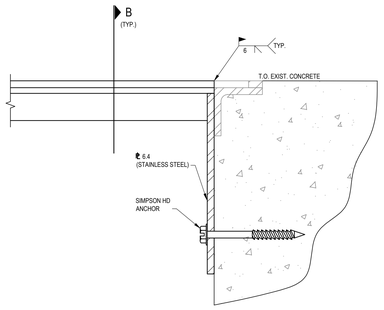
2.1 MATERIALS:
- .1 COATING SYSTEM: TWO COMPONENT, RAPID CURING, HIGHLY MODIFIED THERMOSET RESIN CONSISTING OF A PRIME COAT, INTERMEDIATE COAT AND TWO FINAL COATS.
- .2 PRODUCT: PPC COATINGS AQUACULTURE APPLICATION BY (MITR) MODIFIED THERMOSET RESIN INC. NO ALTERNATIVE COATINGS WILL BE CONSIDERED.
- .3 COLOR: FOREST GREEN.

PART 3 EXECUTION

3.1 PREPARATION:
- .1 WHEN APPLYING PPC COATING SYSTEM ONTO AN EXISTING PPC COATING SUBSTRATE, A SOUND, CLEAN AND DRY SUBSTRATE IS REQUIRED. REMOVE ALL LOOSE COATING AND CONCRETE.
- .2 NO TRIAL BLASTING OF EXISTING COATINGS WILL BE CONDUCTED.
- .3 ALL EXISTING COATING MUST BE PREPARED TOGETHER WITH THE CONCRETE SURFACE, AND WITHSTAND FULL IMPACT OF A SURFACE PREPARATION PROCEDURE THAT WILL CREATE A ROUGH COURSE CONCRETE SURFACE PROFILE, NO LESS THAN CSP 5-6, OR #40 SANDPAPER PROFILE, AS WELL AS PREPARE THE EXISTING COATED SURFACE FOR RECOAT.
- .4 IF EXISTING PPC COATING WITHSTANDS THE IMPACT OF REQUIRED SURFACE PREPARATION PROCEDURE, THEN THE EXISTING PPC COATING CAN BE RECOATED.
- .5 REMOVE PPC COATING THAT DOES NOT WITHSTAND THE SURFACE PREPARATION PROCEDURE. NO LOOSE COATING CAN BE RECOATED.
- .6 APPLY PPC CONCRETE CRACK REPAIR APPLICATION TO CRACKED CONCRETE SUBSTRATE, PRIOR TO COATING.
- .7 AFTER REQUIRED SURFACE PROFILE, EXISTING COATING BONDING TESTING, AND PREPARATION REQUIREMENTS HAVE BEEN ACHIEVED, CLEAN AND DRY SUBSTRATE AS REQUIRED IN PPC SURFACE PREPARATION PROCEDURE PRIOR TO COATING OF THE PPC COATING SYSTEM.

3.2 RECOAT ON EXISTING PPC COATING:
- .1 APPLY PPC COATING SYSTEM ONLY AFTER SURFACE PREPARATION REQUIREMENTS, AS SPECIFIED ABOVE AND IN PPC COATINGS SURFACE PREPARATION GUIDELINES, HAVE BEEN ACHIEVED.
- .2 PRIME COAT:
  - .1 APPLY PPC PRIME COAT TO WHOLE SUBSTRATE TO BE COATED, INCLUDING EXISTING PPC COATING. PRIME COAT PROCEDURE SHALL FILL AND SEAL ALL BUG HOLES AND VOIDS IN CONCRETE SUBSTRATE, CREATING AN EVEN SEALED CONCRETE SUBSTRATE.
  - .2 FILL BUG HOLES AND VOIDS IN SUBSTRATE, THAT WERE NOT FILLED WITH PRIME COAT, WITH A PPC GROUT, TO CREATE AN EVEN SEALED CONCRETE SUBSTRATE.
- .3 INTERMEDIATE COAT:
  - .1 APPLY PPC INTERMEDIATE COAT TO CURED, DRY TO TOUCH PRIME COAT.
  - .2 APPLY PPC INTERMEDIATE COAT TO CONCRETE SURFACE, FILLING IN VOIDS BETWEEN EXISTING PPC COATING, CREATING AN EVEN MONOLITHIC SUBSTRATE WITH EXISTING PPC COATING. EXISTING COATING CAN BE COATED WITH INTERMEDIATE COAT IF REQUIRED.
- .4 FINAL COAT:
  - .1 ONCE THE INTERMEDIATE COAT HAS CURED AND IS DRY TO TOUCH, APPLY FINAL COAT TO ENTIRE SURFACE.
  - .2 FINAL COAT WILL SEAL THE SUBSTRATE, CREATING AN EVEN MONOLITHIC SURFACE. A SECOND FINAL COAT MUST BE APPLIED.
  - .3 TOTAL APPLICATION THICKNESS (TO INCLUDE ALL COATS) SHOULD BE NO LESS THAN 60 MILS.

3.3 CLEAN-UP:
- .1 MATERIALS AND EXISTING COATINGS REMOVED FROM TANKS SHALL BE CLASSIFIED AS NON-ORGANIC AND SHALL BE DISPOSED AS SUCH.



SECTION 'A'

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DRAIN COVER SPECIFICATIONS:

PART 1 SUBMITTALS

1.1 SHOP DRAWINGS:
- .1 SUBMIT DRAWINGS FOR STAINLESS STEEL AND FRAMING MEMBERS, STAMPED AND SIGNED BY PROFESSIONAL ENGINEER REGISTERED OR LICENSED IN THE PROVINCE OF NEW BRUNSWICK.
- .2 INDICATE MATERIALS, CORE THICKNESS, FINISHES, CONNECTIONS, JOINTS, METHOD OF ANCHORAGE, SIZE AND NUMBER OF ANCHORS OR FASTENERS, SUPPORTS, REINFORCEMENT, PROFILES, SIZES, ATTACHMENTS, DETAILS, AND ACCESSORIES.
- .3 INCLUDE ERECTION DRAWINGS, ELEVATIONS AND DETAILS WHERE APPLICABLE.
- .4 INDICATE CONNECTIONS.

1.2 PRODUCT DATA:
- .1 SUBMIT MANUFACTURER'S PRINTED PRODUCT LITERATURE, SPECIFICATIONS AND DATA SHEETS.

1.3 QUALITY ASSURANCE:
- .1 CERTIFICATIONS: IF REQUESTED, SUBMIT PRODUCT CERTIFICATES SIGNED BY MANUFACTURER CERTIFYING MATERIALS COMPLY WITH SPECIFIED PERFORMANCE CHARACTERISTICS AND CRITERIA AND PHYSICAL REQUIREMENTS.

PART 2 PRODUCTS

2.1 MATERIALS:
- .1 FRAMING MEMBERS TO BE FABRICATED FROM 316 STAINLESS STEEL.
- .2 WELDING ROD TO BE 309 ELECTRODE.
- .3 FASTENERS TO BE 316 STAINLESS STEEL.
- .4 FIBRE PRIME AS MANUFACTURED BY GEMITE PRODUCTS INC. OR APPROVED EQUIVALENT.

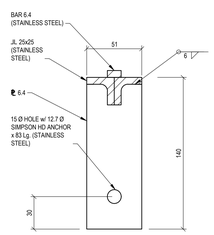
2.2 FABRICATION:
- .1 VERIFY ALL DIMENSIONS ON SITE PRIOR TO SHOP FABRICATION.
- .2 FABRICATE ITEMS OF SIZES AND PROFILES DETAILED ON DRAWINGS, WITH JOINTS NEATLY FITTED AND PROPERLY SECURED.
- .3 FABRICATE WORK SQUARE, TRUE, STRAIGHT AND ACCURATE TO REQUIRED SIZE, WITH JOINTS CLOSELY FITTED AND PROPERLY SECURED.
- .4 ACCURATELY FORM ALL CONNECTIONS AND JOINTS WITH EXPOSED FACES FLUSH, MITRES AND JOINTS TIGHT.
- .5 MASTEREMACO N420 CI BY BASF OR APPROVED EQUIVALENT.

PART 3 EXECUTION

3.1 EXAMINATION:
- .1 VERIFICATION OF CONDITIONS:
  - .1 VERIFY THAT CONDITIONS OF SUBSTRATES PREVIOUSLY INSTALLED UNDER OTHER SECTIONS OR CONTRACTS ARE ACCEPTABLE FOR INSTALLATION IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
  - .2 INFORM CONSULTANT OF UNACCEPTABLE CONDITIONS IMMEDIATELY UPON DISCOVERY.
  - .3 PROCEED WITH INSTALLATION ONLY AFTER UNACCEPTABLE CONDITIONS HAVE BEEN REMEDIED.

3.2 ERECTION:
- .1 OBTAIN CONSULTANT'S PERMISSION PRIOR TO SITE CUTTING OR MAKING ADJUSTMENTS THAT ARE NOT PART OF ORIGINAL WORK.
- .2 REPLACE ITEMS DAMAGED IN COURSE OF INSTALLATION.
- .3 PERFORM NECESSARY CUTTINGS AND ALTERING FOR THE INSTALLATION OF WORK OF OTHER SECTIONS, AND AS INDICATED ON DRAWINGS. NO ADDITIONAL CUTTING IS TO BE DONE WITHOUT THE APPROVAL OF THE CONSULTANT.

3.3 CLEANING:
- .1 PERFORM CLEANING AFTER INSTALLATION TO REMOVE CONSTRUCTION AND ACCUMULATED ENVIRONMENTAL DIRT.
- .2 UPON COMPLETION OF INSTALLATION, REMOVE SURPLUS MATERIALS, RUBBISH, TOOLS AND EQUIPMENT.



SECTION 'B'

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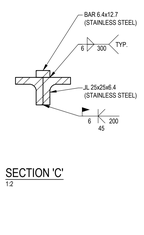

SECTION 'C'

1:2

GENERAL SPECIFICATIONS:

PART 1 GENERAL

1.1 OWNER'S OCCUPANCY:
- .1 EXISTING FACILITY WILL BE OCCUPIED DURING CONSTRUCTION PERIOD FOR EXECUTION OF NORMAL OPERATIONS. COOPERATE WITH OWNER IN SCHEDULING OPERATIONS TO MINIMIZE CONFLICT AND FACILITATE OWNER USAGE.

1.2 TIMING:
- .1 SUPPORTS ARE TO BE INSTALLED IN A SEMI-ENCLOSED LOCATION. MODIFICATIONS OF EXISTING CORRODED SUPPORTS CAN BE PERFORMED WITH COORDINATION OF OWNER.
- .2 ANY SHUTDOWN TO ENABLE WORK WILL BE LIMITED TO SPECIFICALLY TIMED AND SCHEDULED LOCATIONS. ALLOW BUSINESS CONTINUITY.

1.3 PROTECTION:
- .1 SOME TANKS WILL CONTAIN FISH STOCK.
- .2 PROVIDE PROTECTION AND CONTAINMENT MECHANISMS TO CAPTURE MATERIALS TO PREVENT SOLID AND LIQUID CONTAMINATION, AND OBJECTS FROM FALLING INTO WATER OR TANKS.
- .3 TYPE OF PROTECTION AND CONTAINMENT MECHANISMS TO BE APPROVED BY OWNER.
- .4 THIS CONTRACTOR SHALL GIVE ALL NOTICES, OBTAIN ALL PERMITS AND PAY ALL FEES IN ORDER THAT THE WORK HEREIN MAY BE CARRIED OUT.
- .5 ALL LABOUR, MATERIALS, AND WORKMANSHIP SHALL BE WARRANTED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF ACCEPTED SUBSTANTIAL COMPLETION OF THE WORK.
- .6 THE CONTRACTOR SHALL MAKE A THOROUGH EXAMINATION OF THE SITE PRIOR TO BIDDING THE WORK IN ORDER TO BECOME AWARE OF THE EXTENT OF DEMOLITION, NEW WORK AND THE EXTENT OF REQUIRED COORDINATION WITH OTHER TRADES. THIS SHALL INCLUDE VERIFICATION OF EXISTING DIMENSIONS. NO ADDITIONAL COSTS WILL BE CONSIDERED DUE TO A FAILURE TO EXAMINE EXISTING SITE CONDITIONS AND FACILITY OPERATIONS. BEFORE BEGINNING THE WORK, THIS CONTRACTOR SHALL CONFIRM TO THEIR OWN SATISFACTION THAT THE WORK OF THIS TRADE CAN BE CARRIED OUT WITHOUT CHANGES TO THE EQUIPMENT SHOWN ON THE DRAWINGS. ANY DEFECTS, INTERFERENCES OR CONFLICTS SHALL BE REPORTED AT ONCE TO THE OWNER FOR RESOLUTION. NO ADDITIONAL COSTS WILL BE CONSIDERED DUE TO A FAILURE TO REPORT SUCH OCCURRENCES.
- .7 CUTTING AND PATCHING IS TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
- .8 CONNECTIONS INTO EXISTING SYSTEMS TO BE MADE AT DATE AND TIME APPROVED BY OWNER. MAKE REQUEST FOR CONNECTION DATE AND TIME IN WRITING.
- .9 SUBMIT ONE COPY OF FIELD RED-LINED RECORD DRAWINGS TO OWNER FOR REVIEW.
- .10 CONTRACTOR IS RESPONSIBLE FOR GENERAL CLEANUP OF WORK AREAS AFTER COMPLETION.
- .11 ALL WORK SHALL BE DONE IN A SAFE MANNER, IN ACCORDANCE WITH NEW BRUNSWICK CONSTRUCTION SAFETY ASSOCIATION REQUIREMENTS, SITE SAFETY REQUIREMENTS, AND FIRE WATCH IF ANY WELDING/CUTTING IS DONE IN A COMBUSTIBLE AREA.

1.4 POWER AVAILABILITY:
- .1 POWER SUPPLY AVAILABLE ON SITE: 3-PHASE, 600V, 60A POWER SUPPLY IS AVAILABLE ON SITE; BUT, NOT IN VICINITY OF PONDS. 220V RECEPTACLES ARE AVAILABLE NEAR EACH WING.
- .2 PROVIDE TEMPORARY POWER REQUIREMENTS AS NECESSARY FOR OPERATION OF EQUIPMENT.

1.5 CONTRACTORS USE OF SITE:
- .1 FACILITY REGULAR WORKING HOURS ARE 0730 TO 1600, MONDAY TO FRIDAY.

1.6 TANK DEPTHS MEASURE 1370mm DEEP. INSTALLATION OF NEW COATING REQUIRED TO A DEPTH OF 1200mm.

1.7 JUMP NET POSTS TO REMAIN IN PLACE DURING RECOATING PROCESS.

1.8 EXISTING TANK WALKWAY:
- .1 REMOVE 4-BOLTS AT BASE OF WALKWAY SUPPORT COLUMN IN THEIR ENTIRETY AND PATCH HOLES. REMOVE WALKWAY; STORE AND PROTECT FOR REINSTALLATION.
- .2 REINSTALL EXISTING TANK WALKWAY AFTER NEW COATING HAS CURED.
- .3 PROVIDE NEOPRENE PAD BETWEEN BASE OF SUPPORT COLUMN AND SURFACE OF TANK.
- .4 BOLTING OF WALKWAY SUPPORT COLUMN BASE TO TANK IS NOT REQUIRED. STABILIZE WALKWAY BY FOLLOWING MEANS:
  - .1 BOLT WEB OF C75x6 CHANNEL SECTION, APPROXIMATELY 600 MM LONG, PERPENDICULAR TO UNDERSIDE OF BOTH LONGITUDINAL ANGLES OF EXISTING WALKWAY (SIDE CLOSEST TO TANK WALL).
  - .2 BOLT TWO (2) HSS 51x51x3.2 MEMBERS ON TOP OF CHANNEL OUTSIDE OF LONGITUDINAL ANGLES.
  - .3 HSS MEMBERS ARE TO MAKE AN ANGLE OF 45 DEGREES WITH WALKWAY AND EXTEND BACK TO TANK WALL, APPROXIMATELY 5300mm IN LENGTH.
  - .4 ATTACH HSS MEMBERS TO TANK WALL WITH 13mm DIAMETER TITEN HD ANCHORS BY SIMPSON STRONG-TIE. ANCHORS TO BE 150mm LONG AND INSTALLED 100mm FROM VERTICAL INSIDE FACE OF THE TANK.
  - .5 HSS MEMBERS TO ASTM A500, GRADE C, ROLLED CHANNEL MEMBERS TO CSA G40.21-M GRADE 300W; BOLTS, NUTS AND WASHERS TO BE 13mm DIAMETER TO ASTM A325.

1.9 PROVIDE WATER BARRIER BEHIND FISH TRAP DOOR DURING COATING APPLICATION.

1.10 REMOVE FISH TRAP DOOR ALONG WITH STEEL SLATS AND BOLTS DURING RECOATING APPLICATION. AFTER COATING IS INSTALLED, REINSTALL EXISTING STEEL SLATS WITH 13MM DIAMETER TITEN HD ANCHORS BY SIMPSON STRONG-TIE.

1.11 CONTRACTOR TO ENSURE METHOD OF REMOVAL FOR EXISTING COATING IS COMPATIBLE WITH MANUFACTURER'S REQUIREMENTS.

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0	RELEASED FOR CONSTRUCTION	2017.NOV.01

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REGISTERED PROFESSIONAL ENGINEER
Province of New Brunswick
M7238
Ryan D. Johnson
2017-11-01
Date
Province du Nouveau-Brunswick
INGÉNIEUR INHABILITÉ

Drawn By:	DPE / ECM
Dwg Standards Ckd By:	
Designed By:	RDJ
Design Checked By:	
Scale:	AS SHOWN

Project Title
MACTAQUAC FISH POND - FISH TANK COATING AND DRAIN COVER REPLACEMENT FRENCH VILLAGE, NB

Dwg. Title
PLAN AND DETAILS

Project No. FRE-00240274-A0

Dwg. No. **501-1** Rev. No. 0

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