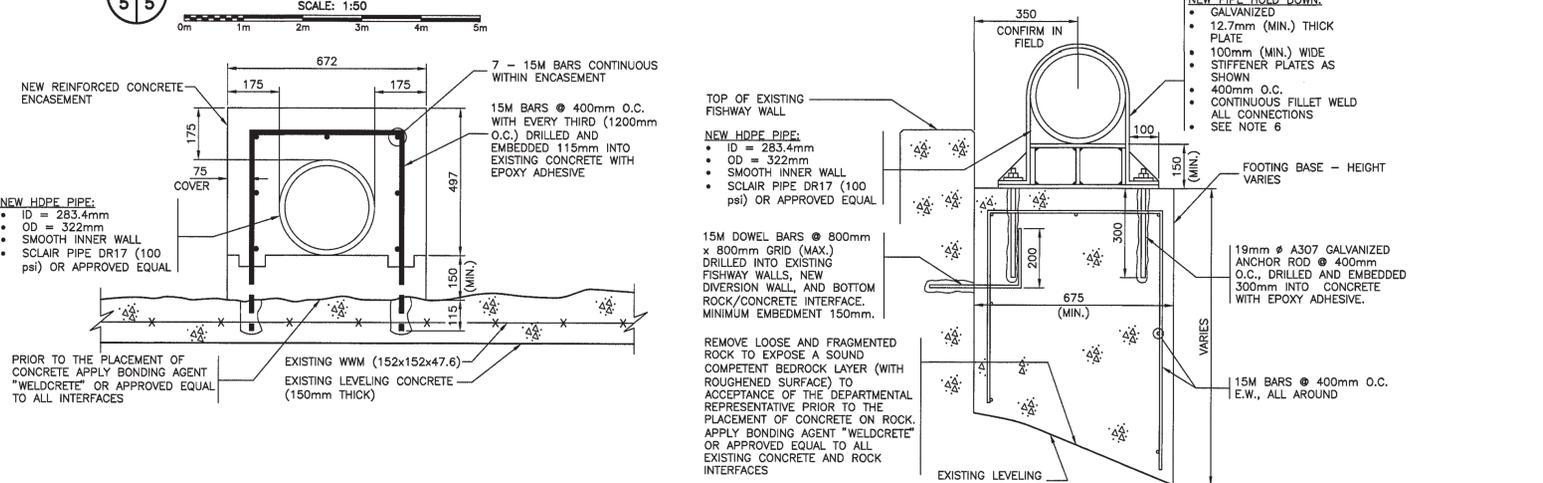
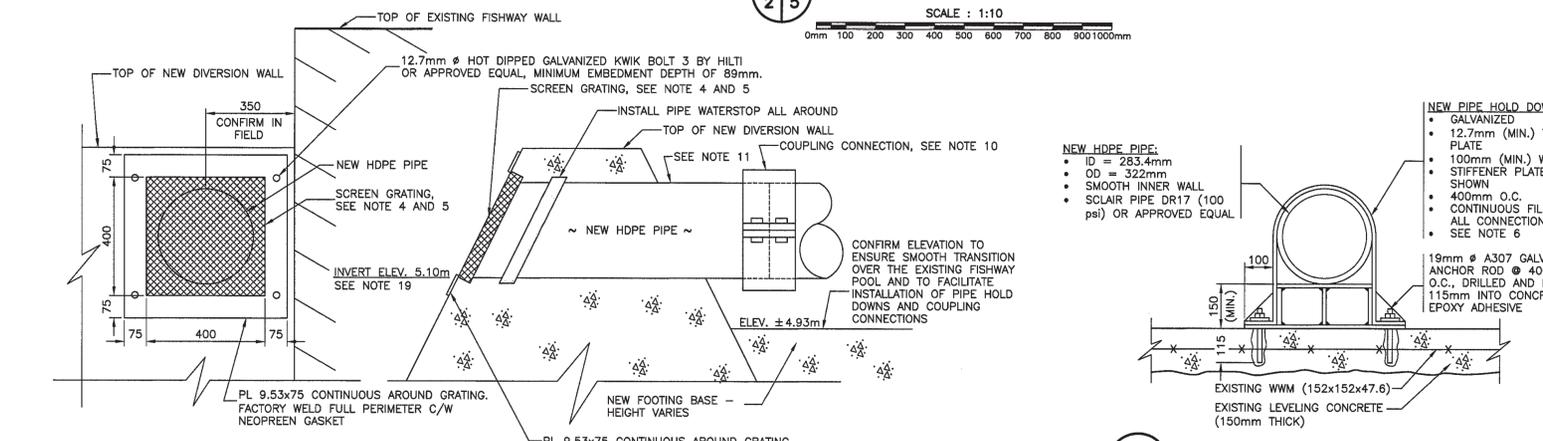


1 ATTRACTION FLOW PIPE - PROFILE



2 ATTRACTION FLOW PIPE - SECTION #1

3 ATTRACTION FLOW PIPE - SECTION #2



4 ATTRACTION FLOW PIPE - INLET SCREEN GRATING DETAILS

5 ATTRACTION FLOW PIPE - SECTION #3

6 PIPE SCREEN CAP DETAIL

NOTES:

- ALL DIMENSIONS IN MILLIMETRES UNLESS SPECIFIED OTHERWISE.
- ALL ELEVATIONS IN METRES.
- DO NOT SCALE FROM DRAWINGS, USE DIMENSIONS AS SHOWN.
- ATTRACTION FLOW SCREEN GRATING, BORDEN TYPE E, (18-R-3.5), RIVETED GRATING, NON-SERRATED EDGE, SIZE NO. 9, BEARING BAR SIZE 4.5X5, GALVANIZED OR APPROVED EQUAL. GRATING TO BE FULLY BANDED.
- INLET SCREEN GRATING TO BE FLUSH WITH FACE OF DIVERSION WALL AND BE COMPLETELY REMOVABLE. CONTRACTOR SHALL PROVIDE A 9.53mm THICK GALVANIZED STEEL PLATE TO MATCH THE DIMENSIONS OF SCREEN FRAME C/W BOLT HOLES TO ALLOW INSTALLATION OVER THE INLET IN PLACE OF THE SCREEN GRATING DURING OFF SEASON. PROVIDE 6mm THICK x 50mm WIDE CONTINUOUS NEOPREEN GASKET AROUND PERIMETER OF NEW STEEL PLATE BETWEEN PLATE AND CONCRETE INTERFACE.
- NEW GALVANIZED PIPE HOLD DOWNS TO BE FABRICATED WITH THE MINIMUM DIMENSIONS INDICATED, OR AS REQUIRED TO SUIT THE PIPE SIZE AND APPLICATION AS PER MANUFACTURER'S RECOMMENDATIONS. RAISED PORTION OF THE HOLD DOWNS TO BE 150mm MINIMUM OR AS REQUIRED TO FACILITATE VALVE AND COUPLING CONNECTIONS. CONTRACTOR TO SUBMIT FABRICATION SHOP DRAWING FOR APPROVAL.
- NEW HDPE ATTRACTION FLOW PIPE SYSTEM TO INCLUDE ALL NECESSARY FITTINGS, CONNECTIONS, VALVES, BENDS, WYES, SCREEN CAPS, PIPE HOLD DOWNS AND ALL OTHER MATERIALS REQUIRED TO INSTALL THE PIPE AS SHOWN AND AS DIRECTED IN THE FIELD BY THE DEPARTMENTAL REPRESENTATIVE. PLEASE NOTE, THE CONTRACTOR SHALL CONFIRM THE EXACT LOCATION AND DISCHARGE POINT WITH THE DEPARTMENTAL REPRESENTATIVE IN THE FIELD. PRIOR TO FINAL INSTALLATION OF THE PIPE HOLD DOWNS, CONTRACTOR SHALL TEMPORARILY SUPPORT THE PIPE(S) AND OPEN SYSTEM (I.E. ALLOW WATER TO PASS THROUGH), OPEN SYSTEM IN THE PRESENCE OF THE DEPARTMENTAL REPRESENTATIVE IN BOTH LOW AND HIGH TIDE CONDITIONS. CONTRACTOR SHALL BE EXPECTED TO MAKE ADJUSTMENTS TO ENSURE SYSTEM IS OPERATING TO THE APPROVAL OF DEPARTMENT REPRESENTATIVE. FOLLOWING APPROVAL OF THE PIPE DISCHARGE LOCATIONS, THE CONTRACTOR SHALL THEN PROCEED TO INSTALL PIPE HOLD DOWNS IN THEIR FINAL LOCATION AND REMOVE ALL TEMPORARY SUPPORTS.
- ATTRACTION FLOW PIPE TO TURN 90 DEGREES AND EXTEND DOWN INTO THE EXISTING FISHWAY POOL. COORDINATE IN THE FIELD WITH THE DEPARTMENTAL REPRESENTATIVE FOR ACTUAL DISCHARGE POINT (ALLOW 2m OF PIPE TO EXTEND DOWN INTO THE POOL). SUPPORT THE PIPE VERTICAL ALONG THE INSIDE WITH PIPE HOLD DOWNS ANCHORED INTO THE EXISTING WALL. CUT EXISTING GRATING AS REQUIRED TO ALLOW PIPE TO ENTER THE POOL AND PROVIDE AUXILIARY SUPPORTS - MINIMIZE OPENING AND PROVIDE BANDING AROUND CUT PERIMETER TO ELIMINATE ANY SHARP EDGES. INSTALL L 76mm x 76mm x 9.5mm GALVANIZED STEEL ANGLE TO SUPPORT EXISTING CUT GRATING TO ENSURE FULL SUPPORT IS PROVIDED. ANGLE TO BE WELDED TO EXISTING STEEL SUPPORT AND CONCRETE ANCHORED INTO EXISTING CONCRETE WALL WITH 12.7mm GALVANIZED ANCHOR BOLTS. SHOP DRAWINGS FOR MODIFICATION TO THE GRATING SUPPORTS TO BE SUBMITTED UNDER SEAL OF PROFESSIONAL ENGINEER LICENCED IN NEWFOUNDLAND AND LABRADOR ALONG WITH THE NECESSARY FABRICATION DETAILS/DESIGN.
- ALL HDPE PIPE ENCASED IN CONCRETE TO BE JOINED BY THE METHOD OF THERMAL BUTT FUSION. ENCASE HDPE PIPE IN CONCRETE AS PER MANUFACTURER'S RECOMMENDATIONS. SUPPLY AND INSTALL ANY ADDITIONAL FITTINGS, JOINTS AND/OR COMPRESSIBLE WRAP AS REQUIRED.
- EXPOSED PIPE SECTIONS LOCATED UPSTREAM AND DOWNSTREAM OF THE CONCRETE ENCASUREMENT SHALL BE JOINED BY BOTH THERMAL BUTT FUSION AND COUPLINGS. PIPE SECTIONS TO BE JOINED SUCH THAT IT CAN EASILY BE DISASSEMBLED AND BE REMOVED FROM SITE DURING OFF SEASON WITH MANPOWER ONLY. CONTRACTOR TO SUBMIT PIPE LAYOUT PLAN WITH LOCATION OF COUPLINGS FOR APPROVAL PRIOR TO INSTALLATION.
- PIPE TO EXTEND PASS CONCRETE WITH SUFFICIENT LENGTH TO FACILITATE INSTALLATION OF THE COUPLING CONNECTIONS. CONTRACTOR SHALL PROVIDE END CAP AND GALVANIZED PROTECTION BOXES TO BE INSTALLED OVER THE STUB ENDS ONCE THE PIPE IS REMOVED DURING THE OFFSEASON. PROTECTION BOXES TO BE A MINIMUM 9.53mm THICK, SIZED AS REQUIRED TO COVER THE STUB END COMPLETELY AND ATTACHED TO THE CONCRETE WITH 12.7mm Ø GALVANIZED ANCHORS. CONTRACTOR TO SUBMIT FABRICATION SHOP DRAWING FOR APPROVAL.
- BUTTERFLY VALVES TO BE INSTALLED TO HDPE PIPE WITH FLANGE CONNECTIONS. FLANGE BACKUP RING AND BOLT HARDWARE TO BE STAINLESS STEEL. REFER TO SPECIFICATION. COORDINATE EXACT LOCATION IN THE FIELD.
- CONTRACTOR SHALL INSTALL END CAP AND GALVANIZED PROTECTION BOX OVER THE STUB END AT CLEANOUT LOCATIONS. PROTECTION BOXES TO BE A MINIMUM 9.53mm THICK, SIZED AS REQUIRED TO COVER THE STUB END COMPLETELY AND ATTACHED TO THE CONCRETE WITH 12.7mm Ø GALVANIZED ANCHORS. CONTRACTOR TO SUBMIT FABRICATION SHOP DRAWING FOR APPROVAL.
- INSTALL STAINLESS STEEL SCREEN CAP AT THE END OF EACH PIPE WITH FLANGE CONNECTION. SCREEN CAP SHOWN FOR GENERAL CONFIGURATION PURPOSES ONLY. CONTRACTOR TO SUBMIT FABRICATION SHOP DRAWING FOR APPROVAL.
- ALL ANCHOR BOLTS AND DOWELS TO BE ANCHORED INTO CONCRETE WITH HILTI HIT-RE 500 EPOXY ADHESIVE, OR APPROVED EQUAL.
- ALL NEW PLACED CONCRETE TO BE TINTED TO MATCH THE EXISTING TERRAIN AND TO LOOK AS NATURAL AS POSSIBLE. CONTRACTOR SHALL PROVIDE SAMPLES AND COORDINATE IN THE FIELD WITH THE DEPARTMENTAL REPRESENTATIVE PRIOR TO POURING.
- CONSTRUCT FORMWORK SUCH THAT THE NEWLY PLACED CONCRETE MATCHES THE EXISTING TERRAIN AND LOOKS AS NATURAL AS POSSIBLE. COORDINATE IN THE FIELD WITH DEPARTMENTAL REPRESENTATIVE.
- CONTRACTOR TO PROVIDE ONE (1) ADDITIONAL BUTTERFLY VALVE AND THREE (3) ADDITIONAL PIPE COUPLINGS TO STORE ON-SITE FOR FUTURE USE.
- CONTRACTOR TO CONFIRM TIE IN LOCATION OF DIVERSION WALL #2 INTO THE EXISTING FISHWAY WALL WITH THE DEPARTMENTAL REPRESENTATIVE. CONTRACTOR SHALL CONFIRM ALL EXISTING ELEVATIONS SHOWN ON THE DRAWINGS INCLUDING THE EXISTING FISHWAY STRUCTURE AND SURROUNDING ROCK IN THE AREA OF NEW WORK. FOLLOWING SURVEY CONFIRMATION, CONTRACTOR SHALL COORDINATE EXACT LOCATION OF THE WALL AND LOCATION AND ELEVATION OF THE PIPE INVERT TO ENSURE THE PIPE IS SLOPED TOWARDS THE FISHWAY POOL AND THE UPSTREAM TOPOGRAPHY/FEATURES WILL ALLOW FREE FLOW OF WATER TO THE PIPE WITHOUT ANY OBSTRUCTIONS. COORDINATE WITH THE DEPARTMENTAL REPRESENTATIVE AND OBTAIN APPROVAL IF FIELD ADJUSTMENTS ARE REQUIRED.

Fisheries and Oceans Canada / **Pêches et Océans Canada**

PROVINCE OF NEWFOUNDLAND AND LABRADOR

PERMIT HOLDER
This Permit Allows
Meridian Engineering Inc.
Member No. 04378

To practice Professional Engineering in Newfoundland and Labrador
Permit No. as issued by PEO, 201403, which is valid for the year 2017.

REGISTERED PROFESSIONAL ENGINEER
PEO
NEWFOUNDLAND AND LABRADOR
DWAYNE FISHER
17/02/22

B	ISSUED FOR TENDER	17/02/22
A	ISSUED FOR 99% REVIEW	16/12/02

revisions: _____
date: _____

project: _____
drawing: _____

**FISHWAY ENHANCEMENT
ROCKY RIVER 2017
COLINET, NL**

designed: C. FISHER
date: OCTOBER, 2016
drawn: R. SNOW
date: OCTOBER, 2016
approved: _____
date: _____
Tender: _____
DFO Project Manager: _____
project number: 6879-171001
drawing no.: _____

ATTRACTION FLOW PIPE - PROFILE, SECTIONS, AND DETAILS

C5 OF 5

DFO DRAWING No. 01N0403A00555