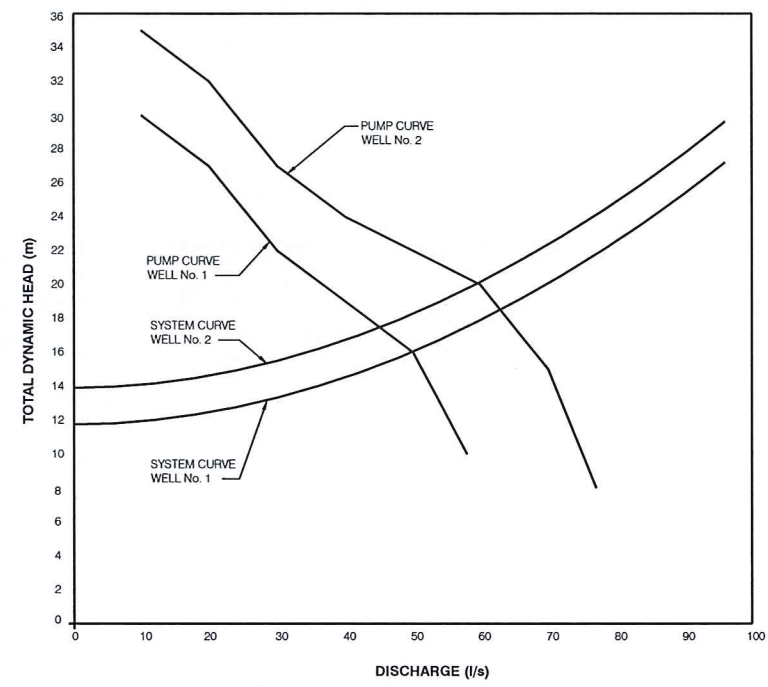
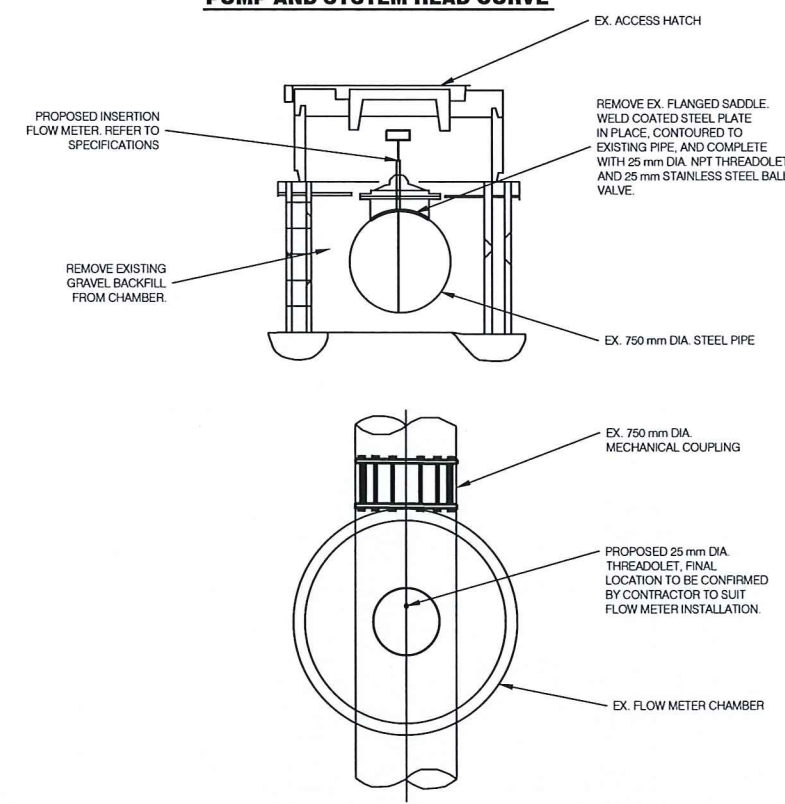


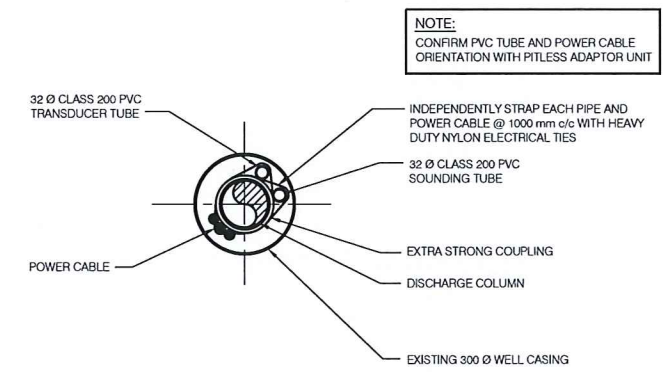
NOTE:
 1. CONFIRM PRESSURE TRANSDUCER ELEVATION WITH THE ENGINEER.
 2. WELL DISCHARGE PIPING TO BE FULLY RESTRAINED (EVERY JOINT) BETWEEN PITLESS ADAPTER UNIT AND TIE-IN AT EXISTING PUMP STATION.



PUMP AND SYSTEM HEAD CURVE



FLOW METER CHAMBER MODIFICATIONS - DETAIL
 N.T.S.



TYPICAL SECTION THROUGH WELL
 N.T.S.

| ITEM | WELL No. 1 | | WELL No. 2 | |
|-------------------------------------|------------|-------|------------|-------|
| | ELEVATION | DEPTH | ELEVATION | DEPTH |
| T.O. EXISTING WELL CASING | 87.5 | - | 88.8 | - |
| APPROXIMATE EXISTING GROUND | 87.0 | 0.5 | 88.0 | 0.8 |
| DISCHARGE PIPE CENTRELINE ELEVATION | 85.8 | 1.7 | 86.8 | 2.0 |
| STATIC WATER LEVEL (SEPT. 2014) | 82.4 | 5.1 | 82.0 | 6.8 |
| ESTIMATED LOWEST STATIC LEVEL | 81.9 | 5.6 | 81.5 | 7.3 |
| RESET LEVEL (PT) | 80.0 | 7.5 | 80.0 | 8.8 |
| DRAWDOWN ELEVATION AFTER PUMP TEST | 76.5 | 11.0 | 78.4 | 10.4 |
| ALARM LEVEL (PT) | 76.1 | 11.4 | 77.1 | 11.7 |
| MAXIMUM SAFE DRAWDOWN ELEVATION | 75.6 | 11.9 | 76.6 | 12.2 |
| SHUTDOWN LEVEL (PT) | 75.6 | 11.9 | 76.6 | 12.2 |
| PRESSURE TRANSDUCER ELEVATION | 75.3 | 12.2 | 76.4 | 12.4 |
| TOP OF PUMP ELEVATION | 75.3 | 12.2 | 76.4 | 12.4 |
| T.O. K-PACKER ELEVATION | 73.0 | 14.5 | 74.1 | 14.7 |
| T.O. WELL SCREEN | 72.3 | 15.2 | 73.6 | 15.2 |
| BOTTOM OF WELL SCREEN | 69.0 | 18.5 | 69.3 | 19.5 |

NOTE:
 ELEVATION IN METRES (m) GEODETIC.
 DEPTH IN METRES (m) BELOW TOP OF EXISTING CASING.
 DATA SOURCE: COLUMBIA WATER WELLS LTD. WELL CONSTRUCTION REPORT (AUG 2010), AND GW SOLUTIONS INC. WELL YIELD ASSESSMENT REPORT (SEPT. 20, 2014).

SUMMARY OF WELL LOG - WELL No.1

| DEPTH BELOW GROUND (m) | | DESCRIPTION OF MATERIAL |
|------------------------|--------|------------------------------------------------|
| FROM | TO | |
| 0 | 4.572 | F-C GRAVEL AND SAND COBBLES, BOULDERS |
| 4.572 | 5.182 | GRAY CLAY GRAVEL TILL |
| 5.182 | 13.106 | F-C GRAVEL AND SAND, COBBLES, BROWN SILTY WASH |
| 13.106 | 15.545 | F-C SAND, M.-C GRAVEL (WATER), GRAY SILT WASH |
| 15.545 | 17.678 | F-C SAND AND GRAVEL |
| 17.678 | 17.983 | BEDROCK |

SUMMARY OF WELL LOG - WELL No.2

| DEPTH BELOW GROUND (m) | | DESCRIPTION OF MATERIAL |
|------------------------|--------|---------------------------------------|
| FROM | TO | |
| 0 | 7.315 | F-C GRAVEL AND SAND COBBLES, BOULDERS |
| 7.315 | 13.716 | HARD TILL COBBLES |
| 13.716 | 16.154 | F-C SAND AND GRAVEL, COBBLES, WATER |
| 16.154 | 18.592 | F-C SAND AND GRAVEL |
| 18.592 | 19.202 | BEDROCK |

NOTE:
 LAYOUT OF WELL DERIVED FROM EXISTING BUILDING OFFSET DISTANCES PROVIDED BY D.F.O. (SEE DRAWING 31-17-909)
 WELL LOG INFORMATION FROM COLUMBIA WATER WELLS LTD.



FISHERIES AND OCEANS CANADA
 REAL PROPERTY AND TECHNICAL SUPPORT BRANCH

**ROBERTSON CREEK HATCHERY
 COLD WATER PUMP STATION
 GROUNDWATER WELLS No. 1 AND No. 2**

**TYPICAL WELL SECTION, WELL LOGS,
 PUMP CURVES, FLOW METER CHAMBER**

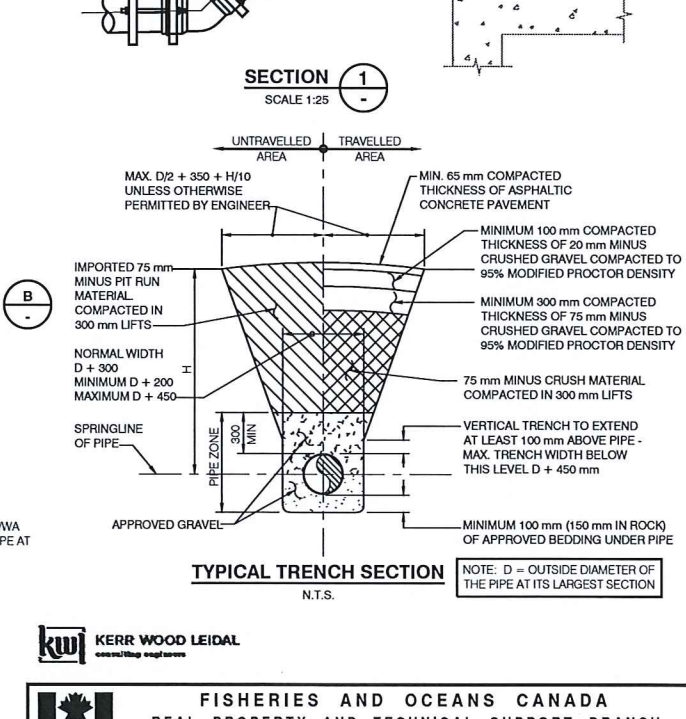
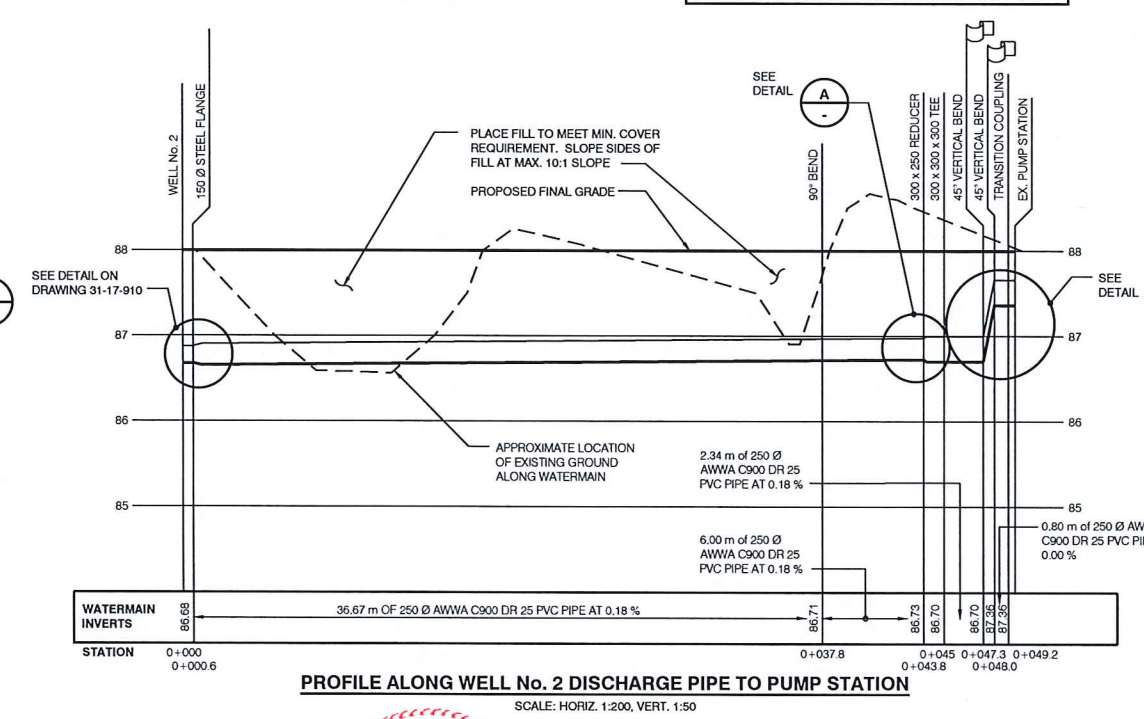
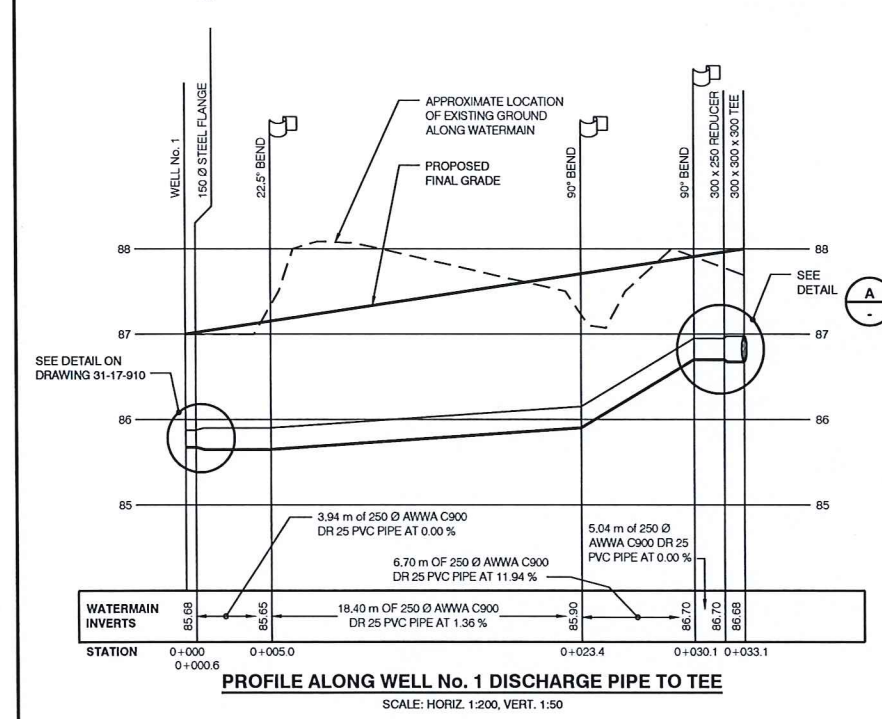
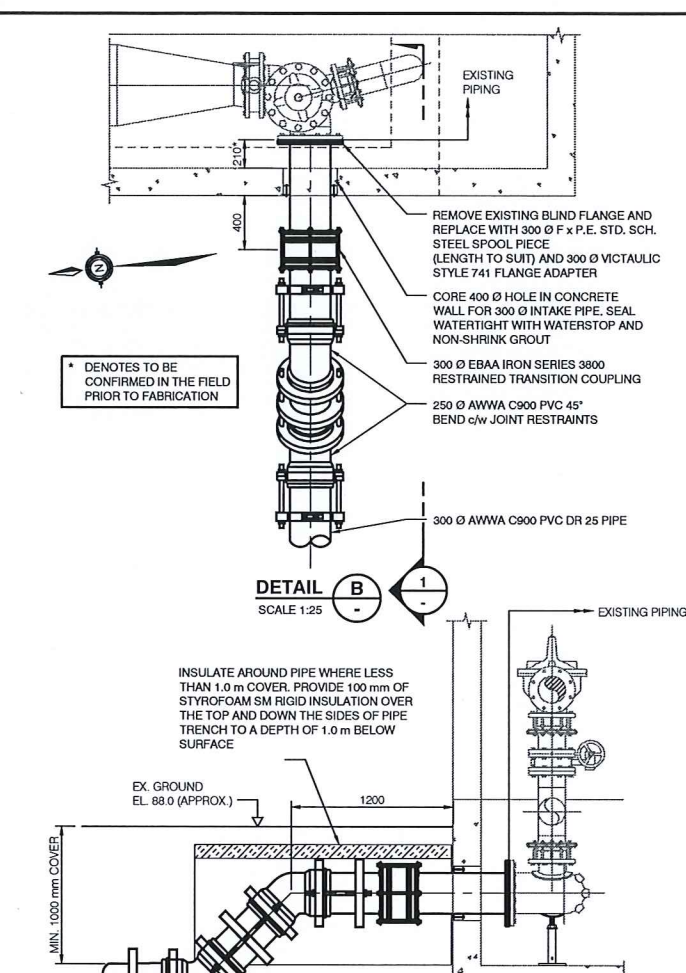
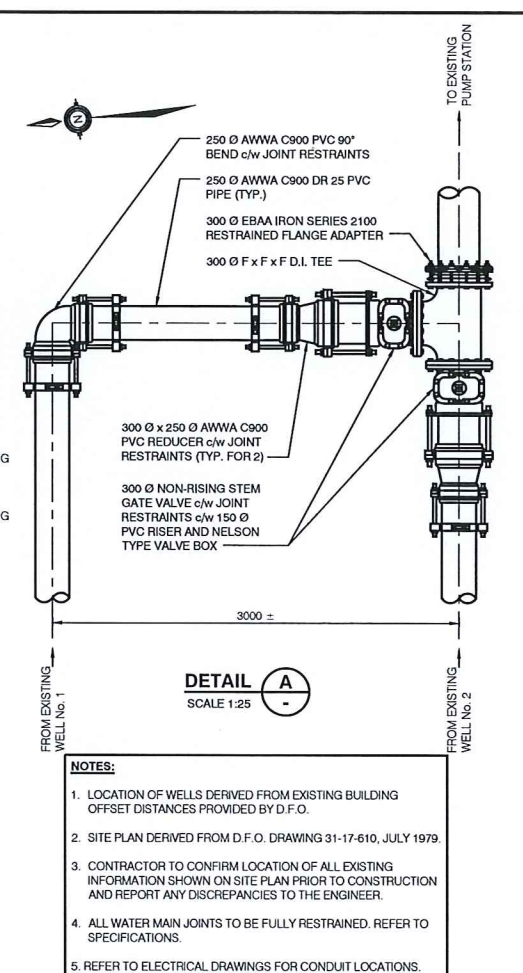
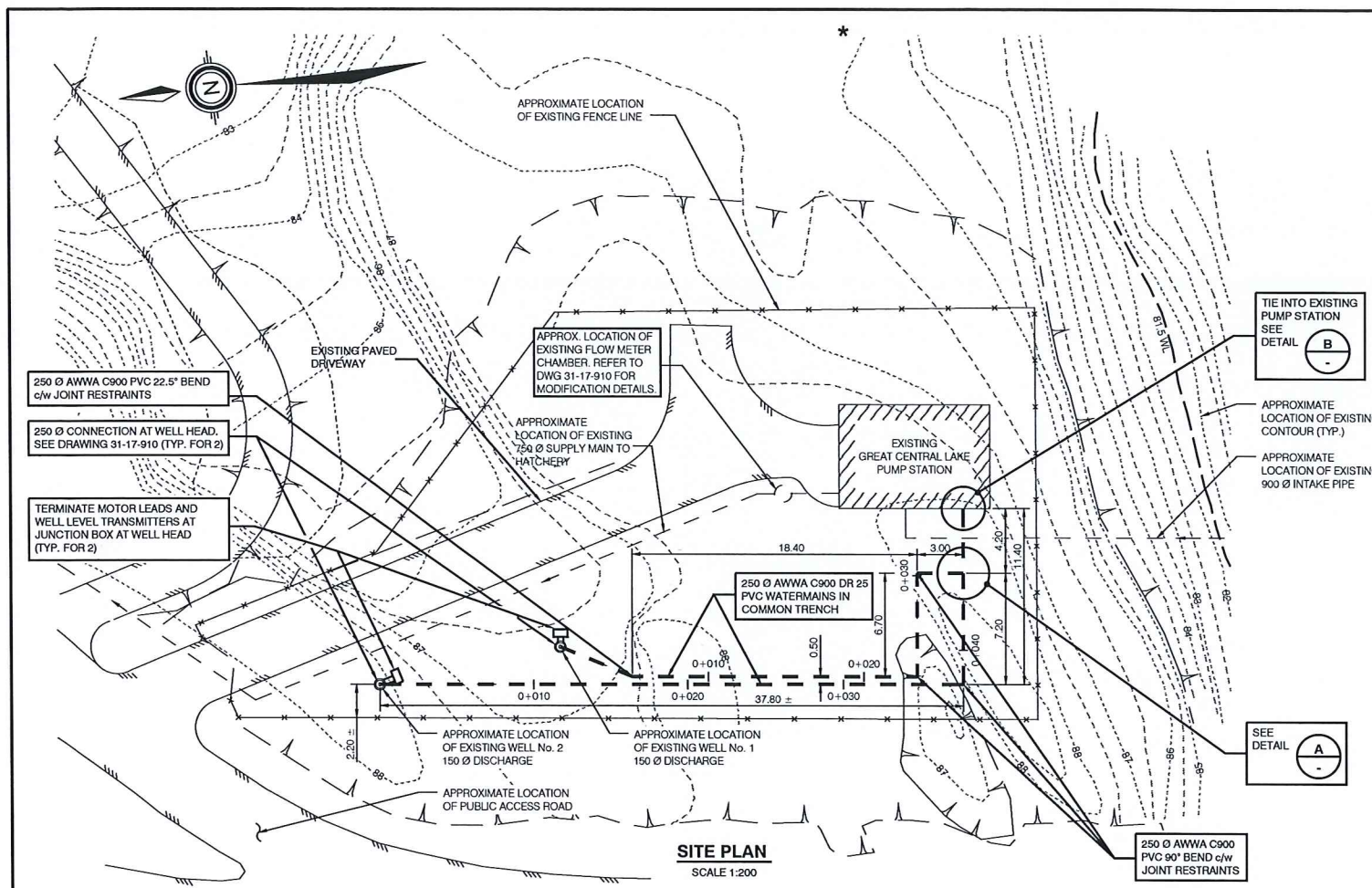
SCALE AS NOTED
 DATE MARCH 2017
 DRAWING NUMBER 31-17-910
 REVISION 6



| NO. | DATE | REVISIONS |
|-----|------------|----------------------------------------------------------|
| 6 | 2017/03/10 | FLOW METER INSTALLATION |
| 5 | 2016/08/05 | RE-ISSUED FOR CONSTRUCTION |
| 4 | 2015/06/24 | UPDATE WELL ELEVATIONS AND PUMP CURVE, ISSUED FOR TENDER |
| 3 | 2015/05/11 | REMOVE PUMP SUPPLY SCOPE NOTES |
| 2 | 2015/03/13 | UPDATED FOR REVISED WELL YIELDS |
| 1 | 2014/06/10 | ISSUED FOR PUMP PROCUREMENT |

| DWG. NO. | DRAWING REFERENCES |
|----------|--------------------|
| | |

| NO. | DATE | REVISIONS |
|-----|------|-----------|
| | | |



| | | | | | | | | | |
|----------|--------------------|-------|-----|------|-----------|-------------|-----|-------|----------------|
| DWG. NO. | DRAWING REFERENCES | NOTES | NO. | DATE | REVISIONS | DESIGNED | MDM | SCALE | AS NOTED |
| | | | | | | DRAWN | | | |
| | | | | | | CHECKED | | | |
| | | | | | | RECOMMENDED | | | MARCH 2017 |
| | | | | | | APPROVED | | | DRAWING NUMBER |
| | | | | | | APPROVED | | | 31-17-915 |
| | | | | | | | | | REVISION |
| | | | | | | | | | 6 |



FISHERIES AND OCEANS CANADA
REAL PROPERTY AND TECHNICAL SUPPORT BRANCH

ROBERTSON CREEK HATCHERY
COLD WATER PUMP STATION
GROUNDWATER WELLS No. 1 AND No. 2
WATERMANS
SITE PLAN, WATER MAIN PROFILES,
SECTIONS, AND DETAILS