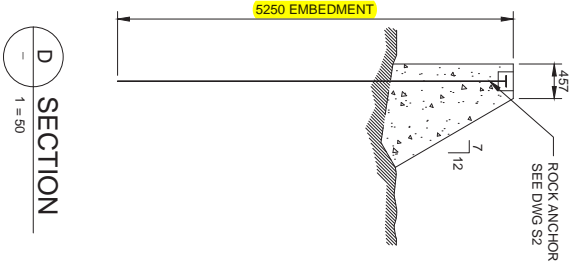


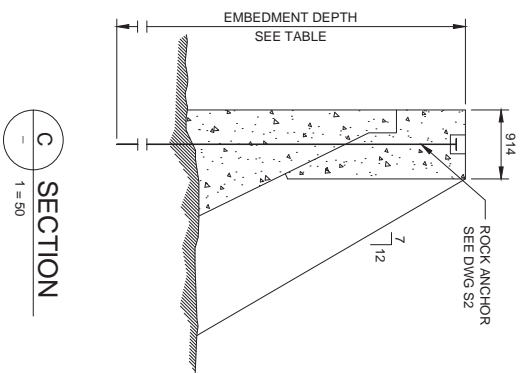
PLAN
SCALE: 1 = 50

EMBEDMENT TABLE	
LOCATION	ANCHOR EMBEDMENT DEPTH *
BUTTRESS #1	6250
BUTTRESS #2	7750
BUTTRESS #3	7750
BUTTRESS #4	7250

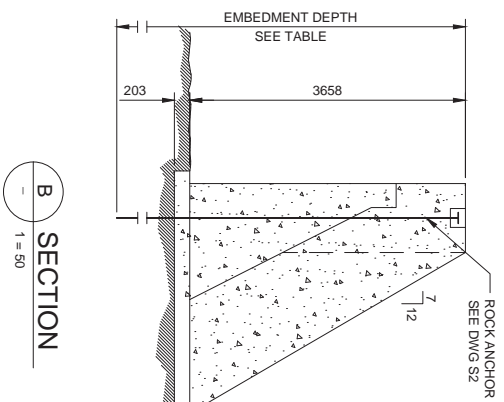
* EMBEDMENT DEPTH IS MEASURED FROM DAM CREST



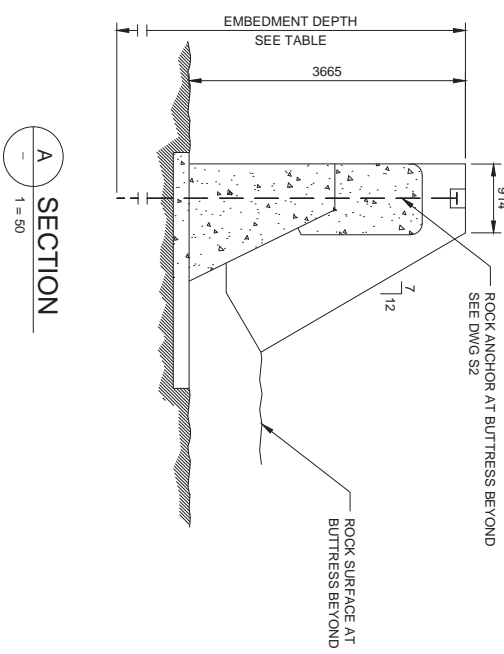
D SECTION
1 = 50



C SECTION
1 = 50



B SECTION
1 = 50



A SECTION
1 = 50

- NOTES:
- DIMENSIONS SHOWN ARE TAKEN FROM EXISTING CONSTRUCTION DRAWINGS. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS.



MARK	DATE	DESCRIPTION	BY

SUNSHINE COAST REGIONAL DISTRICT
McNEIL DAM RETROFIT
PLAN AND SECTIONS

Project No.: 14-031-FEX
Designed By: C. WILLCOX
Drawn By: V. ROUSE
Checked By: C. WILLCOX

S1

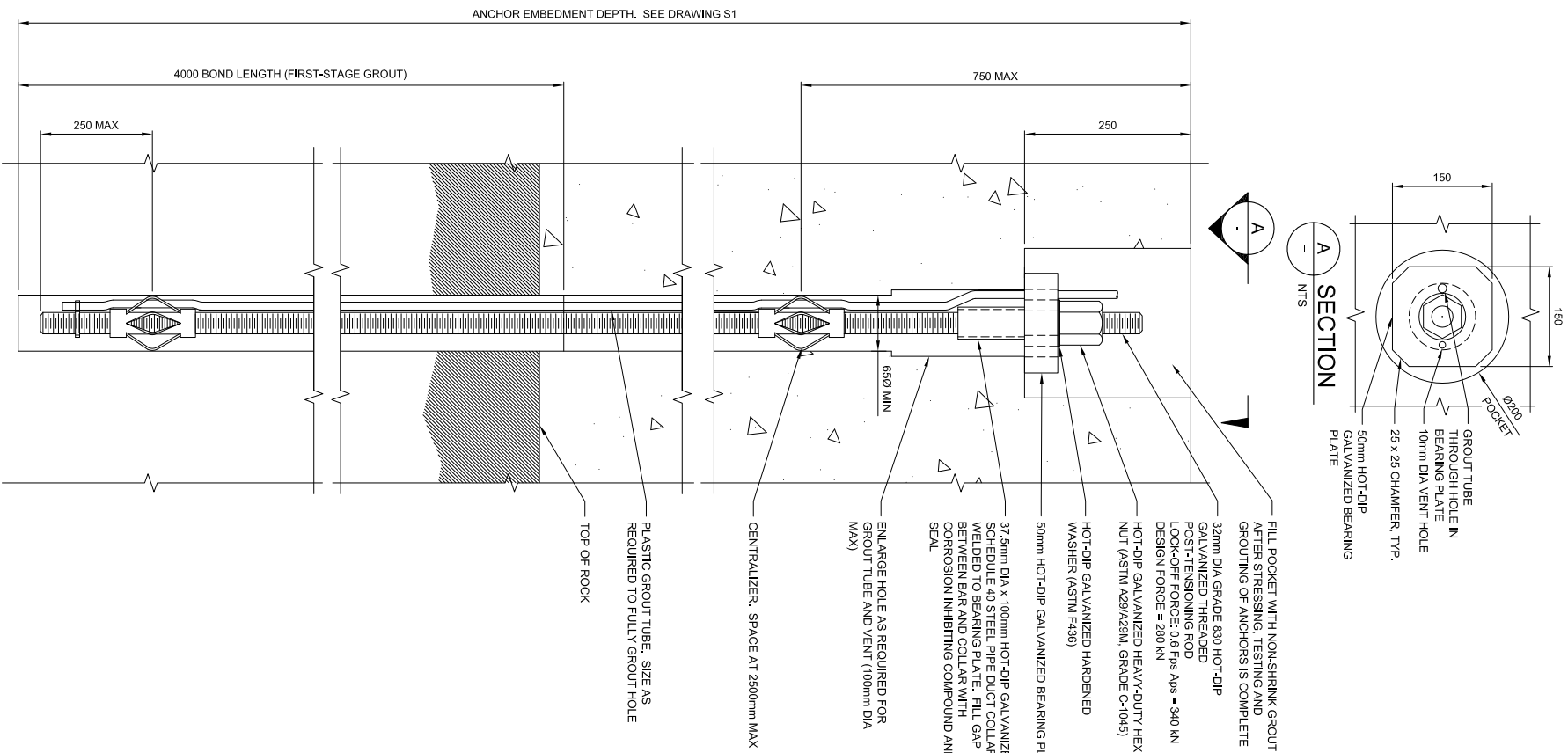
Bar Measures 1 inch



TETRA TECH

www.tetrattech.com
400 112TH AVE NE, SUITE 400
BELLEVUE, WA 98004
425-635-1000





1 ANCHOR DETAIL
S-1 NTS

DESIGN CRITERIA

MAXIMUM NORMAL OPERATING ELEVATION: 0.075m BELOW CREST
 EXTREME FLOOD ELEVATION: 1.8m ABOVE DAM CREST
 SEISMIC: PGA = 0.38g
 FROM: MCNEIL LAKE DAM SAFETY REVIEW DATED OCTOBER 2012
 MINIMUM SLIDING FACTOR OF SAFETY AND POSITION OF RESULTANT FORCE ARE IN ACCORDANCE WITH TABLE 6-4 OF THE 2007 DAM SAFETY GUIDELINES OF THE CANADIAN DAM ASSOCIATION

ANCHOR NOTES

ROCK ANCHORS SHALL CONSIST OF BAR ANCHORS WITH CLASS II PROTECTION AS DEFINED IN PTT DC 35-1-04. RECOMMENDATIONS FOR PRESTRESSED ROCK AND SOIL ANCHORS. ANCHORS SHALL BE THREADED BARS OF THE SIZE AND LENGTH SHOWN ON THE DRAWINGS.

ANCHORS SHALL BE SUPPLIED AS A COMPLETE SYSTEM CONSISTING OF THREADED BAR, ANCHOR PLATE WITH DUCT COLLAR, HARDENED WASHER, HEAVY DUTY HEX NUT, CENTRALIZERS, CORROSION INHIBITING COMPOUND, AND GROUT TUBE.

ANCHORS SHALL BE FABRICATED BY A MANUFACTURER THAT HAS BEEN IN THE PRACTICE OF MANUFACTURING SIMILAR ANCHORS FOR AT LEAST 10 YEARS

THE ANCHOR INSTALLER SHALL BE A FIRM REGULARLY ENGAGED IN THE INSTALLATION OF ROCK ANCHORS WITH AT LEAST TEN YEARS EXPERIENCE INSTALLING SIMILAR ANCHORS.

ANCHOR BARS SHALL BE THREADED BARS CONFORMING TO ASTM A722/A722M WITH A MINIMUM ULTIMATE TENSILE STRENGTH OF 1035 MPa.

HEX NUTS SHALL CONFORM TO ASTM A29/A29M, GRADE C-1045

HARDENED WASHERS SHALL CONFORM TO ASTM F436/F436M

ANCHOR PLATES SHALL BE FABRICATED FROM STEEL CONFORMING TO ASTM A575/A575M, GRADE 50.

DUCT COLLARS SHALL BE SCHEDULE 40 STEEL PIPE WELDED TO ANCHOR PLATE AND CONFORMING TO ASTM A53/A53M, GRADE B.

ANCHORS AND ACCESSORIES SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A153/A153M. CLASS C. ANCHOR AND PLATES SHALL BE GALVANIZED AFTER DUCT COLLAR IS WELDED TO PLATE

GROUT SHALL BE A NON-SHRINK CEMENTITIOUS GROUT CONFORMING TO THE RECOMMENDATIONS OF THE ANCHOR MANUFACTURER.

CONTRACTOR SHALL SUBMIT FOR REVIEW BY THE DESIGNER FABRICATION AND INSTALLATION DRAWINGS INCLUDING THE FOLLOWING: COMPLETE DETAILS OF THE ANCHOR ASSEMBLY INCLUDING BOND LENGTH AND STRESSING LENGTH; LOCATION OF SPACERS AND CENTRALIZERS AND DETAILS OF THE END ANCHORAGE; DETAILS OF CORROSION PROTECTION; PROCEDURES TO BE USED FOR DRILLING, ANCHOR INSTALLATION, GROUTING, STRESSING AND TESTING; AND LISTS OF EQUIPMENT TO BE USED FOR DRILLING, GROUTING, STRESSING AND TESTING THE ANCHORS.

ANCHORS SHALL BE DELIVERED, STORED, HANDLED AND INSTALLED SUCH THAT THEY ARE NOT DAMAGED AND THE CORROSION PROTECTION IS NOT DETRIORATED. ANCHORS SHALL BE INSPECTED IMMEDIATELY PRIOR TO INSTALLATION AND ANY DAMAGE SHALL BE REPAIRED, OR THE ANCHOR SHALL BE REPLACED.

HOLES SHALL BE DRILLED AT THE LOCATIONS AND TO THE DIAMETERS AND DEPTHS SHOWN ON THE DRAWINGS. HOLES SHALL BE LOCATED WITHIN 3 INCHES OF THE PLAN LOCATION AND THE ALIGNMENT SHALL BE WITHIN 2 DEGREES OF VERTICAL. ANY PROPOSED RELOCATION OF HOLES DUE TO INTERFERENCE WITH EXISTING EQUIPMENT OR ATTACHMENTS SHALL BE SUBMITTED TO THE DESIGNER FOR APPROVAL.

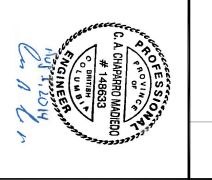
WASTE WATER FROM DRAINING SHALL BE COLLECTED AND RECYCLED OR TREATED HOLES SHALL BE CLEANED WITH PRESSURIZED AIR OR WATER TO REMOVE DRILL CUTTINGS AND MUD IMMEDIATELY PRIOR TO ANCHOR INSTALLATION.

ANCHORS SHALL BE GROUTED USING TWO STAGE GROUTING. FIRST-STAGE GROUTING SHALL BE OVER THE LENGTH INDICATED ON THE DRAWINGS AS THE BOND LENGTH. SECOND-STAGE GROUTING SHALL FILL THE REMAINING LENGTH OF HOLE AFTER STRESSING AND TESTING OF ALL ANCHORS IS COMPLETE.

STRESSING OF ANCHORS SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER AND THE PROVISIONS OF PTT DC35-1-04

THE FIRST ANCHOR COMPLETED AND ONE ADDITIONAL ANCHOR SELECTED BY THE DESIGNER'S REPRESENTATIVE SHALL BE PERFORMANCE TESTED AND THE REMAINING ANCHORS SHALL BE PROOF TESTED IN ACCORDANCE WITH THE PROCEDURES FROM PTT DC35-1-04. THE MAXIMUM TEST LOAD SHALL BE 133% OF THE DESIGN LOAD INDICATED ON THE DRAWINGS

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MARK	DATE	DESCRIPTION	BY

ANCHOR DETAILS

SUNSHINE COAST REGIONAL DISTRICT
 McNEIL DAM RETROFIT

Project No.: 14-031-FEX
 Design By: C. WILLCOX
 Drawn By: V. ROUSE
 Checked By: C. WILLCOX

S2