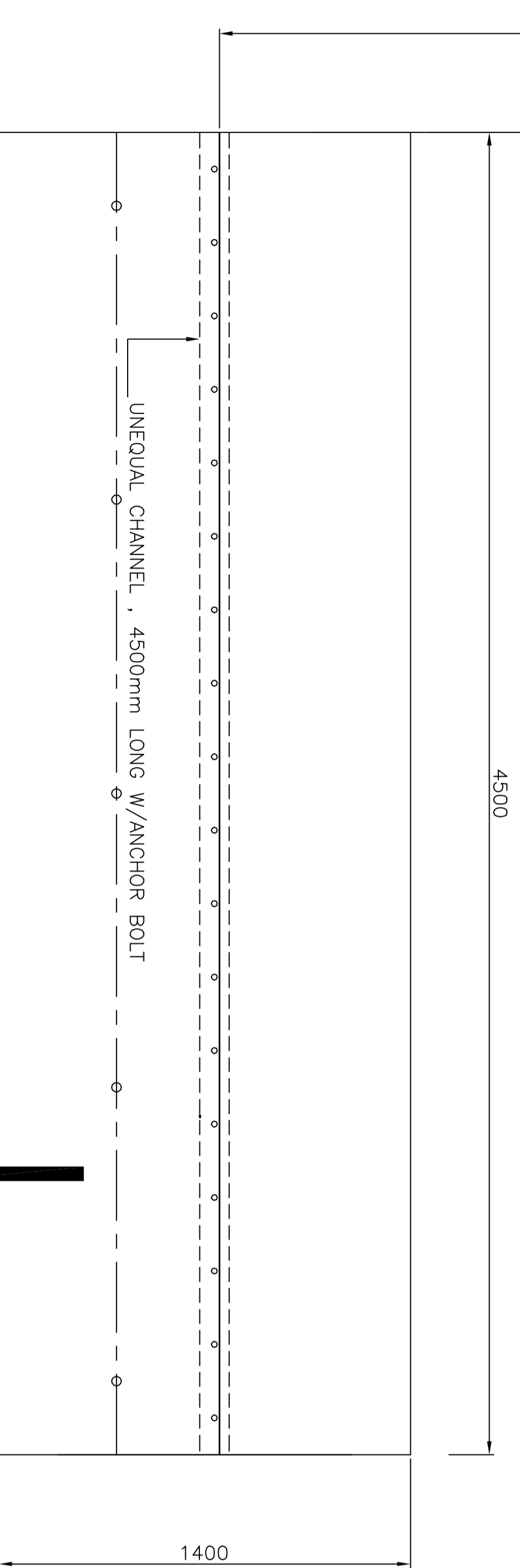
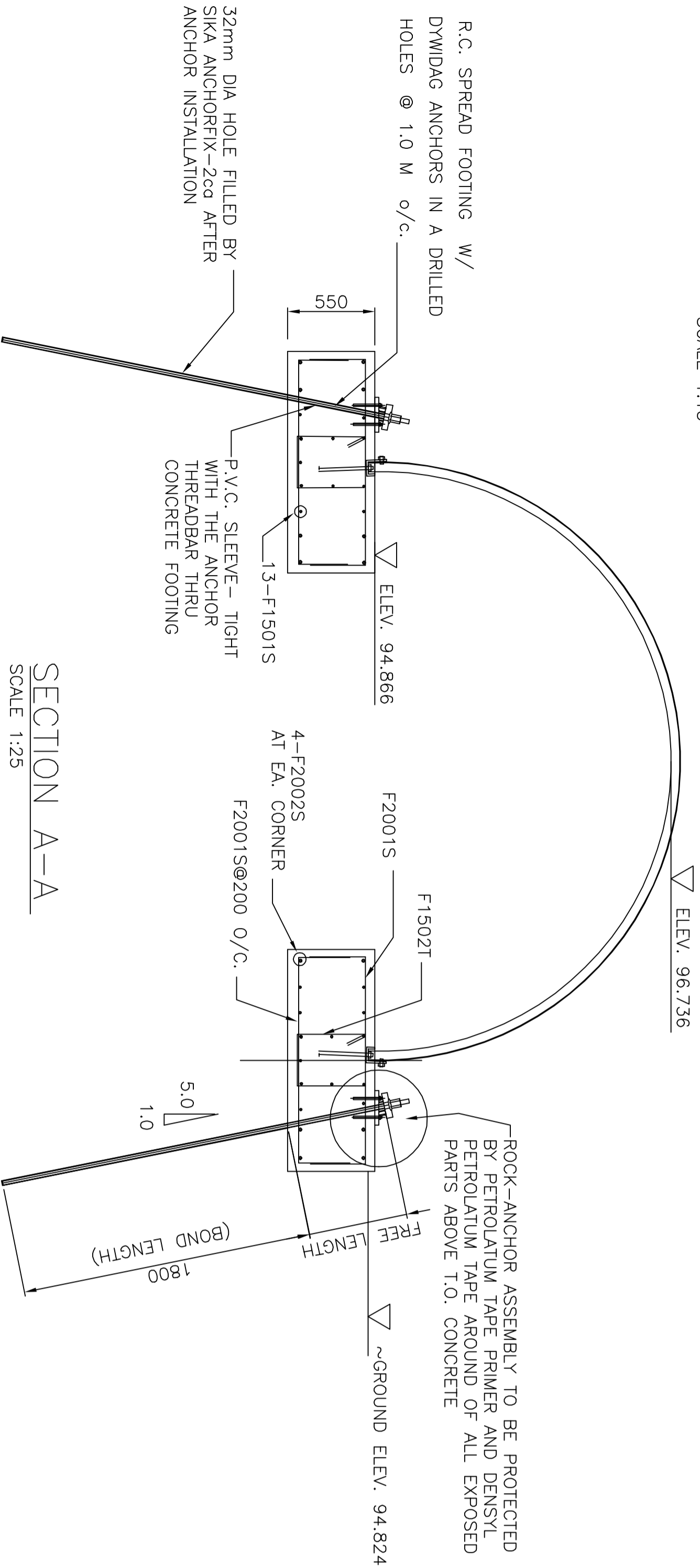


- DYWIDAG 25mm dia. ROCK ANCHOR 1030MPa=150ksi
ALL ANCHORS SHALL BE PROOF TESTED TO 2.50 TIMES THE ANCHOR DESIGN LOAD. IF NO CREEP OCCURS WITHIN 30 MINUTES, THE LOAD SHALL BE REDUCED TO NOMINAL LOAD OF 50 KN AND LOCKED IN.
 - DESIGN LOAD=21.7 KN
 - PROOF LOAD=2.50 X DESIGN LOAD=54.3 KN



PLAN ON FOOTINGS
SCALE 1:15



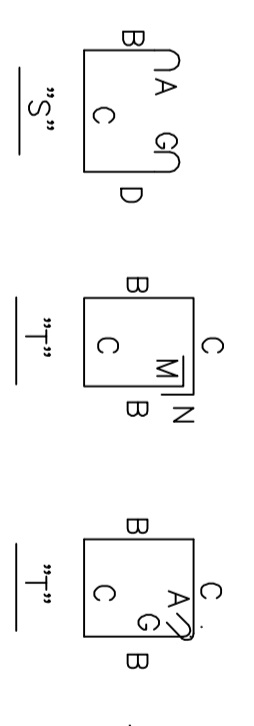
SECTION A-A
SCALE 1:25

FOOTING NOTES

- FOR GENERAL NOTES SEE DWG AA840-205.31-4.01
- FOR GEOTECHNICAL NOTES SEE DWG AA840-205.31-4.02
- FIELD CONFIRM ALL DIMENSIONS RELATED TO THE EXISTING STRUCTURE. RESOLVE WITH DESIGN ENGINEER ALL DISCREPANCIES PRIOR TO START OF CONSTRUCTION.
- BOTTOM OF FOOTING SHALL BE FOUNDED ON BEDROCK, FREE FROM STANDING WATER, LOOSE BEDROCK, SOIL, MUD, BEDROCK IRREGULARITIES AND SLOPING SURFACES. HAND CLEANING, BROOMING AND PRESSURE WASHING TO REMOVE ANY LOOSE MATERIAL IS REQUIRED. IT IS ESTIMATED THAT 0.3M TO 0.5M LOOSE/WEATHERED MATERIAL WILL REQUIRE REMOVAL.
- BEARING SURFACE TO BE INSPECTED AND APPROVED BY A QUALIFIED GEOTECHNICAL ENGINEER PRIOR TO FOOTING CONSTRUCTION. FOR A 1000 MM WIDE FOOTING, THE FOLLOWING DESIGN PARAMETERS WERE USED:
NET BEARING CAPACITY 6600 KPA
ALLOWABLE BEARING CAPACITY PRIMARY LOADS 2200 KPA
ALLOWABLE BEARING CAPACITY PRIMARY + SECONDARY LOADS 3300 KPA
- DAMP-PROOFING SHALL BE APPLIED ON THE BACK FACES OF THE FOOTING AS PER THE SPECIFICATIONS.
- MINIMUM CONCRETE COVER FOR MAIN REINFORCING SHALL BE 50 MM UNLESS NOTED OTHERWISE.
- ALL EXPOSED CONCRETE EDGES SHALL BE GIVEN A 20MM X 20MM CHAMFER.
- ANCHOR BOLTS, AND CHANNEL ARE TO BE PROVIDED BY THE MULTIPLATE ARCH SUPPLIER.

REINFORCING BAR LIST-2 FOOTINGS

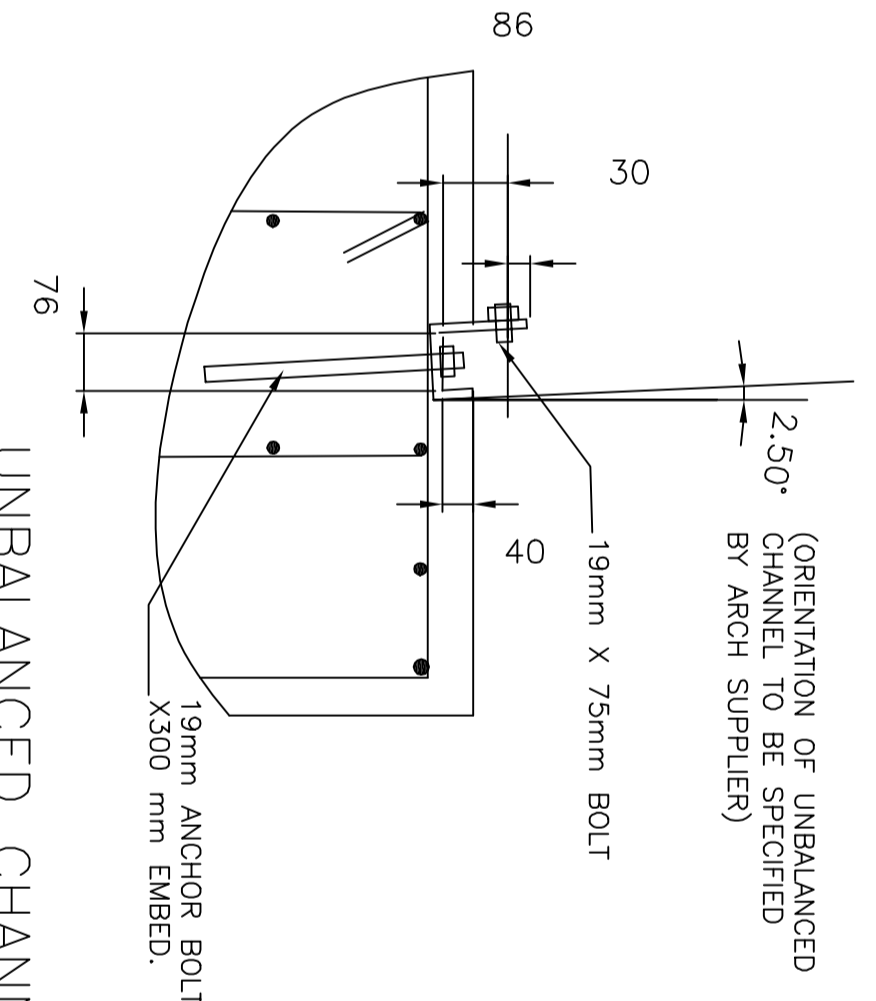
QTY	SIZE	MARK	LENGTH	A	B	C	D	E	F	G	H	R
92	20M	F2001S	1900		300	1300	300					
6	20M	F2002S	5000		300	4400	300					
26	19M	F1501S	4800		200	4400	200					
46	19M	F1502T	1850	100	425	300					100	



QUANTITIES (2 FOOTINGS)

CONCRETE (CU.M)	REINFORCING (KG)	ANCHOR BOLTS (EACH)	CHANNEL (M)
7.7	958	36	9.0

9. DYWIDAG THREDBAR TO BE GRADE 150 ksi.
THREDBAR 25mm DIA X 2350mm LONG W/ ANCHOR BEARING PLATE AND NUT-----EA 10



UNBALANCED CHANNEL EMBEDMENT
SCALE 1:10

SENIOR STRUCTURAL ENGINEER

No.	Date	Revision	By/For
C	MAY 16, 2011	GENERAL REVISION	
A	DEC 14, 2010	GENERAL REVISION	
	JAN 15, 2010	ISSUED FOR CONSTRUCTION	
	SEPT 18, 2009	ISSUED FOR TENDER	

STONE ARCH CULVERT EXTENSION
NEAR MOHAWK, ONTARIO
CULVERT NORTH EXTENSION DETAILS
FOOTING GEOMETRY, REINFORCING AND DETAILS

Drawn DGT
 Design DGT
 Checked DGT
 Verification DGT
 Scale 1:5
 Date JAN 15, 2010
 Office of Chief Engineer
 Bureau de l'ingénieur en chef

 Drawing Number AA840-205.31-4.03
 Design Number
 File 205.31 KINGSTON
 Date 2005.31
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