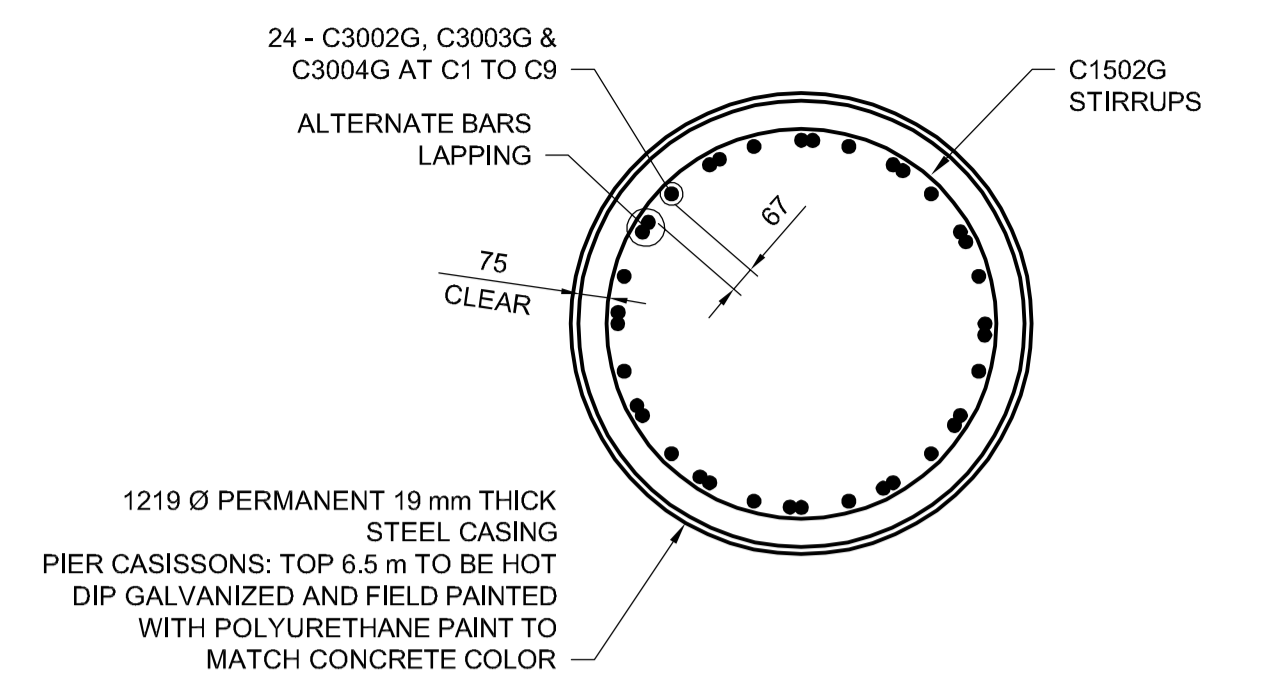
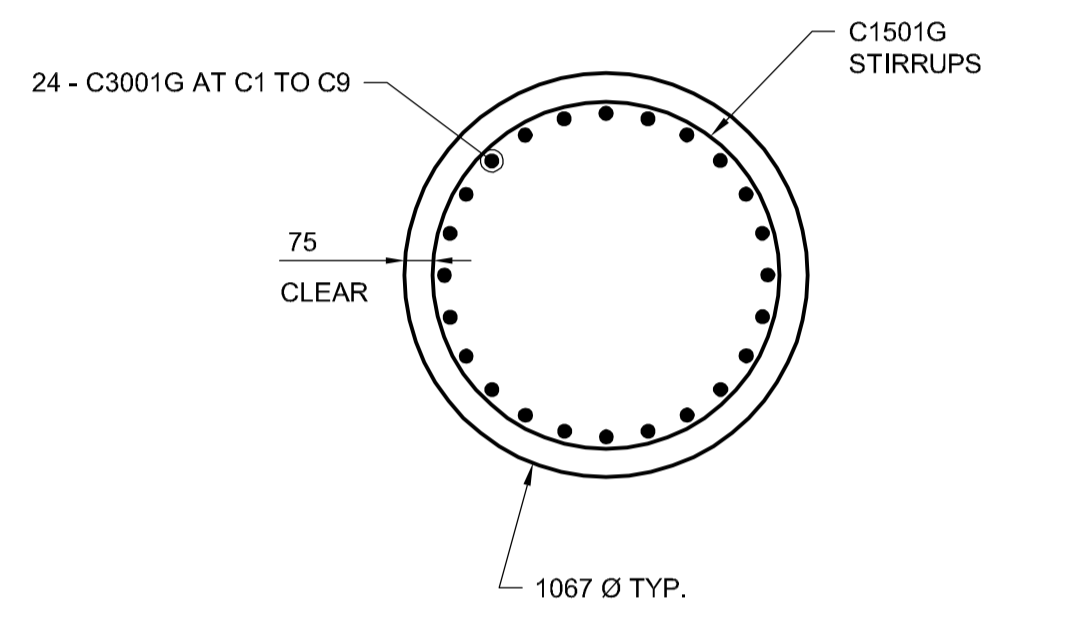


STEEL PIPE CASING ELEVATIONS

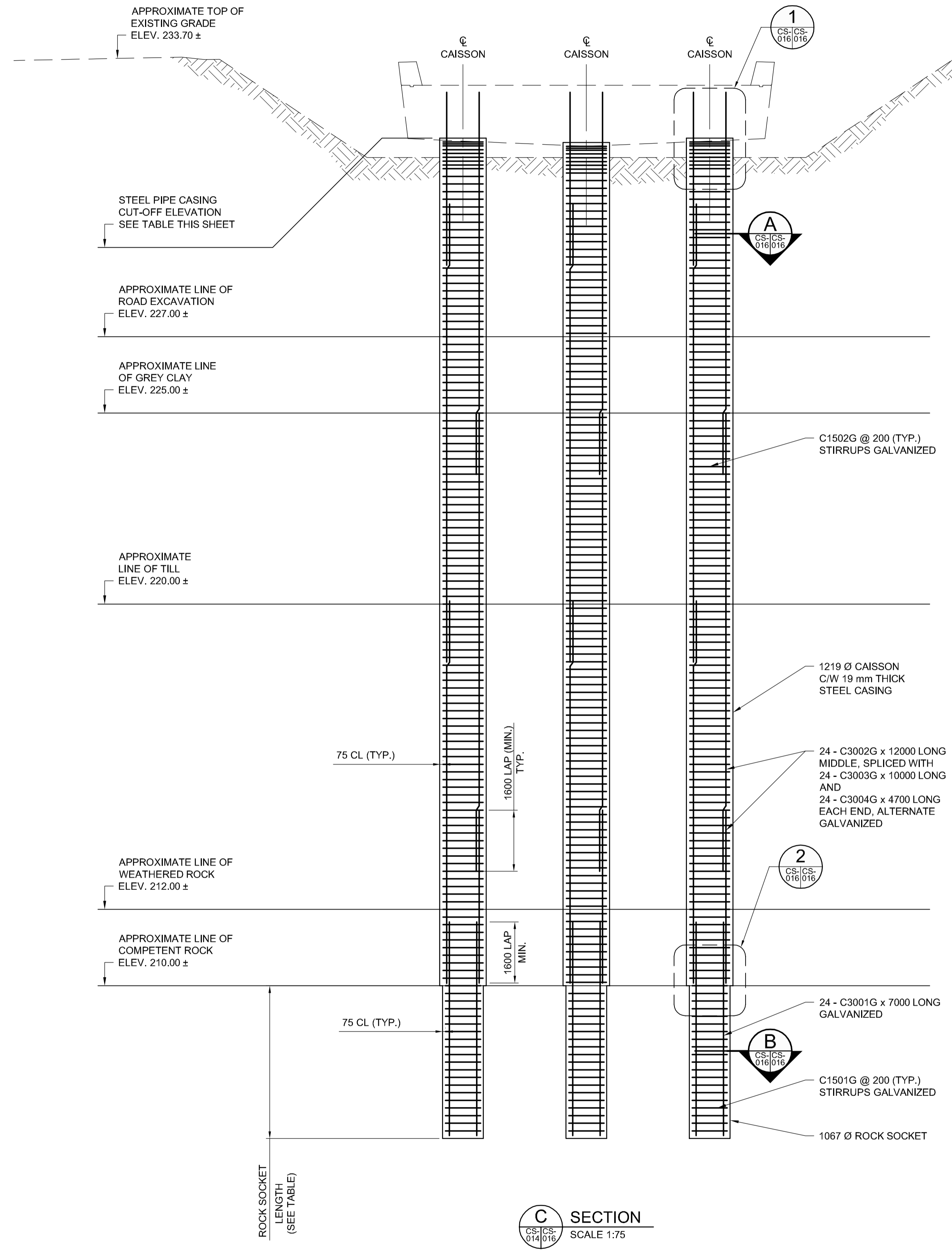
LOCATION	DESCRIPTION	CUT-OFF ELEVATION AT CAISSON ℓ (m)	ESTIMATED CASING TIP ELEVATION (m)
SU. 2	C1	1219 O.D. CAISSONS	231.333
	C2	1219 O.D. CAISSONS	231.195
	C3	1219 O.D. CAISSONS	231.333
SU. 3	C4	1219 O.D. CAISSONS	231.423
	C5	1219 O.D. CAISSONS	231.285
SU. 4	C6	1219 O.D. CAISSONS	231.423
	C7	1219 O.D. CAISSONS	231.311
	C8	1219 O.D. CAISSONS	231.173
	C9	1219 O.D. CAISSONS	231.311



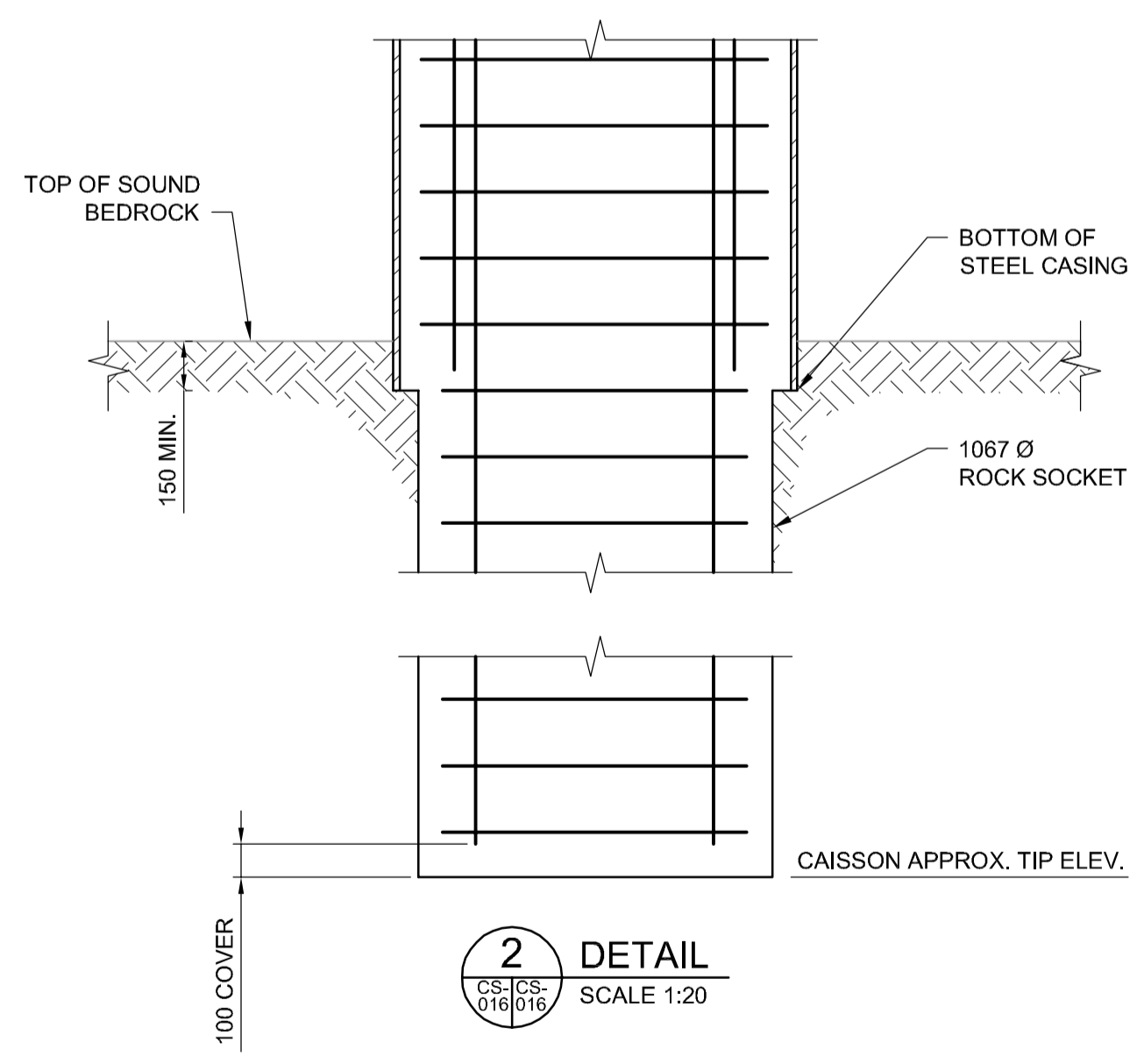
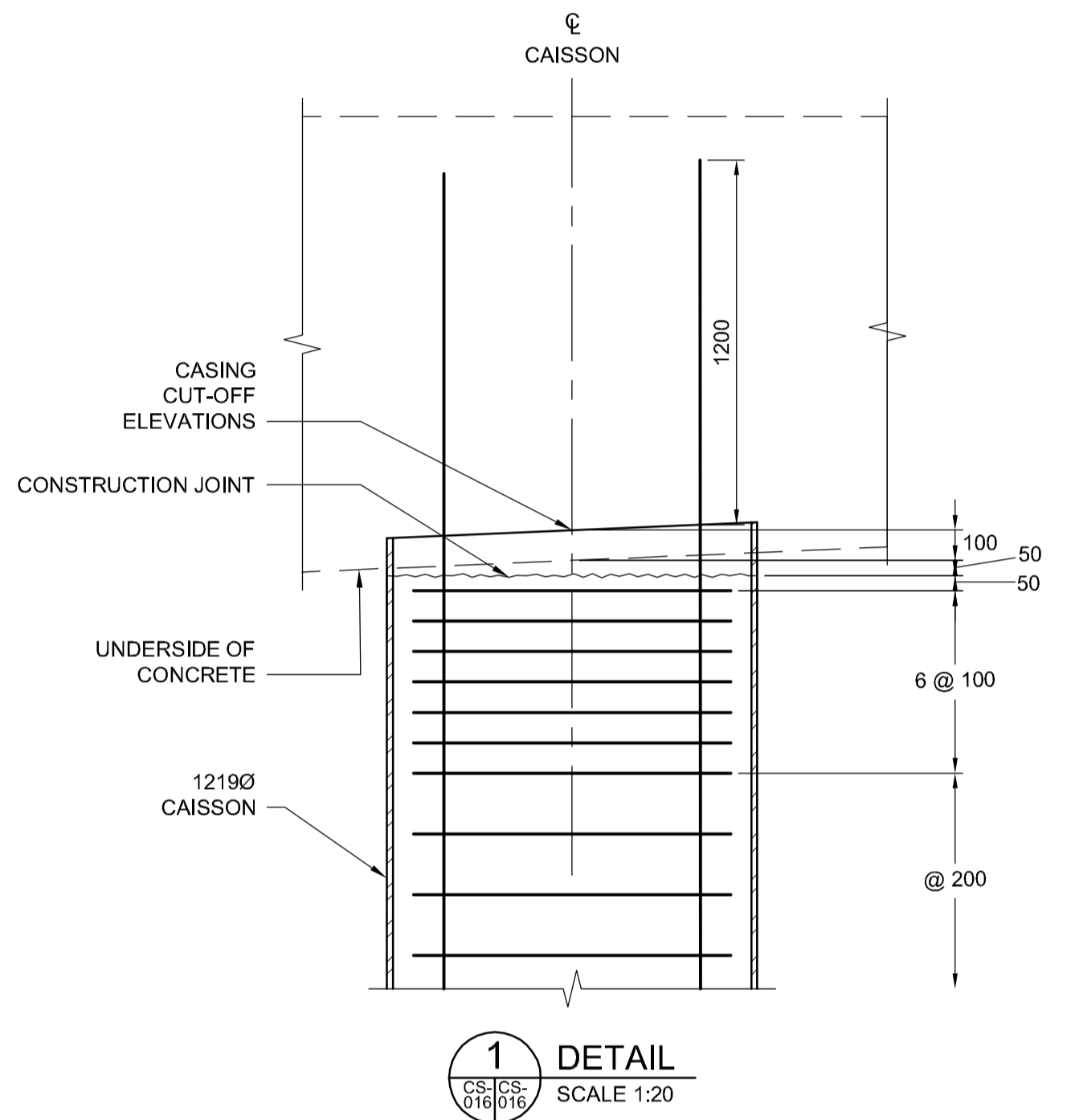
A SECTION
SCALE 1:20



B SECTION
SCALE 1:20



C SECTION
SCALE 1:75



CAISSON NOTES:

- FOR GENERAL NOTES SEE SHEET C2-CS-001.
- FOR FOUNDATION NOTES SEE SHEET C2-CS-001.
- FOR REINFORCING STEEL NOTES REFER TO SHEET C2-CS-001.
- REINFORCING STEEL MARKS ENDING WITH "G" SHALL BE GALVANIZED REINFORCEMENT.
- CONTRACTOR TO FIELD CONFIRM ALL DIMENSIONS RELATED TO THE STRUCTURE.
- RESOLVE WITH CONTRACT ADMINISTRATOR ALL DISCREPANCIES PRIOR TO START OF CONSTRUCTION.
- ALL CAISSONS SHALL BE FOUNDED INTO THE BEDROCK AS PER SOCKET LENGTH TABLE.
- MAXIMUM DESIGN COMPRESSION SERVICE LOAD (WORKING LOAD) FOR CAISSONS:

CAISSON	PRIMARY	PRIMARY & SECONDARY
C1, C3, C4 C6, C7, C9	5460 kN	5970 kN
C2, C5, C8	6510 kN	-

- CAISSON CONCRETE MINIMUM SPECIFIED COMPRESSIVE STRENGTH SHALL BE 35 MPa AT 28 DAYS WITH TYPE HS OR HSB SULPHATE RESISTANT PORTLAND CEMENT.
- PERMANENT CASING WILL BE REQUIRED TO PREVENT EXCESSIVE SEEPAGE AND SLOUGHING INTO THE CAISSON HOLES DURING EXCAVATION AND CASTING OF THE CONCRETE.
- THE CAISSON INSTALLATION SHALL BE MONITORED BY CONTRACTOR'S QUALIFIED GEOTECHNICAL PERSONNEL.
- ALL CAISSON EXCAVATIONS SHALL BE THOROUGHLY CLEANED AND VISUALLY INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO CASTING THE CONCRETE. NO SLOUGH OR DISTURBED MATERIAL SHALL BE ALLOWED TO REMAIN AT THE CAISSON BASE.
- CAISSON CONCRETE SHOULD BE CAST IMMEDIATELY AFTER DRILLING OF THE HOLE TO REDUCE THE RISK OF GROUND WATER SEEPAGE AND SLOUGHING SOIL.
- SPLICES TO LONGITUDINAL REINFORCING TO BE ALTERNATING.
- WHERE GALVANIZING IS DAMAGED, REPAIR WITH TWO COATS OF A COMPONENT ZINC-RICH COATING CONTAINING 96% NON-TOXIC ELECTROLYTIC ZINC POWDER (PURE TO 99.995%) AND NON-TOXIC SOLVENT.
- EXTERIOR STEEL PIPES SHALL BE CUT-OFF PARALLEL TO PIER CAP SOFFIT. CUT-OFF ELEVATIONS ARE GIVEN AT PIPES CENTRE LINES.

CAISSON	ROCK SOCKET LENGTH (mm)
C1, C3, C4, C6, C7, C9	4500
C2, C5, C8	5000

NOTE:
THE SOIL SUBSURFACE ELEVATIONS SHOWN ON THE DRAWING ARE APPROXIMATE ONLY. REFER TO THE TEST HOLE LOGS AND ALL OTHER AVAILABLE INFORMATION TO GAIN MORE KNOWLEDGE ABOUT THE SURFACE AND SUBSURFACE CONDITIONS.



NO.	REVISIONS	DATE	BY
0	ISSUED FOR TENDER	17/01/09	RE

DILLON CONSULTING	
DESIGNED BY: RE	CHECKED BY: SSR
DRAWN BY: CO	APPROVED BY: DBW
HOR. SCALE: AS SHOWN	RELEASED FOR CONSTRUCTION
VERTICAL: AS SHOWN	DATE:

ENGINEER'S SEAL
PROVINCE OF MANITOBA
R.B. ERIC
Member 22665
REGISTERED PROFESSIONAL ENGINEER
CONSULTANT PROJECT NUMBER
16-3353

THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT

Waverley Street Underpass at CN Mile 3.89 Rivers Sub
CONTRACT 2: UNDERPASS STRUCTURE, RAILWORKS, ROADWORKS, LAND DRAINAGE SEWER, PUMPING STATION AND LANDSCAPING WORKS

CITY DRAWING NUMBER: U-239-2016-C2-CS-016
SHEET 016 OF 085
CONSULTANT DRAWING NUMBER: C2-CS-016

FOUNDATION DETAILS - SHEET 2