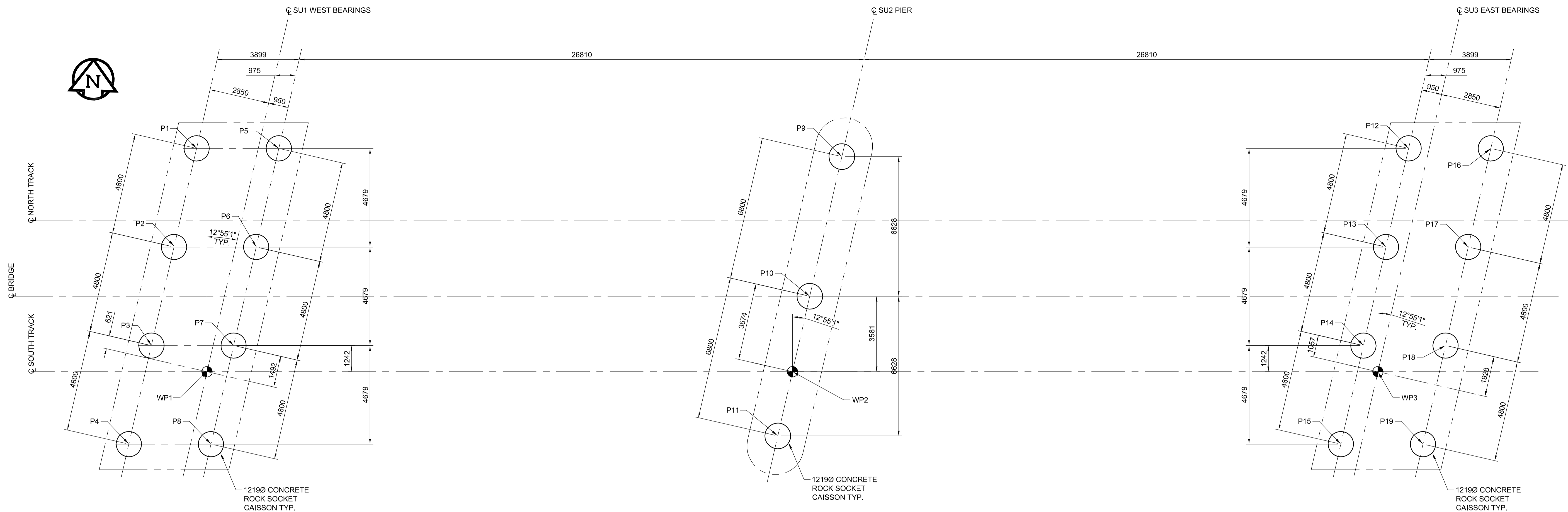
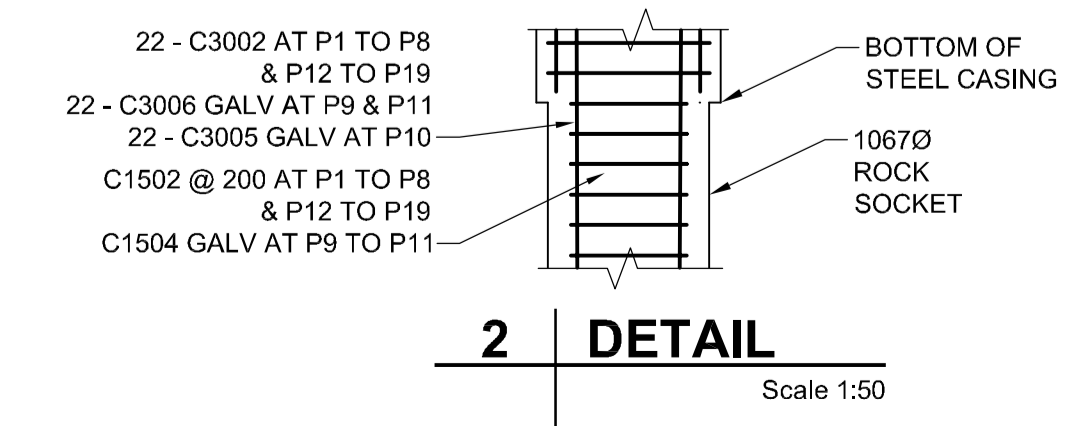
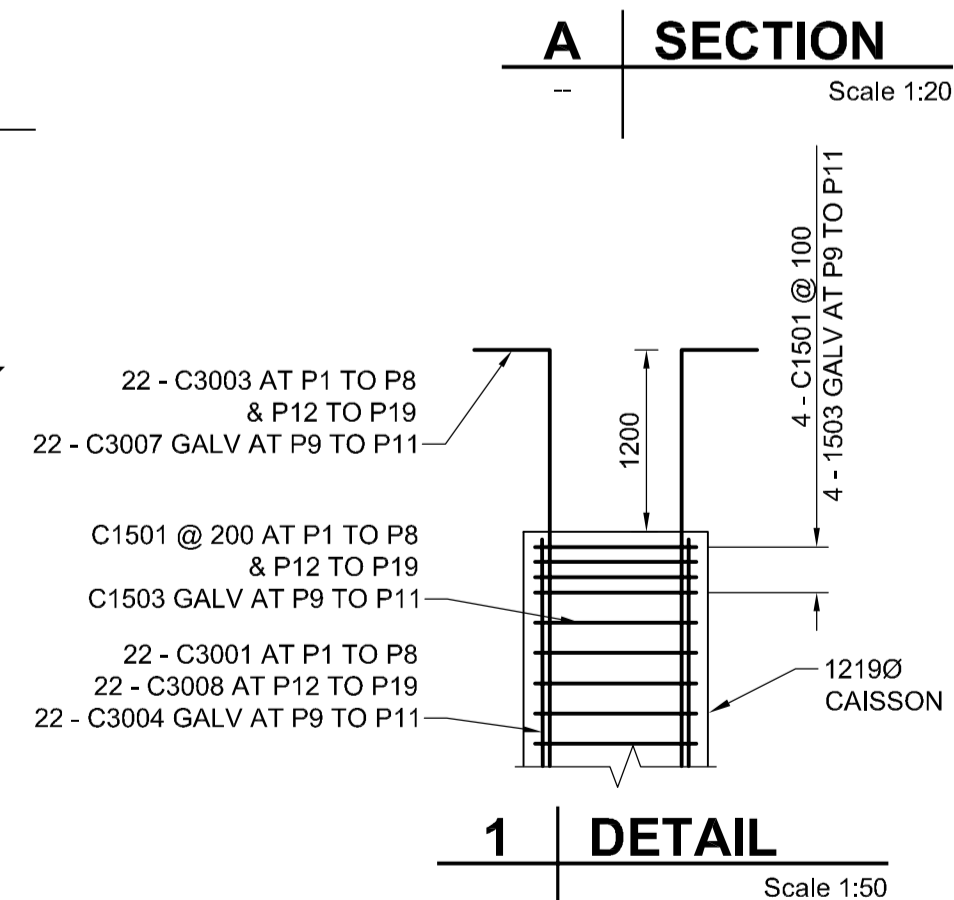
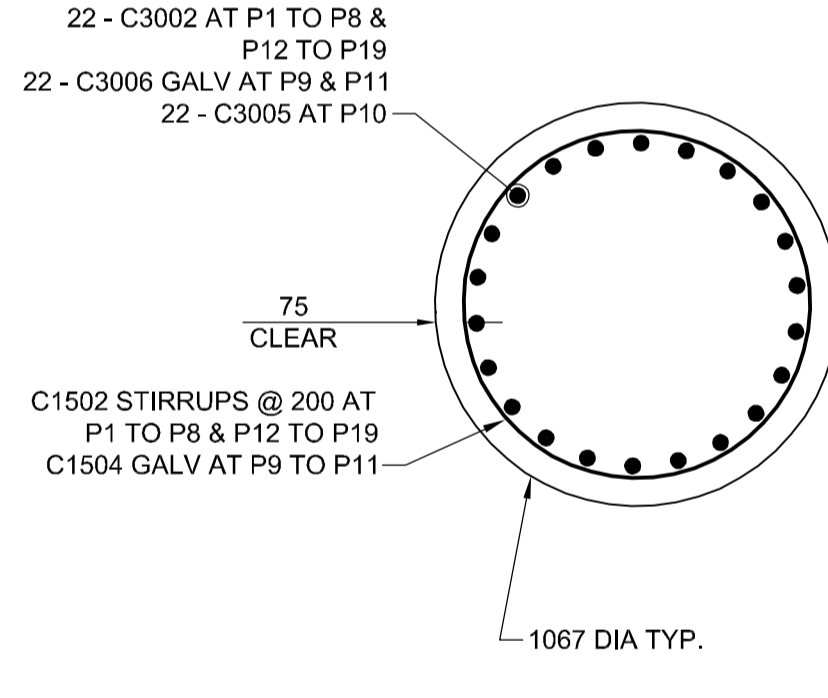
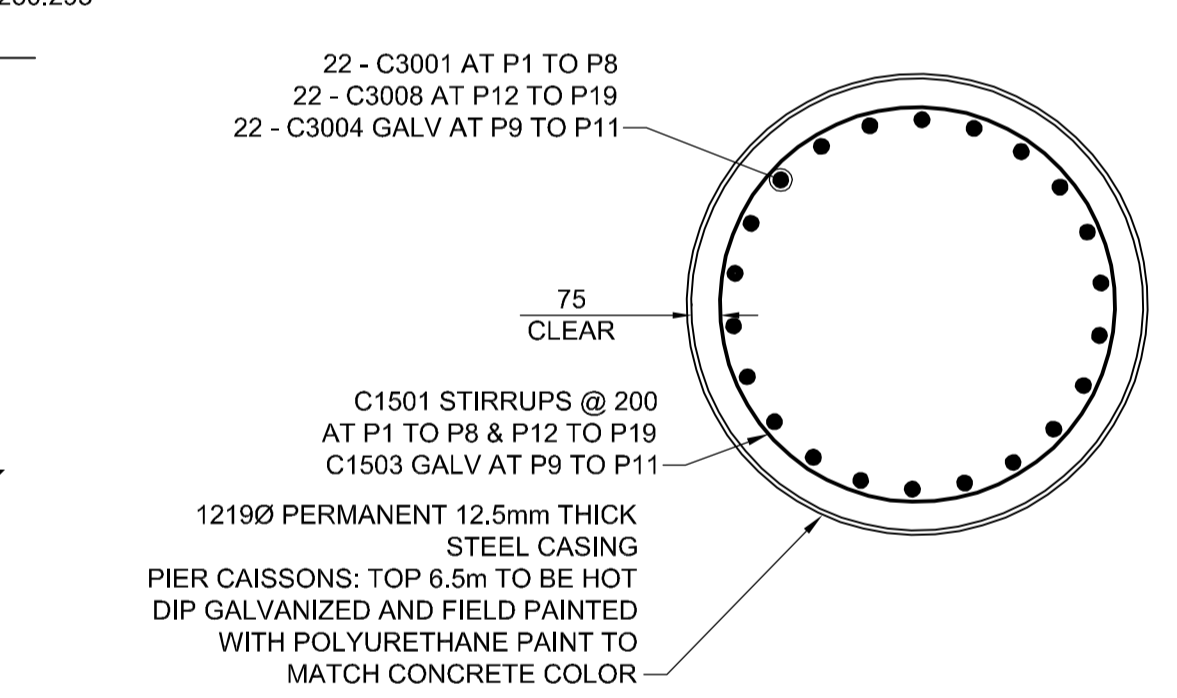
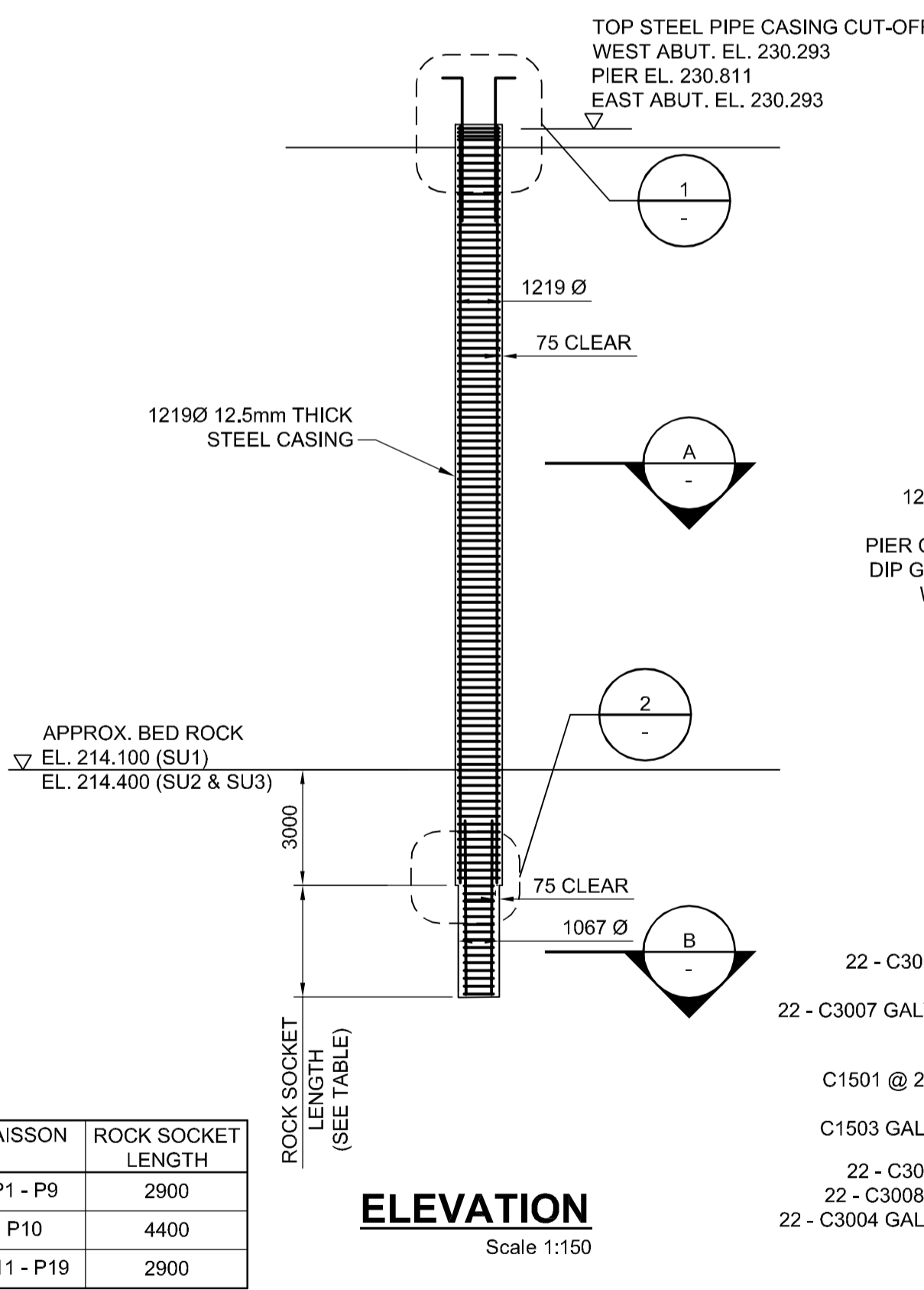


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**FOUNDATION LAYOUT**  
Scale 1:100



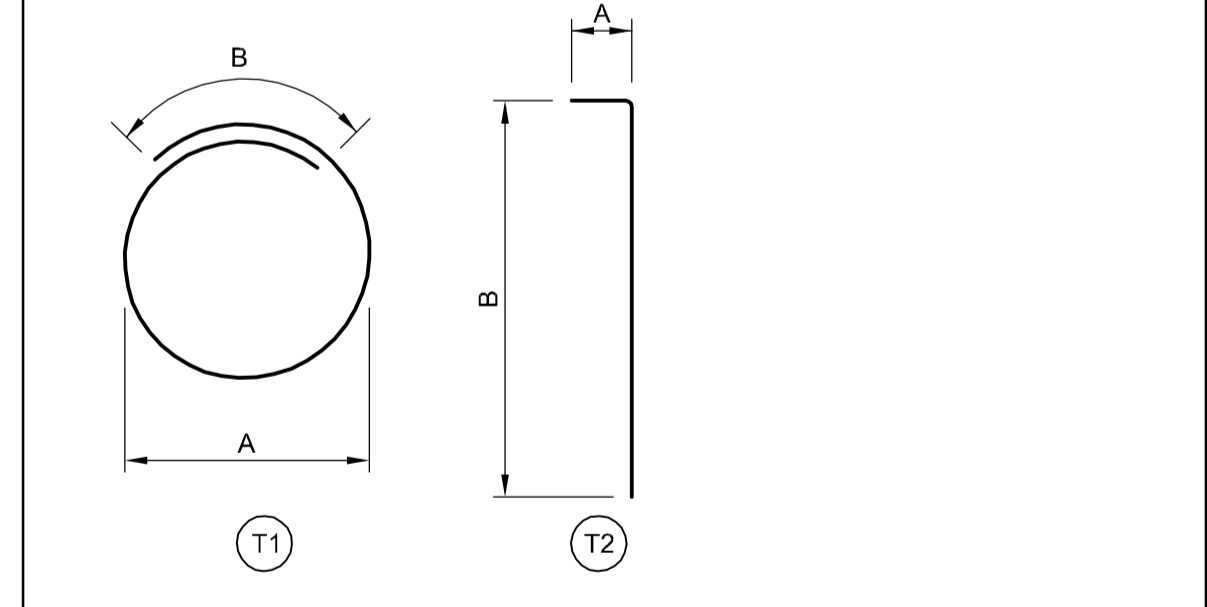
| CAISSON   | ROCK SOCKET LENGTH |
|-----------|--------------------|
| P1 - P9   | 2900               |
| P10       | 4400               |
| P11 - P19 | 2900               |

**CAISSON NOTES:**

- FOR GENERAL NOTES SEE SHEET CS-0001
- FOR FOUNDATION NOTES SEE SHEET CS-0001
- 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 P1 TO P8 AND P12 TO P19:  
PRIMARY LOADS: 3750 kN  
PRIMARY AND SECONDARY LOADS: 4220 kN  
MAXIMUM DESIGN COMPRESSION SERVICE LOADS (WORKING LOAD) FOR CAISSON P10:  
PRIMARY LOADS: 8400 kN  
MAXIMUM DESIGN COMPRESSION SERVICE LOAD (WORKING LOAD) FOR CAISSONS P9 & P11:  
PRIMARY LOADS: 4910 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 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 IF REQUIRED.
- 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.

**BAR LIST: CAISSONS**

| MARK  | NO   | SIZE | COATING | LENGTH | TYPE | A    | B    | MASS (kg) |
|-------|------|------|---------|--------|------|------|------|-----------|
| C1501 | 1568 | 15   | NONE    | 4280   | T1   | 1044 | 1000 | 10737     |
| C1502 | 256  | 15   | NONE    | 3881   | T1   | 917  | 1000 | 1590      |
| C1503 | 300  | 15   | GALV    | 4280   | T1   | 1044 | 1000 | 2054      |
| C1504 | 55   | 15   | GALV    | 3881   | T1   | 917  | 1000 | 342       |
| C3001 | 176  | 30   | NONE    | 19150  | STR  |      |      | 18537     |
| C3002 | 352  | 30   | NONE    | 4500   | STR  |      |      | 8712      |
| C3003 | 352  | 30   | NONE    | 3800   | T2   | 600  | 3200 | 7357      |
| C3004 | 66   | 30   | GALV    | 19367  | STR  |      |      | 7030      |
| C3005 | 22   | 30   | GALV    | 6000   | STR  |      |      | 726       |
| C3006 | 44   | 30   | GALV    | 4500   | STR  |      |      | 1089      |
| C3007 | 66   | 30   | GALV    | 3800   | T2   | 600  | 3200 | 1379      |
| C3008 | 176  | 30   | NONE    | 18850  | STR  |      |      | 18247     |



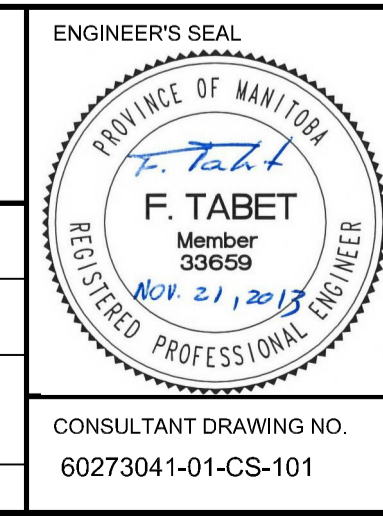
**ESTIMATED QUANTITIES (CAISSONS):**

|                                |       |          |
|--------------------------------|-------|----------|
| • GALVANIZED REINFORCING STEEL | ----- | 12620 kg |
| • PLAIN REINFORCING STEEL      | ----- | 65180 kg |



| LOCATION APPROVED UNDERGROUND STRUCTURES                                                                                                                                                                                                                                                                                                               |            | B.M. ELEV. |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|
| SUPV. U/G STRUCTURES COMMITTEE                                                                                                                                                                                                                                                                                                                         | DATE       |            |
| NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE, BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION. |            |            |
| 0 ISSUED FOR TENDER                                                                                                                                                                                                                                                                                                                                    | 2013/11/21 | KC         |
| NO. REVISIONS                                                                                                                                                                                                                                                                                                                                          | DATE       | BY         |

|                      |                               |
|----------------------|-------------------------------|
| <b>AECOM</b>         |                               |
| DESIGNED BY: FT/DKD  | CHECKED BY: CD                |
| DRAWN BY: KC         | APPROVED BY: EBL              |
| HOR. SCALE: AS NOTED | RELEASED FOR CONSTRUCTION BY: |
| VERTICAL: AS NOTED   | DATE: 2013-06-04              |



BID OPPORTUNITY NO. 712-2013

**THE CITY OF WINNIPEG**  
PUBLIC WORKS DEPARTMENT

PLESSIS ROAD TWINNING AND GRADE SEPARATION AT CN REDDITT SUBDIVISION  
CONTRACT 3

CITY DRAWING NUMBER: U238-2014-2011  
SHEET 11 OF 37

CAISSON LAYOUT

**CS-0011**