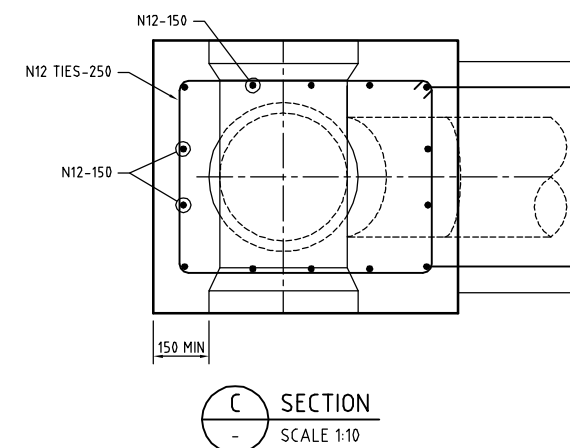


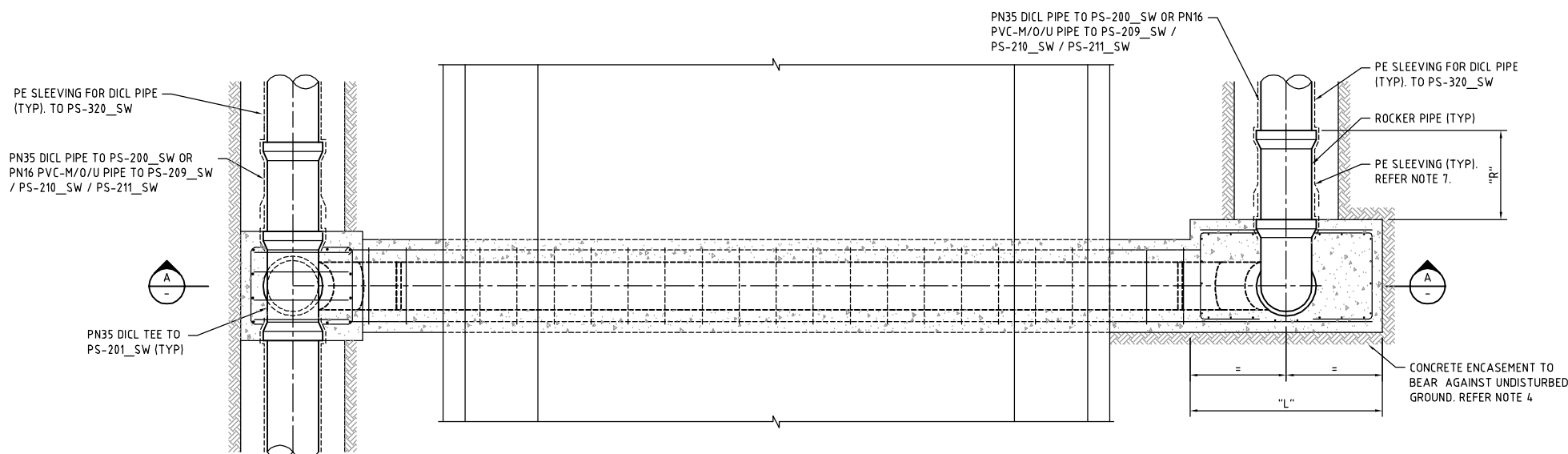
## NOTES:

- ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
- USE TYPE 1 (REFER DTC/1120) OR TYPE 2 (REFER DTC/1121) CROSSINGS WHEREVER POSSIBLE. USE TYPE 3 CROSSING ONLY WHERE SERVICES OR OTHER RESTRICTIONS PREVENTS THE USE OF THE TYPE 1 OR TYPE 2 CROSSING.
- CROSSING TYPE 3 NOT SUITABLE FOR INSTALLATION IN AGGRESSIVE SOILS.
- THRUST RESTRAINT PROVIDED BY CONCRETE ENCASEMENT AND THE BEARING AREA OF THE CONCRETE ENCASEMENT ("L" x "H") AROUND THE 90° VERTICAL BEND. REFER TO TABLE FOR THE MINIMUM REQUIRED BEARING AREA. ULTIMATE LIMIT STATE BASED ON TEST PRESSURE OF 150m HEAD OF WATER.
- STEEL PIPE JOINTS TO BE EITHER PLAIN ENDS WITH WELDING COLLAR, BUTT WELDED OR SLIP-IN TYPE WELDED JOINTS.
- SHOW DIMENSIONS "W1", "Z1", "Z2", "X1", "X2", "L", "H" IN DESIGN AND WORK AS CONSTRUCTED DRAWINGS.
- TAPE 700 LONG PE SLEEVING TO FITTING 150 FROM THE SOCKET FACE TO OVERLAP PE SLEEVED DICL PIPE.
- CONCRETE TO BE NORMAL CLASS N25 TO PS-357\_SW. SLUMP SHALL BE 80mm - 120mm. MAXIMUM NOMINAL AGGREGATE SIZE SHALL BE 20mm.
- ALL REINFORCEMENT SHALL BE TO AS4671 SHAPE - D, STRENGTH GRADE = 500 MPa, DUCTILITY CLASS - N.
- MINIMUM CLEAR COVER TO REINFORCEMENT SHALL BE 70mm.
- DO NOT APPLY ANY THRUST LOADS FOR AT LEAST 28 DAYS AFTER POURING CONCRETE.
- FORM ALL CONSTRUCTION JOINTS. SCABBLE JOINT TO EXPOSE AGGREGATE TO 5mm DEPTH AND WIRE BRUSH CLEAN PRIOR TO FORMING. SOAK EXISTING CONCRETE SURFACE WITH WATER AND REMOVE ALL EXCESS WATER IMMEDIATELY PRIOR TO PLACING CONCRETE.
- WHERE THE WATERMAIN IS DN200 OR SMALLER THE MINIMUM HORIZONTAL CLEARANCE MAY BE REDUCED TO 300mm.



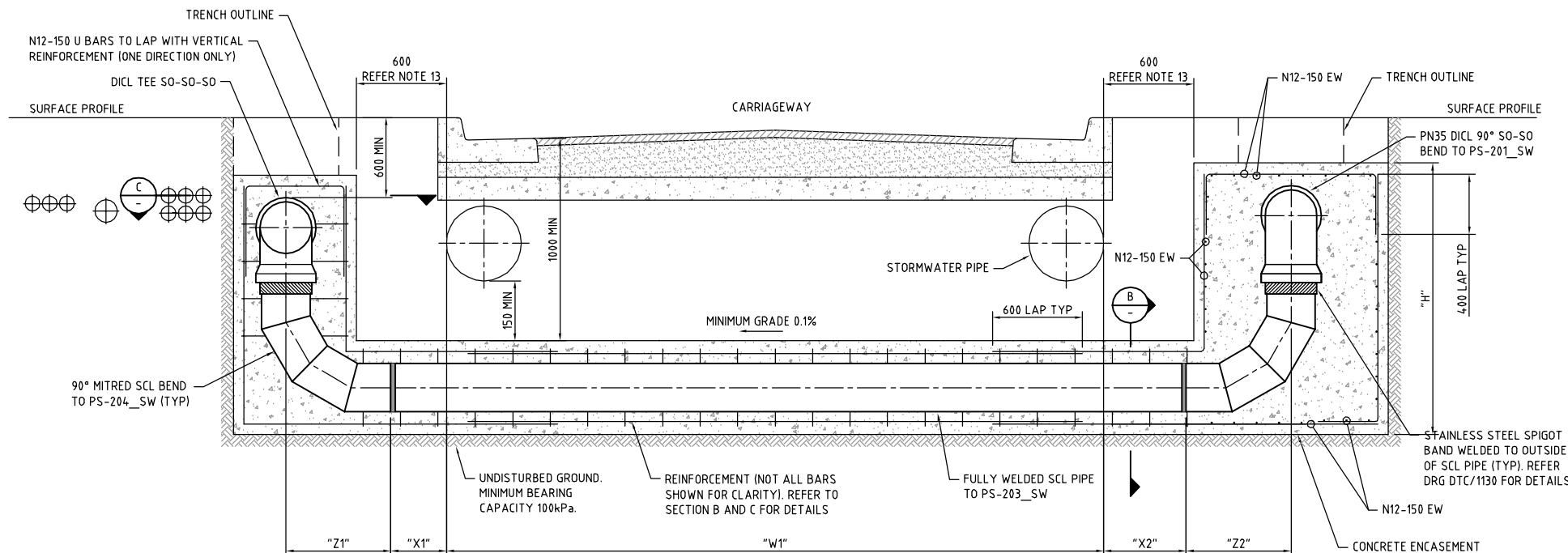
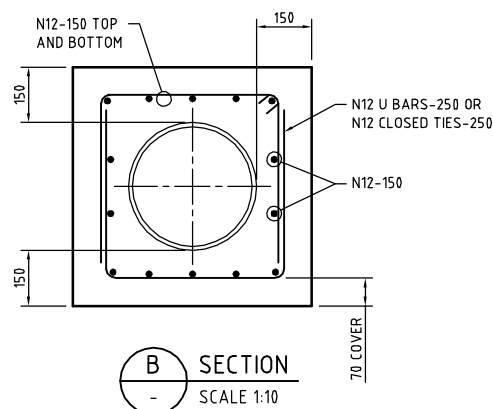
THRUST BLOCK DETAILS FOR 90° DICL BEND

BRANCH DN	BRANCH OD	DESIGN PRESSURE HEAD	TEST PRESSURE HEAD	THRUST T	SOIL AHPB	REQUIRED BEARING AREA	H MIN	L MIN
(mm)	(mm)	(m)	(m)	(kN)	(kPa)	(m²)	(mm)	(mm)
150	177	120	150	36.2	50	0.724	1100	700
150	177	120	150	36.2	100	0.362	1100	500
150	177	120	150	36.2	200	0.181	1100	500
200	232	120	150	62.2	50	1.243	1300	800
200	232	120	150	62.2	100	0.622	1300	550
200	232	120	150	62.2	200	0.311	1300	550
250	286	120	150	94.5	50	1.889	1450	1150
250	286	120	150	94.5	100	0.945	1450	600
250	286	120	150	94.5	200	0.472	1450	600
300	345	120	150	137.5	50	2.749	1550	1600
300	345	120	150	137.5	100	1.375	1550	700
300	345	120	150	137.5	200	0.687	1550	650



TYPICAL MAJOR ROAD CROSSING - CONCRETE ENCASED SCL PIPE

SCALE 1:20

SECTION  
SCALE 1:20SECTION  
SCALE 1:10

ROCKER PIPE DIMENSIONS		
PIPE SIZE (DN)	"R" MIN	"R" MAX
150	300	450
200	400	600
250	500	750
300	600	900

STEEL PIPE DIMENSIONS		
PIPE SIZE (DN)	OUTSIDE DIAMETER (OD)	WALL THICKNESS (WT)
150	168	5.0
200	219	5.0
250	273	5.0
300	324	5.0

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APPROVED

PETER GILLMAN  
MANAGER E & ES

ENGINEERING &amp; ENVIRONMENTAL SERVICES

A  
LETTER

ORIGINAL ISSUE

DETAILS OF ISSUE / AMENDMENT

PJG  
APP'D31/01/12  
DATE

DEEMED TO COMPLY DRAWINGS

**MAJOR ROADWAY CROSSING**  
**WATER MAINS ≤ DN300**  
**TYPE 3 - TRENCHED INSTALLATION**  
**SCL MAIN CONCRETE ENCASED****DTC**  
**1122**ISSUE  
**A**  
DATE  
**31/01/12**