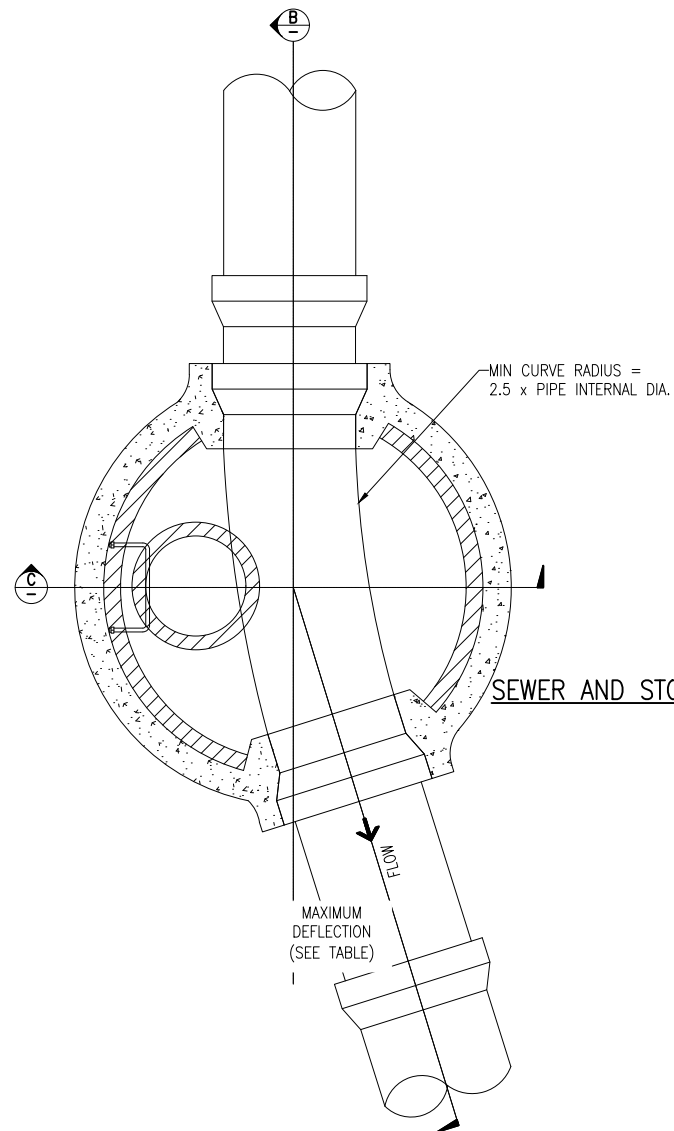
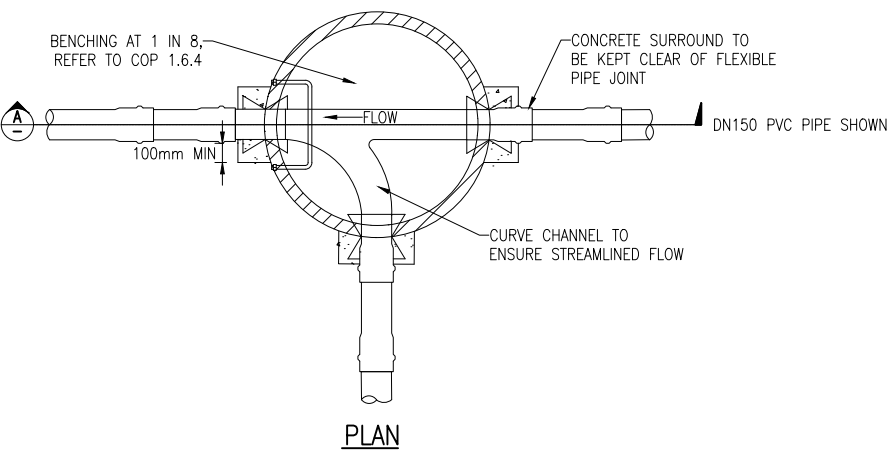


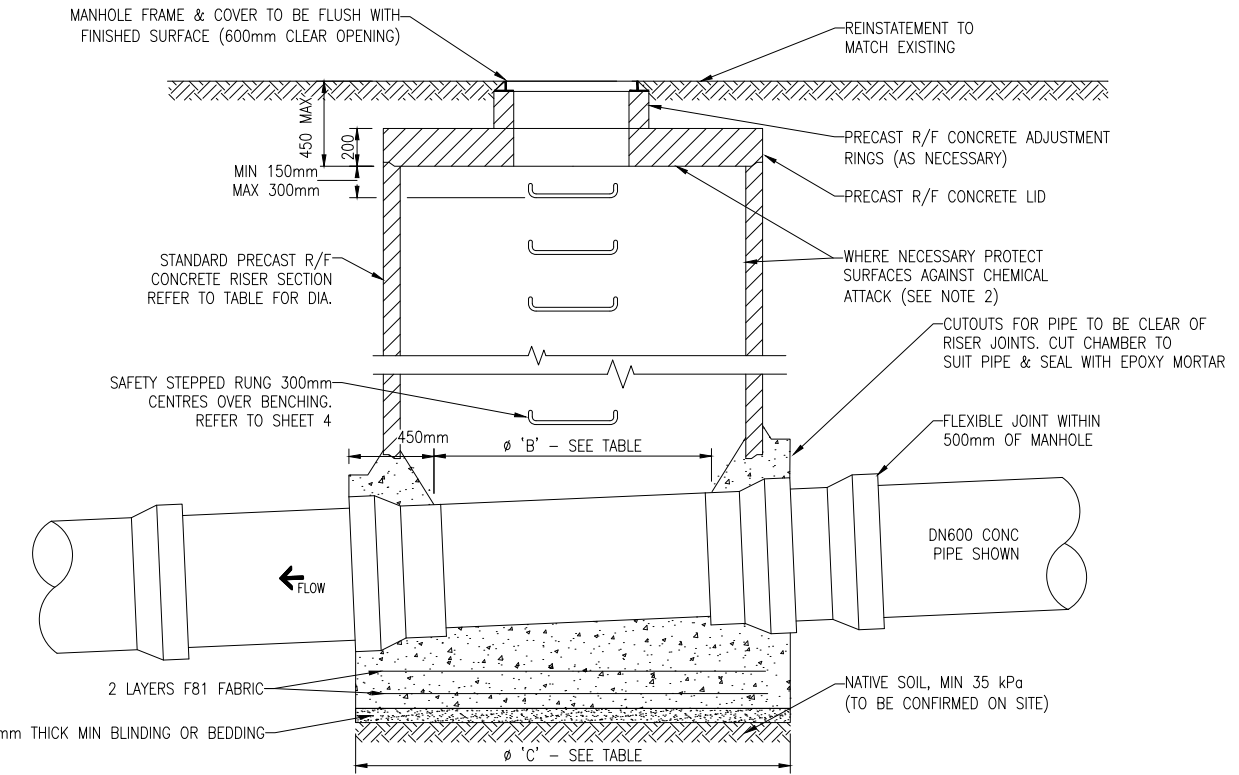
SECTION A



PLAN

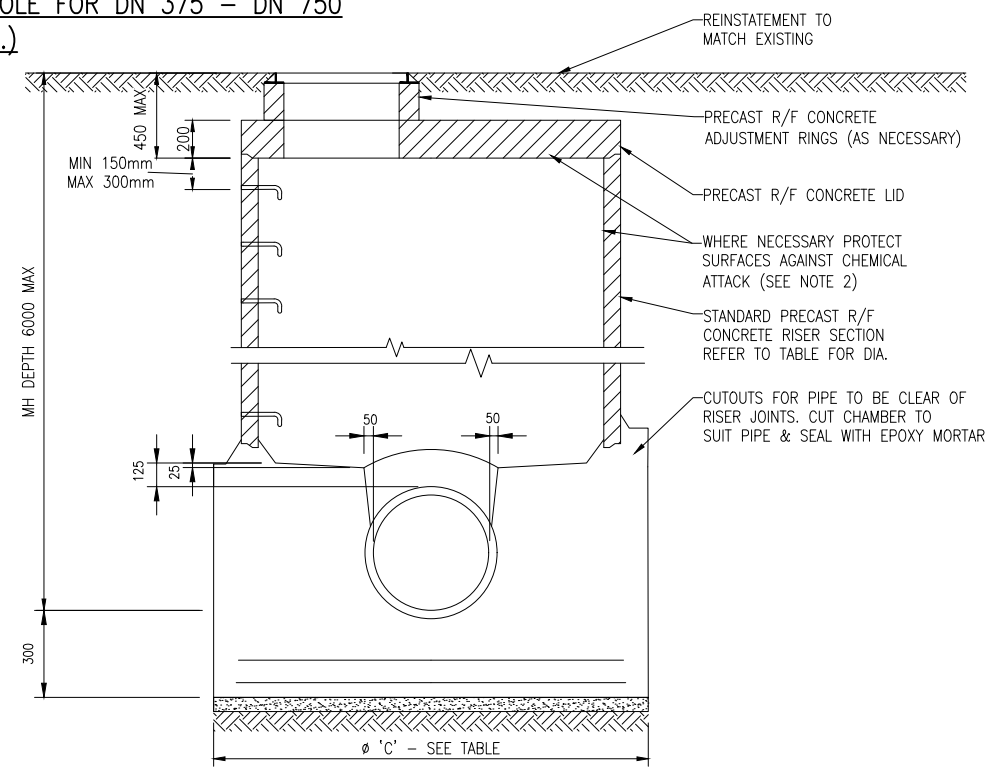


DETAIL 1A PLAN
SEWER AND STORMWATER MANHOLE FOR < DN 375



SECTION B

DETAIL 1B
SEWER AND STORMWATER MANHOLE FOR DN 375 - DN 750
(INC.)



SECTION C

DETAIL 1 NOTES:

- ALL DIMENSIONS IN MILLIMETRES.
- INSIDE SURFACE OF MH AND UNDERSIDE OF ROOF TO HAVE EPOXY COATING, PVC LINING OR PE LINING TO TDC REQUIREMENTS WHERE DIRECTED BY THE ENGINEER.
- DESIGNER TO ENSURE NATIVE SOIL HAS ACCEPTABLE GROUND BEARING CAPACITY.
- REFER TO TDC CODE OF PRACTICE REGARDING FLOATATION/SINKAGE DESIGN CRITERIA.
- MANHOLE LID TYPE.
ARTERIAL ROADS AND STATE HIGHWAYS USE URBAMAX F900 CLASS ROUND FRAME-NON VENTILATED.
LOCAL ROADS USE SE MAESTRO CLASS D400.
ALL LIDS TO HAVE UTILITY NAME.

PIPE SIZE	MAXIMUM HORIZONTAL DEFLECTION AT CHAMBER*	NOMINAL MH DIAMETER	φ 'B'	φ 'C'
DN 375 TO 450	45°	DN 1200	800	1700
DN 500	45°	DN 1800	1400	2300
DN 750	40°	DN 1800	1400	2300

* SHOULD HORIZONTAL DEFLECTION BE GREATER THAN THE MAXIMUM, SPECIALISED DESIGN IS REQUIRED. THIS IS TO BE SUBMITTED TO TDC FOR CONSIDERATION.

NO.	REVISION	BY	CHK	APP	DATE	SURVEY FILE:	INITIAL	DATE	NAME	DATE	ORIGINAL SCALE (A1):	AS SHOWN
L	CHANGES TO SPECS FOR MANHOLE DETAIL	MT			8/24							
K	NEW SHEET ADDED WITH SOAK PIT DETAIL	MT			7/24							
J	STORMWATER SOAKAGE PIT UPDATE	WC	GC		3/24	DATA SOURCE:	WATER		SURVEYED	-	REDUCED SCALE (A3):	
I	SUMP/CATCH PIT UPDATE & PAGE 9 REINSTATED	WC			7/21	LEVEL DATUM	DRAINAGE		DESIGNED	GS	2/16	
H	TYPICAL POSITION OF POLE VENT DETAIL AND SHEET 9 SS	MCB			1/20		ROADING		DESIGN CHECK	GC	2/16	
G	CHANGES TO DETAIL 3B - ENGINEERS APPROVAL ADDED	WC			4/19		PARKS		DRAWN	WC	2/16	PRODUCED BY:
F	CHANGES TO CORBEL DETAIL	WC			2/16		ELEC.PWR		DRG CHECK	GC	2/16	FOR:
							TELECOM		2/16			LTU
							PLANNING		APPROVED	GH	2/16	D & W

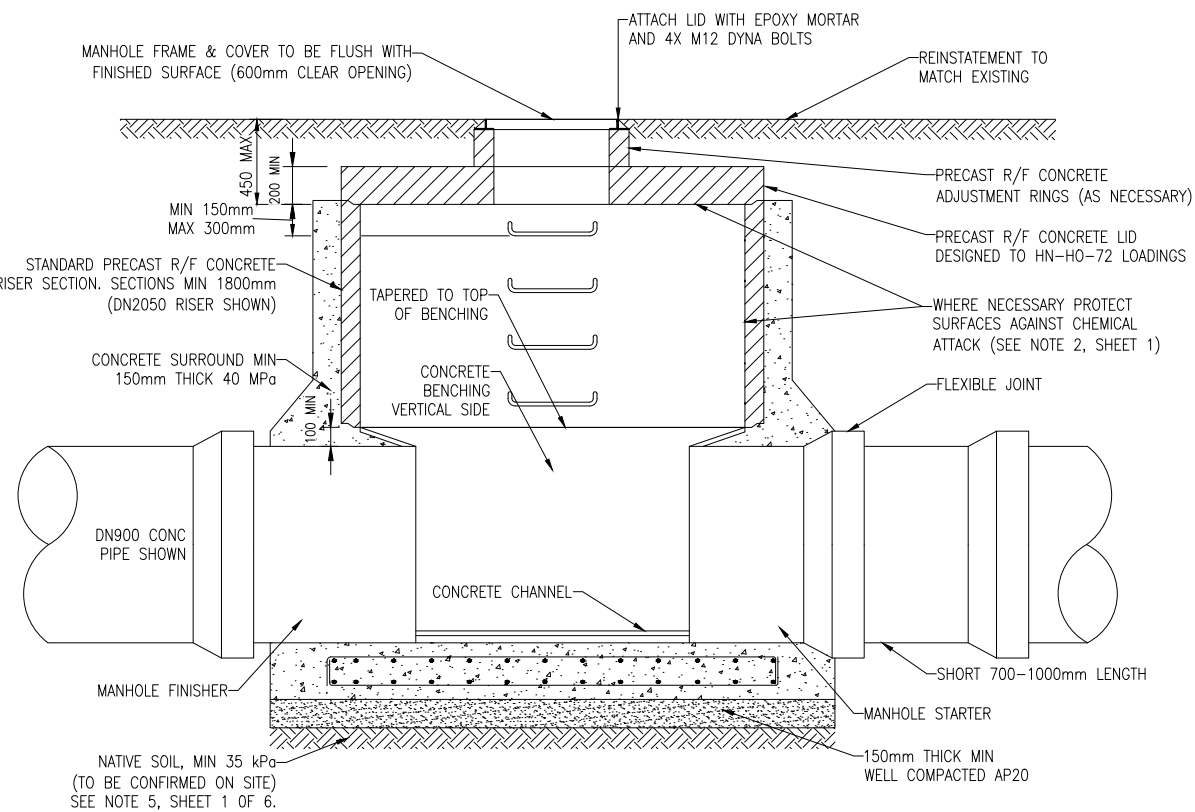
TIMARU
DISTRICT COUNCIL
Te Kaurihera ā Rohe
Te Tihī o Maru

TIMARU DISTRICT COUNCIL
2 King George Place
P.O. Box 522
Timaru 7940
Telephone: 03 687 7200
Website: www.timaru.govt.nz

PROJECT: **DRAINAGE AND WATER CODE OF PRACTICE STANDARD DETAILS**

TITLE: **TYPICAL PRECAST CONCRETE MANHOLE DETAILS**

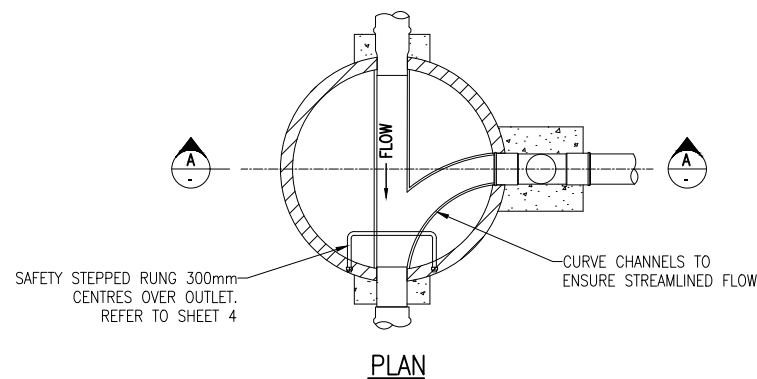
CONTRACT NUMBER:	
DRAWING NUMBER:	5302
REVISION:	L
SHEET:	1 OF 14



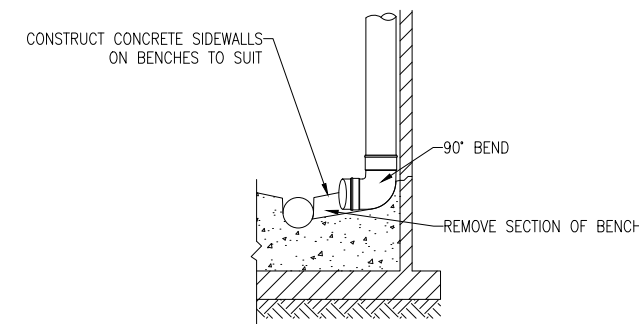
DETAIL 1C
SEWER & STORMWATER MANHOLE FOR > DN 750

NOTES:

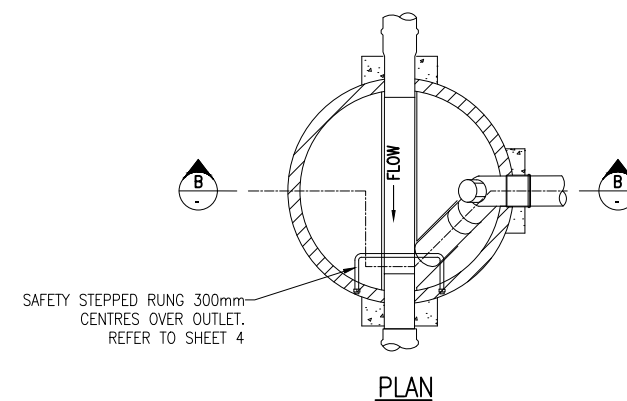
1. DRAWING BASED ON NZS 4404:2004. WHERE DRAWING DIFFERS FROM STANDARD THIS DRAWING TAKES PRECEDENCE.
2. DIMENSION IN MILLIMETRES.
3. ALL STEEL FITTINGS (INCLUDING BOLTS) TO BE GRADE 316 STAINLESS STEEL.
4. DN1200 MH TO BE USED WHERE DROP PIPE > DN150 OR MORE THAN ONE DN150 INTERNAL DROP IS USED.
5. INTERNAL DROP ONLY TO BE USED WHEN DIRECTED BY ENGINEER.
6. HAUNCHING OF INTERSECTION PIPES TO PROVIDE CURVED CHANNELS TO ENSURE STREAMLINED FLOW.
7. STANDARD PRECAST MANHOLE COMPONENTS TO BE USED UNLESS APPROVED OTHERWISE.
8. NO INFILTRATION PERMITTED - WATER OR AIR TEST MAY BE REQUIRED.
9. DETAIL 1C ONLY - DESIGNER TO CONFIRM NATIVE SOIL BEARING CAPACITY & ENSURE FOUNDATION IS SUITABLE TO SUPPORT MANHOLE.
5. MANHOLE LID TYPE.
ARTERIAL ROADS AND STATE HIGHWAYS USE URBAMAX F900 CLASS ROUND FRAME-NON VENTILATED.
LOCAL ROADS USE SE MAESTRO CLASS D400.
ALL LIDS TO HAVE UTILITY NAME.



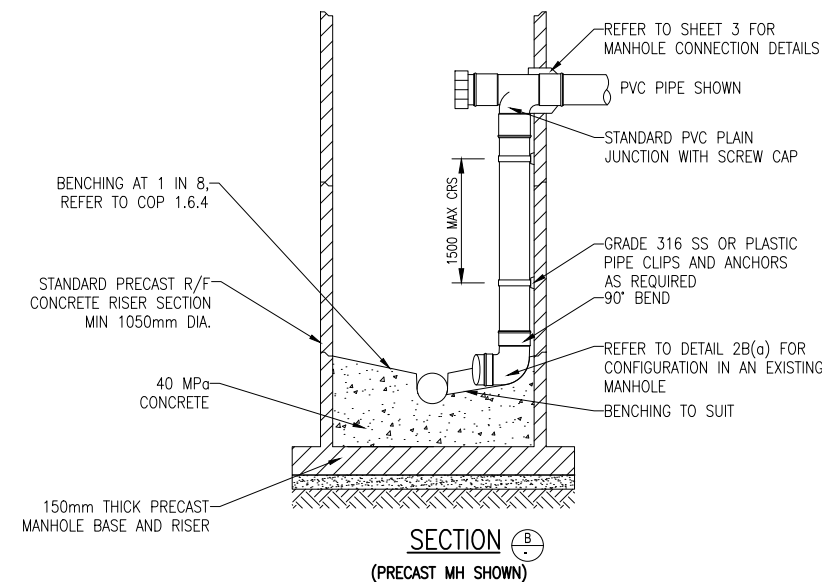
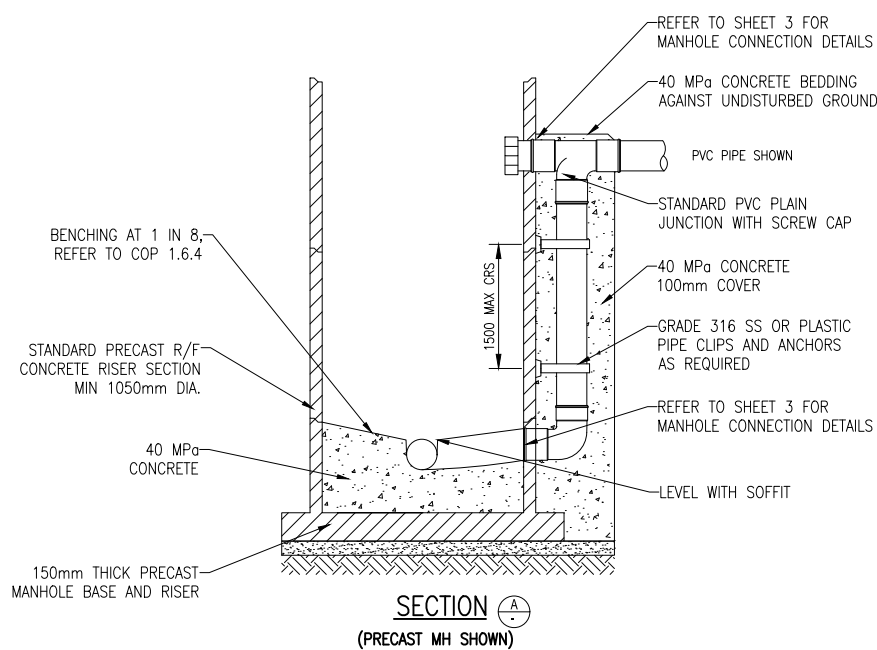
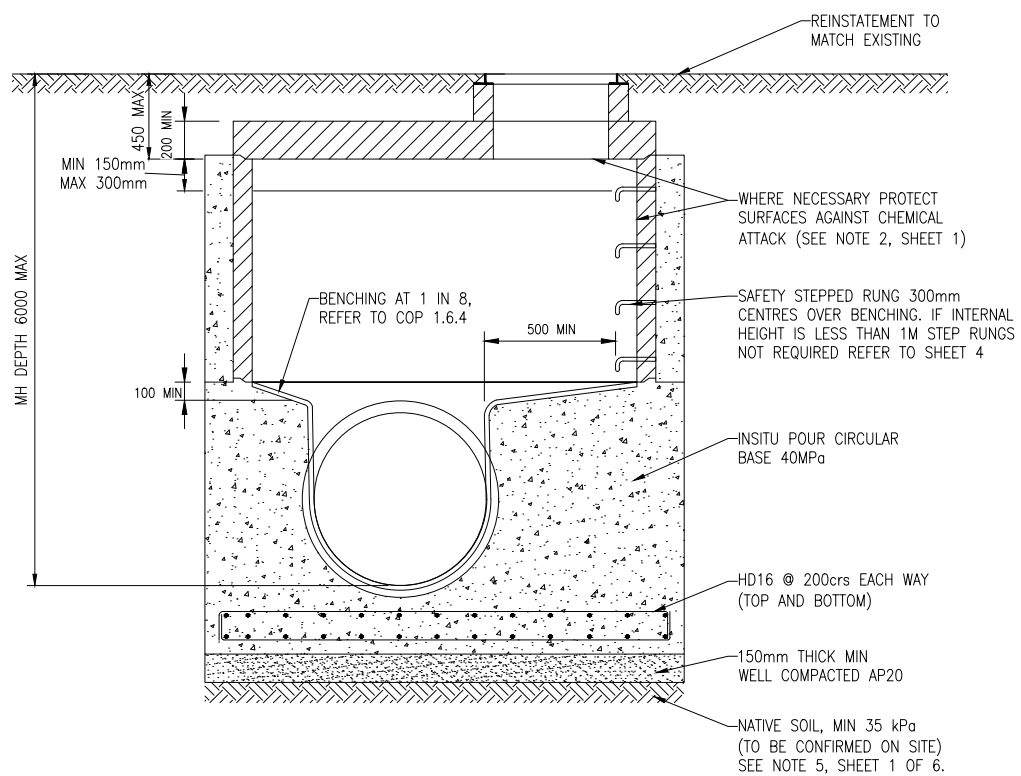
DETAIL 2A
TYPICAL EXTERNAL DROP MANHOLE
SUITABLE FOR INSITU AND PRECAST MH
(ONLY TO BE USED WHEN DIRECTED BY ENGINEER)



DETAIL 2B(a)
TYPICAL INTERNAL DROP MANHOLE - POST CONSTRUCTION
INSTALLATION DETAIL
(ONLY TO BE USED WHEN DIRECTED BY ENGINEER)



DETAIL 2B
TYPICAL INTERNAL DROP MANHOLE
SUITABLE FOR IN-SITU AND PRECAST MH
(ONLY TO BE USED WHEN DIRECTED BY ENGINEER)



NO.	REVISION	BY	CHK	APP	DATE	SURVEY FILE:	INITIAL	DATE	NAME	DATE	ORIGINAL SCALE (A):	AS SHOWN
L	CHANGES TO SPECS FOR MANHOLE DETAIL	MT			8/24	SURVEY FILE:					AS SHOWN	
K	SHEET ADDED WITH SOAK PIT DETAIL	MT			7/24	DATA SOURCE:						
J	STORMWATER SOAKAGE PIT UPDATE	WC	GC		3/24							
I	SUMP/CATCH PIT UPDATE & PAGE 9 REINSTATED	WC			7/21	LEVEL DATUM						
H	TYPICAL POSITION OF POLE VENT DETAIL AND SHEET 9 SS	MCB			1/20							
G	CHANGES TO DETAIL 3B - ENGINEERS APPROVAL ADDED	WC			4/19							
F	CHANGES TO CORBEL DETAIL	WC			2/16							

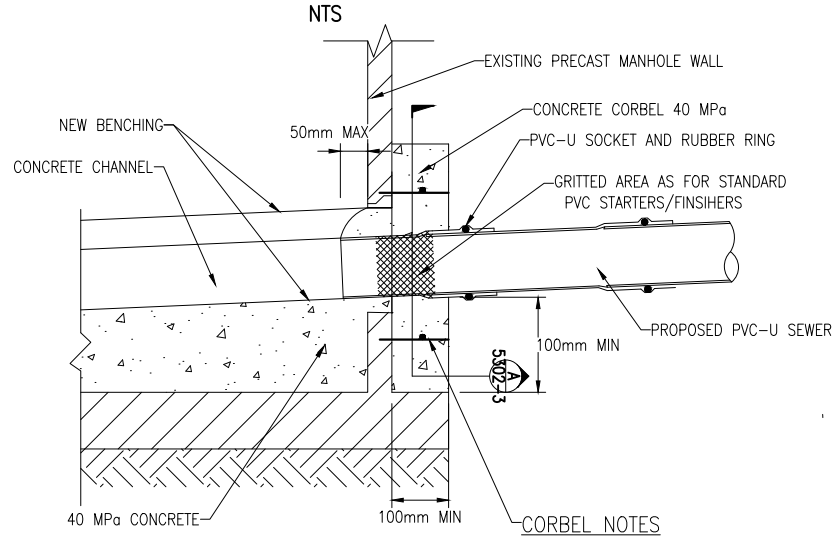
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TIMARU DISTRICT COUNCIL
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DRAINAGE AND WATER
CODE OF PRACTICE
STANDARD DETAILS

TYPICAL
PRECAST CONCRETE MANHOLE
DETAILS & DROP STRUCTURES

CONTRACT NUMBER:	
DRAWING NUMBER:	
5302	L
SHEET 2 OF 13	

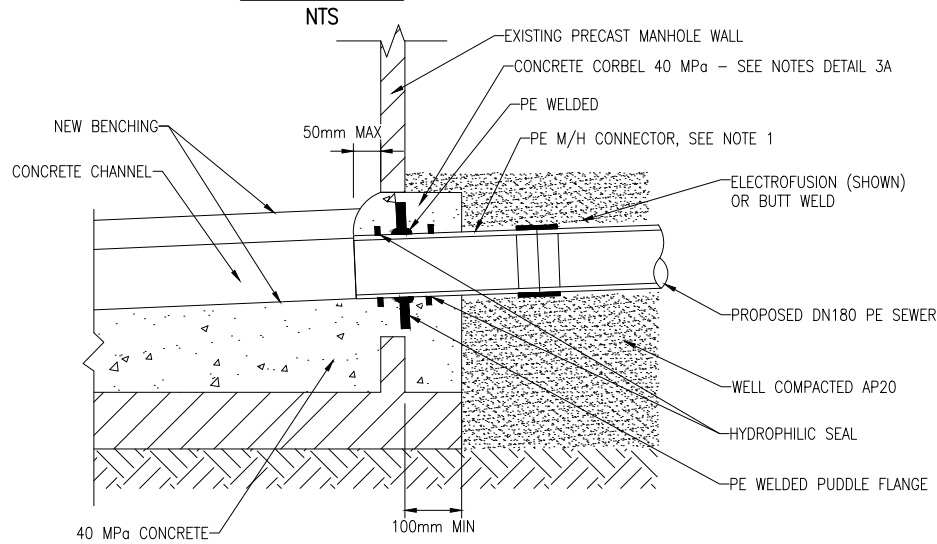
DETAIL 3A
PVC-U SEWER MAIN CONNECTION INTO CONCRETE MANHOLE
- UP TO DN300



PVC-U SOCKET METHOD
*** SEE TABLE BELOW**

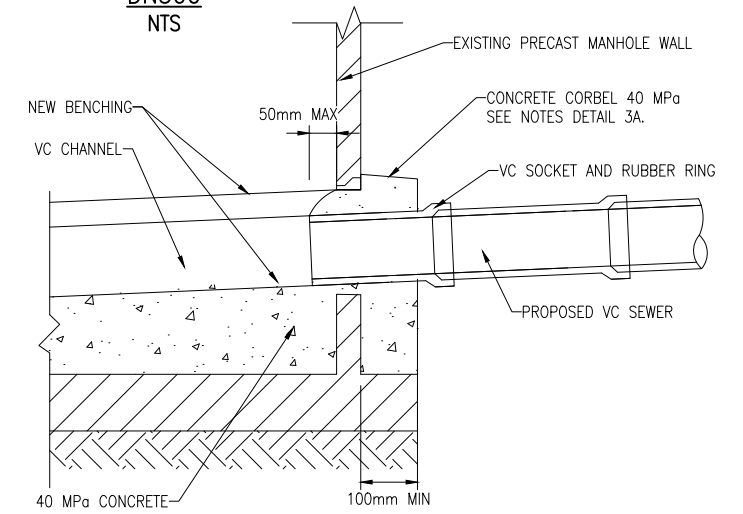
- D10 STARTERS AND D10 CAGE FOR ALL MANHOLES AND CONNECTORS
- STARTERS TO BE CHEMSET INTO MANHOLE WALL
 - 50MM OVERLAP OF STEEL REINFORCING
 - 50MM COVER ON ALL STEEL REINFORCING
 - HOLE TO BE CORE DRILLED OR CUT 50mm MAX OVER SIZE OF THE PIPE DIAMETER
 - HUMES BOND SEAL AROUND GRITTED STARTER BETWEEN WALL AND PIPE.

DETAIL 3B
RESTRAINED PE SEWER MAIN CONNECTION INTO CONCRETE MANHOLE-
UP TO DN300



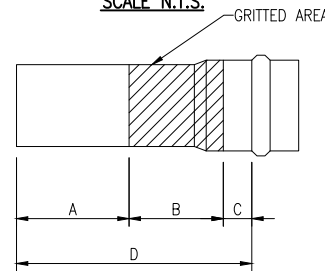
DETAIL 3B NOTES:
 1. PE M/H CONNECTOR TO BE FABRICATED OFF-SITE.

DETAIL 3C
VC SEWER MAIN CONNECTION INTO CONCRETE MANHOLE- UP TO
DN300



GRITTED AREA TABLES

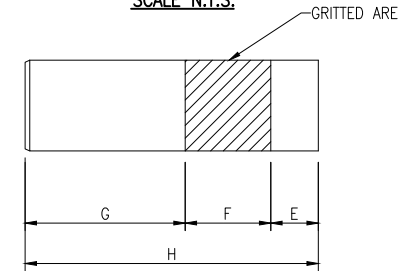
MANHOLE STARTERS
SCALE N.T.S.



PIPE DN	A*	B	C	D
100	144	150	50	344
150	129	150	50	329
175	113	150	50	313
225	95	150	50	295
300	82	150	50	282

* SEE NOTE 3

MANHOLE FINISHERS
SCALE N.T.S.



PIPE DN	E	F	G*	H
100	80	150	265	495
150	80	150	268	498
175	80	150	272	502
225	80	150	276	506
300	80	150	290	520

* SEE NOTE 3

FOR STRAIGHT THROUGH, 90° AND CIRCULAR MANHOLES

FOR ANGLE MANHOLES

PIPE DN	A*	B	C	D
100	130	200	150	430
150	130	200	150	430
175	100	200	150	450
225	130	200	150	480
300	170	200	150	520

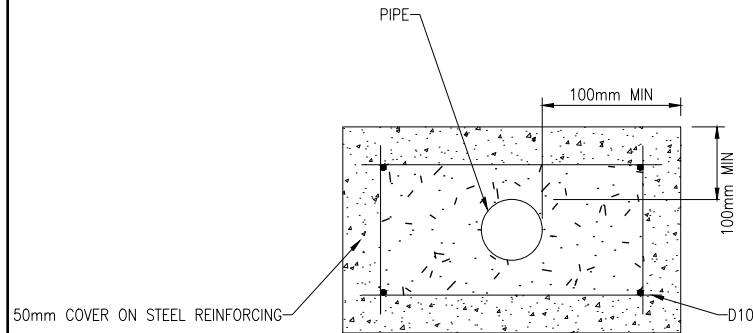
* SEE NOTE 3

PIPE DN	E	F	G*	H
100	110	250	230	590
150	120	250	230	600
175	140	250	260	650
225	120	250	280	700
300	150	250	310	770

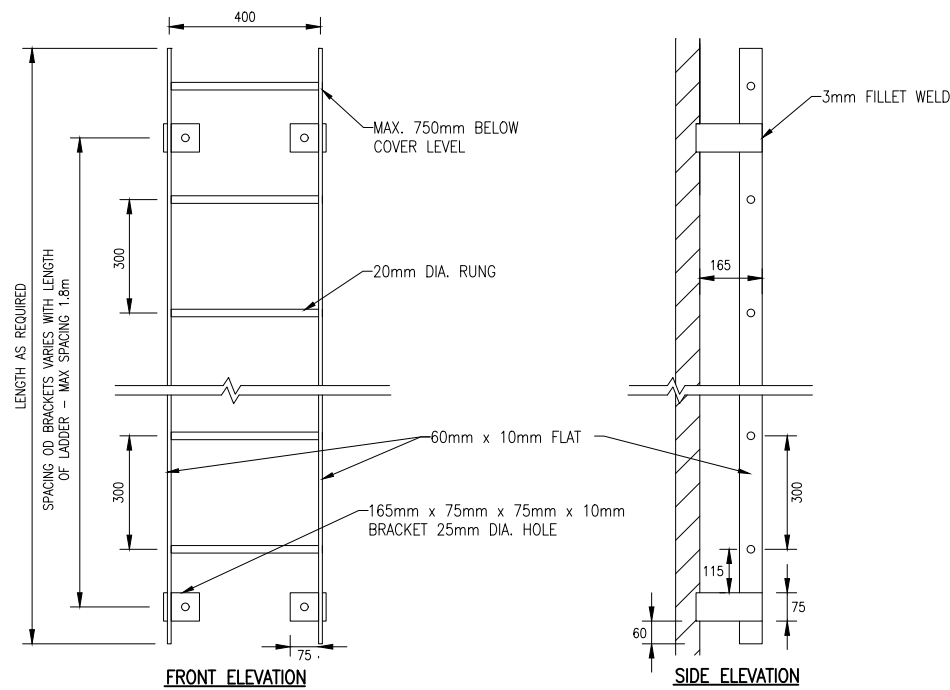
* SEE NOTE 3

GRITTED AREA NOTES

- PIPE SIZES EXCEEDING DN300 - SEE ENGINEER FOR APPROVED DETAIL
- PVC-U SOCKETS WITH GRITTED AREAS ARE TO BE PURCHASED FROM AN APPROVED SUPPLIER. GRITTED AREAS ARE NOT TO BE MADE ONSITE.
- DIMENSIONS A & G MAY BE CUT TO SUIT WITH WRITTEN APPROVAL FROM THE ENGINEER

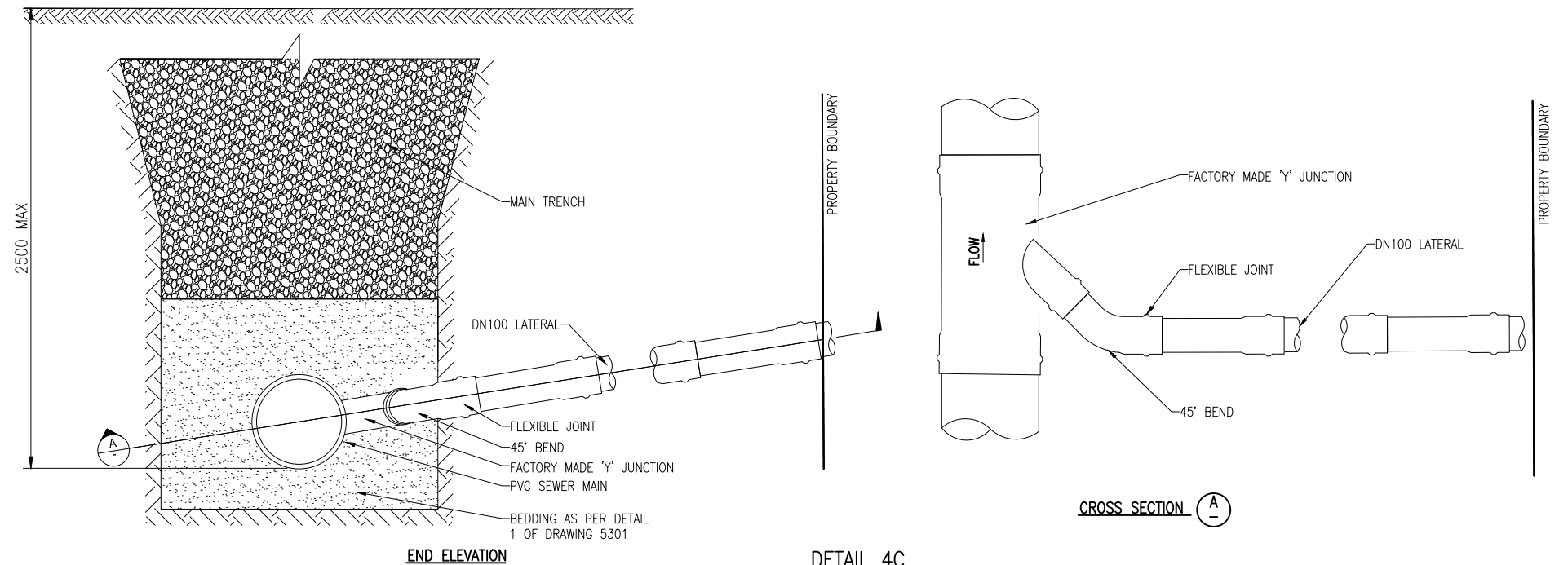


DETAIL A
TYPICAL CORBEL DETAIL

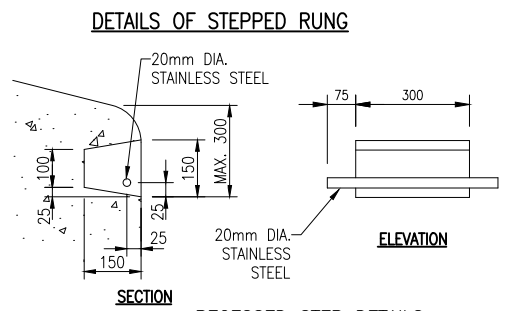
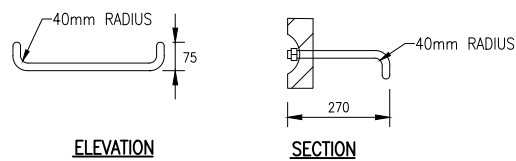
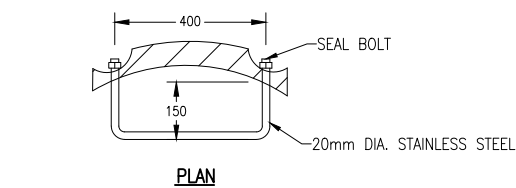


DETAIL 4A
MANHOLE LADDER
SCALE 1:10

- NOTE:
1. MANHOLE LADDER TO BE USED WHERE MANHOLE EXCEEDS 3m IN DEPTH.
 2. MANHOLE LADDERS TO BE 316 STAINLESS STEEL



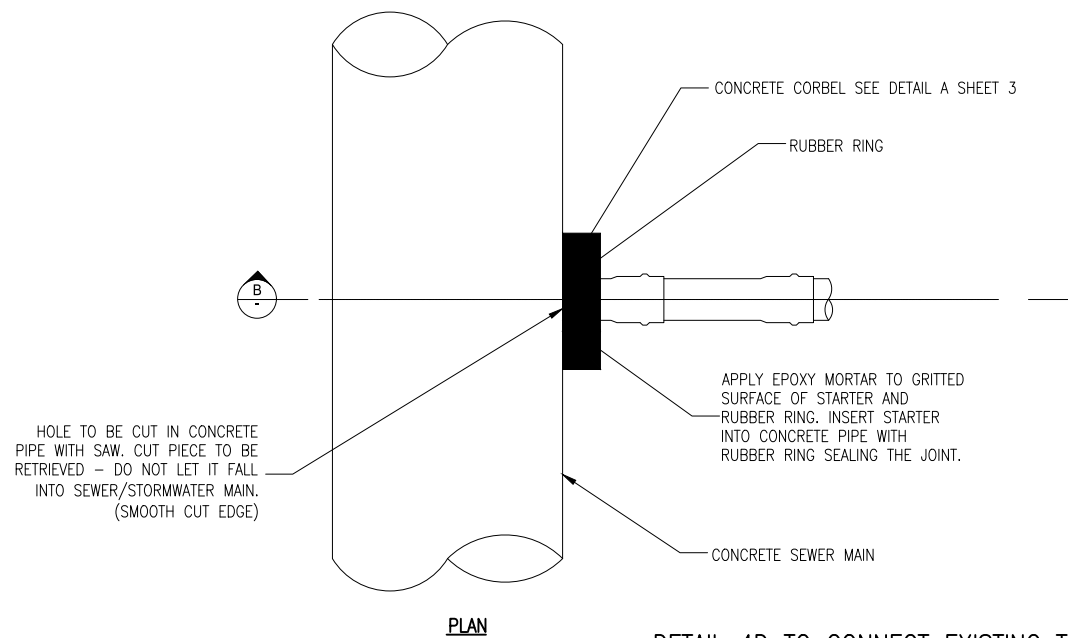
DETAIL 4C
STANDARD CONNECTION FOR SEWER AND STORMWATER
WITH A DEPTH TO INVERT < 2.50m
SCALE 1:10



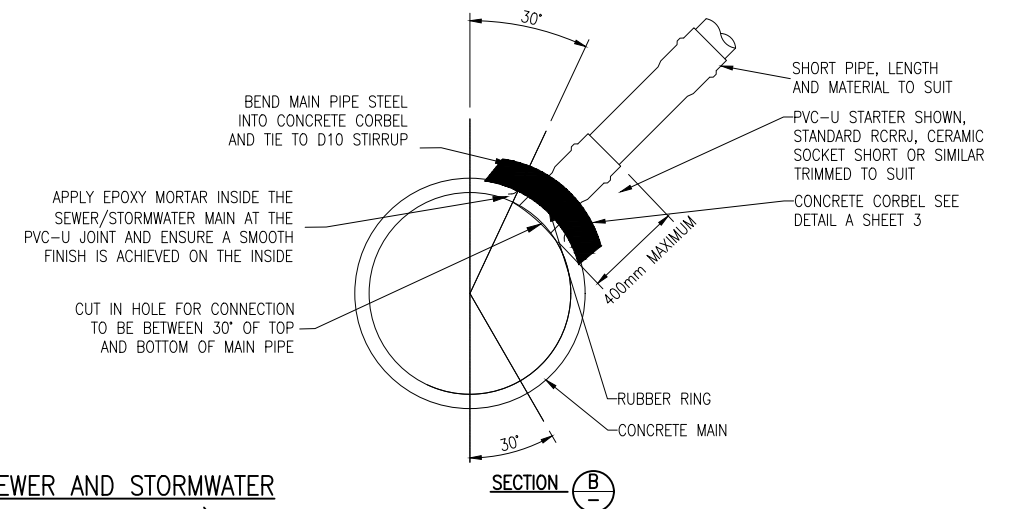
RECESSED STEP DETAILS

DETAIL 4B
MANHOLE STEPS
SCALE 1:10

- NOTE:
1. STEP RUNGS TO BE 316 STAINLESS STEEL OR AN APPROVED ALTERNATIVE



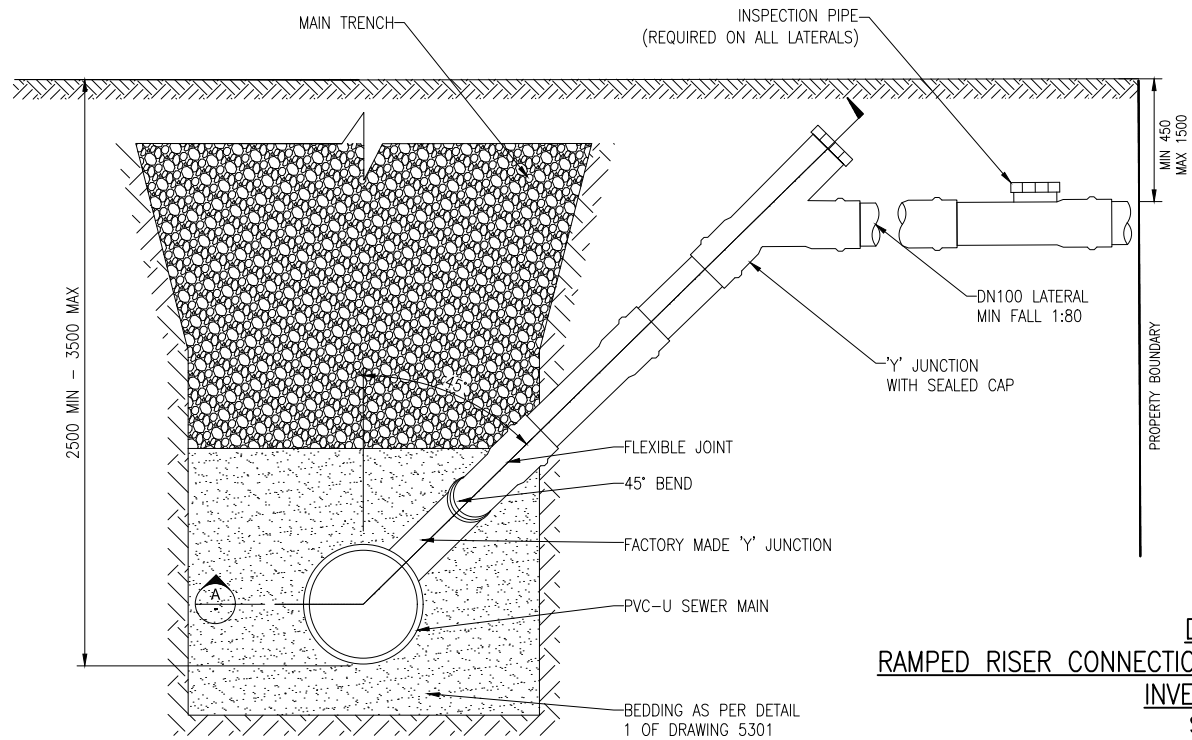
DETAIL 4D TO CONNECT EXISTING TRUNK SEWER AND STORMWATER
(ONLY TO BE USED WHEN DIRECTED BY THE ENGINEER)
SCALE 1:20



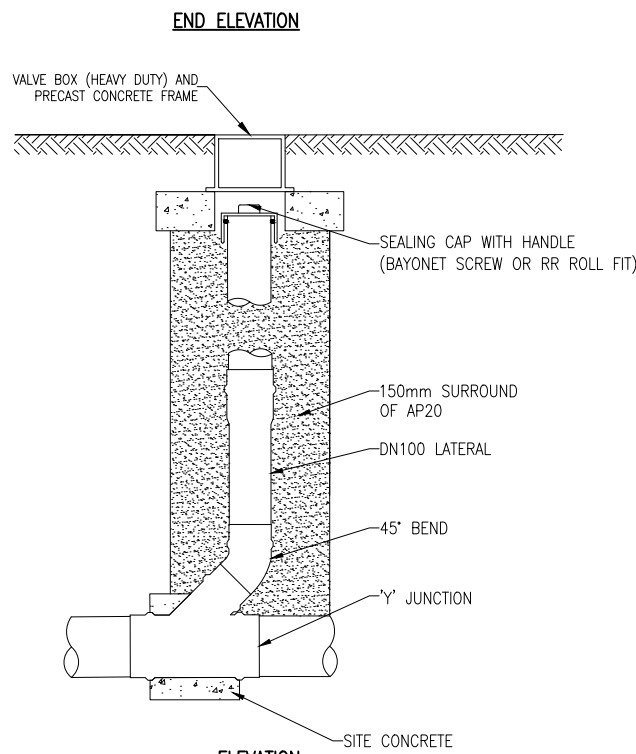
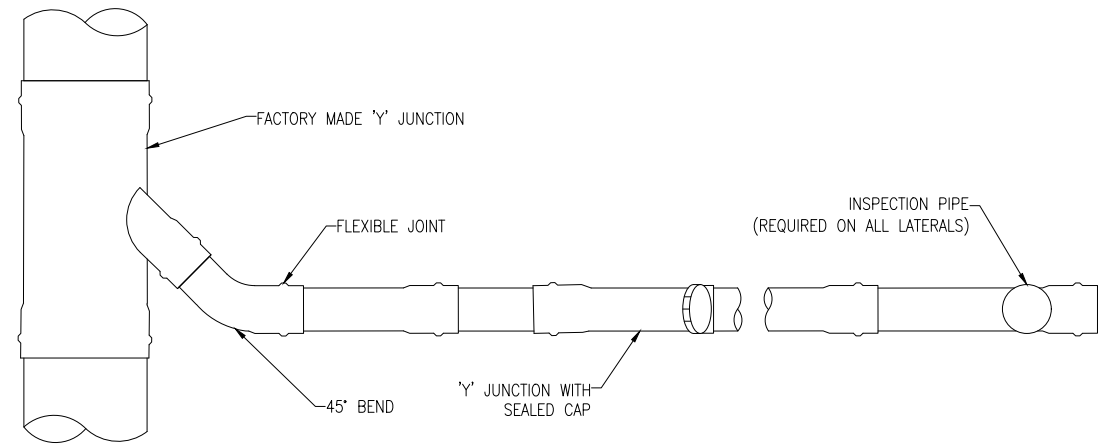
- NOTES:
1. DRAWING BASED ON NZS 4404:2004. WHERE DRAWING DIFFERS FROM STANDARD THIS DRAWING TAKES PRECEDENCE
 2. MINIMUM LATERAL GRADIENT 1:80. MAXIMUM GRADIENT DESIRABLE 1:1. STEEPER GRADIENT WILL BE PERMITTED TO MAINTAIN BUILDING AREA. PIPE TO BE SUPPORTED BY NATURAL GROUND WHERE POSSIBLE.
 3. ALL LATERALS (FROM THE SEWER MAIN OR MANHOLES) TO BE FITTED WITH AN INSPECTION PIPE AT THE PROPERTY BOUNDARY.
 4. DN1050 SEWER MAIN AND DN300 CONNECTION SHOWN
 5. THE DEFINITION OF A TRUNK SEWER IS DETAILED IN THE TDC COP SECTION 1, CLAUSE 1.3

L CHANGES TO SPECS FOR MANHOLE DETAIL		MT		8/24	SURVEY FILE:	INITIAL	DATE	8/24	AS SHOWN	TIMARU DISTRICT COUNCIL 2 King George Place P.O. Box 522 Timaru 7940 Telephone: 03 687 7200 Website: www.timaru.govt.nz	PROJECT: DRAINAGE AND WATER CODE OF PRACTICE STANDARD DETAILS	TITLE: MANHOLE LADDER, STEP RUNG & LATERAL CONNECTIONS	CONTRACT NUMBER: 5302		REVISION: L
K SHEET ADDED WITH SOAK PIT DETAIL	MT		7/24	DATA SOURCE:	WATER										
J STORMWATER SOAKAGE PIT UPDATE	WC	GC	3/24	LEVEL DATUM:	DRAINAGE										
I SUMP/CATCH PIT UPDATE & PAGE 9 REINSTATED	WC		7/21		ROADING										
H TYPICAL POSITION OF POLE VENT DETAIL AND SHEET 9 SS	MCB		1/20		PARKS										
G CHANGES TO DETAIL 3B - ENGINEERS APPROVAL ADDED	WC		4/19		ELEC.PWR										
F CHANGES TO CORBEL DETAIL	WC		2/16		TELECOM										
No. REVISION	BY	CHK	APP	DATE	PLANNING										

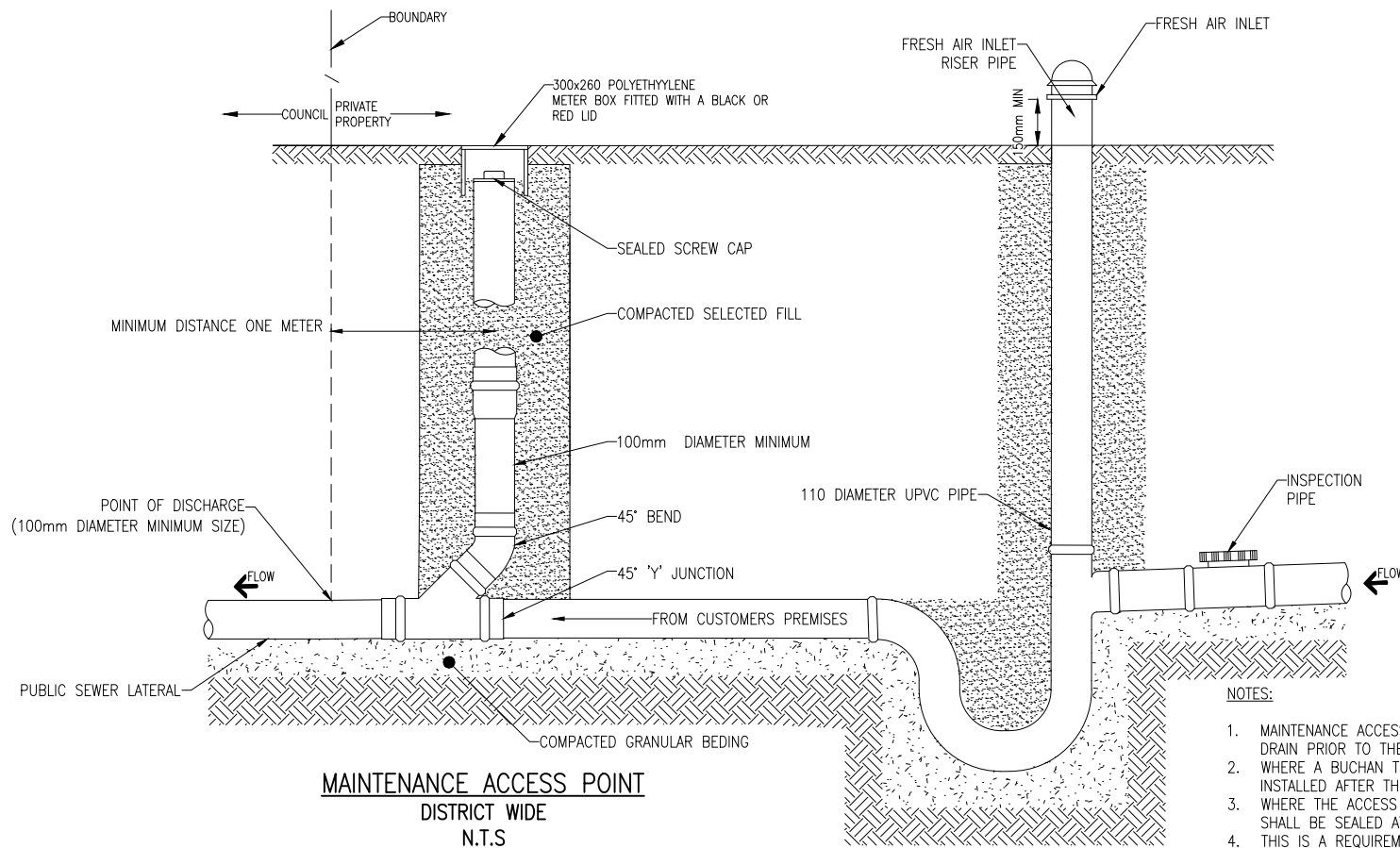
NOTE:
TOP OF RAMP RISER TO BE
CLEARLY IDENTIFIED ON
AS-BUILT PLANS



DETAIL 5A
RAMPED RISER CONNECTION FOR SEWERS WITH A DEPTH TO
INVERT > 2.50m
SCALE 1:10



DETAIL 5B
CLEANING EYE
SCALE 1:10



MAINTENANCE ACCESS POINT
DISTRICT WIDE
N.T.S

PRIVATE ASSET

BOUNDARY TRAP / BUCHAN TRAP
TIMARU ONLY
N.T.S

- NOTES:
1. MAINTENANCE ACCESS POINT TO BE INSTALLED ON THE PRIVATE SEWER DRAIN PRIOR TO THE BOUNDARY
 2. WHERE A BUCHAN TRAP IS INSTALLED THE ACCESS POINT IS TO BE INSTALLED AFTER THE BUCHAN AND PRIOR TO THE BOUNDARY
 3. WHERE THE ACCESS POINT IS LOCATED INSIDE A BUILDING THE COVER SHALL BE SEALED AT FLOOR LEVEL
 4. THIS IS A REQUIREMENT FOR CONNECTION AND DISCHARGE TO COUNCILS SEWER NETWORK INFRASTRUCTURE AS PER TDC BY LAW CHAPTER 15
 5. OTHER METHODS OF BUCHAN INSTALLATION MAY BE USED PROVIDED A WATER SEAL CAN BE ACHIEVED
 6. WHERE A BUCHAN TRAP IS TO BE INSTALLED IN A BUILDING THE FAI ACCESS POINT IS TO BE SEALED USING A SCREW CAP AND THE FAI DIRECTED EXTERNALLY

NO.	REVISION	BY	CHK	APP	DATE	SURVEY FILE:	INITIAL	DATE	NAME	DATE	ORIGINAL SCALE (A1):	AS SHOWN
L	CHANGES TO SPECS FOR MANHOLE DETAIL	MT			8/24							
K	SHEET ADDED WITH SOAK PIT DETAIL	MT			7/24							
J	STORMWATER SOAKAGE PIT UPDATE	WC	GC		3/24	DATA SOURCE:						
I	SUMP/CATCH PIT UPDATE & PAGE 9 REINSTATED	WC			7/21	LEVEL DATUM:						
H	TYPICAL POSITION OF POLE VENT DETAIL AND SHEET 9 SS	MCB			1/20							
G	CHANGES TO DETAIL 3B - ENGINEERS APPROVAL ADDED	WC			4/19							
F	CHANGES TO CORBEL DETAIL	WC			2/16							

TIMARU DISTRICT COUNCIL
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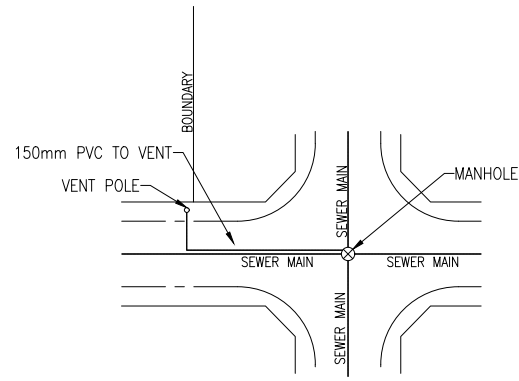
PROJECT: **DRAINAGE AND WATER CODE OF PRACTICE STANDARD DETAILS**

TITLE: **SERVICE LATERAL / CLEANING EYE / RAMPED RISER**

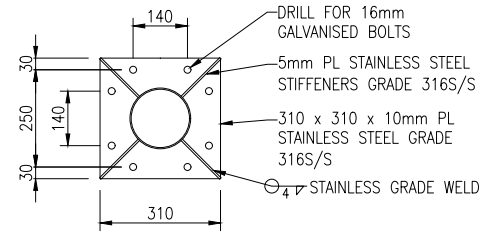
CONTRACT NUMBER: **5302**

DRAWING NUMBER: **5** OF **14**

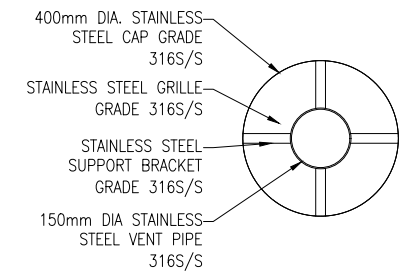
REVISION: **L**



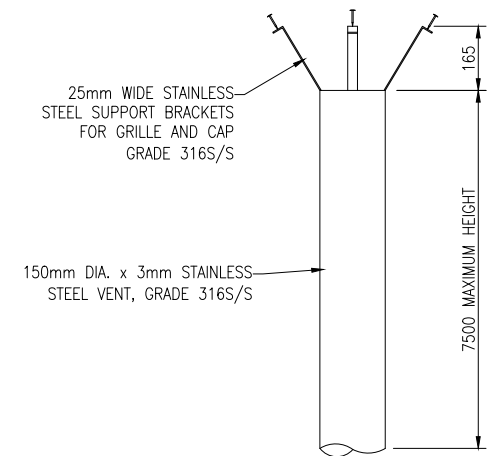
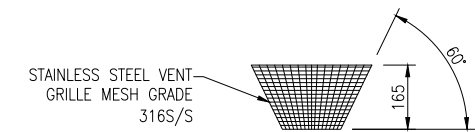
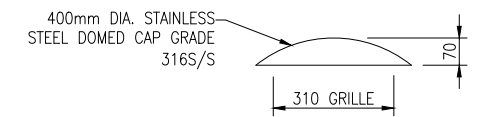
TYPICAL POSITION OF POLE VENT
NTS



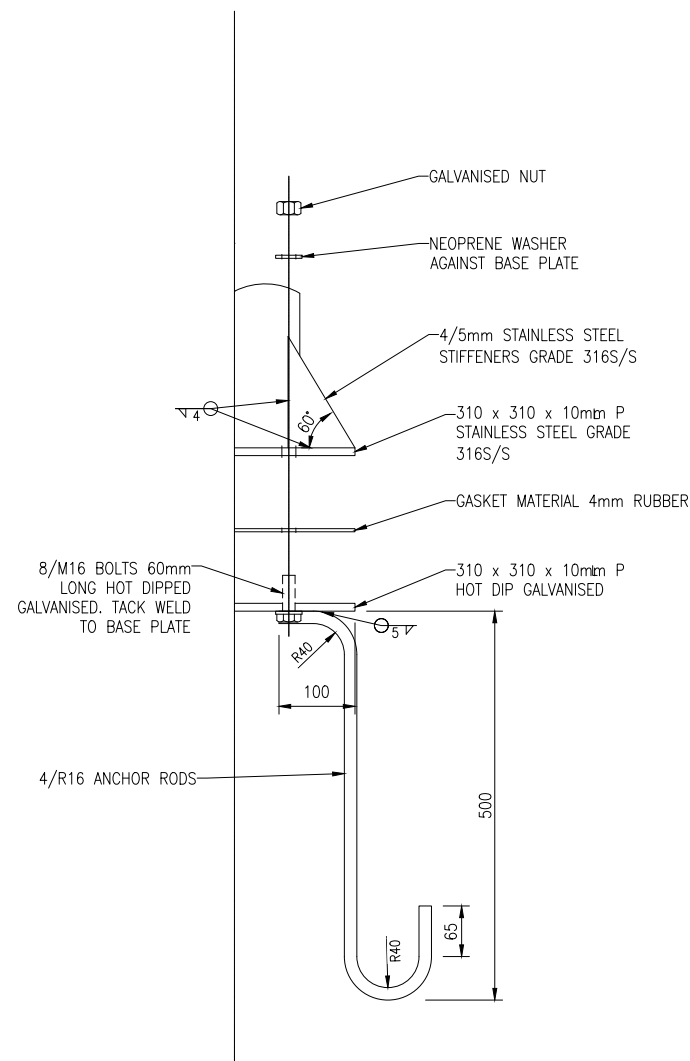
BASE PLATE PLAN
SCALE 1:10



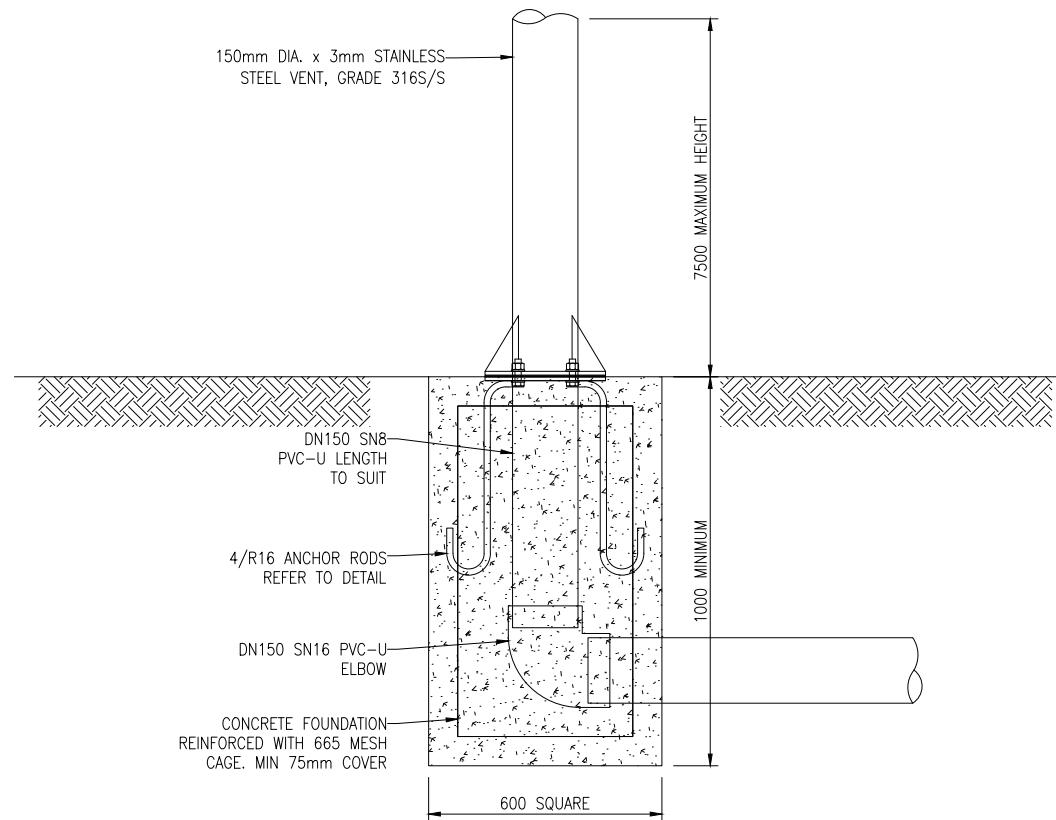
PLAN
SCALE 1:10



POST AND CAP DETAIL
SCALE 1:10



ANCHOR ROD DETAIL
SCALE 1:5



BASE AND POST DETAIL
SCALE 1:10

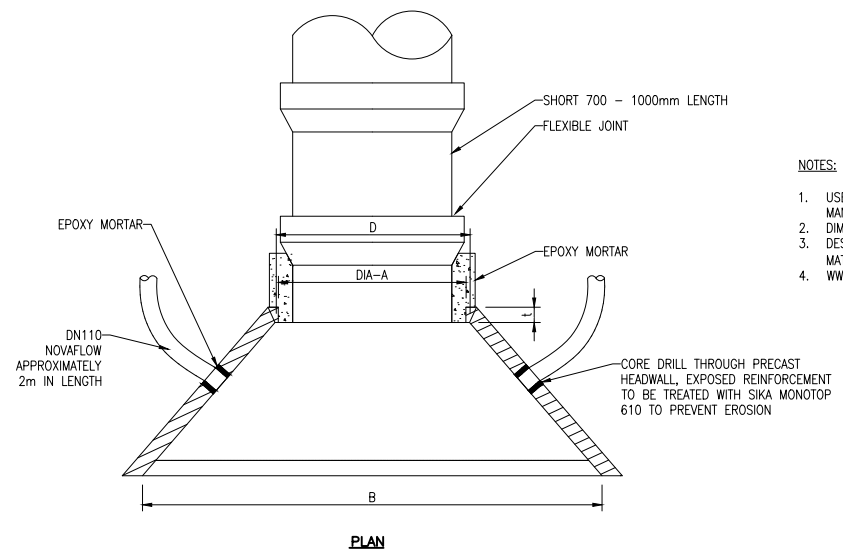
NO.	REVISION	BY	CHK	APP	DATE	DESCRIPTION
L					8/24	CHANGES TO SPECS FOR MANHOLE DETAIL
K					7/24	SHEET ADDED WITH SOAK PIT DETAIL
J					3/24	STORMWATER SOAKAGE PIT UPDATE
I					7/21	SUMP/CATCH PIT UPDATE & PAGE 9 REINSTATED
H					1/20	TYPICAL POSITION OF POLE VENT DETAIL AND SHEET 9 SS
G					4/19	CHANGES TO DETAIL 3B - ENGINEERS APPROVAL ADDED
F					2/16	CHANGES TO CORBEL DETAIL

DATE	NAME	DATE	ORIGINAL SCALE (A1)	REDUCED SCALE (A3)	AS SHOWN
2/16	DESIGNED	GS	2/16		
2/16	DESIGN CHECK	GC	2/16		
2/16	DRAWN	WC	2/16		
2/16	DRG CHECK	GC	2/16		
2/16	APPROVED	GH	2/16		

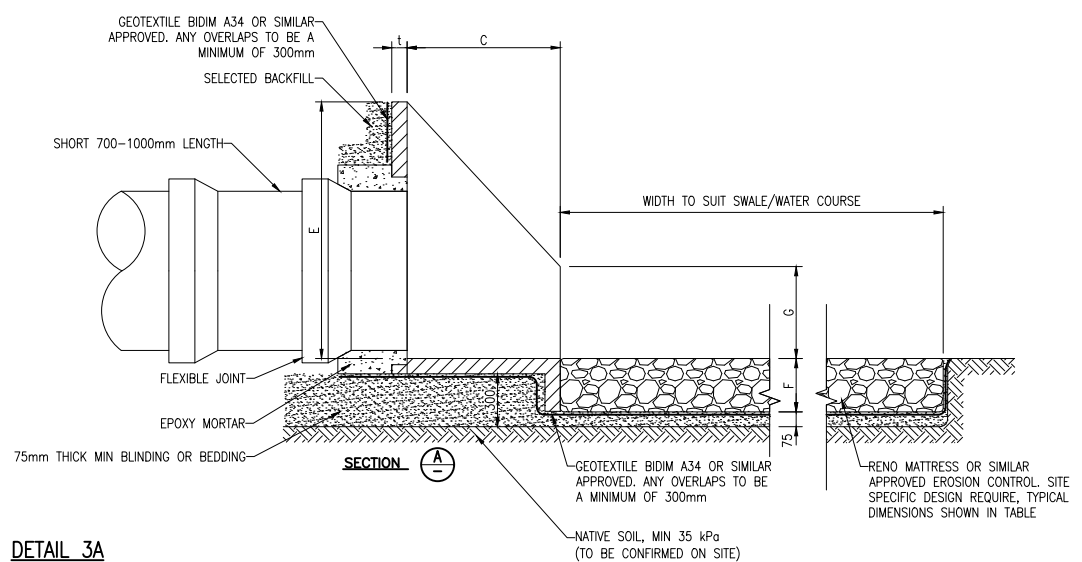
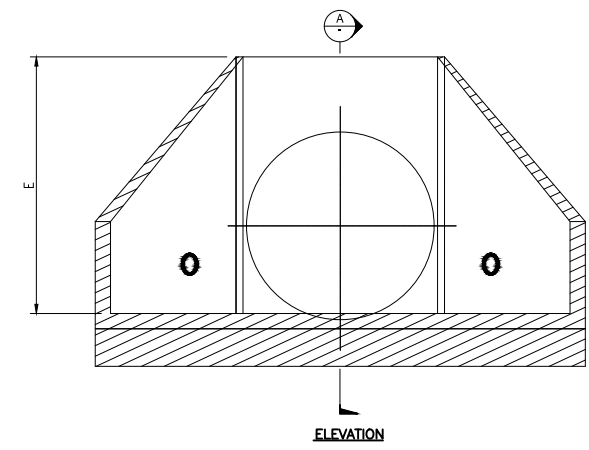
TIMARU DISTRICT COUNCIL
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 Timaru 7940
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DRAINAGE AND WATER CODE OF PRACTICE STANDARD DETAILS
POLE VENT DETAILS

CONTRACT NUMBER: 5302
 DRAWING NUMBER: 6 OF 14
 REVISION: L



- NOTES:**
1. USE HYNDS PRECAST UNITS (OR SIMILAR APPROVED) IN CONJUNCTION WITH MANUFACTURERS INSTRUCTIONS
 2. DIMENSIONS IN MILLIMETRES
 3. DESIGNER TO PROVIDE ADEQUATE SCOUR PROTECTION USING GABION MATTRESSES (OR SIMILAR APPROVED)
 4. WW1050 WITH DN900 CONC PIPE SHOWN

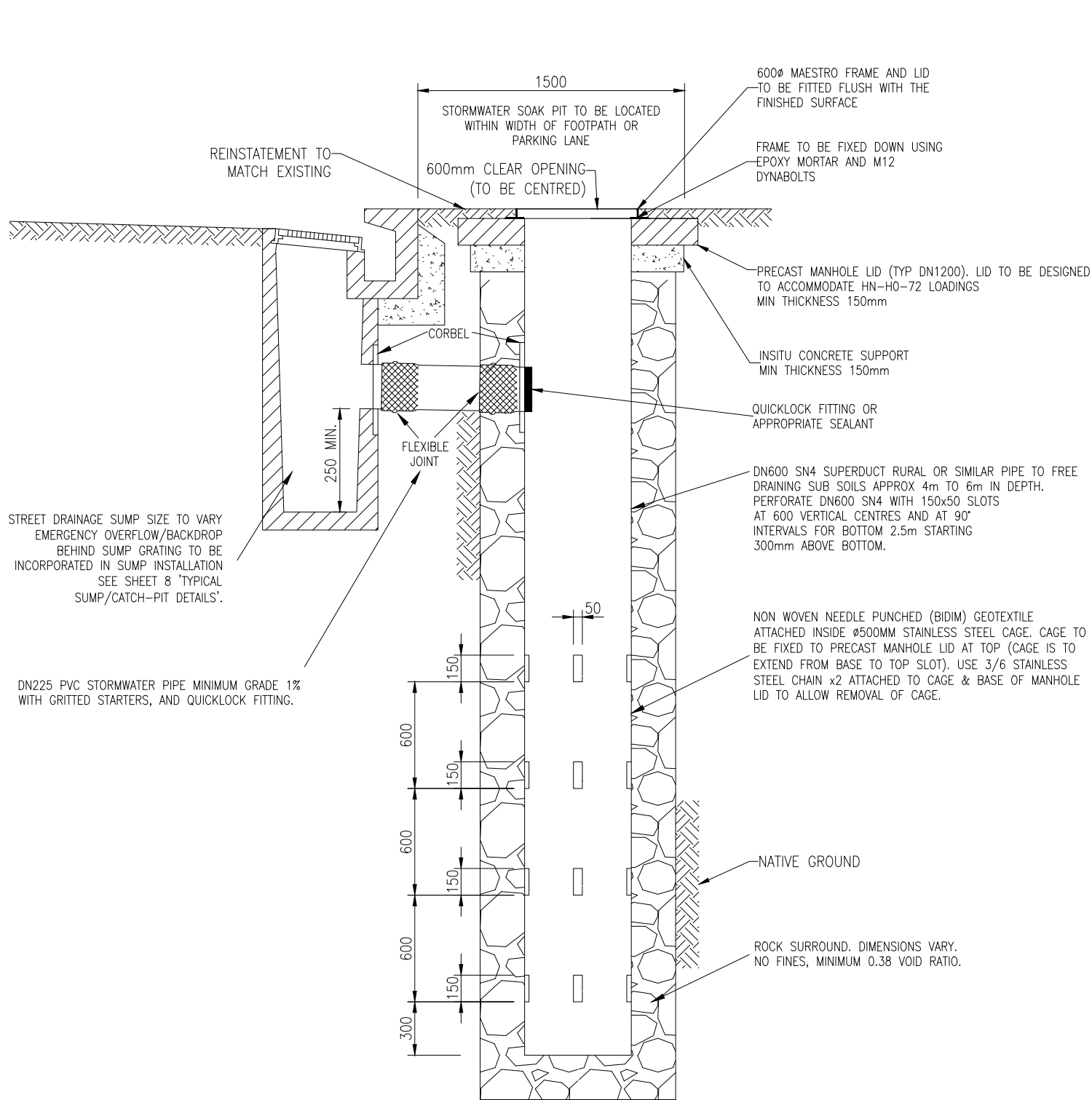


DETAIL 3A
PRECAST REINFORCED CONCRETE INLET/OUTLET DETAIL

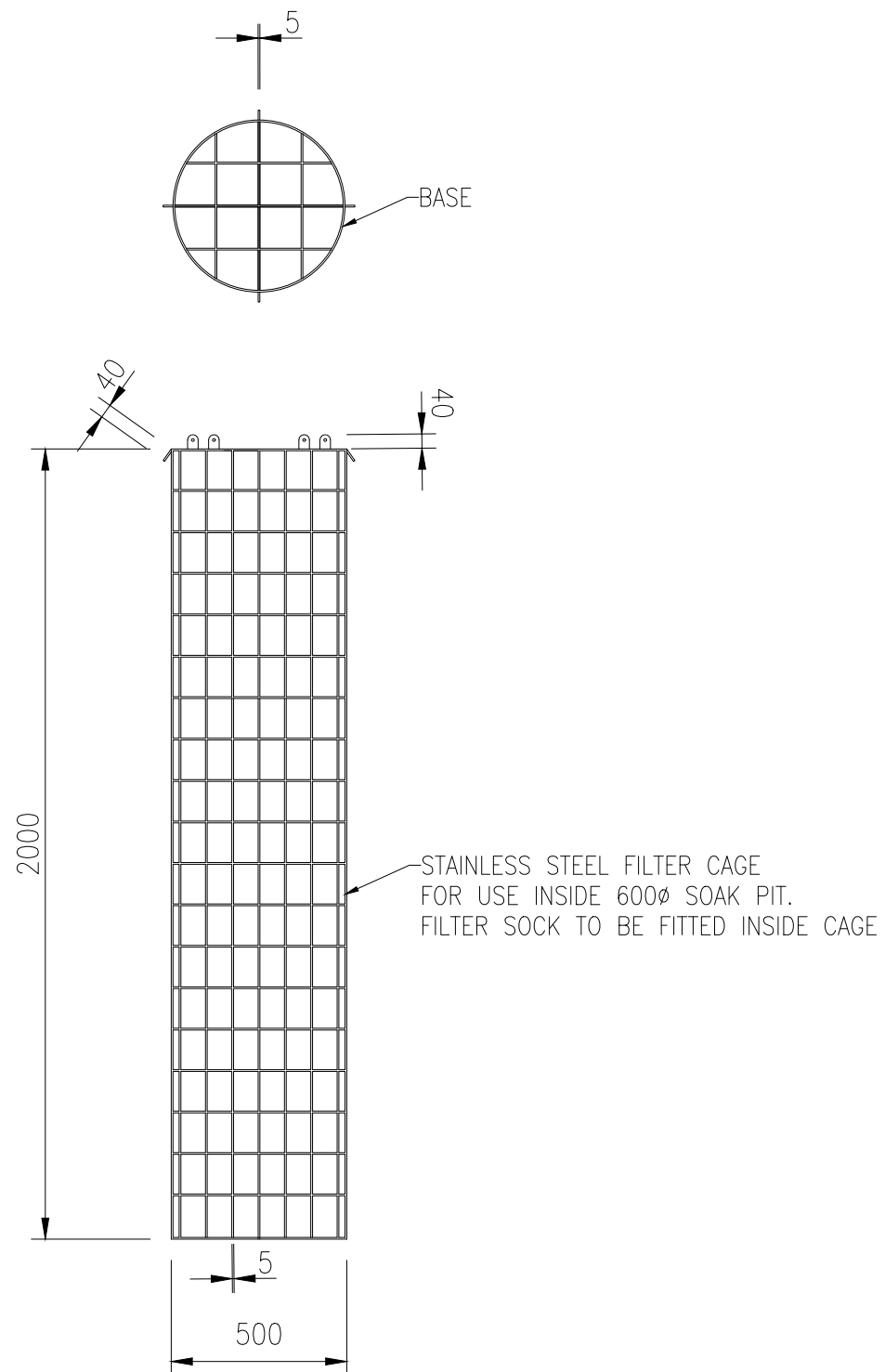
PRODUCT CODE	NOMINAL PIPE DIAMETER	WINGWALL TYPE	A	B	C	D	E	F	G	t	WEIGHT
WW0300	100 to 300	STANDARD	190/390	1000	600	460	520	200	160	60	205kg
WW0600	300 to 675	STANDARD	390/790	2150	745	810	1000	250	390	90	755kg
WW0600L	300 to 600	LONG THROAT	370/700	1950	1100	750	900	280	500	80	925kg
WW1050	600 to 1050	STANDARD	720/1225	3000	1000	1270	1675	345	600	100	1800kg
WW1350	1200 to 1350	STANDARD	1380/1540	4100	2400	1600	1975	425	750	125	5610kg
WW1800	1600 to 1800	STANDARD	1727/2040	4900	2400	2150	2265	450	750	135	7700kg
	2050 and above	SPECIAL									

STANDARD RENO MATTRESS SIZES		
LENGTH	WIDTH	HEIGHT
6000	2000	170
6000	2000	230
6000	2000	300

DO NOT SCALE - IF IN DOUBT ASK



DETAIL A
STORMWATER SOAKAGE PIT

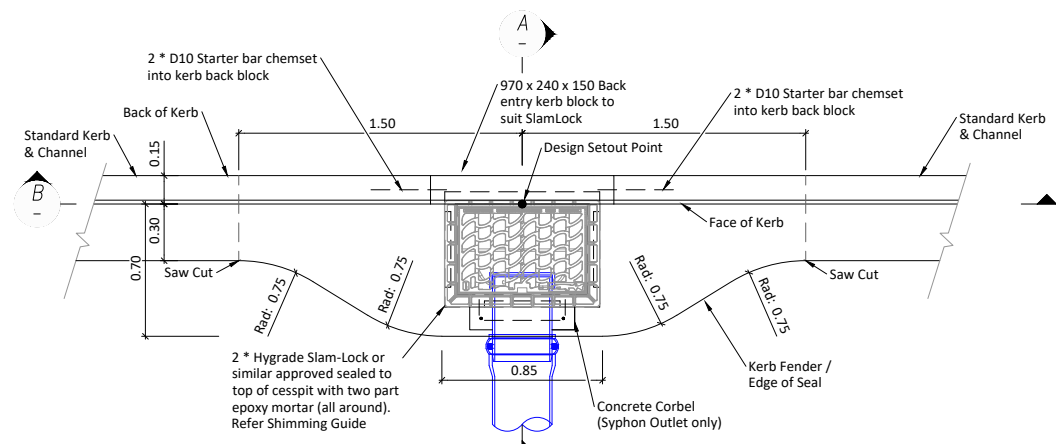


DETAIL B
FILTER CAGE

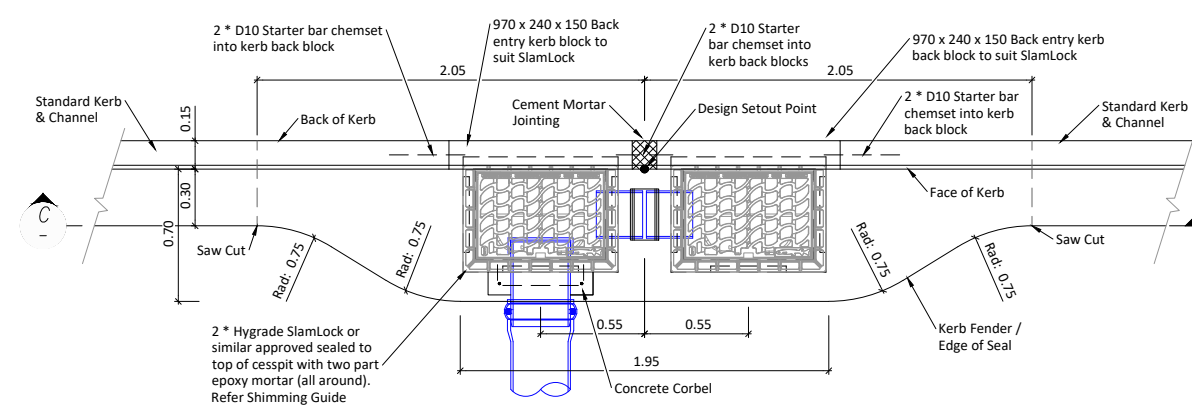
L CHANGES TO SPECS FOR MANHOLE DETAIL		MT		8/24	SURVEY FILE:		INITIAL	DATE	NAME	DATE	ORIGINAL SCALE (A):	1:20
K SHEET ADDED WITH SOAK PIT DETAIL		MT		7/24	DATA SOURCE:	WATER			SURVEYED	-	REDUCED SCALE (A3):	1:40
J STORMWATER SOAKAGE PIT UPDATE		WC	GC	3/24	LEVEL DATUM:	DRAINAGE			DESIGNED	GS	2/16	PRODUCED BY:
I SUMP/CATCH PIT UPDATE & PAGE 9 REINSTATED		WC		7/21		ROADING			DESIGN CHECK	GC	2/16	FOR:
H TYPICAL POSITION OF POLE VENT DETAIL AND SHEET 9 SS		MCB		1/20		PARKS			DRAWN	WC	2/16	D & W
G CHANGES TO DETAIL 3B - ENGINEERS APPROVAL ADDED		WC		4/19		ELEC.PWR			DRG CHECK	GC	2/16	THIS DOCUMENT IS THE PROPERTY OF THE TIMARU DISTRICT COUNCIL. IT IS NOT TO BE REPRODUCED WITHOUT THE PERMISSION OF THE TIMARU DISTRICT COUNCIL.
F CHANGES TO CORBEL DETAIL		WC		2/16		TELECOM			APPROVED	GH	2/16	
REVISION		BY	CHK	APP	DATE	PLANNING						

<p>TIMARU DISTRICT COUNCIL 2 King George Place P.O. Box 522 Timaru 7940 Telephone: 03 687 7200 Website: www.timaru.govt.nz</p>	<p>PROJECT: DRAINAGE AND WATER CODE OF PRACTICE STANDARD DETAILS</p>	<p>TITLE: SOAKAGE PIT AND FILTER CAGE DETAILS</p>	<p>CONTRACT NUMBER:</p> <p>DRAWING NUMBER: 5302</p> <p>SHEET: 8 OF 14</p> <p>REVISION: L</p>
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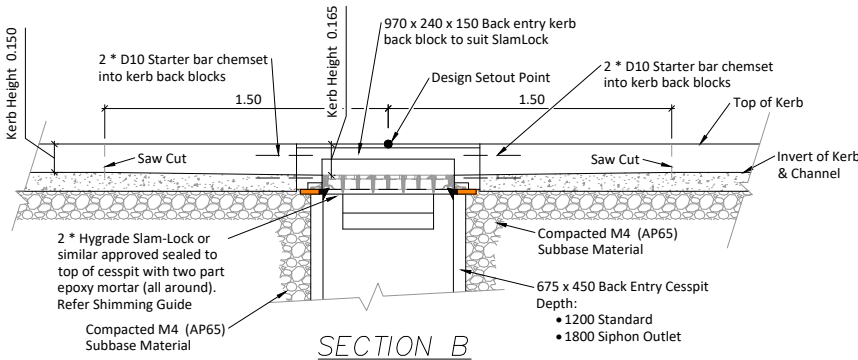
Original Sheet Size A1 (841 x 594) 5302.dwg 711696 DO NOT SCALE - IF IN DOUBT ASK



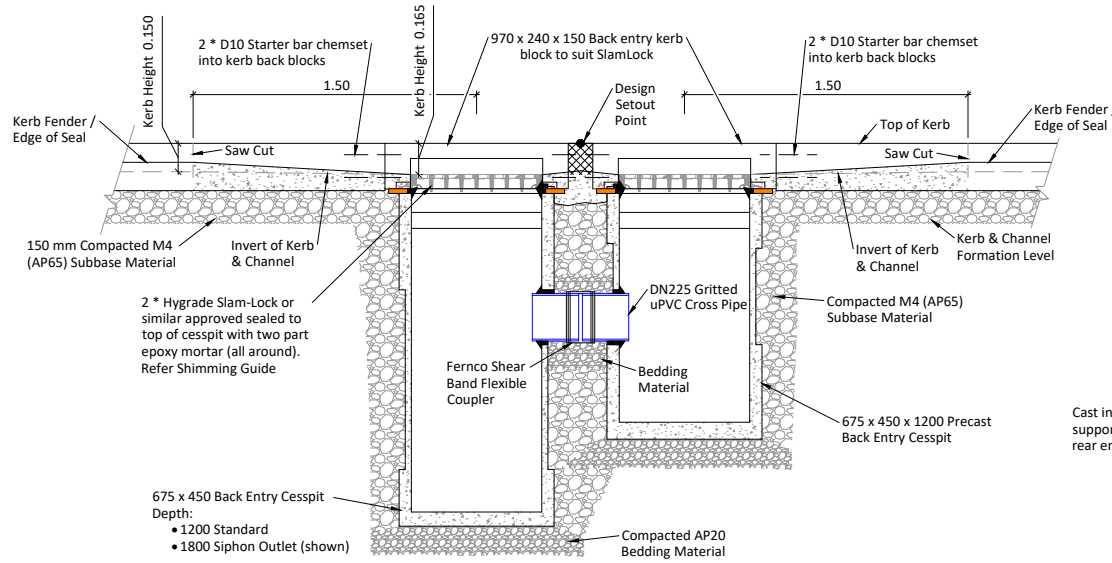
TYPICAL SINGLE SUMP - PLAN
Scale 1:20 @ A1



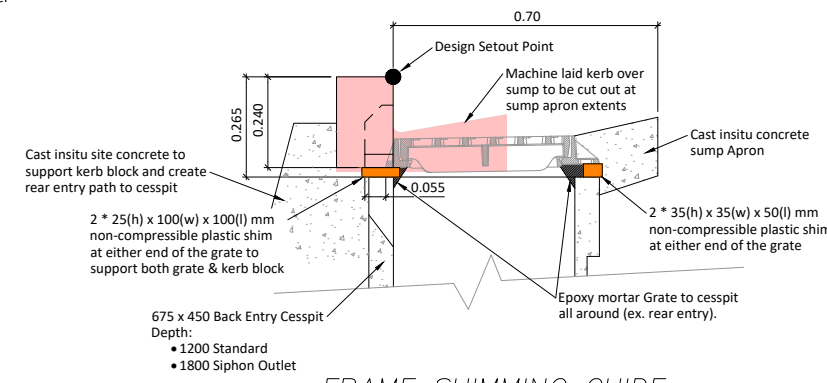
TYPICAL DOUBLE SUMP - PLAN
Scale 1:20 @ A1



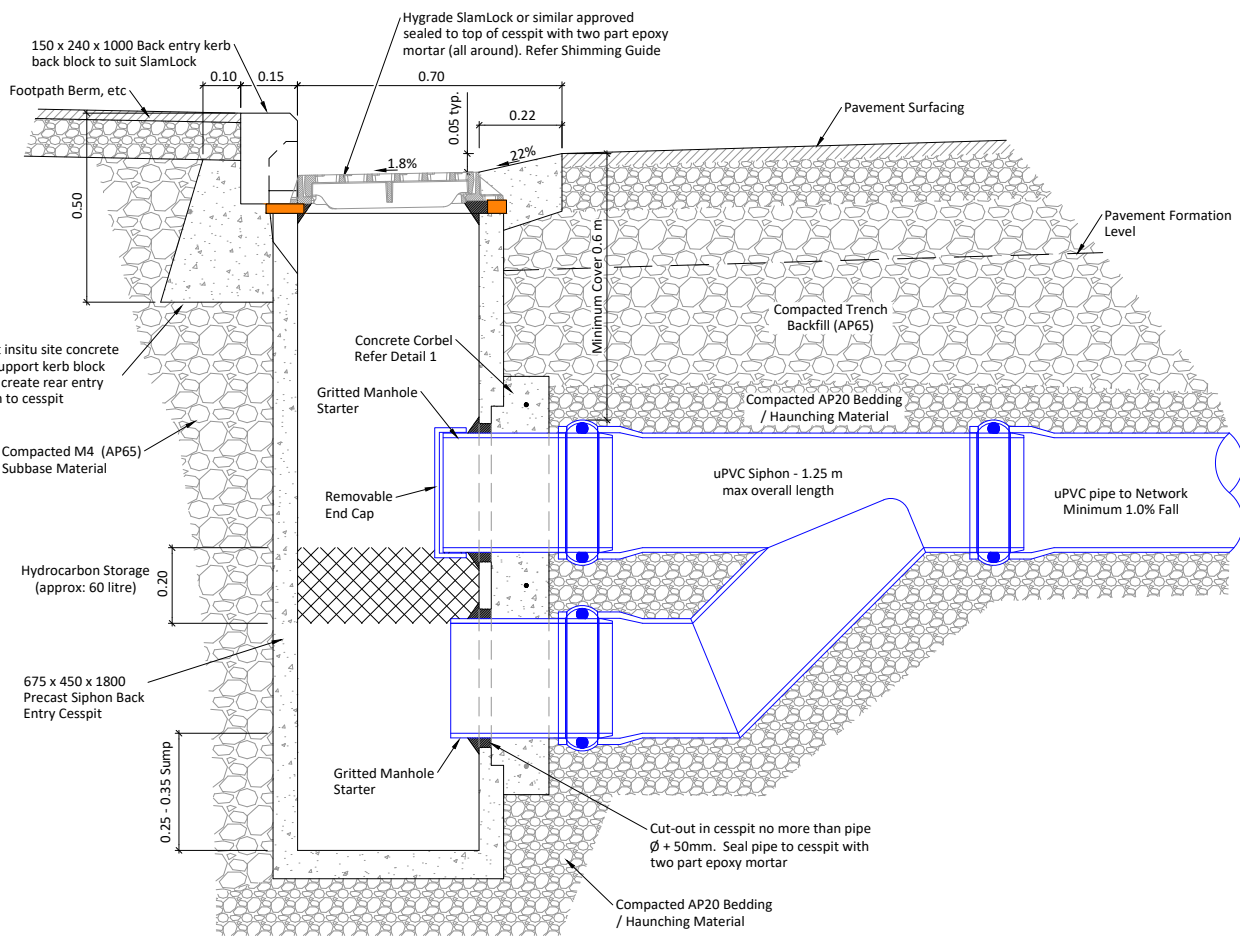
SECTION B
Scale 1:20 @ A1



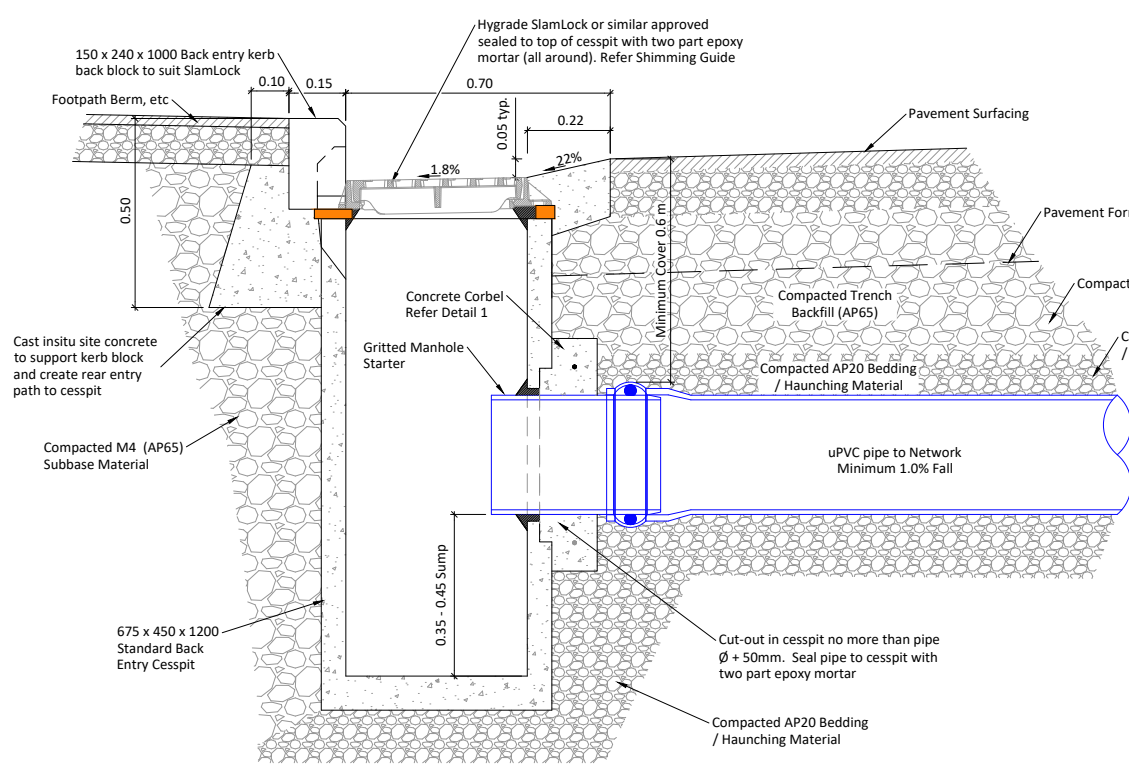
SECTION C
Scale 1:20 @ A1



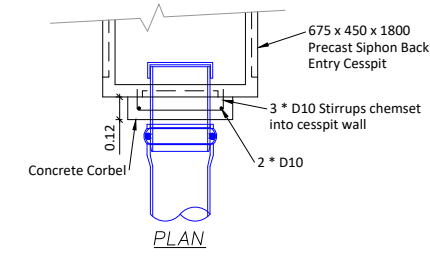
FRAME SHIMMING GUIDE
Scale 1:7.5 @ A1



SECTION A - WITH SIPHON
Scale 1:10 @ A1



SECTION A - STANDARD
Scale 1:10 @ A1



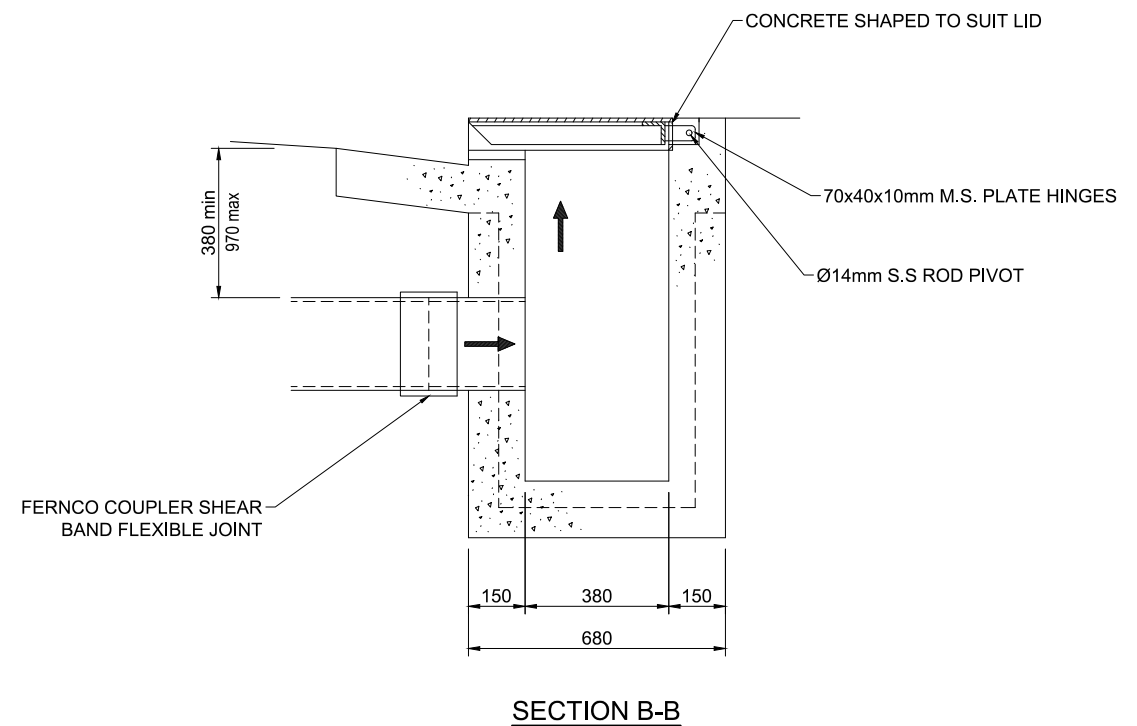
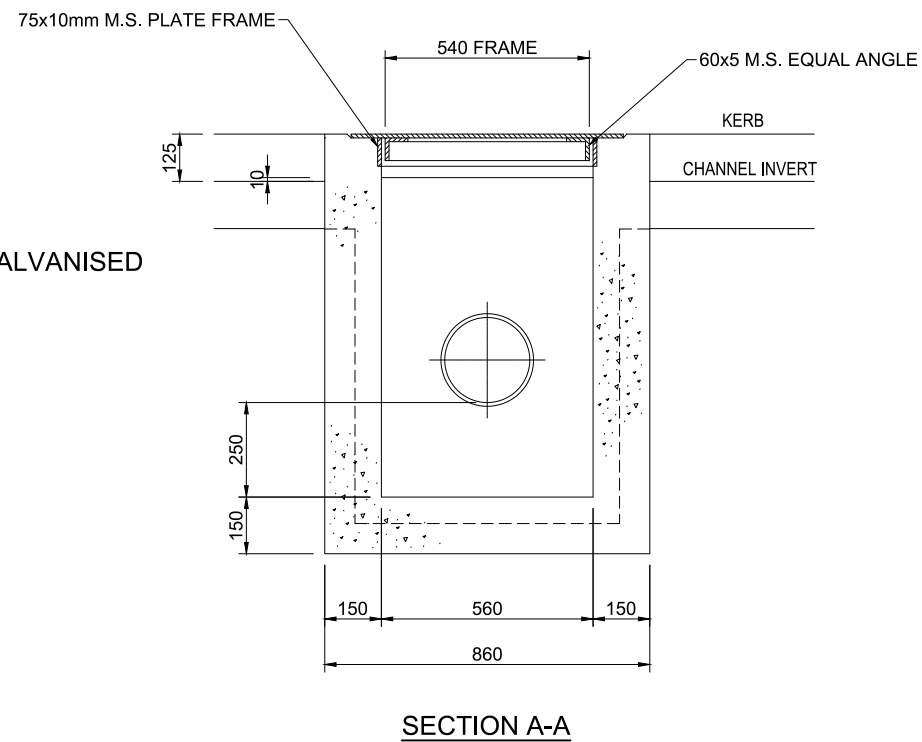
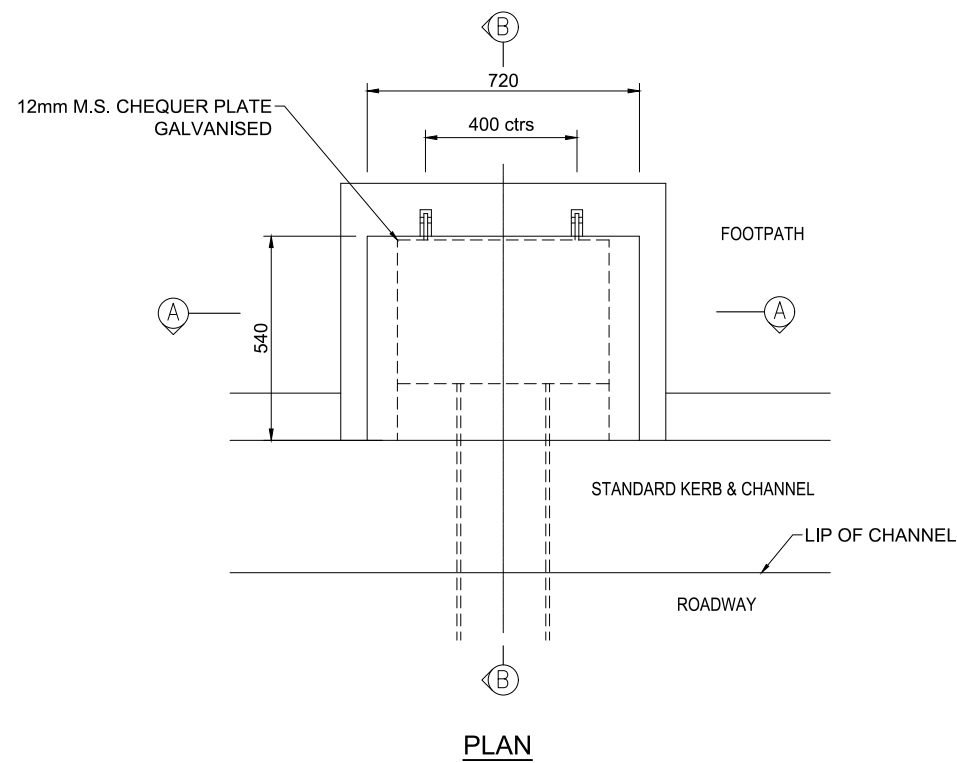
DETAIL 1 - CORBEL
Scale 1:20 @ A1

- Notes:
- All dimensions in metres unless shown otherwise;
 - All materials and pipework to comply with TDC Contract Water & Drainage Standard Specification
 - Syphon option is to be used on State Highways and on streets classified as arterial and above, or as directed by TDC;
 - All insitu concrete to have minimum compressive strength of 25 MPa;
 - Reinforcement to minimum 50 mm cover;
 - Joining of / to precast blocks to be neatly pointed with minimum 10 mm cement mortar;
 - Saw cuts to be 30 mm deep max;
 - Stormwater laterals from sumps to have minimum grade of -1.0 %;
 - Frame & grate to be Hygrade SlamLock or other product approved by Timaru District Council;
 - In high traffic areas (collector roads) the frame and grate shall be attached to the concrete cesspit with threaded rod, nuts and washers drilled and chesmet into top of cesspit;
 - Precast units shown are Hynds standard products - other units may be used subject to Timaru District Council approvals provided frame and grate requirements are met;
 - Precast rear entry kerb blocks must be included;
 - Kerb height transitions from 150 mm to 165 mm;
 - All work in road reserve shall have an approved Corridor Access Request (CAR) and Works Approval Permit (WAP) prior to commencement.
 - Sump location selection to be designed to receive the intended catchments flows as required by the TDC Infrastructure Design Standard (IDS)

NO.	REVISION	BY	CHK	APP	DATE	711696
L	CHANGES TO SPECS FOR MANHOLE DETAIL	MT			8/24	
K	SHEET ADDED WITH SOAK PIT DETAIL	MT			7/24	
J	STORMWATER SOAKAGE PIT UPDATE	WC	GC		3/24	
I	SUMP/CATCH PIT UPDATE & PAGE 9 REINSTATED	WC			7/21	
H	TYPICAL POSITION OF POLE VENT DETAIL AND SHEET 9 SS	MCB			1/20	
G	CHANGES TO DETAIL 3B - ENGINEERS APPROVAL ADDED	WC			4/19	
F	CHANGES TO CORBEL DETAIL	WC			2/16	
E		WC			2/16	
D		WC			2/16	
C		WC			2/16	
B		WC			2/16	
A		WC			2/16	

<p>TIMARU DISTRICT COUNCIL 2 King George Place P.O. Box 522 Timaru 7940 Telephone: 03 687 7200 Website: www.timaru.govt.nz</p>	<p>PROJECT: DRAINAGE AND WATER CODE OF PRACTICE STANDARD DETAILS</p>	<p>TITLE: TYPICAL SUMP / CATCH-PIT DETAILS</p>	<p>CONTRACT NUMBER: 5302</p>
	<p>SCALE: 1:20</p>	<p>SCALE: 1:40</p>	<p>SCALE: 1:7.5</p>

DO NOT SCALE - IF IN DOUBT ASK



L	CHANGES TO SPECS FOR MANHOLE DETAIL	MT		8/24
K	SHEET ADDED WITH SOAK PIT DETAIL	MT		7/24
J	STORMWATER SOAKAGE PIT UPDATE	WC	GC	3/24
I	SUMP/CATCH PIT UPDATE & PAGE 9 REINSTATED	WC		7/21
H	TYPICAL POSITION OF POLE VENT DETAIL AND SHEET 9 SS	MCB		1/20
G	CHANGES TO DETAIL 3B - ENGINEERS APPROVAL ADDED	WC		4/19
F	CHANGES TO CORBEL DETAIL	WC		2/16
	REVISION	BY	CHK	APP
				DATE

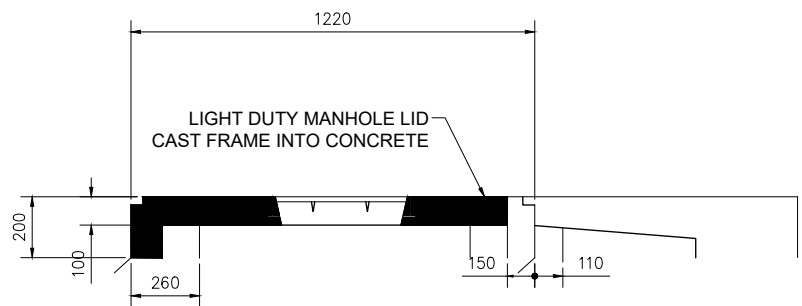
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DATA SOURCE:	WATER		SURVEYED	-	REDUCED SCALE (A3):	1:40
LEVEL DATUM:	DRAINAGE		DESIGNED	GS	PRODUCED BY:	LTU
	ROADING		DESIGN CHECK	GC	FOR:	D & W
	PARKS		DRAWN	WC		
	ELEC.PWR		DRG CHECK	GC		
	TELECOM		APPROVED	GH		
	PLANNING					

TIMARU DISTRICT COUNCIL
 Te Kaitiaki o Te Timarū
 2 King George Place
 P.O. Box 522
 Timaru 7940
 Telephone: 03 687 7200
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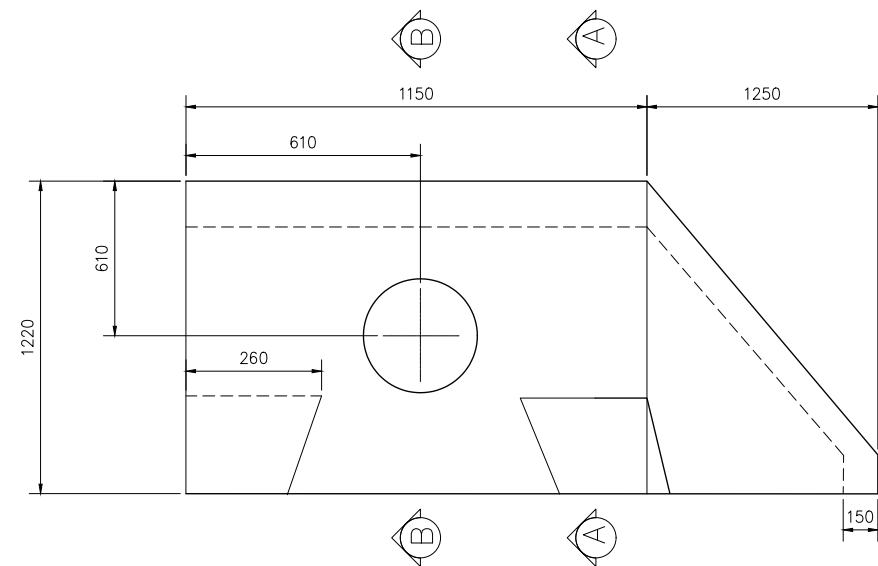
PROJECT: **DRAINAGE AND WATER CODE OF PRACTICE STANDARD DETAILS**

TITLE: **DRAINAGE SYPHON KERB EXIT DETAILS**

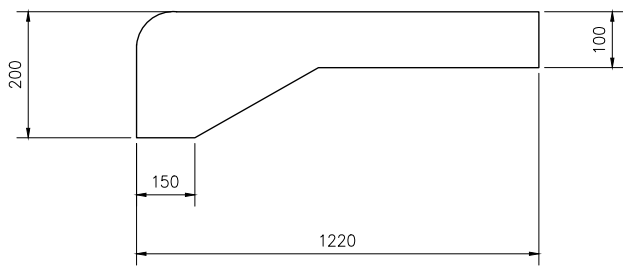
CONTRACT NUMBER:	
DRAWING NUMBER:	5302
REVISION:	L
SHEET:	10 OF 14



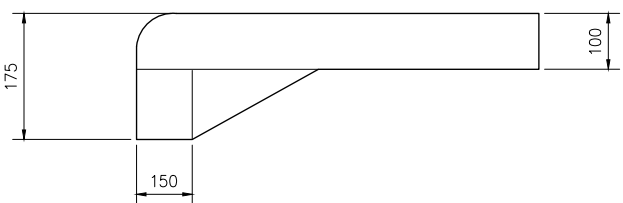
LID FRONT ELEVATION



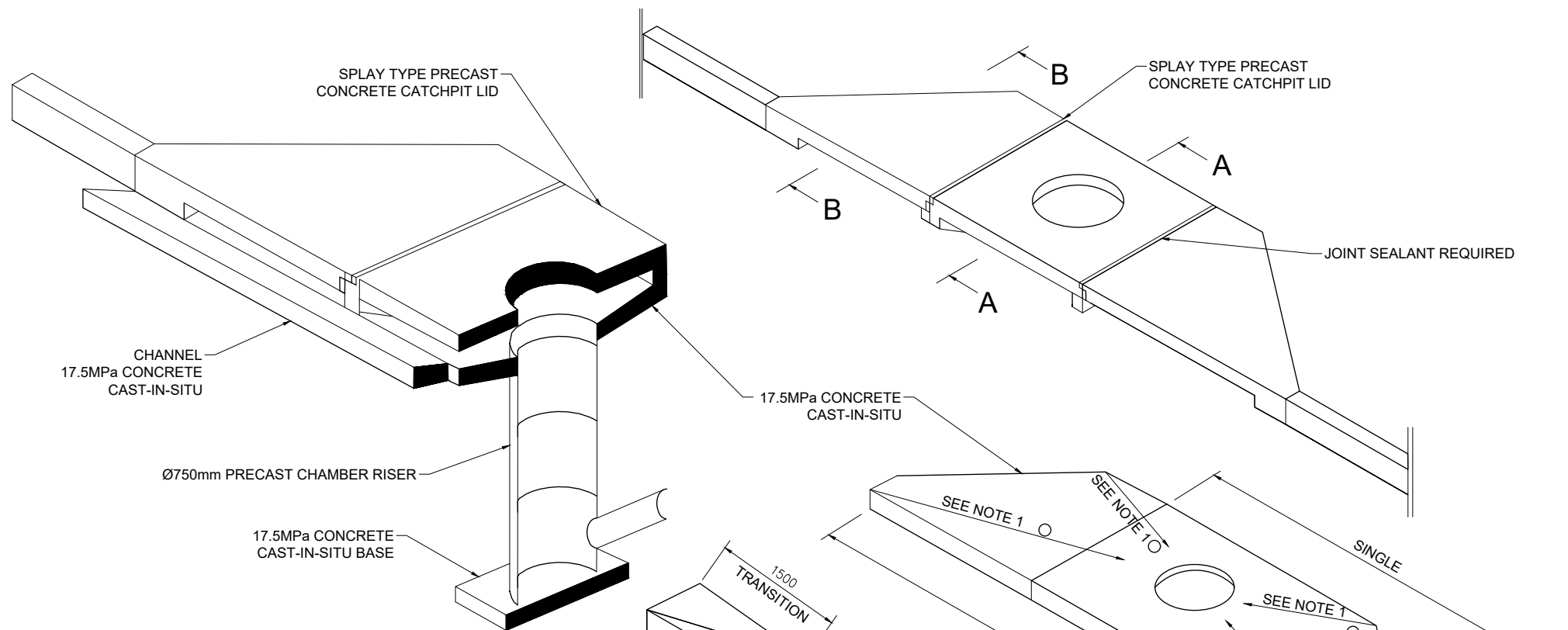
PLAN - CATCHPIT LID SINGLE SPLAY



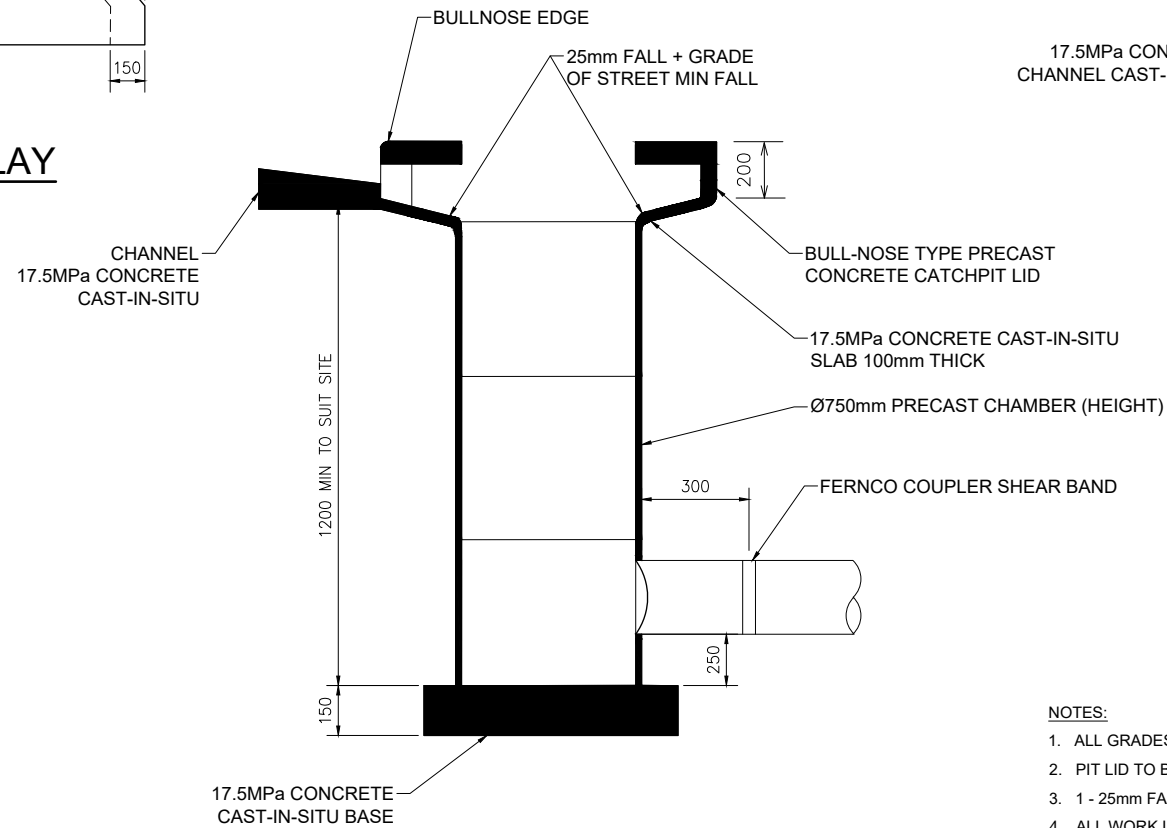
SECTION A-A



SECTION B-B

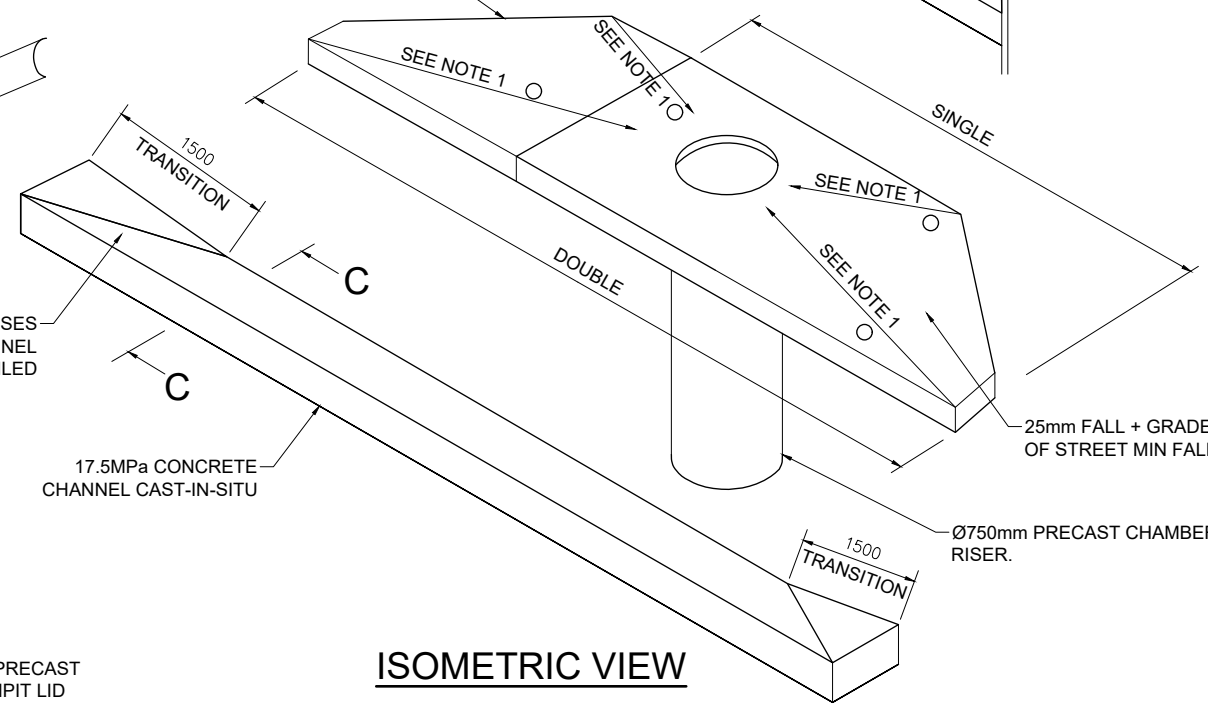


SECTION A-A ISOMETRIC VIEW

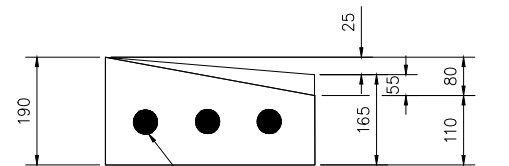


SECTION A-A SIDE ELEVATION

FORM RECESSES AND SHAPE CHANNEL AS DETAILED



ISOMETRIC VIEW



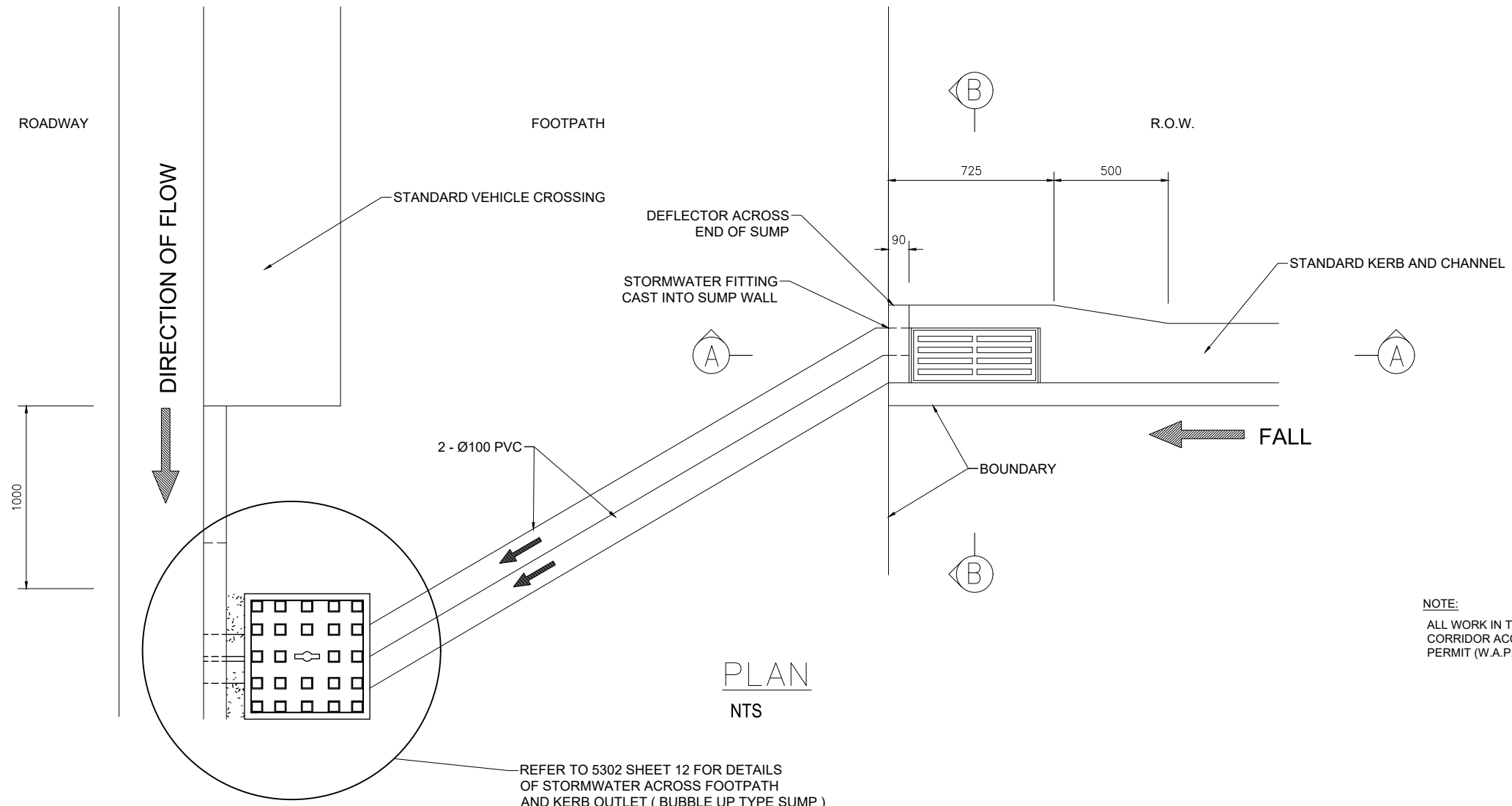
REINFORCE WITH 3 x 12mm BARS LENGTH OF NEW PIT CHANNEL

SECTION C-C

NOTES:

1. ALL GRADES AND FALL INDICATED ARE CRITICAL
2. PIT LID TO BE FLUSH WITH SURROUNDING SURFACES
3. 1 - 25mm FALL + GRADE OF STREET MIN. FALL.
4. ALL WORK IN THE ROAD RESERVE SHALL HAVE AN APPROVED CORRIDOR ACCESS REQUEST (C.A.R.) AND WORKS APPROVAL PERMIT (W.A.P.) PRIOR TO COMMENCEMENT OF WORK.

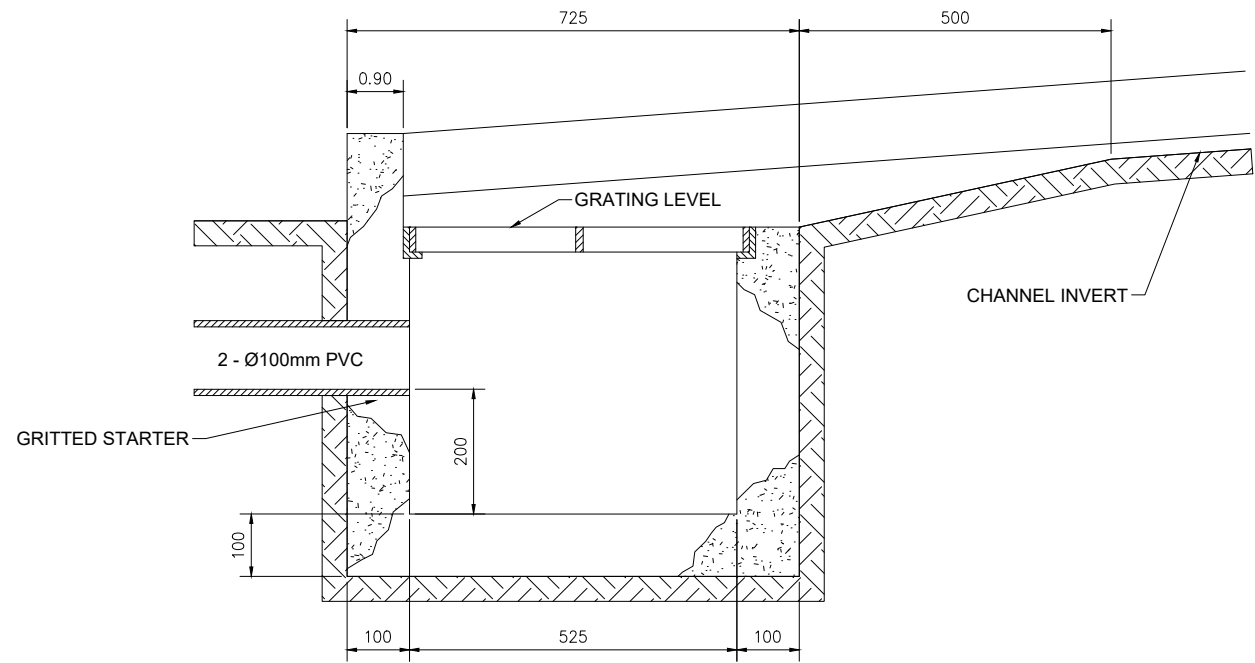
L CHANGES TO SPECS FOR MANHOLE DETAIL		MT		8/24	SURVEY FILE:		INITIAL	DATE	ORIGINAL SCALE (A1): 1:20	TIMARU DISTRICT COUNCIL 2 King George Place P.O. Box 522 Timaru 7940 Telephone: 03 687 7200 Website: www.timaru.govt.nz	PROJECT: DRAINAGE AND WATER CODE OF PRACTICE STANDARD DETAILS	TITLE: SINGLE & DOUBLE STORMWATER SPLAY PIT	CONTRACT NUMBER:		
K	SHEET ADDED WITH SOAK PIT DETAIL	MT		7/24	DATA SOURCE:	WATER			REDUCED SCALE (A3): 1:40				DRAWING NUMBER:	5302	REVISION:
J	STORMWATER SOAKAGE PIT UPDATE	WC	GC	3/24	LEVEL DATUM:	DRAINAGE			PRODUCED BY:	D & W		SHEET:	11	OF:	14
I	SUMP/CATCH PIT UPDATE & PAGE 9 REINSTATED	WC		7/21		ROADING			FOR:	D & W					
H	TYPICAL POSITION OF POLE VENT DETAIL AND SHEET 9 SS	MCB		1/20		PARKS									
G	CHANGES TO DETAIL 3B - ENGINEERS APPROVAL ADDED	WC		4/19		ELEC.PWR									
F	CHANGES TO CORBEL DETAIL	WC		2/16		TELECOM									
REVISION		BY	CHK	APP	DATE	PLANNING									



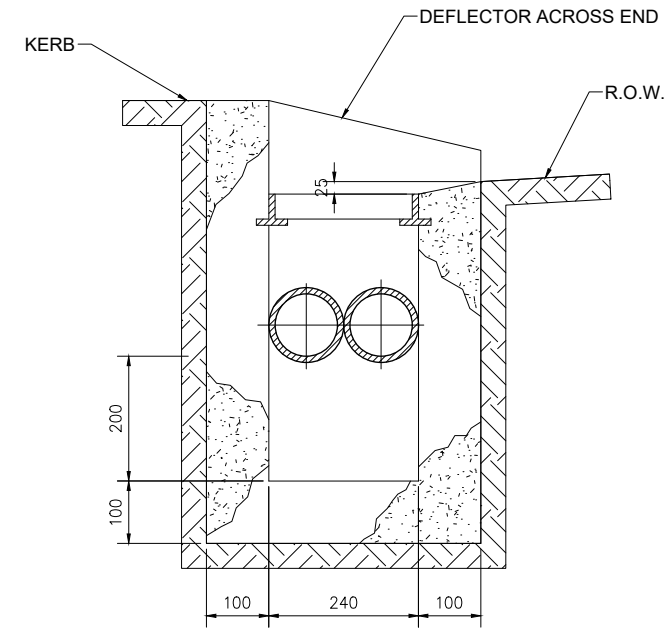
PLAN
NTS

REFER TO 5302 SHEET 12 FOR DETAILS OF STORMWATER ACROSS FOOTPATH AND KERB OUTLET (BUBBLE UP TYPE SUMP)

NOTE:
ALL WORK IN THE ROAD RESERVE SHALL HAVE AN APPROVED CORRIDOR ACCESS REQUEST (C.A.R.) AND WORKS APPROVAL PERMIT (W.A.P.) PRIOR TO COMMENCEMENT OF WORK.

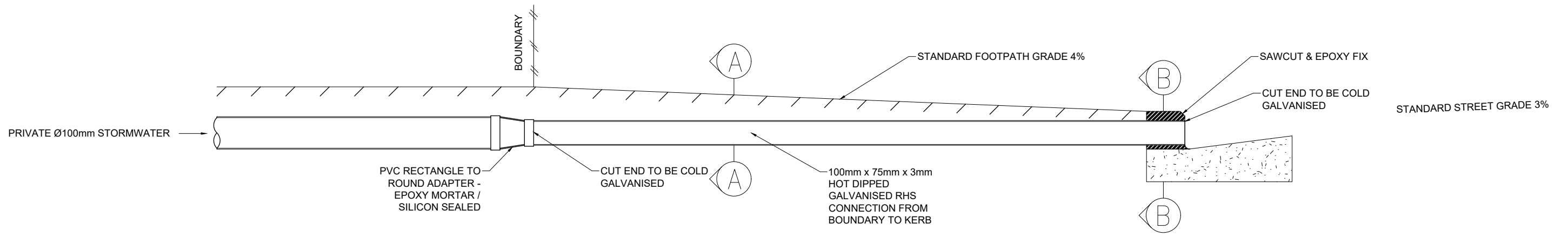


SECTION A-A
Scale 1:10

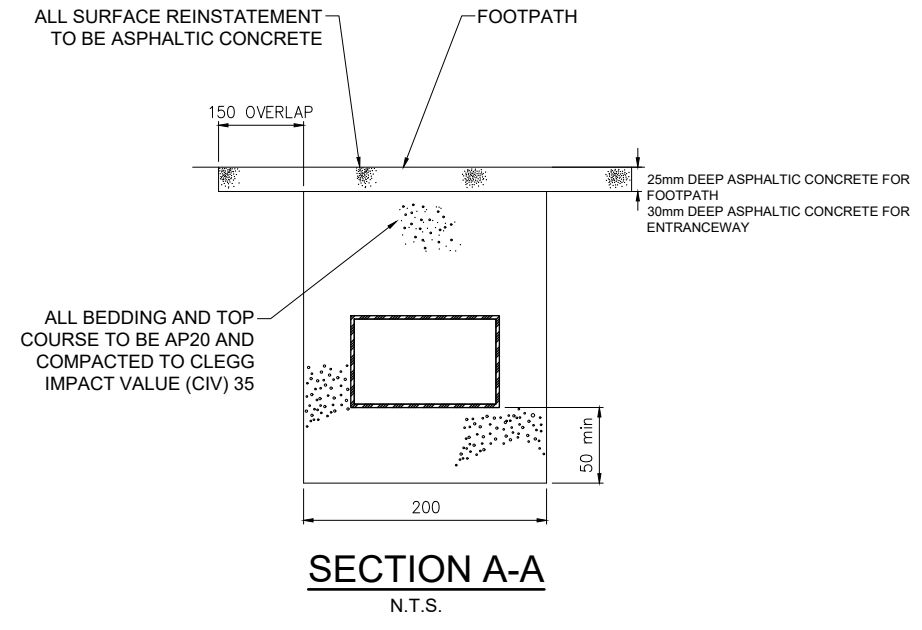


SECTION B-B
Scale 1:10

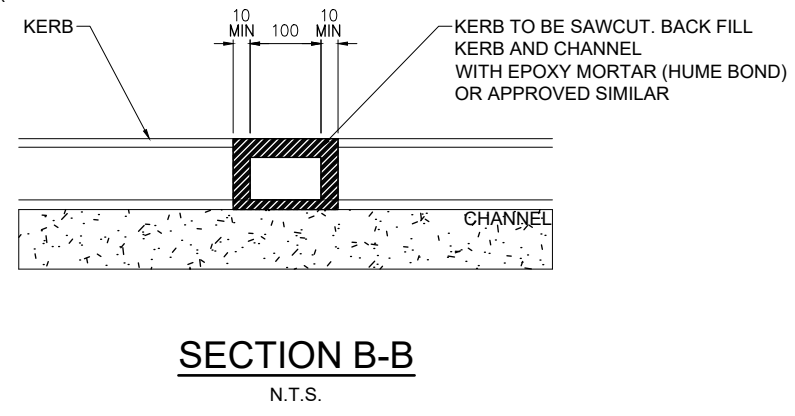
L CHANGES TO SPECS FOR MANHOLE DETAIL		MT		8/24	SURVEY FILE:		INITIAL	DATE	NAME	DATE	ORIGINAL SCALE (A1):	1:20	TIMARU DISTRICT COUNCIL 2 King George Place P.O. Box 522 Timaru 7940 Telephone: 03 687 7200 Website: www.timaru.govt.nz	PROJECT: DRAINAGE AND WATER CODE OF PRACTICE STANDARD DETAILS	TITLE: ACCESS OR RIGHT OF WAY SUMP	CONTRACT NUMBER: DRAWING NUMBER: 5302	REVISION: L
K SHEET ADDED WITH SOAK PIT DETAIL		MT		7/24	DATA SOURCE:	WATER			SURVEYED	-	REDUCED SCALE (A3):	1:40					
J STORMWATER SOAKAGE PIT UPDATE		WC	GC	3/24	LEVEL DATUM:	DRAINAGE			DESIGNED	GS	2/16	PRODUCED BY:	LTU	FOR: D & W	THIS DOCUMENT IS THE PROPERTY OF THE TIMARU DISTRICT COUNCIL. IT IS NOT TO BE REPRODUCED WITHOUT THE PERMISSION OF THE TIMARU DISTRICT COUNCIL.	SHEET: 12 OF 14	
I SUMP/CATCH PIT UPDATE & PAGE 9 REINSTATED		WC		7/21		ROADWAY			DESIGN CHECK	GC	2/16						
H TYPICAL POSITION OF POLE VENT DETAIL AND SHEET 9 SS		MCB		1/20		PARKS			DRAWN	WC	2/16						
G CHANGES TO DETAIL 3B - ENGINEERS APPROVAL ADDED		WC		4/19		ELEC.PWR			DRG CHECK	GC	2/16						
F CHANGES TO CORBEL DETAIL		WC		2/16		TELECOM			APPROVED	GH	2/16						
REVISION		BY	CHK	APP	DATE	PLANNING											



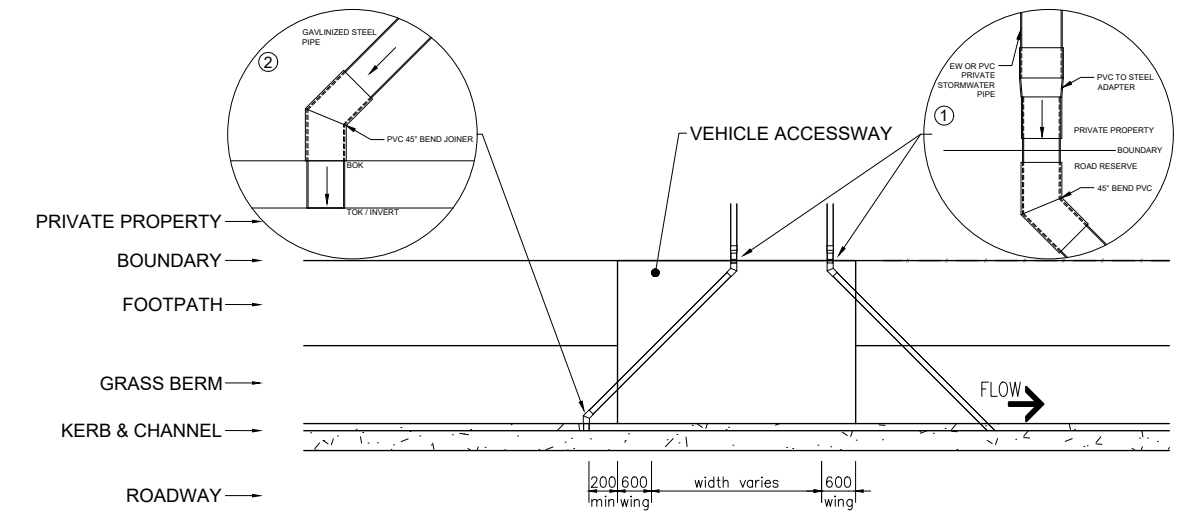
TYPICAL STORMWATER ACROSS FOOTPATH
N.T.S.



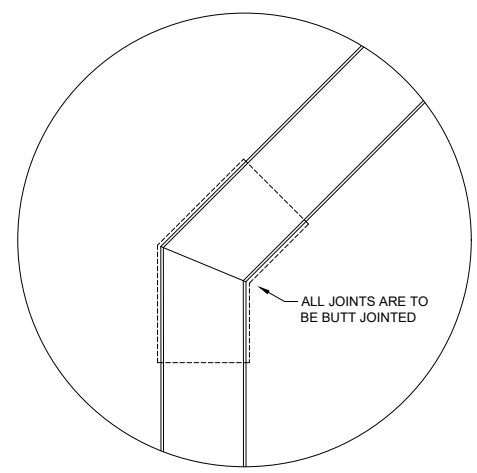
SECTION A-A
N.T.S.



SECTION B-B
N.T.S.



PLAN OF CROSSING DETAIL



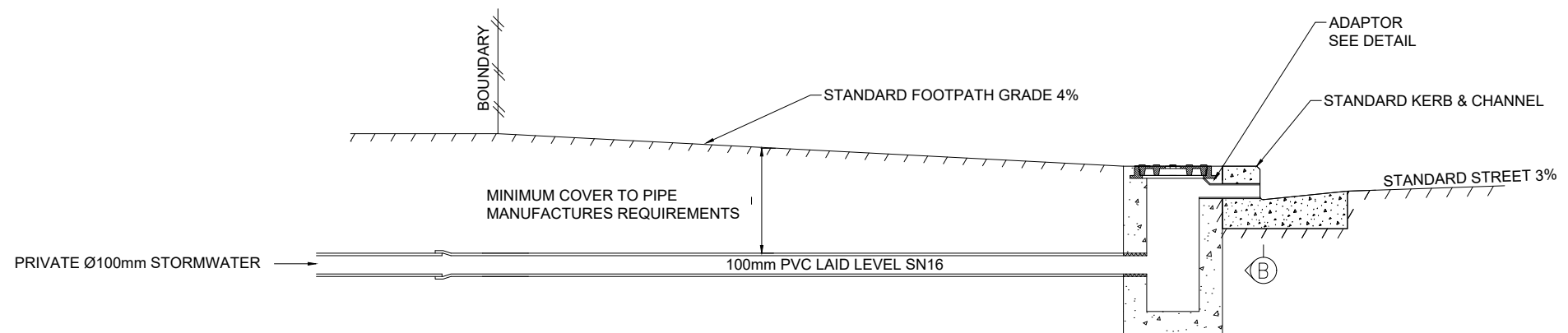
JOINT DETAIL

- ① PREFERRED SOLUTION - ONE COMPLETE SECTION OF GALVANISED STEEL PIPE FROM BOUNDARY TO KERB AND CHANNEL.
- ② ACCEPTABLE SOLUTION USING PVC 45° BEND/JOINER IF OPTION 1 IS NOT ACHIEVABLE
- 45° PVC BEND CAN BE USED TO NEGOTIATE OBSTACLES IN THE FOOTPATH.
- IT IS PREFERRED THAT ADAPTER AND CHANGE OF DIRECTIONS ARE COMPLETED OUTSIDE THE FOOTPATH BOUNDARY.
- ALL JOINTS ARE TO BE BUTT JOINTED.
- ALL JOINTS TO BE SEALED USING SILICONE SEALANT

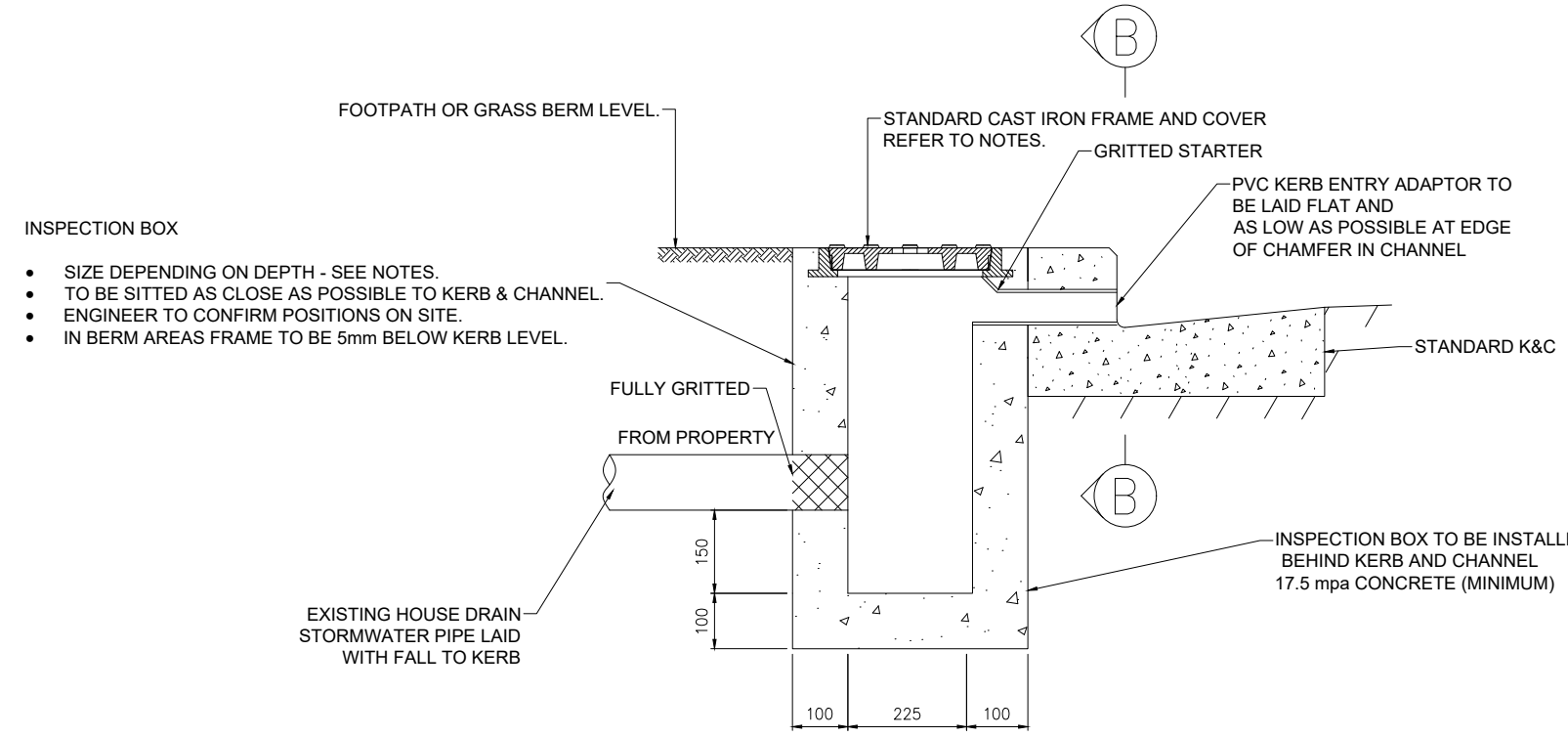
NOTES:

- ALL WORK IN THE ROAD RESERVE SHALL HAVE AN APPROVED CORRIDOR ACCESS REQUEST (C.A.R.) AND WORKS APPROVAL PERMIT (W.A.P.) PRIOR TO COMMENCEMENT OF WORK.
- STORMWATER OUTLETS ARE TO BE PLACED AT LEAST 0.2m FROM THE WING OF VEHICLE CROSSING
- OPTION 1 IS THE PREFERRED INSTALLATION OPTION

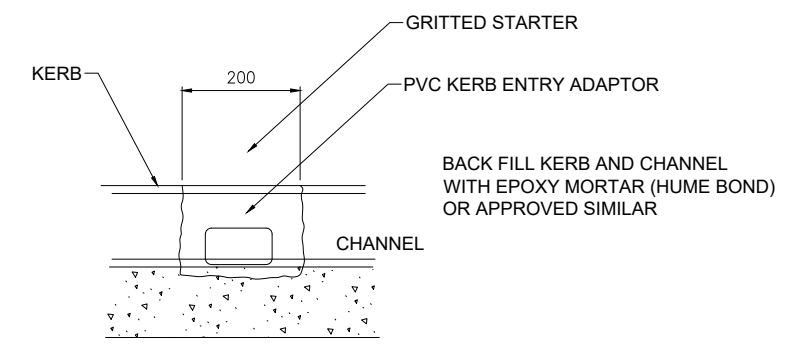
L CHANGES TO SPECS FOR MANHOLE DETAIL		MT		8/24	SURVEY FILE:	INITIAL	DATE	NAME	DATE	ORIGINAL SCALE (A1):	1:20	TIMARU DISTRICT COUNCIL 2 King George Place P.O. Box 522 Timaru 7940 Telephone: 03 687 7200 Website: www.timaru.govt.nz	PROJECT: DRAINAGE AND WATER CODE OF PRACTICE STANDARD DETAILS	TITLE: PIPED STORMWATER FOOTPATH CROSSING DETAIL OPTION 1	CONTRACT NUMBER: 5302	DRAWING NUMBER: 13	REVISION: L
K SHEET ADDED WITH SOAK PIT DETAIL		MT		7/24	DATA SOURCE:					REDUCED SCALE (A3):	1:40						
J STORMWATER SOAKAGE PIT UPDATE		WC	GC	3/24													
I SUMP/CATCH PIT UPDATE & PAGE 9 REINSTATED		WC		7/21	LEVEL DATUM:												
H TYPICAL POSITION OF POLE VENT DETAIL AND SHEET 9 SS		MCB		1/20													
G CHANGES TO DETAIL 3B - ENGINEERS APPROVAL ADDED		WC		4/19													
F CHANGES TO CORBEL DETAIL		WC		2/16													
REVISION		BY	CHK	APP	DATE												



TYPICAL STORMWATER ACROSS FOOTPATH (REQUIRING LOCAL AUTHORITY APPROVAL)
N.T.S.

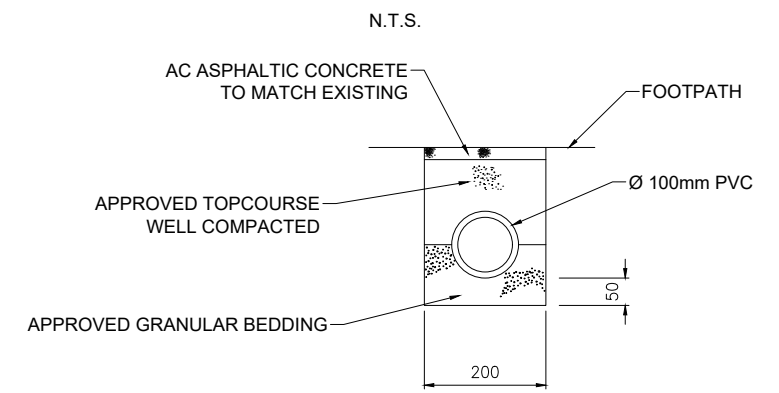


- INSPECTION BOX**
- SIZE DEPENDING ON DEPTH - SEE NOTES.
 - TO BE SITTED AS CLOSE AS POSSIBLE TO KERB & CHANNEL.
 - ENGINEER TO CONFIRM POSITIONS ON SITE.
 - IN BERM AREAS FRAME TO BE 5mm BELOW KERB LEVEL.

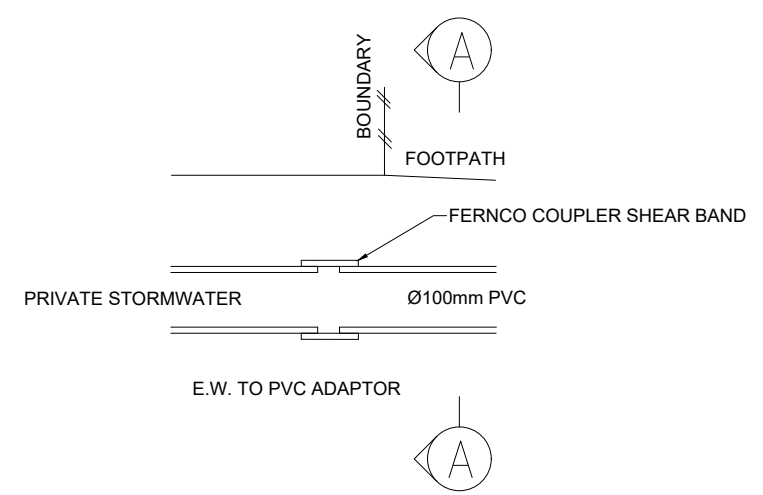


SECTION B-B

DETAILS FOR STORMWATER INSPECTION BOX ACROSS FOOTPATH
N.T.S.



SECTION A-A



- NOTES:**
- ALL WORK IN THE ROAD RESERVE SHALL HAVE AN APPROVED CORRIDOR ACCESS REQUEST (C.A.R.) AND WORKS APPROVAL PERMIT (W.A.P.) PRIOR TO COMMENCEMENT OF WORK.
 - USE 225mm x 175mm INSPECTION BOX UP TO 300 DEPTH TO INVERT (LOWEST PIPE)
 - BASED ON CHRISTCHURCH CITY COUNCIL "TRAFFICABLE HOUSE DRAIN SUMP FRAMES AND COVERS" STANDARD DRAWING
 - BASED ON CHRISTCHURCH CITY COUNCIL "TRAFFICABLE HOUSE DRAIN INSPECTION BOX " STANDARD DRAWING
 - OPTION 2 REQUIRES ENGINEERING APPROVAL

L CHANGES TO SPECS FOR MANHOLE DETAIL		MT		8/24	SURVEY FILE:		INITIAL	DATE		NAME	DATE	ORIGINAL SCALE (A1):	1:20	TIMARU DISTRICT COUNCIL 2 King George Place P.O. Box 522 Timaru 7940 Telephone: 03 687 7200 Website: www.timaru.govt.nz	PROJECT: DRAINAGE AND WATER CODE OF PRACTICE STANDARD DETAILS	TITLE: PIPED STORMWATER FOOTPATH CROSSING DETAILS OPTION 2	CONTRACT NUMBER:	DRAWING NUMBER: 5302	REVISION: L
K SHEET ADDED WITH SOAK PIT DETAIL		MT		7/24	DATA SOURCE:	WATER				SURVEYED	-	REDUCED SCALE (A3):	1:40						
J STORMWATER SOAKAGE PIT UPDATE		WC	GC	3/24	LEVEL DATUM:	DRAINAGE				DESIGNED	GS	PRODUCED BY:	LTU	FOR: D & W	SHEET: 14 OF 14				
I SUMP/CATCH PIT UPDATE & PAGE 9 REINSTATED		WC		7/21		ROADING				DESIGN CHECK	GC	PRODUCED BY:	2/16				FOR: D & W	SHEET: 14 OF 14	
H TYPICAL POSITION OF POLE VENT DETAIL AND SHEET 9 SS		MCB		1/20		PARKS				DRAWN	WC	PRODUCED BY:	2/16	FOR: D & W	SHEET: 14 OF 14				
G CHANGES TO DETAIL 3B - ENGINEERS APPROVAL ADDED		WC		4/19		ELEC.PWR				DRG CHECK	GC	PRODUCED BY:	2/16				FOR: D & W	SHEET: 14 OF 14	
F CHANGES TO CORBEL DETAIL		WC		2/16		TELECOM				APPROVED	GH	PRODUCED BY:	2/16	FOR: D & W	SHEET: 14 OF 14				
No. REVISION		BY	CHK	APP	DATE	PLANNING						PRODUCED BY:	2/16				FOR: D & W	SHEET: 14 OF 14	