

PIT, FRAME AND GRATE DETAILS

DISCLAIMER (APRIL '23): THIS DRAWING IS IN THE REQUIREMENTS REFER BRIDGE TECHNICAL NOTE (BTN) 033: STRUCTURAL REQUIREMENTS FOR REINFORCED CONCRETE DRAINAGE PITS. GEOMETRIC DIMENSIONS SHOWN ON THIS DRAWING MAY BE USED AS A GUIDE

PIT	PIT TOP INTERNAL DIM		FRAME	NUMBER OF	
TYPE	LENGTH	WIDTH	LENGTH	GRATE UNITS	
1	750	1000	750	3	
2	1000	1000	1000	4	
3	1500	1000	1500	6	
4	2000	1000	2000	8	
5	2500	1000	2500	10	

1. THIS PIT IS FOR USE IN MEDIANS AND TABLE DRAINS. IT IS NOT SUITABLE FOR USE IN ROADWAYS, FOOTPATHS, BICYCLE PATHS OR AREAS ACCESSIBLE BY PEDESTRIANS.

A 10 4 1

1090

1075

75x20x1035 MS BARS

REF NOTE 6

ANCHOR

FRAME SEATING DETAIL

400 Y BAR OR

20x10x150 PLATE

75x50x5 MS ANGLE

- 2. MAX. LOADING EACH GRATE UNIT WILL SUPPORT A 150 kN LOAD
- 3. GRATE FRAME SHALL BE CONSTRUCTED FROM 75x50x5 MS ANGLE. CORNER JOINTS SHALL BE WELDED ON UNDERSIDE OF HORIZONTAL LEG AND ON THE INSIDE OF THE VERTICAL LEG WITH SIZE 5 FILLETS.
- 4. ANCHOR SPACING SHALL NOT EXCEED 400 mm.
- EXPOSED CONCRETE EDGES SHALL HAVE 10x10 CHAMFERS.
- 6. THE TOP AND BOTTOM EDGES OF THE BAR ENDS SHALL BE CHAMFERED 5mm X 5mm BEFORE CONTINUOUSLY WELDING ALL AROUND AND GROUND FLUSH BEFORE GALVANIZING.
- 7. BOTH GRATE AND GRATE FRAME SHALL BE HOT DIP GALVANISED TO AS/NZS 4680 UNLESS SPECIFIED OTHERWISE
- 8. PIT REINFORCEMENT F92. LAPS TO BE 300 MINIMUM. CLEAR COVER TO BE 50 MINIMUM, CORNER RETURN REINFORCEMENT MAY BE FABRIC OR EQUIVALENT BARS BARS GRADE 400Y & FABRICS TO COMPLY WITH AS/NZS 4671 CONCRETE SHALL BE NORMAL-CLASS N32 STANDARD STRENGTH GRADE OR HIGHER COMPLYING WITH THE REQUIREMENTS OF AS 1379. EXPOSURE CLASSIFICATIONS UP TO AND INCLUDING B1.
- 9. PRECAST UNITS MAY BE CONSTRUCTED TO THE MANUFACTURER'S DETAILS. THE DESIGN SHALL COMPLY WITH THE AS 5100 BRIDGE DESIGN AND THE FOLLOWING ADDITIONAL REQUIREMENTS:
 - COMBINED FACTORED LATERAL PRESSURE AT ANY POINT AT THE ULTIMATE LIMIT STATE SHALL BE NOT LESS THAN 25 kPa
 - ADEQUATE DRAINAGE SHALL BE PROVIDED TO PIT WALLS TO AVOID HYDROSTATIC PRESSURE.
 - VERTICAL LOAD 210 kN APPLIED ANYWHERE ON PIT.
 - MINIMUM REINFORCEMENT AREA SHALL BE 150 mm ²/m.
 - CONCRETE SHALL BE NORMAL-CLASS N32 STANDARD STRENGTH GRADE OR HIGHER COMPLYING WITH THE REQIREMENTS OF AS 1379, EXPOSURE CLASSIFICATIONS UP TO AND INCLUDING B1.

	F	J.K.	1/7/05	AS 1902 & 1904 SUPERSEDED BY AS/NZS 4471 AUSTRALIAN BRIDGE CODE 1996 SUPERSEDED BY AS 5100 BRIDGE CODE				
	Е				GENERAL NOTES	DESIGNED PRINCIPAL ROAD STANDA	ARD DRAWING	
Ē	D	J.C.	OCT'98	GRATE LATCH NOTE ADDED	1. STANDARD PITS DIMENSIONING & SETTING OUT DETAILS SD 1001 2. UNHAUNCHED PITS SD 1011	DESIGN ENGINEER PROPERTY OF THE MAIN CONTROL O	TED PIT	
55.00	C	J.C.	1/2/98	AMENDMENT TO NOTES 8 & 9, CONCRETE STRENGTH GRADES.	3. HAUNCHED PITS SD 1021	T a	GRATED PIT	
5.2	В	J.C.	1/7/95	STRENGTH & LENGTH OF ANCHOR BARS	4. STEP IRONS SD 1041 5. ALL DIMENSIONS ARE IN MILLIMETRES	DEPRESSE	D STEEL GRATE	
2,00	Α	J. C.	1/9/94	GEMERAL MOTE 5, MOTES 1, 2, 6, 7, 0 & 9.	3. ALL DIRENSIONS ARE IN HILLINEINES	CATALOG PRED SCALE HOR NOT TO SCALE PILE NO. CONTRACT NO.	SHEET NO. DRAWING NO. ISSUE	
12	ISSUE	APP'D	DATE	AMENDMENT		FILENAME sd-1411f.dgn METRES VER	SD 1411 F	

PROCESS OF BEING UPDATED. FOR ALL STRUCTURAL AND MODIFIED WHERE NECESSARY TO ACHIEVE COMPIANCE.