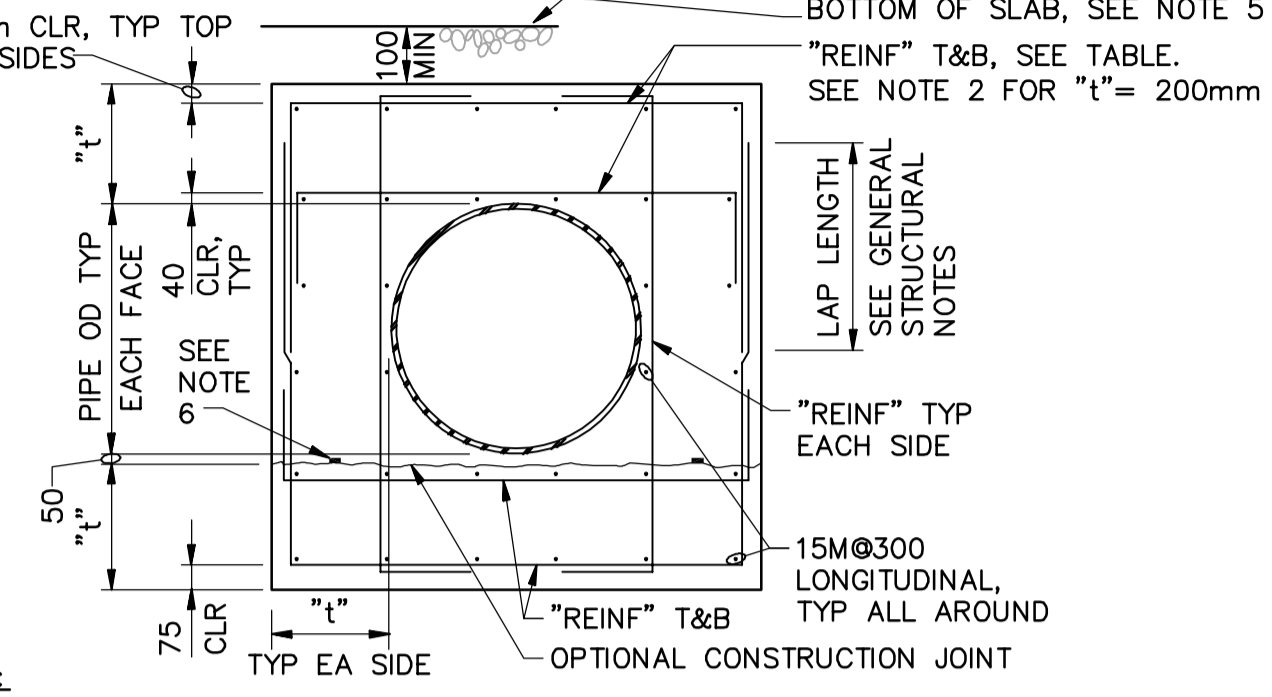


- NOTES:
1. TIE PIPE ENCASUREMENT TO SLAB AS SHOWN WHEN DISTANCE BETWEEN PIPE ENCASUREMENT AND BOTTOM OF SLAB IS LESS THAN 400mm.
 2. 150mm PLASTIC WS IN ENCASUREMENT JOINTS. WELD TO WS IN SLAB JOINTS. SEE DETAIL BELOW.
 3. PROVIDE 50MM ETHAFORM 220 OR EQUAL ON EACH SIDE OF PIPE ENCASEMENT.

1 PIPE ENCASEMENT
N.T.S.

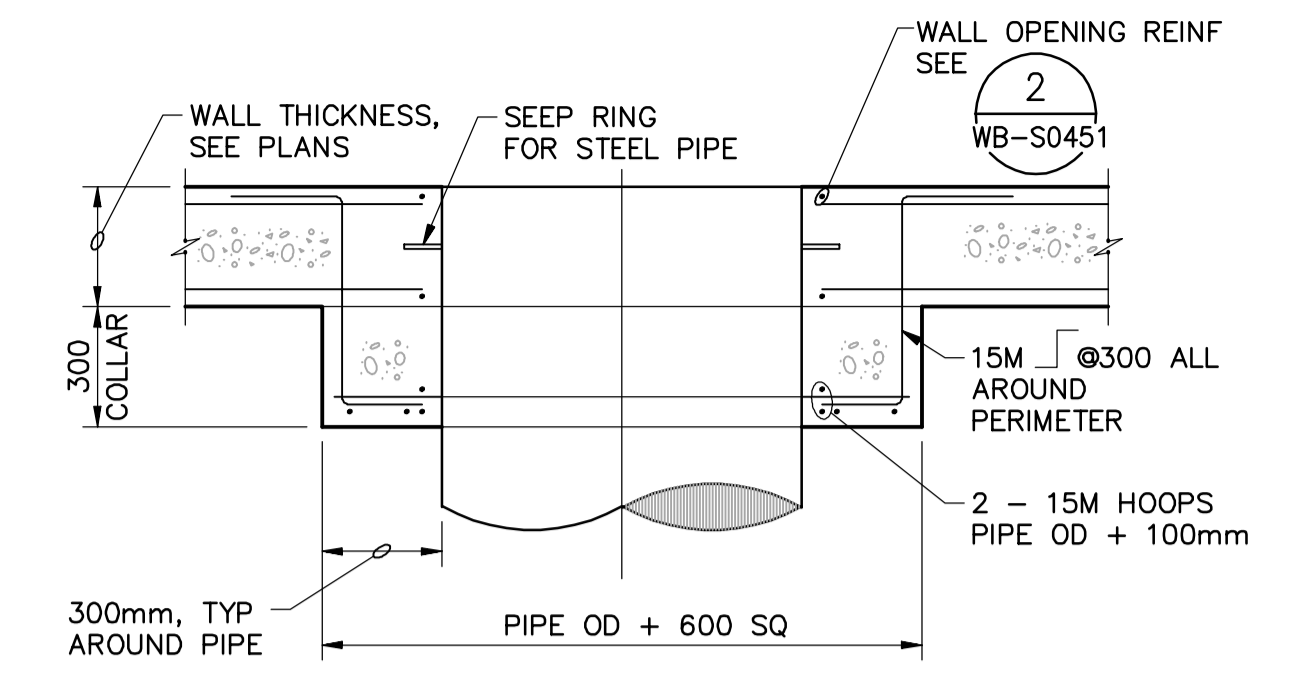
PIPE DIA (mm)	H=3000mm		H=6000mm		H=9000mm		H=12000mm	
	"t" (mm)	REINF	"t" (mm)	REINF	"t" (mm)	REINF	"t" (mm)	REINF
500 THRU 750	200	15M@300	250	15M@300	250	15M@300	250	20M@300
900 THRU 1050	250	15M@300	250	20M@300	250	25M@300	250	20M@150
1200 THRU 1400	250	20M@300	250	25M@300	250	25M@150	300	25M@150
1450 THRU 2200	250	20M@300	250	20M@150	300	25M@150	350	25M@150
2250 THRU 3000	300	25M@200	350	25M@150	400	25M@200	400	30M@250

HEAVY DARK LINE INDICATES BREAK BETWEEN ONE LAYER OF REINFORCING AND TWO. SEE NOTE 2.

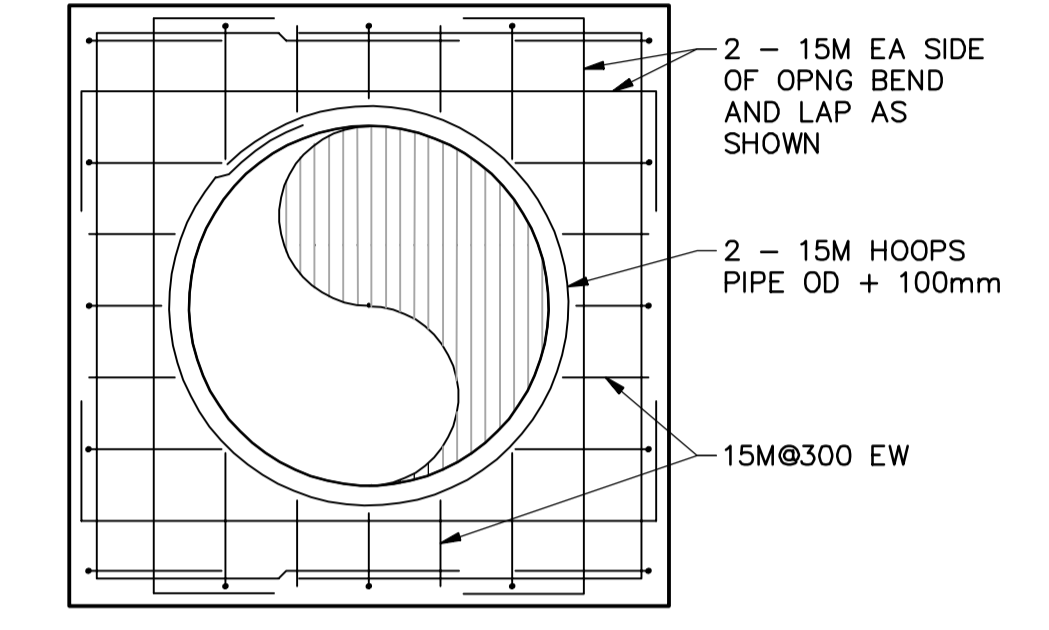


- NOTES:
1. THIS DETAIL APPLIES TO PIPE DIAMETER OF 500mm AND LARGER. FOR SMALLER THAN 500mm, SEE DETAIL.
 2. FOR "t"=200mm REINFORCING SHALL BE ONE LAYER AND CENTERED IN SLABS OR WALLS. SIM
 3. FOR ENCASUREMENT AT PIPE RISER, SEE
 4. "H" IS FILL HEIGHT OR WATER DEPTH OR COMBINATION ABOVE PIPE.
 5. WHEN PIPE ENCASEMENT CLOSER THAN 400mm TO SLAB ABOVE, THE SLAB & ENCASUREMENT TOGETHER. SEE UNLESS DETAILED OTHERWISE.
 6. HYDROPHILIC WATERSTOP CONTINUOUS ALL AROUND IN ALL CONSTRUCTION JOINTS.

2 PIPE ENCASEMENT
N.T.S.

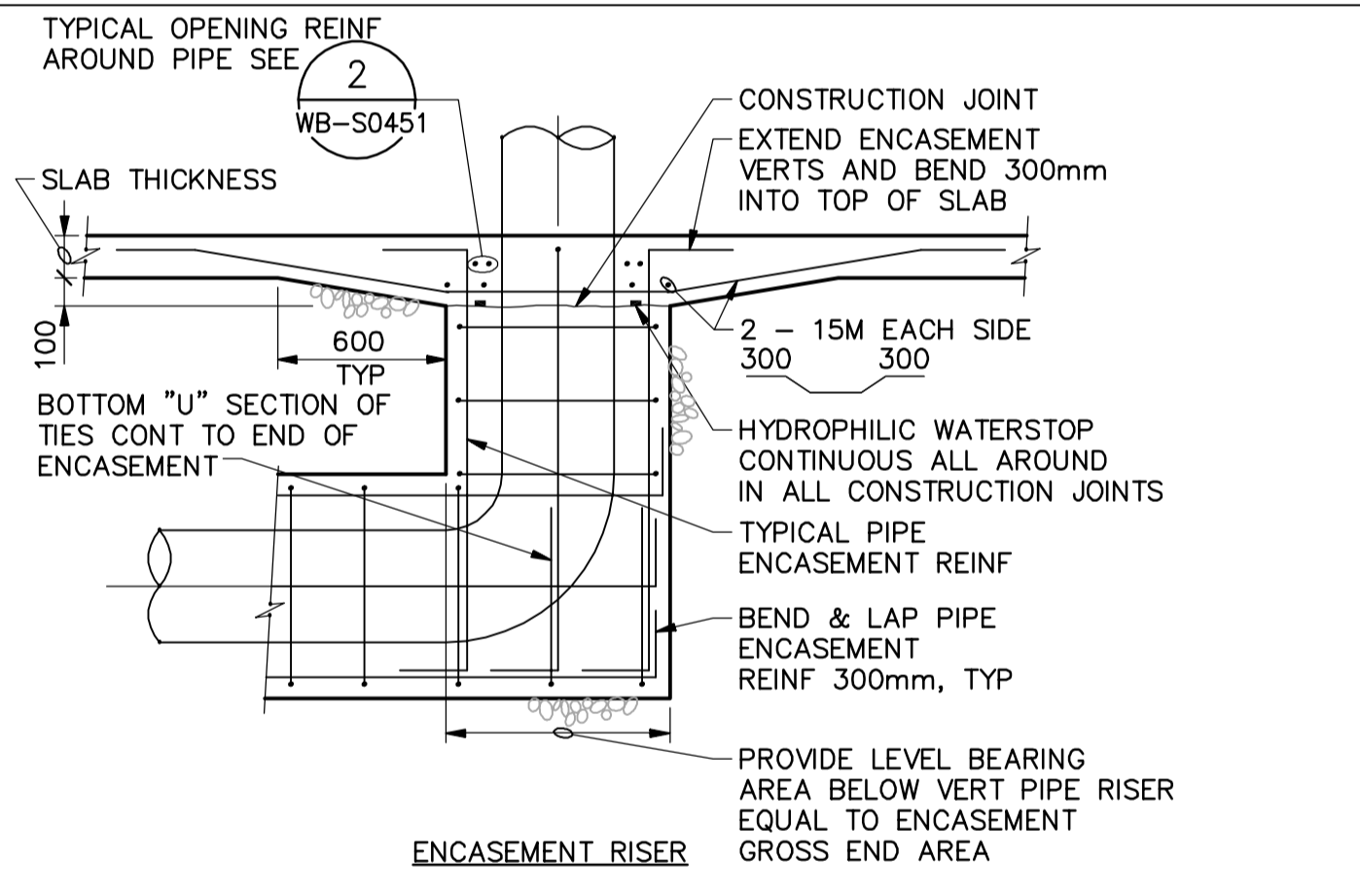


PLAN/SECTION

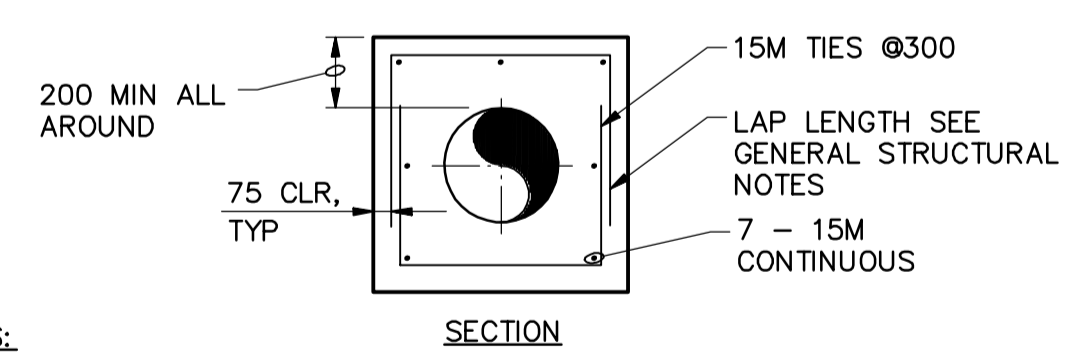


ELEVATION

3 PIPE COLLAR
N.T.S.



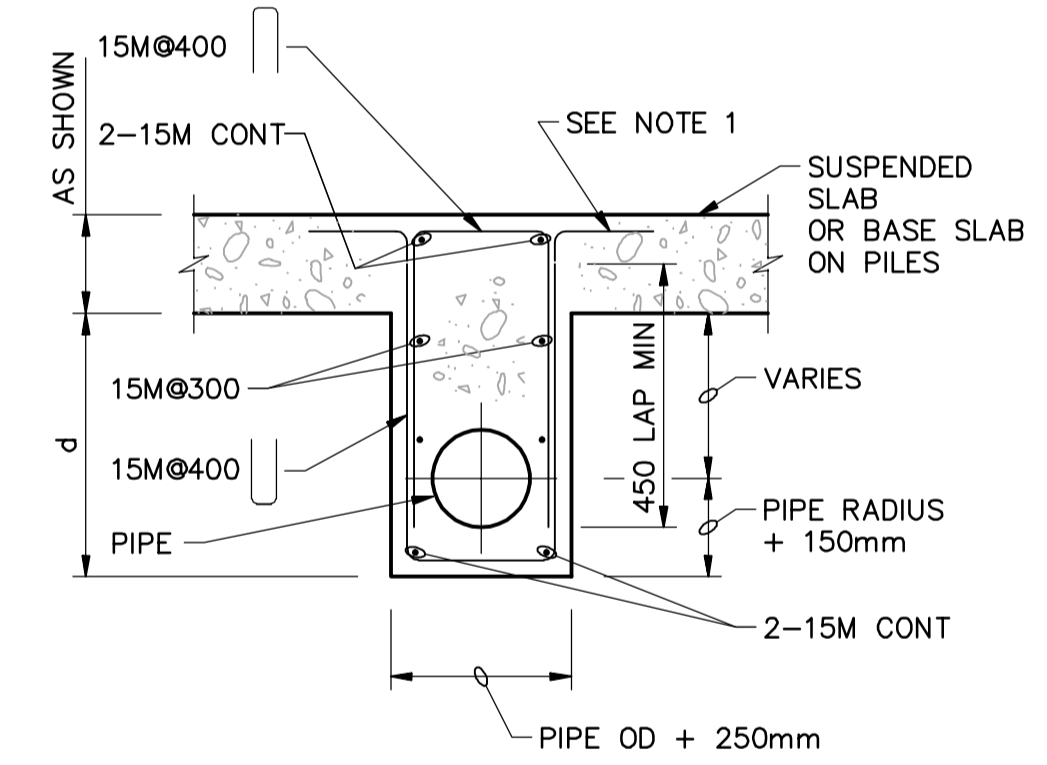
ENCASUREMENT RISER



SECTION

- NOTES:
1. SECTION APPLIES TO PIPES W/ DIAMETERS 450mm AND SMALLER. FOR 500mm DIAMETER PIPES AND LARGER, SEE
 2. WHEN PIPE ENCASUREMENT IS CLOSER THAN 400mm TO SLAB ABOVE, TIE SLAB & ENCASUREMENT TOGETHER. SEE

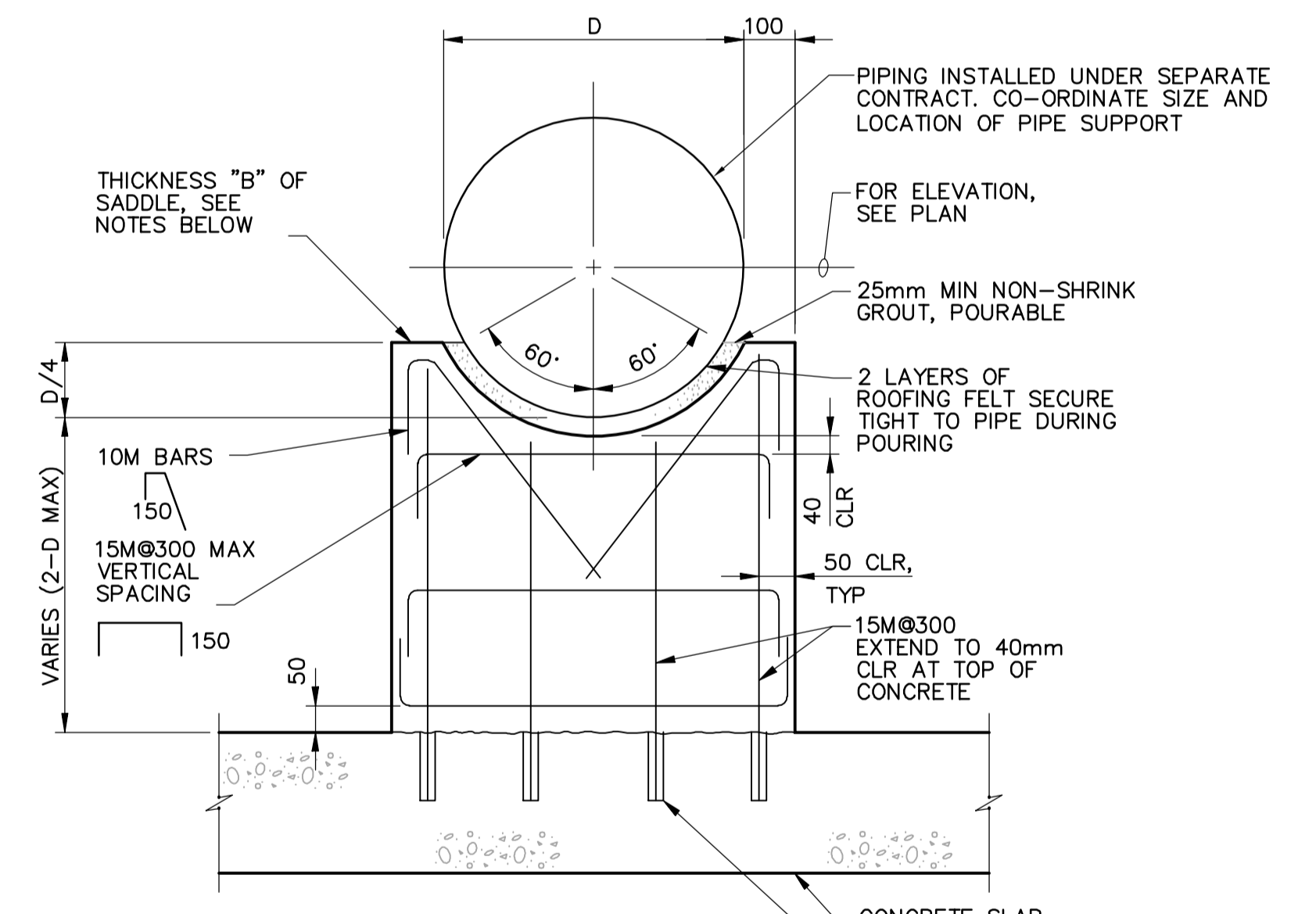
4 PIPE ENCASEMENT
N.T.S.



SECTION

- NOTES:
1. IF d<600 BEND BOTTOM U-BARS TO FORM HOOK OUT AT TOP (AS SHOWN DOTTED). DELETE TOP U-BAR.
 2. IF d>600 DETAIL AS SHOWN WITH U-BARS ON TOP AND BOTTOM.

5 PIPE IN BEAM ENCASEMENT
N.T.S.



- NOTES:
1. THICKNESS "B" OF SADDLE
 B = 150mm WHEN: D < 300mm
 B = 200mm WHEN: 300mm ≤ D < 600mm
 B = 250mm WHEN: 600mm ≤ D < 900mm
 B = 300mm WHEN: 900mm ≤ D < 1200mm
 B = 400mm WHEN: D ≥ 1200mm
 2. FOR "B"=250mm OR THICKER, USE 2 LAYERS OF REINFORCING, TURN HORIZONTAL BARS 90° TO HOOK AROUND VERTICALS, 40mm CLEAR OF CONCRETE
 3. FORM 19mm BEVEL ON ALL EXPOSED CORNERS OF SUPPORT.

6 TYPICAL CONCRETE PIPE SUPPORT
N.T.S.

<p>Certificate of Authorization CH2M HILL Canada Ltd. No. 1441 Expiry: April 30, 2006</p>	B.M. ELEV.	<p>Frederickson Cooper ARCHITECTS</p>	<p>A Geo International Ltd. Company</p>	ENGINEER'S SEAL	<p>THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT ENGINEERING DIVISION</p>
	DESIGNED BY DK	CHECKED BY AP	DESIGNED BY DK	ORIGINAL SIGNED BY D. KRUGER	
	DRAWN BY PT	APPROVED BY DJT	DRAWN BY PT	2006/02/06	
	SCALE: NTS	RELEASED FOR CONSTRUCTION BY: R. SOROKOWSKI	SCALE: NTS	CONSULTANT DRAWING NO. WB-S0458	
00 ISSUED FOR TENDER 2006/02/03 DK	NO. REVISIONS DATE BY	DATE 2005/08/31	DATE 2006/02/08	WATER TREATMENT PLANT FOUNDATIONS AND CONCRETE STRUCTURES STRUCTURAL STANDARD DETAILS	CITY FILE NUMBER SHEET OF CITY DRAWING NUMBER 1-060B-A-50458-001-00D