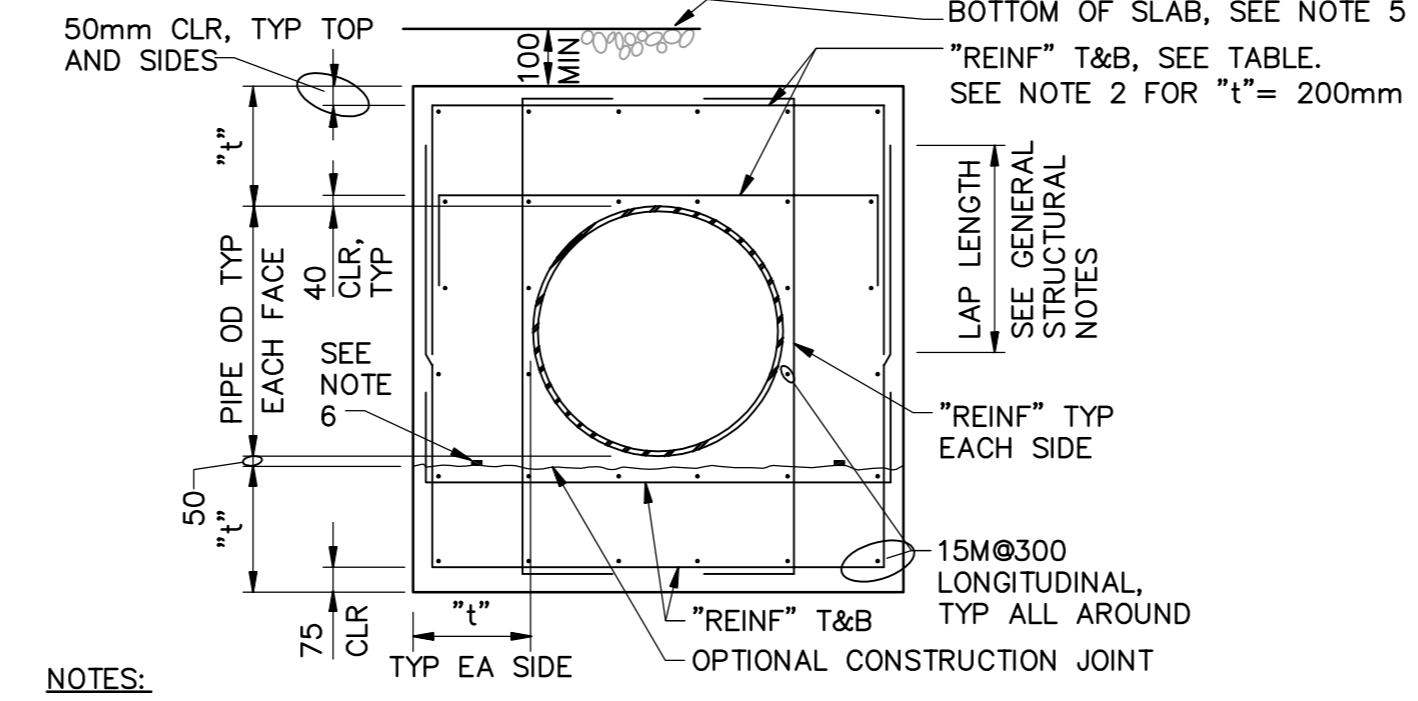


- NOTES:
1. TIE PIPE ENCASEMENT TO SLAB AS SHOWN WHEN DISTANCE BETWEEN PIPE ENCASEMENT AND BOTTOM OF SLAB IS LESS THAN 400mm.
 2. 150mm PLASTIC WS IN ENCASEMENT JOINTS. WELD TO WS IN SLAB JOINTS. SEE DETAIL BELOW.
 3. PROVIDE 50MM ETHAFORM 220 OR EQUAL ON EACH SIDE OF PIPE ENCASEMENT.

1 PIPE ENCASEMENT N.T.S.

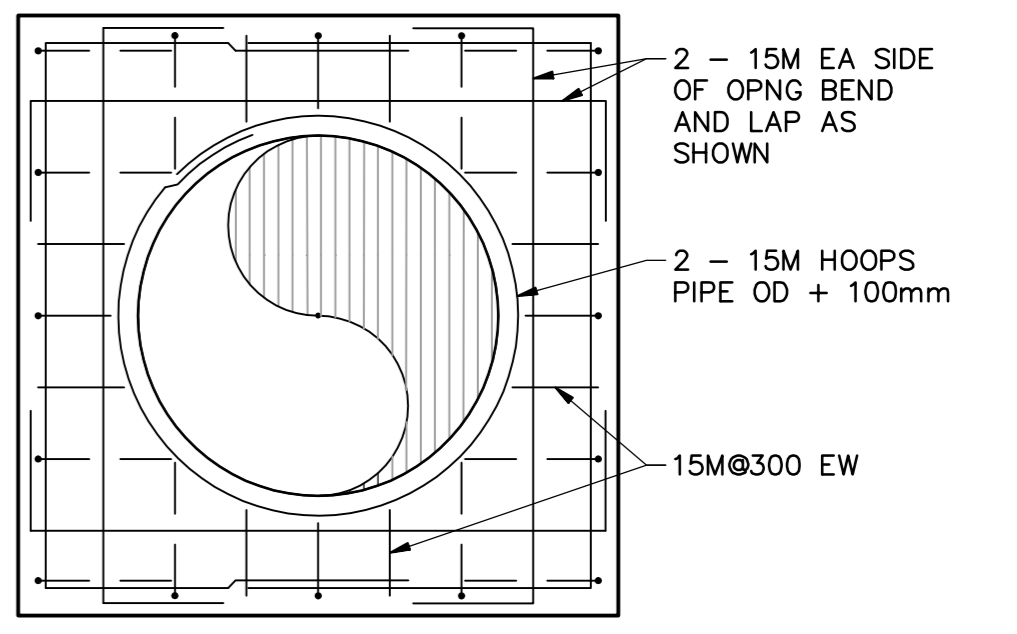
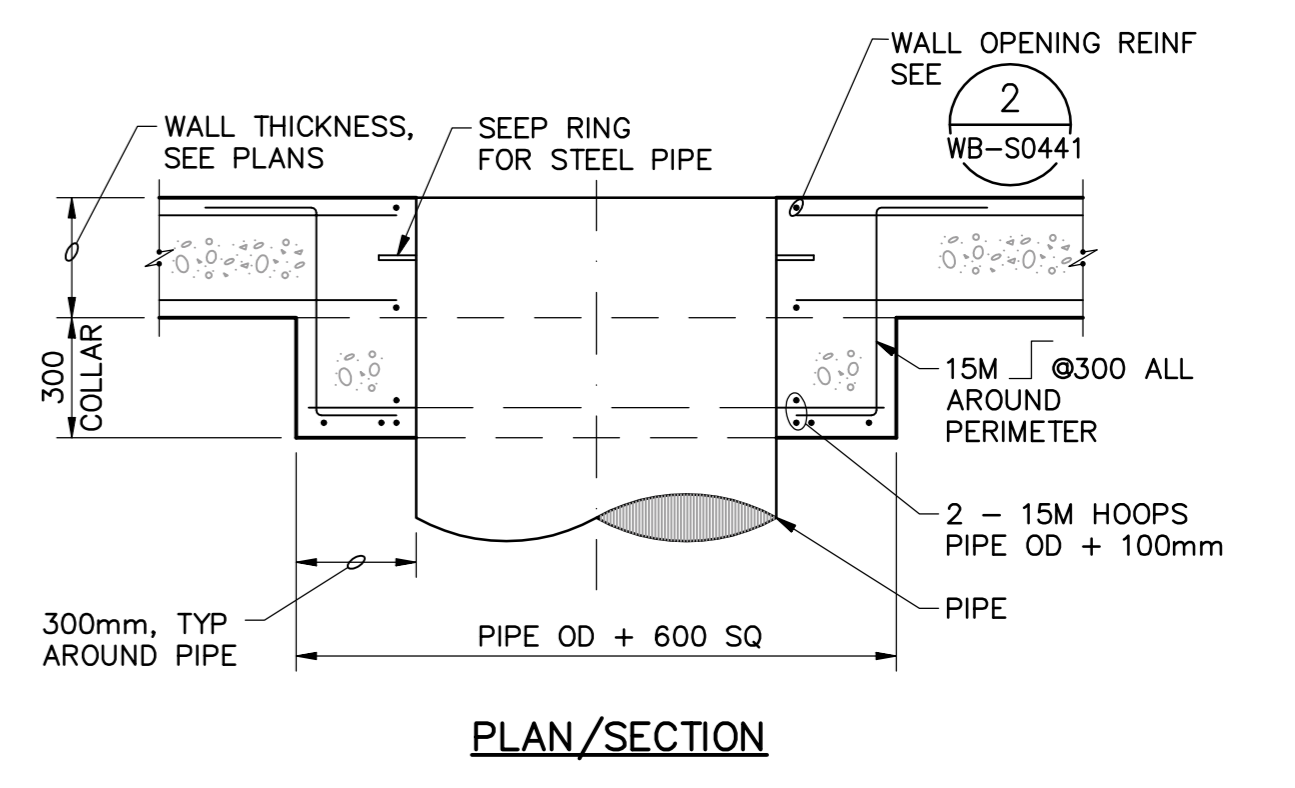
PIPE DIA (mm)	H=3000mm		H=6000mm		H=9000mm		H=12000mm	
	"t" (mm)	REINF	"t" (mm)	REINF	"t" (mm)	REINF	"t" (mm)	REINF
500 THRU 750	200	15M@300	250	15M@300	250	15M@300	250	20M@300
900 THRU 1050	250	15M@300	250	20M@300	250	25M@300	250	20M@150
1200 THRU 1400	250	20M@300	250	25M@300	250	25M@150	300	25M@150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

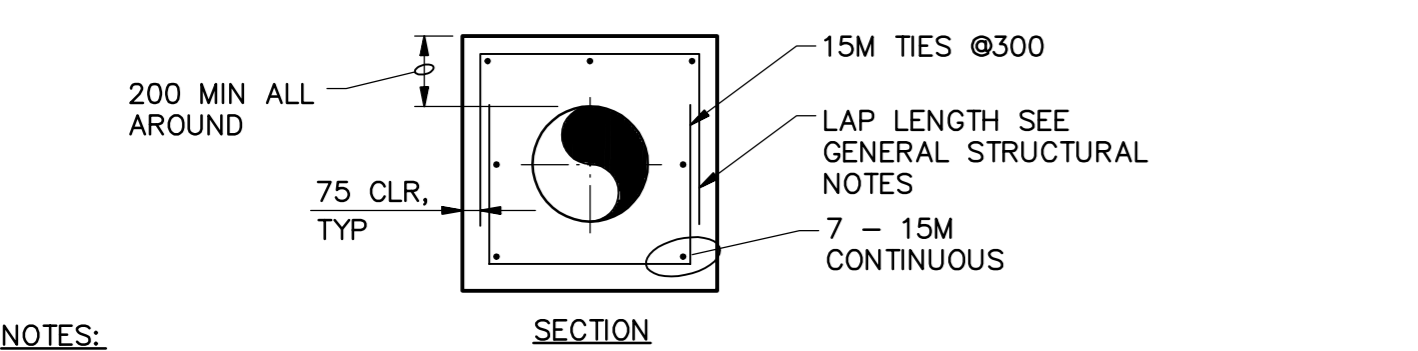
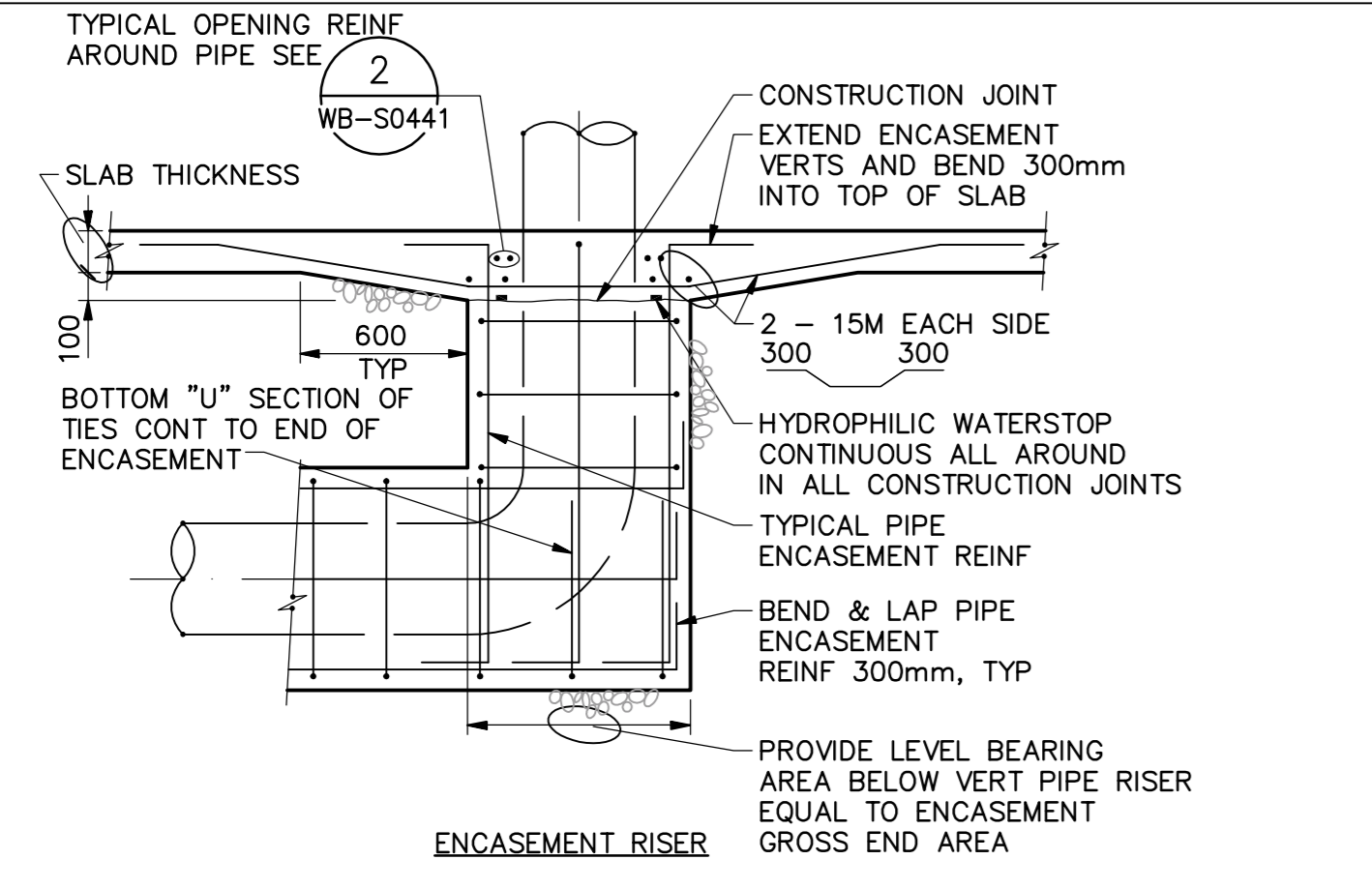


- NOTES:
1. THIS DETAIL APPLIES TO PIPE DIAMETER OF 500mm AND LARGER. FOR SMALLER THAN 500mm, SEE DETAIL.
 2. FOR "t"=200mm REINFORCING SHALL BE ONE LAYER AND CENTERED IN SLABS OR WALLS. SIM
 3. FOR ENCASEMENT AT PIPE RISER, SEE
 4. "H" IS FILL HEIGHT OR WATER DEPTH OR COMBINATION ABOVE PIPE.
 5. WHEN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

2 PIPE ENCASEMENT N.T.S.

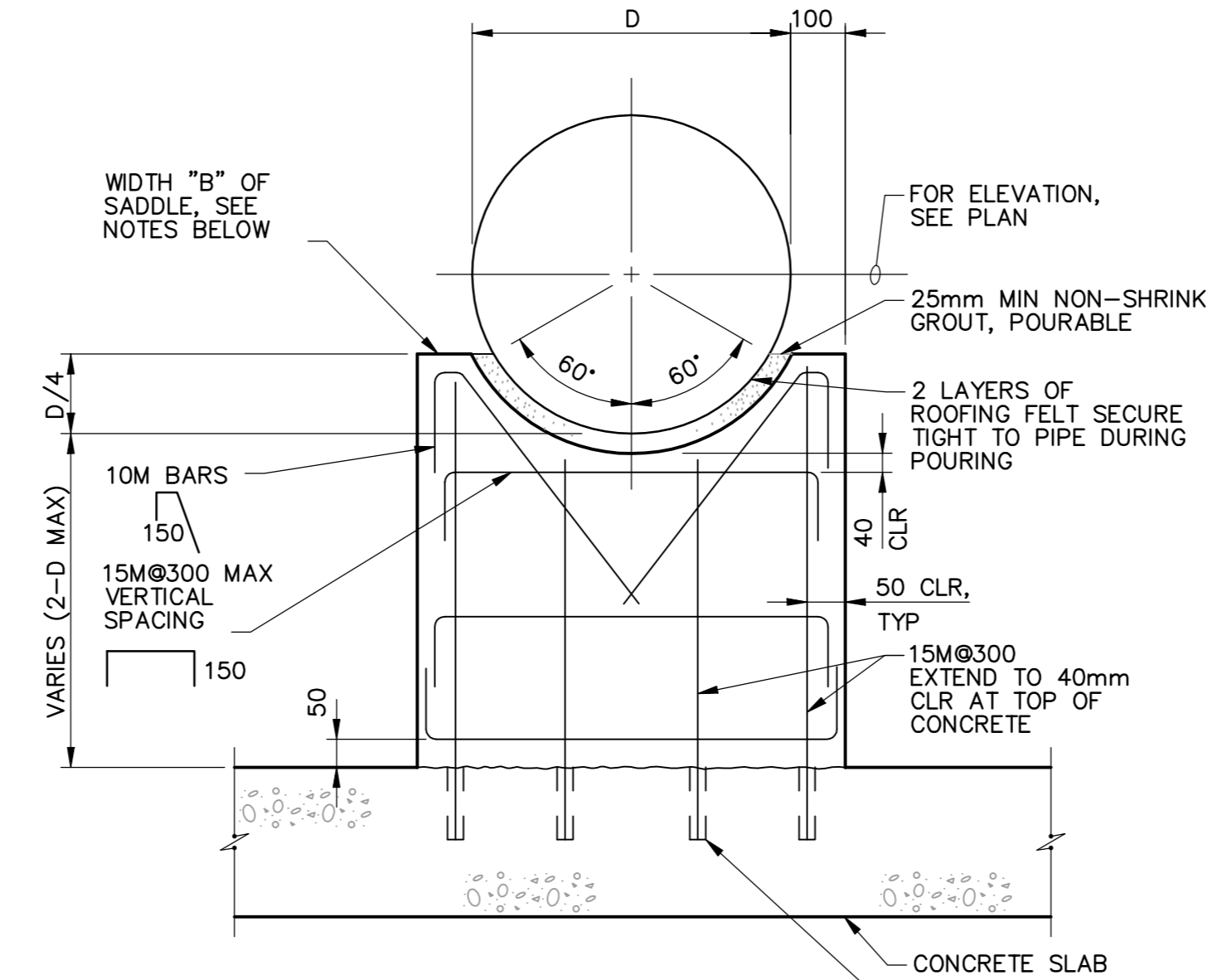


3 PIPE COLLAR N.T.S.



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

4 PIPE ENCASEMENT N.T.S.



- NOTES:
1. THICKNESS "B" OF SADDLE:
 B = 150mm WHEN: 300mm < D < 300mm
 B = 200mm WHEN: 300mm < D < 600mm
 B = 250mm WHEN: 600mm < D < 900mm
 B = 300mm WHEN: 900mm < D < 1200mm
 B = 400mm WHEN: 900mm < 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.

5 TYPICAL CONCRETE PIPE SUPPORT N.T.S.

<p>Certificate of Authorization CH2M Hill Canada Limited (ON) No. 1441 Expiry: April 30, 2006</p>	B.M. ELEV.	<p>Frederickson Cooper ARCHITECTS</p>	<p>A Tyco 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	ORIGINAL SIGNED BY: D. KRUGER
				DRAWN BY: EK		APPROVED BY: DJT	2005/11/03
				SCALE: NTS		RELEASED FOR CONSTRUCTION BY: R. SOROKOWSKI	CONSULTANT DRAWING NO. WB-S0445
	00 ISSUED FOR TENDER 05/11/03 DK	DATE: 2005/10/24	DATE: 2005/11/07		WATER TREATMENT PLANT FOUNDATIONS AND CONCRETE STRUCTURES 1 STRUCTURAL STANDARD DETAILS		
	NO. REVISIONS	DATE	BY		CITY FILE NUMBER SHEET OF CITY DRAWING NUMBER 1-060B-D-S0445-001-00D		