

- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
 2. THE CONTRACTOR IS TO MAKE REFERENCE TO THE GENERAL NOTES IN DRAWING NO. PUB/WSN/GN/001.
 3. THIS DRAWING PROVIDES THE CONCEPTUAL DESIGN OF ACCESS MANHOLES CHAMBERS UP TO 12M DEPTH. THE CONSULTANT SHALL ENGAGE A PROFESSIONAL ENGINEER (P.E.) TO UNDERTAKE THE DETAILED STRUCTURAL DESIGN OF THE CHAMBER AND MAKE THE NECESSARY SUBMISSION TO THE SUPERINTENDING OFFICER (S.O.) AND / OR BCA FOR APPROVAL.
 4. THIS DRAWING IS NOT VALID FOR CHAMBERS EXCEEDING 12M DEPTH FROM GROUND LEVEL. FOR SUCH CHAMBERS, THE CONSULTANT ENGAGED FOR THE PROJECT SHALL SUBMIT THE NECESSARY DESIGN AND DRAWINGS FOR THE BOARD'S APPROVAL BEFORE SUBMISSION TO BCA FOR APPROVAL.
 5. ALL ANCHOR BOLTS SHALL COMPLY WITH BS SS 316.
 6. SAFETY CAGES SHALL BE INSTALLED FOR ALL STAINLESS STEEL LADDERS (GRADE 304) EXCEEDING 3M HEIGHT.
 7. ALL MANHOLE COVERS AND FRAME SHALL BE OF HEAVY DUTY DUCTILE IRON TO GRADE A1 UNDER SS30. STANDARD HEAVY DUTY DUCTILE IRON (GRADE A1) DOUBLE TRIANGULAR MANHOLE COVER AND FRAME (REFER TO PUB/WSN/STD/204) SHALL BE USED FOR 600MM DIA. OPENING.
 8. FOR FIXED STAINLESS STEEL LADDER THAT RISES A VERTICAL DISTANCE OF MORE THAN 9M, AN INTERMEDIATE LANDING PLATFORM AND RAILINGS SHALL BE PROVIDED.
 9. LANDING PLATFORM, RAILINGS AND CONNECTION DETAILS SHALL BE DESIGNED AND ENDORSED BY A PROFESSIONAL ENGINEER (P.E.).
 10. THE CONSULTANT'S P.E. SHALL UNDERTAKE THE DETAILED DESIGN OF THE CHAMBER INCLUDING RC HAUNCHING AND SUBMIT (TOGETHER WITH THE ACCREDITED CHECKER APPOINTED BY THE BOARD) TO SUPERINTENDING OFFICER (S.O.) AND BCA FOR APPROVAL.
 11. THE CONSULTANT'S P.E. SHALL UNDERTAKE GEOTECHNICAL ANALYSIS TO ASSESS THE ALLOWABLE BEARING CAPACITY OF THE SOIL AND EXPECTED SETTLEMENT OF THE CHAMBER AND SUBMIT A REPORT TO THE BOARD. IN ADDITION, THE CONTRACTOR SHALL UNDERTAKE PLATE LOAD TESTS TO VERIFY THE IN-SITU SOIL BEARING CAPACITY, IN ACCORDANCE WITH BS EN ISO 22476-13. WHERE THE BEARING CAPACITY IS DEEMED INADEQUATE AND/OR SETTLEMENT IS EXCESSIVE, THE CHAMBER SHALL BE SUPPORTED ON PILES. THE CONSULTANT SHALL DESIGN ALL PILING WORKS AND SUBMIT (IN CONJUNCTION WITH THE ACCREDITED CHECKER APPOINTED BY THE BOARD), TO THE BUILDING AND CONSTRUCTION AUTHORITY (BCA) FOR APPROVAL.

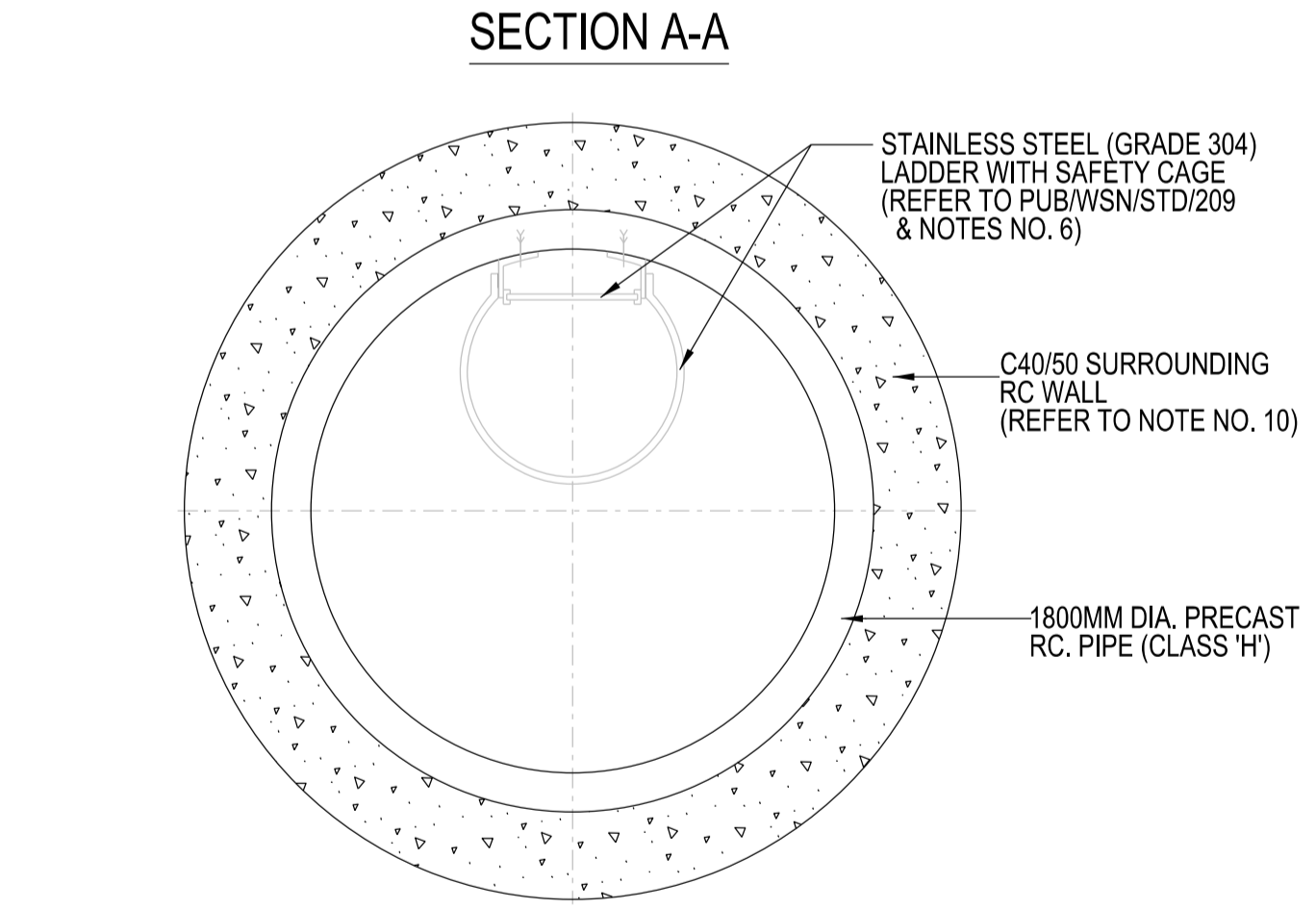
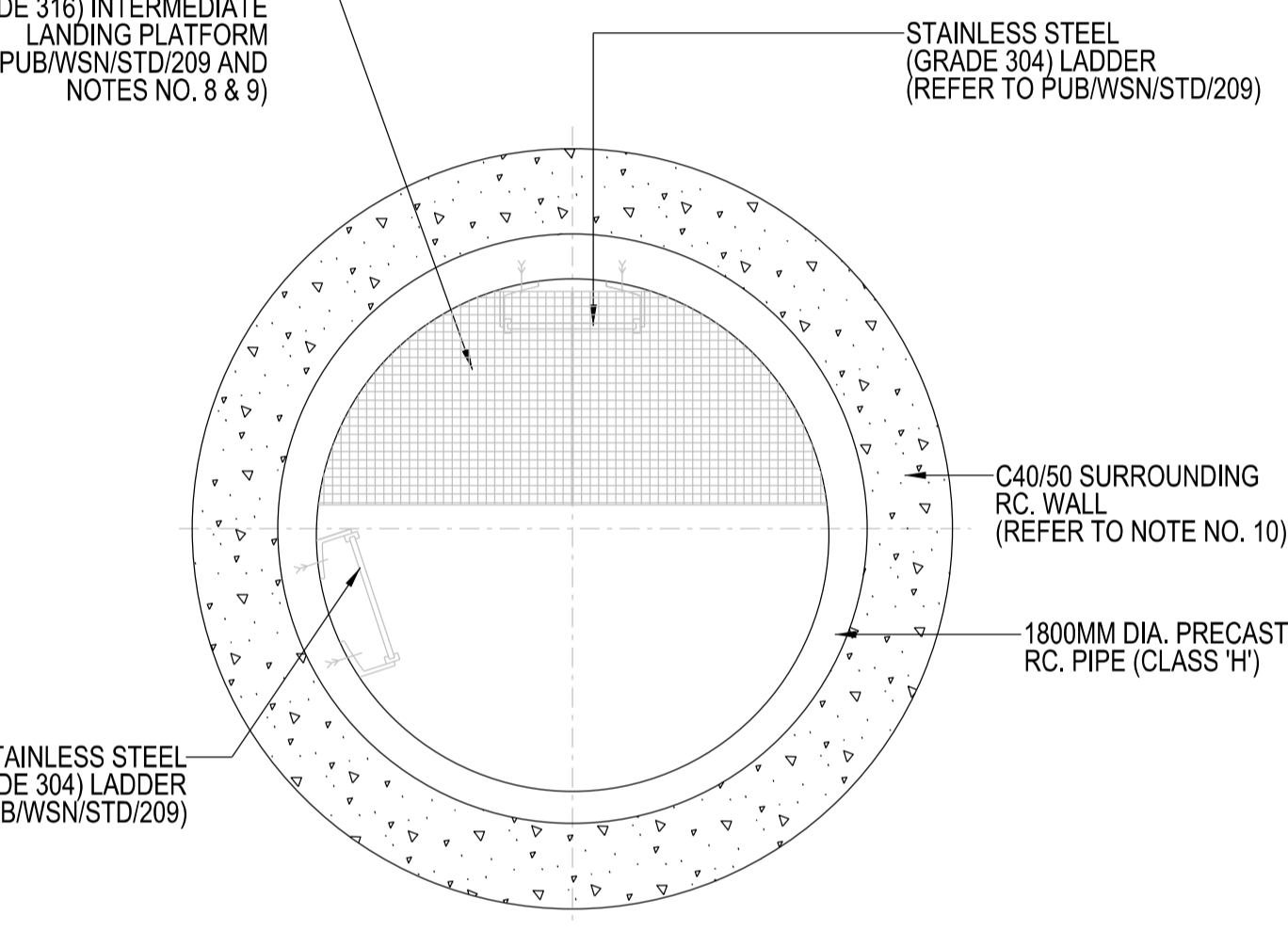
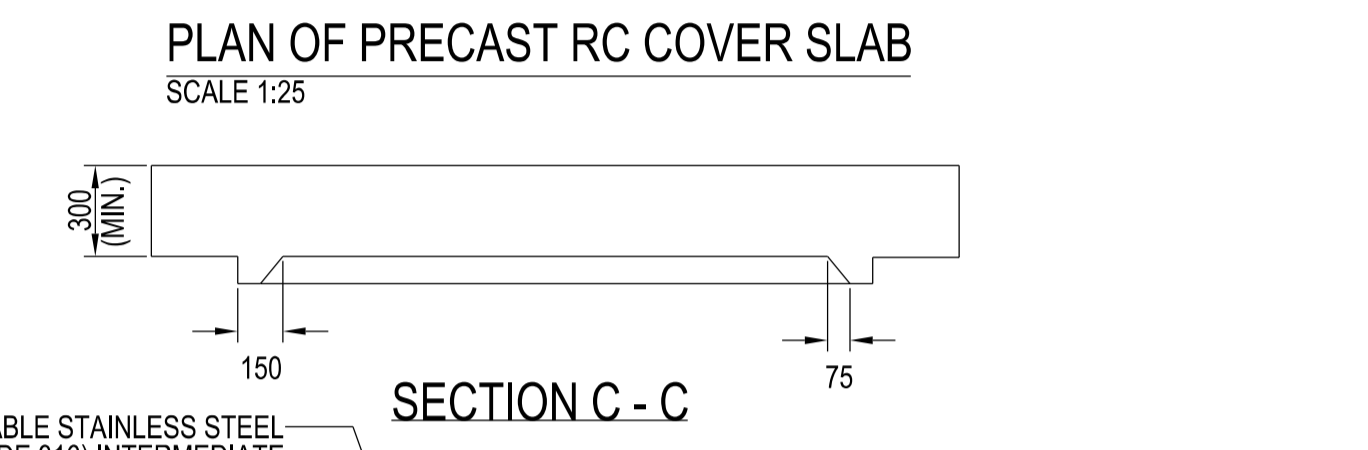
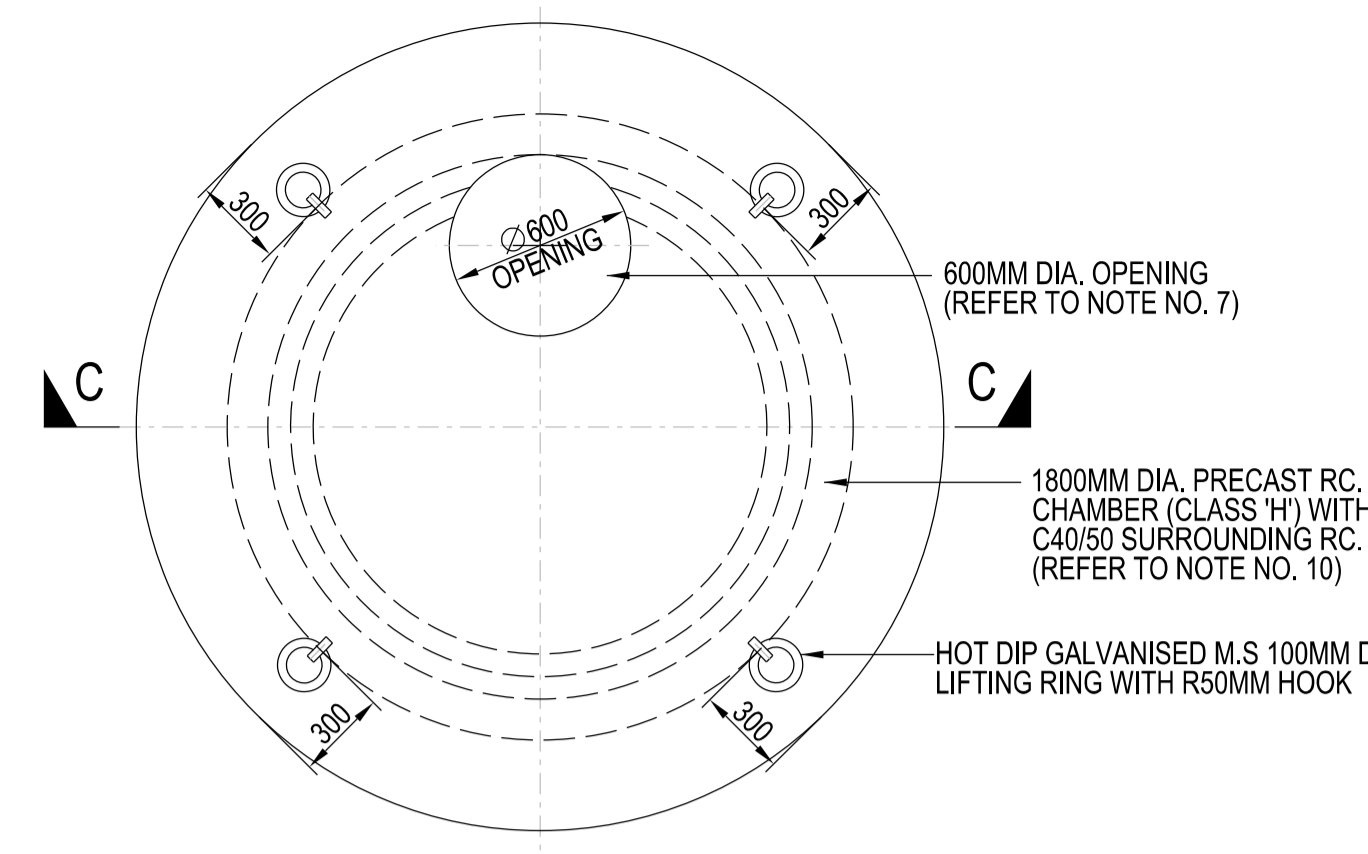


TABLE 2 : DEEP ACCESS MANHOLE CHAMBER

PIPE NOM. DIA. (MM)	RADIAL OFFTAKE / TEE DIA. (MM)	PRECAST RC. PIPE CHAMBER DIA. (MM)	INTERVAL ALONG PIPELINE (M)
700	700 (TEE)	1800	100
800	800 (TEE)	1800	100
900	800 (TEE)	1800	100
1200	800 (TEE)	1800	200
1400	800 (TEE)	1800	200
1600	800 (RADIAL OFFTAKE)	1800	300
1800	800 (RADIAL OFFTAKE)	1800	300
1900	800 (RADIAL OFFTAKE)	1800	300
2200	800 (RADIAL OFFTAKE)	1800	300

ISSUED: NOV 2020	SCALE	DRAWING NO.
LAST REVIEWED: AUG 2021	1:25	PUB/WSN/STD/102

TYPICAL DEEP ACCESS MANHOLE CHAMBER (DEPTH FROM 6M TO 9M) AND (DEPTH EXCEEDING 9M TO 12M)