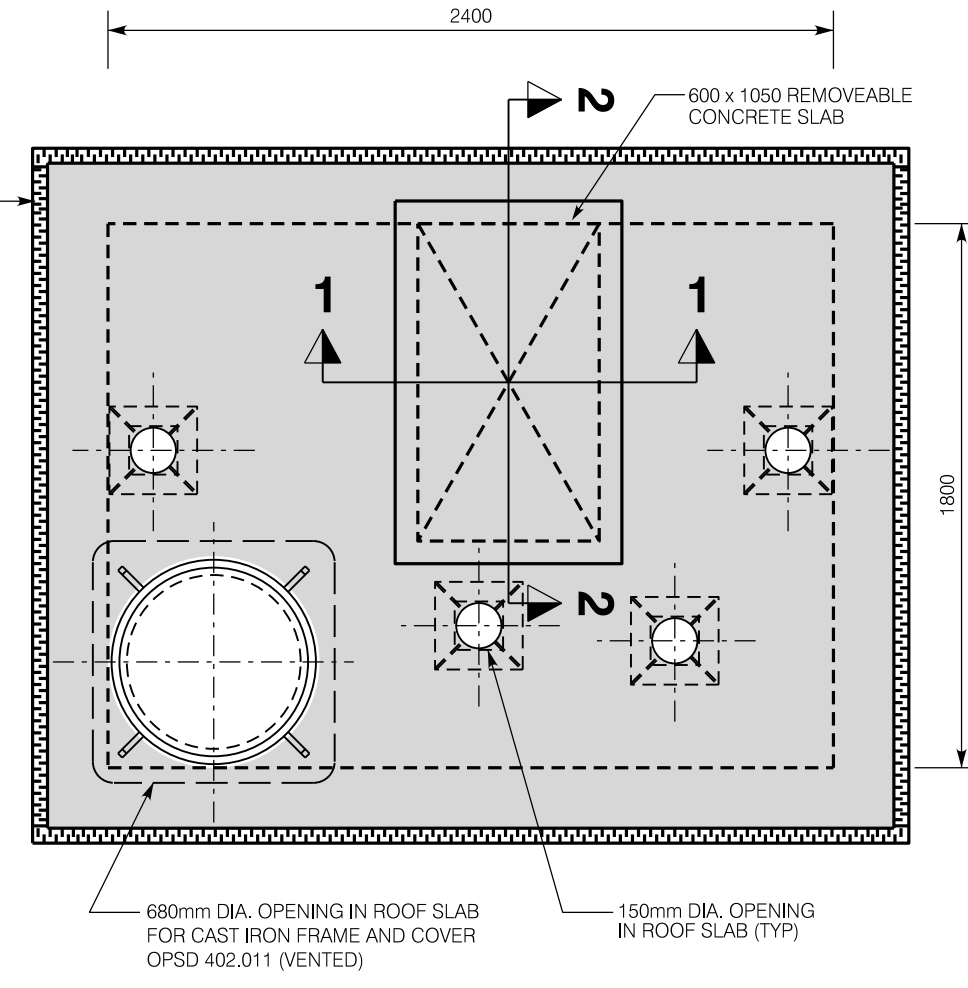
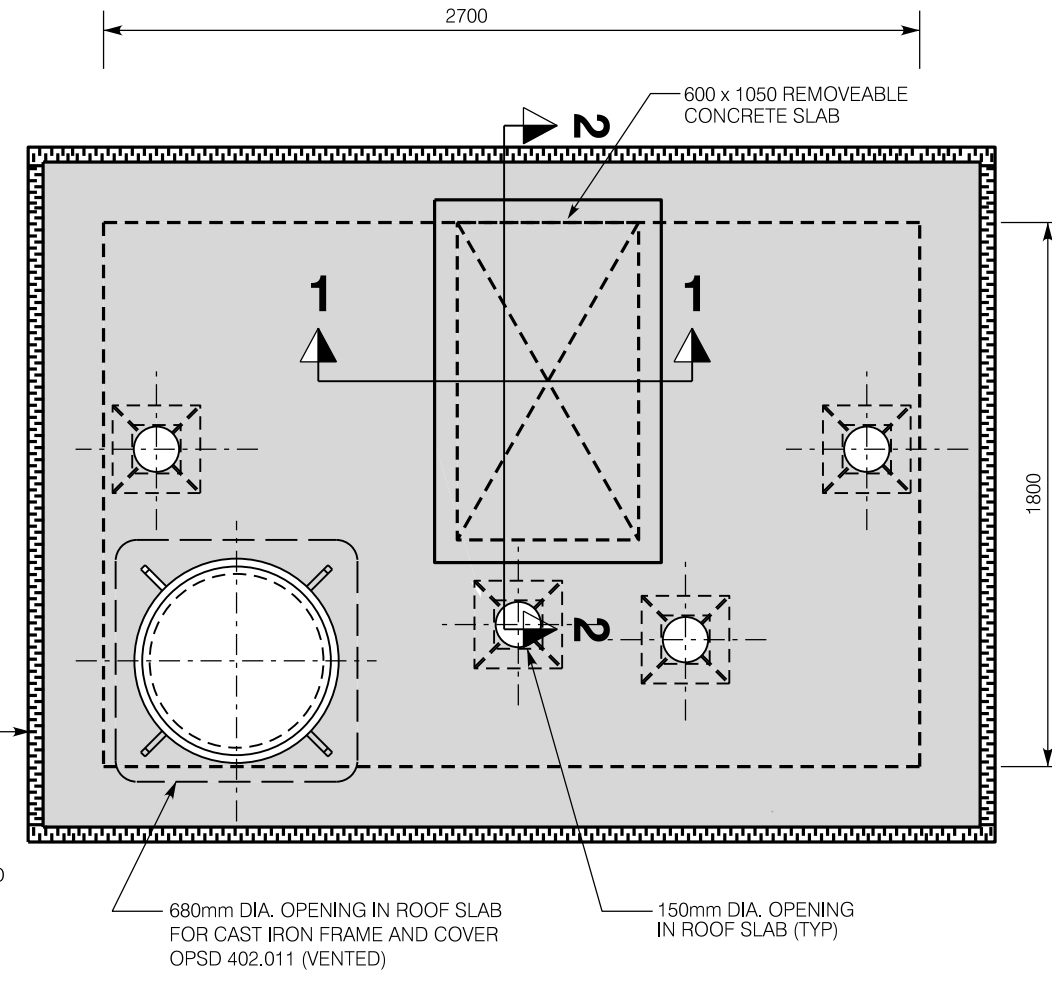


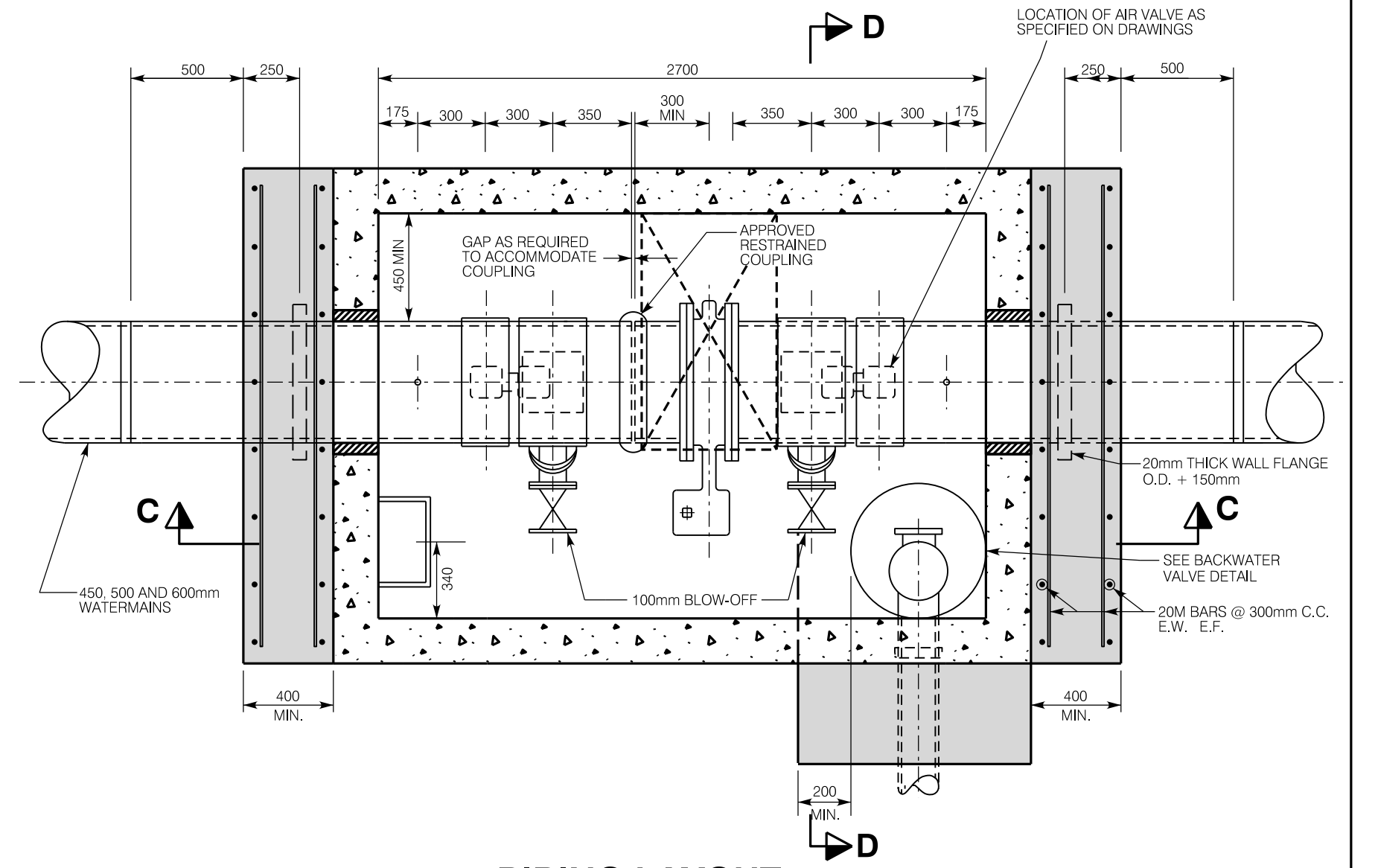
PIPING LAYOUT
CONCRETE PIPE



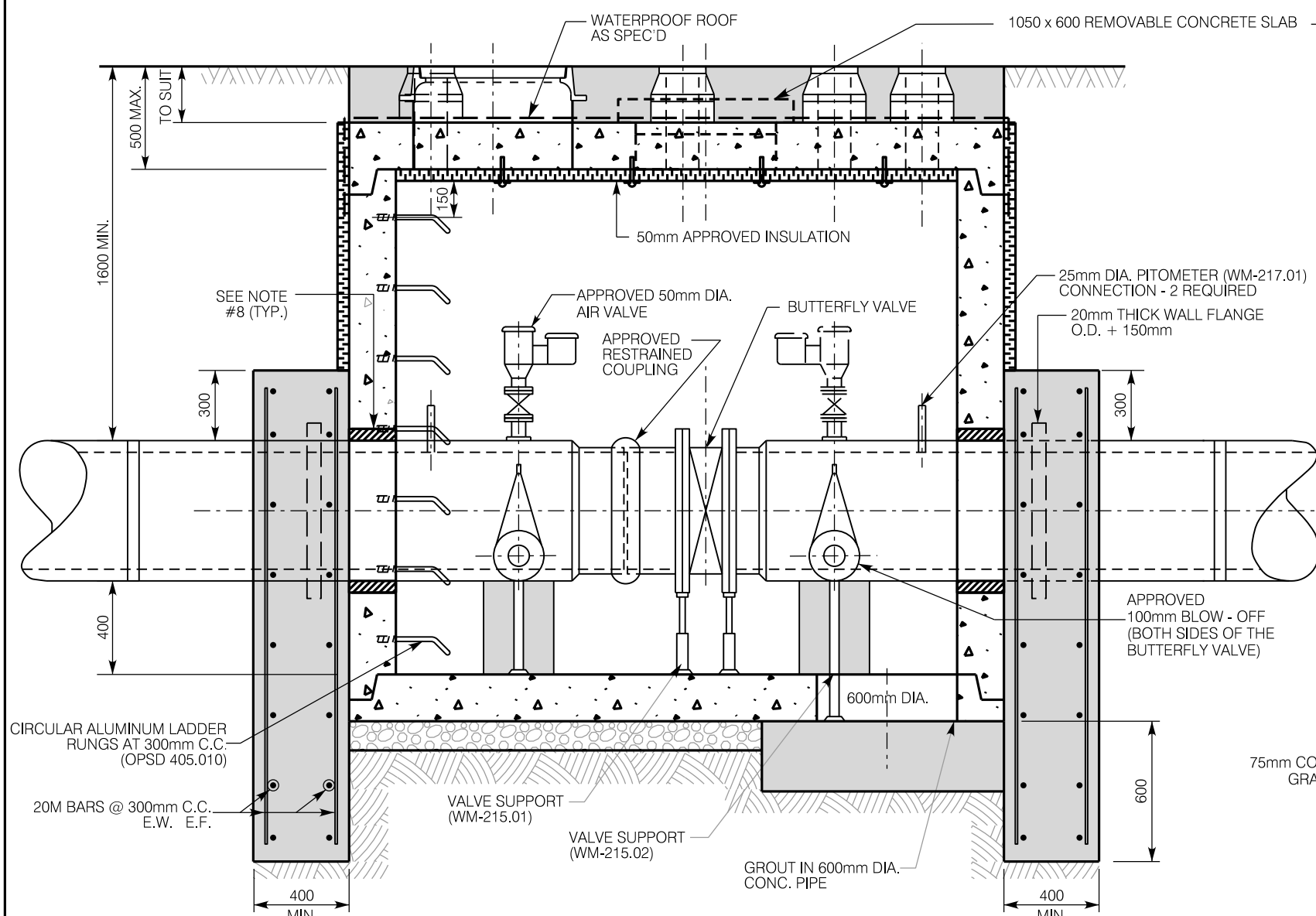
ROOF PLAN
CONCRETE PIPE



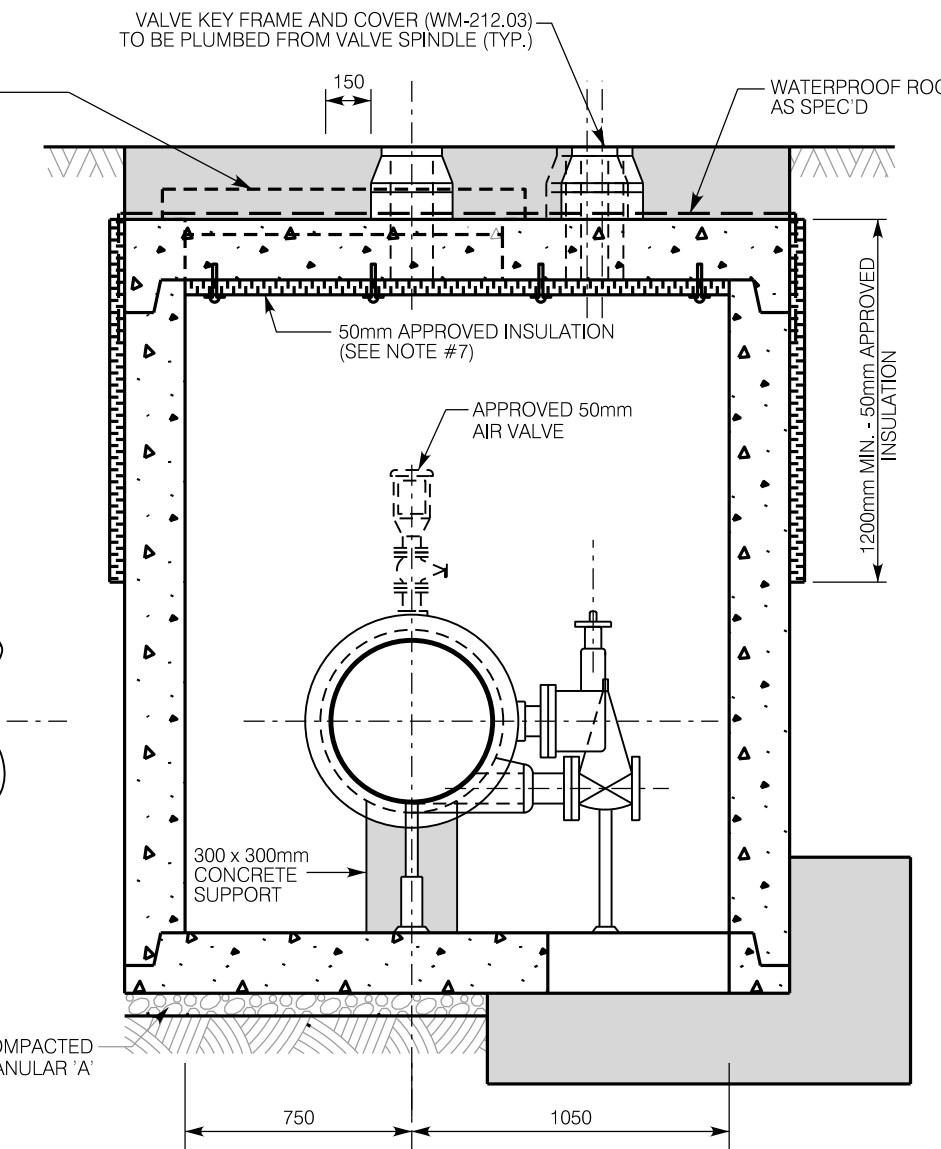
ROOF PLAN
DUCTILE IRON PIPE



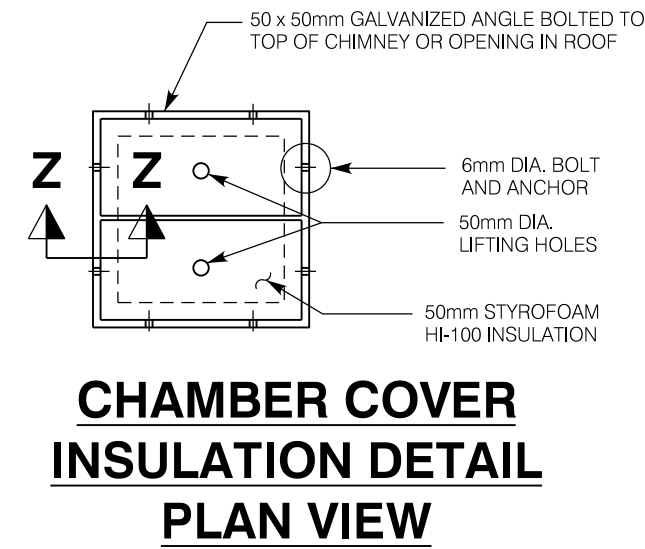
PIPING LAYOUT
DUCTILE IRON PIPE - (CL54)



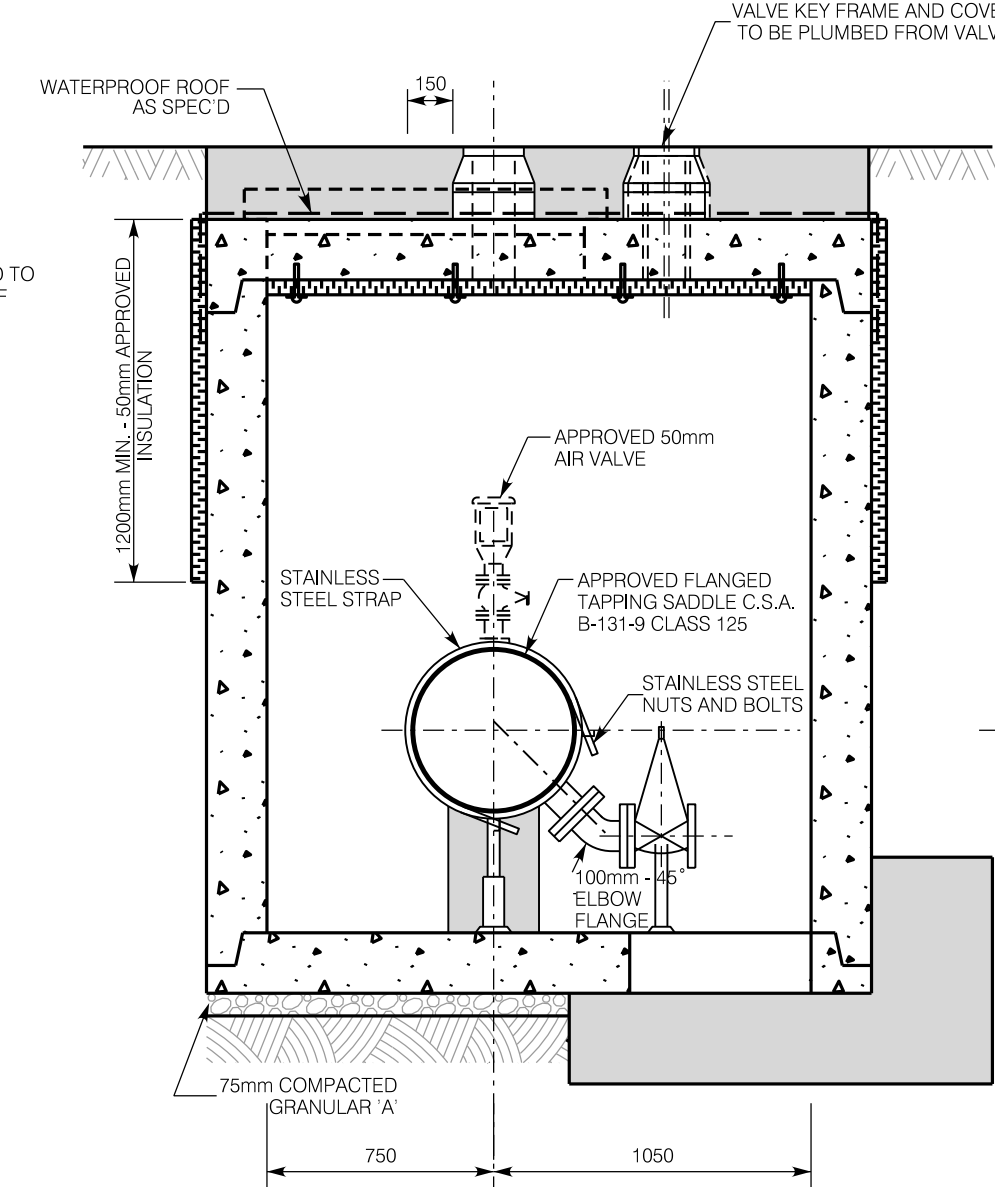
SECTION A-A
CONCRETE PIPE



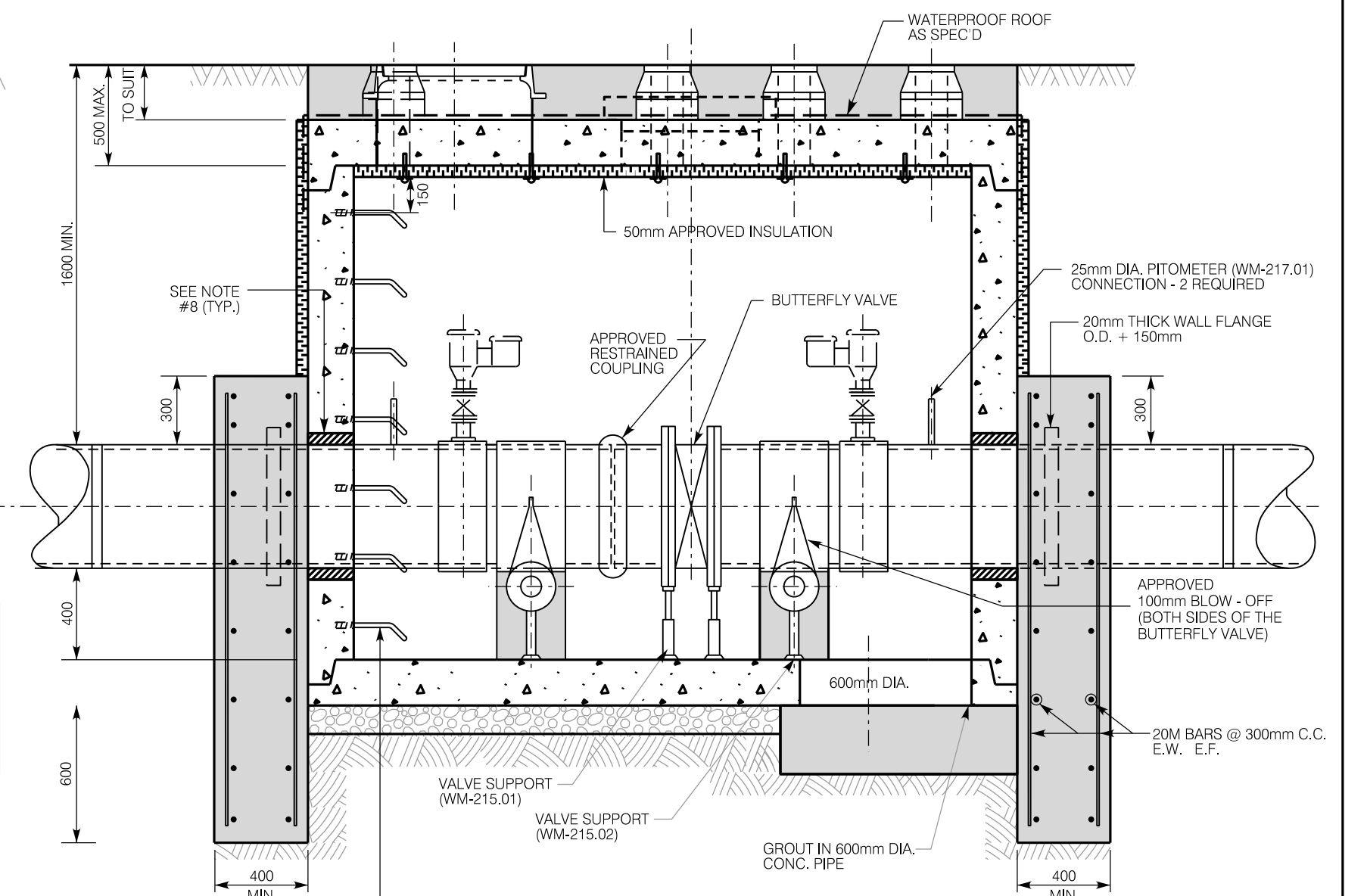
SECTION B-B
CONCRETE PIPE



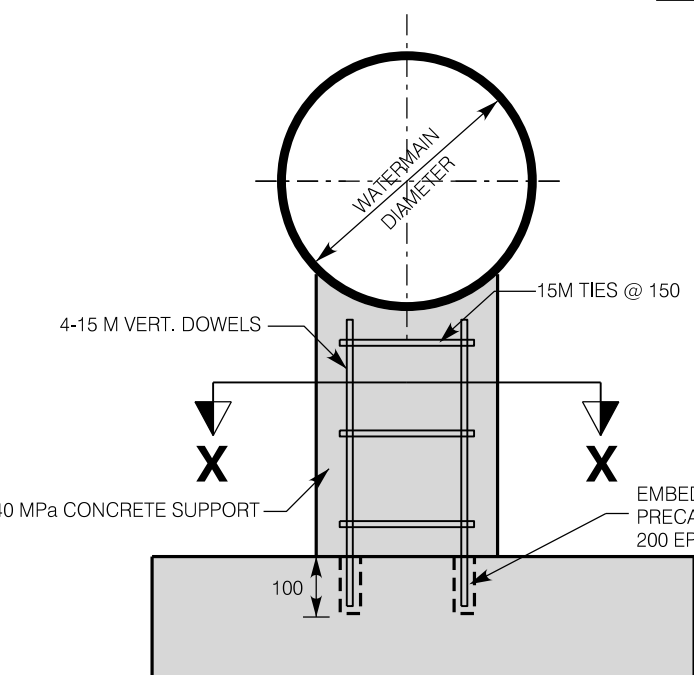
SECTION Z-Z



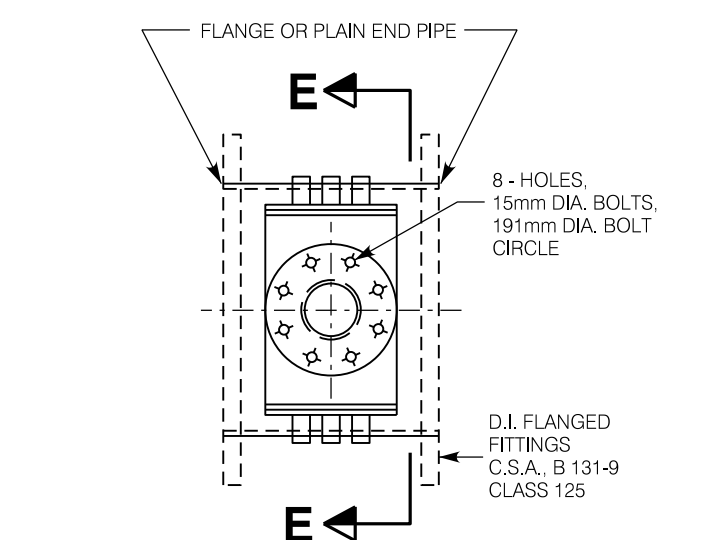
SECTION D-D
DUCTILE IRON PIPE - (CL 54)



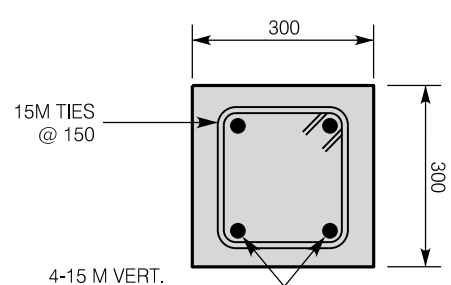
SECTION C-C
DUCTILE IRON PIPE - (CL54)



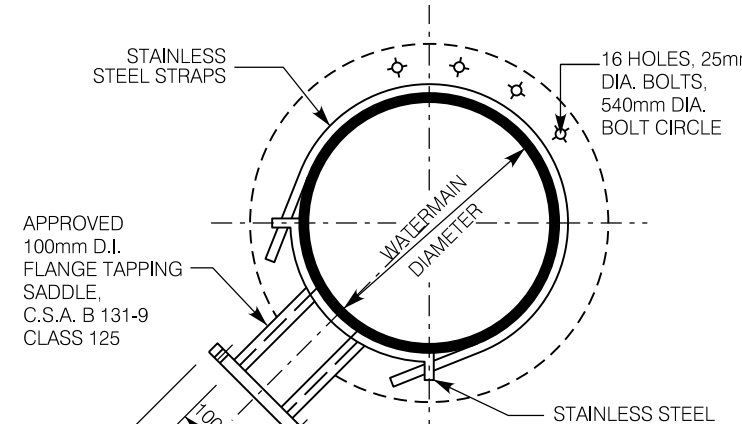
300 x 300 CONCRETE SUPPORT



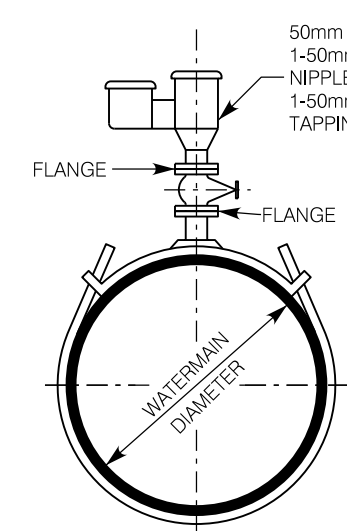
DUCTILE IRON FITTING FOR
100mm DIA. BLOW-OFF



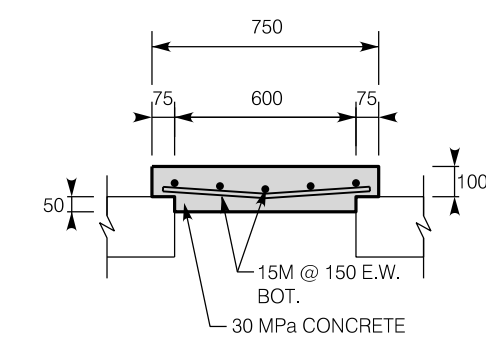
SECTION X-X



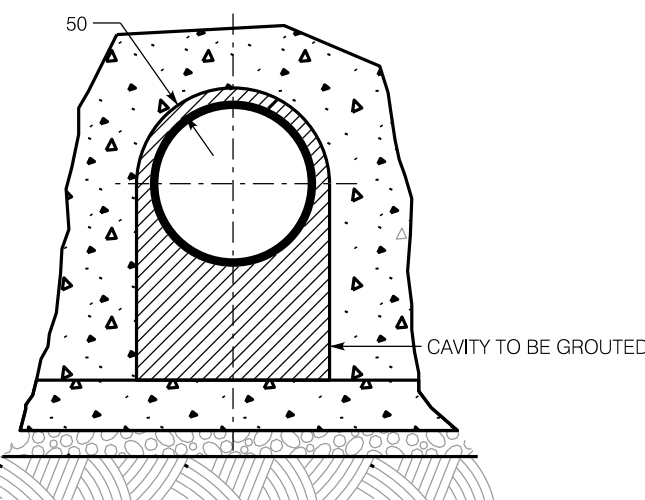
SECTION E-E



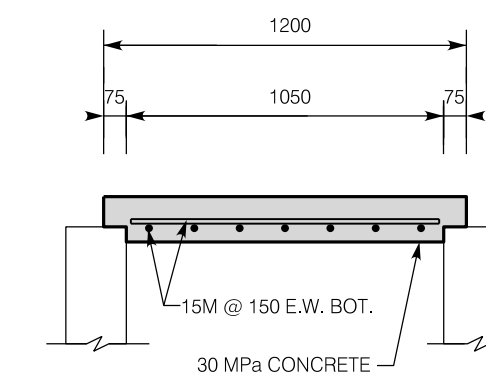
AIR VALVE INSTALLATION
FOR DUCTILE IRON PIPE



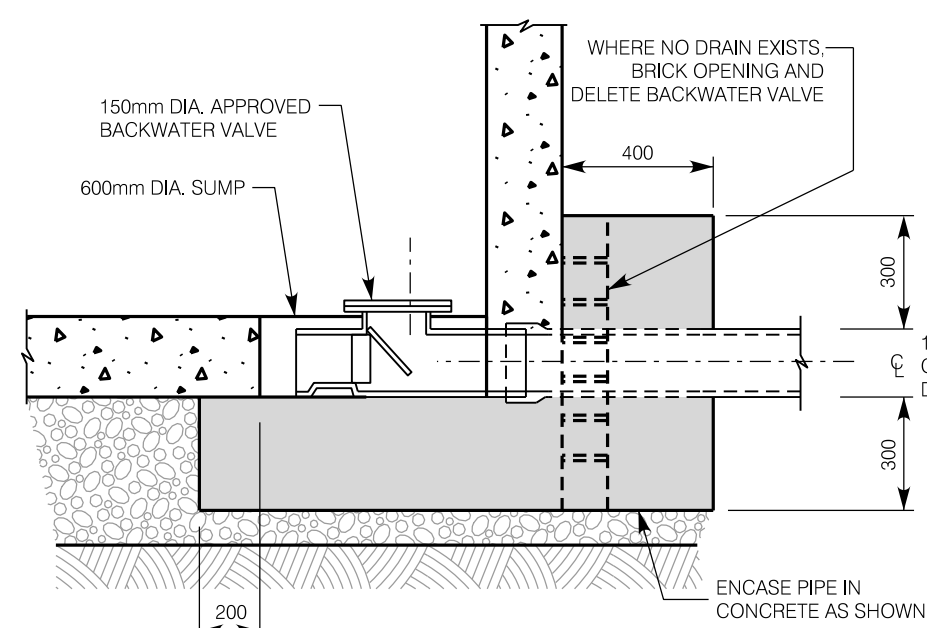
SECTION 1-1
REMOVEABLE CONCRETE SLAB



DOGHOUSE DETAIL



SECTION 2-2
REMOVEABLE CONCRETE SLAB



BACKWATER VALVE DETAIL

NOTES:

1. PRECAST CHAMBERS AND SECTIONS SHALL BE MANUFACTURED TO ASTM C-478, C-574, C-578, C-579, C-580, C-581, C-582, C-583, C-584, C-585, C-586, C-587, C-588, C-589, C-590, C-591, C-592, C-593, C-594, C-595, C-596, C-597, C-598, C-599, C-600, C-601, C-602, C-603, C-604, C-605, C-606, C-607, C-608, C-609, C-610, C-611, C-612, C-613, C-614, C-615, C-616, C-617, C-618, C-619, C-620, C-621, C-622, C-623, C-624, C-625, C-626, C-627, C-628, C-629, C-630, C-631, C-632, C-633, C-634, C-635, C-636, C-637, C-638, C-639, C-640, C-641, C-642, C-643, C-644, C-645, C-646, C-647, C-648, C-649, C-650, C-651, C-652, C-653, C-654, C-655, C-656, C-657, C-658, C-659, C-660, C-661, C-662, C-663, C-664, C-665, C-666, C-667, C-668, C-669, C-670, C-671, C-672, C-673, C-674, C-675, C-676, C-677, C-678, C-679, C-680, C-681, C-682, C-683, C-684, C-685, C-686, C-687, C-688, C-689, C-690, C-691, C-692, C-693, C-694, C-695, C-696, C-697, C-698, C-699, C-700, C-701, C-702, C-703, C-704, C-705, C-706, C-707, C-708, C-709, C-710, C-711, C-712, C-713, C-714, C-715, C-716, C-717, C-718, C-719, C-720, C-721, C-722, C-723, C-724, C-725, C-726, C-727, C-728, C-729, C-730, C-731, C-732, C-733, C-734, C-735, C-736, C-737, C-738, C-739, C-740, C-741, C-742, C-743, C-744, C-745, C-746, C-747, C-748, C-749, C-750, C-751, C-752, C-753, C-754, C-755, C-756, C-757, C-758, C-759, C-760, C-761, C-762, C-763, C-764, C-765, C-766, C-767, C-768, C-769, C-770, C-771, C-772, C-773, C-774, C-775, C-776, C-777, C-778, C-779, C-780, C-781, C-782, C-783, C-784, C-785, C-786, C-787, C-788, C-789, C-790, C-791, C-792, C-793, C-794, C-795, C-796, C-797, C-798, C-799, C-800, C-801, C-802, C-803, C-804, C-805, C-806, C-807, C-808, C-809, C-810, C-811, C-812, C-813, C-814, C-815, C-816, C-817, C-818, C-819, C-820, C-821, C-822, C-823, C-824, C-825, C-826, C-827, C-828, C-829, C-830, C-831, C-832, C-833, C-834, C-835, C-836, C-837, C-838, C-839, C-840, C-841, C-842, C-843, C-844, C-845, C-846, C-847, C-848, C-849, C-850, C-851, C-852, C-853, C-854, C-855, C-856, C-857, C-858, C-859, C-860, C-861, C-862, C-863, C-864, C-865, C-866, C-867, C-868, C-869, C-870, C-871, C-872, C-873, C-874, C-875, C-876, C-877, C-878, C-879, C-880, C-881, C-882, C-883, C-884, C-885, C-886, C-887, C-888, C-889, C-890, C-891, C-892, C-893, C-894, C-895, C-896, C-897, C-898, C-899, C-900, C-901, C-902, C-903, C-904, C-905, C-906, C-907, C-908, C-909, C-910, C-911, C-912, C-913, C-914, C-915, C-916, C-917, C-918, C-919, C-920, C-921, C-922, C-923, C-924, C-925, C-926, C-927, C-928, C-929, C-930, C-931, C-932, C-933, C-934, C-935, C-936, C-937, C-938, C-939, C-940, C-941, C-942, C-943, C-944, C-945, C-946, C-947, C-948, C-949, C-950, C-951, C-952, C-953, C-954, C-955, C-956, C-957, C-958, C-959, C-960, C-961, C-962, C-963, C-964, C-965, C-966, C-967, C-968, C-969, C-970, C-971, C-972, C-973, C-974, C-975, C-976, C-977, C-978, C-979, C-980, C-981, C-982, C-983, C-984, C-985, C-986, C-987, C-988, C-989, C-990, C-991, C-992, C-993, C-994, C-995, C-996, C-997, C-998, C-999, C-1000.
2. FILL ALL JOINTS AND LIFTING HOLES (INSIDE & OUT) 15mm THICK WITH 1:3 NON-SHRINK MORTAR MIX.
3. ALL ADJUSTMENTS TO CHAMBER AND KEY COVERS SHALL BE MADE WITH POURED CONCRETE.
4. ALL CONCRETE TO BE 40 MPa, TYPE 50 CEMENT.
5. ALL REINFORCING TO BE HIGH BOND STRUCTURAL GRADE.
6. WHEN AIR VALVE SPECIFIED, THE CHAMBER WALLS, ROOF COVER (SEE DETAIL) AND CHIMNEY SHALL BE INSULATED WITH 50mm APPROVED INSULATION TO A MINIMUM DEPTH OF 1200mm BELOW TOP OF CHAMBER.
7. FASTEN INSULATION TO CEILING WITH 50mm DIA. WASHERS (GALVANIZED) & 6mm DIA. TAPCON CONCRETE ANCHORS @ 450mm CENTRES.
8. DOGHOUSE OPENING TO BE CUT OUT MIN. 50mm LARGER THAN O.D. OF PROPOSED WATERMAIN. PIPE TO BE WRAPPED WITH MIN. 50mm THICK OF PLAST MASTIC MATERIAL REMAINING CAVITY TO BE GROUTED. (SEE DOGHOUSE DETAIL).
9. ALL FLANGES TO BE IN ACCORDANCE WITH ANSI / AWWA.
10. ALL METAL COMPONENTS INSIDE VALVE CHAMBER INCLUDING STAINLESS STEEL NUTS AND BOLTS, SHALL HAVE A PROTECTIVE CORROSION TAPE COATING SYSTEM (PRIMER, MASTIC AND TAPE).
11. PROTECTIVE CORROSION TAPE COATING (PRIMER, MASTIC AND TAPE) IS NOT REQUIRED ON VALVE BODIES.
12. SEE CONTRACT DRAWINGS FOR LOCATION, ORIENTATION OF 50mm AIR VALVE AND 100mm BLOW-OFF ON BOTH SIDES OF THE VALVE.
13. CHAMBER PIPING SHALL BE CONCRETE OR DUCTILE IRON CLASS 54.
14. WATERPROOF MEMBRANE SHALL BE APPLIED TO ROOF AND ALL CHAMBER WALLS PRIOR TO BACKFILLING.
15. APPROVED RESTRAINED COUPLING SHALL BE IN ACCORDANCE WITH THE APPROVED WATERMAIN PRODUCTS LIST.
16. ALL FLANGE BOLTS TO BE STAINLESS STEEL 316L.
17. ALL VALVES TO BE RESILIENT SEAT TO AWWA C509 FUSION BOUNDED EPOXY (FBE ANSINKST 61 APPROVED) SHOP COAT FINISH ON INTERIOR AND EXTERIOR OF VALVE TO AWWA C550.
18. EXTERIOR AND INTERIOR OF ALL STEEL (NOT STAINLESS STEEL) PIPE SHALL BE LIQUID EPOXY COATED TO AWWA C210.

PRECAST CONCRETE POURED IN PLACE CONCRETE GROUT

City of Hamilton Public Works Department				
PRECAST VALVE CHAMBER FOR 450mm, 500mm AND 600mm DIA. CONCRETE PIPE OR DUCTILE IRON PIPE				
DIMENSIONS SHOWN ARE IN MILLIMETERS UNLESS OTHERWISE NOTED	DATE JUNE, 2019	REV No. 4	FORMERLY RWS-324	HAMILTON STD No. WM-231