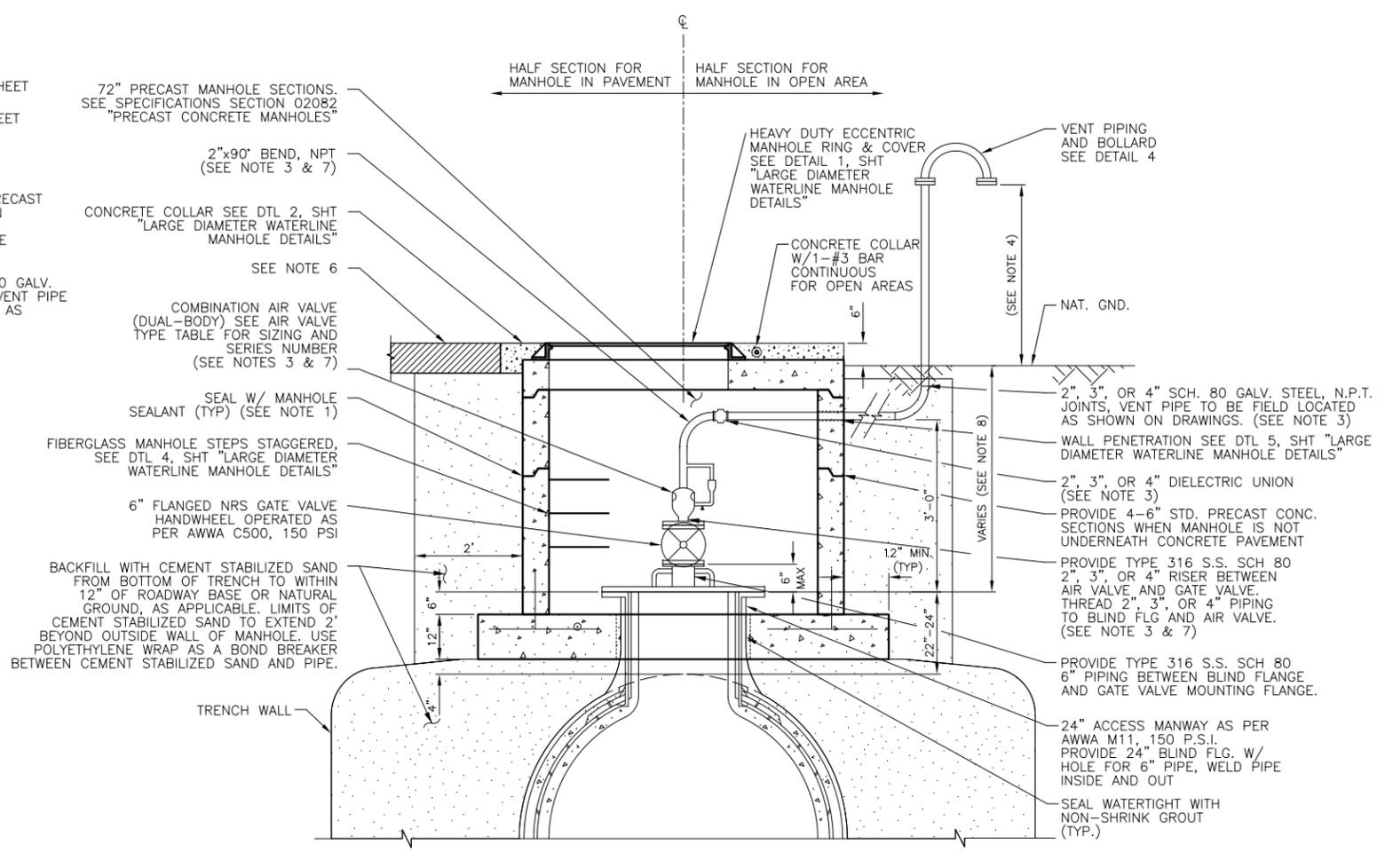
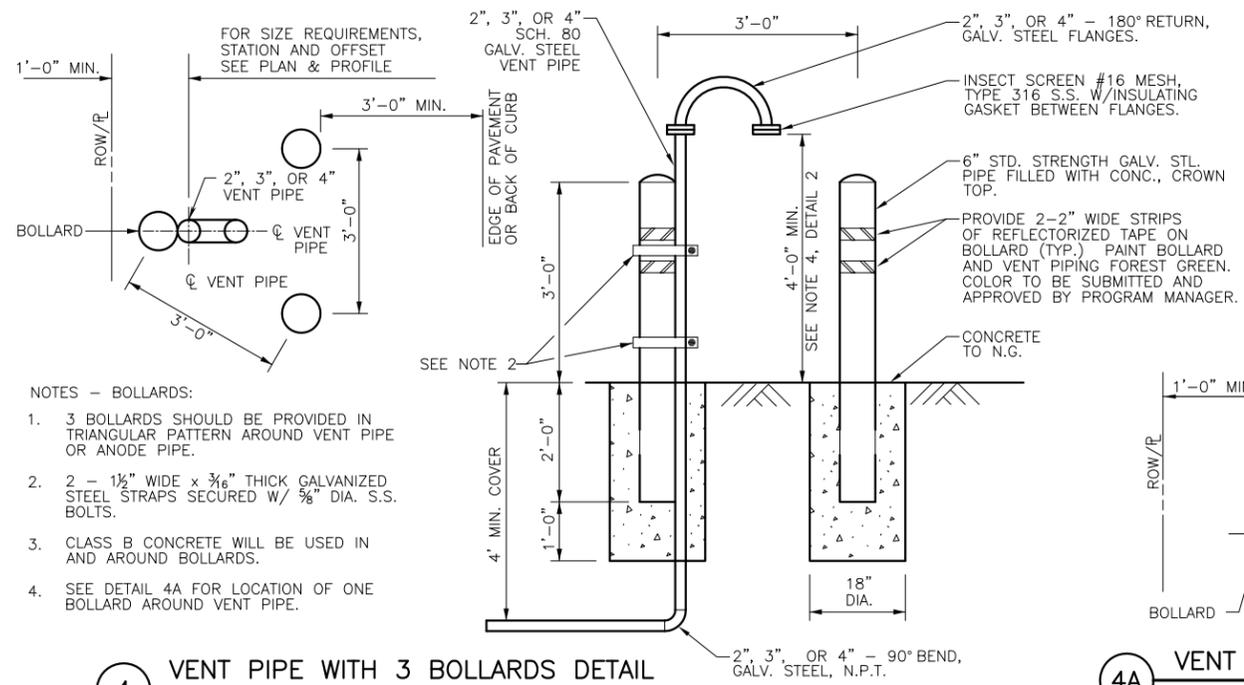


1 LOW PROFILE AIR VALVE ASSEMBLY
(FOR WATER LINES 36-INCH TO 90-INCH DIAMETER)



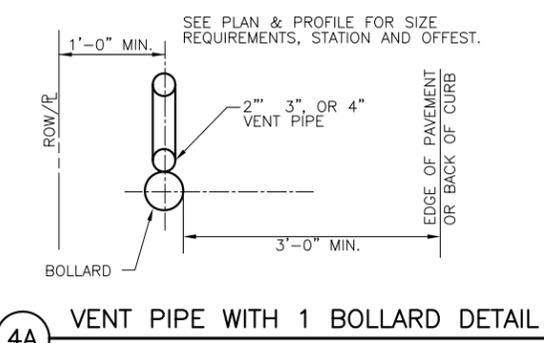
2 AIR VALVE ASSEMBLY WITH ACCESS MANWAY IN SERVICE MANHOLE
(FOR WATER LINES 36-INCH TO 90-INCH DIAMETER)



4 VENT PIPE WITH 3 BOLLARDS DETAIL

WATER MAIN DIAMETER	MANUFACTURER (1)	VACUUM (AI/VR)		AIR RELEASE		
		SERIES	ORIFICE SIZE	SERIES	INLET SIZE (NPT)	ORIFICE SIZE (2)
>=36" <=96"	APCO	1500C		200A	1"	
	CLAVAL	38VB		34AR-C	1"	
	PRATT	WAVVB		WAR 02	1"	

3 AIR VALVE & TYPE TABLE
(FOR WATER LINES 36" TO 90" DIAMETER)



4A VENT PIPE WITH 1 BOLLARD DETAIL

- NOTES:
- (1) OR APPROVED EQUAL.
 - (2) MINIMUM ORIFICE SIZE REQUIRED. TO BE UPDATED FOR EACH PROJECT BASED ON TRANSIENT ANALYSIS.

- NOTES:
- PROVIDE RAM-NEK OR APPROVED EQUAL BETWEEN PRECAST SEGMENTS OF THE MANHOLE.
 - FOR MANHOLES DEEPER THAN 20 FEET, SAFETY CLIMBING RAIL MUST BE PROVIDED (SAF-T-CLIMB OR APPROVED EQUAL).
 - PIPING AND APPURTENANCES OF THE SAME DIAMETER AND CONSTRUCTED OF THE SAME MATERIAL AND CLASS.
 - VERIFY THAT LOCATION OF VENT PIPE SCREEN IS 1 FOOT ABOVE 100-YEAR FLOOD PLAIN ELEVATION OR 4 FEET ABOVE NATURAL GROUND WHICHEVER IS HIGHER.
 - REFER TO PLAN AND PROFILE SHEETS FOR LOCATIONS OF AIR VALVES.
 - FOR PAVEMENT REPAIR, SEE SHEET "EXCAVATION, BEDDING, AND BACKFILL DETAILS".
 - PROVIDE AN APPROVED PETROLATUM BASED TAPE ENCAPSULATING ALL BOLTS IN ACCESS MANHOLE.
 - IF DEPTH OF COVER IS LESS THAN 5', USE "LOW PROFILE AIR VALVE ASSEMBLY DETAIL"

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

**STANDARD LDWL
AIR VALVE & MANHOLE DETAILS**

SHEET 1 OF 2 (NOT TO SCALE)

APPROVED BY:	APPROVED BY:
CITY ENGINEER	DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: NOV-10-2016	DWG NO: