

# STERICYCLE VAPOR MITIGATION SYSTEM

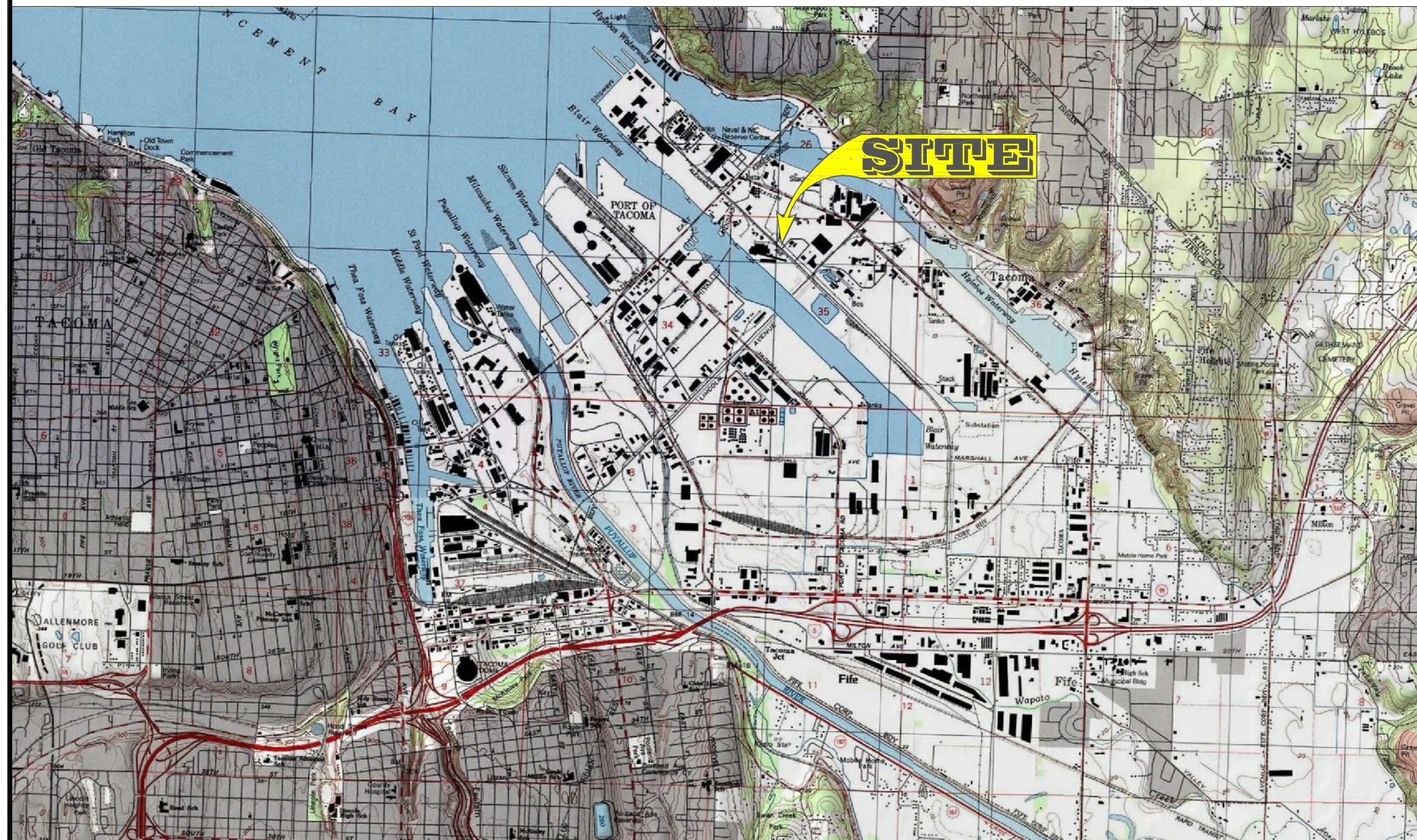
## 1701 ALEXANDER AVE E, TACOMA WA 98421



Amec Foster Wheeler  
Environment &  
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7376 S.W. Durham Road  
Portland, OR 97224

TITLE SHEET

### VICINITY MAP



### AERIAL PHOTO



### INDEX OF DRAWINGS

SHEET NUMBER	DESCRIPTION
ENV-0	TITLE SHEET
ENV-1	VAPOR MITIGATION SYSTEM PIPING LAYOUT
ENV-2	VAPOR MITIGATION SYSTEM TYPICAL SECTIONS
ENV-3	VAPOR MITIGATION SYSTEM VAPOR BARRIER LINER DETAILS
ENV-4	VAPOR MITIGATION SYSTEM VAPOR BARRIER LINER DETAILS
ENV-5	VAPOR MITIGATION SYSTEM EXTERIOR EXHAUST PIPING

### MATERIALS SCHEDULE

- ① 3/4" - 1-1/2" CLEAN CRUSHED ROCK
- ② COMPACTED FILL
- ③ STRUCTURAL SUBGRADE PER ORIGINAL DESIGN
- ④ RAVEN INDUSTRIES ABSOLUTE BARRIER X40BAL GEOLINER (40-MIL HPDE LINER)
- ⑤ AGRU AMERICA AGRUTEX 321 GEOFABRIC
- ⑥ CONCRETE
- ⑦ PEA GRAVEL
- ⑧ CONTROLLED DENSITY FILL (CDF)

ENGINEER STAMP

REV	DATE	MONTH	YEAR	DESCRIPTION	BY	CHKD

STERICYCLE  
VAPOR MITIGATION SYSTEM

DATE	AUGUST 2016
PROJECT NO.	0100480050.00003
SHEET	ENV-0
	SHEET 1 of 6

DRAWN BY: [Name]

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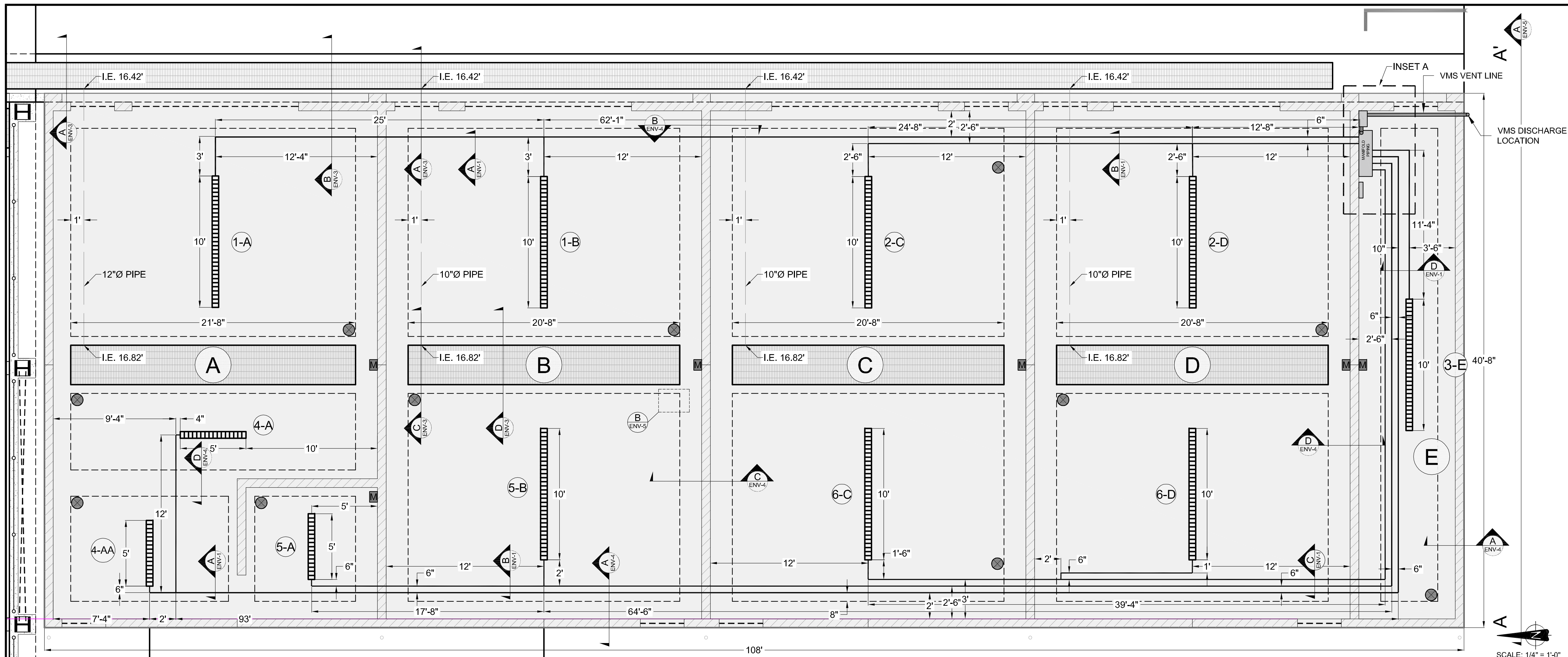
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VAPOR  
MITIGATION  
SYSTEM PIPING  
LAYOUT

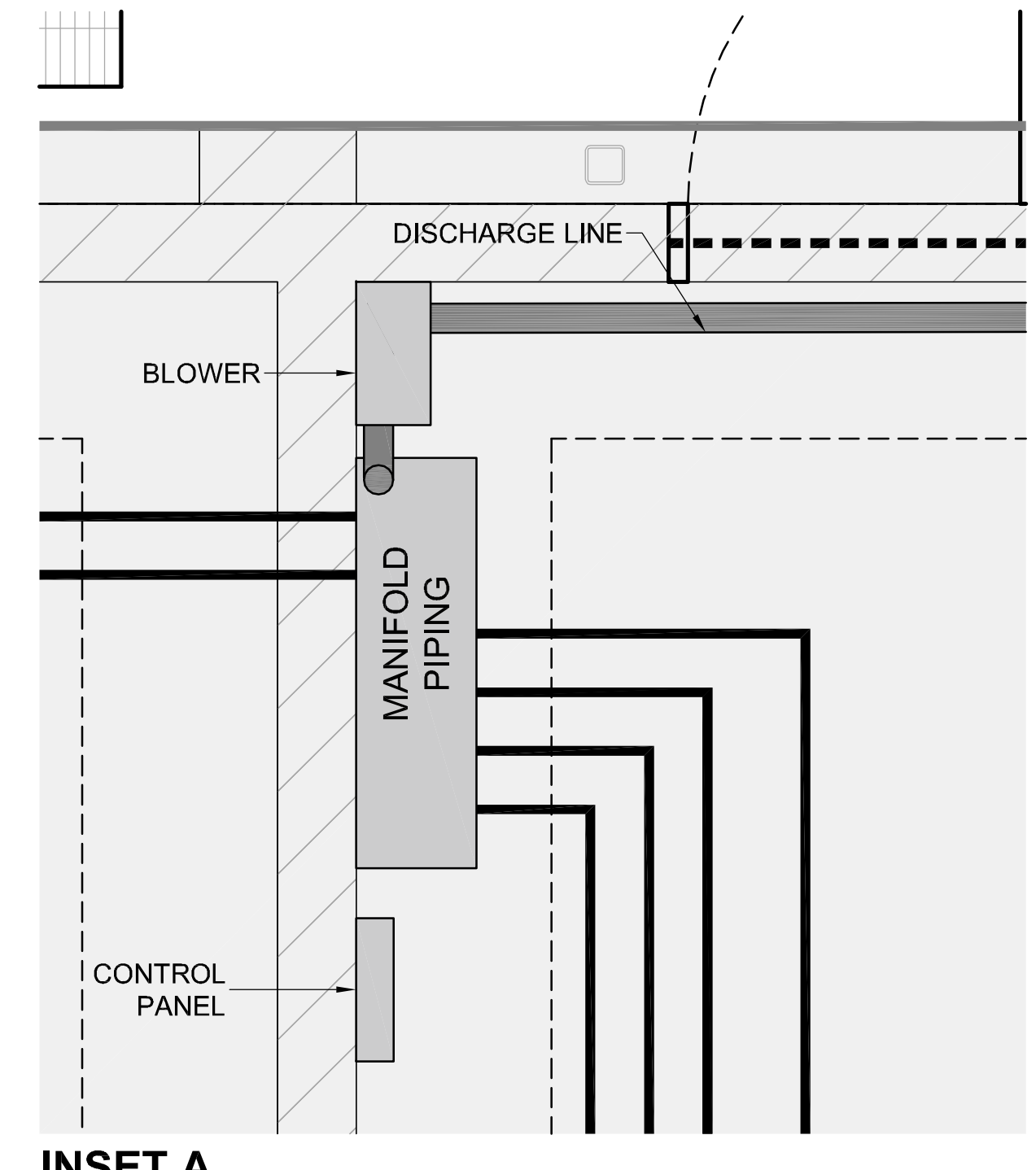
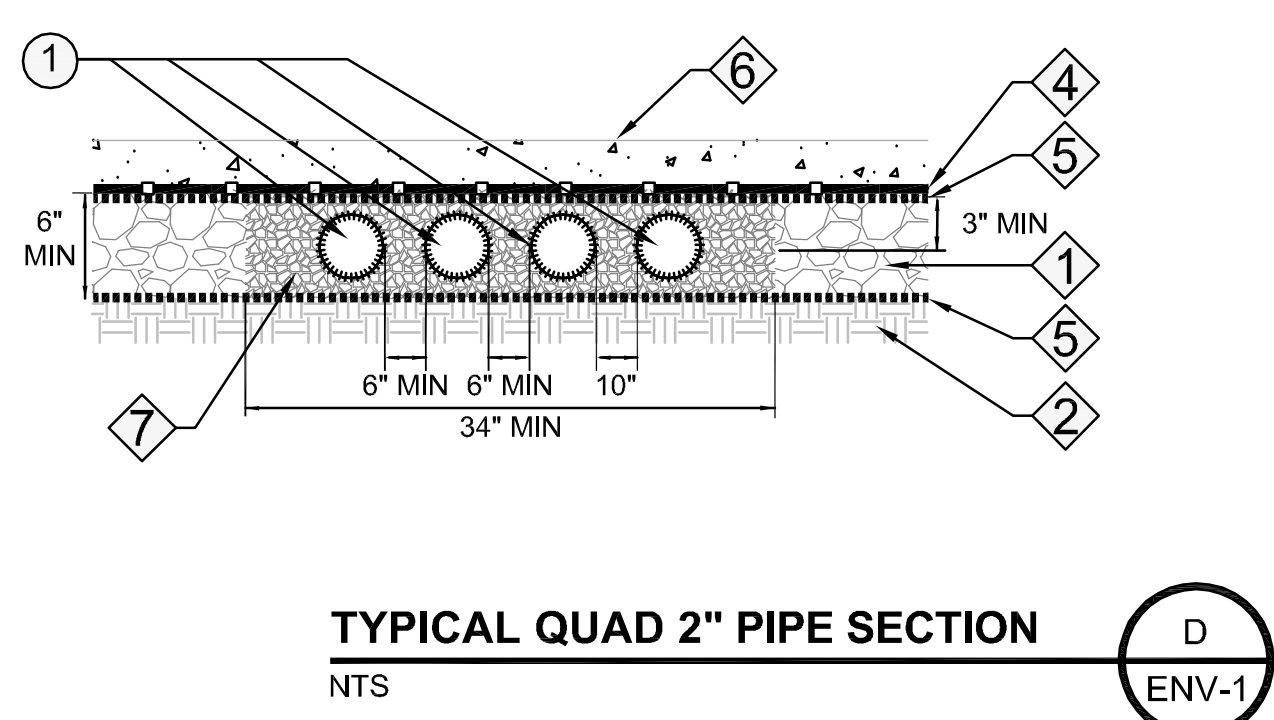
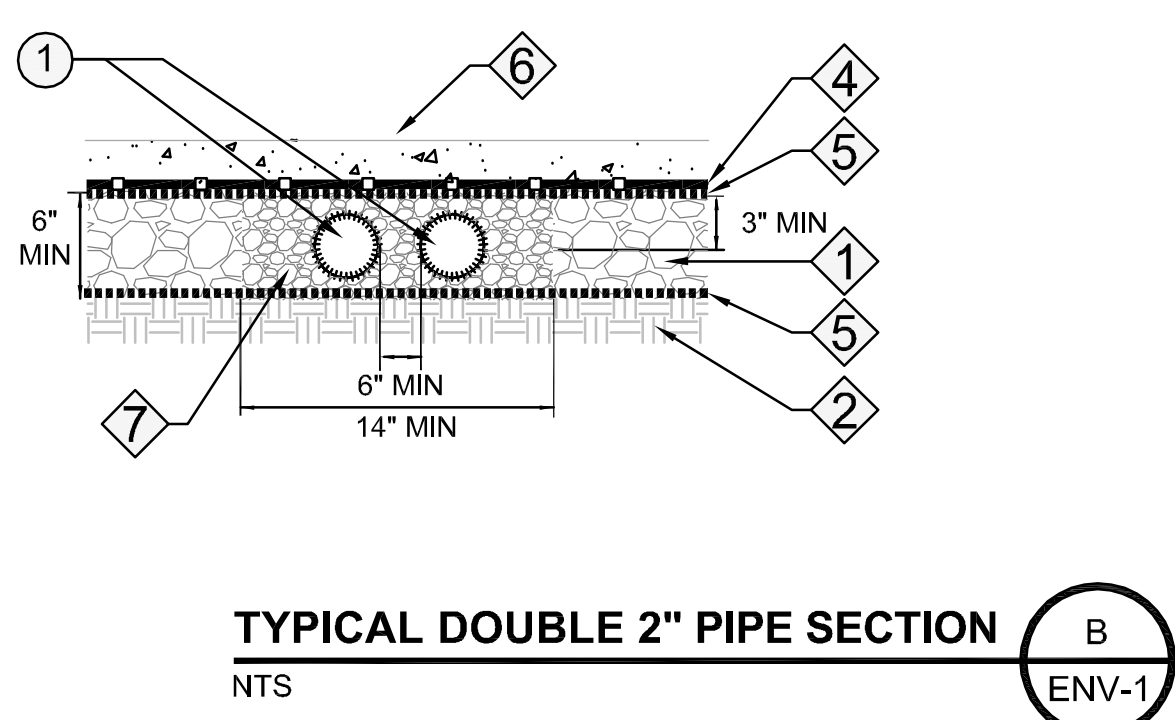
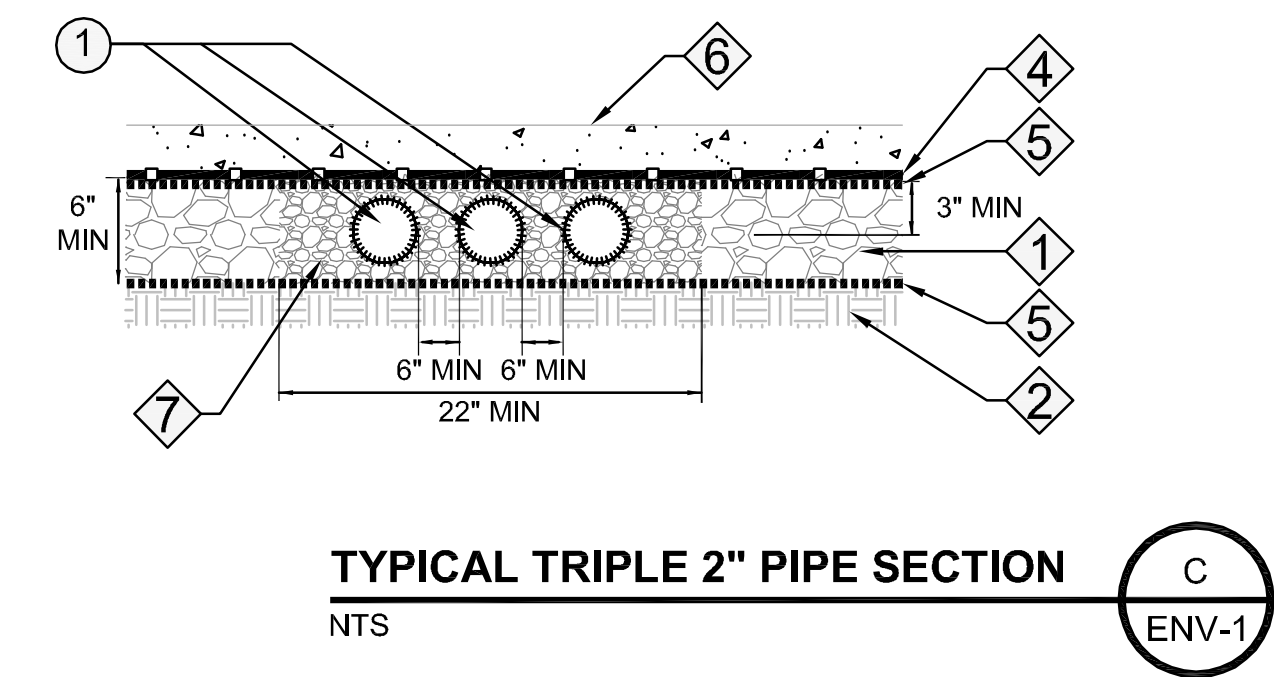
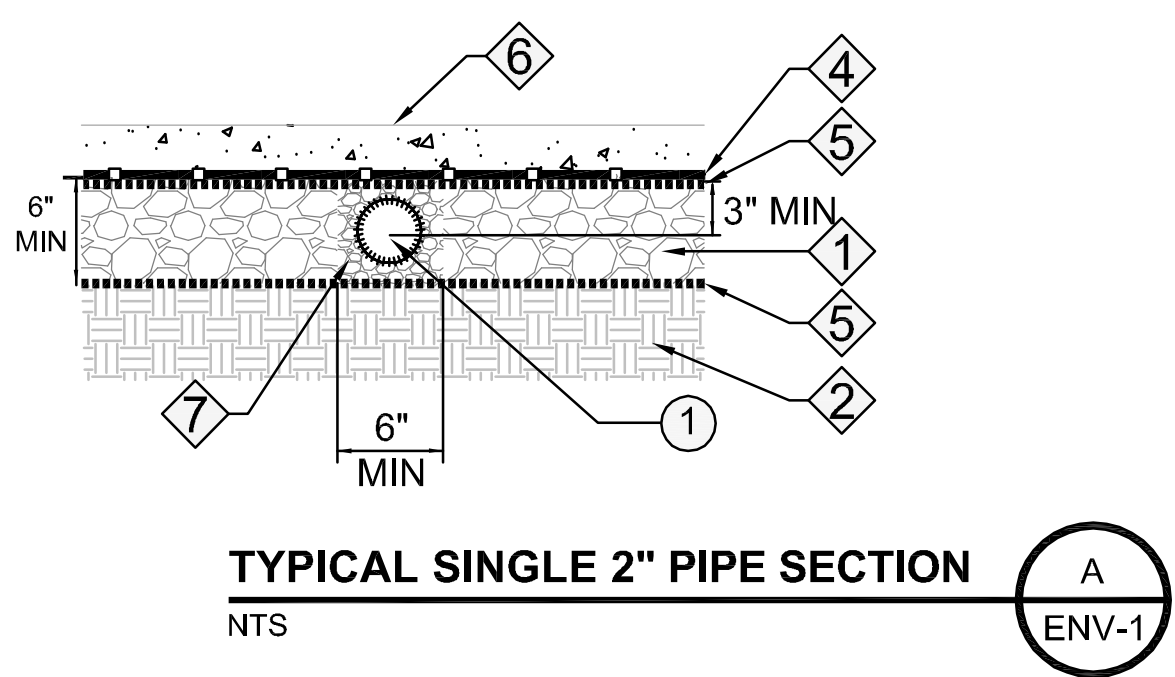
ENGINEER STAMP

REV	DATE	MONTH	YEAR	REVISION DESCRIPTION	ENG. APPROV.



SCALE: 1/4" = 1'-0"  
(WHEN PLOTTED AT FULL SCALE (34"x22"))

- LEGEND**
- 2" SCH. 40 PVC PIPE
  - 2" SCH. 40 PVC 0.02" SLOTTED PIPE SCREEN WITH END CAP
  - EXTENT OF VAPOR BARRIER LINER COVERAGE (SEE ENV-3 AND ENV-4 FOR CONSTRUCTION DETAILS)
  - VAPOR MITIGATION ZONE
  - METHANE GAS SENSOR
  - VMS MONITORING PORT (LOCATION CAN MOVE WITHIN CELL IF CURRENT LOCATION INTERFERES WITH SITE OPERATIONS)



**DRAFT**

STERICYCLE  
VAPOR MITIGATION SYSTEM

DATE	AUGUST 2016
PROJECT NO.	0100480050.00003
SHEET	ENV-1
	SHEET 2 of 6



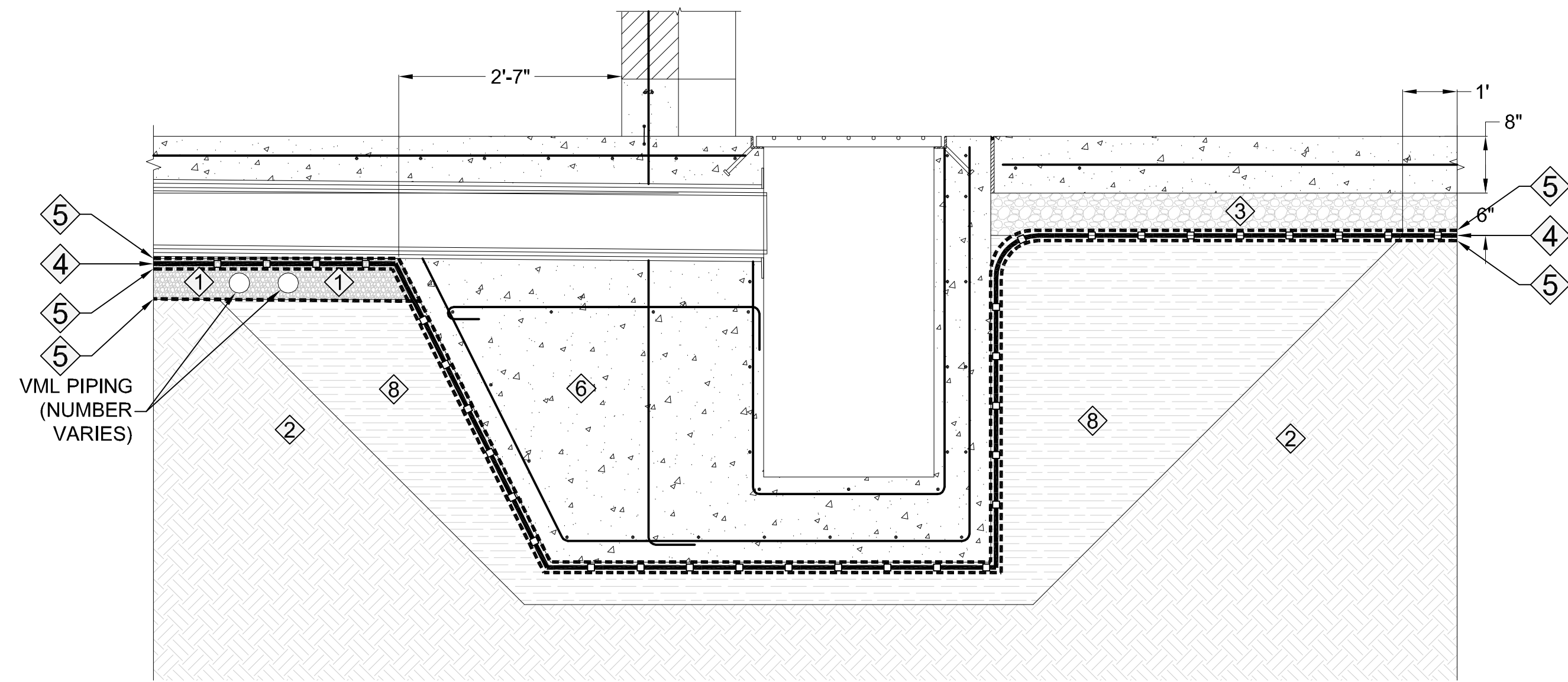




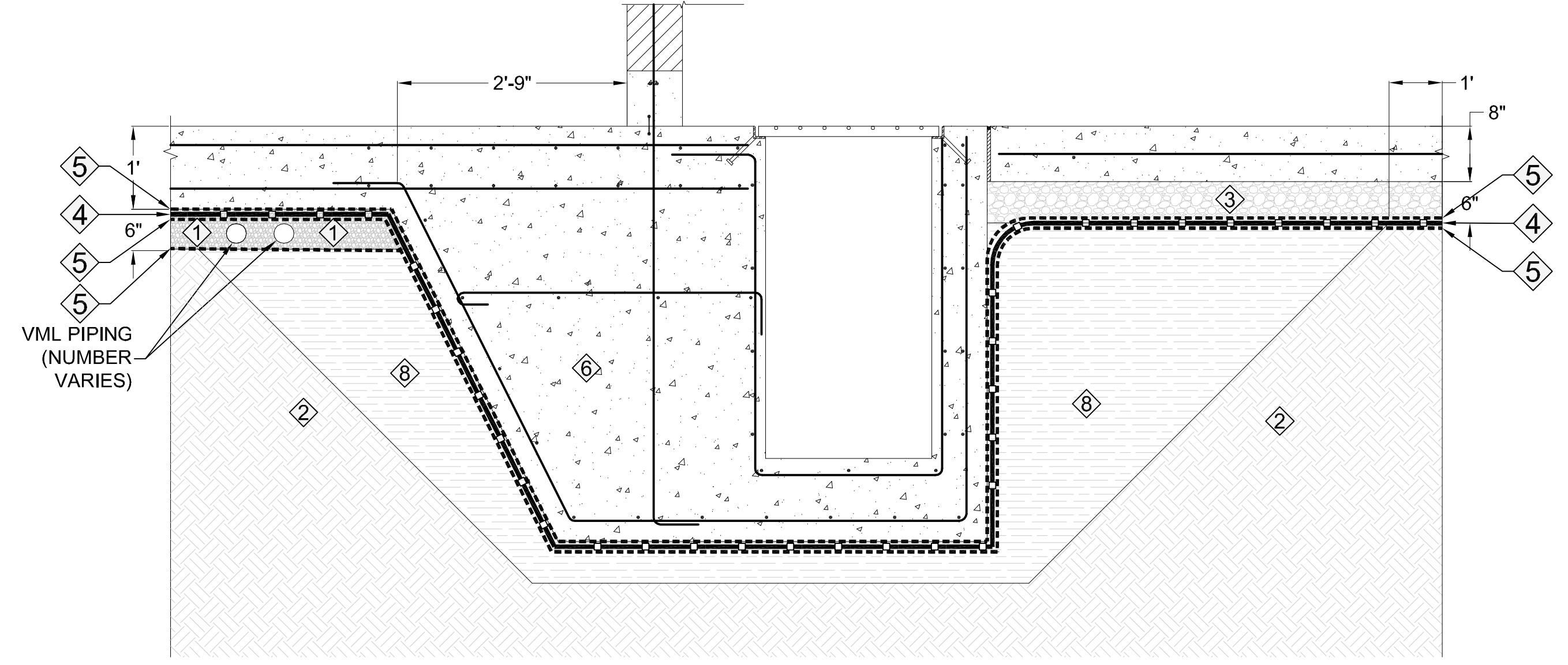
VAPOR  
MITIGATION  
SYSTEM VAPOR  
BARRIER LINER  
DETAILS

ENGINEER STAMP

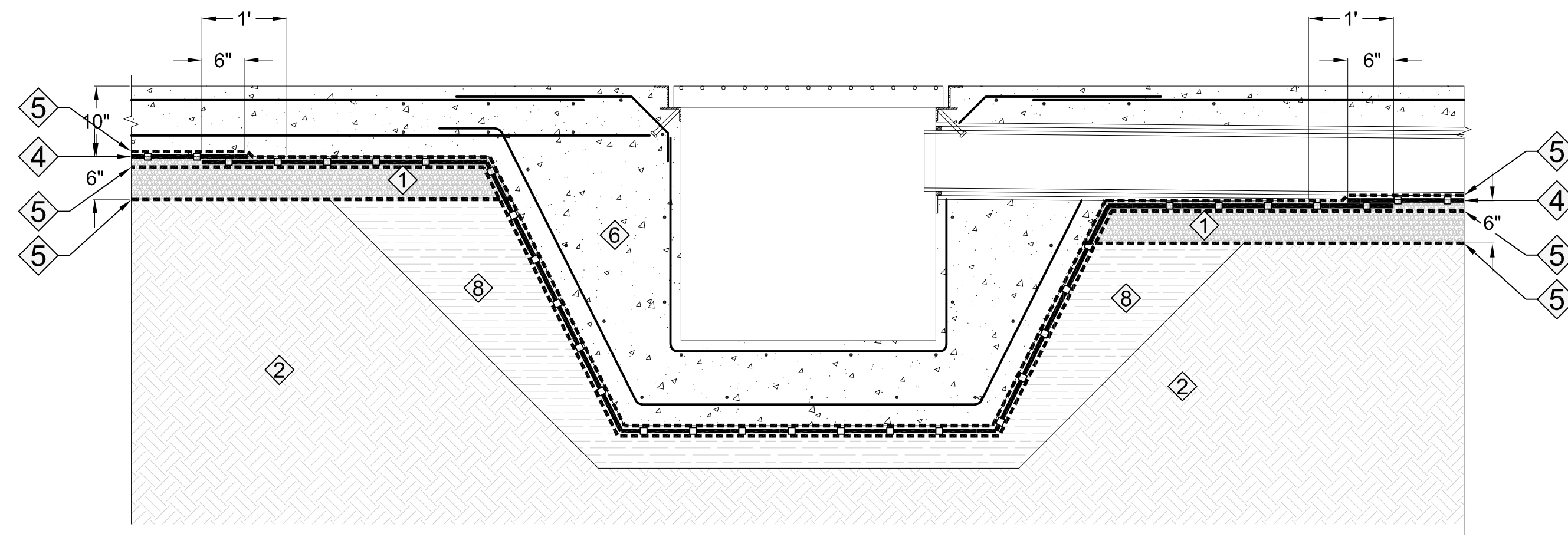
REV	DATE	DESCRIPTION



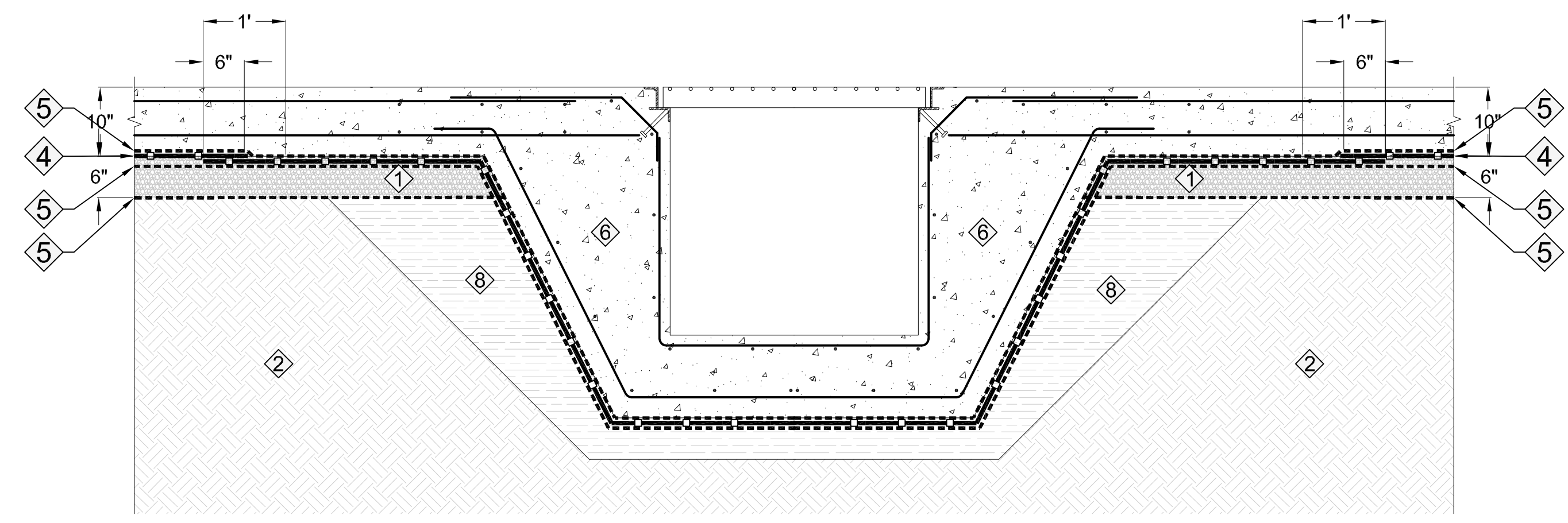
**CONCRETE TRENCH DRAIN AT LAB PACK** A  
NTS ENV-3



**CONCRETE TRENCH DRAIN AT LAB PACK WITHOUT OVERFLOW LINE** B  
NTS ENV-3



**TRENCH AT LAB PACK** C  
NTS ENV-3



**TRENCH AT LAB PACK WITHOUT OVERFLOW LINE** D  
NTS ENV-3

STERICYCLE  
VAPOR MITIGATION SYSTEM

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DATE	AUGUST 2016
PROJECT NO.	0100480050.00003
SHEET	ENV-3
	SHEET 4 of 6

DRAWING NUMBER: ENV-3

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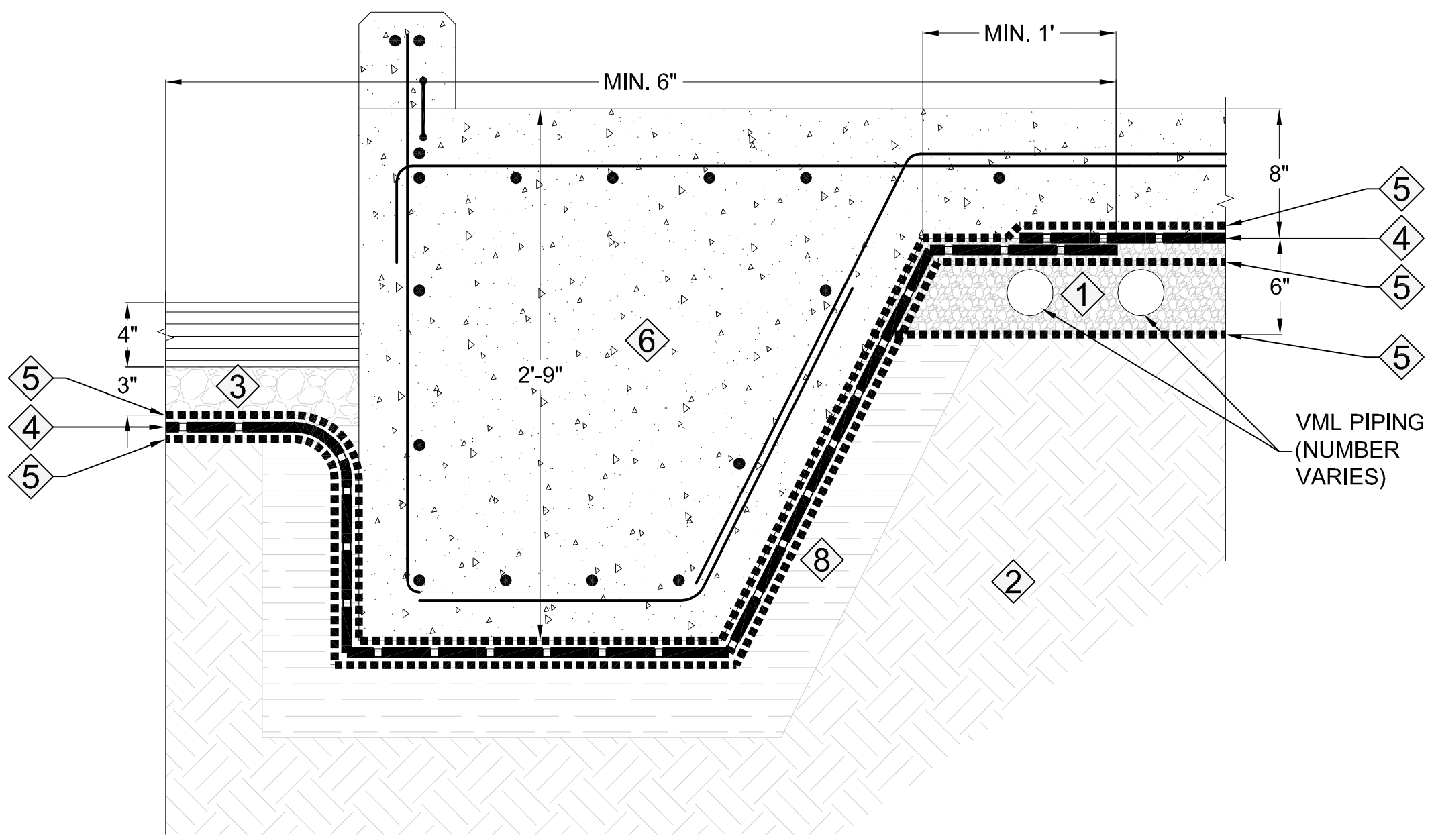


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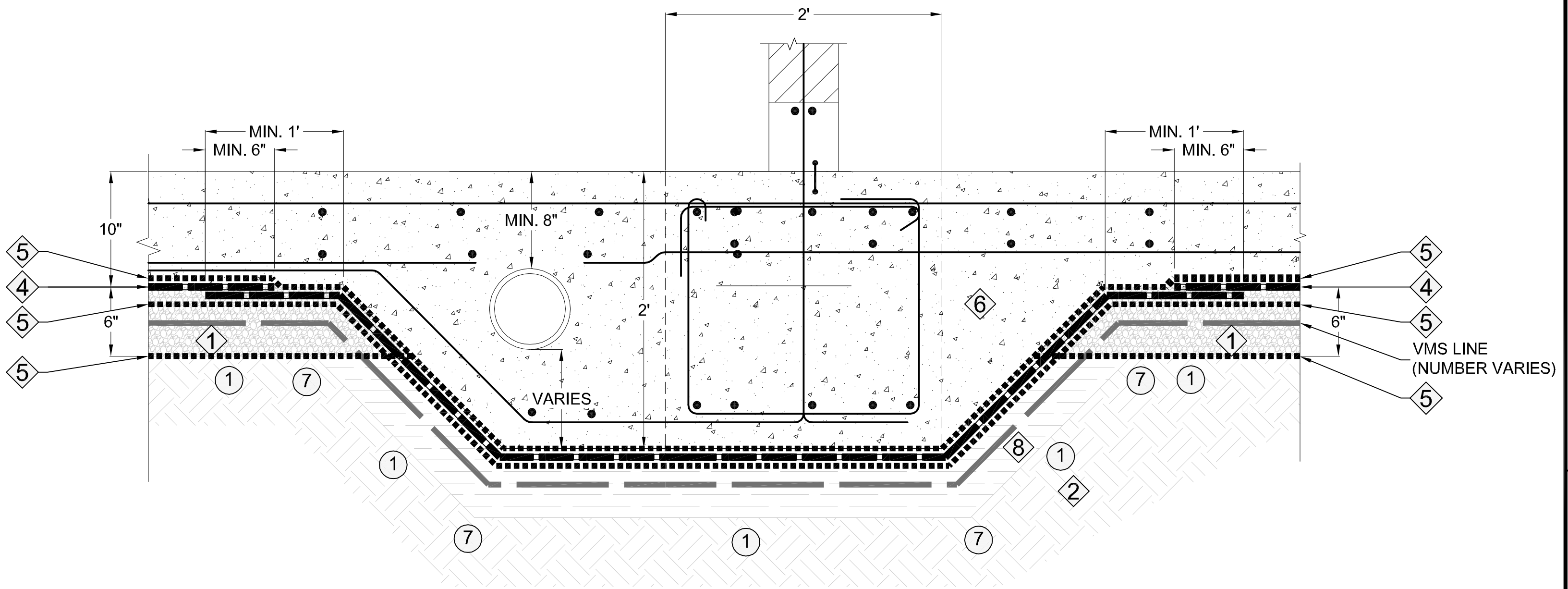
# VAPOR MITIGATION SYSTEM VAPOR BARRIER LINER DETAILS

ENGINEER STAMP

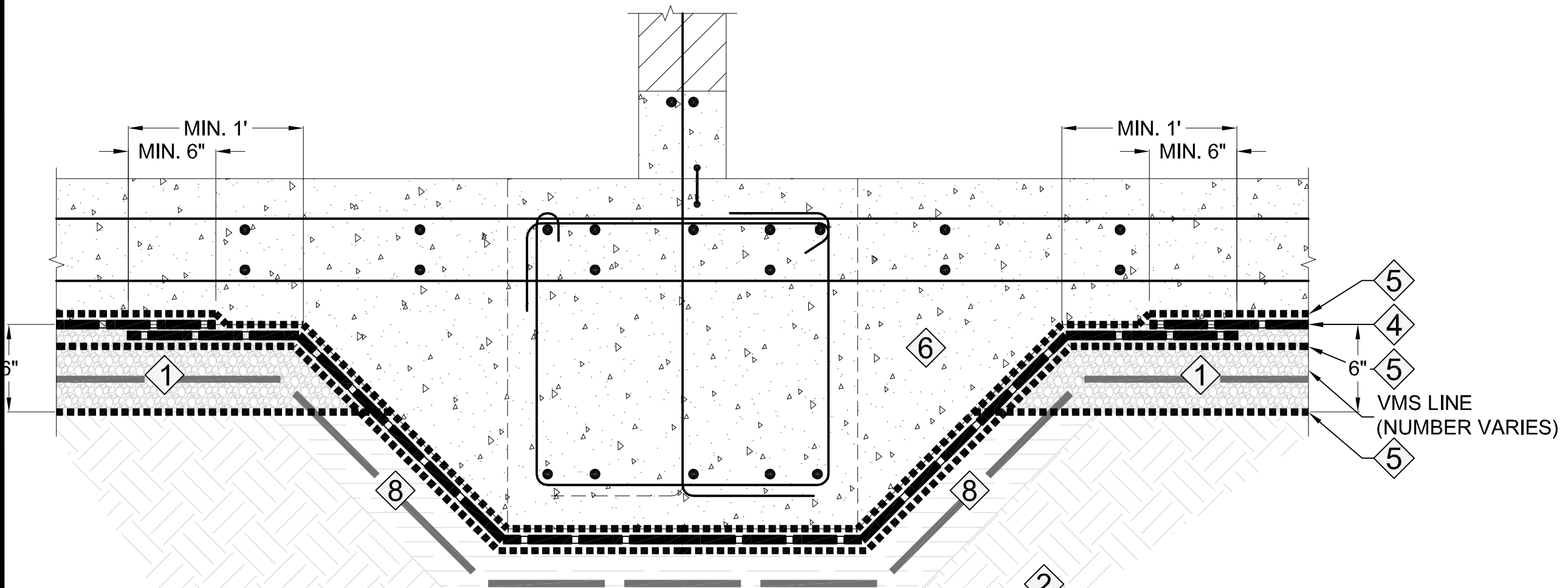
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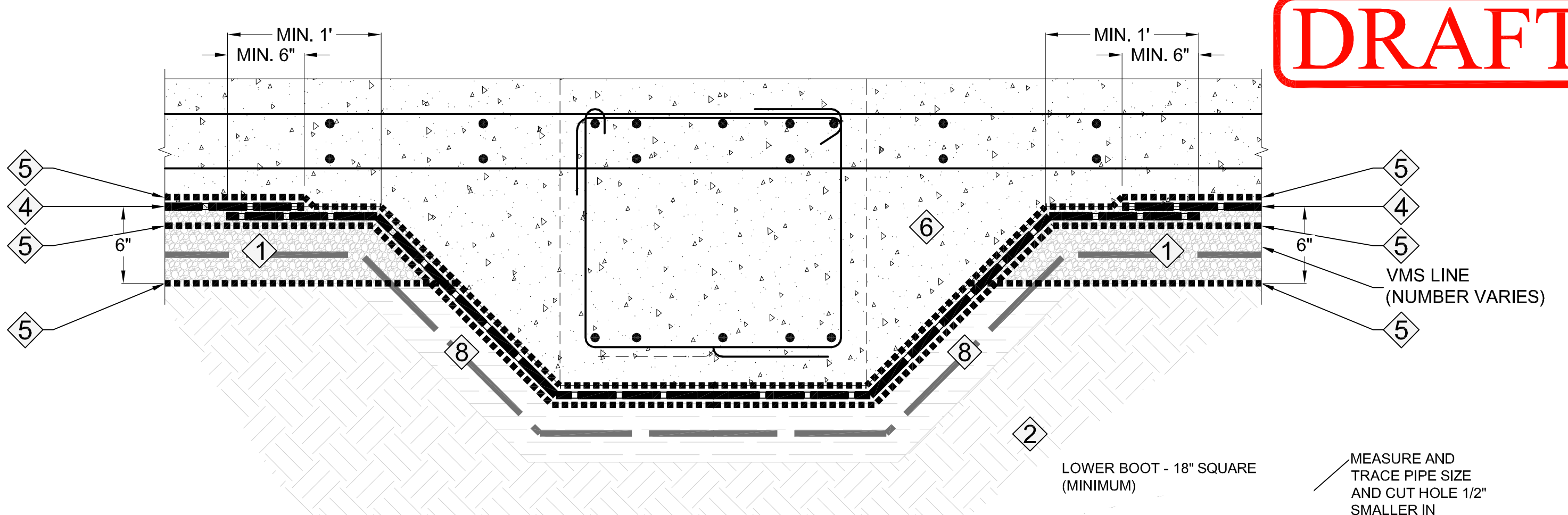
**EXTERIOR CONCRETE GRADE BEAM** A ENV-4 NTS



**INTERIOR CONCRETE GRADE BEAM** B ENV-4 NTS

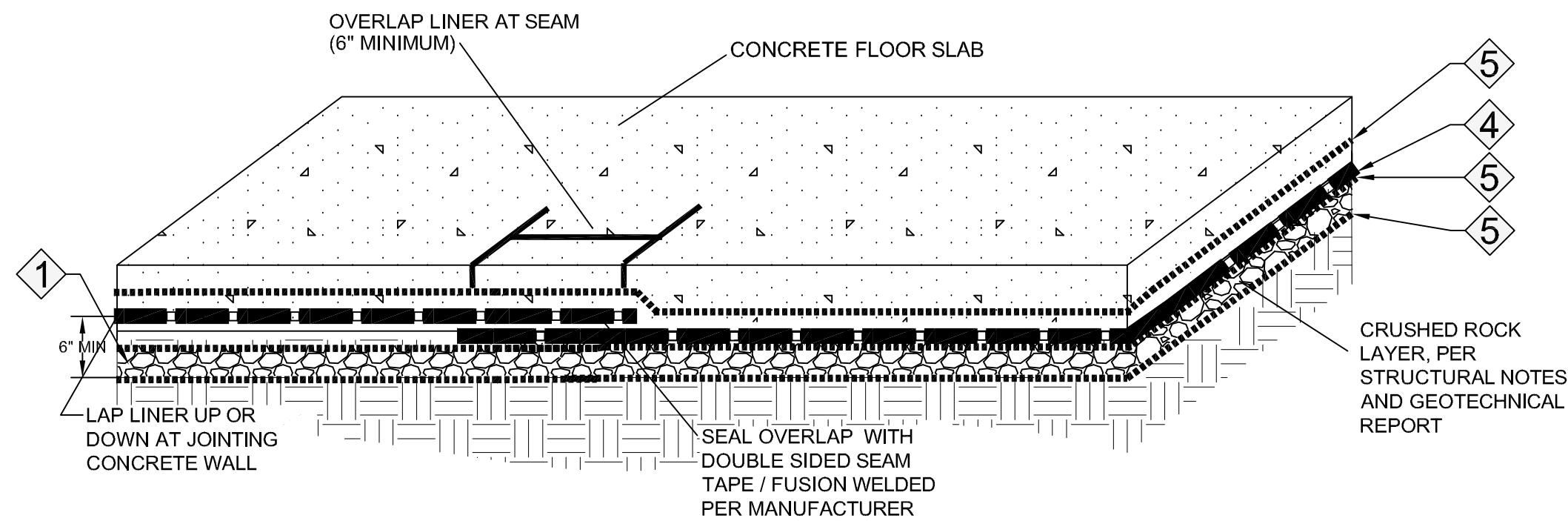


**INTERIOR CONCRETE GRADE BEAM** C ENV-4 NTS

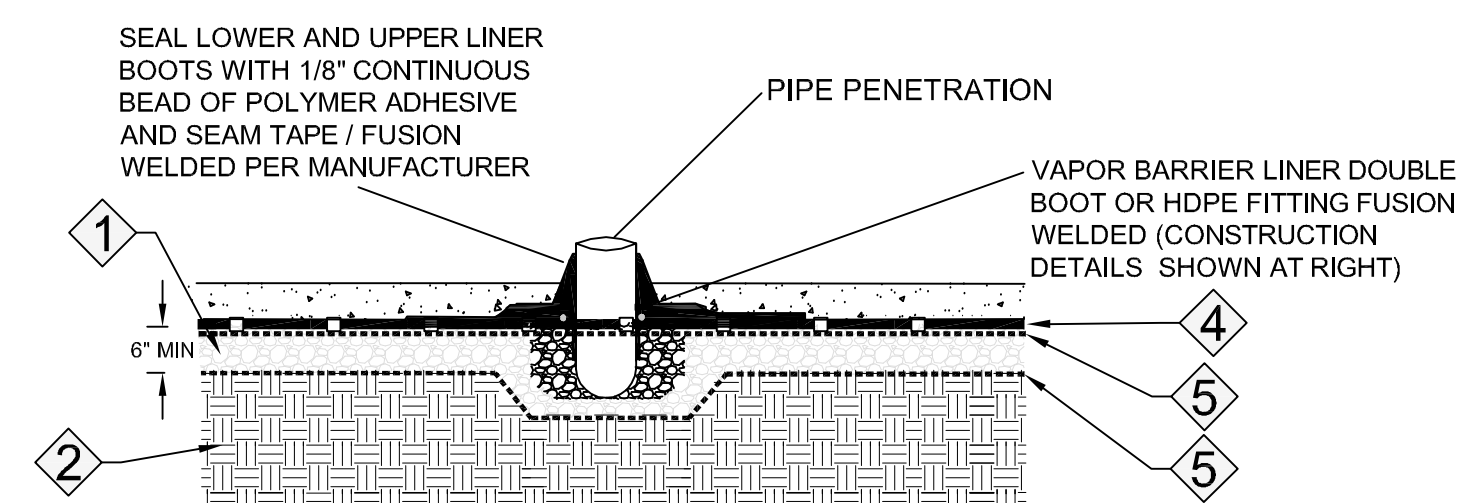


**INTERIOR CONCRETE GRADE BEAM** D ENV-4 NTS

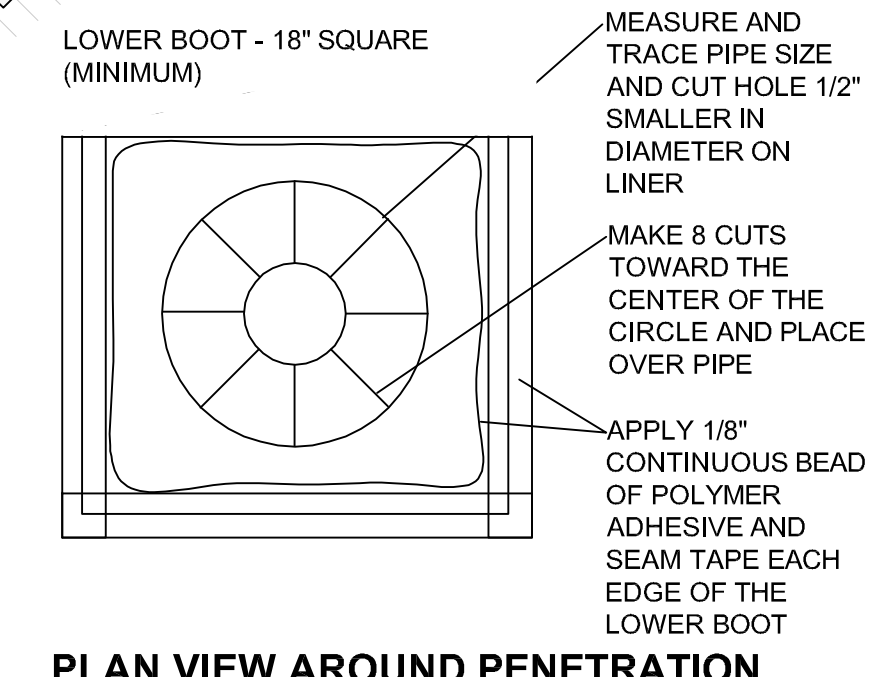
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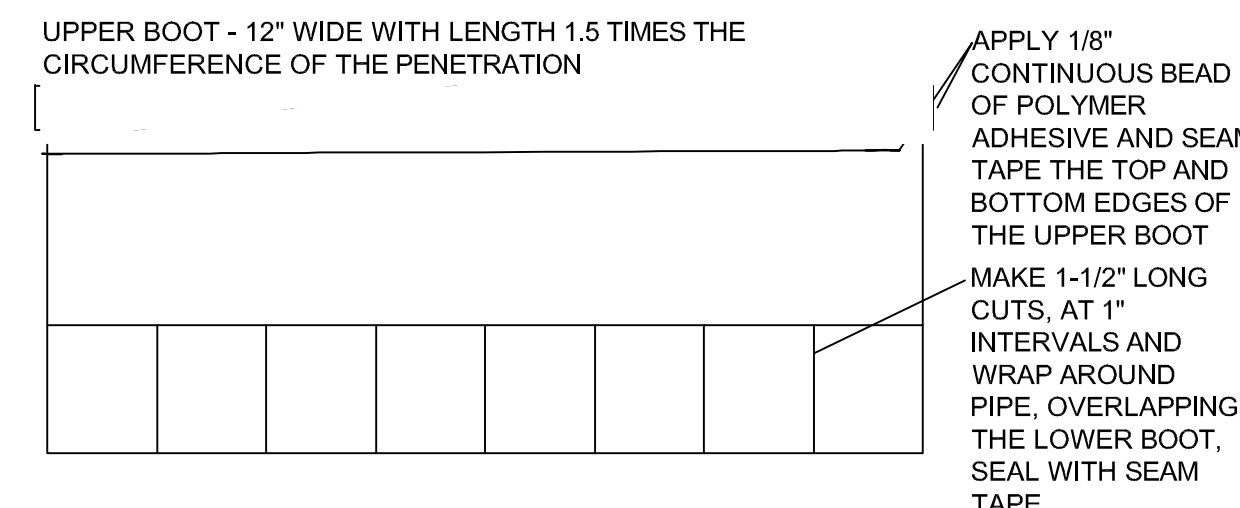
**VAPOR BARRIER BELOW SLAB** E ENV-4 NTS



**TYPICAL VAPOR BARRIER SEALING WITH PENETRATION** F ENV-4 NTS



PLAN VIEW AROUND PENETRATION



**VAPOR BARRIER LINER DOUBLE BOOT CONSTRUCTION** G ENV-4 NTS

NOTE: USE MANUFACTURER HDPE PENETRATION FOR FUSION WELDING, AS REQUIRED BY MANUFACTURER INSTALLATION REQUIREMENTS

**STERICYCLE VAPOR MITIGATION SYSTEM**

DATE AUGUST 2016  
PROJECT NO. 0100480050.00003  
SHEET ENV-4  
SHEET 5 of 6



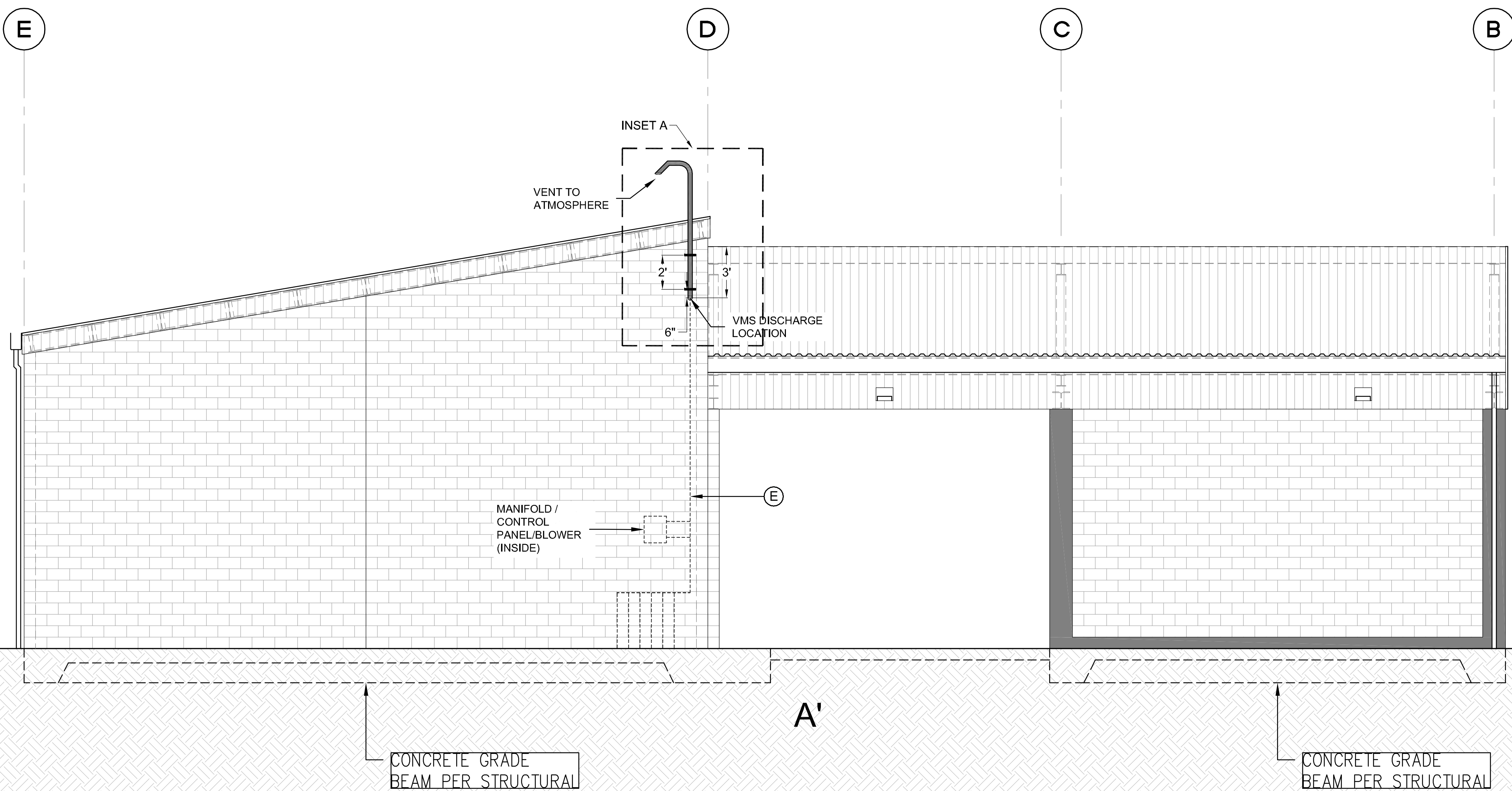


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### VAPOR MITIGATION SYSTEM EXTERIOR EXHAUST PIPING

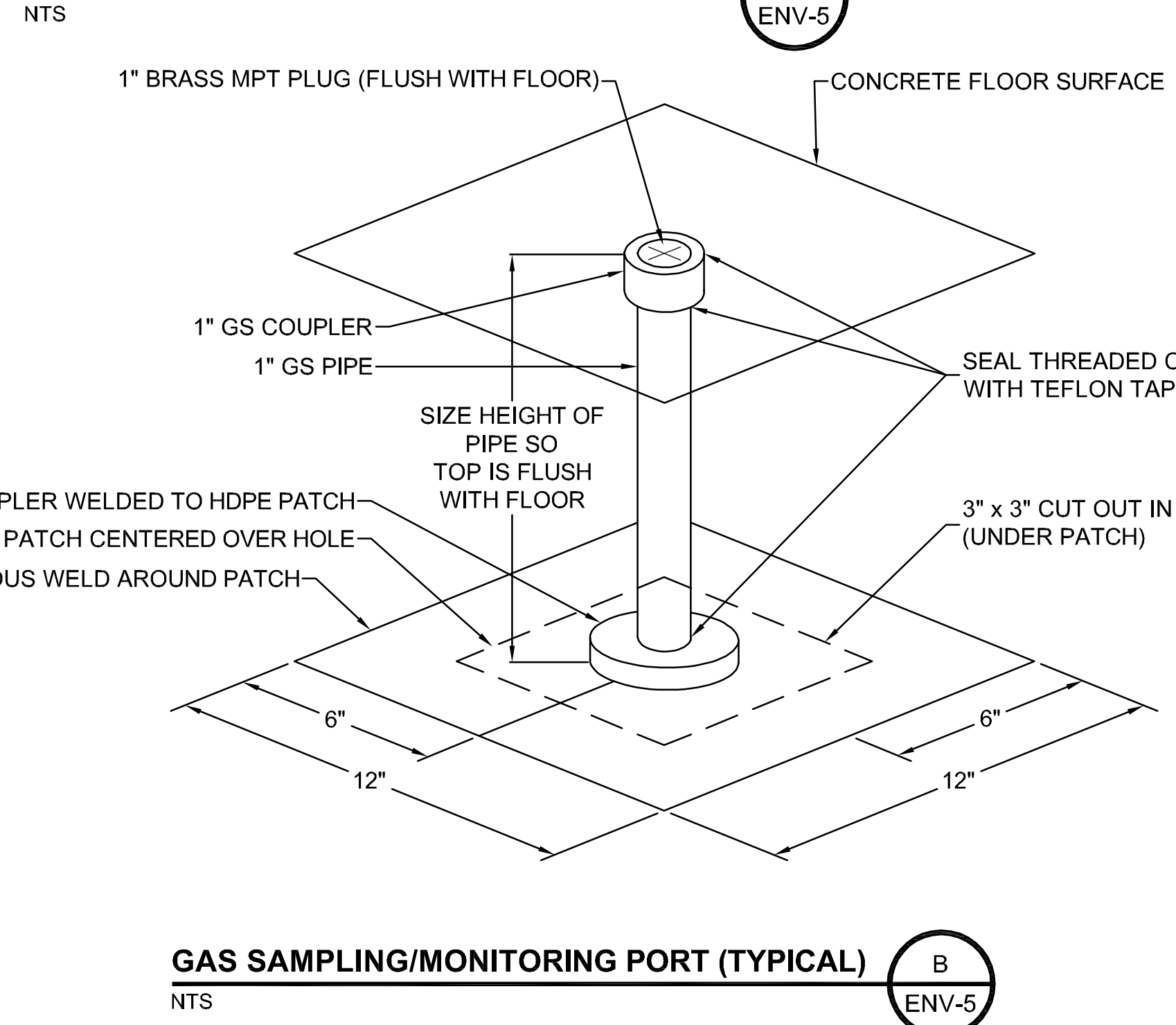
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(WHEN PLOTTED AT FULL SCALE (34"x22"))

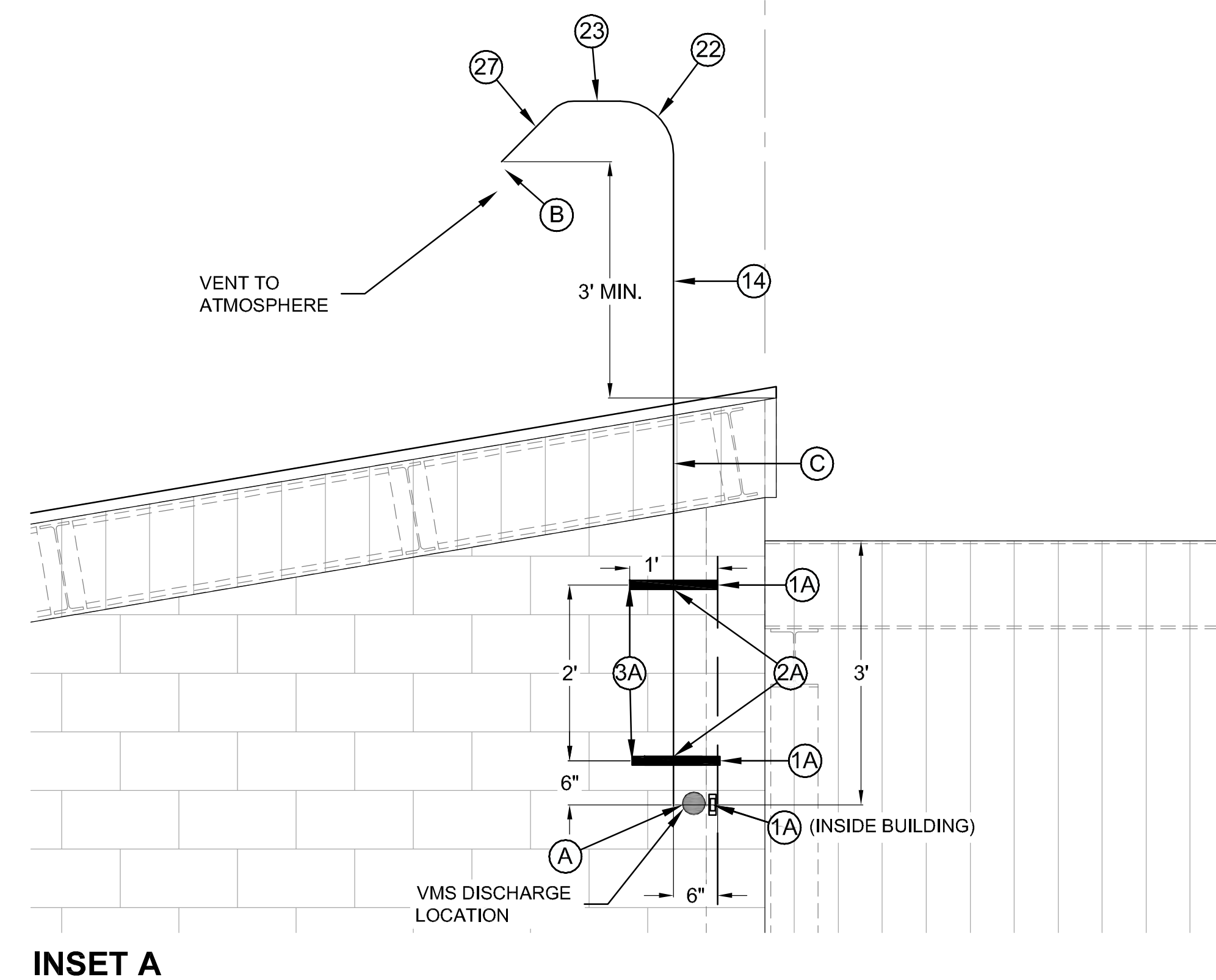


**DRAFT**

#### EXTERIOR VIEW OF VMS DISCHARGE VENT



**GAS SAMPLING/MONITORING PORT (TYPICAL)**



**INSET A**

#### NOTES

- (A) 3" GS PIPE SHALL PENETRATE OUTER WALL AND BE SEALED WITH NON-SHRINKING GROUT.
- (B) DISCHARGE SHALL POINT SOUTH DESPITE AS SHOWN
- (C) VENT EXHAUST OPENING SHALL BE A MINIMUM OF 15-FT LATERALLY FROM ALL HVAC INTAKES AND ANY ELECTRICAL SYSTEMS.
- (D) PLACE VERTICAL LINE ALONGSIDE EDGE OF ROOF.
- (E) INSTALL PLACARDS EVERY 5' ON PIPE WITH PLACARD @ 3" X 4" WIDE WITH 3/8" HIGH BLACK LETTERS

**CAUTION**  
METHANE GAS IN PIPE  
NO SMOKING  
OR ELECTRICAL  
EQUIPMENT WITHIN 10'  
**PIPE PLACARD**

#### MATERIALS SCHEDULE

- (1A) STANDARD C-CHANNEL STRUT (ZINC PLATED)
- (2A) 3" ZINC PLATED PIPE CLAMP
- (3A) STRUCT FIXED TO WALL WITH CONCRETE ANCHOR BOLTS/EPOXY OR OTHER APPROVED ANCHOR BOLT DEVICE.

### STERICYCLE VAPOR MITIGATION SYSTEM

DATE	AUGUST 2016
PROJECT NO.	0100480050.00003
SHEET	ENV-5 SHEET 6 of 6

DRAWN BY: M. GARDNER

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