

HAMPTON ROADS SANITATION DISTRICT



PROJECT TITLE

CIP NUMBER

(LOCATION: CITY/COUNTY & STATE)

DATE (MONTH & YEAR)

LEGEND
(ON SEPARATE PAGE FOR
LARGE PROJECTS)

VICINITY
MAP

MAP SCALE

LOCATION
MAP

MAP SCALE

INDEX TO DRAWINGS
(ON SEPARATE PAGE FOR
LARGE PROJECTS)

ENGINEER'S NAME/LOGO/CONTACT

RESERVE SPACE FOR DRAWING
ADDITION OF: CONTRACTOR, NAME &
OTHER INFORMATION AS REQUIRED
(PIPE MANUFACTURER, ETC.)

VERTICAL DATUM:

ENGINEER'S
SEAL



STANDARD DESIGN DETAIL

STANDARD COVER SHEET

DRAWING NO.
100

SHEET
1 OF 1

DATE
7/2025

PAINT SAFETY YELLOW
TYP. ALL BOLLARDS

6" Ø, SCHEDULE 80
STEEL PIPE FILLED
WITH CONCRETE

FINISHED GRADE

POURED CONCRETE
(3,500 P.S.I.)

#5 BAR, 12" LONG
THROUGH PIPE

1" ROUNDING OF CONCRETE

SLOPE TO
DRAIN

3'-6"

4'-0"

6"

1'-6" SQ.

NOT TO SCALE



STANDARD DESIGN DETAIL

EXTERIOR BOLLARD DETAIL

DRAWING NO.

101

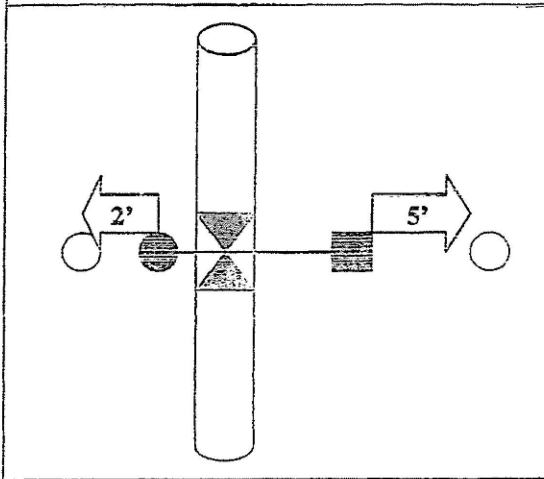
SHEET

1 OF 1

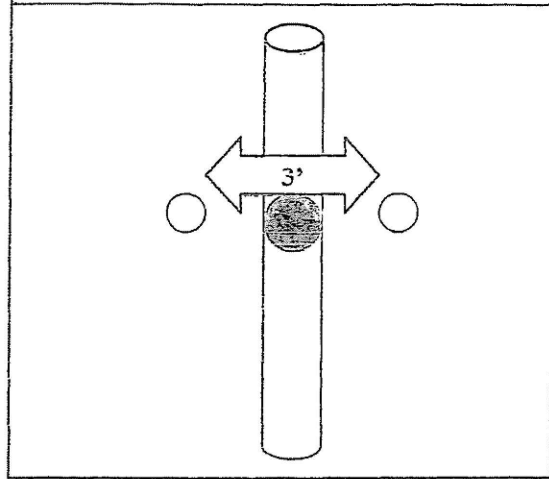
DATE

7/2025

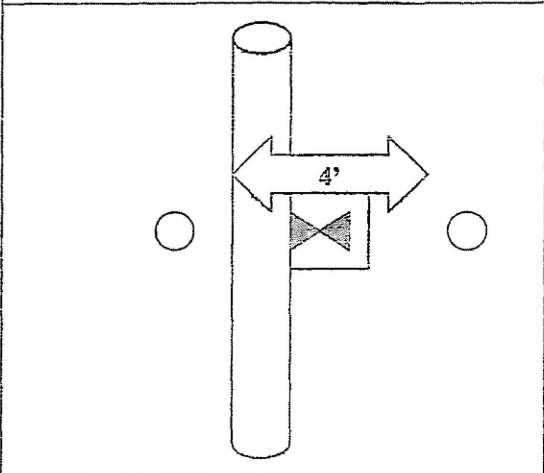
Main Line valve in agricultural area



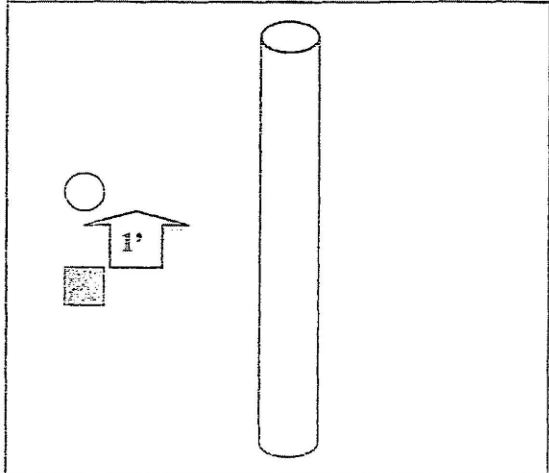
Air Vent in agricultural area



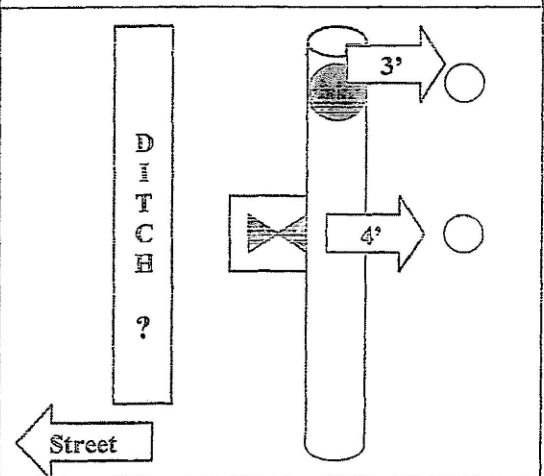
Branch valve in agricultural area



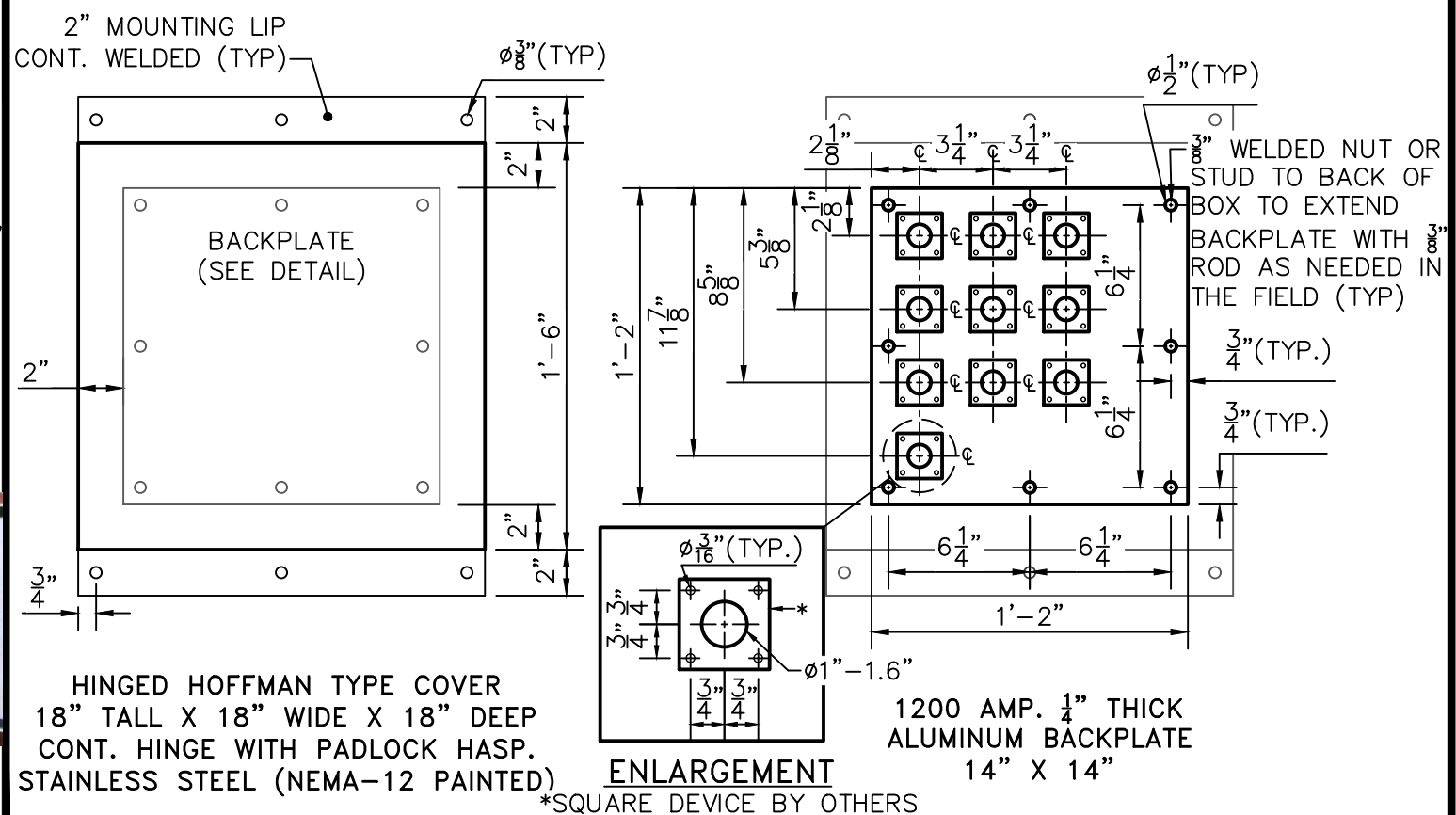
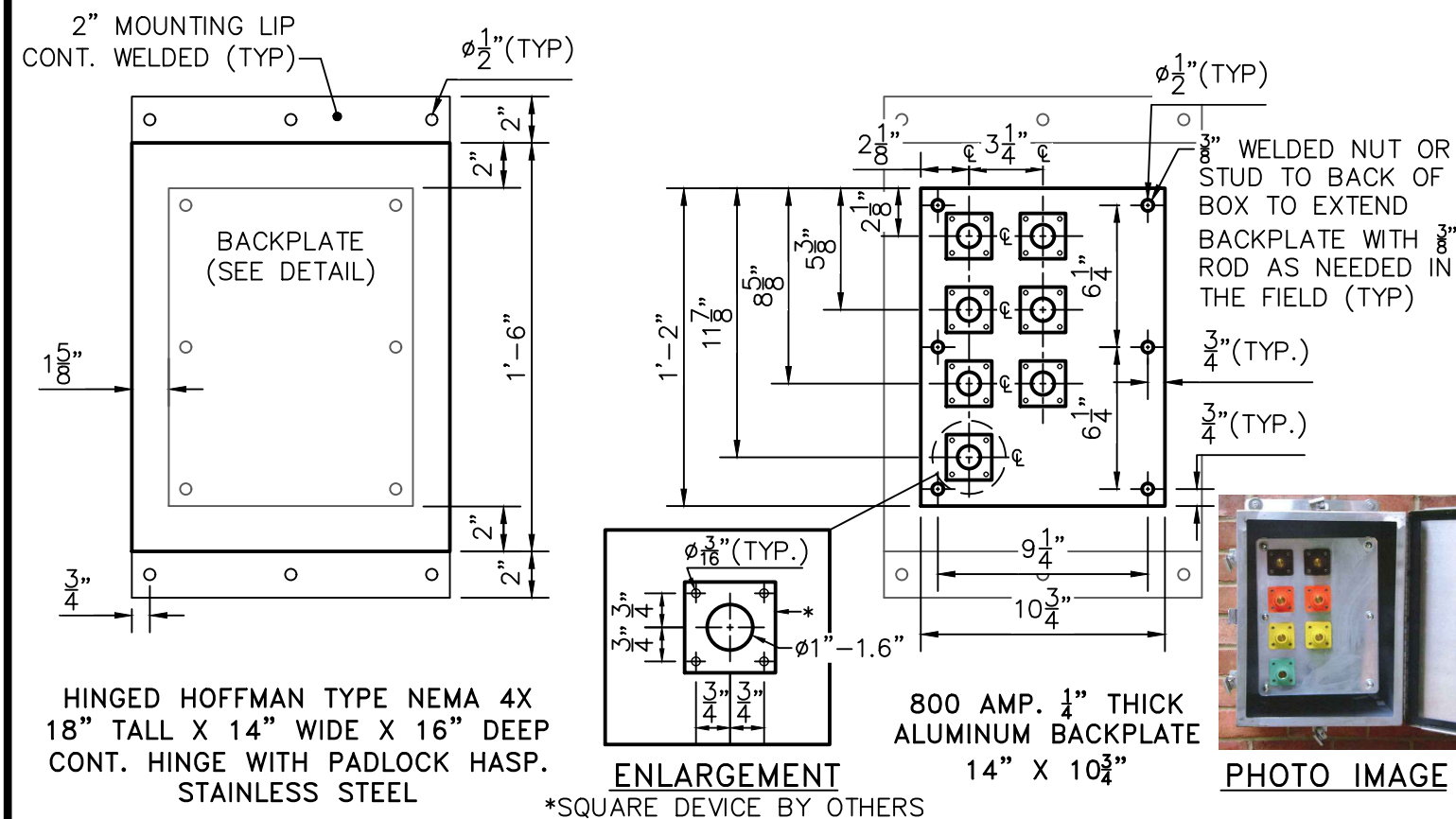
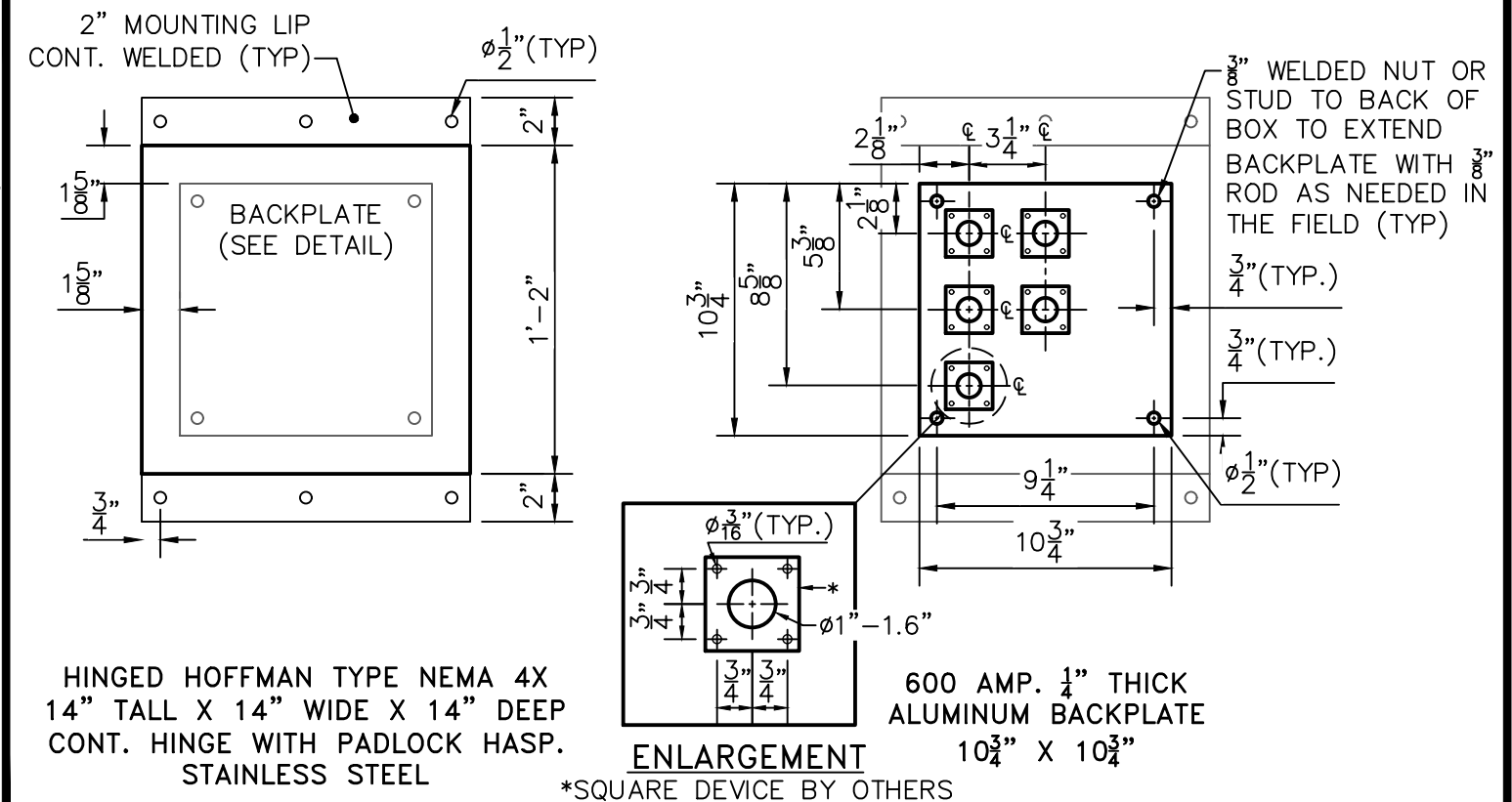
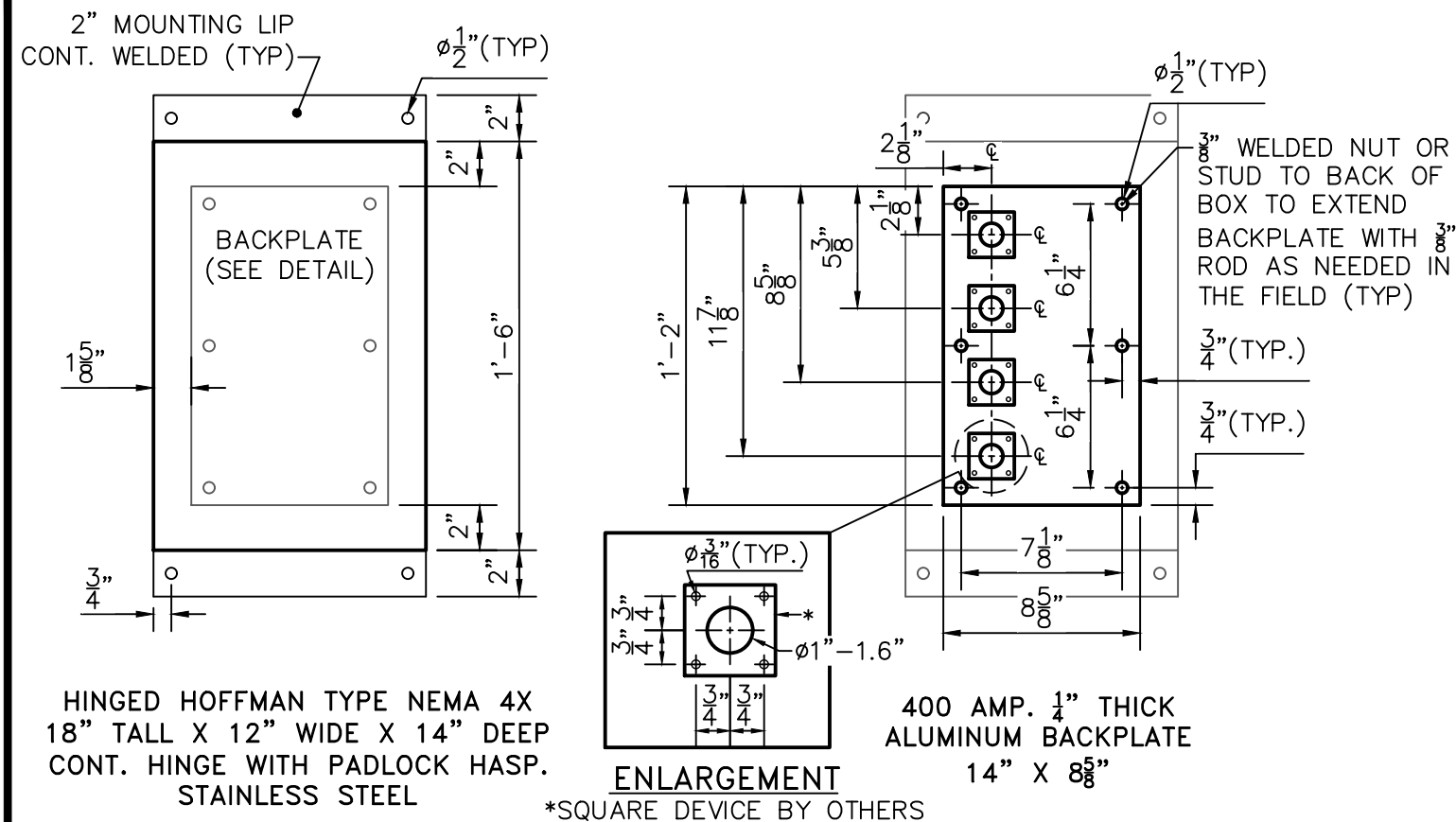
Cathodic test station in agricultural area



Branch valve or Air vent in agricultural area next to roadside



All measurements from center of casting



NOTES:

1. TYPICAL DIMENSIONS SHOWN FOR VARIOUS SERVICE SIZES. BOX MUST BE FIELD VERIFIED PRIOR TO FABRICATION AND INSTALLATION.

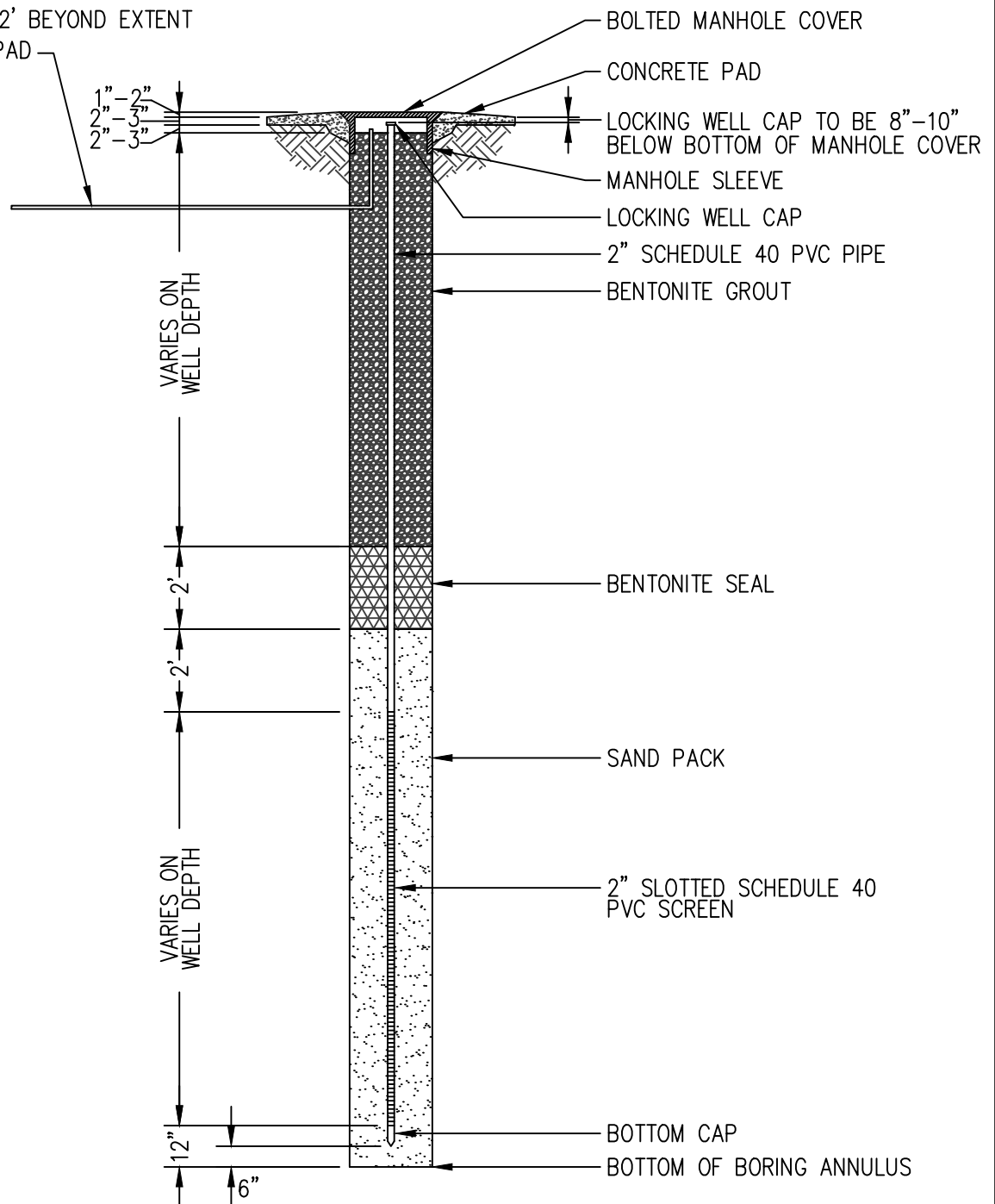


STANDARD DESIGN DETAIL

LOAD TEST HINGED BANK BOX

DRAWING NO.
103
SHEET
1 OF 1
DATE
7/2025

3/4" PVC COATED RIGID CONDUIT
A MINIMUM OF 2' BEYOND EXTENT
OF CONCRETE PAD



*SEE PAGE 2 FOR DETAIL NOTES

NOT TO SCALE



STANDARD DESIGN DETAIL

FLUSH-MOUNT GROUNDWATER MONITORING WELL

DRAWING NO.
104A

SHEET
1 OF 2

DATE
7/2025

WELL DEPTH (FT)	PVC PIPING DIAMETER	SCREEN LENGTH* (FT)	SLOTING SIZE	RISER PIPE LENGTH (FT)	FILTER SAND MEDIA	SEALING MEDIA	SURFACE FINISHING
VARIES	0.75 ID	VARIES	0.010	10'-15' DEPTH=2.5' 15'-20' DEPTH=3.5'	#2	BENTONITE GROUT/NEAT CEMENT	FLUSH MOUNT CASING

*SCREENS LENGTHS COME IN 3FT AND 5FT SECTIONS

NOTES:

1. ONCE THE SCREEN INTERVAL IS INSTALLED, A MINIMUM OF 2 FEET OF SAND SHOULD BE PLACED ABOVE THE SCREEN. ONCE INSTALLED, A MINIMUM OF ONE FOOT THICK SEAL OF BENTONITE SLURRY OR NEAT CEMENT GROUT SHOULD BE PLACED.
2. AT FINAL SURFACE GRADE, THE MONITORING WELL SHALL BE PROTECTED WITH FLUSH MOUNT RISER CASING.
3. UPON COMPLETION OF WELL INSTALLATION, THE CONTRACTOR WILL DEVELOP THE WELL TO REMOVE SILT FROM WITHIN THE SCREEN INTERVAL.



STANDARD DESIGN DETAIL

FLUSH-MOUNT GROUNDWATER MONITORING WELL

DRAWING NO.
104B
SHEET
2 OF 2
DATE
7/2025

LOCATION SKETCH

NOT TO SCALE

"STATION NAME" PUMP STATION

#XXX



Station Location

VICINITY MAP

SCALE: 1"= 1 MILE

SITE ADDRESS: XXXXXXXXXXXX

HORIZONTAL CONTROL:

VIRGINIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE
NORTH AMERICAN DATUM 1983/1996 CORS ADJUSTMENT (US SURVEY FOOT)

NORTH (FT): X,XXX,XXX.XX EAST (FT): XX,XXX,XXX.XX
NORTH (m): X,XXX,XXX.XXX EAST (m): X,XXX,XXX.XXX
LATITUDE: XX°XX'XX.XXXXXX" N LONGITUDE: XX°XX'XX.XXXXXX" W
SCALE FACTOR: X.XXXXXXXXXX CONVERGENCE: X°XX'XX.XXXXXX"

VERTICAL CONTROL:

NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
U.S. SURVEY FEET (DIFFERENTIAL LEVELING)
ELEVATION XX.XX'

DATE ESTABLISHED: _____
GPS DATE: XX/XX/XXXX
DATE RECOVERED: _____

DESCRIPTION:

TO REACH THE DISK FROM XXXXXXXXX

ENTER PHOTO OF DISK

ENTER COMPANY INFO



HRSD

Sustainable, Innovative Wastewater Treatment

2389 G AVENUE, NEWPORT NEWS, VA 23602



STANDARD DESIGN DETAIL

STANDARD BENCHMARK SHEET TEMPLATE

DRAWING NO.
105

SHEET
1 OF 1

DATE
7/2025