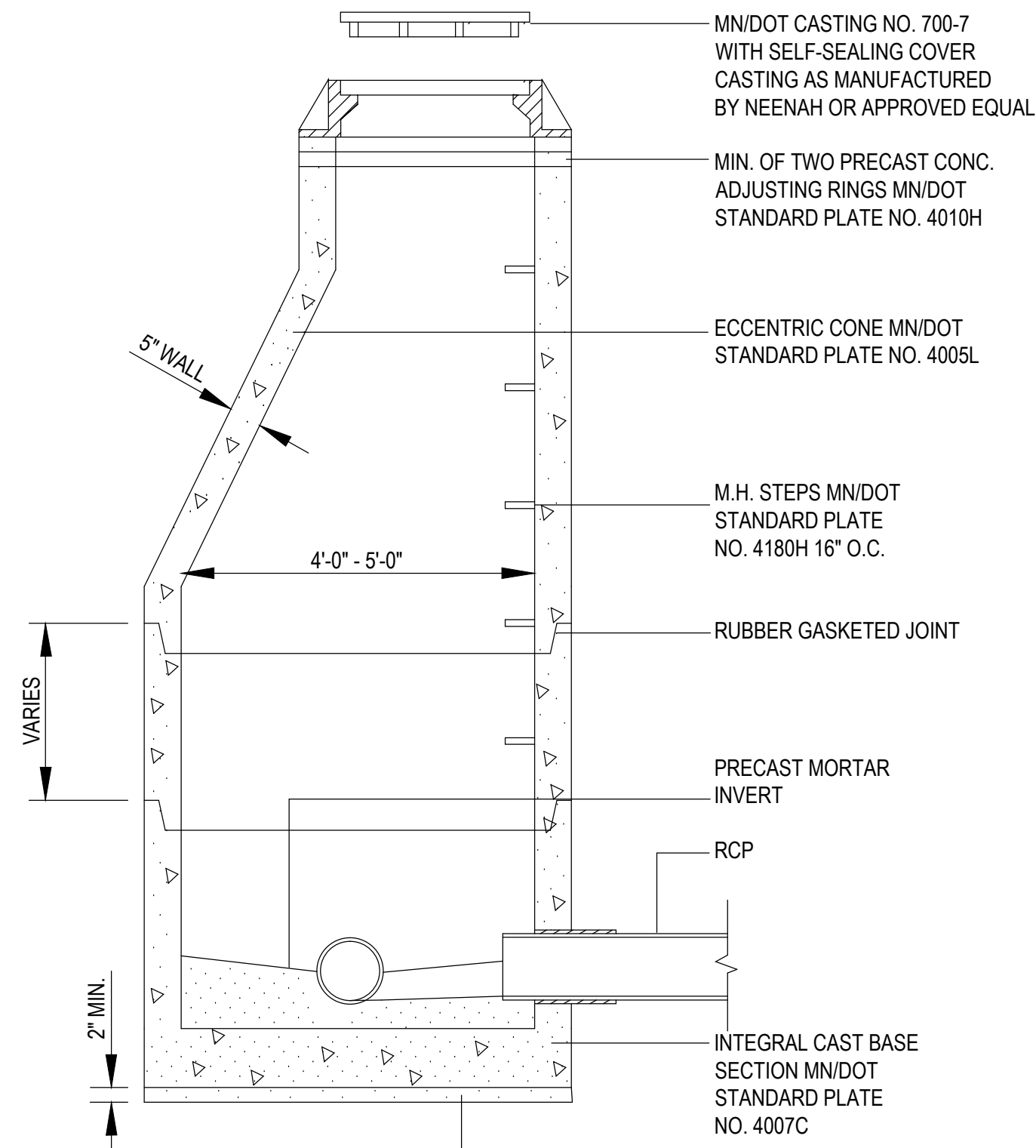


- ① 0-12" DEPTH TRENCH  
SLOPE DEPENDS ON SOIL TYPE.
- ② 0-20" DEPTH TRENCH  
SUPPORT OR SHIELD SYSTEM CAN BE  
UTILIZED TO REDUCE TRENCH WIDTH.
- (A) MINIMUM TRENCH WIDTH SHALL ALLOW FOR SIX  
INCHES CLEARANCE ON EACH SIDE OF PIPE JOINT HUB.
- (B) THE TRENCH MAY BE OVEREXCAVATED A MIN. OF 6" & BACKFILLED WITH  
COMPACTED GRANULAR MATERIALS WHEN ROCK, INCOMPRESSIBLE MATERIALS,  
OR UNSTABLE SOILS ARE ENCOUNTERED.
- (C) COMPACTED GRANULAR ENCASEMENT MATERIAL SHALL COVER  
THE TOP OF PIPE BY AT LEAST 12" AND EXTEND THE FULL  
WIDTH OF THE TRENCH OR AT LEAST 2 1/2" TIMES THE PIPE  
DIAMETER ON EACH SIDE OF THE PIPE.
- (D) BEDDING AND HAUNCHING MATERIAL SHALL BE PLACED  
AND COMPACTED TO PROVIDE FULL SUPPORT FOR THE  
LENGTH OF THE PIPE.

NOTE: THIS DETAIL APPLIES TO SANITARY SEWER,  
STORM SEWER, WATERMAIN, AND ALL SERVICE PIPE.

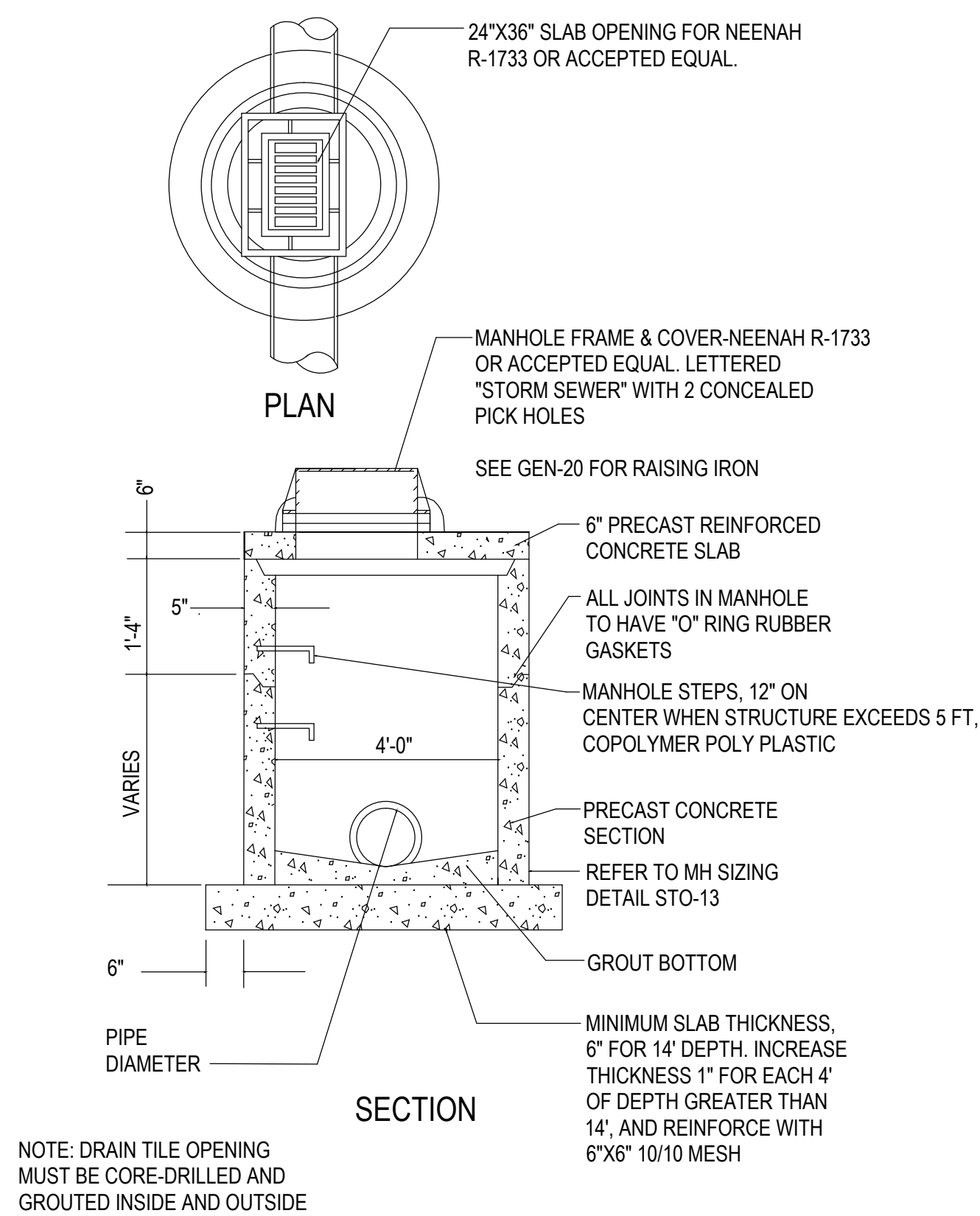
① TYPICAL PIPE BEDDING DETAIL  
SCALE=N.T.S.



NOTE:  
1. USE METAL SHIMS ONLY AT ADJUSTING  
RINGS WHEN LEVELING.

STORM MANHOLE 1 = 4.00' DIA. MANHOLE  
STORM MANHOLE 2 = 5.00' DIA. MANHOLE

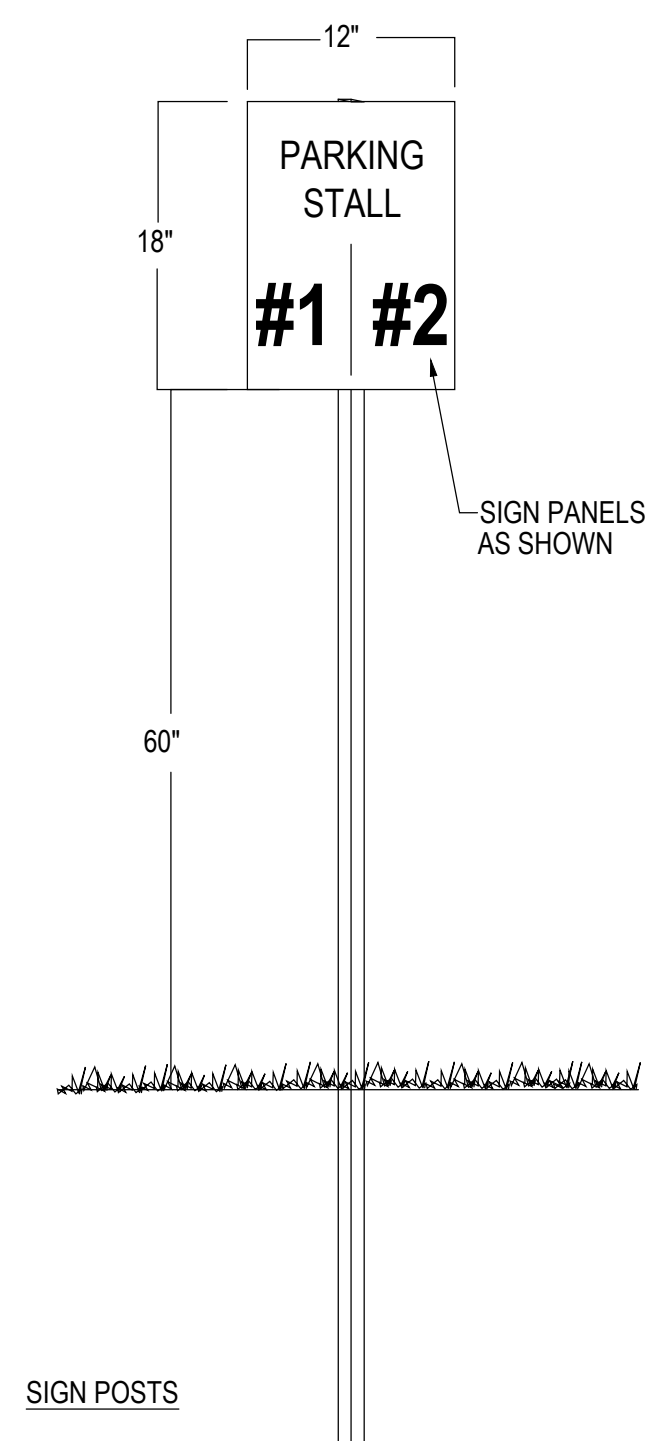
② STANDARD DESIGN "T" STORM MANHOLE/ CATCH BASIN  
SCALE=N.T.S.



NOTE: DRAIN TILE OPENING  
MUST BE CORE-DRILLED AND  
GROUTED INSIDE AND OUTSIDE

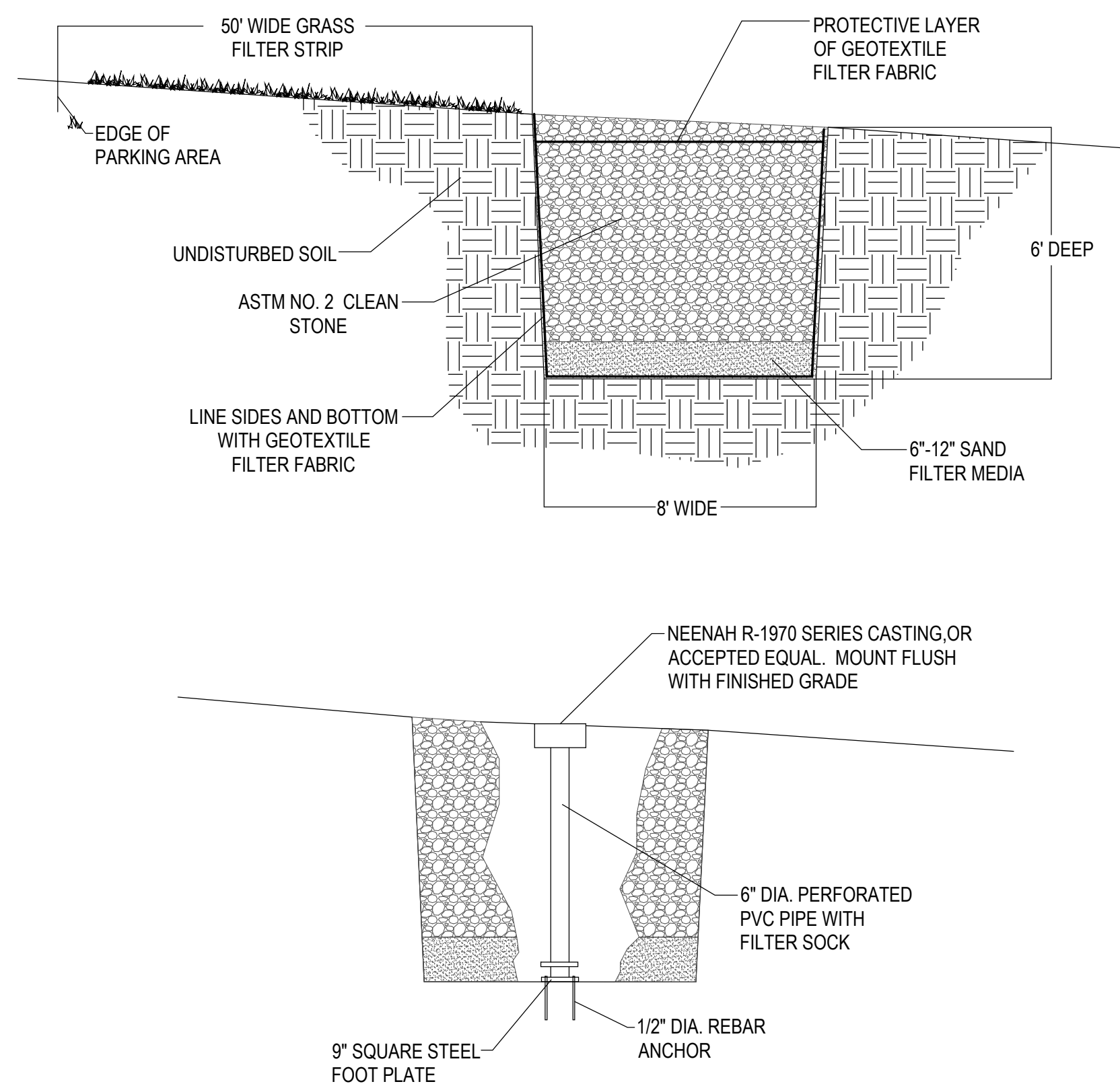
③ CATCH BASIN MANHOLE  
SCALE=N.T.S.

- STREET SIGNS
1. SHALL BE V.I.P. (VISUAL IMPACT PERFORMANCE)  
REFLECTIVE SHEETING PER MMDOT 3352.2A2C.
  2. ATTACH TO SIGN POST WITH 3/8" DRIVE RIVET  
AND NYLON WASHER.
  3. INSTALL SO BOTTOM OF SIGN PANEL  
IS 60" FROM FINISH GRADE.

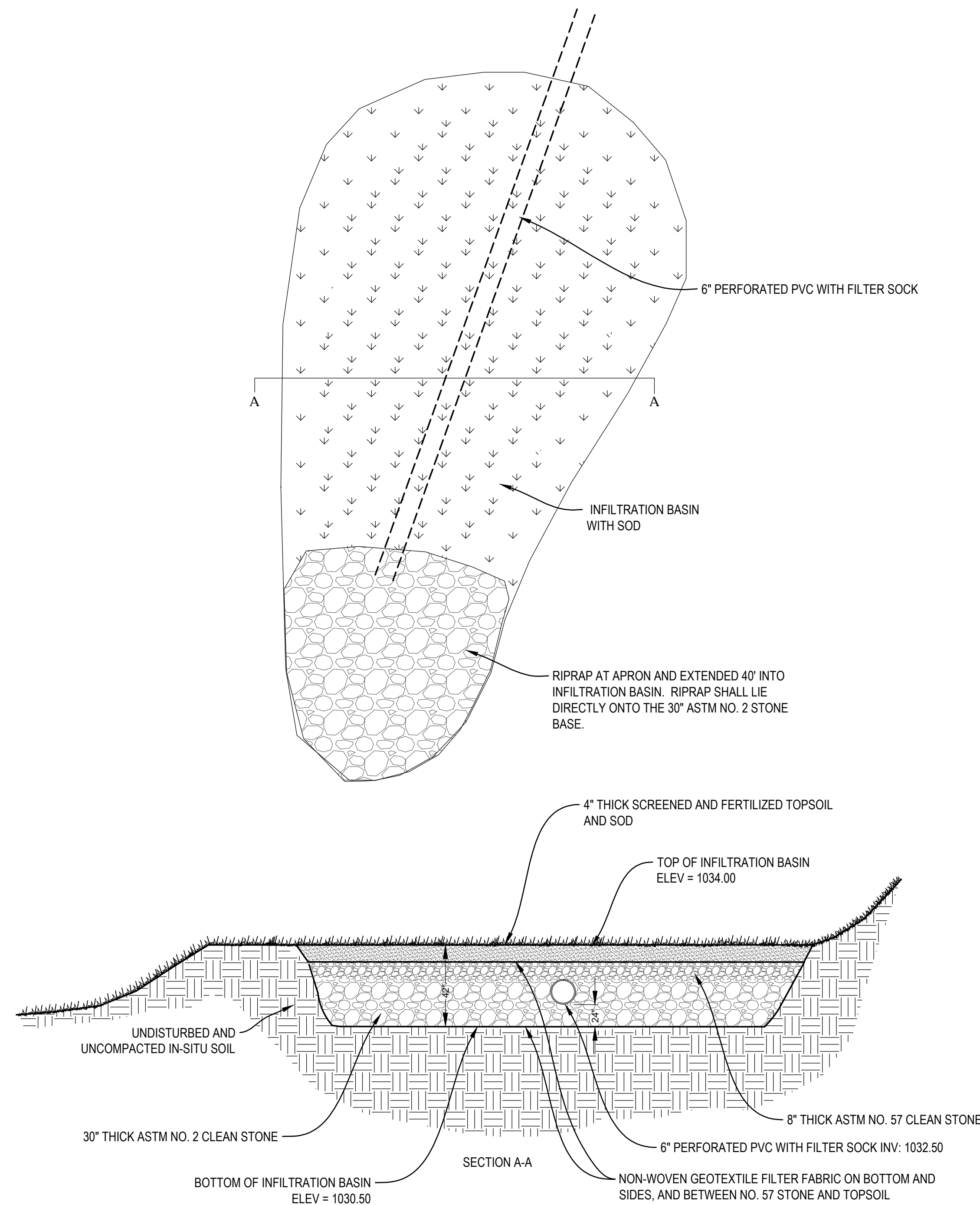


- SIGN POSTS
1. 1-3/4" SQUARE.
  2. 14 GAUGE WITH PUNCHED HOLES.
  3. MINIMUM 10 FEET
  4. POST SHALL BE BURED MIN. 3'
  5. SIGN POSTS TO BE LOCATED 10' ON CENTER  
BETWEEN EACH STALL AT THE LOCATION  
SHOWN ON PLAN SHEET C4.0

④ PARKING SIGN DETAIL  
SCALE=N.T.S.



⑦ INFILTRATION TRENCH AND OBSERVATION WELL DETAIL  
SCALE=N.T.S.



#### CONSTRUCTION SEQUENCING

1. INSTALL SILT FENCE AND/OR OTHER APPROPRIATE TEMPORARY EROSION  
CONTROL DEVICES TO PREVENT SEDIMENT FROM LEAVING OR ENTERING  
THE PRACTICE DURING CONSTRUCTION.
2. ALL DOWN-GRADIENT PERIMETER SEDIMENT CONTROL BMP'S MUST BE IN  
PLACE BEFORE ANY UP GRADIENT LAND DISTURBING ACTIVITY BEGINS.
3. PERFORM CONTINUOUS INSPECTIONS OF EROSION CONTROL PRACTICES.
4. INSTALL UTILITIES (WATER, SANITARY SEWER, ELECTRIC, PHONE, FIBER  
OPTIC, ETC) PRIOR TO SETTING FINAL GRADE OF BIORETENTION DEVICE.
5. ROUGH GRADE THE SITE. IF BIORETENTION AREA IS BEING USED AS  
TEMPORARY SEDIMENT BASINS LEAVE A MINIMUM OF 3 FEET OF COVER  
OVER THE PRACTICE TO PROTECT THE UNDERLYING SOILS FROM  
CLOGGING.
6. PERFORM ALL OTHER SITE IMPROVEMENTS.
7. SEED AND MULCH ALL AREAS AFTER DISTURBANCE.
8. CONSTRUCT BIORETENTION DEVICE UPON STABILIZATION OF  
CONTRIBUTING DRAINAGE AREA.
9. IMPLEMENT TEMPORARY AND PERMANENT EROSION CONTROL  
PRACTICES.
10. REMOVE TEMPORARY EROSION CONTROL DEVICES AFTER THE  
CONTRIBUTING DRAINAGE AREA IS ADEQUATELY VEGETATED.

#### GENERAL NOTES

1. IN THE EVENT THAT SEDIMENT IS INTRODUCED INTO THE BMP DURING OR  
IMMEDIATELY FOLLOWING EXCAVATION, THIS MATERIAL SHALL BE  
REMOVED FROM THE PRACTICE PRIOR TO CONTINUING CONSTRUCTION.
2. GRADING OF BIORETENTION DEVICES SHALL BE ACCOMPLISHED USING  
LOW-COMPACTION EARTH-MOVING EQUIPMENT TO PREVENT  
COMPACTION OF UNDERLYING SOILS.
3. ALL SUB MATERIALS BELOW THE SPECIFIED BIORETENTION DEPTH  
(ELEVATION) SHALL BE DEEP-RIPPED AND SCARIFIED, UNLESS  
OTHERWISE NOTED.

⑧ INFILTRATION BASIN DETAIL  
SCALE=N.T.S.

100% CD<sub>s</sub> - FOR CONSTRUCTION

Revisions	Date

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Drawing Title  
Details

Approved: Project Director

March 16, 2012  
Date

Project Title  
Upgrade Stormwater Systems

Location  
St. Cloud VA Health Care System

Date  
March 16, 2012

Checked  
DJF

Drawn  
RJK

Project Number  
656-12-805

Drawing Number  
C10

Dwg. 2 of 8

