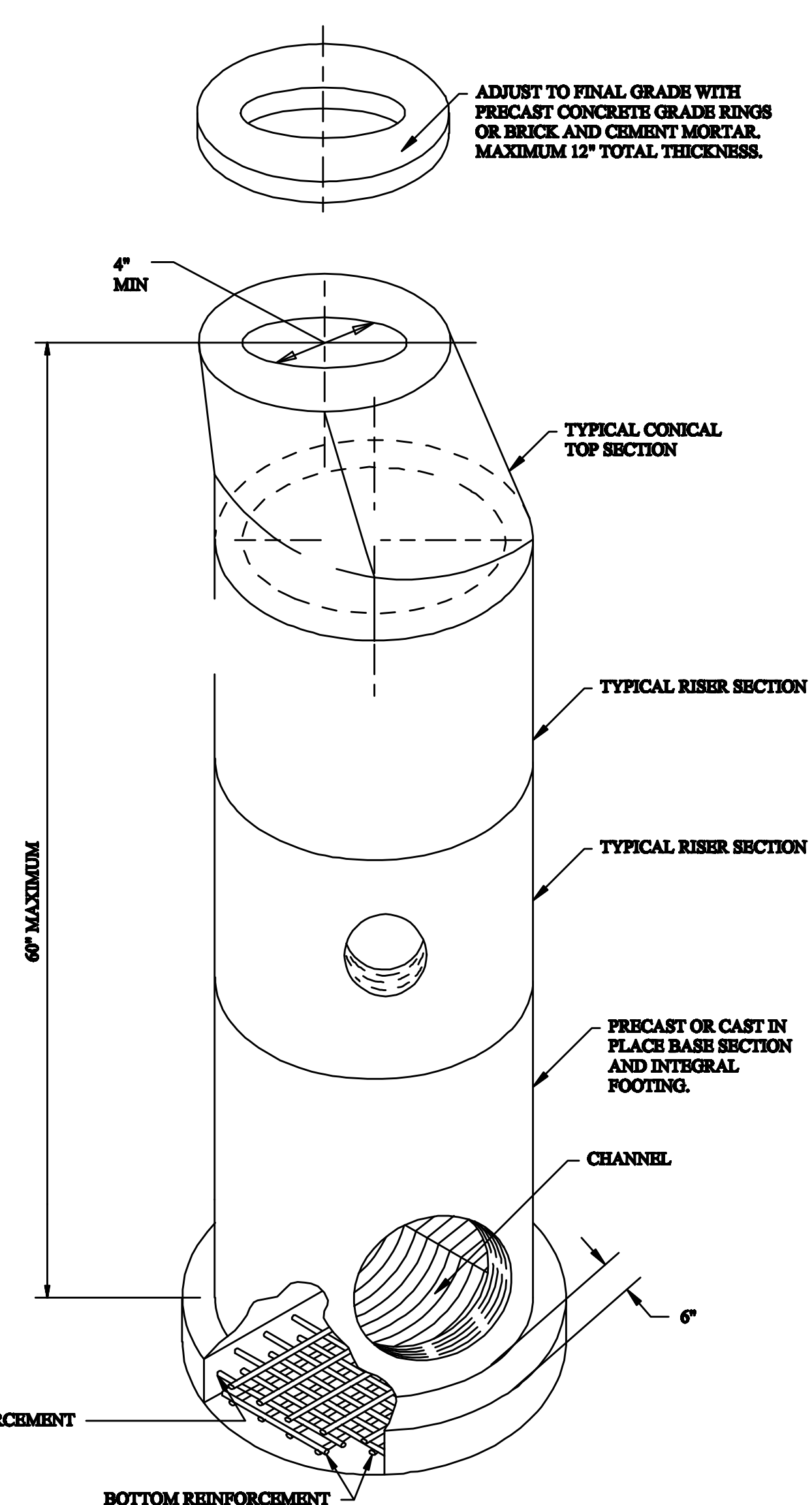
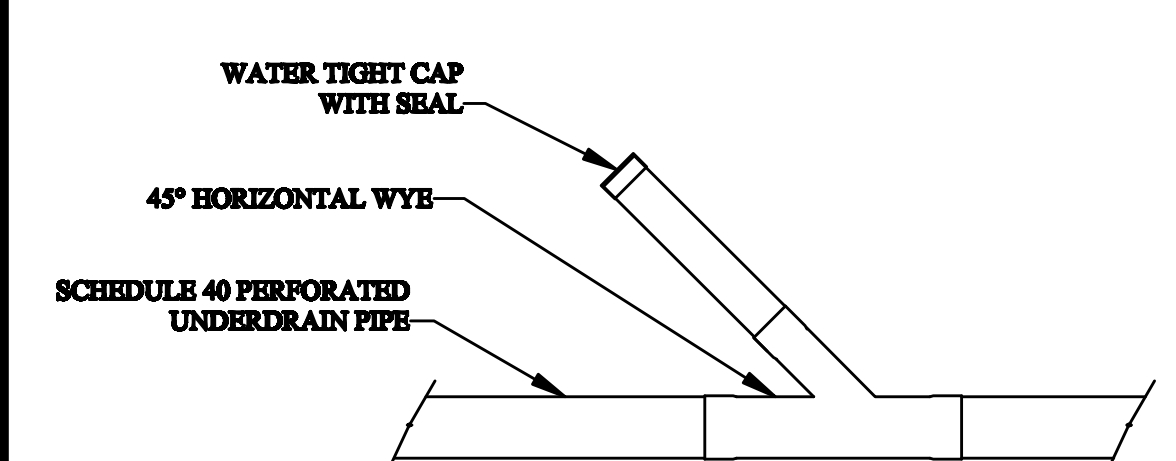


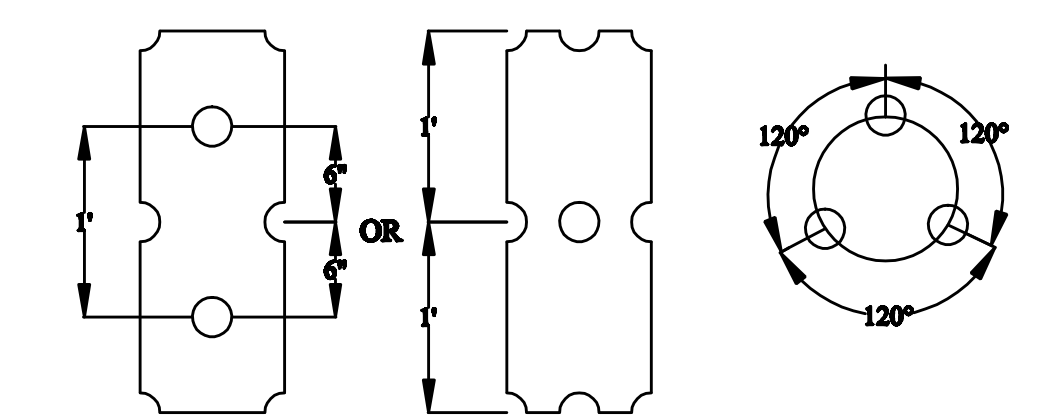
**NOTES:**  
 1. PROVIDE PRECAST REINFORCED CONCRETE MANHOLE IN ACCORDANCE WITH THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION (PENNDOT) PUBLICATION 724, RC 39M.  
 2. CONSTRUCT IN ACCORDANCE WITH PENNDOT PUBLICATION 406, SECTION 605 A THROUGH D AND ASTM C-478M-90.  
 3. PLACE SUBBASE MATERIAL MEETING THE REQUIREMENTS OF PENNDOT PUBLICATION 406, SECTION 350.2, IN LAYERS 4\"/>



1 PRECAST CONCRETE MANHOLE  
 C-6 SCALE: NONE

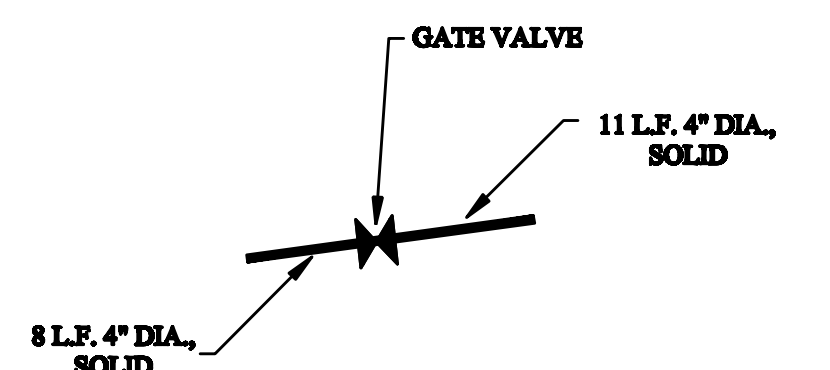


LIMESTONE CELL CLEANOUT PORT



**NOTES:**  
 1. ALL PERFORATED PIPE TO HAVE THREE ONE-INCH DIAMETER PERFORATIONS PER LINEAR FOOT OF PIPE. PERFORATIONS TO BE LOCATED AT TOP AND SIDES OF PIPE AS INDICATED. TOP PERFORATION MAY BE STAGGERED BY 6 INCHES ALONG THE LENGTH OF PIPE FOR BASE OF INSTALLATION.

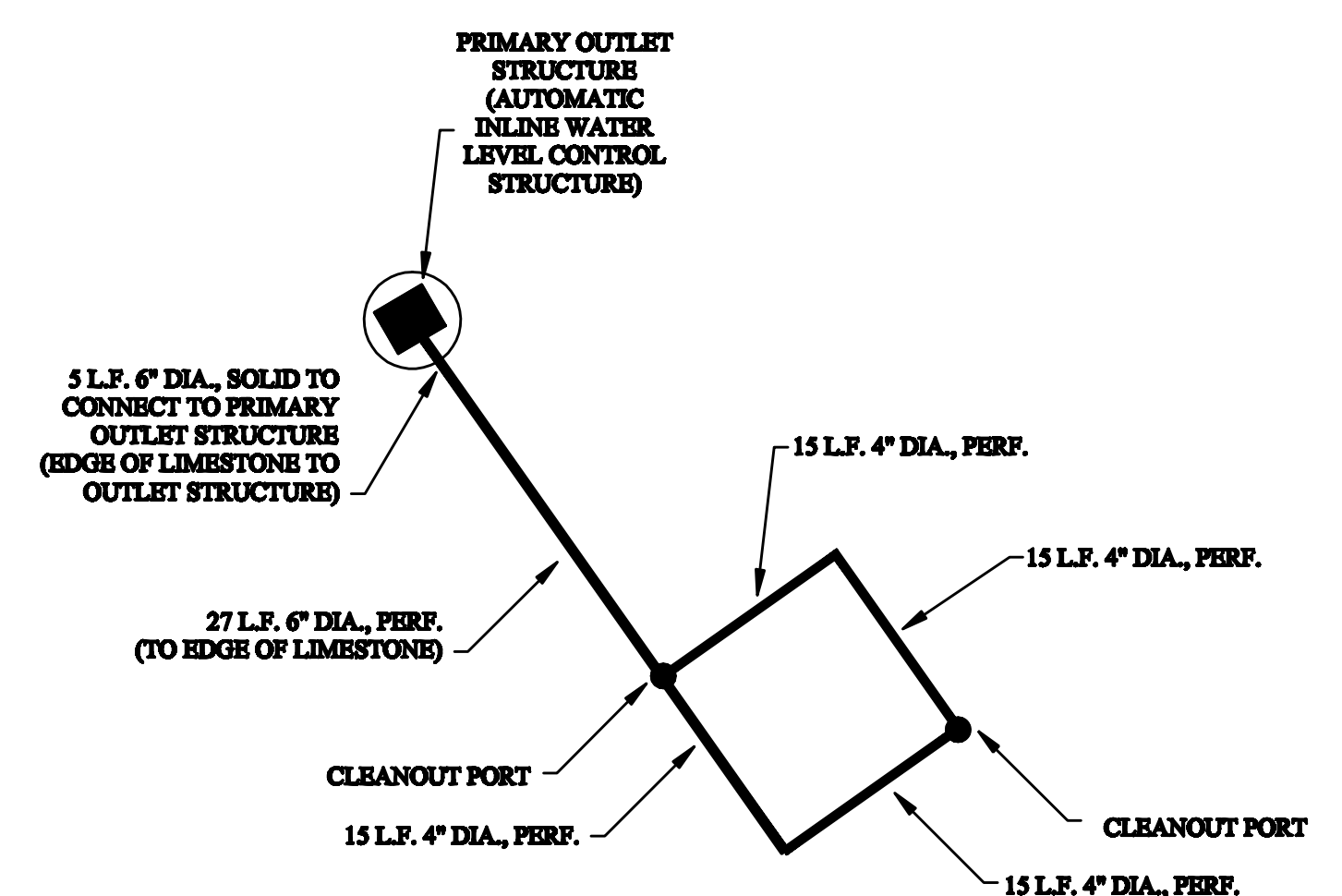
UNDERDRAIN PERFORATION PATTERN



**SETTLING BASIN DRAIN NOTES:**  
 1. PROVIDE ONE GATE VALVE AS INDICATED.  
 2. ALL INVERTS = 1617.5

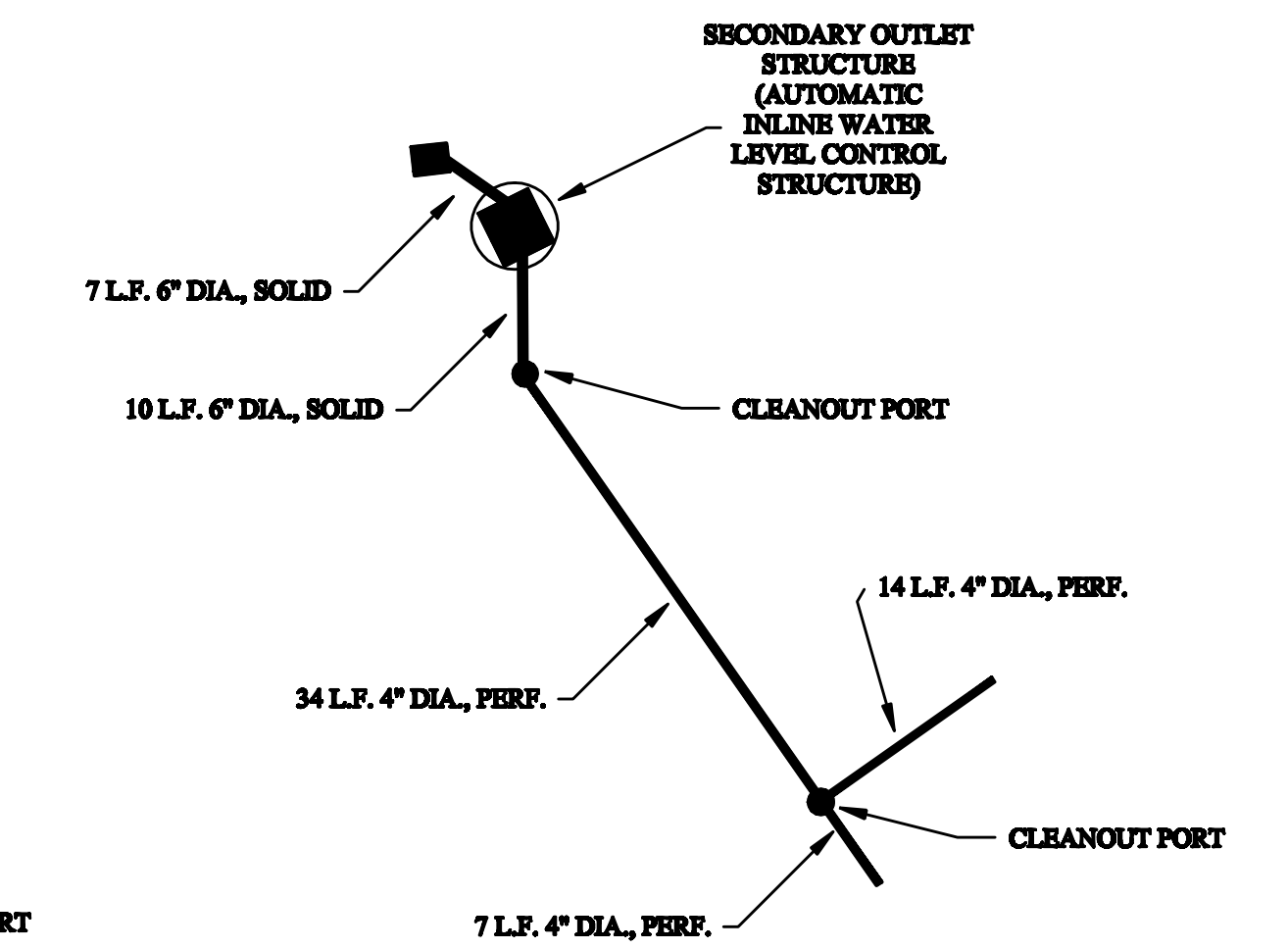
SETTLING BASIN DRAIN

2 UNDERDRAIN PIPING DETAILS  
 C-6 SCALE: 1\"/>



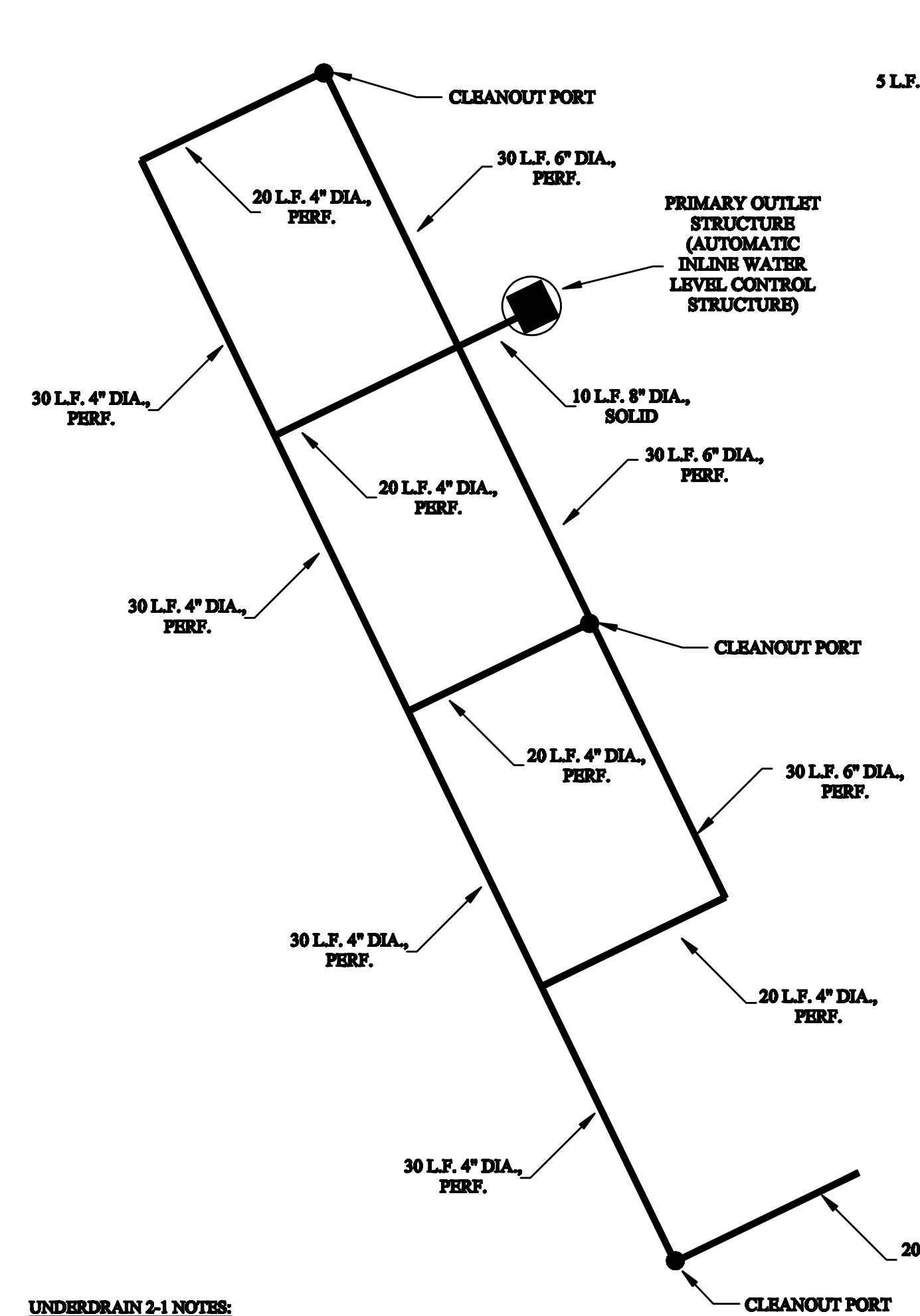
**UNDERDRAIN 1-1 NOTES:**  
 1. UNDERDRAIN 1-1 SHALL BE CONNECTED TO LIMESTONE CELL 1 PRIMARY OUTLET STRUCTURE.  
 2. ALL INVERTS = 1620.0.

UNDERDRAIN 1-1



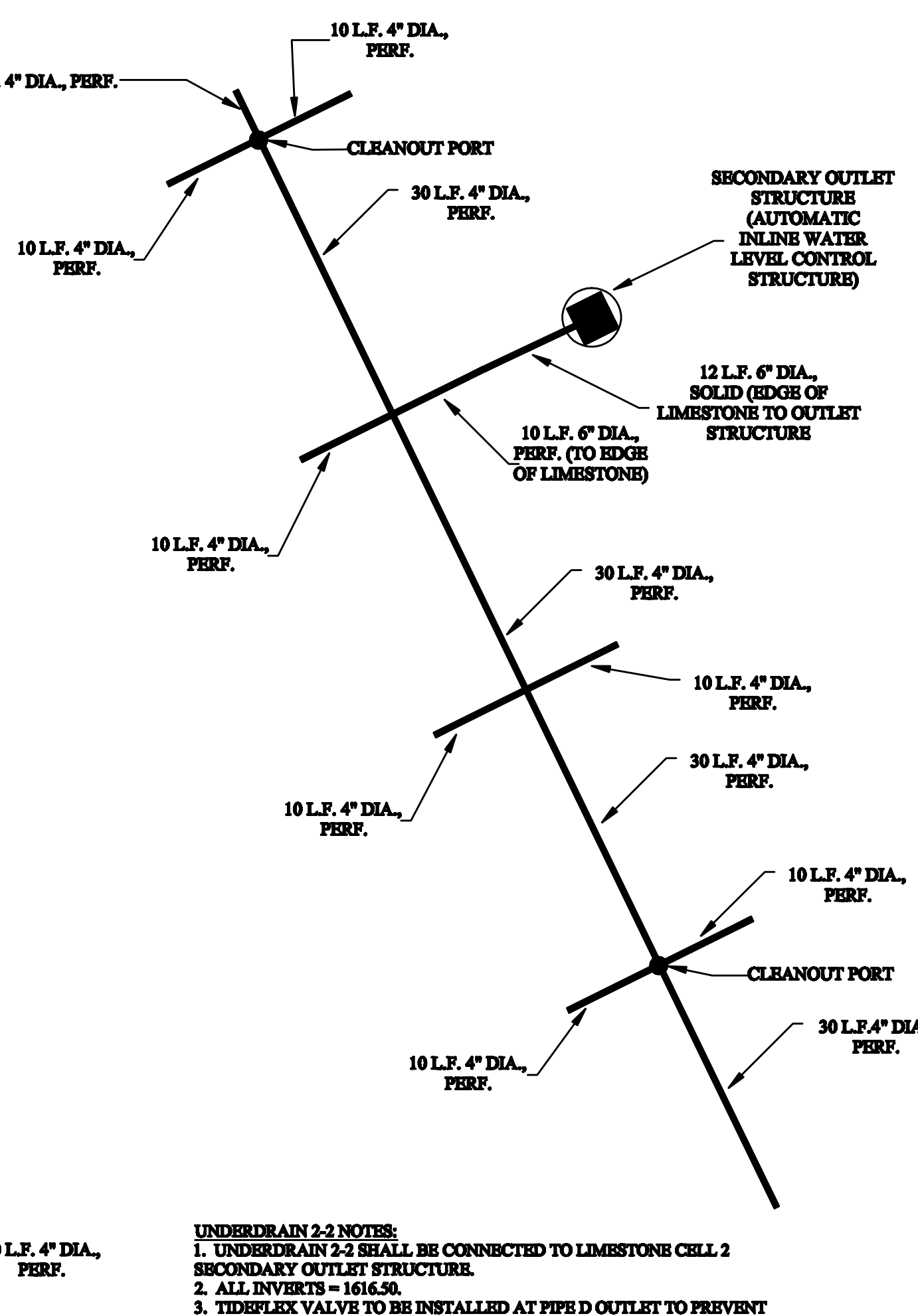
**UNDERDRAIN 1-2 NOTES:**  
 1. JUNCTION BOX USED WITH UNDERDRAIN 1-2 TO BE AS MANUFACTURED BY ADVANCED DRAINAGE SYSTEMS (ADS) OR APPROVED EQUAL. JUNCTION BOX TO BE USED TO CONNECT UNDERDRAIN 1-2 TO PIPE A.  
 2. UNDERDRAIN 1-2 SHALL BE CONNECTED TO LIMESTONE CELL 1 SECONDARY OUTLET STRUCTURE.  
 3. ALL INVERTS = 1618.5.  
 4. TIDEFLEX VALVE TO BE INSTALLED AT PIPE B OUTLET TO PREVENT BACKFLOW INTO LIMESTONE CELL 1 UNDERDRAIN 1-2.

UNDERDRAIN 1-2



**UNDERDRAIN 2-1 NOTES:**  
 1. UNDERDRAIN 2-1 SHALL BE CONNECTED TO LIMESTONE CELL 2 PRIMARY OUTLET STRUCTURE.  
 2. ALL INVERTS = 1619.0.

UNDERDRAIN 2-1

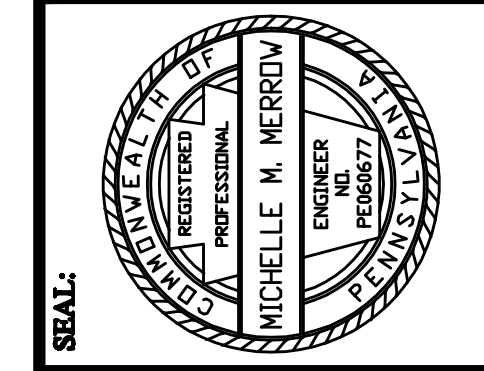


**UNDERDRAIN 2-2 NOTES:**  
 1. UNDERDRAIN 2-2 SHALL BE CONNECTED TO LIMESTONE CELL 2 SECONDARY OUTLET STRUCTURE.  
 2. ALL INVERTS = 1616.50.  
 3. TIDEFLEX VALVE TO BE INSTALLED AT PIPE D OUTLET TO PREVENT BACKFLOW INTO LIMESTONE CELL 2 UNDERDRAIN 2-2.

UNDERDRAIN 2-2

**GENERAL NOTES:**  
 1. ALL UNDERDRAIN PIPES TO BE SCHEDULE 40 PVC OR APPROVED EQUAL.  
 2. FOR PERFORATED PIPE, PROVIDE THREE ONE-INCH DIAMETER PERFORATIONS LOCATED AT THE TOP AND SIDES OF THE PIPE AT ONE FOOT INTERVALS. SEE UNDERDRAIN PERFORATION PATTERN DIAGRAM.  
 3. ENDS OF UNDERDRAIN PIPES SHOULD BE CAPPED, AND ONE ONE-INCH DIAMETER PERFORATION SHALL BE DRILLED INTO EACH END CAP.

2 UNDERDRAIN PIPING DETAILS  
 C-6 SCALE: 1\"/>



NO.	REVISIONS	DATE

**ALDER RUN ENGINEERING**  
 107 COAL STREET  
 OSCOLA MILLS, PENNSYLVANIA 16866  
 PHONE: (814) 339-6998

PROJECT: EMIGH RUN 8 (ER-8) AMD TREATMENT PROJECT  
 PREPARED FOR EMIGH RUN/LAKESIDE WATERSHED ASSOCIATION  
 MORRIS TOWNSHIP, CLEARFIELD COUNTY, PA.

PREPARED FOR: **AMS**  
 New Miles of Blue Stream  
 103 FAIRWAY DRIVE  
 PHILIPSBURG, PENNSYLVANIA 16866  
 PHONE: (814) 343-5676

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DATE: FEB 1, 2007

SCALE: AS NOTED

TITLE: GENERAL DETAILS