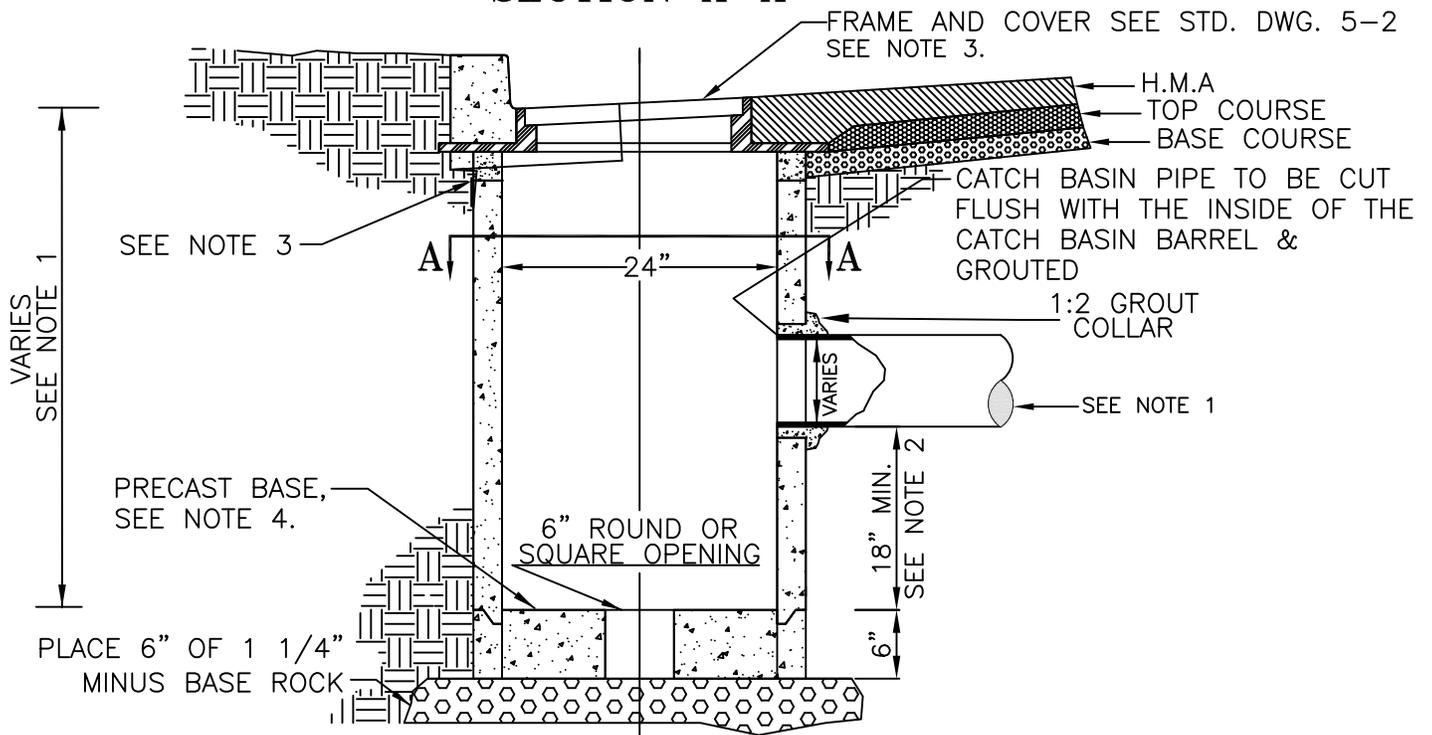


**SECTION A-A**



**NOTES:**

1. SEE PIPE SPECIFICATIONS SECTION 5-1.02 AND CATCH BASIN SPECIFICATIONS SECTION 5-4, FOR ADDED REQUIREMENTS. MAXIMUM NUMBER AND SIZE OF PIPES CONNECTING INTO CATCH BASIN SHALL NOT EXCEED 3 - 12" PIPES. WIRE REINFORCED PRECAST CATCH BASIN SHALL BE REQUIRED WHEN 3 PIPES ARE TO BE CONNECTED TO A CATCH BASIN. PENETRATION OF EXISTING CATCH BASINS, OR FIELD CUT PENETRATIONS OF CATCH BASINS, TO BE MADE BY SAW / CORE DRILLING ONLY.
2. MINIMUM SUMP IS 18" UNLESS APPROVED BY THE ENGINEER DUE TO UTILITY CONFLICTS.
3. 1:2 GROUT BETWEEN CATCH BASIN RING AND CONCRETE TILE, BOTH INSIDE AND OUTSIDE. ADJUSTMENTS OF 2" AND GREATER TO BE MADE WITH PRECAST CONCRETE RINGS. FILTER SOCK TO BE INSTALLED UNDER GRATE PER SECTION 2-27 OF THESE SPECIFICATIONS. REMOVE ONLY WHEN DIRECTED BY ENGINEER.
4. PRECAST CATCH BASIN TO BE MANUFACTURED WITH MINIMUM 3200 PSI CONCRETE, TO THE REQUIREMENTS OF SWSS SECTION 7-05. CAST IN PLACE BASE MAY BE USED WHEN APPROVED BY THE ENGINEER.
5. BACKFILL AROUND CATCH BASIN SHALL BE ENTIRELY CRUSHED SURFACING TOP COURSE WHEN CATCH BASIN IS UNDER OR WILL BE UNDER PAVEMENT.

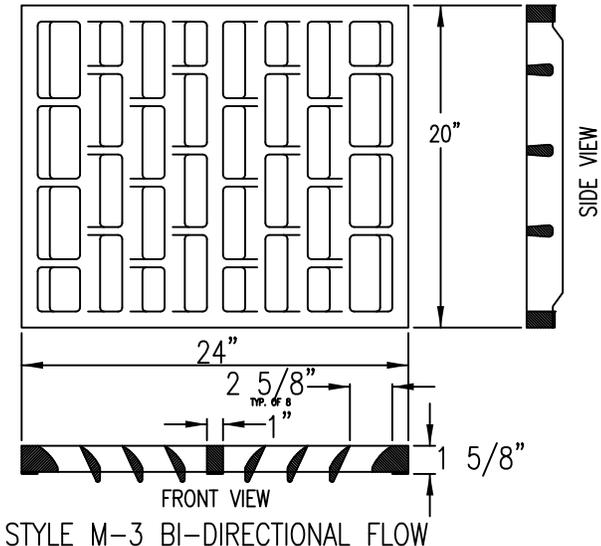
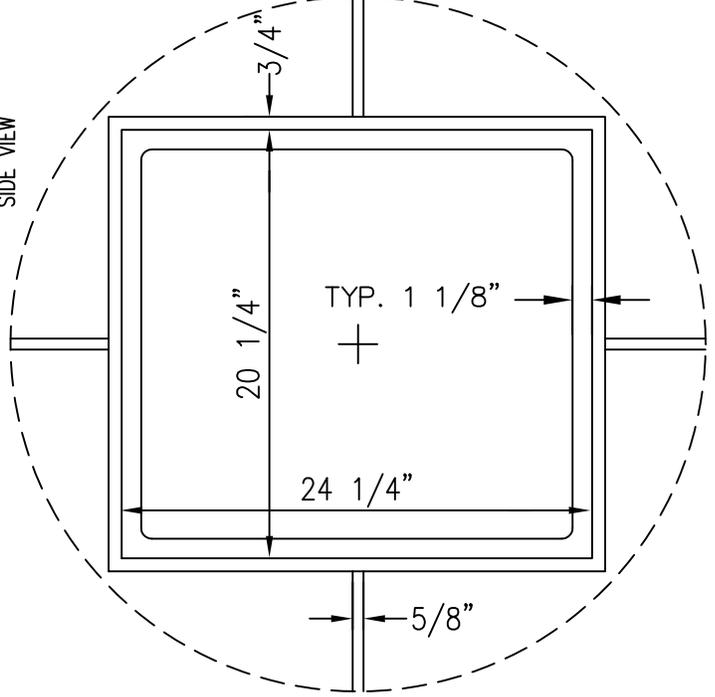
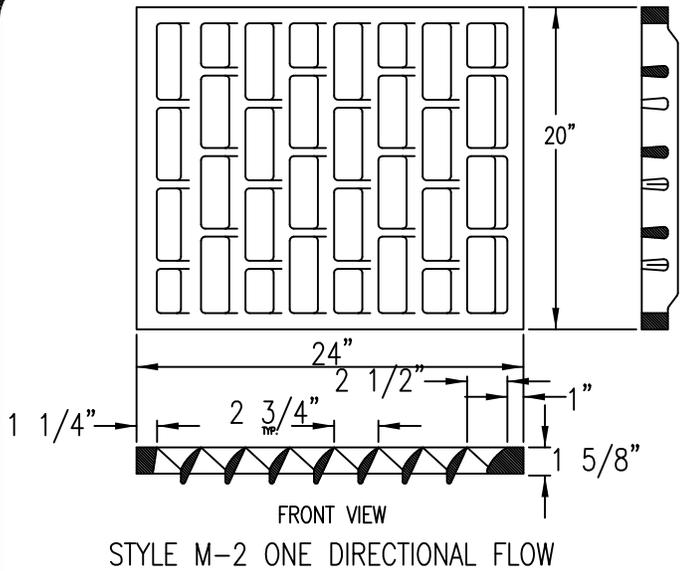
JULY 10, 2013

DWG #

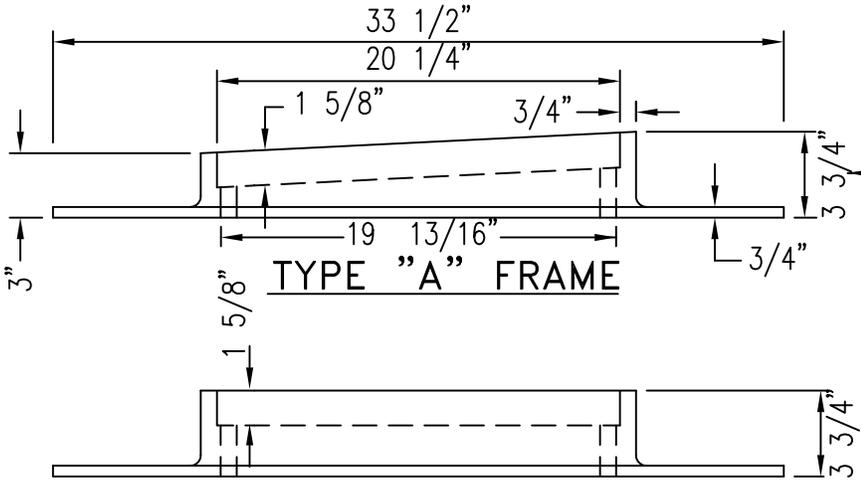


**CATCH BASIN**

**5-1**



- NOTES:
- \* STYLE M-2 OR EQUAL  
USE AT CONTINUOUS GRADE LOCATIONS
  - \* STYLE M-3 OR EQUAL  
USE AT CURB LOW POINTS



EAST JORDAN 7753 ROUND BASE CATCH  
BASIN FRAME AND GRATE  
OR APPROVED EQUAL.  
USE GRATE  
M-2 - 1 DIRECTION  
M-3 - BI-DIRECTIONAL

TYPE "B" FLAT FRAME  
(SPECIAL USE ONLY)

JULY 10, 2013



# CATCH BASIN FRAME AND COVER

DWG #  
**5-2**

DATE: \_\_\_\_\_

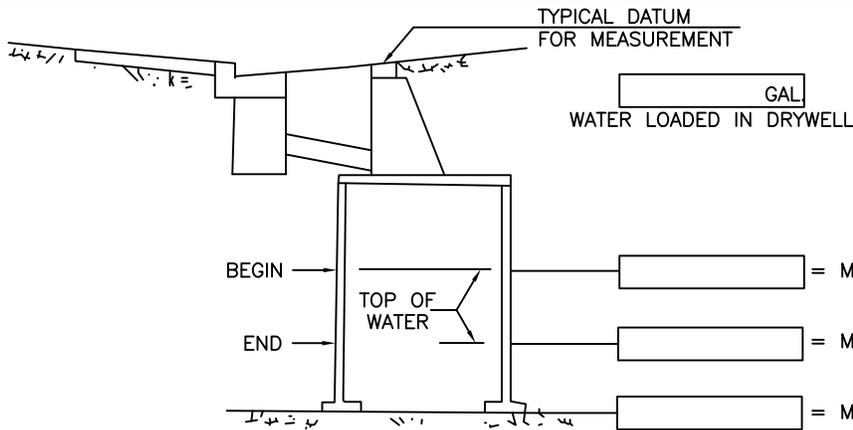
CONTRACTOR \_\_\_\_\_

NEAREST STREET INTERSECTION \_\_\_\_\_

LOCATION FROM NEAREST INTERSECTION \_\_\_\_\_

DRYWELL PRE-LOADED-DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

DRYWELL TESTED DATE: \_\_\_\_\_ TIME: \_\_\_\_\_



MAKE ANY COMMENTS AND CALCULATIONS ON REVERSE SIDE

TIME: \_\_\_\_\_  
TIME: \_\_\_\_\_  
TEST TIME  
30 MINUTE MINIMUM

PRE-TEST PROCEDURE:

1. MEASURE DEPTH (IN INCHES) FROM KNOWN REFERENCE POINT TO BOTTOM OF DRYWELL AND RECORD IN M1 BOX
2. PLACE A MINIMUM AMOUNT OF 3000 GAL. OF WATER IN DRYWELL AT LEAST 12 HOURS BEFORE MAKING THE TEST.

TEST PROCEDURE:

1. PLACE A MINIMUM AMOUNT OF 3000 GALLONS OF WATER IN DRYWELL AND IMMEDIATELY MEASURE FROM KNOWN REFERENCE POINT TO TOP OF WATER (IN INCHES) AND RECORD IN M2 BOX TOGETHER WITH THE TIME OF DAY.
2. AFTER 30 MINUTES (PREFERABLY 60 MINUTES) REMEASURE FROM KNOWN REFERENCE POINT TO TOP OF WATER (IN INCHES) AND RECORD IN M3 BOX TOGETHER WITH THE TIME OF DAY.

CALCULATIONS:

1. DRYWELL GALLONS PER INCH  

$$\text{GAL./INCH} = \frac{3000}{M1-M2} = \text{_____ GAL./INCH.}$$
2. DRYWELL PERCOLATION RATE  

$$\text{GAL./MIN} = \frac{M3-M2}{\text{TIME IN MIN.}} \times \text{GAL./INCH} = \text{_____ GAL./MIN}$$
3. DESIGNATED DRYWELL PERCOLATION RATE  
 REQUIRES 2:1 SAFETY FACTOR FOR CALCULATION 2 ABOVE  

$$0.5 \times \text{GAL./MIN}(2) = \text{_____ DESIGN GAL./MIN}$$

AUGUST 8, 2013

DWG #



# DRYWELL PERCOLATION REPORT

# 5-3

DRAINFIELD ENVELOPE

CATCH BASIN AS PER CITY OF BENTON CITY STD. DWG. 5-1 TO BE PAID FOR AS SEPARATE BID ITEM.

FRAME & GRATE CITY OF BENTON CITY STD. PLAN 5-2

CONCRETE CURB AND GUTTER.

24" M.H. RING & SOLID COVER SEE STD DWG 3-3.

TO BE MARKED "STORM" ON COVER

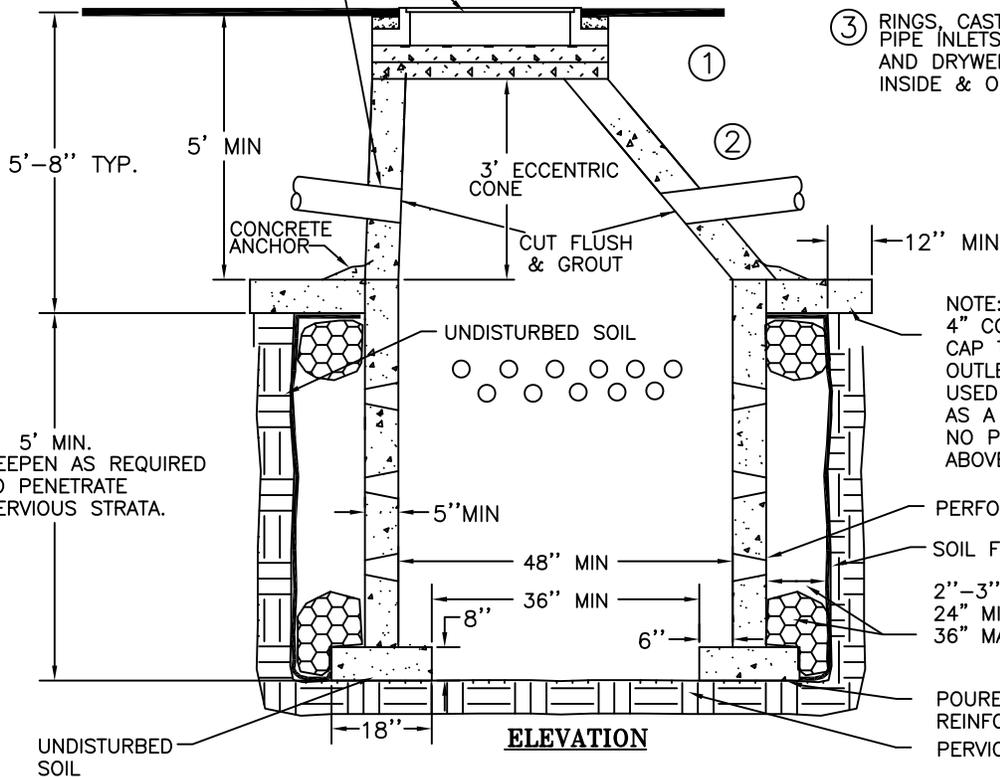
ACCESS TO LINE UP WITH FLAT TOP ACCESS

10" MIN. STORM DRAIN PIPE FROM CATCH BASIN

**PLAN**

**NOTES:**

- ① PRECAST CONCRETE ADJ. RINGS. 6" MIN. 24" MAX SEE DWG 3-4 FOR MANHOLE ADJUSTMENT & GROUTING REQUIREMENTS.
- ② WHEN UNDER A.C.P., ALL BACKFILL ABOVE THE CONCRETE CAP TO BE 5/8" MINUS CRUSHED ROCK. 95% MIN. DENSITY.
- ③ RINGS, CASTING, LIFTHOLES AND PIPE INLETS INTO CATCH BASIN AND DRYWELL SHALL BE GROUTED INSIDE & OUT.



NOTE:  
 4" CONCRETE CAP. CAP TO BE BELOW OUTLET PIPE IF DRYWELL USED IN STORM SEWER AS A MANHOLE. NO PERFORATIONS TO BE ABOVE CONCRETE CAP.

PERFORATED M.H. SECTION  
 SOIL FILTRATION FABRIC  
 2"-3" WASHED RIVER ROCK  
 24" MIN WIDTH  
 36" MAX WIDTH UNDER PAVEMENT.

POURED "IN PLACE" OR REINFORCED PRECAST BASE  
 PERVIOUS STRATA

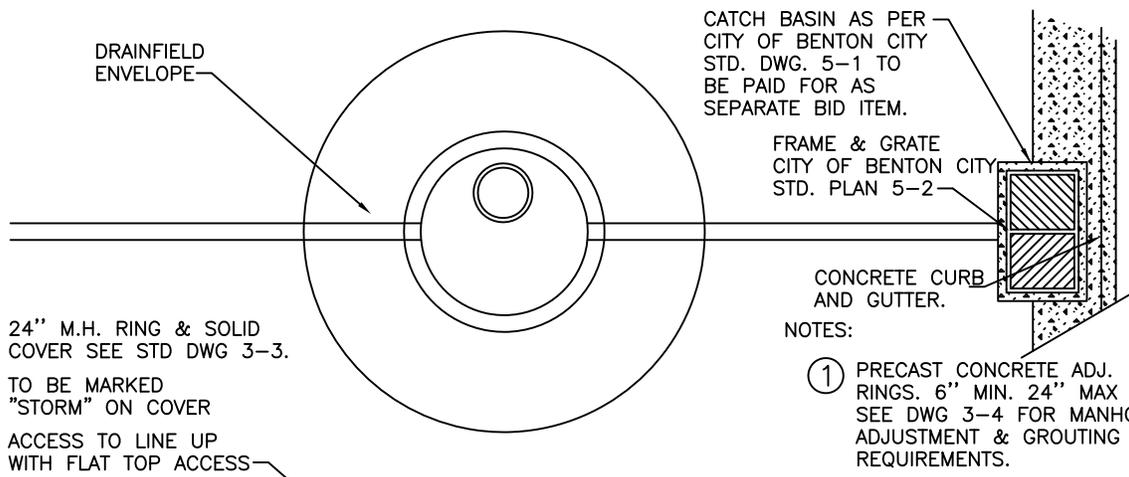
AUGUST 8, 2013

DWG #

**MODIFIED DRY WELL DETAIL**

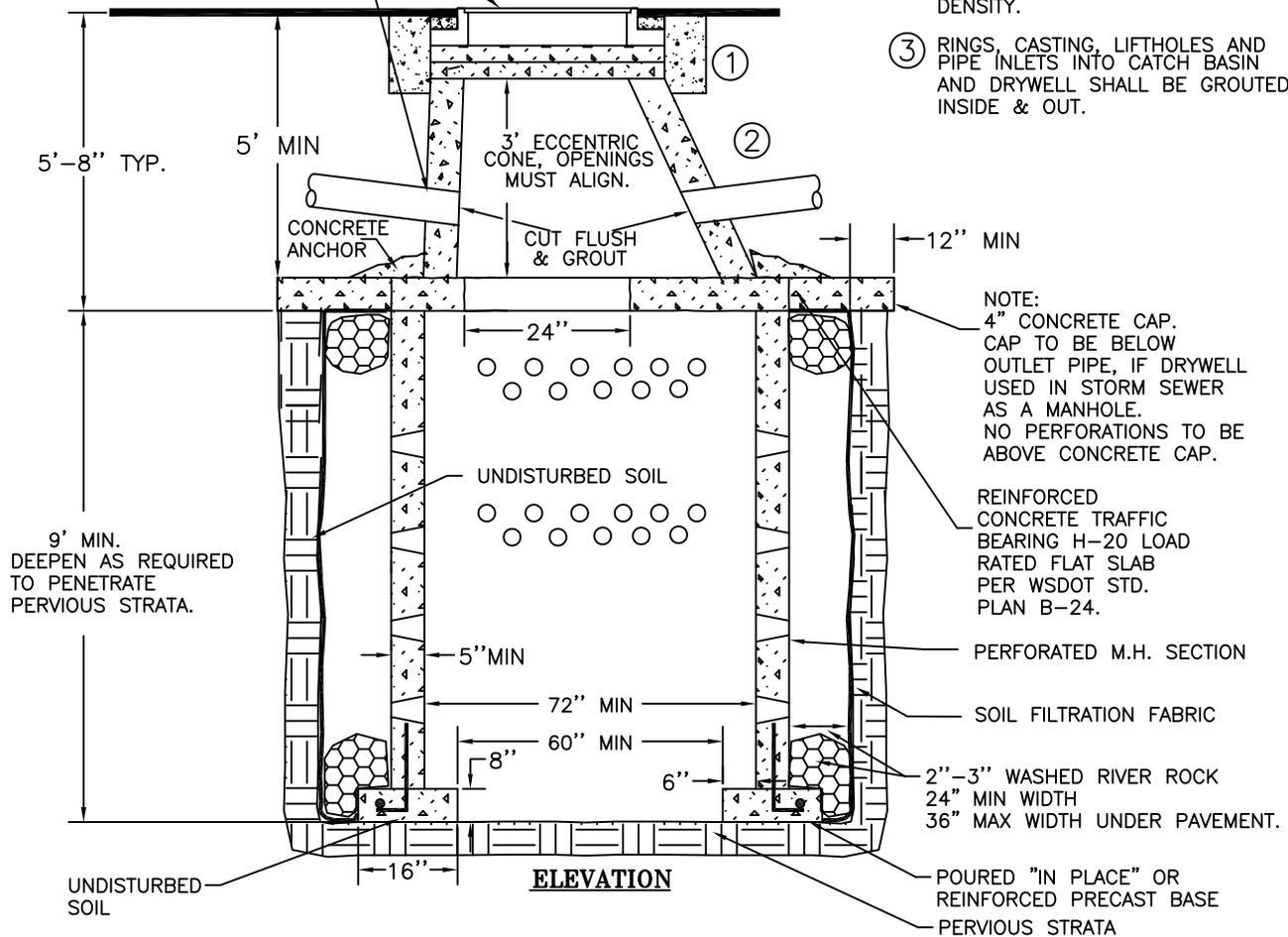
**5-4**





**PLAN**

- NOTES:
- ① PRECAST CONCRETE ADJ. RINGS. 6" MIN. 24" MAX SEE DWG 3-4 FOR MANHOLE ADJUSTMENT & GROUTING REQUIREMENTS.
  - ② WHEN UNDER A.C.P., ALL BACKFILL ABOVE THE CONCRETE CAP TO BE 5/8" MINUS CRUSHED ROCK. 95% MIN. DENSITY.
  - ③ RINGS, CASTING, LIFTHOLES AND PIPE INLETS INTO CATCH BASIN AND DRYWELL SHALL BE GROUTED INSIDE & OUT.



AUGUST 8, 2013

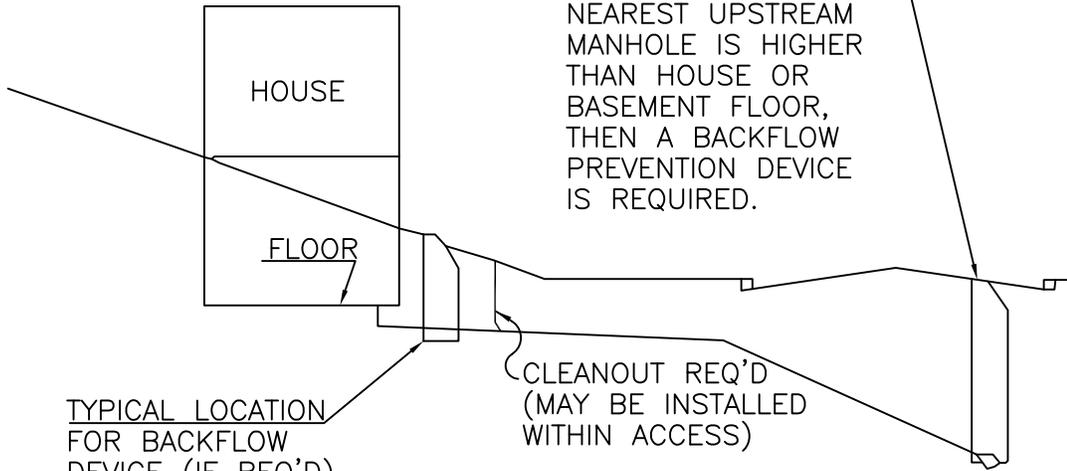
DWG #

**DRY WELL DETAIL**

**5-5**

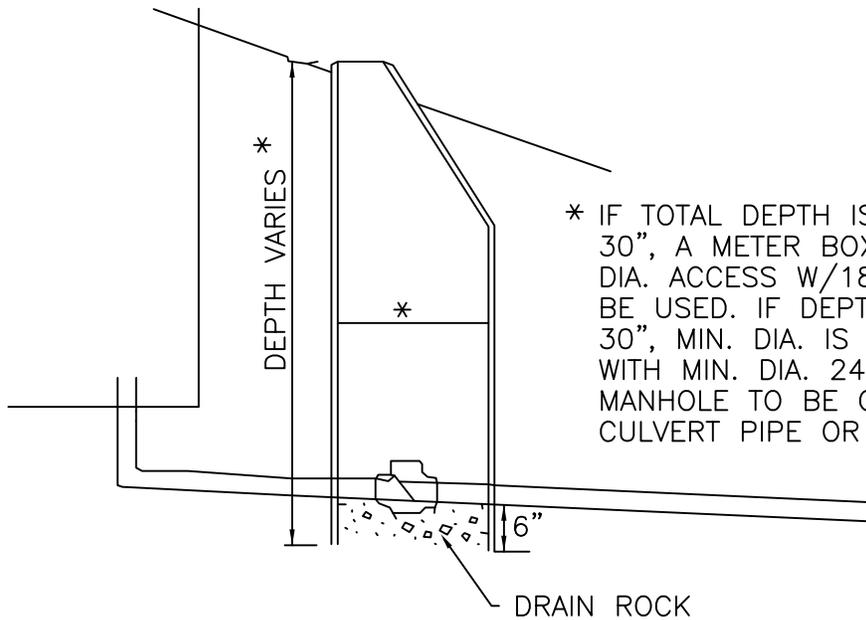


IF RIM (LID) OF  
NEAREST UPSTREAM  
MANHOLE IS HIGHER  
THAN HOUSE OR  
BASEMENT FLOOR,  
THEN A BACKFLOW  
PREVENTION DEVICE  
IS REQUIRED.



TYPICAL LOCATION  
FOR BACKFLOW  
DEVICE (IF REQ'D)  
IF LOCATED IN BASEMENT  
FLOOR PROVIDE MINIMUM  
10' X 15' ACCESS.

CLEANOUT REQ'D  
(MAY BE INSTALLED  
WITHIN ACCESS)



\* IF TOTAL DEPTH IS LESS THAN  
30", A METER BOX OR MIN. 18"  
DIA. ACCESS W/18" LID MAY  
BE USED. IF DEPTH IS OVER  
30", MIN. DIA. IS TO BE 42"  
WITH MIN. DIA. 24" ACCESS COVER.  
MANHOLE TO BE CONCRETE BLOCK  
CULVERT PIPE OR PRE-CAST CONCRETE.

AUGUST 8, 2013

DWG #



# SANITARY SEWER SERVICE BACKFLOW REQUIREMENTS

# 5-6