

This diagram illustrates the installation of a rain guardian turret on a circular stormwater outlet. The outlet is shown in cross-section, revealing a grid of filter material. A concrete base is included for the turret. The diagram specifies the following dimensions and components:

- Outlet Dimensions:** The outlet has a diameter of 3'-10" and a height of 3'-8".
- Turret Dimensions:** The rain guardian turret has a height of 4'-1" and a base diameter of 4'-2".
- Installation Details:** The turret is positioned so that its primary outlet aligns with the toe of the basin side slope to avoid soil interference with the filter.
- Labels:**
 - CURB-CUT (WIDTH VARIES)
 - CONCRETE INLET
 - DISTANCE VARIES
 - INSURMOUNTABLE CURB FACE
 - BACK OF CURB
 - RAIN GUARDIAN TURRET (CONCRETE BASE INCLUDED)
 - POSITION RAIN GUARDIAN TURRET SO PRIMARY OUTLET ALIGNS WITH TOE OF BASIN SIDE SLOPE TO AVOID SOIL INTERFERENCE WITH FILTER

Diagram illustrating the cross-section of a rainwater management system, showing various components and dimensions:

- INLET INSURMOUNTABLE CURB**: Located at the top left, with a height of 6".
- GUTTERLINE**: Indicated by a dashed line across the top of the system.
- RAIN GUARDIAN TURRET INLET**: A vertical inlet structure.
- RAIN GUARDIAN TURRET (CONCRETE BASE INCLUDED)**: The main vertical structure.
- TOP FIBERGLASS GRATE**: Located at the top of the turret.
- HIGH VOLUME OVERFLOW**: A side outlet for high flow.
- REMOVABLE FILTER WALL**: A wall within the system.
- PRIMARY OUTLET**: A vertical outlet at the bottom.
- BASIN BOTTOM**: The bottom of the system.
- CLASS 5 AGGREGATE**: The material filling the basin.
- SUBSOILS**: The ground beneath the aggregate.
- SITE SPECIFIC**: Dimensions for the inlet and overflow are noted as "SITE SPECIFIC".
- Dimensions**:
 - 6" (Inlet curb height)
 - 5" (Inlet depth)
 - 5" (Inlet depth)
 - 10.5" (Main basin depth)
 - 1'-3.5" (Main basin width)
 - 1'-1.75" (Main basin width)
 - 1'-0" (Main basin width)
 - 4" (Main basin width)
 - 6" (Main basin width)

1. INLET WIDTH AND DISTANCE BETWEEN BACK OF CURB AND RAIN GUARDIAN TURRET MAY VARY WITH SITE CONDITIONS.
2. CONCRETE BASE EXTENDS BEYOND THE FILTER WALL OF THE RAIN GUARDIAN TURRET TO SERVE AS A SPLASH DISSIPATOR.

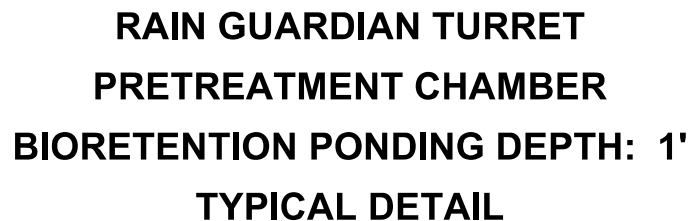
1. THE TOP OF THE CLASS 5 BASE (COMPACTED TO 95% STANDARD PROCTOR) IS PRECISELY 1' 4" BELOW THE GUTTERLINE ELEVATION.

1. STEEL REINFORCED, COLD JOINT SECURED MONOLITHIC CONCRETE STRUCTURE (1,030 LBS). CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI AT 28 DAYS. CONCRETE AIR ENTRAINED (5% TO 8.5% BY VOLUME); MANUFACTURED AND DESIGNED TO ASTM C858.

- 3. FIBERGLASS TOP GRATE (32 LBS, 1-1/2" THICK) - 1,760 LB
CONCENTRATED LOAD OR 409 LB/SQ-FT UNIFORM LOAD.**

1. INSTALL THE CLASS 5 BASE (COMPACTED TO 95% STANDARD PROCTOR). THE DISTANCE FROM THE BACK OF THE CURB MAY VARY BASED ON SITE CONDITIONS, BUT CONSIDERATIONS SHOULD INCLUDE SLOPE OF THE INLET AND BASIN SIDE SLOPES ADJACENT TO THE RAIN GUARDIAN TURRET. POSITION RAIN GUARDIAN TURRET SO PRIMARY OUTLET ALIGNS WITH TOE OF BASIN SIDE SLOPE TO AVOID SOIL INTERFERENCE WITH REMOVABLE FILTER WALL. EXCAVATE 1' 10" BELOW THE GUTTERLINE ELEVATION (I.E. THE BIOTRETION OVERFLOW ELEVATION) TO ACCOMMODATE THE 1' PONDING DEPTH, 6" CLASS 5 AGGREGATE, AND 4" RAIN GUARDIAN TURRET BASE (INCLUDED). THEREFORE, THE TOP OF THE CLASS 5 COMPACTED BASE IS PRECISELY 1' 4" BELOW THE GUTTERLINE ELEVATION. THE INLET TO THE RAIN GUARDIAN TURRET WILL BE 10-1/2" ABOVE THE TOP OF THE CONCRETE BASE AND 1-1/2" BELOW THE GUTTERLINE ELEVATION TO ACCOMMODATE A SLOPED INLET FROM THE GUTTER TO THE RAIN GUARDIAN TURRET.

2. SET RAIN GUARDIAN TURRET ON THE PREPARED CLASS 5 BASE.
3. INSTALL FRAMING FOR INLET BETWEEN RAIN GUARDIAN TURRET AND BACK OF CURB. TOP ELEVATIONS OF THE FRAMING SHOULD MATCH THE TOP OF THE CURB ON THE STREET SIDE AND THE TOP OF THE RAIN GUARDIAN TURRET ON THE BIoretention SIDE.
4. INSTALL EXPANSION/CONTRACTION JOINT MATERIAL OR A SHEET OF POLY TO SERVE AS A BOND BREAK BETWEEN RAIN GUARDIAN TURRET AND CONCRETE INLET BEFORE POURING INLET.
5. SIDE CURBS OF THE POURED INLET MUST HAVE AN INSURMOUNTABLE PROFILE TO PREVENT WATER FLOW FROM OVERTOPPING THE DOWNSTREAM SIDE OF THE INLET.
6. REMOVABLE FILTER WALL SHOULD BE INSTALLED WITH FILTER FABRIC ON THE INTERIOR SIDE OF THE RAIN GUARDIAN TURRET.



REV	BY	DATE	DESCRIPTION
A	MDH	11/16/2022	TURRET - 1'
SCALE		VARIABLE	
U.S. PATENT NOS.		8,501,016 AND 8,858,804	

