

**James V. Fitzgerald ASBS Pollution Reduction Program**

**Upland BMPs: LID Projects**

**Approved by Selection Committee June 9, 2014**

**LID Site #9 – Cooperator ID#: 202.0724.01**

**Site Information:**

Property is on ~6000 square foot parcel up the street from the Fitzgerald Marine Reserve and includes a residential structure and storage unit. Runoff is through neighboring properties to a drainage ditch that discharges into the ASBS. Stormwater from street above the house drains onto property and stormwater from the roof structures infiltrates poorly on the property. The landowner is highly active in the environmental community and improvements would be close to the Reserve and visible.

**Integrated Project BMPs:**

- Install two batteries of three 205 gallon rainwater storage tanks to capture and store runoff from house and storage unit roof (1,080 square feet)
- Construct 5x14 foot rain garden on north side of property to capture and filter runoff from street, property and house roof
- Construct 8x24 foot rain garden on south side of property to capture and filter runoff from the property on other side of house and from house roof

**Treatment Description:**

Roof runoff is directed through the existing gutters to new downspouts that attach to two separate groups of rainwater storage tank. Overflow from these tanks is outlet into two separate rain gardens. The rain gardens provide infiltration only and will overflow overland in the case of a large storm event. Irrigation risers allow the tanks to be drained manually or for the stored water to be used for irrigation.

**Stormwater Capture/Treatment:**

**North Rain Garden/Tank System: 48%**

**South Rain Garden/Tank System: 52%**

# PROJECT 202.0724.01

## WATER QUALITY IMPROVEMENT PLAN

### GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH FINAL DESIGN DRAWINGS AND ATTACHED SPECIFICATIONS: 07 65 00 GUTTERS AND DOWNSPOUTS, 32 30 20 GRAVEL EROSION PROTECTION, 32 30 60 RAIN GARDEN, 33 40 00 STORM DRAINAGE UTILITIES, 33 40 10 RAINWATER CATCHMENT.
- SAN MATEO RESOURCE CONSERVATION DISTRICT SHALL BE RESPONSIBLE FOR OBTAINING ANY NEEDED PERMITS, EASEMENTS, AND/OR RIGHT-OF-WAYS, AND MEETING ALL LOCAL, STATE, AND FEDERAL REGULATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL UTILITIES AND SHALL CALL NORTHERN CALIFORNIA UNDERGROUND SERVICE ALERT AT '811' AT LEAST 3 DAYS PRIOR TO START OF CONSTRUCTION. SPECIAL SAFETY PRECAUTIONS SHALL BE TAKEN WHEN WORKING IN THE VICINITY OF GAS, OIL, AND ELECTRICAL LINES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING LOCATIONS OF TEMPORARY ACCESS, STAGING AREAS, AND OTHER FACILITIES TO PRECONSTRUCTION CONDITION. DISTURBANCE OF EXISTING STRUCTURES AND VEGETATION MUST BE AVOIDED OR MINIMIZED TO THE FULLEST POSSIBLE EXTENT.
- LANDOWNER SHALL BE RESPONSIBLE FOR THE SUCCESSFUL ESTABLISHMENT AND MAINTENANCE OF VEGETATION PRACTICES.
- CONTRACTOR SHALL ENSURE THAT THE USE AND/OR STORAGE OF PETROLEUM POWERED EQUIPMENT SHALL BE ACCOMPLISHED IN A MANNER TO PREVENT THE POTENTIAL RELEASE OF PETROLEUM MATERIALS INTO WATERS OF THE STATE.
- CAL-OSHA SAFETY REQUIREMENTS SHALL BE IN EFFECT DURING ALL CONSTRUCTION.
- CONTACT THE SAN MATEO RESOURCE CONSERVATION DISTRICT AT LEAST 7 DAYS PRIOR TO START OF CONSTRUCTION. PHONE: (650) 726-4660.

### AS-BUILT NOTES

- THIS AS-BUILT PLAN REPRESENTS THE STATUS OF THE PROJECT AS INSTALLED IN THE FIELD. IT IS NOT A CERTIFICATION OF THE COMPLETENESS OF THE WORK OR THE CONSISTENCY OF THE WORK WITH THE ORIGINAL DESIGN DOCUMENTS. IN SOME CASES DEVIATIONS FROM THE ORIGINAL DESIGN DOCUMENTS MAY LEAD TO OPERATIONS OR MAINTENANCE ISSUES. THE ENGINEER ACCEPTS NO LIABILITY FOR FAILURES OR PROBLEMS ARISING FROM DEVIATIONS FROM THE ORIGINAL DESIGN DOCUMENTS.

### SHEET INDEX

- TITLE SHEET AND GENERAL NOTES
- LAYOUT PLAN
- CONSTRUCTION DETAILS
- CONSTRUCTION DETAILS

### VICINITY MAP

NOT TO SCALE



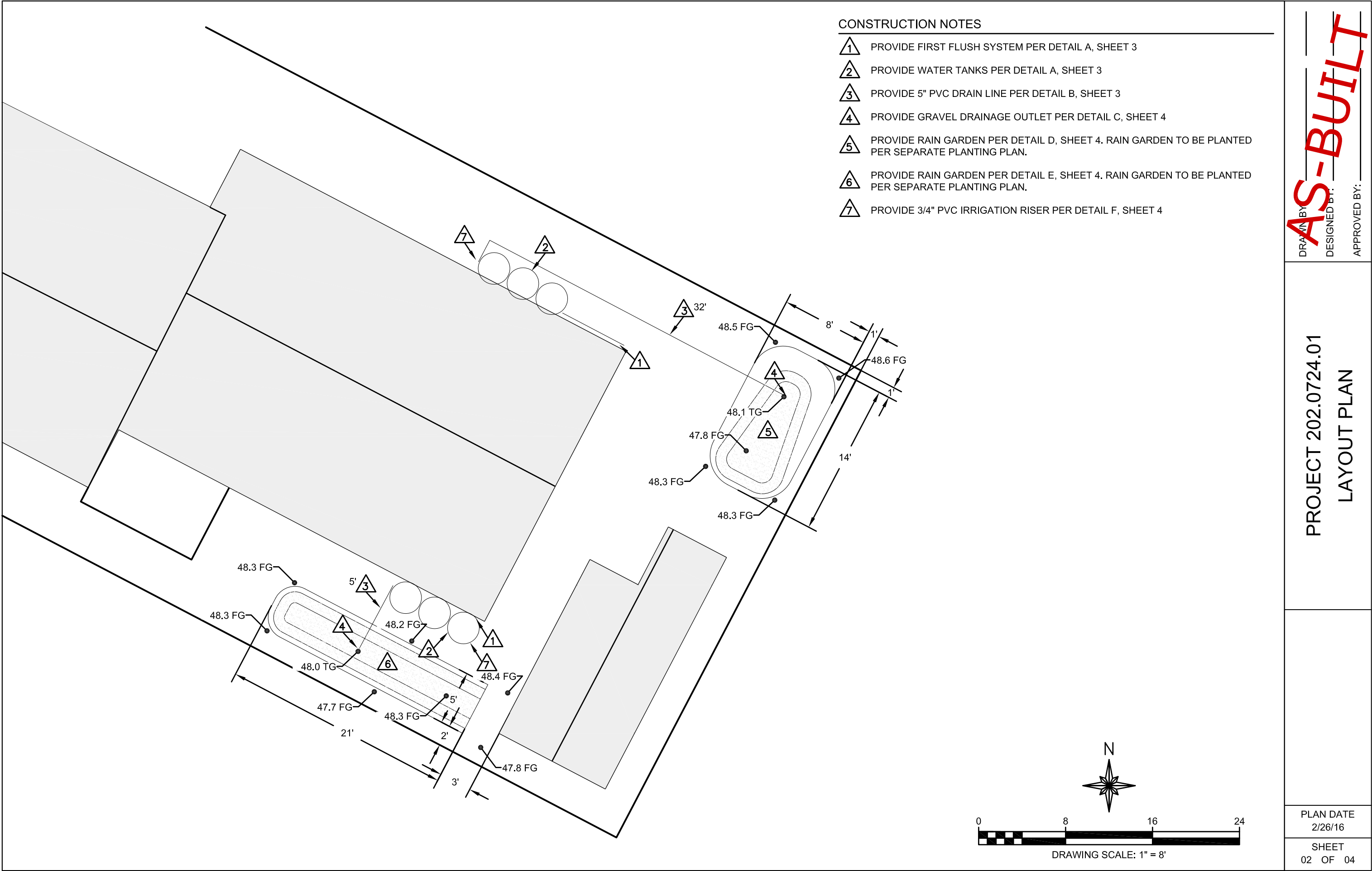
AS-BUILT

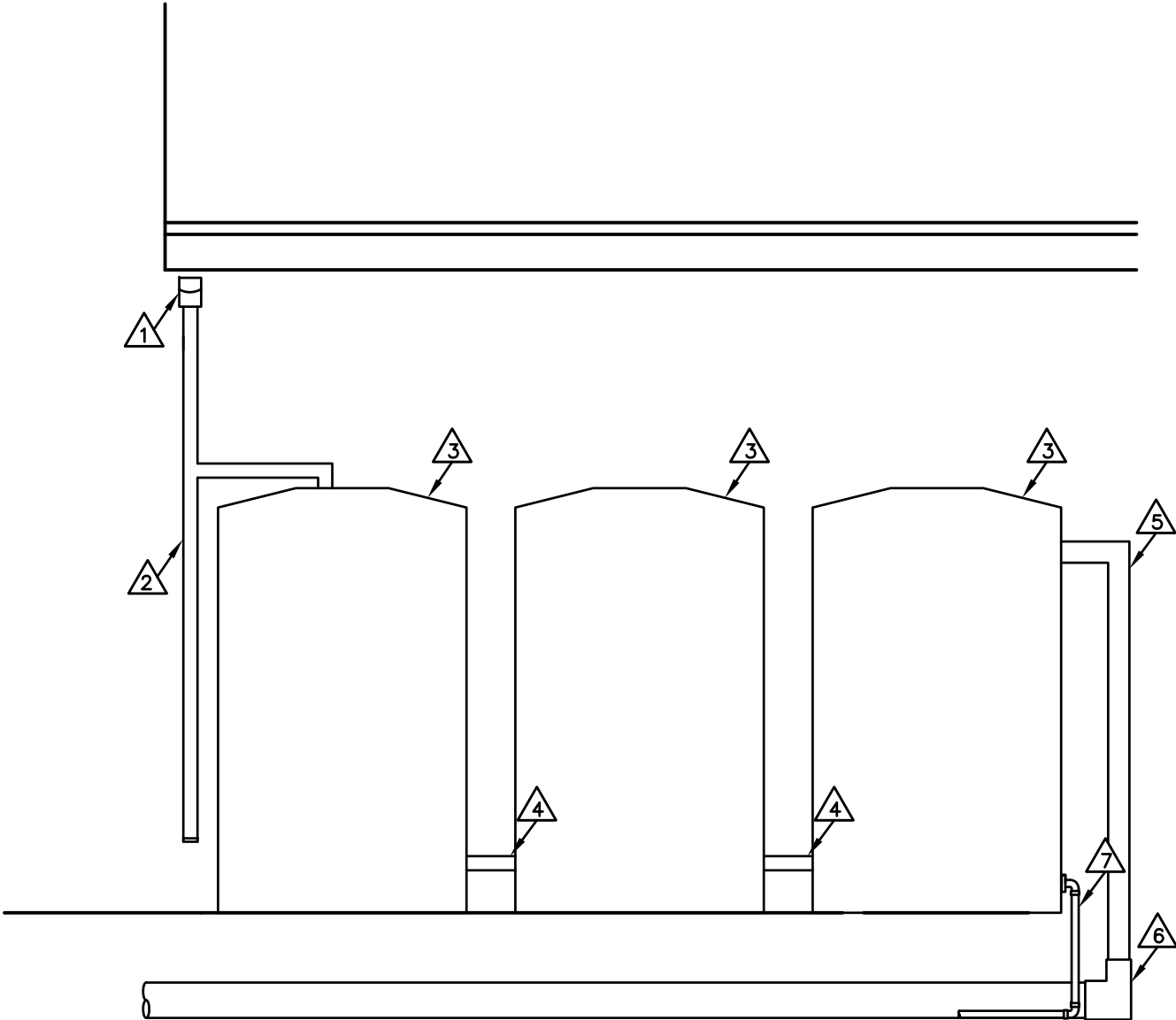
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DESIGNED BY: \_\_\_\_\_  
APPROVED BY: \_\_\_\_\_

PROJECT 202.0724.01  
TITLE SHEET & GENERAL NOTES

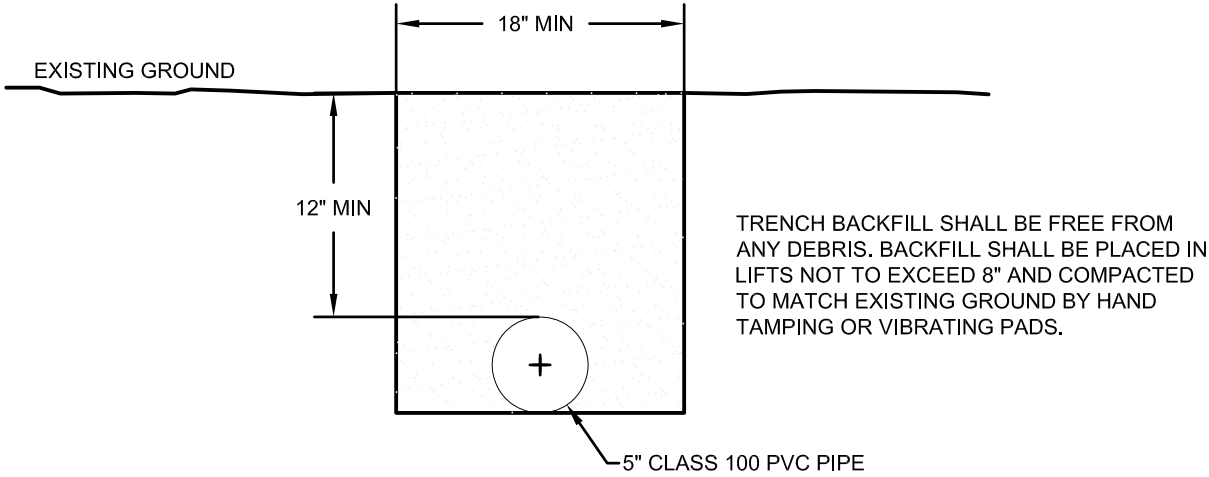
PLAN DATE  
2/26/16

SHEET  
01 OF 04

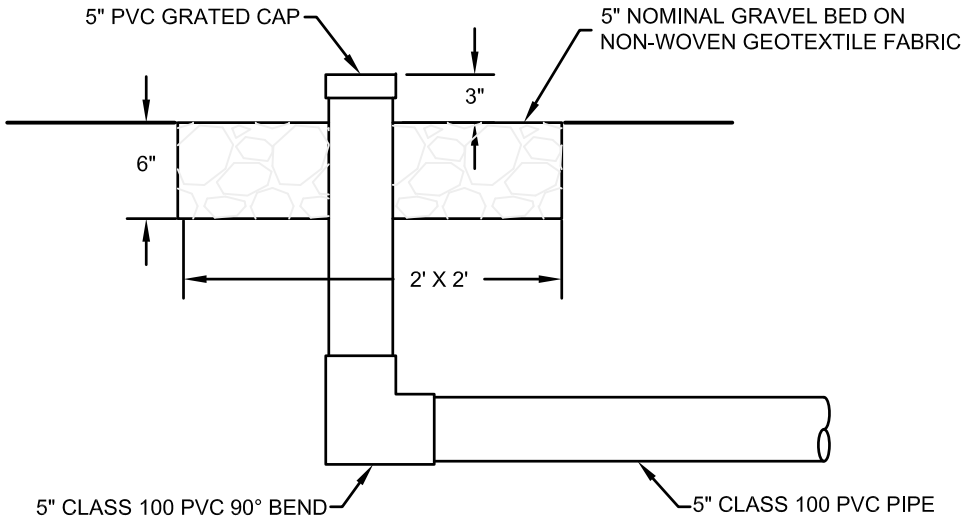




- 1 PROVIDE 2" SQUARE GUTTER OUTLET WITH SLOPED SCREEN INLET
- 2 PROVIDE BUSHMAN FIRST FLUSH SYSTEM OR APPROVED EQUAL
- 3 PROVIDE BUSHMAN 205 GALLON TANK OR APPROVED EQUAL
- 4 PROVIDE 1" CONNECTION PIPELINE
- 5 PROVIDE 3" OVERFLOW PIPELINE
- 6 PROVIDE 3"x5" PVC BEND
- 7 PROVIDE 3/4" IRRIGATION PIPELINE



TRENCH BACKFILL SHALL BE FREE FROM ANY DEBRIS. BACKFILL SHALL BE PLACED IN LIFTS NOT TO EXCEED 8" AND COMPACTED TO MATCH EXISTING GROUND BY HAND TAMPING OR VIBRATING PADS.



SCALE	RAIN GARDEN DETAIL	DETAIL D	SCALE	IRRIGATION RISER	DETAIL F	
1" = 2'		SHEET 2	1" = 1'		SHEET 2	
SCALE	RAIN GARDEN DETAIL	DETAIL E				
1" = 2'		SHEET 2				

PROJECT 202.0724.01

CONSTRUCTION DETAILS

PLAN DATE  
2/26/16

SHEET  
04 OF 04

AS-BUILT

DRAWN BY: \_\_\_\_\_

DESIGNED BY: \_\_\_\_\_

APPROVED BY: \_\_\_\_\_

AS-BUILT

DRAWN BY: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
APPROVED BY: \_\_\_\_\_

PROJECT 202.0724.01  
CONSTRUCTION DETAILS

PLAN DATE  
2/26/16

SHEET  
04 OF 04



1. Final plant selection, locations and placement shall be verified in field by Ecological Concerns Incorporated prior to installation.
2. Plant spacing at 1 foot/On-Center
3. All plants 1 gallon container size