

# West Alameda Bio-retention Basin Draft Design



~21,175 ft<sup>2</sup> of impervious area (shaded blue) on W. Alameda would drain to the basin location.

1142 W Alameda St

Santa Fe, New Mexico

Street View - May 2015

Basins 1 and 2

Sediment Trap

Curb Cut



Back to Map

Google



Curb Cut

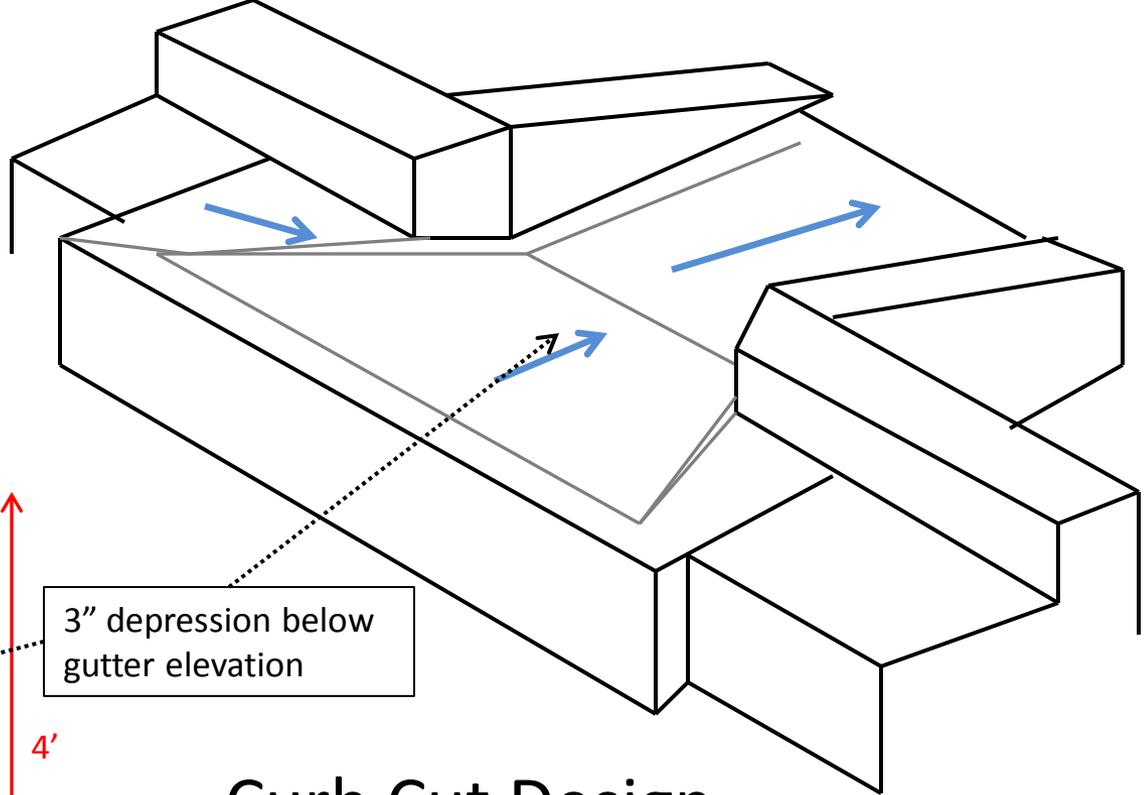
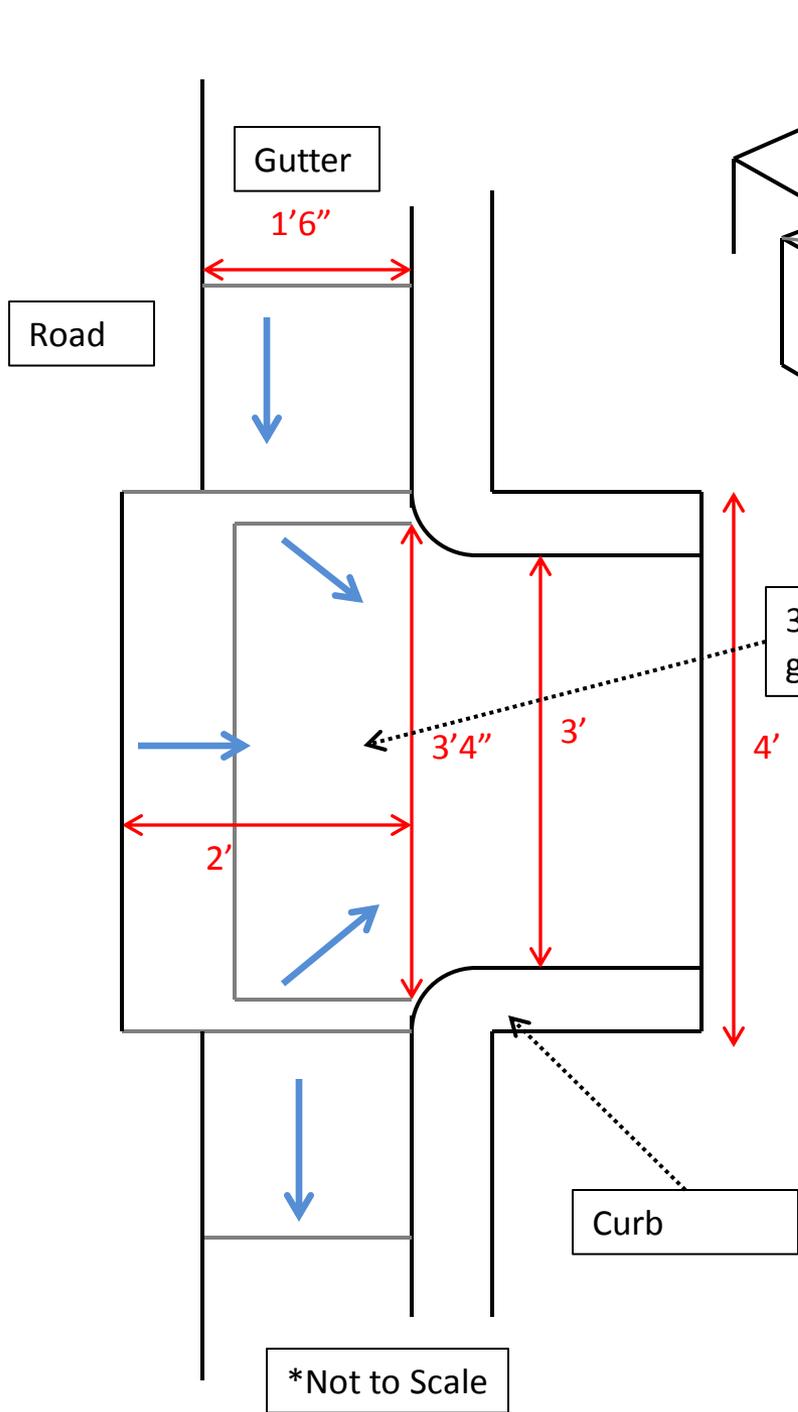
Sediment Trap

Sediment Trap Overflow Pipe to Basins

Basins 1 and 2

Overflow Pipe to Storm Drain

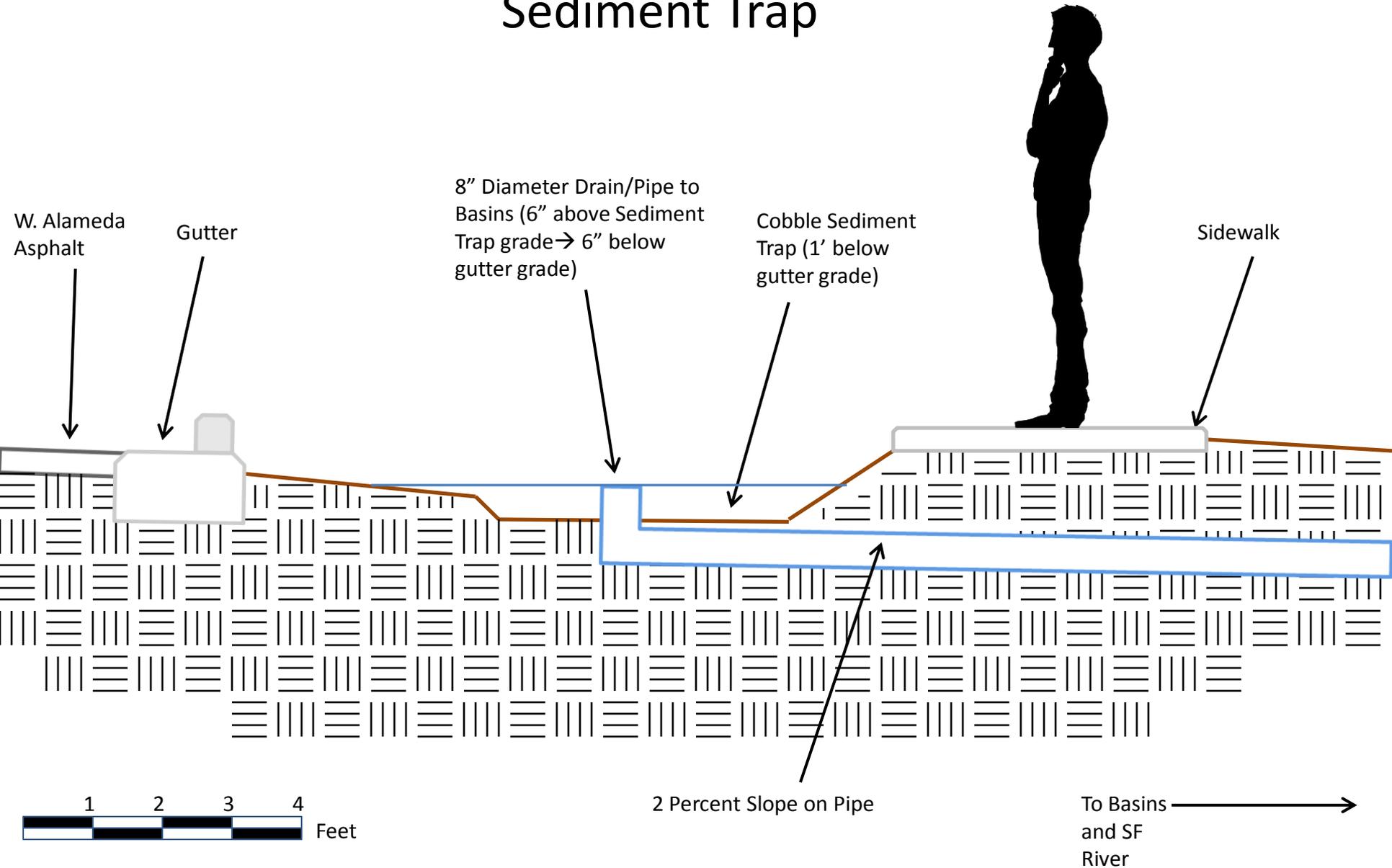
Existing Storm Drain Outlet into SF River



## Curb Cut Design



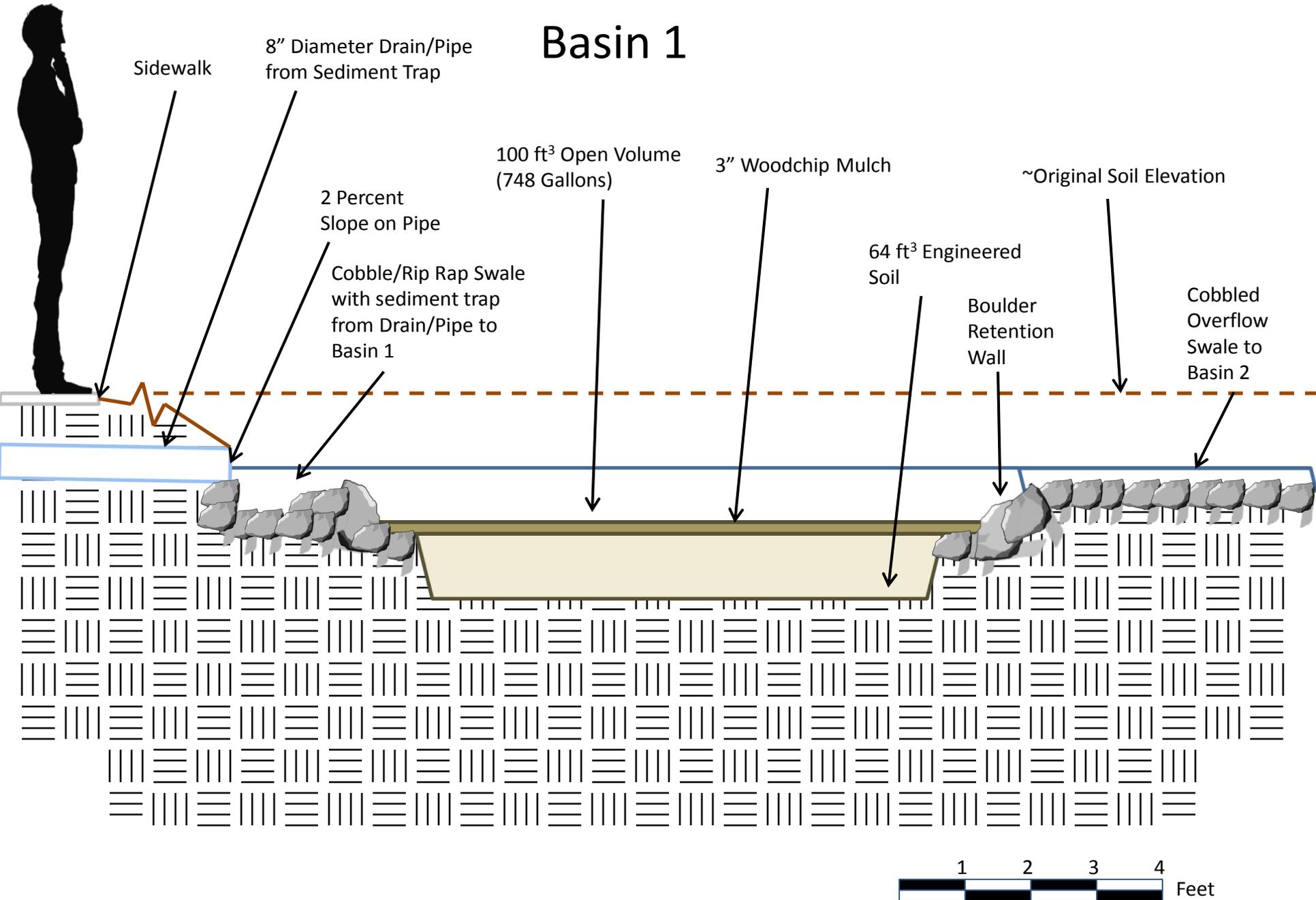
# Sediment Trap



# Example of Sediment Basin and Basin 2 Overflow Drain



# Basin 1



# Basin 2

6-8" Deep Swale from Basin 1 (Lined with Cobble/Rip Rap)

375 ft<sup>3</sup> Open Volume (2,805 gallons)

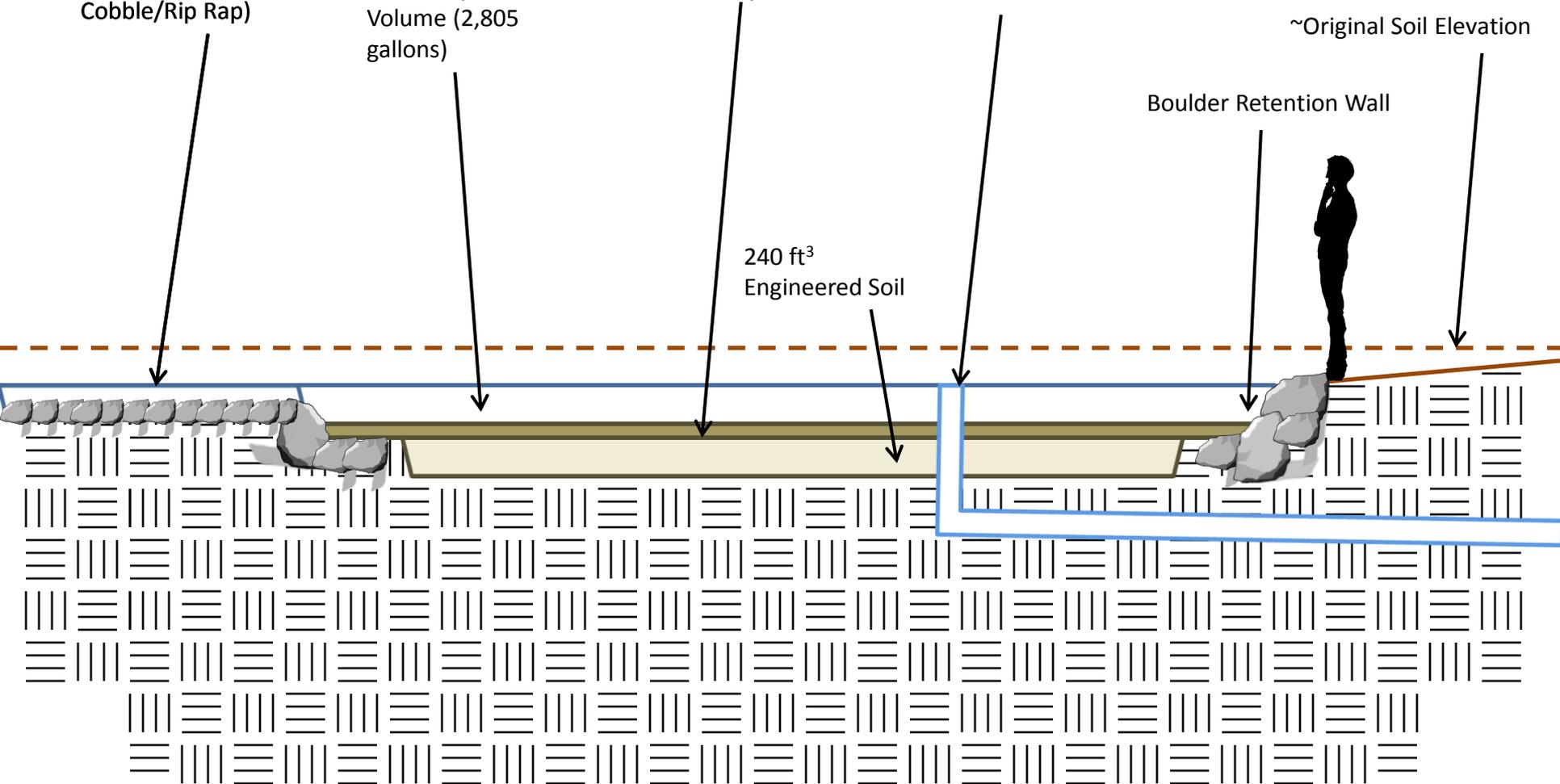
3" Woodchip Mulch

8" Diameter Overflow Drain/Pipe to Existing Stormwater Pipe

~Original Soil Elevation

Boulder Retention Wall

240 ft<sup>3</sup> Engineered Soil



# Runoff and Basin Characteristics

<b>Location/Unit</b>	<b>Area (sqft)</b>	<b>Estimated Runoff or Catchment (open basin)</b>
W. Alameda Impervious Area	21,175	1056 gallons (0.1 inch storm); 10560 (1 inch storm); 126,711 gallons (annually)
Sediment Basin	35	131 gallons
Basin 1	100	748 gallons
Basin 2	375	2805 gallons
Minimum Catchment		3684 gallons (~0.35 inch storm event)



1413 Second Street, Suite 3  
 Santa Fe, NM 87505  
 (505) 820-1696; fax 986-9132  
[info@santafewatershed.org](mailto:info@santafewatershed.org)  
[santafewatershed.org](http://santafewatershed.org)



March 8, 2016

### Estimated Costs for Bio-retention Basins at W. Alameda

Melissa,

Please find a table with the anticipated costs to install two basins (~779 ft<sup>3</sup> of open volume and mixed soil media) to capture and filter stormwater from approximately ½ acre of impervious surface from W. Alameda. The basins will include grasses, shrubs, and trees to improve shading, remediation of common pollutants, and habitat improvement. The height of the open volume stone wall will be less than 18 inches (~12 inches exposed above ground). Efforts will be made to solicit volunteers for assistance with planting, mixing soil, etc. to generate community ownership and support for future projects. Please let me know if you have any questions.

Sincerely,

Aaron Kaufman and Andy Otto

Item	Cost
Sand	\$ 309.78
Compost	\$ 288.42
Mulch	\$ 262.92
Stone	\$ 597.71
Vegetation	\$ 721.04
PVC Pipe	\$ 341.19
Soil Excavation Equipment Rental	\$ 3,144.55
Labor	\$ 4,310.89
Total Misc. (Mileage, Curb cut, etc)	\$ 932.42
Total (including GRT)	\$ 11,815.72
Total Funding from <i>Santa Fe Watershed Association</i> Grant	\$ 8,403.62
<b>Total Request from City</b>	<b>\$ 3,412.10</b>