

West Little Pimmit Storm Sewer & Kensington Green Street Projects



June 23, 2015

Nottingham Elementary School

Project Timeline

- May 2013:** Adjacent neighbors voted on plants for rain gardens
- Shrub & Wildflower Garden option selected

February 26, 2013: Public Meeting at Nottingham Elementary School

- Included Open House for adjacent residents and presentation for civic association members
- Green Street and storm sewer capacity projects discussed during open house and presentation
- County's response to resident questions posted online

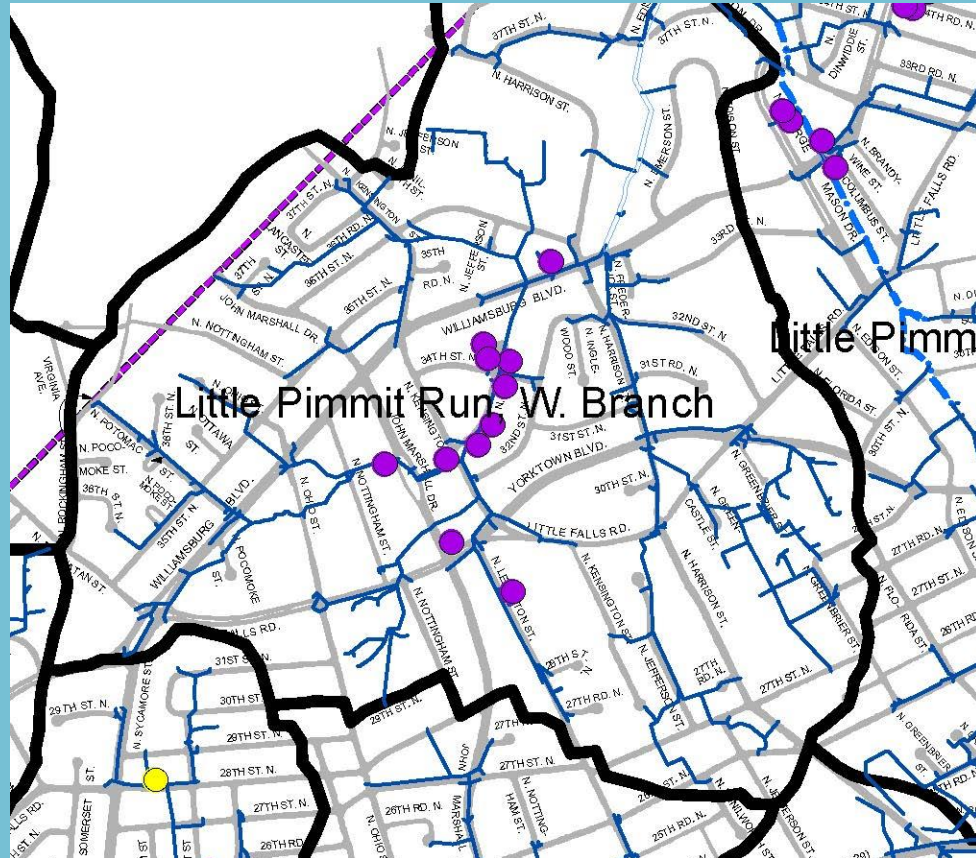
- January 2013:** Resident Q&A document from 2012 is updated
- Is available online

July 20 & 23, 2012: Curbside meetings with those adjacent to rain gardens

Agenda

1. Storm Sewer Capacity Project
2. Background on Stormwater & Rain Gardens
3. Kensington and 32nd St N Green Streets

Flooding from June 2006 Storm



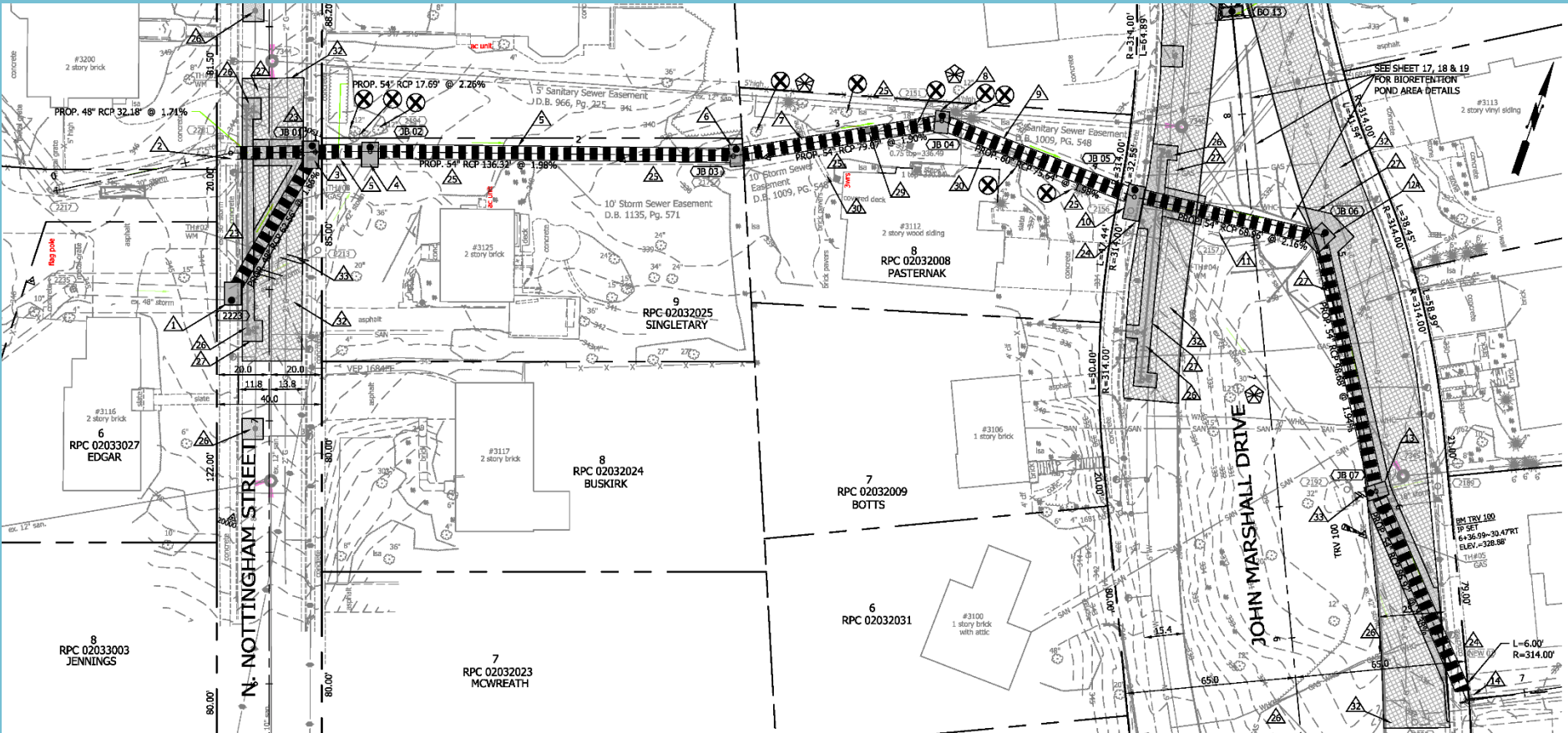
High Water Marks at
5510 N. 33RD St. after
June 2006 Storm



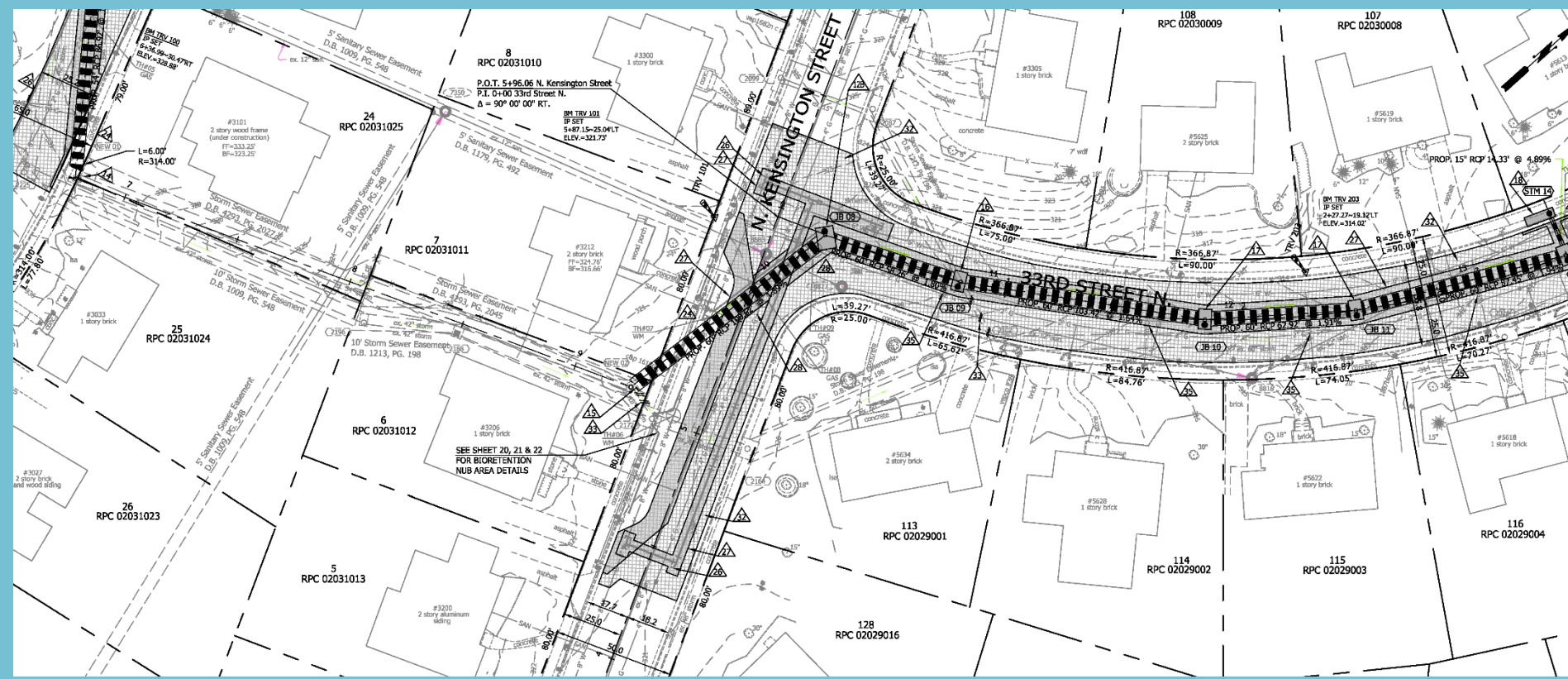
Google Earth Photo with Flood Level Marked



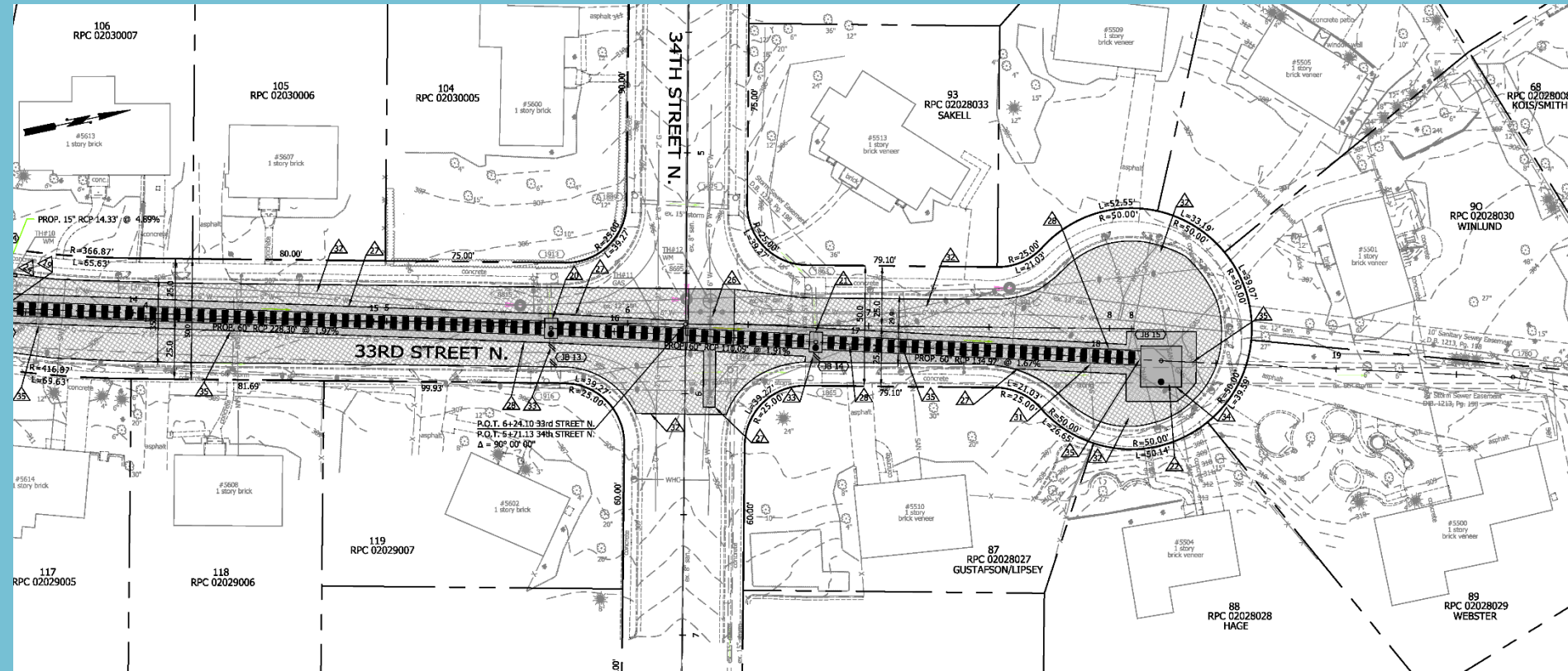
Plan View Showing Beginning of Project N. Nottingham to John Marshall Dr.



Plan View Showing Middle Section of Project John Marshall Dr. to N. Kensington St at intersection with 33rd St. N



Plan View Showing End of Project 33rd St. N, from N. Kensington St. to cul-de-sac













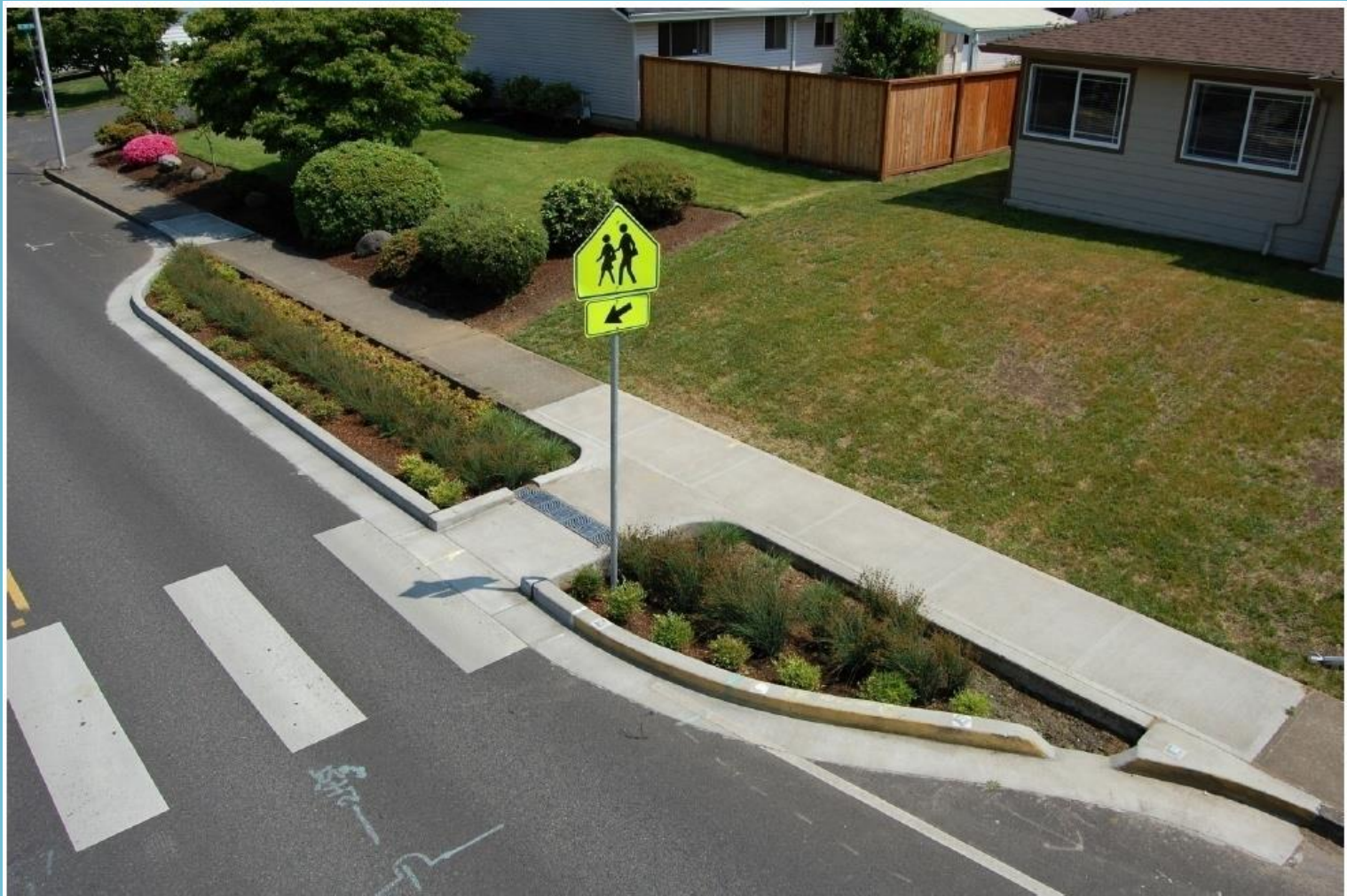
Stormwater Challenges

Volume: Significant quantities of stormwater enter Arlington's stream during storms, causing erosion that exposes our infrastructure and undermines trees along our streams.

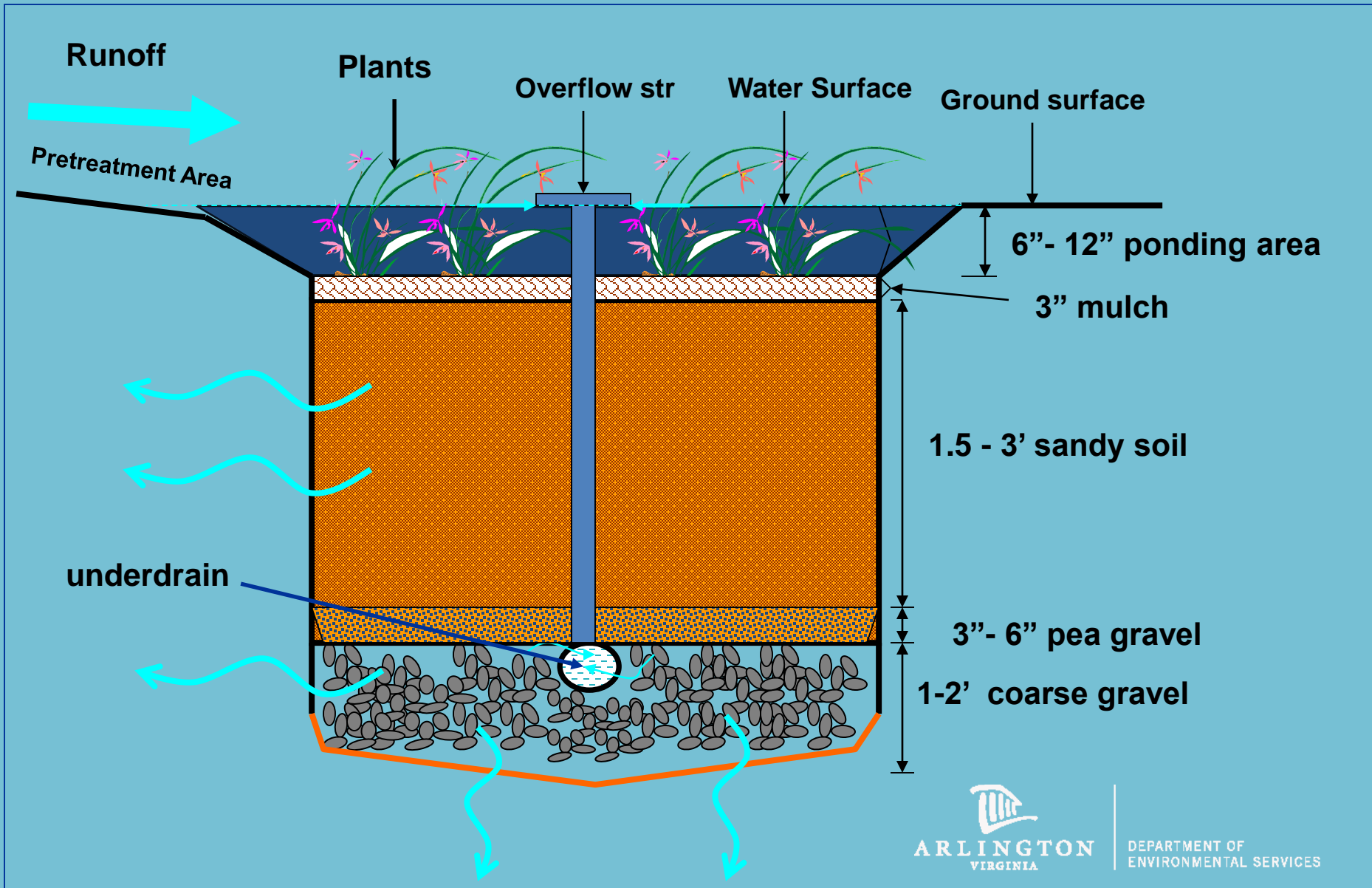
Pollutants: Stormwater washes pollutants like nutrients (nitrogen and phosphorus), sediment, bacteria, and litter into our streams. This causes poor water quality in our streams.

Regulations: Arlington's Municipal Separate Storm Sewer Permit (MS4 Permit) and the Chesapeake Bay Total Maximum Daily Load (TMDL) require Arlington to address the volume and pollutant loads in our stormwater.

A Green Street is a street with a vegetated area in the public right-of-way that reduces the volume of stormwater and stormwater pollutants that enter our local streams, the Potomac River, and the Chesapeake Bay.



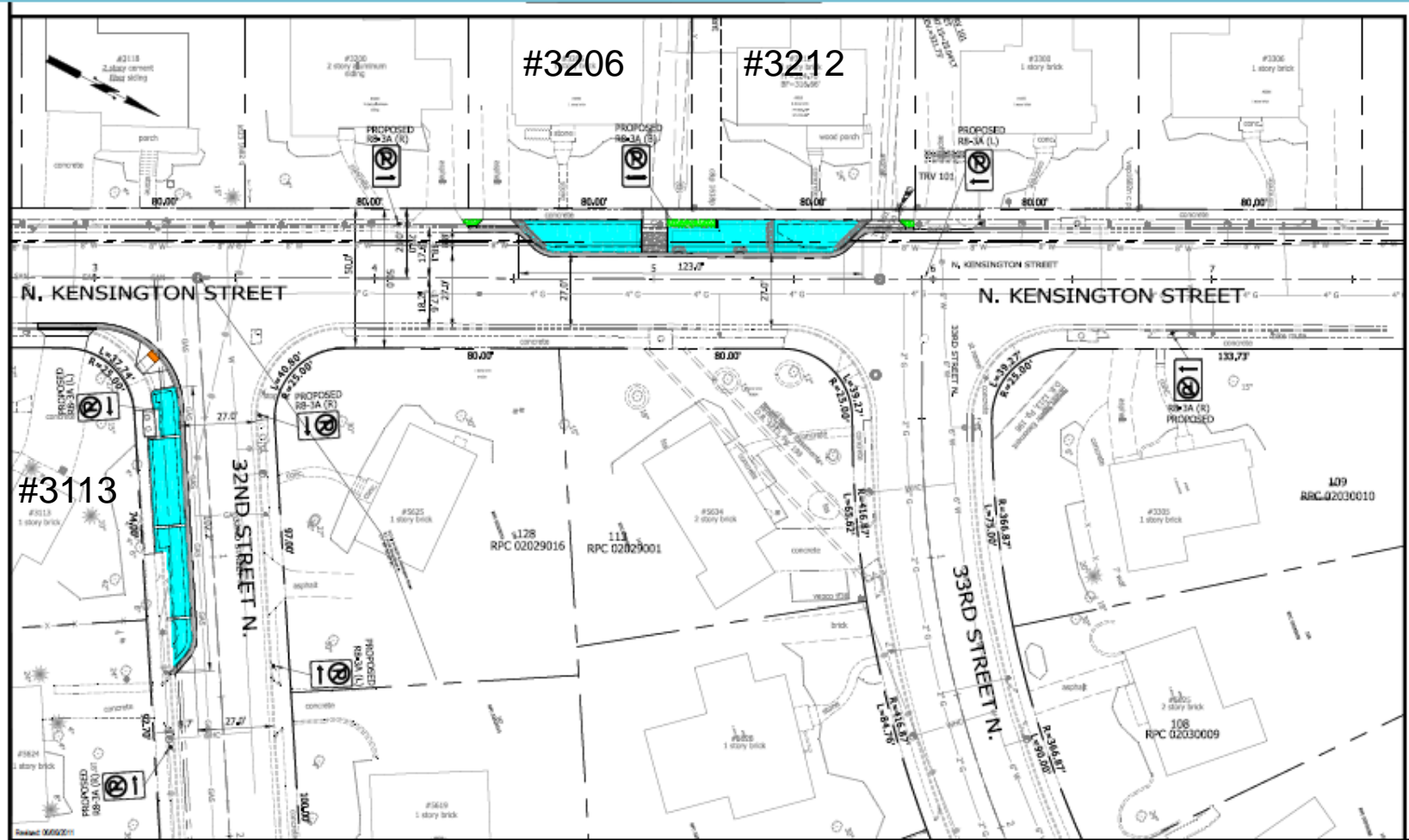
Green Street Rain Garden



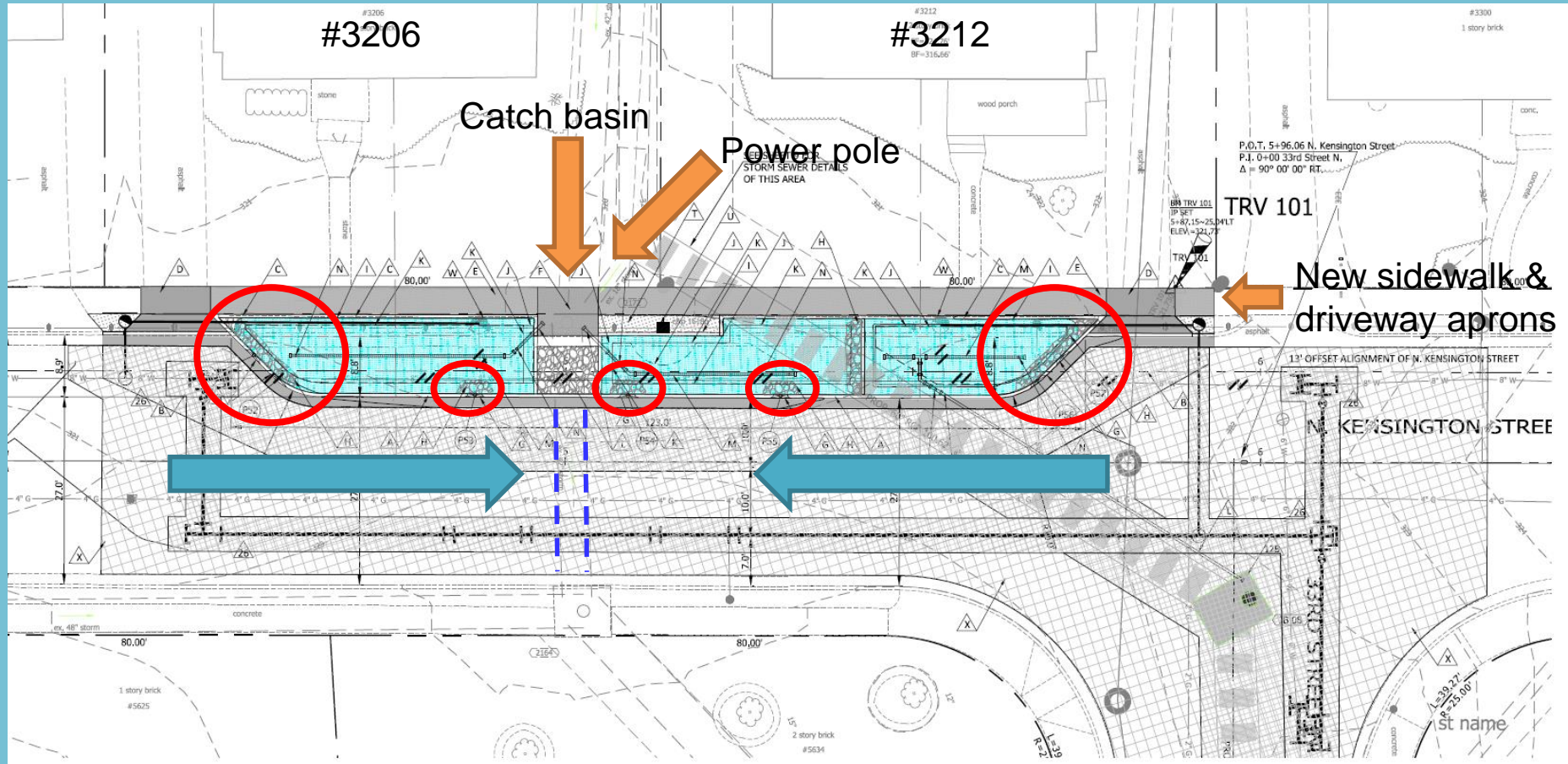


07/13/2011

Kensington & 32nd St Green Streets

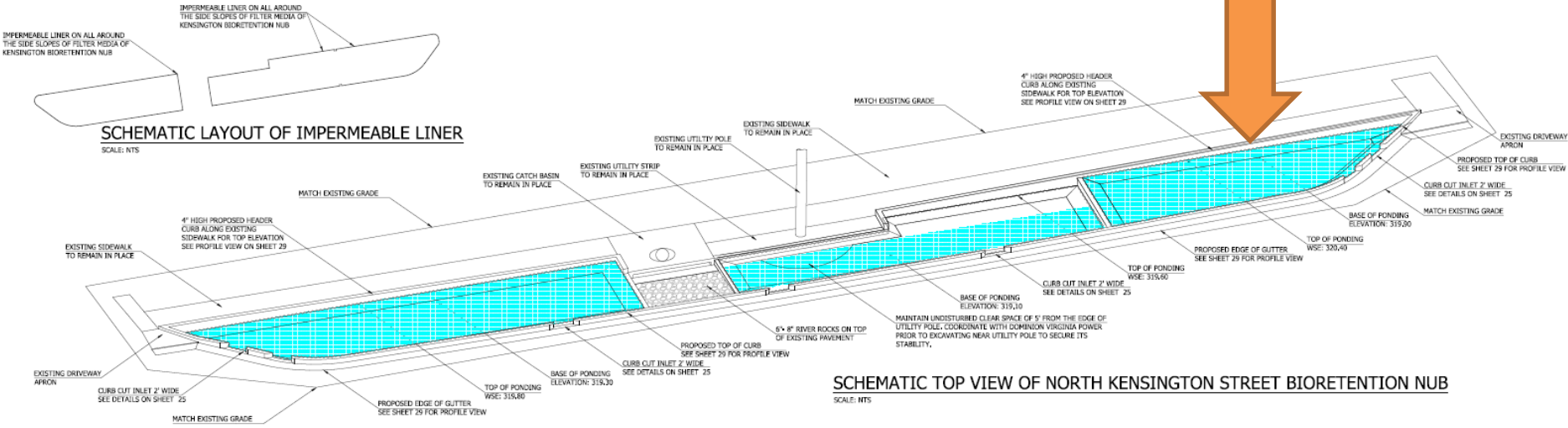


Kensington Green Street

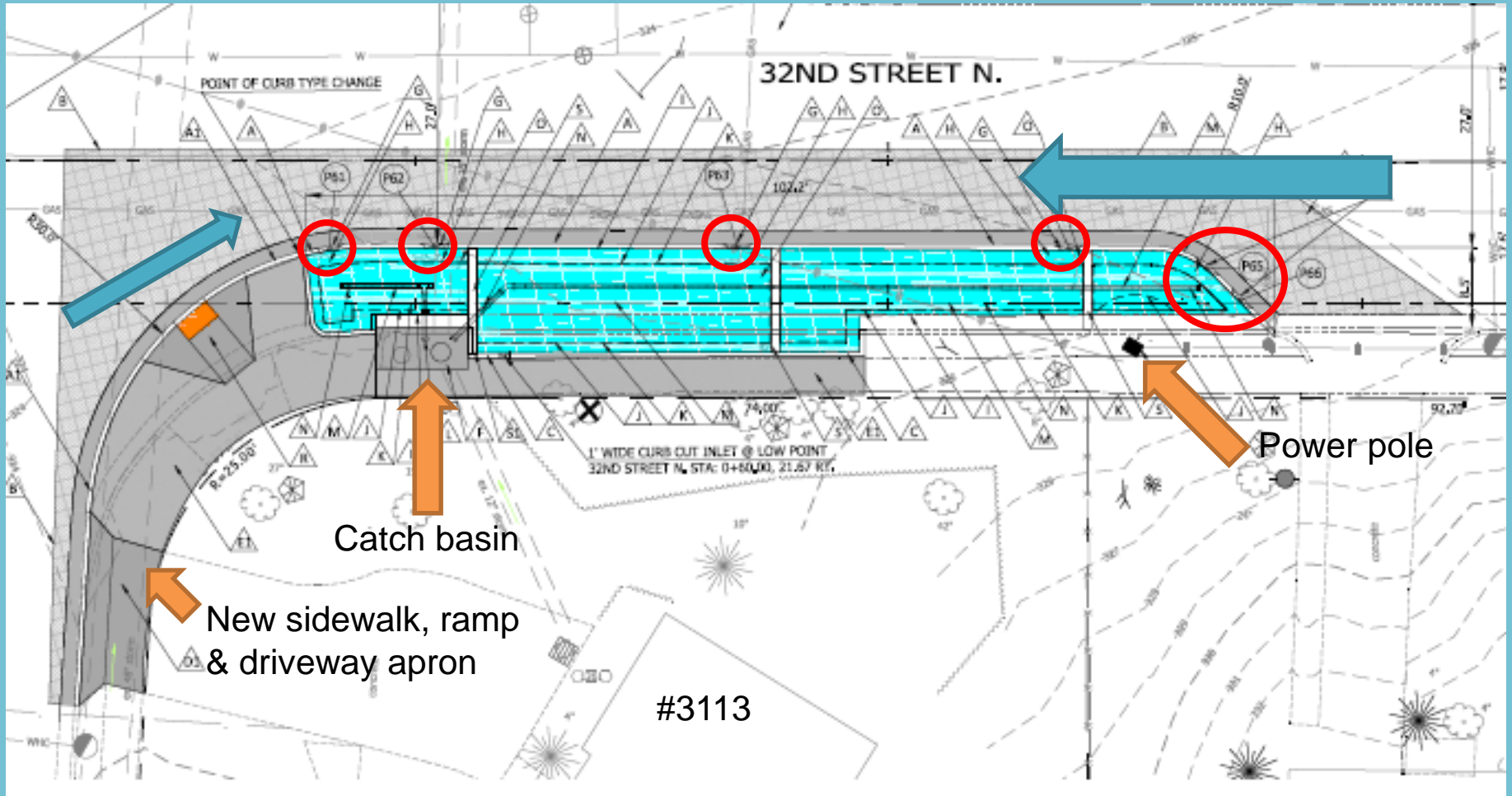


Kensington Green Street

4" high header curb

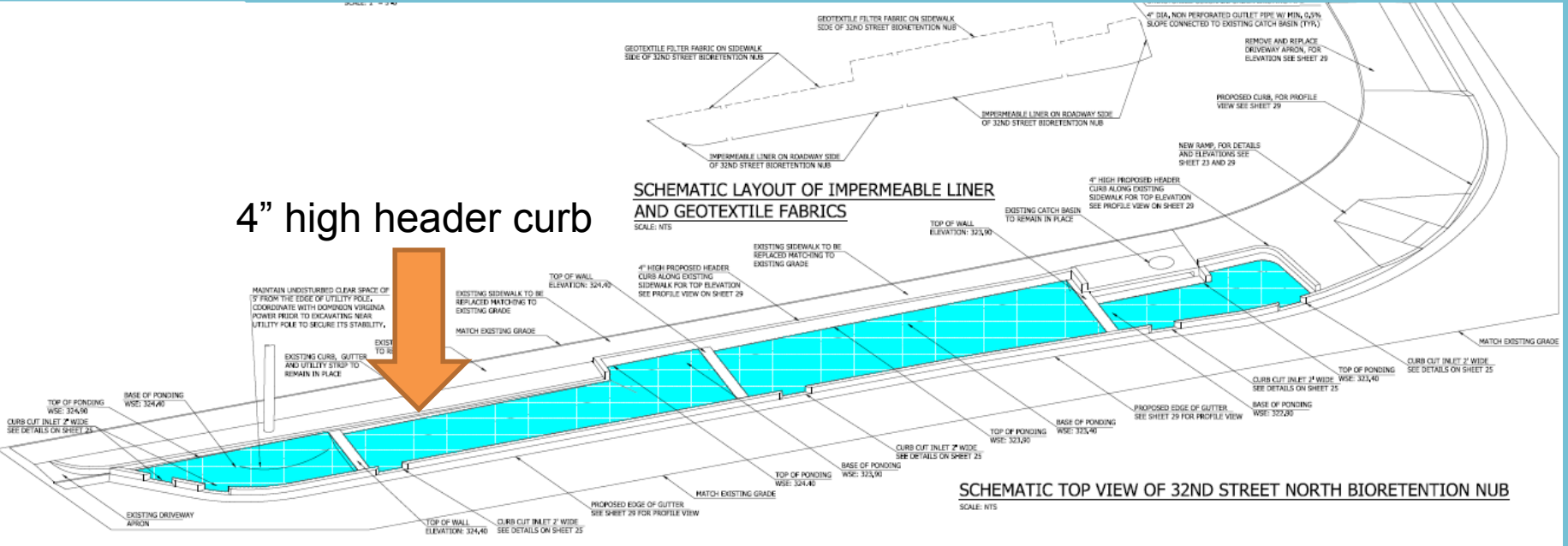


32nd Street Green Street

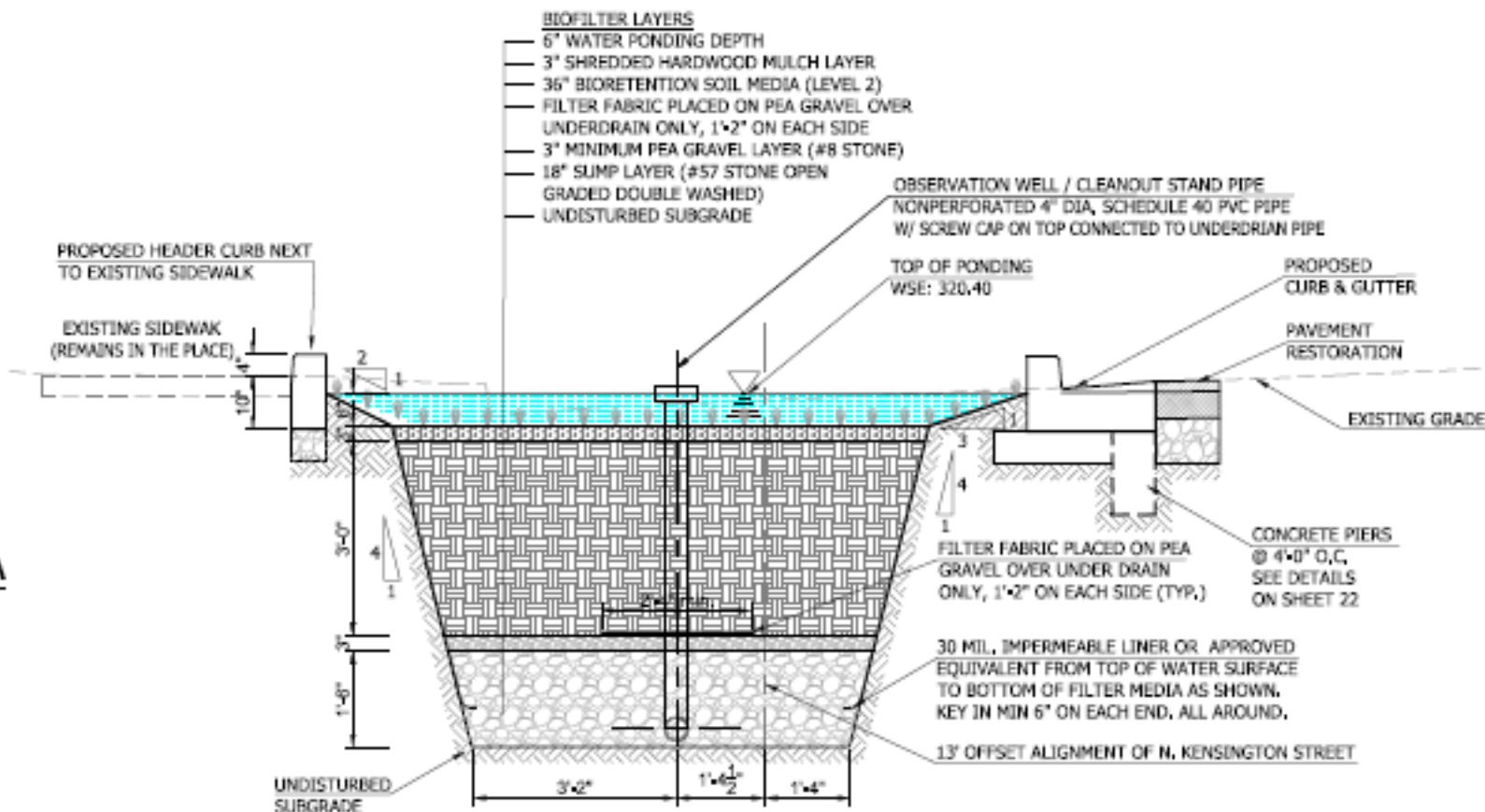


32nd St Green Street

4" high header curb



-A



X-SECTION DETAIL NEAR STA: 5+60

SCALE: 1" = 2'-0"

Plant Choices

Green Street Plant Palettes

In Arlington, Green Streets are planted with species native to Northern Virginia. Native plants support local wildlife, don't require inputs of fertilizer or pesticides, and are typically low maintenance. However, only certain native plants can handle the unique growing conditions in a Green Street rain garden.

- The soil in a rain garden is very sandy and low in the organic matter plants need to grow. The sandy soil helps water filter quickly into the ground, but the rain garden also dries out quickly between rains. Rain garden plants must be able to withstand drought periods and the short periods when the rain garden is full with ponding water during a rain storm.
- Plants must be tolerant of pollution and salt that will wash into the rain garden during storms.
- For safety, rain garden plants must also be low-growing (less than four feet in height).

[Green Street Plant Choices as a PDF](#)

There are four plant palette options for Arlington Green Streets. The palette options meet all of these criteria and provide an attractive year-round landscape. Adjacent residents to the Green Street rain gardens will be provided the opportunity to vote on their favorite choice. Click on the plant names below to be linked to images and further information.

Sunny Meadow

- Two native grasses: [Broomsedge](#), [Little bluestem](#), or [Sea oats](#)
- One shrub: [Virginia sweetspire 'Little Henry'](#) or [Inkberry 'Shamrock'](#)
- [Swamp milkweed](#)
- [Wild bergamot](#)
- [Mountain mint](#)
- [Thin-leaved sunflower](#) or [Black-eyed susan](#)
- [Obedient plant](#)

Shrub & Wildflower Garden

- [Arrowwood 'Blue muffin'](#)
- [Winterberry 'Red sprite'](#) or [Inkberry 'Shamrock'](#)
- [Purple coneflower](#)
- [Smooth white beardtongue](#)
- [Black-eyed susan](#)
- [Smooth blue aster](#) or [New York aster](#)
- One native grass: [Broomsedge](#), [Switchgrass](#), or [Sea oats](#)

Bright & Bold

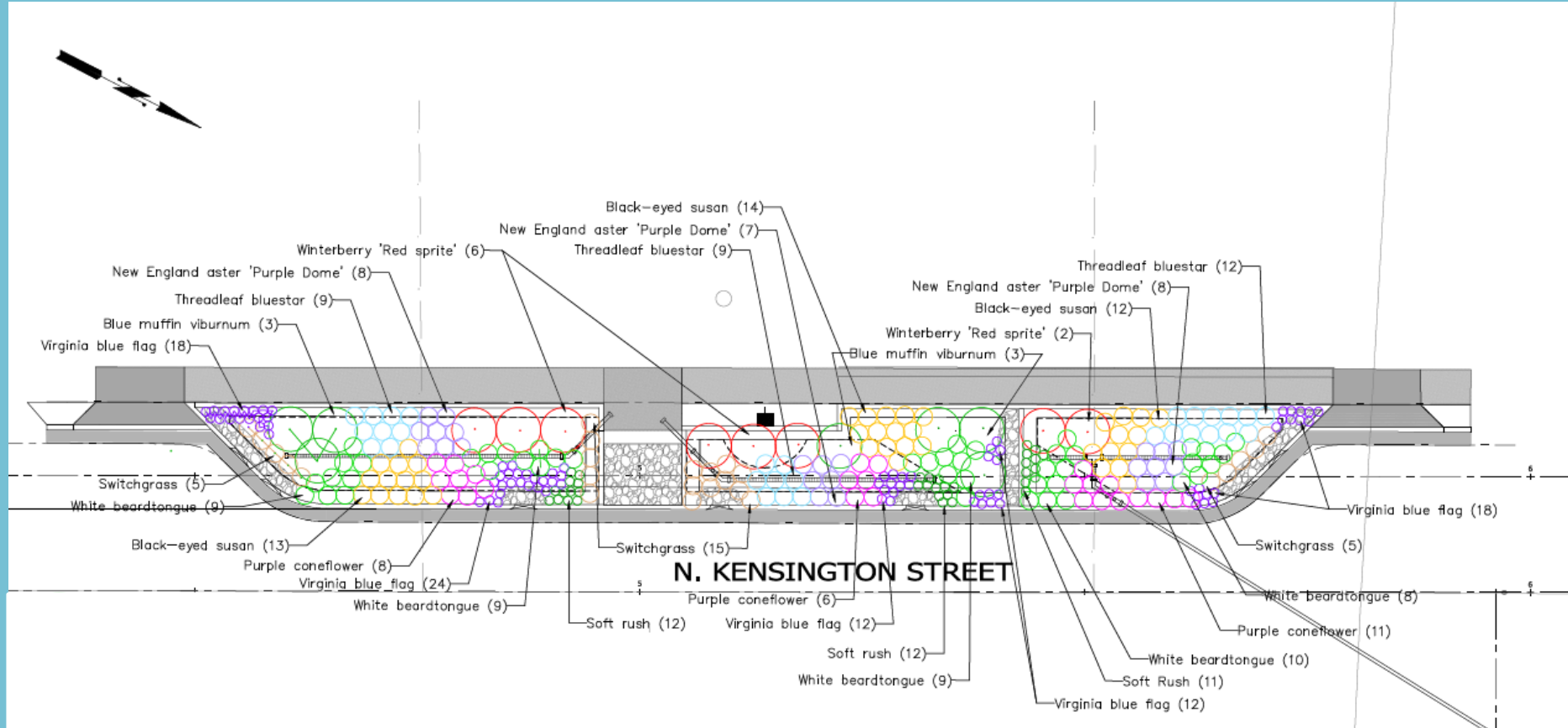
- One shrub: [Winterberry 'Red sprite'](#) or ['Gro Low' Sumac](#)
- [Switchgrass](#) or [Soft rush](#)
- [Purple coneflower](#)
- [Blazing star](#)
- [Cardinal flower](#)
- [Black-eyed susan](#)
- [Summer phlox](#)



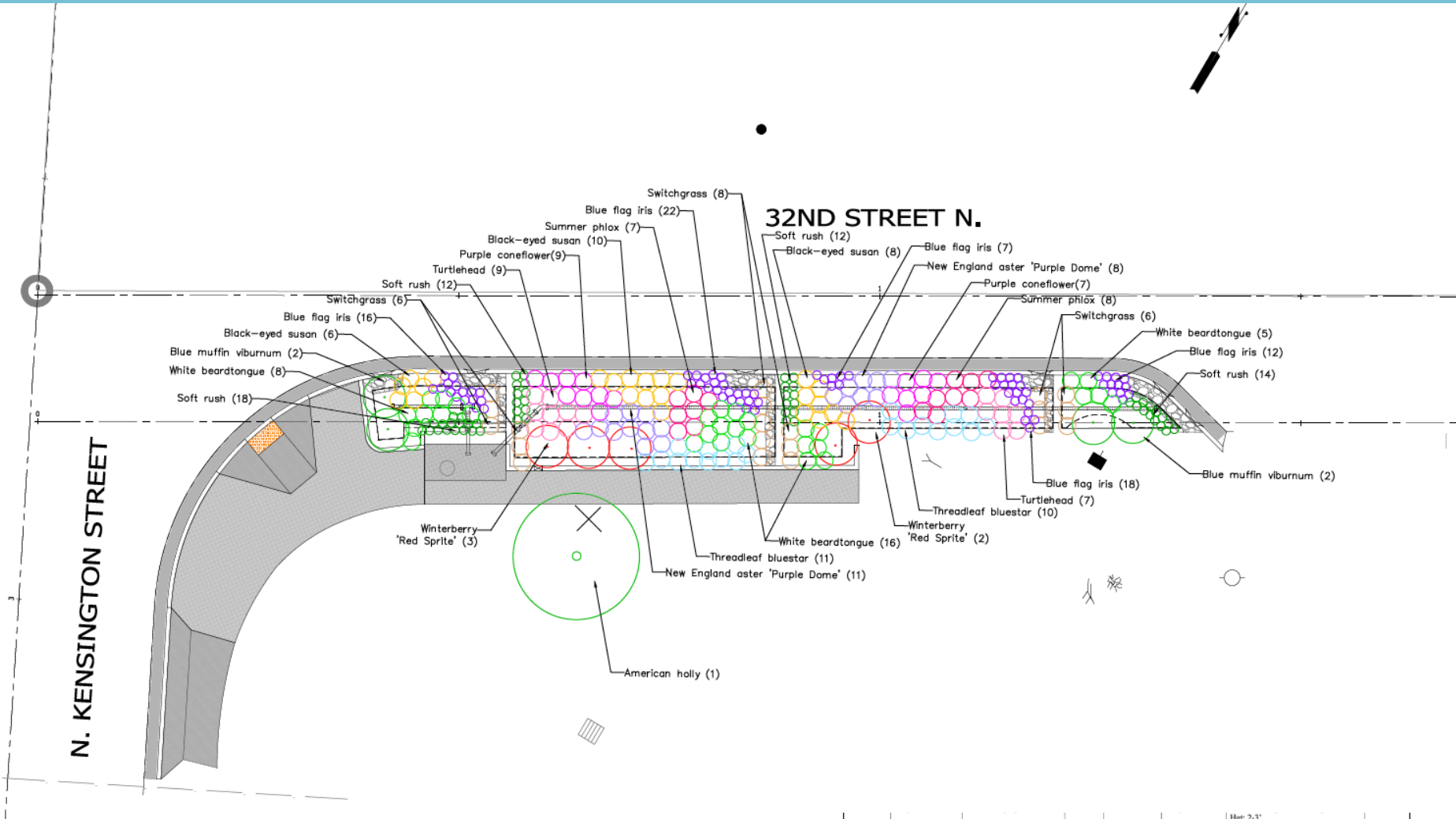
Sunny meadow Green Street



Planting Plan: Kensington St



Planting Plan: 32nd Street



Albemarle Green Street
APRIL 2012



Albemarle Green Street
SEPT 2012



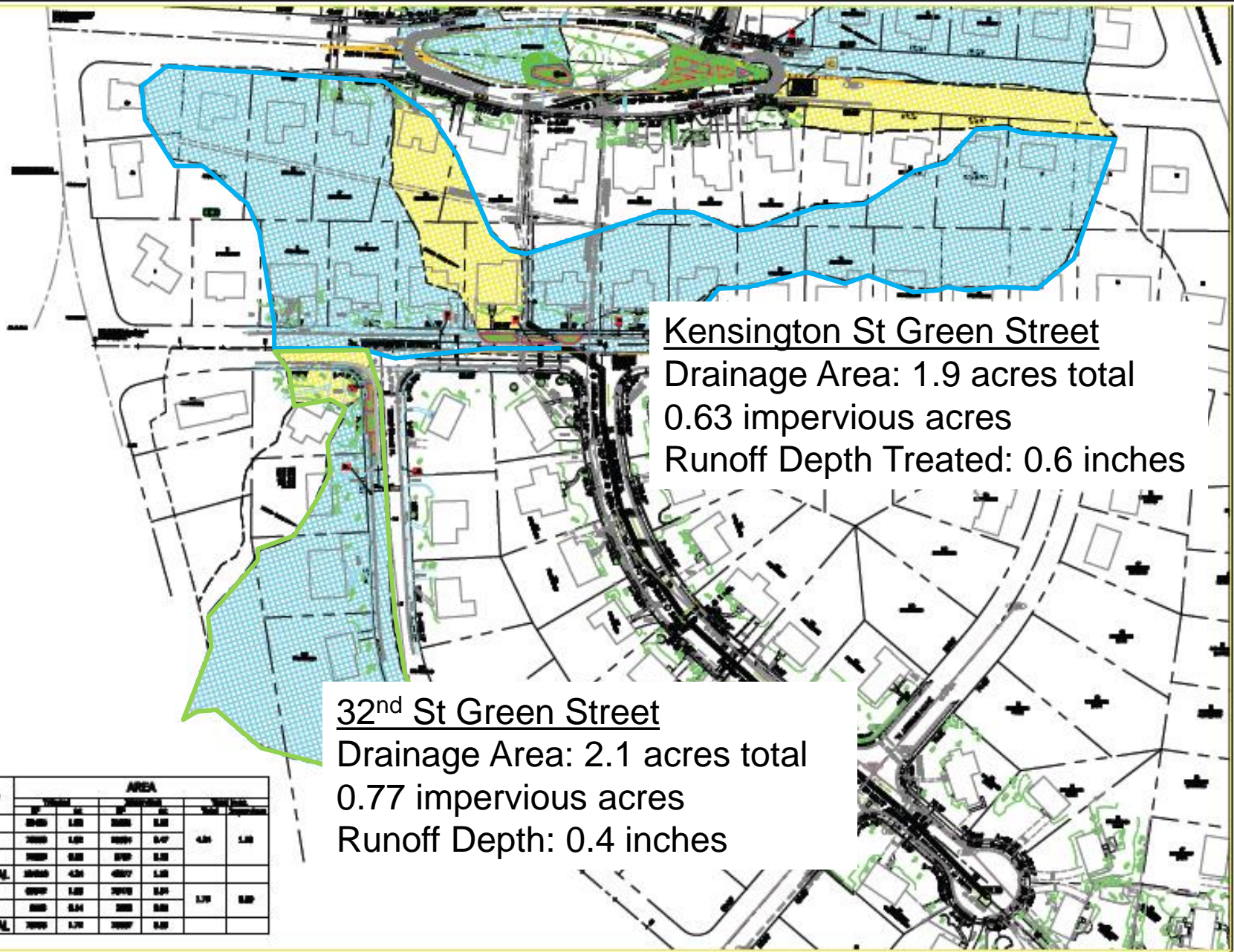
09/13/2012

Albemarle Green Street
JUL 2013



Maintenance

- Monthly or bimonthly
- Also inspected after any large storms
- Remove sediment
- Weed, inspect, replant, prune plants
- Remove trash
- Make sure underdrain, overflow, all pipes and catch basins working correctly



Kensington St Green Street
 Drainage Area: 1.9 acres total
 0.63 impervious acres
 Runoff Depth Treated: 0.6 inches

32nd St Green Street
 Drainage Area: 2.1 acres total
 0.77 impervious acres
 Runoff Depth: 0.4 inches

Sub	Sector	AREA				TOTAL	IMPERVIOUS
		AC	PERCENT	SQ. FT.	PERCENT		
Kensington	a	2040	1.02	2220	0.52	4.06	1.03
	b	2000	1.00	2000	0.47		
	c	1000	0.50	1100	0.25		
TOTAL		5040	2.52	5320	1.24		
32nd	d	2000	1.00	2000	0.51	3.70	0.80
	e	500	0.25	500	0.20		
	TOTAL	2500	1.25	2500	0.60		

Next Steps

- Finalize plans taking into account tonight's feedback – 100% plans
- Obtain temporary construction easements
- Gas line & sewer lateral relocation will begin this fall
- Project will go to bid this summer/fall
- Construction begins spring 2016.
- Green Street construction will coordinate with storm sewer construction.
- Construction for all components will take approximately 16 months.

Questions??

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Resources

N. Kensington & 32nd St Green Streets

<https://projects.arlingtonva.us/projects/north-kensington-green-street/>

Green Streets

<http://projects.arlingtonva.us/programs/stormwater-management/green-streets/>

West Little Pimmit Phases I and 2 Storm Sewer Project

<http://projects.arlingtonva.us/projects/west-little-pimmit-run-storm-sewer-upgrade/>

Watershed Retrofit Planning

- Identify locations where stormwater treatment **can be added**.
- A ranked inventory of projects.
- Little Pimmit Run Watershed Retrofit Plan
www.arlingtonva.us/departments/EnvironmentalServices/cpe/page75627.aspx

Little Pimmit Run Retrofits Ranking Summary

Site ID	Site Description	Practice	Score	Rank	Previously selected for concept development?
LPW-44	John Marshall Dr. Median	Bioretention	115.62	1	Y
LPW-48A(1)	John Marshall Drive and Little Falls Road	Street Bioretention	87.87	2	
LPW-60B	Minor Hill Park	Bioretention	85.28	3	Y
LPE-37A	Williamsburg St. near Harrison St.	Street Bioretention	82.70	4	
LPW-48B(1)	John Marshall Drive and Little Falls Road	Street Bioretention	69.19	5	
LPW-35A(1)	Knights of Columbus	Bioretention	65.13	6	
LPW-61A	Nottingham Elementary School	Bioretention	64.15	7	
LPW-46B	North Kensington Street and 33rd Street North	Street Bioretention	62.88	8	Y
LPW-100B	John Marshall Dr. and 35th St.	Street Bioretention	61.28	9	
LPE-32B	George Mason Dr. between Little Falls and 37th St.	Bioretention	58.18	10	
LPW-54	Median at Williamsburg Blvd and North Powhatan Street	Bioretention	56.65	11	
LPW-53	Keatsburg High School	Dr. Swale	55.70	12	



