City of Sacramento Design Practices and Operations and Maintenance

6th American River Basin LID Conference

City of Sacramento

Department of Utilities

March 1, 2018

SSQP Design Manual Update Schedule

(Sacramento County, Cities of Sacramento, Galt, Folsom, Elk Grove, Rancho Cordova, and Citrus Heights)

- Public Review Period: 10/04/2017 to 01/02/2018
- Public Outreach Workshop: 10/27/2017
- BIA Outreach: 10/04/2017, 11/17/2017, 02/15/2018
- SAHM Training: March 13, 2018
- **HMP and LID Implementation Date: 7/1/2018**

Implementation Challenges/Considerations

Ensure	Plan early!	Add	Conduct	Safety
Ensure the long term maintenance of LID and other post construction measures	Early planning is hugely important to prevent design challenges later in the process	Add detailed cross sections and notes in the improvement plans	Conduct during construction inspections (City staff, development engineers)	Safety Considerations: steep slopes, deep planters, street parking, pedestrian safety

Overview of City of Sacramento maintenance verification process

- Plan review phase: maintenance agreement
- Annual maintenance verification process
- Inspections: the good, bad, and ugly!
- Inspections: inspirational success stories!!

Plan Review Phase

- City of Sacramento requires all projects with privately maintained treatment control measures to execute a maintenance agreement
- Maintenance agreement is recorded with the deed for the parcel, to ensure that it follows future owners
- Executed agreement must be submitted before approval of the improvement plans
- Maintenance agreement exhibits: legal description, site plan (not parcel map!), and O&M guidance

Annual Maintenance Verification Process

- Send annual maintenance records request letters to all sites with maintenance agreements
- Create template letter for ease of use and consistency
- Add site information from database (database used to track projects with on-site post-construction measures)
- Send 1st round of letters by end of May, allow 30 days to respond
- Send 2nd round of letters to sites that did not respond by the deadline
- Notify sites of approximate inspection dates in 2nd round of letters
- Review submitted maintenance records and follow up with site owners as needed
- Conduct inspections

Submittal Examples

Vegetated Swales - Maintenance Self-Inspection Checklist

Site Address: 2251 Meadowview Road

Inspector(s): Reginald C Allen

Date: June 03, 2017

Progressive Church of God In Christ

Weather: Partly cloudy 78 degrees

A. Site				
	Item	Check		Notes/Actions
1	Excessive trash/debris	Y	(N)	area clean
2	Bare/exposed soil	Y	(N)	fully landscaped
3	Excessive landscape waste/yard clippings	Y	(N)	regularly maintained
4	On-site construction activity	Y	(N)	

B. Inflow Points (e.g. downspouts, curb cuts, edge of pavement)				
	Item	Check		Notes/Actions
1	Excessive trash/debris/sediment accumulation at inflow points	Y	(N)	clean

C. Grass Channel				
	Item	Check		Notes/Actions
1	Excessive trash/debris accumulation	Y	(N)	clean
2	Evidence of oil/chemical accumulation	Y	(N)	No evidence of oil/chemical
3	Good Vegetation Cover	(Y)	N	Fully landscaped
4	Standing water	Y	(N)	no, good drainage

Photographs		
#	Photo ID	Description
1.	#2276	Westside swale (north view)
2.	#2277	" " (north view)
3.	#2278	" " (north view)
4.	#2279	Eastside swale (north view)
5.	#2280	Eastside swale (north view)
6.	#2281	Eastside swale (north view)
7.		
8.		
9.		
10.		

Instructions for photos: The following photos must be provided: Site area, swale channel, swale inflow and outflow

Inspector's Additional Notes:

Area is maintained by a commercial landscape company. Inspected weekly.

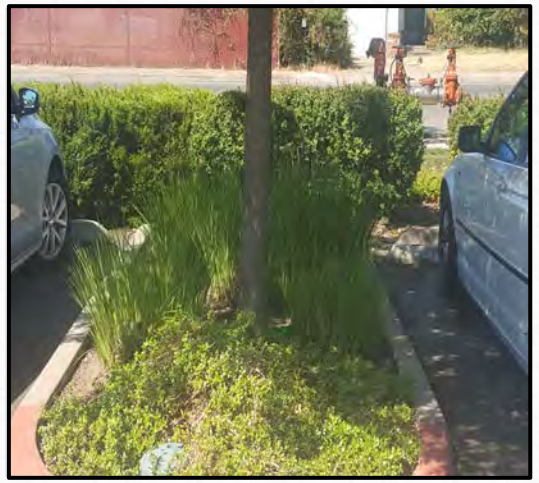
Question	Response	Details
Vegetation Too Tall?	No	
Odors?	No	
Bioswale Number: 2		
Initial Inspection Photo(s): Appendix 3 Appendix 4		
Bioretention/Vegetated Swale or Planter Box:		
Visible Problems?	No	
Trash or Debris?	Yes	
Pollutants?	No	
Rodent Holes?	No	
Hazardous Tress/Brush?	No	
Erosion or Scouring?	No	
Excessive Sediment?	No	
Liner Condition (if visible)?	Good	
Spillway/Berm Damaged?	No	
Inlet/Outlet Condition?	Good	
Security (fence, etc.)?	N/A	
Standing Water?	No	
Mosquitoes & other Insects?	No	
Is Flow of Water Spreading Equally?	Yes	
Invasive Weeds or Vegetation?	No	
Poor Vegetation Cover < 90%?	No	
Pedestrian Path Clear?	N/A	

11283
College Market Place (Goodwill Store)

Trust but verify!

Inspections- Good!

- follow the rain drop…



Inspections- Good!

traditional but reliable…

Inspections- Bad!

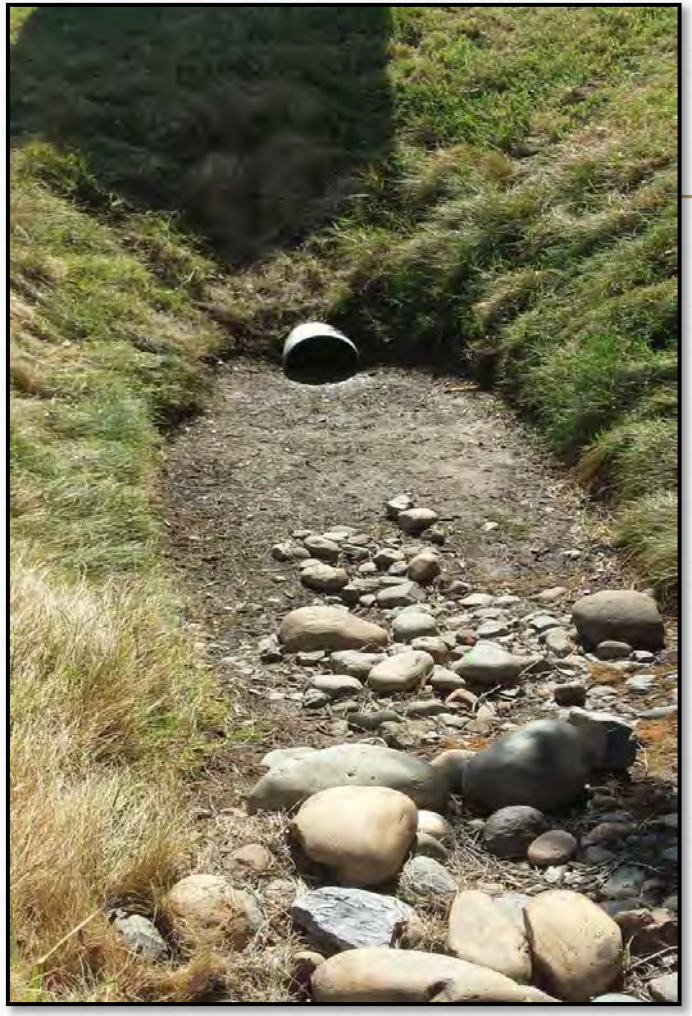
Some ideas look better on paper!

Inspections- Bad!

So what happened to the swale?!

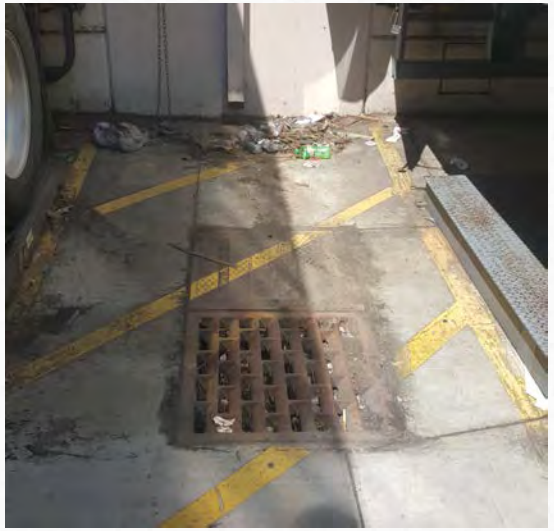
Inspections- Bad!

Help needed!



Inspections- Ugly!

When did you say you had these maintained? Hmm…

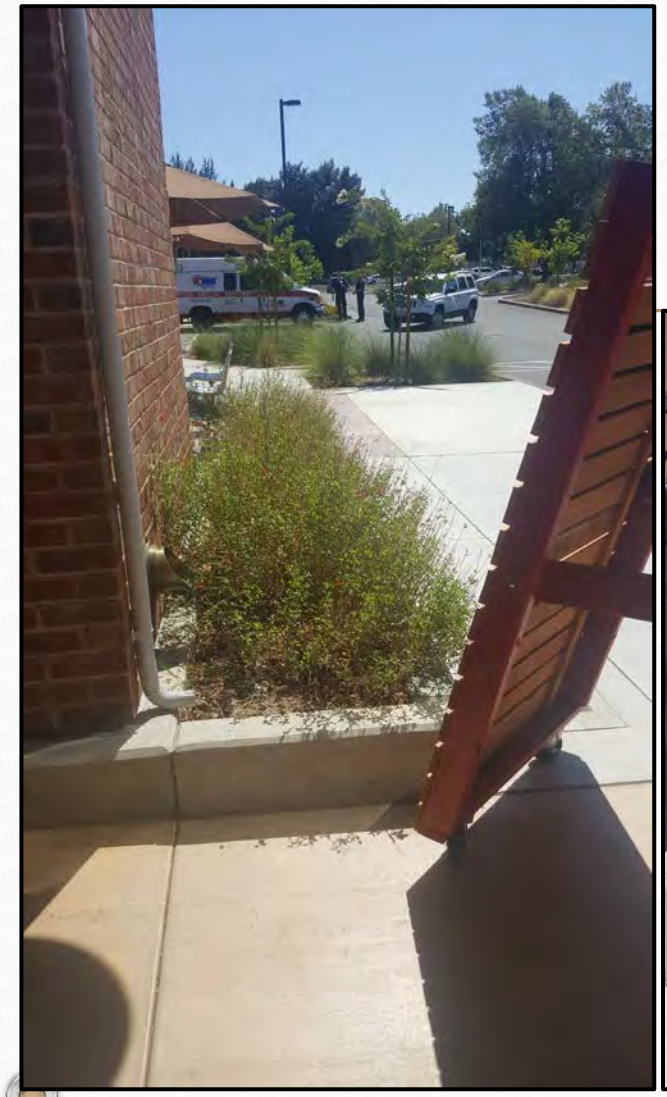


Inspections- Ugly!

Missing interceptor found

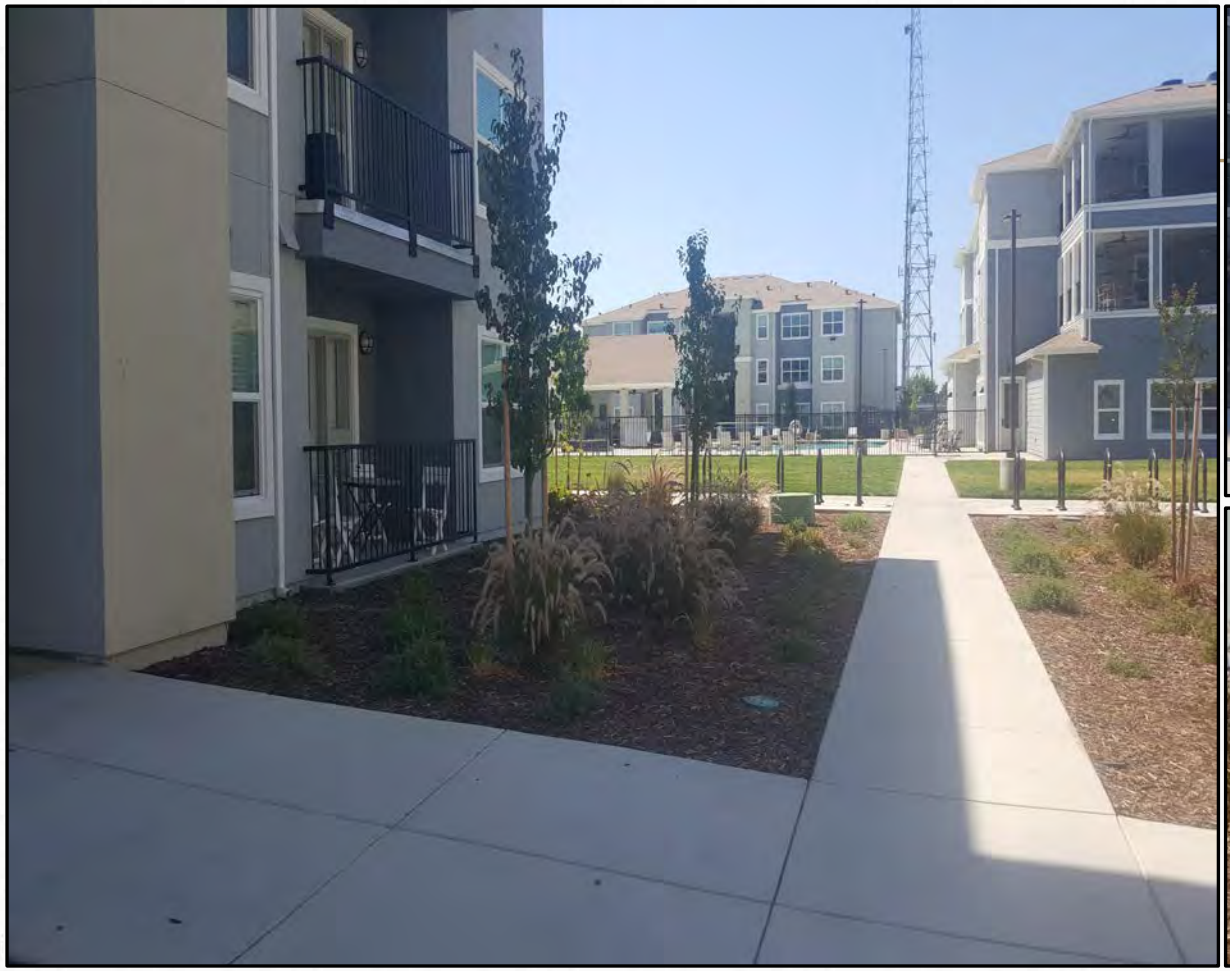
Inspections Success Stories

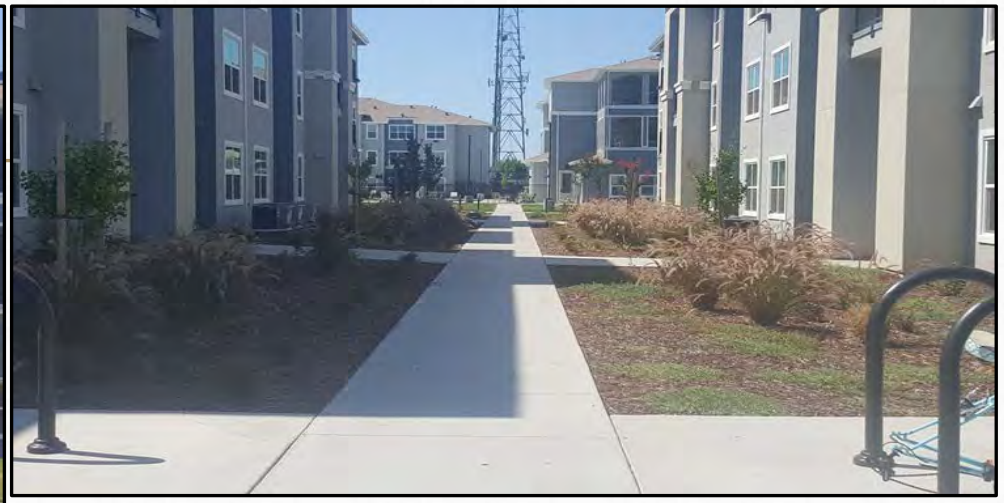
Got Swagger!



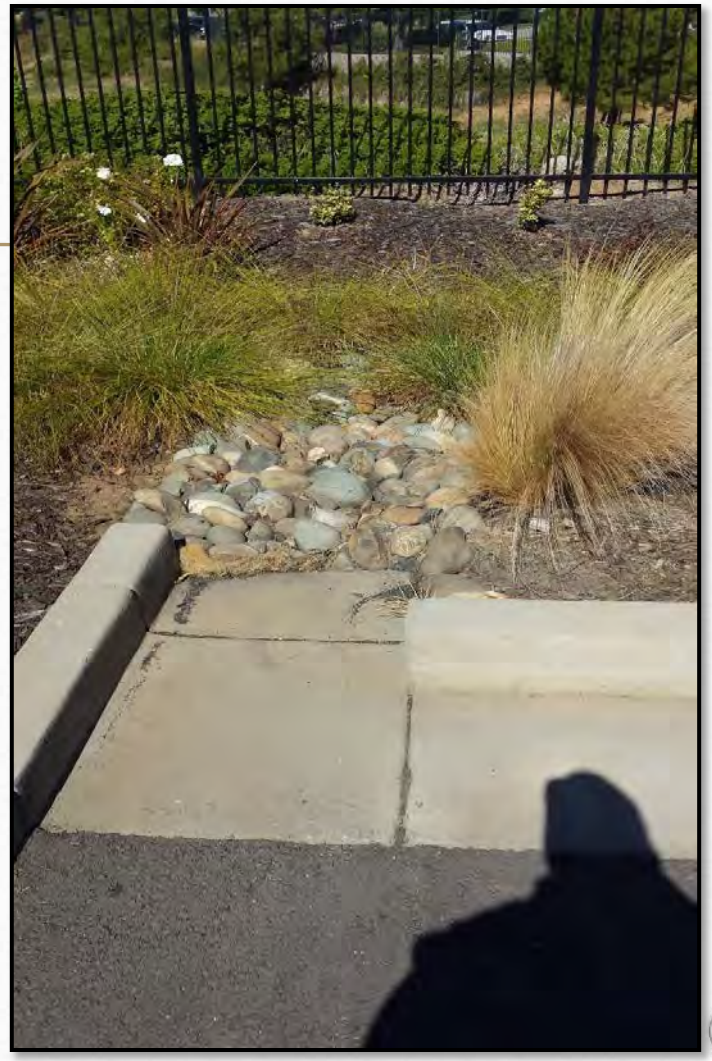
Go to inspect swale, run into awesomeness

3075 Redding Ave





Vegetated Swale – 2251 Meadowview Rd



Disconnected Pavement

- Make the grassy area work for you!

Same planter, 16 years later…Going strong!

2500 River Plaza Drive

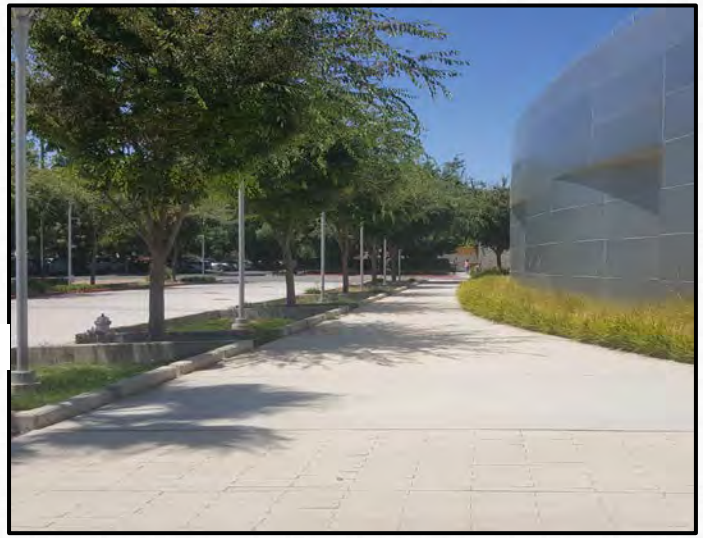
CSUS: Bioretention Planters

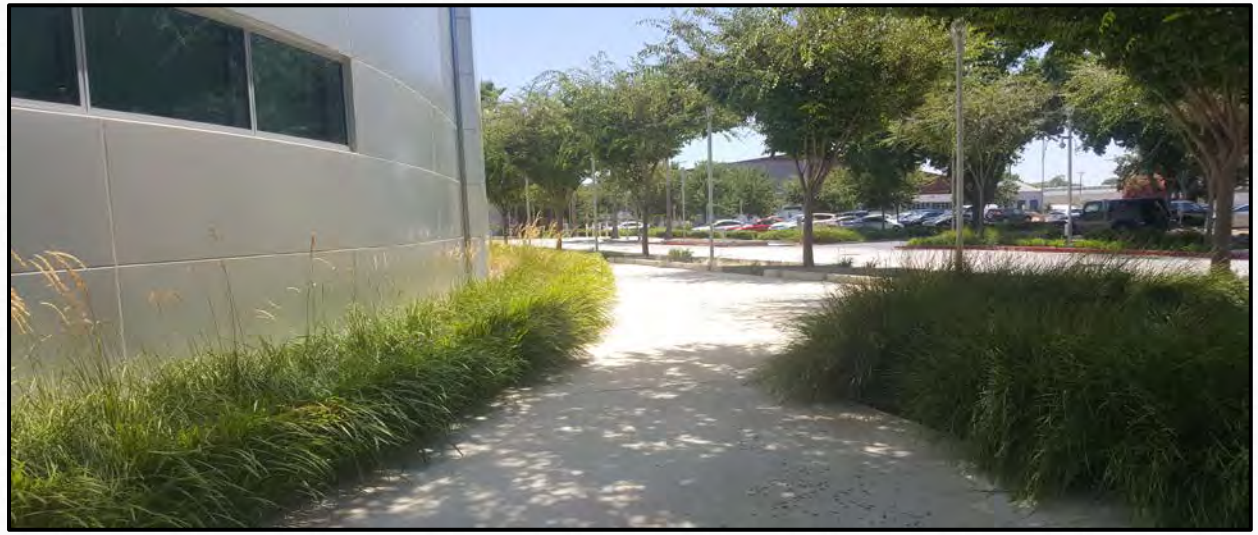
CA Lottery Building, East 10th Street

- Stormwater planters

CA Lottery Building, East 10th Street

- Disconnected roof drains
- Disconnected pavement





Dixieanne Ave Green Street

Questions??

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New Development Program
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