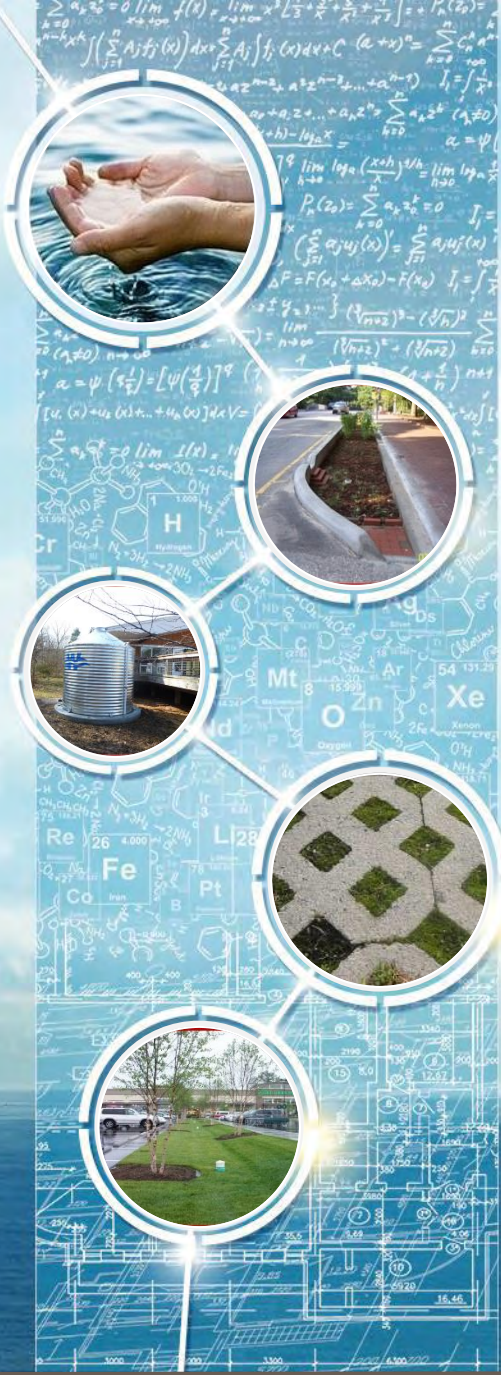




Construction Phase

April 13, 2018

Jonathan Smith, PE – Tetra Tech



Best Management Practices

- Four Key Phases to Success

1. Pre-Construction/Planning

2. Construction

3. Closeout

4. Long Term Mgmt/Maintenance

Construction Phase: What Is It?

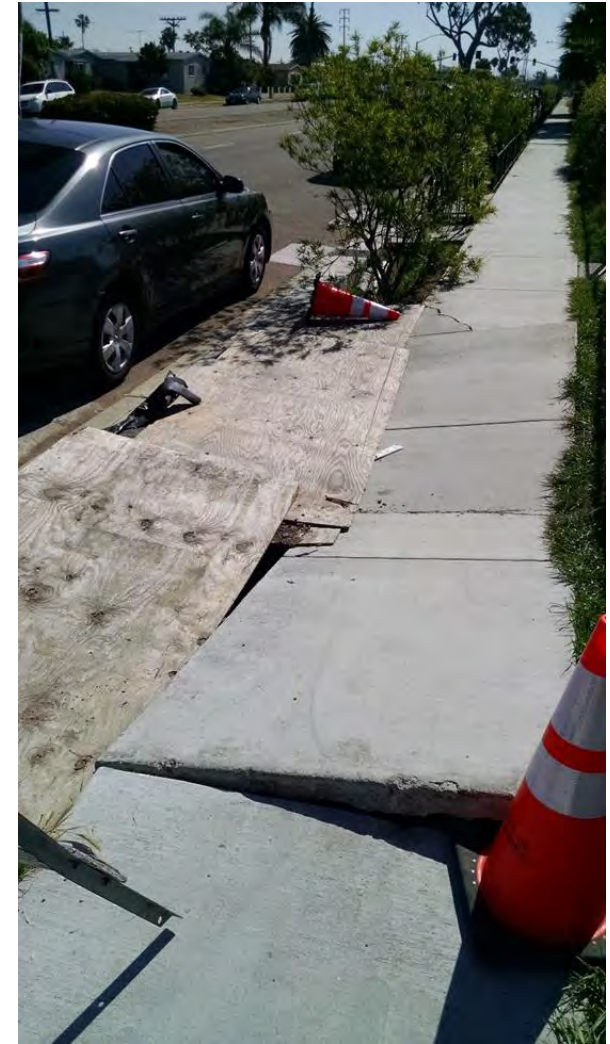
- Physical Implementation of BMPs
- Starts when plans are submitted
- Ends when contractor is ready to leave site
- Includes inspection/observation



Construction Inspection key questions

- What needs to be inspected
- When does it need to be done?
- Who conducts inspection?
- How are findings documented?
- Is there a clear mechanism to resolve issues?

Why is Construction Phase Management Important?



Infiltration Systems: Beware Compaction

| Soil type/Compaction | Number of tests | Average infiltration rate (in/hr) | COV |
|--|-----------------|-----------------------------------|-----|
| Noncompacted sandy soils | 36 | 13 | 0.4 |
| Compacted sandy soils | 39 | 1.4 | 1.3 |
| Noncompacted and dry clayey soils | 18 | 9.8 | 1.5 |
| All other clayey soils (compacted and dry, plus all wetter conditions) | 60 | 0.2 | 2.4 |

Infiltration Rates during Prior Tests of Disturbed Urban Soils (Pitt, Chen)

Test Subgrade Permeability for Infiltration Systems

- Test Actual Subgrade Infiltration Rate (ASTM 3385)
 - After excavation and before installing aggregate, measure in situ infiltration rate with a double ring infiltrometer test
 - Determine level of compaction experienced during construction



Key Questions to Answer

- How are BMPs tracked?
- Is design review responsibility well defined?
- Are inspection criteria clearly communicated?
- Who conducts inspection during construction?
- How were stakeholders involved?
- Lessons learned?





Questions and Discussion

