

Quarterly Progress Report:

Project Number and Title: 4-7, Integrated Green Infrastructure and Sustainable Transportation Planning

Research Area: Thrust Area 4

PI: Christopher Hunter, University of Rhode Island

Co-PI(s): Farhad Atash, University of Rhode Island

Reporting Period: October 1, 2019 – Dec 31, 2019

Submission Date: 2/27/2020

Overview: (Please answer each question individually)

We continued to examine the literature on Green Infrastructure Practices for potential impact on reduction of stormwater runoff trying to find quantifiable values:

- *On community or site scale level*
- *On regional scale*
 - *With the intention of identifying concepts, principles, and benefits*

We investigated issues dealing with Serviceability and

These activities will help us work toward a projection of how much potential there is for extending the life of the infrastructure.

We have been able to develop our initial literature review write-up, but certainly there is more to ascertain with trying to find quantifiable evidence of impacts when using green infrastructure.

We have begun to look into parameters that can be involved in modeling issues as we try to connect the ability to extend the serviceability life of the transportation infrastructure. Models were looked into that represented different portions of transportation infrastructure and reflected a reduction curve over time.

Table 1: Task Progress

Task Number	Start Date	End Date	% Complete
Task 1: Investigate Green Infrastructure (GI) practices at the community and site scale (concepts, principles and benefits)	7/1/2019	6/30/2020	50%
Task 2: Investigate GI practices at regional scale (concepts, principles, and benefits)	7/1/2019	6/30/2020	50%
Task 3: Identify specific set of infrastructure parameters to use for performance analysis and identify a modeling approach or apply asset management software to apply to strategies that align with GI best	10/2019	6/30/2020	20%

practices at different scales.			
Overall Project:	7/1/2019 (when project actually approved)	Enter Planned/Actual End(6/3020)	

Table 2: Budget Progress		
Project Budget	Spend – Project to Date	% Project to Date*
108,000 (2yrs)	16,000	15% spent

*Include the date the budget is current to.

Describe any opportunities for training/professional development that have been provided...

Describe any activities involving the dissemination of research results (be sure to include outputs, outcomes, and the ways in which the outcomes/outputs have had an impact during the reporting period. Please use the tables below for any Publications and Presentations in addition to the description of any other technology transfer efforts that took place during the reporting period.)... Use the tables below to complete information about conferences, workshops, publications, etc. **List all other outputs, outcomes, and impacts after the tables** (i.e. patent applications, technologies, techniques, licenses issued, and/or website addresses used to disseminate research findings).

Table 3: Presentations at Conferences, Workshops, Seminars, and Other Events				
Title	Event	Type	Location	Date(s)
Integrated Green Infrastructure and Sustainable Transportation Planning	University of Rhode Island Annual Transportation Forum	Conference/Forum	Kingston, RI @ URI	10/25/2019

Table 4: Publications and Submitted Papers and Reports				
Type	Title	Citation	Date	Status
i.e. Peer-reviewed journal, conference paper, book, policy paper	NA			

Encouraged to add figures that may be useful (especially for the website)...

Insert figures here

Participants and Collaborators:

Use the table below to list all individuals who have worked on the project.

Table 5: Active Principal Investigators, faculty, administrators, and Management Team Members

Individual Name	Email Address	Department	Role in Research
Christopher D. Hunter	cdhunter@uri.edu	Civil & Environmental Engineering	PI
Farhad Atash	fatash@uri.edu	Landscape Architecture	Co-PI

Use the table below to list all students who have participated in the project during the reporting. (This includes all paid, unpaid, intern, independent study, or any other student that participated in this project.)

Table 6: Student Participants during the reporting period				
Student Name	Email Address	Class	Major	Role in research
None during the time period.				

Use the table below to list any students who worked on this project and graduated during this reporting period.

Table 7: Student Graduates			
Student Name	Role in Research	Degree	Graduation Date
None.			

Use the table below to list organizations have been involved as partners on this project and their contribution to the project.

Table 8: Research Project Collaborators during the reporting period						
Organization	Location	Contribution to the Project				
		Financial Support	In-Kind Support	Facilities	Collaborative Research	Personnel Exchanges
None.		Mark the appropriate contribution with an "x"				

List all other outputs, outcomes, and impacts here (i.e. patent applications, technologies, techniques, licenses issued, and/or website addresses used to disseminate research findings). Please be sure to provide detailed information about each item as with the tables above.

Have other collaborators or contacts been involved? If so, who and how? (This would include collaborations with others within the lead or partner universities; especially interdepartmental or interdisciplinary collaborations.)

Table 9: Other Collaborators			
Collaborator Name and Title	Contact Information	Organization and Department	Contribution to Research

None.			(i.e. Technical Champion)
Kate Wilson	kate.wilson@dot.ri.gov	RIDOT/Design	Technical Champion

Who is the Technical Champion for this project?

Name: Kate Wilson

Title: Principal Civil Engineer

Organization: Rhode Island Department of Transportation

Location (City & State): Providence, RI

Email Address: kate.wilson@dot.ri.gov

Changes:

We did not have a student working with us, but we have gotten access to a Ph.D. student, who has an environmental engineering background from his Masters Degree, and he is helping us move forward.

We are looking into issues with drainage as well as the overall green infrastructure to see if that will give us another way to look at the problem. Whatever the drainage or runoff issue is, it has an impact on the infrastructure in its environment.

Planned Activities:

The future activities are involved in integrating how we can best use the student to provide the linkages between an estimated impact of green infrastructure on transportation infrastructure. We have been in contact with the Aquidneck Island Planning Commission and their attempts to transform there West Side of the Island to deal with resiliency.