Green Infrastructure Program

Before You Begin

PLEASE READ BEFORE PROCEEDING

- **Limit your use of bullets and other formatting.**
- **Copy and paste as needed.**
- **Log into your account at https://www.GrantRequest.com/SID_5833?SA=AM to access saved and submitted requests.**
- **Add mail@grantapplication.com to your safe senders list to ensure you receive all system communications.**
- **Anticipate a notice of application receipt within 24 hours of submission**

General Information

Applicant Information

Organization

Julia De Burgos Cultural Arts Center

Executive Officer Title

Executive Director

Executive Officer First Name

Letitia

Executive Officer Last Name

Lopez

Executive Officer Address

2800 Archwood Avenue
Cleveland, Ohio 44109

Executive Officer Phone

216-894-5664

Executive Officer Extension

0

Executive Officer E-mail Address

letitialopez@juliadeburgos.org

Project Manager Title

Executive Director

Project Manager First Name

Letitia

Project Manager Last Name

Lopez

Office Address

2800 Archwood Avenue
Cleveland, Ohio 44109

Office Phone

216-894-5664

Extension

Alternate Phone

E-mail

letitialopez@juliadeburgos.org

Project Information

Parcel Numbers

015-25-080 & 015-25-081

Green Infrastructure SCM’s Proposed

Bioretention and infiltration basin

Watershed of Project

Walworth Run

Project Start Date

January 01, 2020

Project End Date

November 30, 2020

Total Project Cost

199748.46

Requested Grant Amount

199748.46

Project Title

Julia De Burgos Cultural Arts Center Green Infrastructure Retrofit

Project Address

2800 Archwood Avenue
Cleveland, Ohio 44109

Green Infrastructure SCM's Data.

Provide acre measurements to the nearest hundreth

List each proposed SCM and denote the square footage footprint of each (e.g., Rain Garden – 400 SF).
For "Rain Harvesting", indicate "0" square feet.

1) 650 SF Bioretenion/Infiltration basin
2) 278 SF Bioretenion/Infiltration basin
3) 275 SF Bioretenion/Infiltration basin

List each proposed SCM and denote the drainage area to each to nearest hundredth of an acre.

0.33 acres total
1) 0.186 acres
2) 0.066 acres
3) 0.061 acres

Pre-Construction Impervious Acres

13640

Post-Construction Impervious Acres:

13139

Change in Impervious Acres

-0.015

Impervious Acres Draining to each SCM(s)

1) 0.17 acres
2) 0.06 acres
3) 0.06 acres

*Pre-Construction – Average Annual Runoff (in.) of Project Area

22.46

Post-Construction - Average Annual Runoff (in.) of Project Area

0.64

Annual Runoff Reduction (gal/yr.)

(Runoff Reduction (in.) / 12 x Treated Drainage Area (acre) x 325,851.433 = gal/yr.)

195081

Existing Conditions Results (EPA National Stormwater Calculator Report). For proposed projects that are only adding SCMs to the existing land use, this will serve as your *baseline scenario* and you do not need to upload a report for "Improvements Meeting Minimum Title IV Standards Results" (see below).

Use *Analysis using the US EPA Stormwater Calculator an upload the results here

NAtional Stormwater Calculator.pdf

Provide the following map:
Show existing project discharge points and corresponding drainage areas and drainage patterns, including offsite areas that drain into the project area. As applicable, show the limits of existing forest, meadow, lawn, and impervious areas and the percentage of the project area comprised by each.

Existing Conditions Map

GIG Site Plan-JDB Pre.pdf

Improvements Meeting Minimum Title IV Standards Results (EPA National Stormwater Calculator Report). The "Existing Conditions Results" and this report must be submitted if a new or re-development project is being proposed that incorporates SCMs. This report will serve as your baseline scenario.

Use *Analysis using the US EPA Stormwater an upload the results here

Ohio EPA Bioretention Calculations.pdf

Provide the following map:
Show proposed project discharge points and corresponding drainage areas and drainage patterns, including offsite areas that drain into the project area. As applicable, show the limits of existing forest, meadow, lawn, and impervious areas and the percentage of the project area comprised by each.

Post-Development Map with required Title IV SCMs only.

GIG Site Plan-JDB POST.pdf

Improvements with Proposed SCMs Results (EPA National Stormwater Calculator Report)

Use *Analysis using the US EPA Stormwater Calculator an upload the results here

NAtional Stormwater Calculator_VER_1.pdf

Provide the following map:
Show proposed project discharge points and corresponding drainage areas and drainage patterns, including areas that drain into the project area. As applicable, show the limits of proposed forest, meadow, lawn, and impervious areas and the percentage of the project area comprised by each.
For each proposed SCM, show the following:
- The total drainage area
- The impervious drainage area, including the % of the sites total Impervious area
- The actual size of the practice (square feet)

Post-Development Map with SCMS

GIG Site Plan-Project11x17 Exhibit.pdf

Project Narrative

Project Narrative

Project Introduction

Introduction (100 word maximum)Provide a brief introduction to the organization that would be delivering the proposed GIG project.

Julia de Burgos Cultural Arts Center (JDB) and Archwood United Church of Christ (Archwood UCC) are
delivering the project. JDB was founded in 1989 to establish a family-oriented center that fosters Latino
cultural pride and art appreciation and transforms lives by preserving, educating, and promoting Latinx
heritage through the teaching and practice of history, culture, and the visual, performing, and literary
arts. Founded in 1819, Archwood UCC is the oldest UCC congregation in Cleveland. It welcomes all and
seeks to live as a multicultural, multiracial, intergenerational gathering of people who serve the church,
its members, and the community.

Project Summary

Describe the GIG project. Include the following information:

- Objectives and Outcomes;
- Proposed design and installation;
- Drawings or figures of the site and GIG project;
- How the SCM will function;
- Other relevant project details; and,
- Current photos of the GIG project site. If awarded, design documents must be submitted to the District for review, comment, and approval prior to site work.

The project is located at the Julia de Burgos Cultural Arts Center and Archwood United Church of Christ property at 2800 Archwood Avenue in Cleveland's Brooklyn Centre neighborhood. Archwood UCC owns the property and JDB will be managing the project and long term maintenance of the bioretention in partnership with Archwood UCC. Currently, JDB is in talks with the Church to purchase the campus. The project proposes the reconfiguration of an existing parking lot and installation of three bioretention/infiltration basin cells to manage stormwater runoff from the parking lot, roof runoff from the parsonage (house) next to the parking lot and from portions of the existing hall. The current parking lot is in poor condition with broken and cracked pavement. Downspouts from the parsonage and hall are directly connected to underground sewers on site. Stormwater runoff from the two parcels are connected via two manholes to a combined brick sewer main along Archwood Avenue in the Walworth Run CSO (CSO-088).

Multiple soil boring logs from the area (Denison & Pearl) identify sandy soils to 8-feet depth with sand and gravel to 24-feet. Therefore, stormwater infiltration has a high potential for this area. JDB will hire Environmental Design Group (EDG) to perform a soil infiltration test onsite to determine actual infiltration rates.

The project objectives are to reduce stormwater entering the combined sewers from the two parcels for the 2-year, 24 hour events; which will in turn reduce CSOs and provide JDB and Archwood UCC with a significant improvement that will enhance their environmental programmatic capacity. The parking lot will be regraded and resurfaced to drain to two bioretention/infiltration cells to be located in the rear of the parking lot and a larger bioretention/infiltration basin in front of the parsonage. Downspouts will be disconnected on approximately ¼ of the existing roof of the hall and all of the parsonage.

The two back bioretention cells will be sized to connect the back downspouts of the hall in the future, when the owners improve the back playground. An existing garage at the back of the lot will be demolished to provide room for these two bioretention/infiltration basin cells. The bioretention/infiltration basins will be designed to align with the recommended standards in Ohio's Rainwater and Land Development Manual but modified with increased stormwater volume control capacity. The existing catchbasins will be modified to receive overflow from the bioretention/infiltration

basins.
An area of lawn in front of the parsonage presents an ideal opportunity to install a
bioretention/infiltration basin feature to capture and infiltrate runoff from the parsonage and hall
downspouts. The bioretention/infiltration basin will use vibrant, bright-colored native plants to liven up
the property and provide an opportunity to transform its use periodically into an outdoor art space
where students can integrate their projects with the bioretention/infiltration basin garden and visitors
will be welcomed into the JDB Center. Currently, the center uses the lawn area for outdoor art display.
The green infrastructure will be a shining feature of the organization and property, with opportunities to
draw in new community members by teaching them about the importance of the project. Furthermore,
directly across the street from this facility is the Baldwin Wallace Archwood House. The Archwood
House hosts students from the Berea school who serve the community by housing students and
performing community outreach, including Urban Semester of Service every other fall. JDB has worked
with this facility in the past and will work with them in the future on this project.
A conceptual plan, SCM calculations and cost estimate for the project has already been produced (see
attachments). The design consultant, Environmental Design Group (EDG), will be authorized to further
the design and provide final construction drawings, specification, operations and maintenance manuals,
interpretive sign design and construction administration support services once the grant is awarded.
The project will be quoted by at least three qualified construction contractors familiar with this type of
w ork. JDB will contract out the construction of the parking lot and the SCMs to a qualified contractor.

Archwood UCC is also a co-applicant to this grant application (we didn't know where in the application to place this information). That co-application information is:
Archwood United Church of Christ
Kathy Harlow, Treasurer/Secretary
2800 Archwood AVenue
Cleveland, Ohio 44109
216/351-1060

cwlegal@gmail.com

Project Summary Photos

Upload a zip or pdf file containing up to five(5) photos

Pre-development photo log.pdf

Ability to Provide Long Term Maintenance

Describe the plans for long-term maintenance, addressing ALL the following questions:

- Who owns the land where the GIG project will be located? Does the applicant have site control?
- What is the anticipated design life expectancy of the green infrastructure features for which GIG funding is requested?
- Who is responsible to provide on-going maintenance for the design life of the project and how will maintenance be ensured?
- Provide an anticipated list of routine maintenance tasks/activities, schedule, and estimated annual cost to ensure continued performance of the GIG project.

Archwood UCC owns the property and both they and JDB will be responsible for site maintenance. The
JDB board of 12 individuals will commit the necessary time annually to performing maintenance of the
bioretention/infiltration cells. The board will augment their time with existing and future volunteers.
Through periodic cleanup events in addition to other volunteer opportunities, JDB anticipates hosting
100 volunteers a year (typical volunteer amounts annually). The Church and JDB also currently contract
a local landscaping company to maintain the grounds and will engage the company in proper care for
the bioretention landscape features.
EDG will use existing O&M guidance such as the Northeast Ohio Stormwater Training Council's
Maintaining Stormwater Control Measures: Guidance for Private Owners and Operators to produce an
O&M manual for JDB and Archwood UCC. EDG will also perform an on-site maintenance training for JDB
and Archwood UCC board and volunteers with staff certified through The Ohio State University and
Summit SWCD's Inspection and Maintenance Certification for Stormwater Control Measures in Ohio.
As bioretention is a landscaped feature of a site, maintenance of the plants is important. In the first
year, plants should be watered as needed to ensure establishment. Weeding and pruning of the plants
should occur as needed through the lifetime of the system. Pretreatment and filter bed areas should be
inspected semi-annually for erosion or deposition of sediment, and these areas should be cleaned out
and repaired if sediment has accumulated or erosion is occurring. Inspections for litter and debris

removal should occur monthly, and mulch should be added or replaced annually as needed.
Approximately every 3-10 years, depending on the type of run-on to the system, fine sediments may
accumulate in the top few inches of mulch, which should be corrected by replacing a portion or all of the
planting soil and filter layer until better permeability is achieved.
It is estimated that ongoing maintenance of these systems, including volunteer assistance, would cost
approximately $500/year. This cost is well within the existing and future budget of JDB and Archwood
UCC. The JDB has received multiple grant awards for their organization, including Cleveland Foundation, George Gund Foundation, Fowler Foundation, Cuyahoga Arts and Culture, and United Black Fund, among others.
Additionally, the center houses multiple dance, workshop and art activities for low cost, which provide for additional income for the group.

Visibility and Public Outreach

What audiences will be exposed specifically to the green infrastructure components of this project (neighbors, students, community groups, public)?

- Describe how these audiences will interact with the GIG project and include methods of exposure, frequency, and education components.

JDB has a rich history of providing arts programming in Cleveland with a focus on Latinx culture. JDB
serves Latinx people and families of all ages, but many program participants are youth ranging from 5-18
years old residing in near-west side Cleveland neighborhoods in an area that is 32% Hispanic.
Programming includes the following:
● Miss Latina Image, a program that inspires, educates, and empowers young Latina women to
reach their full potential. About 20 girls/year participate, which includes two events with nearly
300 total attendees.
● Latin dance classes that average 40 students/week, and a youth class recital that draws 75
attendees.
● The Superhero In You, a children’s program to develop their own superhero image from
personal experiences to tell a story and conquer fears. The class has 8-10 students and a
showcase event with 50-100 people expected.
● Parrandon, a Christmas event that hosts 300 community members to celebrate the holiday
season.
● Hispanic Heritage Month celebration is one of the biggest events of the year at JDB, where 300
community members join annually in celebration.

JDB rents out the hall about twice a month for parties and other events, where each event brings about
100 people to the center. Archwood UCC holds weekly service on Sundays with an average of 40
parishioners attending, a twice-monthly produce sale and free breakfast with 70 community members
attending, and three weekly Alcoholics Anonymous meetings hosting 25 individuals at each meeting.
Each of these programs and events has the opportunity for interaction with the project, as the parking
lot is the primary point of entry. Bilingual educational signage at the bioretention/infiltration basins will
inform visitors about the importance of stormwater management and the students can integrate their
visual art projects with "art in the garden" programming.

Tasks and Deliverables

Submit a schedule of GIG project tasks and deliverables with start dates and end dates for the significant benchmarks with project completion date defined.

JDB_Timeline&Deliverables.docx

Letters of Support

- Applications must include one letter of support from the applicable councilperson.
- Applications must include a letter of support from each non-municipal project partner named in the application. Please note this applies to non-municipal partners only. Please do not include letters of support from various municipal departments unless specifically required.
- Applications proposing work on publicly-owned property, including within the right-of-way, must include a letter of support from the applicable public office with control over the property. For the City of Cleveland, a GIG project in the right-of-way in the City of Cleveland must include a support letter from the Mayor's Office of Capital Projects.
- Do not include any letters of support beyond those specified above. The Sewer District does not want extraneous letters of support.

JDB_LOS Other.pdf

Budget

Budget Information

Budget Summary

The Budget Summary and Budget represent the green infrastructure components of the project exclusively. Include details on the provider for all in-kind services and/or materials including specific material cost and hourly rate. If there is a volunteer component, please identify the source of volunteers.

See attached spreadsheet, which includes project costs stamped by a registered Landscape Architect. This project will be bid/quoted to construction contractors.

GIG PROJECT INCOME

NEORSD Anticipated

199748.46

NEORSD Committed

NEORSD Total

NEORSD Description

199,748.46

Foundations Anticipated

Foundations Committed

Foundations Total

Foundations Description

Government Grants or Contracts Anticipated

Government Grants or Contracts Committed

Government Grants or Contracts Total

Government Grants or Contracts Description

Organizational Budget Anticipated

Organizational Budget Committed

Organizational Budget Total

Organizational Budget Description

In-kind Support Anticipated

In-kind Support Committed

In-kind Support Total

In-kind Support Description

Other Anticipated

Other Committed

Other Total

Other Description

GIG PROJECT EXPENSES

Professional Services

NEORSD Request
45650

Other Funding

Total
45650

Line Item Description

Design, Survey, CA, interpretive sign design and Infiltration testing

Labor

NEORSD Request

Other Funding

Total

Line Item Description

Plants

NEORSD Request

Other Funding

Total

Line Item Description

Equipment Rental

NEORSD Request

Other Funding

Total

Line Item Description

Materials

NEORSD Request

Other Funding

Materials Total

Line Item Description

Other

NEORSD Request

154098.46

Other Funding

Other Total

154098.46

Line Item Description

construction, permits, plant material - see attached estimate

Upload Engineer's Estimate (If applicable)

JDB_Cost Estimate-revised.xlsx

CITY OF CLEVELAND
Office of the Council
www.clevelandcitycouncil.org

Jasmin Santana COUNCIL MEMBER, WARD 14
COMMITTEES: Health & Human Services • Safety • Transportation • Utilities

August 22, 2019

Northeast Ohio Regional Sewer District
McMonagle Administration Building
3900 Euclid Avenue
Cleveland, Ohio 44115

RE: NEORSD Green Infrastructure Grant for Julia de Burgos Cultural Arts Center

Dear NEORSD Grant Committee:

I am writing you to express my full support for the Julia de Burgos Cultural Arts Center (JDB)'s request for funding through the NEORSD Green Infrastructure Grant for the retrofit of their center's parking lot and grounds located at 2800 Archwood Avenue. JDB owns the property and was founded in 1989 with the mission to transform lives by preserving, educating, and promoting Latino heritage through the teaching and practice of history, culture, and the visual, performing, and literary arts.

The proposed green infrastructure will functionally and visually enhance JDB's grounds and be a vibrant gateway for visitors and students at the Center. The students can integrate their arts projects into the green infrastructure and JDB plans to use the renewed parking lot and grounds to bring in more volunteers to the organization. It will be a shining feature of the organization and provide them with opportunities to draw in new community members by teaching them about the importance of green infrastructure and its benefits. The organization is a cornerstone of Latino pride and community in Ward 14 and a project such as this is an ideal fit for their stewardship and care.

Thank you for your consideration, and please contact me with any additional questions.

Sincerely,

Jasmin Santana
Cleveland City Council, Ward 14

City Hall 601 Lakeside Avenue N.E., Room 220, Cleveland, OH 44114 • **Phone** (216) 664-4238 • **Fax** (216) 664-3837
Email jsantana@clevelandcitycouncil.org

METRO WEST
COMMUNITY DEVELOPMENT ORGANIZATION

August 27, 2019

Northeast Ohio Regional Sewer District
McMonagle Administration Building
3900 Euclid Avenue
Cleveland, Ohio 44115

RE: NEORSD Green Infrastructure Grant for Julia De Burgos Cultural Arts Center

Dear NEORSD Grant Committee:

I am writing to express the support of Metro West Community Development Organization for Julia De Burgos Cultural Arts Center (JDB)'s request for funding through the NEORSD Green Infrastructure Grant for the retrofit of their center's parking lot and grounds located at 2800 Archwood Avenue in the Brooklyn Centre neighborhood. JDB's mission is to transform lives by preserving, educating, and promoting Latino heritage through the teaching and practice of history, culture, and the visual, performing, and literary arts. Founded in 1989, JDB has supported members of our community since its inception. JDB made our service area its permanent home in 2018.

The proposed green infrastructure will functionally and visually enhance JDB's grounds and will create a vibrant gateway for visitors and students at the Center. JDB serves as a hub for many members of the community. If granted project funds, the created infrastructure and educational elements would be an opportunity for a diversity of residents to be educated on the benefits of green infrastructure and sustainable practices. Additionally, JDB's plans to integrate art into their proposed infrastructure will further make a positive visual impact on the neighborhood. The organization is a cornerstone of Latino pride and community. The NEORSD Green Infrastructure Grant would provide an opportunity for the exterior of JDB's site to be a physical reflection of the cultural pride, art, and celebration that JDB creates through its work in the community.

Thank you for your consideration, and please contact me with any questions you may have.

Sincerely,

Ricardo León
Executive Director
Metro West Community Development Organization

3167 FULTON ROAD, SUITE 303, CLEVELAND, OHIO 44109 | TEL (216) 961-9073 | FAX (216) 961-9387

Tasks & Deliverables

September 6, 2019 .....NEORSD Grant Due. EDG to upload;
October 2019 thru December 2019 .....NEORSD review of grant applications;

December 31, 2019 .....Notice of grant approval;
January 31,2020 .....contract between Julia De Burgos (JDB), Archwood UCC & NEORSD;

January 1, 2020. ..... JDB contract with EDG;
March 31, 2020..... Survey, infiltration testing, and design finalized;
April 30, 2020 review of construction drawings and specifications and draft Operations and Maintenance manual by the District;

May 2020.....Permits procured; NEORSD Approval;
May 25, 2020 ..... Issue CD's and project manual for Contractor Quoting;
June 2020 ..... Construction contractor selected;
July 2020 ..... Construction begins;
October 2020 Construction Completion; As Built Drawings; Final Drainage Report; O&M manual;
Interpretation signage to be sent to NEORSD for review and approval;
November 2020O&M Training session with JDB; Installation of Interpretation signs and ribbon cutting with Art Exhibit.

Tasks & Deliverables

September 6, 2019 ..... NEORSD Grant Due. EDG to upload;
October 2019 thru December 2019 .....NEORSD review of grant applications;

December 31, 2019 .....Notice of grant approval;
January 31,2020 ..... contract between Julia De Burgos (JDB), Archwood UCC & NEORSD;

January 1, 2020. ..... JDB contract with EDG;
March 31, 2020 ..... Survey, infiltration testing, and design finalized;
April 30, 2020 .review of construction drawings and specifications and draft Operations and Maintenance manual by the District;

May 2020 .....Permits procured; NEORSD Approval;
May 25, 2020 ..... Issue CD's and project manual for Contractor Quoting;
June 2020 ..... Construction contractor selected;
July 2020 ..... Construction begins;
October 2020 .....Construction Completion; As Built Drawings; Final Drainage Report; O&M manual; Interpretive signage to be sent to NEORSD for review and approval;
November 2020....O&M Training session with JDB; Installation of Interpretive signs and ribbon cutting with Art Exhibit.

Environmental Design Group

PARKS GROUP
Akron, Ohio

Date: 9/2/2019
Project Title: **Julia De Burgos Green Campus**
Project No. 19-00321-010
Description: Conceptual Class 3 design qty. estimate

Prepared by: K. Holmok
Approved By:

PHASE DESCRIPTION: CONCEPTUAL PLANS (CLASS 3)

Item #		NO. UNITS	UNIT MEAS.	UNIT COSTS	SUBTOTAL COST	Item Requested for NEORSD GIG Grant Reimbursement
201 & 624	Clearing & grubbing/Mobilization/demo	1	LS	$9,500.00	$9,500.00	$9,500.00
203	Excavation and Embankment (including all excavation hauled)	1	LS	$3,564.44	$3,564.44	$3,564.44
253	Asphalt Pavement (reuse existing base gravel)	767	SY	$32.00	$24,544.00	$24,544.00
SPEC	Concrete Walk	390	SF	$6.00	$2,340.00	$2,340.00
609	6" x 18 " Concrete Curbing	313	LF	$27.00	$8,451.00	$8,451.00
641	Parking Lot Markings	360	LF	$2.00	$720.00	$720.00
653	Topsoil Furnished and Placed (repair seeding)	4	CY	$70.00	$280.00	$280.00
SPEC	Concrete Curb Stop	6	EA	$90.00	$540.00	$540.00
SPEC	ADA Signage & Handicap Marker	1	EA	$200.00	$200.00	$200.00
SPEC	Storm sewer redirection - 10-inch HDPE	1	LS	$10,800.00	$10,800.00	$10,800.00
SPEC	Catch basin with concrete collar	2	EA	$1,800.00	$3,600.00	$3,600.00
SPEC	Downspout Diconnection (PVC for disconnection)	60	LF	$50.00	$3,000.00	$3,000.00
SPEC	Concrete Curb Cuts (bioretention inlets)	2	EA	$85.00	$170.00	$170.00
SPEC	4" PVC underdrain cleanouts w/caps	85	LF	$35.00	$2,975.00	$2,975.00
SPEC	Stormwater PPP	1	LS	$565.00	$565.00	$565.00
SPEC	Bioretention/Infiltration Basin (including soil, stone, sand, underdrainage, overflow, mulc	1203	SF	$40.00	$48,120.00	$48,120.00
SPEC	Bioretention overflow w/grate	1	EA	$2,000.00	$2,000.00	$2,000.00
SPEC	Interpretive Sign	2	EA	$850.00	$1,700.00	$1,700.00
SPEC	Shrubs	15	EA	$60.00	$900.00	$900.00
SPEC	Perennials/Grasses	140	EA	$16.00	$2,232.77	$2,232.77
SPEC	Lawn (tree lawn repair)	72	SY	$1.50	$108.00	$108.00
	Contingency (20%)				$25,262.04	$25,262.04
	Permits (2%)	1	LS	$2,526.20	$2,526.20	$2,526.20
	Design, Survey, CA, interpretive sign design and Infiltration testing	1	LS	$45,650.00	$45,650.00	$45,650.00
				PROJECT COSTS SUBTOTAL	**$199,748.46**	
					NEORSD GIG Grant Request Total	$199,748.46

The above Opinion of Probable Project Costs is based on available information and the Landscape Architect's experience and qualifications. This opinion represents the Landscape Architect's best judgment based on experience with the construction of similar projects. The Landscape Architect has no control over the cost of labor, materials, equipment or services furnished by others or over competitive bidding or market conditions and, therefore, does not guarantee that this project cost estimate will approximate the actual project costs.

ASSUMPTIONS

a. Cost estimates and ranges are developed to the Association for the Advancement of Cost Consulting International (AACE) Class 3 estimate level. Construction cost estimates utilize ODOT 2018 prices, and local public bid prices for similar work. Unit costs include direct, indirect costs, contractor overhead and profit.
b. Excavation and Haul: It is assumed that soil is clean fill. Phase I/II screening would have to occur on any non-roadway property prior to purchase/project.
c. Assumed Soil Conditions: Unknown
d. No bedrock conflicts
e. No existing utility conflicts, repairs or upgrades are known.
f. Maintenance costs are not included
g. The cost estimate does not include fire and all risk insurance.
h. The listed 20% construction cost contingency was based upon these assumptions and risks.
i. Non-Construction Costs (Permitting, environmental, security, etc.) is unknown and an allowance of 2% of construction costs is included.

LANDSCAPE ARCHITECT:

Signature
Katherine Gluntz Holmok, ASLA

8/30/2019
Date

SEAL

STATE OF OHIO
KATHERINE GLUNTZ HOLMOK
1045
REGISTERED LANDSCAPE ARCHITECT

Environmental Design Group

PARKS GROUP
Akron, Ohio

Date: 9/2/2019
Project Title: **Julia De Burgos Green Campus**
Project No. 19-00321-010
Description: Conceptual Class 3 design qty. estimate

Prepared by: K. Holmok
Approved By:

PHASE DESCRIPTION: CONCEPTUAL PLANS (CLASS 3)

Item #		NO. UNITS	UNIT MEAS.	UNIT COSTS	SUBTOTAL COST	Item Requested for NEORSD GIG Grant Reimbursement
201 & 624	Clearing & grubbing/Mobilization/demo	1	LS	$9,500.00	$9,500.00	$9,500.00
203	Excavation and Embankment (including all excavation hauled)	1	LS	$3,564.44	$3,564.44	$3,564.44
253	Asphalt Pavement (reuse existing base gravel)	767	SY	$32.00	$24,544.00	$24,544.00
SPEC	Concrete Walk	390	SF	$6.00	$2,340.00	$2,340.00
609	6" x 18 " Concrete Curbing	313	LF	$27.00	$8,451.00	$8,451.00
641	Parking Lot Markings	360	LF	$2.00	$720.00	$720.00
653	Topsoil Furnished and Placed (repair seeding)	4	CY	$70.00	$280.00	$280.00
SPEC	Concrete Curb Stop	6	EA	$90.00	$540.00	$540.00
SPEC	ADA Signage & Handicap Marker	1	EA	$200.00	$200.00	$200.00
SPEC	Storm sewer redirection - 10-inch HDPE	1	LS	$10,800.00	$10,800.00	$10,800.00
SPEC	Catch basin with concrete collar	2	EA	$1,800.00	$3,600.00	$3,600.00
SPEC	Downspout Diconnection (PVC for disconnection)	60	LF	$50.00	$3,000.00	$3,000.00
SPEC	Concrete Curb Cuts (bioretention inlets)	2	EA	$85.00	$170.00	$170.00
SPEC	4" PVC underdrain cleanouts w/caps	85	LF	$35.00	$2,975.00	$2,975.00
SPEC	Stormwater PPP	1	LS	$565.00	$565.00	$565.00
SPEC	Bioretention/Infiltration Basin (including soil, stone, sand, underdrainage, overflow, mulch)	1203	SF	$40.00	$48,120.00	$48,120.00
SPEC	Bioretention overflow w/grate	1	EA	$2,000.00	$2,000.00	$2,000.00
SPEC	Interpretive Sign	2	EA	$850.00	$1,700.00	$1,700.00
SPEC	Shrubs	15	EA	$60.00	$900.00	$900.00
SPEC	Perennials/Grasses	140	EA	$16.00	$2,232.77	$2,232.77
SPEC	Lawn (tree lawn repair)	72	SY	$1.50	$108.00	$108.00
	Contingency (20%)				$25,262.04	$25,262.04
	Permits (2%)	1	LS	$2,526.20	$2,526.20	$2,526.20
	Design, Survey, CA, interpretive sign design and Infiltration testing	1	LS	$45,650.00	$45,650.00	$45,650.00
				PROJECT COSTS SUBTOTAL	**$199,748.46**	
					NEORSD GIG Grant Request Total	$199,748.46

The above Opinion of Probable Project Costs is based on available information and the Landscape Architect's experience and qualifications. This opinion represents the Landscape Architect's best judgment based on experience with the construction of similar projects. The Landscape Architect has no control over the cost of labor, materials, equipment or services furnished by others or over competitive bidding or market conditions and, therefore, does not guarantee that this project cost estimate will approximate the actual project costs.

ASSUMPTIONS

a. Cost estimates and ranges are developed to the Association for the Advancement of Cost Consulting International (AACE) Class 3 estimate level. Construction cost estimates utilize ODOT 2018 prices, and local public bid prices for similar work. Unit costs include direct, indirect costs, contractor overhead and profit.
b. Excavation and Haul: It is assumed that soil is clean fill. Phase I/II screening would have to occur on any non-roadway property prior to purchase/project.
c. Assumed Soil Conditions: Unknown
d. No bedrock conflicts
e. No existing utility conflicts, repairs or upgrades are known.
f. Maintenance costs are not included
g. The cost estimate does not include fire and all risk insurance.
h. The listed 20% construction cost contingency was based upon these assumptions and risks.
i. Non-Construction Costs (Permitting, environmental, security, etc.) is unknown and an allowance of 2% of construction costs is included.

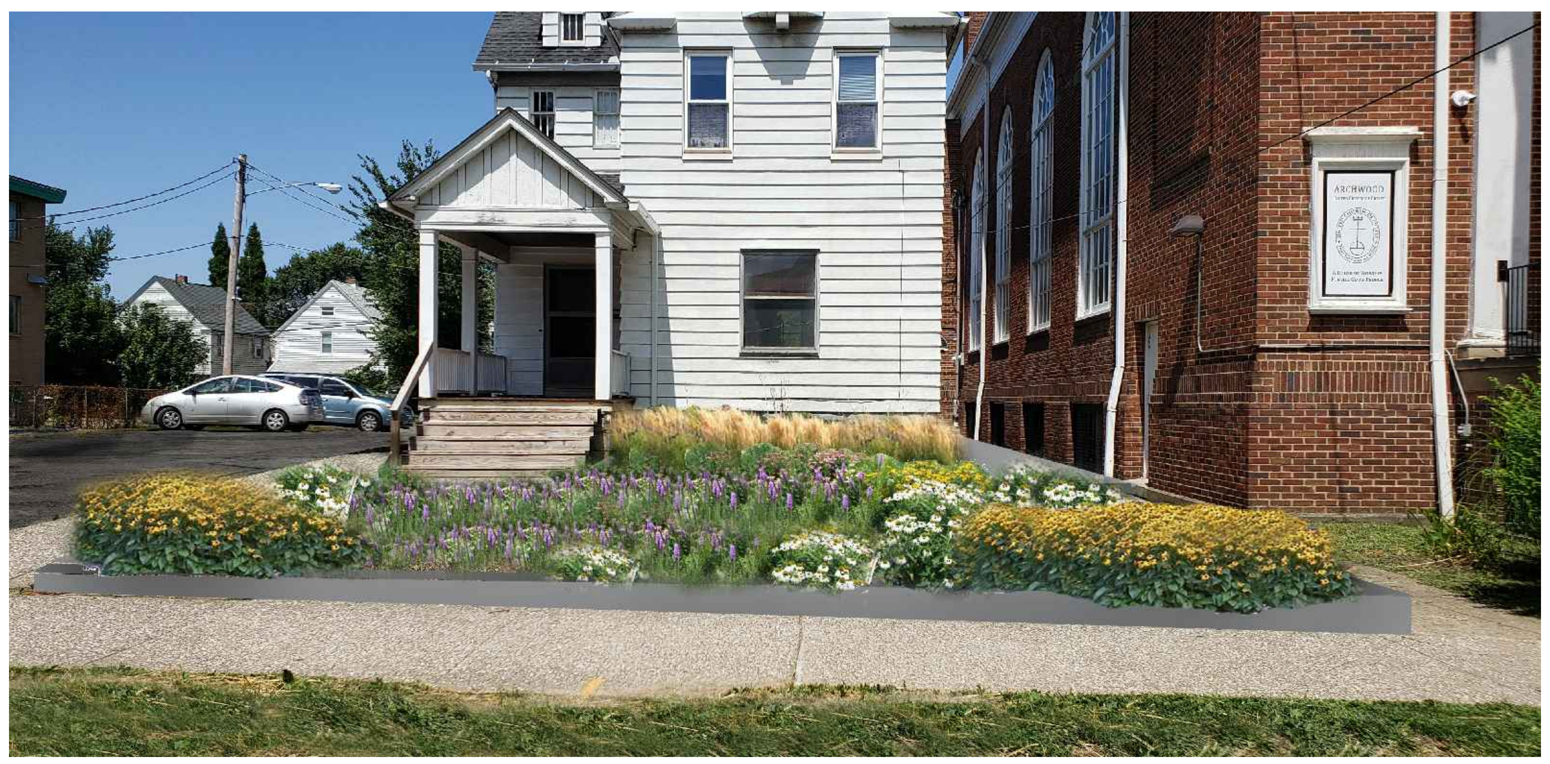
LANDSCAPE ARCHITECT:

Signature
Katherine Gluntz Holmok, ASLA

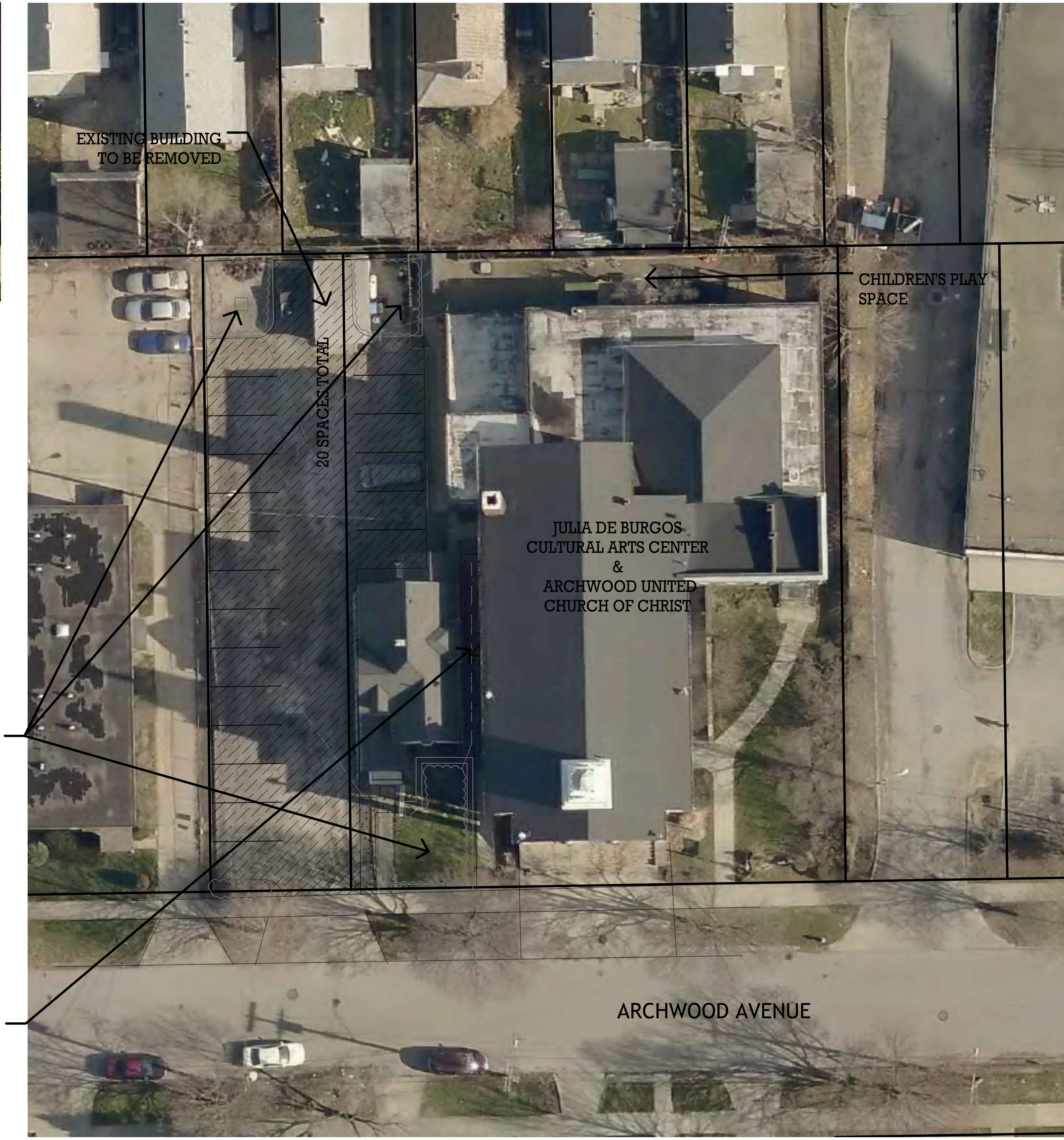
8/30/2019
Date

SEAL

EXISTING FRONT YARD



PROPOSED FRONT BIORETENTION



PROPOSED
BIORETENTION/
INFILTRATION BASIN

DISCONNECT
DOWNSPOUTS AND
CONNECT TO
BIORETENTION

Environmental Design Group
AKRON / CLEVELAND / COLUMBUS
HQ 450 GRANT ST., AKRON, OH 44311
P 330.375.1390 / TF 800.835.1390
W ENVDESIGNGROUP.COM

Julia De Burgos Cultural Arts Center

GREEN INFRASTRUCTURE CAMPUS RETROFITS

0 20 40
GRAPHIC SCALE IN FEET

N

PHOTO LOG	Julia De Burgos Cultural Arts Center GI Retrofit	Project No. **19-00321-010**
Grant Name: Northeast Ohio Regional Sewer District 2019 GIG	**Site Location: PPN # 015-25-080 & 015-25-081** 2800 Archwood Avenue, Cleveland, OH 44109	

Photo No. 1	**Date:** 2019-08-08

The existing parking lot next to the church house has the ability to capture large amount of directly connected impervious surfaces and direct to the front grass area, which will be turned into an infiltrating bioretention cell.

Photo No. 2	**Date:** 2019-08-08

Downspouts from the church can be disconnected from the existing sewer system and diverted to a front infiltrating bioretention cell (grassy area). The existing walk between the buildings would be regraded to flow water to the front bioretention.

PHOTO LOG	Julia De Burgos Cultural Arts Center GI Retrofit	Project No. **19-00321-010**
Grant Name: Northeast Ohio Regional Sewer District 2019 GIG	**Site Location: PPN # 015-25-080 & 015-25-081** 2800 Archwood Avenue, Cleveland, OH 44109	

Photo No. 3	**Date:** 2019-08-08

Within the parking lot, there are two existing catch basins. Each would be reconstructed and moved to allow for stormwater to be directed to the front and two rear bioretention cells. These relocated catch basins would be used as overflow for larger storm events.

Photo No. 4	**Date:** 2019-08-08

Downspouts along the house would be diverted to the proposed front bioretention cell.

PHOTO LOG	Julia De Burgos Cultural Arts Center GI Retrofit	Project No. **19-00321-010**
Grant Name: Northeast Ohio Regional Sewer District 2019 GIG	**Site Location: PPN # 015-25-080 & 015-25-081** 2800 Archwood Avenue, Cleveland, OH 44109	

Photo No. 5	**Date:** 2019-08-08

Downspouts along the backside of the building would not be disconnected at this time as it would disturb the existing play surface of the playground at the back of the facility. However back bioretention cells would be sized to include these downspouts in the future.

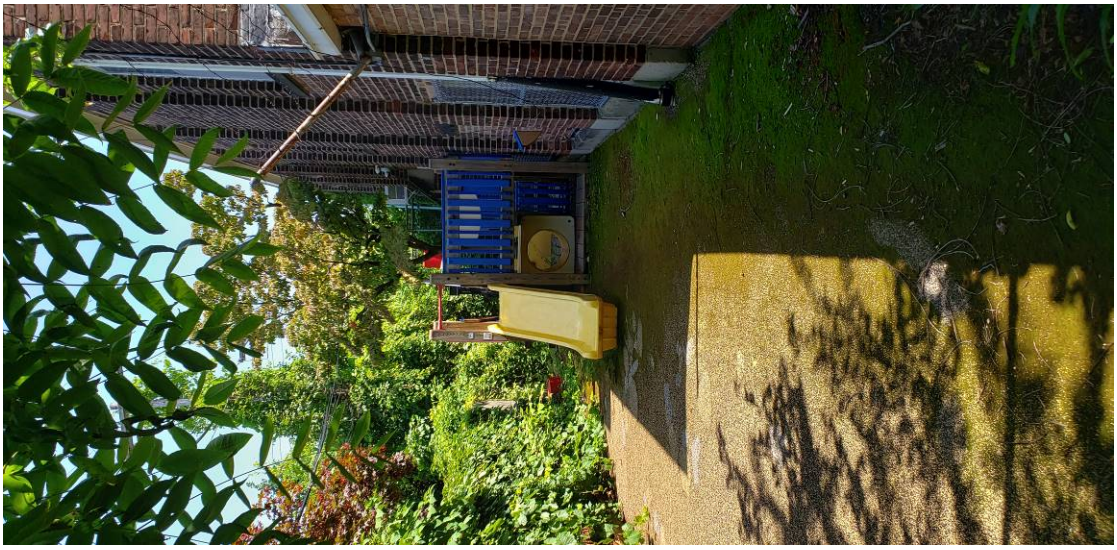
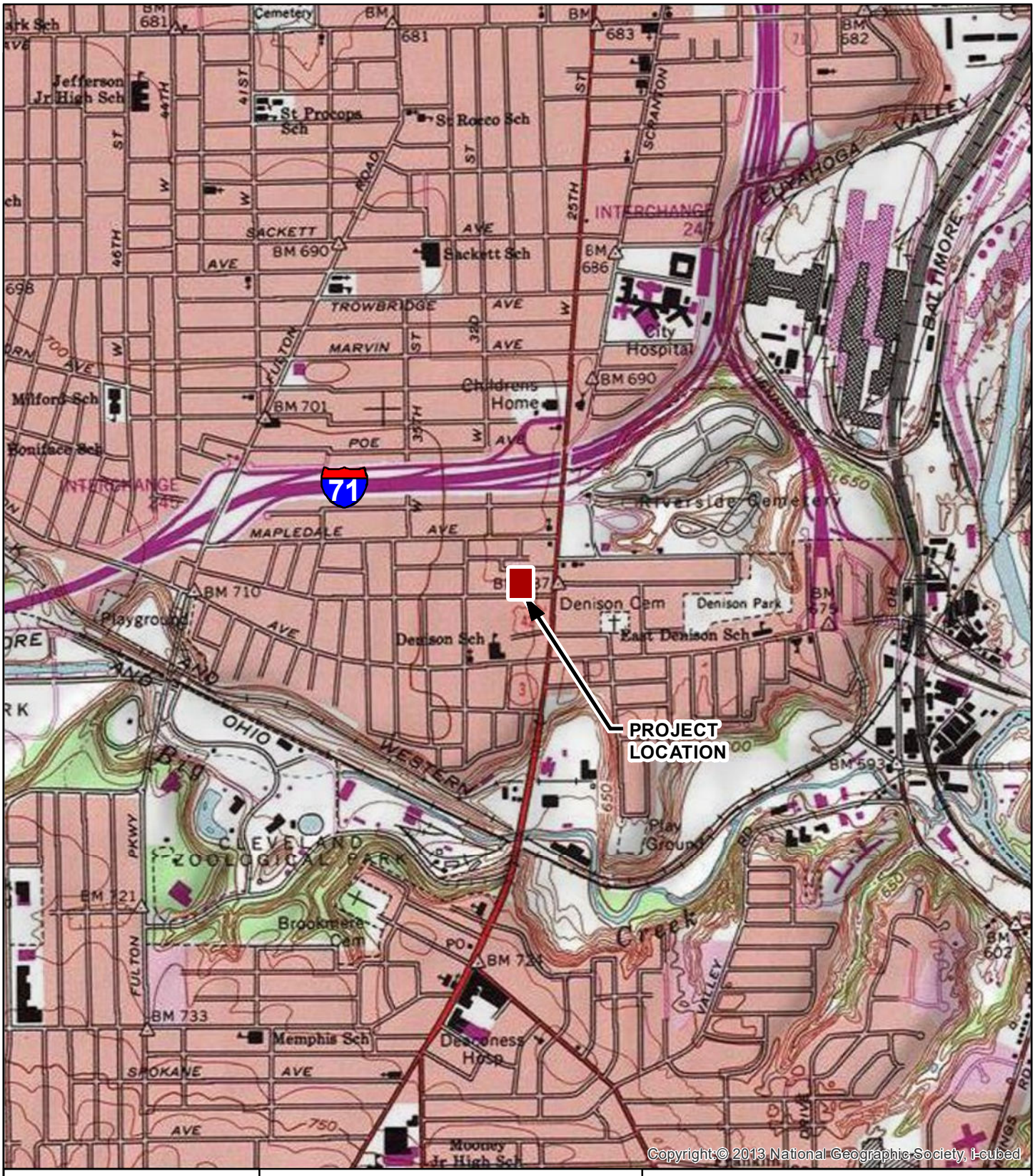


Photo No. 6	**Date:** 2019-08-08

The old garage would be razed as part of the project so two back bioretention cells can be built.



Cuyahoga County, Ohio

Key Map

Julia De Burgos
GREEN CAMPUS RETROFIT
Cleveland, Ohio

Project Location Map

1,600 Feet

8.20.2019

NEORSD GIG Grant Application 2019

National Stormwater Calculator Report

Site Description

Julia B Burgos

Parameter	Current Scenario	Baseline Scenario
Site Area (acres)	0.33	0.33
Hydrologic Soil Group	B	B
Hydraulic Conductivity (in/hr)	1	1
Surface Slope (%)	2	2
Precip. Data Source	CLEVELAND WSFO AP	CLEVELAND WSFO AP
Evap. Data Source	CLEVELAND WSFO AP	CLEVELAND WSFO AP
Climate Change Scenario	None	None
% Forest	0	0
% Meadow	0	0
% Lawn	35	25
% Desert	0	0
% Impervious	65	75
Years Analyzed	20	20
Ignore Consecutive Wet Days	False	False
Wet Day Threshold (inches)	0.10	0.10

LID Control	Current Scenario	Baseline Scenario
Disconnection	0	0
Rain Harvesting	0	0
Rain Gardens	0	0
Green Roofs	0	0
Street Planters	100 / 5	0
Infiltration Basins	0	0
Porous Pavement	0	0

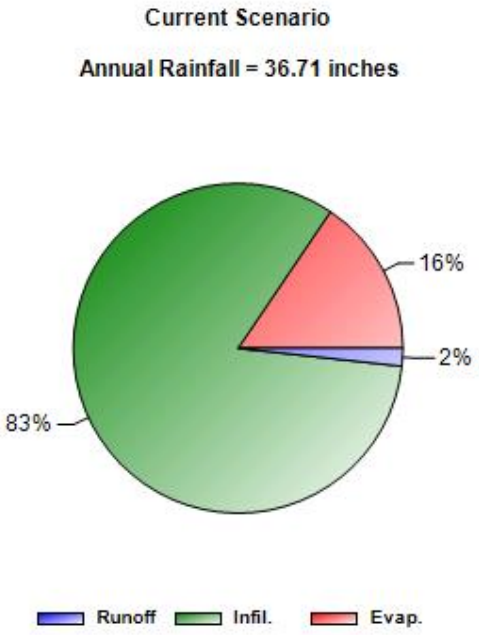
% of impervious area treated / % of treated area used for LID

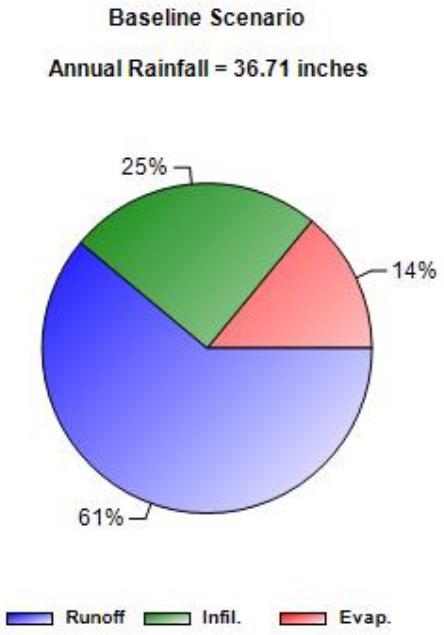
National Stormwater Calculator Report

Summary Results

Julia B Burgos

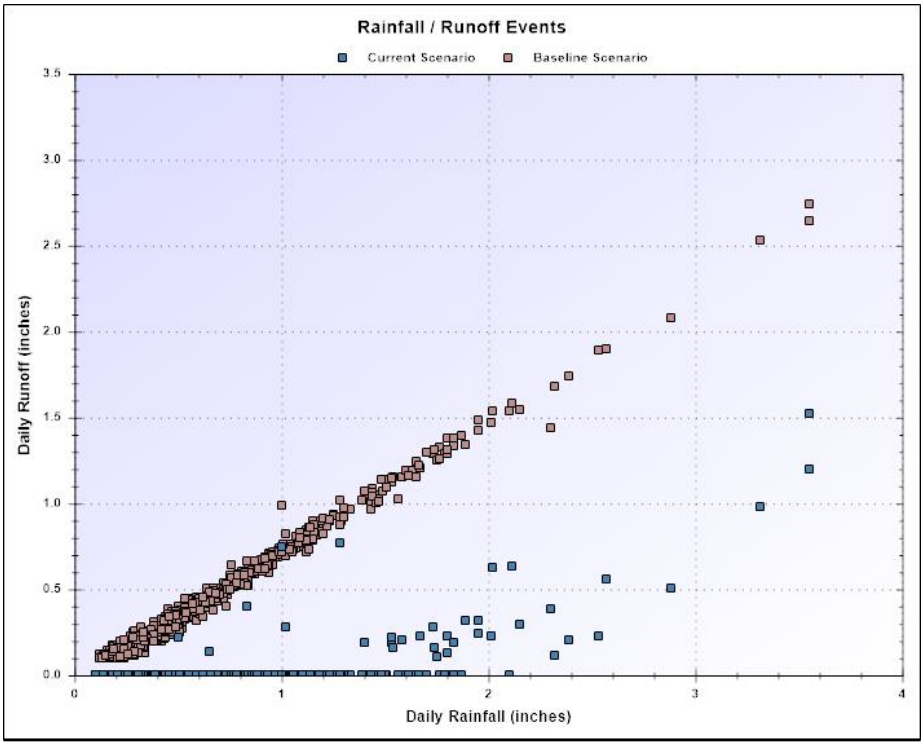
Statistic	Current Scenario	Baseline Scenario
Average Annual Rainfall (inches)	36.71	36.71
Average Annual Runoff (inches)	0.64	22.46
Days per Year With Rainfall	78.05	78.05
Days per Year with Runoff	1.70	56.51
Percent of Wet Days Retained	97.82	27.59
Smallest Rainfall w/ Runoff (inches)	0.50	0.12
Largest Rainfall w/o Runoff (inches)	2.10	0.24
Max. Rainfall Retained (inches)	2.37	0.91

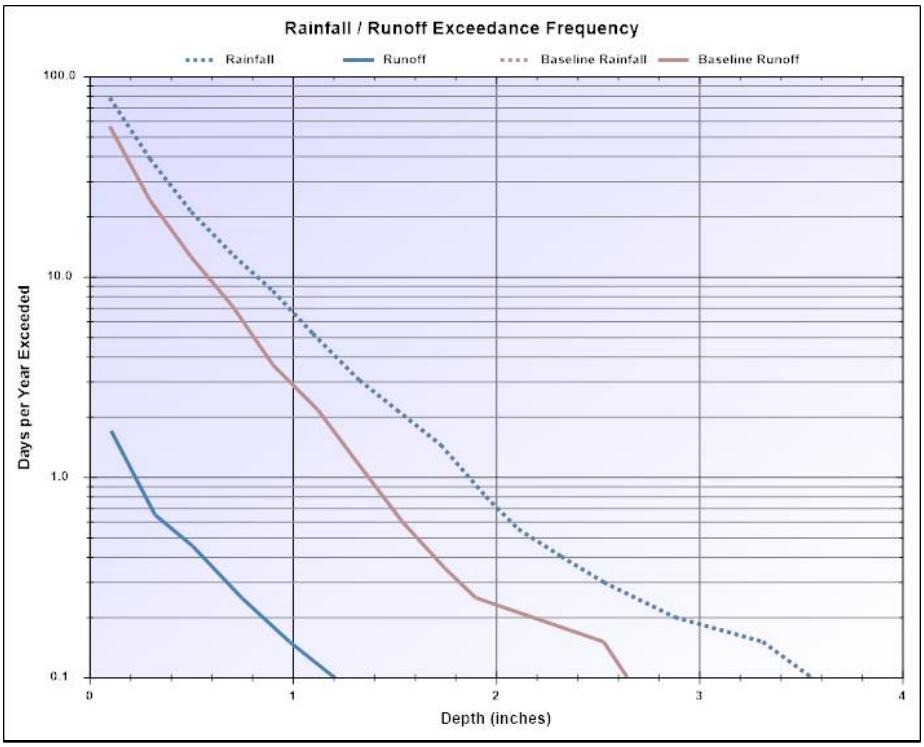




National Stormwater Calculator Report

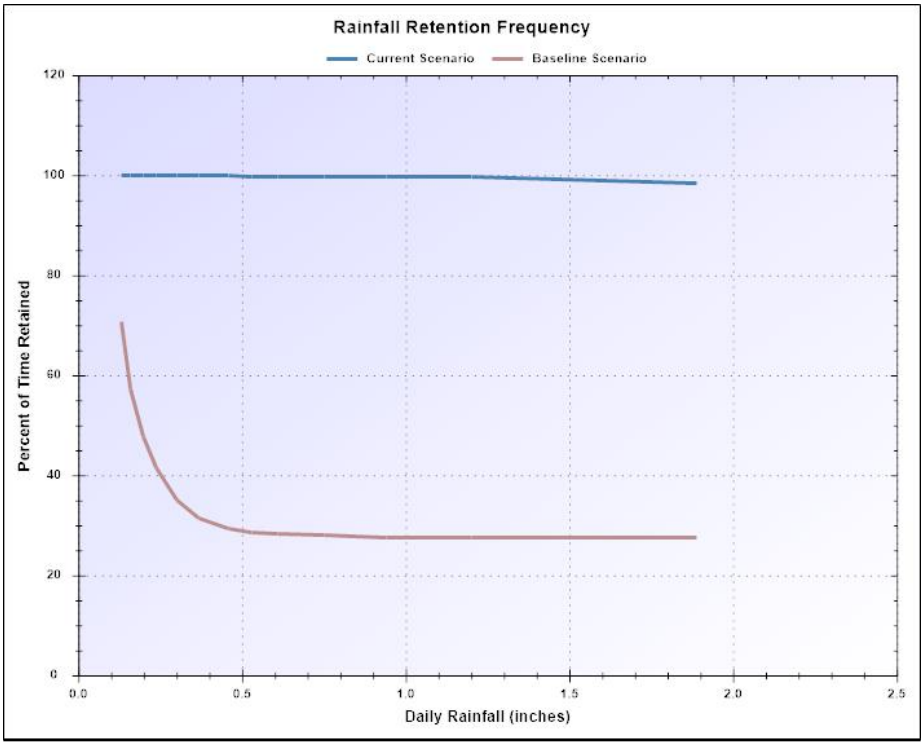
Julia B Burgos

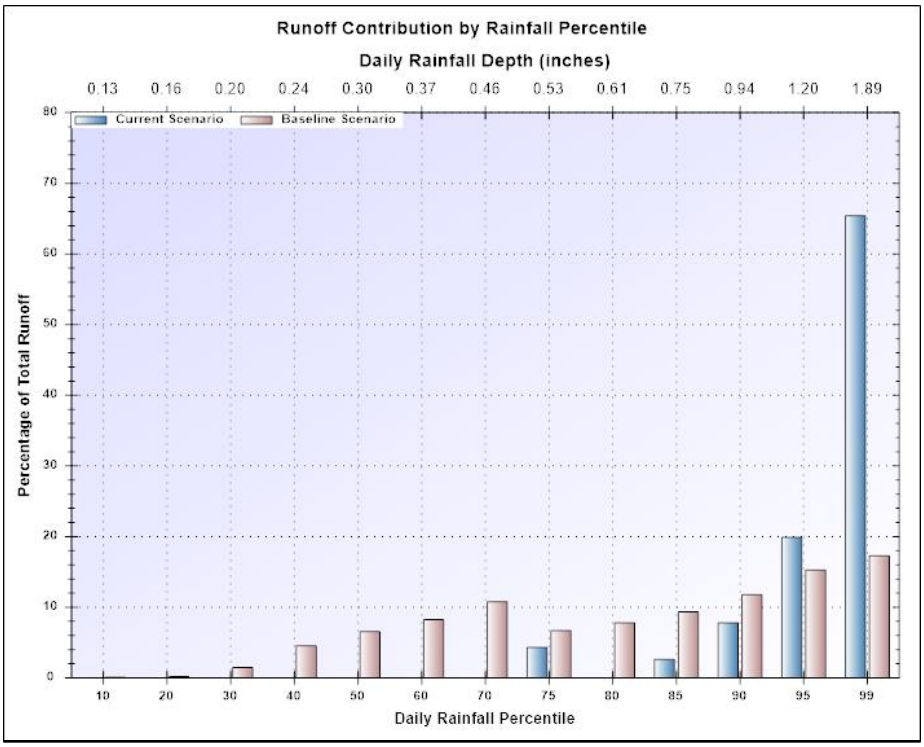




National Stormwater Calculator Report

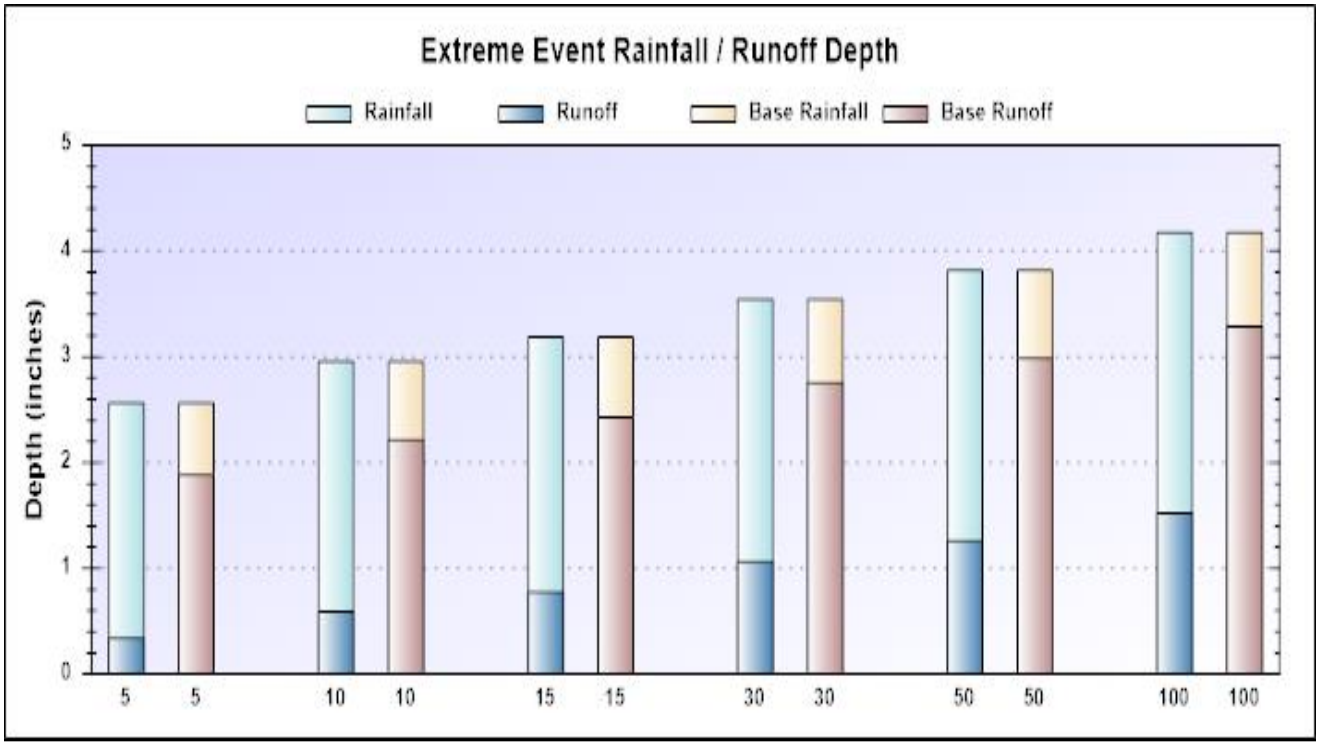
Julia B Burgos

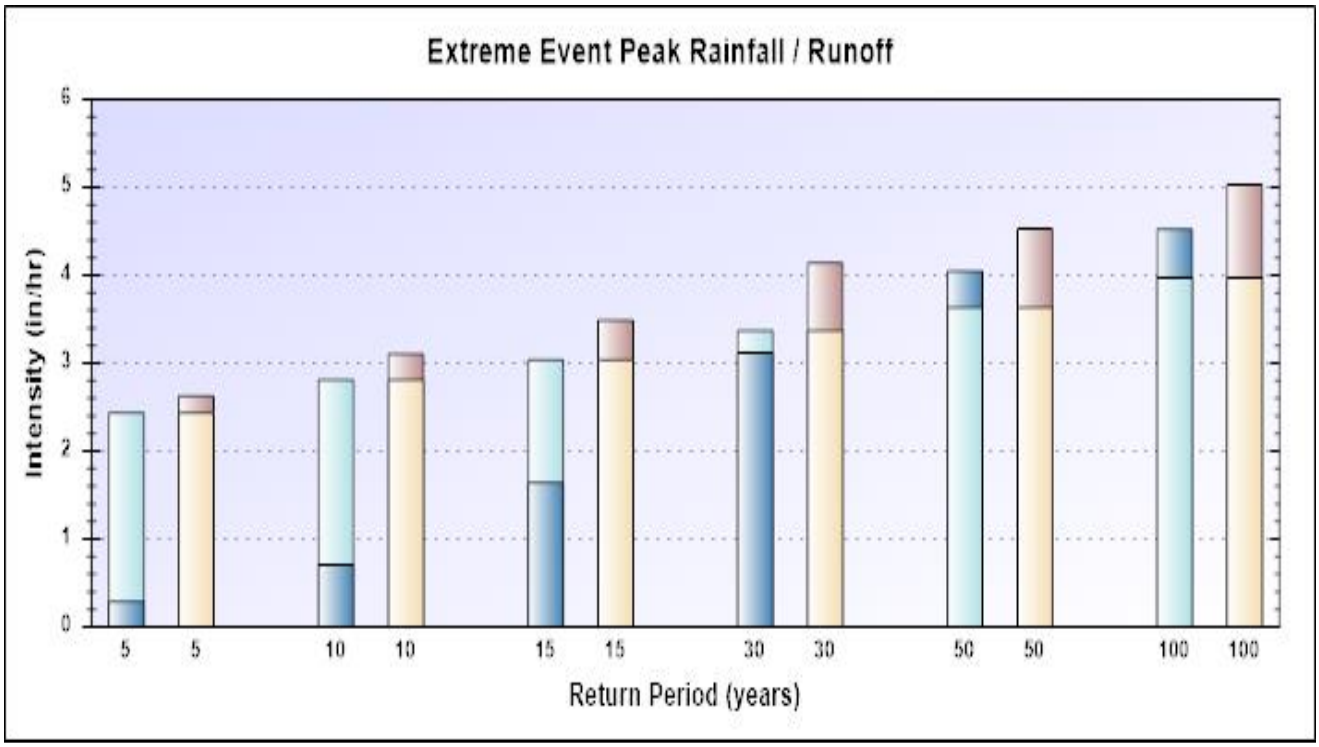




National Stormwater Calculator Report

Julia B Burgos





National Stormwater Calculator Report

Estimate of Probable Costs

Julia B Burgos

Capital Costs

LID Control	Current Scenario	Baseline Scenario	Cost Difference
Disconnection	$ - $	$ - $	$ - $
Rainwater Harvesting	$ - $	$ - $	$ - $
Rain Gardens	$ - $	$ - $	$ - $
Green Roofs	$ - $	$ - $	$ - $
Street Planters	$ 22,500 - $ 31,400	$ - $	$ 22,500 - $ 31,400
Infiltration Basins	$ - $	$ - $	$ - $
Permeable Pavement	$ - $	$ - $	$ - $
Total	$ 22,500 - $ 31,400	$ - $	$ 22,500 - $ 31,400

Maintenance Costs

LID Control	Current Scenario	Baseline Scenario	Cost Difference
Disconnection	$ - $	$ - $	$ - $
Rainwater Harvesting	$ - $	$ - $	$ - $
Rain Gardens	$ - $	$ - $	$ - $
Green Roofs	$ - $	$ - $	$ - $
Street Planters	$ - $ 800	$ - $	$ - $ 800
Infiltration Basins	$ - $	$ - $	$ - $
Permeable Pavement	$ - $	$ - $	$ - $
Total	$ - $ 800	$ - $	$ - $ 800

LEGEND

PROJECT LIMITS

FLOW DIRECTION

DOWNSPOUT/CATCH BASIN

Julia De Burgos GI Retrofit
PRE-DEVELOPMENT DRAINAGE MAP

Environmental Design Group
2800 Euclid Avenue Suite 620
Cleveland, OH 44115 330.375.1390
www.envdesigngroup.com

N

0 40 80

GRAPHIC SCALE IN FEET

BIORETENTION (RAINGARDEN) CALCULATIONS USING OHIO EPA APPROVED METHODS (FROM CONSTRUCTION PERMIT OHC000005)

Enter data in shaded cells only, other cells will be automatically calculated — **ODNR CALCULTAOR**

Date:	9/2/2019
Project Name:	Julia De Burgos
Number:	na
Type Of Project:	Redevelopment
Location of Device:	2800 Archwood

Upstream Drainage Area (A) — 0.33 acres

Required Filter Bed Size of the Bioretention (Equation from: ONDR, 2014. "*Rainwater and Land Development*"):

Upstream Drainage Area (A)					0.33	acres
Proposed Impervious Area:		14342	sq.ft.		0.329	acres
Percent:	100%	<25%	WQv/1 Ft Max (sq.ft.)	959.4798		
		>= 25%	5% of Imp Area (sq.ft)	717.1	x 718	sq.ft. minimum Filter Bed

Proposed Bioretention Area Design:

Proposed Device Area Size (sq.ft.)	1205	sq.ft.
Device Storage Depth (Above Ground)(feet)	0.75	ft
Soil depth (feet) 2 to 4 feet	2	ft
Concrete Sand depth (feet) - 3 inches	0.25	ft
Pea Gravel depth (feet) - 3 inches	0.25	ft
Stone depth (feet) - 10 to 12 inches	0.8333333	ft
WQv	903.75	cuft

0.408555674

Required Size of the Bioretention to meet drain time of WQv:

A (sq. ft.) = (WQv)(ds)/[(k)(hs + ds)(ts)]	697.803	sq. ft.
where:		
WQv = water quality volume (cf)	959	cu.ft.
ds = planting soil depth (feet)(note: typical minimum is 2')	2	ft
k = coefficient of permeability of planting soil media (ft/day)(note: settled soil media (0.5in/hr) 1 ft/day)	1	ft/day
hs = height of water above planting soil and mulch (feet)	0.75	ft
ts = design filter bed drain time (days) (note: 1 day (24 hrs) is required by OEPA)	1	days
does design draw down in 24 hours or less?	YES	

Required WQv (Equation from: ONDR, 2014. "*Rainwater and Land Development*"):

WQv=C*P*A/12			0.022	acre ft.
where:			959.4798	
WQv = water quality volume (cu.ft.f)				
C= Weighted C or planned site imp				
Weighted C		0.80	0.892	picked C
Planned Site Impervious where	C=0.858i^3-0.78i^2+0.774i+0.04	0.892		
Redevelopment Project?If yes, then 20% of WQv	Yes x		191.89596	Redevelopment WQv (cu.ft.)
	No		959.480	New Development WQv (cu.ft.)
New Development Required Ponding depth for WQv			16.04	inches
Re-Development Required Ponding depth for WQv			3.21	inches

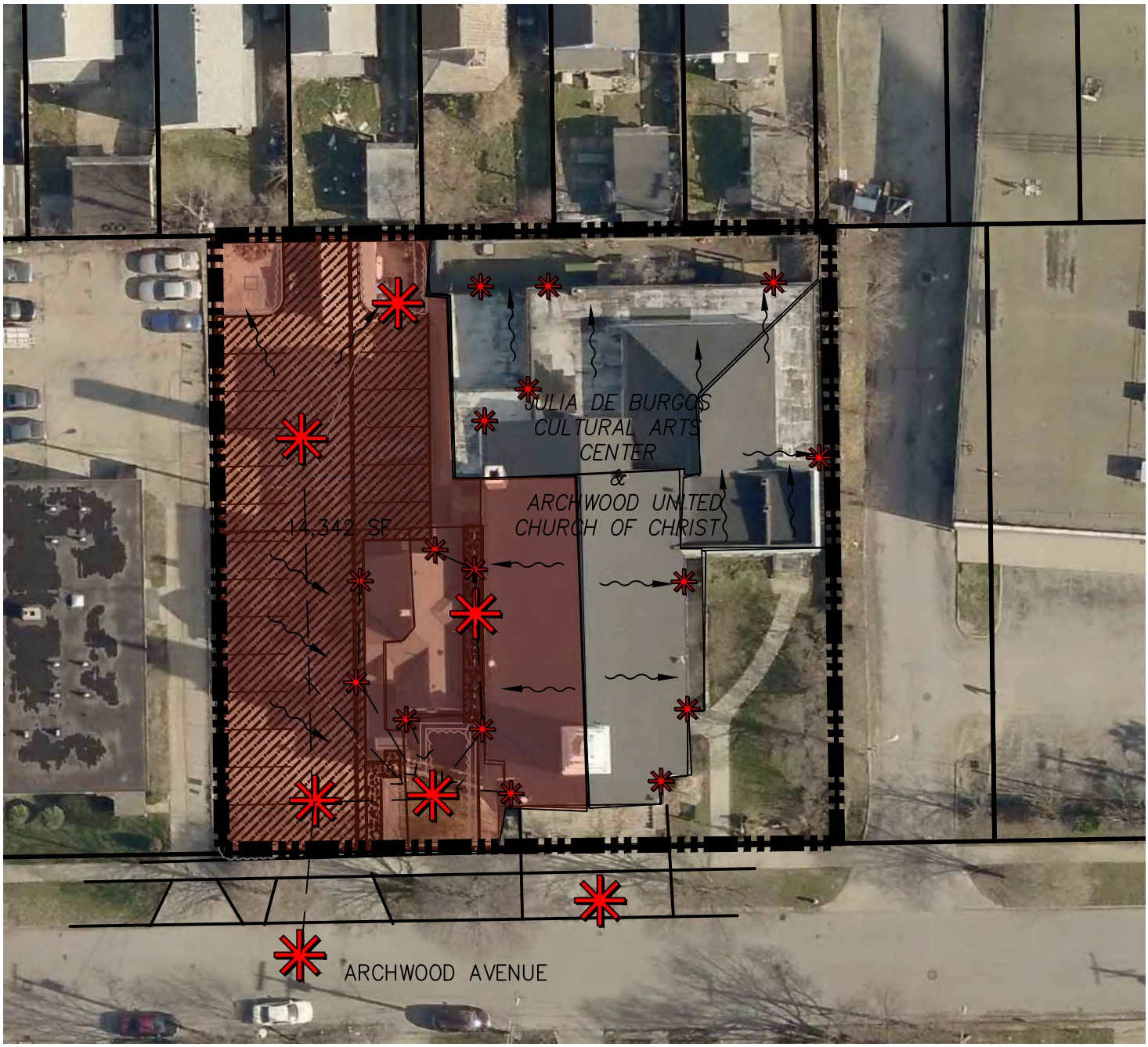
Ohio EPA Weighted Runoff Coefficient Calculations From Construction Permit (OHC000004)(Expires 4/20/2018):

Land use	Project Drainage Area (acres)*	% Total Drainage Area	C Value Per Land Use Area
Industrial & Commercial	0.329247016	1.00	0.80
High Density Residential (>8 dwellings/ac)	0	0.00	0.00
Medium Density Residential (4-8 dwellings/ac)	0	0.00	0.00
Low Density Residential (<4 dwellings/ac)	0	0.00	0.00
Open space and Recreational Areas	0	0.00	0.20
Total Acres*:	0.329247016	**Weighted C:**	0.80

Table 1 - OEPA Runoff Coefficients Based upon Type of Land Use	
Industrial & Commercial	0.8
High Density Residential (>8 dwellings/ac)	0.5
Medium Density Residential (4-8 dwellings/ac)	0.4
Low Density Residential (<4 dwellings/ac)	0.3
Open space and Recreational Areas	0.2

* **This Total Area must match the Upstream Drainage Area**

WQv Rainfall (P) (in)
0.90



LEGEND

PROJECT LIMITS

FLOW DIRECTION

DOWNSPOUT/CATCH BASIN

Julia De Burgos GI Retrofit
POST-DEVELOPMENT
DRAINAGE MAP

Environmental Design Group
2800 Euclid Avenue Suite 620
Cleveland, OH 44115 330.375.1390
www.envdesigngroup.com

N

0 40 80

GRAPHIC SCALE IN FEET

National Stormwater Calculator Report

Site Description

Julia B Burgos

Parameter	Current Scenario	Baseline Scenario
Site Area (acres)	0.33	0.33
Hydrologic Soil Group	B	B
Hydraulic Conductivity (in/hr)	1	1
Surface Slope (%)	2	2
Precip. Data Source	CLEVELAND WSFO AP	CLEVELAND WSFO AP
Evap. Data Source	CLEVELAND WSFO AP	CLEVELAND WSFO AP
Climate Change Scenario	None	None
% Forest	0	0
% Meadow	0	0
% Lawn	35	25
% Desert	0	0
% Impervious	65	75
Years Analyzed	20	20
Ignore Consecutive Wet Days	False	False
Wet Day Threshold (inches)	0.10	0.10

LID Control	Current Scenario	Baseline Scenario
Disconnection	0	0
Rain Harvesting	0	0
Rain Gardens	0	0
Green Roofs	0	0
Street Planters	100 / 5	0
Infiltration Basins	0	0
Porous Pavement	0	0

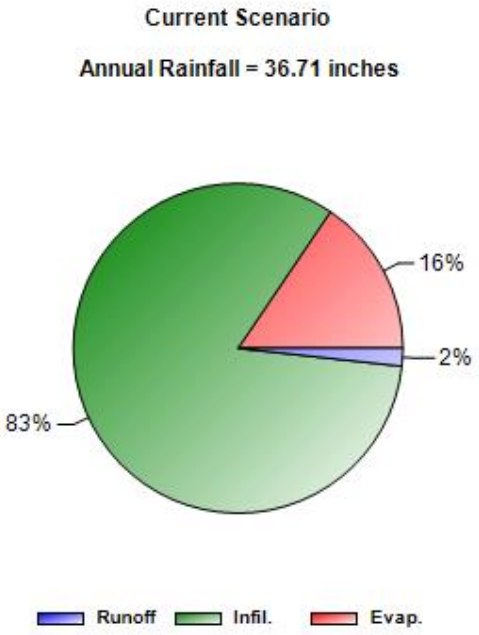
% of impervious area treated / % of treated area used for LID

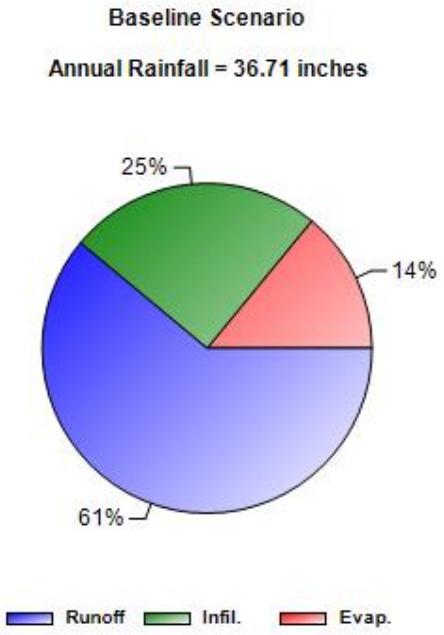
National Stormwater Calculator Report

Summary Results

Julia B Burgos

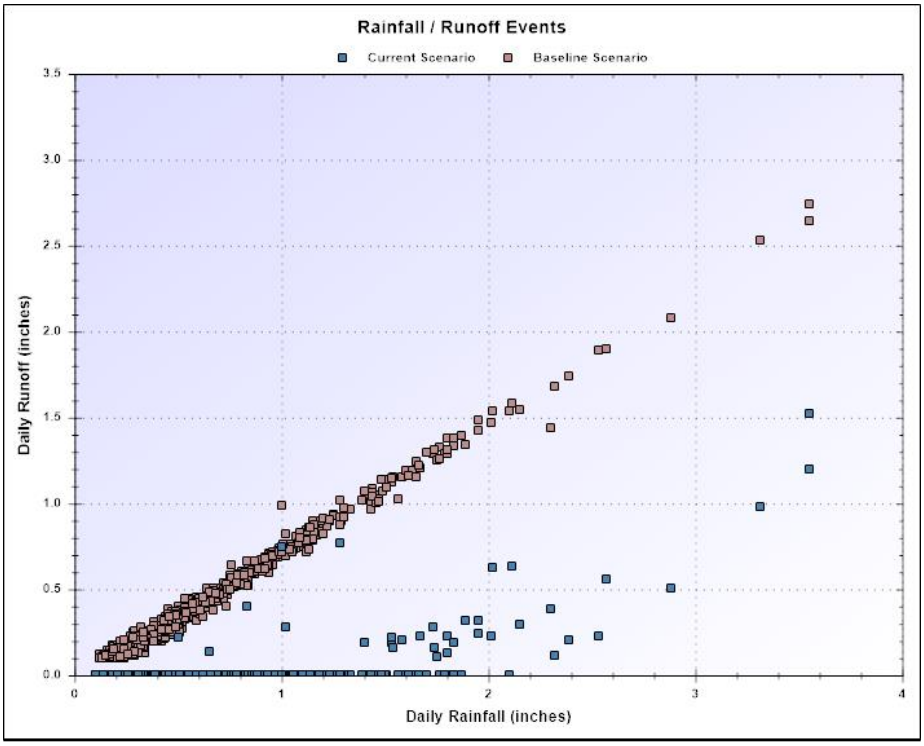
Statistic	Current Scenario	Baseline Scenario
Average Annual Rainfall (inches)	36.71	36.71
Average Annual Runoff (inches)	0.64	22.46
Days per Year With Rainfall	78.05	78.05
Days per Year with Runoff	1.70	56.51
Percent of Wet Days Retained	97.82	27.59
Smallest Rainfall w/ Runoff (inches)	0.50	0.12
Largest Rainfall w/o Runoff (inches)	2.10	0.24
Max. Rainfall Retained (inches)	2.37	0.91

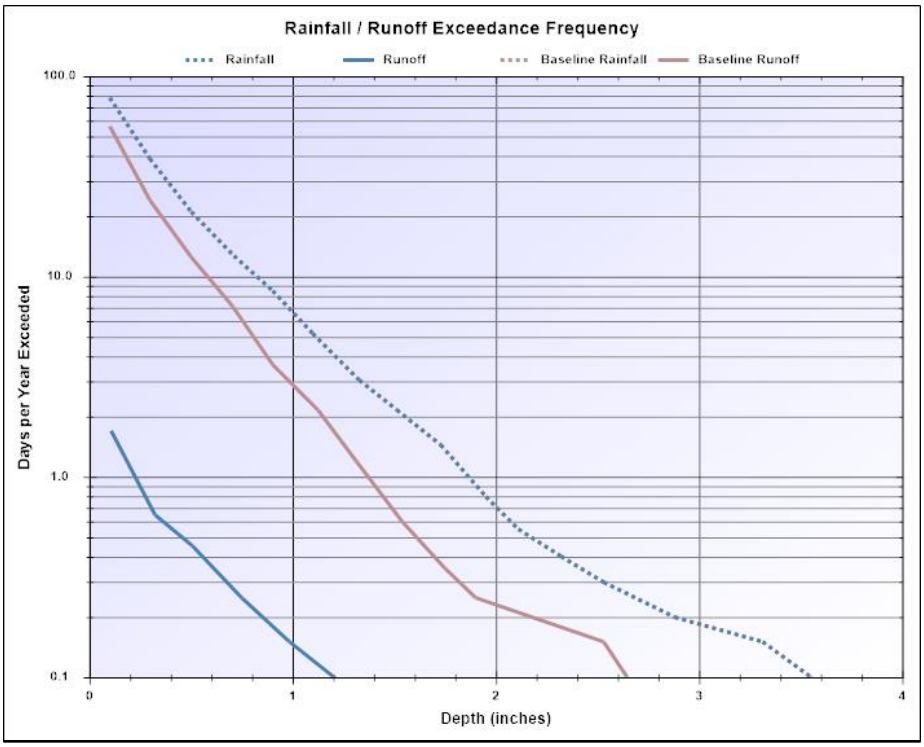




National Stormwater Calculator Report

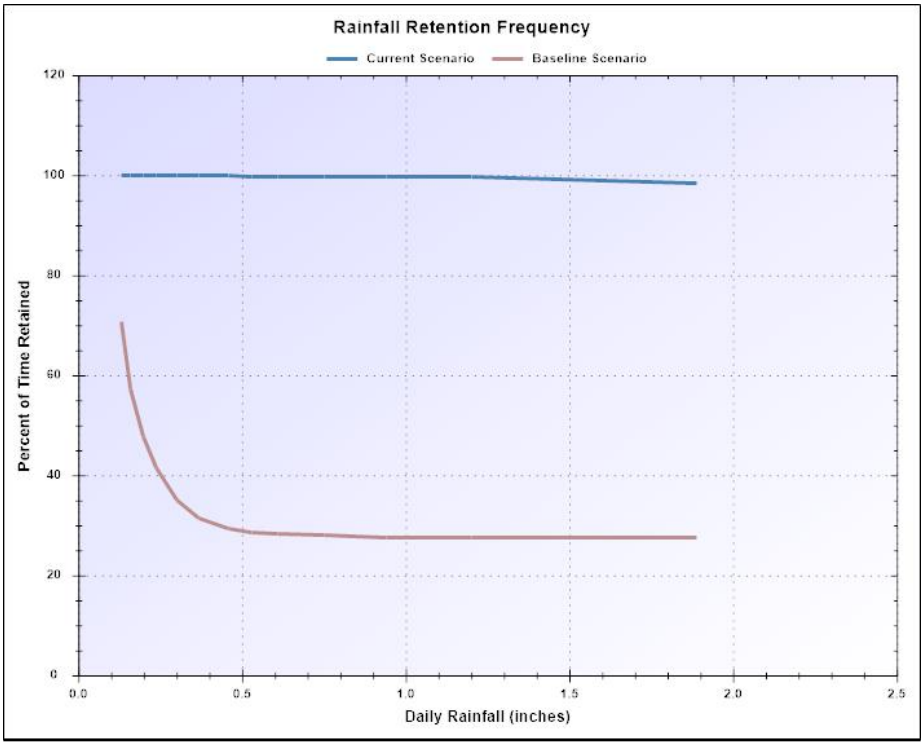
Julia B Burgos

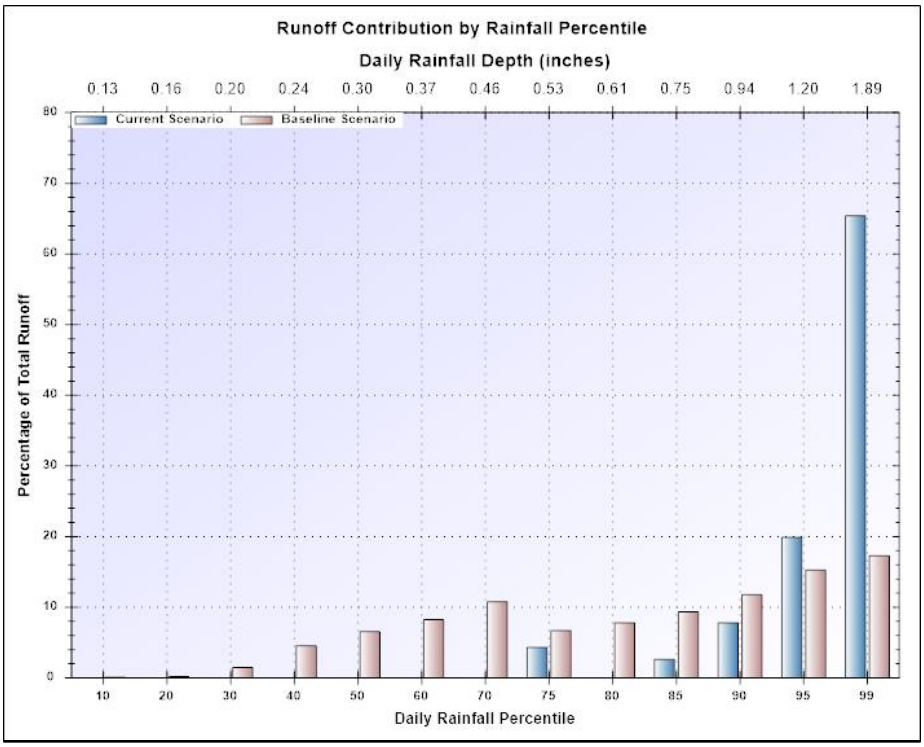




National Stormwater Calculator Report

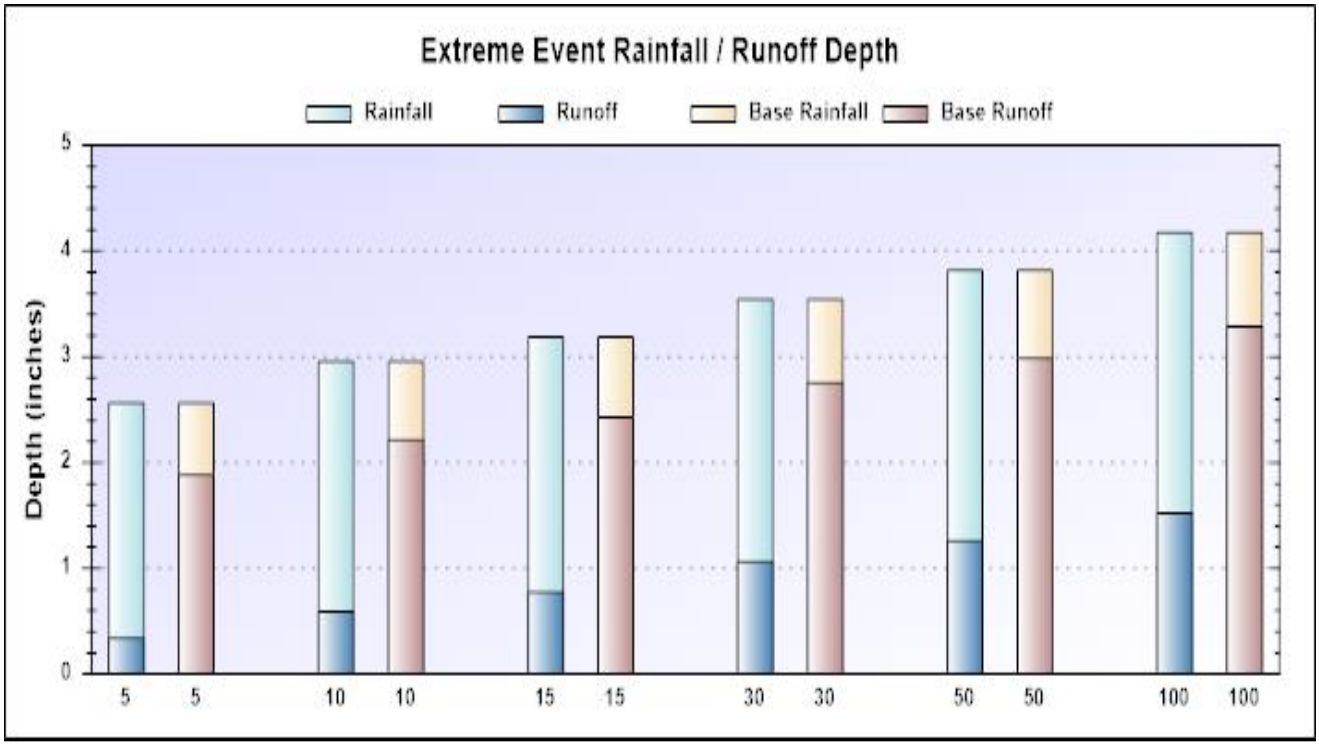
Julia B Burgos

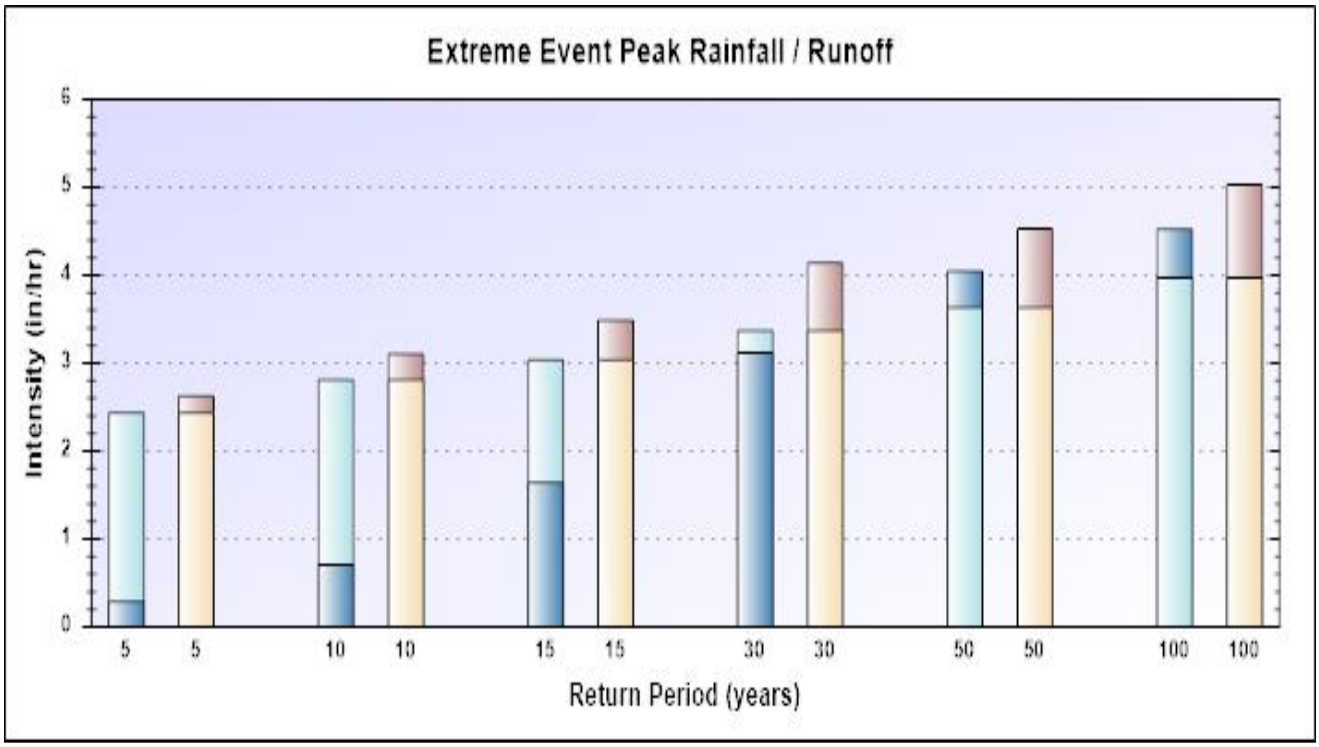




National Stormwater Calculator Report

Julia B Burgos





National Stormwater Calculator Report

Estimate of Probable Costs

Julia B Burgos

Capital Costs

LID Control	Current Scenario	Baseline Scenario	Cost Difference
Disconnection	$ - $	$ - $	$ - $
Rainwater Harvesting	$ - $	$ - $	$ - $
Rain Gardens	$ - $	$ - $	$ - $
Green Roofs	$ - $	$ - $	$ - $
Street Planters	$ 22,500 - $ 31,400	$ - $	$ 22,500 - $ 31,400
Infiltration Basins	$ - $	$ - $	$ - $
Permeable Pavement	$ - $	$ - $	$ - $
Total	$ 22,500 - $ 31,400	$ - $	$ 22,500 - $ 31,400

Maintenance Costs

LID Control	Current Scenario	Baseline Scenario	Cost Difference
Disconnection	$ - $	$ - $	$ - $
Rainwater Harvesting	$ - $	$ - $	$ - $
Rain Gardens	$ - $	$ - $	$ - $
Green Roofs	$ - $	$ - $	$ - $
Street Planters	$ - $ 800	$ - $	$ - $ 800
Infiltration Basins	$ - $	$ - $	$ - $
Permeable Pavement	$ - $	$ - $	$ - $
Total	$ - $ 800	$ - $	$ - $ 800