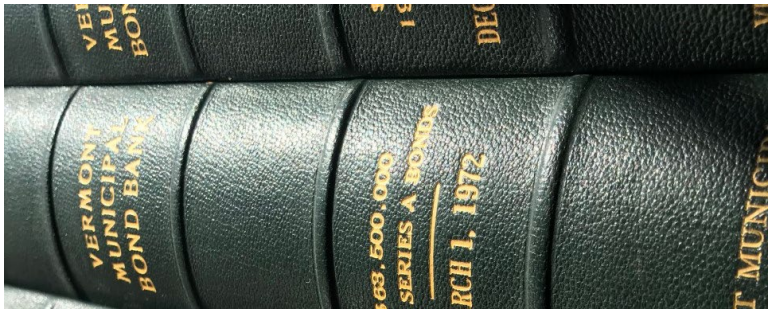
Vermont Bond Bank



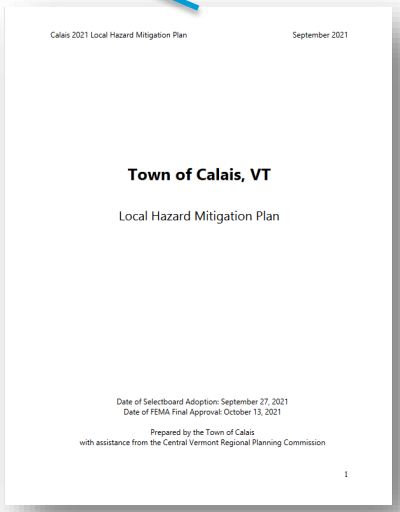
CAPITAL PLANNING 101

Vermont Capital Planning Forum

April 11, 2024

What is a Capital Plan?

- "The capital infrastructure built and maintained by local government is essential for a thriving community" – Government Finance Officers Association
- Plan for maintaining, updating, and creating new capital improvements in support of thriving community
- Document where other plans and studies become real through financial plan to accommodate the capital improvements needed
- Should cover at least five years, with best practice 10 to 25 years in length
- **It's a plan!!! "All models are wrong but some are useful"**



Why do a capital plan in Vermont?

TOWN PLAN – Title 24, Chapter 117, Subchapter 005

(4) A utility and facility plan, consisting of a map and statement of present and prospective community facilities and public utilities showing existing and proposed educational, recreational and other public sites, buildings and facilities, including hospitals, libraries, power generating plants and transmission lines, water supply, sewage disposal, refuse disposal, storm drainage, and other similar facilities and activities, and recommendations to meet future needs for community facilities and services, with indications of priority of need, costs, and method of financing.

https://www.trorc.org/wp-content/uploads/2022/12/Capital-Budgets-and-Programs-11292022-1.pdf

IMPACT FEES – Title 24, Chapter 131

§ 5203. Procedure
(a) A municipality may levy an impact fee on any new development within its borders provided that it has:
(1) been confirmed under section 4350 of this title and, after July 1, 1992, adopted a capital budget and program pursuant to chapter 117 of this title. The plan or capital budget and program may include:
(A) indication of locations proposed for development with a potential to create the need for new capital projects;
(B) standards for level of service for the capital projects to be fully or partially funded with impact fees;
(C) proposed locations and project lists, cost estimates, and funding sources;
(D) timing or sequence of development in the identified locations; and
(2) developed a reasonable formula that will be used to assess a developer's impact fee. The formula shall reflect the level of service for the capital project to be funded and a means of assessing the impact associated with the development such as square footage or number of bedrooms. The level of service shall be either:
(A) an existing level of service;
(B) a State or federal standard; or
(C) a standard adopted as part of a town plan or capital budget.

Ideal table of contents

- Narrative describing vision and tie to larger planning efforts
- Capital asset policy – describe what constitutes a capital asset and depreciation schedule
    - Example long lived assets with intimal purchase value (capitalization threshold) in excess of $10 thousand
    - See next slide on asset deprecation schedule
- *Debt management and capital reserve policy – define the amount of debt desired by alongside policy for making capital reserve contributions*
- Description of process for prioritizing projects and related scorecard
    - Typically points based system including items such:

Health and safety	Essentiality	Depreciation / desired level of service	Community demand / need	Lifecycle costs
Departmental priority	Climate resilience	Population equity	Availability of sources	

- Aggregate summary of projects by department with individual project solicitations attached as appendix to plan
- Long term financial projection in which sources equal uses

Examples: https://www.vtbondbank.org/resource/capital-planning-resource-page

Sample Asset Depreciation Schedule

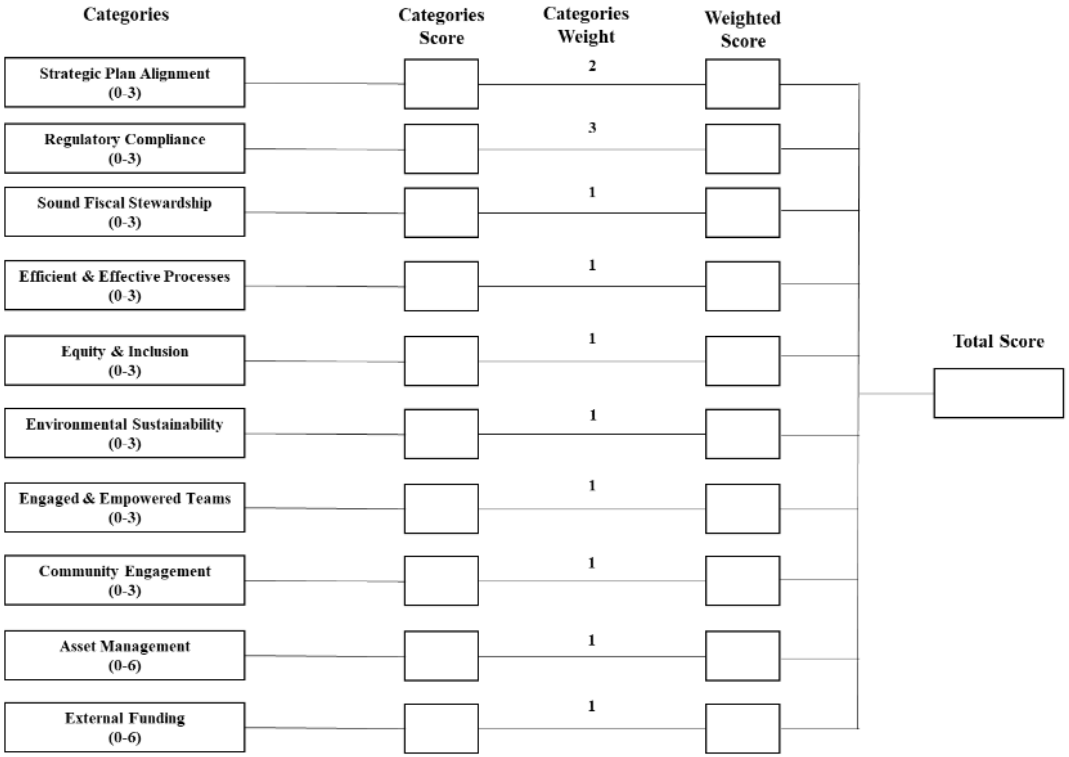
From: TN Water & Wastewater Financing Board & Utility Management Review Board

Buildings	30 to 50 years
Equipment & tools	10 to 15 years
Furniture and fixtures	5 to 10 years
Machinery, Equipment, Vehicles	5 to 15 years
Pumps and treatment equipment	15 to 20 years
Transportation Equipment	5 to 10 years
Water lines and storage	40 to 50 years

Example Prioritization

Production of CIP Plan

The final plan will be produced based on the evaluation of the CIP score, project type, funding, and schedule. The CIP will be re-evaluated on an annual basis to align growth, needs and budgeting.



https://assets.lawrenceks.org/finance/Policies/CIP_Prioritization_guidelines.pdf

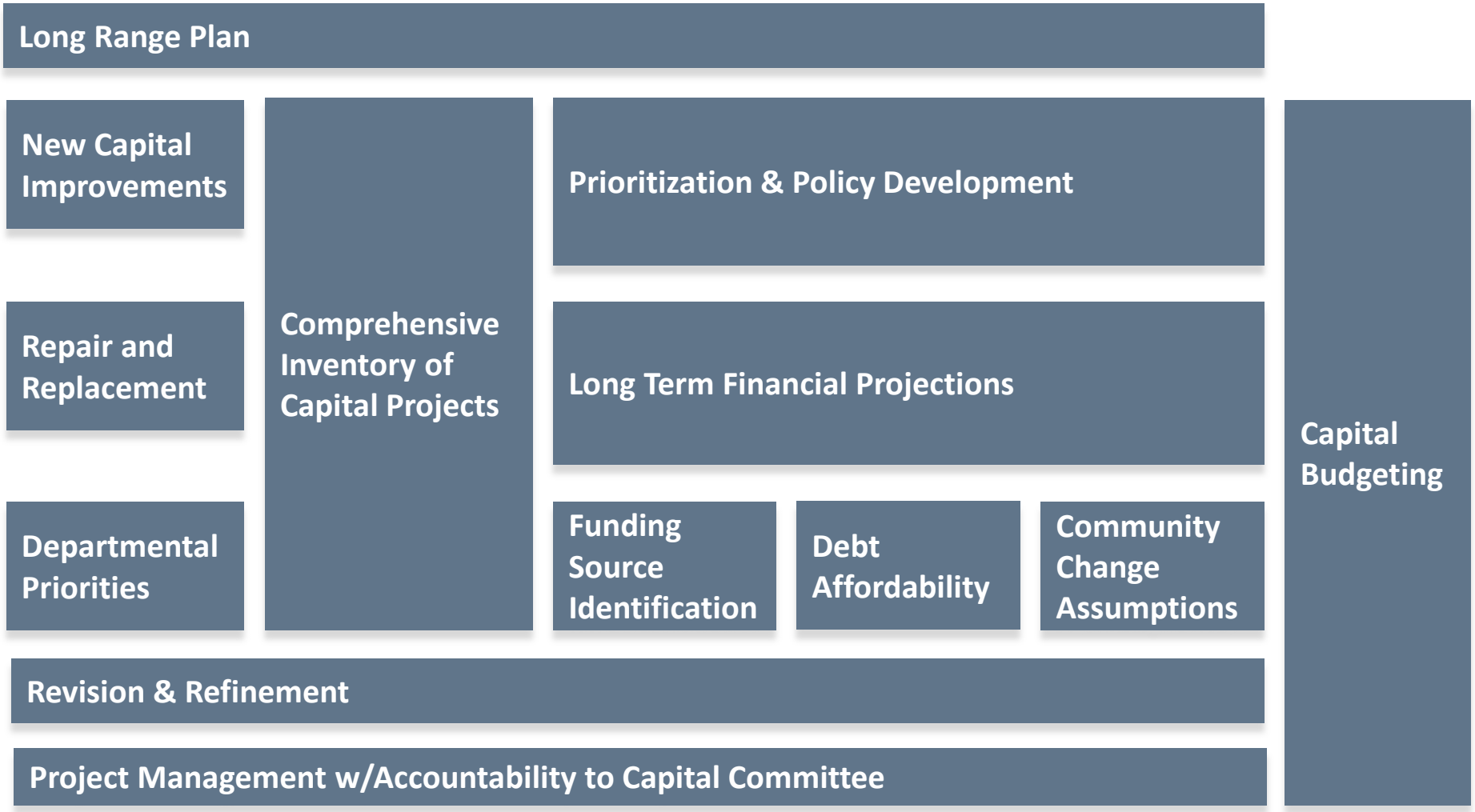
Adapting the capital plan

> The lesson from Vermont's difficult year is that environmental volatility, both acute and chronic, is now a fact of life. Governments' ability to respond to these consequences—whether successful or insufficient—will have wide-ranging impacts on civic life and fiscal sustainability.

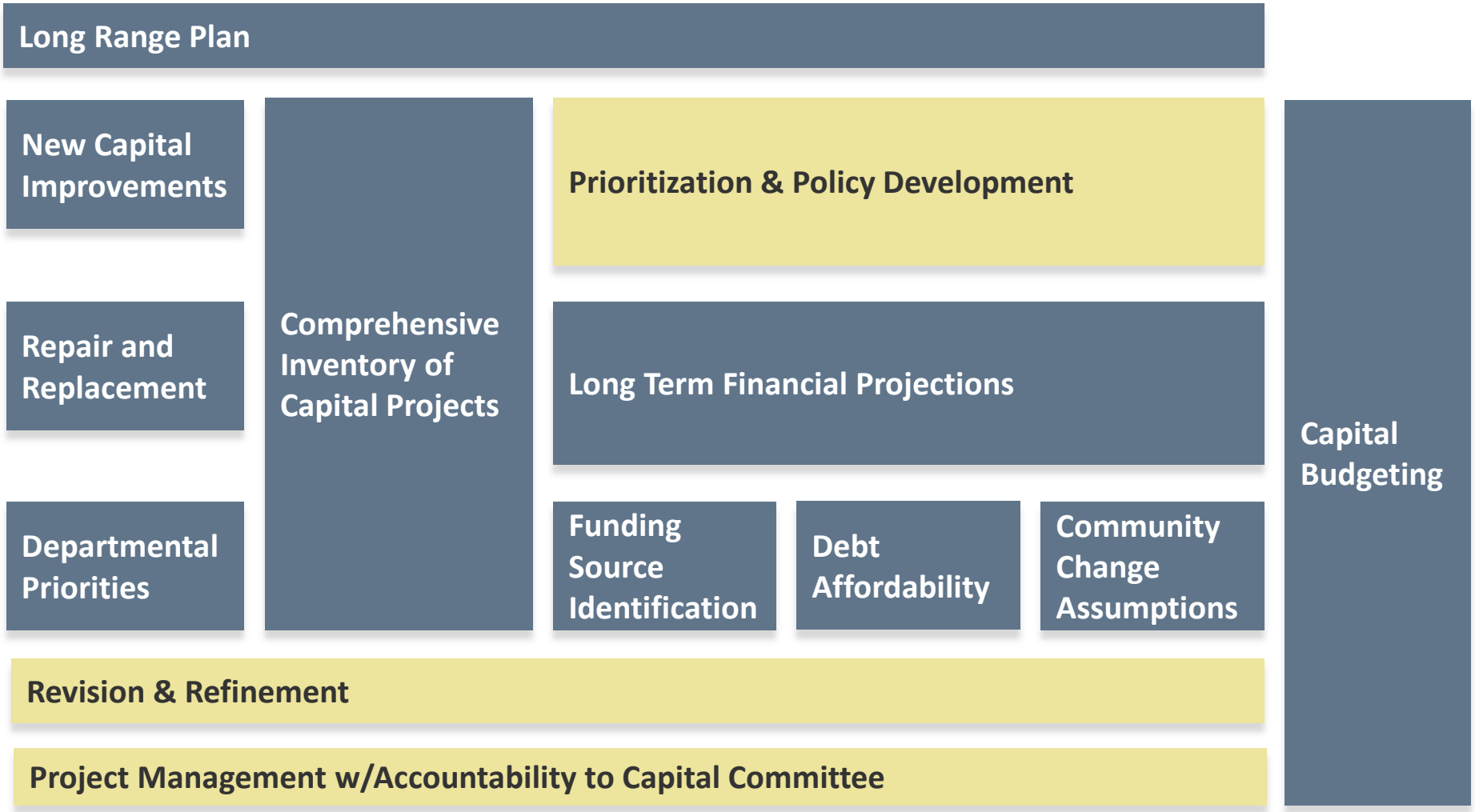
- *Identify and adopt a future looking climate model.* Acceptance of a common model will allow contributors and users of the capital plan a starting place for evaluating impact
- *Categorize equipment, facilities, and infrastructure by level of vulnerability to both acute and chronic risk. Acute risk occurs from a significant and often, isolated event.* This is typically the evaluation completed as part of local hazard mitigation plans. However, a changing environment is resulting in on-going challenges that will be faced on a shorter timeline than expected—like potholes
- *Integrate the above findings in the capital plan.* Climate and environmental risks are becoming an unavoidable component of municipal management and the mitigation strategies should similarly be integrated with existing documents
- *Move some portion of operating reserves topically used for unexpected repair and replacement to capital reserves to help anticipated the unexpected.*
- *Modify capital project scoring to also include furthering adaption in the scoring criteria.*
- *Reexamine useful life calculation of all assets.*
- *Dedicate chapter or section to social infrastructure and natural systems such as cooling centers and wetlands.*

From: https://gfoaorg.cdn.prismic.io/gfoaorg/7f01ff0e-0f74-4f47-9501-82f5ea62d429_PlanningforUncertainty_gfr0224.pdf

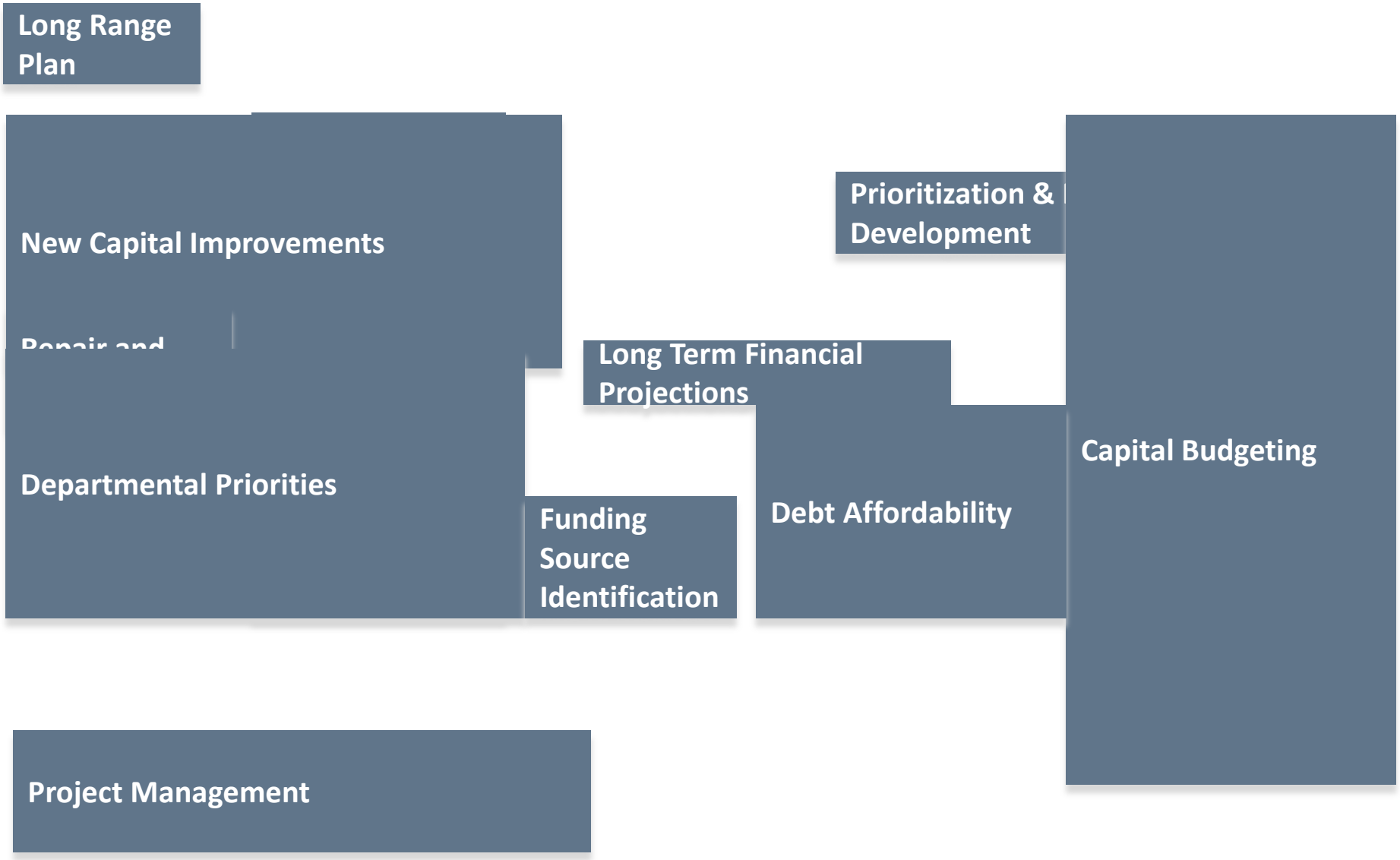
Capital Planning Process…in a Vacuum



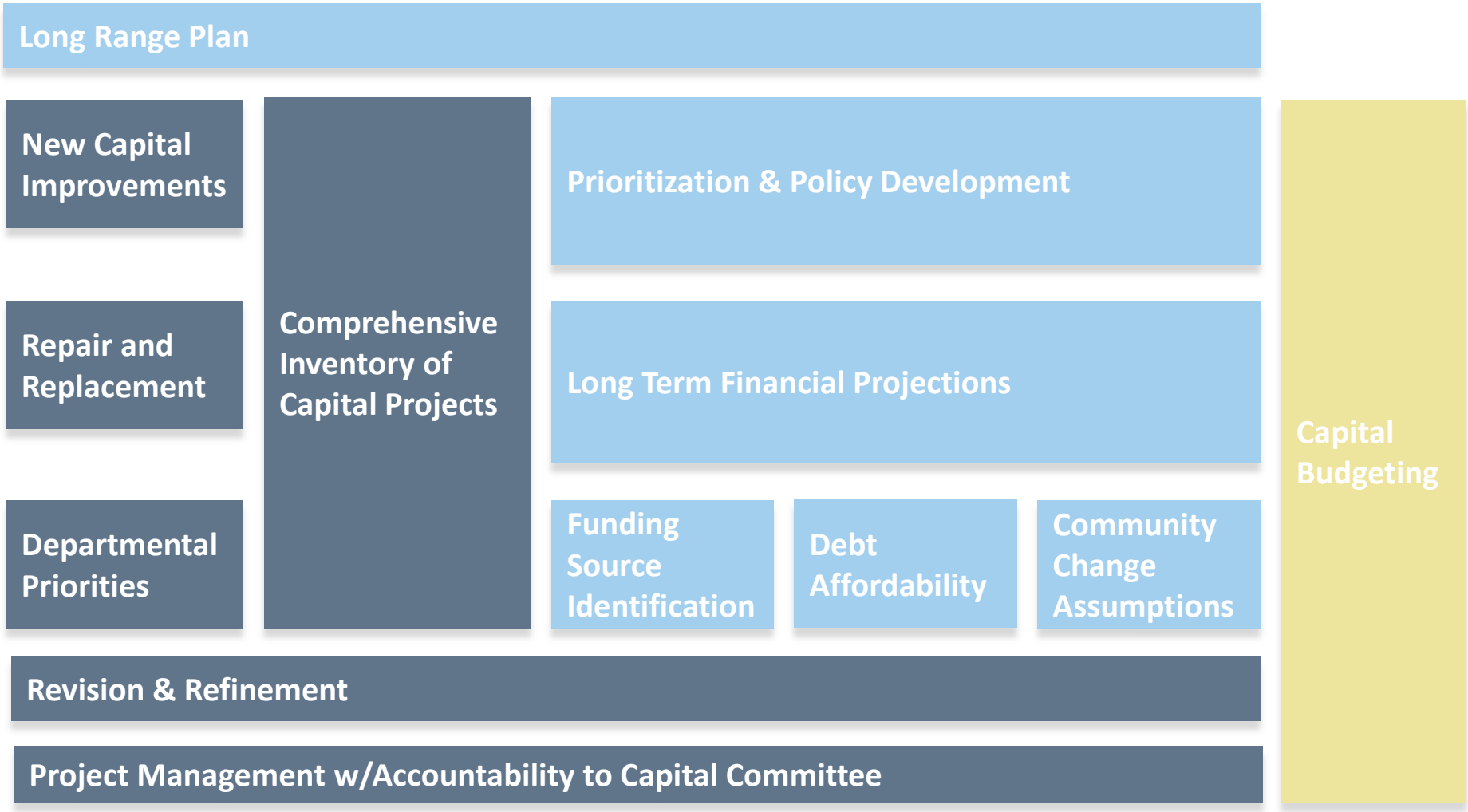
Capital Planning Process…Best Practice



Capital Planning Process…in Reality



Capital Planning Process…for Discussion



Connecting Operating Budget to Capital Budget

Contributions to Debt Service, Reserves, and PAYGO **allowing capital plan sources to equal capital plan sources**

	DEPARTMENT	FY 18--19	FY 19--20	FY 20--21	FY 21--22	FY 22--23	FY 23--24	Total	%
1	I. TOTAL PROJECT COSTS								
2	Town Offices/Buildings/Grounds	58,000	141,000	70,000	48,000	97,000	97,000	511,000	2.4%
3	Cemetery	5,000	5,000	8,000	5,000	5,000	15,000	43,000	0.2%
4	Police	243,527	179,246	125,961	99,998	74,308	149,431	872,470	4.0%
5	Rescue	252,000	411,700	30,000	104,000	88,000	275,000	1,160,700	5.3%
6	Fire	48,000	660,600	85,000	0	0	750,000	1,543,600	7.1%
7	Highway Infrastructure	105,000	90,000	90,000	95,000	895,000	95,000	1,370,000	6.3%
8	Highway Equipment & Bldgs.	172,000	560,000	562,082	271,695	229,988	129,061	1,924,826	8.9%
9	Public Works: Roads and Bike/ped Paths	34,600	120,200	4,642,100	271,100	45,900	2,170,000	7,283,900	33.6%
10	Recreation	43,000	68,000	350,000	0	39,000	0	500,000	2.3%
11	Library & Town Center	6,500,000	0	0	0	0	0	6,500,000	29.9%
12									
13	Sub-Total, Gen'l Fund	7,461,127	2,235,746	5,963,143	894,793	1,474,196	3,680,492	21,709,496	100.0%
14									
18	Stormwater	15,900	404,000	24,000	325,000	24,000	390,000	1,182,900	
19	Water Department. Projects	125,000	260,000	320,000	365,000	35,000	1,015,000	2,120,000	
20	Wastewater/Sewer Dept. Projects	2,104,153	118,000	261,000	428,000	160,000	250,000	3,321,153	
21									
22	Total, All Projects	9,706,180	3,017,746	6,568,143	2,012,793	1,693,196	5,335,492	28,333,549	
23									
24	II. FUNDING OF GENERAL FUND PROJECTS								
25		FY 18--19	FY 19--20	FY 20--21	FY 21--22	FY 22--23	FY 23--24	Total	%
26									
27	Total Costs: Gen'l Fund Projects	7,461,127	2,235,746	5,963,143	894,793	1,474,196	3,680,492	21,709,496	
28									
29	Funding Sources:								
30	Grants/Donation/Other	349,127	990,556	3,854,876	371,076	184,196	454,196	6,204,027	29%
31	Bond Issue/Loan	6,600,000	320,000	1,315,420	0	800,000	4,033,000	13,068,420	60%
32	Police Cruiser Fund	35,400	34,650	95,765	38,202	44,112	84,235	332,363	2%
33	Hwy. Equip. Repl. Fund Loans	145,000	460,000	246,488	181,695	204,988	27,741	1,265,912	6%
34	General Fund, non-debt	331,600	430,540	450,594	303,820	240,900	(918,680)	838,774	4%
35	Total Source of Funds	7,461,127	2,235,746	5,963,143	894,793	1,474,196	3,680,492	21,709,496	100%

Connecting Operating Budget to Capital Budget

	Final Budget	Actual	Variance Positive (Negative)
EMPLOYEE BENEFITS	85,730	80,095	5,635
OTHER			
Selectboard discretionary	3,000	1,154	1,846
Community events	1,500	1,090	410
Tree conservation	9,000	3,758	5,242
Committee support	1,500	50	1,450
Miscellaneous expense	-	25,294	(25,294)
	15,000	31,346	(16,346)
DEBT SERVICE			
Principal	715,628	653,500	62,128
Interest	158,144	158,144	-
	873,772	811,644	62,128
TRANSFERS TO OTHER FUNDS			
Special revenue funds	23,071	29,833	(6,762)
Capital projects funds	193,944	254,377	(60,433)
Enterprise funds	36,289	36,289	-
	253,304	320,499	(67,195)

Contributions to Debt Service, Reserves, and PAYGO **allowing capital plan sources to equal capital plan sources**

			FY 19--20	FY 20--21	FY 21--22	FY 22--23	FY 23--24	Total	%
			141,000	70,000	48,000	97,000	97,000	511,000	2.4%
			5,000	8,000	5,000	5,000	15,000	43,000	0.2%
			179,246	125,961	99,998	74,308	149,431	872,470	4.0%
			411,700	30,000	104,000	88,000	275,000	1,160,700	5.3%
			660,600	85,000	0	0	750,000	1,543,600	7.1%
			90,000	90,000	95,000	895,000	95,000	1,370,000	6.3%
			560,000	562,082	271,695	229,988	129,061	1,924,826	8.9%
			120,200	4,642,100	271,100	45,900	2,170,000	7,283,900	33.6%
			68,000	350,000	0	39,000	0	500,000	2.3%
			0	0	0	0	0	6,500,000	29.9%
			2,235,746	5,963,143	894,793	1,474,196	3,680,492	21,709,496	100.0%
			404,000	24,000	325,000	24,000	390,000	1,182,900	
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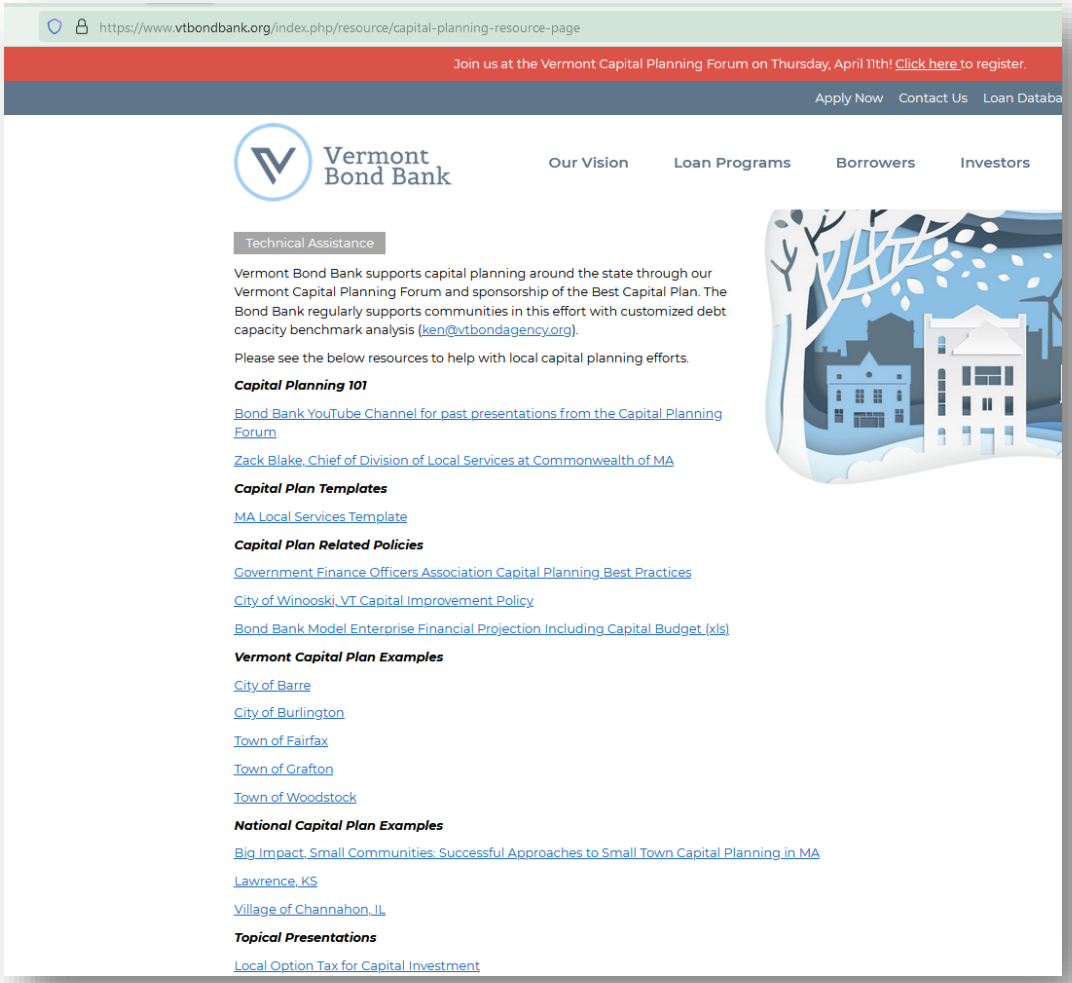
What Mix Assuming Level Fund Capital?

	Debt	PAYGO	Reserves	Grants / Outside Funding
Debt	+	-	-	+ / =
PAYGO	-	+	=	+
Reserves	=	-	+	+
Grants / Outside Funding	+ / =	=	+ / =	+
Spending Capacity	High	Low	Medium	Low to High
Risk	High	Low	Low	Low to High

Resources



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https://www.vtbondbank.org/index.php/resource/capital-planning-resource-page

Vermont Bond Bank

Capital Planning 101

Sarah Macy

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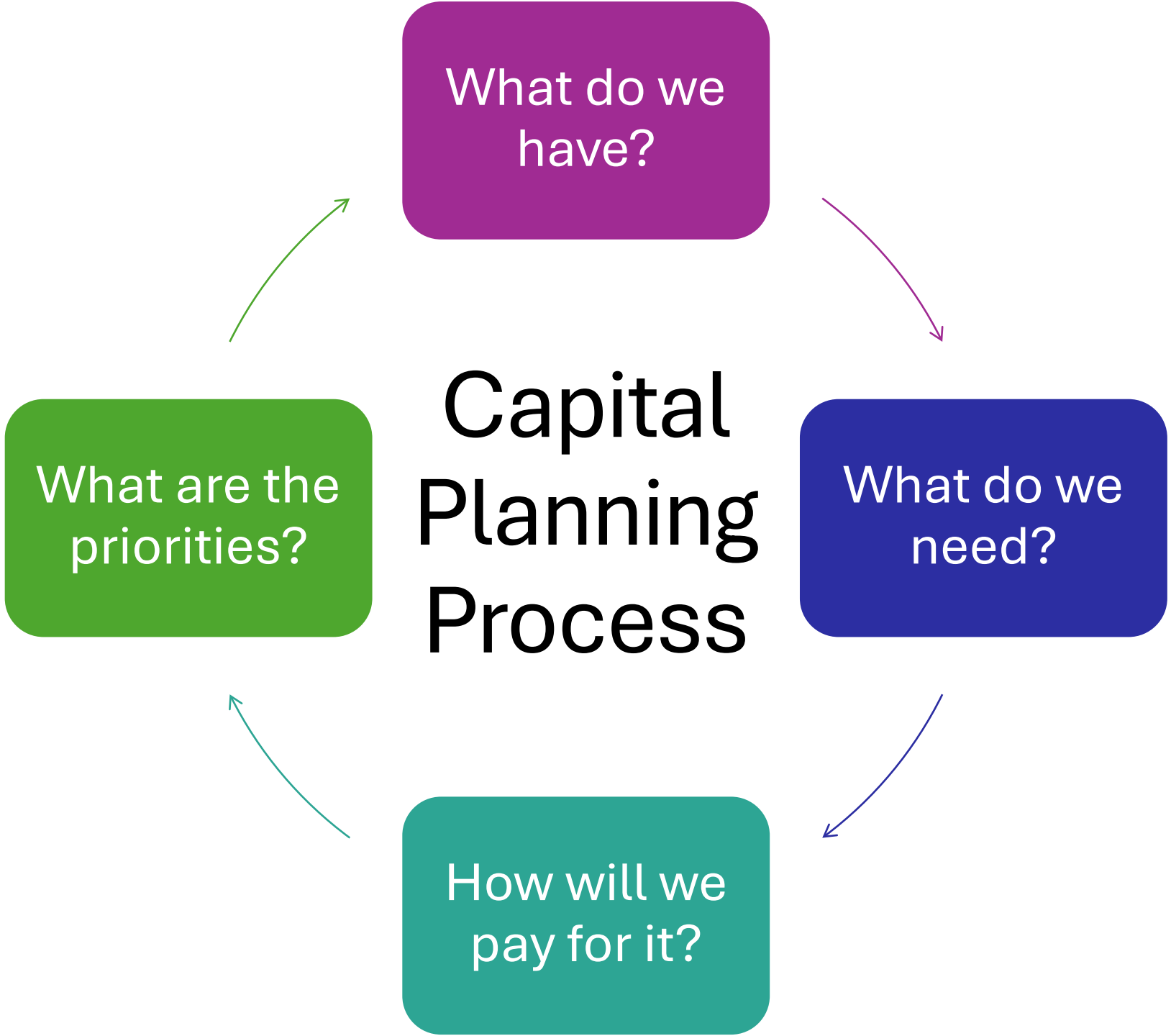

What do we have?
What do we need?
How will we pay for it?
What are the priorities?
Capital Planning Process

Capital Planning Process

Determine Need and Establish Buy In

Selectboard Approval

- Budgets as policy
- Required policy work
- Documented priority status
- Keeps process visible

Internal Support

- Communicate benefits
- Set clear and manageable expectations
- Iterative process

Set Parameters

<u>Capital Planning Policy</u>

- Define scope
  - Timeframe of the Plan
  - Definition of Capital Project
- Identify participants and responsibilities
- Requirement for ranking criteria
- Funding strategies

Set Parameters

<u>Beyond the Capital Planning Policy</u>

- Determine which data characteristics will be captured in the process
- Project ranking and prioritization criteria
- Process to submit projects
- Other related policies
- Annual timeline

Gather, Organize, and Summarize Data

<u>Gather Data</u>

1. Existing assets and projects
   - Audit data; insurance data
   - Input from department heads
   - Physical inventory
2. New projects
   - Input from department heads
   - Input from elected officials
   - Town plan documents
3. Third party data
   - Existing engineering studies
   - Road and Sidewalk condition reports

Gather, Organize, and Summarize Data

<u>Organize Data</u>

- Use excel or a database to enter the data

<u>Summarize Data</u>

- Create project sheets
- Group like items to create projects
- Basis for the CIP document
- Project sheets become implementation guides and the starting point for next year

Identify and Assign Funding Sources

Allocation of Current Resources

- Capital reserves
- One-time resources
- Establishing dedicated revenue streams

State, Federal, Local Grants

Impact Fees

Debt Financing

- Leases
- Short term debt
- Long term debt

Donations

Others?

Rank and Prioritize Projects

Create a predetermined clear, objective set of criteria to evaluate all projects

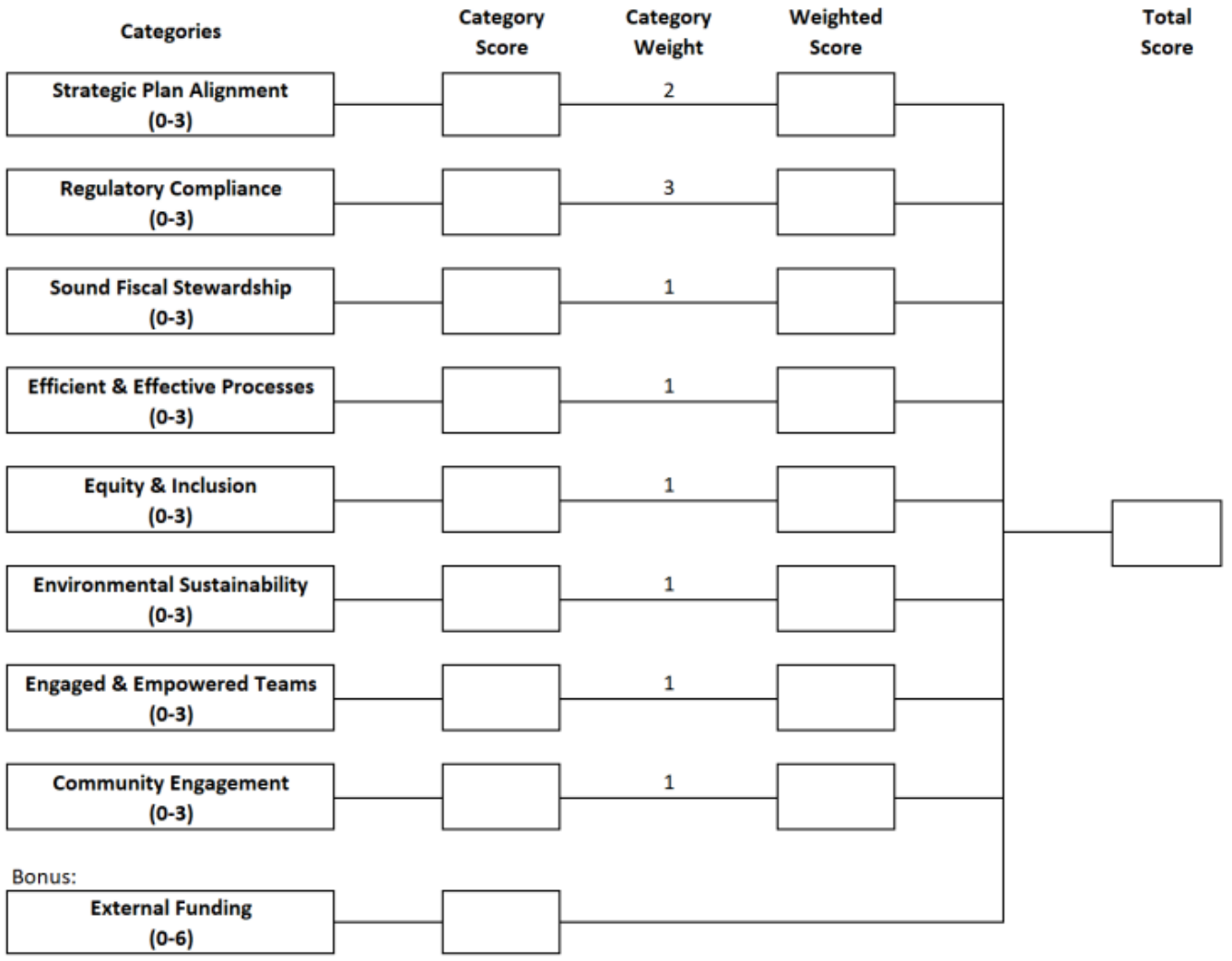
Promote procedural justice in the allocation of limited resources

Ensure existing assets are maintained before embarking on new initiatives

Rank and Prioritize Projects

~

Example Rubric



Source: City of Lawrence, Kansas – CIP Prioritization Summary

Rank and Prioritize Projects

~

Example Rubric

Categories	Category Score	Category Weight	Weighted Score	Total Score
Strategic Plan Alignment (0-3)		2		
Regulatory Compliance (0-3)		3		
(0-6)				

CIP Ranking Criteria

1. **Strategic Plan Outcome Alignment** – The strategic plan and other plans such as Plan 2040, various master plans, departmental strategic plans, and asset management plans are prepared to provide the City of Lawrence with a valuable aid for continuing efforts to meet and exceed goals set forth by City departments, advisory boards and commissions, and the community at-large. Plans include those documents that have been prepared internally to assure consistent adherence to industry best practices, as well as those documents that have been created with the assistance of outside consultants. The score will be based on answers to the following question:
    a. How many progress indicator(s)/strategy(ies) outlined in the strategic plan does this project align with?

Scoring Scale

0	1	2	3
The project does not align with any progress indicators or strategies outlined in the strategic plan	The project aligns with one (1) progress indicator or strategy outlined in the strategic plan	The project aligns with two (2) progress indicators or strategies outlined in the strategic plan	The project aligns with three (3) progress indicators or strategies outlined in the strategic plan

Source: City of Lawrence, Kansas – CIP Prioritization Summary

Rank and Prioritize Projects

~

Example Rubric

Categories	Category Score	Category Weight	Weighted Score	Total Score

2. **Regulatory Compliance** – This includes compliance with regulatory mandates such as Environmental Protection Agency (EPA) directives, the Americans with Disabilities Act, the Manual on Uniform Traffic Control Devices and other County, State and Federal laws. This also includes compliance with self-imposed City ordinances, such as achieving 100% renewable energy within municipal operations. The score will be based on answers to the following questions:
    a. Does the proposed project address a current regulatory mandate? If yes, which one(s)?
        i. If the project addresses Americans with Disabilities Act compliance, does it implement the 2010 ADA Standards for Accessible Design for newly constructed or altered State and Local Government facilities?
    b. Will the proposed project proactively address a foreseeable (within the next 5 years) regulatory mandate? If yes, which one(s)?
    c. Does the proposed project have a lasting impact on promoting regulatory compliance over the long term (more than 10 years)?

Scoring Scale

0	1	2	3
The project does not address a regulatory compliance issue	The project provides a short-term fix for an existing regulatory compliance issue or for one anticipated in the near future	The project provides a moderate-term fix for an existing regulatory compliance issue (maximum score for self-mandated projects)	The project resolves a pressing or long-term regulatory compliance issue and at least half of the project budget is tied to meeting a regulatory compliance standard

External Funding (0-6)	

Source: City of Lawrence, Kansas – [CIP Prioritization Summary]

Rank and Prioritize Projects

~

Example Rubric

Categories	Category Score	Category Weight	Weighted Score	Total Score
Strategic Plan Alignment (0-3)		2		
Regulatory Compliance (0-3)		3		
Community Engagement (0-3)		1		
Bonus: External Funding (0-6)				

Bonus Section

1. **External Funding** – Capital improvement projects may be funded through sources other than City funds. Grants through various agencies, public private partnerships, and donations can all be sources of external funding for a project. The percentage of total cost funded by an outside source will determine the score in this category.

Scoring Scale

0	1	2	3	4	5	6
0% to 14% External Funding	15% to 28% External Funding	29% to 43% External Funding	44% to 57% External Funding	58% to 71% External Funding	72% to 85% External Funding	86% to 100% External Funding

Source: City of Lawrence, Kansas – CIP Prioritization Summary

Present and Adopt Plan

Create a final CIP document incorporating:

- Narrative
- Summary data
- Project sheets

Final step in the process is adoption:

- Present to Selectboard
- Incorporate feedback as needed
- Hold public hearing
- Selectboard to adopt the CIP

Review, Revise, Repeat

Budgeting is a living process that requires ongoing evaluation and improvement

While the experience is still fresh, consider:

- Was the process timely?
- Did stakeholders have adequate time to participate?
- Was there data missing?
- Are there policy points that need clarification?

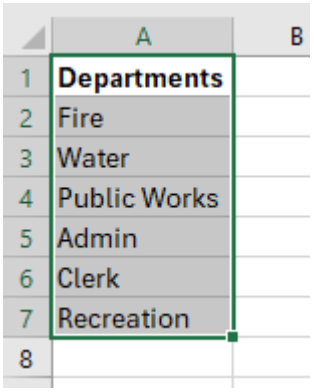
Combining Tables and Named Ranges in create Data Validation Lists

Step 1: Create your list.

	A	B
1	**Departments**	
2	Fire	
3	Water	
4	Public Works	
5	Admin	
6	Clerk	
7	Recreation	
8		
9		

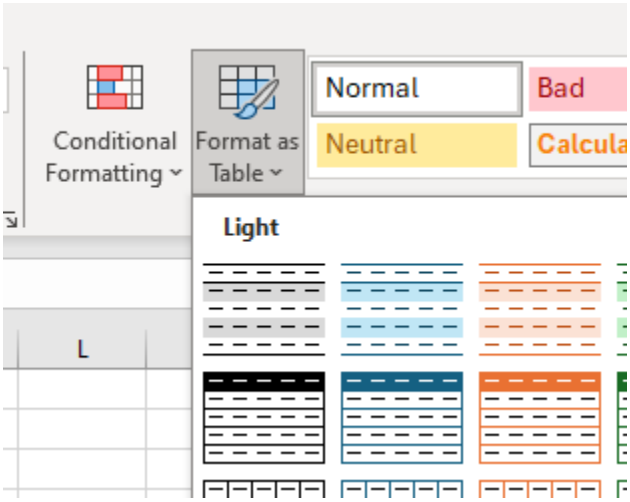
Step 2: Turn it into a table.

Highlight the list:

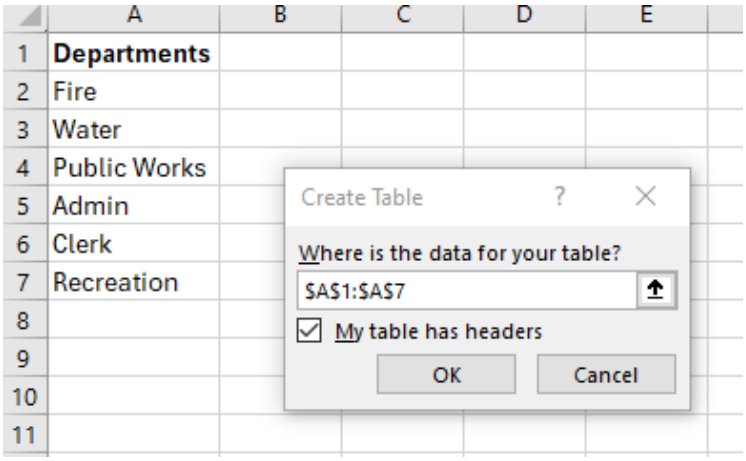


	A	B
1	**Departments**	
2	Fire	
3	Water	
4	Public Works	
5	Admin	
6	Clerk	
7	Recreation	
8		

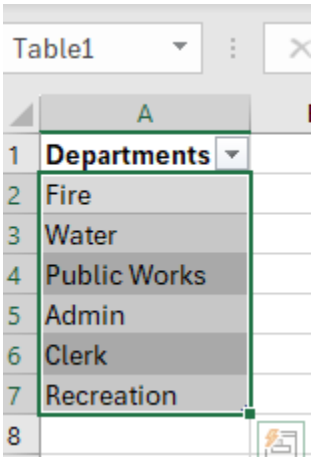
Select Format as Table from the middle of the Home ribbon:



Check the box for “My table has headers:

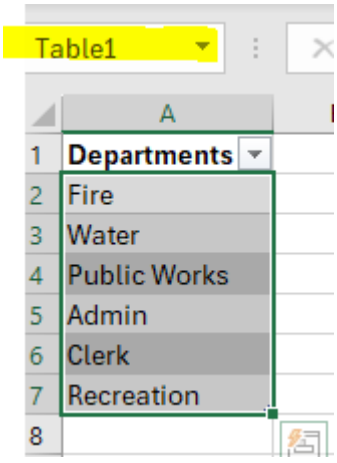


Voila! A Table:

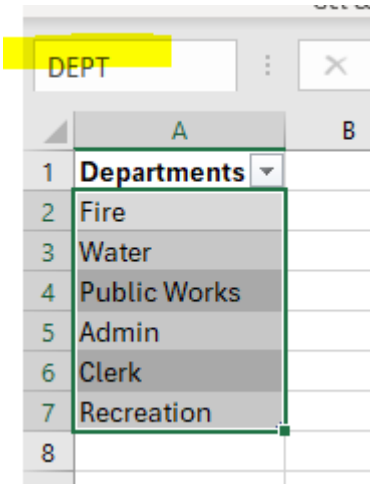


Step 3: Turn the table into a Named Range

When the table is selected the Name Box will tell you the name of the table:

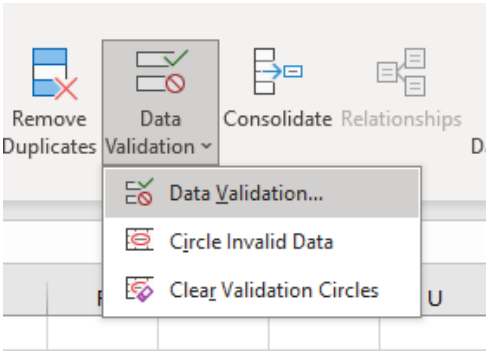


Click into the Name Box and rename the table and hit enter (you must hit enter to save the name change):

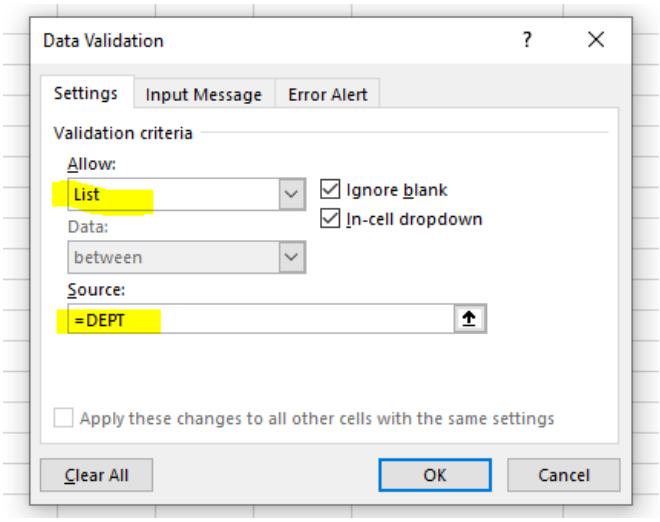


Step 4: Used the Named Range as the Source of a List in Data Validation

Select Data Validation from the Data Validation drop down menu on the Data tab



Allow for a List and enter an equals sign followed by the name of your range as the source:



April 11, 2024

Efficiency Vermont Overview

Vermont Bond Bank
Capital Planning Forum

Mike Crowley
Commercial & Industrial Portfolio Manager, Efficiency Vermont

Efficiency Vermont

Who we are

- Statewide energy efficiency utility
- Reduce the cost of energy for all Vermonters
- Help families, businesses, and institutions understand and make better use of energy and reduce greenhouse gases

Efficiency Vermont

What we do

- Direct support through incentives, training, and technical advice
- Market transformation through supply chain engagement
- Partnership with energy service providers

Efficiency Vermont

The impacts of efficiency

Over $3 billion

Lifetime savings from 2000-2021

Over 13 million metric tons of CO_2e

Lifetime avoided from 2000-2021

2.8 million cars

Equivalent impact of GHG emissions avoided

38% lower

Vermont's average energy bills, below the national average

9,832 jobs

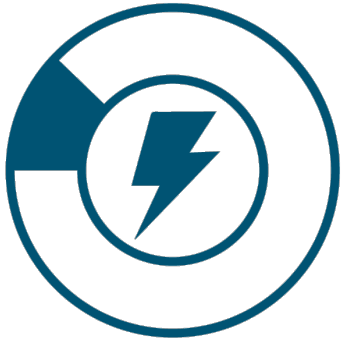
Vermont's energy efficiency jobs – 58% of the clean energy workforce

482 businesses

Efficiency Excellence Network members

The economic value of efficiency

Efficiency comprises over 15% of VT's electric portfolio, delivered at 75% of the cost of purchasing new power.



15.1%

Percentage of Vermont's 2021 electric needs met by efficiency

5.32¢/kWh

Cost of saving electricity with efficiency

vs

7.4¢/kWh

Cost of supplying electricity

$13.00/MMBtu

Cost of saving fossil fuel with efficiency

vs

$23.55/MMBtu

Cost of supplying fossil fuel

Commercial Prescriptive Offers

- ✓ Point of Sale rebates with participating distributors
- ✓ Online or mail-in after purchase rebate forms

Supported Projects and Technologies:

- Building Envelope
- HVAC (e.g.,. Heat pumps, wood boilers & furnaces)
- Commercial Refrigeration Equipment
- Agricultural Equipment
- Commercial Kitchen Equipment

Commercial Custom Program

- ✓ Team of Account Managers and Energy Consultants
- ✓ Incentives determined on a project-by-project basis
- ✓ “Structured Custom” offers guarantee incentive amounts

Services include:

- Commercial New Construction Technical Assistance
- Design Assistance (e.g., audits and energy modeling)
- Energy Treasure Hunts
- Strategic Energy Management
- Retrofit Lighting
- Flexible Load Management

What is “Strategic Energy Management” (SEM)?

Commit

1. Organizational Commitment

a) Policy & Goals
b) Resources

2. Planning & Implementation

Plan

a) Energy Management Assessment
b) Energy Map
c) Metrics & Goals
d) Project Register

Do

e) Employee Engagement
f) Implementation

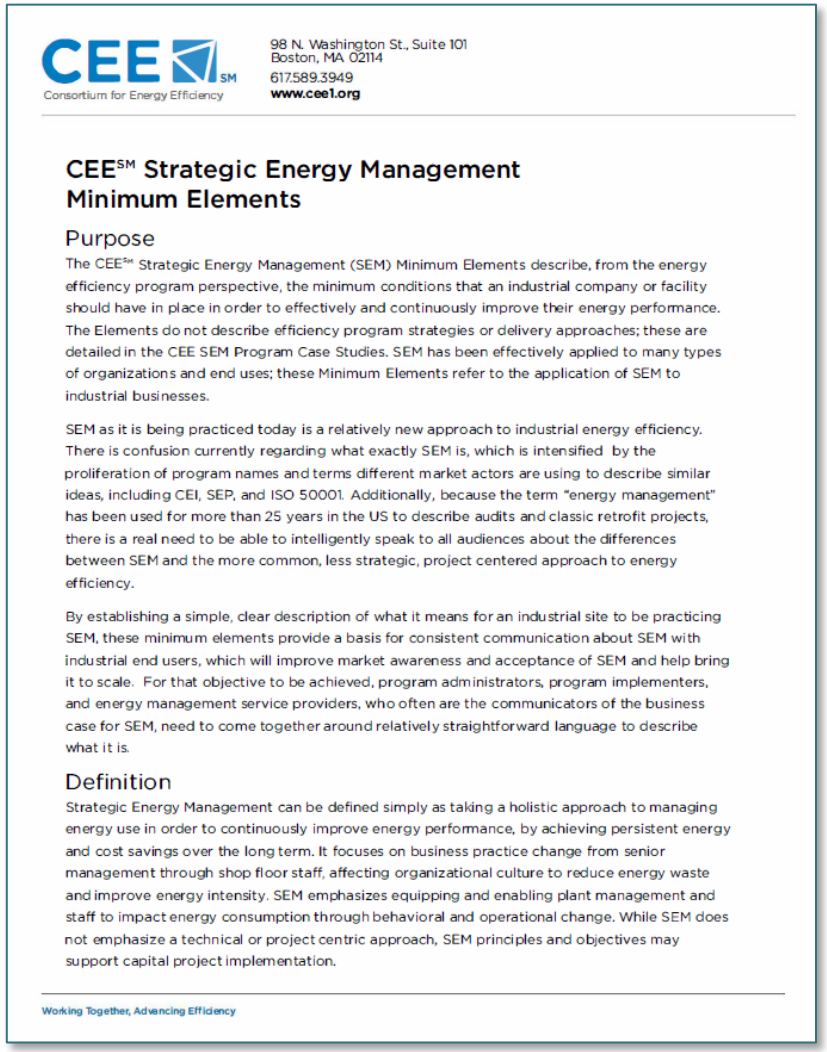
Act

g) Reassessment

3. System for Measuring & Reporting Energy Performance

Check

a) Measurement
b) Data Collection & Availability
c) Analysis
d) Reporting



CEE SM
Consortium for Energy Efficiency

98 N. Washington St., Suite 101
Boston, MA 02114
617.589.3949
www.cee1.org

CEE℠ Strategic Energy Management Minimum Elements

Purpose

The CEE℠ Strategic Energy Management (SEM) Minimum Elements describe, from the energy efficiency program perspective, the minimum conditions that an industrial company or facility should have in place in order to effectively and continuously improve their energy performance. The Elements do not describe efficiency program strategies or delivery approaches; these are detailed in the CEE SEM Program Case Studies. SEM has been effectively applied to many types of organizations and end uses; these Minimum Elements refer to the application of SEM to industrial businesses.

SEM as it is being practiced today is a relatively new approach to industrial energy efficiency. There is confusion currently regarding what exactly SEM is, which is intensified by the proliferation of program names and terms different market actors are using to describe similar ideas, including CEI, SEP, and ISO 50001. Additionally, because the term “energy management” has been used for more than 25 years in the US to describe audits and classic retrofit projects, there is a real need to be able to intelligently speak to all audiences about the differences between SEM and the more common, less strategic, project centered approach to energy efficiency.

By establishing a simple, clear description of what it means for an industrial site to be practicing SEM, these minimum elements provide a basis for consistent communication about SEM with industrial end users, which will improve market awareness and acceptance of SEM and help bring it to scale. For that objective to be achieved, program administrators, program implementers, and energy management service providers, who often are the communicators of the business case for SEM, need to come together around relatively straightforward language to describe what it is.

Definition

Strategic Energy Management can be defined simply as taking a holistic approach to managing energy use in order to continuously improve energy performance, by achieving persistent energy and cost savings over the long term. It focuses on business practice change from senior management through shop floor staff, affecting organizational culture to reduce energy waste and improve energy intensity. SEM emphasizes equipping and enabling plant management and staff to impact energy consumption through behavioral and operational change. While SEM does not emphasize a technical or project centric approach, SEM principles and objectives may support capital project implementation.

Source: https://library.cee1.org/system/files/library/11283/SEM_Minimum_Elements.pdf

Make a Commitment

Efficiency Vermont

Adopt a formal Energy Policy and share the message with all staff

Include a commitment to setting and meeting goals

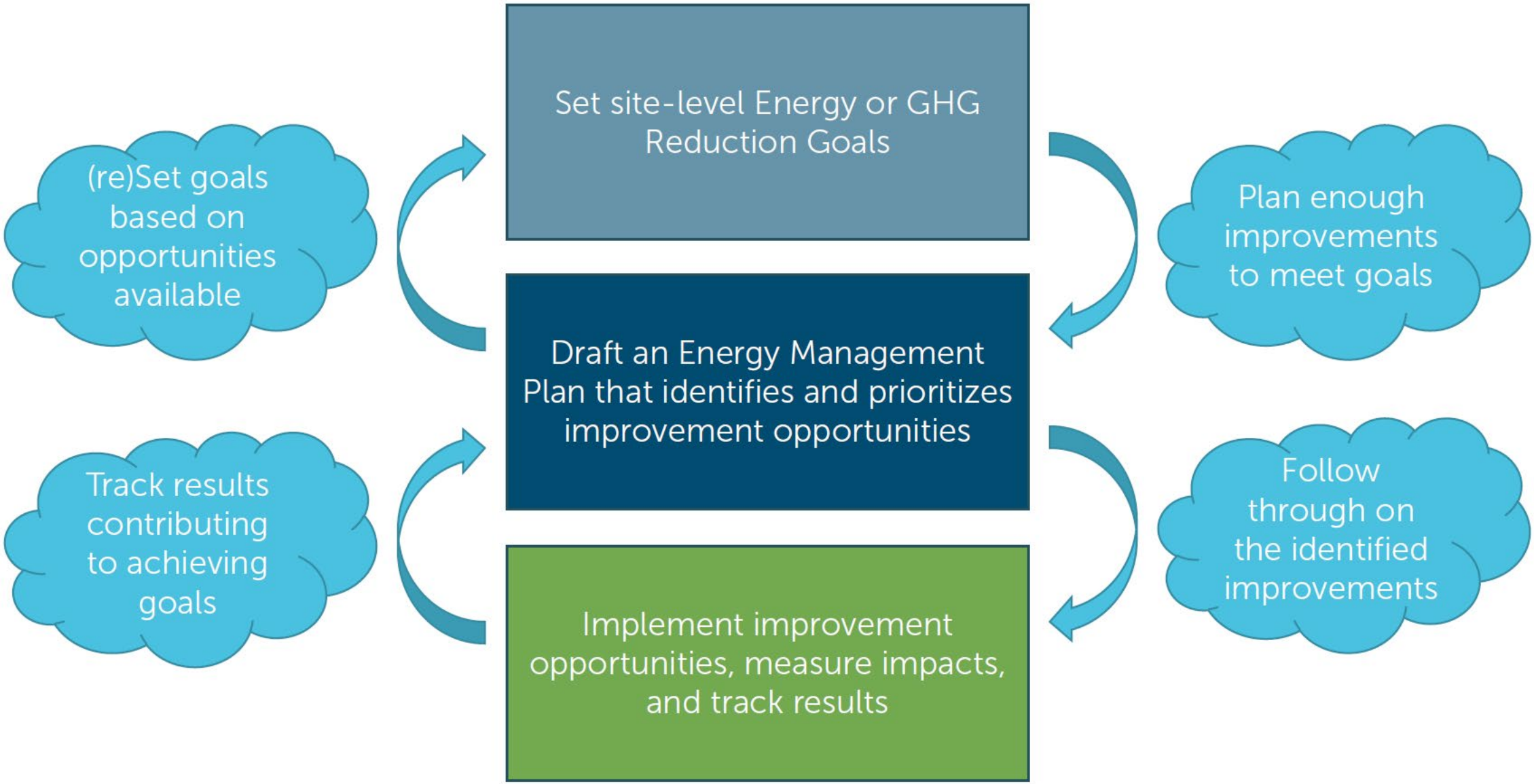
Form a cross-functional Energy Team, empowered by site leadership, that meets regularly and leads the effort

Provide the team with sufficient resources (people, time, $) to meet goals

Raise energy awareness, provide training, and gain staff and stakeholder support

Enlist everyone's support to meet goals

Plan & Implement Improvements



What is an Energy Treasure Hunt?

A facilitated site walkthrough focused on:

- Identifying low- and no-cost energy savings, carbon reduction or demand reduction opportunities that can be implemented quickly;
- Identifying cost-effective capital projects to reduce energy cost and or consumption and other resource savings ideas;
- Engaging staff in energy and emission reduction efforts.

Energy Treasure Hunt outcomes:

- A prioritized portfolio of actions resulting in improved energy efficiency and reduced energy costs spanning immediate low and no cost measures up to long term capital projects requiring planning and budgeting;
- A formal effort to keep staff engaged in implementing the identified actions to establish or reinforce a persistent strategic energy management culture.

EXPLORE

What are we looking for? **Ask 4 Quick Questions to assess opportunities:**

EXPLORE

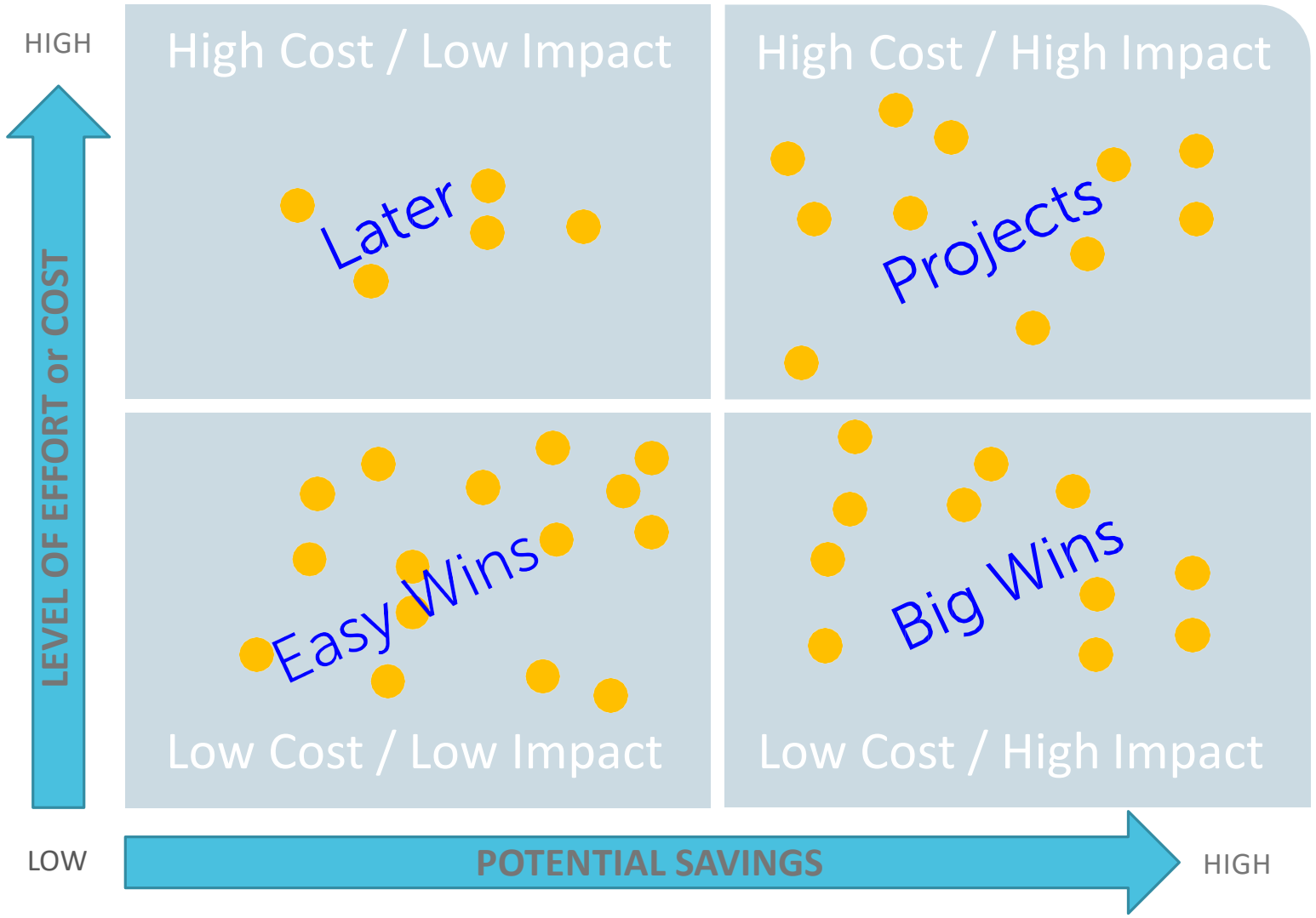
Source: Better Buildings, US DOE. https://betterbuildingssolutioncenter.energy.gov/better-plants/energy-treasure-hunts

PRIORITIZE

With all participants, *briefly* present your ideas

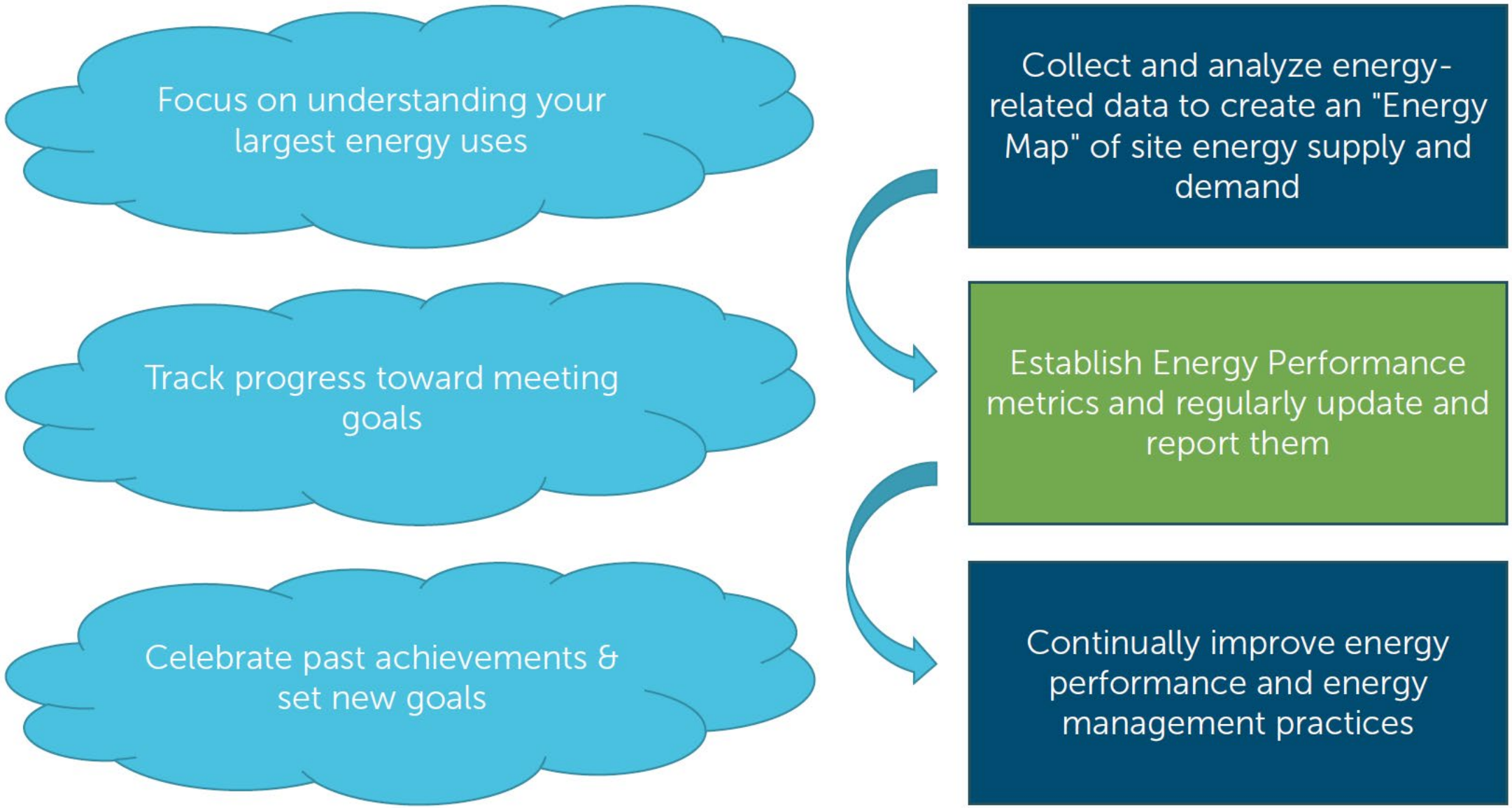
Rank the ideas based on *Level of Effort* and *Potential Savings*

Classify each idea as "Big Win", "Easy Win", "Project", or "Later"



Measure & Report Results

Efficiency Vermont



REPORT FINDINGS

Provide a briefing on the Energy Treasure Hunt to site management

Include the following:

- ✓ Summary of the event
- ✓ Overview of Top 10 opportunities
- ✓ Other findings or observations
- ✓ Next steps

Ask for management approval to proceed to implementation as needed

Measure Category	Measure Description	Savings (kWh/yr)	Savings (therms/yr)	Estimated Simple Payback	Savings ($/yr)
Big Wins	Repack valve on Boiler 3 to repair steam leak		2,080	1 month	$800
	Boiler staging optimization		22,908	< 6 months	$9,200
	Apply an unoccupied schedule to the kitchen exhaust and make up air unit	45,290	4,420	< 1 week	$4,900
	Employ the OR ACH set back during unoccupied periods	31,600	3,940	< 1 week	$3,800
Easy Wins	Audit and repair/replace failed steam traps		27,050	~6 months	$10,800
	Repair condensate leaks at the header and collection tank		6,250	< 2 months	$2,500
	Apply occupancy schedule to AHU 13	20,000	1,500	< 6 months	$2,000
	Optimize schedule for AHU 18	8,000	500	< 2 months	$800
	Apply occupancy schedule to AHU 37 zones: 41,43,44 surgical registration, PPT work room, B1 area (6 VAV boxes)	4,090	440	~1 year	$500
Projects	Replace existing burners with AutoFlame fully modulating		27,630	10 - 11 years	$11,100
	Increase steam pipe insulation in D Wing		215	5 - 6 years	$100
	Insulate bare valves and fittings in the boiler room		8,850	9 - 10 years	$3,500
	Insulate steam valves		500	3 years	$200
Total		**108,980**	**106,283**	**<3.5 years**	**$50,200**

Efficiency Vermont SEM Support

1. Help you define and measure progress toward Energy Performance goals

2. Create an Energy Management Plan including a prioritized portfolio of measures, projects, and activities that will help your meet your goals

3. Introduce globally recognized Energy Management best practices

Thank you

Mike Crowley
Portfolio Manager
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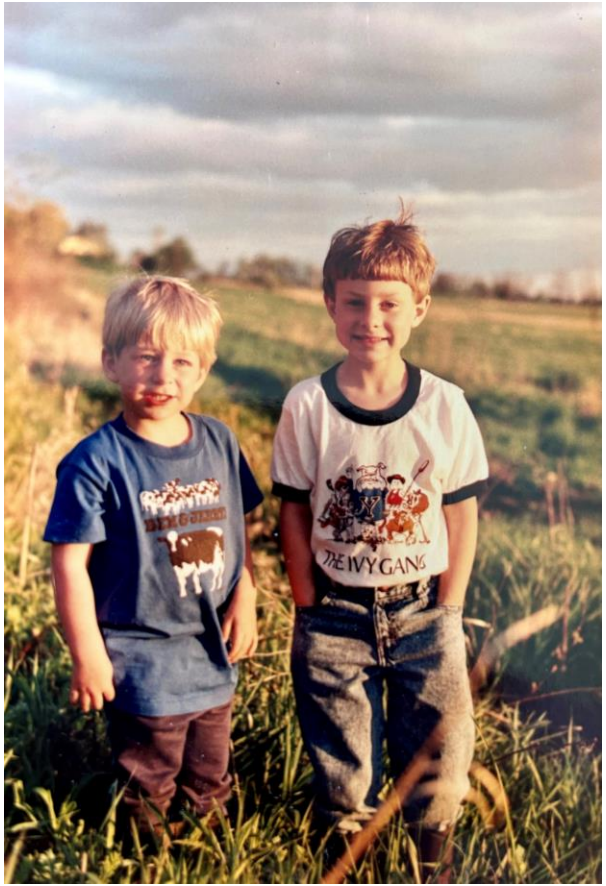
Winooski, VT 05404

efficiencyvermont.com

Vermont Capital Planning Forum| 4.11.24



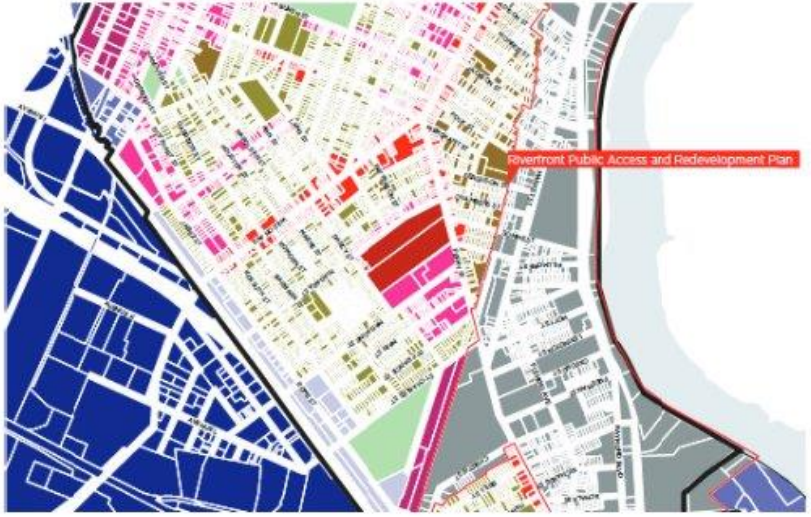
Micah 3, Caleb 5
Mt. Philo, VT photo credit: Jane Stratton (Mom)

Caleb 38, Childhood home
North Ferrisburg, VT photo: Jen Stratton (wife)

Newark's Master Plan

Our City Our Future

Volume 1



Tropical Storm Irene 2011: 6” Rainfall

2011

Superstorm Sandy 2012: 12’ Surge


GLOBAL WARMING IS REAL
HOBOKEN


NEWARK ST
ONE WAY
STOP


SHIP 39
HOBOKEN

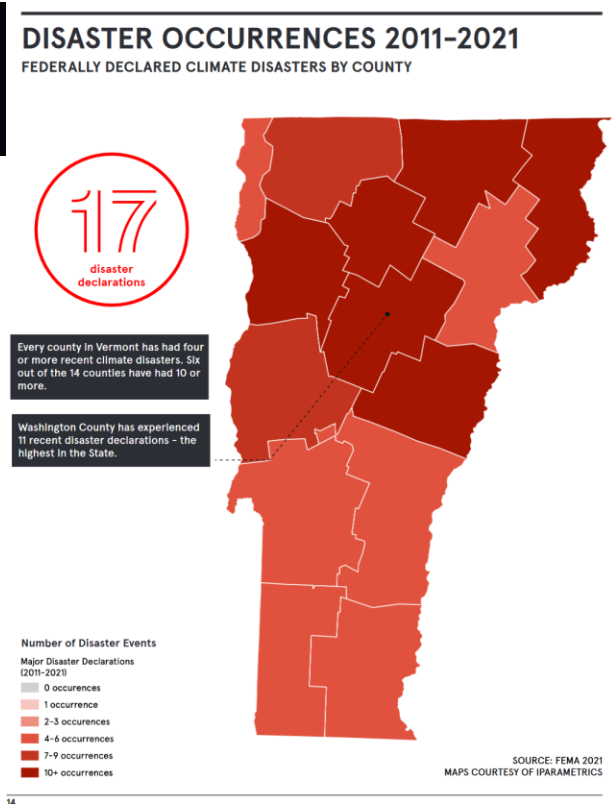

HOBOKEN CARWASH

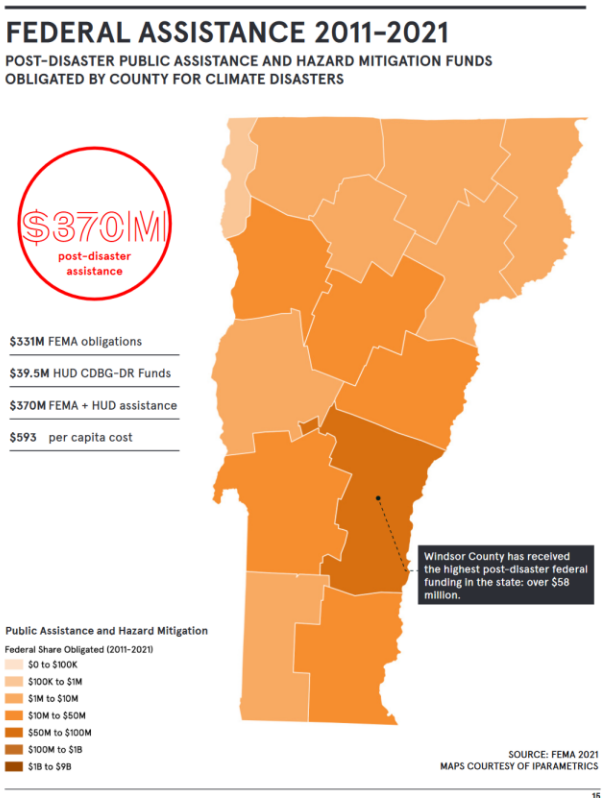
Hurricane Henri: 2021

Hurricane Ophelia: 2023

VERMONT
ATLAS OF DISASTER

REBUILD BY DESIGN





Is the risk real?

WINDHAM COUNTY

IN 2011, SEVERE FLOODING FROM TROPICAL STORM IRENE SWEPT A BRIDGE DOWNSTREAM, POSING THREATS TO DAM SITES INCLUDING BALL MOUNTAIN LAKE DAM IN JAMAICA, VERMONT.[7]

SEPTEMBER 2011

IMAGE SOURCE: FRANK FEDELE | US ARMY CORPS OF ENGINEERS

Did this happen?

$5.29B

A 2021 study by University of Vermont predicts $5.29 billion in flood damages along the Winooski River in the next century, affecting over 140,000 Vermonters.[8]

7.5 inches is the increase in average annual precipitation in Vermont between the early 1900s and 2020, averaging a rise of 1.4 inches per decade since 1960.[5]

$558 MILLION IN LOSSES

ACCORDING TO THE VERMONT DEPARTMENT OF FINANCIAL REGULATION, WEATHER-RELATED INSURED LOSSES COST AUTO, HOMEOWNERS, AND FARM POLICIES $558 MILLION FROM 2010 TO 2019.[6]

JULY 2023 | BARRE CITY

IMAGE SOURCE: JONATHAN WILLIAMS

Will it happen again?

Should we do nothing?

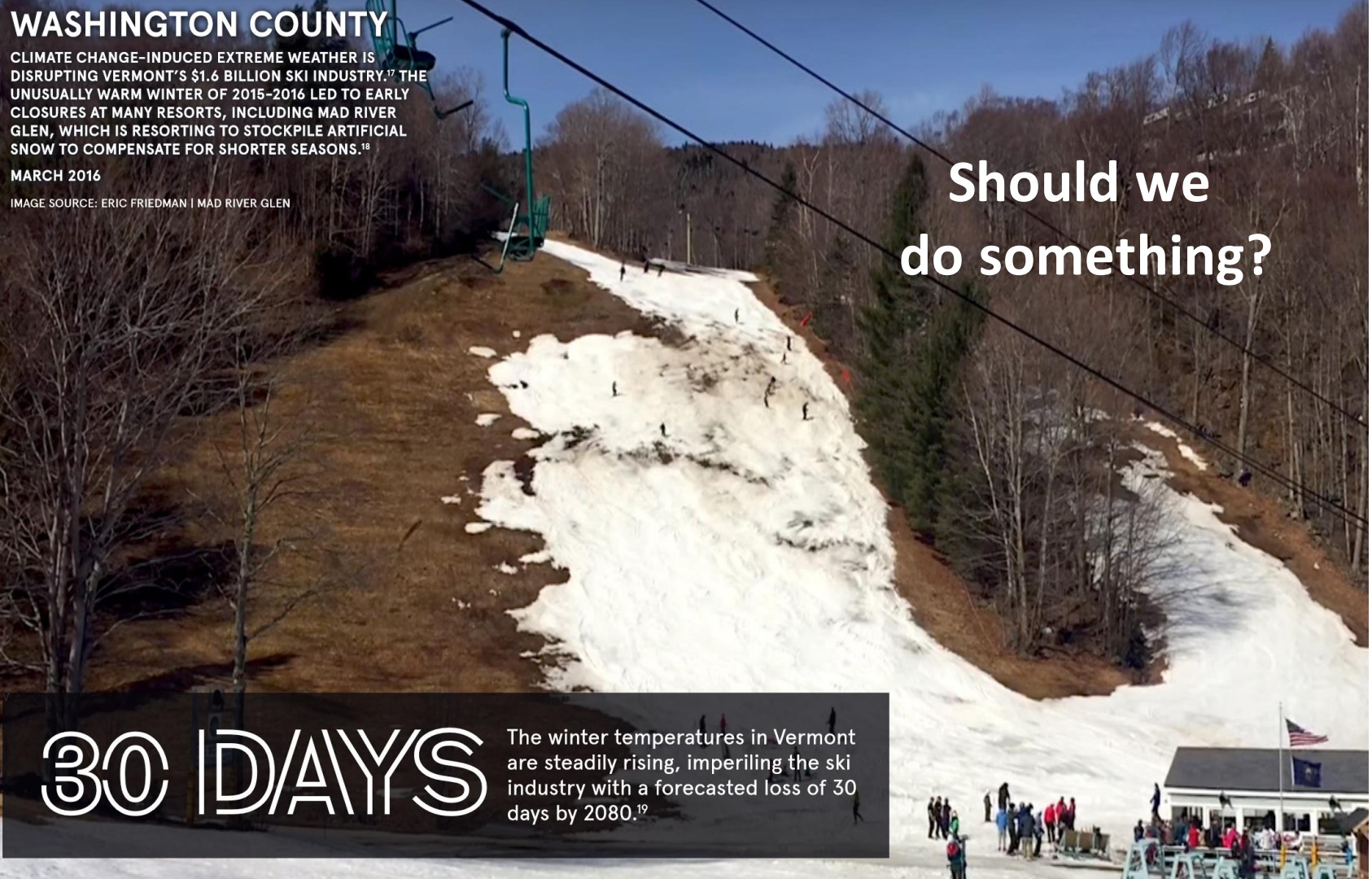
Producing no for an answer, within the context of a negotiation, is easier than trying persuade anyone (an angry mob of community members for example) to actually agree on saying yes.

WASHINGTON COUNTY

CLIMATE CHANGE-INDUCED EXTREME WEATHER IS DISRUPTING VERMONT'S $1.6 BILLION SKI INDUSTRY.[17] THE UNUSUALLY WARM WINTER OF 2015-2016 LED TO EARLY CLOSURES AT MANY RESORTS, INCLUDING MAD RIVER GLEN, WHICH IS RESORTING TO STOCKPILE ARTIFICIAL SNOW TO COMPENSATE FOR SHORTER SEASONS.[18]

MARCH 2016

IMAGE SOURCE: ERIC FRIEDMAN | MAD RIVER GLEN



Should we do something?

30 DAYS

The winter temperatures in Vermont are steadily rising, imperiling the ski industry with a forecasted loss of 30 days by 2080.[19]

CHAMPIONS OF CHANGE

1. GLOBAL WARMING SOLUTIONS ACT

In September 2020, the Vermont State Legislature passed the Vermont Global Warming Solutions Act (H.688), creating legally binding emissions reduction targets. The Act calls on the state to reduce greenhouse gas pollution to 26% below 2005 levels by 2025, 40% below 1990 levels by 2030, and 80% below by 2050. The Act also created the Vermont Climate Council and charged them with developing an initial state Climate Action Plan. Notably, the Act creates a pathway for private citizens to take legal action against the State, should it not create, implement, or enforce rules necessary to achieve the targets.[23]

2. MIDDLEBURY RIVER RESTORATION

In a groundbreaking effort, the town of Middlebury spearheaded the restoration of the Middlebury River in 2019. By investing $3 million, they reconnected the river with its floodplain, enhancing stability and reducing erosion by 20%. Local collaborations further improved fish habitats and bolstered the region's resilience to climate change. This innovative project turns a once-degraded river into a symbol of Vermont's commitment to environmental integrity, reflecting a forward-thinking approach to climate adaptation that promises lasting impacts on the state's ecological landscape.[25]

3. BARRE CITY HOME BUYOUTS

Facing repeated flooding, Barre City implemented a strategic home buyout program in 2013. Investing over $1.2 million in funds from federal, state, and local sources, the city acquired and demolished 15 properties in flood-prone areas. These spaces were transformed into public parks and natural flood barriers, mitigating flood damage by an estimated 30%. The program stands as a compelling example of turning climate vulnerability into community strength, providing both safety and aesthetic value to the city's landscape.[25]

4. THE AFFORDABLE HEAT ACT

Enacted into law in 2023, The Affordable Heat Act (S.5) aims to provide financial support to low-income households struggling with heating costs. The Act offers subsidies and support to eligible individuals, while ushering a transition to cleaner energy. The legislature will vote on its implementation in 2025.[26]

5. REGIONAL GREENHOUSE GAS INITIATIVE

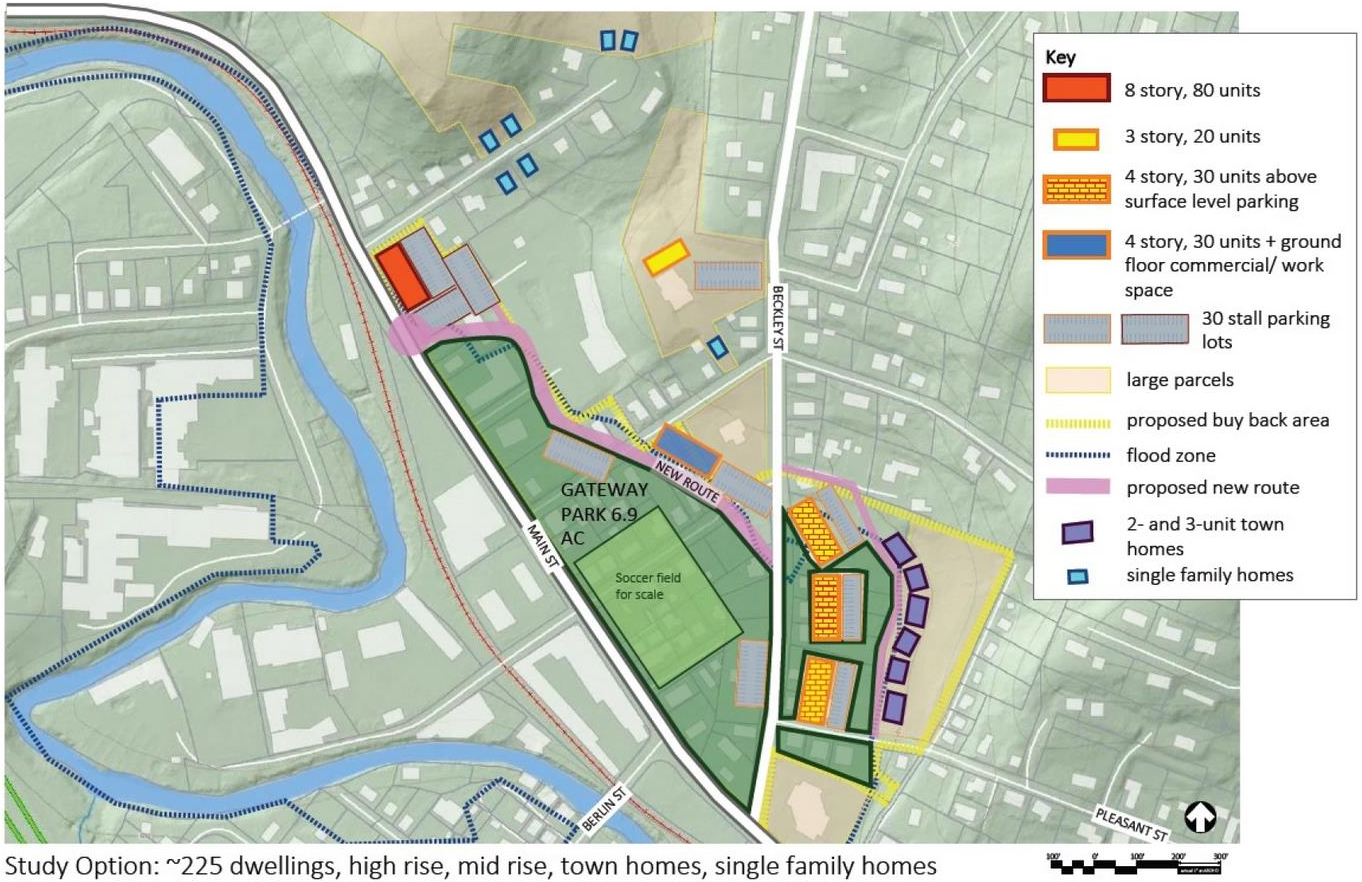
Vermont's participation in the Regional Greenhouse Gas Initiative has been instrumental in reducing the state's carbon footprint, with a 20% decrease in greenhouse gas emissions from power plants since 2008. The program also generated over $100 million in revenue for the state, further supporting its environmental efforts.[27]

6. GREEN INFRASTRUCTURE IN HINESBURG

Hinesburg, Vermont, sets a commendable example with its adoption of a green infrastructure plan. The town is pioneering strategies to manage stormwater and reduce flooding, contributing to the entire state's resilience and adaptation in the face of climate change.[28]

IMAGE SOURCE: STATE OF VERMONT | AGENCY OF NATURAL RESOURCES

IMAGE SOURCE: VPIRG | STUDENT CLIMATE RALLY 2019



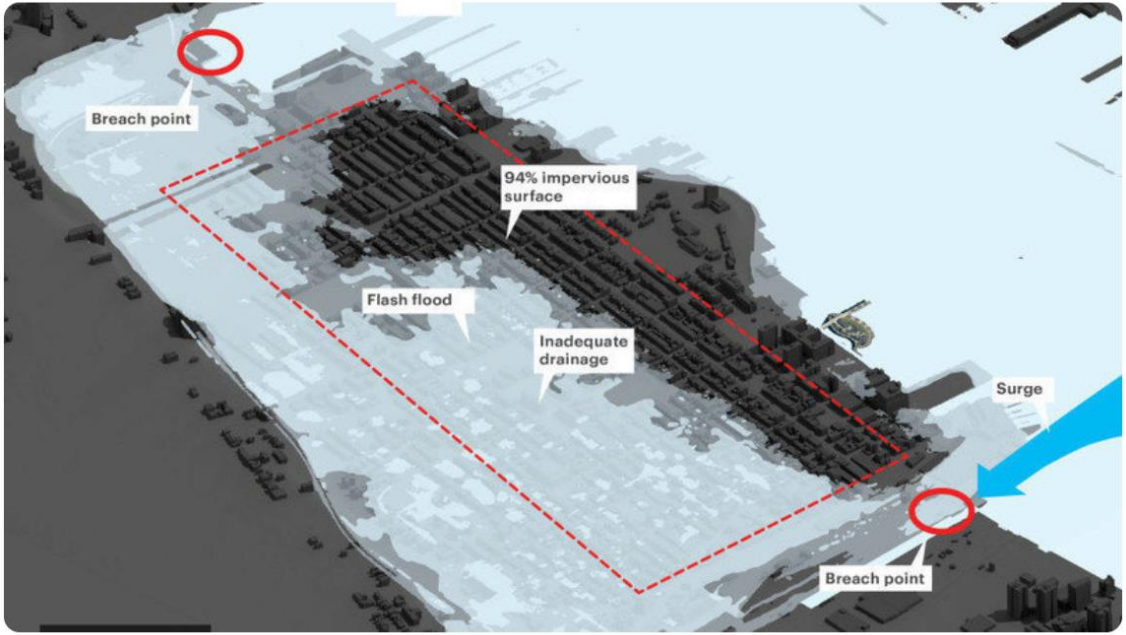
Study Option: ~225 dwellings, high rise, mid rise, town homes, single family homes

10/24/23

North Barre Gateway Park Feasibility Study

BLACK RIVER DESIGN ARCHITECTS

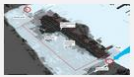
SAY NO TO OPTION A: Stop Hoboken from Building a Wall that Doesn't Protect All Residents



Started December 14, 2015
Petition to Director, Office of Flood Hazard Risk Reduction Measures David Rosenblatt and **6 others**

Petition Closed

This petition had 742 supporters


SAY NO TO OPTION A: Stop Hoboken from Building a Wall that Doesn't...

Share on Facebook

Send an email to friends

Send a message via WhatsApp

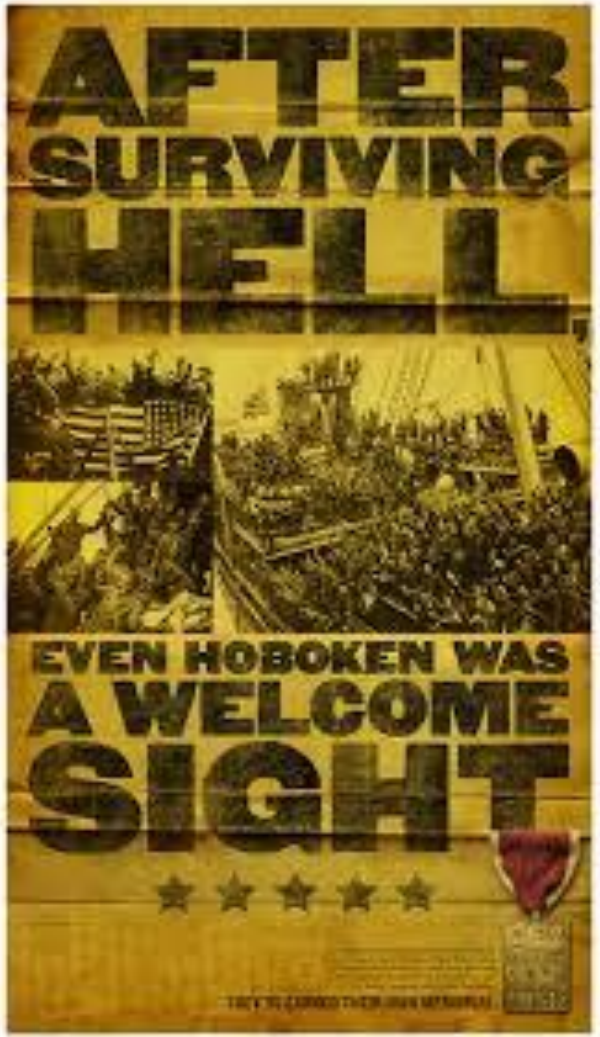
Tweet to your followers

Copy link

DESIGNED AND ENGRAVED FOR NEW YORK and ENVIRONS. THE NEW YORK MANUAL. 1868.


WILLNER'S

HOBOKEN WW1

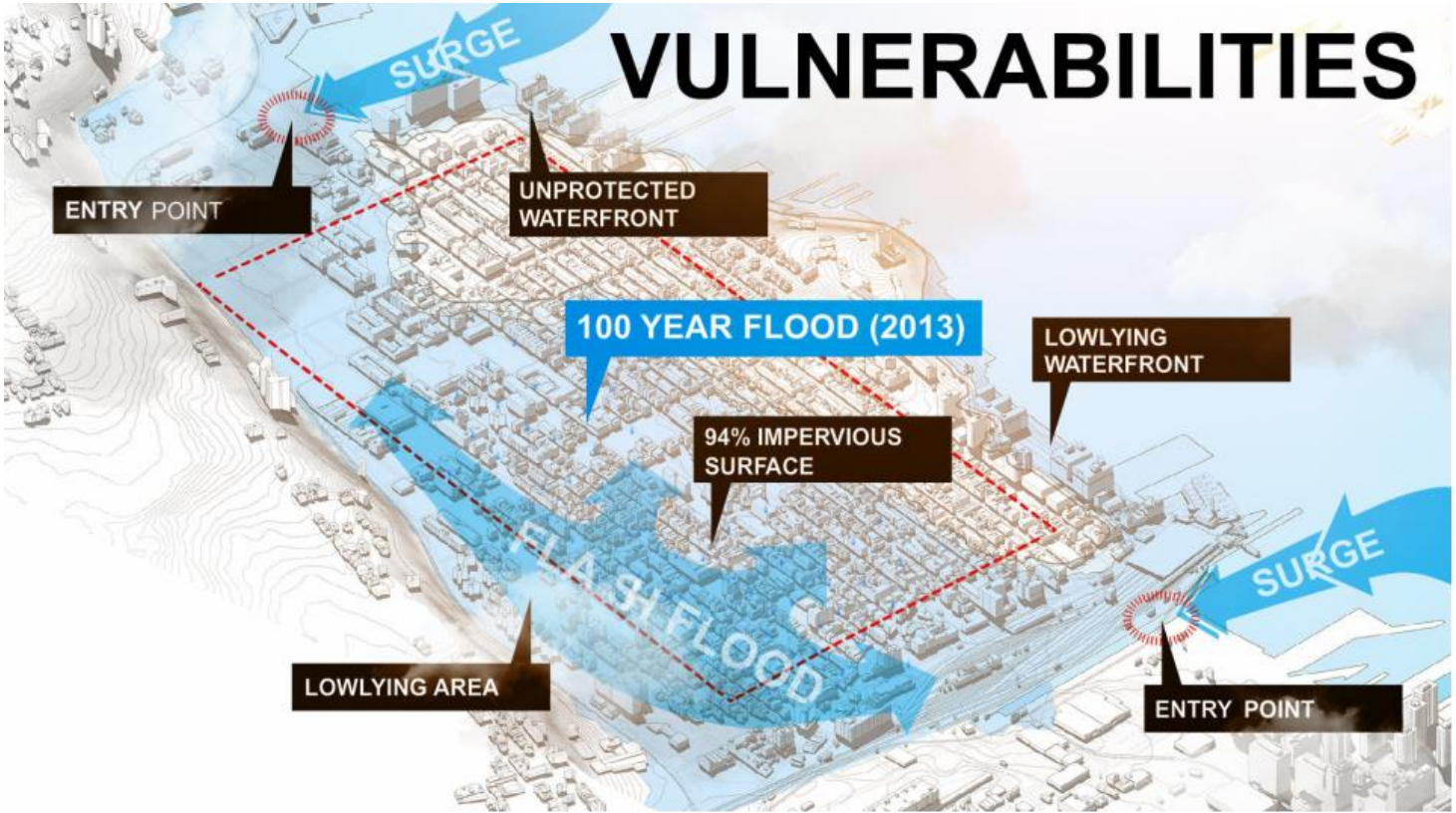

AFTER
SURVIVING
HELL,
EVEN HOBOKEN WAS
A WELCOME
SIGHT


MAXWELL HOUSE
COFFEE
LIPTON
KERR
HOBOKEN 1955
Hoboken Historical Museum


HOBOKEN

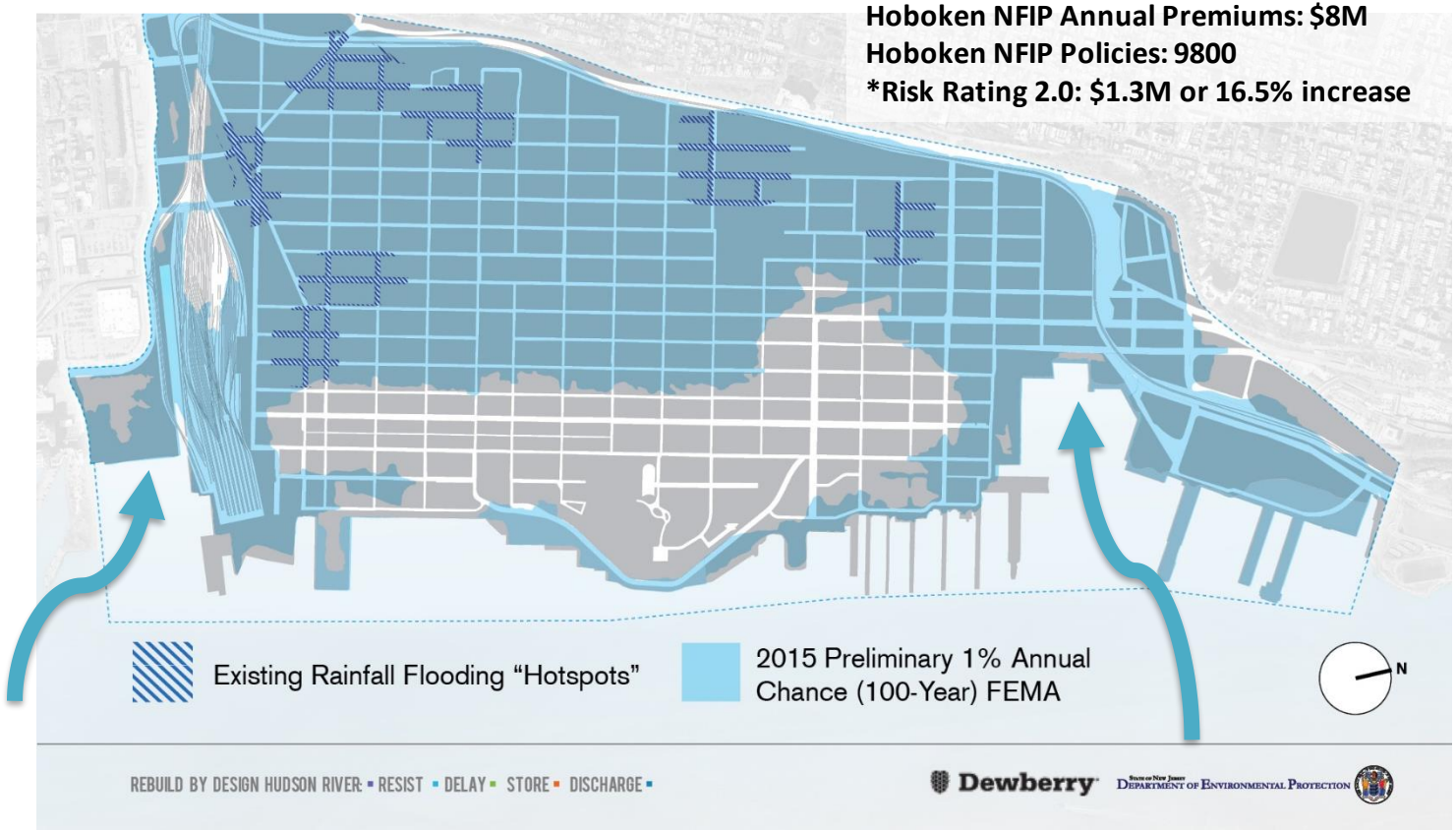
Hoboken's dual flooding risk

Coastal flooding & flash flooding

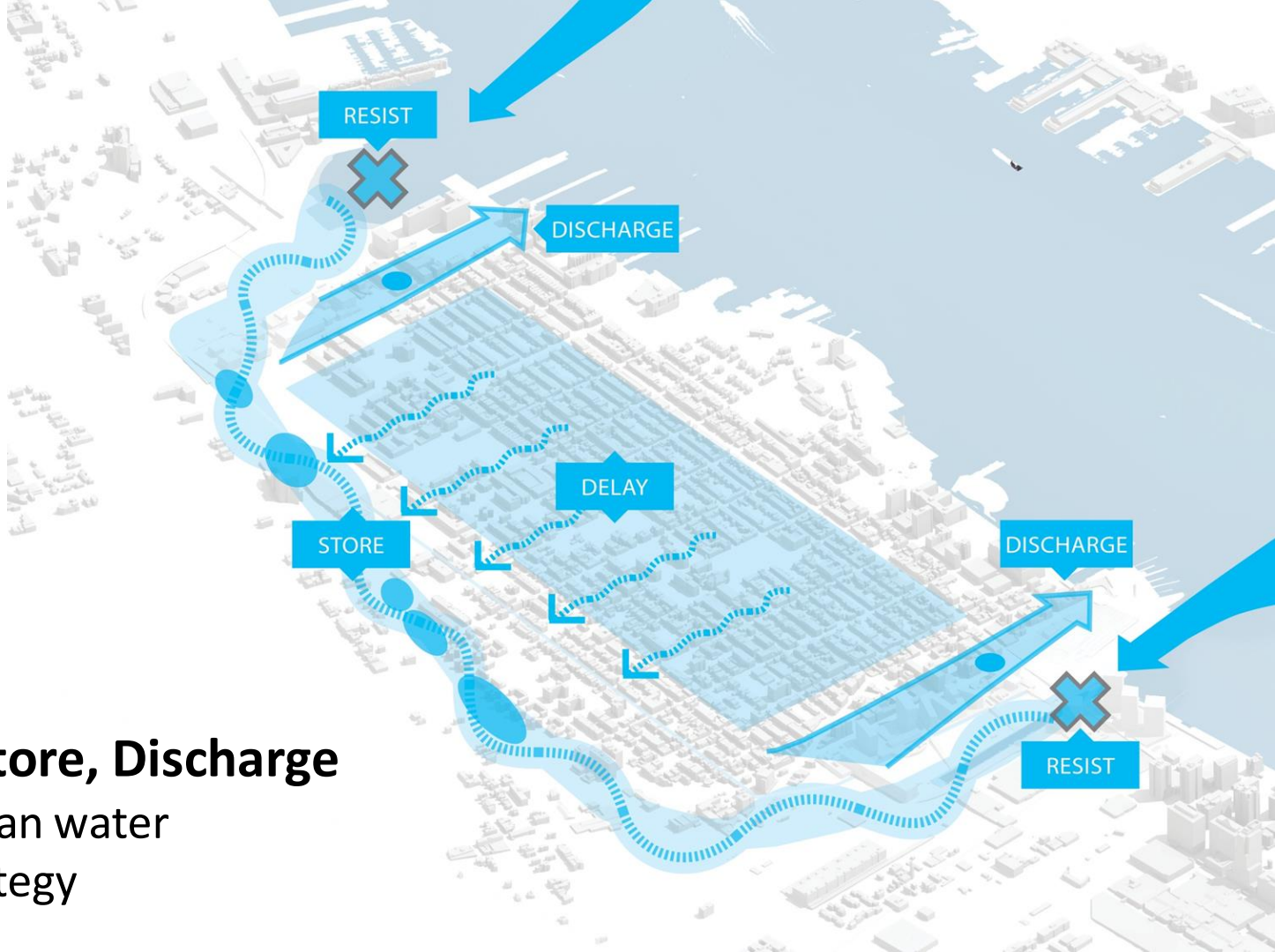


Flood Risk

Landmass within Flood Zone (A): 63.85%
Landmass within Flood Zone (V): 7.41%
Landmass within Flood Zone (X): 7.66%
Hoboken Tax Base: $12B
Hoboken NFIP Total Liability: $2.3B
Hoboken NFIP Annual Premiums: $8M
Hoboken NFIP Policies: 9800
***Risk Rating 2.0: $1.3M or 16.5% increase**



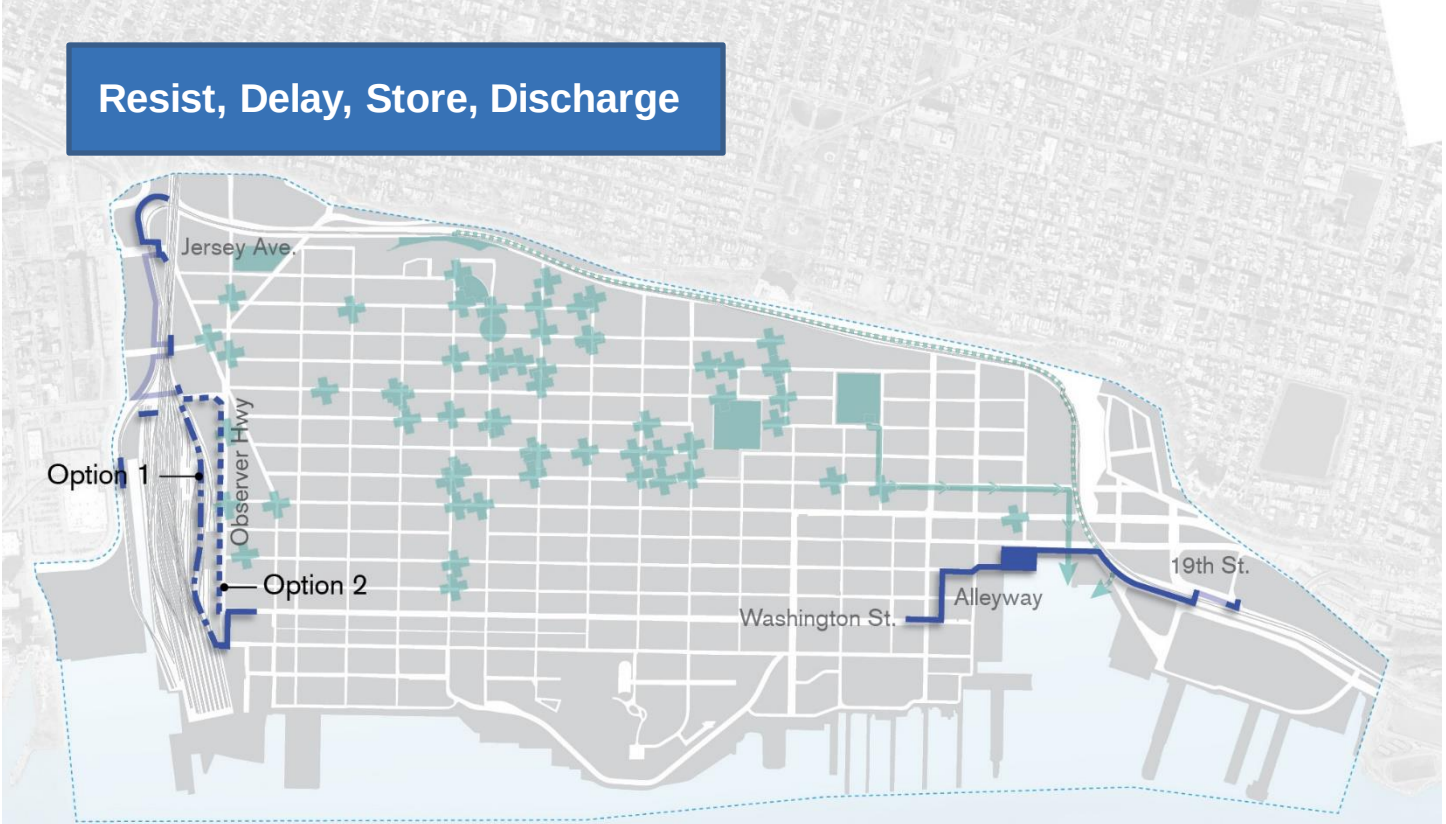
REBUILD BY DESIGN



Resist, Delay, Store, Discharge

An integrated urban water management strategy

Resist, Delay, Store, Discharge

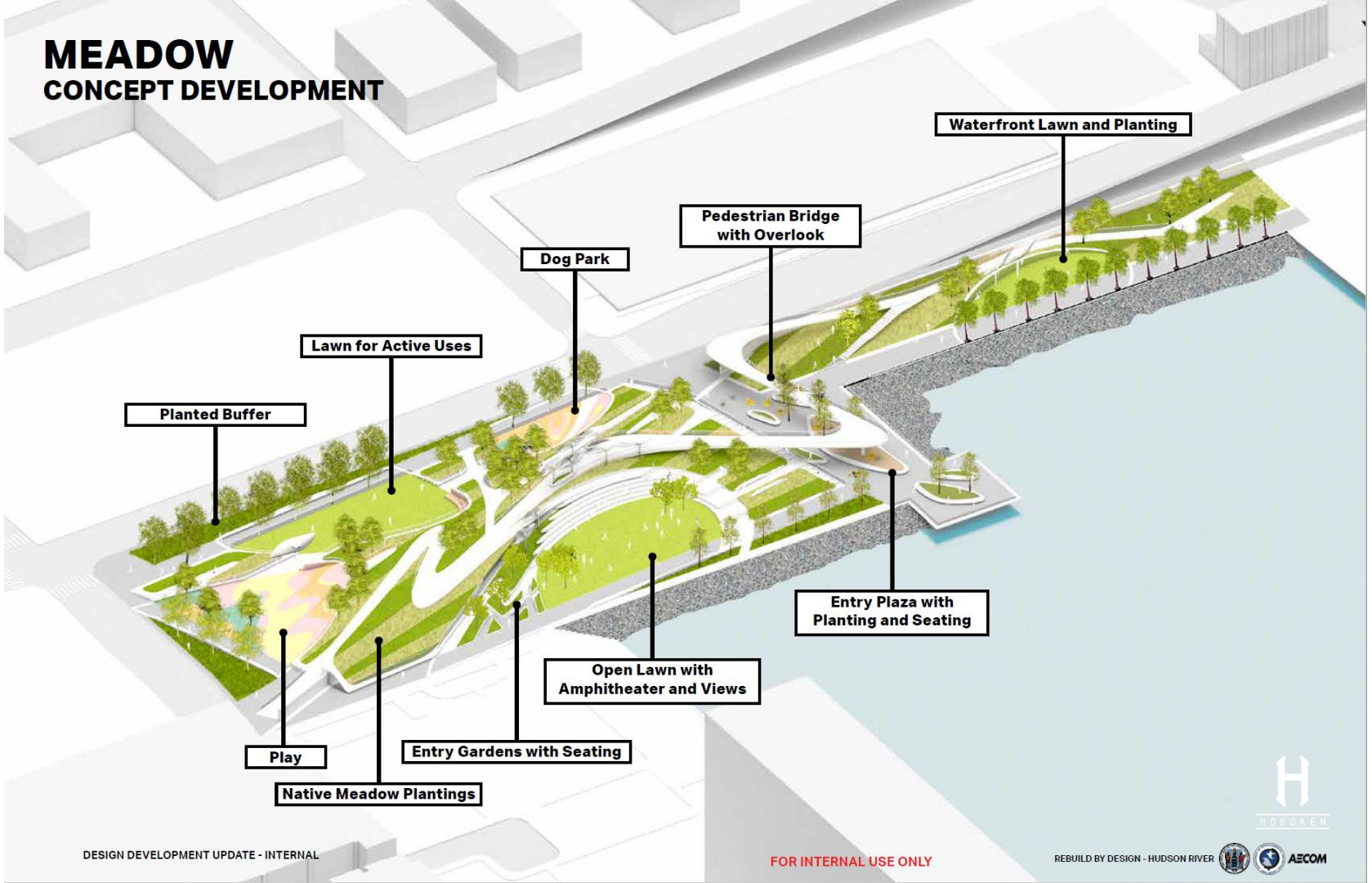


Environmental Review

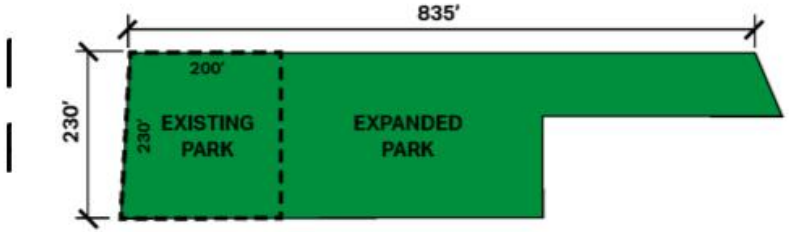
Rebuild by Design EIS


Environmental Education
Urban Identity
Signage
Bikeshare
Data Gathering
Hoboken Cove Boat House
Existing Initiatives
Washington Street Redevelopment
Public Wifi
Maintenance
Dry vs. Wet
Adaptability
Weather Resistant
Materiality
Sustainability
Seasonality
All-Weather Use
Festivals and Events
Height
Shade
Views

MEADOW
CONCEPT DEVELOPMENT

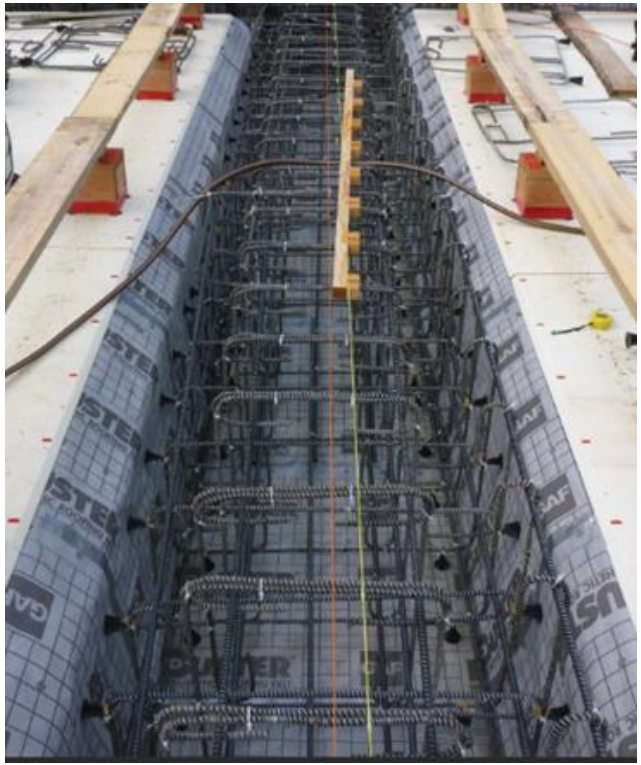


Resist: In Construction



General Sequence of Construction

3. Install foundation and backfill.



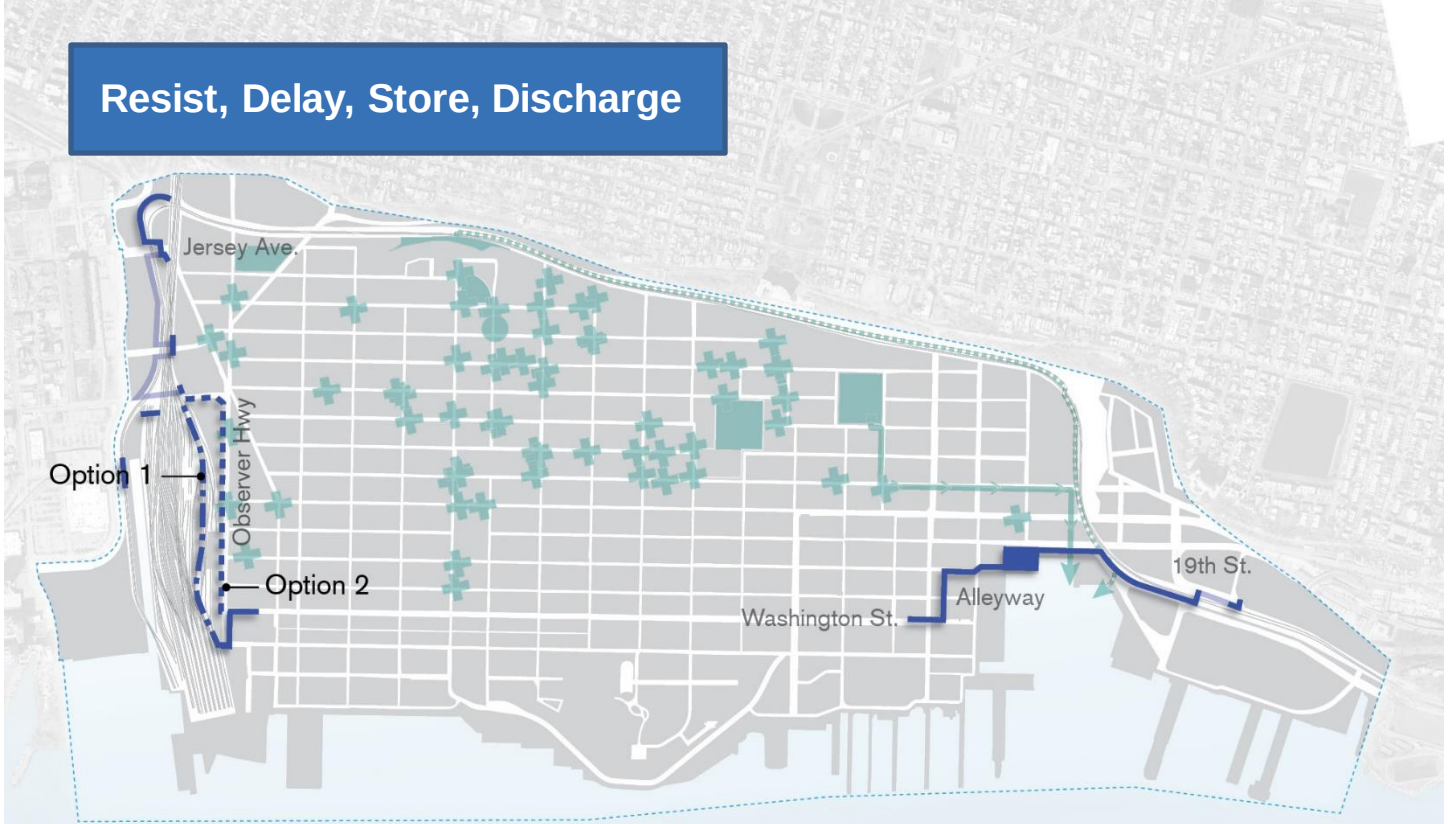
4. Install stem wall.

Illustrative examples from other projects.

https://www.forconstructionpros.com/concrete/article/20972529/army-corps-builds-foundation-for-

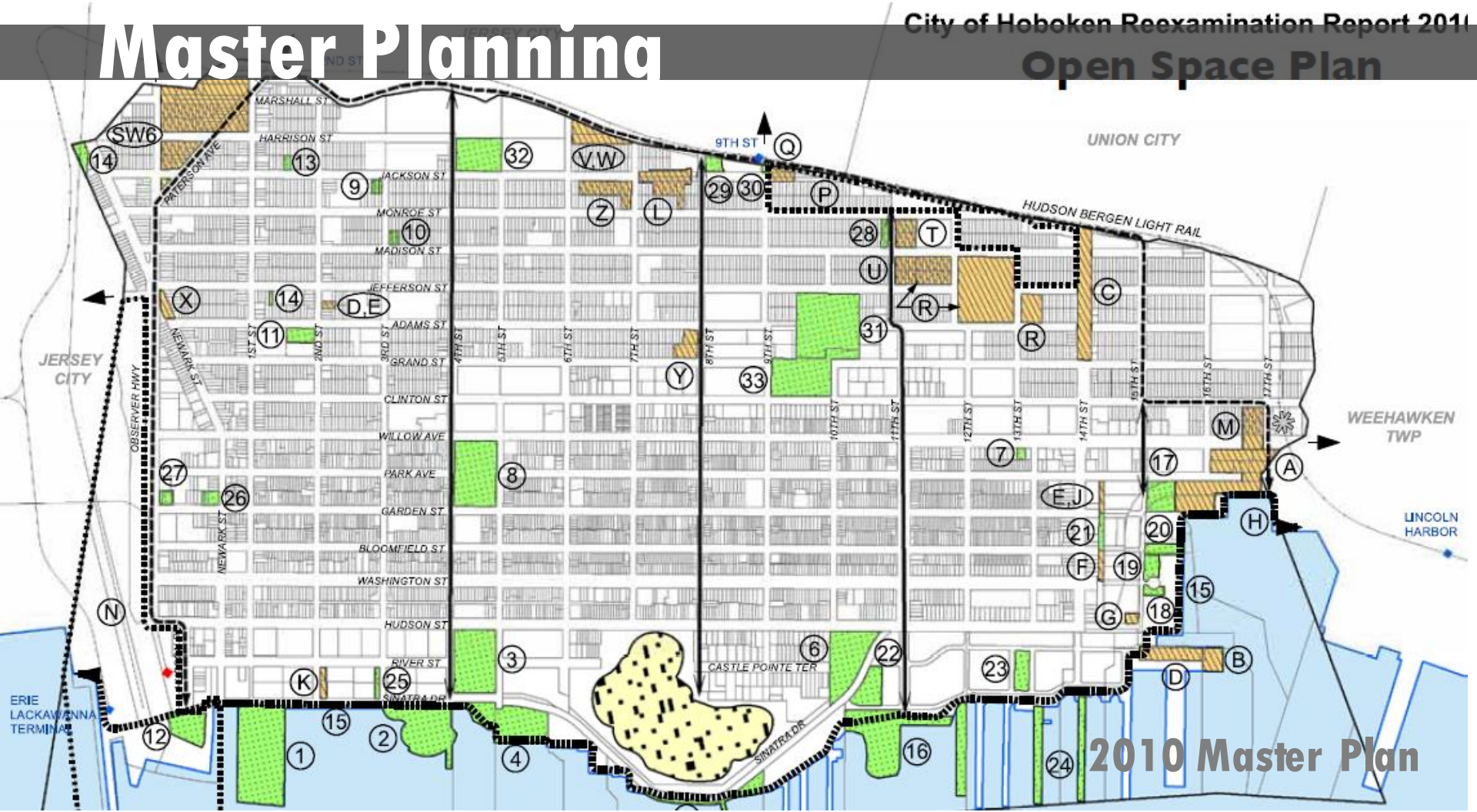

<<<------ RO

Resist, Delay, Store, Discharge



Master Planning

Open Space Plan



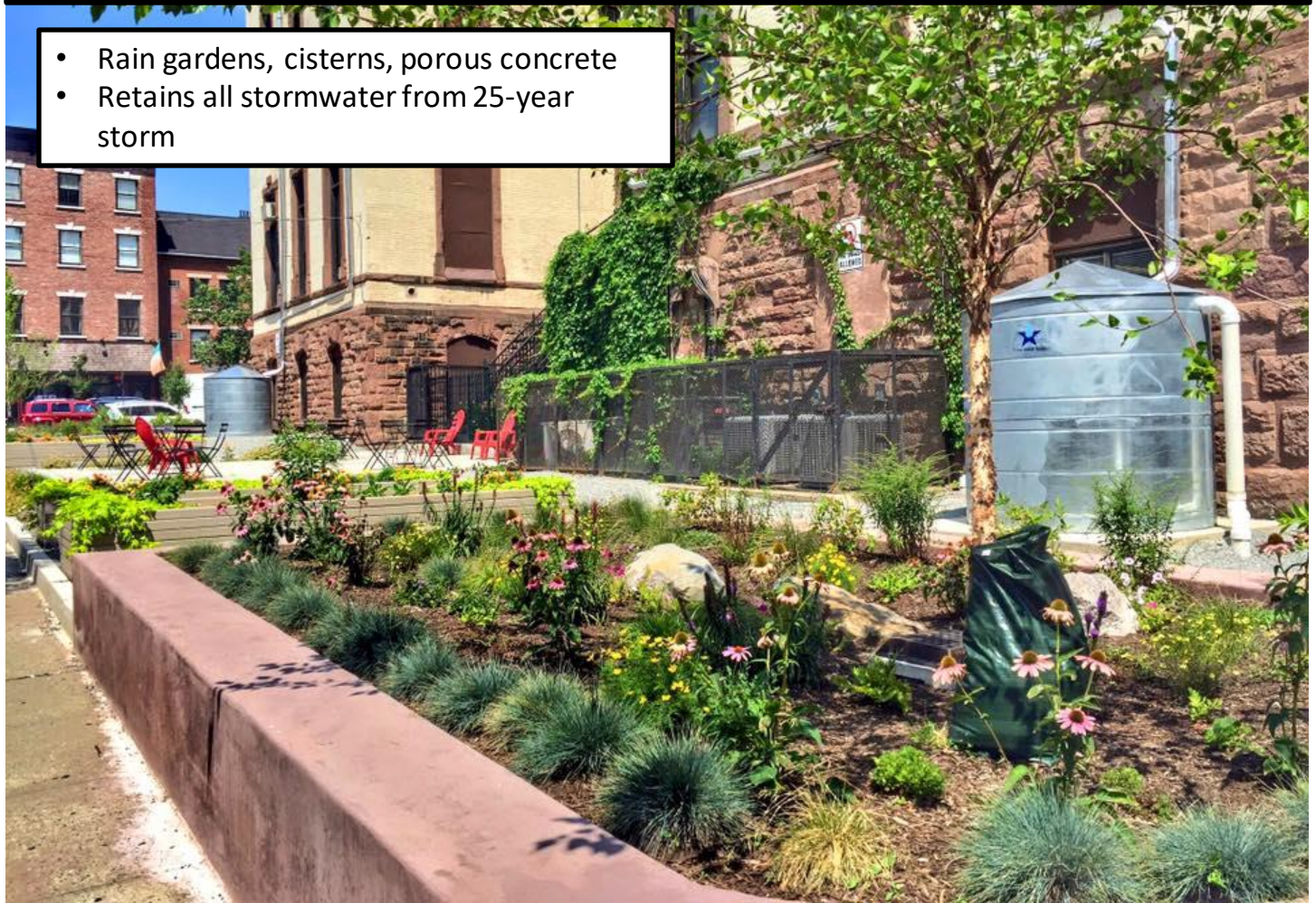
2010 Master Plan

H1 and H5 Pump Stations

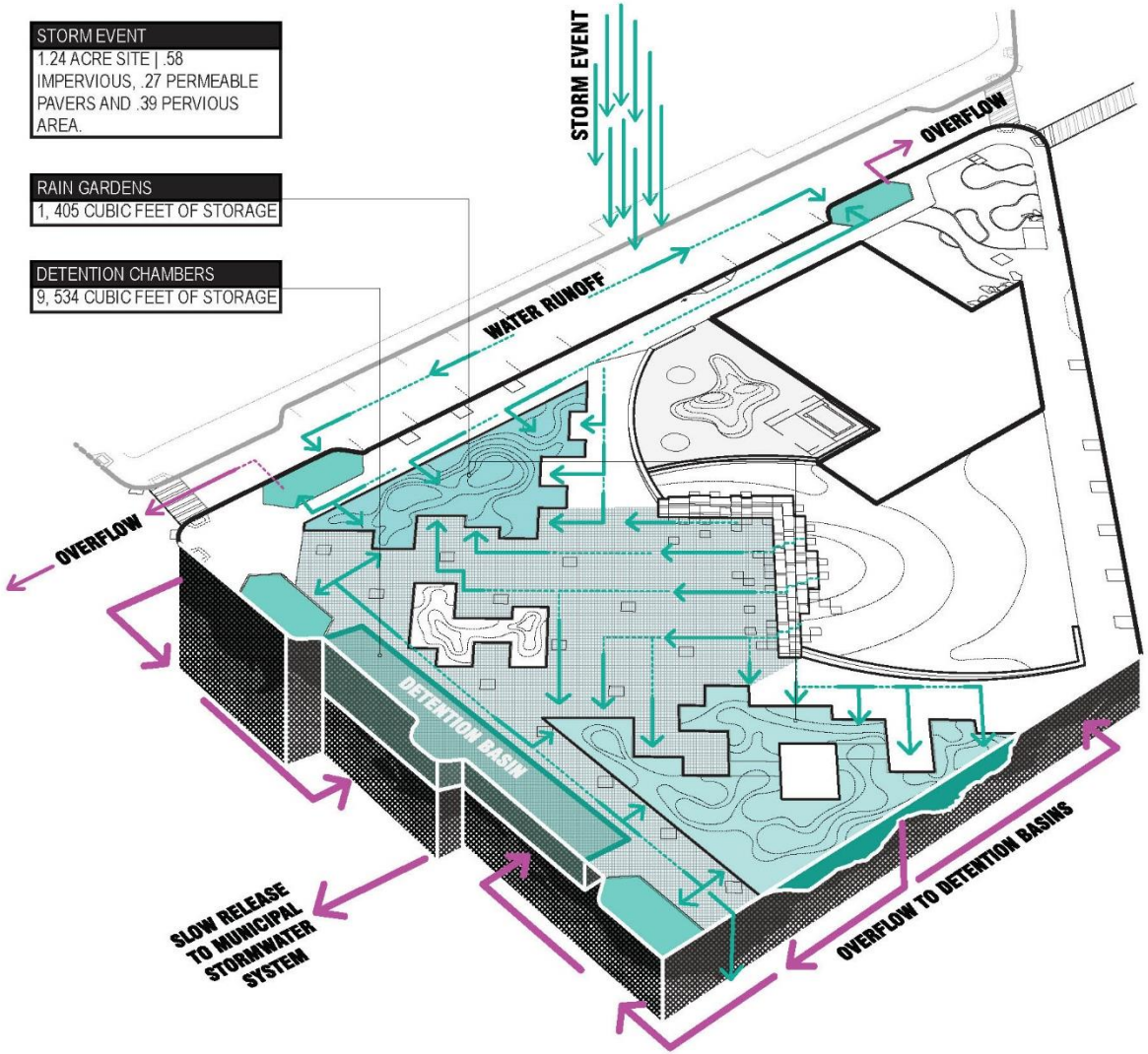
“Discharge” - H-5 Wet Weather Pump Station

- Will alleviate flooding in NW Hoboken
- 40M gallons/day

“Delay” & “Store” – City Hall Demonstration Project



Southwest Park


STORM EVENT
1.24 ACRE SITE | .58 IMPERVIOUS, .27 PERMEABLE PAVERS AND .39 PERVIOUS AREA.
RAIN GARDENS
1, 405 CUBIC FEET OF STORAGE
DETENTION CHAMBERS
9, 534 CUBIC FEET OF STORAGE
STORM EVENT
OVERFLOW
WATER RUNOFF
OVERFLOW
DETENTION BASIN
SLOW RELEASE TO MUNICIPAL STORMWATER SYSTEM
OVERFLOW TO DETENTION BASINS

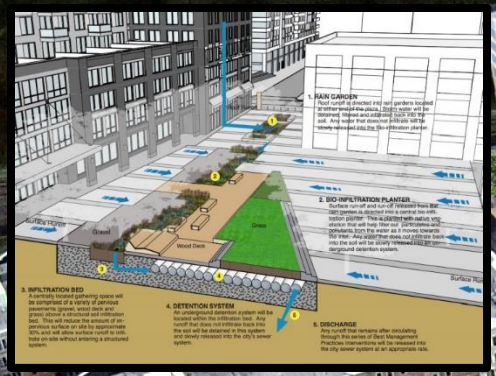
HOBOKEN


HOBOKEN
WELCOME TO SOUTHWEST PARK
Park Hours: 8am - 10pm
Please Do Not:
• Litter or discard household or commercial garbage
• Use glass containers/dispensers for food or drink consumption
• Consume drugs or alcohol, or carry unsealed alcoholic beverage containers
• Barbecue or engage in any activity with an open flame
• Perform commercial activity, except by prior approval from the City of Hoboken
• Perform solicitations, except by prior approval from the City of Hoboken
• Post placards, signs, posters, or other advertisements
• Perform live entertainment or make excessive noise, except by prior approval from the City of Hoboken
• Erect any permanent or nonpermanent structures
• Battle in public restrooms
• Lie in a prone position on any bench
• Let dogs off leash in the park, except within the dog run
• Tamper with or remove park property
• Remove any natural element of the park
• Climb on any property or surface
• Enter any area that is fenced, posted, or marked "Keep Out/Keep Off."
• Skateboard
• Operate recreational motorized scooters or vehicles
• Operate gas or battery powered model airplanes and cars that may endanger the safety of others
• Engage in profanity, fighting, or any act that endangers the safety of others

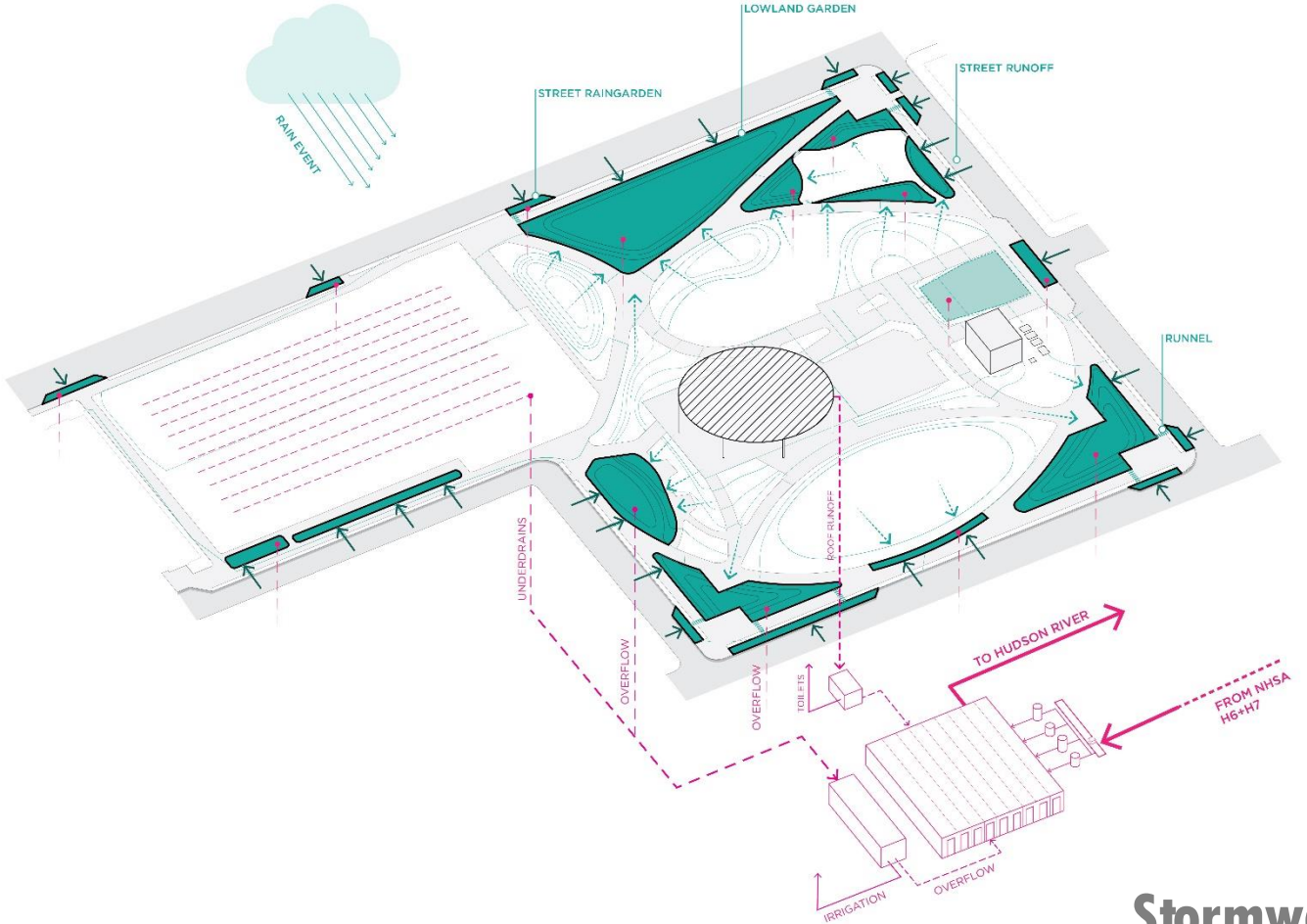

Southwest Resiliency Park

“Delay” & “Store” – 7th & Jackson Resiliency Park

- 2 acres
- 300K gallons retention



MONROE CENTER



Stormwater Management


CREAMER


1 MG Detention Tank


MG Detention Tank


Lawn over 1 MG Detention Tank

Athletic Field over Gravel Detention


Basketball Basin

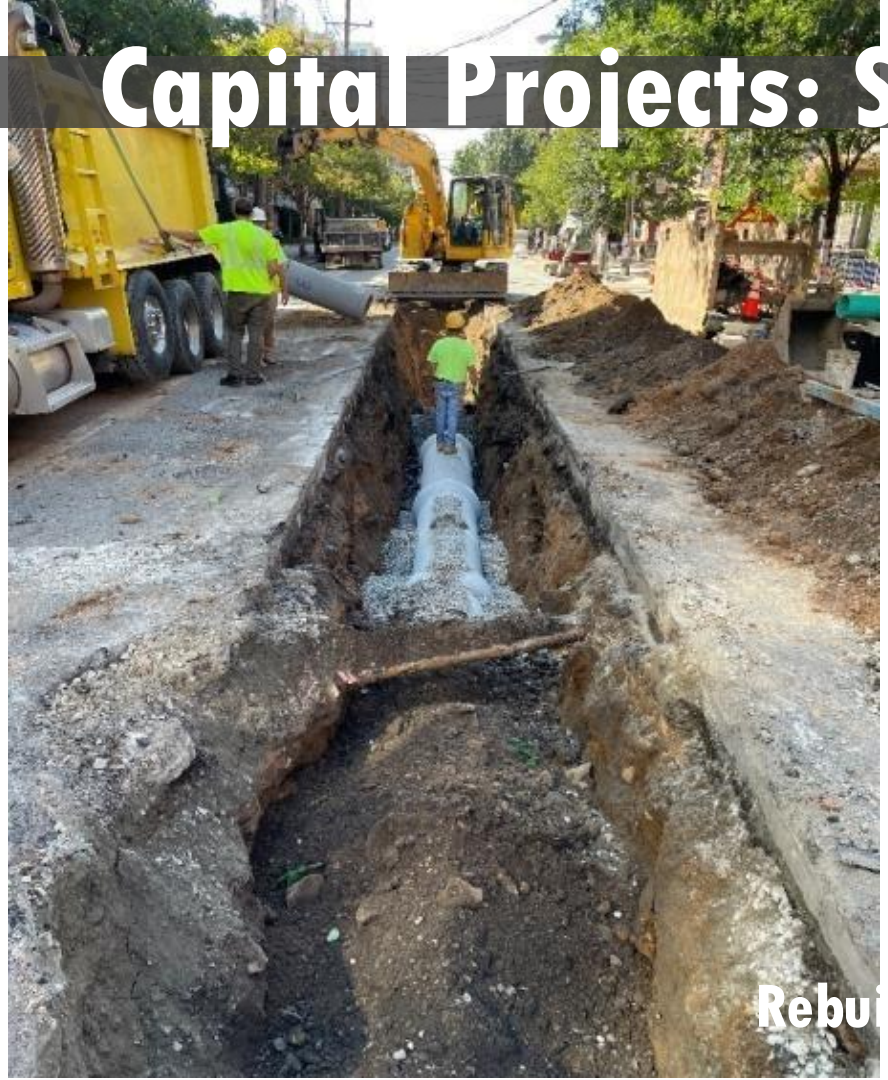
11 Right-of-Way Rain Gardens

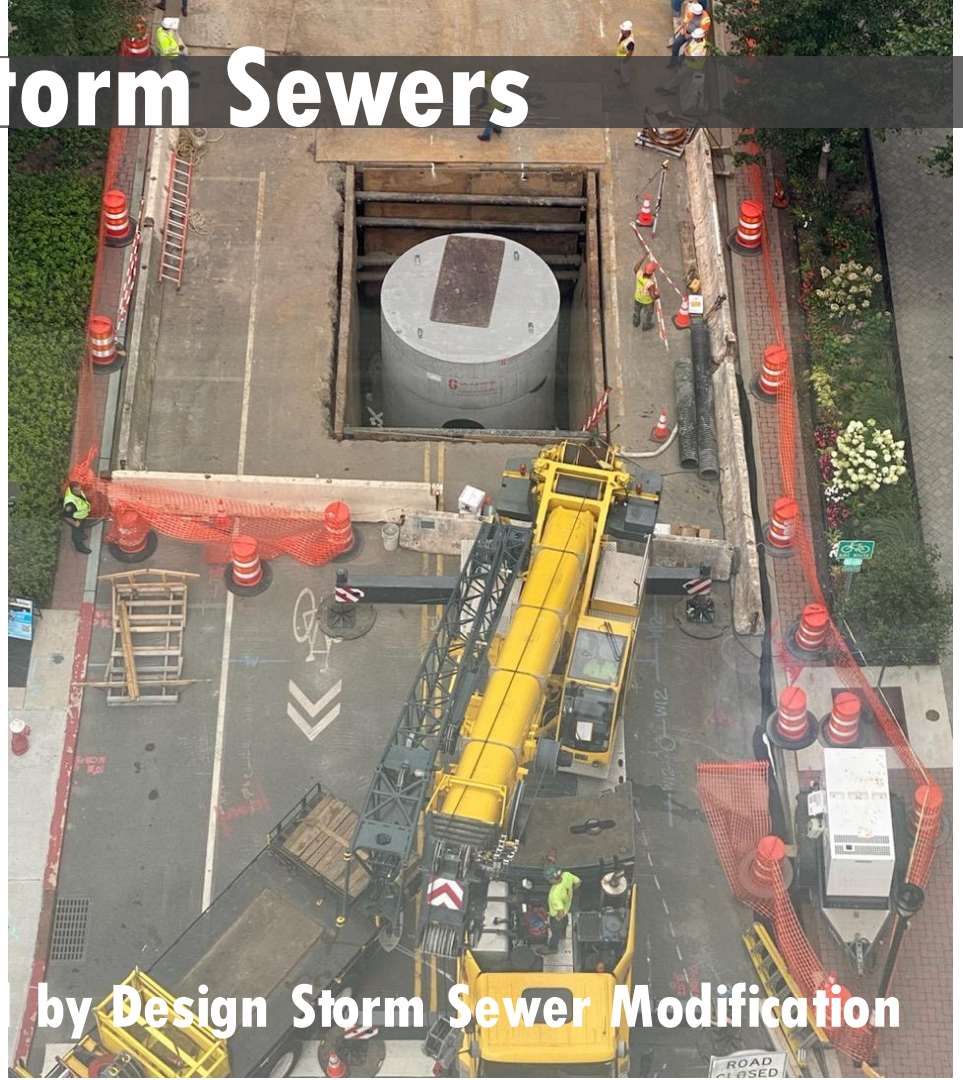
Site Aerial at Substantial Completion

Capital Projects: Roads

Washington Street Rain Gardens

Capital Projects: Storm Sewers





Rebui by Design Storm Sewer Modification


CAT

Private Projects: Green Roofs

Green Roofs Ordinance, Resilient Building Design Guidelines

Maintenance

Shared Services

NHSA Cleaning
Rain Garden Trash Screens

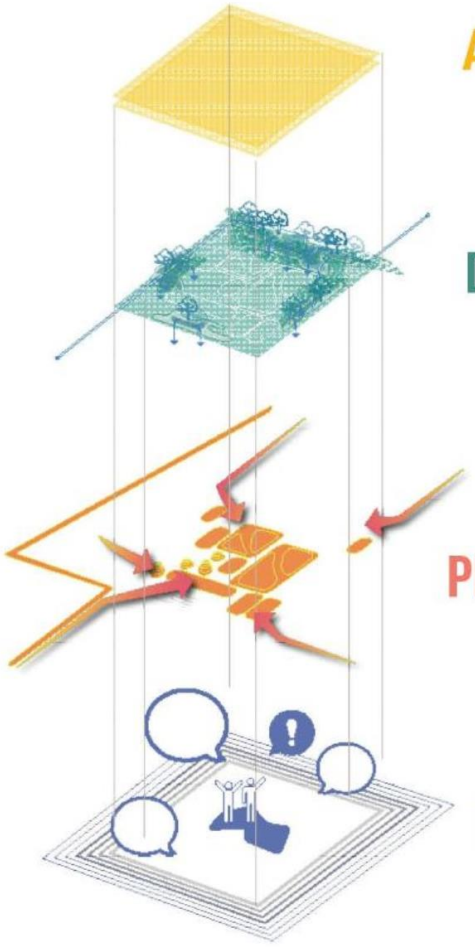
Training

Youth Training Program

Volunteers

Contractors


7TH & JACKSON PARK
800 MONROE RESILIENCY PARK SITE
NORTHWEST RESILIENCY PARK
HARBORSIDE PARK
SOUTHWEST RESILIENCY PARK
100 Year Flood Zone



A CAPPED SITE

COMPLETED REMEDIATION AND CAPPING TO INFORM PROGRAM TYPE AND ORGANIZATION ON SITE

EXPLORE HOW TO WORK WITHIN THE CAPPING DESIGN TO STORE WATER

DELAY, STORE, DISCHARGE

MAXIMIZE FLOOD RISK REDUCTION WITHIN PROJECT CONSTRAINTS THROUGH IMPLEMENTATION OF STORMWATER BEST PRACTICES

NATIVE, ORNAMENTAL LOW≐ MAINTENANCE PLANTINGS AND WOODLAND SCREENING

EVALUATE OPPORTUNITIES FOR INCREASED STORMWATER CONVEYANCE TO REDUCE IMPACTS FROM LOCALIZED FLOODING

STRATEGIC PROGRAMMING

CONNECTION TO THE GREEN CIRCUIT WILL ENHANCE BIKE CULTURE

PROGRAMMING WILL ACT AS CONNECTORS BETWEEN ADJACENT GREEN SPACES, GREEN CIRCUIT, AND THE LIGHTRAIL STATION

A MIXTURE OF PASSIVE AND ACTIVE PROGRAMMING WILL COMPLIMENT THE EXISITNG PARK PROGRAMS SURROUNDING THE SITE

ENGAGEMENT

BRINGING EVERYONE TO THE TABLE≐ MUNICIPAL MEETINGS, COMMUNITY STAKEHOLDERS, AND THE PUBLIC.

UNDERSTANDING THE LOCAL CONTEXT ≐ THE REDEVELOPMENT, DEMOGRAPHICS, EXISTING OPEN SPACE, AND TRANSPORTATION MODES

HYBRID ENGAGEMENT, FEATURING NEW DIGITAL TOOLS TO FACILITATE COLLABORATION WITHIN PANDEMIC SAFETY PROTOCOLS

PREDESIGN ENGAGEMENT & COMMUNITY INPUT RECEIVED
January 26th, 2023

3 PARK DESIGN APPROACHES
April 13th, 2023

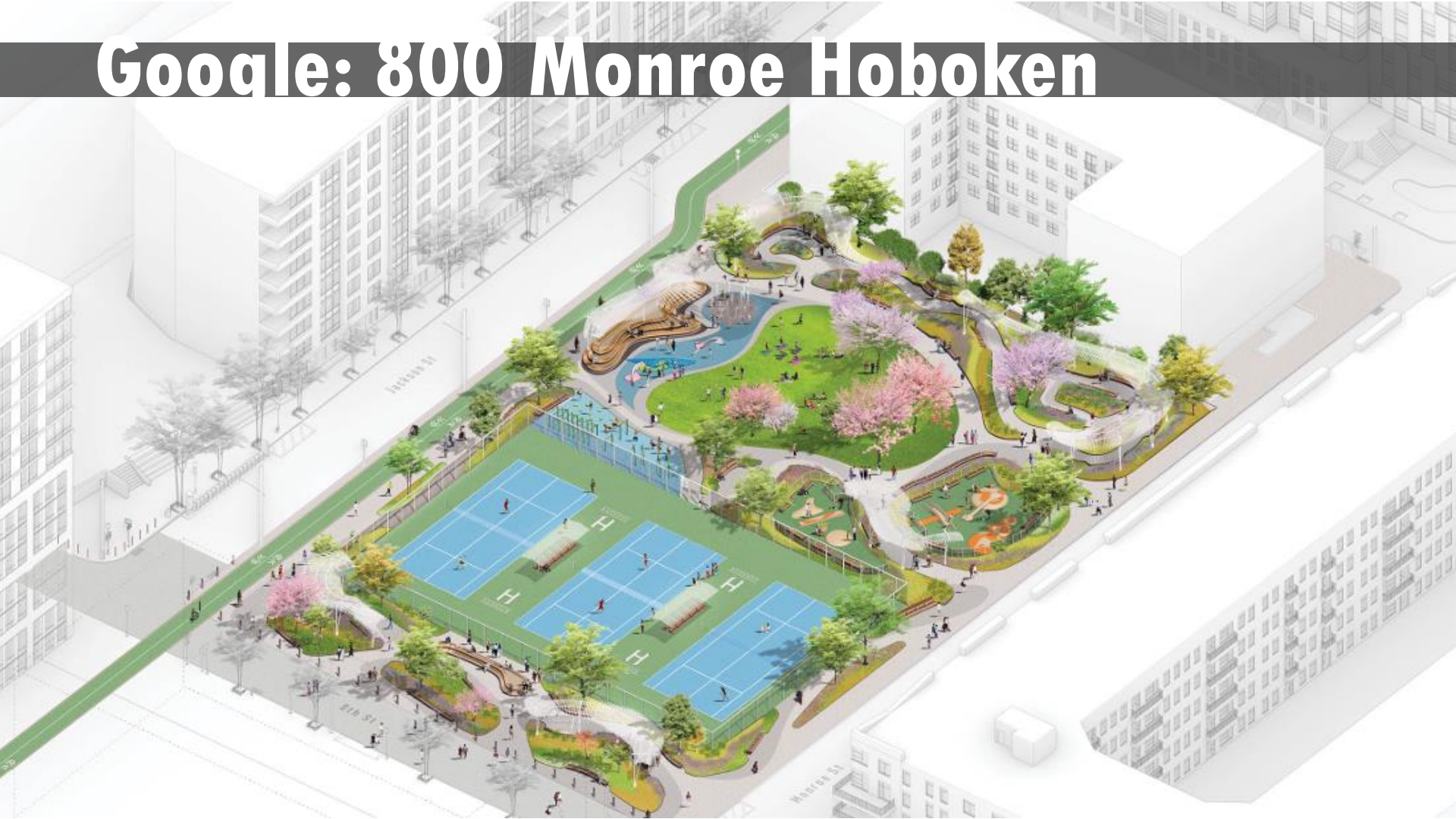
2 ALTERNATIVES FOR THE PREFERRED APPROACH
August 9h, 2023

PREFERRED ALTERNATIVE FINAL CONCEPTUAL DESIGN
November 21st 2023

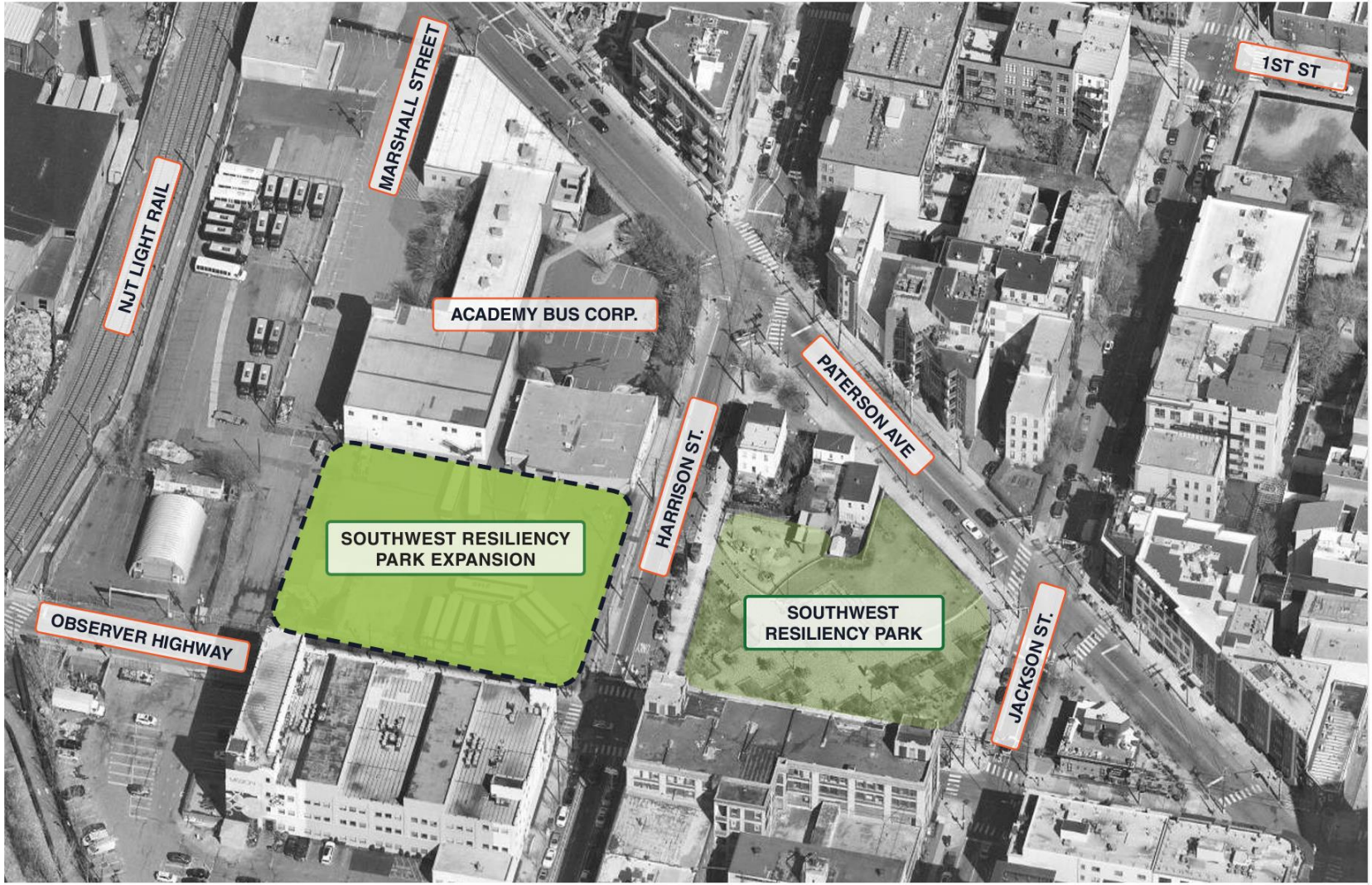
WHERE ARE WE IN THE PROCESS?

HOBOKEN AECOM

Google: 800 Monroe Hoboken



Block 10 (SW Park Expansion)


1ST ST
MARSHALL STREET
NJT LIGHT RAIL
ACADEMY BUS CORP.
PATERSON AVE
HARRISON ST.
SOUTHWEST RESILIENCY PARK EXPANSION
SOUTHWEST RESILIENCY PARK
JACKSON ST.
OBSERVER HIGHWAY

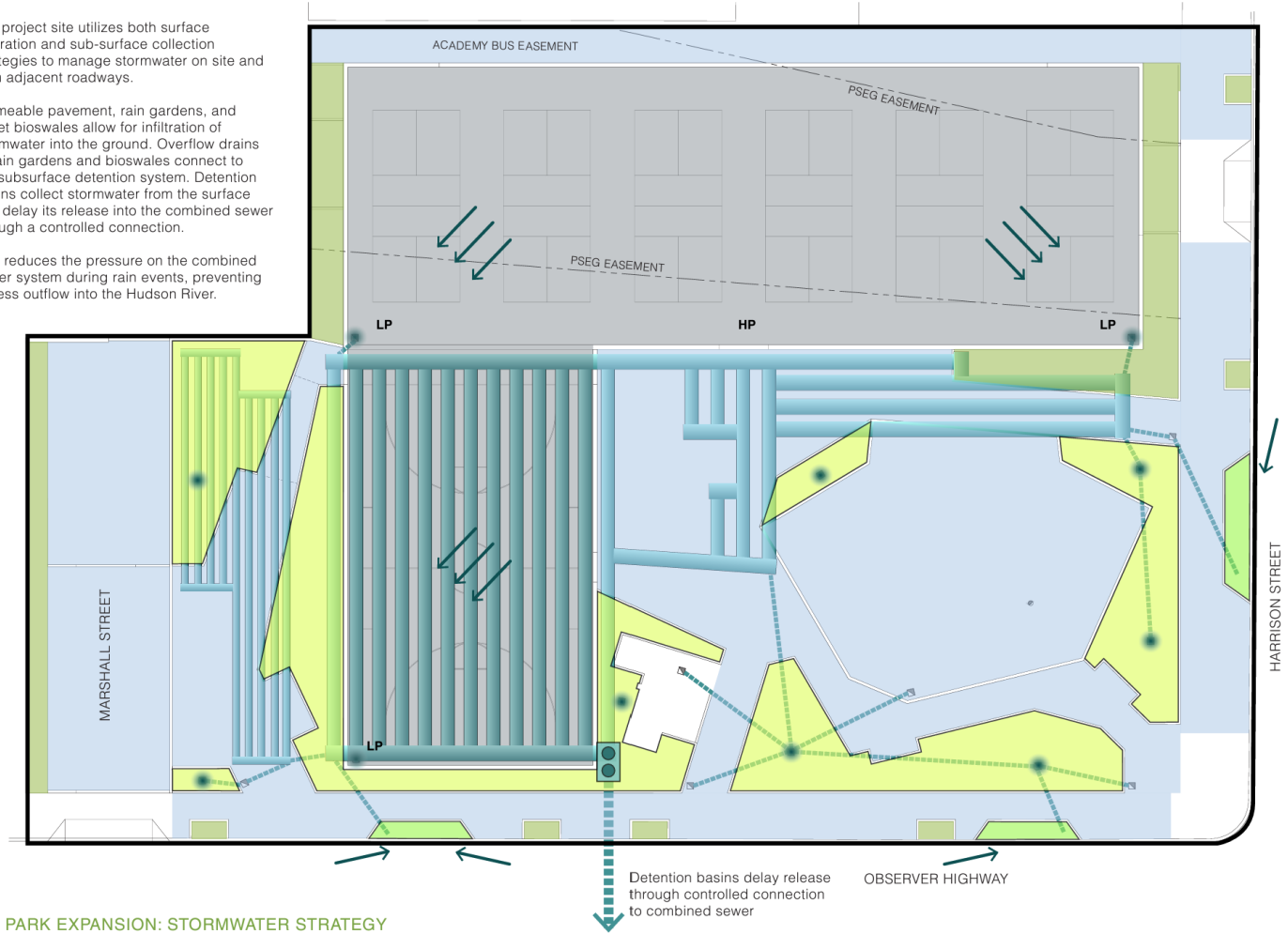
Block 10 (SW Park Expansion)

STORMWATER STRATEGY

The project site utilizes both surface infiltration and sub-surface collection strategies to manage stormwater on site and from adjacent roadways.

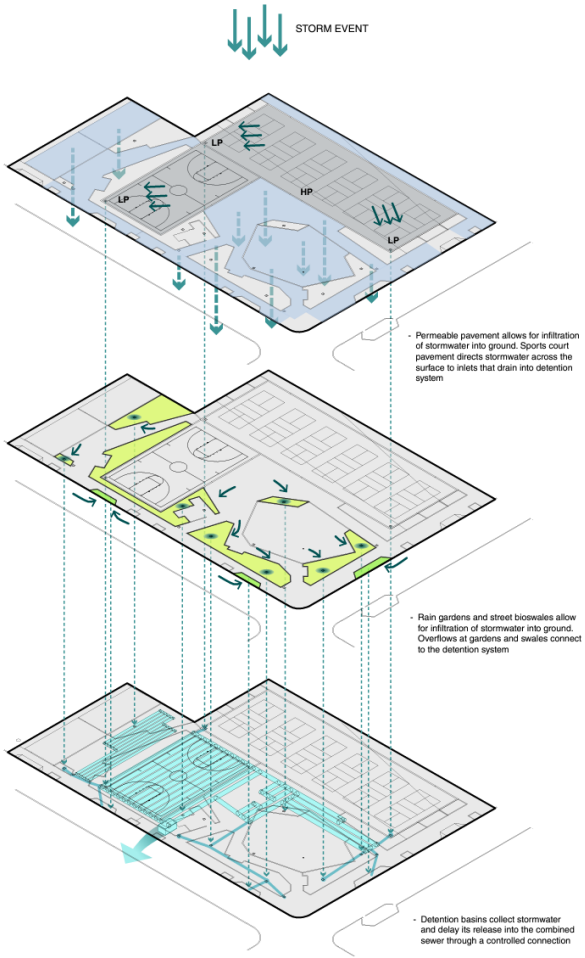
Permeable pavement, rain gardens, and street bioswales allow for infiltration of stormwater into the ground. Overflow drains at rain gardens and bioswales connect to the subsurface detention system. Detention basins collect stormwater from the surface and delay its release into the combined sewer through a controlled connection.

This reduces the pressure on the combined sewer system during rain events, preventing excess outflow into the Hudson River.



SW PARK EXPANSION: STORMWATER STRATEGY

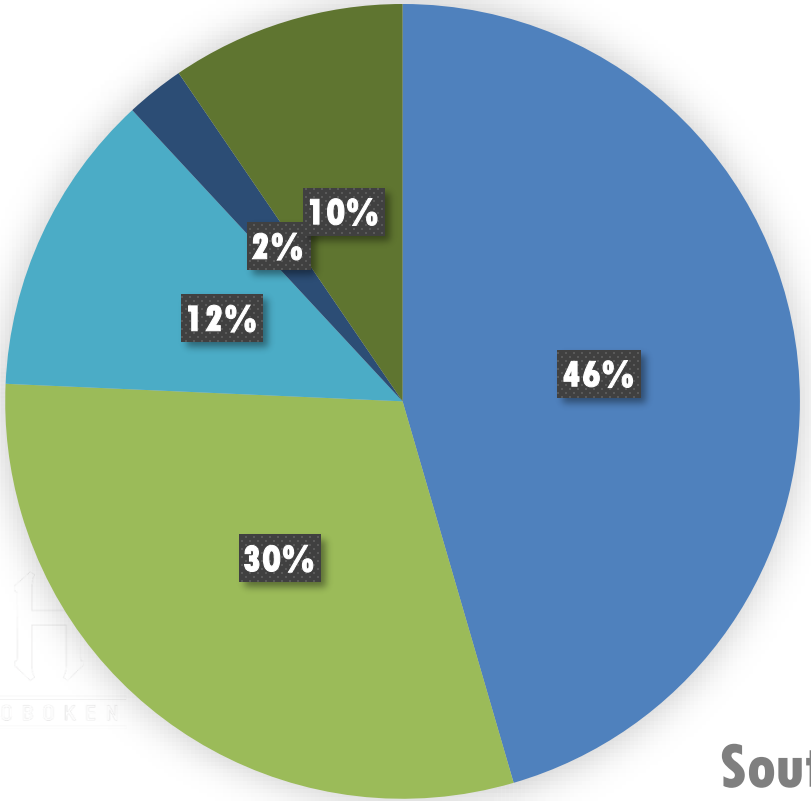
Apr 2023


STORM EVENT
LP
LP
HP
LP
- Permeable pavement allows for infiltration of stormwater into ground. Sports court pavement directs stormwater across the surface to inlets that drain into detention system
- Rain gardens and street bioswales allow for infiltration of stormwater into ground. Overflows at gardens and swales connect to the detention system
- Detention basins collect stormwater and delay its release into the combined sewer through a controlled connection


ACADEMY BUS EASEMENT
PSEG EASEMENT
PSEG UNDERGROUND UTILITY
PSEG EASEMENT
MARSHALL STREET
HARRISON STREET
OBSERVER HIGHWAY
1
2
3
5
6
7
8


MARSHALL ST ENTRANCE
FULL COURT BASKETBALL
SHADED PLAZA
PICKLEBALL COURTS
OBSERVER HWY ENTRANCE
PLAYGROUND
HARRISON ST. ENTRANCE
OBSERVER HWY
HARRISON ST
HARRISON / OBSERVER CORNER ENTRANCE

Maximizing Funding Sources



- Municipal Open Space Trust Fund
- FEMA BRIC
- NJ Green Acres
- NJ Urban Parks
- I-Bank Principal Forgiveness

Southwest Park Expansion Cost Estimate

Benefit Cost Analysis

Map Marker ▲	Mitigation Title	Property Type	Hazard	Benefits (B)	Costs (C)	BCR (B/C)	Benefits (B)	Costs (C)	BCR (B/C)
1	Drainage Improvement @ 58 Jackson St, Hoboken, New Jersey, 07030		DFA - Riverine Flood	$ 20,775,200	$ 16,961,353	1.22	$ 30,169,441	$ 17,198,670	1.75
2	Permeable Pavement @ 58 Jackson St, Hoboken, New Jersey, 07030		Riverine Flood	$ 76,674	$ 283,000	0.27	$ 121,109	$ 283,000	0.43
3	Bioretention @ 58 Jackson St, Hoboken, New Jersey, 07030		Riverine Flood	$ 278,404	$ 84,300	3.30	$ 462,024	$ 84,300	5.48
4	Urban Trees @ 58 Jackson St, Hoboken, New Jersey, 07030		Riverine Flood	$ 799,288	$ 109,609	7.29	$ 1,194,322	$ 109,609	10.90
TOTAL (SELECTED)				**$ 21,929,566**	**$ 17,438,262**	**1.26**	**$ 31,946,896**	**$ 17,675,579**	**1.81**

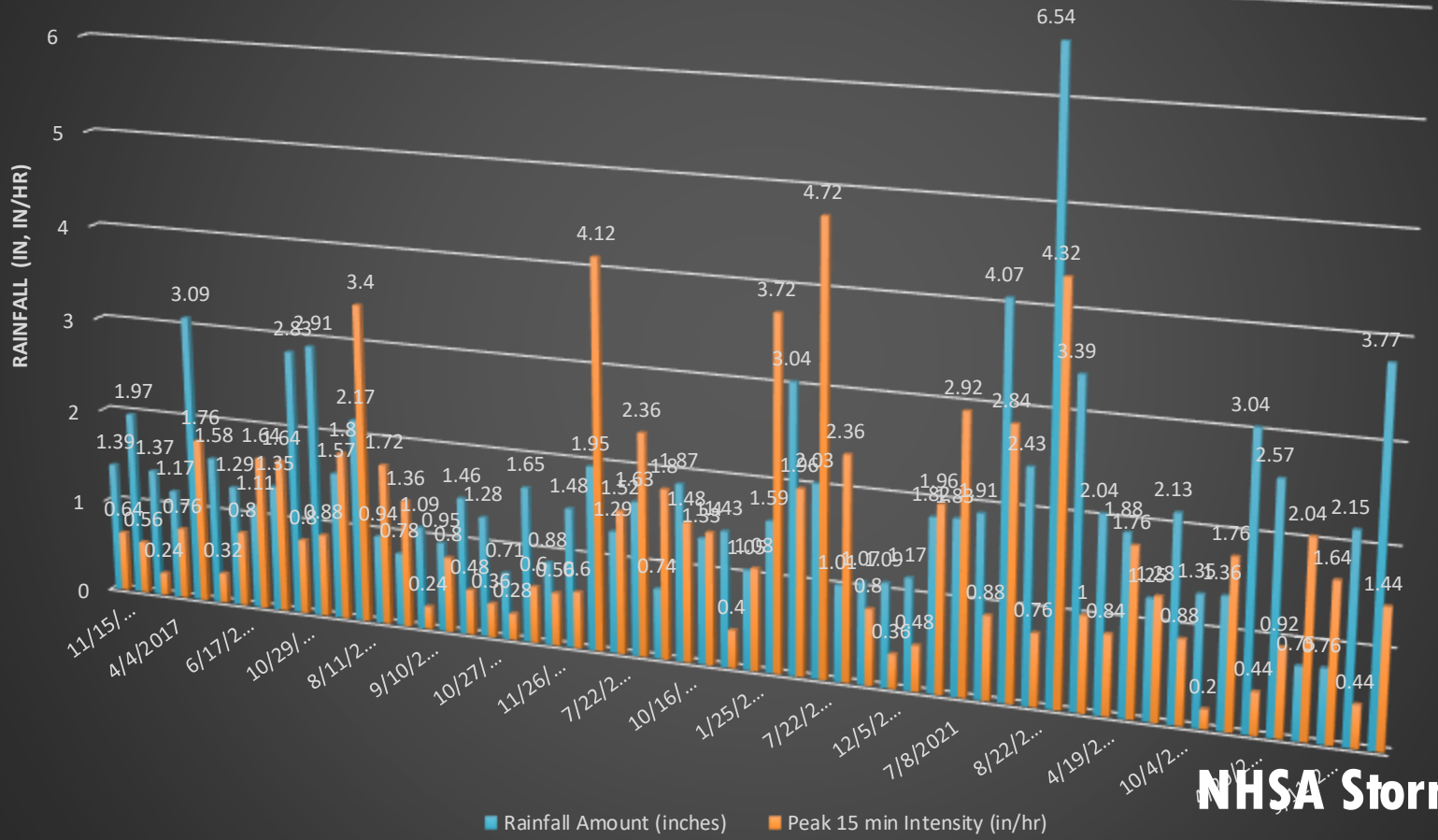
Southwest Park Expansion BCA

Procurement

Project	Northwest Resiliency Park Bid
Municiaplity	City of Hoboken
County	Hudson County

Item #	Description	Quantity	Unit	Contractor 1 Unit Price	Contractor 1 Amount	Contractor 2 Unit Price	Contractor 2 Amount
A .02	Furnish and Install Right-of-Way striping per plan including but not limited to traffic, bike, parking, stop bars, etc.	1	LS	$ 20,822.00	$ 20,822.00	$ 21,000.00	$ 21,000.00
A .03	Furnish and Install Right-of-Way 2-inch milling and paving, curb to curb, complete	7,125	SY	$ 17.00	$ 121,125.00	$ 36.00	$ 256,500.00
A 0.03.1	Furnish and Install Right-of-Way 4" base repair milling and paving, curb to curb, complete	2,300	SY	$ 32.00	$ 73,600.00	$ 44.00	$ 101,200.00
A .04	Furnish and Install Additional Traffic Signage, complete	30	EA	$ 255.00	$ 7,650.00	$ 275.00	$ 8,250.00
A .05	Furnish and Install Fencing in Playground Area per landscape drawings, complete	1	LS	$ 45,000.00	$ 45,000.00	$ 58,000.00	$ 58,000.00
A .06	Provide Site Maintenance (2-years), complete	1	LS	$ 330,000.00	$ 330,000.00	$ 158,000.00	$ 158,000.00
A	Alternates	Subtotal:			$ 1,027,197.00		$ 777,950.00

Measure what Matters



NHSA Storm Data

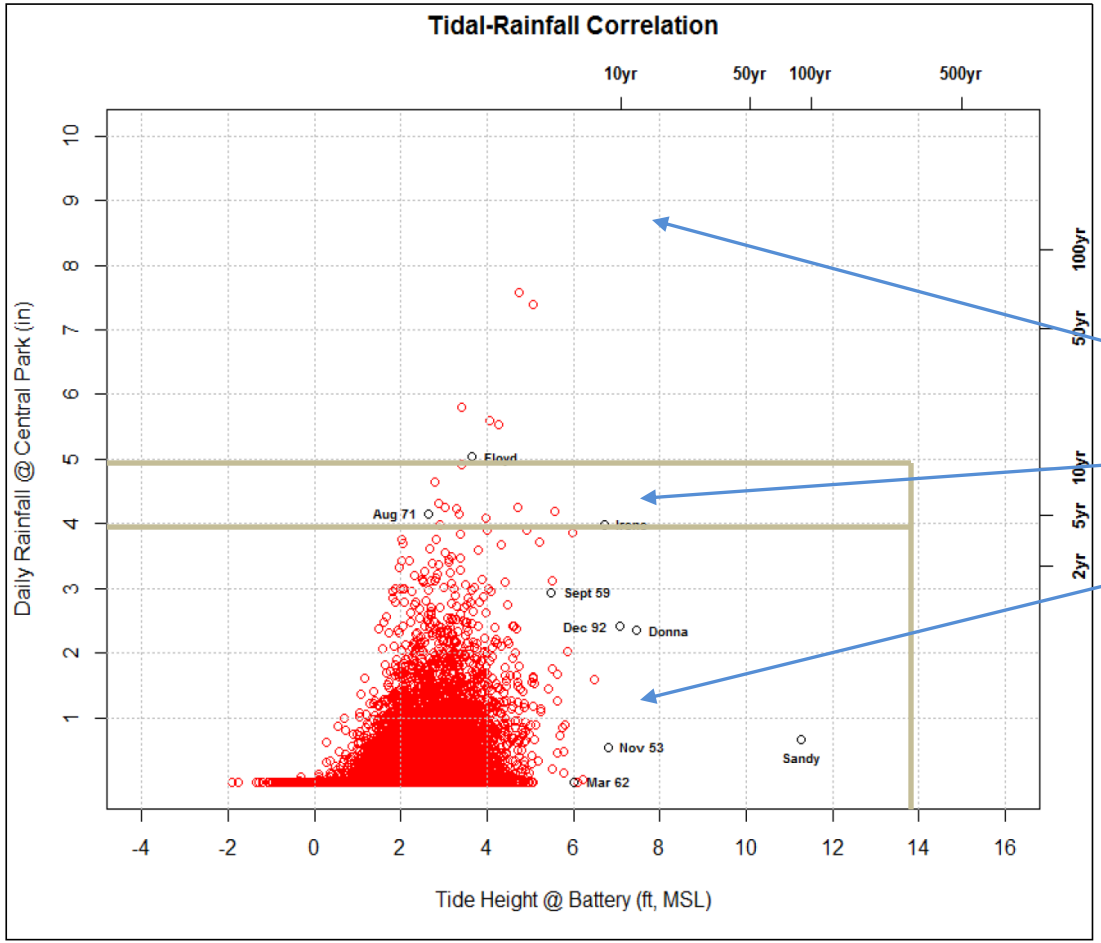


Figure 2: Tidal-rainfall correlation at Central Park station

Avoid – Buyouts, Evacuate

Minimize – Harden, Close Down

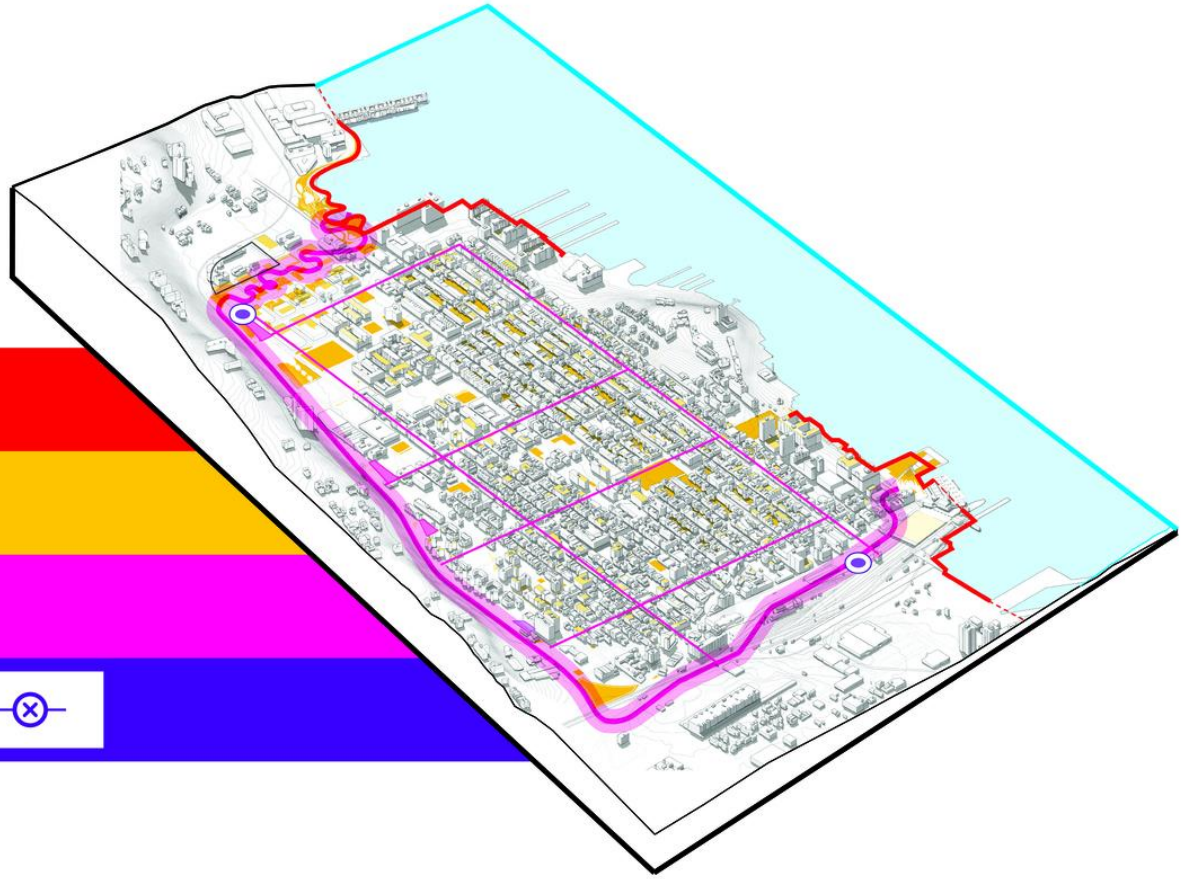
Mitigate – Modify Floodplain, Building practices, Policies, Ordinances, Codes

RESIST

DELAY

STORE

DISCHARGE



Solar for Schools and Municipalities

Carrie Fenn – C & I *Solar Project Consultant*

SunCommon Commercial Solar

SunCommon believes everyone has a right to healthy environment and a brighter future – and renewable energy is where it starts.

Solar Siting

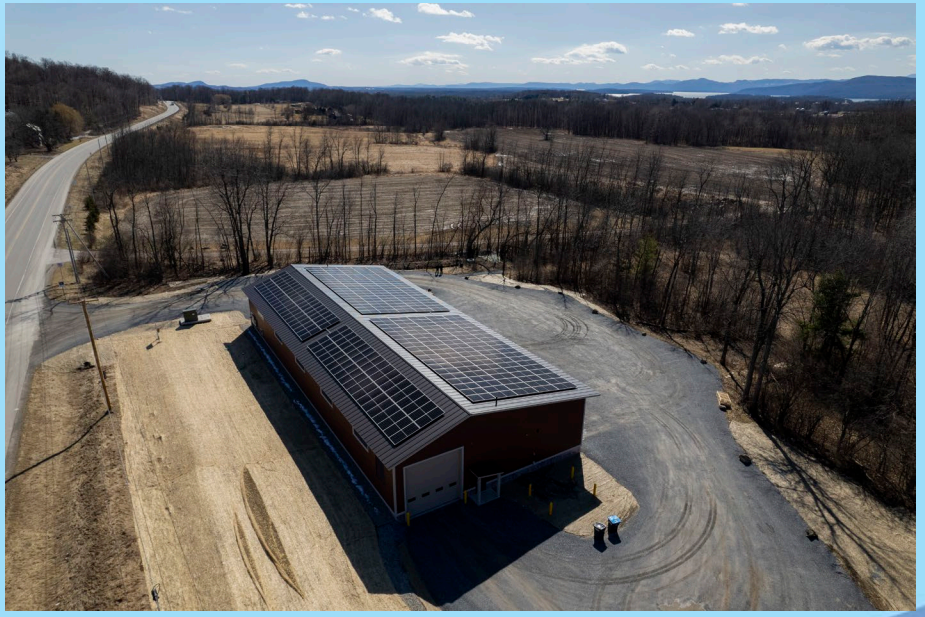
- East, West or South facing roofs
- Free of obstructions for 60 feet
- Asphalt shingle, rubber membrane or standing seam roof
- Roof material should be less than 15 years old (newer the better!)
- Additional structural capacity of 2-10 PSF
- Wide open parking lots!

Vermont Net Metering

- Power company credits utility account for production
- Draw credits down at night and winter
- Credits good for 1 year from date of production
- Credits can be shared with any account in the same utility- allocations may be changed once per quarter
- Net metering system size limited to 500kw ac for all account holders with the exception of school districts, limited to 1MW

Direct Pay with Inflation Reduction Act

- Tax Exempt and Government entities receive a 30% direct payment from the Federal Government
- Project must be registered prior to the filing of the tax return, after install
- Projects over 1MW have prevailing wage and apprenticeship requirements (will rarely apply in Vermont)



Charlotte Town Garage

- **129kW DC Array**
- **Fossil fuel free building**
- **$21,863 per year in utility offsets**
- **94% of Town utility costs covered by solar**
- **$400K in taxpayer savings over warrantied life of system**

RI Infrastructure Bank

RHODE ISLAND
INFRASTRUCTURE BANK

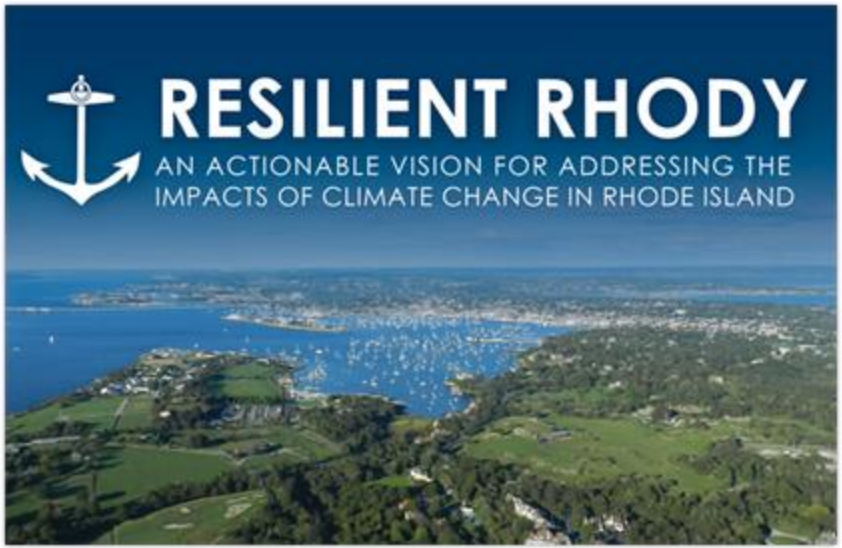
April 2024

About the Infrastructure Bank

Rhode Island's centralized hub of local infrastructure investment since 1989

Since inception, the Bank has invested over $2.7 billion into Rhode Island's infrastructure

State of Rhode Island
Municipal Resiliency



Resilient Rhody, 2018

2023 Executive Order – Planning & Policy, Funding & Implementation

- State Resilience Plan Update
- Statewide Resilience Program
  - Municipal Resilience Program 2.0
- State Resilience Grants
- Federal Funding for Resilience
  - NOAA CRRC Application
- State Policy & Standards for Resilience

Resilience in Rhode Island - A Team Effort

Rhode Island Resilience 2023 – Executive Order 23-0

*The Department of Environmental Management shall recruit and hire an individual to serve as the **Rhode Island Chief Resilience Officer***

- **Coordinate resilience efforts across state agencies, municipalities, businesses, and other organizations** and to advise the RI Executive Climate Change Coordinating Council (RIEC4), established pursuant to R.I. General Laws § 42-6.2-1, on the status and effectiveness of those efforts;
- **Draft state policies** on resilience **and implement such policies** under the direction of the RIEC4;
- Serve as the **primary voice and advocate** for state actions on resilience;
- Build upon the **planning assistance** provided to municipalities by **MRP workshops, in coordination with partner agencies;**
- Work closely with RIIB on the **MRP Action Grants** and the planning and financing of other resilience projects;
- Work with RIIB and CRMC on the implementation of the **OSCAR grant program**;
- **Plan and implement projects** to protect and restore the habitat and recreational resources owned or under the stewardship of DEM;
- Aggressively **track and apply for federal grants** to fund resilience efforts across Rhode Island;
- **Coordinate resilience efforts with decarbonization** programs, activities, and policies taken in accordance with the RI Act on Climate; and
- **Provide biennial reports** to the RIEC4, the Governor, the Speaker of the House of Representatives, and the President of the Senate on the State of Resilience in Rhode Island, with the first report to be submitted by December 31, 2024.

Municipal Resilience Program Overview

- **MRP Workshops:**
  - **Identify** community hazards, strengths, vulnerabilities, and priority actions
  - **Develop** localized resilience strategies
  - **1600+ Resilience Actions** identified to date
- **MRP Action Grants:**
  - **Fund** design and construction of capital projects with resilience benefits
  - **$19.4mm in Action Grant funding** awarded to date
- **MRP Project Pipeline:**
  - **Support** municipalities to identify further funding/financing sources

MRP Participating Municipalities

90% of Rhode Island Municipalities now participating!

2019 | *Westerly, South Kingstown, Portsmouth, Barrington & Warren*

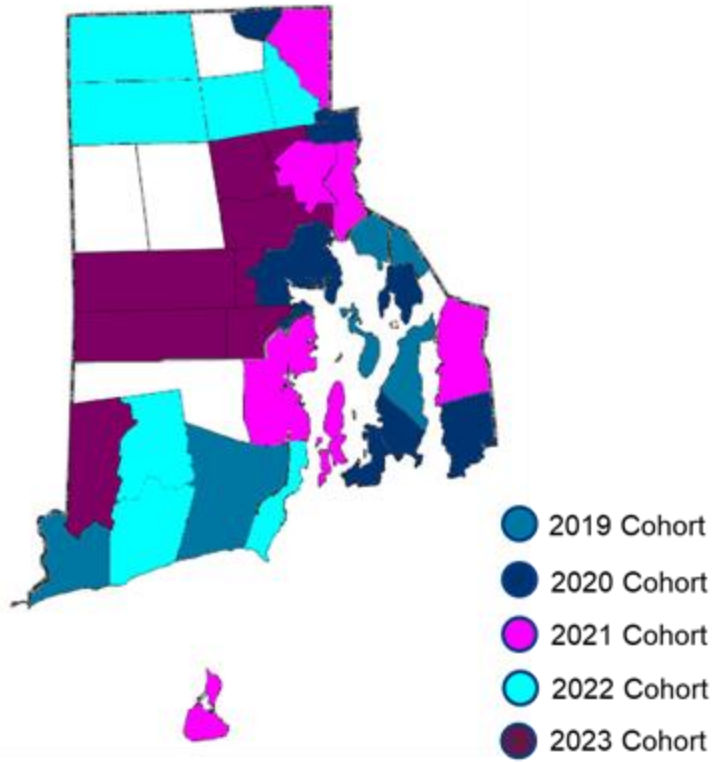
2020 | *Bristol, Woonsocket, Little Compton, Warwick, Pawtucket & Central Falls, Newport, Middletown*

2021 | *Cumberland, East Providence, Jamestown, New Shoreham, North Kingstown, Providence, Tiverton*

2022 | *Burrillville, Charlestown, Glocester, Lincoln, Narragansett, Richmond, Smithfield*

2023 | *Coventry, Cranston, East Greenwich, Hopkinton, Johnston, North Providence, West Greenwich, West Warwick*

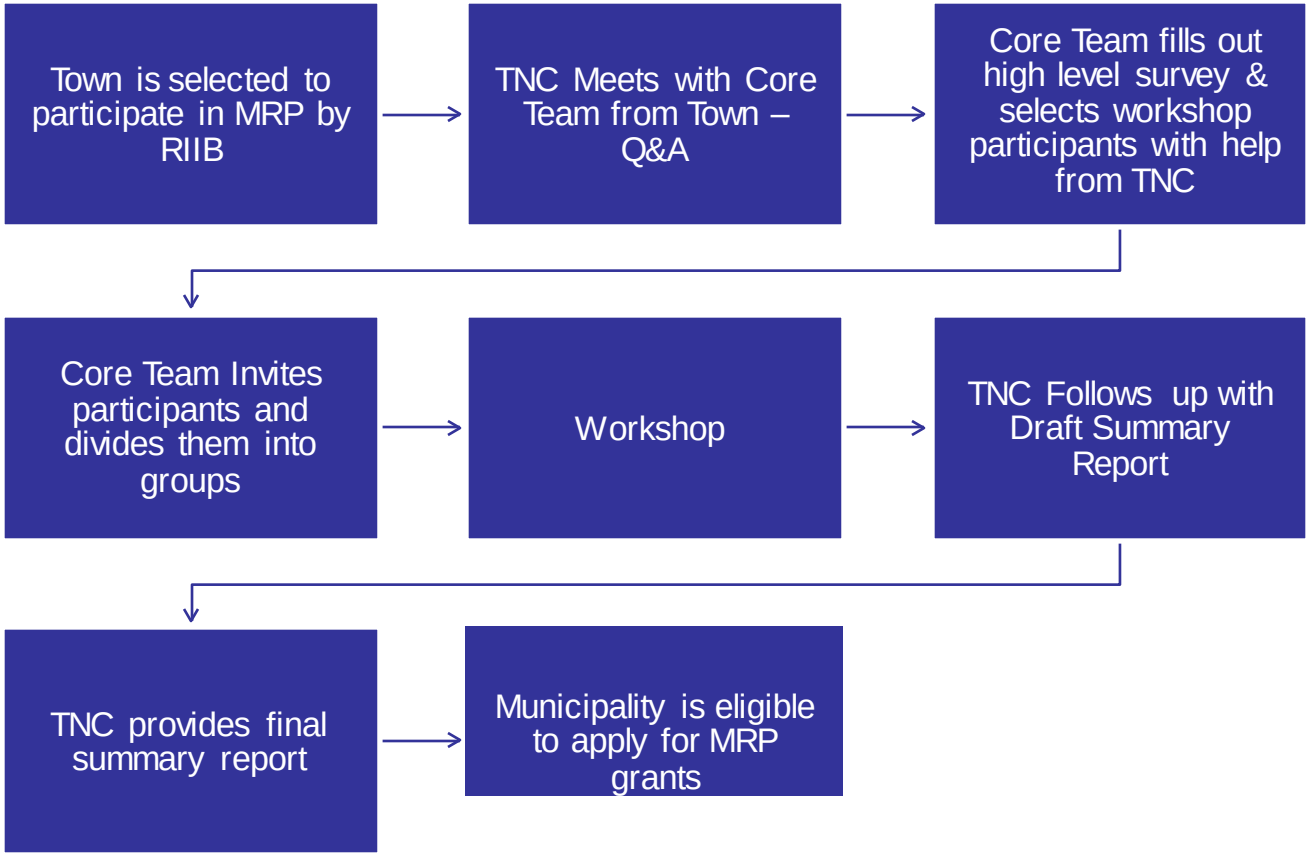
2024 | *Foster… and counting!*



Workshop Objectives

- ✓ Understand **connections** – ongoing issues, hazards, and activities in each town.
- ✓ Identify **strengths & vulnerabilities**.
- ✓ **Identify priority actions** to improve resilience.
- ✓ Opportunities to **advance priority actions**.

Workshop Process



MRP Action Grants

Overview: **MRP Action Grants enable participating municipalities to implement climate resilience projects identified in their MRP workshops**

Key Facts:

- **Grant –** Does not have to be repaid; no interest rates or administrative fees.
- **Match –** 25% of Grant Dollars Awarded (Up to half can be in-kind / staff time – effectively 12.5% cash match).
- **Eligible Entities –** Municipalities who have completed their MRP Workshop.
- **Eligible Projects –** Design and construction. Available to projects that tackle climate change vulnerabilities with sustainable approaches and long-term vision.
- **Grant Agreement** is required which identifies project timeline and progress reporting
- RIIB assigns an **engineering technical review** to authorize payments

Watershed Restoration at Bristol Golf Course & Tupelo Street – Constructed with MRP Action Grant Funds by Town of Bristol

MRP Funding Options

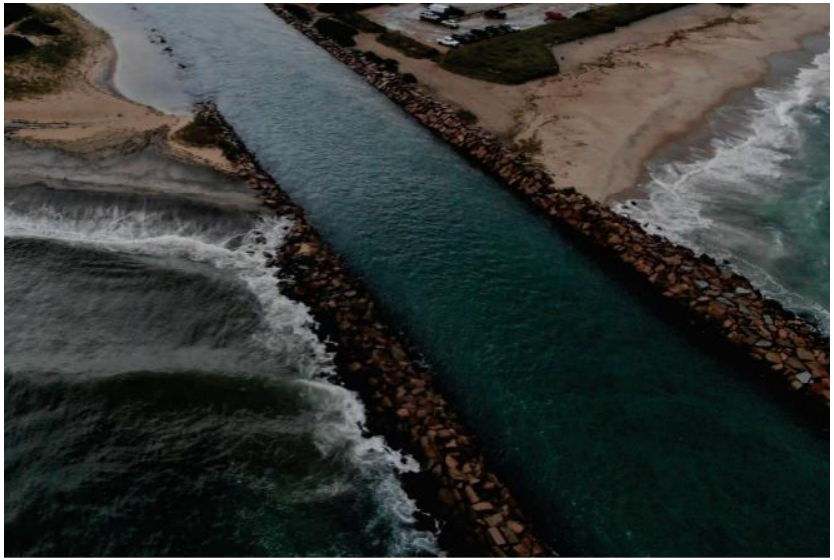
- $16M from 2022 Green Bond
  - $52M in requests from applicants demonstrated strong demand in 2023 RFP
- $12M grants awarded in January 2024
  - 20 awards to 19 communities
  - Amounts ranging from $87,000 to $2.1M
- Next RFP for remaining $4M expected later in 2024
- New funding proposed $10MM 2024 Green Bond
  - Subject to legislative and voter approval
- Proposed creation of a revolving loan fund program to fund larger scale projects
  - Will ensure reliable and recurring funding for resiliency projects which will enable better planning
  - Will enable communities to be pro-active to address root causes rather than simply treating symptoms
  - Will safeguard fiscal well being as well as promoting sustainable infrastructure
  - Amid rising costs, states scramble to budget for natural disasters - Route Fifty (route-fifty.com)
  - Community Finance Brief: Beyond Averages: A New Era in Climate Risk Assessment for Local Leaders — CSG LLC (courtstreetgroup.com)
  - Planning for Uncertainty (gfoa.org)

MRP Action Grant Funded Projects

Newport King Park Shoreline Resilience Project

- Largest MRP award made to date - $2 Million+
- Project will expand the beach and public access, include seawater tolerant plantings along the beach to fight erosion and flooding, regrading of the shoreline, and repairs to portions of the seawall.
- Project will reduce flooding due to storm surge and make the beach more resilient to erosion.

Charlestown Breachway Improvements Project



- Structural improvements to increase shoreline resiliency
- Funds for design/engineering for breachway barriers which will hold against storm surge and mitigate flooding along areas adjacent to the breachway

Pawtucket-Central Falls Stormwater Parklets Project

- Green Infrastructure in their new TOD District. Area is 86% impervious surfaces.
- Permeable pavers, bio-retention beds, and street trees
- Curb bump outs and seating areas to make the area more pedestrian friendly

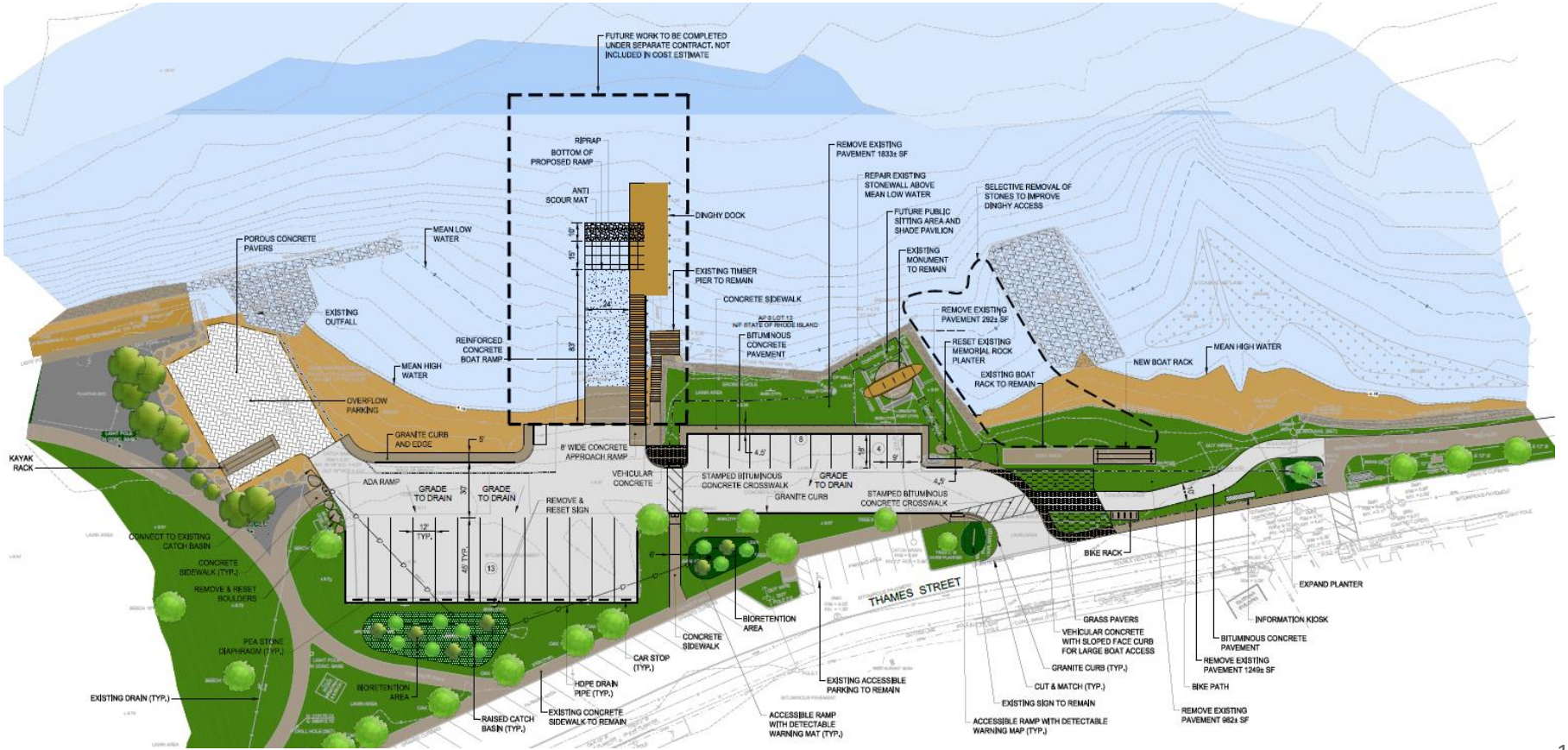
A. VIEW OF EXISTING PINE AND CONANT ST INTERSECTION

C. AERIAL VIEW OF PROPOSED PARKLET

B. VIEW OF PROPOSED PARKLET

D. AERIAL VIEW OF PROPOSED PARKLET

Bristol Independence Park Improvements Project



Providence Public Street Waterfront Access Project

Public Steet has three distinct areas:

(A) Wider portion of Public St. consisting of a paved asphalt street. Businesses located on the block require vehicle access and parking.

(B) Narrower unpaved portion of the right-of-way extending to the waterfront. This is a narrow stretch with limited vehicle activity.

(C) Waterfront area next to Public Street. Includes mudflat at low-tide. Location of proposed recreational doc.