North Carolina Sentinel Landscape Committee

DECEMBER 9, 2025



Agenda

1:30 PM	Welcome and Introduction Committee Member Roll Call Voting Members • Steve Troxler, Commissioner, NC Department of Agriculture and Consumer Services • Rick Long, Installation Coordinator, NC Department of Military and Veterans Affairs • Jeff Michael, Deputy Secretary, NC Department of Natural and Cultural Resources • Kyle Briggs, Executive Director, NC Wildlife Resources Commission • Dr. Myron F. Floyd, Dean, College of Natural Resources, NC State University • Chester Lowder, Sentinel Landscape Partnership Liaison • Jeremy Goodwin, State Roadside Environmental Engineer, NC Department of Transportation Ex Officio Members • Dr. Chris Baillie, Interim Partnership Coordinator • Jaime Simon. External Affairs and Communication, DoD REPI Program	Steve Troxler *Commissioner of Agriculture* Veronica Jamison *Farmland Preservation Office Manager*
1:35 PM	Reading of Ethics Reminder	Steve Troxler *Commissioner of Agriculture*
1:36 PM	Approval of Minutes for September 16, 2025	Steve Troxler *Commissioner of Agriculture*
1:40 PM	Committee Member Reports on NC Sentinel Landscape Activities • NCDA&CS Report • NC Department of Military and Veterans Affairs Report • NC Department of Natural and Cultural Resources Report • NC Wildlife Resources Commission Report • College of Natural Resources - NCSU Report • Sentinel Landscape Partnership Report • NC Department of Transportation • Eastern North Carolina Sentinel Landscapes Coordinator • United States Department of Defense Readiness and Environmental Protection Integration Program	 Evan Davis, *Farmland Preservation Director* Rick Long, *Installation Coordinator* Jeff Michael, *Deputy Secretary* Kyle Briggs, *Executive Director* Dr. Myron F. Floyd, *Dean* Chester Lowder, *Partnership Liaison* Jeremy Goodwin, *State Roadside Environmental Engineer* Dr. Chris Baillie, *Interim Partnership Coordinator* Jaime Simon. *External Affairs and Communication, DoD REPI Program*
2:30 PM	Eastern North Carolina Sentinel Landscape Partner Spotlight: NC State Coastal Dynamics Design Lab	Andrew Fox, *Director and Co-Founder*
2:45 PM	Additional Sentinel Landscape Committee Business Items • Nomination and Approval of Military Installation Ex Officio Seats and Members	Steve Troxler *Commissioner of Agriculture*
3:00 PM	Public Comments	Public Attendees
3:05 PM	Next Meeting, Assignments, and Adjournment	Steve Troxler *Commissioner of Agriculture*

Committee Member Roll Call

Voting Members

- Steve Troxler, Commissioner, NC Department of Agriculture and Consumer Services
- Rick Long, Installation Coordinator, NC Department of Military and Veterans Affairs
- Jeff Michael, Deputy Secretary, NC Department of Natural and Cultural Resources
- Kyle Briggs, Executive Director, NC Wildlife Resources Commission
- Dr. Myron F. Floyd, Dean, College of Natural Resources - NCSU
- Chester Lowder, Sentinel Landscape Partnership Liaison
- Jeremy Goodwin, State Roadside Environmental Engineer, NC Department of Transportation

Ex Officio

- Dr. Chris Baillie, Interim Partnership Coordinator
- Jaime Simon. External Affairs and Communication, DoD REPI Program

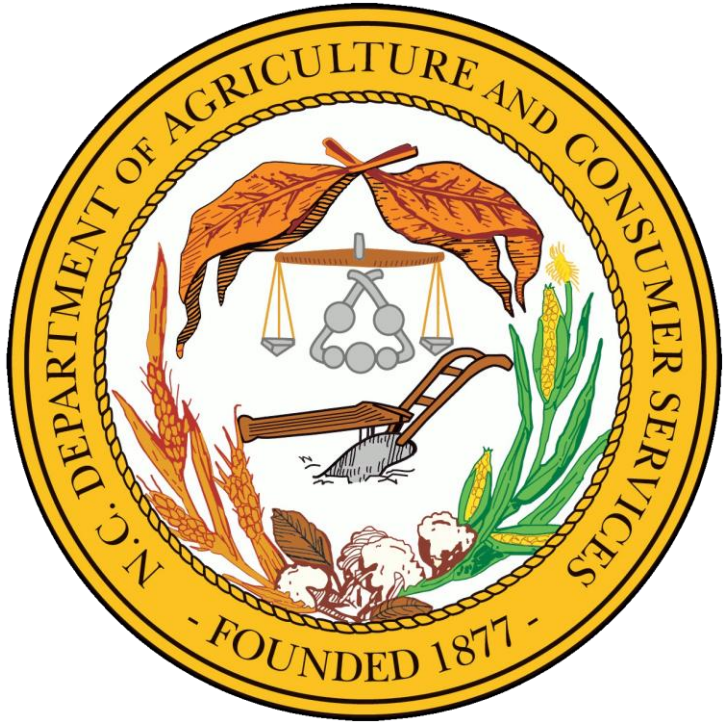
Ethics Reminder

- *Under the State Government Ethics Act, the chairman is required to remind all members of their duty to avoid conflicts of interest or appearances of conflicts of interest. If you have any conflict or appearance of conflict of interest with respect to any item on the agenda, please state this for the record and refrain from inappropriate participation on that item.*

Approval of Minutes

- September 16, 2025

NC Department of Agriculture and Consumer Services Report



Military Partnership Agricultural Conservation Easements – Open Contracts

Farm Name	Military Partner	County	Grantee	Length	Acres
Boyd Farm	USAF-SJAFB	Washington	Working Lands Trust	Perpetual	1,164.08
Futral Farm	MCIEAST-MCB Camp Lejeune	Onslow	Working Lands Trust	Perpetual	465.13
				Total Acres	**1,629.21**

Completed Military Partnership Agricultural Conservation Easements Since 2016

Military Partner	Acres Conserved	Easements Recorded	Counties
USAF	10,905.494	20	Bertie, Hyde, Tyrrell, Washington
Navy/USMC	3,982.161	7	Jones, Pamlico
Totals	**14,887.655**	**27**	**6**

Easement Purchase Funding Summary for Completed Military Partnership Agricultural Conservation Easements

NCDA&CS Easement Purchase Funds	REPI (Military) Easement Purchase Funds	USDA Easement Purchase Funds	Landowner Donation of Easement Value	Total Easement Purchase Value
$11,006,794.34	$13,677,606.21	$5,063,613.78	$3,038,641.24	**$32,786,655.57**

MOU with NC MAC

Project	Award	Expenses thru October 2025	Balance
NCDA&CS Project	$40,100.00	$36,846.29	$3,253.71
Coordinator Position	$120,305.60	$0.00	$120,305.60
WLT Project	$53,467.00	$49,704.98	$3,762.02
NCFSWC Project	$53,467.00	$53,467.00	$0.00
TOTAL	**$267,339.60**	**$140,018.27**	**$127,321.33**

NC Department of Military and Veterans Affairs Report



NC Department of Natural and Cultural Resources Report



North Carolina Department of Natural and Cultural Resources

North Carolina Land and Water Fund (NCLWF)

The NCLWF Board has awarded $36 million in 2025 grants:

- **9,300 acres protected**
  - **6,250 acres to be added to NC Wildlife Resources Commission game lands**
  - **2,360 acres in local parks and preserves**

- **$5.8 million on 1,664 acres protecting the military mission near M.C.A.S. Cherry Point, U.S. Army Fort Bragg, U.S.M.C. Camp Lejeune, and U.S.A.F. Seymour Johnson.**

North Carolina Department of Natural and Cultural Resources

NCLWF 2025 projects funded in ENCSL Counties

Project	Amount Funded	Area (acres)	County
2025-061 - NCWRC - Shutt Tract - Rocky Ford Branch	$187,100	118	Richmond
2025-040 - NCCF - Turkey Creek Riparian Buffer	$112,615	101	Onslow
2025-023 - Kill Devil Hills - Fresh Pond - Nags Head Woods	$1,570,735	45	Dare
2025-080 - TLC - Neuse Islands Wilderness	$2,602,555	799	Johnston
2025-038 - NCCF - North River Headwaters	$638,998	268	Carteret
2025-034 - TNC - Saus Tract - Holly Shelter	$494,507	218	Pender
2025-033 - TNC - King Tract - Holly Shelter	$266,159	115	Pender
Totals	$5,872,669	1,664	

Atlantic Conservation Coalition

A Natural and Working Lands focused
Climate Pollution Reduction Grant (CPRG) initiative

Sara Ward, ACC Director (sara.ward@dncr.nc.gov)
NC Sentinel Landscape Partnership Meeting– December 9, 2025

Atlantic Conservation Coalition Initiative (ACC)

ACC Project Types

ACC projects will include a mix of activities such as land conservation, habitat restoration, and improved land management.



Coastal Habitats Projects
Restoring and creating wetlands, and installing living shorelines to protect coastlines, reduce flooding, and support biodiversity.



Peatland Projects
Rewetting degraded landscapes and replanting native vegetation to restore natural hydrology, improve water quality, and prevent wildfires.



Forest and Tree Projects
Reforesting land, managing forests more sustainably, and planting urban trees to enhance ecosystem health, reduce heat, and build long-term resilience.

ACC High Level Goals

NC DNCR administers the grant on behalf of the regional coalition to:

$421 million over 5 years

- $50 million each in MD, VA, NC, and SC
- $200 million to The Nature Conservancy across region

Reduce GHGs	Community Benefits	Maximize funding	Innovative and Scalable
Implement ambitious measures that will achieve significant cumulative greenhouse gas (GHG) reductions by 2030 and beyond	Achieve substantial community benefits (such as reduction of criteria and hazardous air pollutants), particularly in low-income and disadvantaged communities	Complement other funding sources to maximize these GHG reductions and community benefits	Pursue innovative policies and programs that are replicable and can be "scaled up" across multiple jurisdictions

Funded by the U.S. Environmental Protection Agency (EPA), the ACC includes five coalition members and 18 partner organizations committed to advancing nature-based solutions through on-the-ground action. NC DNCR is administrative lead.

ACC Year 1 Accomplishments

- ***Finalized Grant Agreement and fully obligated funding***
- ***Subaward Agreements executed between DNCR and Coalition***
- ***Funding Spent as of September 30, 2025: $6,653,819***
- ***Acquired 4,000 acres of land in NC and MD for peatland and forest restoration***
- ***27 stakeholder and community engagement activities that reached over 1,000 community members and SMEs***



TNC acquired a 2,727- acre Pamlico County property, known as "Light Ground Pocosin," that contains critical natural pocosin habitat.

Launched the ACC Dashboard

Duke
NICHOLAS INSTITUTE
for ENERGY, ENVIRONMENT
& SUSTAINABILITY

Atlantic Conservation Coalition Dashboard

Overview | Progress

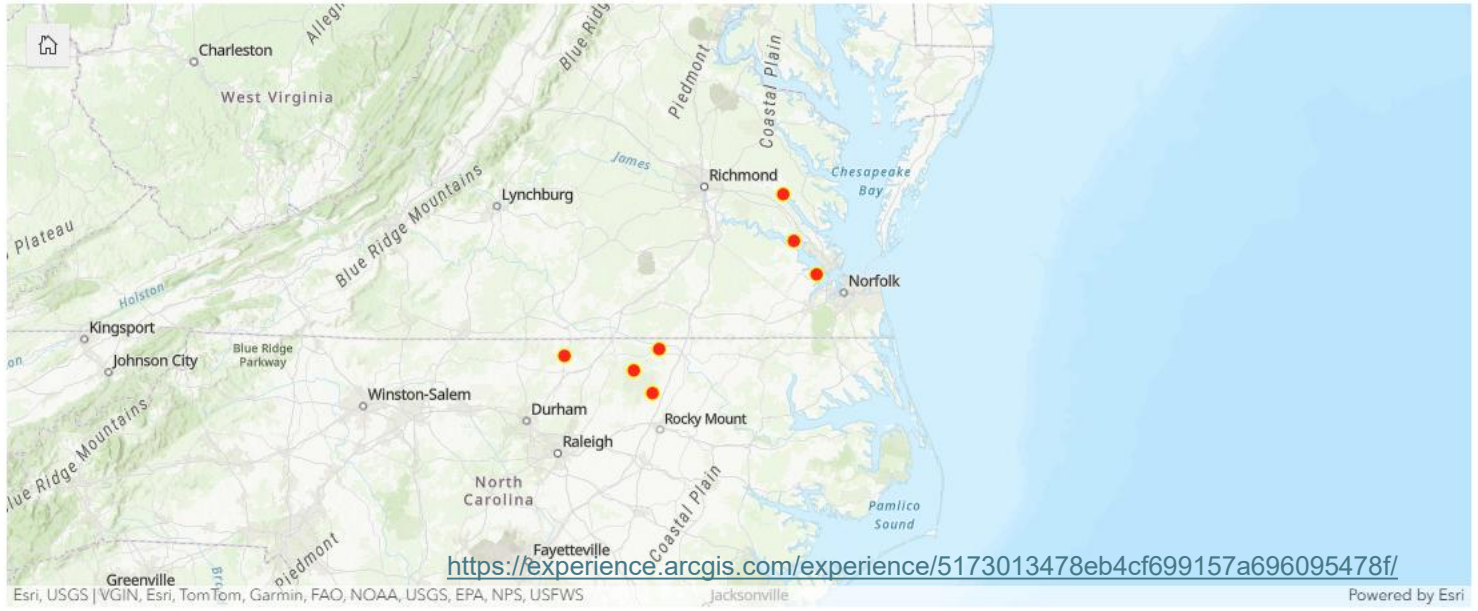
Updated June 2025. Check back in Fall 2025 for the latest progress.

Project Pipeline Stages	Opportunity Assessment	Commitment	Planning & Design	Approvals & Compliance	Implementation
	50 Sites	2 Sites 2911 Acres	2 Sites 436 Acres	1 Site 333 Acres	1 Site 406 Acres

Explore the ACC Project Sites

The sites displayed on the map are updated at the discretion of our partner organizations, based on project progress and privacy considerations. The number of sites shown on the pipeline above might not match the number of sites shown on the map.

- Project Site: Ware Creek WMA
- Project Site: Ragged Island WMA Shoreline Restoration
- Project Site: Hog Island WMA Shoreline Protection and Restoration
- Project Site: Tree Planting Site 1
- Project Site: Tree Planting 2
- Project Site: Forest Management Plan 3

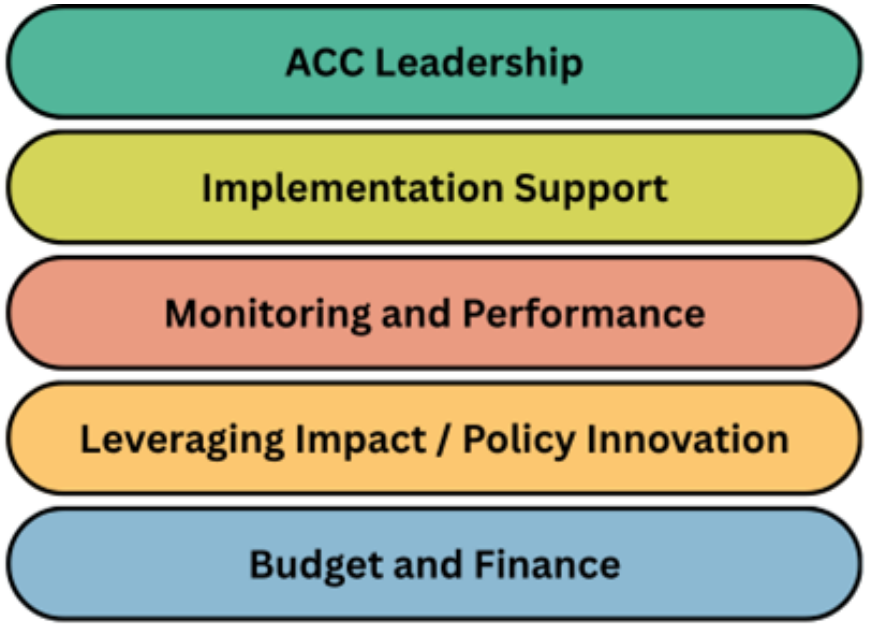


https://experience.arcgis.com/experience/5173013478eb4cf699157a696095478f/

Our Coalition Team is Growing!!!

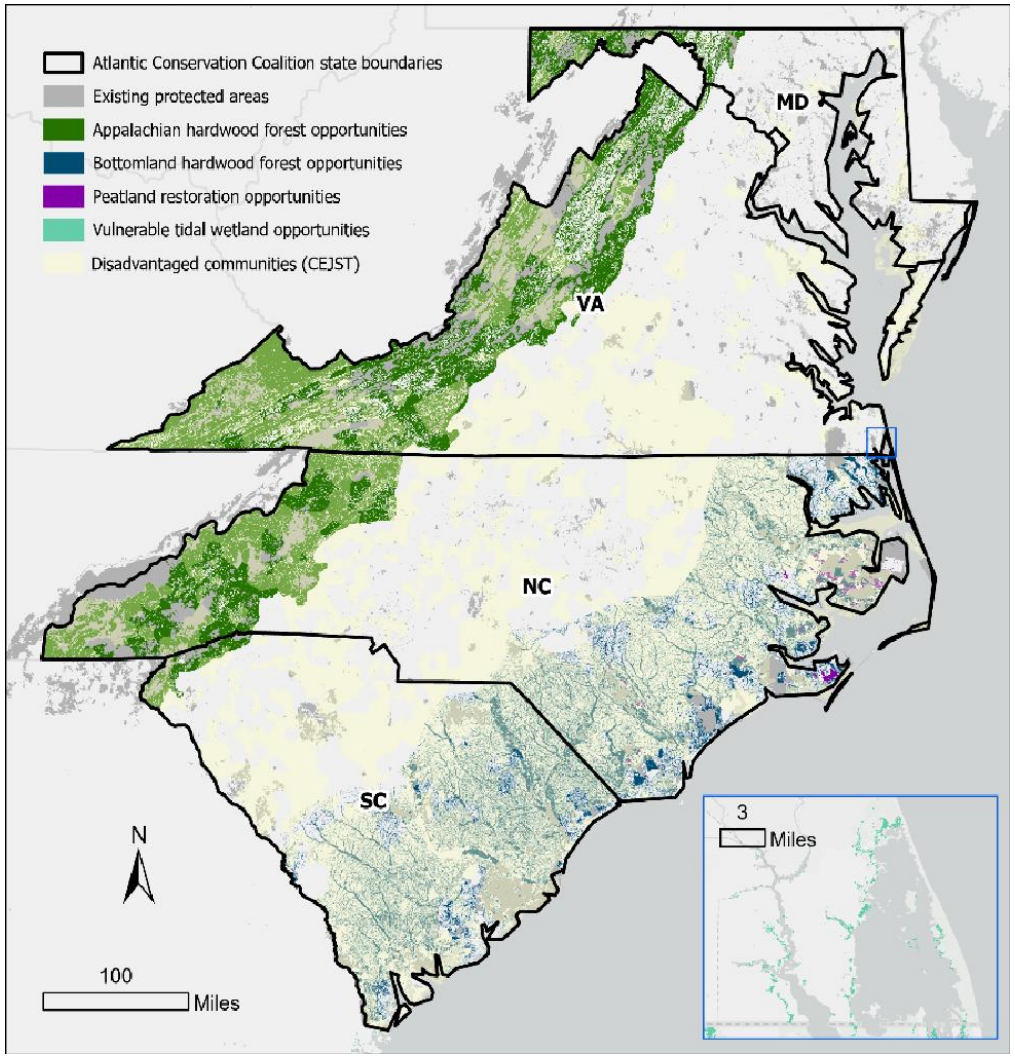

Credit: DNCR

- 17 new positions hired across coalition partners
- New NC DNCR ACC Division in Office of Secretary
- Branches:



- Currently 6 positions funded by ACC; 7 additional in hiring process

A look ahead for the ACC



In the next year, the ACC will:

- Acquire two properties totaling 11,000 acres of bottomland hardwood forest in SC
- NCCF will begin living shoreline project at Cape Lookout National Seashore and assess other sites for salt marsh restoration
- Finalize the updated NC Working Lands Action Plan
- NCFS will create a forest cost-share program for small landowners.
- NCSP will identify acquisition and restoration opportunities
- VA will begin land acquisition, permitting and construction activities for living shoreline installation, salt marsh creation and wetland restoration
- VA engage tribes on designing a competitive grant program for tribal restoration and conservation activities
- MD will create and solicit applications for a new Advancing Agroforestry fund
- Duke will update the ACC public-facing dashboard throughout the year

NC Wildlife Resources Commission Report



NC State University College of Natural Resources Report



Eastern NC Sentinel Landscape Partnership Report



Eastern NC Sentinel Landscape Partnership Report

Regional Resilience Planning Highlights

- MCI-EAST: MIRR; RCPP; NFWF NCRF
- Seymour Johnson AFB: NFWF NCRF; USACE; OLDCC Feasibility Study
- Fort Bragg: REPI Challenge; NFWF NCRF

Eastern NC Sentinel Landscape Partnership Report

Proposals

Successful

- NCLWF

Pending

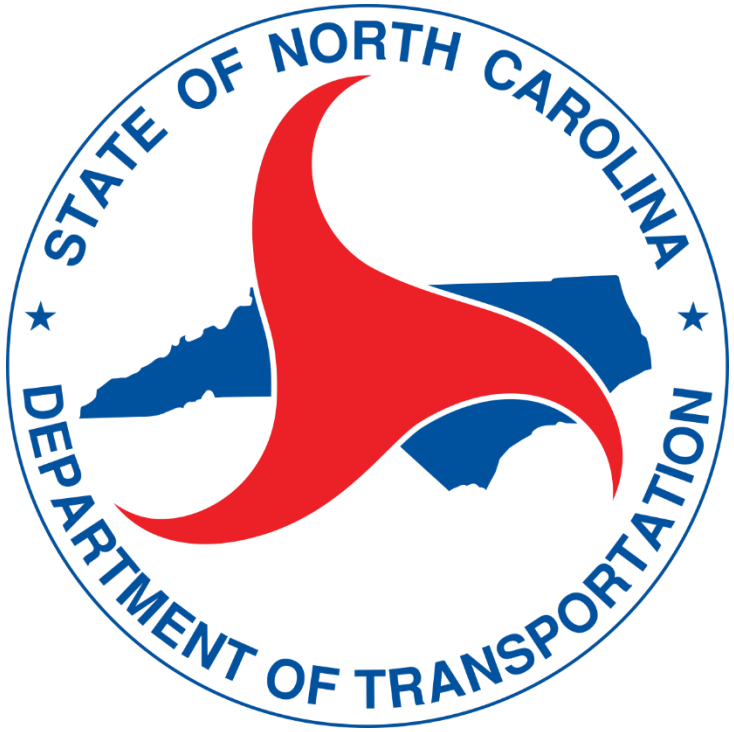
- REPI Challenge
- NFWF NCRF

In Process

- EDA



NC Department of Transportation Report



Eastern North Carolina Sentinel Landscapes Coordinator Report



Eastern NC Sentinel Landscape Partnership Report

Near-Term Efforts

- Funding Opportunity Analyses
- Capacity Building
- Proposal Development Support
  - NFWF NCRF
  - OLDCC DCIP
  - MIRR
  - EDA

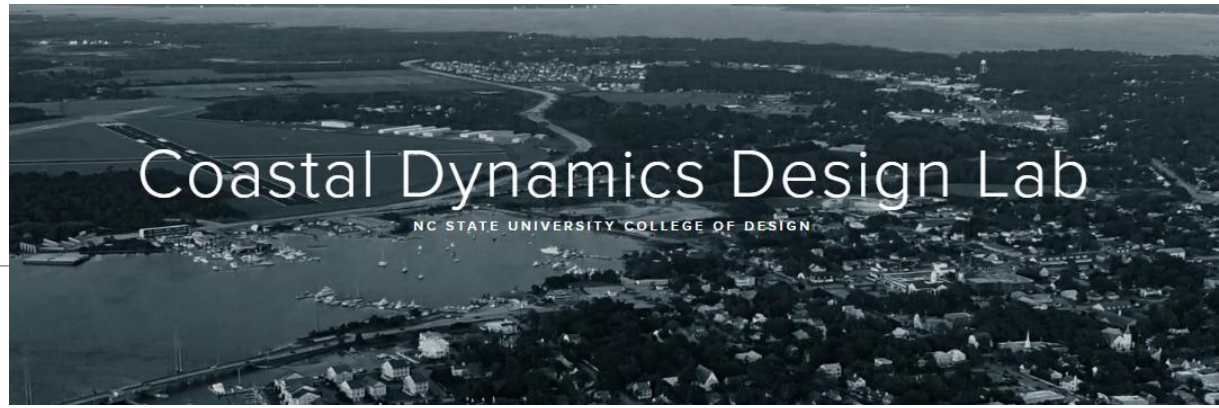


United States Department of Defense Readiness and Environmental Protection Integration Program Report



Eastern North Carolina Sentinel Landscape Partner Spotlight





Andrew Fox, PLA, FASLA
Director and Co-Founder,
NC State Coastal Dynamics Design Lab
NC State College of Design
Email: andrew_fox@ncsu.edu

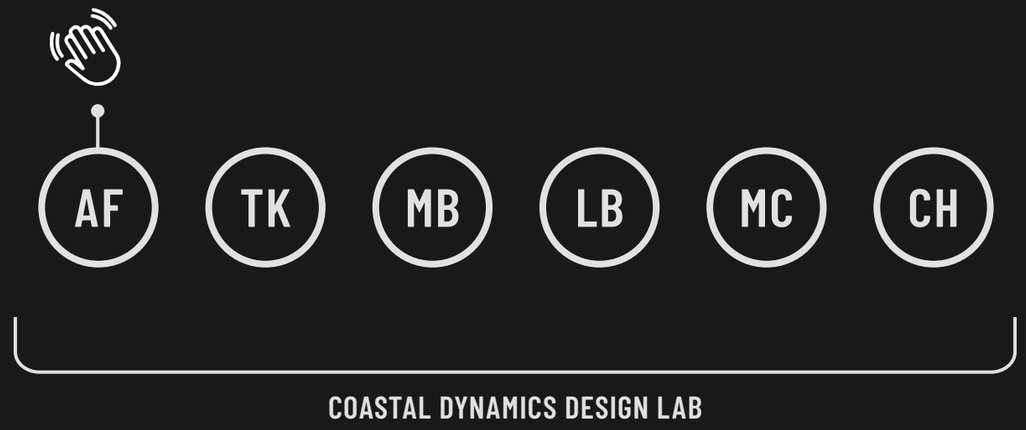




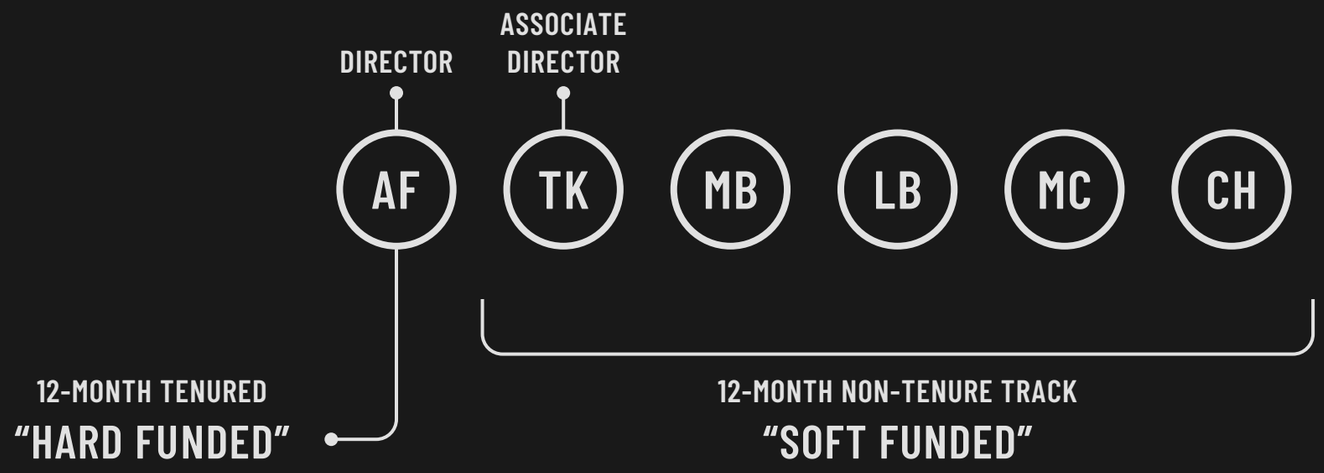
NC STATE COASTAL DYNAMICS DESIGN LAB

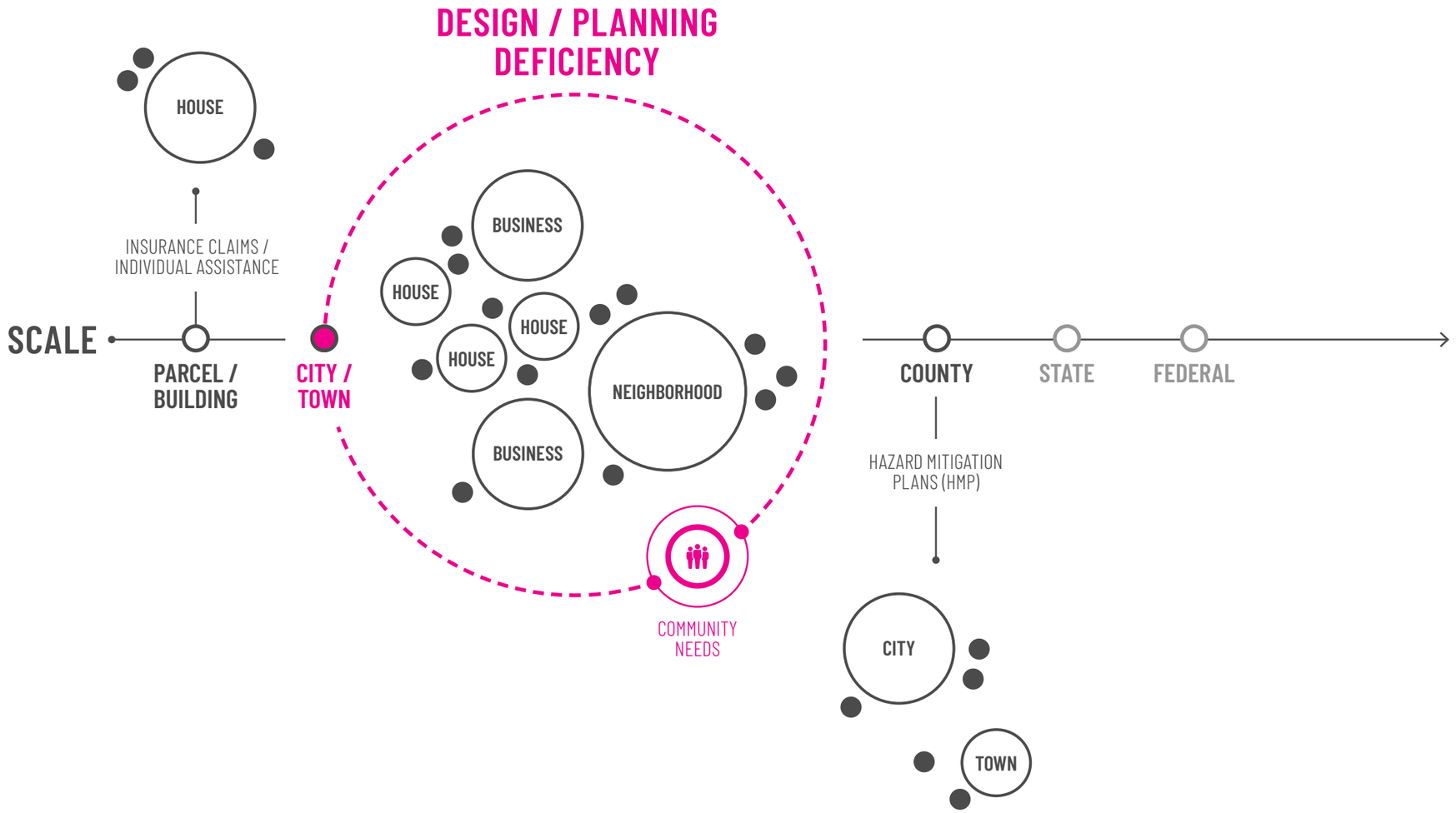
ACCELERATING RECOVERY + RESILIENCE ACROSS NORTH CAROLINA

ANDY FOX, FASLA, PLA
PROFESSOR + CDDL DIRECTOR
NC STATE UNIVERSITY COLLEGE OF DESIGN

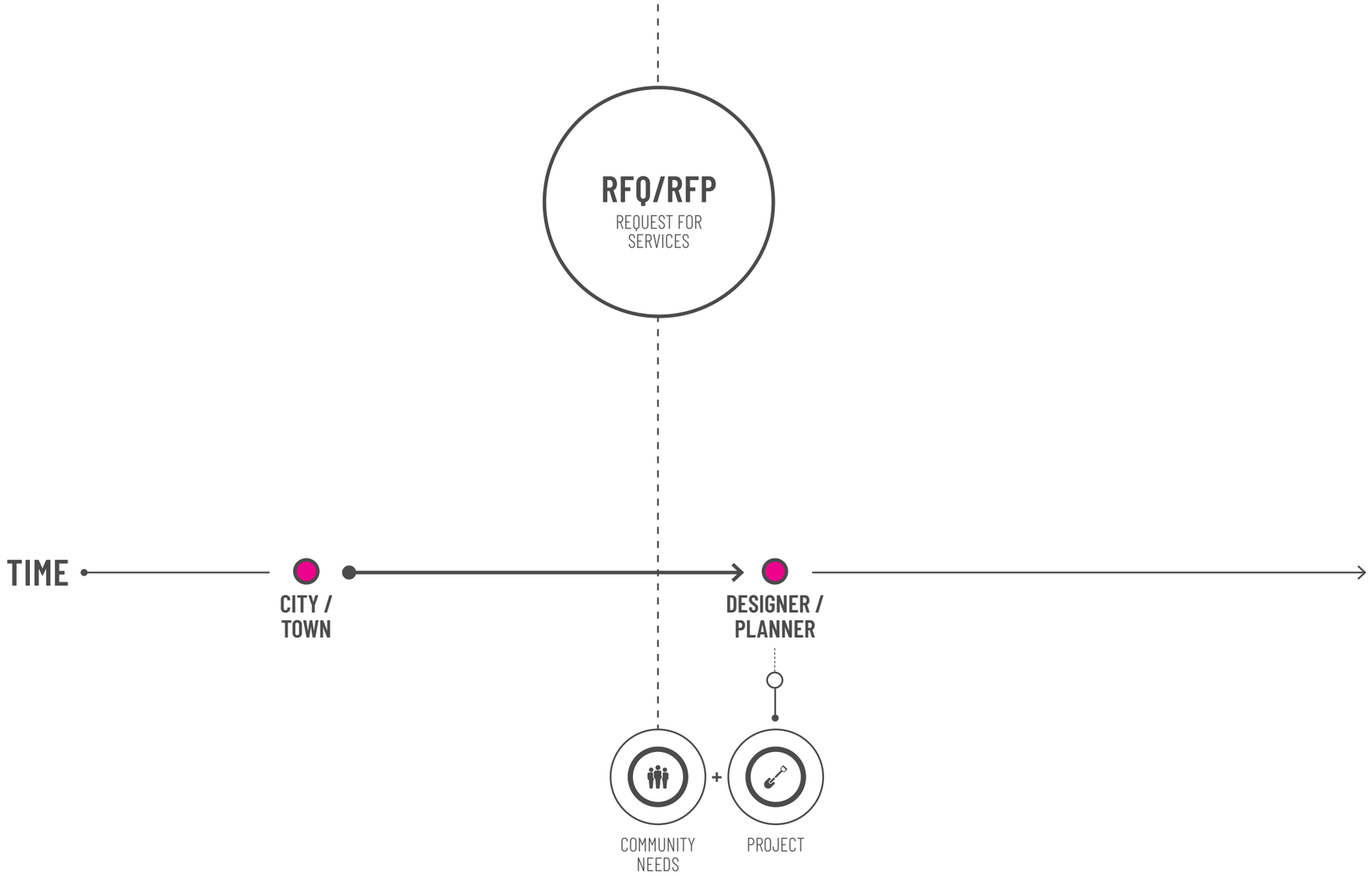


Our mission is to assist communities recover from floods, plan for more resilient and prosperous futures, and celebrate the natural and cultural resources that make each place special.

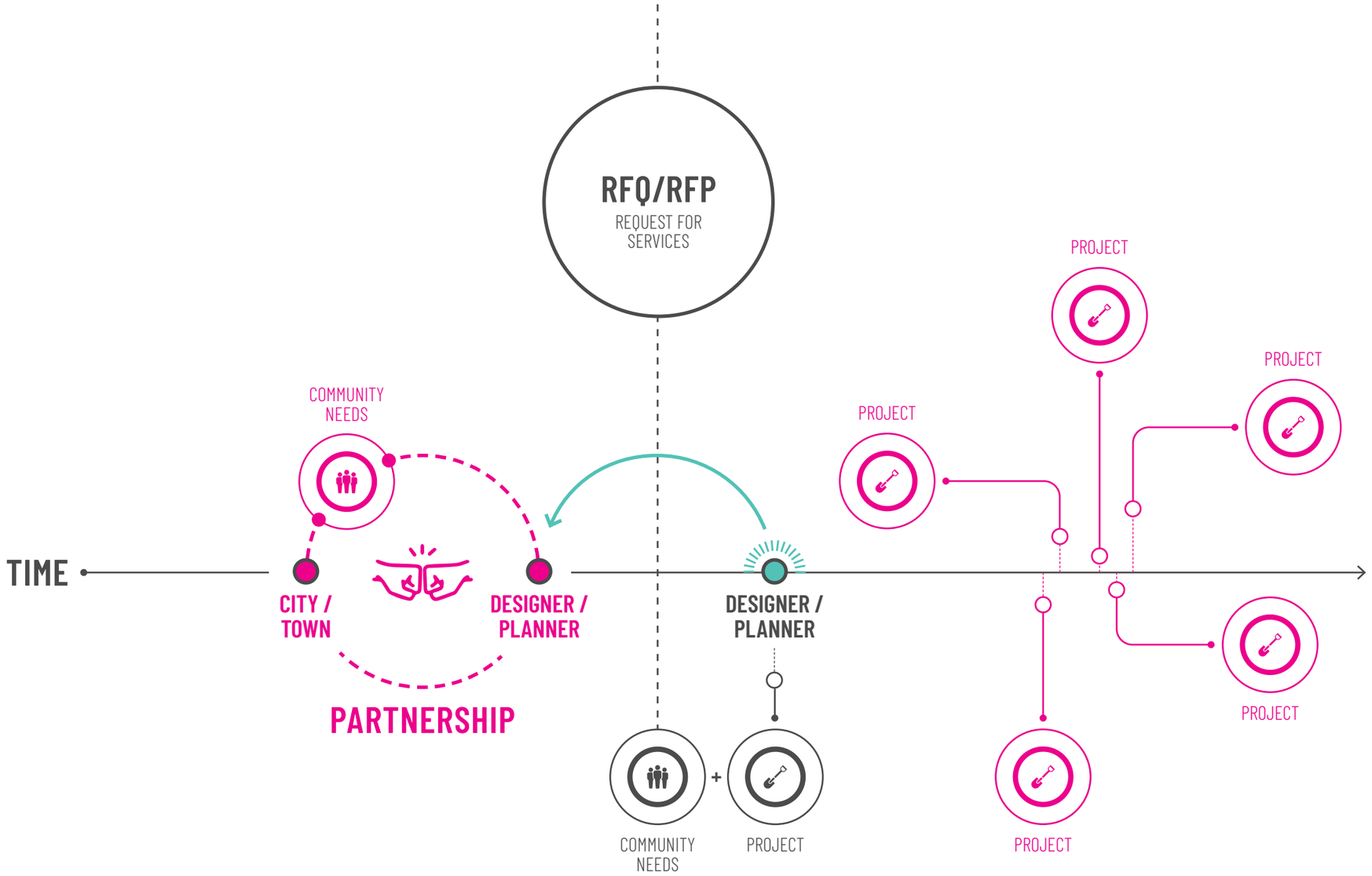

DIRECTOR
ASSOCIATE DIRECTOR
AF
TK
MB
LB
MC
CH
12-MONTH TENURED
“HARD FUNDED”
12-MONTH NON-TENURE TRACK
“SOFT FUNDED”



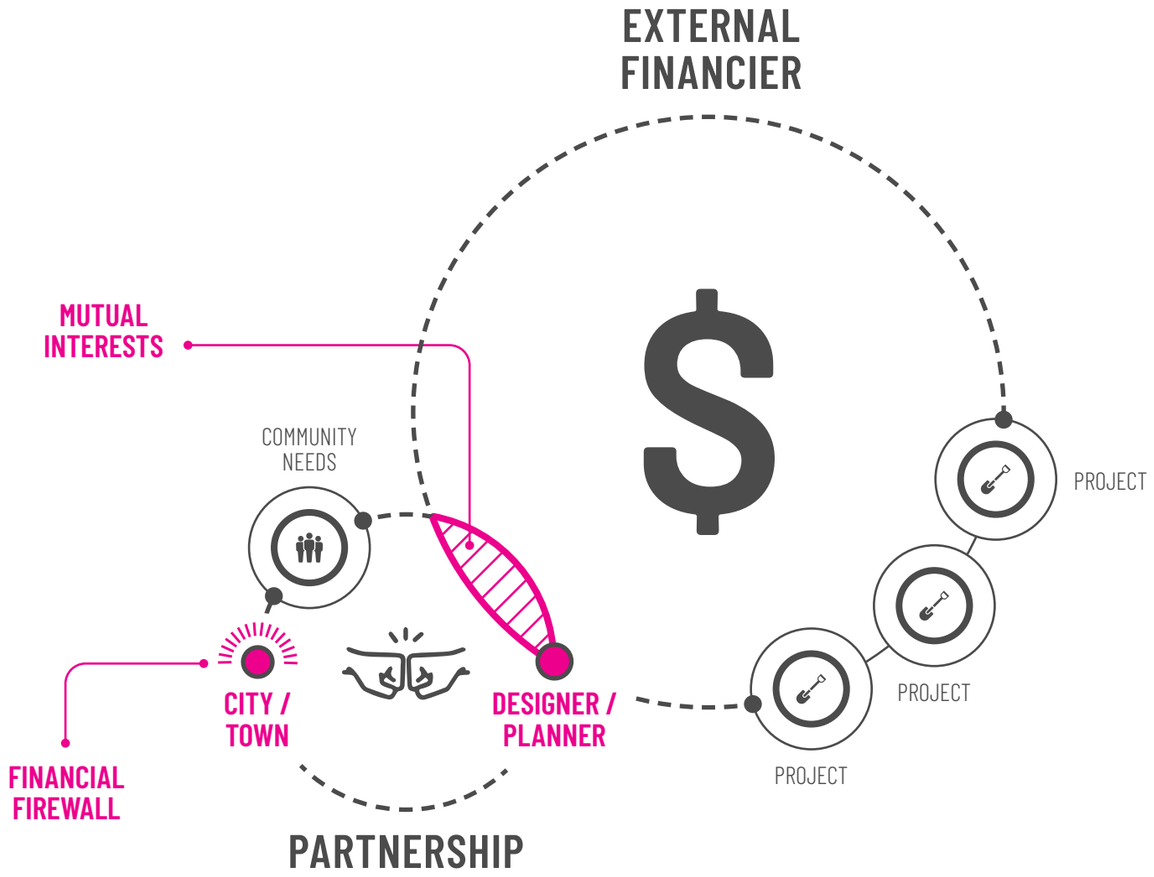
PRE-REQ 01:
FIT



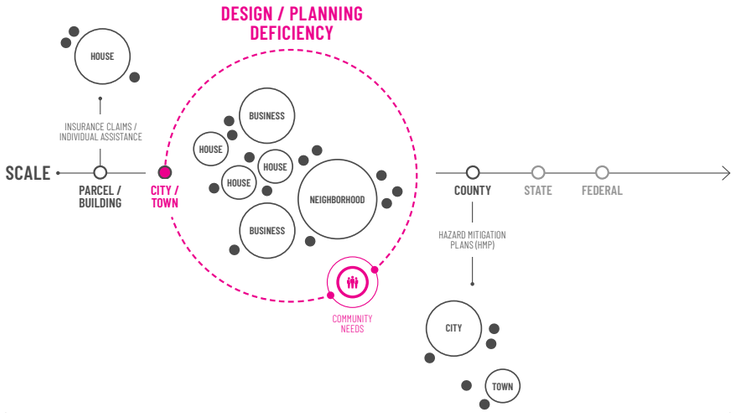
PRE-REQ 02:
TIME



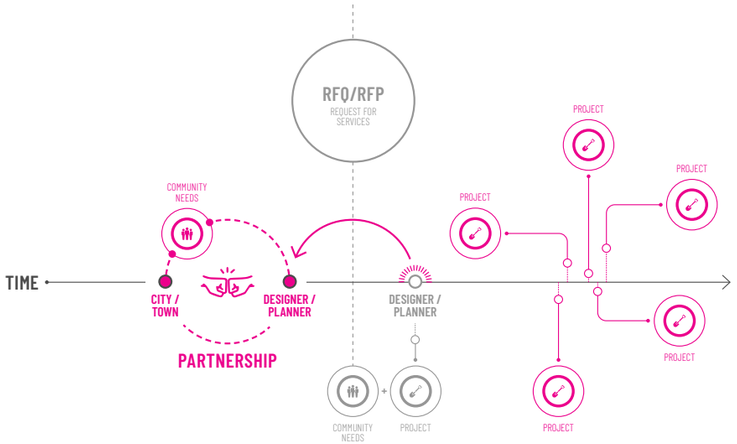
PRE-REQ 02:
TIME



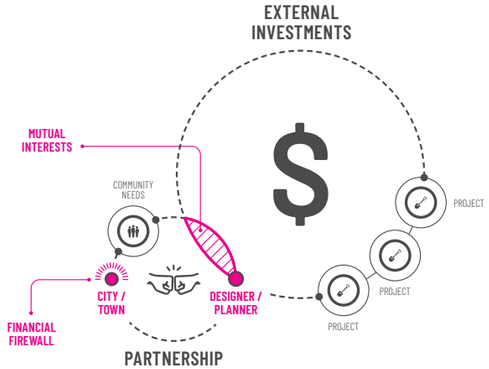
PRE-REQ 03:
MONEY



PRE-REQ 01: FIT. Commit to filling service gaps. Holistic solutions require scales of focus that have historically been absent in underserved communities.



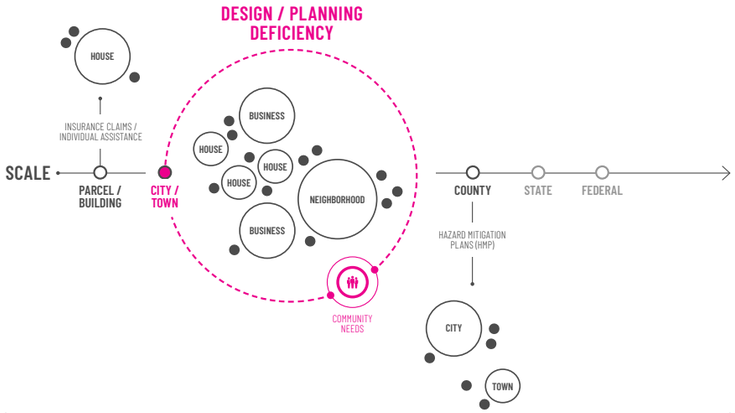
PRE-REQ 02: TIME. Move up the timeline of engagement to allow for the co-definition of issues, opportunities, and potential solutions.



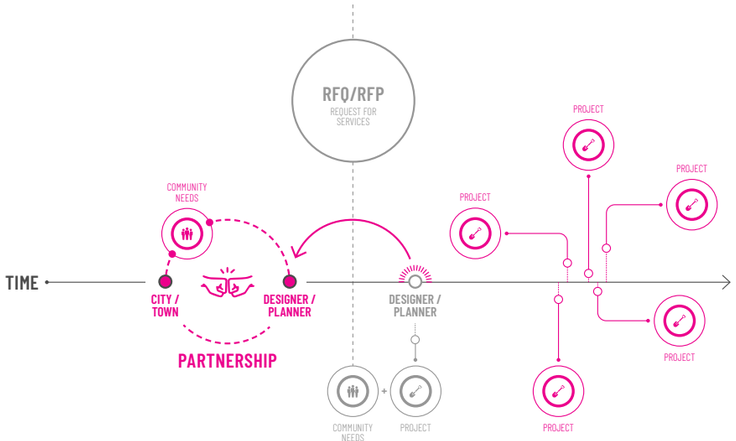
PRE-REQ 03: MONEY. Establish firewalls that protect community resources by playing an active role in identifying and securing external sources of project funding.

POLLOCKSVILLE "FLOODPRINT"

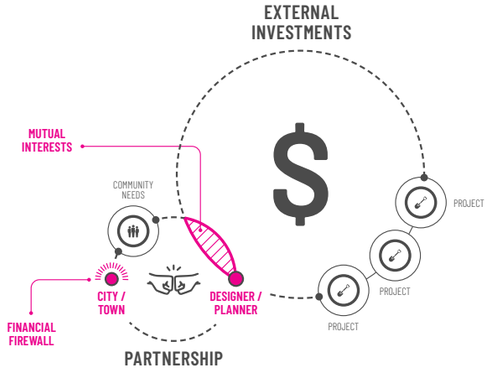
ACCELERATING RURAL RECOVERY AND RESILIENCE



PRE-REQ 01: FIT. Commit to filling service gaps. Holistic solutions require scales of focus that have historically been absent in underserved communities.



PRE-REQ 02: TIME. Move up the timeline of engagement to allow for the co-definition of issues, opportunities, and potential solutions.



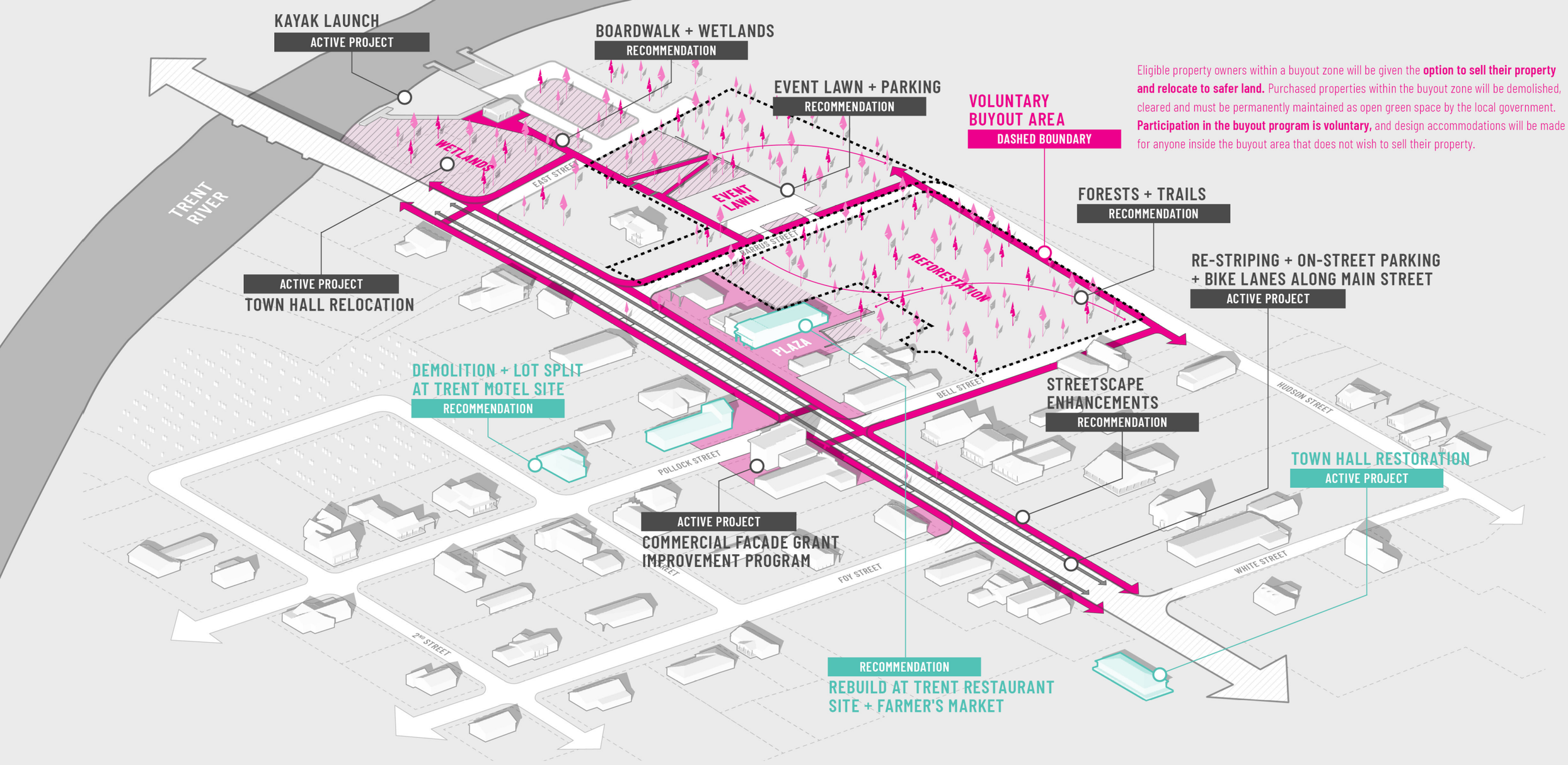
PRE-REQ 03: MONEY. Establish firewalls that protect community resources by playing an active role in identifying and securing external sources of project funding.

216
PEOPLE

1,000 YEAR
FLOOD EVENT

$2M+
GRANTS + MATCH COMMITMENTS

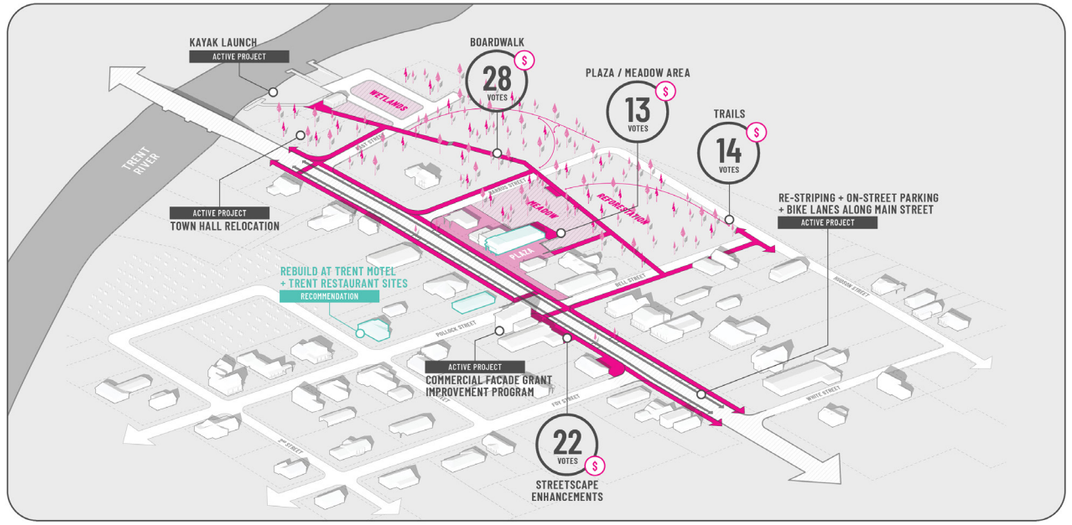
<12
MONTHS AFTER PLAN ADOPTION



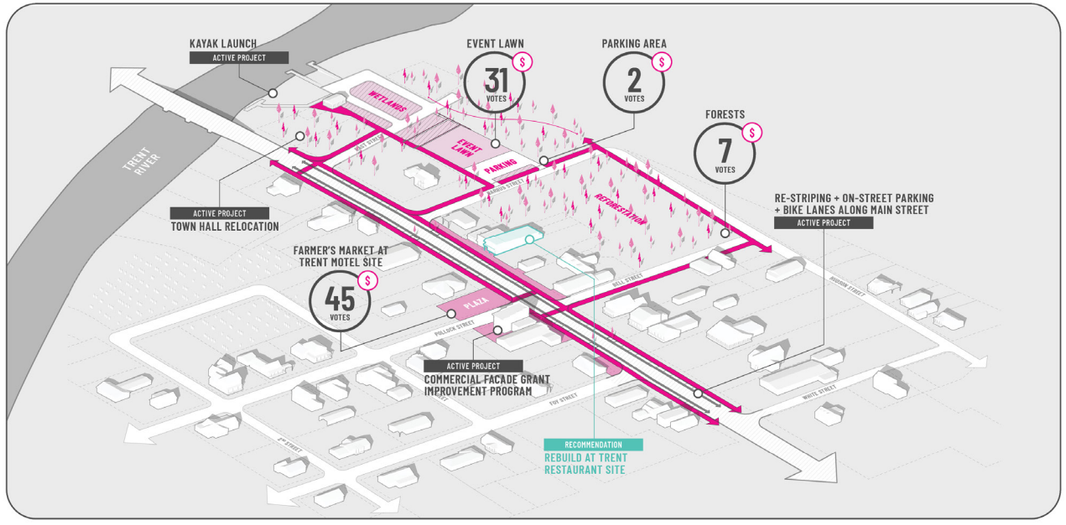
PRE-REQ 01: FIT

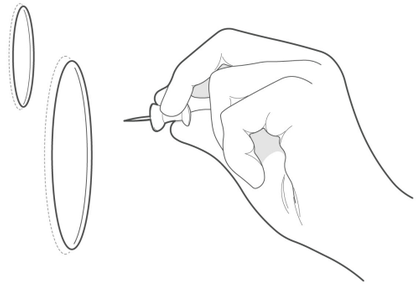
POLLOCKSVILLE "FLOODPRINT" PLAN: A SCALED APPROACH THAT CONNECTS INTO EXISTING INITIATIVES

PUSH PIN VOTING RESULTS: ALTERNATIVE 'A'



PUSH PIN VOTING RESULTS: ALTERNATIVE 'B'





Each stakeholder who participated in the walk-up event was asked to place up to four (4) push pins in the programmatic recommendations that they would like to see further investment and planning support.







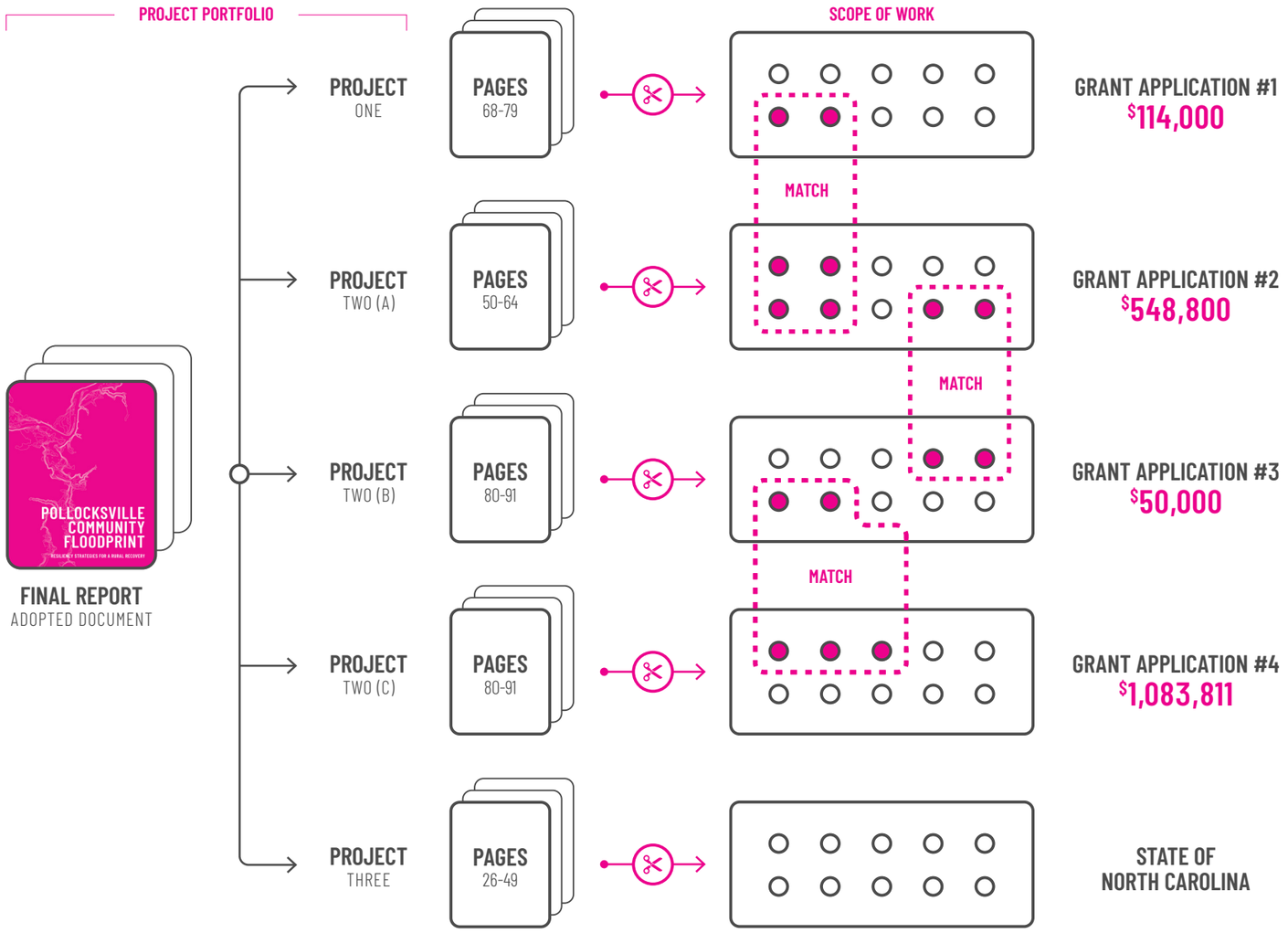






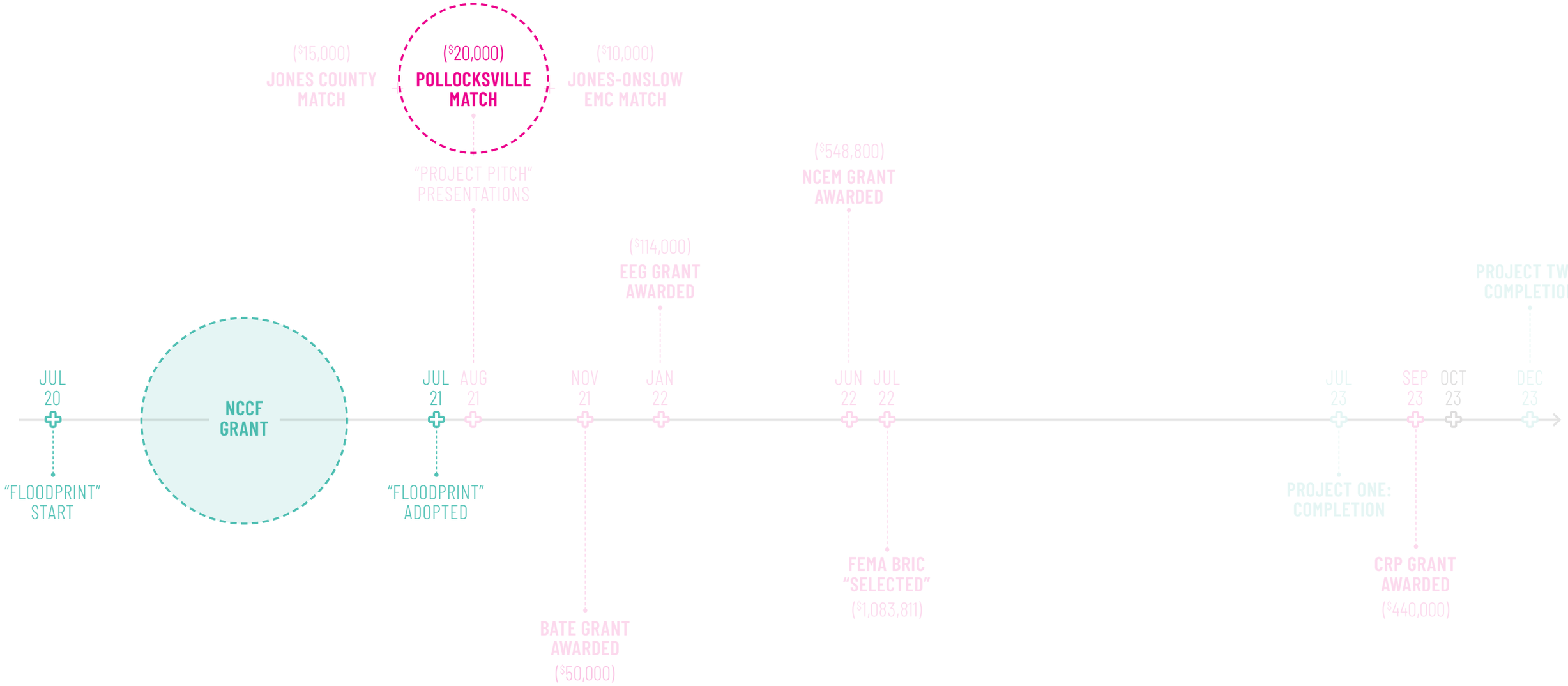
PRE-REQ 01:
FIT

GUIDED BY COMMUNITY INPUT



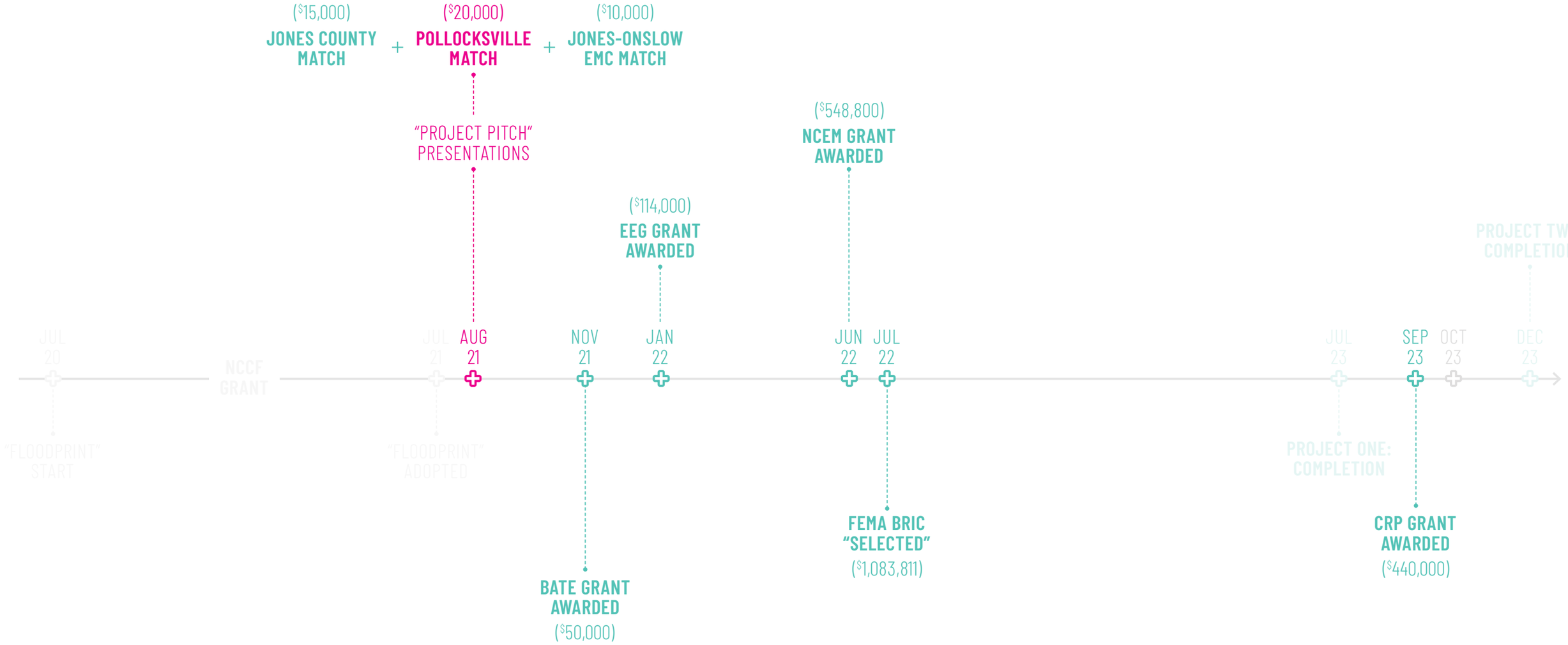
PRE-REQ 01:
FIT

FILLING IN CAPACITY GAPS: A “CUT-AND-PASTE” PRODUCT



PRE-REQ 03: MONEY

EXTERNAL GRANT FOR ANALYSIS & PLANNING + MOU / MOA WITH TOWN



PRE-REQ 03: MONEY

LEVERAGING INTERNAL FUNDS ($20,000) FOR EXTERNAL IMPLEMENTATION RESOURCES ($2,261,611) = 113x multiplier


POLLOCKSVILLE
East St



POLLOCKSVILLE RIVERFRONT PARK

GRANT FUNDING: NORTH CAROLINA ENVIRONMENTAL ENHANCEMENT (EEG) + NORTH CAROLINA EMERGENCY MANAGEMENT (NCEM)



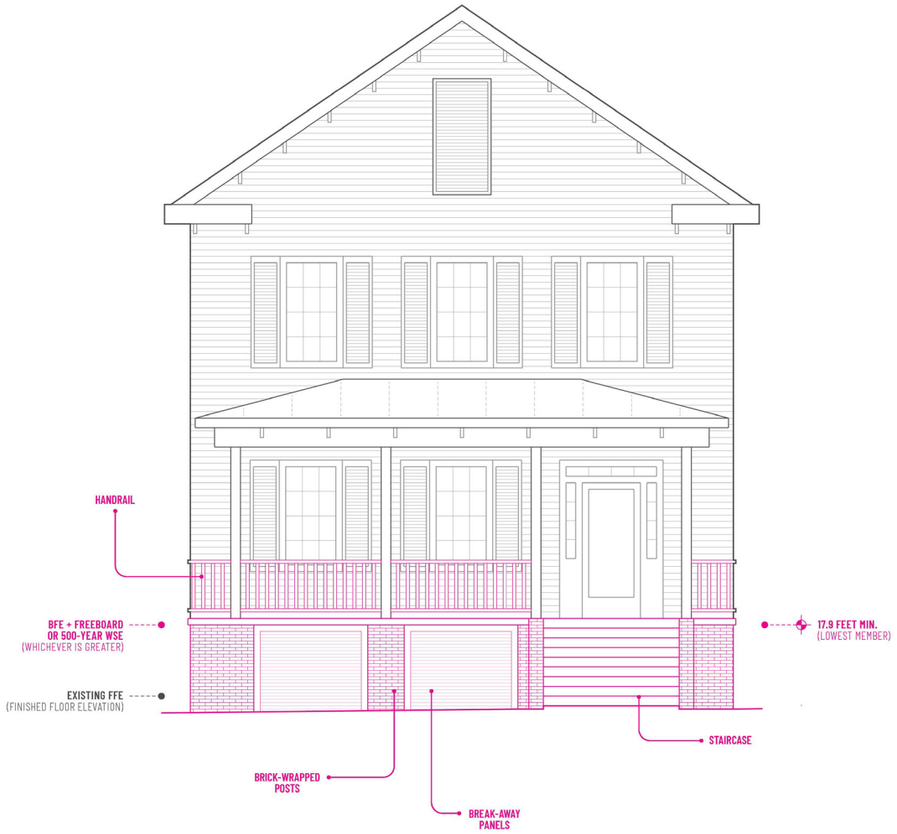


POLLOCKSVILLE MAIN STREET IMPROVEMENTS

GRANT FUNDING: NORTH CAROLINA EMERGENCY MANAGEMENT (NCEM)

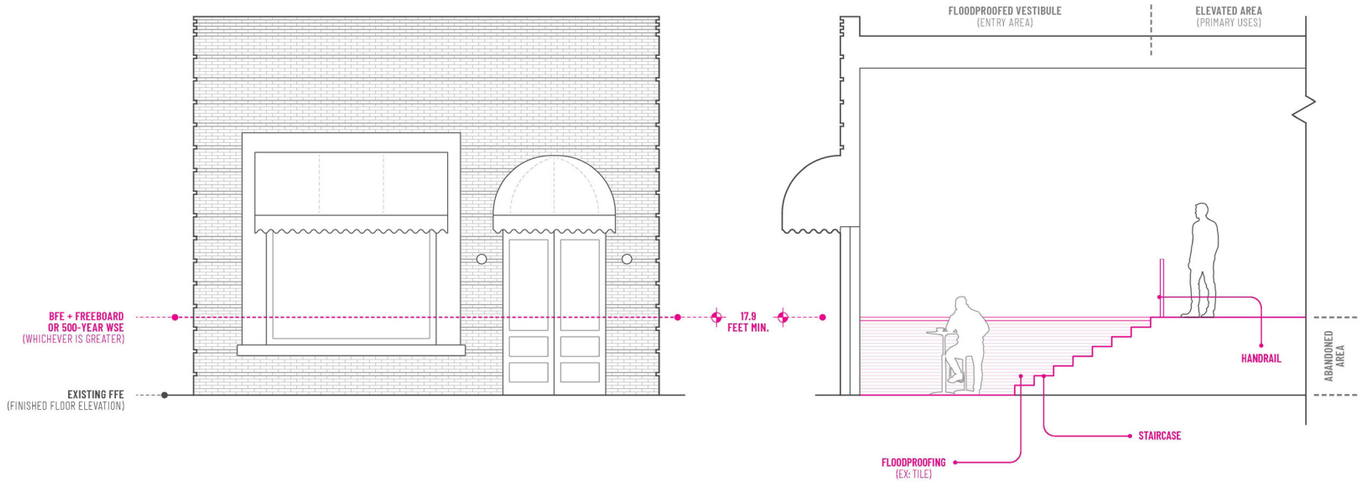

Trent
Family
Restaurant
BREAKFAST · LUNCH · DINNER
134


4. ELEVATING
COMMERCIAL SPACES
3. FACADE IMPROVEMENTS,
PRIVATELY FUNDED
1. STRIPING IMPROVEMENTS
2. LANDSCAPE
+ MOBILITY
IMPROVEMENTS



203 MAIN STREET

FRONT ELEVATION



127 MAIN STREET

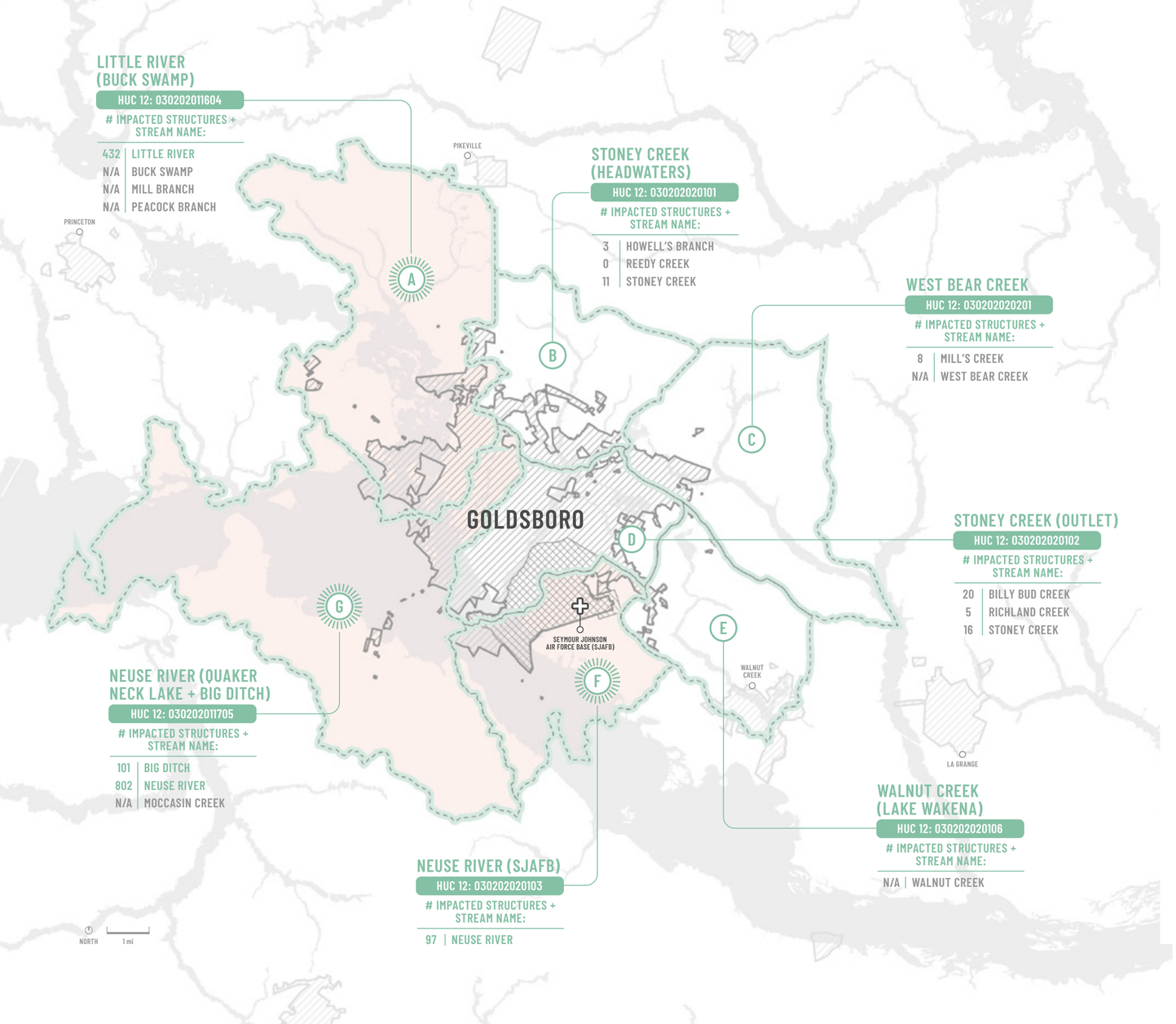
FRONT ELEVATION + INTERIOR SECTION



GOLDSBORO FLOODPRINT:

BIG DITCH STREAM RESTORATION + INFRASTRUCTURE IMPROVEMENTS

The City of Goldsboro regularly experiences flooding from routine flood events. Aside from the historic levels of flooding experienced during Hurricanes Matthew (2016) and Florence (2018), more frequent and severe flooding has become an ongoing, cyclical issue in neighborhoods that border adjacent swamps, wetlands, and tributaries.



SUBWATERSHED ANALYSIS

IDENTIFICATION OF MOST-IMPACTED GEOGRAPHIES + COMMUNITIES

Seven (7) subwatersheds (HUC-12's) divide Goldsboro's footprint into unique hydrological units. Preliminary analysis compared the FFE's (finished floor elevations) of each structure in these subwatersheds against the projected WSE (water surface elevation) of a 500-year flood event. **These results identified three (3) subwatersheds (A, G, and F; shaded in orange) as being the most vulnerable to damages due to a high quantity of impacted structures.** Subsequent analysis assessed the potential for suitable project typologies within these highlighted areas.

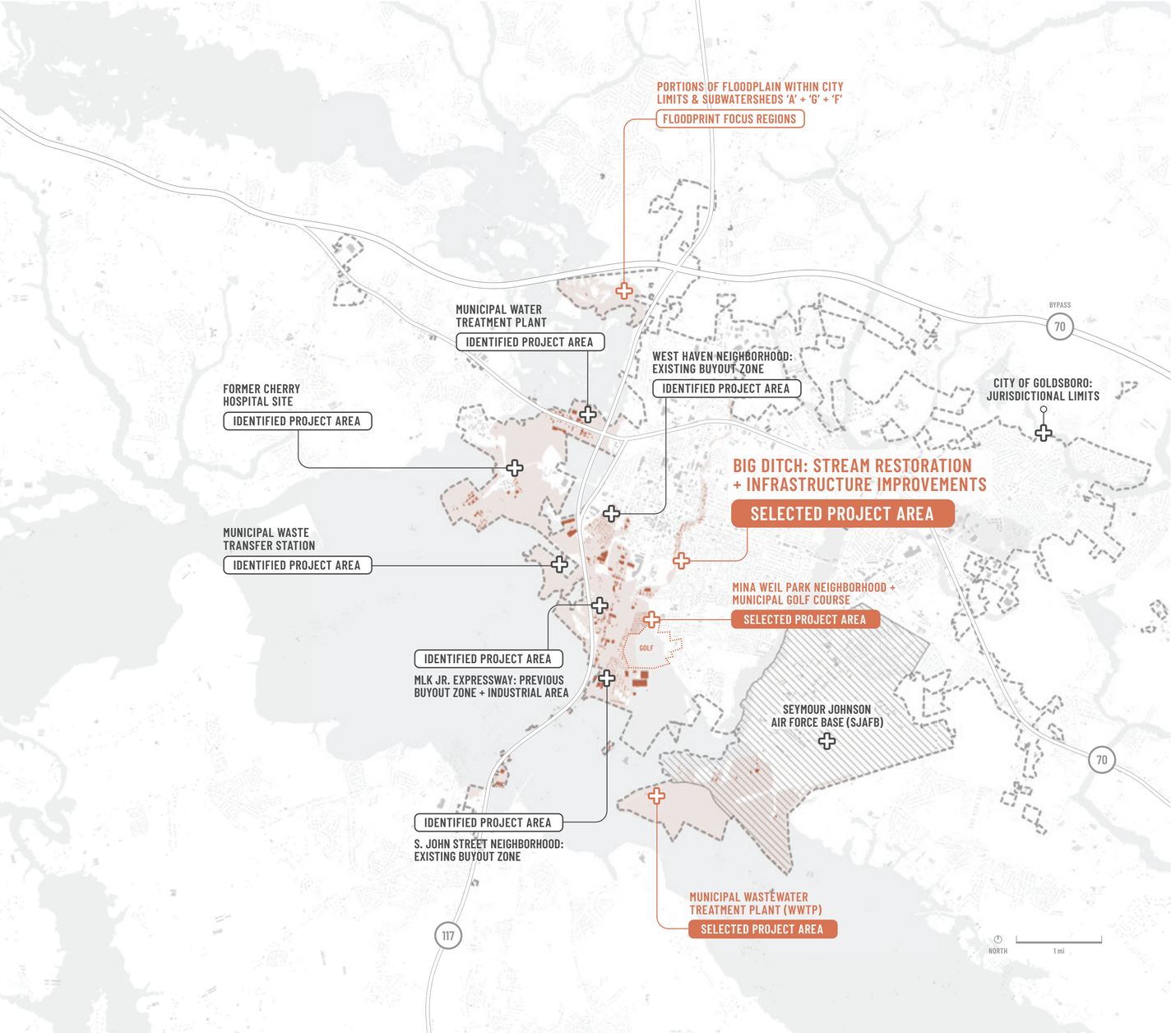


Diagram: Decision matrix chart comparing identified potential projects against FEMA BRIC review criteria.

	POTENTIAL PROJECTS	COMMUNITY LIFELINES	RISK REDUCTION	POPULATION IMPACTED	NATURE-BASED	LEVERAGE PARTNERS
PUBLIC UTILITIES	WASTE TRANSFER STATION	✓	✓	✓		
	WATER TREATMENT PLANT	✓	✓	✓		✓
	WASTEWATER TREATMENT PLANT	✓	✓	✓	✓	✓
LAND MANAGEMENT	MLK JR. AREA: PREVIOUS BUYOUTS			✓	✓	
	WEST HAVEN: EXISTING BUYOUTS			✓	✓	✓
	S. JOHN STREET: EXISTING BUYOUTS			✓	✓	✓
	FORMER CHERRY HOSPITAL SITE			✓	✓	✓
NATURAL SYSTEMS	BIG DITCH: STREAM RESTORATION	✓	✓	✓	✓	✓
	MINA WEIL AREA + GOLF COURSE	✓	✓	✓	✓	✓

POTENTIAL PROJECT AREAS

FEDERAL GRANT COMPETITIVENESS: DECISION MATRIX

After review of each potential project through five (5) federal grant program (i.e., FEMA BRIC) review criteria, **one (1) "Public Utilities" project, and two (2) "Natural Systems" projects (including restoration and infrastructure improvements along Big Ditch), satisfied all of the decision matrix conditions and were selected as projects to further develop as part of the Goldsboro Floodprint effort.**

STREAM RESTORATION + INFRASTRUCTURE IMPROVEMENTS

BIG DITCH

This project will: i) **restore approximately 2,300 linear feet of stream**; ii) **upgrade three (3) culvert/bridge conditions**; and iii) **create a "floodplain park" within the Elmwood Terrace community**.

Hydraulic modeling of the proposed scope of work indicates that these improvements will reduce flood-related damages throughout the project area. Specifically, (14) single-family residential units, (63) multi-family residential units, and (3) public/private entities will benefit from reductions in projected flood heights, and, two (2) of the three (3) road crossings will be able to withstand flood conditions equivalent to modeled 100- and 500-year flood events.









Photos: Existing Conditions of Big Ditch within the Study Area.

BENEFITING STRUCTURES
"SCENARIO C" ALTERNATIVE

A total of seven (7) practical alternatives for the Big Ditch project were identified and evaluated. These included a "No Action Alternative," a consideration of "Alternative Sites," and five (5) "Alternative Actions." **The preferred alternative ("Scenario C") offers the most substantial levels of flood reduction without relying on contingencies or commitments external to the City and project partners** (e.g., participation in voluntary buyouts).

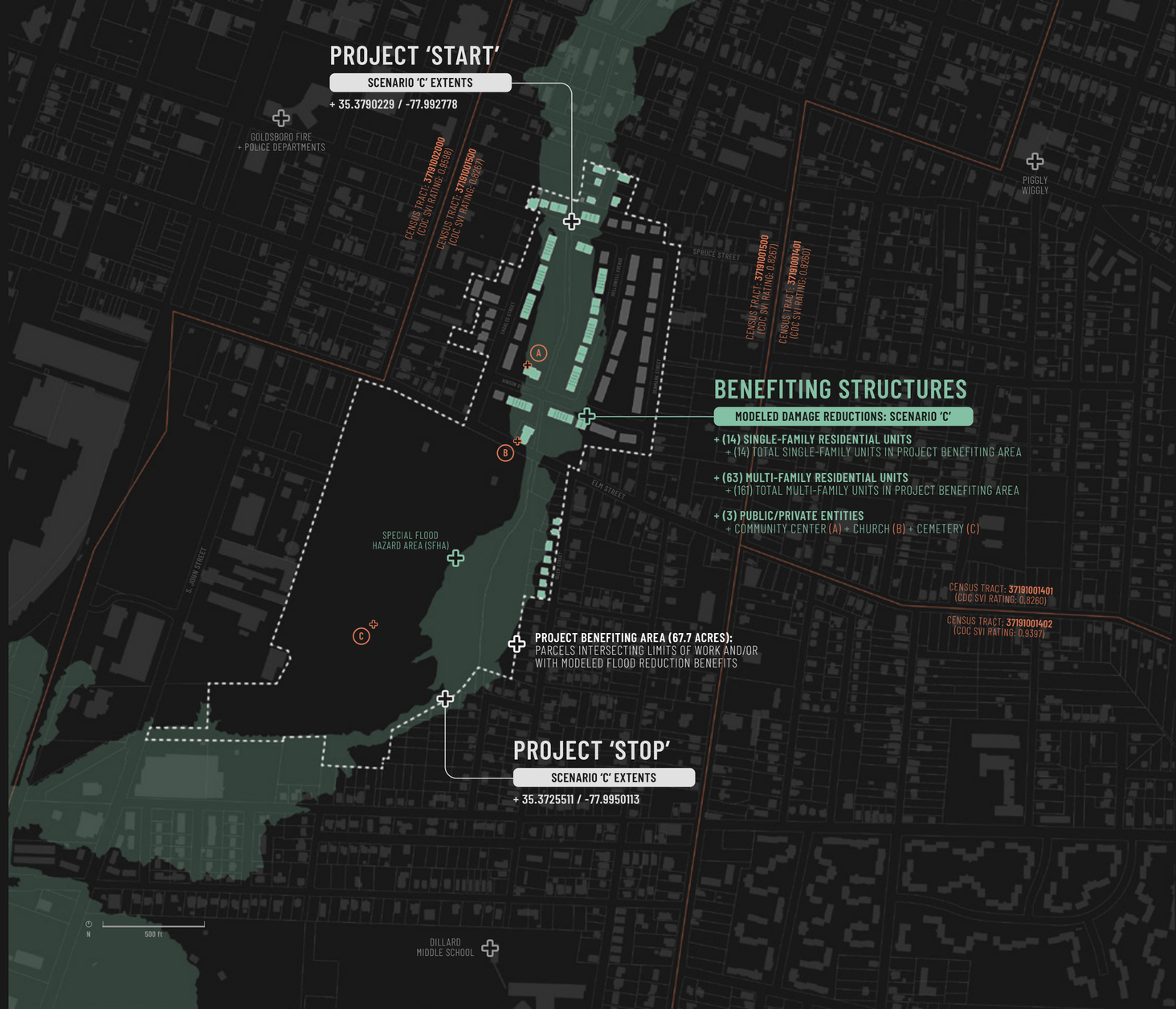




Table. Number of Elmwood Terrace residential units where the modeled Water Surface Elevation (WSE) is greater than the First Floor Elevation (FFE).

	EXISTING WSE > FFE Existing Condition: Water Surface Elevation > First Flood Elevation	PROPOSED WSE > FFE "Scenario C" Condition: Water Surface Elevation > First Flood Elevation	CHANGE # Residential Units No Longer Displaced
10-YR	1 UNIT	NONE	-1
50-YR	17 UNITS	NONE	-17
100-YR	23 UNITS	7 UNITS	-16
500-YR	38 UNITS	9 UNITS	-29

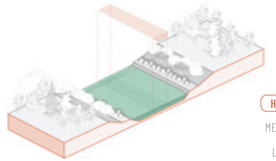
ELMWOOD TERRACE ENLARGEMENT: "SCENARIO C" EFFECTIVENESS

EXISTING VERSUS PROPOSED FLOOD EXTENTS

The modeled reductions in Water Surface Elevation (WSE) as a result of "Scenario C" would prevent the displacement of an additional: (17) residential units during a 50-year event, (16) residential units during a 100-year event, and (29) residential units during a 500-year event, compared to the existing condition. While none of the "Alternative Actions" assessed would completely eliminate flooding outside of the newly created floodplain, the modeled reductions in both WSE and spatial extents of flooding will significantly reduce the severity of associated social, environmental, and economic impacts during future flood events.



1



HIGH
MEDIUM
LOW
EFFECTIVENESS

+ Replace concrete channel with a wider, more natural stream.
- secondary focus: ecological function

FLOODPLAIN RESTORATION



OR

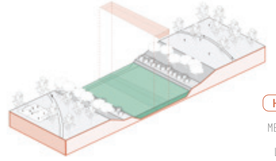
YES, SUPPORT

DO NOT SUPPORT





2



HIGH
MEDIUM
LOW
EFFECTIVENESS

+ Replace concrete channel with a wider, more natural stream.
- secondary focus: public use + recreational spaces

FLOODPLAIN PARK



OR

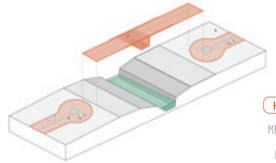
YES, SUPPORT

DO NOT SUPPORT





3



HIGH
MEDIUM
LOW
EFFECTIVENESS

+ Remove portions of non-critical roads that cross the stream.
- convert roads to cul-de-sacs with round-a-bouts for cars

REMOVE SELECT ROADS



OR

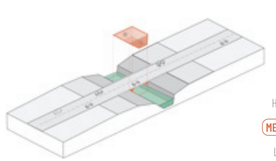
YES, SUPPORT

DO NOT SUPPORT





4



HIGH
MEDIUM
LOW
EFFECTIVENESS

+ Upgrade undersized pipes beneath road for better water flow.
- no change to traffic pattern

INCREASE CULVERT SIZE



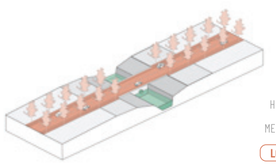
OR

YES, SUPPORT

DO NOT SUPPORT



5



HIGH
MEDIUM
LOW
EFFECTIVENESS

+ Re-design roadways to better absorb ponding water.
- trees, shrubs, swales + drainage improvements

GREEN STREETS



OR

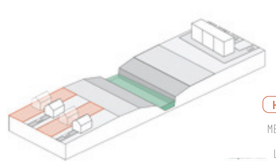
YES, SUPPORT

DO NOT SUPPORT





6



HIGH
MEDIUM
LOW
EFFECTIVENESS

+ Participating homes are acquired at fair market value.
- buildings are demolished and land must be left as open space

ACQUISITIONS



OR

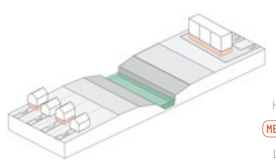
YES, SUPPORT

DO NOT SUPPORT





7



HIGH
MEDIUM
LOW
EFFECTIVENESS

+ Participating homes are elevated above flood elevation.
- greatly reduces future flood damages, but some risks remain

ELEVATIONS



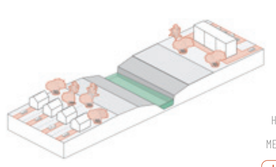
OR

YES, SUPPORT

DO NOT SUPPORT



8



HIGH
MEDIUM
LOW
EFFECTIVENESS

+ Install low-maintenance rain gardens to better absorb water.
- plant palette and permeable paving designed to suit each property

RAIN GARDENS

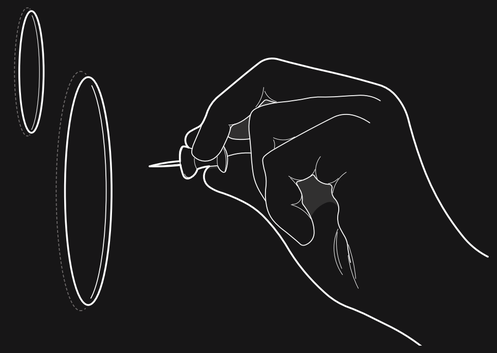


OR

YES, SUPPORT

DO NOT SUPPORT

Image: Illustration of push-pin voting method.



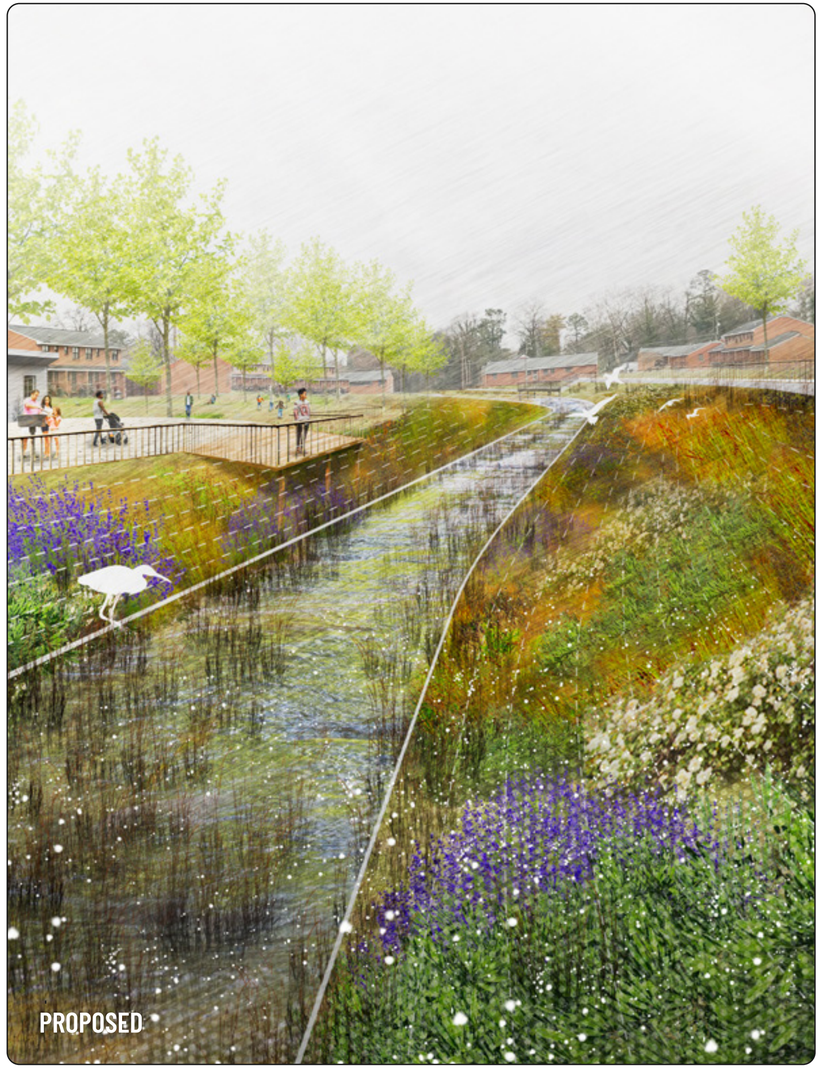
PROGRAM PREFERENCES

PUBLIC ENGAGEMENT: SESSION 1 OF 3

The purpose of this public engagement session was to solicit community feedback and preferences for potential flood reduction strategies within the Big Ditch focus area.

"Floodplain restoration" - described as "replacing concrete channels with a wider, more natural stream" - tied for the most votes from stakeholders out of eight (8) flood mitigation project options presented during a preliminary public workshop about the project.





PROJECT IMPACTS

MULTI-PRONGED BENEFITS

"This proposal draws upon FEMA guidance ("Building Community Resilience with Nature-Based Solutions," 2021) for implementing several "watershed scale" practices (i.e., "floodplain restoration" and "stormwater park") as part of an interconnected suite of nature-based solutions.

The cumulative benefits of these practices are **primarily intended to better control and manage floodwaters** throughout the project area, but will also offer a wide breadth of ancillary benefits, such as: **improving water quality, increasing available habitat for wildlife, and addressing existing inequities in access to recreational amenities.**

VALUES FROM HYDRAULIC MODELING AND FEMA BENEFIT-COST CALCULATOR, V.6.0 (NOVEMBER 2023)

BENEFITS: MODELED DAMAGE REDUCTIONS

FFE: 89.18

205 PRINCESS

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	87.05	86.12	-0.93
50-YR	88.60	87.48	-1.12
100-YR	88.98	87.83	-1.15
500-YR	89.95	89.07	-0.88

FFE: 87.97

207 PRINCESS

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	87.05	86.18	-0.87
50-YR	88.56	87.47	-1.09
100-YR	88.92	87.80	-1.12
500-YR	89.68	88.87	-0.81

FFE: 87.77

211 PRINCESS

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	87.05	86.22	-0.83
50-YR	88.51	87.45	-1.06
100-YR	88.83	87.74	-1.09
500-YR	89.44	88.49	-0.95

FFE: 95.58

204 PRINCESS

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	87.05	86.14	-0.91
50-YR	88.59	87.48	-1.11
100-YR	88.96	87.81	-1.15
500-YR	89.81	87.81	-2.00

FFE: 93.54

208 PRINCESS

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	87.06	86.22	-0.84
50-YR	88.53	87.46	-1.07
100-YR	88.83	87.75	-1.08
500-YR	89.50	88.67	-0.83

FFE: 94.84

319 SPRUCE

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	87.05	86.23	-0.82
50-YR	88.48	87.42	-1.06
100-YR	88.77	87.70	-1.07
500-YR	89.30	87.70	-1.60

FFE: 90.22

321 SPRUCE

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	87.05	86.23	-0.82
50-YR	88.42	87.42	-1.00
100-YR	88.77	87.70	-1.07
500-YR	89.30	88.07	-1.23

FFE: 89.09

403-405 SPRUCE

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	87.05	86.23	-0.82
50-YR	88.48	87.42	-1.06
100-YR	88.77	87.70	-1.07
500-YR	89.30	88.08	-1.22

FFE: 88.85

407-413 SPRUCE

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	87.04	86.23	-0.81
50-YR	88.48	87.42	-1.06
100-YR	88.77	87.69	-1.08
500-YR	89.29	88.04	-1.25

FFE: 88.48

305-315 HOLLOWELL

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	85.12	83.38	-1.74
50-YR	86.63	85.34	-1.29
100-YR	87.05	85.76	-1.29
500-YR	88.18	86.79	-1.39

FFE: 87.63

317-319 HOLLOWELL

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	85.17	83.28	-1.89
50-YR	86.68	85.28	-1.40
100-YR	87.10	85.72	-1.38
500-YR	88.23	86.76	-1.47

FFE: 86.64

401-411 HOLLOWELL

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	85.20	83.16	-2.04
50-YR	86.70	85.21	-1.49
100-YR	87.12	85.64	-1.48
500-YR	88.24	86.68	-1.36

FFE: 85.83

413-415 HOLLOWELL

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	85.14	83.08	-2.06
50-YR	86.62	85.15	-1.47
100-YR	87.03	85.58	-1.45
500-YR	88.13	86.61	-1.52

FFE: 85.23

417-427 HOLLOWELL

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	84.81	82.74	-2.07
50-YR	86.21	84.82	-1.39
100-YR	86.62	85.23	-1.39
500-YR	87.73	86.20	-1.53

FFE: 90.94

400-410 CHARLES

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	85.17	83.28	-1.89
50-YR	86.68	85.28	-1.40
100-YR	87.10	85.71	-1.39
500-YR	88.22	86.75	-1.47

FFE: 88.00

312-322 CHARLES

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	85.07	83.43	-1.64
50-YR	86.59	85.36	-1.23
100-YR	87.01	85.78	-1.23
500-YR	88.13	86.82	-1.31

FFE: 89.33

300-310 CHARLES

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	85.06	83.45	-1.61
50-YR	86.54	85.36	-1.18
100-YR	86.96	85.79	-1.17
500-YR	88.08	86.83	-1.25

FFE: 87.65

408-410 SPRUCE

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	84.77	83.58	-1.19
50-YR	86.22	85.33	-0.89
100-YR	86.82	85.71	-1.11
500-YR	87.94	86.76	-1.18

FFE: 84.29

402-412 HINSON

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	84.56	82.27	-2.29
50-YR	85.75	84.21	-1.54
100-YR	86.10	84.53	-1.57
500-YR	86.87	85.14	-1.73

FFE: 85.43

414-424 HINSON

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	84.54	82.28	-2.26
50-YR	85.72	84.22	-1.50
100-YR	86.06	84.53	-1.53
500-YR	86.81	85.14	-1.67

FFE: 85.58

426 - 500 HINSON

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	84.56	82.28	-2.28
50-YR	85.74	84.19	-1.55
100-YR	86.09	84.52	-1.57
500-YR	86.84	85.14	-1.70

FFE: 87.14

611 ISLER

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	--	--	--
50-YR	83.67	82.54	-1.13
100-YR	83.86	82.89	-0.97
500-YR	84.27	83.78	-0.71

FFE: 88.44

613 ISLER

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	--	--	--
50-YR	83.29	82.45	-0.84
100-YR	83.51	82.78	-0.73
500-YR	84.19	83.68	-0.51

FFE: 85.63

615 ISLER

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	--	--	--
50-YR	82.97	82.36	-0.61
100-YR	83.18	82.69	-0.49
500-YR	83.87	83.56	-0.31

FFE: 87.92

617 ISLER

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	--	--	--
50-YR	82.26	82.09	-0.17
100-YR	82.49	82.46	-0.03
500-YR	83.57	83.42	-0.15

FFE: 88.28

619 ISLER

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	--	--	--
50-YR	--	--	--
100-YR	--	--	--
500-YR	83.52	83.40	-0.12

FFE: 64.41

621 ISLER

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	--	--	--
50-YR	--	--	--
100-YR	--	--	--
500-YR	83.47	83.38	-0.09

FFE: 65.12

623 ISLER

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	--	--	--
50-YR	--	--	--
100-YR	--	--	--
500-YR	83.44	83.36	-0.08

FFE: 87.20

COMMUNITY CENTER

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	83.86	82.75	-2.11
50-YR	86.27	84.87	-1.40
100-YR	86.68	85.29	-1.39
500-YR	87.79	86.27	-1.52

FFE: 85.35

S.O.E. CHURCH

FLOOD EVENT	WSE: EXISTING	WSE: PROPOSED	Δ WSE
10-YR	84.50	82.11	-2.39
50-YR	85.21	84.03	-1.18
100-YR	85.72	84.33	-1.39
500-YR	86.67	84.84	-1.83

VALUES FROM "FEMA ECOSYSTEM SERVICE VALUE UPDATES" (JUNE 2022)

BENEFITS: ECOSYSTEM SERVICES

PROPOSED LAND USE (FEMA DESIGNATIONS)	AREA (ACRES)	VALUE / ACRE / YEAR ($)	PROJECT USEFUL LIFE (YEARS)
"RIPARIAN"	**9.65**	$37,199	50
"URBAN GREEN OPEN SPACE"	**1.59**	$15,541	50
TOTAL PROJECT AREA	20.97	--	--

DATA FROM GOLDSBORO HOUSING AUTHORITY FOR (63) IDENTIFIED ADDRESSES (MAY 2023)

BENEFITS: SOCIAL

SOCIAL BENEFIT CATEGORY (FEMA DESIGNATIONS)	TOTAL FOR IDENTIFIED PROPERTIES (N=63)	AVERAGE PER ADDRESS IDENTIFIED
# BUILDING STORIES	95	**1.50**
# BUILDING SQUARE FEET	59,948	**952**
# TOTAL RESIDENTS	**133**	2.11
# EMPLOYED RESIDENTS	**21**	0.33
# ACTIVE NFIP POLICIES	**57**	0.90

COMPLETED PER "SCENARIO C" SCHEMATIC PLAN (SEPTEMBER 2023)

COSTS: PROFESSIONAL OPINION OF PROBABLE COST

LINE ITEM COST ($)	COST CATEGORY
$144,514	GENERAL REQUIREMENTS
$287,500	EROSION & SEDIMENT CONTROL
$234,876	SITE DEMOLITION
$47,800	CLEARING & GRUBBING
$501,816	EARTHWORK
$1,369,700	UTILITY RELOCATION
$139,322	VEHICULAR DRIVES & LOTS
$389,000	WALKWAYS, STAIRS & RAMPS
$1,153,700	SITE WALLS & FENCING
$71,000	SITE LIGHTING & FURNISHINGS
$1,616,464	STRUCTURES
$3,000	EDUCATIONAL SIGNAGE
$922,748	PLANTING & STABILIZATION
$705,600	DESIGN / ENGINEERING & PERMITTING
$7,587,040	**TOTAL CONSTRUCTION COST**
$976,108	**LONG-TERM MAINTENANCE (50 YEARS)**

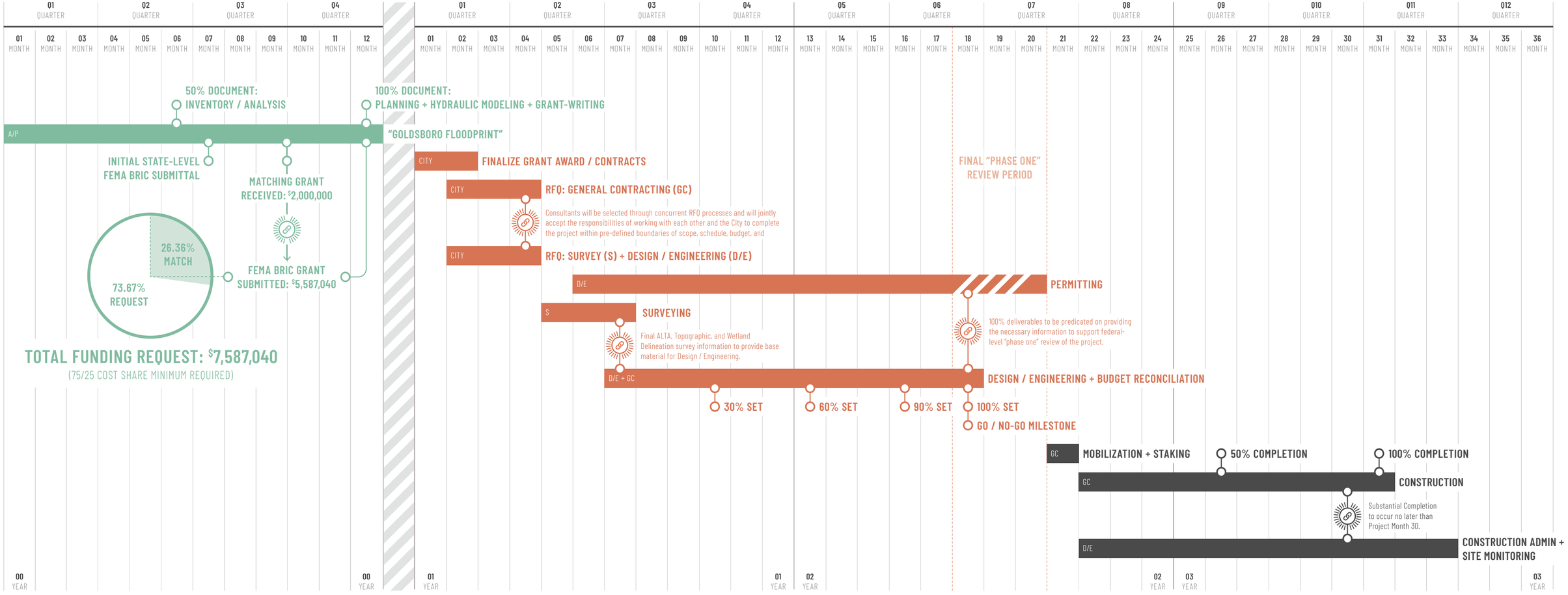
BENEFITS: $10,784,962
COSTS: $8,563,147

BENEFIT-COST ANALYSIS

PRELIMINARY COST-EFFECTIVENESS

The benefit-cost ratio (BCR) for the proposed scope of work is 1.26 - meaning the monetary equivalents of modeled damage reductions, ecosystem services, and social benefits exceed the anticipated costs of construction and long-term maintenance.

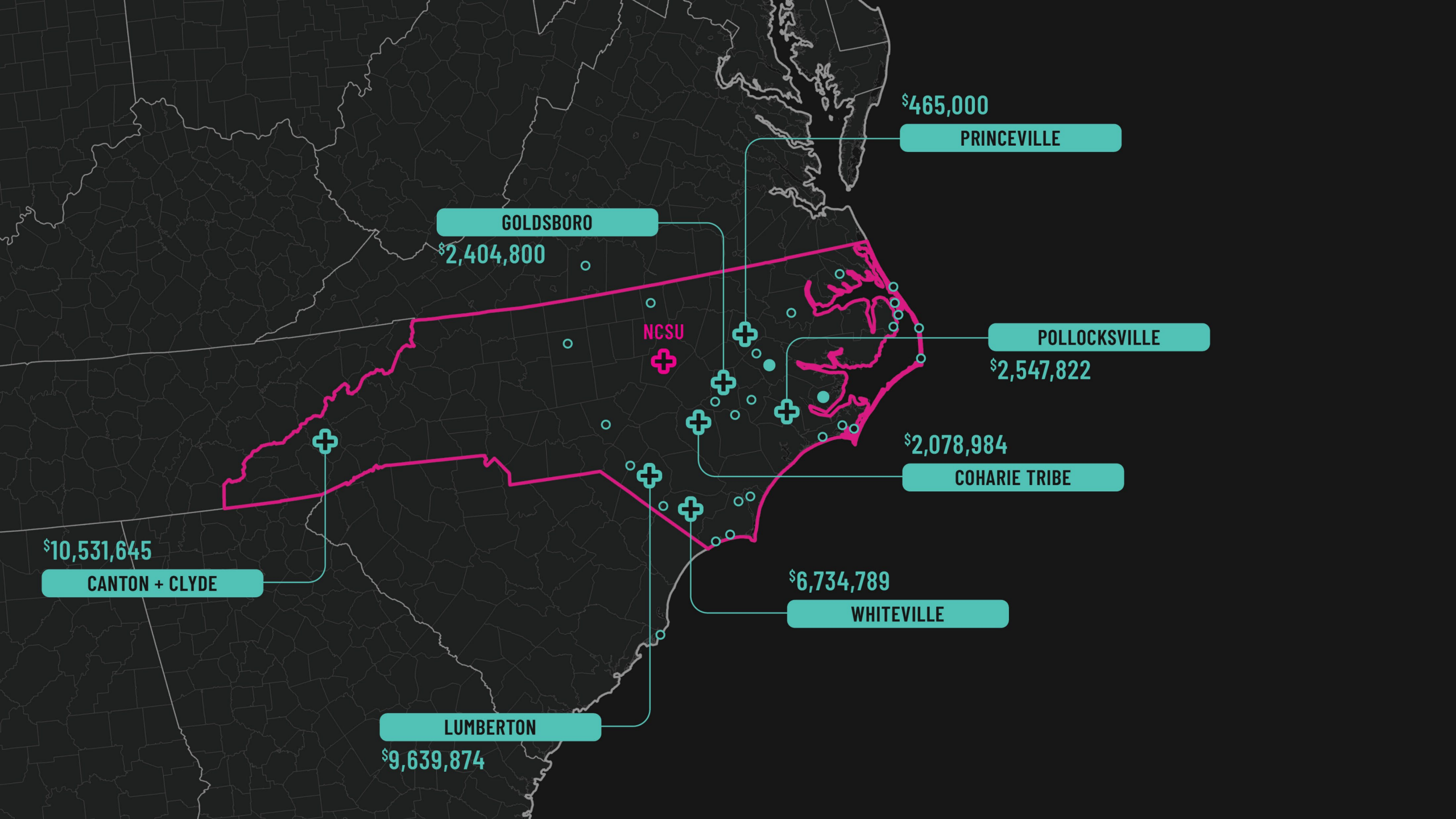
FEMA requires a minimum BCR of 1.00 for a project to be eligible for federal funding. The calculated BCR of 1.26 for the proposed scope of work establishes cost-effectiveness for this project.



PROJECT DELIVERY

PLANNING / RESOURCE PROCUREMENT + DESIGN + CONSTRUCTION

Planning methods and processes strategically aligned project deliverables with potentially viable external grant programs to support implementation. These efforts generated project buy-in, aided local capacity constraints, and enabled post-planning phases of the project to coincide delivery of the 100% "Goldsboro Floodprint" report.


$465,000
PRINCEVILLE
GOLDSBORO
$2,404,800
NCSU
POLLOCKSVILLE
$2,547,822
$2,078,984
COHARIE TRIBE
$10,531,645
CANTON + CLYDE
$6,734,789
WHITEVILLE
LUMBERTON
$9,639,874

FLOODPRINT: 2020

LUMBERTON

POPULATION: 20,928

+ $35,000: Foundation Grant
+ $48,331: State-Level Grant
+ $150,000: State-Level Grant
+ $232,416: Private Donation
+ $250,000: State-Level Grant
+ $31,025: Third Party Cost-Share
+ $5,590,702: Awarded + Resubmitted
+ $2,800,000: State-Level Grant
+ $15,000: Foundation Gift
+ $82,400: State-Level Grant
+ $600,000: State-Level Grant
+ $25,000: Foundation Grant
+ $30,000: Foundation Grant

$9,639,874

FLOODPRINT: 2020

PRINCEVILLE

POPULATION: 2,119

+ $15,000: Foundation Grant
+ $50,000: Private Donation
+ $200,000: Federal-Level Grant
+ $200,000: International-Level Grant

$465,000

FLOODPRINT: 2021

POLLOCKSVILLE

POPULATION: 216

+ $114,000: State-Level Grant
+ $20,000: Match Commitment
+ $10,000: Match Commitment
+ $15,000: Match Commitment
+ $50,000: Foundation Grant
+ $1,230,022: Awarded + Resubmitted
+ $548,800: State-Level Grant
+ $440,000: State-Level Grant
+ $120,000: State-Level Grant

$2,547,822

FLOODPRINT: 2023

WHITEVILLE

POPULATION: 4,688

+ $249,880: Foundation Grant
+ $5,173,909: Awarded + Resubmitted
+ $1,320,000: State-Level Grant

$5,265,529

FLOODPRINT: 2023

GOLDSBORO

POPULATION: 32,749

+ $2,000,000: State-Level Grant
+ $5,966,392: Awarded + Withdrawn
+ $404,800: Federal-Level Grant

$2,404,800

FLOODPRINT: 2024

COHARIE TRIBE

MEMBERS: 2,700

+ $2,078,984: Submitted + Pending

$2,078,984

FLOODPRINT: 2024

HAYWOOD COUNTY

CANTON + CLYDE POPULATION: 5,803

CANTON:
+ $698,990: State-Level Grant

HAYWOOD COUNTY:
+ $3,990,226: Submitted + Pending

CLYDE:
+ $391,612: Federal-Level Grant
+ $999,593: State-Level Grant
+ $50,000: Foundation Grant
+ $50,000: Foundation Grant
+ $25,000: Foundation Grant
+ $434,672: Submitted + Pending
+ $3,891,552: Submitted + Pending

$10,531,645

FLOODPRINTS: 2025 - 2027

PAMLICO COUNTY

POPULATION DENSITY: 36 people / sq mi

NORTH RIVER

POPULATION: 400 +/-

PITT COUNTY

POPULATION DENSITY: 205 people / sq mi

MANTEO

POPULATION: 1,595

LUMBEE TRIBE

MEMBERS: 55,000

'TBD' COMMUNITY

POPULATION: --

$34,411,914

TOTAL VALUE OF EXTERNAL INVESTMENTS INTO COMMUNITES FOR IMPLEMENTATION (AWARDED + PENDING)

32x RETURN ON INVESTMENT

IMPLEMENTATION FUNDS / (RESEARCH + PLANNING + GRANT-WRITING FUNDS)

OPPORTUNITIES TO ADVANCE ENCSL PARTNERS

INSIDE THE FENCE LINE: REDUCE VULNERABILITIES TO STRENGTHEN READINESS

+ ADDRESS ACUTE AND CHRONIC CLIMATE THREATS THAT NEGATIVELY IMPACT OPERATIONS
+ ENHANCE DAY-TO-DAY PERFORMANCE OF ENVIRONMENTAL SYSTEMS/FUNCTIONS
+ INTEGRATE STAFF/FAMILY PROGRAMMING TO IMPROVE ACCESS, HEALTH, AND WELL-BEING

OPPORTUNITIES TO ADVANCE ENCSL PARTNERS

INSIDE THE FENCE LINE: REDUCE VULNERABILITIES TO STRENGTHEN READINESS

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BEYOND THE FENCE LINE: BENEFITING DEFENSE SUPPORTING COMMUNITIES

+ ENHANCED COLLABORATION ON MILITARY INSTALLATION READINESS REVIEWS (MIRRS)
+ ASSIST COMMUNITIES RECOVER FROM FLOODS + BUILD LONG-TERM RESILIENCE, INCLUDING TIES TO:
    + RESILIENT COASTAL COMMUNITIES PROGRAM (RCCP)
    + NC FLOOD RESILIENCY BLUEPRINT
    + OFFICE OF LOCAL DEFENSE COMMUNITY COOPERATION (OLDCC)

OPPORTUNITIES TO ADVANCE ENCSL PARTNERS

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ENHANCE CURRENT AND FUTURE PRIORITY PROJECTS

+ STRENGTHEN COMMUNITY ENGAGEMENT PROCESSES AND OUTCOMES
+ SUPPORT ONGOING INITIATIVES: NFWF-FUNDED NEUSE RIVER FLOOD RESILIENCE PROJECT
+ PURSUE SUPPORT FOR IMPLEMENTATION OR EXPANSION OF PROJECTS AND PROGRAMS



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Additional Sentinel Landscape Committee Business Items



Ex Officio Seats

- N.C.G.S. 106-747(d): The Commissioner of Agriculture or the Commissioner's designee shall serve as Committee chair. Upon a favorable vote by a majority of the voting members, the Committee chair may appoint voting members and nonvoting ex officio members representing other State agencies, local government officials, federal agencies, military installations, and nongovernmental organizations that are experienced in land management activities within sentinel lands.

Ex Officio Seats for Military Installations

- Receive nominations to create military installation ex officio seats
  - Motion to approve military installation seats

Ex Officio Members for Military Installation Seats

- Receive nominations to appoint members to military installation ex officio seats
  - Motion to approve members to fill military installation seats

Public Comments



Next Meeting, Assignments, and Adjournment

