
MORSES POND BEACH & BATHHOUSE IMPROVEMENTS
SUPPLEMENTARY FEASIBILITY STUDY
TASK 7: BUILDING LOCATION ANALYSIS



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INTRODUCTION



PROJECT BACKGROUND

At the direction of ATM 2024, the NRC created the Moses Pond Beach Advisory Committee (MoPoBAC) to address both the concerns raised by the NRC in January 2024, and to review the overall project for potential issues prior to the Design Phase.

The Committee held site visits and conducted 6 meetings over the Summer of 2024. In August 2024, the MOPOBAC produced a Recommendations Report, which was then accepted by the NRC.

The Committee's findings included recommendations regarding:

- Program changes,
- Scope/cost changes,
- Required site investigations, and
- Environmental/permitting/mitigation concerns



PROJECT TIMELINE

January 18, 2024	Rec Commission presents feasibility study to NRC
January 31, 2024	NRC responds to feasibility study with concerns to be addressed
February 2, 2024	NRC votes to support request from CPC for design funds, contingent on issues being addressed in Design Phase.
March 2024	Town Meeting approves \$925K CPC appropriation for design
May 9, 2024	NRC appoints Morses Pond Beach Advisory Committee. Site walk and 6 meetings between May and December 2024.
August 2024	MOPO Beach Advisory Committee finalizes recommendations
October 2024	NRC votes to carry capital request as Proponent and appoints FMD to manage a supplemental feasibility study.
December 2024	CPC votes to approve \$168k request to NRC for supplemental study
January 2025	PBC advises Designphase funds (previously appropriated) not available to address Feasibilityphase issues.
March 2025	Advisory Committee votes 12-0 in support of supplemental study



PROJECT GOALS AND OBJECTIVES



The site is very much loved as it is, so a master plan tenet should include preserving and enhancing all that is great.



The bathhouse has outlived its practical and functional life and given the extent of repairs and upgrades required in order to bring the building into full code compliance and functionality, it is more cost effective and practical to demolish the existing building and create a new building.



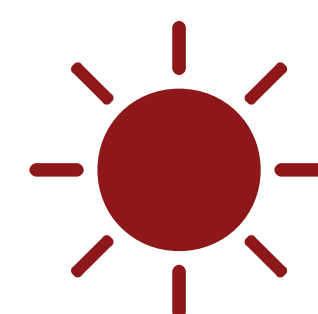
The design shall improve universal access for site amenities, walkways and paths.



Designs should be simple and sustainable, and in keeping with the inherent historical, environmental, cultural, and social site character.



Through the establishment of meadows and native landscape plantings, wildlife habitat can be improved.



New building enhancements should be attractive, low-intensity, and supportive of neighborhood and town-wide use during the summer swimming season.



Improvements to Morses Pond Beach will be designed in a cost-effective and sustainable manner.



MoPoBAC GOAL AND MEMBERSHIP

“Take a collaborative approach amongst all stakeholders to develop an ADA-compliant outcome that meets the programmatic needs for Recreation, environmental impact needs for NRC, operational needs for Recreation staff and customer experience needs for patrons and the Wellesley community at large, while at the same time enhancing the overall natural and aesthetic qualities of the site with a design that is simple, safety oriented and sustainable, and in keeping with the inherent historical, environmental, cultural, and social site character.”

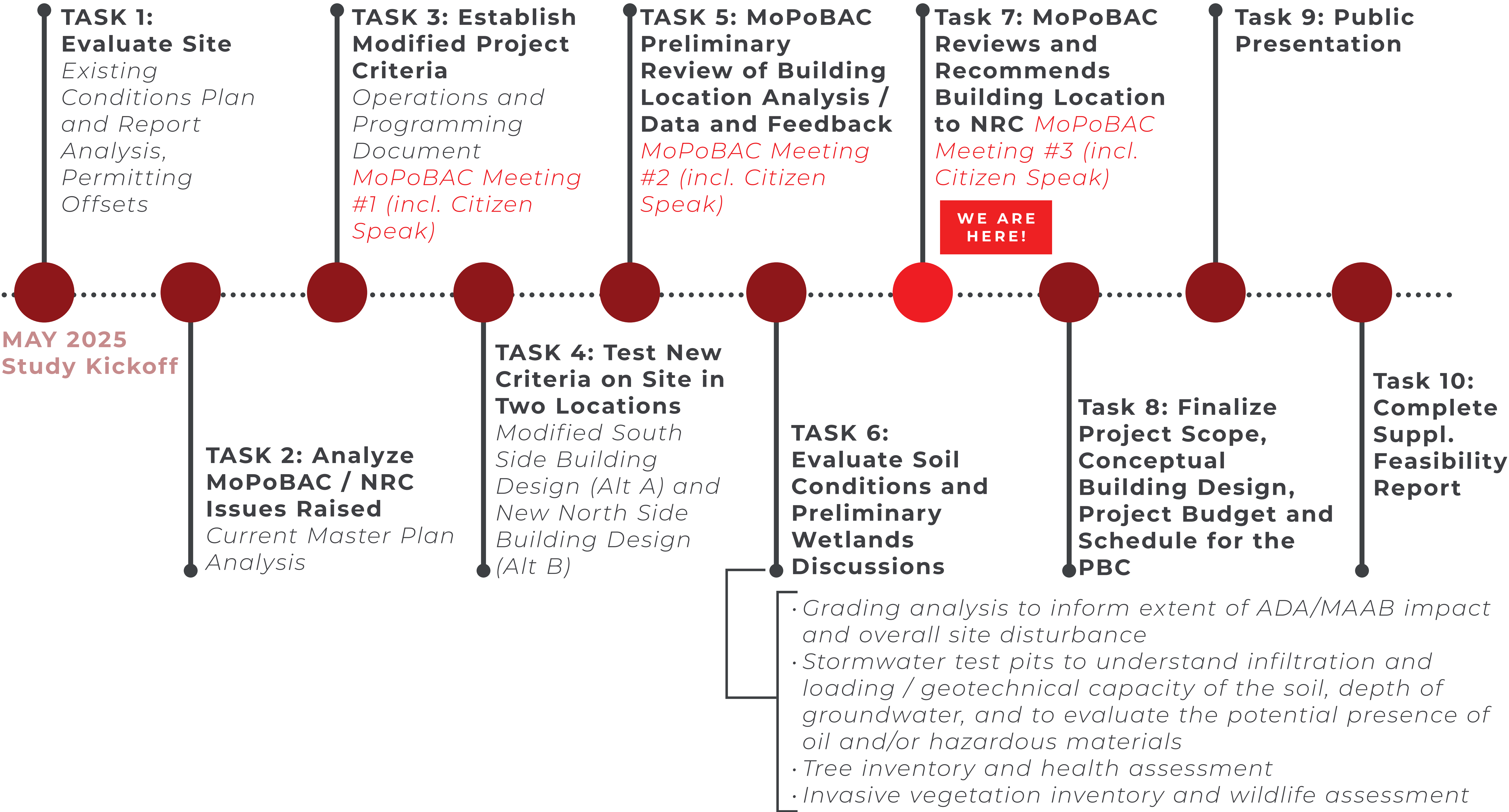
The MoPoBAC includes representation from NRC, Recreation, Select Board, Community Preservation Committee and Citizens.

Committee:

- Jay McHale, Chair
- Tripp Sheehan, ViceChair
- Tom Ulfelder, Select Board
- Stephen Murphy, Community Preservation Committee
- Mark Wolfson, Recreation Commission
- Michelle Jacobs, Precinct B
- Maura Renzella, Youth Commission and Precinct B
- Staff support from NRC, Recreation, DPW, and FMD



SUPPLEMENTARY FEASIBILITY STUDY TASK SUMMARY



EXISTING SITE CONDITIONS



*Photo of the Existing
Bathhouse, July 2019*

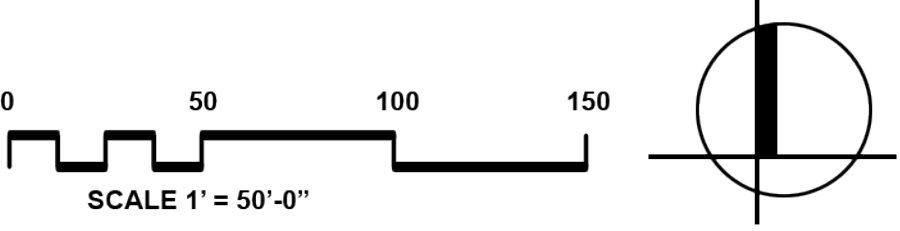
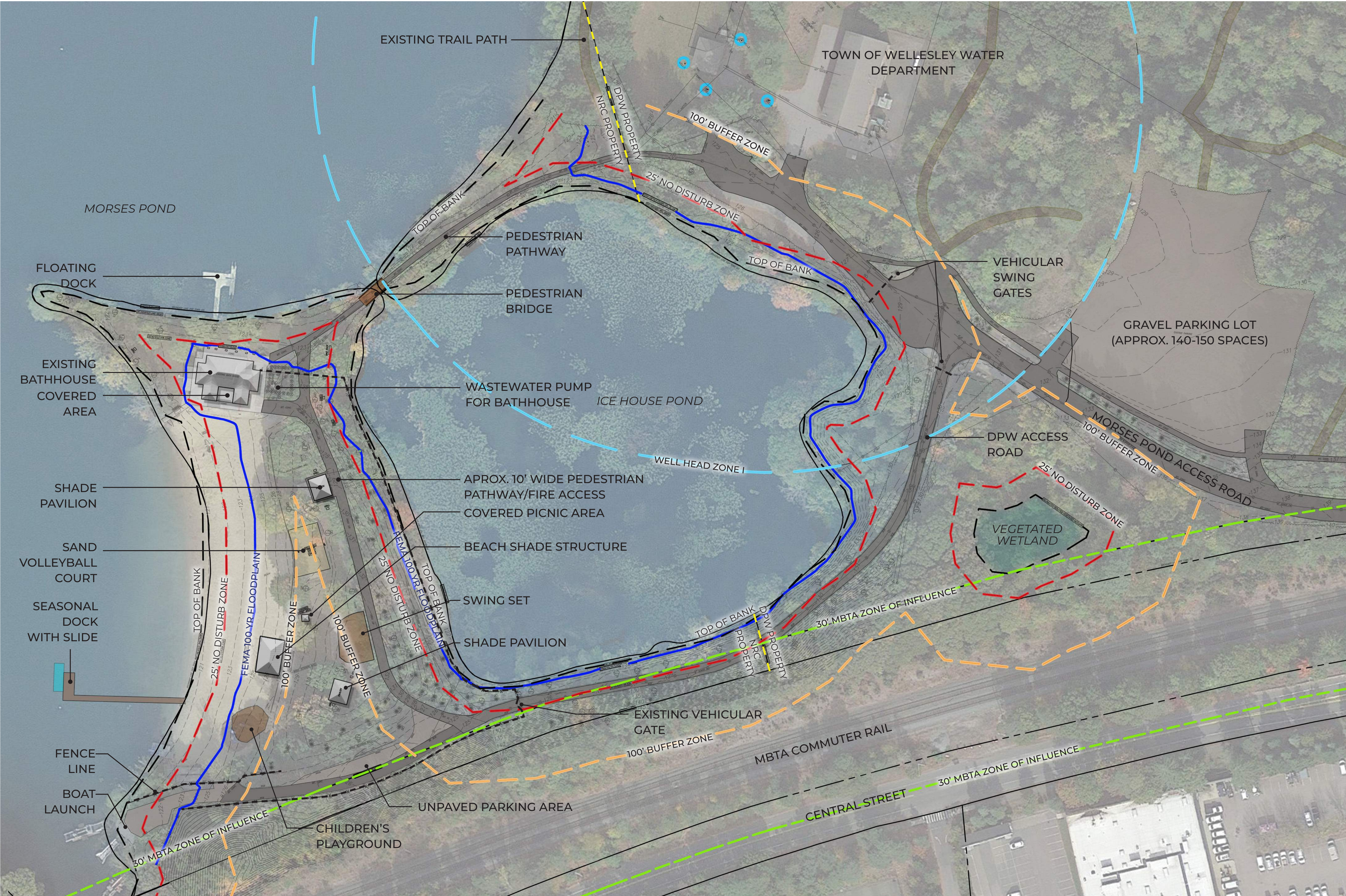
EXISTING CONDITIONS PLAN: **SITE HISTORY AS A TOWN BEACH**



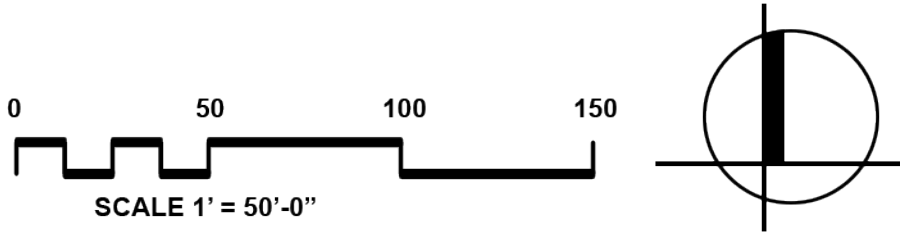
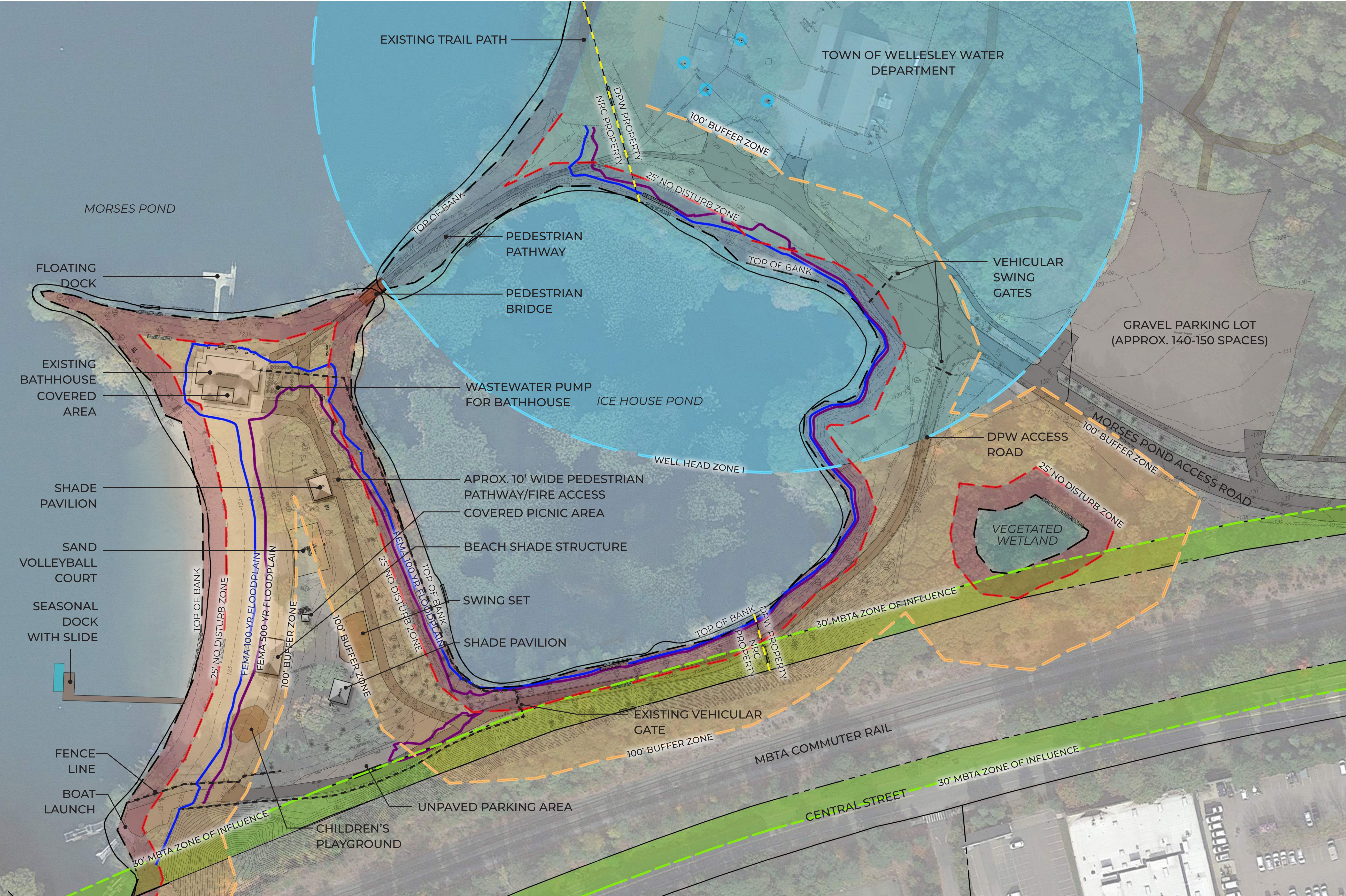
EXISTING CONDITIONS PLAN: BUILDING AND AMENITIES INVENTORY

TASK 1

Evaluate Site
Existing Conditions
Plan and Report
Analysis



EXISTING CONDITIONS PLAN: **PERMITTING OFFSETS**



PERMIT / KEYS
REGS. OUTCOMES

Zone I Wellhead Zone

Avoid Work in zone. No new land uses are permitted unless they are for water supply or shown to have no significant impact. Occasional parking may be allowable with precautions.

MBTA Zone of Influence

Avoid Work in Zone. Work within 30' of MBTA property requires a license and extensive coordination with MBTA.

Wetlands

Local Notice of Intent (NOI) for work in the Bordering Land Subject to Flooding (BLSF). Required under WPA and Wellesley Wetlands Bylaw for work in the BLSF and buffer zones.

- Compensatory flood storage is required if fill occurs below **100 -year FEMA flood elevation** (124.2' NAVD88). Must match floodwater displacement volume.
- **25-foot No Disturb Zone** must remain intact.
- Work in **100-foot buffer zone** must preserve habitat; tree removal requires native species replacement or mitigation plan.

Article 97 Land

No Change In Use. Project must maintain recreational use. Continued use as a beach is assumed not to require new Article 97 legislation unless advised otherwise.

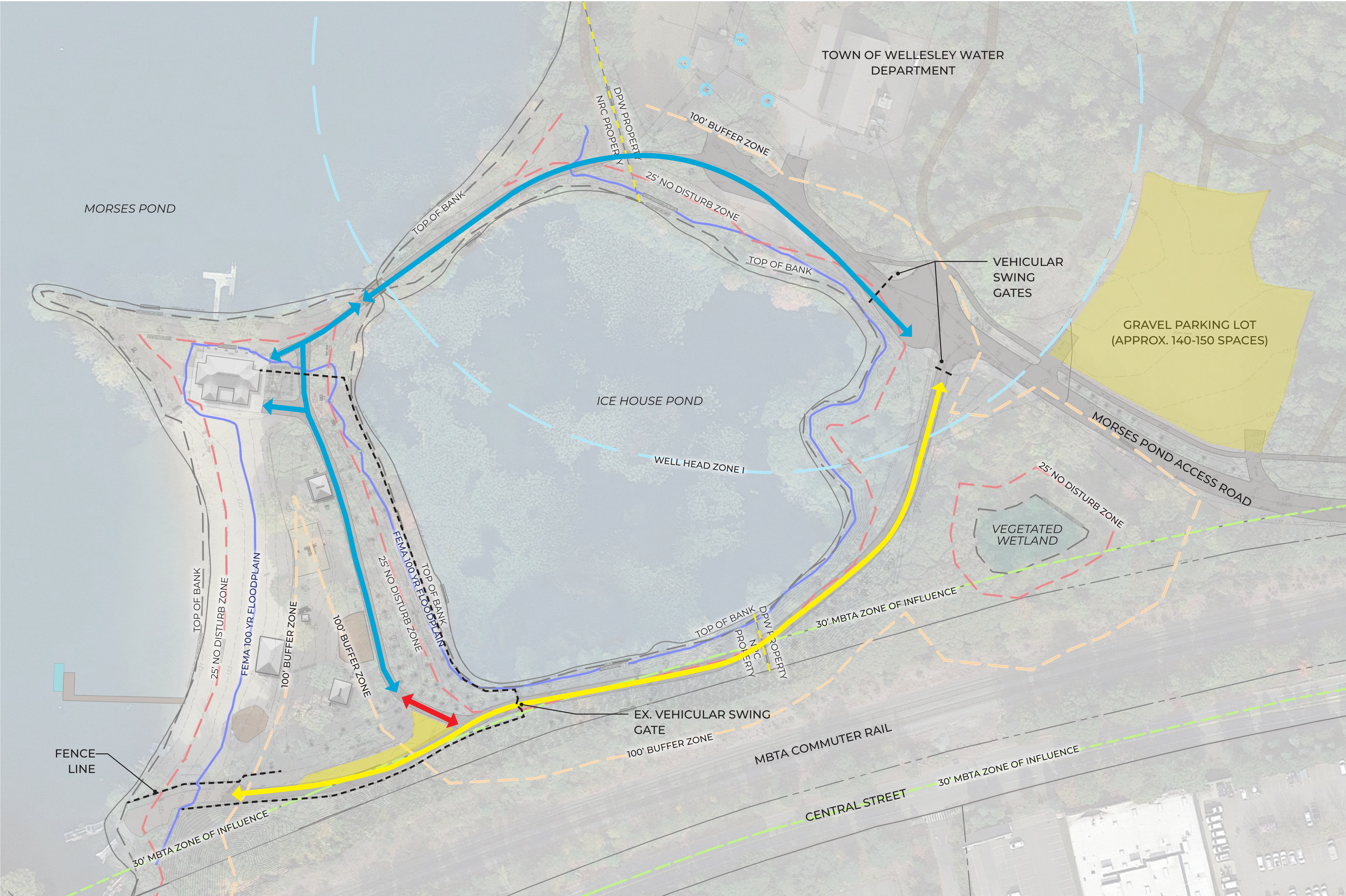
MA Architectural Access Board (AAB) Parking Requirements

No Onsite Parking Required and Building Location not Restricted. No requirement for parking within 200' or drop off with 100' of buildings applies.

500-year FEMA flood elevation

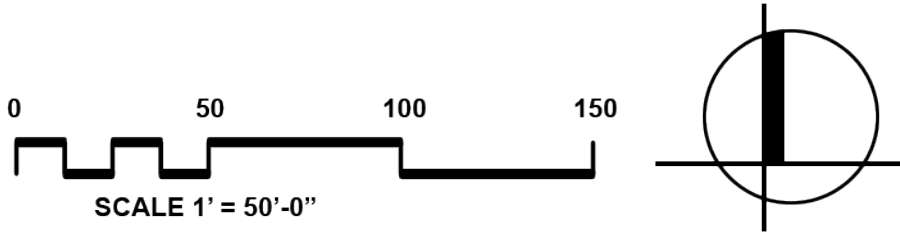
Potential Building Construction Consideration. For climate change / resiliency consideration (0.2 chance of flooding annually)

EXISTING CONDITIONS PLAN: **PEDESTRIAN AND VEHICULAR CIRCULATION**



LEGEND





- EX. FENCE LINE
- ↔ ACCESSIBLE PEDESTRIAN ROUTE (< 5%)
- ↔ NON-ACCESSIBLE PEDESTRIAN ROUTE (> 5%)
- ↔ VEHICULAR ROUTE



EXISTING CONDITIONS PLAN: **EXISTING SIGNIFICANT TREES**

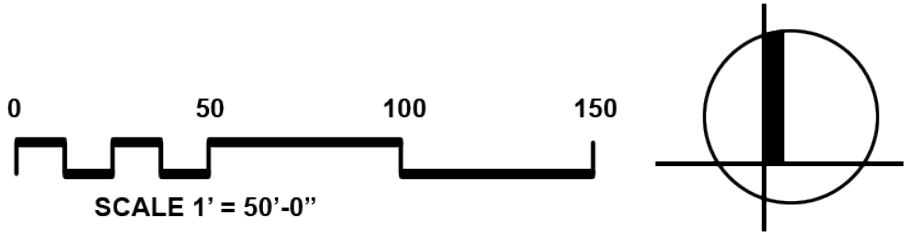


LEGEND

-  **149** EX. INVENTORIED DECIDUOUS TREES - INSIDE THE 100' WETLAND BUFFER
-  **66** EX. INVENTORIED EVERGREEN TREES - INSIDE THE 100' WETLAND BUFFER
-  **8** EX. INVENTORIED DECIDUOUS TREES - OUTSIDE 100' WETLAND BUFFER
-  **7** EX. INVENTORIED EVERGREEN TREES - OUTSIDE 100' WETLAND BUFFER

CALIPER	# OF DECIDUOUS	# OF EVERGREEN
< 6	3	0
6 - 18	107	50
> 18	47	23
TOTAL:	157	73


The tree inventory was conducted by Hartney Greymont on August 6, 2025 by a Massachusetts Certified Arborist.




EXISTING CONDITIONS PLAN: **EXISTING TREE CONDITIONS**




LEGEND

**1**


EX. EVERGREEN TREE:
EXCELLENT CONDITION

**13**


EX. EVERGREEN TREE:
GOOD CONDITION

**56**

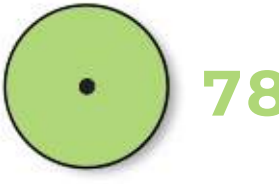
EX. EVERGREEN TREE:
FAIR CONDITION

**3**

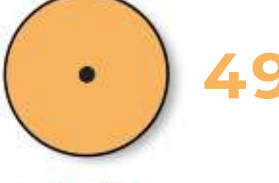
EX. EVERGREEN TREE:
POOR CONDITION

**8**

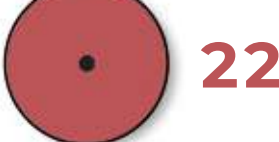
EX. DECIDUOUS TREE:
EXCELLENT CONDITION

**78**

EX. DECIDUOUS TREE:
GOOD CONDITION

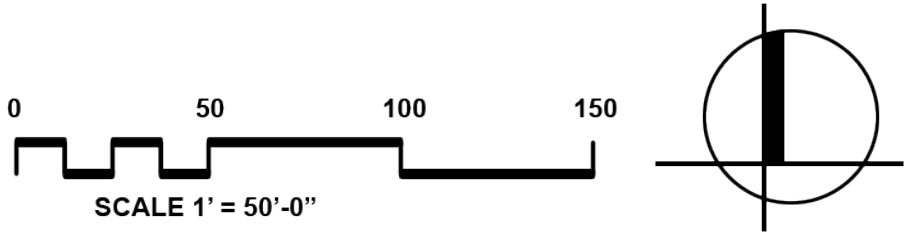
**49**

EX. DECIDUOUS TREE:
FAIR CONDITION

**22**

EX. DECIDUOUS TREE:
POOR CONDITION

CONDITION KEY	# OF DECIDUOUS
EXCELLENT	Tree is in excellent condition. May have unique value or be aesthetically desirable.
GOOD	Tree is desirable and in moderately good health.
FAIR	Tree may show some signs of minor health issues
POOR	Tree is unsound, high risk, unhealthy, or undesirable.



EXISTING CONDITIONS PLAN: **EXISTING INVASIVE TREES**



LEGEND

INVASIVE SPECIES IDENTIFICATION

- 11** EXISTING BLACK LOCUST (BL)
- 14** EXISTING NORWAY MAPLE (NM)
- 1** EXISTING TREE OF HEAVEN (TOH)

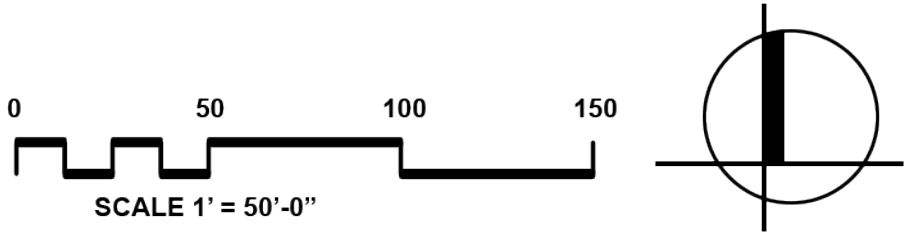
INVASIVE TREE CONDITION

- 0** EX. TREE: EXCELLENT CONDITION
- 16** EX. TREE: GOOD CONDITION
- 8** EX. TREE: FAIR CONDITION
- 2** EX. TREE: POOR CONDITION

CONDITION	# OF BL	# OF NM	# OF TOH
EXCELLENT	0	0	0
GOOD	4	11	1
FAIR	6	2	0
POOR	1	1	0
TOTAL:	11	14	1

CONDITION KEY	# OF DECIDUOUS
EXCELLENT	Tree is in excellent condition. May have unique value or be aesthetically desirable.
GOOD	Tree is desirable and in moderately good health.
FAIR	Tree may show some signs of minor health issues
POOR	Tree is unsound, high risk, unhealthy, or undesirable.

Invasive trees were inventoried by Weston & Sampson on August 6, 2025. Additional invasive trees were identified during this effort that were located beyond the project limits and/or had a dbh of 3" or less.



EXISTING CONDITIONS PLAN: **EXISTING INVASIVE PLANTS**



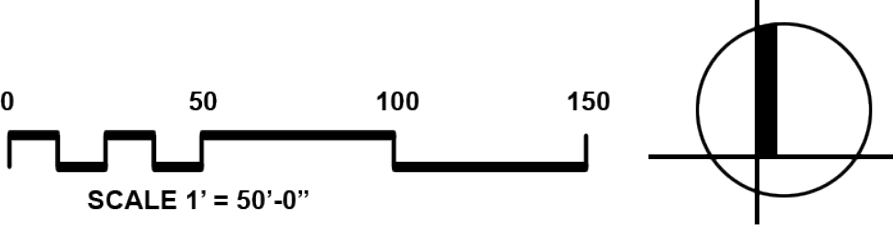
LEGEND

INDIVIDUAL PLANTS

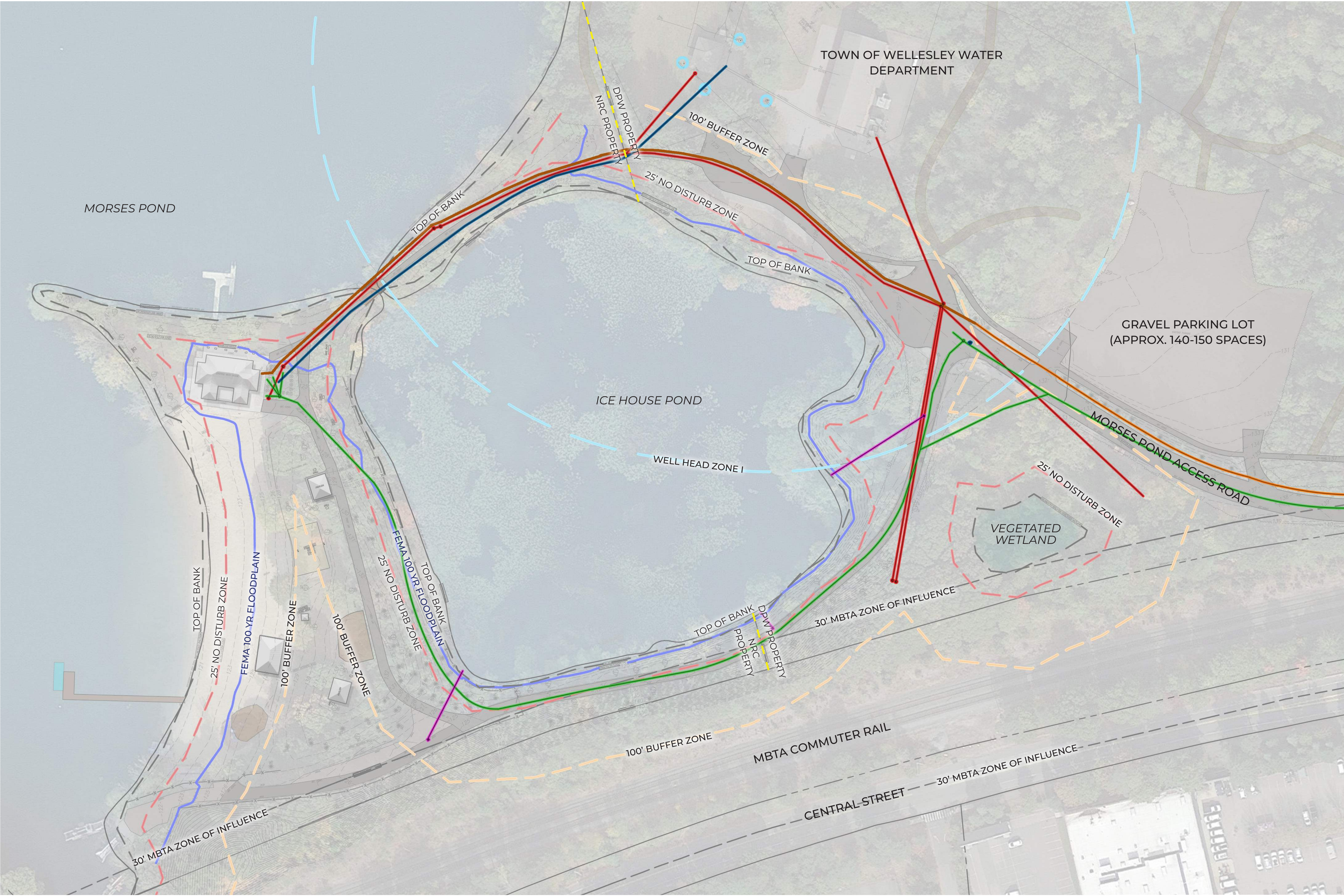
- BARBERRY
- BITTERSWEET
- BURNING BUSH
- COMMON BUCKTHORN
- GLOSSY BUCKTHORN
- JAPANESE HONEYSUCKLE
- KNOTWEED
- MULTIFLORA ROSE
- PRIVET
- PURPLE LOOSESTRIFE

PLANT SWATHS

- BITTERSWEET
- COMMON BUCKTHORN
- GLOSSY BUCKTHORN
- GARLIC MUSTARD
- JAPANESE HONEYSUCKLE
- KNOTWEED
- MULTIFLORA ROSE
- NORWAY MAPLE
- PURPLE LOOSESTRIFE

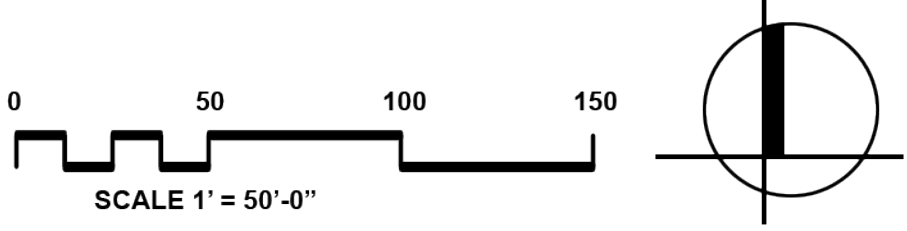


EXISTING CONDITIONS PLAN: **EXISTING UTILITIES**

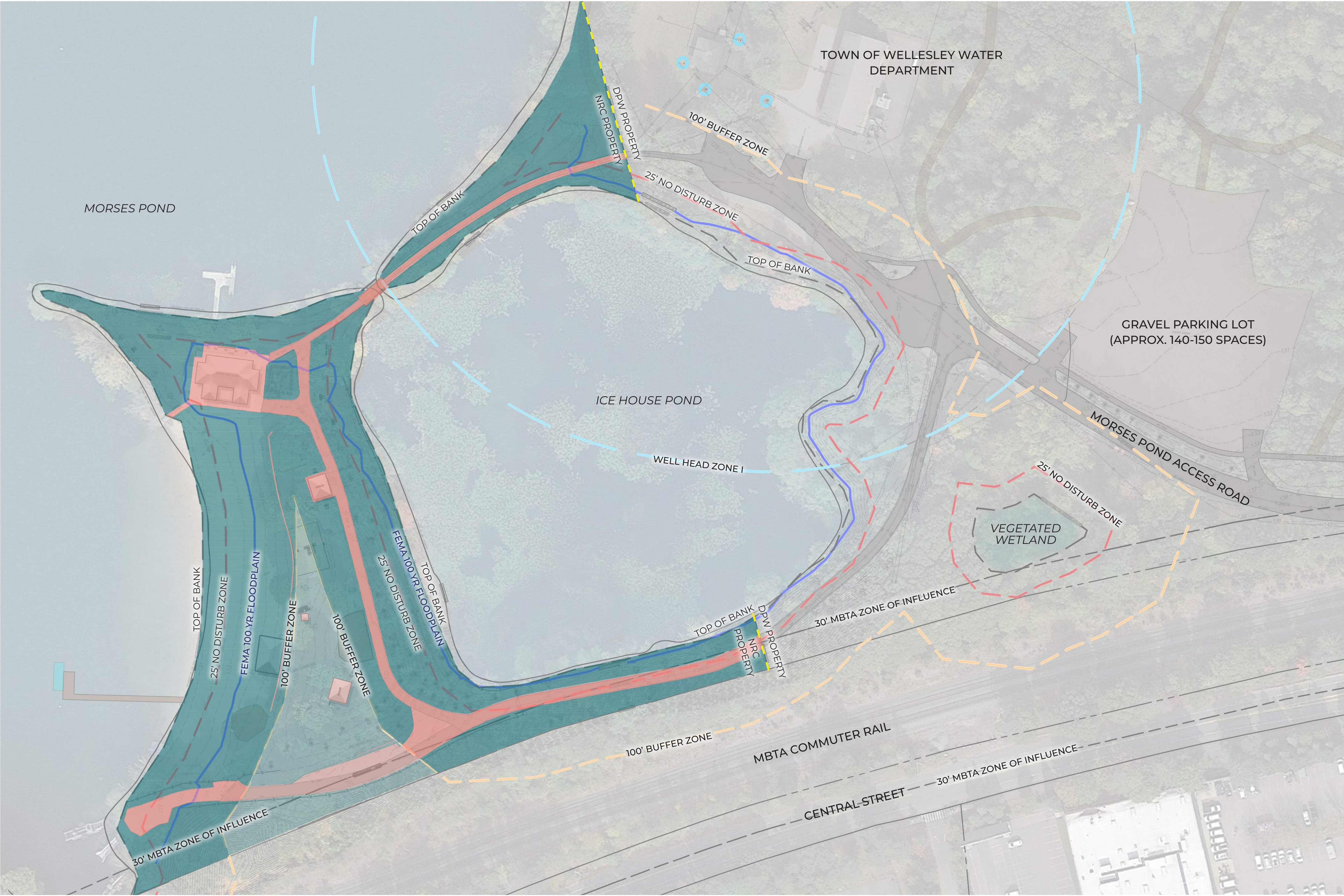


LEGEND

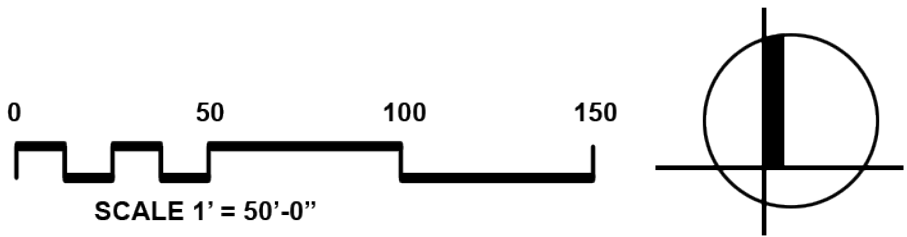
WATER	EX. WATER LINE
SEWER	EX. SANITARY SEWER LINE
STORM	EX. STORM DRAINAGE
ELECTRICAL	EX. ELECTRICAL CONDUIT
COMMUNICATIONS	EX. COMMUNICATIONS LINE
CABLE	EX. CABLE LINE FOR INTERNET



EXISTING CONDITIONS PLAN: IMPERVIOUS / PERVIOUS COVER



LEGEND	
24,074 sf	IMPERVIOUS AREA - INSIDE 100' WETLAND BUFFER
4,641 sf	IMPERVIOUS AREA - OUTSIDE 100' WETLAND BUFFER
134,501 sf	PERVIOUS AREA - INSIDE 100' WETLAND BUFFER
24,144 sf	PERVIOUS AREA - OUTSIDE 100' WETLAND BUFFER



CURRENT MASTER PLAN ANALYSIS



*Illustrative Rendering of
the Current Master Plan,
from 2024*

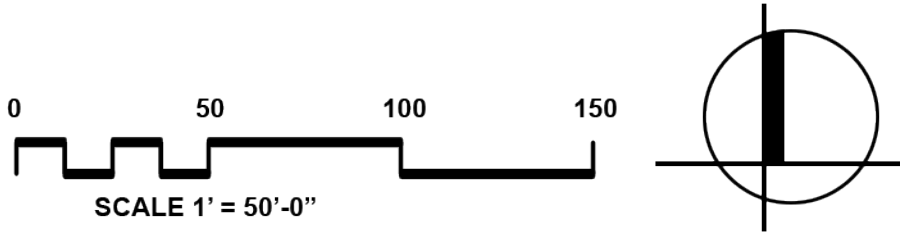
CURRENT MASTER PLAN

TASK 2

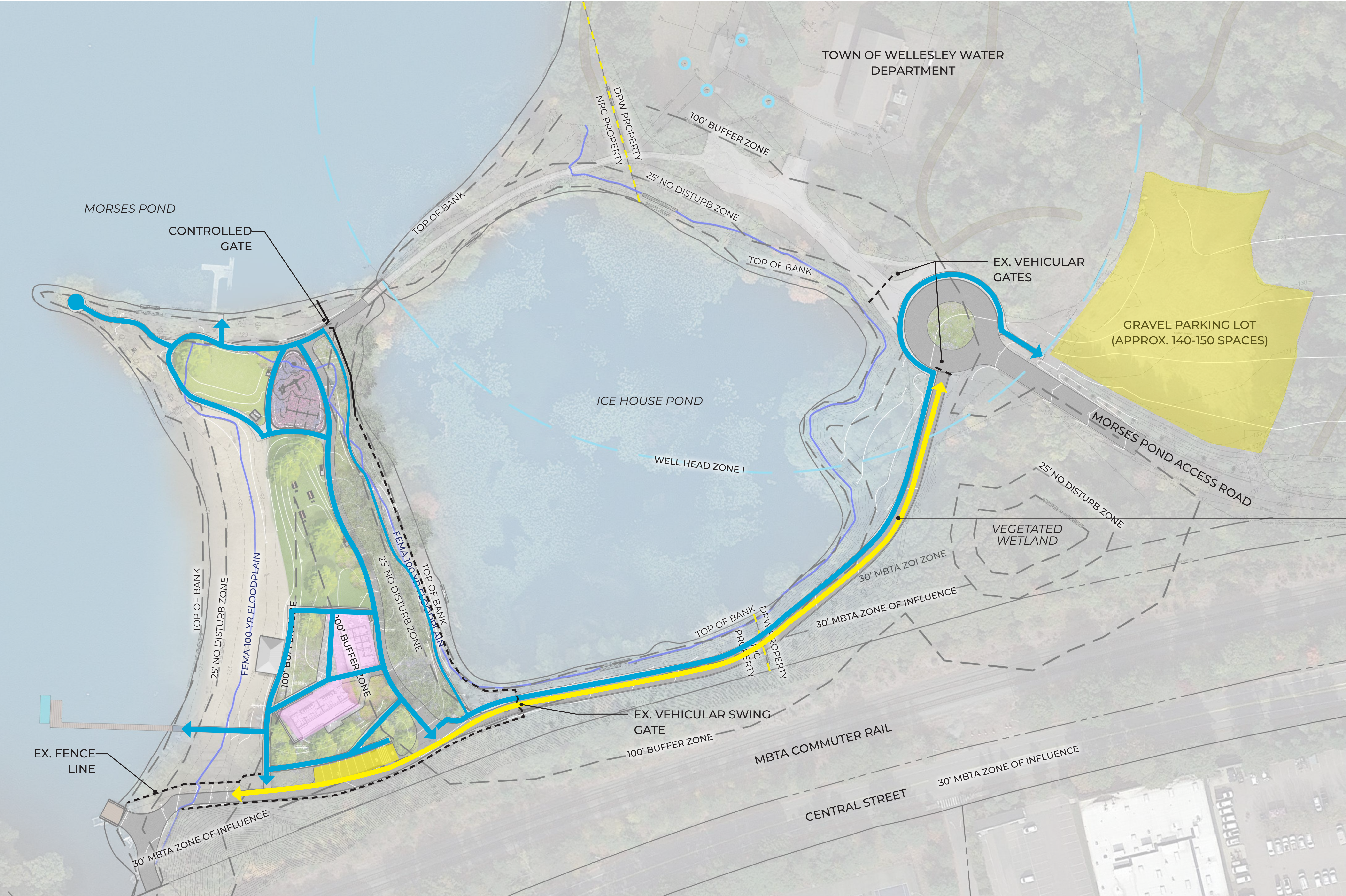
Analyze MoPoBAC /
NRC Issues Raised
Current Master Plan
Analysis

The Master Plan produced during the 2024 study was completed prior to the realignment of the seasonal dock location. Additionally, the boardwalk along the beach was value engineered out of the design after the study was finalized.

The Master Plan to the left reflects the new location of the seasonal dock and the removal of the previously proposed boardwalk to make up what is now referred to as the Current Master Plan. Permitting offsets have also been included on this plan.



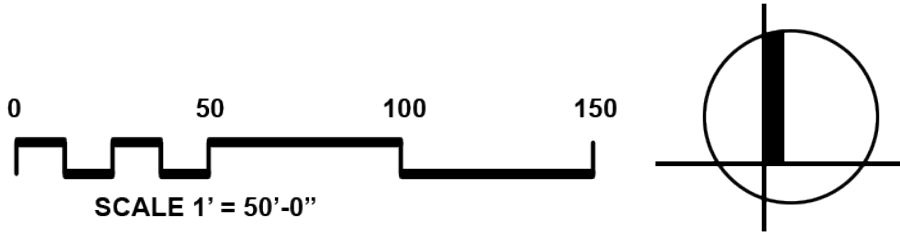
CURRENT MASTER PLAN: **PEDESTRIAN AND VEHICULAR CIRCULATION**



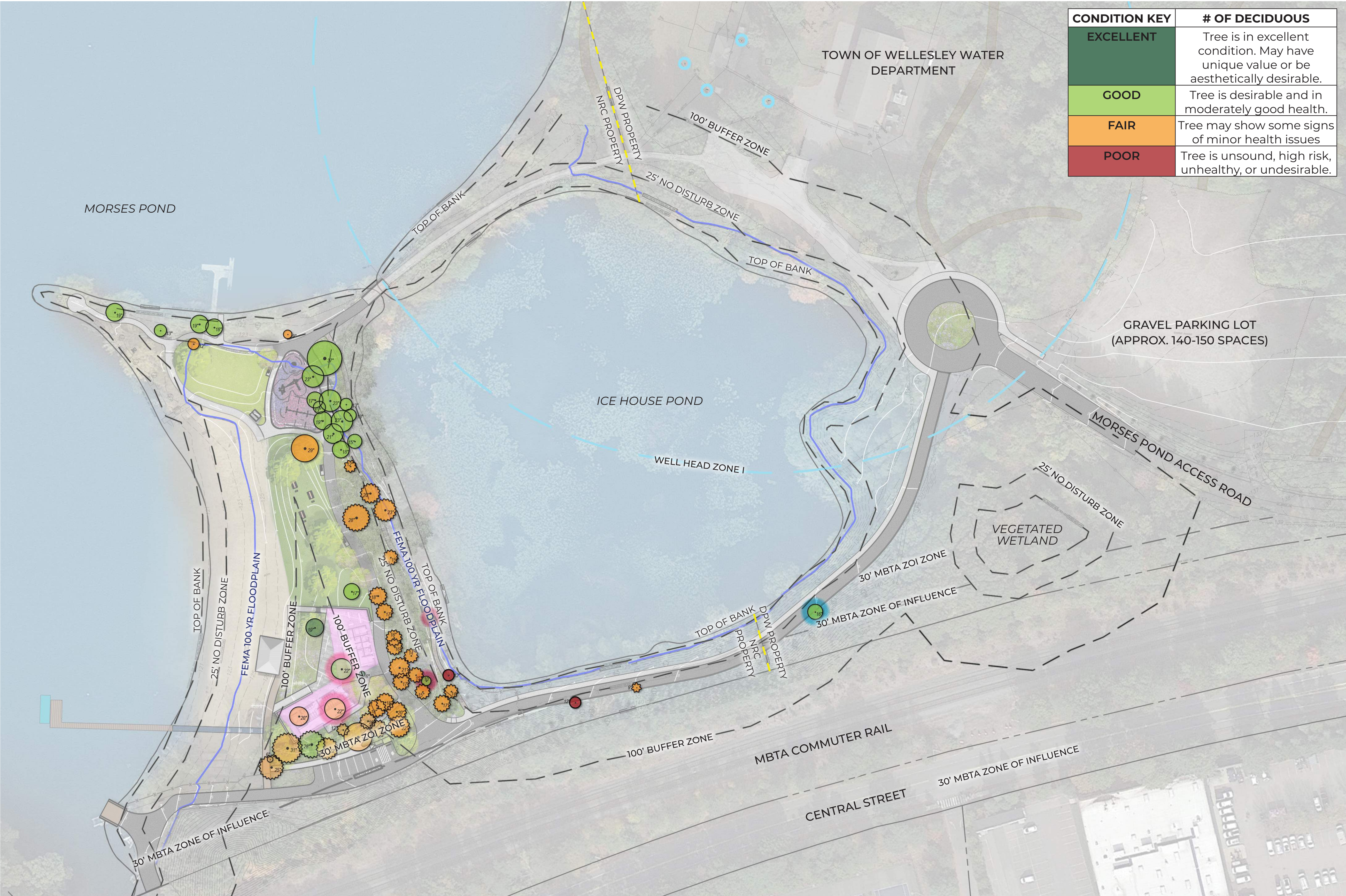
LEGEND

- EX. FENCE LINE
- ↔ ACCESSIBLE PEDESTRIAN ROUTE (< 5%)
- ↔ NON-ACCESSIBLE PEDESTRIAN ROUTE (> 5%)
- ↔ VEHICULAR ROUTE
- EX. PARKING AREA
- PROPOSED ACCESSIBLE PARKING
- PR. FENCELINE

Adding sidewalk along the DPW Access Drive and milling the roadway falls within the MBTA's Zone of Influence and will require approval from the MBTA to be completed. The approval process has historically taken anywhere between 9 and 12+ months, and requires a financial obligation.



CURRENT MASTER PLAN: TREE IMPACTS



CONDITION KEY	# OF DECIDUOUS
EXCELLENT	Tree is in excellent condition. May have unique value or be aesthetically desirable.
GOOD	Tree is desirable and in moderately good health.
FAIR	Tree may show some signs of minor health issues
POOR	Tree is unsound, high risk, unhealthy, or undesirable.

LEGEND

TREES REMOVED WITH IN THE 100' BUFFER

0

1

EX. EVERGREEN & DECIDUOUS TREES: EXCELLENT CONDITION

0

20

EX. EVERGREEN & DECIDUOUS TREES: GOOD CONDITION

21

3

EX. EVERGREEN & DECIDUOUS TREES: FAIR CONDITION

0

2

EX. EVERGREEN & DECIDUOUS TREES: POOR CONDITION

TREES REMOVED OUTSIDE THE 100' BUFFER

0

1

EX. EVERGREEN & DECIDUOUS TREES: EXCELLENT CONDITION

1

1

EX. EVERGREEN & DECIDUOUS TREES: GOOD CONDITION

6

4

EX. EVERGREEN & DECIDUOUS TREES: FAIR CONDITION

0

0

EX. EVERGREEN & DECIDUOUS TREES: POOR CONDITION

INVASIVE TREE SPECIES INCLUDED IN REMOVAL WITH IN 100' BUFFER

1

EX. BLACK LOCUST

2

EX. NORWAY MAPLE

0

EX. TREE OF HEAVEN

INVASIVE TREE SPECIES INCLUDED IN REMOVAL WITH IN 100' BUFFER

0

EX. BLACK LOCUST

2

EX. NORWAY MAPLE

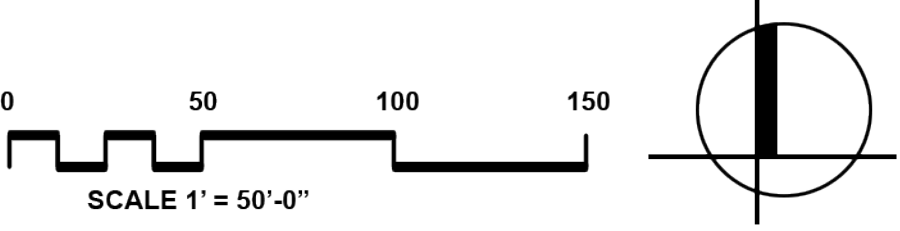
0

EX. TREE OF HEAVEN

CURRENT MASTER PLAN: UTILITIES



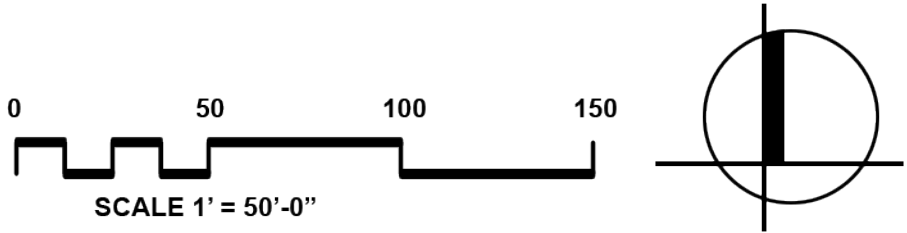
LEGEND	
	EX. WATER LINE
	EX. SANITARY SEWER LINE
	EX. STORM DRAINAGE
	EX. ELECTRICAL CONDUIT
	EX. COMMUNICATIONS LINE
	EX. CABLE LINE FOR INTERNET
	PROPOSED WATER LINE
	PROPOSED SANITARY SEWER LINE
	PROPOSED ELECTRICAL CONDUIT
	PROPOSED CABLE LINE FOR INTERNET



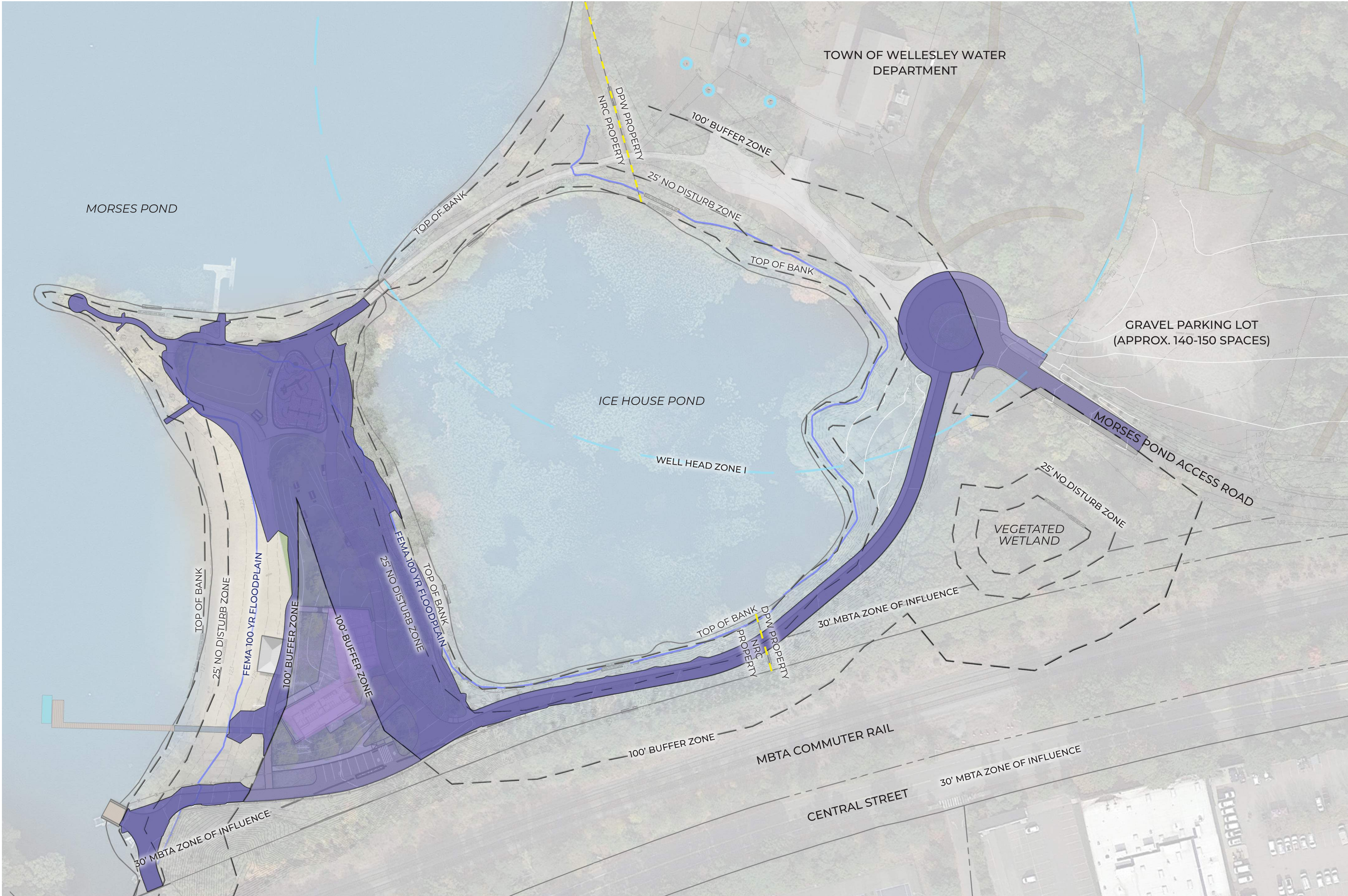
CURRENT MASTER PLAN: IMPERVIOUS / PERVIOUS COVER



LEGEND	
28,560 sf	IMPERVIOUS AREA - INSIDE 100' WETLAND BUFFER
11,280 sf	IMPERVIOUS AREA - OUTSIDE 100' WETLAND BUFFER
130,015 sf	PERVIOUS AREA - INSIDE 100' WETLAND BUFFER
17,505 sf	PERVIOUS AREA - OUTSIDE 100' WETLAND BUFFER

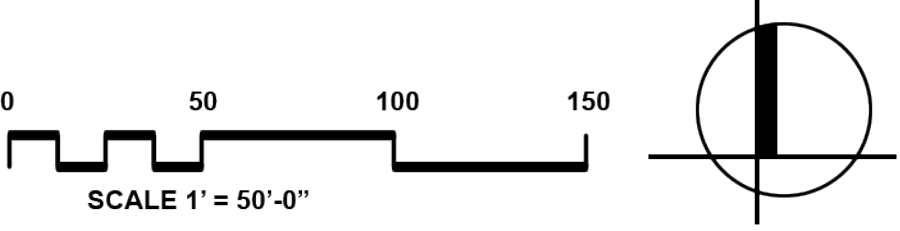


CURRENT MASTER PLAN: **DISTURBANCE**



LEGEND

- 87,764 sf** **DISTURBED AREA**
- INSIDE 100'
WETLAND BUFFER*
- 29,158 sf** **DISTURBED AREA**
- OUTSIDE 100'
WETLAND BUFFER



CURRENT MASTER PLAN: ANALYSIS SUMMARY

	EXISTING CONDITIONS PLAN	CURRENT MASTER PLAN	NET CHANGE
IMPERVIOUS AREA - INSIDE 100' WET- LAND BUFFER	24,074 sf	28,560 sf	+4,486 sf
PERVIOUS AREA - INSIDE 100' WETLAND BUFFER	134,501 sf	130,015 sf	-4,486 sf
TOTAL IMPERVIOUS AREA	28,715 sf	39,840 sf	+11,125 sf
TOTAL PERVIOUS AREA	158,645 sf	147,520 sf	-11,125 sf
BUILDING SQUARE FOOTAGE	2,572 sf	3,191 sf	+619 sf
BUILDING LOCATION	North side	South side	N/A
OVERALL CUT / FILL	N/A	7,050.9 cy cut / 1,201.3 cy fill	5,849.6 cy net cut
CUT / FILL WITHIN THE 100 YR. FEMA FLOODPLAIN	N/A	458.8 cy cut / 68 cy fill	390.9 cy net cut
DEDICATED LAWN AREA	+/- 22,220 sf	+/- 17,730 sf	-4,490 sf
AMENITIES TO REMAIN	N/A	<ul style="list-style-type: none">• Beach pavilion• Floating docks	<ul style="list-style-type: none">• Beach pavilion• Floating docks
RELOCATED AMENITIES	N/A	N/A	N/A
REMOVED AMENITIES	N/A	<ul style="list-style-type: none">• Play structure• Swing Set• Both permanent pavilions• Volleyball court	<ul style="list-style-type: none">• Play structure• Swing Set• Both permanent pavilions• Volleyball court
ADDED AMENTIES	N/A	<ul style="list-style-type: none">• New playground• Pavilion• Picnic area• Accessible beach mats• Boardwalk path• Overlook path	<ul style="list-style-type: none">• New playground• Pavilion• Picnic area• Accessible beach mats• Boardwalk path• Overlook path
PARKING	<ul style="list-style-type: none">• Gravel pull off area• No ADA parking	<ul style="list-style-type: none">• 7 parking spaces• 2 ADA parking spaces	+9 spaces
DECIDUOUS TREES - INSIDE THE 100' WET- LAND BUFFER	149	123	-26
EVERGREEN TREES - INSIDE THE 100' WETLAND BUFFER	66	45	-21
TOTAL DECIDUOUS TREES	157(existing)	125 (remain)	-32 (5 invasive)
TOTAL EVERGREEN TREES	73 (existing)	45 (remain)	-28
UTILITY IMPACTS	N/A	Additional water line & electrical conduit from the north to the southern location	+/- 300 linear feet (Electrical) +/- 300 linear feet (Water)
VEHICULAR CIRCULATION	Southern path	Southern path	N/A
PEDESTRIAN CIRCULATION AND BEACH ACCESS	<ul style="list-style-type: none">• Beach access is through the northern bathhouse.• Southern access is restricted by fencing and gates• Full access to Ice House Pond loop path only during off season• Main beach path is not accessible at southern end	<ul style="list-style-type: none">• Beach access is through the southern bathhouse• Northern access would be gated• Full access to Ice House Pond loop path year round through fenced off secondary pond path• All paths are accessible	<ul style="list-style-type: none">• 1 access point at the south end• Full access to Ice House Pond loop path only during off season• All paths are accessible
AREA OF DISTURBANCE	N/A	116,922 sf (87,764 sf inside 100' wetland buffer)	+116,922 sf
PERMITTING IMPACTS	N/A	<ul style="list-style-type: none">• Wildlife assessment is required (greater than 5,000 sf of alteration within the 100' wetland buffer)• A stormwater report is required (net increase in impervious within the 100' wetland buffer)• Minor compensatory storage is necessary within the 100 Yr. FEMA Floodplain (greater than 5,000 sf of alteration)• Planting one native replacement tree for each tree re-moved - 47 Native Trees Total• Zone of Influence permit required (project schedule to accomo-date review periods)	N/A



MODIFIED PROJECT CRITERIA

*View of the beach,
June 2019*

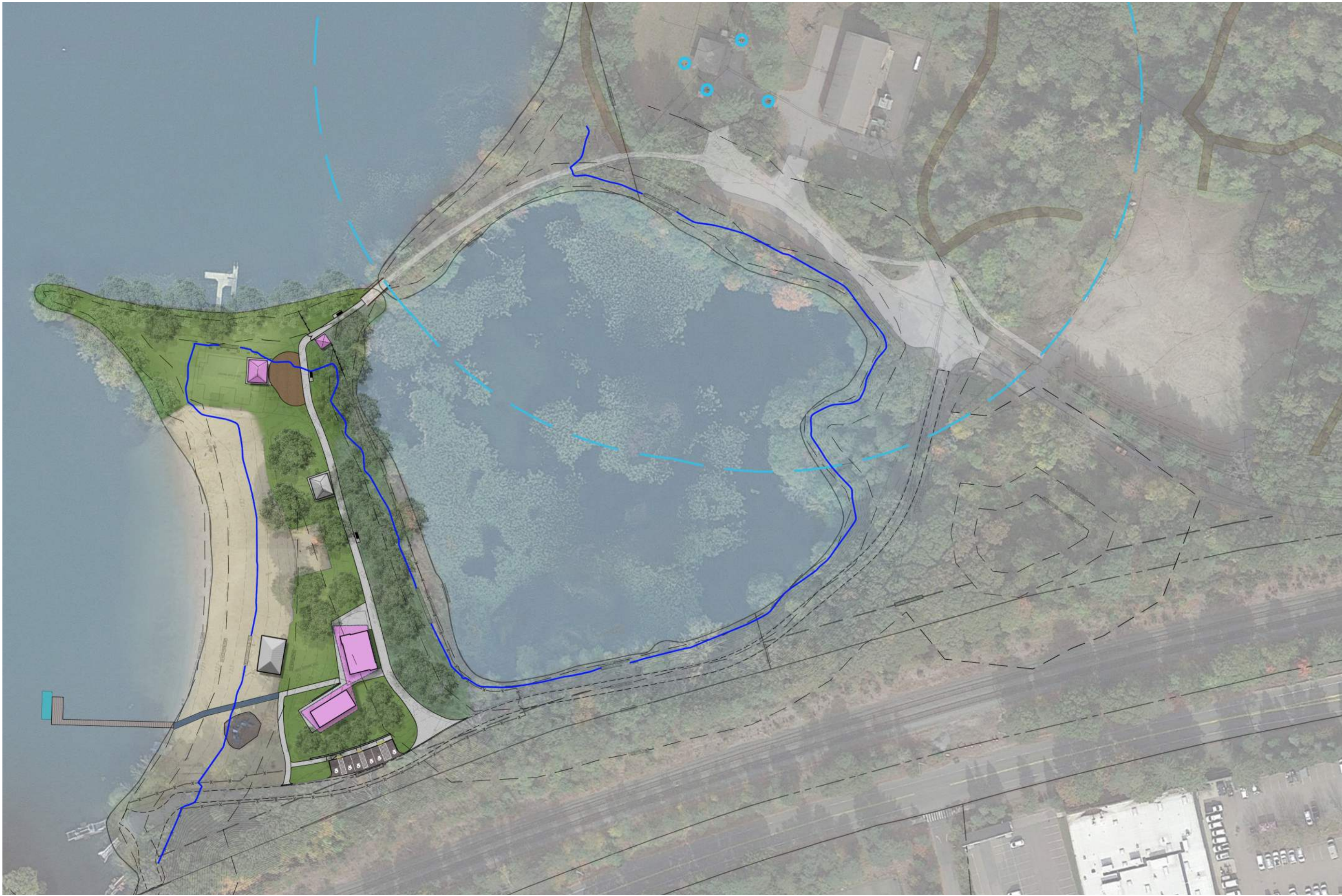


BUILDING PROGRAM	EX. BATHHOUSE PROGRAM (nsf)	CURRENT MASTER PLAN BATHHOUSE PROGRAM (nsf)	REVISED BATHHOUSE PROGRAM FOR NEW CRITERIA TESTING (nsf)	NET REDUCTION - CURRENT TO REVISED (nsf)	NET REDUCTION - CURRENT TO REVISED (%)	
Interior Spaces						
Public Uses	825	1200	720	480	40%	
Women's Bathroom	426	465	300	165	35%	• 6 stalls + 3 changing areas to 3 stalls + 2 changing areas
Men's Bathroom	325	465	300	165	35%	• 3 stalls, 3 urinals + 3 changing areas to 3 stalls/urinals + 2 changing areas
Accessible / Family Bathrooms	74	140	120	20	14%	• Includes 2 separate Family toilets
Concession		130		130	100%	• eliminated, vending remains
Staff Uses	732	825	620	205	25%	
Guardroom	206	265	250	15	6%	
Lifeguard changing rooms	242	included in the Guardroom nsf				• consolidated into the Guardroom
First Aid	110	295	130	165	56%	
Office/Gatekeeper	174	165	160	5	3%	
Beach manager's office (formerly: Town)		100	80	20	20%	
Mechanical	62	144	100	44	31%	
Storage	444	740	644	96	13%	
Grossing Factor		290.9	146	82.5	28%	
TOTAL INTERIOR SPACES	2063	3199.9	2230	907.5	28%	
TOTAL EXTERIOR SPACES	868	3450	2540	910	26%	

Exterior space is considered the deck area, which includes a water fountainn, rinse station, and lifeguard break area

blue = Previously proposed as conditioned spaces, TBD

* included but no associated nsf



**ALTERNATIVE A: MODIFIED SOUTH
SIDE BUILDING DESIGN**

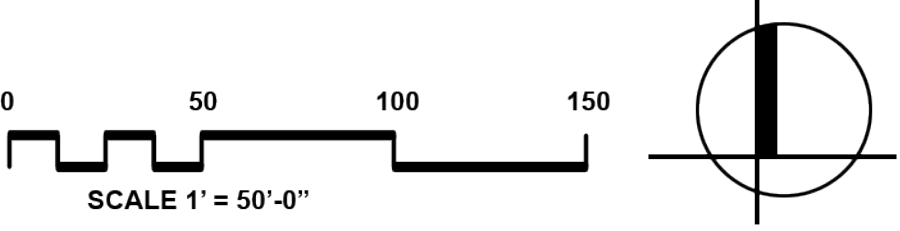
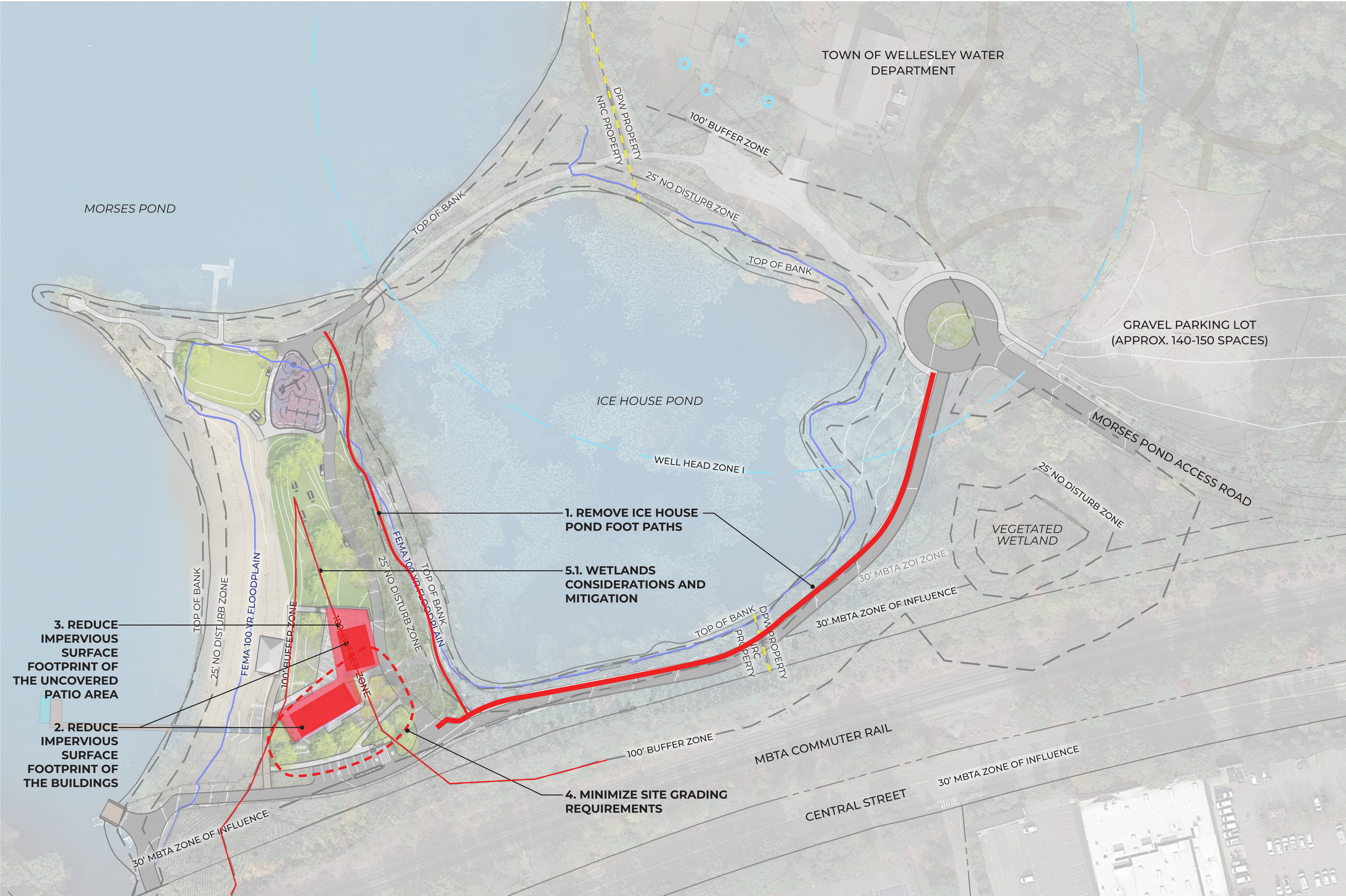
Reduced square footage buildings
located in the same orientation and
location (south side) as the Current
Master Plan



**ALTERNATIVE B: NEW NORTH SIDE
BUILDING DESIGN**

Reduced square footage buildings
located generally in the same
location as the existing bathhouse
building (north side)

MODIFIED PROJECT CRITERIA: ISSUES RAISED WITH CURRENT MASTER PLAN



MODIFIED PROJECT CRITERIA: **BOTH ALTERNATIVE A AND B ADDRESS ISSUES RAISED**

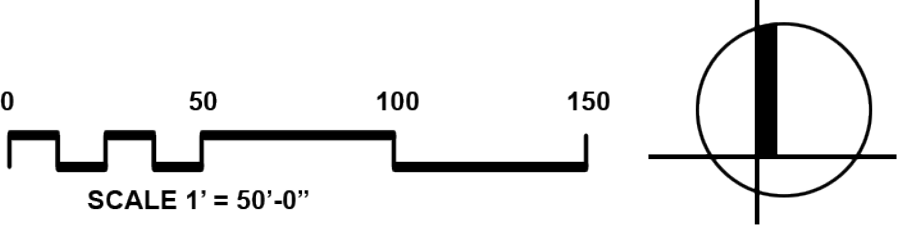
MoPoBAC Recs		Supplemental Study Schemes: Alternative A and B	How Recommendations are Addressed
1.	Remove Ice House Pond footpaths	Removed N/S path along the west side of Ice House Pond and the sidewalk along the South drive. Made pedestrian access to the Beach from the North path and ADA vehicular access (only) from South drive.	Reduces Project scope/cost and environmental impact.
2.	Reduce impervious surface footprint of the buildings	Reduced size of Building by having less toilets (still above Code minimum) and removed built indoor boat storage	Less impact on stormwater and preserves more natural open space.
3.	Reduce impervious surface footprint of the uncovered patio area	Reduced built patio area around buildings.	Less impact on stormwater and preserves more natural open space.
4.	Minimize site grading requirements	Alt A and B test smaller footprint options with different degrees of grading requirement.	Smaller footprint of disturbed area reduces grading requirements from the Current Master Plan.
5.1.	Wetlands considerations and mitigation	Alt A and B test smaller footprint options with different degrees of wetlands impact and mitigation requirements	<ul style="list-style-type: none">• Native tree replacements• Wildlife assessment required• Minor compensatory storage requirements• A stormwater report may not be needed (net decrease in impervious within the 100' wetland buffer)
5.2.	Low-impact sustainable design	This is the Design intent and will be pursued as part of Design Phase work.	TBD. To be reviewed with NRC in the Design Phase.
5.3.	Impact of the potential increase beyond current seasonal use	No Change in Use. Replacing current functions and seasonal use (only).	No special permitting or additional studies required for extended hours or seasons.
5.4.	Ownership, Maintenance and Budgeting	NRC proposed NRC Ownership but leased to Recreation for maintenance	TBD. Decision not part of this Study and will be based on discussions between NRC/DPW and Recreation/FMD.
5.5.	NRC engagement with Recreation	Recreation part of MoPoBAC.	Supplemental Study benefits from more input.
6.	Determine whether any 'Change in Use' is planned	No Change in Use. Replacing current functions.	No special permitting or additional studies required for extended hours or seasons.
7.	Evaluate Accommodations for Food Trucks	MoPoBAC to determine if part of Project scope.	Lockable power hook ups will be provided at the exterior of each building.

**ALTERNATIVE A:
MODIFIED SOUTH SIDE
BUILDING DESIGN**



*View from the south side
of Morses Pond Beach
toward the water*

ALTERNATIVE A: MODIFIED SOUTH SIDE BUILDING DESIGN

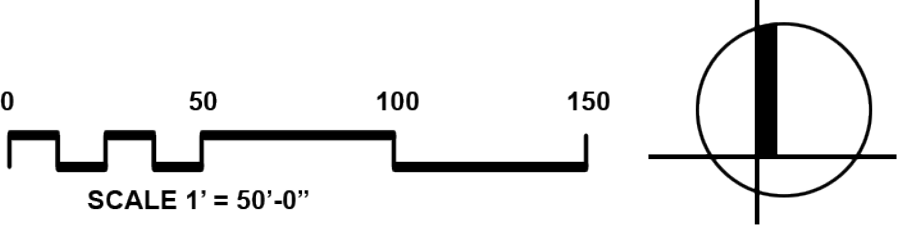


ALTERNATIVE A: PEDESTRIAN AND VEHICULAR CIRCULATION

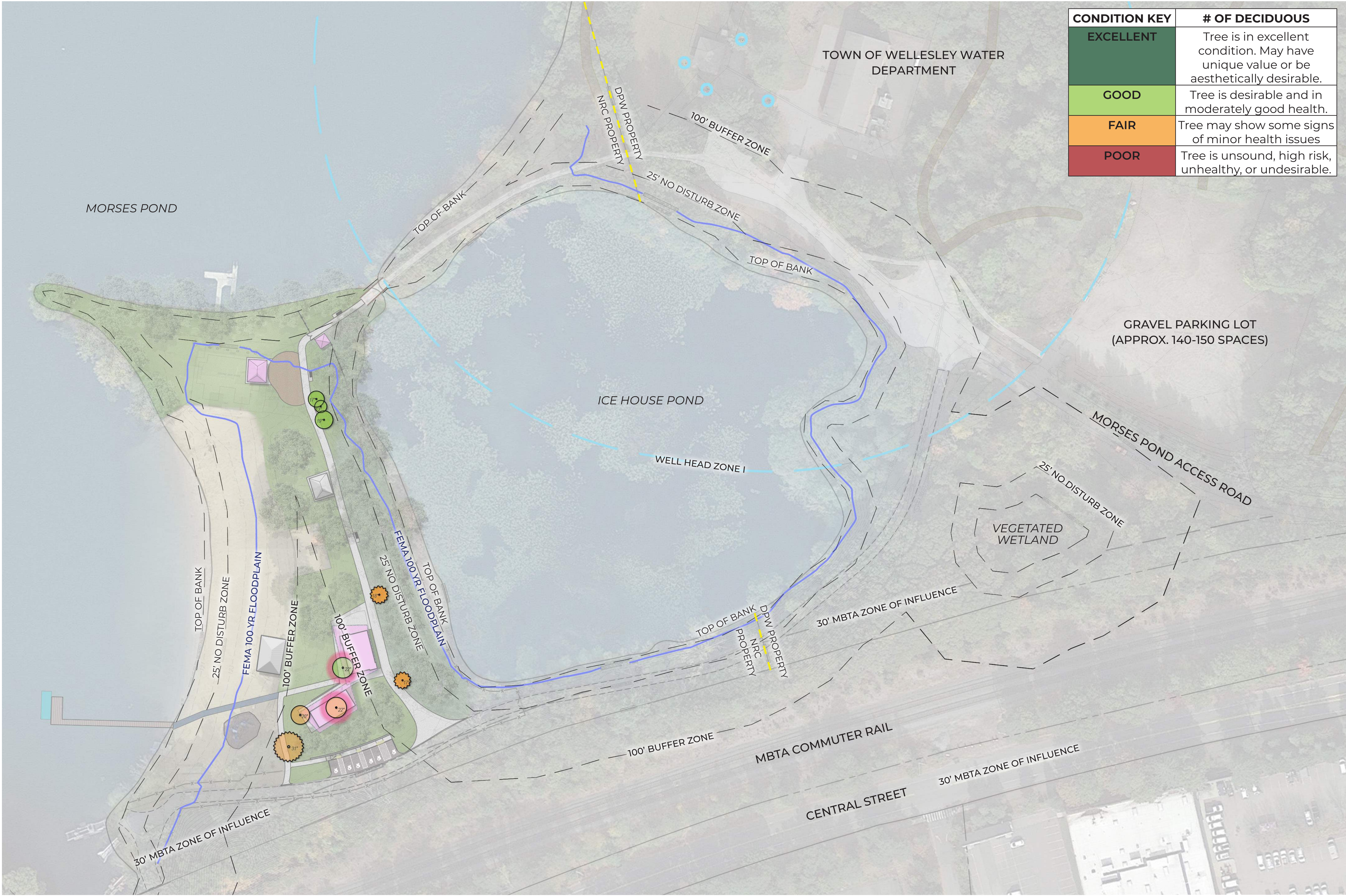


LEGEND

- EX. FENCE LINE
- ACCESSIBLE PEDESTRIAN ROUTE (< 5%)
- NON-ACCESSIBLE PEDESTRIAN ROUTE (> 5%)
- VEHICULAR ROUTE
- EX. PARKING AREA
- PROPOSED ACCESSIBLE PARKING
- PR. FENCELINE



ALTERNATIVE A: TREE IMPACTS



CONDITION KEY	# OF DECIDUOUS
EXCELLENT	Tree is in excellent condition. May have unique value or be aesthetically desirable.
GOOD	Tree is desirable and in moderately good health.
FAIR	Tree may show some signs of minor health issues.
POOR	Tree is unsound, high risk, unhealthy, or undesirable.

LEGEND

TREES REMOVED WITH IN THE 100' BUFFER

EX. EVERGREEN & DECIDUOUS TREES: EXCELLENT CONDITION

EX. EVERGREEN & DECIDUOUS TREES: GOOD CONDITION

EX. EVERGREEN & DECIDUOUS TREES: FAIR CONDITION

EX. EVERGREEN & DECIDUOUS TREES: POOR CONDITION

TREES REMOVED OUTSIDE THE 100' BUFFER

EX. EVERGREEN & DECIDUOUS TREES: EXCELLENT CONDITION

EX. EVERGREEN & DECIDUOUS TREES: GOOD CONDITION

EX. EVERGREEN & DECIDUOUS TREES: FAIR CONDITION

EX. EVERGREEN & DECIDUOUS TREES: POOR CONDITION

INVASIVE TREE SPECIES INCLUDED IN REMOVAL WITH IN 100' BUFFER

EX. BLACK LOCUST

EX. NORWAY MAPLE

EX. TREE OF HEAVEN

INVASIVE TREE SPECIES INCLUDED IN REMOVAL WITH IN 100' BUFFER

EX. BLACK LOCUST

EX. NORWAY MAPLE

EX. TREE OF HEAVEN

ALTERNATIVE A: UTILITIES



LEGEND

WATER

SEWER

STORM

ELECTRICAL

COMMUNICATIONS

CABLE

WATER

SEWER

ELECTRICAL

CABLE

EX. WATER LINE

EX. SANITARY SEWER LINE

EX. STORM DRAINAGE

EX. ELECTRICAL CONDUIT

EX. COMMUNICATIONS LINE

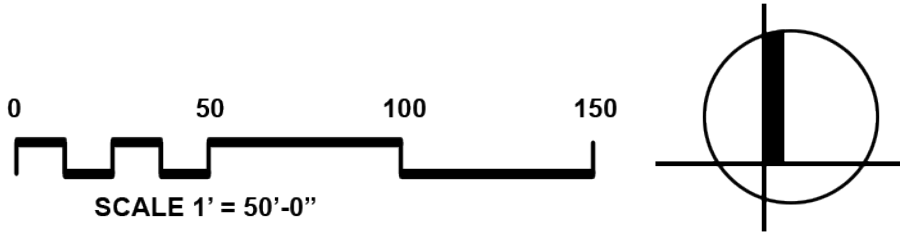
EX. CABLE LINE FOR INTERNET

PROPOSED WATER LINE

PROPOSED SANITARY SEWER LINE

PROPOSED ELECTRICAL CONDUIT

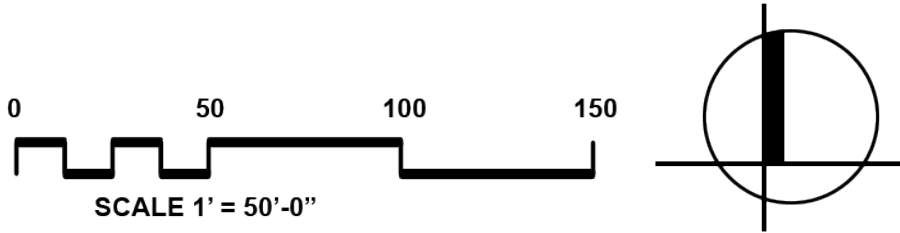
PROPOSED CABLE LINE FOR INTERNET



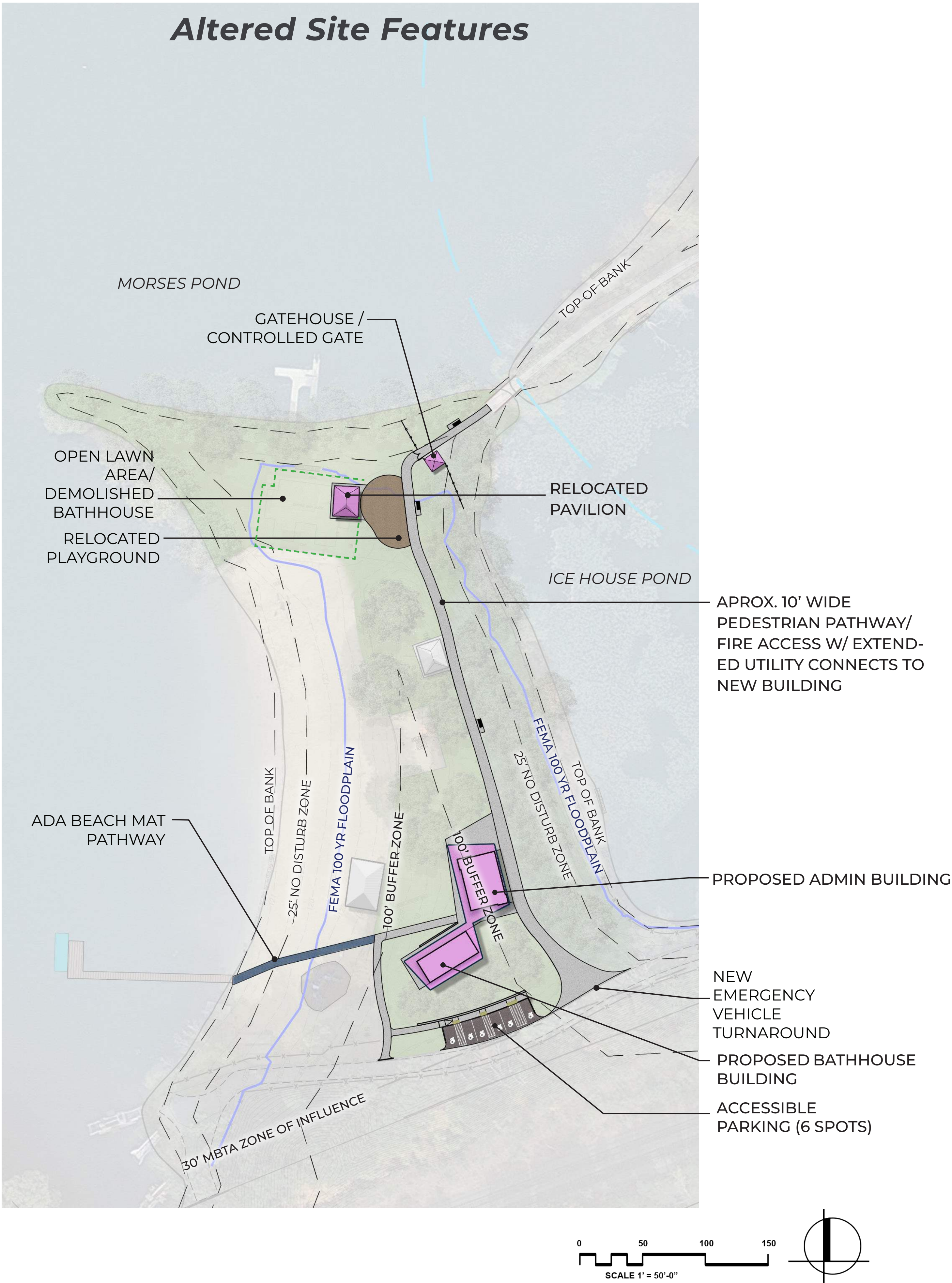
ALTERNATIVE A: IMPERVIOUS / PERVIOUS COVER



LEGEND	
19,447 sf	IMPERVIOUS AREA - INSIDE 100' WETLAND BUFFER
8,384 sf	IMPERVIOUS AREA - OUTSIDE 100' WETLAND BUFFER
139,128 sf	PERVIOUS AREA - INSIDE 100' WETLAND BUFFER
20,401 sf	PERVIOUS AREA - OUTSIDE 100' WETLAND BUFFER



ALTERNATIVE A: OVERALL DISTURBANCE SUMMARY



ALTERNATIVE A: ANALYSIS SUMMARY

	EXISTING CONDITIONS PLAN	ALTERNATIVE A: MODIFIED SOUTH SIDE BUILDING	NET CHANGE
IMPERVIOUS AREA - INSIDE 100' WETLAND BUFFER	24,074 sf	19,447 sf	-4,627 sf
PERVIOUS AREA - INSIDE 100' WETLAND BUFFER	134,501 sf	139,128 sf	+4,627 sf
TOTAL IMPERVIOUS AREA	28,715 sf	27,831 sf	-884 sf
TOTAL PERVIOUS AREA	158,645 sf	159,529 sf	+884 sf
BUILDING SQUARE FOOTAGE	2,572 sf	2,230 sf	-342 sf
BUILDING LOCATION	North side	South side	N/A
OVERALL CUT / FILL	N/A	835 cy cut / 31 cy fill	803 cy net cut
CUT / FILL WITHIN THE 100 YR. FEMA FLOODPLAIN	N/A	10 cy cut/ 24 cy fill	14 cy net fill
DEDICATED LAWN AREA	+/- 22,220 sf	+/- 26,250 sf	+4,030 sf
AMENITIES TO REMAIN	N/A	<ul style="list-style-type: none">• Beach pavilion• Floating docks• Play structure• Volleyball court• Northern permanent pavilion	<ul style="list-style-type: none">• Beach pavilion• Floating docks• Play structure• Volleyball court• Northern permanent pavilion
RELOCATED AMENITIES	N/A	<ul style="list-style-type: none">• Swing set• Southern permanent pavilion	<ul style="list-style-type: none">• Swing set• Southern permanent pavilion
REMOVED AMENITIES	N/A	N/A	N/A
ADDED AMENTIES	N/A	<ul style="list-style-type: none">• Gatehouse at northern entrance• Accessible beach mats	<ul style="list-style-type: none">• Gatehouse at northern entrance• Accessible beach mats
PARKING	<ul style="list-style-type: none">• Gravel pull off area• No ADA parking	<ul style="list-style-type: none">• 6 ADA parking spaces	+6 spaces
DECIDUOUS TREES - INSIDE THE 100' WETLAND BUFFER	149	146	-3
EVERGREEN TREES - INSIDE THE 100' WETLAND BUFFER	66	64	-2
TOTAL DECIDUOUS TREES	157(existing)	151 (remain)	-6(2 invasive)
TOTAL EVERGREEN TREES	73 (existing)	70 (remain)	-3
UTILITY IMPACTS	N/A	Additional water line & electrical conduit from the north to the southern location	+/- 300 linear feet (Electrical) +/- 300 linear feet (Water)
VEHICULAR CIRCULATION	Southern path	Southern path	N/A
PEDESTRIAN CIRCULATION AND BEACH ACCESS	<ul style="list-style-type: none">• Beach access is through the northern bathhouse.• Southern access is restricted by fencing and gates• Full access to Ice House Pond loop path only during off season• Main beach path is not accessible at southern end	<ul style="list-style-type: none">• Beach access is through the northern gatehouse• Southern access is monitored by the bathhouse / restricted by fencing and gates• Full access to Ice House Pond loop path only during off season• All paths are accessible	<ul style="list-style-type: none">• Main access at the northern end• Limited access at the southern end• Limited access to Ice House Pond loop path during beach season• All paths are accessible
AREA OF DISTURBANCE	N/A	32,926 sf (22,258sf inside 100' wetland buffer)	+32,926 sf
PERMITTING IMPACTS	N/A	<ul style="list-style-type: none">• Wildlife assessment is required (greater than 5,000 sf of alteration within the 100' wetland buffer)• A stormwater report may not be needed (net decrease in impervious within the 100' wetland buffer)• Minor compensatory storage is necessary within the 100 Yr. FEMA Floodplain (greater than 5,000 sf of alteration)• Planting one native replacement tree for each tree removed - 5 native trees total	N/A

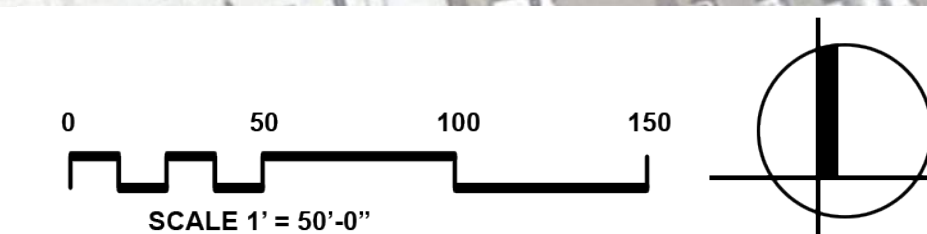


ALTERNATIVE B: NEW NORTH SIDE BUILDING DESIGN

*View from the north side of
Morses Pond Beach toward the
water*



ALTERNATIVE B: **NEW NORTH SIDE BUILDING DESIGN**

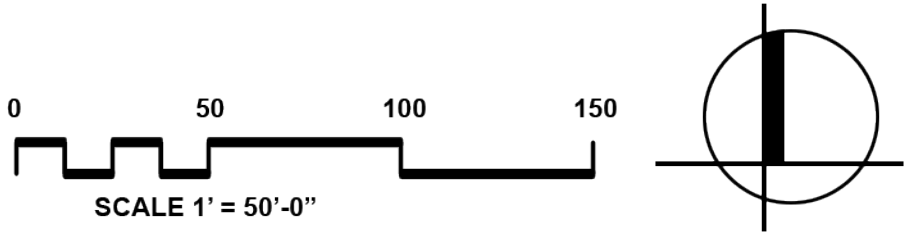


ALTERNATIVE B: PEDESTRIAN AND VEHICULAR CIRCULATION

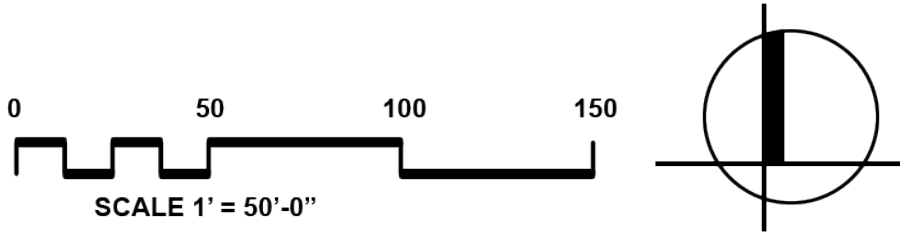
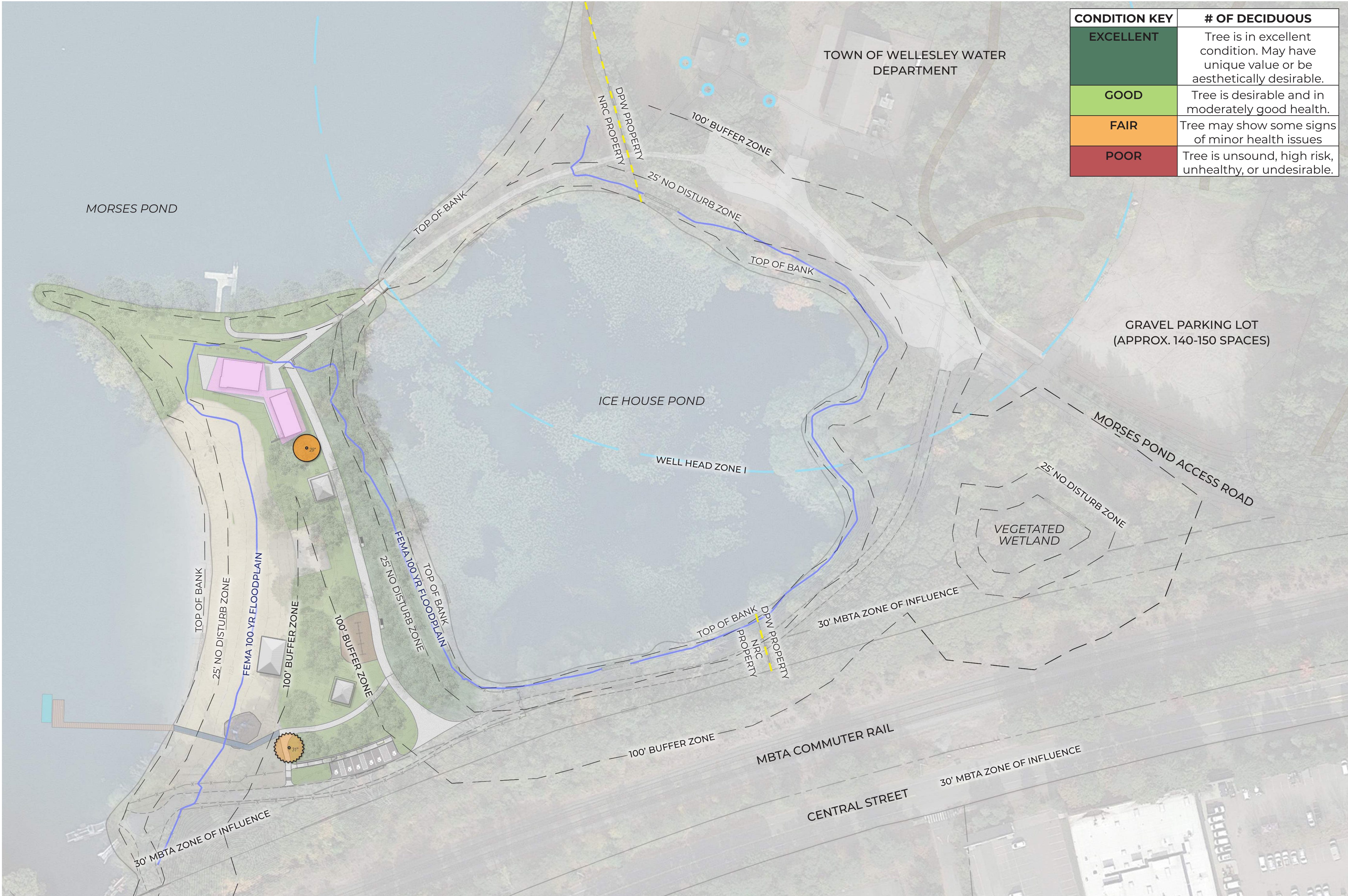


LEGEND

- EX. FENCE LINE
- ↔ ACCESSIBLE PEDESTRIAN ROUTE (< 5%)
- ↔ NON-ACCESSIBLE PEDESTRIAN ROUTE (> 5%)
- ↔ VEHICULAR ROUTE
- EX. PARKING AREA
- PROPOSED ACCESSIBLE PARKING
- PR. FENCELINE



ALTERNATIVE B: TREE IMPACTS

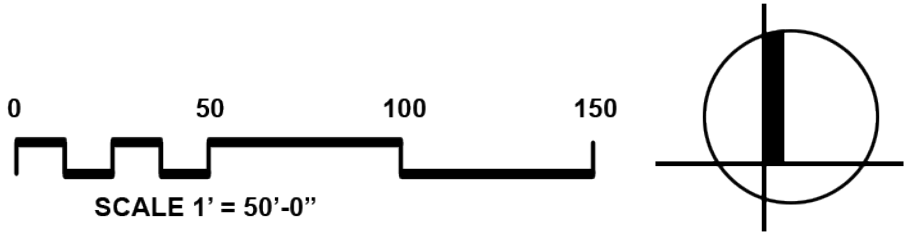


ALTERNATIVE B: UTILITIES

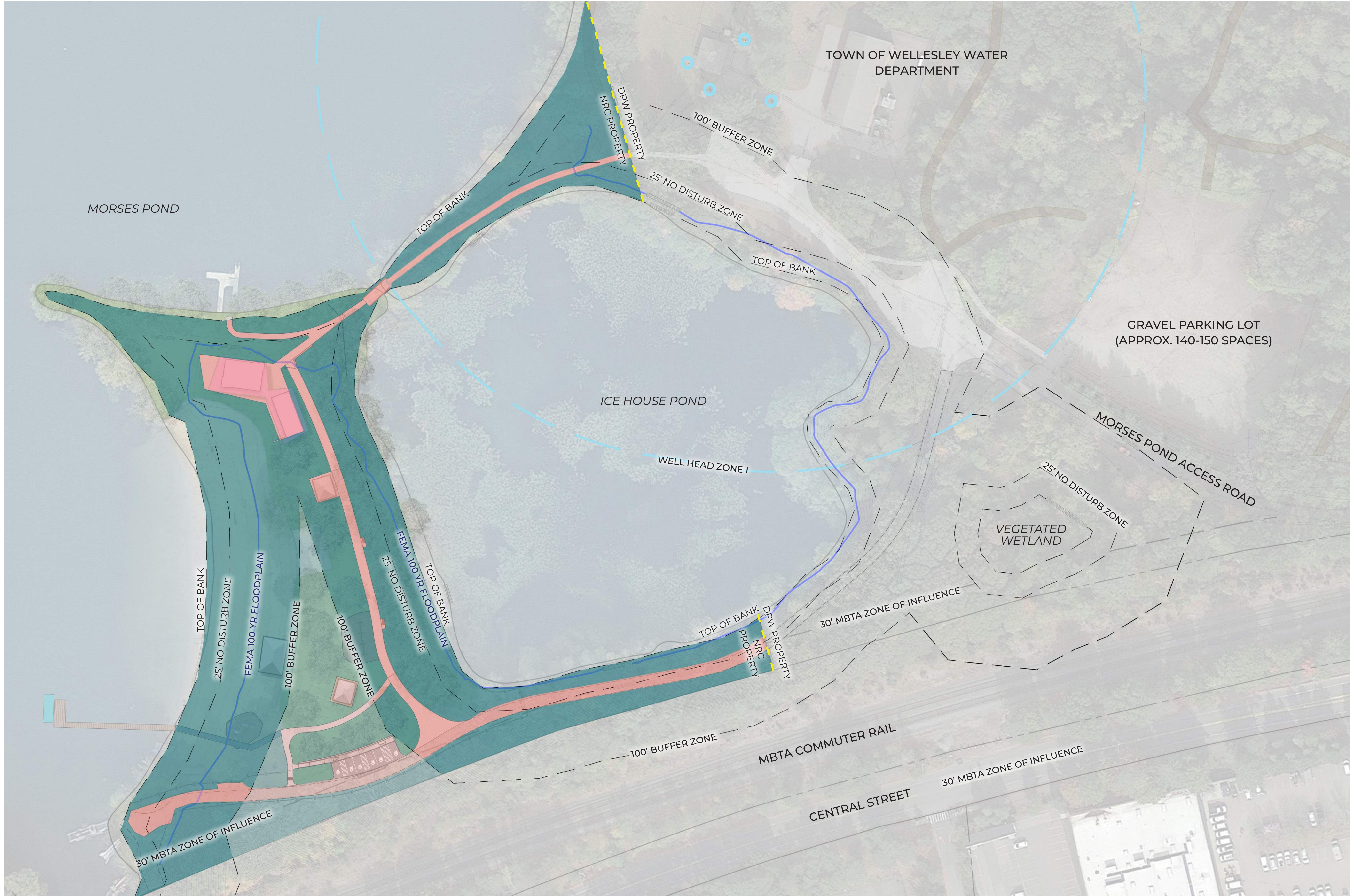


LEGEND

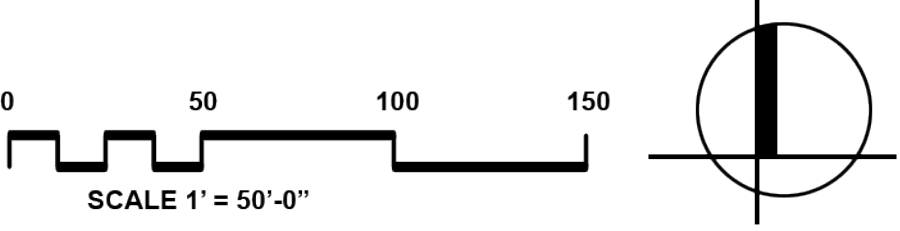
WATER	EX. WATER LINE
SEWER	EX. SANITARY SEWER LINE
STORM	EX. STORM DRAINAGE
ELECTRICAL	EX. ELECTRICAL CONDUIT
COMMUNICATIONS	EX. COMMUNICATIONS LINE
CABLE	EX. CABLE LINE FOR INTERNET



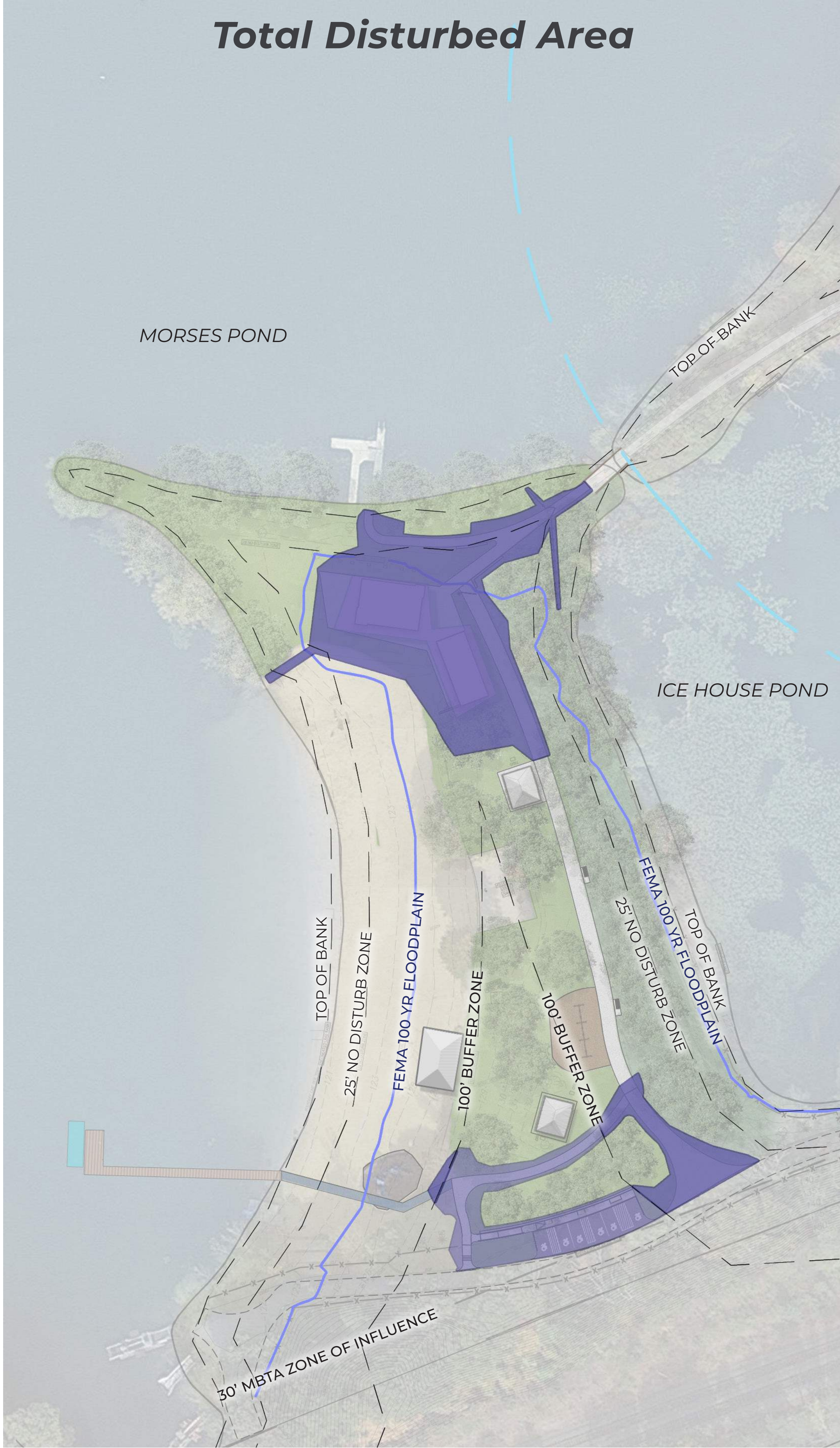
ALTERNATIVE B: IMPERVIOUS / PERVIOUS COVER



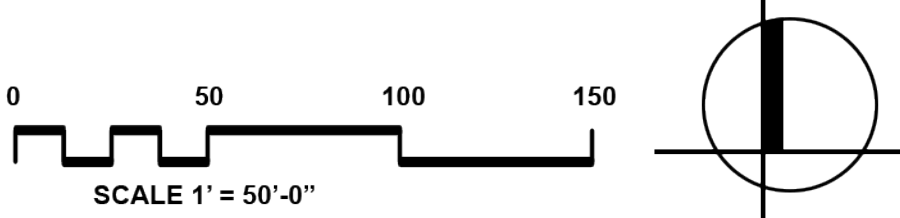
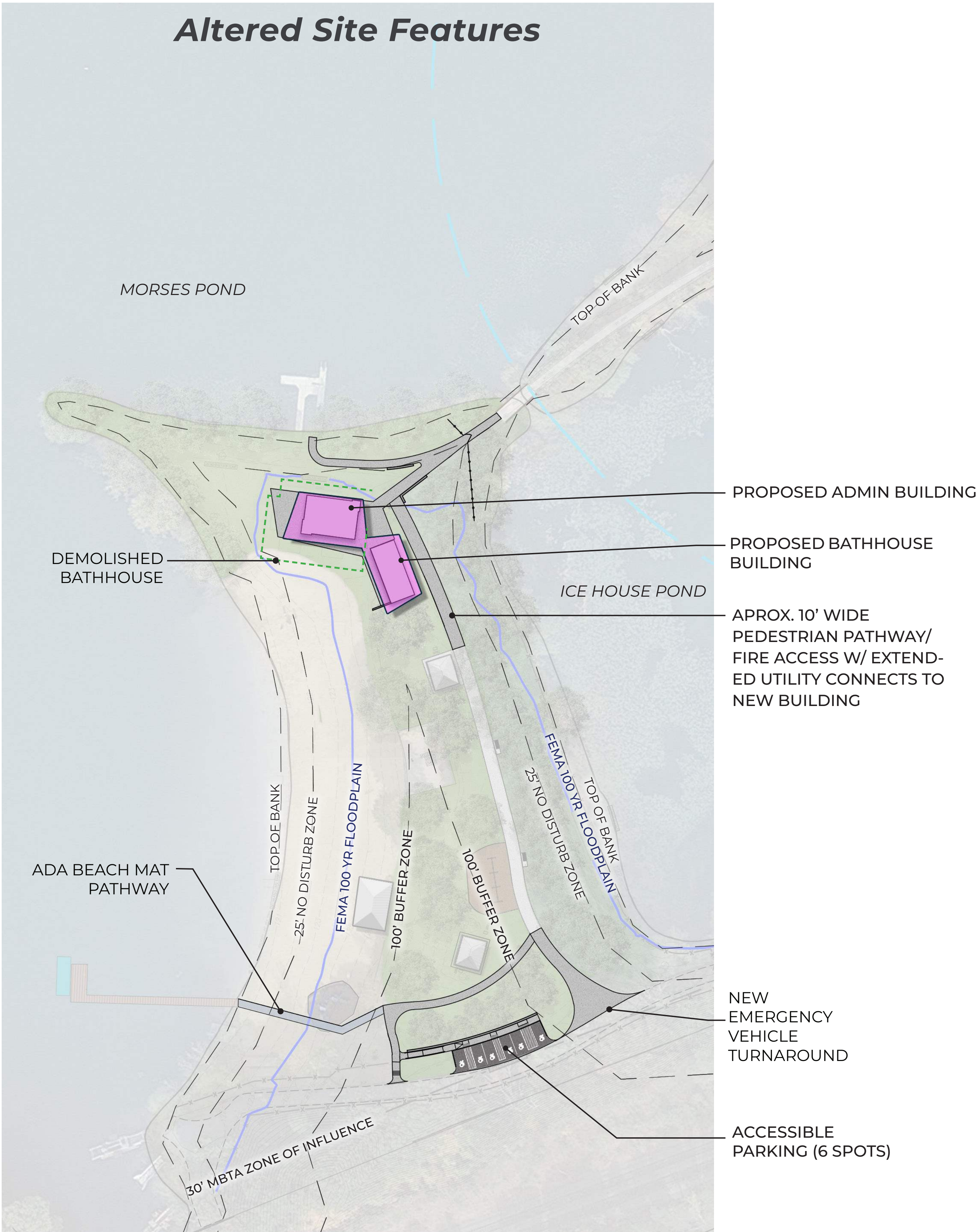
LEGEND	
22,881 sf	IMPERVIOUS AREA - INSIDE 100' WETLAND BUFFER
6,518 sf	IMPERVIOUS AREA - OUTSIDE 100' WETLAND BUFFER
135,694 sf	PERVIOUS AREA - INSIDE 100' WETLAND BUFFER
22,267 sf	PERVIOUS AREA - OUTSIDE 100' WETLAND BUFFER



ALTERNATIVE B: OVERALL DISTURBANCE SUMMARY



19,638 sf	DISTURBED AREA - INSIDE 100' WETLAND BUFFER	5,877 sf	DISTURBED AREA - OUTSIDE 100' WETLAND BUFFER
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ALTERNATIVE B: ANALYSIS SUMMARY

	EXISTING CONDITIONS PLAN	ALTERNATIVE B: NEW NORTH SIDE BUILDING	NET CHANGE
IMPERVIOUS AREA - INSIDE 100' WET-LAND BUFFER	24,074 sf	22,881 sf	-1,193 sf
PERVIOUS AREA - INSIDE 100' WETLAND BUFFER	134,501 sf	135,694 sf	+1,193 sf
TOTAL IMPERVIOUS AREA	28,715 sf	29,399 sf	+684 sf
TOTAL PERVIOUS AREA	158,645 sf	157,961 sf	-684 sf
BUILDING SQUARE FOOTAGE	2,572 sf	2,230 sf	-342 sf
BUILDING LOCATION	North side	North side	N/A
OVERALL CUT / FILL	N/A	438 cy cut / 82 cy fill	356 cy net cut
CUT / FILL WITHIN THE 100 YR. FEMA FLOODPLAIN	N/A	54 cy cut, 13 cy fill	41 cy net fill
DEDICATED LAWN AREA	+/- 22,220 sf	+/- 21,328 sf	-892 sf
AMENITIES TO REMAIN	N/A	<ul style="list-style-type: none">• Beach pavilion• Both permanent pavilions• Floating docks• Play structure• Swing Set• Volleyball court	6
RELOCATED AMENITIES	N/A	N/A	N/A
REMOVED AMENITIES	N/A	N/A	N/A
ADDED AMENTIES	N/A	<ul style="list-style-type: none">• Accessible beach mats	<ul style="list-style-type: none">• Accessible beach mats
PARKING	<ul style="list-style-type: none">• Gravel pull off area• No ADA parking	<ul style="list-style-type: none">• 6 ADA parking spaces	+6 spaces
DECIDUOUS TREES - INSIDE THE 100' WET-LAND BUFFER	149	148	-1
EVERGREEN TREES - INSIDE THE 100' WETLAND BUFFER	66	66	0
TOTAL DECIDUOUS TREES	157(existing)	156 (remain)	-1
TOTAL EVERGREEN TREES	73 (existing)	72(remain)	-1
UTILITY IMPACTS	N/A	Minimal: Hookups to new buildings	Minimal
VEHICULAR CIRCULATION	Southern path	Southern path	N/A
PEDESTRIAN CIRCULATION AND BEACH ACCESS	<ul style="list-style-type: none">• Beach access is through the northern bathhouse.• Southern access is restricted by fencing and gates• Full access to Ice House Pond loop path only during off season• Main beach path is not accessible at southern end	<ul style="list-style-type: none">• Beach access is through the northern bathhouse• Southern access is restricted by fencing and gates• Full access to Ice House Pond loop path only during off season• All paths are accessible	<ul style="list-style-type: none">• Main access at the northern end• restricted access at the southern end• limited access to Ice House Pond loop path during beach season• All paths are accessible
AREA OF DISTURBANCE	N/A	25,515 sf (19,638 inside 100' wetland buffer)	+25,515 sf
PERMITTING IMPACTS	N/A	<ul style="list-style-type: none">• Wildlife assessment is required (greater than 5,000 sf of alteration within the 100' wetland buffer)• A stormwater report may not be needed (net decrease in impervious within the 100' wetland buffer)• Minor compensatory storage is necessary within the 100 Yr. FEMA Floodplain (greater than 5,000 sf of alteration)• Planting one native replacement tree for each tree removed - 1 Native Trees Total	N/A

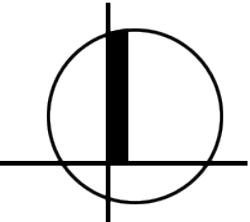
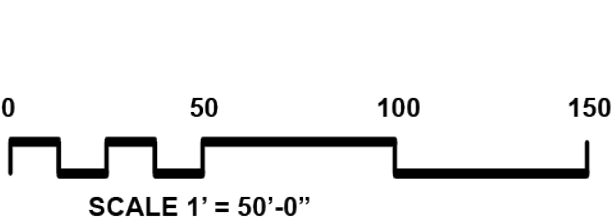
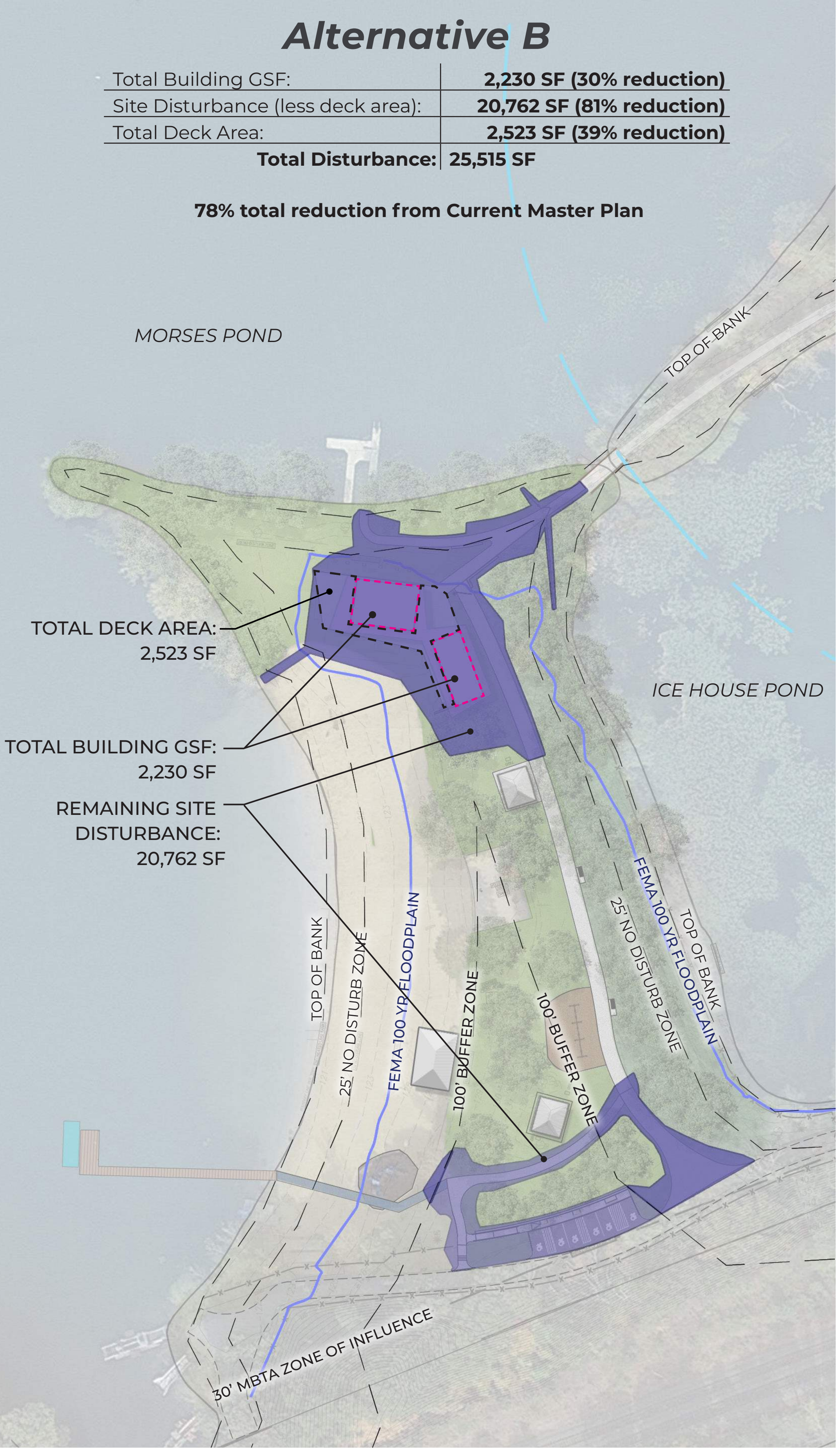
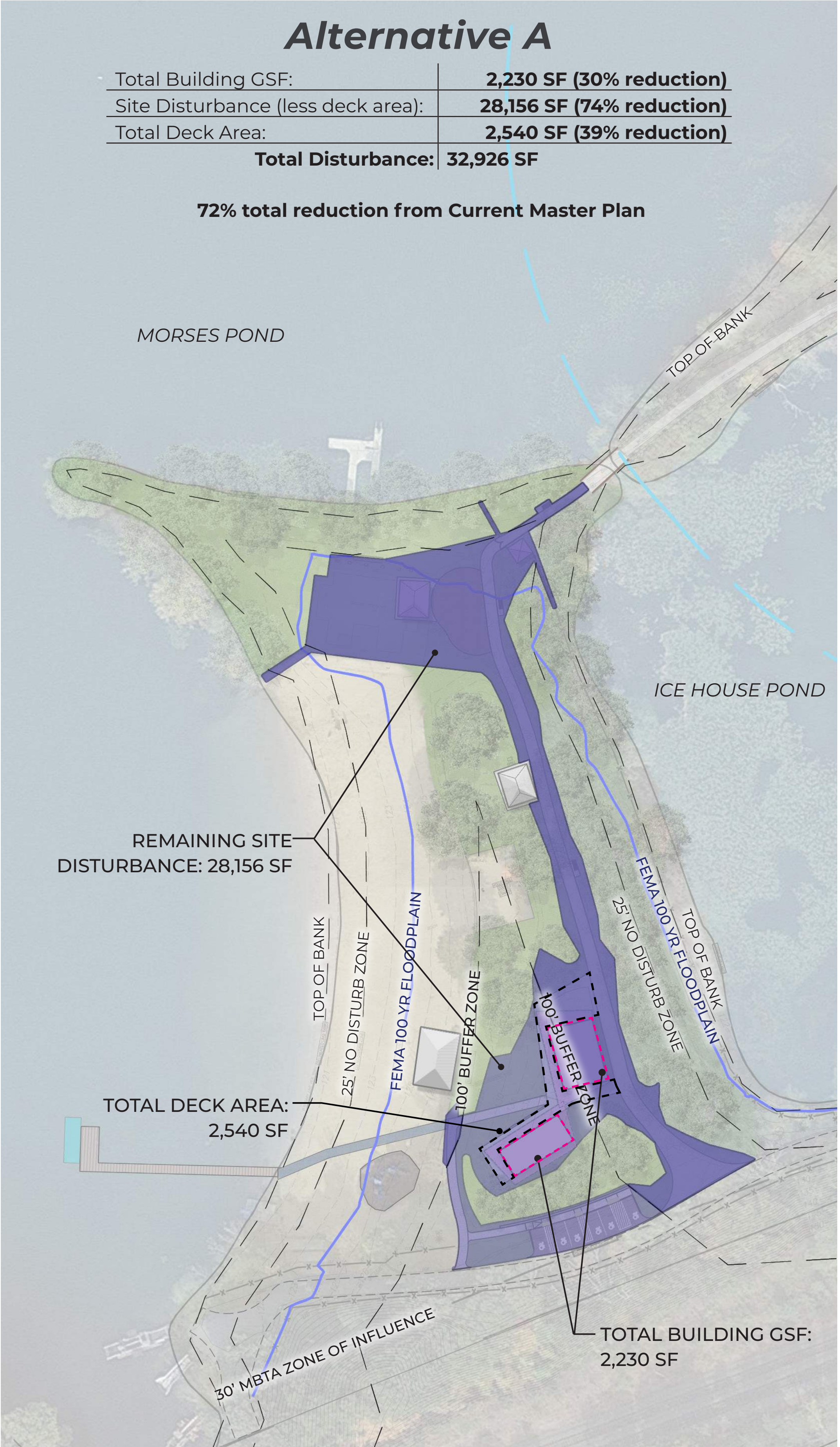
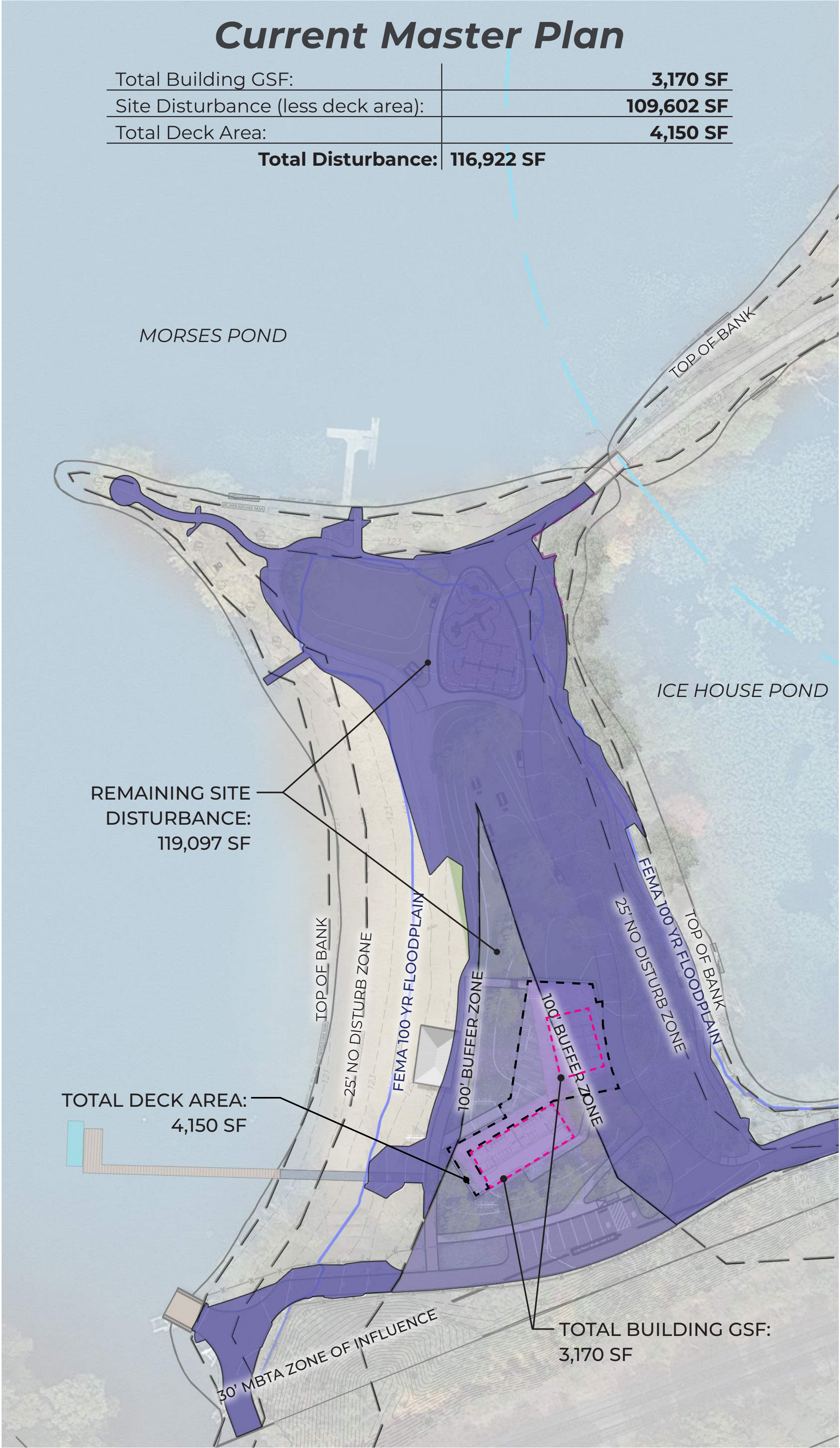


ALTERNATES COMPARISON SUMMARY

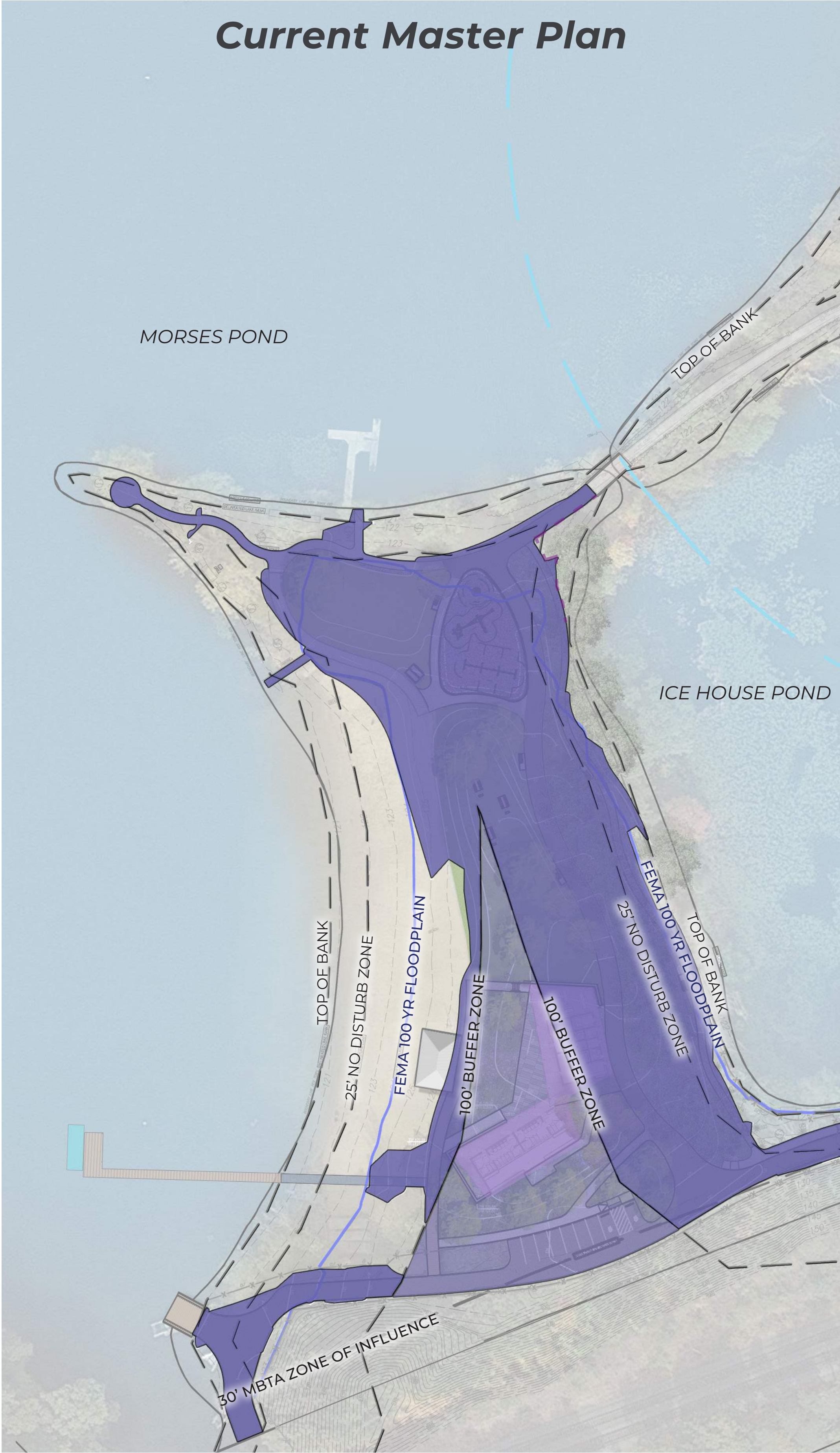


*Test pits performed in
August 2025*

ALTERNATES COMPARISON: **OVERALL SCOPE REDUCTION**

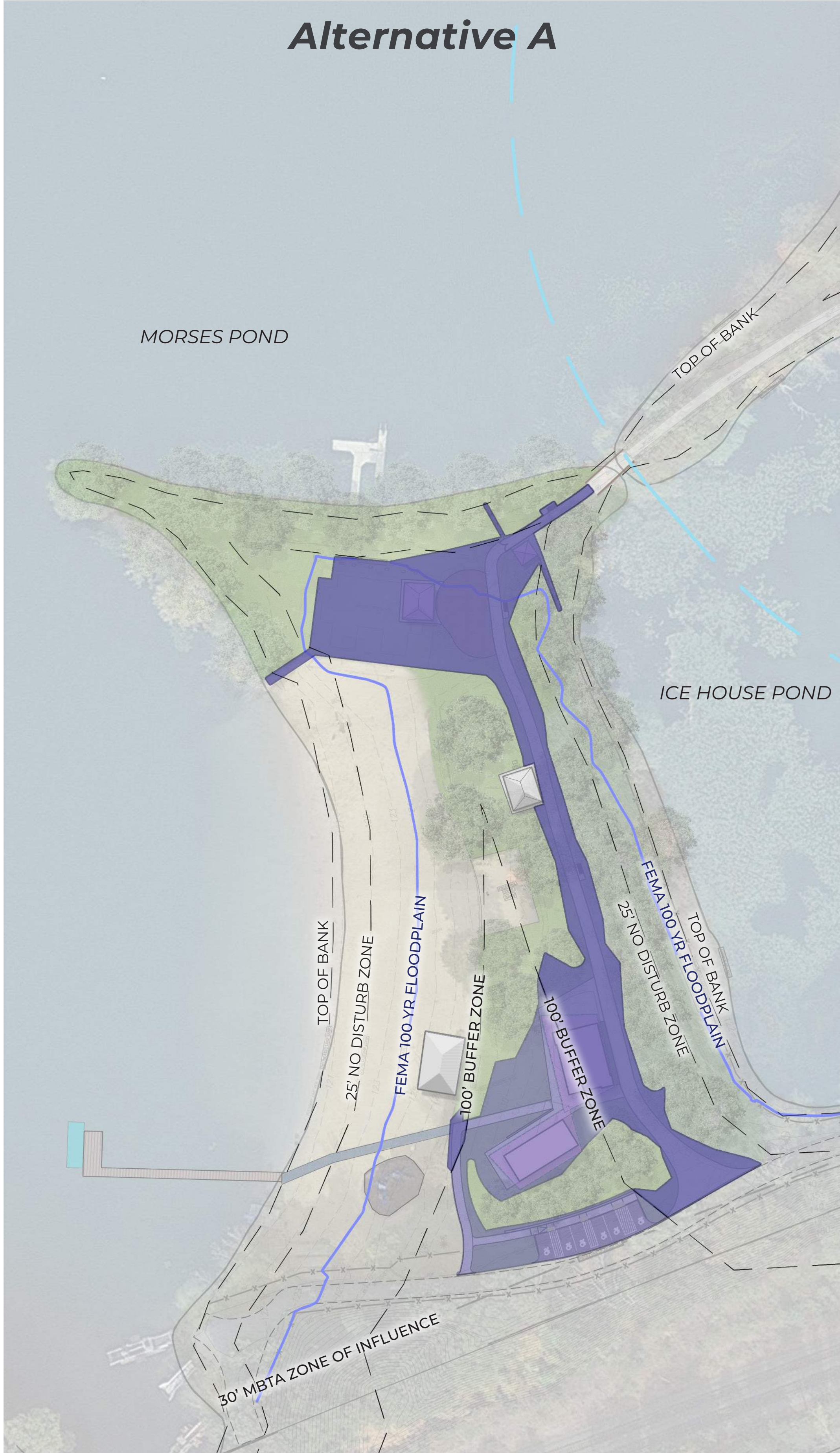


ALTERNATES COMPARISON: **OVERALL SITE DISTURBANCE**



87,764 sf	DISTURBED AREA - INSIDE 100' WETLAND BUFFER*	29,158 sf	DISTURBED AREA - OUTSIDE 100' WETLAND BUFFER
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* INCLUDES DISTURBANCE AREAS OF VEHICULAR DROP OFF AND ACCESS ROAD



22,258 sf	DISTURBED AREA - INSIDE 100' WETLAND BUFFER	10,668 sf	DISTURBED AREA - OUTSIDE 100' WETLAND BUFFER
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19,638 sf	DISTURBED AREA - INSIDE 100' WETLAND BUFFER	5,877 sf	DISTURBED AREA - OUTSIDE 100' WETLAND BUFFER
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	EXISTING CONDITIONS PLAN	CURRENT MASTER PLAN
IMPERVIOUS AREA - INSIDE 100' WET- LAND BUFFER	24,074 sf	+4,486 sf
PERVIOUS AREA - INSIDE 100' WETLAND BUFFER	134,501 sf	-4,486 sf
TOTAL IMPERVIOUS AREA	28,715 sf	+11,125 sf
TOTAL PERVIOUS AREA	158,645 sf	-11,125 sf
BUILDING SQUARE FOOTAGE	2,572 sf	+619 sf
BUILDING LOCATION	North side	South side
OVERALL CUT / FILL	N/A	5,849.6 cy net cut
CUT / FILL WITHIN THE 100 YR. FEMA FLOODPLAIN	N/A	458.8 cy cut, 68 cy fill = 390.9 cy net cut
DEDICATED LAWN AREA	+/- 22,220 sf	-4,490 sf
AMENITIES TO REMAIN	N/A	<ul style="list-style-type: none">• Beach pavilion• Floating docks
RELOCATED AMENITIES	N/A	N/A
REMOVED AMENITIES	N/A	<ul style="list-style-type: none">• Play structure• Swing set• Both permanent pavilions• Volleyball court
ADDED AMENTIES	N/A	<ul style="list-style-type: none">• New playground• Pavilion• Picnic area• Accessible beach mats• Boardwalk path• Overlook path
PARKING	<ul style="list-style-type: none">• Gravel pull off area• No ADA parking	+9 spaces (7 parking spaces, 2 ADA spaces)
DECIDUOUS TREES - INSIDE THE 100' WET- LAND BUFFER	149	-26
EVERGREEN TREES - INSIDE THE 100' WETLAND BUFFER	66	-21
TOTAL DECIDUOUS TREES	157(existing)	-32 (5 invasive)
TOTAL EVERGREEN TREES	73 (existing)	-28
UTILITY IMPACTS	N/A	+/- 300 linear feet (Electrical) +/- 300 linear feet (Water)
VEHICULAR CIRCULATION	Southern path	Southern path
PEDESTRIAN CIRCULATION AND BEACH ACCESS	<ul style="list-style-type: none">• Beach access is through the northern bathhouse.• Southern access is restricted by fencing and gates• Full access to Ice House Pond loop path only during off season• Main beach path is not accessible at southern end	<ul style="list-style-type: none">• 1 access point at the south end• Full access to Ice House Pond loop path only during off season• All paths are accessible
AREA OF DISTURBANCE	N/A	116,922 sf (87,764 sf inside 100' wetland buffer)
PERMITTING IMPACTS	N/A	<ul style="list-style-type: none">• Wildlife assessment is required (greater than 5,000 sf of alteration within the 100' wetland buffer)• A stormwater report is required (net increase in impervious within the 100' wetland buffer)• Minor compensatory storage is necessary within the 100 Yr. FEMA Floodplain (greater than 5,000 sf of alteration)• Planting one native replacement tree for each tree removed - 47 Native Trees Total• Zone of Influence permit required (project schedule to accomodate review periods)

ALTERNATIVE A: MODIFIED SOUTH SIDE BUILDING	ALTERNATIVE B: NEW NORTH SIDE BUILDING
-4,627 sf	-1,193 sf
+4,627 sf	+1,193 sf
-884 sf	+684 sf
+884 sf	-684 sf
-342 sf	-342 sf
South side	North side
803 cy net cut	356 cy net cut
10 cy cut, 24 cy fill, 14 cy net fill	54 cy cut, 13 cy fill, 41 cy net fill
+4,030 sf	-892 sf
<ul style="list-style-type: none">• Beach pavilion• Floating docks• Play structure• Volleyball court• Northern permanent pavilion	<ul style="list-style-type: none">• Beach pavilion• Both permanent pavilions• Floating docks• Play structure• Swing Set• Volleyball court
<ul style="list-style-type: none">• Swing set• Southern permanent pavilion	N/A
N/A	N/A
<ul style="list-style-type: none">• Gatehouse at northern entrance• Accessible beach mats	<ul style="list-style-type: none">• Accessible beach mats
+6 ADA spaces	+6 ADA spaces
-3	-1
-2	0
-6 (2 invasive)	-1
-3	-1
+/- 300 linear feet (Electrical) +/- 300 linear feet (Water)	Minimal
Southern path	Southern path
<ul style="list-style-type: none">• Main access at the northern end• Limited access at the southern end• Limited access to Ice House Pond loop path during beach season• All paths are accessible	<ul style="list-style-type: none">• Main access at the northern end• restricted access at the southern end• limited access to Ice House Pond loop path during beach season• All paths are accessible
32,926 sf (22,258sf inside 100' wetland buffer)	25,515 sf (19,638 inside 100' wetland buffer)
<ul style="list-style-type: none">• Wildlife assessment is required (greater than 5,000 sf of alteration within the 100' wetland buffer)• A stormwater report may not be needed (net decrease in impervious within the 100' wetland buffer)• Minor compensatory storage is necessary within the 100 Yr. FEMA Floodplain (greater than 5,000 sf of alteration)• Planting one native replacement tree for each tree removed - 5 native trees total	<ul style="list-style-type: none">• Wildlife assessment is required (greater than 5,000 sf of alteration within the 100' wetland buffer)• A stormwater report may not be needed (net decrease in impervious within the 100' wetland buffer)• Minor compensatory storage is necessary within the 100 Yr. FEMA Floodplain (greater than 5,000 sf of alteration)• Planting one native replacement tree for each tree removed - 1 Native Trees Total



SUMMARY COMPARISON: **ALTERNATIVE A AND B FOR RECOMMENDATION / SELECTION**

TASK 5

**MoPoBAC
Preliminary Review
of Building Location
Analysis /Data and
Feedback**

CRITERIA	ALTERNATIVE A: South Side Building Location	ALTERNATIVE B: North Side Building Location
Patrons		
Beach Character	Transformational. New beach front area opens up panaramic views/site to the North for patrons.	Existing patron beach experience to remain largely unchanged. Slightly more view to the North-West past building.
Shade Trees and Lawn	Adds an open lawn area at existing demolished building (beach level). Reduces current tree/shade lawnarea at the South.	No significant shade tree and lawn impact.
Main Public Entry (North)	Building located on opposite side of site from entrance. Separate gatehouse at North entry required.	Building with integral gatehouse located at main entry on the North.
ADA/ MAAB Access (South)	Building adjacent to accessible entrance/parking. Requires ramps to access elevated building.	Building located on opposite side from accessible entrance/parking. Requires a ramp and traversing entire site to access building. Requires separate monitoring of South entrance from staff/guard.
View from Deck	Deck has elevated view of beach and opens up view across to the North (boat launch). Sun is at patron's back.	Low (beach elevation) panaramic view from deck located at bend in site. View of boat launch from grass area obstructed by building.
View from Beach	Parental view to Bathhouse from beach is into the sun.	Parental view to Bathhouse from beach is away from the sun.
Amenities	Requires relocating/eliminating/replacing a shade structure and the swing set.	All amenities can remain.
Staff		
Programming	Meets program requirements for staff.	Meets program requirements for staff.
Gatekeeper	Requires remote staffing at North entry.	Requires monitoring of South accessible entry by staff/guards.
Boat Launch	Building is remote from beach and launch	Building is central to beach and launch
Potential Food Trucks	Food trucks could be accommodated near building or adjacent to accessible parking area	Food trucks could be accommodated near building.
Building		
Buildings (Quantity)	Requires separate gatehouse structure at North entry.	Gatehouse incorporated into main Bathhouse.
Flood Zone	Admin building floor elevation is at EL.=131.05. Public building floor elevation is at EL.=131.10. This is 6.85' above the 100-year FEMA floodplain (which is at EL.=124.2). Also above FEMA 500-year floodplain.	Both building floor elevations at EL.=125.2'. This is 12" above the 100-year FEMA floodplain (which is at EL.=124.2).
Solar Potential	Oriented to the North with trees to the South, so no solar panel potential.	In open area, so solar panel potential.



SUMMARY COMPARISON: **ALTERNATIVE A AND B FOR RECOMMENDATION / SELECTION**

TASK 6

Evaluate Soil Conditions

CRITERIA	ALTERNATIVE A: South Side Building Location	ALTERNATIVE B: North Side Building Location
Environmental Impact		
Site Disturbance	Excavates South end of site for new parking/building, demolishes building on North side, and trenches utilities between. Total disturbance 32,926 SF	Excavates South end of site for new parking/paths and excavates North side for building (including on demolished building site. Total disturbance 25,515 SF
Wetlands	Building mostly located outside Wetlands for least impact.	Building located within wetlands (including existing building site).
Stormwater	Soils generally transmit water well (sandy/gravelly with high infiltration). Seasonal high groundwater is less of a concern for Alternative A.	Soils generally transmit water well (sandy/gravelly with high infiltration). Seasonal high groundwater appears relatively shallow in some locations (as close as 46–60 in), which will need to be managed through the future stormwater management and drainage design for planned improvements.
Impervious	Overall net decrease of 4,627 SF of impervious area in Wetlands from existing conditions.	Overall net decrease of 1,193 SF of impervious area in Wetlands from existing conditions.
Mitigation	Wildlife assessment and minor compensatory storage required; 5 native tree replacements	Wildlife assessment and minor compensatory storage required; 1 native tree replacements
Soil Loading Capacity / Geotechnical Considerations	Undocumented fill (1-4 ft deep) and some buried topsoil layers were found in the vicinity. A localized area northeast of the shade pavilion contained up to 10 feet of loose fill with organics/debris. May be satisfactory however the proximity of the northeast building to this localized area raises concerns about potential fill requiring overexcavation and replacement with engineered backfill.	Lower risk of unsuitable fill at foundation depths.
Cost Deltas		
Utilities	Utilities need to be extended to South side of site (+\$235,000)	Current utilities exist to building location.
Building Construction	Durable and low maintenance construction. Low risk of flooding. Requires additional Gatehouse (\$120,000), replace lawn at existing building footprint (+\$75,000)	More durable materials and additional design elements (i.e. raised deck perimeter walls) may be considered because of lower elevation and proximity to water (+\$105,000).
Amenities	Requires swing set relocation (+\$50,000), relocating the shade shelter (+\$130,000)	All amenities can remain.
Site Disruption / Excavation	Less disruption / excavation than Current Master Plan but more than Alternate B (+\$30,000)	Less disruption/excavation than Current Master Plan and Alternate A, apart from repair needed on the north / south pathway due to construction activities (+15,000)
Tree Mitigation	Replace 5 trees (+\$2,400 per tree = \$12,000)	Replace 1 tree (+\$2,400 per tree = \$2,400)
Soil Loading Capacity / Geotechnical Considerations	Overexcavation and lightweight fill would be required for +/- 6 ft depth (+125,000), no dewatering required	Overexcavation and lightweight fill of +/-2 feet may be needed for half of the building footprint (+25,000), dewatering would be needed due to high groundwater (+15,000)

Cost deltas included in this chart are high-level order-of-magnitude numbers and are intended to be used for cost comparative purposes only.



