

MODIFIED PROJECT CRITERIA: **ALTERNATIVE A AND B**



ALTERNATIVE A: SOUTH SIDE BUILDING DESIGN



ALTERNATIVE B: NORTH SIDE BUILDING DESIGN

	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
-4,040 sf	-1,193 sf
+4,040 sf	+1,193 sf
-297sf	+684 sf
+297 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 past building.
Shade Trees and Lawn	Adds an open lawn area at existing demolished building (beach level). Reduces current tree/shade lawn area at the South.	No significant shade tree and lawn impact for patrons.
Main Public Entry (North)	Building located on opposite side of site from main public entrance (gatekeeper control required at remote entry). Requires patrons to traverse site to purchase passes/rentals and to use bathhouse.	Building with integral gatehouse located at main entry on the North.
ADA / MAAB Access (South)	Building adjacent to accessible entrance/parking. Requires sloped walkways to access elevated building.	Building located on opposite side from accessible entrance/parking. Requires traversing site to access building. Requires separate monitoring of South entrance by staff/guard.
View from Bathhouse Deck	Deck has elevated view of beach and view to the North, with sun at patron's back.	Low (beach elevation) panaramic view from deck located at bend in site.
View from Beach	Parental view to Bathhouse from beach (towards sun).	Parental view to Bathhouse from beach (away from sun).
Amenities	Requires relocating/eliminating/replacing a shade structure and the swing set.	All current amenities can remain.
Staff		
Programming	Meets all program requirements for staff.	Meets all program requirements for staff.
Gatekeeper	Requires remote staffing at North entry.	Requires monitoring of South accessible entry by staff/guards.
View from Building	Building is on South end of beach with full view to the North.	Building is at bend in site, with views in two directions.
Potential Food Trucks	Food trucks can be accommodated near building (or adjacent to accessible parking area).	Food trucks can be accommodated near building.
Building		
Buildings (Quantity)	Requires separate minimal gatehouse structure at North entry.	Gatehouse located as part of main Bathhouse.
Flood Zone	Building floor elevations are approximately 7 feet above the 100-year FEMA floodplain. Also above FEMA 500-year floodplain.	Building floor elevations are approximately 12" above the 100-year FEMA floodplain (EL 125.2) and also 9.6" above current floor elevation of the existing building (EL 124.4).
Building Foundations & Soil-Loading / Geotechnical Considerations	Requires deeper excavation of unstable soil on man-made hill for foundations. Dewatering is unlikely. Geotechnically, undocumented fill (1-4 ft deep) and some buried topsoil layers were found in the vicinity.	Requires some excavation and dewatering for foundations at its lower elevation. Geotechnically, low quantities of unsuitable soil were found at foundation depths. Groundwater was found closer to foundation depth.



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 (at demolished building site). Total disturbance 25,515 SF
Wetlands	Approximately half the building is located outside the 100-foot wetlands buffer zone.	Entire building located within the 100-foot wetlands buffer zone (current building site)
Stormwater	Soils generally transmit water well (sandy/gravelly with high infiltration). Seasonal high groundwater is of low concern.	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 in the design.
Impervious	Similar total impervious area proposed for both Alternates. Within Wetlands, there is a net reduction of 4,040 SF of impervious area compared to current existing conditions.	Similar total impervious area proposed for both Alternates. Within Wetlands, there is a net reduction of 1,193 SF of impervious area compared to current existing conditions.
Mitigation	Wildlife assessment and minor compensatory storage required (requires 5 native tree replacements)	Wildlife assessment and minor compensatory storage required (requires 1 native tree replacement)
Cost Deltas		
Utilities	Utilities need to be extended to South side of site (+\$235,000)	Current utilities exist to building location.
Bathhouse Building	Requires a minimal Gatekeeper structure at North entry (+\$30,000), replace existing building footprint with lawn (+\$75,000)	May require more durable materials and additional design elements because of lower elevation and proximity to water (+\$105,000).
Amenities	Building location 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. Assume some road repair will be 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.

