



# CRYSTAL LAKE BATHHOUSE PUBLIC PARK MASTER PLAN

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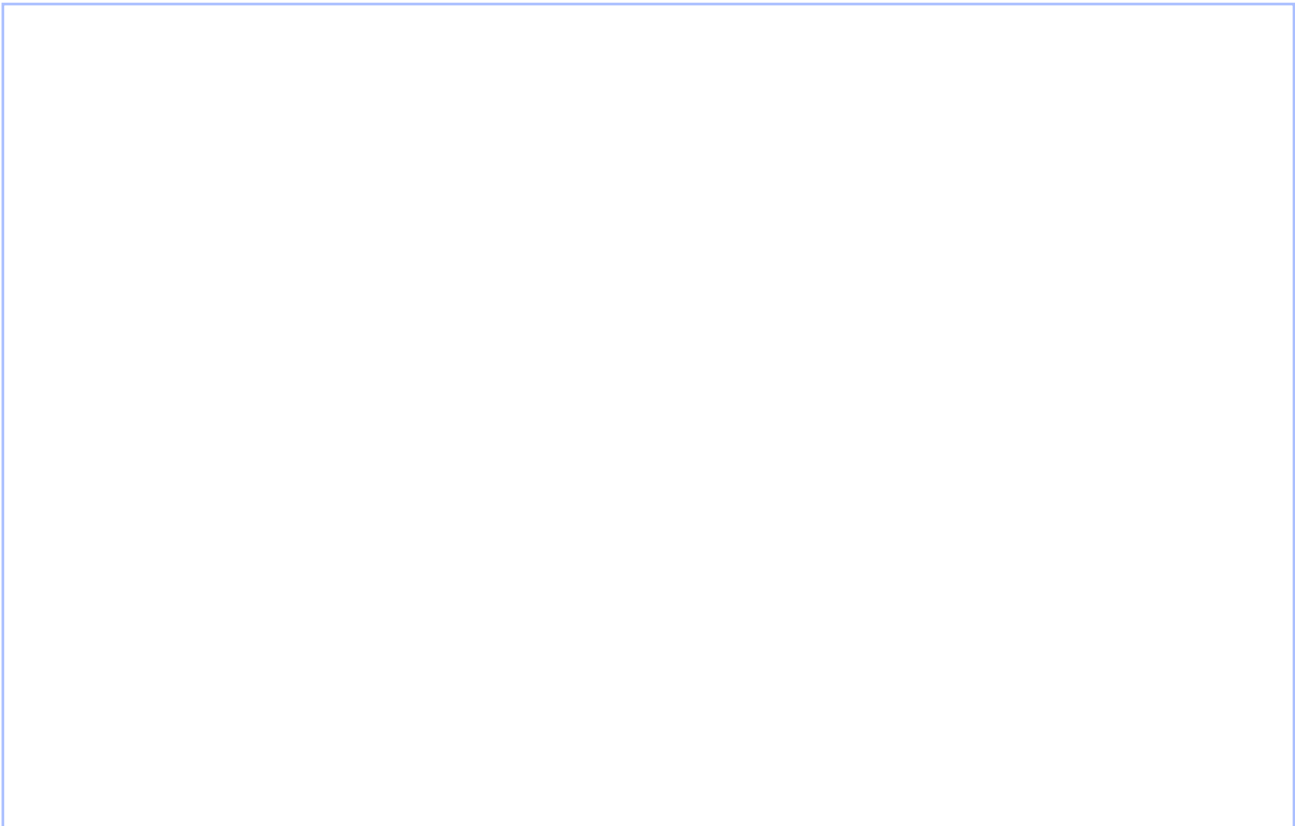
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# Alternative Solutions Considered But Not Selected

## 5.1 Overview

Subsequent to programming activities, and over the course of many months, the study team and Task Force explored a series of development options for the park and Bathhouse. The first step was to explore big-picture layout options through a series of 'Site Programming Diagrams'; next, a series of nine different 'Master Plan Options' were explored. These showed specific building layouts in conjunction with specific vehicular and pedestrian circulation flows throughout the park and shoreline. At the end of this process, the Task Force asked that two of the 'Master Plan Options' be explored in more depth, including revisions to the site plans and floor plans, along with elevation studies and massing images of the Bathhouse structure itself.

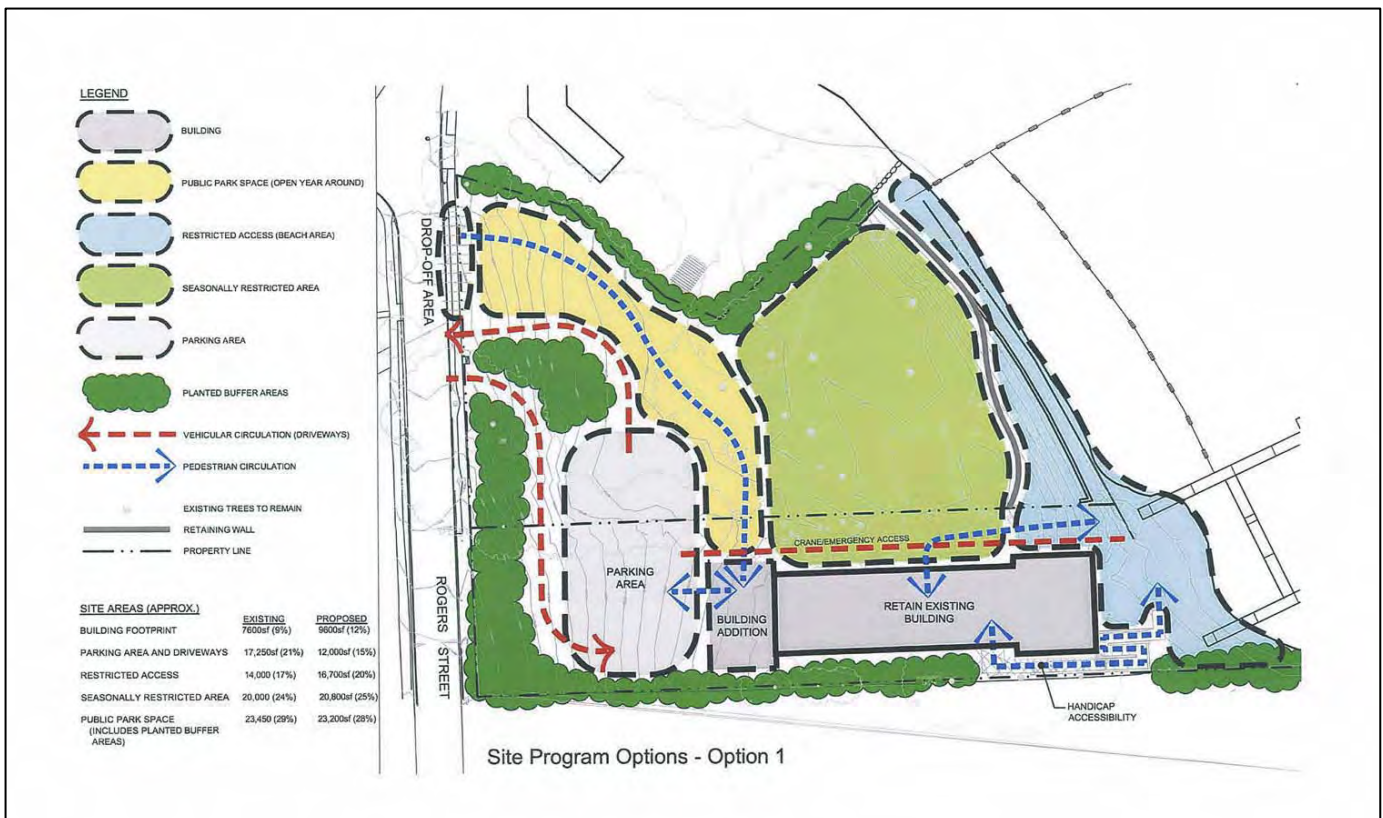
## 5.2 Five Initial Site Programming Diagrams

At its second meeting with the Task Force on June 11, 2008, the study team presented an initial series of Site Programming Diagrams that explored programmatic issues using diagrammatic site plans for three different Bathhouse configurations.

### Existing Bathhouse Option

#### Site Program Option 1:

- Renovate the existing bathhouse at 30 Rogers Street.
- Construct a new parking lot parallel to Rogers Street, spanning over both the newly acquired 20 & and the existing 30 Rogers Street parcels.
- Provide both parking ingress and egress in separate drives on the newly acquired 20 Rogers Street parcel.
- Provide year-round public park space on the newly acquired 20 Rogers Street parcel, connected to Levingston Cove via the newly acquired easement over 'Lot 2' at 230 Lake Avenue.



## New Bathhouse Option

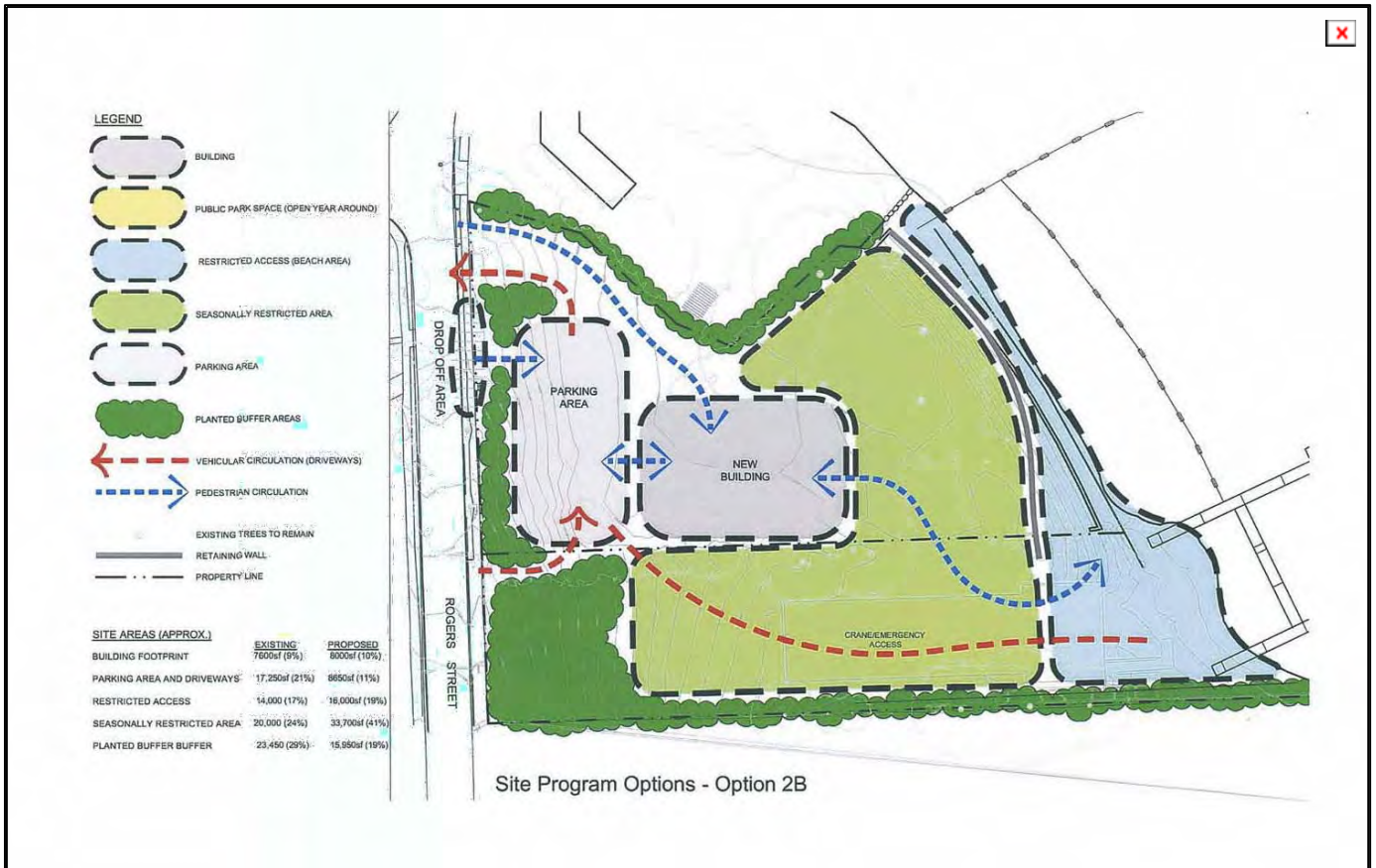
### Site Program Option 2A:

- Construct a new building with expanded beach on the existing 30 Rogers Street parcel.
- Construct new parking lot parallel to Rogers Street, spanning over both the newly acquired 20 & the existing 30 Rogers Street parcels.
- Provide parking ingress on the existing 30 Rogers Street parcel and a separate parking egress on the newly acquired 20 Rogers Street parcel.
- Provide year-round public park space on the newly acquired 20 Rogers Street parcel, connected to Levingston Cove via the newly acquired easement over 'Lot 2' at 230 Lake Avenue.



Site Program Option 2B:

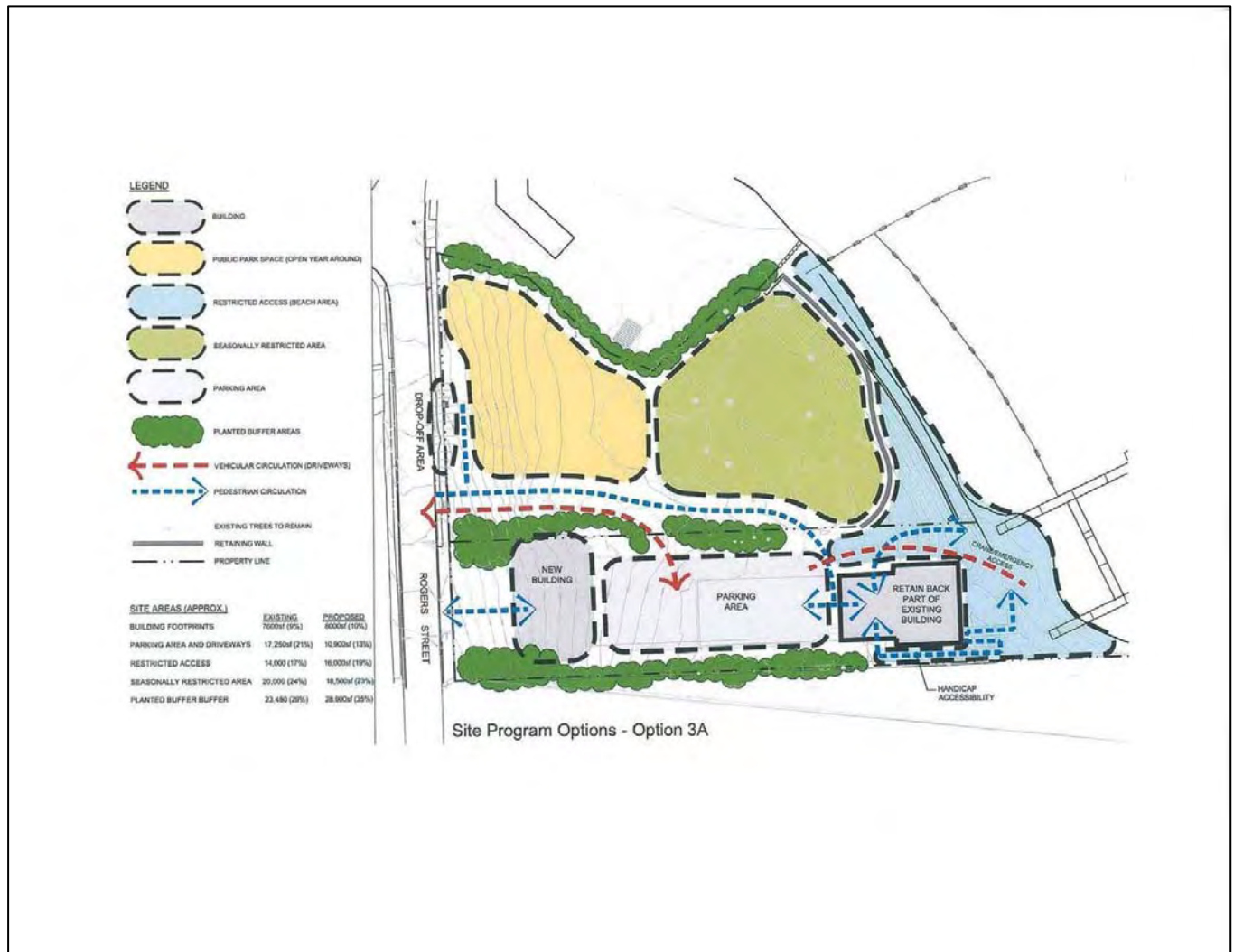
- Construct a new building on the newly acquired 20 Rogers Street Parcel.
- Provide expanded beach and seasonally restricted lawn area on the existing 30 Rogers Street parcel.
- Construct new parking lot parallel to the street on the newly acquired 20 Rogers Street parcel.
- Provide parking ingress on the existing 30 Rogers Street parcel and a separate parking egress on the newly acquired 20 Rogers Street parcel.
- No connection to the newly acquired easement over 230 Lake Avenue property.



Separate Bathhouse/Community Building Option

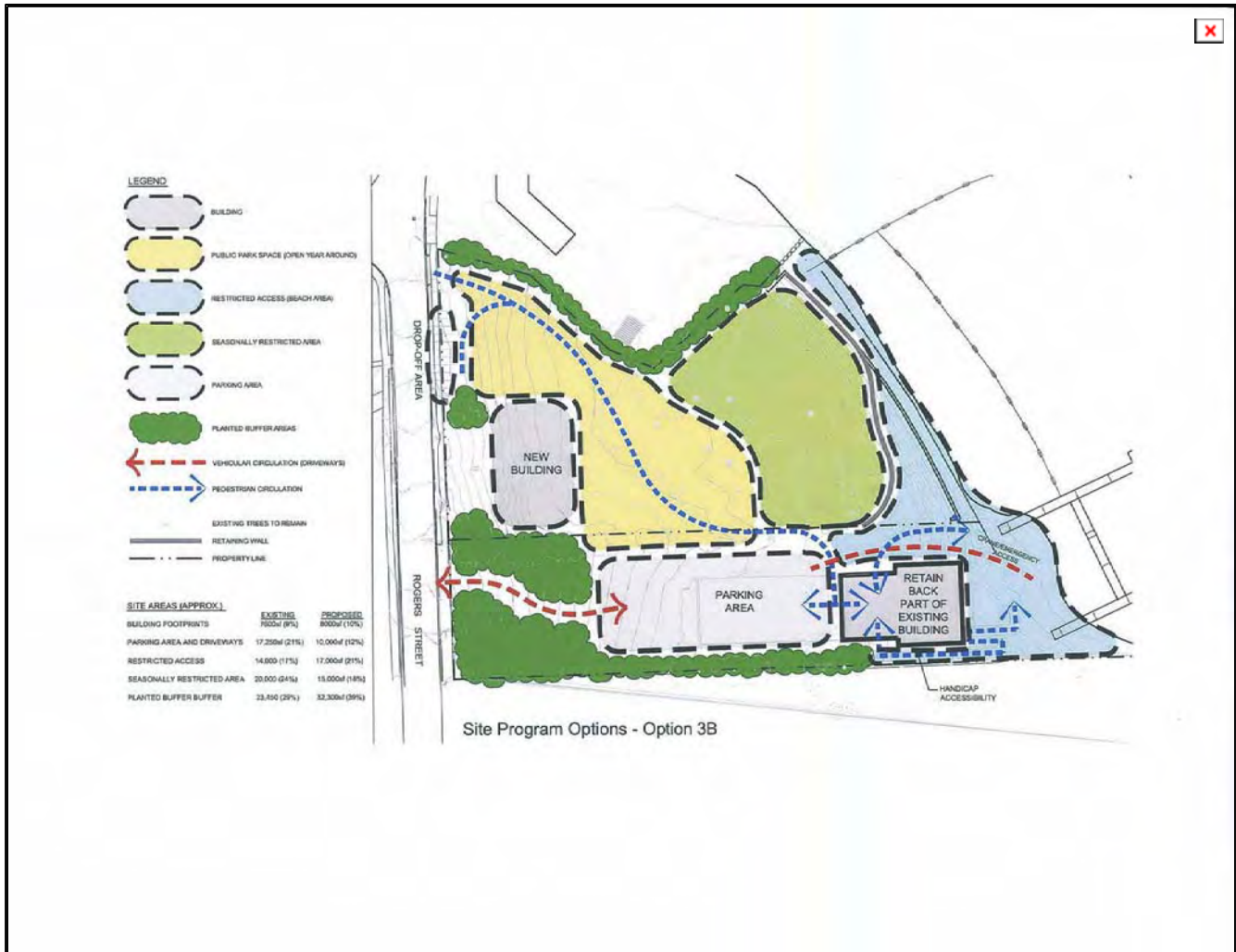
Site Program Option 3A:

- Construct two separate buildings on the existing 30 Rogers Street parcel.
- Renovate the lake-side portion of existing Bathhouse for seasonal programs.
- Construct a new community building up close to Rogers Street.
- Construct a new parking lot on the existing 30 Rogers Street parcel, between the two buildings and perpendicular to Rogers Street.
- Provide shared parking ingress and egress on the newly acquired 20 Rogers Street parcel.
- Provide year-round public park space on the newly acquired 20 Rogers Street parcel connected to Levingston Cove via the newly acquired easement over 'Lot 2' at 230 Lake Avenue.



Site Program Option 3B:

- Construct two separate buildings, one on the existing 30 Rogers Street parcel and the other on the newly acquired 20 Rogers Street parcel.
- Renovate the lake-side portion of existing bathhouse at 30 Rogers Street for seasonal programs.
- Construct a new community building on the 20 Rogers Street parcel.
- Construct a new parking lot on the existing 30 Rogers Street parcel perpendicular to Rogers Street with shared ingress and egress on the existing 30 Rogers Street parcel.
- Provide year-round public park space on the newly acquired 20 Rogers Street parcel connected to Levingston Cove via the newly acquired easement over 'Lot 2' at 230 Lake Avenue.





The programmatic elements explored in the five initial Site Programming Diagrams included the location and size of public park space (areas on the site that are fully available for year round use by the public), the location and size of seasonally restricted open space (space that is available only to beach permit users during the swim season), the size of beach area, vehicular circulation patterns (parking areas and driveways), pedestrian movement, and landscape buffer areas.

Although the options were diagrammatic, they all considered the restraints imposed by the topography of the site. The general guiding principle for the vehicular circulation design was to create an on-site parking area that was generally “flat”, with a slope of 5% or less in order to comply with accessibility codes. Any handicap parking space would also have to meet the required 2% or less slope. An on-street ‘drop-off’ area was also highlighted to provide accommodations for camp busses and parental on-street stacking. This was consistently shown on the 20 Rogers Street parcel.

The steepness and configuration of the ingress/egress driveway(s) was also considered. The goal was to have driveways with a slope of 12% or less. By following these standards, vehicular circulation and stormwater issues could be improved over existing conditions. In general, a parking lot with one-way ‘drive-thru’ circulation is considered superior to a ‘dead-end’ parking lot in which a patron needs to turn around in the parking lot before egressing out of the site.

Accommodations for a safe and accessible route to the beach for emergency and maintenance vehicles is a programming consideration that was taken into account and was delineated by dashed red lines.

Most of the pedestrian routes shown in these Site Programming Diagrams were located in full consideration of accessibility, with the grading of at least one pedestrian path through the site and into the building being completely accessible without the use of handicap ramps. The accessible path from the building to the beach itself varied. In those options, which maintained the existing lake-side portion of the existing bathhouse, the accessible path to the beach made use of the existing handicap ramp. On the other hand, Option 2A (new building) makes use of an elevator within the building envelope to provide access to the beach via a lower level.

After review of these initial Site Programming Diagrams at their meetings, the Task Force generally indicated that they would prefer any new building or building addition be entirely or at least mostly located on the 30 Rogers Street parcel, away from the street, near or at the location of the existing bathhouse. The general consensus was that a building on the 20 Rogers Street site not only blocked views of the lake but also took up land within the newly acquired park open space. Keeping the location of the building in approximately the same location also provides some screening from the MBTA tracks.

### **5.3 Five Initial Master Plan Options**

At the study team's third meeting with the Task Force on August 13, 2008, detailed Master Plan Options that combined floor plan and site layouts were presented for the first time. Parking and vehicular circulation were explored in more detail as well as methods for successfully incorporating pedestrian and handicap accessibility through the steep portions of the site. Locations for the placement of the temporary fence required to segregate seasonal 'permit' areas from public 'open space' were also presented. All of these Master Plan Options entail moving the stone retaining wall at the 'left beach' back away from the water to allow more space down by the water in this narrow area and, in some cases, to accommodate new handicap access ramps to the beach. All of these Master Plan Options also show potential paths for accessible pedestrian connections to the newly acquired 'Lot 2' conservation restriction area on the 230 Lake Avenue parcel, through which the connection to Levingston Cove can be made.

**The designations for Master Plan Options from this point in the study going forward (1A, 1B, etc) do not relate to the previous Site Programming Diagrams discussed in Section 3.2. Instead, they relate to the configuration of the proposed bathhouse building, with a concentration on exploring options for either year-round or off-season public access to a community meeting room.**

The five initial Master Plan Options presented are described in the subsequent pages.



Crystal Lake Master Plan - Building and Site Options

## I. Options that Make Use of the “Entire Existing Bathhouse”

### **Master Plan Option 1A:**

- Preserve and renovate the entire existing bathhouse, which provides more square footage than called for in the building program.
- The additional square footage allows for two multi-purpose rooms, one of which (on the parking lot end) is available for after-hours community use, while the second (on the lake end) is dedicated to seasonal program use.
- Parking is spread out over both 20 and 30 Rogers Street properties, configured as a ‘flat’ lot (see site section diagram) with one-way vehicular circulation requiring two curb cuts on Rogers Street.
- Passenger drop-off/pick-up is possible within the parking area due to the one-way circulation and a drop-off/pick-up area on Rogers Street is not shown.
- A pedestrian path along the north side of the existing bathhouse leads to the bathhouse entry, located on the side of the building, with a temporary seasonal fence preventing access to the beach or seasonal lawn area without first checking in at the bathhouse.
- There are both steps and a switchback handicap access ramp leading to the beach from a second, segregated exit from the bathhouse. The location of the ramp is integrated much more successfully into the landscape and flow of patron activities than the existing ramp on the opposite side of the building. In addition, because the design of the ramp requires the relocation of a portion of the stone

retaining wall along the 'left beach', this layout provides the opportunity to expand the 'left beach' area.

- The existing handicap access ramp on the south side of bath house is removed.
- Emergency and maintenance access ("crane access") is located at the northeastern corner of the bathhouse, via a steep paved path in approximately the same location as exists.



**Master Plan Option 1B:**

- Preserve and renovate the entire existing bathhouse (similar to Option 1A).
- The additional square footage again allows for two multipurpose rooms, however, both are located on the lake end and would be dedicated to seasonal program use, with community use only during the 'off-season'.
- Placement of both multi-purpose rooms on the lake-end of the building allows better supervision of the parking lot and park by administrative staff by placing the administrative office on the parking lot end of the building.
- The site design for this option is exactly the same as Option 1A.

## II. Options that Make Use of a “Portion of the Existing Bathhouse”



### Master Plan Option 2A:

- Preserve and renovate only enough square footage at the ‘lake-end’ of the existing building to meet the square footage requirements of the building program. The preserved portions of the building include the entire two-story hipped roof section directly abutting the lake, as well as a portion of the single-story flat roofed ‘ell’ heading towards the parking lot.
- A single multi-purpose room is located on the lake-end of the bathhouse. As such it would be dedicated to seasonal programs during the swim season and accessible for community use only during the off-season.
- Demolishing a significant portion of the existing single-story ‘ell’ allows for a ‘flat’ parking lot to be placed completely within the 30 Rogers Street parcel, perpendicular to Rogers Street.
- In order to maintain a properly graded (12% or less) driveway, part of the driveway is constructed within the 20 Rogers Street parcel. The site plans shows a two-way driveway with single curb cut on Rogers Street.
- Parking is configured as a “dead-end” lot, eliminating the possibility for easy drop-off/pick-up within the parking lot as was possible in the one-way circulation pattern shown in Options 1A and 1B. Accordingly, the study team anticipates that more drop-off/pick-up activity will take place on Rogers Street.

### Crystal Lake Master Plan

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- Again, a pedestrian path along the north side of the existing bathhouse leads to the bathhouse entry, which is located on the side of the building.
- A temporary seasonal fence prevents access to the beach or seasonal lawn area without first checking in at the bathhouse.
- The existing handicap access ramp on south side of bathhouse is removed.
- There are two pedestrian entries onto the beach from the bathhouse. The first is via a new set of steps on the north side of building. The second is via the existing access ramp on the south side of building. Relocation of the entry lobby integrates the accessible ramp into the patron flow much more effectively. Placement of the new administrative office area on the south side of the building creates much better oversight of the ramp as well.
- Use of the existing ramp means that relocation of the existing stone wall and expansion of the 'left beach' area is possible, but strictly optional.
- As with Options 1A and 1B, the emergency and maintenance access ("crane access") is located at the northeastern corner of the bathhouse.



**Master Plan Option 2B:**

- Preserve and renovate only the two-story hipped roof section of the existing building directly abutting the lake and use this structure as a community center on the upper level and the guard room on the lower level.
- Construct a new, separate bathhouse within a portion of the footprint of the existing single-story 'ell'.
- Connect the two structures with a covered roof or pergola to provide open-air shelter from storms or sun.
- The combined square footage of these two buildings meets the square footage requirements of the building program.
- As with Option 2A, the single multi-purpose room is located within the lake-end of the existing building to take advantage of the beautiful view, with the utilitarian bathhouse facilities located to the parking lot side. As such, the multi-purpose room would be dedicated to seasonal programs during the swim season and accessible for community use only during the off-season.
- The parking and driveway design is very similar to Options 1A and 1B which allow for a desirable one-way traffic flow, however, because the new bathhouse takes up a slightly smaller footprint than the existing single-story 'ell' (which is demolished) the parking lot protrudes less onto the 20 Rogers Street parcel.
- As with Option 2A, the existing access ramp is maintained on the south side of the building, with much easier patron access.

- Emergency and maintenance access (“crane access”) is relocated away from the north side of the building allowing the steps to run immediately along the northeastern corner of the preserved community building.

### III. New Building Option



#### Master Plan Option 3A:

- Construct a new bathhouse roughly within a portion of the existing building’s footprint, but pulled slightly north and away from the water.
- The floor plan layout is very similar to that of Option 2A, except that the all-new construction allows for programmatic improvements such as an internal stairway connecting the guard room on the lower level to the staff areas on the upper level.
- Positive attributes of the existing structure, such as the open-air veranda and lake-side multi-purpose room are incorporated into the new building.
- The single multi-purpose room is located at the lake-end of the new building to take advantage of the view, with the utilitarian bathhouse facilities located on the parking lot side. As such, the multi-purpose room would be dedicated to seasonal programs during the swim season and accessible for community use only during the off-season.
- The relocation of the bathhouse allows for more distance between the bathhouse and lake, which in turn allows for expansion of the existing beach.
- The relocation of the bathhouse allows more room between the south side of the new building and the MBTA property line, which in turn allows for the relocation of emergency and maintenance access (“crane access”) to the ‘non-park/non-public’ portion of the site.

### Crystal Lake Master Plan

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- Moving the crane access to the south side allows for more flexibility, better placement, and better design alternates for the steps and access ramps down to the beach.
- The design of the ramp shown in the site plan requires the relocation of a portion of the retaining wall, which in turn allows for an expansion of the ‘left beach’.
- The desirable one-way parking lot circulation patterns shown in Options 1A, 1B and 2B would work with this bathhouse layout, however for discussion purposes; a single, two-way driveway entrance/exit drive for the parking is shown. This dead-end parking layout makes on-site drop-off and pick-up difficult, but only requires one curb cut on Rogers Street.

#### **5.4 Additional Master Plan Options**

On September 10, 2008, the Task Force was presented with two site plan refinements to previously presented Master Plan Options; a series of options for the beach ramp; and a series of four new Master Plan Options, each of which included a choice between two parking lot designs; a ‘dead-end’ option and a ‘drive-thru’ option. These parking lot options were intended to help the Task Force sort out the pros and cons of a ‘dead-end’ parking lot with a shared entry/exit drive with a single curb-cut, all on a smaller footprint, versus those of a ‘flow-through’ parking lot with either a single entry/exit drive or two different drives on a larger footprint and encompassing a portion of both parcels on Rogers Street.

In regard to ‘refinements’, the Task Force wanted to see how the site plan components shown in Option 1A (August 13<sup>th</sup>) would work with the Option 2A and 3A bathhouse building plans.

In regard to beach ramp alternatives, the Task Force expressed a desire to explore configurations of the access ramp and steps in close proximity to each other including ramp options that didn’t extend as far into the 20 Rogers Street lawn area and a ‘ramp-only’ (no steps) system. As a result, four design alternates for configuring the beach access ramp were presented, all of which presupposed that ‘crane access’ was located on the MBTA side of the building, and all of which would work with any of the new (September 10<sup>th</sup>) Master Plan Options.

The Master Plan Options (Section 5.3 II.) that included use of a “portion of the existing bathhouse” which essentially was the ‘lake-end’ of the existing building, crane access required the demolition of the southern side of the veranda in order to provide sufficient clearance between the building and MBTA property line. A structural review was conducted and it was determined that there would be no adverse structural impacts, or excessive costs involved with removing this portion of the veranda and a portion of basement below it. However, concerns regarding the aesthetic consequences of such a partial demolition were expressed by the Study Team.

Concurrently, the Task Force initiated conversations with the MBTA for a potential easement or right of way if necessary. A conceptual design was produced by the study team that concluded the southern veranda could be maintained if permission was granted by the MBTA to construct a retaining wall and a portion of a paved ‘crane access’ driveway within the MBTA right-of-way.

For the Master Plan Options (Section 5.3 III) that presented a completely new bathhouse , the new building was located in such a manner as to provide adequate clearance for the ‘crane access’ path along the southern edge of the site.

#### **Refinements to Previously Presented Master Plan Options**

The Task Force focused on two preferred bathhouse options: Option 2A that made use of a portion of the existing building and Option 3A that involved the construction of a new bathhouse. Both these two building configurations had been previously combined with a ‘dead-end’ parking lot scheme.

The ‘flow-through’ parking lot scheme shown in the Option 1A site plan was of interest to the Task Force. As such, the study team presented site plans showing this ‘flow-through’ parking lot layout combined with the Option 2A and 3A building plans. Other interesting features of the Option 1A site plan included the beach ramp

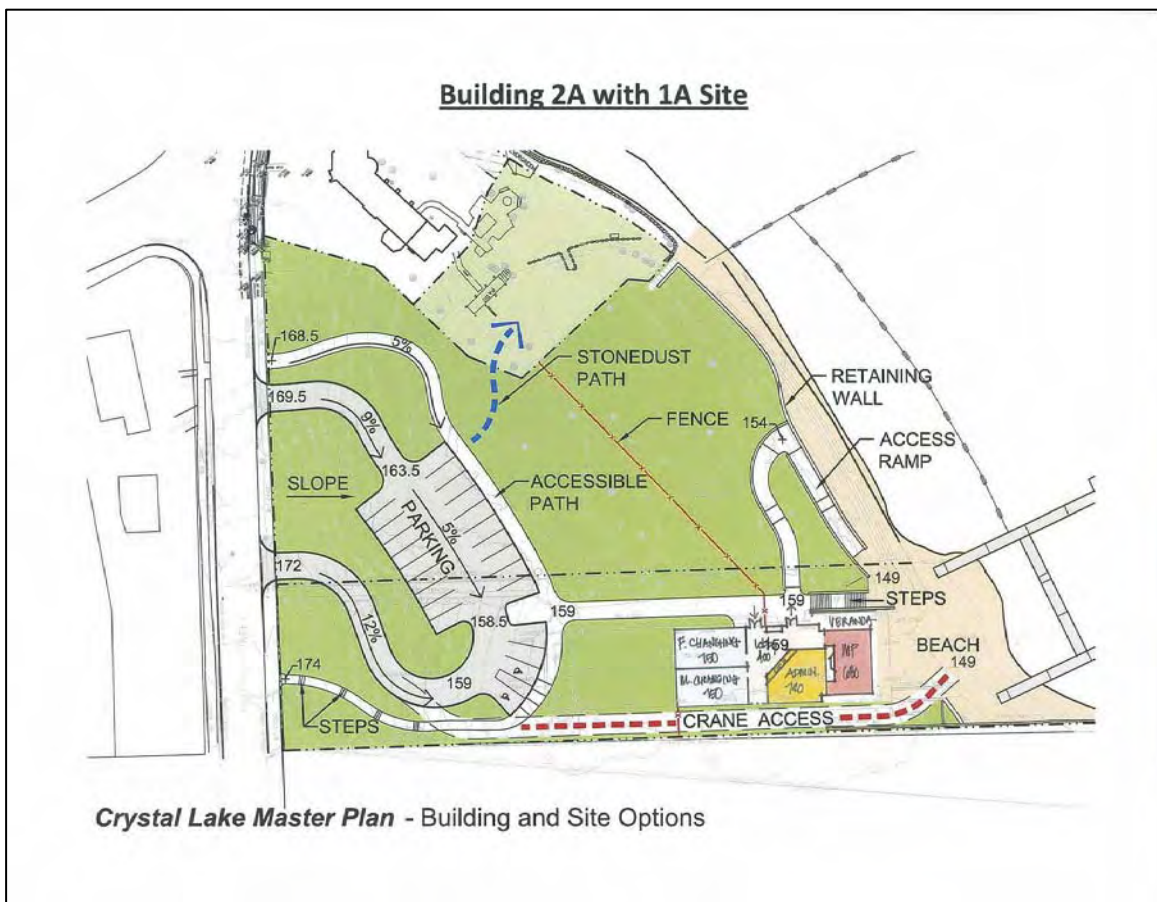
#### **Crystal Lake Master Plan**

and related expansion of the 'left beach' and the steps adjacent to the building's north side. Both of these refined sketches included the relocation of the 'crane access' path to the MBTA side of the bathhouse, with floor plan revisions that could accommodate such access.

In the original 2A bathhouse and site plan, the Task Force was concerned with the lack of parking lot and parkland supervision from inside the building, and the less visible remote entrance into the bathhouse from the parking lot.

The revised bathhouse floor plan for Option 2A moved the administrative/check-in area to the northwest corner of the plan and 'bumped' it out into the park with a bay. This change provided the administrative area with windows on three sides and clear unobstructed views toward the west into the parking lot; to the north into the lawn area and to the east into the ramp/stair system leading to the beach and lake beyond. The front entrance was moved to face the parking lot directly and the changing/toilet rooms were moved to the southern side of the building to buffer the noise of the MBTA Green Line and no longer obstruct views to the parking lot from the entry lobby.

The relocated entrance lobby improved supervision and accessibility from the lobby, but precluded continued use of the existing handicap access ramp to the beach. The revised Option 2A presented demolition of the existing ramp system on the southern edge of the building and the relocation of an access ramp to the northern (park) side of the bathhouse.



## **I. Additional Master Plan Options Utilizing a Portion of the Existing Bathhouse**

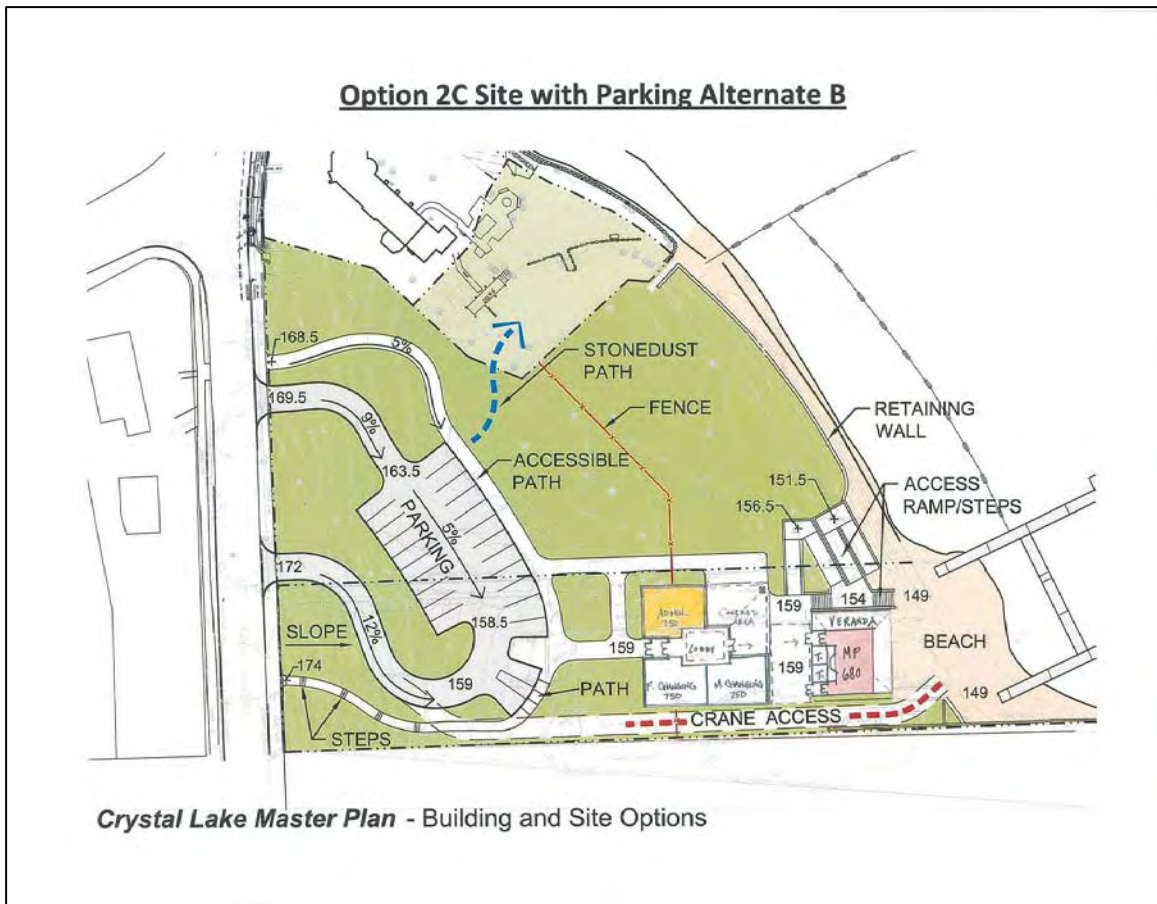
A series of four new Master Plan Options were presented to the Task Force for consideration. Two of these options (2C & 2D) split up the building program by combining the renovation of the two-story 'lake-end' of the existing bathhouse with the construction of a second seasonal support building on site. The renovated portion of the existing bathhouse contains a self-sufficient multi-purpose room with separate entry and toilets on the upper level, overlooking the lake, and the guard room on the lower level. The separate building would support the seasonal swim program only. It faces the parking lot and contains check-in, administrative and first-aid offices, and changing/toilet rooms for both sexes. The idea behind the 'split' buildings is to heat a minimal amount of square footage during the off-season, when the lakeside multi-purpose room would be available for community use.

As with Option 2B, the area between the two buildings is open to the air and could be covered with roof, trellis, or a combination of the two in order to shelter patrons without the expense of constructing enclosed space.

Both of these options assume 'crane access' is provided on the MBTA-side of the building, requiring removal of the existing south side veranda, the implications of which have been discussed previously. Given the location of the 'crane access' drive, any of the four previously discussed ramp alternatives on the 'park-side' of the bathhouse would work with these new Master Plan Options.

It should also be noted that both of these new Master Plan Options position the front door of the seasonal facility on the parking lot end of the building, as opposed to the park-side entries shown in the Initial Master Plan Options. These two options also position the administrative offices within the building so that they have windows directly overlooking the parking lot and park, providing superior supervision.

The lakeside community room is available only during the 'off-season' under both of these new Master Plan Options. There was concern expressed regarding public safety during the off-season because the community room is hidden from view as the second building is located between it and the parking lot/street.



**Master Plan Option 2C:**

- Option 2C has many of the same characteristics as Option 2B, with an improved floor plan layout and site supervision as discussed above.
- Preserve and renovate only the two-story hipped roof section of the existing building directly abutting the lake and use this structure as a community center on the upper level and the guard room on the lower level.
- The southern side of the existing veranda is removed thus allowing adequate width between the building and the property line to place the emergency and maintenance access (“crane access”).
- Construct a new, separate bathhouse within a portion of the footprint of the existing single-story ‘ell’.
- A covered roof or pergola could connect the two structures providing open-air shelter from storms or sun. This option does make use of a dedicated open-air roofed area directly outside the check-in lobby, thus allowing the space between the two buildings to be uncovered if desired.
- The combined square footage of these two buildings meets the square footage requirements of the building program.
- As with Options 2A and 2B, the single multi-purpose room is located within the lake-end of the existing building to take advantage of the beautiful view, with the utilitarian Bathhouse facilities located to the parking lot side. The multi-purpose room would be dedicated to seasonal programs during the swim season and accessible for community use only during the off-season. As noted above however, the multi-purpose building is hidden from view which could create a supervision issue.
- In contrast to Option 2A, the existing access ramp to the beach is removed and replaced by a ramp system on the ‘park’ side of the complex.
- Emergency and maintenance access (“crane access”) is relocated away from the north side of the building allowing the steps to run immediately along the northeastern corner of the preserved community building.



**Master Plan Option 2D:**

- Option 2D is almost identical to Option 2C above, except for the orientation of its swim-program building, which extends a bit onto the 20 Rogers Street parcel and allows more open space between itself and the lakeside community building.

## **II. Additional Master Plan Options Involving a New Building**

The other two options (3B & 3C) envision a new two-story building housing the entire program under one roof, in conjunction with an expanded beach area in front of the bathhouse. The expanded beach is possible due to a repositioning of the new building further away from the shoreline. As with the renovation options, the guard room and support facilities would be placed on the lower level, adjacent to the beach and docks. To minimize operating costs associated with off-season use of the lakeside community room, a separate entrance and dedicated toilet rooms are shown in each option. The seasonal administrative and support spaces would be completely segregated and supplied with minimal heat.

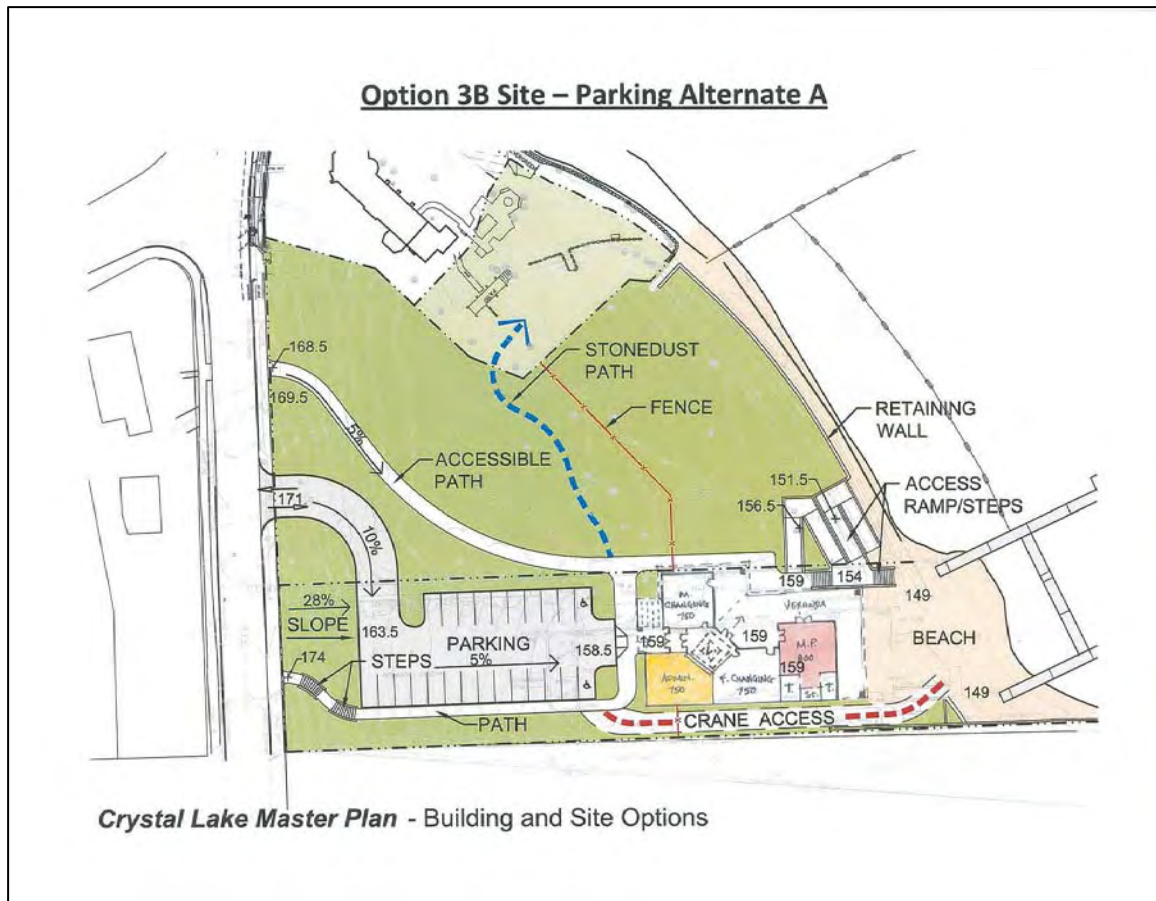
Emphasis is placed on sheltering verandas integrated into the new plan layout with geometry appropriate for a hipped roof design, utilizing the most attractive feature of the existing building. The veranda on the first floor would be used to overhang the guard room on the beach side, therefore providing immediate open-air shelter for beach patrons and guards alike in the event of a quick or periodic rain shower. The veranda's would extend further toward the street and be much deeper on the park-side than the existing building, thus providing better shelter for either beach or lawn patrons during inclement weather.

As with Options 2C and 2D, both of these new options allow 'crane access' on the MBTA-side of the building. Given the location of the 'crane access' driveway on the south side of the Bathhouse, any of the four previously discussed ramp alternatives on the 'park-side' of the Bathhouse would work.

Option 3B positions the front door of the bathhouse on the parking lot end of the building (as opposed to the park-side entries shown in the Initial Master Plan Options), and also positions the administrative offices so that they have windows directly overlooking the parking lot and park, providing superior supervision. Unfortunately, this does not allow an internal 'back-of-house' stairway connection to the guard room in the lower level because the lower level is a 'slab on grade' at the parking lot end of the building (unless additional square footage was added to the program to extend the basement all the way to the parking lot).

Option 3C provides the opposite benefits. It places the administrative suite in the middle of the building in order to allow for a 'back-of-house' stairwell connection to the guard room below. Doing so takes away their ability to oversee the parking lot, but increases administrative control and flexibility over the operation of the facility. Views to the park are possible from the administrative area from across the check-in lobby as opposed to windows on a directly abutting exterior wall, which would be superior.

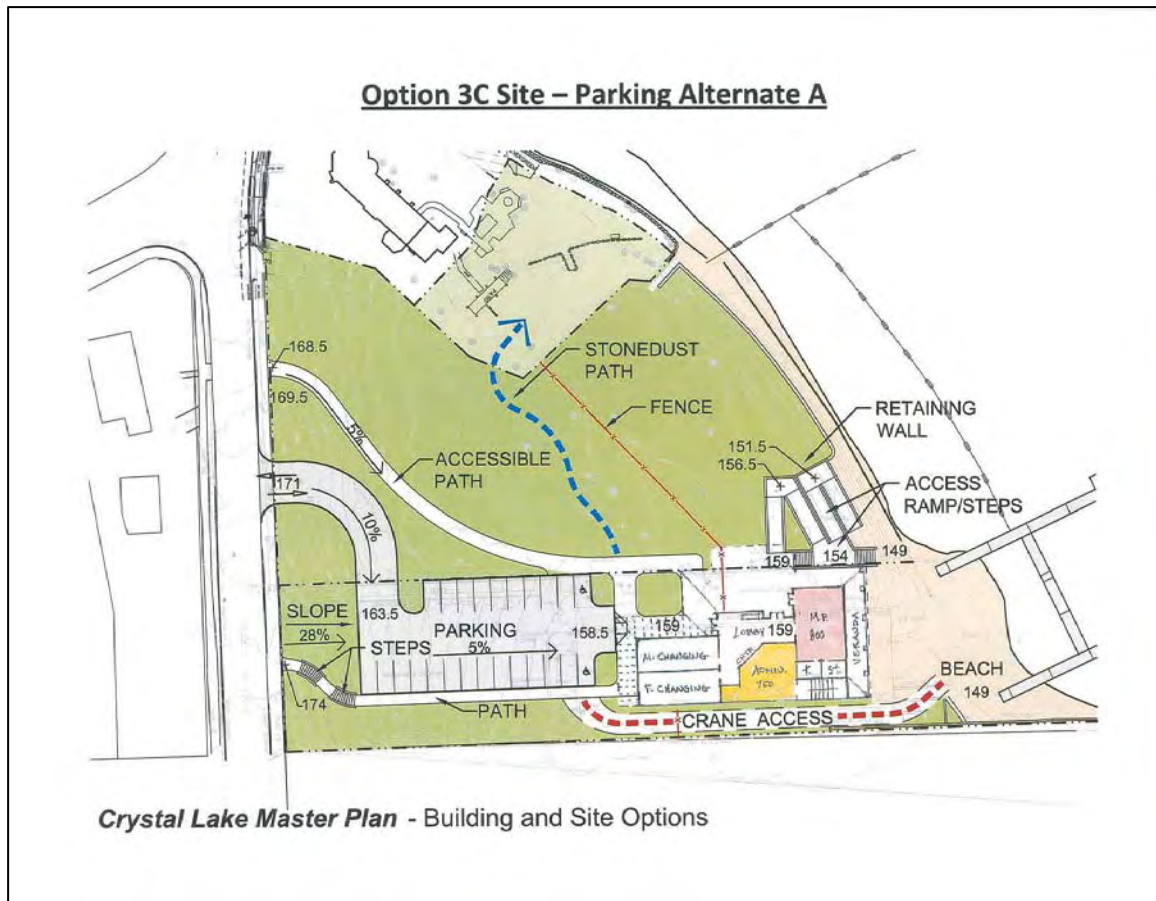
The lakeside community room in both scenarios is available only 'off-season'. There is better accommodation of public safety concerns under Option 3C since the off-season door to the community room is visible from the parking lot and street, though under a deeply lit canopy. Option 3B does not adequately address this issue.



**Master Plan Option 3B:**

- Option 3B has many of the same characteristics as Option 3A, however, it provides an improved floor plan layout and site supervision as discussed above.
- Construct a new bathhouse roughly within a portion of the existing building’s footprint, but pulled slightly north away from the MBTA and west away from the water which allows for an expanded beach in front of the building.
- The floor plan layout does not allow for an internal stairway connecting the guard room on the lower level to the staff areas on the upper level.
- Positive attributes of the existing structure, such as the open-air veranda and lake-side community room, are incorporated into the new building.
- The single multi-purpose room is located at the lake-end of the new building to take advantage of the view, with the utilitarian Bathhouse facilities located to the parking lot side. The multi-purpose room would be dedicated to seasonal programs during the swim season and accessible for community use only during the off-season.
- The multi-purpose room has self-contained toilets and storage, minimizing the extent of the building that would have to be heated during the off-season.
- The off-season exterior door to the multi-purpose room is hidden from view from the parking lot and street, thereby creating a potential public safety issue.
- The relocation of the Bathhouse allows more room between the south side of the new building and the MBTA property line, which in turn allows for the relocation of emergency and maintenance access (“crane access”) to the ‘non-park/non-public’ portion of the site.
- Moving the crane access to the south side allows for more flexibility, better placement, and better design alternates for the steps and access ramps down to the beach.

**Crystal Lake Master Plan**



### Master Plan Option 3C:

- Option 3C has many of the same characteristics as Option 3B, with the added benefits of internal stair circulation between the two floor levels and a safer off-season entrance to the lakeside community room, as discussed above.
- Construct a new bath house roughly within a portion of the existing building’s footprint, but pulled slightly north and away from the water which allows for an expanded beach in front of the building.
- The floor plan layout allows for an internal stairway connecting the guard room on the lower level to the staff areas on the upper level.
- Positive attributes of the existing structure, such as the open-air veranda and lake-side community room are incorporated into the new building.
- The single multi-purpose room is located at the lake-end of the new building to take advantage of the view, with the seasonal Bathhouse facilities located to the parking lot side. The multi-purpose room would be dedicated to seasonal programs during the swim season and accessible for community use only during the off-season.
- The multi-purpose room has self contained toilets and storage, minimizing the extent of the building that would have to be heated during the off-season.
- With two entrances facing the parking lot, Option 3C provides the best visibility of the off-season exterior door to the lakeside multi-purpose room and increased safety.
- The relocation of the Bathhouse allows more room between the south side of the new building and the MBTA property line, which in turn allows for the relocation of emergency and maintenance access (“crane access”) to the ‘non-park/non-public’ portion of the site.
- Moving the crane access to the south side allows for more flexibility, better placement, and better design alternates for the steps and access ramps down to the beach.

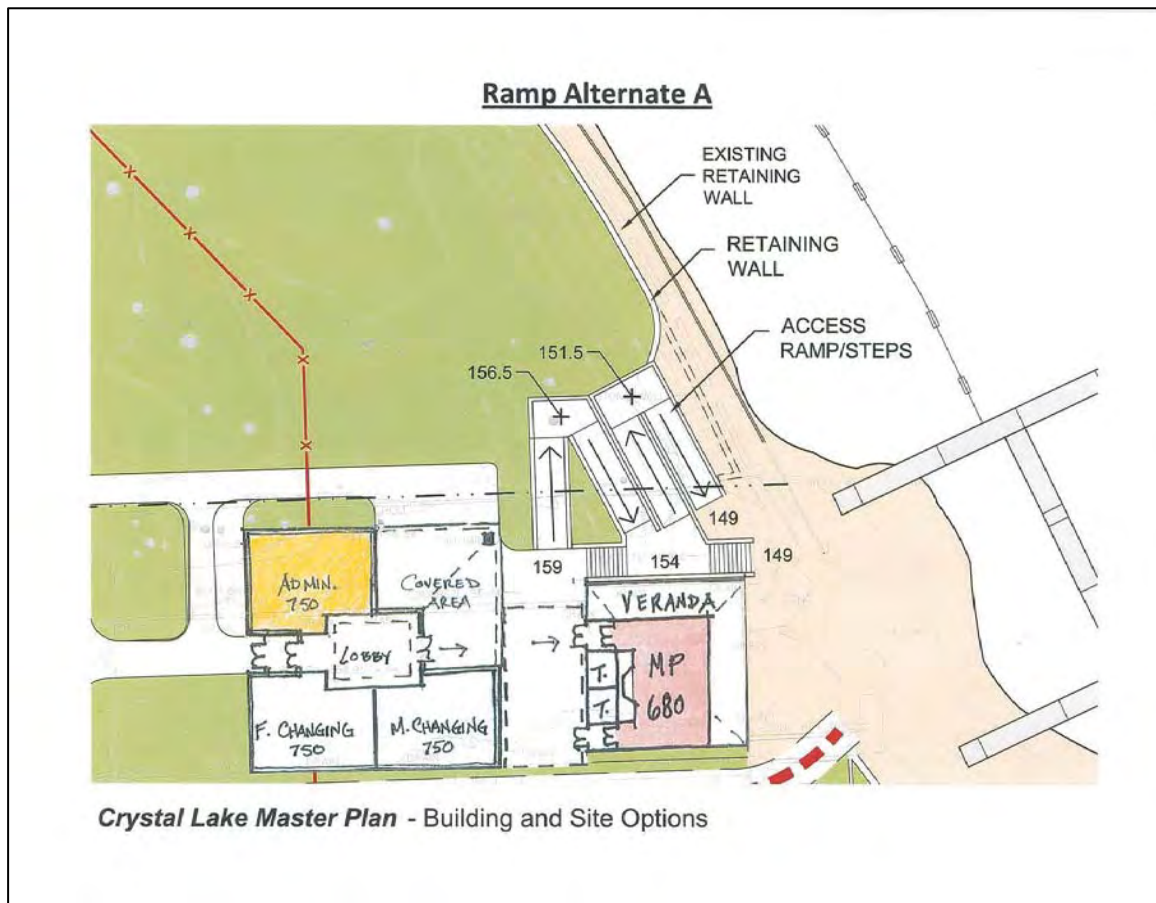
### Crystal Lake Master Plan



### III. Alternative Beach Ramp/Stair Configurations

A series of four ramp layouts (A thru D) were explored. All four options assume the 'crane access' is provided on the southern side of the building though the building layout for Option 2C was shown, these ramp configurations could work with any of the building options presented to date.

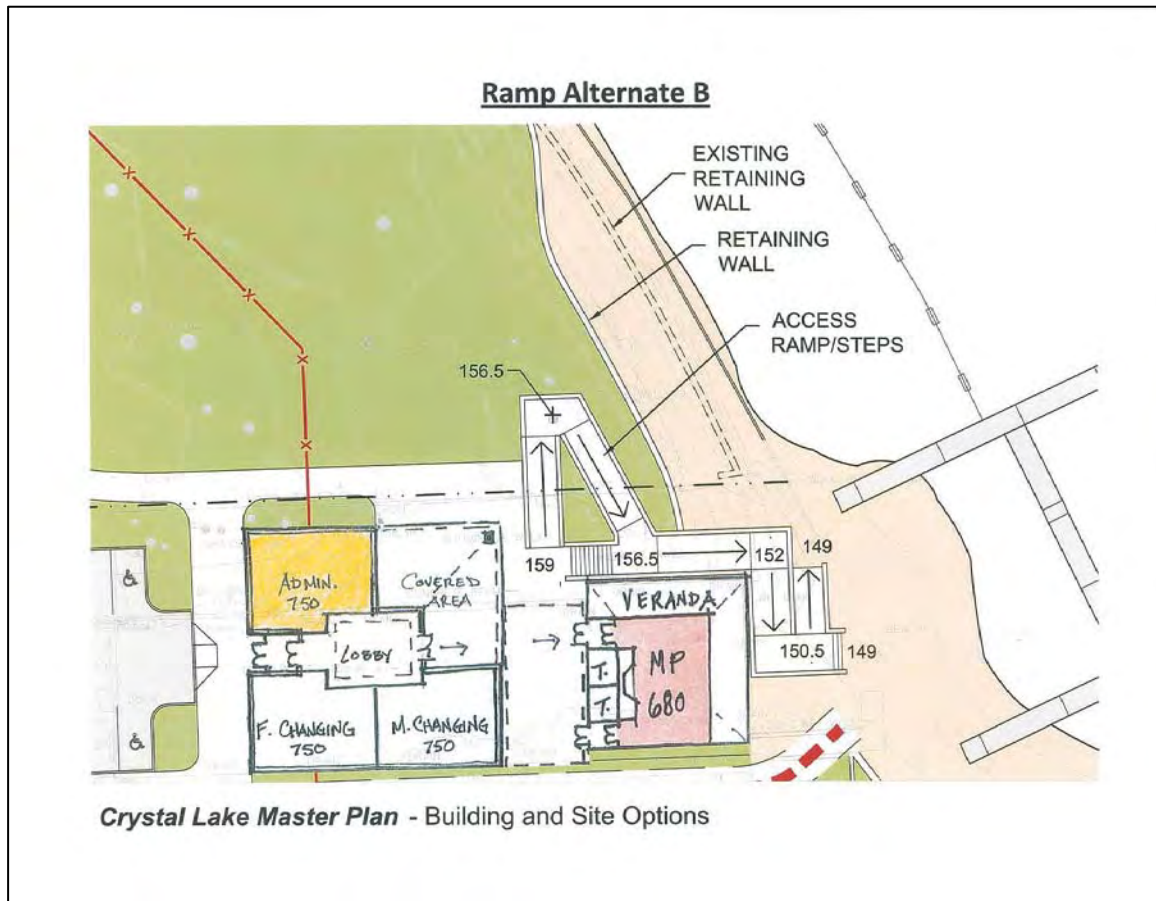
The change in elevation from the first floor within the Bathhouse to the beach is approximately ten feet. Accessible design requires that ramps have a maximum slope of 1:12, thus a minimum ramp run of 120 feet is required to meet site conditions at Crystal Lake. Accessible design also requires a level 5-foot landing every 30 feet and there are minimum dimensional requirements for landings at switchbacks. Dimensions and configurations for handrails are another consideration in ramp design. In all designs, the existing stone retaining wall running along the shoreline must be partially modified to allow for the ramps and steps.



#### **Ramp/Stair Alternative A:**

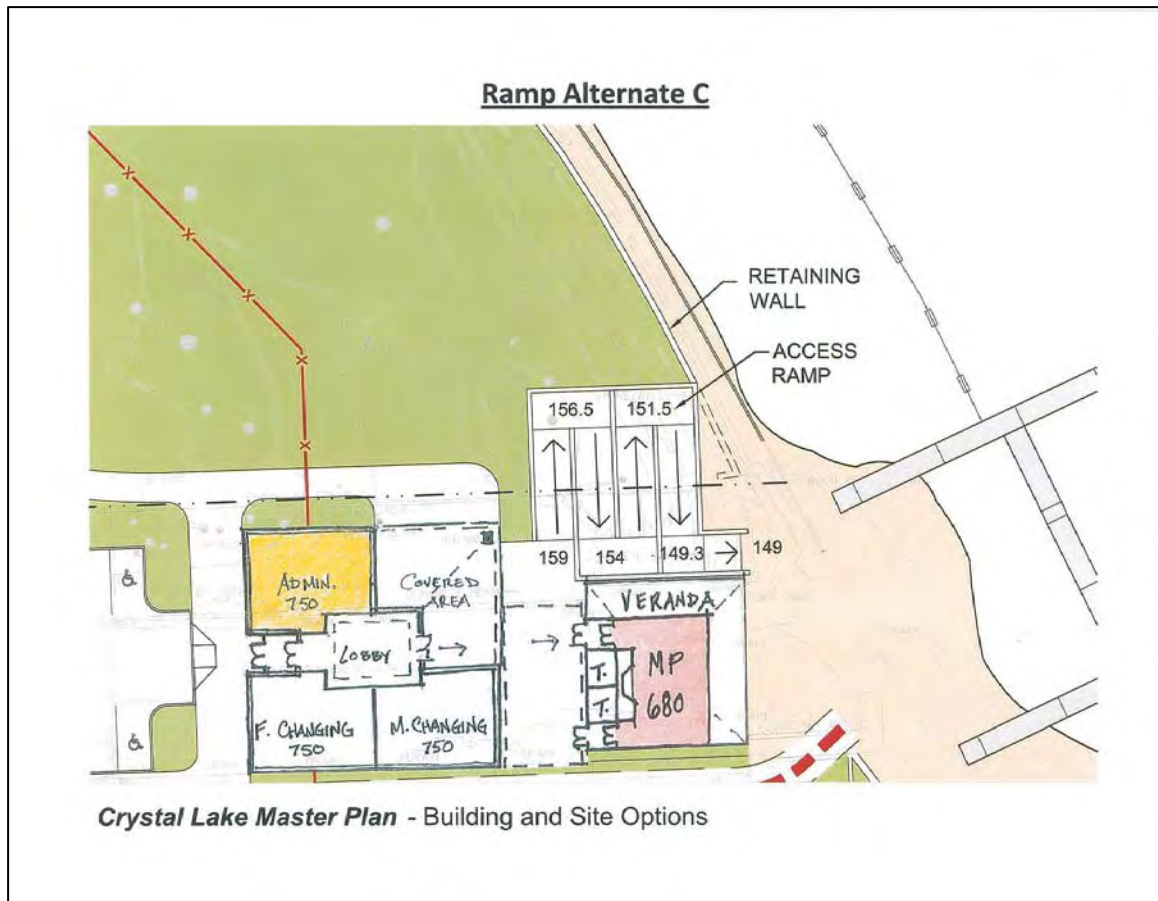
- Provides a series of four straight ramp segments with two intermediate landings.
- Three of the ramp segments are parallel to the shoreline and, because the fourth is perpendicular to the building, the opportunity exists to create a planting bed between the top two runs.
- A separate, straight-run stairway hugs the north side of the building.
- The mid-point of the access ramp system is tied into the intermediate stair landing.
- Both the stairway and ramp system begin and end in the same general areas, which is desirable.
- A small portion of the existing stone retaining wall along the 'left beach' is removed and the beach is extended slightly back toward the new ramp.

### **Crystal Lake Master Plan**



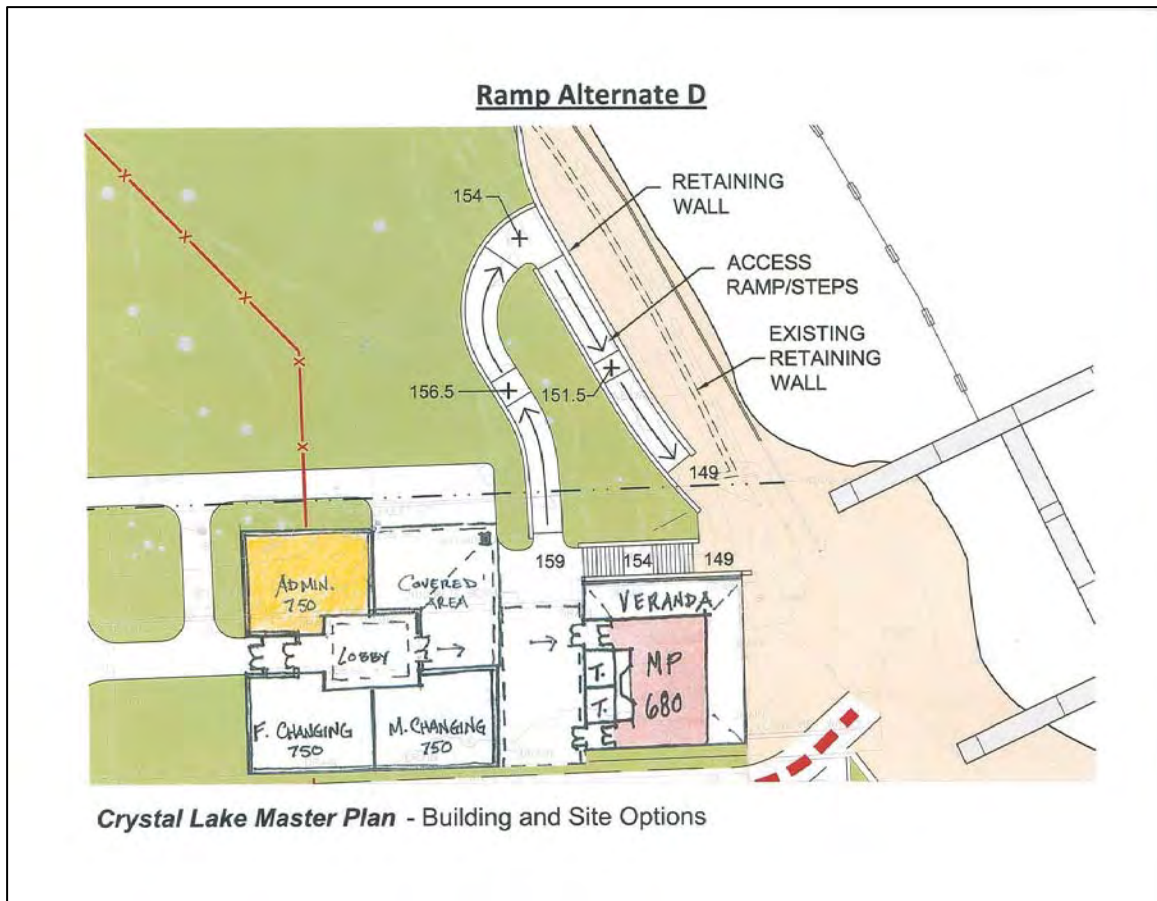
**Ramp/Stair Alternative B:**

- Provides a series of five straight ramp segments with four intermediate landings.
- This ramp layout makes use of space alongside the Bathhouse that is dedicated to stairways under Alternative A, and as such, does not take up as much room on the lawn portion of the 20 Rogers Street parcel.
- It does, however, take up significant space on the existing beach in front of the bathhouse and requires a reconfiguration of the entry into the lower level guardroom because the ramps and steps closely wrap around the northeastern corner of the building.
- One of the top two ramp segments runs parallel to the shoreline and, because the adjacent segment is perpendicular to the building, the opportunity exists to create a planting bed between the top two runs.
- A straight-run stairway with fewer steps hugs the building at the upper level and leads patrons to a landing from which they must then walk down two segments of ramp before encountering another small set of risers immediately at the beach. All able and disabled patrons must use the ramp system from the halfway point down.
- Both the stairway and ramp system begin and end in the same general areas, which is desirable.
- Because more of the ramp is placed immediately adjacent to the Bathhouse, a much larger portion of the existing stone retaining wall along the ‘left beach’ can be removed in order to extend the width of the beach significantly along the shoreline, more than making up the lost beach in front of the building.



**Ramp/Stair Alternative C:**

- Provides a series of five straight ramp segments with four intermediate landings arranged in a series of tight switchbacks with retaining walls.
- This ramp layout makes use of no stairways and requires all beach patrons to use the ramp system.
- Because it is built into the lawn portion of the 20 Rogers Street parcel it has no impact on the size of the beach in front of the Bathhouse as occurs in Alternative B.
- The layout is unimaginative, repetitive and harsh, without intermediate planting beds.
- Both the stairway and ramp systems begin/end in the same exact areas, which is desirable.
- A small portion of the existing stone retaining wall along the 'left beach' is removed and the beach is extended slightly back toward the new ramp, though less so than in Ramp Alternative A.



**Ramp/Stair Alternative D:**

- Provides a series of two curved ramp segments with three intermediate landings.
- A separate, straight-run stairway hugs the building.
- This ramp system extends far into the lawn portion of the 20 Rogers Street parcel and, as such, has no impact on the size of the beach in front of the Bathhouse.
- The layout is more organic than the other alternatives as it winds through the park, and could be softened even more by recessing itself into the landscape in conjunction with a series of stone retaining walls.
- Both the stairway and ramp systems begin/end in the same areas, which is desirable.
- A significant portion of the existing stone retaining wall along the 'left beach' is removed and the beach is extended significantly back toward the new ramp.

Ramp Alternatives A, B, and C were generally disliked in favor of Ramp Alternative D. The perception was that the first three alternatives did not fit well into the park landscape while Ramp Alternative D does, as its path-like system winds through the lawn area. Additionally, the ramp landing halfway down can be used as a viewing area.

#### IV. Additional Parking Lot Studies

Two parking lot configurations were explored in great detail in conjunction with each of the new Master Plan Options presented at the September 10, 2008, Task Force meeting. Graphics supporting these configurations are shown in the following segment.



#### **Parking Lot Configuration A:**

- Dead-end parking lot with all 24 parking spaces located on the 30 Rogers Street parcel.
- Driveway grade of 10% requires paving on the 20 Rogers Street parcel.
- A single curb cut for the driveway is needed on the 20 Rogers Street parcel.
- Photographs were provided showing the location of the curb cut within the streetscape.
- Green space is maximized on the 20 Rogers Street parcel.
- On site drop-off/pick-up is difficult within the dead-end parking lot, resulting in more drop-off/pick-up activity on Rogers Street.



**Parking Configuration B:**

- Drive-through parking plan with a one-way in drive and a one-way out drive.
- 24 parking spaces are spread across both the 20 and 30 Rogers Street parcels.
- Driveway grade of 10% requires paving on the 20 Rogers Street parcel.
- Two curb cuts for the two driveways are required, both on the 20 Rogers Street parcel.
- Photographs were provided showing the location of the curb cuts within the streetscape.
- A considerable amount of green space is used on the 20 Rogers Street parcel.
- On site drop-off/pick-up is possible, resulting in less drop-off/pick-up activity on Rogers Street.

It was the sense of the Task Force that Parking Lot Configuration A was more desirable given its minimal impact on the newly acquired park space on the 20 Rogers Street parcel. Both configuration alternatives are included for each of the four new Master Plan Options. However, the Task Force was subsequently presented another option and selected an Oval Parking Lot Option as is the final recommendation (see Recommended Solution 3.3).

**Conclusions**

Based upon the comments and discussions at the September 10<sup>th</sup> meeting, it was determined that two options were preferred and should be explored in more detail by the Study Team – the revised Option 2A and Option 3C. Both of these options were preferred with a “dead-end” parking/two-way driveway configuration similar to Parking Configuration A, with all parking located on the 30 Rogers Street parcel. Parking Configuration B was not considered desirable.

However, per noted in Section 3.3, the Oval Parking Lot Option was the final choice of the Task Force though not formally diagrammed within the Preferred Master Plan Option C.

**Crystal Lake Master Plan**

## **5.5 Two Preferred Master Plan Options**

At the December 17, 2008 and January 14, 2009 Task Force meetings, the study team presented a series of additional refinements, detailed studies, cost estimates and presentation graphics for the Two Preferred Master Plan Options that had been identified by the Task Force: Option 3C, which was a New Building and the Recommended Solution (See Section 3) and Option 2A, which was a Partial Renovation with Addition to the existing building. Updated site plans and floor plans were created, along with elevation and massing studies of the proposed bathhouse for each option.

At the September 10<sup>th</sup> meeting, the study team was asked to present a series of improvements to the layout of the Bathhouse previously show in Option 3C. These improvements utilized the best characteristics of the ‘revised’ Option 2A layout and were inserted into Option 3C which became the final recommended solution. The administrative area was pulled to the northwest corner of the bathhouse in order to provide direct supervision of both the parking lot and lawn area. The front entrance to the bathhouse, which had previously faced the parking lot, was nonetheless pulled closer still to the lot, and the changing/toilet rooms were therefore relocated to the southern edge of the building where they would buffer the noise from the MBTA Green Line. In making these revisions, the Task Force recognized that some covered ‘veranda’ area facing the lawn had been lost, but felt that the overall improvements to the floor plan and site supervision were well worth the trade-off.

A final refinement to the Option 3C layout was the incorporation of a separate vestibule and dedicated toilet rooms serving the multi-purpose/community room overlooking the lake. This will allow the room to be used without the need to open up and heat the remainder of the Bathhouse, saving operational and maintenance expense.

Bathhouse Option 2A Partial Renovation with Addition to the existing building as presented was deemed acceptable, however the Task Force finally voted on Option 3C that incorporated many of the elements of Option 2A.

Site plan details included specific locations of new retaining walls along the driveways and site steps and access ramps leading to the beach. Also presented was a proposed conceptual grading plan and cross-section for the emergency and maintenance drive (“crane access”) along the southern side of the Bathhouse, as well as concepts for pedestrian connections to the ‘Lot 2’ parcel at 230 Lake Avenue and improved stormwater management systems within the park itself.

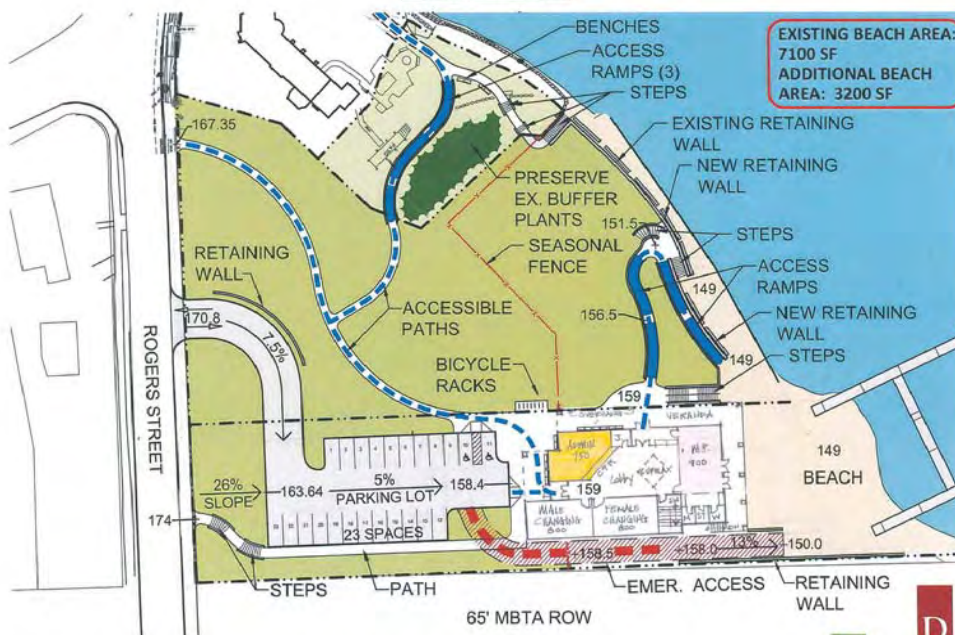
**Option 3c Site**



Crystal Lake Master Plan - Building and Site Options



**Option 3c Site**



EXISTING BEACH AREA:  
7100 SF  
ADDITIONAL BEACH  
AREA: 3200 SF

Crystal Lake Master Plan - Building and Site Options

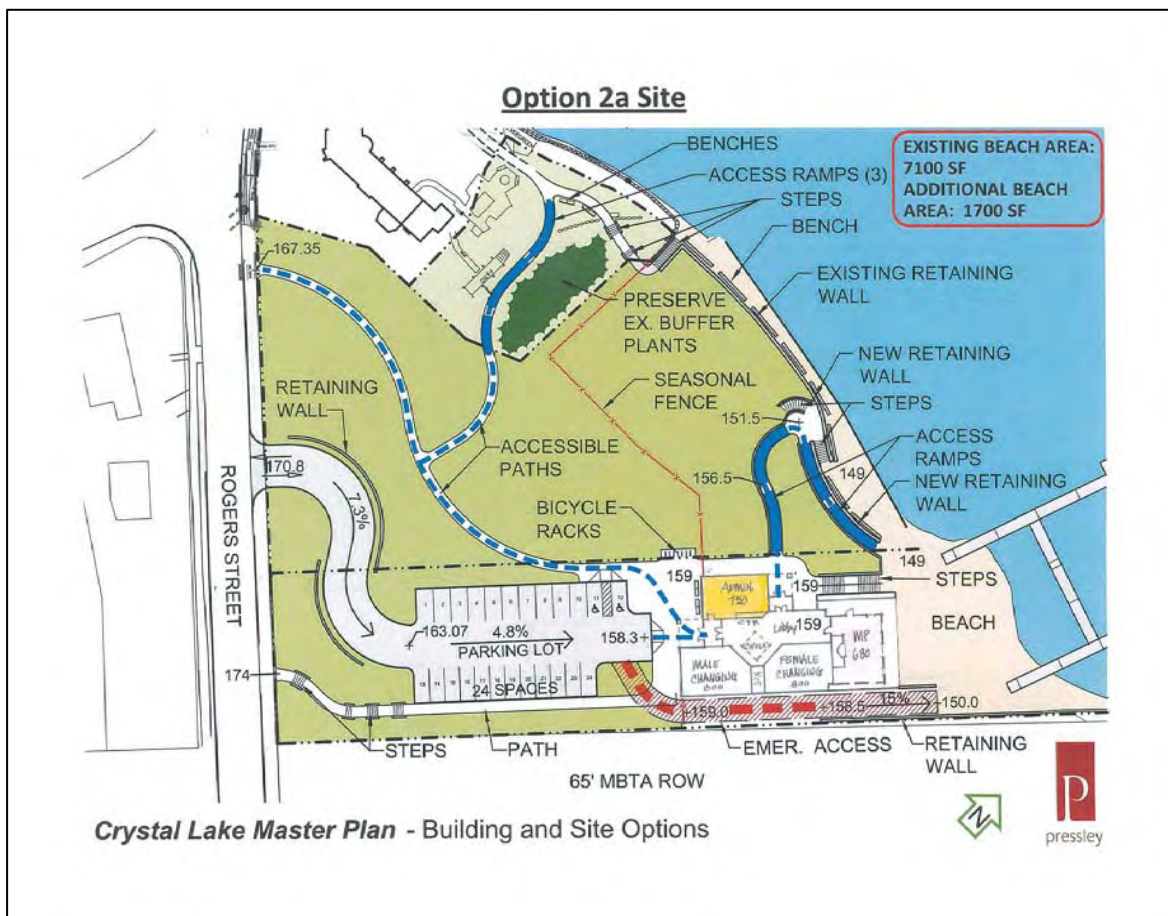




### **Master Plan Option 3C: Recommended Solution (see Section 3)**

- The ‘revised’ Option 3C Bathhouse contains the entire building program under a single roof, with the improved plan layout and site supervision characteristics requested by the Task Force. It places the administrative area on the northwest corner of the building with outside views to the parking lot and lawn area. It also places the main entrance on the west end of the building, directly facing the parking lot and street.
- It is an entirely new building that still abuts the lake and provides a lakeside multi-purpose/community room on the upper level and guard room on the lower level, directly abutting the beach and waterfront.
- As a new structure, it is easier to mold its configuration to specific program improvements such as a self-contained community room, an internal stair connection between floor levels, and increased square footage of open-air covered veranda.
- As a new building, it is possible to pull it further away from the beach and increase the square footage of beachfront.
- As a new building, it is possible to pull it further away from the MBTA right-of way and provide adequate width between the building and the MBTA property line to construct the emergency and maintenance access drive to the beach (“crane access”) without the need for an easement onto MBTA property.
- The handicap access ramp and stairway system leading from the Bathhouse to the beach is located on the north (park) side of the Bathhouse.
- The multi-purpose/community room is located within the lake-end of the building to take advantage of the beautiful view, with the seasonal Bathhouse facilities located on the parking lot side. As such, the multi-purpose room would have to be dedicated to seasonal programs during the swim season and accessible for community use only during the off-season or after sunset when the swim program is closed.
- Off-season access to the community room is gained through a separate entry lobby facing the lawn and self-contained toilet facilities are provided. The remainder of the building does not need to be heated or maintained to allow off-season community use of the multi-purpose room.
- The building makes use of a hipped-roof massing, sympathetic to the most notable feature of the original building. A cupola located directly above the check-in desk floods the lobby with natural light and minimizes electric lighting requirements.
- The upper level veranda provides covered open-air shelter on the lower level, immediately accessible for beach patrons during inclement weather.
- Parking Lot Configuration A is used, however one less parking space is shown (23 parking spaces in a dead-end configuration instead of 24 in Option 2A). This configuration maximizes the amount of green space on the newly acquired 20 Rogers Street parcel.
- Otherwise, the site plan is exactly the same as that shown in Option 2A:
  - Two pedestrian walks lead to the bathhouse from Rogers Street. The handicapped accessible route travels through the 20 Rogers Street parcel, beginning adjacent to the 230 Lake Avenue house. It is properly graded to accommodate wheelchair access. An accessible path to ‘Lot 2’ on the 230 Lake Avenue parcel breaks off at about the half-way point. This path makes use of a series of ramps to make up a seven foot grade difference as it approaches the existing arbor on ‘Lot 2’ and then connects to a stone-dust path along the shoreline to the rear of 230 Lake Avenue leading toward Levingston Cove.
  - The second pedestrian path from Rogers Street to the Bathhouse begins adjacent to the bridge over the MBTA Green Line tracks. It is a more direct path and makes use of a series of four stairways interspersed with walks to make up the significant grade change between the street and parking lot.
  - Emergency and maintenance access (“crane access”) is relocated away from the north side of the building allowing the steps from the Bathhouse to the beach below to run immediately along the northeastern corner of the preserved community building.

- A more refined version of Ramp Alternative D is shown winding through the lawn area in front of the 'left beach'. This ramp configuration is desirable due to its organic nature and the way it gently fits within the park landscape. Specific spot elevations are shown, as are a new set of steps leading from the lawn to the 'left beach' which is a desirable and convenient feature.
- An extension of the beach area in front of the existing bathhouse is not possible; however, the beach area adjoining the ramp is expanded. An additional 1,700 square feet of beach is provided.
- At the far northerly end of the left beach, a set of stairs connects the beachfront to the lawn on the 20 Rogers Street parcel, and also to a path leading to 'Lot 2' of the 230 Lake Avenue parcel. The seven foot grade difference between the park and 'Lot 2' is negotiated by a series of stairs and walks which connect to the accessible route described above.
- Conceptual options for stormwater management improvements include rain gardens between the parking lot and Bathhouse, use of a natural infiltration area within the gravel/sand 'crane access drive alongside the northern edge of the Bathhouse, and underground infiltration basins located within the lawn area and taking surface water from the parking lot and roof drains from the Bathhouse.



**Master Plan Option 2A: Partial Renovation with Addition to the Existing Bathhouse**

- The 'revised' Option 2A Bathhouse contains the entire building program under a single roof, with the improved plan layout and site supervision characteristics first presented at the September 10, 2008 Task Force meeting. It places the administrative suite in its own three-sided bay with outside views to the parking lot, lawn area, and ramp/stair system. It also places the main entrance on the west end of the building, directly facing the parking lot/street.

- It preserves and renovates the two-story hipped roof section of the existing building directly abutting the lake and makes use of this structure as a lakeside multi-purpose/community room on the upper level and incorporates the guard room on the lower level, directly abutting the beach and waterfront.
- The single-story flat-roofed portion of the existing building is demolished and a smaller and better configured addition is constructed in its place.
- The southern side of the existing veranda is removed under one version of the site plan in order to allow adequate width between the building and the MBTA property line to construct the emergency and maintenance access drive to the beach (“crane access”).
- Based upon preliminary discussions with the MBTA, it may be possible to avoid removal of the southern side of the veranda if the City can secure an easement onto the MBTA Green Line right-of-way upon which the ‘crane access’ drive can be partially constructed.
- In either case, the existing handicap access ramp from the Bathhouse to the beach will be removed from the south side and a new access ramp will be constructed on the north (park) side of the Bathhouse.
- The multi-purpose/community room is located within the lake-end of the existing building to take advantage of the beautiful view, with the seasonal Bathhouse facilities located to the parking lot side. As such, the multi-purpose room would have to be dedicated to seasonal programs during the swim season and accessible for community use only during off-season.
- Off-season access to the community room is gained through the entry lobby facing the parking lot, thus alleviating any public safety concerns, but requiring that a greater volume of space be heated than some other options in which the community room had self-contained toilet facilities and a direct exterior access door.
- In contrast to the original version of Option 2A, the existing access ramp to the beach is removed and replaced by a ramp system on the ‘park’ side of the complex.
- The addition makes use of a hipped-roof massing, sympathetic to the preserved lakeside end of the original building. A cupola located directly above the check-in desk at the lobby floods the lobby with natural light and will minimize electric lighting requirements.
- Parking Lot Configuration A is used, with 24 parking spaces in a dead-end configuration. This configuration maximizes the amount of green space on the newly acquired 20 Rogers Street parcel.
- Two pedestrian walks lead to the Bathhouse from Rogers Street. The handicapped accessible route travels through the 20 Rogers Street parcel, beginning adjacent to the 230 Lake Avenue house. It is properly graded to accommodate wheelchair access. An accessible path to ‘Lot 2’ on the 230 Lake Avenue parcel breaks off at about the half-way point. This path makes use of a series of ramps to make up a seven foot grade difference as it approaches the existing arbor on ‘Lot 2’ and then connects to a stone-dust path along the shoreline to the rear of 230 Lake Avenue leading toward Levingston Cove.
- The second pedestrian path from Rogers Street to the Bathhouse begins adjacent to the bridge over the MBTA Green Line tracks. It is a more direct path and makes use of a series of four stairways interspersed with walks to make up the significant grade change between the street and parking lot.
- Emergency and maintenance access (“crane access”) is relocated away from the north side of the building allowing the steps from the Bathhouse to the beach below to run immediately along the northeastern corner of the preserved community building.
- A more refined version of Ramp Alternative D is shown winding through the lawn area in front of the ‘Left Beach’. This ramp configuration is desirable due to its organic nature and the way it gently fits within the park landscape. Specific spot elevations are shown, as are a new set of steps leading from the lawn to the ‘Left Beach’ which is a desirable and convenient feature.
- An extension of the beach area in front of the existing Bathhouse is not possible; however, the beach area adjoining the ramp is expanded. An additional 1,700 square feet of beach is provided.
- At the far northerly end of the ‘left beach’, a set of stairs connects the beachfront to the lawn on the 20 Rogers Street parcel, and also to a path leading to ‘Lot 2’ of the 230 Lake Avenue parcel. The seven foot grade difference between the park and ‘Lot 2’ is negotiated by a series of stairs and walks, which connect to the accessible route described above.

- Conceptual options for stormwater management improvements include rain gardens between the parking lot and Bathhouse, use of a natural infiltration area within the gravel/sand ‘crane access drive along side the northern edge of the Bathhouse, and underground infiltration basins located within the lawn area and taking surface water from the parking lot and roof drains from the Bathhouse.

### **5.6 Summary Overview of Preferred Master Plan Options**

The following section outlines the differences and similarities between the Two Preferred Master Plan Options 2A and 3C.

- Preliminary sitework costs are essentially the same for both options – \$893k for Option 2A and \$885k for Option 3C.
- Both options save healthy trees and provide new plantings to buffer the MBTA line and parking lot.
- Both options improve stormwater management issues which have been previously recognized by the City.
- Both options would require a new forced (pumped) sewage main to Rogers Street to mitigate conflicts involved in constructing the new ‘crane access’ drive on the south side of the Bathhouse.
- The beach area is increased under both options, though more under Option 3C.
- Both options provide complete handicap access throughout the site and a connection to the public park at Levingston Cove.
- Both options as depicted make use of a dead-end parking lot on the 30 Rogers Street parcel, but Option 3C has one less parking space (23) than Option 2A (24). Option 3C final version has a recommended Oval Parking Lot (See Section 3.3).
- Crane and emergency access to the beach is provided along the south side of the bathhouse under each option, however an easement onto MBTA property, or the partial demolition of the existing veranda is required under Option 2A.
- Conservation Commission and DEP permitting is required under both options.
- Option 2A preserves 52 feet of the existing bathhouse at the water end, while Option 3C demolishes the existing bathhouse in its entirety but replicates the architectural elements in the new bathhouse.
- Option 2A may be eligible for Community Preservation funding of the bathhouse work, while this is not applicable for Option 3C.
- Project Cost for Option 2A is \$4.28 million in 2009 dollars (Project Cost includes site and building construction costs, fees, furnishings, equipment and contingencies).
- Project Cost for Option 3C is \$4.89 million in 2009 dollars (Project Cost includes site and building construction costs, fees, furnishings, equipment and contingencies).
- Option 3C includes an internal stairway connection between the two floor levels while Option 2A does not due to existing conditions.
- The multi-purpose/community room is limited to 680 sq.ft. under Option 2A, while a larger room is possible under Option 3C (900 sq.ft. shown, but it could be any size and shape).
- Option 2A has a smaller floor area than Option 3C which might translate to lower maintenance or operational costs.
- Both options can be designed for LEED or ‘green’ certification.
- Use of the self-contained community room in Option 3C does not require opening or heating the entire bathhouse for off-season use, while use of the community room in Option 2A does.
- Both options provide administrative oversight of the parking lot and lawn area, but only Option 2A extends this supervision to the ramp/stairway system.
- Option 3C provides more covered veranda space and extends it to both levels, where as Option 2A makes use of the existing, smaller veranda on the upper level only.

### **5.7 Site Plan Development Diagrams for 230 Lake Avenue Parcel**

Also presented at these meetings was a diagrammatic site plan showing how a pathway system constructed within 'Lot 2' of the 230 Lake Avenue parcel could connect the Crystal Lake pedestrian circulation system on the 20 Rogers Street parcel to the proposed stonedust path on the shoreline (back side) of the 230 Lake Avenue house and the parkland at Levingston Cove beyond.

Because the grades at 'Lot 2' are about seven feet lower than the grades at the 20 Rogers Street parcel, it is necessary to use a series of 1:12 ramps and stairways to make up the difference. The ramps are shown on the uphill side, where they can be installed while minimally disturbing the site and the existing garden pond, and serve as an extension of the accessible path of travel established within the Crystal Lake park. A series of steps near the northerly termination of the 'Left Beach provides an alternate connection between 'Lot 2' and the park on the 20 Rogers Street parcel, though they are not accessible to persons in wheelchairs.

### **5.8 MBTA Easement Study**

The Task Force initiated discussions with the MBTA during the time period between its September 10<sup>th</sup> and December 17<sup>th</sup> meetings. From these preliminary discussions, it was determined that the City of Newton might be able to obtain an easement onto the MBTA property alongside the Green Line rail bed in order to build the emergency and maintenance access ("crane access") route along the south side of the existing Bathhouse (Option 2A), and in so doing, avoid the partial demolition of the existing veranda. This would avoid the cost and aesthetic issues involved with the removal of the veranda on the south side of the Bathhouse and, most importantly, maintain the symmetry of the existing building as viewed from the water, or from across the lake.

To make this possible, a retaining wall would have to be built within the MBTA right-of-way, holding the 'crane access' route above the adjacent MBTA property. This would require a minimum encroachment of seven feet into the MBTA property, with possibly more area required for any grading necessary along the retaining wall. The attached plan diagram shows an encroachment of 8.5 feet. As presented, this plan is diagrammatic in nature because the study team was not able to obtain accurate existing condition and grading information on the MBTA property. Instead, the study team's work was based on available surveys that were not field verified. If this alternative route is ever pursued, an engineering study will need to be conducted to determine the type and size of retaining wall needed as well as the area of disturbance and grading.