ACKNOWLEDGEMENTS

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1. **Executive Summary**

**Project Context**

The marina at Sloan’s Lake Park commands spectacular lake and mountain views, is surrounded by gardens and park land, and is the hub of boating and water skiing activity; yet is largely unused by park visitors due to its state of disrepair. In 2007 the citizens of Denver passed a parks bond issue that included approximately two million dollars to fund the design and construction of significant improvements at Sloan’s Lake: a new irrigation pump, general aesthetic and safety improvements to the marina, and upgrades to the existing public restrooms in the Boathouse.

Beginning in the fall of 2008, the project team took the input and feedback from citizens, neighborhood stakeholders, and user groups and combined it with functional and operational requirements of the project to develop a plan that was presented at the final public meeting to general approval. Following are descriptions of the key plan elements.

*Figure 1-1: Sloan’s Lake Dock, circa 1920*

*Figure 1-2: Existing Conditions*
Plan Elements

A. The Boathouse

The historic Boathouse will anchor the marina redevelopment. This 6,000 square foot building will once again become the heart of the marina district. The current parks maintenance operations will be relocated and the interior of the building will be reorganized and remodeled to accommodate community and private functions in a large Event Space for approximately 100 people, and a smaller Conference/Meeting Room for up to 20 people. In addition, the Public Restrooms will be expanded and renovated to meet ADA accessibility requirements.

B. The Boathouse Plaza

Located directly south of the boathouse, the Boathouse Plaza is a formal event space that extends out into the lake to give visitors a 180 degree view of the lake and its edge. The plaza will feature an interactive fountain that “disappears” when not in use, as well as seating, special paving, and pedestrian scale lighting. Adjacent gathering spaces include the Bosque, with its circular benches and trees, and the Boathouse Patio with its trellises and concession activity. The relocated Boat Docks, immediately west of the plaza, provide an important day-use docking area for boaters.

C. The Jetty

Visitors will be encouraged to stroll out to the end of the Jetty for one of the best views in all of Denver. The jetty will be widened and will feature a meandering tree-lined and lighted pedestrian path leading to the Jetty Pavilion at its end. Two large landscape areas are defined by the central meandering path. The eastern landscape area will be a native grass area sloping gently to the south that can accommodate rustic picnics on its shady benches. The western landscape area, just east of the Boathouse, will become a sloped turf grass Crescent Green focused on the Boat Deck Pavilion, a multi-purpose covered “island” out in the lagoon. This “island” that will serve as a performance stage, a fishing pier, a venue for public and private events, and another place for daily visitors’ enjoyment.

D. The Marina Edge

Wrapping around the marina lagoon from the jetty, the marina edge will be defined by the sweeping arc of the Boardwalk and the Water Quality Garden. The boardwalk and approach walks provide a strong connection to the existing playground and tennis courts north of the marina and help to define the street-oriented plaza along West Byron Place.

The Water Quality Garden is a central focal point of the marina edge. Receiving water from existing culverts, this feature will provide basic water quality treatment while also creating a landscape focal point for the marina edge. The center of the garden will be depressed and will feature a permanent pool of water flanked by terraced landscape garden beds that will become inundated during significant storm events, creating a seasonal reminder of the relationship of the lake to its urban watershed.

West of the boardwalk and the water quality garden is the Marina Green. East of the Boardwalk, the east marina edge is intended to be much more naturalistic, with a lake edge full of native vegetation and wetlands. The East Observatory Overlook will provide a quiet, lake-oriented pavilion and overlook removed from the main activity zones of the marina.

E. The Irrigation Pump

A new irrigation pump station will be located just southwest of the marina parking lot, in a concrete masonry enclosure designed to fit in with the stone masonry Boathouse architecture. The existing, non-functional irrigation pump currently housed in the Boathouse will be removed.
Figure 1-3: Marina Master Plan
2. **Detailed Master Plan**

**An Overview of the Sloan’s Lake Marina Improvement Project**

The marina at Sloan’s Lake Park remains one of the park’s most compelling features. It commands spectacular views of the lake and the mountains, is surrounded by gardens and park land, and is the hub of boating and water skiing activity. Yet other than the boaters who dock in front of the boathouse, the marina is largely unused by park visitors due to its lack of attractions, the safety and access issues caused by its dilapidated condition, and a general feeling of abandonment.

Despite its state of disrepair (see *Figure 1-2: Existing Conditions*), park planners have long recognized the potential of the marina to be a focal point for the park, as it was for many decades from the 1920s to the 1950s (see *Figure 1-1: Sloan’s Lake Dock, circa 1920*). The Sloan’s Lake Park Master Plan, completed in 2002 recommended a significant list of marina improvements intended to restore the marina’s importance and functionality, including a renovation of the Boathouse building into a community and boating oriented building, development of a “hard” lake edge with a pedestrian promenade around the perimeter of the marina, and improvements to the jetty including a pavilion on its end.

**2007 Bond Funding**

In 2007 the citizens of Denver passed a parks bond issue that included funding for a marina improvement project that will facilitate the implementation of a significant portion of the recommended improvements. The marina’s bond allocation includes approximately two million dollars to fund the design and construction of improvements that, according to the language in the bond, are to include the following:

- A new irrigation pump to replace the old (currently non-functional) pump that will be used to pump lake water for irrigation purposes;
- General improvements that improve the aesthetics and safety of the marina; and
- Upgrades to the existing public restrooms in the Boathouse including improved ADA access.

In the fall of 2008 the City’s Parks and Recreation department began the process of developing a plan for the marina’s improvements. Working with a consultant, the City conducted a series of meetings with a citizens’ advisory committee made up of representatives from the adjacent neighborhoods, Councilman Rick Garcia’s office, user groups, and park advisory board members. The advisory committee met with the consultant team over two meetings to help craft a vision for what the marina should be, what activities should be promoted, and
how the marina should look. Armed with the framework of this vision, the consultant team developed a series of concepts for how the park might be improved.

Three additional meetings were held with the advisory committee and the general public. At these meetings, attendees were able to identify their preferences for numerous park improvement alternatives. The project team took the input and feedback from the public and combined it with functional and operational requirements of the project to develop a plan that met as many of the community’s goals as possible. This plan was presented at the final public meeting to general approval.

As the plan represented a long term vision with a comprehensive overhaul of the marina, a phasing plan identifies the scope of the first phase of improvements that could be constructed within the budgetary limits of the bond issue funding (see Section 3. Phasing and Costs). The improvements selected for this first phase were chosen on the basis of compliance with the commitments of the bond issue, safety, operational necessities, and logical construction sequencing.

**The Planning Context**

The Marina Master Plan (see Figure 1-3: Marina Master Plan) seeks to achieve the key objectives identified by the Sloan’s Lake Master Plan (2002), the public involvement process, and Denver Parks and Recreation staff. These objectives include:

- A place for people to enjoy in numerous and diverse ways;
- A balance of formal and naturalistic character;
- A functional boating environment;
- A marina that meets the needs of today, while accommodating future uses and expansions; and
- Environmentally responsible development.

Supporting these objectives is a strong set of values that was articulated by the City of Denver Parks Department and by members of the participating public. These values include:

- Environmental responsibility – reflected in the plan by the emphasis on treating stormwater entering the marina before it gets into the lake, the use of native grasses and low water consuming plants where possible;
- Community – represented in the plan by the numerous places and facilities that allow members of the community to enjoy this public amenity in diverse ways;
- Preservation of history – the plan preserves and builds on the original intent of the marina to provide a boating facility for a variety of boating types. The plan also reemphasizes the importance of the Boathouse, and seeks to re-affirm its role as a place that people can use and enjoy while visiting the park; and
- Universal access – the renovation of the public restrooms in the Boathouse will better serve community members with mobility challenges.

*Figure 2-2: Dragon Boat Race, 2008*
Marina Master Plan Project Areas

The project area for the marina improvements coincides, for the most part, with the existing marina features, including the Boathouse, the lake frontage south of the Boathouse (the “Boathouse Plaza”), the Jetty, and the northern edge of the marina lagoon along West Byron Place (the “Marina Edge”). In addition, a new irrigation pump and enclosure is proposed for the west side of the Boathouse, and some trail improvements into adjacent park areas are recommended to better connect the new marina with the overall park circulation system. Following are descriptions of these key areas.

A. The Boathouse

The historic Boathouse will become the anchor of the marina redevelopment. This 6,000 square foot building will once again become the heart of the marina district. While continuing to house the office for the Sloan’s Lake Boat Rangers and the storage and staging area for the Denver Aquatic Program’s Special Needs Recreation Program, the maintenance operation that currently occupies the majority of the building will be relocated. The interior of the building will be completely reorganized and remodeled to accommodate community and private functions in a large Event Space (capacity for approximately 100 people), and a smaller Conference/Meeting Room that can accommodate up to 20 people (See Error! Reference source not found.). In addition, the Public Restrooms on the north side of the building will be expanded and renovated to meet ADA accessibility requirements (see Section 4. Appendix A: Boathouse Restroom Remodel Alternatives).
Figure 2-4: Boathouse Improvements Floor Plan
B. The Boathouse Plaza

Located directly south of the Boathouse, the **Boathouse Plaza** is a formal event space that physically and visually connects the Boathouse to Sloan’s Lake. This plaza extends out into the lake to give visitors a 180 degree view of the lake and its edge, and is intended to be used for special events, private parties, and casual use by park visitors. The plaza will feature an interactive fountain that “disappears” when not in use or when events are underway. Abundant seating, special paving, and pedestrian scale lighting will also serve to make this space an attractive event venue.

The plaza is surrounded by other gathering spaces that can expand the capacity of the plaza or serve as more intimate gathering spaces in their own right for families and groups visiting the site.

These adjacent spaces include the **Bosque** with its circular benches and trees, and the **Boathouse Patio** with its trellises and concession activity.

All of these spaces are all linked together by a continuation of the meandering jetty walkway that connects the jetty and the Boathouse Plaza to the main Sloan’s Lake pedestrian loop to the west. The existing **Boat Docks**, used by motor boaters, will be relocated immediately to the west of the plaza, providing an important day-use docking area for boaters, and adding activity and interest to the plaza area.
C. The Jetty

The marina Jetty is one of the most important character-defining elements within the site. Jutting out into Sloan’s Lake, the jetty protects the marina lagoon, is the most prominent land form in the northeast park quadrant, and provides important functions for boaters, fishermen, and people just seeking a different vantage point and view. Once primarily dedicated to boating related use, the jetty is now intended to provide more opportunities for non-boaters to enjoy this part of the lake while maintaining its important boating functions. Visitors will be encouraged to stroll out to the end of the jetty for one of the best views in all of Denver.
The jetty will be widened and will feature a meandering tree-lined and lighted pedestrian path leading to the **Jetty Pavilion** at its end. Narrower concrete paths will flank each side of the jetty, providing water access for boating related functions (i.e. a platform for dropping off water skiers prior to boaters entering the docks adjacent to the Boathouse, and future boat mooring slips in the lagoon area) as well as for fishing and kayaking.

Two large landscape areas are defined by the central meandering path and the side paths along the jetty edge. The eastern landscape area will be a native grass area sloping gently to the south that can accommodate rustic picnics or any visitors that want to take advantage of the shady benches and grass areas and the views to the lake and mountains to the south. The western landscape area, just east of the Boathouse will become a sloping turf grass **Crescent Green** focused on the **Boat Deck Pavilion**, a multi-purpose covered “island” out in the lagoon, just off the north side of the jetty. This “island” that will serve as a performance stage, a fishing pier, a venue for public and private events, and another place for daily visitors to explore and enjoy Sloan’s lake.

The **Jetty Pavilion** will serve as a beacon, encouraging pedestrians to stroll to the end of the jetty. Additional design exploration for the pavilion architecture will be required, however the use of a tensile-type structure is highly recommended as their aesthetics reinforces the marina-oriented design of the jetty.
D. The Marina Edge

Wrapping around the marina lagoon from the Jetty to the east end of the marina district, the marina edge will provide a variety of experiences for park users.

Between the Boardwalk and the pedestrian plaza along West Byron Place, the **Water Quality Garden** is a central focal point of the marina edge. Receiving water from culverts that currently dump untreated stormwater into the marina lagoon, this feature will provide basic water quality treatment while also creating a landscape focal point for the marina edge. The center of the garden will be depressed and will feature a permanent pool of water flanked by terraced landscape beds of gardens of shrubs and perennials that will become inundated during significant storm events. The plant materials in each bed will be adapted to the anticipated frequency of inundation, as the lower terraces will be inundated more often than the upper ones. During the larger storms, stormwater will fill the depressed pond and cascade into the lake over a curving weir, creating a seasonal event that reminds park visitors about the relationship of the lake to its urban watershed. Surrounding the garden will be a native landscape of grasses and trees with numerous places to sit and enjoy this unique park element.

![Figure 2-12: Marina Edge Plan](image)

This edge is defined by the sweeping arc of the **Boardwalk** and its approach walks which push out into the marina lagoon, providing excellent views of the lake and to the Water Quality Garden just north of the boardwalk. This feature creates a strong connection between the marina and the park area to the north, connecting with the major walkway that descends down from the existing playground and tennis courts and defining a street-oriented plaza along West Byron Place.

![Figure 2-13: Water Quality Garden Plan](image)
From a functional standpoint the marina edge is defined by the two walks which curve around the north side of the marina lagoon. The busy concrete bike and pedestrian path *(Main Trail)* is located slightly away from the lake edge to efficiently accommodate the higher speed traffic while creating a significant space along the lake’s edge dedicated to more passive park use. A pedestrian-only crusher fines *Walking Trail* follows the lake edge and accesses numerous benches and vantage points from which to sit and enjoy the view.

Between the two walks are a series of landscape areas with very different characters and uses. West of the boardwalk and the water quality garden is the *Marina Green*, a panel of bluegrass and trees intended to provide a park-like area for picnicking and casual recreation close to the lake edge.
The lake edge along the Green is defined by a low wall that provides open views to the lake, and access for water-related activities such as fishing, model boat use, kayaking, etc. East of the Boardwalk, the east marina edge is intended to be much more naturalistic, with a lake edge characterized by native vegetation and wetlands. The **East Observatory Overlook** is the eastern limit of the east marina edge, and the marina district as a whole, and will provide a quiet, lake-oriented pavilion and overlook removed from the main activity zones of the marina.

*Figure 2-12: Marina Edge Perspective View*

*Figure 2-17: Marina Green and Lake Edge Perspective*
E. The Irrigation Pump

As part of infrastructure improvements and to meet new water supply strategies, the marina improvements will include the replacement of the existing, non-functional Irrigation Pump that is currently housed in the Boathouse, with a new **Irrigation Pump Station** located just southwest of the marina parking lot (see Figure 2-19: Pump House View). The new pump will be within a concrete masonry enclosure designed to fit in with the stone masonry Boathouse architecture (see Error! Reference source not found.). The new pump will serve the irrigation system for the entire park (see additional details in Section 5, Appendix B: Irrigation Pump Alternatives).
Project Details

Lake Edge Details

Figure 2-20: Lake Edge Details
3. Phasing and Costs

*Improvements Phasing*

**Phase I Improvements (2010)**

The complete package of marina improvements exceeds the marina’s bond funding allocation by several million dollars. Selecting the improvements for implementation in the first phase involved identifying those improvements that are essential for park operations, that remedy critical safety concerns, and which provide the most immediate value and impact in transforming the marina from a liability to an asset in the park.

Since much of the construction will occur in and around the lake, construction strategy and issues such as the de-watering of the construction areas also figured into developing a logical set of improvements for this first implementation package. The proposed Phase 1 improvements are listed below.

**Probable Improvement Items**

- Pump & Pump House
- Boathouse restroom remodel
- Jetty improvements and landscaping
- North Marina Edge improvements and landscaping
- Water Quality Garden
- Marina Lagoon--selective excavation and removal of material

**Possible Improvement Items**

(depending on final contractor bids)

- Boat Deck Pavilion
- Bosque (part of the Boathouse Plaza)

**Future Improvement Items**

- Boathouse renovation
- Boathouse Plaza
- Boat Dock relocation
- East Observatory Overlook
- Jetty Pavilion
Figure 3-1: Recommended Phase 1 Improvements
Figure 3-2: Phase I Improvements Schedule
## Cost Estimate

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4/17/2009

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Sloan's Lake Marina Preferred Alternative
4/17/2009

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<td>Excavate and remove material</td>
<td>4000 cy</td>
<td>cy</td>
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(Incl. contingency)
4. **APPENDIX A: BOATHOUSE RESTROOM REMODEL ALTERNATIVES**

**Initial Concepts**

The project team evaluated the long term and short term needs for the Boathouse restrooms. The remodel design had to be feasible as a Phase 1 improvement, meaning that it needed to work within the current building use (as a parks maintenance facility), and it had to make sense as part of the long term vision to renovate the entire Boathouse into a community facility. The project team chose Option C (see Figure 4-1: Boathouse Restroom Remodel – Initial Concepts) as the preferred alternative. However, the design had to be revised to not impact the existing employee restroom. (See the final preferred alternative in Figure 4-2: Boathouse Restroom Remodel – Preferred Alternative.)

---

**Figure 4-1: Boathouse Restroom Remodel – Initial Concepts**

**Option A: Single Stall—ADA Compliant**
- Pros: Achieves ADA compliance with no permanent impact to adjacent building use
- Cons: Lower cost of ADA alternatives could be potential short-term solution until full building remodel is possible
  
**Option B: Expansion w/ Two Stalls**
- Pros: Maintains ADA-compliant stalls with a minimum of building impact
- Cons: Medium cost of modified alternatives

**Option C: Expansion w/ Three Stalls**
- Pros: Increased capacity
- Cons: Impacts existing, functional employee restroom

---

**Figure 4-2: Boathouse Restroom Remodel – Preferred Alternative**
**Preferred Alternative**

The proposed Boathouse public restroom renovation will expand both the men’s and the women’s restrooms from two stalls to three. One stall per side will be ADA accessible. The expansion for the restrooms will utilize space in the existing storage area east of the restrooms. While the entry doors will remain in the current locations for the restrooms, the door to the storage area will be blocked off and entry to this area will be only by the small garage door on the east.

![Figure 4-2: Boathouse Restroom Remodel – Preferred Alternative](image-url)
Restroom Remodel Cost Estimate

Sloan's Lake Boat House
Restroom Remodel - Option 2
Denver, Colorado

This budget and attachments are "Without Prejudice. For Discussion Purposes Only."

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<th>Material</th>
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**TOTAL GENERAL CONDITIONS:** $1,850 $1,368 $7,033 $42 $2,657 $0 $0 $11,496 14.37% 38.30%

**DEMOILISH & SITEWORK:** $325 $380 $1,424 $142 $472 $6,500 $543 $9,757 12.20% 32.52%

**CONCRETE:**
- Replace Concrete: $200 $249 $369 $43 $131 $263 $1,219 8.13%
- TOTAL CONCRETE: $200 $249 $369 $43 $131 $263 $1,219 1.52% 4.06%

**Carpentry & Millwork:**
- Blanks & Finishing - Misc: $75 $189 $18 $58 $68 $395 398.98%
- TOTAL CARPENTRY & MILLWORK: $75 $189 $18 $58 $68 $395 0.50% 1.33%

**THERMAL & MOISTURE PROTECTION:**
- Heat Patch: $600 $600 $289.09
- Paint Coating: $200 $200 $200 $200 $200 $200 $200 $200 $200 $200 0.00% 7.33%

**DOORS & GLASSING:**
- JBM Doors - 36"x78"x1/2" - Hardware: $1,760 $269 $23 $66 $397 $2,383 $1,981.90
- TOTAL DOORS & GLASSING: $1,760 $269 $23 $66 $397 $2,383 2.99% 7.54%

**FINISHES:**
- Stained Concrete Floor: $111 $90 $59 $57 $284 0.90%
- Frame/Finish Walls: $1,011 $1,079 $74 $878 $794 $4,763 4.88%
- Finish/Refinish Ceiling: $885 $89 $24 $108 $51 $1,528 5.03%
- 4" Tile Wall/Coat: $1,274 $1,568 $79 $548 $694 $4,185 10.62%
- Paint Walls & Ceilings: $400 $311 $10 $109 $107 $1,032 1.12%

**TOTAL FINISHES:** $4,051 $4,079 $204 $1,428 $2,012 $12,072 15.10% 40.24%
## BUDGET ESTIMATE SUMMARY

This budget and attachments are Without prejudice. For Discussion Purposes Only.

### SLOAN'S LAKE Pump & Marina Master Plan

**Sloan's Lake Boat House**

**Restroom Remodel - Option 2**

**Denver, Colorado**

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### SPECIALTIES

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**TOTAL SPECIALTIES** $3,800 $6,400 $271 $161 $ - | $511 | $3,682 | 3.80% | 10.23 |

### MECHANICAL

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<th>Item</th>
<th>Qty</th>
<th>Units</th>
<th>Equipment</th>
<th>Material</th>
<th>Labor</th>
<th>Small Tools</th>
<th>Burden</th>
<th>Subcontract</th>
<th>CH &amp; P</th>
<th>Total</th>
<th>Unit Cost</th>
<th>%</th>
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**TOTAL MECHANICAL** $8,677 | $4,383 | $419 | $1,370 | $356 | $7,535 | $18,530 | 20.02% | 54.83 |

### ELECTRICAL

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<th>Qty</th>
<th>Units</th>
<th>Equipment</th>
<th>Material</th>
<th>Labor</th>
<th>Small Tools</th>
<th>Burden</th>
<th>Subcontract</th>
<th>CH &amp; P</th>
<th>Total</th>
<th>Unit Cost</th>
<th>%</th>
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**TOTAL ELECTRICAL** $2,535 | $2,535 | $251 | $889 | $750 | $1,755 | $7,851 | 9.70% | 26.00 |

### OTHER DIRECT COSTS

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<tr>
<th>Item</th>
<th>%</th>
<th>Cost</th>
<th>$/F.P.</th>
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<tbody>
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<td>17100 Security Access &amp; Clearance</td>
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<tr>
<td>17150 Preventive Maintenance</td>
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<tr>
<td>17200 Operations Support &amp; Warranty</td>
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<td>17200 Bond</td>
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<td>17250 Use Taxes &amp; Other Paid</td>
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<tr>
<td>17150 Training</td>
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**TOTAL OTHER DIRECT COSTS** $4,176 | $ - | $ - | $1,197 | $1,197 | $7,877 | 9.35% | 21.92 |

**TOTAL DIRECT COSTS** $1,023 | $19,042 | $20,022 | $1,002 | $7,281 | $8,500 | $7,533 | $65,216 | 9.70% | 26.00 |
### Sloan's Lake Boat House

**Restroom Remodel - Option 2**

**Denver, Colorado**

<table>
<thead>
<tr>
<th>Spec</th>
<th>Item</th>
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<th>4</th>
<th>Equipment</th>
<th>Material</th>
<th>Labor</th>
<th>Small Tools</th>
<th>Burden</th>
<th>Subcontract</th>
<th>O &amp; P</th>
<th>Total</th>
<th>Unit Cost</th>
<th>%</th>
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This budget and attachments are "Without Prejudice, For Discussion Purposes Only"
5. **Appendix B: Irrigation Pump Alternatives**

The following alternatives were investigated to explore some ideas from neighborhood group members that proposed relocating the irrigation pump to different locations in the park. This study also looked at several types of pump systems. Based on the findings of the study and an evaluation of the costs and benefits of each alternative, the project team recommended that the original recommendation, Alternative A, be retained as the preferred alternative. Alternative A is a vertical turbine system to be located at the Marina area (see *Figure 5-1: Pump Details, Sheet 1*).
Figure 5-1: Pump Details, Sheet 1
Figure 5-2: Pump Details, Sheet 2
Figure 5-3: Irrigation Pump Alternatives Plan
## Irrigation Pump Cost Estimate

**Avocet Irrigation Design**

**SLOANS LAKE PARK IRRIGATION PUMPING SYSTEMS**
**OPINION OF PROBABLE COSTS (December 19, 2008)**

### Scenario 1a – Single Vertical Turbine Pump Station utilizing existing mainline (intake screen within lake)

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
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<tbody>
<tr>
<td>Mobilization</td>
<td>$75,000</td>
</tr>
<tr>
<td>Water Control</td>
<td>$150,000</td>
</tr>
<tr>
<td>Tree Protection</td>
<td>$4,000</td>
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<tr>
<td>Concrete Intake Pipe</td>
<td>$75,000</td>
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<tr>
<td>Irrigation Repair</td>
<td>$8,000</td>
</tr>
<tr>
<td>Pump Station</td>
<td>$255,000</td>
</tr>
<tr>
<td>Filter Unit</td>
<td>$95,000</td>
</tr>
<tr>
<td>18&quot; PVC Mainline</td>
<td>$15,000</td>
</tr>
<tr>
<td>Gate Valves</td>
<td>$6,000</td>
</tr>
<tr>
<td>60x60 Slide Gate</td>
<td>$10,000</td>
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<tr>
<td>Pump Building 25x30@$120/lf</td>
<td>$90,000</td>
</tr>
<tr>
<td>Topslopping</td>
<td>$3,000</td>
</tr>
<tr>
<td>Sodding</td>
<td>$6,000</td>
</tr>
<tr>
<td>Concrete Intake Struct. W/F Screen</td>
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<tr>
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<td>Demo existing pump</td>
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**Total** $924,000

### Scenario 1b – Single Vertical Turbine Pump Station utilizing existing mainline (intake screens in wet well)

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<tr>
<td>Water Control</td>
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<tr>
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<tr>
<td>Concrete Intake Pipe</td>
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<tr>
<td>Irrigation Repair</td>
<td>$8,000</td>
</tr>
<tr>
<td>Pump Station</td>
<td>$255,000</td>
</tr>
<tr>
<td>Filter Unit</td>
<td>$95,000</td>
</tr>
<tr>
<td>18&quot; PVC Mainline</td>
<td>$15,000</td>
</tr>
<tr>
<td>Gate Valves</td>
<td>$6,000</td>
</tr>
<tr>
<td>60x60 Slide Gate</td>
<td>$10,000</td>
</tr>
<tr>
<td>Pump Building 25x30@$120/lf</td>
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<tr>
<td>Wet Well Expansion + filter screens/hatch</td>
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<td>Topslopping</td>
<td>$3,000</td>
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<tr>
<td>Sodding</td>
<td>$6,000</td>
</tr>
<tr>
<td>Concrete Viet Well</td>
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</tr>
<tr>
<td>Concrete Intake Struct. W/F Screen</td>
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<tr>
<td>Electrical (assumes no transformer upgrade)</td>
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**Total** $938,000

### Scenario 2 – Submersed Turbine Pumps mounted on steel skid installed directly on lake bottom

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<td>Diver</td>
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<tr>
<td>Pump Station</td>
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<tr>
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<tr>
<td>18&quot; PVC Mainline</td>
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<tr>
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</tr>
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<td>Pump Building 15x20@$120/lf</td>
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**Total** $887,000

### Scenario 3 – Submersed Turbine Pumps installed in concrete wet well located on-shore

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<td>Water Control</td>
<td>$150,000</td>
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<tr>
<td>Tree Protection</td>
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<tr>
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<td>Irrigation Repair</td>
<td>$8,000</td>
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<tr>
<td>Filter Unit</td>
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<tr>
<td>18&quot; PVC Mainline</td>
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<tr>
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</tr>
<tr>
<td>60x60 Slide Gate</td>
<td>$10,000</td>
</tr>
<tr>
<td>Pump Building 15x20@$120/lf</td>
<td>$36,000</td>
</tr>
<tr>
<td>Wet Well (approx. 15x20+ hatch)</td>
<td>$100,000</td>
</tr>
<tr>
<td>Topslopping</td>
<td>$3,000</td>
</tr>
<tr>
<td>Sodding</td>
<td>$6,000</td>
</tr>
<tr>
<td>Intake Screen</td>
<td>$10,000</td>
</tr>
<tr>
<td>Electrical (assumes no transformer upgrade)</td>
<td>$30,000</td>
</tr>
<tr>
<td>Demo existing pump</td>
<td>$20,000</td>
</tr>
</tbody>
</table>

**Total** $909,000
APPENDIX C: PLAN DEVELOPMENT

Advisory Committee Meeting #1: October 1, 2008

This meeting introduced the advisory committee to the Sloan’s Lake Pump and Marina Improvements Project. The project team discussed the Denver bond issue and project budget, phasing plan, goals, and work to date. The team then introduced the history of the lake and discussed existing uses and conditions. Site issues and analysis were presented along with the project priorities and how they relate to the Sloan’s Lake Master Plan.

Figure 6-1: Manhattan Beach Amusement Park, 1891-1914

Figure 6-2: Special Needs Recreation Program

Figure 6-3: Sloan’s Lake Park Master Plan, 2002

From the discussion, the project team received input on the character, experiences, activities, and events that neighbors and users of the park want to see. Some of the suggested uses and improvements include:

- Permanent shade structures
- Pavilion for special events – maybe at end of jetty
- Kids play element (not a full blown playground) with water feature
- Gardens
- Small stage for events, award ceremonies
- Gathering space/plaza
- Public art
The project team and committee members discussed lake edge options and its preferred character. The project team explained that the lake edge treatment could vary and doesn’t have to be the same throughout. Committee members’ suggestions and comments include:

- Hard edges, like new construction at Grasmere Lake in Washington Park are liked
- Some like a more natural edge
- Everyone dislikes the gabions (rock-filled wire baskets) that are very common throughout the park.
- Comments that the rock (riprap) and gabion edges were difficult to keep clear of trash, etc.
- Comments that maybe the lake edge should be done with the historic wall treatment that originally was used for the jetty and the old boat ramps
- Comment that the lake edge should be different from other parks
- Many liked a combination of a small hard edge/wall at the water’s edge with an adjacent grass strip, and then a path

The possibility of repurposing a portion of the boathouse building met with mostly positive feedback. When discussing possible future uses for the boathouse building, some of the suggestions include:

- Community space
- Place to rent for weddings, etc.
- The new facility at 4-Mile House is a good example
- If the pump is removed from the building, then the new pump structure should be compatible with boat house
- Concessions (one suggestion was to move concessions to a separate building closer to the boat ramps and youth football fields)
Ideas and comments on the general design approach include:

- Water quality is important; the design should try to provide some water quality treatment. A “green” approach met with approval – wise use of water and other resources.
- Comments to not try to stuff too many uses into the marina. There is just not that much space to accommodate high intensity uses.
- Several attendees stated that the marina edge should be natural, or active -- not just “hard” and inflexible.
- Irrigation pump intake must be designed to keep lake sediment from wrecking the pump again. Possibly plan for sediment removal around the intake.
- A suggestion to look at Regents Park in London that has an interesting separated row boating area.
- A suggestion to look at Pueblo’s Mineral Palace Park lake-edge treatment, and also the Pueblo Riverwalk.
- Design water edge to allow people to have more of a water experience. Possibly better access to water.
- Suggestions for activities not currently present at the marina: ice skating, fishing, remote control boating

Miscellaneous comments/concerns raised:

- Will the new irrigation pump drain the lake?
  The project team explained that the system will continue to be connected to the potable water system, so in the case of a drought, a discussion could be had with Denver Water about using potable water instead of the lake water for irrigating the park.
- Why not allow ice skating in the marina?
  The project team explained that this would require a change to Denver regulations that currently ban skating in Denver parks.

- A neighborhood group has had an on-going concern about water supply to the lake. Requests have been made to the City for a measuring device to measure inflow from the Rocky Mountain Ditch to see if Sloan’s Lake is getting its full 7% share of ditchwater rights.

  This was duly noted, however water supply will not be a focus of this project.

Figure 6-5: Sloan’s Lake Marina Storm Basins
Advisory Committee Meeting #2: November 10, 2008

At this meeting the project team introduced three concepts for the Sloan’s Lake Pump and Marina Improvements Project to the advisory committee. The project team presented the three site alternatives, the design and features, the key differences between alternatives, and the pros and cons of each. Each alternative had a hand-drawn plan with labels and sections that further described the design elements.

Alternative 1
- Creation of promenade around marina and on jetty
- Existing perimeter path maintained
- Minor water quality treatment
- Lake view plaza south of boathouse

Figure 6-6: Marina Concept 1

Figure 6-7: Section 1A: Water Quality Feature

Figure 6-8: Section 1B: Promenade

Figure 6-9: Section 1C: Jetty

Figure 6-10: Section 1D: Boathouse Overlook Plaza
Alternative 2
- Integration with park area to north
- Lake edge plaza on north edge
- More significant water quality feature
- Curved jetty and landforms

Figure 6-11: Marina Concept 2

Figure 6-12: Section 2A: Water Quality Feature/Sediment Pond

Figure 6-13: Section 2B: Jetty

Figure 6-14: Section 2C: Boathouse Plaza/Ice Rink
Alternative 3

- Restore jetty to historic condition
- Boardwalk and wq pond on north edge
- Best water quality
- Patio / Pergola on E. side of Boathouse

Figure 6-15: Marina Concept 3

Figure 6-16: Section 3A: Boardwalk and Water Quality Area

Figure 6-17: Section 3B: Jetty

Figure 6-18: Section 3C: Boathouse Patio
In response to the three concepts, the committee voiced the following preference and concerns.

Likes:
- Trees creating the “Promenade”
- Exterior patio (needs more focus and be able to share space between pedestrians and maintenance workers)
- Moving the maintenance facility for less traffic and machinery to see
- Ice skating/ multi-use plaza
- Jetty from Option 1 can be designed to phase in Option 3 later if cost is an issue
- Retaining historical elements
- Wetlands feature (provides educational, wildlife, aesthetic, nature trails, and place making)
- Shade on jetty
- Community center in building (patio makes building opportunities greater)
- Option 1 and Option 2’s vegetation (Option 3 is too “harsh”)
- Option 2 pulls people out to jetty with curves and interest
- Improvements closer to boat ramps
- Neck-downs for parking opportunities
- Hard edge along marina seems more clean
- Creating recreation uses
- Multiple experiences
- Expanding usability outside of boathouse

Dislikes:
- Getting so close to the water but not being able to get in
- Encouraging getting wet with steps into water
- Long, historical Jetty with no shelter and no focus
- Fountains (uses too much energy, evaporates, and maintenance issues)

The next discussion topic was the boathouse remodel alternatives. The project team presented a preliminary floor plan, programming options, and cost information. There were many concerns that removing the current maintenance function of the boathouse would ultimately displace the Boxing Club for its current home in the Gun Club building. However, the project team assured the Boxing Club members that the club will remain in the Gun Club building. The project team also updated the committee on the irrigation system planning and discussed the next steps in the process.

![Figure 6-19: Boathouse Programming Concept](image-url)
Miscellaneous comments and concerns raised at the meeting include:

- Make the wetland function aesthetically and sustainably. Consult experts in the design and details. Want to see what final product will look like – precedents. How to keep sediment from returning and causing the same problem years from now?
- Can the wetlands be added later or in phases?
- This project will become the example for the rest of the lake’s improvements – need to make it as sustainable as possible.
- Water quality – How to control and improve it? How much of an impact does this area have or can it have on the rest of the lake’s water quality?
- Are the playgrounds moving?
- Need space for children.
- Is building a “fancy marina” necessary for the improvement of the entire park? Look at Coor’s Ponds for a precedent.
- Still wanting ice skating on actual lake water. How can Denver policy be changed?
- Make the lake a source of community pride as it once was. (Engaging people through activities and amenities proves to be a deterrent to homeless problems.)
- Keeping and improving handicap access to the boat docks.
- Lighting as a security feature?
- Remember keeping the views intact for most area residents.
- What use will the boathouse building hold – commercial, semi-commercial, or recreation? What is more important to this site?
- Look at adding a second floor to the boathouse to increase square footage and increase uses that can be accommodated in this area.
- What about a concessions or catering kitchen?
- Will outdoor beach showers be added?
- Consider pump locations for aesthetics and noise.
- A park for all seasons?
- How much maintenance and money will go into building a “sea wall”?
- How far do we need to dredge? Consider irrigation.
Open House #1: January 13, 2009

This meeting was to introduce the general public to the Sloan’s Lake Pump and Marina Improvements Project. It was set up to provide background information for people new to the planning process and to give participants the opportunity to ask more questions and understand the options on their own terms. The project team asked attendees to pick up a packet in which they could vote for their favorite alternatives, elements, and designs. The packet corresponded to the stations set up around the room and also allowed for written feedback and comments.

Station 1: Background Information

- Site history
- Aerial maps
- Photo boards of existing conditions
- Master Plan, with blow-up of recommendations for Marina area
- Background on irrigation pump and need for replacement
- The first Advisory Committee Meeting PowerPoint presentation

Figure 6-20: Station 1: Background Information Boards
Station 2: Summary of Alternatives and Feedback from Advisory Committee Meeting #2

- Board for each alternative with geo-referenced comments
- Cost information for major elements listed on the boards
- Supplemental sections

*Figure 6-21: Station 2: Alternatives Boards*
Station 3: Plan Elements and Details

- Water quality area
- Jetty and marina edge near 24th Ave.
- Marina edge character
- Marina trails/promenade
- Location of pump house
- Lake Edge in front of Boathouse
- Structure types for picnic shelters, gazebo, etc
- Other elements (children’s feature, etc.)
- Building programming options
Station 4: Prioritization of Improvements for Initial Construction

This station listed key program elements with room for participants to “write in” their own additional desired elements. Each participant had an equal number of stick-on dots to place on their preferred elements to be included in the first phase of improvements. (This did not include the elements deemed “must-have elements – the pump, ADA bathrooms, etc. – but did include some elements not discussed in Station 3, including the dredging of the marina, boat storage slips, etc.)

The top dot-getters were:

- The Marina Edge/Promenade (36 votes)
- The Jetty (33 votes)
- The Boat House plaza (29 votes)
- Other -- “Ensuring Sufficient Water in the Lake” (14 votes)
Public Feedback Summary

Jetty Character
  • **Which Option Was Preferred?** Option ‘C’ with the curved jetty
  • **Why?** People liked the curves, trees, less concrete, lower walls along water’s edge. However, many did not like the boat docks shown on this concept.
  • **Conclusions / Response:** Incorporate curves and trees into design. Provide lower walls along edge and fewer railings. Don’t locate boat docks on Jetty.

Promenade Character
  • **Which Option Was Preferred?** All three options were close in vote-getting. Concept A was slightly preferred, with Concept B a close second.
  • **Why?** Many people wanted two paths: one for the cyclists and high speed traffic and another for strolling and hanging out closer to the water. People also wanted open green space between the paths for picnicking, etc.
  • **Conclusions / Response:** Design should include two paths (one for bikes, one for slower traffic), lots of trees, lots of open grassy space, lots of places to sit, opportunities for fishing and using miniature sail boats in the marina lagoon.

Lake Edge Treatments
  • **Which Option Was Preferred?** The three options received almost an equal number of votes, with the “Informal” option (with the low wall along the water’s edge) receiving the most votes.
  • **Why?** People want a variety of lake edge types at the marina, including formal treatment as special areas, informal wall edges along high use areas, and some naturalistic edges as well.
  • **Conclusions / Response:** The design should incorporate a variety of edge types: formal, informal, and naturalistic. This variety can be used to create different spaces at the marina that will appeal to a diverse user groups.

Boat House Frontage/Plaza
  • **Which Option Was Preferred?** Option B (with the rounded and sunken plaza) was favored, although Option A (with the more formal plaza that pushed out over the lake edge) had good support.
  • **Why?** While more people preferred Option B (some thought it was “less stiff”) over Option A, in general they were supportive of some kind of a plaza in this location. In addition, many thought that it was important to move the boat docks away from their current position directly between the boathouse and the lake. Providing places to sit was identified as an important need.
  • **Conclusions / Response:** Continue to plan for a plaza in this location, similar in scale and design to Options B and A. If at all possible, the boat docks should be moved away from the front of the building to open up views and give the plaza a lake front edge. The design should include plenty of places to sit.

Pump House Locations / Architecture
  • **Which Option Was Preferred?** Location A, the pump house location away from the lake edge, was greatly preferred over the location nearer to the lake and the front of the boathouse building. Little comment was received on the pump house aesthetics or architecture.
  • **Why?** People didn’t want the pump house in the middle of the new proposed improvements.
  • **Conclusions / Response:** Locate pump house close to the parking lot. Keep pump house architecture simple with appropriate compatible materials.
Gazebo Architecture

- **Which Option Was Preferred?** Option B (Victorian-looking octagonal gazebo) was preferred by a significant margin. Option A was considered too grandiose.
- **Why?** People want a simple design in keeping with the park’s character.
- **Conclusions / Response:** Develop a simple gazebo design that is not too grand of an architectural statement, but is a special and unique element that is compatible with, and enhances, the marina area.

Water Quality Treatment Area

- **Which Option Was Preferred?** Both concepts received about the same amount of votes.
- **Why?** There is general support for a water quality area. People want to make sure that it is well maintained, and that it will be an amenity for the park.
- **Conclusions / Response:** Incorporate a water quality pond in the design so that it is an amenity as well as a functioning sediment pond. It must be compatible with other marina improvements.

Boat House Programming Options

- **Which Option Was Preferred?** Option 1 (the full redevelopment of the boat house into a community facility) was favored 5 to 1 over the other two options – which called for more limited improvements.
- **Why?** People really want a community building that will add to the vitality of the park. They want the maintenance function moved to a different location to accommodate this redevelopment.
- **Conclusions / Response:** Continue to plan for conversion of boat house to community uses, while retaining boat rangers and minor storage function for aquatic and special needs recreation programs.
Open House #2: May 12, 2009

This meeting was to introduce the latest refinements in the Sloan’s Lake Pump and Marina Improvements Project Site Plan to the public.
List of Meeting / Open House Attendees

Larry Ambrose, Sloan’s Neighborhood Association
Jane Parker Ambrose, Northwest Quadrant Association
Michael Kadovitz, Tuxedo Park Alive
Melinda Pollack
Pat & Ernie Ornelas
Paul Aldretti
Henry Ansbacher
Mickie Clayton
Ruth Mares
Terri Mungle
Chris Grady
Robyn Dino
Mindy Klowden
Margie Grimsley, Sloan’s Lake Citizen’s Group
Dave Goldblatt, West Colfax Business Improvement District
Barbara Baker, Jefferson Park United Neighbors
Kathleen Genereux, Neighbor
Joe Morrell, Former SL Master Plan Committee
Brian Del Mar, Avid boater & neighbor
Ron Drey, Sail boater & neighbor
Mark and Lisa Stormberg, Involved in NW Parking Area
Bill Johnston, West Highland Neighborhood Association
Chandra Mathews, Neighbor
Noel Copeland, PRAB member
Michael McCown, DPR Northwest Maintenance District
Rick Garcia, Councilman District - 1
Pat Defa, CD-1 Aide
Leah Huffer, DPR-Special Needs Program
Lisa Perry, DPR-Aquatics Supervisor
Terrie Ruelle, DPR-Boat Ranger
Susan Fry, DPR-Parks Ranger Program
Dennis Patterson
Eric Hemmer, Sloan’s Neighborhood Association / Boater
Brent Weakley, Neighbor (JPUN)
Derrick Kabaruk
Mike Quintana, Sloan’s Lake Boxing Club
Sonya Quintana, Sloan’s Lake Boxing Club
Greg V., Sloan’s Lake Boxing Club
Albert Garcia, P & L Hawks
Dan Watson, Sloan’s Lake Boxing Club
Joe Anderson
Rose Sanchez
Loreto Sanchez
Tricia Sanchez
Luke Godwin
Randy Swan
Jude Aiello
Elisa Cohen, North Denver Tribune - editor
Peter Lira
Shelley Lira
Loralee Bullen
Todd Blair
Angela Montgamery