



Cost Implementation Plan

Rosewood Nature Study Area



Truckee Meadows
Parks Foundation

June 4, 2021

Introduction

In September of 2020 the Truckee Meadows Nature Study Area Concept Plan (concept plan) was adopted by the Truckee Meadows Parks Foundation to develop the Truckee Meadows Nature Study Area, now referred to as the Rosewood Nature Study Area. This plan identified approximately 30 projects to be completed over a six-year period. This document will supplement the concept plan and provide the Truckee Meadows Parks Foundation with an estimated cost for each project to help plan and secure the funding required for implementation. The information in this document will be referred to as a Cost Implementation Plan (CIP).

To develop the CIP each project identified in the concept plan was further analyzed and broken down into a project type including: Trail Projects, Signage Projects, Building Projects, Visitor Amenity Projects, Garden Projects, Restoration & Maintenance Projects, and Planning and Design Projects. To determine the scope of each project an amount per unit was calculated. The amount per unit for each project includes; lump sum (LS), lineal foot (LF), each (EA), or cost per year (YR). Based on each cost per unit, experts were consulted to determine a unit price. This unit price included estimated costs for materials, labor, construction, and maintenance. In addition, a fifteen-percent contingency was applied to each unit price to account for any unforeseen costs and to account for the fluctuation in construction costs per year. When applying this cost to the total amount of units an estimated cost was associated with each project.

Project costs were further broken down to determine which phase each project would occur to help staff manage their efforts over the life of the CIP. The six year period proposed in the concept plan was divided into four phases; Current Projects (Phase 1), Short-Term Projects (Phase 2), Medium-Term Projects (Phase 3), and Long-Term Projects (Phase 4).

As a result, this CIP includes an overall cost analysis and map for the entire project, as well as a cost analysis and map for each phase. This will provide an understanding of when these cost will be required and where they will be applied to the Rosewood Nature Study Area throughout the life of the CIP.

Improvement Projects

- Trail Projects
- Signage Projects
- Building Projects
- Visitor Amenity Projects
- Garden Projects
- Restoration & Maintenance
- Planning & Design

Refer to the Capital Improvement Program Table to view related project and phase.



Overall Improvement Project Map

Rosewood Nature Study Area

Legend

- | | | | | | |
|--|--|--|-----------------------|--|--|
| | Rosewood Nature Study Area Boundary | | Pedestrian Bridge | | Wildlife Viewing Points/Interpretive Signs |
| | Existing Cart Path Rehab. to Pavement | | Pedestrian Tunnel | | Pedestrian Site Access |
| | New Trail (Pavement) | | Flood Mitigation Area | | Vehicular Site Access |
| | Existing Cart Path Rehab. to Aggregate | | Riparian Revegetation | | Restroom |
| | New Trail (Aggregate Surface) | | Fishing Area | | Parking Area |
| | New Boardwalk | | | | Visitors Center |



WOOD RODGERS
 BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
 1361 Corporate Boulevard Reno, NV 89502
 Tel: 775.823.4066 Fax: 775.823.4066

Cost Analysis

Overall

ITEM NO.	DESCRIPTION	QUANTITY	UNIT OF MEASURE	UNIT PRICE	TOTAL
Trail Projects					
1	New Decomposed Granite (DG) Trail from Tunnel to Steamboat Creek	910	LF	\$15.00	\$13,650.00
2	Repair Pedestrian Bridge Decks	210	LF	\$50.00	\$10,500.00
3	Rehab Existing Cart Path (Assumes 40% of paths need minor maintenance and 60% needs new pavement)	7,500	LF	\$65.00	\$487,500.00
4	Rehab Existing Cart Path (Replace with Aggregate Surface)	6,500	LF	\$55.00	\$357,500.00
5	Construct New Paved Trail Segments (assumes clearing, grading, and surfacing)	1,825	LF	\$80.00	\$146,000.00
6	Construct New Aggregate Trail Segments (assumes clearing, grading, and surfacing)	2,950	LF	\$70.00	\$206,500.00
7	Construct New Boardwalk	470	LF	\$110.00	\$51,700.00
Trail Projects Subtotal					\$1,273,350.00
Signage Projects					
1	Entry/Site Identification	1	LS	\$50,000.00	\$50,000.00
2	Directional Trail Signage & Interpretive Signage Installation	1	LS	\$60,000.00	\$60,000.00
3	Enhance/Open Southern Pedestrian Entrance	1	LS	\$50,000.00	\$50,000.00
Signage Projects Subtotal					\$160,000.00
Building Projects					
1	Open Visitors Center (use of existing facilities & basic information)	1	LS	\$50,000.00	\$50,000.00
2	Outdoor Classroom	1	LS	\$200,000.00	\$200,000.00
3	Improvements to Visitors Center (add event space, classroom, lab, visitor enhancements)	1	LS	\$1,000,000.00	\$1,000,000.00
Building Projects Subtotal					\$1,250,000.00
Visitor Amenity Projects					
1	Open Fishing Area (floating dock, benches, on shore fishing areas)	1	LS	\$30,000.00	\$30,000.00
2	Construct Rest/Interpretive/Wildlife Viewing Vista Points (Includes donor opportunities)	10	EA	\$20,000.00	\$200,000.00
3	Install Portable Restroom at Southern Entrance (Includes pad and enclosure)	1	LS	\$25,000.00	\$25,000.00
Visitor Amenity Projects Subtotal					\$255,000.00
Garden Projects					
1	Pollinator Garden	3	YR	\$17,500.00	\$52,500.00
Garden Projects Subtotal					\$52,500.00
Restoration and Maintenance Projects					
1	Above ground irrigation; Loop 1	1	LS	\$40,000.00	\$40,000.00
2	Treat and suppress invasive species throughout upland, riparian, and wetland areas	6	YR	\$50,000.00	\$300,000.00
3	Plant competitive native grasses, riparian/wet meadow species, and shrub/upland species	6	YR	\$52,000.00	\$312,000.00
4	Plant perimeter of property	1	LS	\$52,000.00	\$52,000.00
5	Install/monitor bird nest boxes	2	YR	\$20,000.00	\$40,000.00
Restoration and Maintenance Projects Subtotal					\$704,000.00
Planning and Design Projects					
1	Trail and Signage Master Plan (Existing trail condition analysis, wayfinding, branding, vista points-wildlife viewing, interpretive, user amenities, donor opportunities, accessibility, different user experiences, connectivity, trailheads)	1	LS	\$120,000.00	\$120,000.00
2	Trail Design (Includes boardwalk, vista points, new trails, trailheads, trail rehab, visitor amenities, signage)	1	LS	\$200,000.00	\$200,000.00
3	Planning and Schematic Design for Future Visitor Center Improvements	1	LS	\$80,000.00	\$80,000.00
4	Visitor Center Design	1	LS	\$200,000.00	\$200,000.00
Planning and Design Subtotal					\$600,000.00
Estimated Overall Project Costs					\$4,294,850.00

Improvement Project



Trail Projects



Garden Projects



Restoration & Maintenance

Refer to the Capital Improvement Program Table to view related project and phase.

Mira Loma Park

Mira Loma Drive

Pembroke Drive

To Interstate 580

To Interstate 80

Pembroke Drive

Boynton Slough

Steamboat Creek

Veterans Parkway

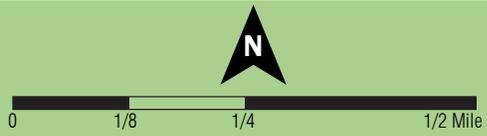
Hidden Valley Country Club

Current Improvement Projects

Rosewood Nature Study Area

Legend

- Rosewood Nature Study Area Boundary
- Existing Cart Path
- New Trail Connection (Decomposed Granite)
- Pedestrian Bridge
- Pedestrian Tunnel
- Pedestrian Site Access
- Vehicular Site Access
- Parking Area



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Cost Analysis

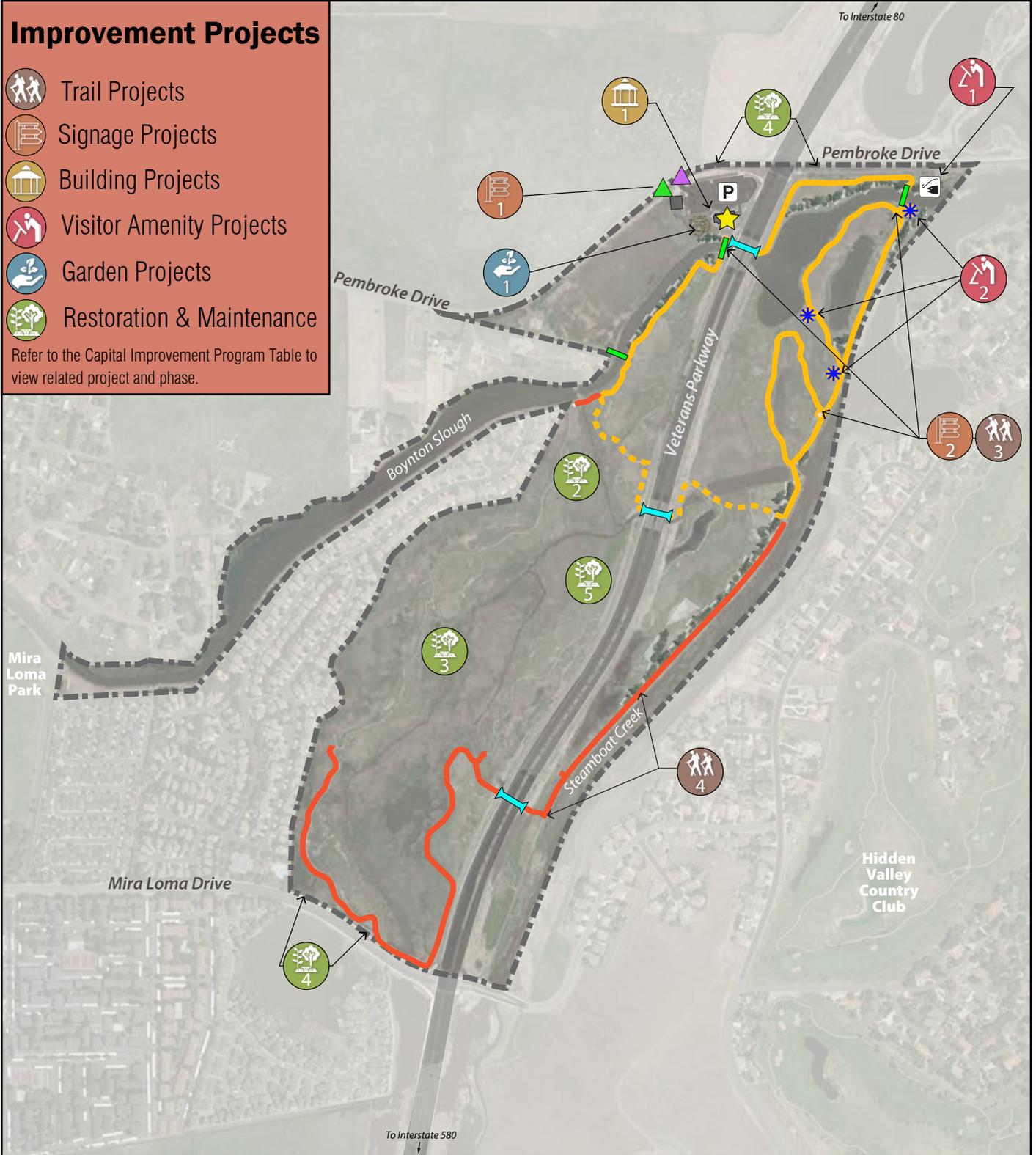
Current Projects (Phase 1)

ITEM NO.	DESCRIPTION	QUANTITY	UNIT OF MEASURE	UNIT PRICE	TOTAL
Trail Projects					
1	New Decomposed Granite (DG) Trail from Tunnel to Steamboat Creek	910	LF	\$15.00	\$13,650.00
2	Repair Pedestrian Bridge Decks	210	LS	\$50.00	\$10,500.00
Trail Projects Subtotal					\$24,150.00
Garden Projects					
1	Pollinator Garden	1	YR	\$17,500.00	\$17,500.00
Garden Projects Subtotal					\$17,500.00
Restoration and Maintenance Projects					
1	Above ground irrigation; Loop 1	1	LS	\$40,000.00	\$40,000.00
2	Treat and suppress invasive species throughout upland, riparian, and wetland areas	1	YR	\$50,000.00	\$50,000.00
3	Plant competitive native grasses, riparian/wet meadow species, and shrub/upland species	1	YR	\$52,000.00	\$52,000.00
5	Install/monitor bird nest boxes	1	YR	\$20,000.00	\$20,000.00
Restoration and Maintenance Projects Subtotal					\$122,000.00
Planning and Design Projects					
1	Trail and Signage Master Plan (Existing trail condition analysis, wayfinding, branding, vista points-wildlife viewing, interpretive, user amenities, donor opportunities, accessibility, different user experiences, connectivity, trailheads)	1	LS	\$120,000.00	\$120,000.00
2	Trail Design (Includes boardwalk, vista points, new trails, trailheads, trail rehab, visitor amenities, signage)	1	LS	\$200,000.00	\$200,000.00
Planning and Design Subtotal					\$320,000.00
Total Estimated Cost					\$483,650.00

Improvement Projects

- Trail Projects
- Signage Projects
- Building Projects
- Visitor Amenity Projects
- Garden Projects
- Restoration & Maintenance

Refer to the Capital Improvement Program Table to view related project and phase.



Short-Term Improvement Projects

Rosewood Nature Study Area

Legend

- | | | |
|--|--|-----------------|
| Rosewood Nature Study Area Boundary | Wildlife Viewing Points/Interpretive Signs | Parking Area |
| Existing Cart Path Rehab. to Pavement | Pedestrian Site Access | Visitors Center |
| Existing Trail DG | Vehicular Site Access | |
| Existing Cart Path Rehab. to Aggregate | Riparian Revegetation | |
| Pedestrian Bridge | Fishing Area | |
| Pedestrian Tunnel | | |

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Cost Analysis

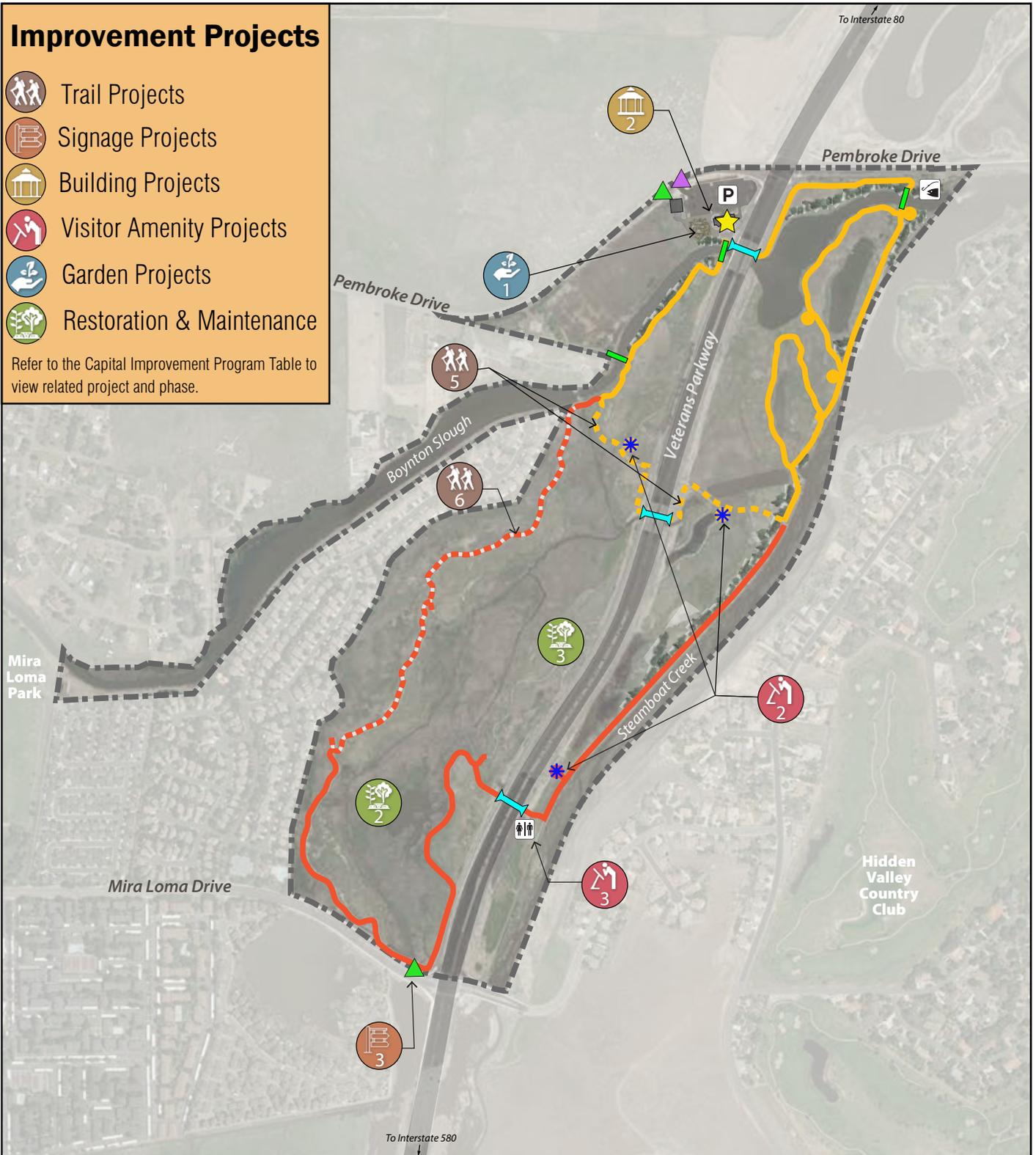
Short-Term (Phase 2)

ITEM NO.	DESCRIPTION	QUANTITY	UNIT OF MEASURE	UNIT PRICE	TOTAL
Trail Projects					
3	Rehab Existing Cart Path (Assumes 40% of paths need minor maintenance and 60% needs new pavement)	7,500	LF	\$65.00	\$487,500.00
4	Rehab Existing Cart Path (Replace with Aggregate Surface)	6,500	LF	\$55.00	\$357,500.00
Trail Projects Subtotal					\$845,000.00
Signage Projects					
1	Entry/Site Identification	1	LS	\$50,000.00	\$50,000.00
2	Directional Trail Signage & Interpretive Signage Installation	1	LS	\$60,000.00	\$60,000.00
Signage Projects Subtotal					\$110,000.00
Building Projects					
1	Open Visitors Center (use of existing facilities & basic information)	1	LS	\$50,000.00	\$50,000.00
Building Projects Subtotal					\$50,000.00
Visitor Amenity Projects					
1	Open Fishing Area (floating dock, benches, on shore fishing areas)	1	LS	\$30,000.00	\$30,000.00
2	Construct Rest/Interpretive/Wildlife Viewing Vista Points (Includes donor opportunities)	3	EA	\$20,000.00	\$60,000.00
Visitor Amenity Projects Subtotal					\$90,000.00
Garden Projects					
1	Pollinator Garden	1	YR	\$17,500.00	\$17,500.00
Garden Projects Subtotal					\$17,500.00
Restoration and Maintenance Projects					
2	Treat and suppress invasive species throughout upland, riparian, and wetland areas	1	YR	\$50,000.00	\$50,000.00
3	Plant competitive native grasses, riparian/wet meadow species, and shrub/upland species	1	YR	\$52,000.00	\$52,000.00
4	Plant perimeter of property	1	LS	\$52,000.00	\$52,000.00
5	Install/monitor bird nest boxes	1	YR	\$20,000.00	\$20,000.00
Restoration Projects Subtotal					\$174,000.00
Planning and Design Projects					
3	Planning and Schematic Design for Future Visitor Center Improvements	1	LS	\$80,000.00	\$80,000.00
Planning and Design Projects Subtotal					\$80,000.00
Total Estimated Costs					\$1,366,500.00

Improvement Projects

-  Trail Projects
-  Signage Projects
-  Building Projects
-  Visitor Amenity Projects
-  Garden Projects
-  Restoration & Maintenance

Refer to the Capital Improvement Program Table to view related project and phase.



Medium-Term Improvement Projects

Rosewood Nature Study Area

Legend

- | | | |
|--|---|--|
|  Rosewood Nature Study Area Boundary |  Pedestrian Tunnel |  Wildlife Viewing Points/Interpretive Signs |
|  Existing Trail (Pavement) |  Riparian Revegetation |  Pedestrian Site Access |
|  Convert DG Trail to Pavement |  Fishing Area |  Vehicular Site Access |
|  Existing Trail (Aggregate Surface) |  Restroom |  Visitors Center |
|  Construct New Trail to Aggregate Surface |  Parking Area | |
|  Pedestrian Bridge | | |



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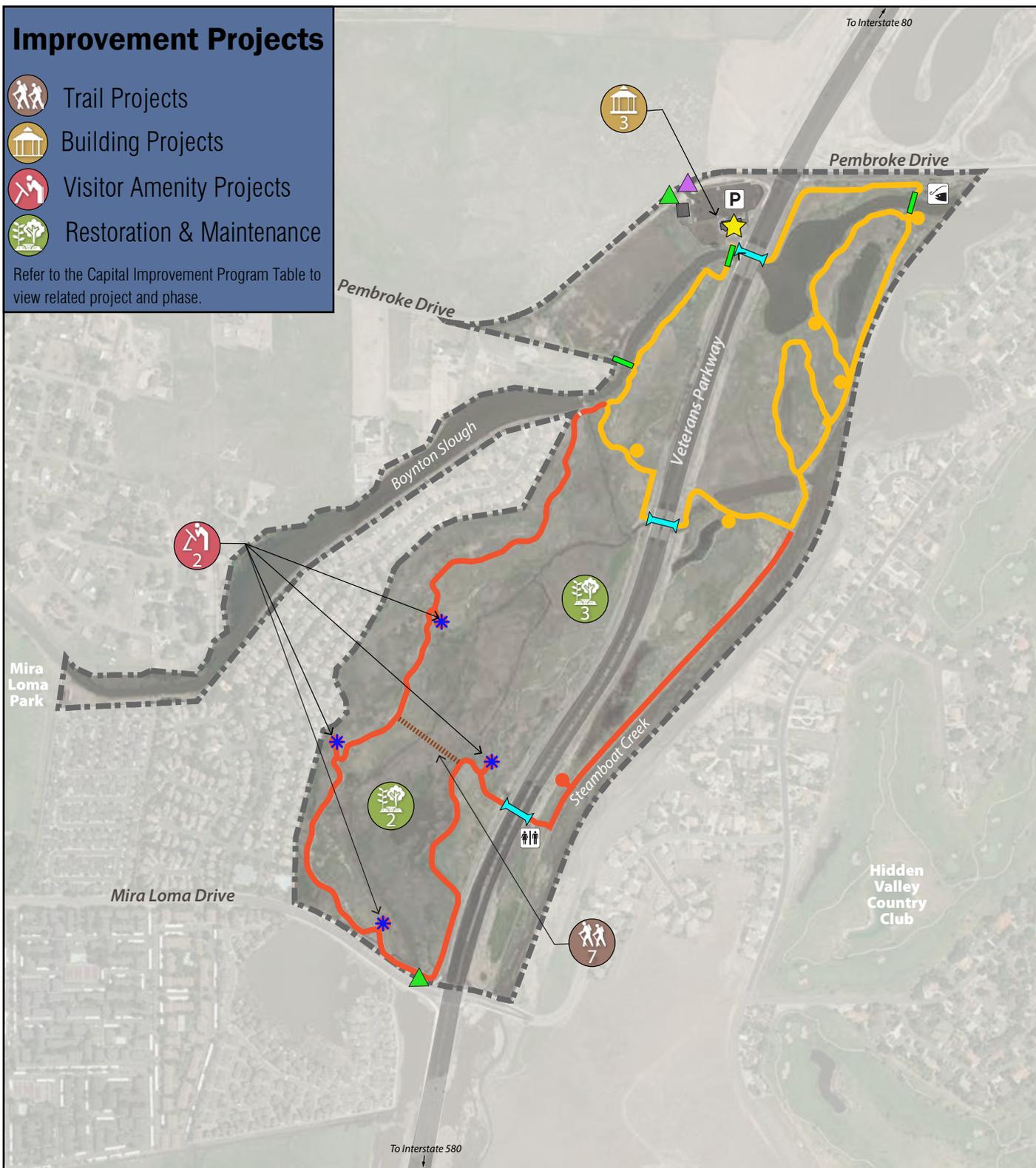
Medium-Term (Phase 3)

ITEM NO.	DESCRIPTION	QUANTITY	UNIT OF MEASUR	UNIT PRICE	TOTAL
Trail Projects					
5	Construct New Paved Trail Segments (assumes clearing, grading, and surfacing)	1,825	LF	\$80.00	\$146,000.00
6	Construct New Aggregate Trail Segments (assumes clearing, grading, and surfacing)	2,950	LF	\$70.00	\$206,500.00
Trail Projects Subtotal					\$352,500.00
Signage Projects					
3	Enhance/Open Southern Pedestrian Entrance	1	LS	\$50,000.00	\$50,000.00
Signage Projects Subtotal					\$50,000.00
Building Projects					
2	Outdoor Classroom	1	LS	\$200,000.00	\$200,000.00
Building Projects Subtotal					\$200,000.00
Visitor Amenity Projects					
2	Construct Rest/Interpretive/Wildlife Viewing Vista Points (Includes donor opportunities)	3	EA	\$20,000.00	\$60,000.00
3	Install Portable Restroom at Southern Entrance (Includes pad and enclosure)	1	LS	\$25,000.00	\$25,000.00
Visitor Amenity Projects Subtotal					\$85,000.00
Garden Projects					
1	Pollinator Garden	1	YR	\$17,500.00	\$17,500.00
Garden Projects Subtotal					\$17,500.00
Restoration and Maintenance Projects					
2	Treat and suppress invasive species throughout upland, riparian, and wetland areas	2	YR	\$50,000.00	\$100,000.00
3	Plant competitive native grasses, riparian/wet meadow species, and shrub/upland species	2	YR	\$52,000.00	\$104,000.00
Restoration and Maintenance Projects Subtotal					\$204,000.00
Planning and Design Projects					
4	Visitor Center Design	1	LS	\$ 200,000.00	\$200,000.00
Planning and Design Projects Subtotal					\$200,000.00
Total Estimated Costs					\$1,109,000.00

Improvement Projects

-  Trail Projects
-  Building Projects
-  Visitor Amenity Projects
-  Restoration & Maintenance

Refer to the Capital Improvement Program Table to view related project and phase.



Long-Term Improvement Projects

Rosewood Nature Study Area

Legend

- | | | |
|---|--|---|
|  Rosewood Nature Study Area Boundary |  Wildlife Viewing Points/Interpretive Signs |  Visitors Center |
|  Existing Trail (Pavement) |  Pedestrian Site Access |  Trail Projects |
|  Existing Trail (Aggregate Surface) |  Vehicular Site Access |  Building Projects |
|  Construct Boardwalk |  Restroom |  Visitor Amenity Projects |
|  Pedestrian Bridge |  Parking Area |  Restoration & Maintenance |
|  Pedestrian Tunnel |  Fishing Area | |



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Cost Analysis

Long-Term (Phase 4)

ITEM NO.	DESCRIPTION	QUANTIT Y	UNIT OF MEASUR	UNIT PRICE	TOTAL
Trail Projects					
7	Construct New Boardwalk	470	LF	\$110.00	\$51,700.00
Trail Projects Subtotal					\$51,700.00
Building Projects					
3	Improvements to Visitors Center (add event space, classroom, lab, visitor enhancements)	1	LS	\$1,000,000.00	\$1,000,000.00
Building Projects Subtotal					\$1,000,000.00
Visitor Amenity Projects					
2	Construct Rest/Interpretive/Wildlife Viewing Vista Points (Includes donor opportunities)	4	EA	\$20,000.00	\$80,000.00
Visitor Amenity Projects Subtotal					\$80,000.00
Restoration and Maintenance Projects					
2	Treat and suppress invasive species throughout upland, riparian, and wetland areas	2	YR	\$50,000.00	\$100,000.00
3	Plant competitive native grasses, riparian/wet meadow species, and shrub/upland species	2	YR	\$52,000.00	\$104,000.00
Restoration and Maintenance Projects Subtotal					\$204,000.00
Total Estimated Costs					\$1,335,700.00

Cost Funding Plan

General/Pre-Project Work to Establish Potential Funding Opportunities

- **Seek Partnerships:** seek like-minded organizations or agencies who could share building/adjoining building space to reduce operating and maintenance costs. Establish a goal to look at this prior to renovation of the existing building to capture potential future savings and to leverage funding.
- **Wetland Bank Program:** Consider establishment of a Wetland Bank program to leverage the work being done on restoration and to provide working capital for long term operations and maintenance. Consider partnering with an existing non-profit like Nevada Land Trust who has a statewide program with existing structure and staff in place for developing the program.
- **Nevada State Division of Outdoor Recreation:** coordinate with the Administrator and apprise them of the project (can be an advocate for projects).
- **State Question 1 (SQ1):** Acquire the funds for each phase and apply for matching grants (requires proof of matching funds 2 years out).
- **Explore opportunities with:** Nevada Department of Wildlife, Audubon Society, Ducks Unlimited, NV Waterfowl Association, and the Washoe Tribe (historical hunting grounds).
- **Donor Opportunities:** Develop methods for the visitor's center, rooms, or classrooms to be dedicated to the education funding and consider major donor opportunities through naming the buildings or rooms.

Trails

- State Question 1
- Engage with Washoe County to see if there is opportunity to have juvenile offender or other work release crews do annual trail maintenance and litter pick up on a scheduled basis seeking a sponsor to help fund the work.
- Seek local business and foundations (Health/Hospitals) funding of specific trail segments.
- Establish a Donor Program to buy benches, picnic tables, interpretive signs, vista or wildlife viewing points and include a long term operations and maintenance component.
- Paved path costs should be rolled into larger grant programs like SQ-1 and Great American Outdoors Act (Land and Water Conservation Fund)



Building Projects

- Great American Outdoor Act
- State Question 1
- Wildlife & Sport Fish Restoration Program
- Partnership with other organizations or agencies



Restoration & Maintenance

- State Question 1
- U.S. Fish & Wildlife Service- State Wildlife Grant Program (SWG)
- Wildlife & Sport Fish Restoration Program
- USDA- NCRS- Farm Bill and Environmental Quality Incentive Program
- Conservation Reserve Enhancement Program
- Nevada Department of Environmental Protection- State Wetland Program
- Develop a Wetland/Meadow restoration Bank Program
- North American Wetland Conservation Act Grant
- Ducks Unlimited & NV Waterfowl Association



Signage

- Recreation Trails Program
- State Question 1
- Private Foundations- NV Energy Foundation, Robert Z. Hawkins, and other local foundations such as Renown
- Wrap trail segments into a larger grant opportunity.



Garden Projects

- U.S. Fish & Wildlife Service- State Wildlife Grant Program (SWG)
- Wildlife & Sport Fish Restoration Program
- Pollination Stewardship Grants
- USDA- NCRS- Farm Bill and Environmental Quality Incentive Program
- Conservation Reserve Enhancement Program
- Raley's – donate at the checkout stand program
- Seek surrounding neighborhood fundraising opportunities, (Hidden Valley Country Club, Rosewood Lakes, etc.)



Visitor Amenities

- State Question 1
- Wildlife & Sport Fish Restoration Program
- Private Donors or Foundations



Conclusion

Once completed the Rosewood Nature Study Area will cost an estimated \$4.3 million dollars and provide the region with approximately 200 acres of upland, riparian and wetland habitat. Four and one half miles of pedestrian paths, (50% or 2.3 miles of paved path) and several other amenities including; a visitor's center, wildlife viewing areas, a fishing pond, a pollinator garden, as well as future opportunities for an estimated 70 acres of potential flood mitigation (Appendix B). This investment will allow the Truckee Meadows Parks Foundation to provide the community with a unique asset that will allow visitors and residents to enjoy the natural landscapes that are unique to the Truckee Meadows.

Prepared for:



Prepared by:





Appendix A

Rosewood Nature Study Area
Cost Implementation Plan



Capital Improvement
Program Summary

ROSEWOOD NATURE STUDY AREA – Cost Implementation Plan Summary

PROJECTS	Estimated Cost	Current Projects (Phase 1)	Short Term Projects (Phase 2)	Medium Term Projects (Phase 3)	Long Term Projects (Phase 4)	
Trail Projects						
	1 New Decomposed Granite (DG) Trail From Tunnel to Steamboat Creek Trail	\$13,650				
	2 Repair Pedestrian Bridge Decks	\$10,500				
	3 Rehab Existing Cart Path (assumes 40% of paths need minor maintenance & 60% need new pavement)	\$487,500				
	4 Rehab Existing Cart Path (replace with aggregate surface)	\$357,500				
	5 Construct New Paved Trial Segments (assumes clearing, grading, and surfacing)	\$146,000				
	6 Construct New Aggregate Trial Segments (assumes clearing, grading, and surfacing)	\$206,500				
	7 Construct New Boardwalk	\$51,700				
Signage Projects						
	1 Entry/Site Identification	\$50,000				
	2 Directional Trail Signage & Interpretive Signage Installation	\$60,000				
	3 Enhance/Open Southern Pedestrian Entrance	\$50,000				
Building Projects						
	1 Open Visitor Center (use of existing facilities & basic information)	\$50,000				
	2 Outdoor Classroom	\$200,000				
	3 Improvements to Visitor Center (add events space, classroom, lab, visitor center enhancements)	\$1,000,000				
Visitor Amenity Projects						
	1 Open Fishing Area (floating dock, benches, on shore fishing areas)	\$30,000				
	2 Construct Rest/Interpretive/Wildlife Viewing Vista Points (includes donor opportunities)	\$200,000				
	3 Install Portable Restroom at Southern Entrance (includes pad and enclosure)	\$25,000				
Garden Projects						
	1 Pollinator Garden	\$52,500				
Restoration & Maintenance Projects						
	1 Above Ground Irrigation; Loop 1	\$40,000				
	2 Treat and Suppress Invasive Species Throughout Upland, Riparian, and Wetland Areas	\$300,000				
	3 Plant Competitive Native Grasses, Riparian/Wet Meadow Species, and Shrub/Upland Species	\$312,000				
	4 Plant Perimeter of Property	\$52,000				
	5 Install/Monitor Bird Nest Boxes	\$40,000				
Planning & Design Projects						
	1 Trail & Signage Master Plan (wayfinding, branding, vista points-wildlife viewing, interpretive, donor opportunities, existing conditions, accessibility, different user experiences, connectivity)	\$120,000				
	2 Trail Design (Vista Point Design, Trail Design, Bridge Design)	\$200,000				
	3 Planning and Schematic Design for Future Visitor Center Improvements	\$80,000				
	4 Visitors Center Design	\$200,000				
Total Costs:		\$4,294,850	\$438,650	\$1,366,500	\$1,109,000	\$1,335,700