



Midpeninsula Regional  
Open Space District

R-15-126  
Meeting 15-22  
August 26, 2015

## AGENDA ITEM 9

### AGENDA ITEM

Final Design Development Options for the Mount Umunhum Summit Project (Options Do Not Include Recommendations for the Radar Tower)

### GENERAL MANAGER'S RECOMMENDATIONS

A handwritten signature in black ink, appearing to be "S. J. J.", located to the right of the "GENERAL MANAGER'S RECOMMENDATIONS" heading.

1. Review design options and associated estimates of probable cost for the Mount Umunhum Summit Project.
2. Confirm the Planning and Natural Resources Committee's recommendation for a mid-level option (Preferred Option), and direct staff to make any desired adjustments to the design.
3. Direct staff to proceed with final design development and production of construction documents, which will form the basis for permit submittals and a Request for Bids package.

### SUMMARY

A range of alternative design options was prepared for public access facilities at the Mount Umunhum Summit, costing from \$2.5M to \$5.08M. The recommended mid-level option with two additions was selected by the Planning and Natural Resources Committee (Committee) to finalize the Schematic Design. Given the high cost and public anticipation of this project, the Committee desired to have the full Board review and confirm their selection prior to moving forward with final designs. Following Board confirmation, staff will prepare the final Construction Documents, which will be used as part of permit application submittals and as the basis for a Request for Bids to solicit bid proposals for construction.

### MEASURE AA

The Mount Umunhum Summit Project (Summit Project) is included in the FY2015-16 Action Plan as Measure AA Project #23-4. This project is part of the "Mt. Umunhum Public Access and Interpretation Projects" portfolio to complete the summit area restoration, and install new parking areas and visitor amenities to allow public access.

### BACKGROUND

The Summit Project at Sierra Azul Open Space Preserve will provide a unique destination to some of the best views in the Bay Area with a target timeline to open the site to the public during the fall of 2016. Preliminary public access improvements were presented to the Committee at the April 21, 2015 meeting (R-15-67) (see Attachment 1 for minutes); refined designs were presented at the June 30, 2015 meeting (R-15-100) (see Attachment 2 for minutes); three

schematic design options were presented at the August 11, 2015 meeting (R-15-120) at which the Committee selected their preferred option (see Attachment 3 for minutes). Consulting landscape architects Restoration Design Group (RDG) has incorporated final Committee feedback received on August 11 into the Preferred Option for presentation to the Board at this meeting. At this time, RDG requires final Board concurrence on restoration and public access features and facilities in order to advance the design development and begin production of construction documents to meet the anticipated public access opening of fall 2016. Staff and consultants will be presenting a total of four options for public access amenities: the three original Options A, B, and C, plus the Committee's recommendation to implement Option B with the addition of a stairway and more substantial trailhead shelter taken from Option A. This new hybrid of Options A and B will now be referred to as the Preferred Option.

## DISCUSSION

The three options for public access facilities at Mount Umunhum were formulated from a full range of access improvements that were identified as part of the early schematic design phase, and represent a range of total costs from over \$5M (Option A) to approximately \$2.5M (Option C). All options include restoration of natural landforms, planting of native vegetation, an ADA-accessible drop-off area, accessible trails at the summit, and interpretive elements. The cost estimates provided in this report do not include any of the radar tower long-term options nor provision of potable water. Graphic representations of the Committee's Preferred Option, plus Options A, B, and C, are included as Attachment 4. Detailed cost estimates for the Committee's Preferred Option, plus Options A, B, and C are provided as Attachment 5.

**Committee's Preferred Option** is a hybrid of Options A and B, which is comprised of Option B plus inclusion of a summit stairway and trailhead shelter from Option A, as described below, for a total cost of approximately \$4.2 million. The design assumes phased implementation pending a final decision on the radar tower. For example, interpretive panels and benches near the tower, which may be affected by a future radar tower decision, could be installed at a later date as a future phase and after a final Board decision is made on the radar tower.

**Option A** is considered the most refined and developed option and includes the greatest scope of public access improvements, including a substantial trailhead type picnic shelter with stone walls and solid roof, landform and vegetative restoration of the upper graded terrace (formerly "Upper Parking"), and a stairway from this area to the West Summit. Option A represents a construction project costing approximately \$5.1 million and delivers a heightened level of detailing and materials beyond typical District design standards.

**Option B**, which costs approximately \$3.7 million, is similar in most respects to Option A, yet achieves cost savings by replacing the trailhead picnic shelter with a smaller and less expensive one, eliminates the landform and vegetative restoration of the upper graded terrace in favor of leaving the terrace as-is with minimal improvements for use as special event parking, and eliminates the stairway to the West Summit.

**Option C** is the lowest cost and represents the most modest approach to site development at an estimated total cost of \$2.5M. Option C reduces the ADA-accessible parking capacity, size, and detailing of the summit turnaround; simplifies the custom rock viewing coves with benches; reduces the parking capacity of the main lot; removes the picnic structure from the trailhead; and

removes the equestrian area. Option C incorporates typical rustic District design standards for visitor amenities, using for example, less durable split-rail fence instead of more substantial corten metal railing.

A summary cost comparison of the three options is presented in Table 1 below.

**Table 1. Summary of Cost Estimates for Three Summit Project Options**

<b>Item/Description</b>	<b>Preferred Option</b>	<b>Option A</b>	<b>Option B</b>	<b>Option C</b>
General Site Work	\$400,000	\$400,000	\$400,000	\$400,000
General Restoration Work	\$480,000	\$480,000	\$480,000	\$480,000
West Summit	\$140,800	\$140,800	\$140,800	\$85,800
Turn-around and Tower Area	\$524,900	\$724,900	\$724,900	\$391,650
East Summit	\$84,000	\$84,000	\$84,000	\$44,000
Terrace (Special Use Parking)	\$27,000	\$467,500	\$27,000	\$27,000
Summit Stair	\$380,000	\$380,000	\$0	\$0
Lower Parking	\$463,500	\$488,500	\$463,500	\$293,700
Trailhead	\$347,000	\$347,000	\$172,000	\$30,000
Equestrian Terrace	\$205,000	\$205,000	\$205,000	\$0
Interpretive and Other Signage	\$130,000	\$130,000	\$130,000	\$130,000
General Conditions (i.e. mobilization: 15% of total)	\$477,330	\$577,155	\$424,080	\$282,323
<b>SUBTOTAL with General Conditions</b>	<b>\$3,659,530</b>	<b>\$4,424,855</b>	<b>\$3,251,280</b>	<b>\$2,164,473</b>
<b>TOTAL with 15% Design Contingency</b>	<b>\$4,208,460</b>	<b>\$5,088,583</b>	<b>\$3,738,972</b>	<b>\$2,489,143</b>
Terrace Parking Alternate Full Buildout		\$513,800		

### **Committee Review and Recommendations**

The Committee recommends Option B, plus the addition of the stairway and more substantial trailhead shelter taken from Option A, as the Preferred Option. Option B was formulated to strike a balance between the extensive scope of built improvements in Option A, and the minimal facilities and typical materials used in Option C. Option B retains the heightened level of detail and materials of Option A as is appropriate for a key destination location such as Mount Umunhum, while still remaining in general alignment with the scale of amenities offered at other District Preserves. Option B also reflects the desires of the Committee to provide a suitable destination location with appropriate amenities not found at other Preserves, such as wind and shade shelters. If potable water is found to be available, it would be incorporated into any of the three Options at the same cost, but this cost is not included in the Summary of Cost Estimates (Table 1).

### **FISCAL IMPACT**

The Planning Department's FY2015-16 Budget includes \$611,000 for schematic design, permitting, construction documents and initial construction of the new parking areas, restrooms, landing zone, other public access improvements and site amenities. Additional funds will be requested in the FY2016-17 Budget to complete the construction of the Summit Project improvements. Cost for any of the options, including the most expensive Option A, is included in

the Measure AA allocation for this Project. In addition, generous funding from the State Coastal Conservancy in the amount of \$500,000 for the Summit Project will be used to fund the native plant restoration, which is considered to be a non-capital project and therefore does not qualify for Measure AA funding.

## **PUBLIC NOTICE**

Public notice was provided as required by the Brown Act.

## **CEQA COMPLIANCE**

Construction of the Mount Umunhum Summit Area was included in the Mount Umunhum Environmental Restoration and Public Access Plan EIR, which was certified by the Board on October 17, 2012 (R-12-91).

## **BOARD COMMITTEE REVIEW**

Please refer to the Discussion section of this report for a full description of the Committee review process and recommendation.

## **NEXT STEPS**

Board confirmation of the Preferred Option (i.e., acceptance of a Final Schematic Design) will mark the end of the conceptual design phase. Remaining work will focus on the production of bid documents for contracting, and initiating permitting. No major changes would occur after the Final Schematic Design without a formal change of scope. Construction is scheduled for Spring/Summer 2016. The timeline to meet the goal of providing public access to the summit of Mount Umunhum by October 2016 appears in the table below.

<b>Mount Umunhum Summit Project Implementation Milestones</b>	
Refined Conceptual Design	April 21, 2015 (completed)
Draft Schematic Design for Committee Review*	June 30, 2015 (completed)
Final Schematic Design for Committee Review	August 11, 2015 (completed)
Board Consideration of Committee Preferred Option	August 26 (this meeting)
Permitting/Construction Documents	Fall 2015
Approve Restoration Grading Contract**	Winter 2015/16
Approve Visitor Amenities Construction Contract**	Winter 2015/16
Construction Phase	Spring/Summer 2016
Restoration Planting	Fall 2016 – Fall 2017

Finally, investigations on providing water to the public (potable or non-potable) are underway. Staff is soliciting quotes from three separate companies to investigate the possibility of a new well location at or near the summit.

## **Attachments**

1. Minutes from April 21, 2015 PNR Committee meeting

2. Minutes from June 30, 2015 PNR Committee meeting
3. Draft Minutes from August 11, 2015 PNR Committee meeting
4. Graphics of schematic plans for Preferred Option and Options A, B, and C
5. Cost estimates for Preferred Option and Options A, B, and C

Responsible Department Head:

Jane Mark, AICP, Planning Manager

Prepared by:

Meredith Manning, Senior Planner

Lisa Bankosh, Planner III

Contact:

Meredith Manning, Senior Planner



Midpeninsula Regional  
Open Space District

**PLANNING AND NATURAL RESOURCES COMMITTEE  
MIDPENINSULA REGIONAL OPEN SPACE DISTRICT**

Administrative Office – Board Room  
330 Distel Circle  
Los Altos, CA 94022

April 21, 2015

**APPROVED MINUTES\***

**ROLL CALL**

Director Riffle called the Regular Meeting of the Planning and Natural Resources Committee to order at 4:06 p.m.

**Members Present:** Jed Cyr, Larry Hassett, and Curt Riffle

**Members Absent:** None

**Staff Present:** General Manager Steve Abbors, General Counsel Sheryl Schaffner, Planning Manager Jane Mark, Senior Planner Meredith Manning, Senior Planner Tina Hugg, Public Affairs Manager Shelly Lewis and Interim District Clerk Kim Marie Smith

**ORAL COMMUNICATIONS**

None.

**ADOPTION OF AGENDA**

**Motion:** Director Cyr moved and Director Hassett seconded the motion to adopt the agenda.

**VOTE: 3-0-0**

**COMMITTEE BUSINESS**

**1. Concept design plans for the Mount Umunhum Summit Project (R-15-67)**

Meredith Manning Senior Planner introduced Bob Birkeland Senior Principal Landscape Architect with Restoration Design Group (RDG) to give the Committee a presentation of the draft conceptual design for the Mt. Umunhum summit. Mr. Birkeland along with his associate Rich Walkling presented to the Committee a PowerPoint presentation with an overview of the

**Planning & Natural Resources Committee**  
**April 21, 2015**

Mt. Umunhum summit concept plan. They discussed the District goals and objectives which are to establish a fiscally and environmentally sustainable visitor destination that aligns with the District's mission by balancing public access, enjoyment, and education with environmental restoration. Creating a destination that is accessible to and accommodates a broad range of user groups, remove or permanently cap physical hazards and restore the native landscape and habitat for wildlife as much as possible, provide ample, rich, and diverse trail experiences for hikers, bicyclists, and equestrians and highlight the rich natural and cultural history of the site through interpretive and educational opportunities. Discussion ensued.

Director Cyr asked if potable water was going to be on site. Ms. Manning stated that currently planned at the trail head there will be a horse trough and shelter and staff will be exploring the potential for potable water at the trail head site.

Director Riffle asked roughly when the Board of Directors will be making a design decision on the tower. Ms. Manning commented that the decision will not be made until October 2017.

Director Riffle also shared his concerns with Director Cyr and stated that he recommends that potable water should be available for the public and horses.

Director Riffle stated that in 2012 the hang gliding communities concerns are not on the conceptual plan and asked if their concerns were going to be addressed. Ms. Manning reported the hang gliding community would be invited to see the conceptual design and obtain their comments at the next phase of the design.

Director Riffle asked Directors Cyr and Hassett if they had any concerns with not addressing the hang gliding communities concerns. Director Hassett commented that his vision is not to have them jumping off over the trail and then heading down to Bald Mountain but would like to obtain the information of any commitments that have been made to the community. Ms. Manning commented that hang gliding was addressed in the Environmental Impact Report and was evaluated as an environmental impact and was included as a concept and permits would be issued by the District. Currently there is a conceptual agreement with them that there would be no more than two to three people at a time and they would have to police themselves. Director Cyr also echoed Director Hassett and asked if any commitments have been made to the hang gliding community. He also stated that is not high on his priority list but does not want to exclude it as an option. His vision is that he would want a world class space to invite the public and have them understand the multiple uses that are on the ground. General Manager Abbors confirmed that the Committee would like to consider hang gliding in some form but not have it dominate the experience and will take that direction. Director Riffle stated that a decision will need to be made either there will or will not have hang gliding and if it is decided to accommodate it in one form or another we should be put into the design. He also stated that in the year 2012 a vocal organized hang gliding community attended the meetings and shared their concerns. Mr. Birkeland stated that in the 2012 plans there was a place for hang gliders at either the upper or lower parking lot but apparently that is not where they want to launch. If they want to launch from the upper parking lot the District may consider allowing hang glider events on certain days or on a weekend by obtaining a permit.

Director Riffle commented that he was glad that the District is working with the Amah Mutsen and accommodating their cultural needs but stated that there is also a large community of military veterans and they need to be honored independently from what may happen to the tower.

**Planning & Natural Resources Committee**  
**April 21, 2015**

Ms. Manning responded that the interpretive specialist will be contacting some of the prominent veterans to work in the interpretation and will have a very robust interpretative program independent from the tower.

Director Riffle commented on the harshness of the summits environment and how wind could reach up to 100 mph and could potentially have double-digit rainfall. He asked if there was a way to control access or would there be seasonal closures. Ms. Manning answered that as part of the concept plan the gate currently at Bald Mountain will stay and there will be several control points on the way up to the mountain.

Director Riffle stated that if there are any road closures that this information be posted onto the District website so that the public is aware of any closures and also recommending having a web-cam onsite. He also recommends having wi-fi access at the summit which in turn could be an opportunity to expand on the interpretive program. Ms. Manning stated that that these recommendations will be discussed in phase two.

Director Riffle expressed his concern about the cost and even though this is a very high quality well thought out and through project it is on top of a very unforgiving mountain. He questioned whether the constituents would question the cost of the project since historically the District usually has gravel parking lots and a toilet and mentioned that the constituents would not expect the District to build a world class facility. Director Riffle asked Director's Cyr and Hassett if they were concerned with the cost. Director Cyr stated that this project is unique to the District, he felt more comfortable with an elaborate design. He also stated that most of the design is moving material and bringing it closer to its original shape and form and will allow for an intimate and emotional connection to the site. Director Hassett agreed with Director Cyr and mentioned that there is higher interest from the public to access the site.

General Manager Abbors stated that the summit would be more a world class experience than a world class project and commented that the materials that are going to be used are going to withstand the elements. He also reminded the Committee that this past June the public approved this project and budget.

Director Riffle reminded staff that we need to accommodate any future potential partner such as the Mt. Um Conservancy as we go forward as terms of transparency and our willingness to work with a partner.

Ms. Manning stated that the next step is to take all of today's input and then present the committee with a 50% schematic designs in June and at which time will have a better understanding of the cost of the project.

**ADJOURNMENT**

Director Riffle adjourned the Regular Meeting of the Planning and Natural Resources Committee of the Midpeninsula Regional Open Space District at 5:45 p.m.

---

Maria Soria  
Deputy District Clerk





Midpeninsula Regional  
Open Space District

## PLANNING AND NATURAL RESOURCES COMMITTEE

Administrative Office  
330 Distel Circle  
Los Altos, CA 94022

June 30, 2015

### APPROVED MINUTES\*

#### ROLL CALL

Director Cyr called the Special Meeting of the Planning and Natural Resources Committee to order at 3:34 p.m.

**Members Present:** Jed Cyr and Larry Hassett

**Members Absent:** Curt Riffle

**Staff Present:** General Manager Steve Abbors, Assistant General Manager Ana Ruiz, Assistant General Counsel Hilary Stevenson, Planning Manager Jane Mark, Senior Planner Meredith Manning, and District Clerk Jennifer Woodworth

The committee selected Director Cyr to act as the Chair Pro-Tempore.

#### ORAL COMMUNICATIONS

There were none.

#### ADOPTION OF AGENDA

**Motion:** Director Hassett moved, and Director Cyr seconded the motion to adopt the agenda.

**VOTE: 2-0-0**

#### COMMITTEE BUSINESS

- 1. Approve the Planning and Natural Resources Committee Minutes:**  
April 14, 2015  
April 21, 2015  
April 29, 2015  
June 2, 2015

Director Cyr stated that the minutes for April 21, 2015 are continued to the next Planning and Natural Resources Committee meeting to allow the District Clerk to listen to the audio recordings to clarify comments made at the meeting.

**Motion:** Director Hassett moved, and Director Cyr seconded the motion to approve the minutes for the April 14, 2015, April 29, 2015, and June 2, 2015 Planning and Natural Resources Committee meetings.

**VOTE: 2-0-0** (Director Riffle absent)

## **2. Draft Schematic Design and Alternatives for the Mount Umunhum Summit Project (R-15-100)**

Senior Planner Meredith Manning described the current status of the project and summarized direction received from the Planning and Natural Resources Committee at the previous meeting on the topic.

Bob Birkeland, representing landscape architecture firm Restoration Design Group, provided a brief overview of the project's timeline and described various design challenges at the site, including exposed nature of the summit, limited parking, and ADA access. Mr. Birkeland outlined options for mitigating the challenges presented. Ms. Manning described various alternatives being explored for equestrian parking and access to the trails. Mr. Birkeland showed draft schematic designs for the summit displaying where potential shelters and parking areas would be located. Ms. Manning also described an open air option for the Mt. Umunhum tower to provide for interpretive elements and a gathering area for visitors. Finally, Mr. Birkeland provided project cost estimates and proposed project phasing.

Director Hassett inquired if the cost estimates provided includes the three options for the radar towers.

Ms. Manning explained that the options for the radar tower are not currently included in this project. The provided cost estimates also do not include costs for a potential well on the site. A well is currently the only option for providing potable water at the site because at this time the Regional Water Quality Control Board is not issuing permits for water to be brought to the site.

Director Hassett inquired further regarding the proposed gate allowing access to ADA parking.

Ms. Manning explained the gate would be unmanned and would have signs directing visitors to ADA parking and a drop-off area near the summit.

Extensive discussion ensued regarding the potential need and use for a shuttle to the summit. Ms. Manning reported that the option of a shuttle was discussed in 2012, and at that time it was determined staff would wait to determine visitor usage before exploring shuttle options.

Operations Manager Michael Newburn provided additional information regarding access needs for equestrians on the trail and at the summit, including trail width and shaded areas.

Ms. Manning described two installations currently on the site by partner agencies – Santa Clara Valley Water District and United States Geological Service. Ms. Manning reported the District

has received a request from the Santa Clara Valley Water District to temporarily mount an antenna on the radar tower, which would report on climate conditions.

The Committee agreed the Water District could place antenna on the tower.

Assistant General Counsel Hilary Stevenson reported staff can proceed with this direction through execution of a revocable license agreement to be negotiated with the Water District.

Public hearing opened at 5:16 p.m.

No speakers present.

Public hearing closed at 5:16 p.m.

Director Hassett inquired if guidelines would be developed in order to determine when the preserve would be closed for access.

Ms. Manning reported several access gates could be closed to prevent visitors from entering the site when it is closed. Mr. Abbors stated the Operations department would draft guidelines for determining when the site should be closed to ensure visitor safety.

The Committee provided feedback regarding the proposed shade structures, including their preference for a concrete structure for the trailhead area and minimalist structures for the summit area.

### **ADJOURNMENT**

Director Cyr adjourned the meeting of the Planning and Natural Resources Committee of Midpeninsula Regional Open Space District at 5:30 p.m.

---

Jennifer Woodworth, CMC  
District Clerk



Midpeninsula Regional  
Open Space District

## PLANNING AND NATURAL RESOURCES COMMITTEE

Administrative Office  
330 Distel Circle  
Los Altos, CA 94022

August 11, 2015

### DRAFT MINUTES

#### ROLL CALL

Director Riffle called the Special Meeting of the Planning and Natural Resources Committee to order at 2:30 p.m.

**Members Present:** Jed Cyr, Larry Hassett, and Curt Riffle

**Members Absent:** None

**Staff Present:** General Manager Steve Abbors, General Counsel Sheryl Schaffner, Project Manager Aaron Hébert, Planning Manager Jane Mark, Senior Planner Meredith Manning, and District Clerk Jennifer Woodworth

#### ORAL COMMUNICATIONS

No speakers present.

#### ADOPTION OF AGENDA

**Motion:** Director Cyr moved, and Director Hassett seconded the motion to adopt the agenda.

**VOTE: 3-0-0**

#### COMMITTEE BUSINESS

- 1. Approve the Planning and Natural Resources Committee Minutes:  
July 14, 2015**

**Motion:** Director Hassett moved, and Director Cyr seconded the motion to approve the minutes for the July 14, 2015 Planning and Natural Resources Committee meeting.

**VOTE: 3-0-0**

- 2. Redwood Cabin Structural Stabilization Analysis (R-15-119)**

Project Manager Aaron Hébert described the location of the Redwood Cabin and access to the site. Mr. Hébert provided photos and described the current condition of the Redwood Cabin, including roof and deck deterioration and structural integrity of the floor and walls. Mr. Hébert explained his concerns related to the Redwood Cabin's substructure and nearby bridge, which will both require structural evaluation to determine long term stability. Finally, Mr. Hébert provided further information related to registering the Redwood Cabin with the San Mateo County Historic Resource Advisory Board.

Director Hassett inquired as to the process to repair the rotting substructure.

Mr. Hébert explained staff would work with Environmental Science Associates to develop plans to repair the substructure and meet with San Mateo County staff to ensure the design is consistent with the County's permit requirements.

Director Hassett inquired if registering the Redwood Cabin as a historic resource would allow the District to seek grant funds to restore the cabin.

Mr. Hébert explained that registering the Redwood Cabin would be the first step in pursuing grant funds; however, he did not want to overstate the potential for grant funds because more historic buildings exist than funds available. If the Board directed staff to seek grant funds for restoration, staff would then register the cabin with the state as a historic resource.

Director Riffle inquired as to the Committee's interest in preserving the Redwood Cabin for use as a residence or hiker's hut.

Directors Hassett and Cyr expressed interest in completing maintenance and structural stabilization to arrest further building decay, but absent finding a partner or grant funding did not support committing large amounts of District funds to restoring the cabin due to its condition and remote location.

Director Riffle expressed his concerns related to the cost and feasibility associated with ongoing maintenance of the site due to its remote location.

Public comment opened at 3:19 p.m.

No speakers present.

Public comment closed at 3:19 p.m.

**Motion:** Director Hassett moved, and Director Cyr seconded the motion to forward the following recommendations for the full Board of Directors' consideration:

1. Amend a contract with Environmental Science Associates to develop cost estimates for stabilization repairs to the Redwood Cabin and to complete a structural evaluation of an access bridge leading to the Redwood Cabin.
2. Register the Redwood Cabin with the San Mateo County Historic Resource Advisory Board in order to qualify the structure for the California Historical Building Code regulations.

**VOTE: 3-0-0**

### 3. Final Design Development Options for the Mount Umunhum Summit Project (R-15-120)

Senior Planner Meredith Manning described the current status of the project, summarized direction received from the Planning and Natural Resources Committee at previous meetings and outlined the decisions before the Committee related to the three options for the final design elements. Ms. Manning outlined the project schedule for implementing the Board's decision for the summit restoration and design.

Bob Birkeland, representing landscape architecture firm Restoration Design Group, described the three schematic design options including various elements of each and associated costs for each of the three options.

Acting Planner II Bryan Apple provided an update on efforts to locate a well or other water source for the project. Mr. Apple described the potential costs associated with the feasibility of providing potable water at the summit, including assessing the site for potential well sites and potential ongoing costs for well water treatment and monitoring. Mr. Apple explained that the State Water Resources Control Board is currently not permitting the hauling of potable water, so this is not an option at this time.

Director Cyr left at 4:07 p.m. and returned at 4:09 p.m.

Director Cyr inquired regarding whether the full Board of Directors would be weighing in on the three schematic options before the project moved forward.

Ms. Manning explained that currently the project would move forward based on the Committee's recommendations, and once designs were developed, the decision would be forwarded to the Board of Directors to authorize the construction.

Director Hassett explained that he is hesitant to bring the Committee's recommendations to the full Board at this time if it will create a lengthy delay to the project and would prefer to see this project continue to move forward.

Public comment opened at 4:20 p.m.

No speakers present.

Public comment closed at 4:20 p.m.

Director Hassett suggested the following modifications to Option B:

- Inclusion of the summit stair described in Option A.
- Direct the creation of additional renderings to show how the breezeway structure would look based on the "Open Air" option with the removal of the upper four floors of the Radar Tower.
- Inclusion of the trailhead shelters described in option A.

**Motion:** Director Cyr moved, and Director Hassett seconded the motion to confirm the recommendation for a mid-level option, and direct staff to make the following adjustments to the design: inclusion of the summit stair and the trailhead shelter described in option A. The

Committee further directed staff to create additional renderings of the breezeway structure illustrating how this structure would look if the top four stories of the Radar Tower were removed to create the “Open Air” option.

**VOTE: 3-0-0**

**Motion:** Director Hassett moved, and Director Cyr seconded the motion to direct staff to report to the full board on the recommendations of the Planning and Natural Resources before moving proceeding with final design development and production of construction documents, which will form the basis for permit submittals and a Request for Bids package.

**VOTE: 3-0-0**

**ADJOURNMENT**

Director Riffle adjourned the meeting of the Planning and Natural Resources Committee of Midpeninsula Regional Open Space District at 4:45 p.m.

---

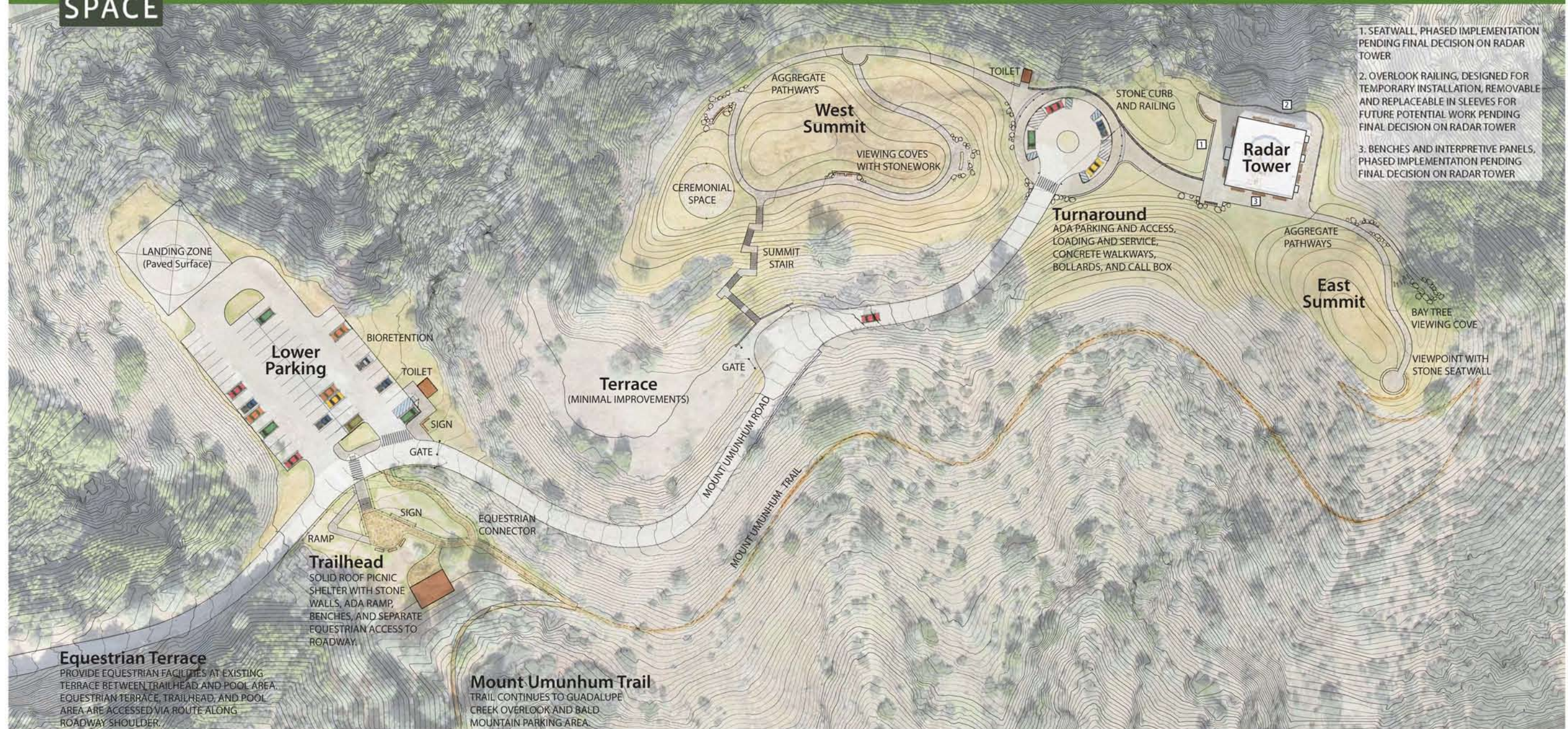
Jennifer Woodworth, CMC  
District Clerk





# MOUNT UMUNHUM SUMMIT PROJECT

Midpeninsula Regional Open Space District



## PNR COMMITTEE PREFERRED SCHEMATIC DESIGN

26 August, 2015



**RDG** Restoration Design Group Team

SANDIS	Tim Best
Rutherford + Chekene	Vic Claassen
Ware Associates	Lech Naumovich
Leslie Stone Associates	Cornerstone Earth Group





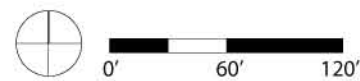
# MOUNT UMUNHUM SUMMIT PROJECT

Midpeninsula Regional Open Space District



## SCHEMATIC PLAN - OPTION A

26 August, 2015



**RDG** Restoration Design Group Team

SANDIS	Tim Best
Rutherford + Chekene	Vic Claassen
Ware Associates	Lech Naumovich
Leslie Stone Associates	Cornerstone Earth Group





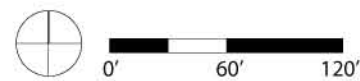
# MOUNT UMUNHUM SUMMIT PROJECT

Midpeninsula Regional Open Space District



## SCHEMATIC PLAN - OPTION B

26 August, 2015



Restoration Design Group Team

SANDIS  
Rutherford + Chekene  
Ware Associates  
Leslie Stone Associates

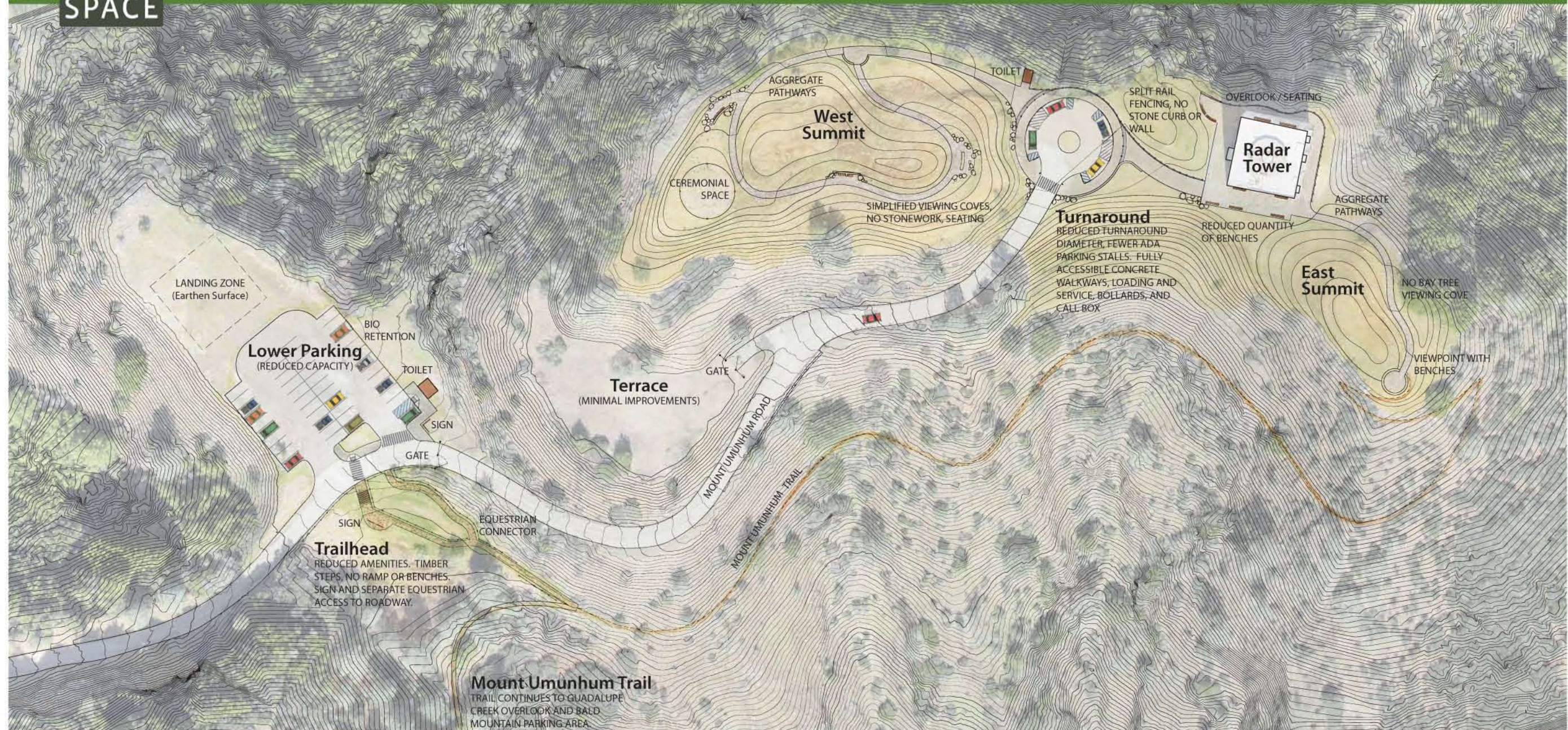
Tim Best  
Vic Claassen  
Lech Naumovich  
Cornerstone Earth Group





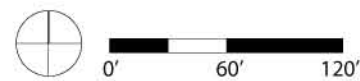
# MOUNT UMUNHUM SUMMIT PROJECT

Midpeninsula Regional Open Space District



## SCHEMATIC PLAN - OPTION C

26 August, 2015



Restoration Design Group Team

SANDIS  
 Rutherford + Chekene  
 Ware Associates  
 Leslie Stone Associates

Tim Best  
 Vic Claassen  
 Lech Naumovich  
 Cornerstone Earth Group



**Mount Umunhum Summit Project - Schematic Plan**  
**Midpeninsula Regional Open Space District / Restoration Design Group, LLC**  
*Preliminary Estimate of Probable Construction Costs*

8/26/2015

**Planning and Natural Resources Committee's Preferred Option**

ITEM / DESCRIPTION	QTY.	UNIT	COST	TOTAL
<b>GENERAL SITE WORK</b>				
Demolition (Misc.Site Work, Prep Base of Tower For Public Access)	1	LS	\$50,000	\$50,000
Rough Grade Summit, Tower, Parking Areas and Trailhead	1	LS	\$350,000	\$350,000
			<b>Subtotal</b>	<b>\$400,000</b>
<b>GENERAL RESTORATION WORK</b>				
Native Seeding	1	LS	\$30,000	\$30,000
Rock Outcrops for Renaturalized Revegetation Areas (From Site Areas or Imported)	1	LS	\$50,000	\$50,000
Soil Preparation	1	LS	\$100,000	\$100,000
Revegetation of Restoration Areas	1	LS	\$200,000	\$200,000
Irrigation Allowance	1	LS	\$100,000	\$100,000
			<b>Subtotal</b>	<b>\$480,000</b>
<b>WEST SUMMIT</b>				
Summit Area ADA Pathways (6 ft. width)	3,400	SF	\$12	\$40,800
Summit Viewing Coves Stone or Concrete Walls (West Summit)	4	EA	\$20,000	\$80,000
Ceremonial Space (West Summit)	1	LS	\$20,000	\$20,000
			<b>Subtotal</b>	<b>\$140,800</b>
<b>TURN-AROUND AND TOWER AREA</b>				
Turn-Around and Adjacent Road (AC Paving - Summit Approach Road Excluded)	8,000	SF	\$12	\$96,000
Bollards/Barriers at Turn-Around	1	LS	\$30,000	\$30,000
Truncated Domes at Turn-Around	1	LS	\$15,000	\$15,000
Concrete Paving at Turn-Around, Path To 1st Viewing Cove, Ramp to Tower Court	6,000	SF	\$12	\$72,000
Aggregate Paved ADA Court Around Tower	5,300	SF	\$8	\$42,400
Guardrail along Northside of Tower/Court	175	LF	\$150	\$26,250
Stone curb (9") around Turn-Around and Ramp to Tower Court	300	LF	\$150	\$45,000
Galvanized Metal Railing Along Road at Turn-Around	200	LF	\$100	\$20,000
Benches	11	EA	\$5,000	\$55,000
Stone Wall West of Tower (34")	85	LF	\$250	\$21,250
Customized Pre-manufactured Single Vault Toilet	1	LS	\$50,000	\$50,000
Call Box at Turnaround (does not include cable runs from source)	1	LS	\$10,000	\$10,000
Water Tank (temporary, non-potable for irrigation)	1	LS	\$12,000	\$12,000
Drainage and Bioretention Areas Allowance (C.3 Areas)	1	LS	\$30,000	\$30,000
			<b>Subtotal</b>	<b>\$524,900</b>
<b>EAST SUMMIT</b>				
Summit Area ADA Pathways (6 ft. width)	2,000	SF	\$12	\$24,000
Bay Tree Viewing Cove (East Summit)	1	LS	\$20,000	\$20,000
Viewpoint (Stone Circular Seatwall)	1	LS	\$40,000	\$40,000
			<b>Subtotal</b>	<b>\$84,000</b>
<b>TERRACE (Minimal Improvements)</b>				
Vehicular Gate for Restricted Access to Terrace	1	LS	\$7,500	\$7,500
AC Paving Removal at Terrace Entry and Regrade to gravel surface	1	LS	\$10,000	\$10,000
Minimal regrading to naturalize topography	1	LS	\$7,500	\$7,500
Native Seeding	1	LS	\$2,000	\$2,000
			<b>Subtotal</b>	<b>\$27,000</b>

**Mount Umunhum Summit Project - Schematic Plan**  
**Midpeninsula Regional Open Space District / Restoration Design Group, LLC**  
*Preliminary Estimate of Probable Construction Costs*

8/26/2015

**Planning and Natural Resources Committee's Preferred Option**

ITEM / DESCRIPTION	QTY.	UNIT	COST	TOTAL
<b>SUMMIT STAIR</b>				
In Grade Concrete Stairway and Railing (From Upper Parking Entry to West Summit)	1	LS	\$300,000	\$300,000
Retaining Walls at Stair Landings	1	LS	\$50,000	\$50,000
Improvements at Base of Stair (Vehicle Pull-out / Pedestrian Landing)	1	LS	\$30,000	\$30,000
			<b>Subtotal</b>	<b>\$380,000</b>
<b>LOWER PARKING</b>				
Lower Parking and Entry Road Section (AC Paving)	25,000	SF	\$10	\$250,000
Landing Zone (AC Paving)	6,400	SF	\$10	\$64,000
Concrete Pathways to Toilet and Crosswalk to Trailhead	1,000	SF	\$12	\$12,000
Pre-manufactured Double Vault Toilet	1	LS	\$50,000	\$50,000
Sign Board	1	LS	\$5,000	\$5,000
Vehicular Gate for Restricted Access to Summit	1	LS	\$7,500	\$7,500
Drainage and Bioretention Areas Allowance (C.3 Areas)	1	LS	\$75,000	\$75,000
			<b>Subtotal</b>	<b>\$463,500</b>
<b>TRAILHEAD</b>				
Trailhead Area Aggregate Paving	2,500	SF	\$8	\$20,000
Concrete Stairs and ADA Ramp	1	LS	\$25,000	\$25,000
Split-Rail Fence	400	LF	\$40	\$16,000
Benches	2	EA	\$3,000	\$6,000
Sign Board	1	LS	\$5,000	\$5,000
Picnic Shelter (Solid Roof w/ Stone Walls)	1	LS	\$275,000	\$275,000
			<b>Subtotal</b>	<b>\$347,000</b>
<b>EQUESTRIAN TERRACE (BELOW TRAILHEAD)</b>				
Housing Trail (4 ft. width)	9,000	SF	\$12	\$108,000
Equestrian Staging Area	1	LS	\$20,000	\$20,000
Parking Area (AC Paving)	1	LS	\$45,000	\$45,000
Picnic Area	1	LS	\$20,000	\$20,000
Water Tank (non-potable for fire)	1	LS	\$12,000	\$12,000
			<b>Subtotal</b>	<b>\$205,000</b>
<b>INTERPRETIVE AND SIGNAGE</b>				
Interpretive Allowance (Summit and Tower Areas)	1	LS	\$100,000	\$100,000
Site, Trail, and Regulatory Signage	1	LS	\$30,000	\$30,000
			<b>Subtotal</b>	<b>\$130,000</b>
<b>OPTION B SUBTOTAL</b>				<b>\$3,182,200</b>
General Conditions (Mobilization, O+P - 15% of total)				\$477,330
<b>SUBTOTAL with General Conditions</b>				<b>\$3,659,530</b>
Design Fee Contingency (15%)				\$548,930
<b>PNR Committee's Preferred Option TOTAL</b>				<b>\$4,208,460</b>

**ADDITIONAL / EXCLUDED ITEMS**

<i>MROSD Soft Costs, Survey, Permits, Coordination and Project Management</i>	<i>Excluded</i>
<i>Summit Approach Road (Estimate is for Summit Court, Turn-around, Parking Areas Only)</i>	<i>Excluded</i>
<i>Site Geotechnical Slope Stability Studies and Implementation</i>	<i>Excluded</i>
<i>Water and Electrical Service for Temporary Irrigation System</i>	<i>Excluded</i>
<i>40-Year Maintenance Cost (Basic Maintenance Assumed to be Provided by MROSD)</i>	<i>Excluded</i>

**Mount Umunhum Summit Project - Schematic Plan**  
**Midpeninsula Regional Open Space District / Restoration Design Group, LLC**  
*Preliminary Estimate of Probable Construction Costs*

8/26/2015

**OPTION A**

ITEM / DESCRIPTION	QTY.	UNIT	COST	TOTAL
<b>GENERAL SITE WORK</b>				
Demolition (Misc.Site Work, Prep Base of Tower For Public Access)	1	LS	\$50,000	\$50,000
Rough Grade Summit, Tower, Parking Areas and Trailhead	1	LS	\$350,000	\$350,000
<b>Subtotal</b>				<b>\$400,000</b>
<b>GENERAL RESTORATION WORK</b>				
Native Seeding	1	LS	\$30,000	\$30,000
Rock Outcrops for Renaturalized Revegetation Areas (From Site or Imported)	1	LS	\$50,000	\$50,000
Soil Preparation	1	LS	\$100,000	\$100,000
Revegetation of Restoration Areas	1	LS	\$200,000	\$200,000
Irrigation Allowance	1	LS	\$100,000	\$100,000
<b>Subtotal</b>				<b>\$480,000</b>
<b>WEST SUMMIT</b>				
Summit Area ADA Pathways (6 ft. width)	3,400	SF	\$12	\$40,800
Summit Viewing Coves Stone or Concrete Walls (West Summit)	4	EA	\$20,000	\$80,000
Ceremonial Space (West Summit)	1	LS	\$20,000	\$20,000
<b>Subtotal</b>				<b>\$140,800</b>
<b>TURN-AROUND AND TOWER AREA</b>				
Turn-Around and Adjacent Road (AC Paving - Summit Approach Road Excluded)	8,000	SF	\$12	\$96,000
Bollards/Barriers at Turn-Around	1	LS	\$30,000	\$30,000
Truncated Domes at Turn-Around	1	LS	\$15,000	\$15,000
Concrete Paving at Turn-Around, Path To 1st Viewing Cove, Ramp to Tower Court	6,000	SF	\$12	\$72,000
Aggregate Paved ADA Court Around Tower	5,300	SF	\$8	\$42,400
Breezeway Shelter at Tower (Steel)	1	LS	\$200,000	\$200,000
Guardrail along Northside of Tower/Court	175	LF	\$150	\$26,250
Stone curb (9") around Turn-Around and Ramp to Tower Court	300	LF	\$150	\$45,000
Galvanized Metal Railing Along Road at Turn-Around	200	LF	\$100	\$20,000
Benches	11	EA	\$5,000	\$55,000
Stone Wall West of Tower (34")	85	LF	\$250	\$21,250
Customized Pre-manufactured Single Vault Toilet	1	LS	\$50,000	\$50,000
Call Box at Turnaround (does not include cable runs from source)	1	LS	\$10,000	\$10,000
Water Tank (temporary, non-potable for irrigation)	1	LS	\$12,000	\$12,000
Drainage and Bioretention Areas Allowance (C.3 Areas)	1	LS	\$30,000	\$30,000
<b>Subtotal</b>				<b>\$724,900</b>
<b>EAST SUMMIT</b>				
Summit Area ADA Pathways (6 ft. width)	2,000	SF	\$12	\$24,000
Bay Tree Viewing Cove (East Summit)	1	LS	\$20,000	\$20,000
Viewpoint (Circular Stone Seatwall)	1	LS	\$40,000	\$40,000
<b>Subtotal</b>				<b>\$84,000</b>
<b>TERRACE - RENATURALIZED</b>				
Rough Grading and Rock Slope Naturalization	1	LS	\$300,000	\$300,000
Native Seeding	1	LS	\$12,500	\$12,500
Rock Outcrops for Renaturalized Revegetation Areas (From Site Areas or Imported)	1	LS	\$50,000	\$50,000
Soil Preparation	1	LS	\$25,000	\$25,000
Revegetation of Restoration Areas	1	LS	\$50,000	\$50,000
Irrigation Allowance	1	LS	\$30,000	\$30,000
<b>Subtotal</b>				<b>\$467,500</b>

**Mount Umunhum Summit Project - Schematic Plan**  
**Midpeninsula Regional Open Space District / Restoration Design Group, LLC**  
*Preliminary Estimate of Probable Construction Costs*

8/26/2015

**OPTION A**

ITEM / DESCRIPTION	QTY.	UNIT	COST	TOTAL
<b>SUMMIT STAIR</b>				
In Grade Concrete Stairway and Railing (From Upper Parking Entry to West Summit)	1	LS	\$300,000	\$300,000
Retaining Walls at Stair Landings	1	LS	\$50,000	\$50,000
Improvements at Base of Stair (Vehicle Pull-out / Pedestrian Landing)	1	LS	\$30,000	\$30,000
<b>Subtotal</b>				<b>\$380,000</b>
<b>LOWER PARKING</b>				
Lower Parking and Entry Road Section (AC Paving)	25,000	SF	\$10	\$250,000
Landing Zone (AC Paving)	6,400	SF	\$10	\$64,000
Concrete Pathways to Toilet and Crosswalk to Trailhead	1,000	SF	\$12	\$12,000
Custom Pre-manufactured Double Vault Toilet	1	LS	\$75,000	\$75,000
Sign Board	1	LS	\$5,000	\$5,000
Vehicular Gate for Restricted Access to Summit	1	LS	\$7,500	\$7,500
Drainage and Bioretention Areas Allowance (C.3 Areas)	1	LS	\$75,000	\$75,000
<b>Subtotal</b>				<b>\$488,500</b>
<b>TRAILHEAD</b>				
Trailhead Area Aggregate Paving	2,500	SF	\$8	\$20,000
Concrete Stairs and ADA Ramp	1	LS	\$25,000	\$25,000
Split-Rail Fence	400	LF	\$40	\$16,000
Benches	2	EA	\$3,000	\$6,000
Sign Board	1	LS	\$5,000	\$5,000
Picnic Shelter (Solid Roof w/ Stone Walls)	1	LS	\$275,000	\$275,000
<b>Subtotal</b>				<b>\$347,000</b>
<b>EQUESTRIAN TERRACE (BELOW TRAILHEAD)</b>				
Housing Trail (4 ft. width)	9,000	SF	\$12	\$108,000
Equestrian Staging Area	1	LS	\$20,000	\$20,000
Parking Area (AC Paving)	1	LS	\$45,000	\$45,000
Picnic Area	1	LS	\$20,000	\$20,000
Water Tank (non-potable for fire)	1	LS	\$12,000	\$12,000
<b>Subtotal</b>				<b>\$205,000</b>
<b>INTERPRETIVE AND SIGNAGE</b>				
Interpretive Allowance (Summit and Tower Areas)	1	LS	\$100,000	\$100,000
Site, Trail, and Regulatory Signage	1	LS	\$30,000	\$30,000
<b>Subtotal</b>				<b>\$130,000</b>
<b>OPTION A SUBTOTAL</b>				<b>\$3,847,700</b>
General Conditions (Mobilization, O+P - 15% of total)				\$577,155
<b>SUBTOTAL with General Conditions</b>				<b>\$4,424,855</b>
Design Fee Contingency (15%)				\$663,728
<b>OPTION A TOTAL</b>				<b>\$5,088,583</b>

**Mount Umunhum Summit Project - Schematic Plan**  
**Midpeninsula Regional Open Space District / Restoration Design Group, LLC**  
*Preliminary Estimate of Probable Construction Costs*

8/26/2015

**OPTION A**

ITEM / DESCRIPTION	QTY.	UNIT	COST	TOTAL
<b>ADDITIONAL / EXCLUDED ITEMS</b>				
<i>MROSD Soft Costs, Survey, Permits, Coordination and Project Management</i>				<i>Excluded</i>
<i>Summit Approach Road (Estimate is for Summit Court, Turn-around, Parking Areas Only)</i>				<i>Excluded</i>
<i>Site Geotechnical Slope Stability Studies and Implementation</i>				<i>Excluded</i>
<i>Water and Electrical Service for Temporary Irrigation System</i>				<i>Excluded</i>
<i>40-Year Maintenance Cost (Basic Maintenance Assumed to be Provided by MROSD)</i>				<i>Excluded</i>
<b>TERRACE ALTERNATE - Full Build-out</b>				
Upper Parking at Terrace (AC Paving)	12,500	SF	\$10	\$125,000
Improvements to Upper Parking Entry (Regrading, Widen Road, Retaining Walls)	1	LS	\$150,000	\$150,000
Concrete Pathways to Shelter, Toilet and Stair	1,400	SF	\$12	\$16,800
Picnic Shelter (Post and Beam w/ Seatwall)	1	LS	\$100,000	\$100,000
Custom Pre-manufactured Double Vault Toilet	1	LS	\$75,000	\$75,000
Benches	4	EA	\$3,000	\$12,000
Sign Board	1	LS	\$5,000	\$5,000
Drainage and Bioretention Areas Allowance (C.3 Planters)	1	LS	\$30,000	\$30,000
<b>SUBTOTAL</b>				<b>\$513,800</b>
<b><i>\$513,800 replaces the Upper Parking Restoration cost of \$467,000 for an add of \$46,300</i></b>				



**Mount Umunhum Summit Project - Schematic Plan**  
**Midpeninsula Regional Open Space District / Restoration Design Group, LLC**  
*Preliminary Estimate of Probable Construction Costs*

8/26/2015

**OPTION B**

ITEM / DESCRIPTION	QTY.	UNIT	COST	TOTAL
<b>GENERAL SITE WORK</b>				
Demolition (Misc.Site Work, Prep Base of Tower For Public Access)	1	LS	\$50,000	\$50,000
Rough Grade Summit, Tower, Parking Areas and Trailhead	1	LS	\$350,000	\$350,000
			<b>Subtotal</b>	<b>\$400,000</b>
<b>GENERAL RESTORATION WORK</b>				
Native Seeding	1	LS	\$30,000	\$30,000
Rock Outcrops for Renaturalized Revegetation Areas (From Site Areas or Imported)	1	LS	\$50,000	\$50,000
Soil Preparation	1	LS	\$100,000	\$100,000
Revegetation of Restoration Areas	1	LS	\$200,000	\$200,000
Irrigation Allowance	1	LS	\$100,000	\$100,000
			<b>Subtotal</b>	<b>\$480,000</b>
<b>WEST SUMMIT</b>				
Summit Area ADA Pathways (6 ft. width)	3,400	SF	\$12	\$40,800
Summit Viewing Coves Stone or Concrete Walls (West Summit)	4	EA	\$20,000	\$80,000
Ceremonial Space (West Summit)	1	LS	\$20,000	\$20,000
			<b>Subtotal</b>	<b>\$140,800</b>
<b>TURN-AROUND AND TOWER AREA</b>				
Turn-Around and Adjacent Road (AC Paving - Summit Approach Road Excluded)	8,000	SF	\$12	\$96,000
Bollards/Barriers at Turn-Around	1	LS	\$30,000	\$30,000
Truncated Domes at Turn-Around	1	LS	\$15,000	\$15,000
Concrete Paving at Turn-Around, Path To 1st Viewing Cove, Ramp to Tower Court	6,000	SF	\$12	\$72,000
Aggregate Paved ADA Court Around Tower	5,300	SF	\$8	\$42,400
Breezeway Shelter at Tower (Steel)	1	LS	\$200,000	\$200,000
Guardrail along Northside of Tower/Court	175	LF	\$150	\$26,250
Stone curb (9") around Turn-Around and Ramp to Tower Court	300	LF	\$150	\$45,000
Galvanized Metal Railing Along Road at Turn-Around	200	LF	\$100	\$20,000
Benches	11	EA	\$5,000	\$55,000
Stone Wall West of Tower (34")	85	LF	\$250	\$21,250
Customized Pre-manufactured Single Vault Toilet	1	LS	\$50,000	\$50,000
Call Box at Turnaround (does not include cable runs from source)	1	LS	\$10,000	\$10,000
Water Tank (temporary, non-potable for irrigation)	1	LS	\$12,000	\$12,000
Drainage and Bioretention Areas Allowance (C.3 Areas)	1	LS	\$30,000	\$30,000
			<b>Subtotal</b>	<b>\$724,900</b>
<b>EAST SUMMIT</b>				
Summit Area ADA Pathways (6 ft. width)	2,000	SF	\$12	\$24,000
Bay Tree Viewing Cove (East Summit)	1	LS	\$20,000	\$20,000
Viewpoint (Stone Circular Seatwall)	1	LS	\$40,000	\$40,000
			<b>Subtotal</b>	<b>\$84,000</b>
<b>TERRACE (Minimal Improvements)</b>				
Vehicular Gate for Restricted Access to Terrace	1	LS	\$7,500	\$7,500
AC Paving Removal at Parking Entry and Regrade to gravel surface	1	LS	\$10,000	\$10,000
Minimal regrading to naturalize topography	1	LS	\$7,500	\$7,500
Native Seeding	1	LS	\$2,000	\$2,000
			<b>Subtotal</b>	<b>\$27,000</b>
<b>SUMMIT STAIR</b>				
Not included				

**Mount Umunhum Summit Project - Schematic Plan**  
**Midpeninsula Regional Open Space District / Restoration Design Group, LLC**  
*Preliminary Estimate of Probable Construction Costs*

8/26/2015

**OPTION B**

ITEM / DESCRIPTION	QTY.	UNIT	COST	TOTAL
<b>LOWER PARKING</b>				
Lower Parking and Entry Road Section (AC Paving)	25,000	SF	\$10	\$250,000
Landing Zone (AC Paving)	6,400	SF	\$10	\$64,000
Concrete Pathways to Toilet and Crosswalk to Trailhead	1,000	SF	\$12	\$12,000
Pre-manufactured Double Vault Toilet	1	LS	\$50,000	\$50,000
Sign Board	1	LS	\$5,000	\$5,000
Vehicular Gate for Restricted Access to Summit	1	LS	\$7,500	\$7,500
Drainage and Bioretention Areas Allowance (C.3 Areas)	1	LS	\$75,000	\$75,000
			<b>Subtotal</b>	<b>\$463,500</b>
<b>TRAILHEAD</b>				
Trailhead Area Aggregate Paving	2,500	SF	\$8	\$20,000
Concrete Stairs and ADA Ramp	1	LS	\$25,000	\$25,000
Split-Rail Fence	400	LF	\$40	\$16,000
Benches	2	EA	\$3,000	\$6,000
Sign Board	1	LS	\$5,000	\$5,000
Picnic Shelter (Post and Beam w/ Seatwall)	1	LS	\$100,000	\$100,000
			<b>Subtotal</b>	<b>\$172,000</b>
<b>EQUESTRIAN TERRACE (BELOW TRAILHEAD)</b>				
Housing Trail (4 ft. width)	9,000	SF	\$12	\$108,000
Equestrian Staging Area	1	LS	\$20,000	\$20,000
Parking Area (AC Paving)	1	LS	\$45,000	\$45,000
Picnic Area	1	LS	\$20,000	\$20,000
Water Tank (non-potable for fire)	1	LS	\$12,000	\$12,000
			<b>Subtotal</b>	<b>\$205,000</b>
<b>INTERPRETIVE AND SIGNAGE</b>				
Interpretive Allowance (Summit and Tower Areas)	1	LS	\$100,000	\$100,000
Site, Trail, and Regulatory Signage	1	LS	\$30,000	\$30,000
			<b>Subtotal</b>	<b>\$130,000</b>
<b>OPTION B SUBTOTAL</b>				<b>\$2,827,200</b>
General Conditions (Mobilization, O+P - 15% of total)				\$424,080
<b>SUBTOTAL with General Conditions</b>				<b>\$3,251,280</b>
Design Fee Contingency (15%)				\$487,692
<b>OPTION B TOTAL</b>				<b>\$3,738,972</b>

**ADDITIONAL / EXCLUDED ITEMS**

MROSD Soft Costs, Survey, Permits, Coordination and Project Management	Excluded
Summit Approach Road (Estimate is for Summit Court, Turn-around, Parking Areas Only)	Excluded
Site Geotechnical Slope Stability Studies and Implementation	Excluded
Water and Electrical Service for Temporary Irrigation System	Excluded
40-Year Maintenance Cost (Basic Maintenance Assumed to be Provided by MROSD)	Excluded

**Mount Umunhum Summit Project - Schematic Plan**  
**Midpeninsula Regional Open Space District / Restoration Design Group, LLC**  
*Preliminary Estimate of Probable Construction Costs*

8/26/2015

**OPTION C**

ITEM / DESCRIPTION	QTY.	UNIT	COST	TOTAL
<b>GENERAL SITE WORK</b>				
Demolition (Misc.Site Work, Prep Base of Tower For Public Access)	1	LS	\$50,000	\$50,000
Rough Grade Summit, Tower, Parking Areas and Trailhead	1	LS	\$350,000	\$350,000
		<b>Subtotal</b>		<b>\$400,000</b>
<b>GENERAL RESTORATION WORK</b>				
Native Seeding	1	LS	\$30,000	\$30,000
Rock Outcrops for Renaturalized Revegetation Areas (From Site Areas or Imported)	1	LS	\$50,000	\$50,000
Soil Preparation	1	LS	\$100,000	\$100,000
Revegetation of Restoration Areas	1	LS	\$200,000	\$200,000
Irrigation Allowance	1	LS	\$100,000	\$100,000
		<b>Subtotal</b>		<b>\$480,000</b>
<b>WEST SUMMIT</b>				
Summit Area ADA Pathways (6 ft. width)	3,400	SF	\$12	\$40,800
Summit Viewing Coves Log Benches (West Summit)	4	EA	\$7,500	\$30,000
Ceremonial Space (West Summit)	1	LS	\$15,000	\$15,000
		<b>Subtotal</b>		<b>\$85,800</b>
<b>TURN-AROUND AND TOWER AREA (Reduced Turn-Around w/ 2 ADA Stalls)</b>				
Turn-Around & Adjacent Road (AC Paving - Summit Approach Road Excluded)	6,500	SF	\$12	\$78,000
Bollards/Barriers at Turn-Around	1	LS	\$15,000	\$15,000
Truncated Domes at Turn-Around	1	LS	\$15,000	\$15,000
Concrete Paving at Turn-Around, Path To 1st Viewing Cove, Ramp to Tower Court	5,000	SF	\$12	\$60,000
Aggregate Paved ADA Court Around Tower	5,300	SF	\$8	\$42,400
Guardrail along Northside of Tower/Court	175	LF	\$150	\$26,250
Split-Rail Fence Along Road at Turn-Around	200	LF	\$40	\$8,000
Benches	9	EA	\$5,000	\$45,000
Customized Pre-manufactured Single Vault Toilet	1	LS	\$50,000	\$50,000
Call Box at Turnaround (does not include cable runs from source)	1	LS	\$10,000	\$10,000
Water Tank (temporary, non-potable for irrigation)	1	LS	\$12,000	\$12,000
Drainage and Bioretention Areas Allowance (C.3 Planters)	1	LS	\$30,000	\$30,000
		<b>Subtotal</b>		<b>\$391,650</b>
<b>EAST SUMMIT</b>				
Summit Area ADA Pathways (6 ft. width)	2,000	SF	\$12	\$24,000
Viewpoint (Aggregate Paving w/ Log Benches)	1	LS	\$20,000	\$20,000
		<b>Subtotal</b>		<b>\$44,000</b>
<b>TERRACE (Minimal Improvements)</b>				
Vehicular Gate for Restricted Access to Terrace	1	LS	\$7,500	\$7,500
AC Paving Removal at Terrace Entry and Regrade to gravel surface	1	LS	\$10,000	\$10,000
Minimal regrading to naturalize topography	1	LS	\$7,500	\$7,500
Native Seeding	1	LS	\$2,000	\$2,000
		<b>Subtotal</b>		<b>\$27,000</b>
<b>SUMMIT STAIR</b>				
Not included				

**Mount Umunhum Summit Project - Schematic Plan**  
**Midpeninsula Regional Open Space District / Restoration Design Group, LLC**  
*Preliminary Estimate of Probable Construction Costs*

8/26/2015

**OPTION C**

ITEM / DESCRIPTION	QTY.	UNIT	COST	TOTAL
<b>LOWER PARKING (Reduced Size)</b>				
Partial Lower Parking and Entry Road Section (AC Paving)	15,000	SF	\$10	\$150,000
Landing Zone (Compacted Earth Surfacing)	6,400	SF	\$3	\$19,200
Concrete Pathways to Toilet and Crosswalk to Trailhead	1,000	SF	\$12	\$12,000
Pre-manufactured Double Vault Toilet	1	LS	\$50,000	\$50,000
Sign Board	1	LS	\$5,000	\$5,000
Vehicular Gate for Restricted Access to Summit	1	LS	\$7,500	\$7,500
Drainage and Bioretention Areas Allowance (C.3 Planters)	1	LS	\$50,000	\$50,000
			<b>Subtotal</b>	<b>\$293,700</b>
<b>TRAILHEAD (Reduced Amenities)</b>				
Trailhead Area Aggregate Paving	1,000	SF	\$8	\$8,000
Timber Stairs	1	LS	\$5,000	\$5,000
Split-Rail Fence	150	LF	\$40	\$6,000
Benches	2	EA	\$3,000	\$6,000
Sign Board	1	LS	\$5,000	\$5,000
			<b>Subtotal</b>	<b>\$30,000</b>
<b>EQUESTRIAN TERRACE (BELOW TRAILHEAD)</b>				
No improvements in this area				
<b>INTERPRETIVE AND SIGNAGE</b>				
Interpretive Allowance (Summit and Tower Areas)	1	LS	\$100,000	\$100,000
Site, Trail, and Regulatory Signage	1	LS	\$30,000	\$30,000
			<b>Subtotal</b>	<b>\$130,000</b>
<b>OPTION C SUBTOTAL</b>				<b>\$1,882,150</b>
General Conditions (Mobilization, O+P - 15% of total)				\$282,323
<b>SUBTOTAL with General Conditions</b>				<b>\$2,164,473</b>
Design Fee Contingency (15%)				\$324,671
<b>OPTION C TOTAL</b>				<b>\$2,489,143</b>

<b>ADDITIONAL / EXCLUDED ITEMS</b>	
<i>MROSD Soft Costs, Survey, Permits, Coordination and Project Management</i>	<i>Excluded</i>
<i>Summit Approach Road (Estimate is for Summit Court, Turn-around, Parking Areas Only)</i>	<i>Excluded</i>
<i>Site Geotechnical Slope Stability Studies and Implementation</i>	<i>Excluded</i>
<i>Water and Electrical Service for Temporary Irrigation System</i>	<i>Excluded</i>
<i>40-Year Maintenance Cost (Basic Maintenance Assumed to be Provided by MROSD)</i>	<i>Excluded</i>