

“Roads to Trails - Less is More”

“Offering realistic and effective solutions for improving existing trail systems”

Session Overview

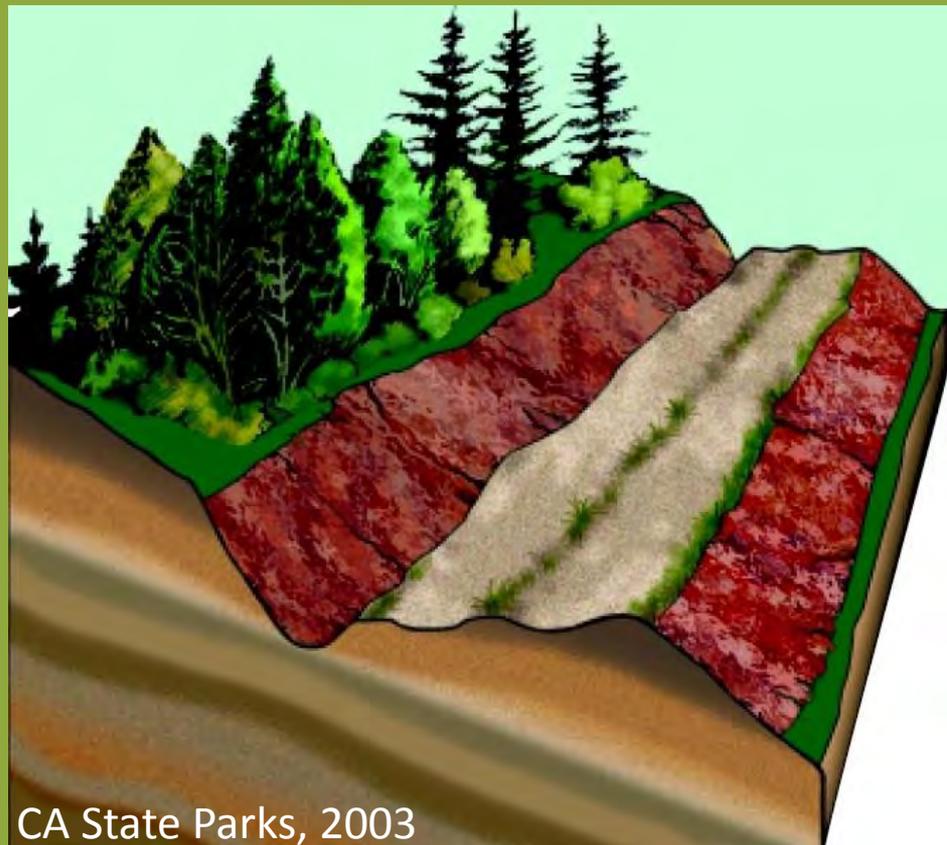
- Road to Trail definitions (*based on our experience*)
- Reasons for doing it
- Candidates
 - Criteria / Evaluation
- Project steps
 - From planning to monitoring
- Case studies
- Interactive exercise
- Take aways and other resources

Road-to-trail conversion is a technique used for transforming an existing road into a recreational trail.

What does Road-to-trail conversion mean to you?

Why do you perform Road-to-trail conversions?

Road-to-trail conversion is a technique used for transforming an existing road into a recreational trail.







Recreation Benefits

- Meet multi-use trail system goals
- Improved recreational experience
- Enhanced aesthetic experience



Watershed and Habitat Benefits

- Reduction in sediment transport
- Improved fluvial-geomorphic functioning
- Species habitat enhancement
- Minimize barriers



S p e c t r u m

Passive

Active

Passive- Conversion of a road to a trail by altering the maintenance regime, placing natural barriers, planting vegetation or allowing existing vegetation to grow, and making minor modifications to stabilize or correct drainage.

Active – Conversion of a road to a trail by mechanically narrowing the road surface. Excavation of road embankment and landing fill and stabilization of excavated materials on the inboard edge of the cut-bench. A narrow portion of the road cut-bench is preserved to serve as the trail-bed –
(CA State Parks, 2003)

Conversion Criteria

- Service access not compromised
- Good bones –
 - *Stable road bed*
 - *Gentle grade & curvilinear alignment*
 - *Good sight lines*
 - *Good overall drainage*

Converting a poorly designed road will result in a poorly designed trail



Other Considerations

- Maintenance History
- Cost
- Equipment Access and Staging



Road to Trail Pilot in Pleasanton Ridge Regional Park

How did we get here?

Land Use Plan Identified:

- Areas of need
- User preferences / groups demand
- Operational requirements

California



Pacific Ocean

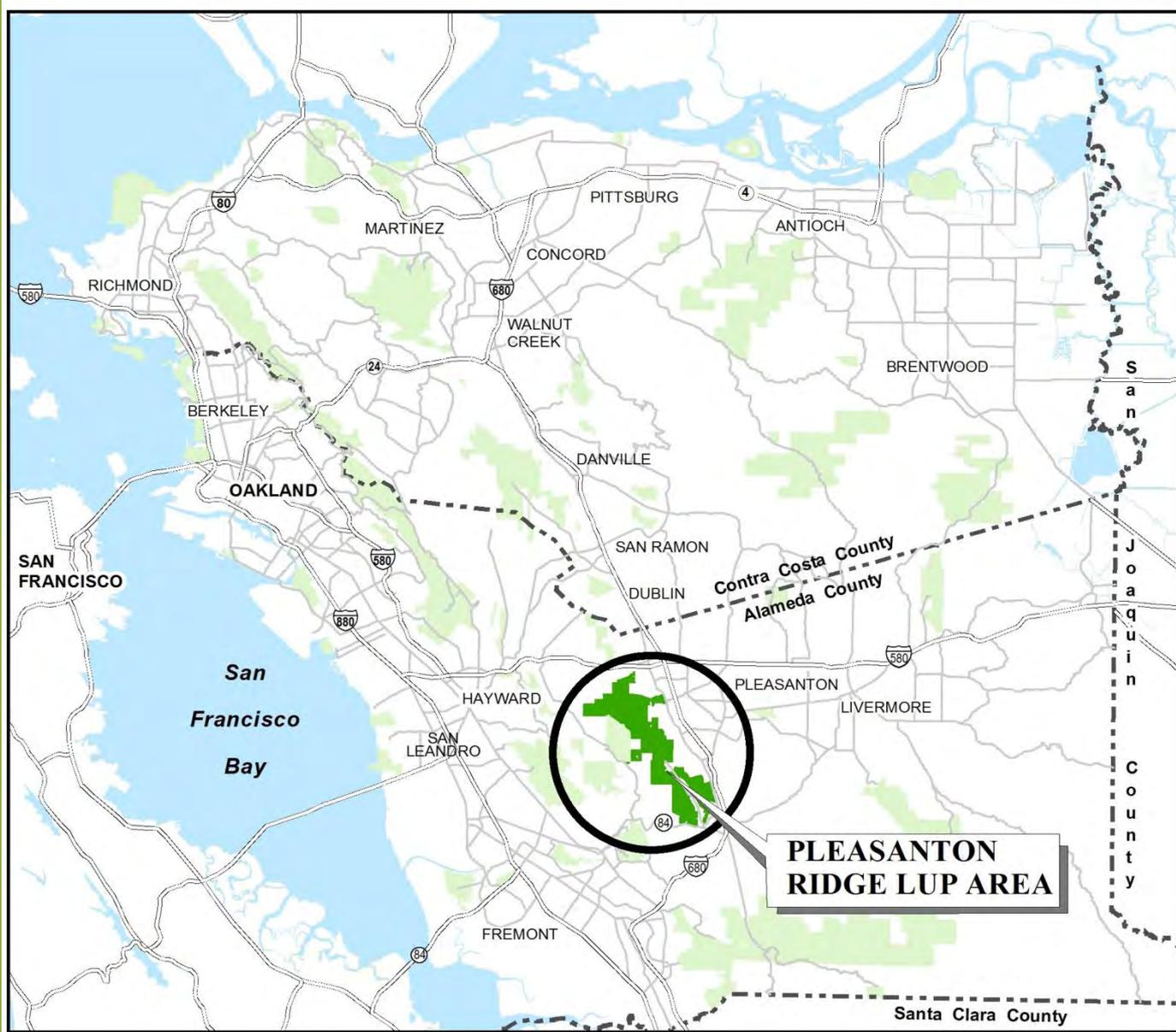
San Francisco

Los Angeles

COSTAL RANGE
SIERRA NEVADA
SERRANO RANGE



Pleasanton Ridge Regional Park



Pleasanton Ridge Regional Park Case Study



Planning and advocating for a trail system that will:

- Protect natural & cultural resources
- Promote safe & enthusiastic trail use

AND, where appropriate,

- Modify existing ranch roads to meet these goals



Identifying Needs

On-site Resource Evaluations





Interactive Community Meetings

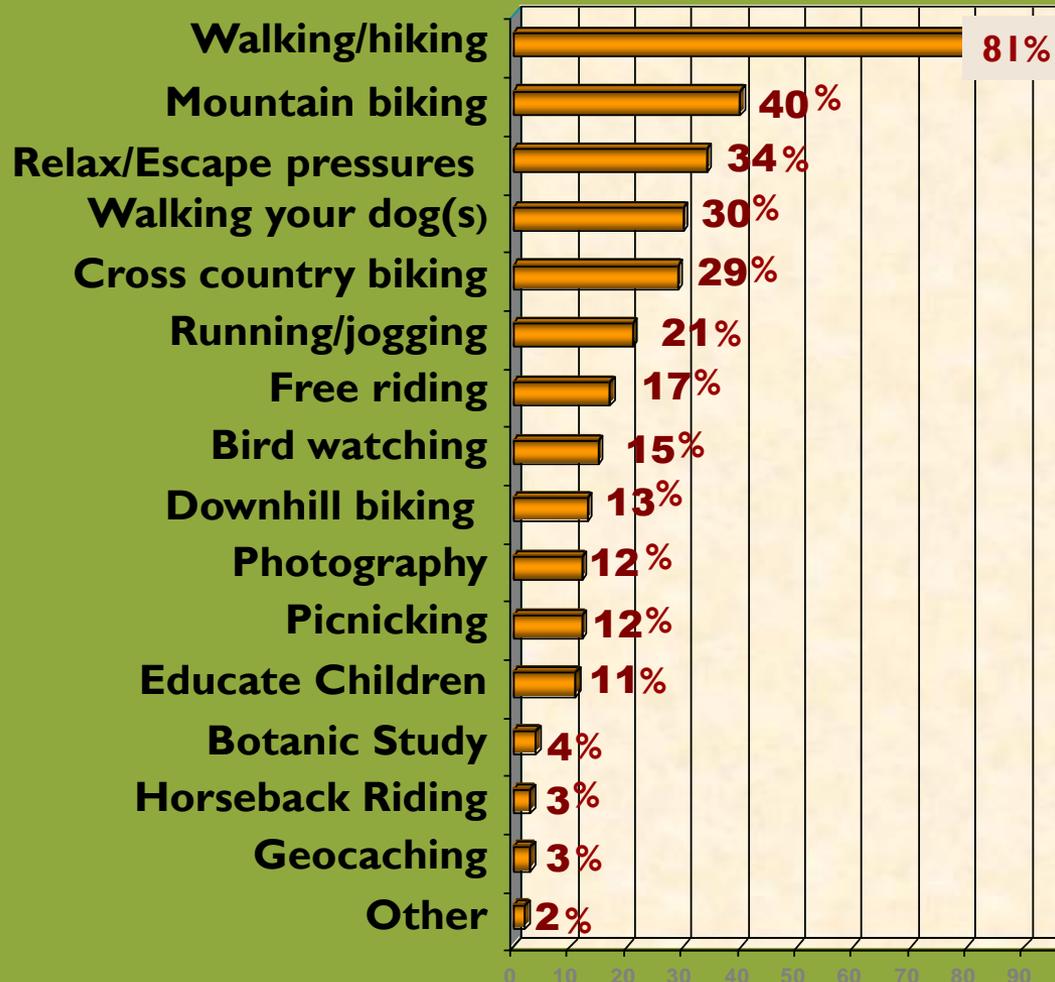


Community Engagement



Community Trail User Surveys

PRIMARY RECREATION USES

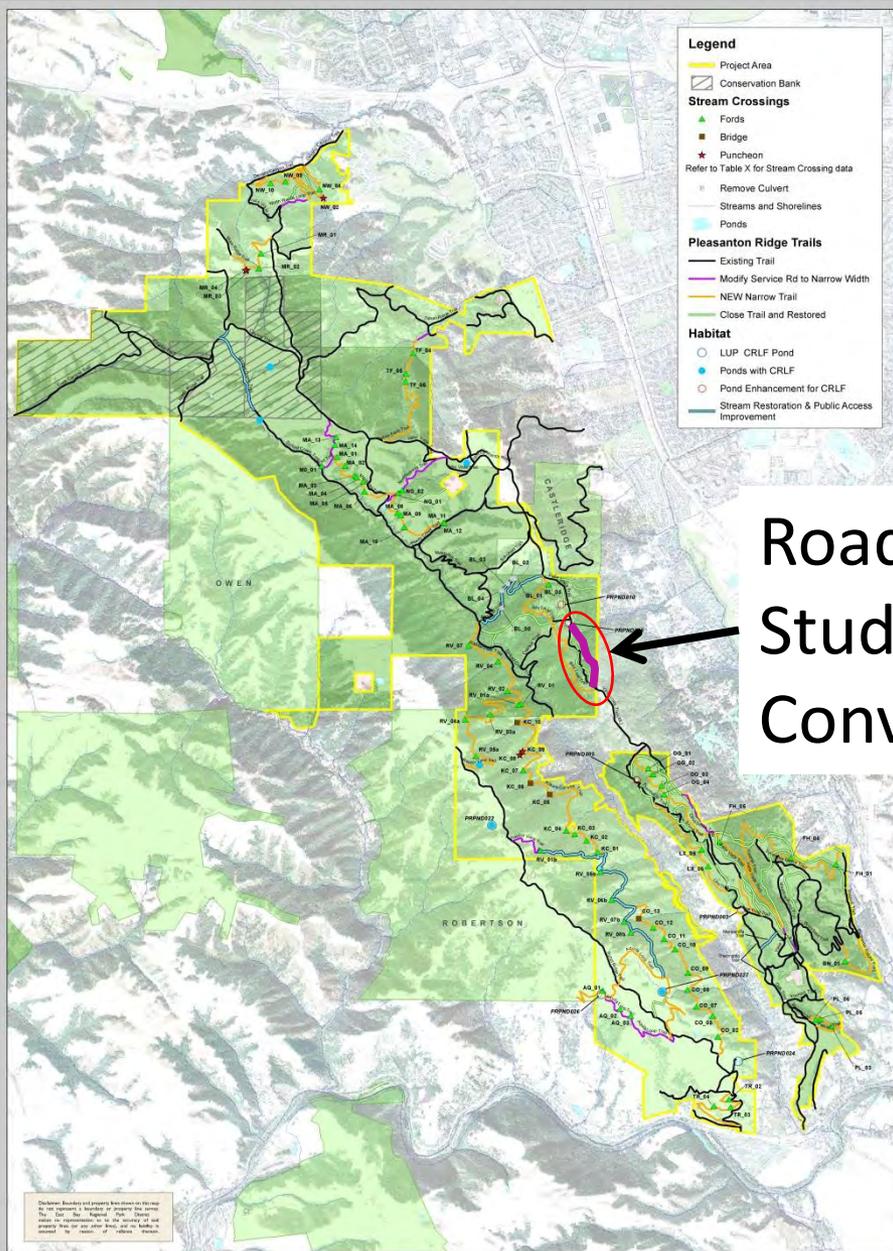


ADDITIONAL FACILITIES DESIRED

Hiking/jogging trails	51%
Back country camping	49%
Heritage sites interpretation	37%
Picnic shelters/areas	36%
Single-track Mt. bike trails	31%
Organized trail events (e.g. endurance rides/runs)	29%
Natural areas/nature preserve - limited or no public access	23%
Orienteering classes/events	21%
Horse trails	20%
Geocaching	14%
Archery	14%
Youth group camping	13%
Recreation programs	11%
Interpretive center	9%
Children's play area	8%
Sand volleyball courts	7%
Other	4%

Trail System Recommendations

- 
- Multi-use, Stacked Loops
 - 31 Miles of Narrow Trails - including narrowing 7 miles of service-road-width trails



- Legend**
- Project Area
 - Conservation Bank
 - Stream Crossings**
 - Fords
 - Bridge
 - Punchaon
 - Refer to Table X for Stream Crossing data
 - Remove Culvert
 - Streams and Shorelines
 - Ponds
 - Pleasanton Ridge Trails**
 - Existing Trail
 - Modify Service Rd to Narrow Width
 - NEW Narrow Trail
 - Close Trail and Restored
 - Habitat**
 - LUP CRLF Pond
 - Ponds with CRLF
 - Pond Enhancement for CRLF
 - Stream Restoration & Public Access Improvement

Road to Trail Case Study #1 Active Conversion

The location boundaries and property lines shown on this map are for informational purposes only and do not constitute a warranty of accuracy. The District is not responsible for any errors or omissions on this map. The District is not responsible for any damage or injury resulting from the use of this map. The District is not responsible for any loss of property or other loss, and no liability is assumed by the District or its employees.

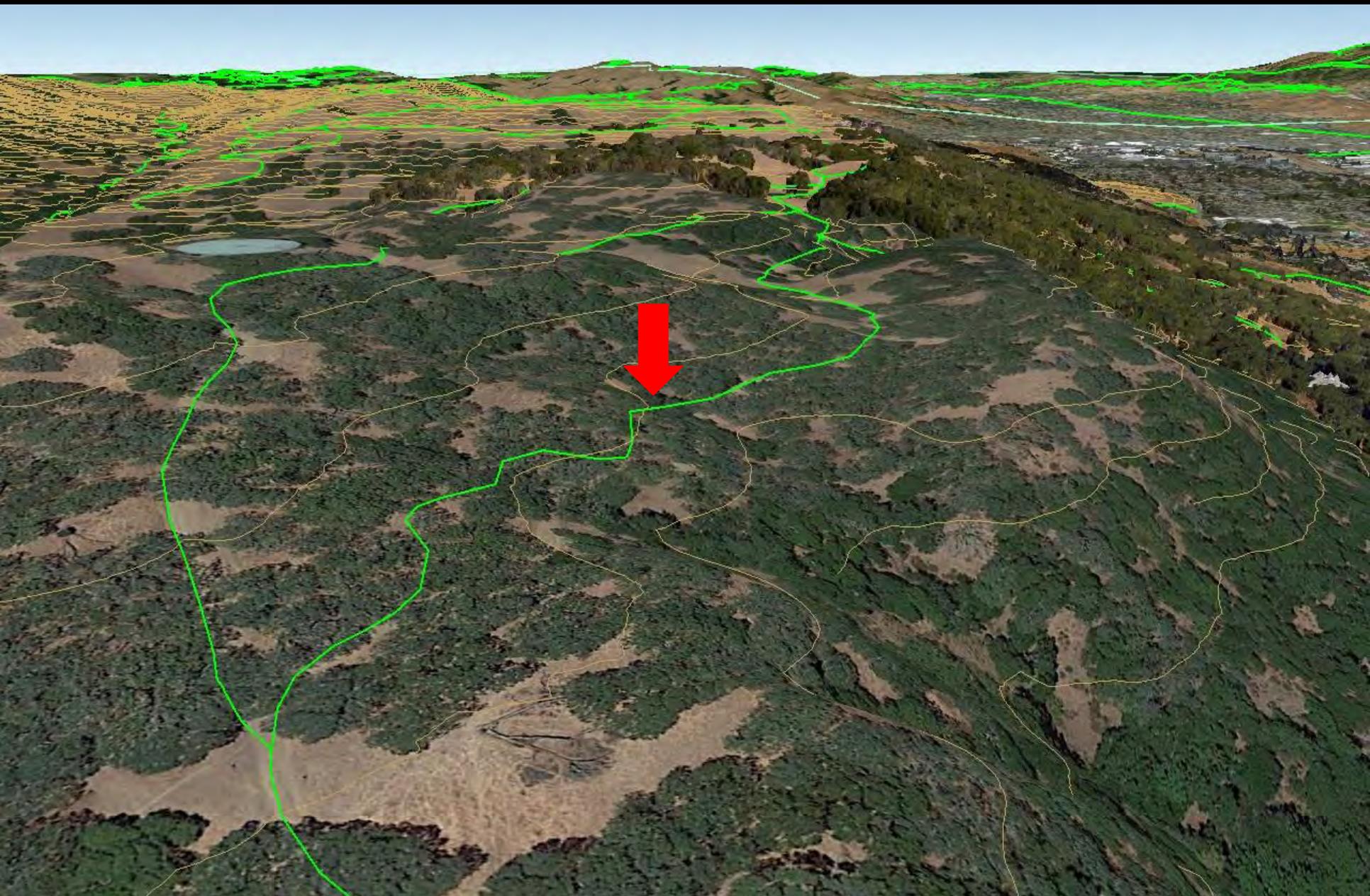


RESTORATION AND PUBLIC ACCESS IMPROVEMENTS

PLEASANTON RIDGE REGIONAL PARK

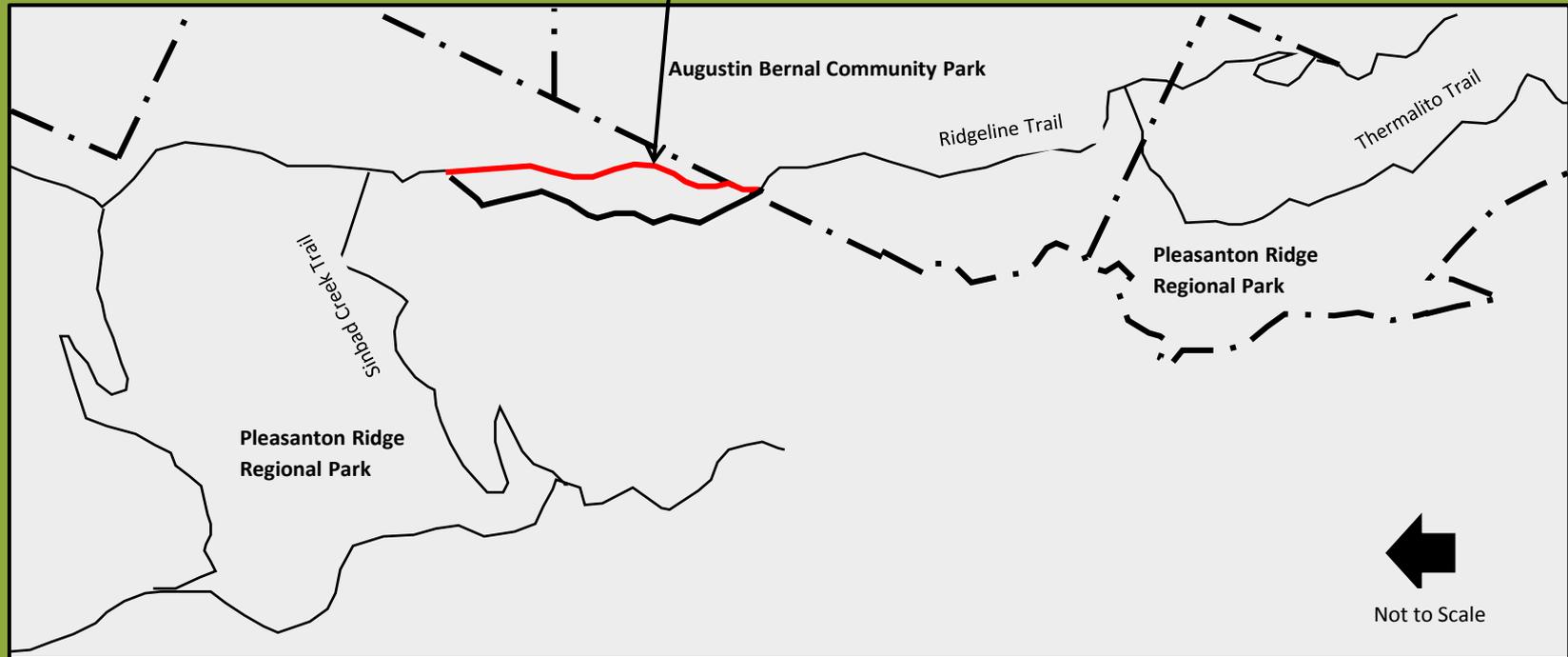
Path: C:\Projects\PublicAccess\Map\LUP\2009\Map\Restoration\PublicAccess\Map\TR_System_Import\PLR_TR_System_Import_Aerial_1.pdf JULY 24, 2014





ROAD-TO-TRAIL PROJECT

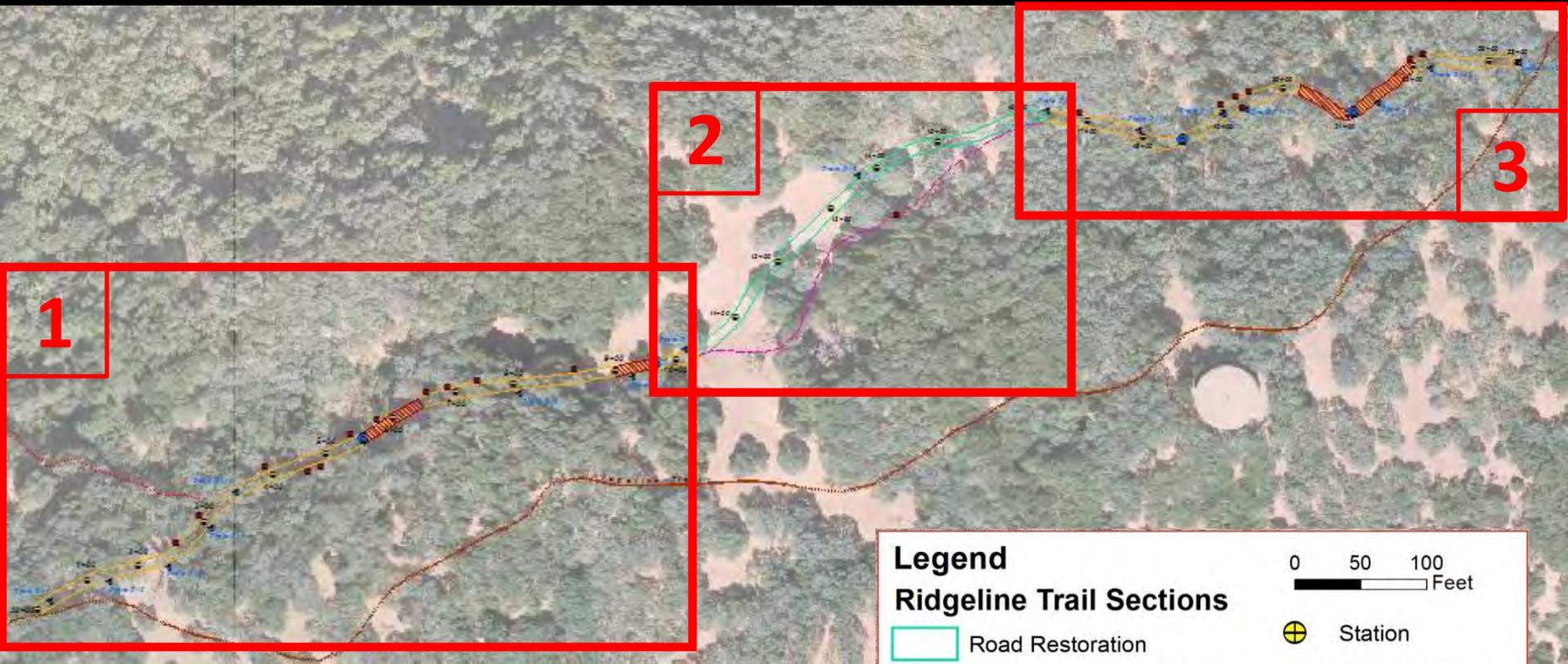
Action Plan - Step-by-step Process for Converting Roads to Trails



Ridgeline Trail

Narrowing one mile of service-road-width trail

Construction Map Sections



Legend

Ridgeline Trail Sections

 Road Restoration

 Road 2 Trail Conversion

 Grade Change

 Trail Re-Route

0 50 100
Feet

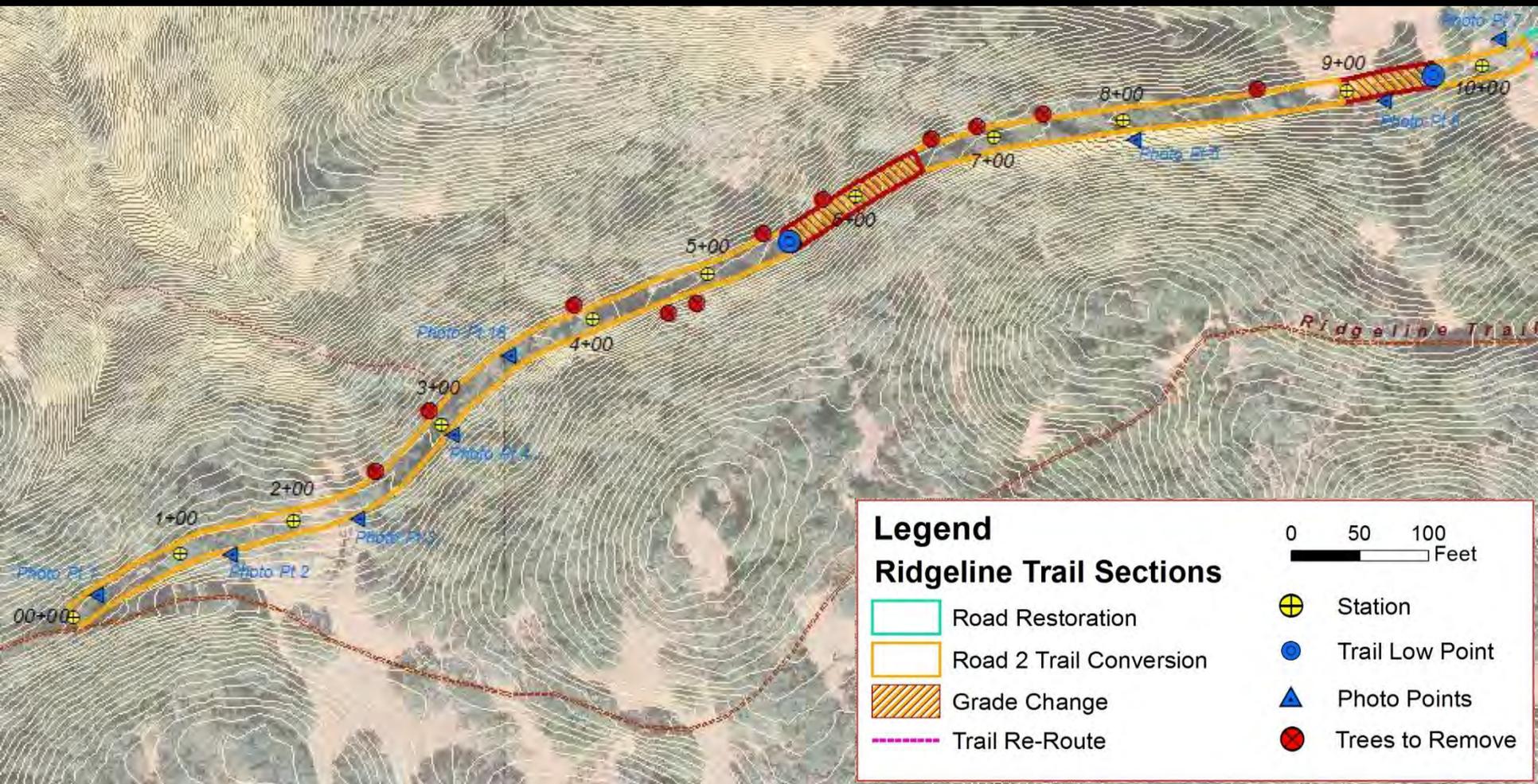
 Station

 Trail Low Point

 Photo Points

 Trees to Remove

Construction Map Section 1

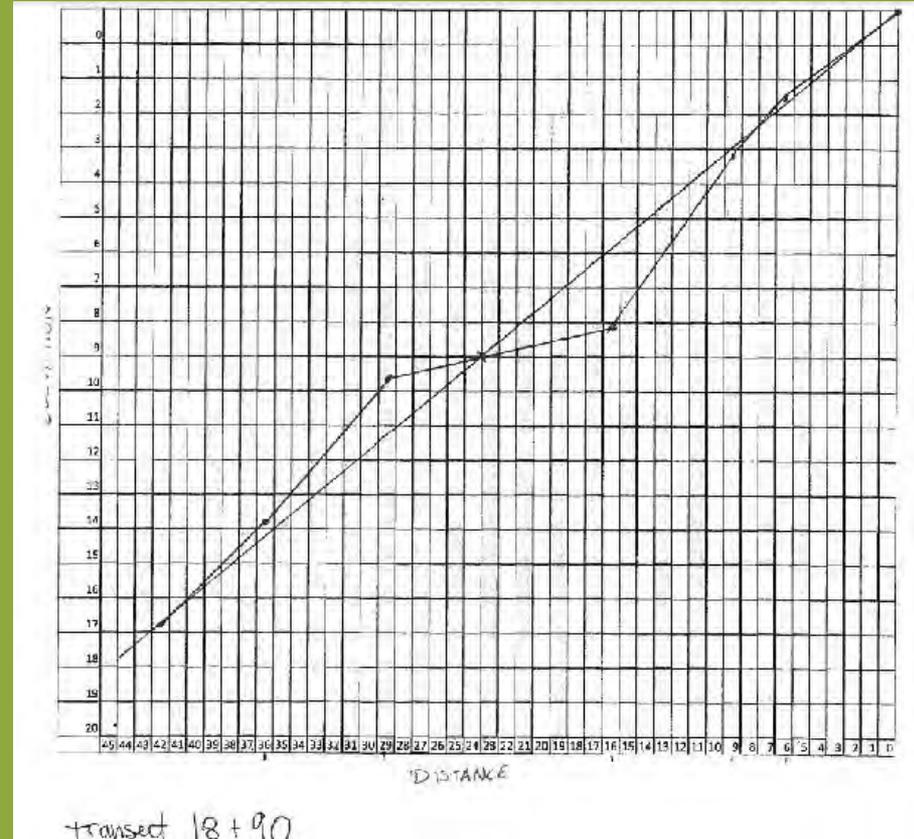


Project Planning

- Determine trail standards based on uses and equipment
- Closure Strategy
- Station Project
- Basic Design
 - Realignments
 - Tree removal
 - Grade Reversals
- Identify transect locations and shoot
- Layout and mark trail
- Locate and mark bottom of fill on downhill slope
- Setup photo points
- Close trail to public



Project Planning



Transect Locations

- Drainages or engineered grade reversals
- Turns or bends in the trail
- Anywhere it is unclear where the bench ends and fill begins

Project Planning

Design & Layout:
Locate and mark inside and outside edges of new trail surface within road bed



Project Planning



Locate and mark bottom of fill on downhill slope

Project Planning

- Setup photo points
- Close trail to public



Pre-Construction



- Install silt fencing
- Have BMPS on site
- Remove trees and vegetation
- Preview project with equipment operators
- Stage equipment



Pre-Construction

- Preview project with equipment operators
- Coordinate staging, entry point(s), & direction of work
- Plan for areas with an unbalanced amount of material

Pre-Construction

Remove trees and vegetation, but leave material onsite and use for aesthetics and stabilization afterwards



Construction

Mechanized Construction

- Excavator backs up along the road pulling embankment fill and placing it between the cutbank the inside edge of the marked trail.
- Sweco works on newly narrowed trail:
 - Cleaning edges
 - Track walking for compaction where slopes allow
 - Refining final grade of trail
- Dozer rips road sections to be abandoned

Hand Work

- Blend “seam” of newly placed fill in cutbank to create a slope match
- Finish and outslope tread as needed
- Create “meander effect”
- Construct realignment
- Clear dirt collars around remaining trees in embankment fill

Construction

- Equipment and Machinery
 - Excavator
 - Sweco
 - D4 Bulldozer
 - Skid Loader
 - Water Truck



Construction

Excavator pulls dirt between flagged embankment fill and outboard edge of trail...



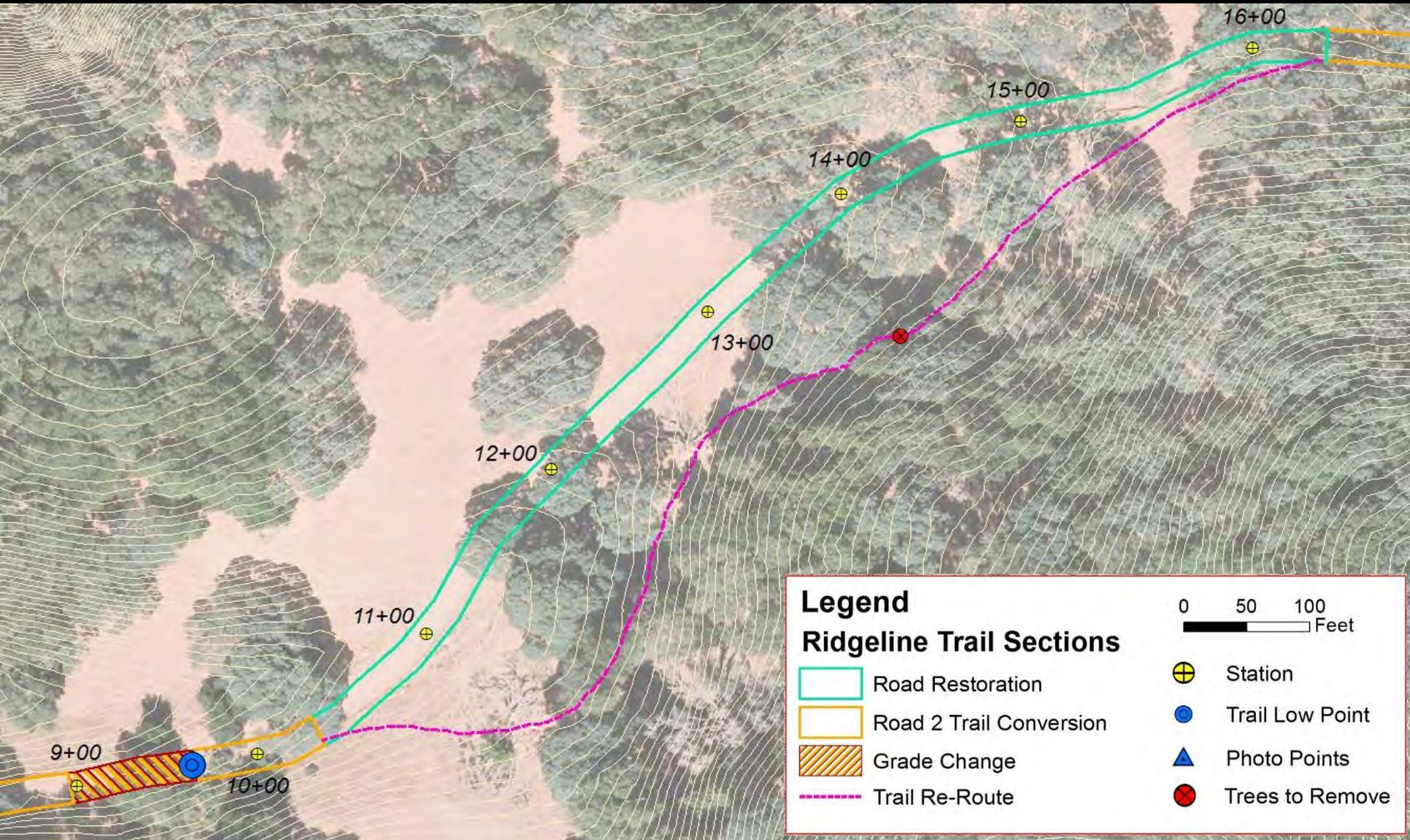
...and places it between the inboard edge of trail and top of cutbank.







Recontour and Realign



Ripping the Road

