

# Basic Information Form

**Park Name:** Sequoia & Kings Canyon NP

**PEPC Project ID:** 69154

**Other Project ID:** \_\_\_\_\_

**PMIS ID:** 238684

**Related Project(s):**

107223 Created From 69154

90262 Created From 69154

**Project Status:** Proposed

**Compliance Status:** In Process

**Sensitive:** No

**Project Target Start:** 01/01/2023

**Project Creation Date:** 12/20/2016

**Project Title:** Rehabilitate 15.29 Miles of the Mineral King Road in Sequoia National Park

**Secondary Title:**

**Project Description:** This project proposes to rehabilitate the full length of the Mineral King Road within Sequoia National Park and formalize and pave seven parking lots that serve as trailheads for stock users, day-hikers, and backpackers seeking to access thousands of acres of Wilderness within and beyond the Mineral King valley.

Key components of this project include the following:

- Grind, recycle, and overlay existing pavements, including excavation of existing roadbed;
- Replace failed base courses and poor subgrade materials;
- Regrade/super-elevate the road in sections to correct and direct drainage to the upslope side of the road (to reduce erosion and undercutting of the roadway, and improve vehicular safety);
- Pave all 15.29 miles of the road, including 1.38 miles that are currently unpaved;
- Pave pullouts that are currently paved; all pullouts that are unpaved would remain unpaved;
- Pave some short driveway aprons to unpaved secondary roads and campgrounds, such as the Atwell Campground, to protect grades and minimize erosion at points of entry/exit between differing surface materials;
- Spot-stabilize and reinforce 6,000 linear feet of outside edge of the roadway, including the installation of several retaining walls (8,800 square feet);
- Replace, and in most cases enlarge, approximately 205 culverts that are in poor condition and install approximately nine additional culverts for improved drainage;

- Clean and rehabilitate drainage structures, including ditches;
- Brush the roadway within 10 feet of the road edge on either side to maintain visibility for safety;
- Replace existing signs and object markers, such as culvert markers and mileage posts, with standard signage along the roadway;
- Replace two existing metal gates along the roadway.
- Re-pave the parking lot at the Ranger Station and formalize, grade, pave, and at least partially stripe six additional trailhead parking lots near or at the end of the road (This includes a slight expansion of the parking lot at the end of Mineral King Road and the development of a small accessible interpretive and/or picnic area near the trailhead.);
- Install pre-manufactured, metal bike racks within newly paved parking lots;
- Relocate and, in some instances, install new bear-proof food storage boxes and trash/recycling containers within the developed footprint or along the perimeters of existing parking lots;
- Relocate and, in some instances, install new interpretive media including waysides and orientation signage with frames made of weathering steel (unpainted) or powder-coated metal near the perimeters of existing parking lots;
- Revegetate areas adjoining the road that are disturbed by construction and revegetate and obliterate areas where social use has expanded the developed footprint of parking lots beyond intended use.

All work would strive to be constructed to Universal Design Standards to remove existing ABA barriers to extent possible or provide an equivalent alternate experience.

More specific information about this proposed action is included internal documents, Pre 95% Designs.

**Project Leader:** Brian Horton

**NEPA Specialist:** Elizabeth Boerke, Theresa Fiorino, Amy Brown

**NHPA Specialist:** Juanita Bonnifield, Jane Allen, Elle Farias

**External Agency/Applicant:** \_\_\_\_\_

**Division/Office:** Division of Maintenance and Construction

**Designer:**

**Conceptual Design Date:** \_\_\_\_\_

**Project Type:** Repair/Rehabilitation

**Project Category:** Historic Asset

Road Paved

Road Unpaved

**General Notes:** \_\_\_\_\_

## Locations

County/Borough, State	District, Section	Geo. Marker	Other	Tract ID
Tulare, CA	Ash Mt		Mineral King	

## File List

Title
<a href="#">CA FTNP SEKI 13(2) - Draft Scoping Report.pdf</a> (5.2 MB, PDF file)
<a href="#">Disney Contact - MK Inholding.pdf</a> (247.6 KB, PDF file)
<a href="#">DRAFT Mineral King Preliminary Hydraulic Recommendations.pdf</a> (6.2 MB, PDF file)
<a href="#">Mineral King Road FHWA Meeting.docx</a> (25.3 KB, .docx file)
<a href="#">Project Schedule Update From Mason 20190306.pdf</a> (83.6 KB, PDF file)
<a href="#">SEKI 13(2) - Draft Scoping Summary.pdf</a> (202.0 KB, PDF file)
<a href="#">SEKI 13(2) Scoping Estimate.pdf</a> (83.2 KB, PDF file)
<a href="#">SEKI13(2)-Draft Project Delivery Plan comments.xls</a> (40.5 KB, .xls file)

**Last Updated Date:** 06/28/2022

**Last Updated By:** ELBoerke

## SEKI PROJECT DESCRIPTION AND SCOPE OF WORK

<b>Project Name:</b> Rehabilitate 15.29 Miles of the Mineral King Road	<b>Date(s) Submitted:</b> 1/26/2021; edited 3/24/2021; reviewed in 4/2021; finalized 6/22/2022
<b>NPS Project Leader or Liaison:</b> Nicole Mason	<b>NPS Division/Office or External Applicant:</b> Maintenance
<b>Funding Source:</b> FLTP	<b>PMIS #:</b> 238684

### Project Description/Scope of Work

- 1) **Project Description:** This project proposes to rehabilitate the full length of the Mineral King Road within Sequoia National Park and formalize and pave seven parking lots that serve as trailheads for stock users, day-hikers, and backpackers seeking to access thousands of acres of Wilderness within and beyond the Mineral King valley.

Key components of this project include the following:

- Grind, recycle, and overlay existing pavements, including excavation of existing roadbed;
- Replace failed base courses and poor subgrade materials;
- Regrade/super-elevate the road in sections to correct and direct drainage to the upslope side of the road (to reduce erosion and undercutting of the roadway, and improve vehicular safety);
- Pave all 15.29 miles of the road, including 1.38 miles that are currently unpaved;
- Pave pullouts that are currently paved; all pullouts that are unpaved would remain unpaved;
- Pave some short driveway aprons to unpaved secondary roads and campgrounds, such as the Atwell Campground, to protect grades and minimize erosion at points of entry/exit between differing surface materials;
- Stabilize 12 miles of road cut-slope by scaling loose rock and other hazards from road cut-slopes;
- Reinforce 6,000 linear feet of outside edge of the roadway, including the installation of several retaining walls (8,800 square feet);
- Replace, and in most cases enlarge, approximately 205 culverts that are in poor condition and install approximately nine additional culverts for improved drainage;
- Clean and rehabilitate drainage structures, including ditches;
- Brush the roadway within 10 feet of the road edge on either side to maintain visibility for safety;
- Replace existing signs and object markers, such as culvert markers and mileage posts, with standard signage along the roadway;
- Replace two existing metal gates along the roadway;
- Re-pave the parking lot at the Ranger Station and formalize, grade, pave, and at least partially stripe six additional trailhead parking lots near or at the end of the road (This includes a slight expansion of the parking lot at the end of Mineral King Road and the development of a small accessible interpretive and/or picnic area near the trailhead.);
- Install pre-manufactured, metal bike racks within newly paved parking lots;
- Relocate and, in some instances, install new bear-proof food storage boxes and trash/recycling containers within the developed footprint or along the perimeters of existing parking lots;
- Relocate and, in some instances, install new interpretive media including waysides and orientation signage with frames made of weathering steel (unpainted) or powder-coated metal near the perimeter of existing parking lots; and
- Revegetate areas adjoining the road that are disturbed by construction and revegetate and obliterate areas where social use has expanded the developed footprint of parking lots beyond intended use.

All work would strive to be constructed to Universal Design Standards to remove existing ABA barriers to extent possible or provide an equivalent alternate experience.

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- 2) Location:** The Mineral King Road travels roughly 25 miles from Highway 198 in Three Rivers to Mineral King Valley in Sequoia National Park, with the last 15.29 miles the park. All mileage in the park has been identified as culturally significant and is eligible for listing on the National Register as the Mineral King Historic District. The park portion of the road begins at Lookout Point in dense chaparral and climbs through montane forests and a giant sequoia grove to Mineral King Valley in the subalpine zone.
- 3) Purpose and Need:** The intent of this project is to rehabilitate this road in order to preserve safe public access to the recreational and educational opportunities in the historic Mineral King area, Silver City, and Sequoia wilderness trailheads, to preserve the Mineral King Road as an historic feature in itself, and to promote efficiency by returning the road to a condition where regular annual and cyclic maintenance can keep it in good condition.

Mineral King is one of the primary public access points to the backcountry and wilderness areas of Sequoia and Kings Canyon National Parks. The area has two NPS campgrounds, a ranger station, NPS employee housing, and trailheads that are the primary takeoff point for half of the Sequoia National Park wilderness area. The road primarily serves park visitors to Mineral King and Sequoia wilderness lands, clients of Silver City Resort, and summer residents within a small cabin community. (The road has an NPS Asset Priority Index of 85 and is in Optimizer Band 2.)

The road surface is in poor condition (summary Pavement Condition Index of 46; overall Facility Condition Index of the road is .238 – Poor), and the roadbed itself is still essentially as constructed in the 1870's. Much of the road traverses steep sidehills, with significant rockfall during the winter closed season and occasional rockfall in summer. The failing walls and fill slope creep have resulted in several thousand feet of longitudinal pavement cracking on the outboard edge, which has narrowed the already-tight effective width of the road. All culverts along the roadway are also past their designed lifetime, and many are undersized to enable adequate drainage of streams and sheet flow on the roadway, particularly following the 2021 KNP Complex Fire that burned through the first approximate 8 miles of the roadway. Many of the historic stone retaining walls for drainage are also failing and need rehabilitation to preserve the road.

Parking areas near the end of the road also remain unpaved, are non-ABA compliant, and create social parking conditions that threaten to expand the developed footprint, encroach on natural and cultural resources, and create a chaotic environment for parking and visitor access on busy days.

Motor vehicle accidents are reported about once per year, but close calls are a daily occurrence. The crash history shows a crash rate of 5.7 crashes per million vehicle miles traveled; over four times the statewide average for two-lane rural roads.

This project would bring the Mineral King Road from Poor to Good condition and would preserve public access to the Mineral King valley and the surrounding Sequoia National Park.

### **4) Detailed Work Plan:**

#### **ROAD SURFACE AND SUBSURFACE:**

The Mineral King Road would be rehabilitated in accordance with current engineering design standards to preserve and extend the life of the roadway and enhance safety to the best extent possible. This project proposes to repave 13.91 miles of the Mineral King Road at existing widths along the roadway and pave 1.38 miles of the road that is currently unpaved (total of 15.29 miles; the entire length of the road within Sequoia

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National Park). The width of pavement along the current unpaved section would be, approximately, the average width of the paved roadway (minus any paved pullouts).

Repaving Mineral King Road would require pulverizing and then compacting up to four inches of existing asphalt (137,000 square yards of full depth reclamation; an additional 72,900 square yards of full depth reclamation with cement) and re-grading the road superelevation to correct existing drainage, protect the roadway, and enhance visitor safety. Specific considerations and mitigations would be utilized to protect sequoia trees as identified within the Sequoia Mitigation Plan and as implemented by a specialist in the field during implementation, including: reduced depth pulverization, removal of existing asphalt by bucket or other non-destructive means around exposed sequoia roots, and, in some cases slightly elevating the road to avoid disturbance of sequoia roots. (Although the Sequoia Mitigation Plan has been incorporated into the proposed action; specific mitigation measures remain called out in the mitigations associated with the categorical exclusion; see that document for additional details.)

All in all, approximately 210,000 square yards of asphalt would be reclaimed; approximately 5,050 tons of aggregate would be laid as the subsurface material; and 30,800 tons of asphalt would be laid and compacted over the roadway for a total gained height of 2"-6" above the existing road surface. Due to past and ongoing threats of avalanches and highwater, one to two short sections of road would be surfaced with integral colored (black) concrete (for an approximate total surface coverage of 407 square yards) in order to increase the durability of the roadway in critical locations while minimizing the visibility of the material.

In addition to the primary road, all paved pullouts along the Mineral King Road would be repaved under this project; all pullouts that are unpaved would remain unpaved. Short driveway aprons at intersections with secondary gravel roads and campgrounds would also be paved to protect grades and minimize erosion at points of entry/exit between different surface materials. The length of these aprons would be less than 20 feet in length and would be determined by the grade and materials of the intersection (increased length is required for steep slopes and gravel roads (See Sheet 7 of the 70% Designs).

Because much of the road has been undermined by poor drainage, erosion, and loose slopes and subsurface materials, this project also requires slope stabilization along 12 miles of road, including 6,000 linear feet of reinforced outside edge and 10,000 square feet of reinforced shoulder stabilization (See Detail A on Sheet 6 of 70% Designs). As part of this stabilization, several retaining/support walls would be installed, including four special rock embankments (see sheet G-5 in 70% designs), two soil nail walls (see sheets G-6 through G-8 in 70% designs) and two soldier pile walls (see sheet S-1 in 70% designs) along the lower sections of the road where surrounding soils are susceptible to erosion. The rock embankments would be faced with rock; the soldier pile walls would be faced with horizontal timbers; and the soil nail walls would be faced with colored concrete to match the hue of surrounding soils. All supporting walls would be installed below the road and therefore largely not visible to the average driver.

In order to stabilize the roadway and address drainage issues (outlined below), Federal Highways estimates that this project would excavate selective sections of existing roadway, up to 30' below grade in some locations, and would overall excavate up to 3,750 cubic yards of undesirable subsurface material. Up to an additional 1,365 cubic yards of material would be required to backfill these areas.

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### **DRAINAGE:**

Approximately 44,000 linear feet of ditches along the road would be cleaned/excavated and 40,000 linear feet of ditches would be paved with asphalt.

Due to the poor condition and minimal size of existing culverts, all culverts along the Mineral King Road would also be replaced and approximately nine new culverts would be installed, for a total of approximately 214 culverts. All existing rundowns (metal shoots placed on the downslope edge of the road to enable drainage and minimize erosion along the outside edge of the road) would be removed as they would no longer be necessary.

At least 170 of these culverts would be upsized to a culvert that is between 6 and 24 inches larger in diameter than the existing culvert to accommodate drainage, align with engineering standards, and in a few instances, improve the chances that a fisher or other wildlife may utilize the structure to cross the roadway. An additional seven culverts would be upsized six inches to accommodate additional debris flow post KNP Complex fire. At least one culvert would be reduced in size. The minimum size culvert along Mineral King Road would increase from 6 to 24 inches in diameter to better accommodate seasonal flows and reduce chances of clogging with debris. In a few locations, where the roadway crosses perennial streams within high quality fisher habitat, an additional, dry culvert between 24 and 36' in diameter could be also installed within the drainage to serve as a wildlife crossing.

Except for the existing concrete culverts that would be replaced in kind and the approximately 25 culverts that would be converted to concrete to structurally support a larger culvert with minimal cover, all culverts would be corrugated metal pipes, and almost all would have flared end sections. In the approximately 64 locations where the existing culvert has either a mortared stone or dry-stone headwall, the headwalls would be removed to accommodate installation and a stone headwall composed of existing and new stone of similar color (to accommodate increased size of culvert) would be reset. Approximately five of these culverts, which are all 47 inches in diameter or larger, would require the installation of a concrete headwall and wingwall which would be faced with stone to minimize the visibility of the concrete.

In a few instances, where an inlet to a culvert is regularly filled by shedding embankments above and therefore requires routine cleaning, the inlet may be paved with a small concrete box that could be regularly cleaned out. All concrete used in these locations would be tinted to match surrounding duff/soil.

Riprap (around 3,000 cubic yards of material of various class sizes) would also be placed at the outlet of potentially all culverts in order to minimize future erosion in these locations. All but 17 culverts could have class 3 or smaller rip rap with no more than 16 cubic yards per location. Four culverts could have over 100 cubic yards of riprap placed at the outlet. The riprap would match native material in color and texture and would be cleaned or certified to be free of seed prior to placement. Disturbed areas adjacent to the riprap would be revegetated to make these features less visibly apparent into the future.

### **ADDITIONAL ROAD FEATURES:**

All non NPS signs – such as culvert markers and mileage posts, would be removed during construction and new, standard markers would be placed in their stead.

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Two existing gates along the road, one at station 100 (beginning of project) and the other at station 524+35.00 (before Atwell Mill Campground), would be replaced with standard metal gates with improved functionality.

### VEGETATION CLEARING AND REHABILITATION:

Prior to construction, the roadway would be strategically brushed within 10 feet of the road edge on either side to maintain visibility for safety. No sequoias would be directly impacted by these activities.

All non-paved or aggregate surface areas impacted by construction would be revegetated (estimated at 9 acres). In addition, one area above the existing Tar Gap Trailhead parking lot would be obliterated and the area replanted with native vegetation.

### PARKING LOTS:

This project would also re-pave the parking lot at the Ranger Station and formalize, grade, pave, and at least partially stripe six additional trailhead parking lots near or at the end of the road. While the final, developed footprints of these parking lots would mostly align with the existing footprints, one section of a parking lot would decrease in usable size and another would slightly increase in size. The details of parking lot modifications are outlined below.

At all of the parking lots, large boulders would be strategically placed to prohibit encroachment on surrounding vegetation, and timber stops would be used in formal parking spots. Bear-proof food storage boxes and trash/recycling containers would also be strategically placed within the developed footprint or along the perimeters of the parking lots to reduce conflicts with wildlife. Up to three circular metal bike racks, made of galvanized steel, would also be installed within the developed footprint or along the perimeter of each parking lot. These racks would each be approximately 36" wide and extend 32" above grade, with 10" buried below the surface (see example in attached Bike Parking Specifications).

#### Ranger Station Parking Lot and Picnic Area Parking Lot

The Ranger Station Parking Lot would be repaved - careful not to disturb the rock wall that runs along the northern edges of the lot – and would remain unstriped to accommodate the maximum number of short-term users. The northern half of the picnic area parking lot (across the road from the Ranger Station) would be paved and one ABA parking spot and one standard parking spot striped. A colored concrete paved ditch would be installed at the southern boundary of the asphalt to enable better drainage across the parking lot, and the remaining portion of the parking lot would be aggregate, similar to existing conditions. Boulders would be added to slow encroachment and compaction of soils surrounding healthy trees near the creek.

To enable ABA accessibility from the parking lots to the Ranger Station, the NPS would construct a short ABA trail from the edge of the road to the existing amphitheater trail, just to the north of the Ranger Station Parking Lot, and up to the Ranger Station. This trail would be approximately 160 feet long, graded with some supporting stone retaining walls, and paved with asphalt. A ramp would connect the trail to the porch of the Ranger Station.

The existing interpretive signage at the end of the Ranger Station Parking Lot may also be relocated along the ABA trail, and additional interpretive signage and a bronze tactile relief map would be installed near the ABA parking space in the picnic area parking lot. Any interpretive signage would be made of weathering



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steel bases (unpainted) or powder-coated metal, with high-pressure laminate exhibit panels, and would be buried up to two feet deep with concrete footings that would be laid below grade. The overall displays could range between three and six feet in total height and would include between one and three panels that are each either 24" w x 36" h or 36" w x 48" h. Approaches to these displays would be leveled to align with ABA standards for accessibility (see MK Ranger Station Layout 1 and sheet D2 in the 70% Designs). The bronze relief model would be installed in a shady location to prevent overheating in direct sunlight.

### Tar Gap Parking Lot

The upper portion of the Tar Gap Trailhead Parking Lot would be restored and no longer accessible to vehicles. Instead, the lower portion of the lot would be slightly expanded to accommodate approximately 10 vehicles (see sheet D4 in the 70% Designs).

### Sawtooth Left (North) and Right (South) Parking Lots

The left and right parking lots at Sawtooth would be paved within the existing developed footprint of these lots, and approximately twenty parking spaces would be striped in the left and northern section of the right parking lot, with one additional parking space for a vehicle and trailer. The southern end of the right parking lot would remain unstriped to maximize capacity for parking, and a riprap apron would be installed at the southern edge of the lot to slow and filter drainage off the lot as it approaches a nearby waterway (see sheets D5 and D-6 in the 70% Designs).

### Restroom Parking

The only accessible public restroom in the Mineral King Valley is located near the end of the road and close to the bridge over the East Fork of the Kaweah River. This restroom has a small parking area associated with it that would be paved and striped to include one ABA accessible stall and one standard parking stall.

### Parking Lot for Eagle Mosquito Trailhead (End of the Road)

Although the end of Mineral King Road has been used as a parking lot and trailhead by the public for decades, the land itself is not owned by the National Park Service and is instead located on a 5-acre private parcel. Therefore, before any improvements could be made to the parking lot at the end of the road, the NPS would pursue rights to at least a portion of the property (i.e., a scenic easement for the portion of the private parcel that would continue to be used by the public) to formalize NPS interest in providing and maintaining public access to this trailhead.

Should such rights be granted/obtained, the NPS would expand the parking lot at the end of Mineral King Road by a maximum of 36 feet to the north and minimally graded to enhance accessibility and improve drainage. The existing pull off to the right upon entry would remain aggregate and would be signed for trailer parking; parallel parking would be formalized along the southern edge; and perpendicular parking would be formalized in the remaining portions of the lot for a total of roughly 45 designated parking spaces. The layout would accommodate a medium sized vehicle and trailer to turnaround within the existing footprint and one to two ABA accessible parking spaces.

For improved visitor experiences and enhanced accessibility, a small developed interpretive wayside/picnic area would be constructed to the north/northeast portion of the parking lot, near the Eagle-Mosquito trailhead and the trail network beyond. Orientation signage made of weathering steel bases (unpainted) and high-pressure laminate exhibit panels would be installed in this location, similar to the existing orientation

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exhibit. The overall display could range between three and six feet in total height and would include one panel that is 36" w x 48" h (See MK Disney Lot Revised Layout 3.) In addition, a small sign would point people in the direction of Cold Springs Nature Trail, near the entrance of the parking area. Through a separate project, additional signage would be installed at the trailhead, a short distance away from the Eagle-Mosquito parking area.

### CONSTRUCTION:

#### Crew

All construction would be performed by a contractor and Federal Highways Engineer or representative. SEKI would provide liaison and support as identified within the project agreement. Optimal crew size would be determined by the contractor but is expected to be large given the scope and timing of the project with anywhere between 5 and 100 contract staff on site at any one time which could be dispersed throughout the project area.

#### Schedule

Construction would occur over two to five years, depending on whether or not the project needs to occur in phases under separate contracts. The earliest possible start date would be in FY23.

The precise construction schedule would be determined in coordination with the contractor but would include year-round work and night work during the summer months. Given varying elevation and temperatures across the 15.29 miles of road, most winter work would occur in the lower half of the road—below the second gate—with work moving up the road as freezing temperatures dissipate during the spring/summer.

Although emergency access through construction areas would need to be reasonably accommodated at all times, sectional road closures would be integral to project implementation, with longer road closures (perhaps several days long) allowed during the winter months and shorter closures accommodated during the summer months (closures up to 2 consecutive hours during the day and for several hours at night). No work would occur on weekends during June/July/August and would occur on an as needed basis only in September and October. Although several sections of the road could be closed at any one time, the contractor would need to allow all traffic through the construction in one pulse to avoid multiple long delays for any one party. Entire parking lots would need to be closed during construction.

All closures would need to be approved by the NPS prior to closure, and a strategic communications plan would be developed and implemented to communicate expectations for residents and visitors to the Mineral King Valley.

#### Staging

At a minimum, staging locations would include the Ranger Lookout Pullout towards the beginning of the project but would also likely include existing pullouts and parking lots and the Atwell Campground. The Ranger Lookout Pullout would likely be used for project trailers/office space. Materials and equipment storage would likely be at the Atwell Campground located in the center of the project site but the area could also be used to house a number of contractors during project implementation. The contractor would be responsible for providing water and waste management to support such use, particularly if used in the off season.

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### Materials

This project would require large amounts of various engineered materials. All imported materials and their sources would be identified by the contractor and approved by the NPS. Imported materials would be required to be free of any invasive seeds. No known hazardous materials would be used or removed for the construction scope of work. Imported materials include the following (quantities are the maximum approximates/estimates based on 70% designs; exact quantities may change due to conditions in the field):

- 1,365 cubic yards of backfill
- 5,050 tons of aggregate, subsurface material
- 2,890 cubic yards of riprap, class 2 – 7
- 17 boulders of various sizes
- 30,800 tons of Asphalt Concrete Pavement Mix ½” and ¾” nominal aggregate, 195,600 square yards of prime coat, 285 tons of blotter, and 90 tons of tack coat
- 80 tons of Fog Seal and 294 tons of antistrip additive Type 3
- 800 tons of cementitious material, 2-3 integral colors
- 530 square yards of concrete
- Roughly 214 corrugated metal pipes, 24” to 96” diameter, totaling over 9,000 linear feet
- 2 metal gates
- Roughly 450 signs and object markers
- SWPP typical controls
- NPS provide seed for 9 acres of revegetation

### Equipment

At a minimum, this project would require the following types of heavy equipment, each estimated at approximately 200 hours of use: 8 Cubic Yard Dump Trucks, Backhoe Loaders, Wheel Loaders, Bulldozers, Motor Graders, Excavators, water trucks, hydroseeding trucks, pavement equipment and pickup trucks. All equipment would be inspected by NPS staff prior to entering the job site. While much of this equipment would likely be used at any time of year, paving equipment would only be used in the upper portions of the road during the summer and early fall due to restrictions related to temperatures and installation of asphalt and concrete. Pulverization equipment would need to occur within 2 weeks prior to any paving work, suggesting this equipment would have some limited seasonality in the upper portions of the road as well.

5) **Proposed Timeline:** See “schedule” under Question 4 above.

6) **Supporting Documentation:** *As attachments include the following:*

Yes	N/A	Item
<input checked="" type="checkbox"/>	REQUIRED	Map(s) of project site and/or area (including proposed staging areas and source of materials if sourced within park). Please combine into one PDF with photos.  <b>Reference current 70% draft set and SCRs in association with FHwy 70% Field Report</b>

## SEKI PROJECT DESCRIPTION AND SCOPE OF WORK

<b>Project Name:</b> Rehabilitate 15.29 Miles of the Mineral King Road		<b>Date(s) Submitted:</b> 1/26/2021; edited 3/24/2021; reviewed in 4/2021; finalized 6/22/2022
<b>NPS Project Leader or Liaison:</b> Nicole Mason		<b>NPS Division/Office or External Applicant:</b> Maintenance
<b>Funding Source:</b> FLTP		<b>PMIS #:</b> 238684
<input checked="" type="checkbox"/>	REQUIRED	<p>Photoset (word document with embedded and annotated photos), include historic photos, if appropriate. Please combine into one PDF with map(s).</p> <p><b>Reference contracted CLI</b></p>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>Designs for any architectural modifications (including modifications to landscape features such as walls, trails, pathways, etc.). The following drawings will be needed for projects requiring permits from the Army Corps of Engineers under the Clean Water Act: Plan (top), Profile (side), and Cross-section (front or back).</p> <p><b>Reference current 70% draft set and SCRs in association with FHwy 70% Field Report. Also reference updated designs for the parking lots at the end of the road and at the Ranger Station.</b></p>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>Spec sheets/manufacture documents for all known materials (i.e. roofing shingles, catalogue information, safety data sheets).</p> <p><b>Reference current 70% draft set and SCRs in association with FHwy 70% Field Report</b></p>

## Exhibit A

Sequoia Mitigation Plan as Formalized in Draft Construction Drawings

\_User: thomas.mccrary\_

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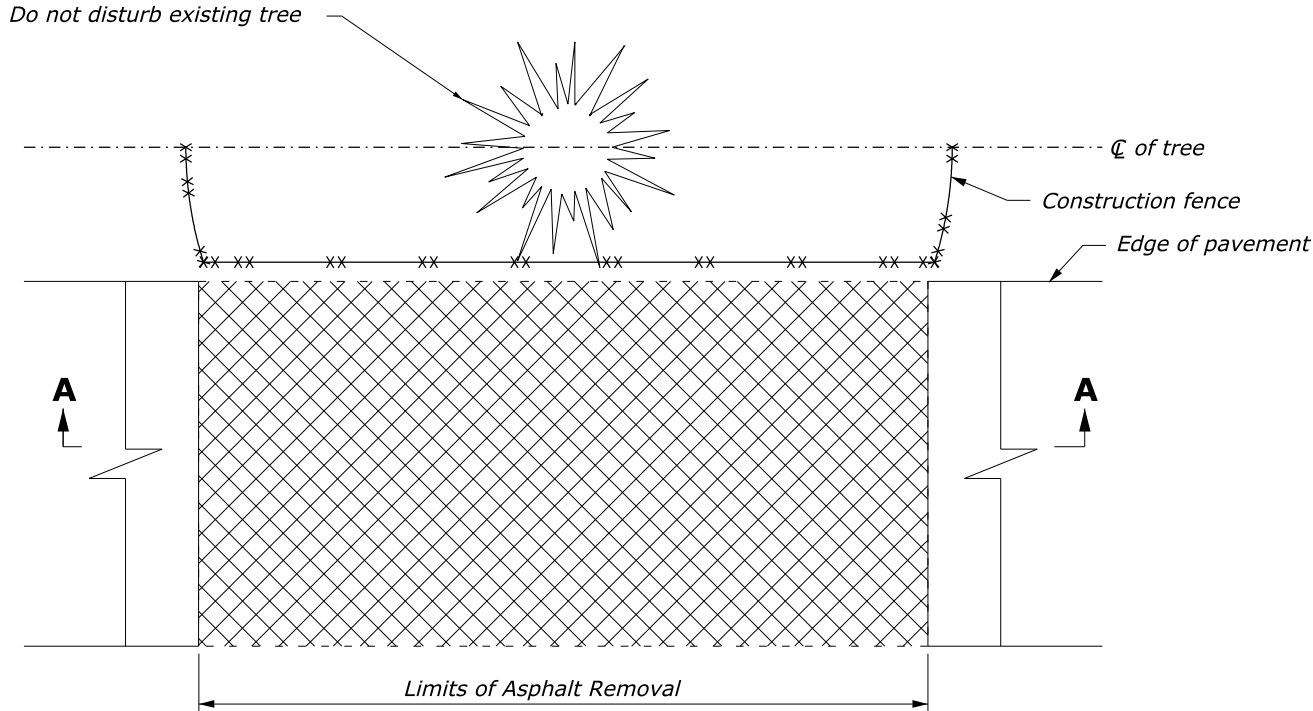
5/2/2022

Sequoia Mitigation Summary			
Start	End	Length	Sequoia Mitigation
442+50	443+20	100'	1
443+20	445+84	264'	2
445+84	446+65	81'	1
520+75	522+40	165'	1
526+55	527+05	50'	2
527+05	528+05	100'	1
563+00	564+00	100'	1
572+60	573+60	100'	1
573+60	575+00	140'	2
575+00	575+50	50'	1
586+50	587+50	100'	1
588+60	589+60	100'	1
589+60	590+93	133'	2
590+93	591+93	100'	1
598+33	598+83	50'	1
598+83	599+46	63'	2
599+46	599+96	50'	1
600+23	600+73	50'	1
600+73	601+65	92'	2
601+65	602+15	50'	1
603+95	604+45	50'	1
604+45	606+10	165'	2
606+10	606+60	50'	1
609+75	610+25	50'	1
610+25	612+00	175'	2
612+00	613+00	100'	1
613+00	615+65	265'	2
615+65	616+15	50'	1
626+50	627+50	100'	1
634+10	635+90	180'	1
642+40	643+05	65'	1
643+05	643+95	90'	2
643+95	644+60	65'	1
645+70	646+70	100'	1
648+00	649+00	100'	1
649+00	651+50	250'	2
651+50	652+50	100'	1

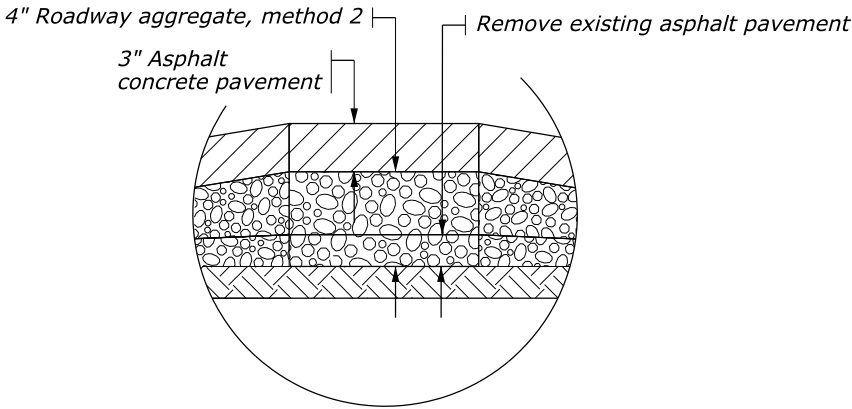
STATE	PROJECT	SHEET NUMBER
CA	SEKI 13(2) Mineral King Road NPS PMIS NO.: 238684 DRAWING NO.: XXX-XXXXX	H1

NOTE:

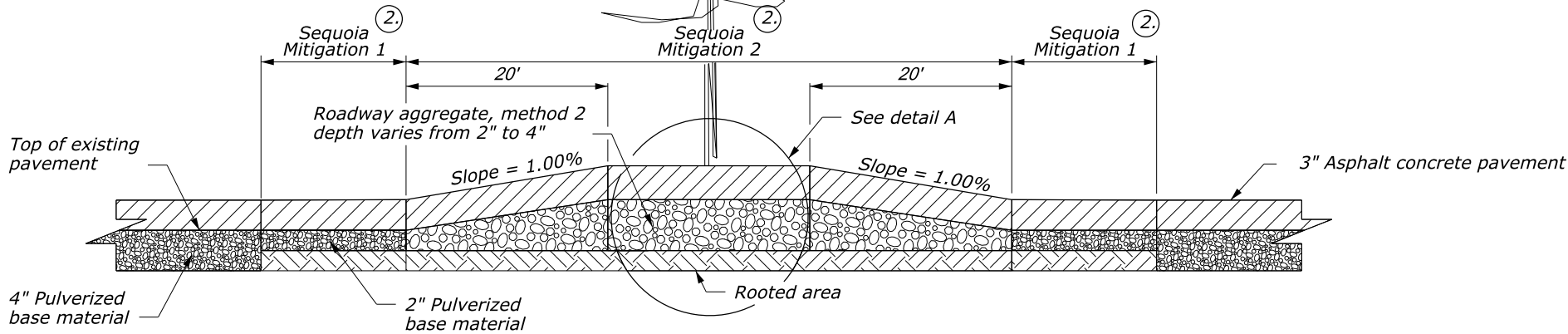
1. See Subsection 304.05 of SCR's.
2. See Sequoia Mitigation Summary for lengths.
3. Conserved milled and pulverized material meeting Subsection 304.05 requirements may be used as backfill materials as directed by the CO.



PLAN VIEW



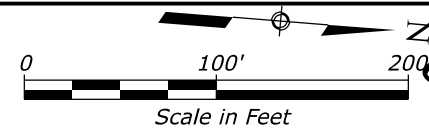
Detail A



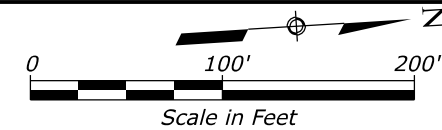
SECTION A-A

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS HIGHWAY DIVISION	
U.S. CUSTOMARY SPECIAL <b>SEQUOIA MITIGATION ZONES</b>	
	SPECIAL 308-A



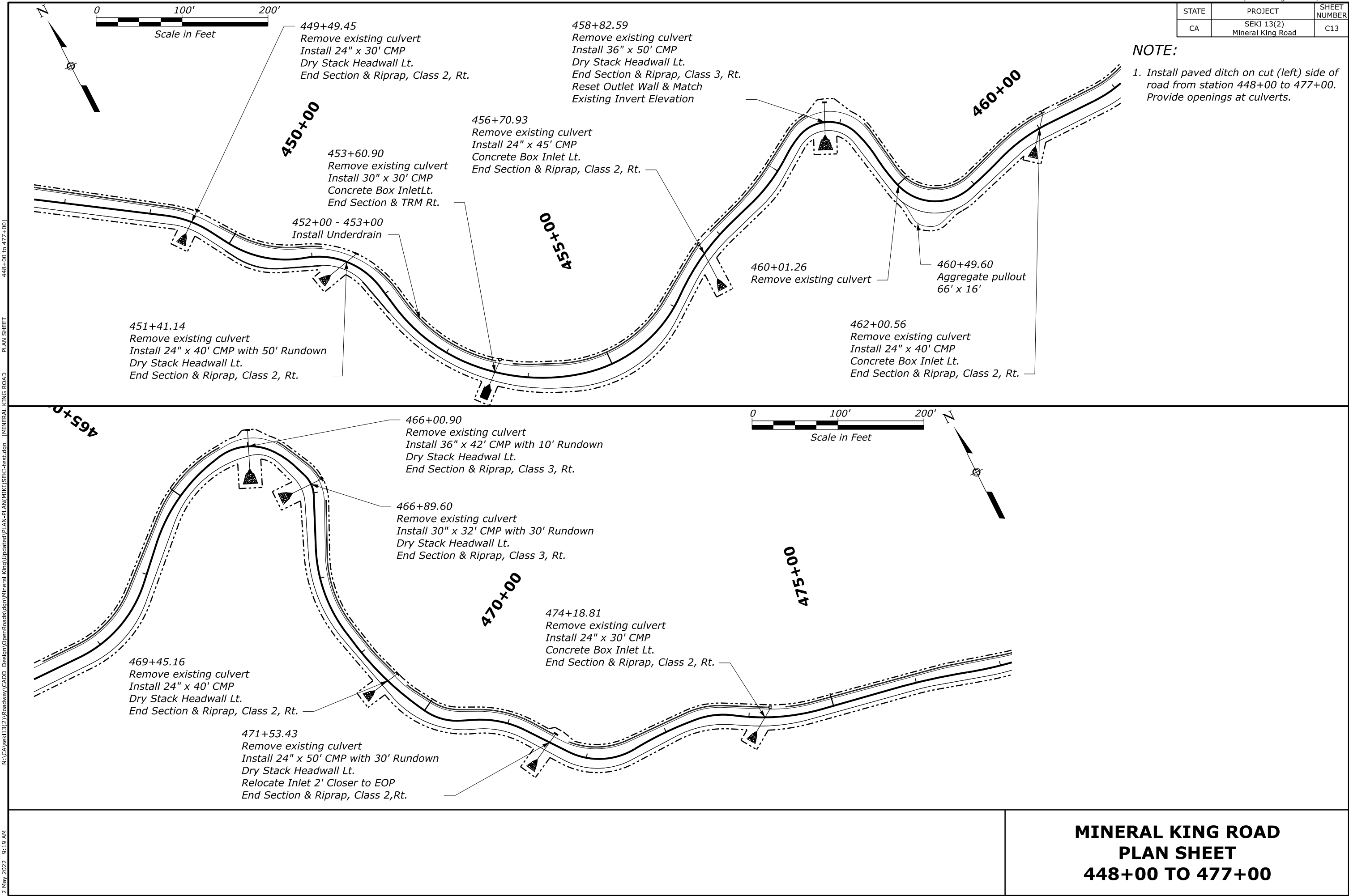
1. Install paved ditch on cut (left) side of road from station 419+00 to 448+00. Provide openings at culverts.



STATE	PROJECT	SHEET NUMBER
CA	SEKI 13(2) Mineral King Road	C13

NOTE:

1. Install paved ditch on cut (left) side of road from station 448+00 to 477+00. Provide openings at culverts.



448+00 to 477+00

PLAN SHEET

MINERAL KING ROAD

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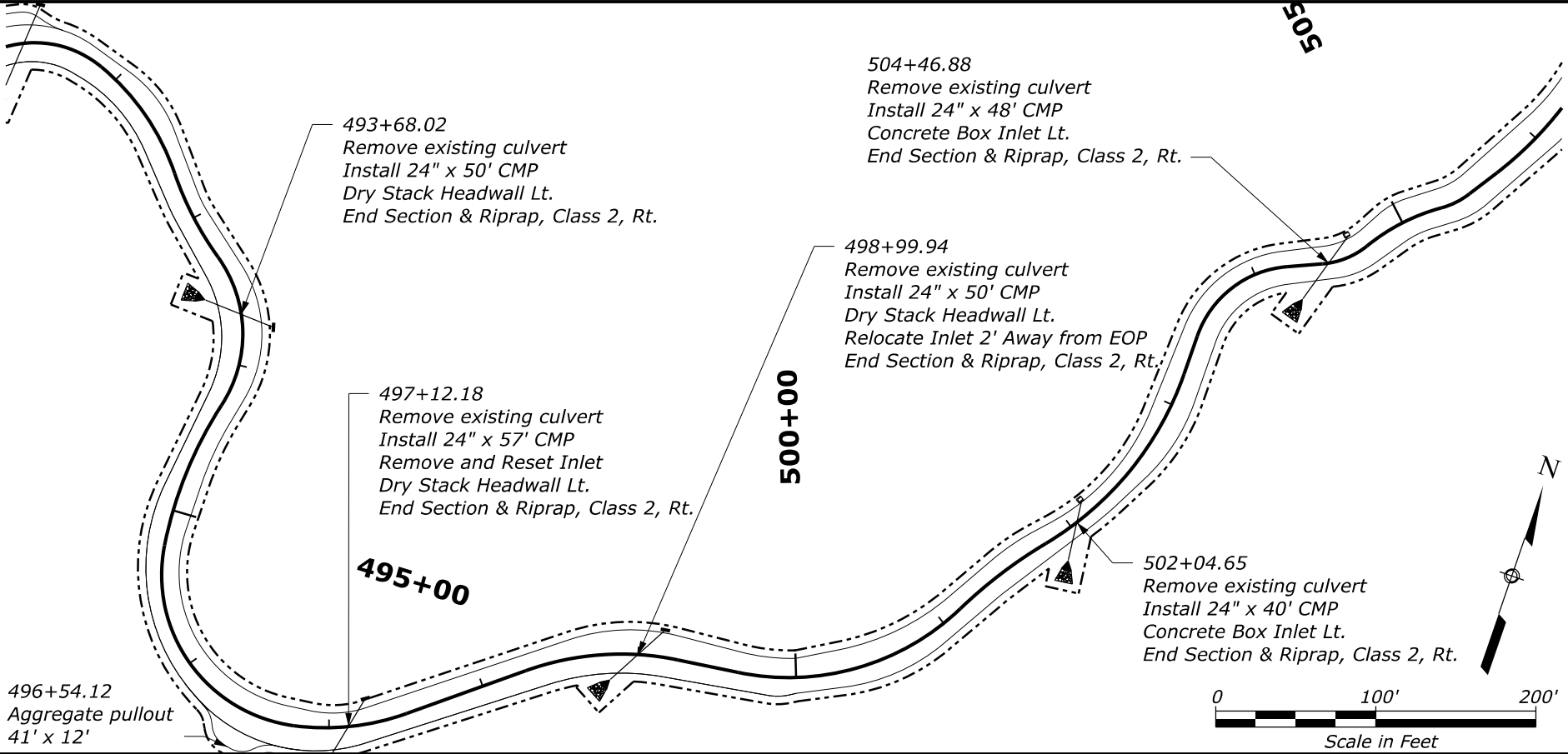
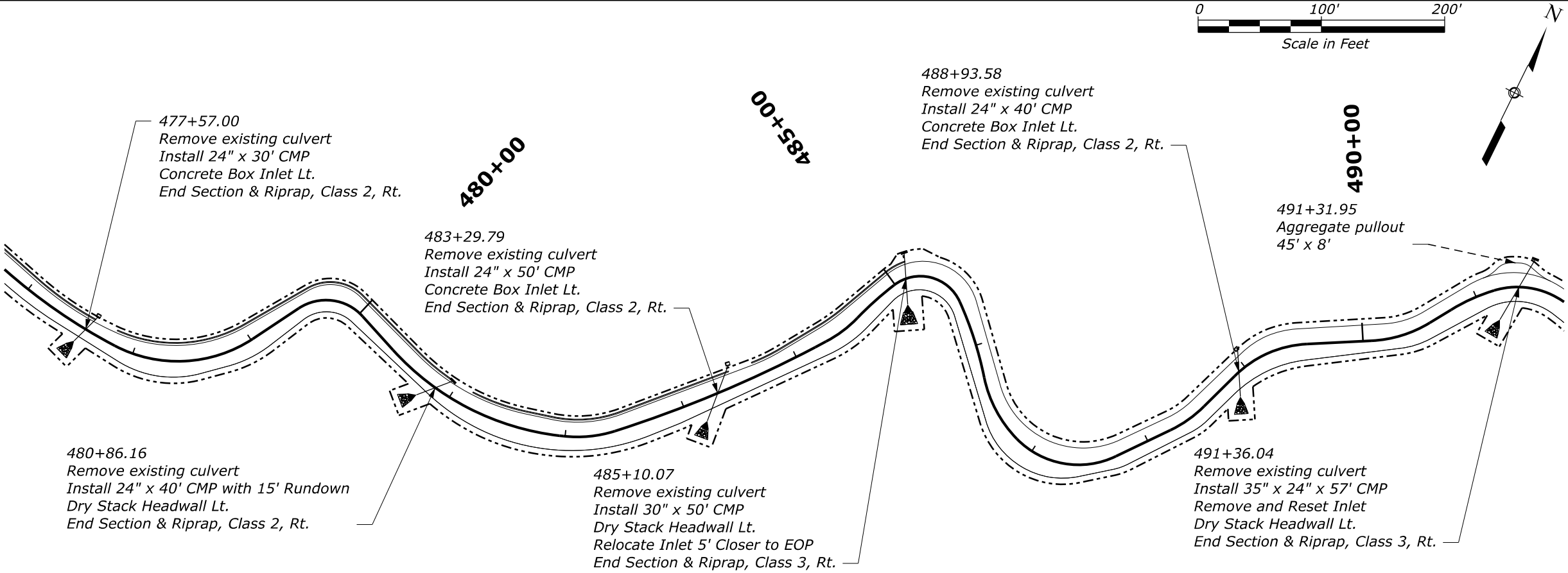


N:\CA\sek13(2)\Roadway\CADD\_Design\OpenRoads\dm\Mineral King\Updated\PLAN+PLAN(MIKI)SEKI-test.dgn [MINERAL KING ROAD] PLAN SHEET 477+00 to 506+00 2 May 2022 9:19 AM

STATE	PROJECT	SHEET NUMBER
CA	SEKI 13(2) Mineral King Road	C14

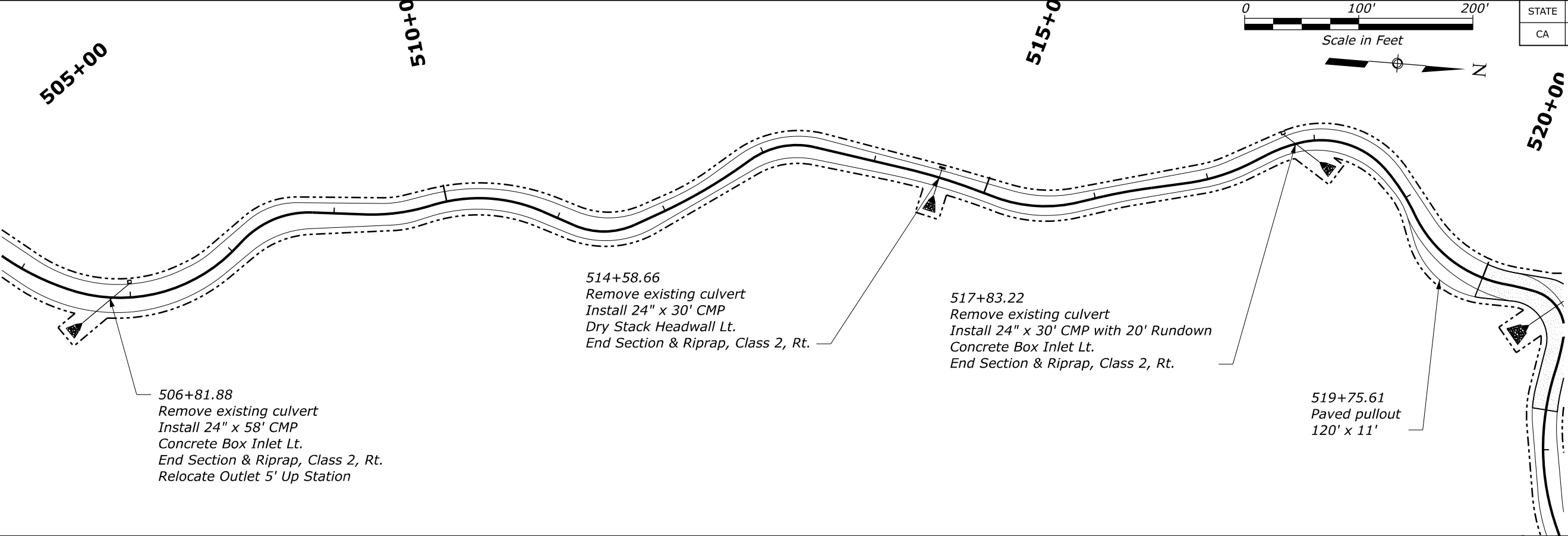
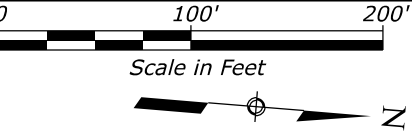
NOTE:

1. Install paved ditch on cut (left) side of road from station 477+00 to 480+00. Provide openings at culverts.
2. Install graded ditch from station 480+00 to 506+00.



MINERAL KING ROAD  
PLAN SHEET  
477+00 TO 506+00

STATE	PROJECT	SHEET NUMBER
CA	SEKI 13(2) Mineral King Road	C15

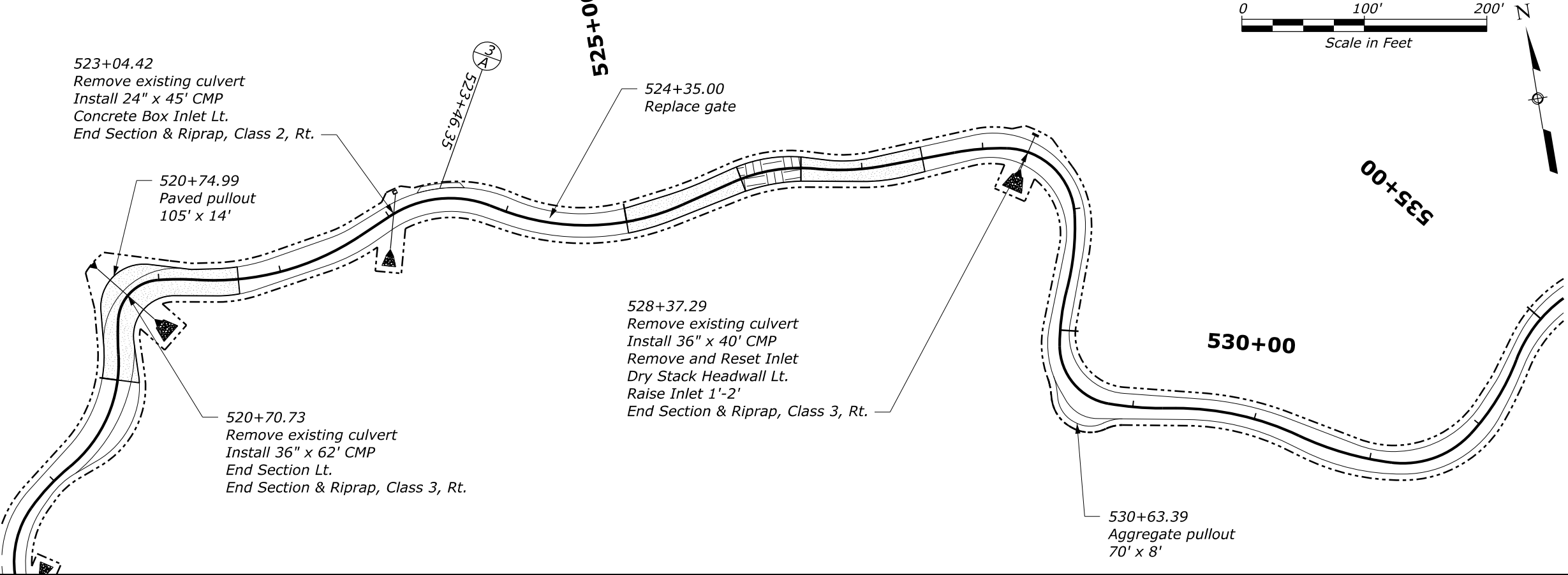
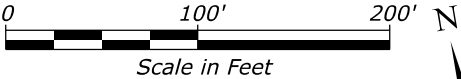


506+81.88  
Remove existing culvert  
Install 24" x 58' CMP  
Concrete Box Inlet Lt.  
End Section & Riprap, Class 2, Rt.  
Relocate Outlet 5' Up Station

514+58.66  
Remove existing culvert  
Install 24" x 30' CMP  
Dry Stack Headwall Lt.  
End Section & Riprap, Class 2, Rt.

517+83.22  
Remove existing culvert  
Install 24" x 30' CMP with 20' Rundown  
Concrete Box Inlet Lt.  
End Section & Riprap, Class 2, Rt.

519+75.61  
Paved pullout  
120' x 11'



523+04.42  
Remove existing culvert  
Install 24" x 45' CMP  
Concrete Box Inlet Lt.  
End Section & Riprap, Class 2, Rt.

520+74.99  
Paved pullout  
105' x 14'



520+70.73  
Remove existing culvert  
Install 36" x 62' CMP  
End Section Lt.  
End Section & Riprap, Class 3, Rt.

524+35.00  
Replace gate

528+37.29  
Remove existing culvert  
Install 36" x 40' CMP  
Remove and Reset Inlet  
Dry Stack Headwall Lt.  
Raise Inlet 1'-2'  
End Section & Riprap, Class 3, Rt.

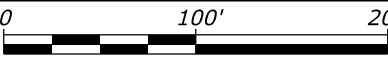
530+63.39  
Aggregate pullout  
70' x 8'

**NOTE:**  
1. Install graded ditch from station  
506+00 to 535+00.

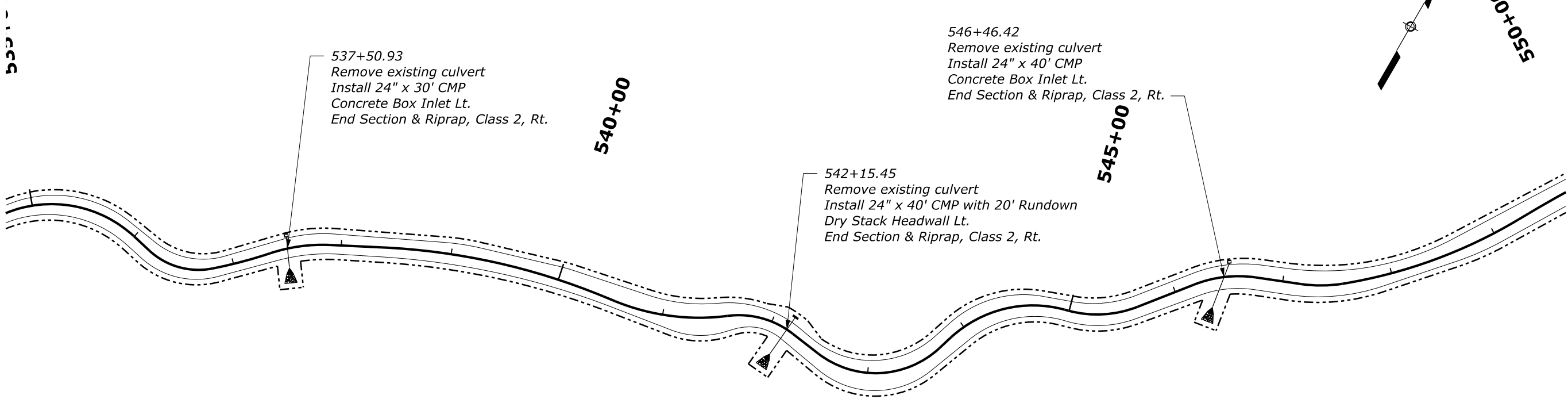
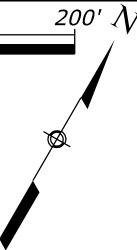
-  Sequoia Mitigation 1  
See Sheet 308-A
-  Sequoia Mitigation 2  
See Sheet 308-A

**MINERAL KING ROAD  
PLAN SHEET  
506+00 TO 535+00**

STATE	PROJECT	SHEET NUMBER
CA	SEKI 13(2) Mineral King Road	C16



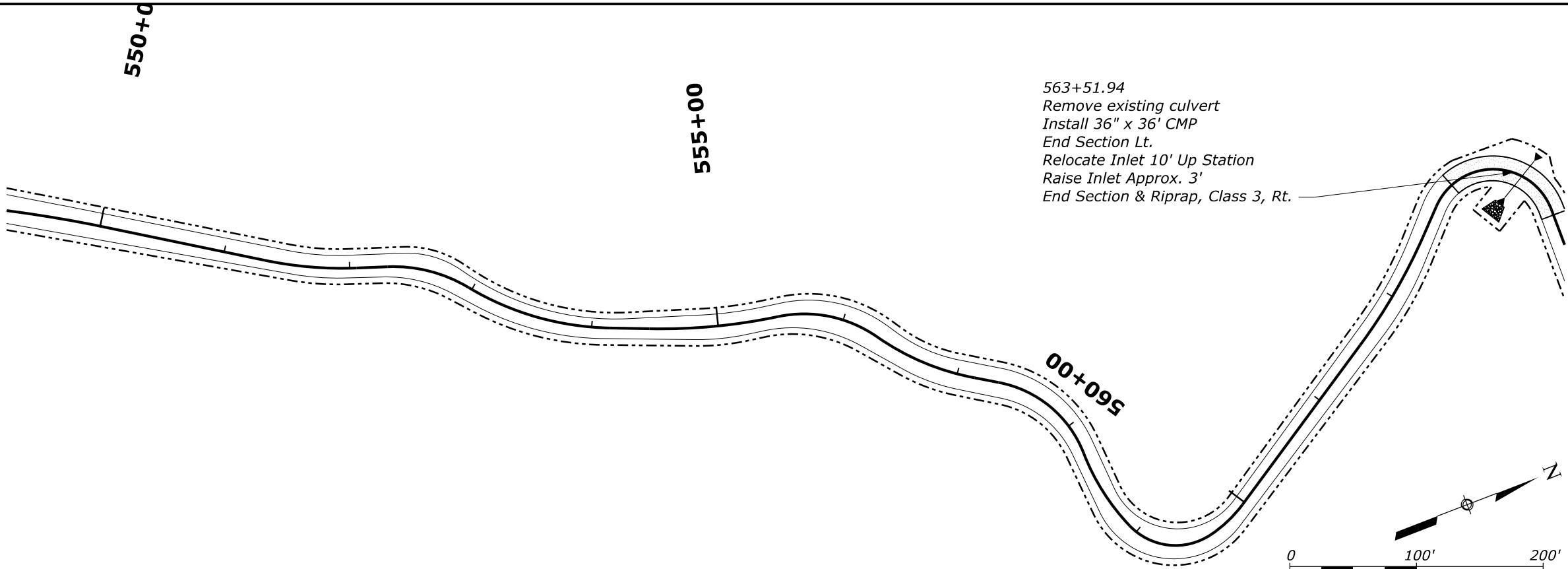
Scale in Feet



537+50.93  
Remove existing culvert  
Install 24" x 30' CMP  
Concrete Box Inlet Lt.  
End Section & Riprap, Class 2, Rt.

542+15.45  
Remove existing culvert  
Install 24" x 40' CMP with 20' Rundown  
Dry Stack Headwall Lt.  
End Section & Riprap, Class 2, Rt.

546+46.42  
Remove existing culvert  
Install 24" x 40' CMP  
Concrete Box Inlet Lt.  
End Section & Riprap, Class 2, Rt.



563+51.94  
Remove existing culvert  
Install 36" x 36' CMP  
End Section Lt.  
Relocate Inlet 10' Up Station  
Raise Inlet Approx. 3'  
End Section & Riprap, Class 3, Rt.

**NOTE:**

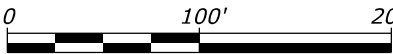
1. Install graded ditch from station 535+00 to 564+00.



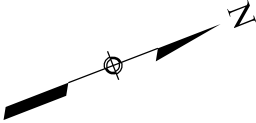
Sequoia Mitigation 1  
See Sheet 308-A



Sequoia Mitigation 2  
See Sheet 308-A

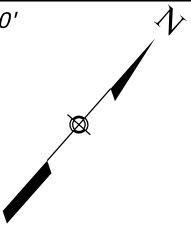
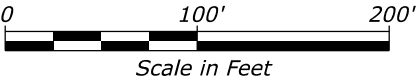


Scale in Feet




**MINERAL KING ROAD  
PLAN SHEET  
535+00 TO 564+00**


STATE	PROJECT	SHEET NUMBER
CA	SEKI 13(2) Mineral King Road	C17

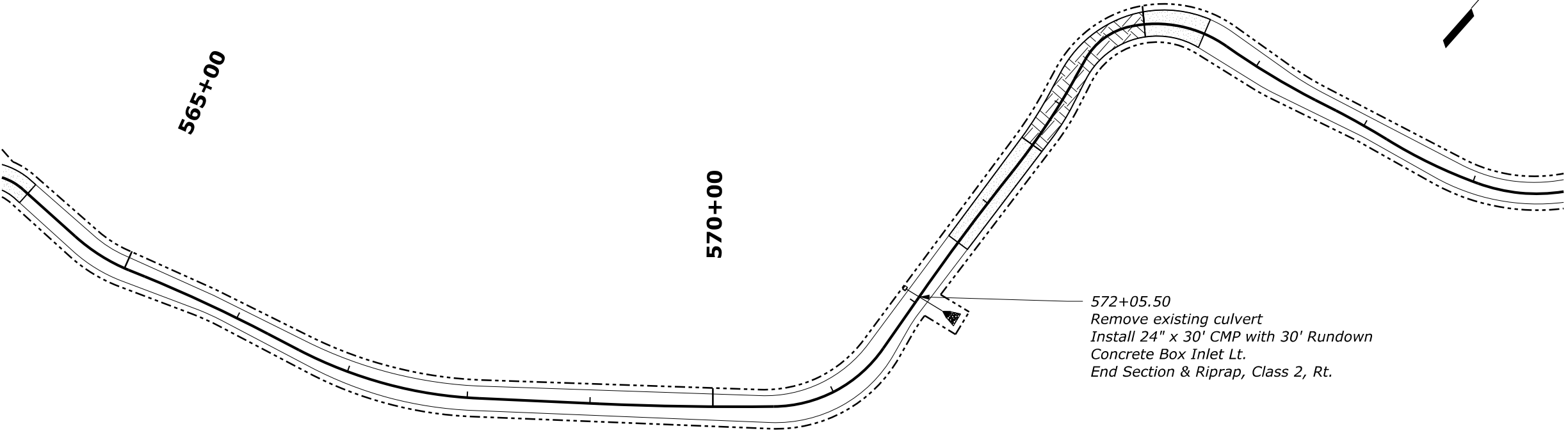


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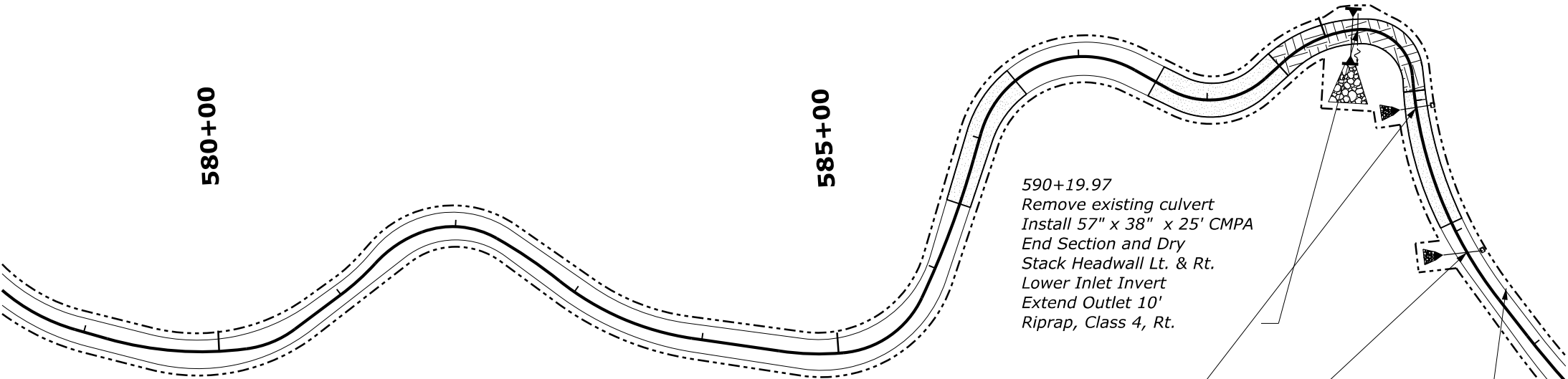
1. Install graded ditch from station 564+00 to 593+00.

 Sequoia Mitigation 1  
See Sheet 308-A

 Sequoia Mitigation 2  
See Sheet 308-A



572+05.50  
Remove existing culvert  
Install 24" x 30' CMP with 30' Rundown  
Concrete Box Inlet Lt.  
End Section & Riprap, Class 2, Rt.

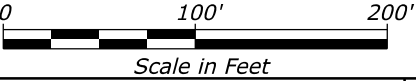


590+19.97  
Remove existing culvert  
Install 57" x 38" x 25' CMPA  
End Section and Dry  
Stack Headwall Lt. & Rt.  
Lower Inlet Invert  
Extend Outlet 10'  
Riprap, Class 4, Rt.

591+05.00  
New Proposed Culvert  
Install 24" x 25' CMP  
Concrete Box Inlet Lt.  
End Section & Riprap, Class 2, Rt.

592+17.30  
Remove existing culvert  
Install 24" x 28' CMP  
Concrete Box Inlet Lt.  
End Section & Riprap, Class 2, Rt.

592+00 - 593+00  
Install Underdrain



MINERAL KING ROAD  
PLAN SHEET  
564+00 TO 593+00

STATE	PROJECT	SHEET NUMBER
CA	SEKI 13(2) Mineral King Road	C18

NOTE:

1. Install graded ditch from station  
593+00 to 622+00.



Sequoia Mitigation 1  
See Sheet 308-A



Sequoia Mitigation 2  
See Sheet 308-A

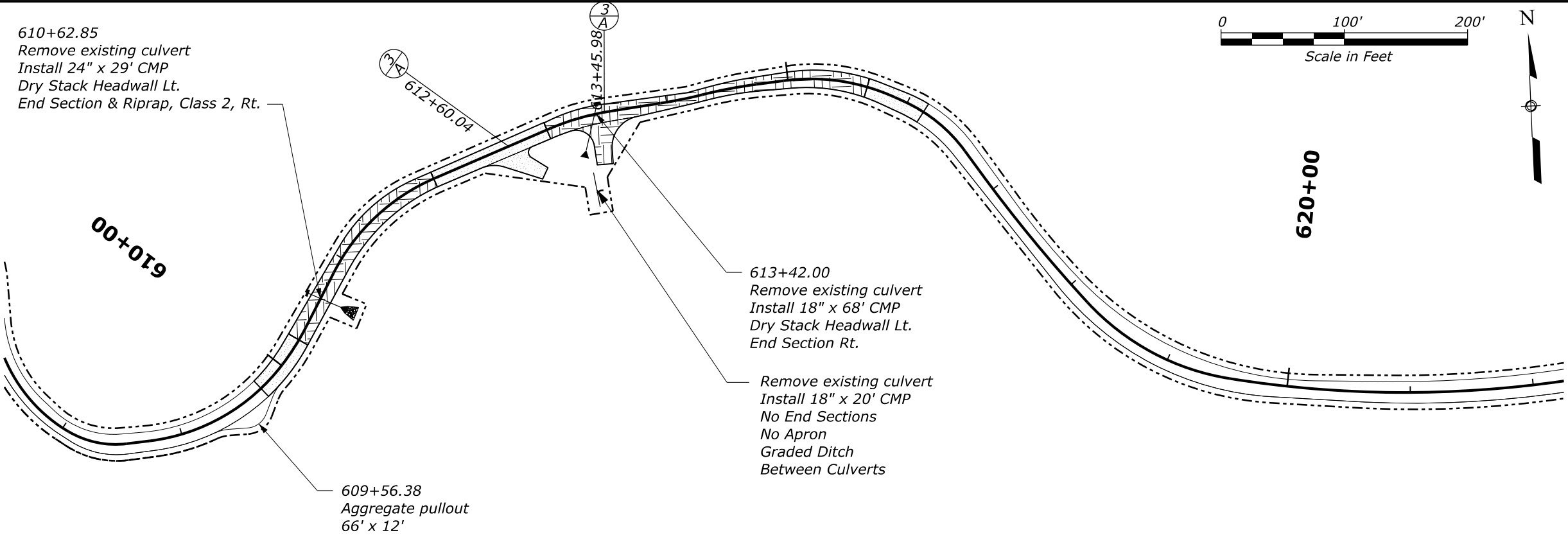
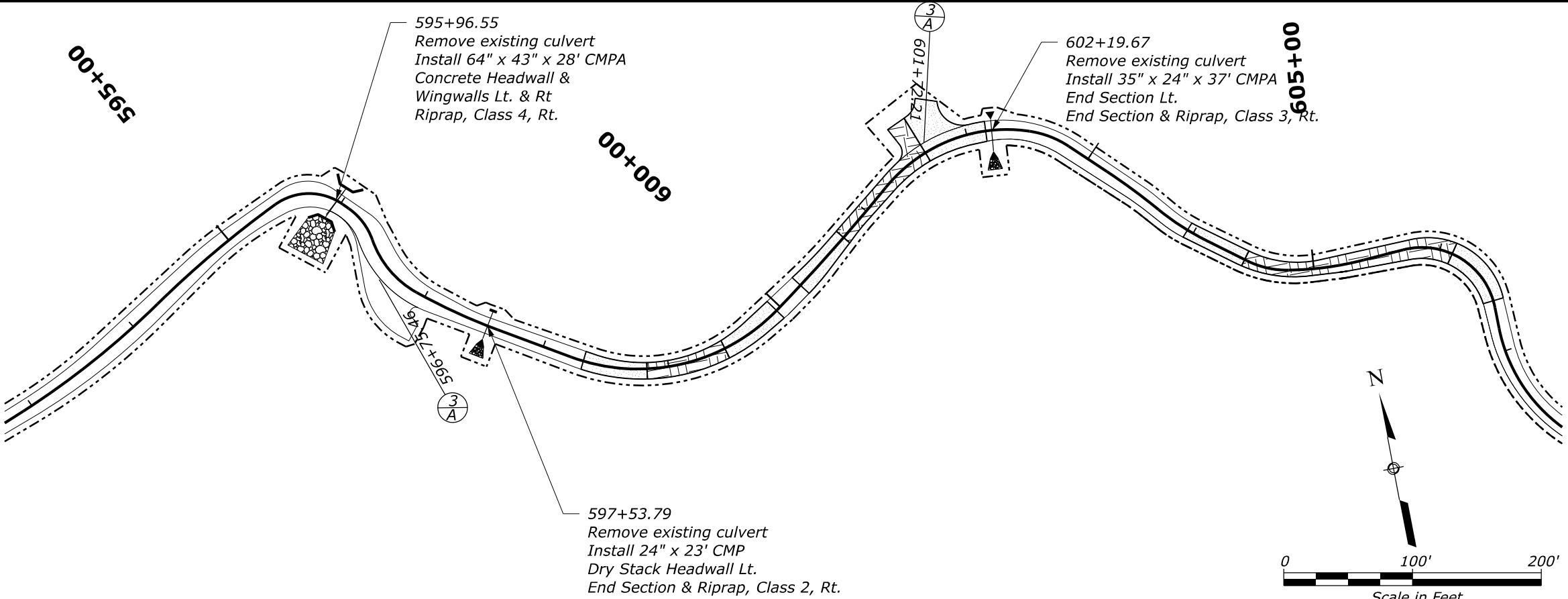
593+00 to 622+00

PLAN SHEET

MINERAL KING ROAD

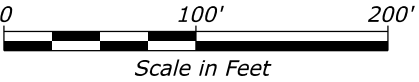
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MINERAL KING ROAD  
PLAN SHEET  
593+00 TO 622+00

STATE	PROJECT	SHEET NUMBER
CA	SEKI 13(2) Mineral King Road	C19



NOTE:

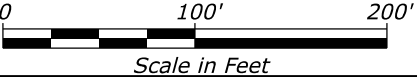
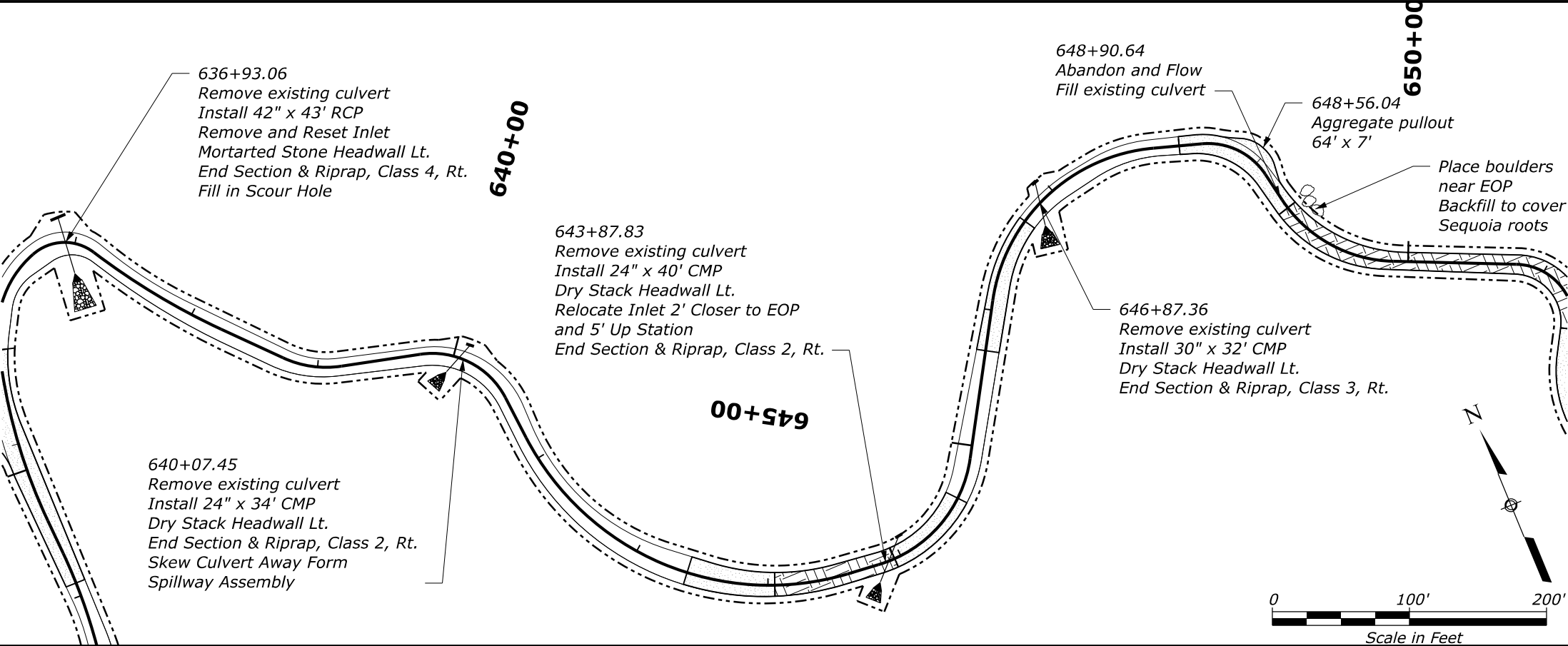
1. Install graded ditch from station 622+00 to 651+00.



Sequoia Mitigation 1  
See Sheet 308-A



Sequoia Mitigation 2  
See Sheet 308-A



MINERAL KING ROAD  
PLAN SHEET  
622+00 TO 651+00

STATE	PROJECT	SHEET NUMBER
CA	SEKI 13(2) Mineral King Road	C20

NOTE:

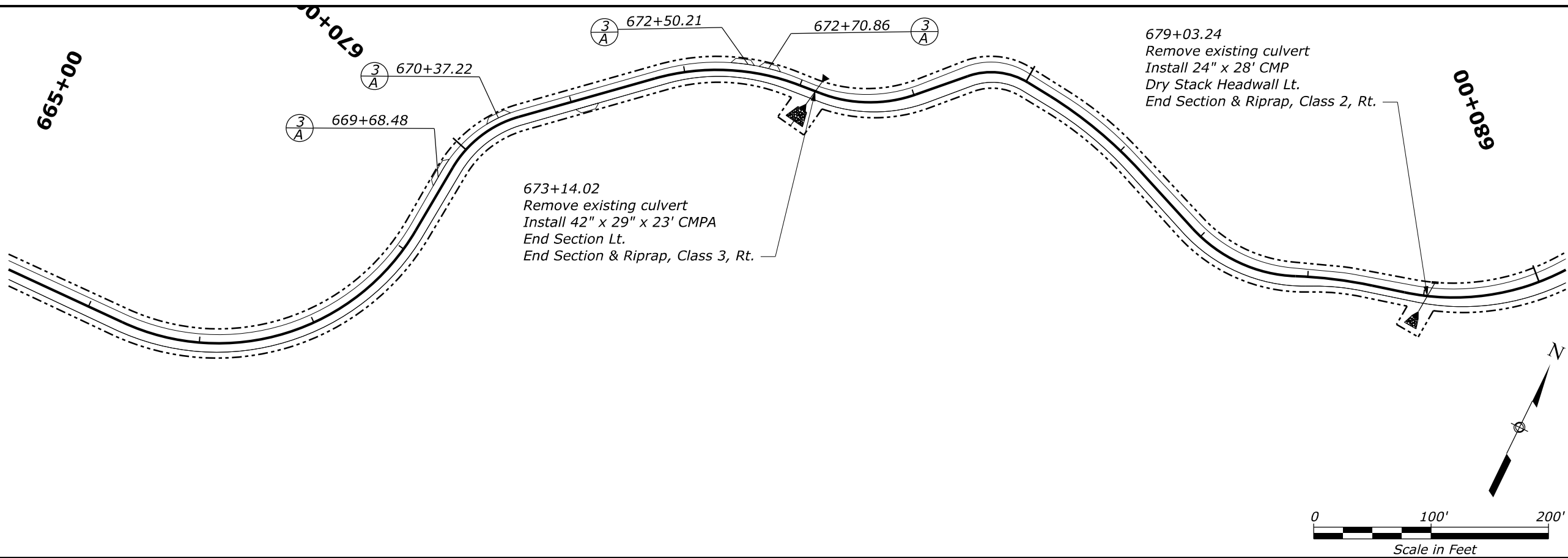
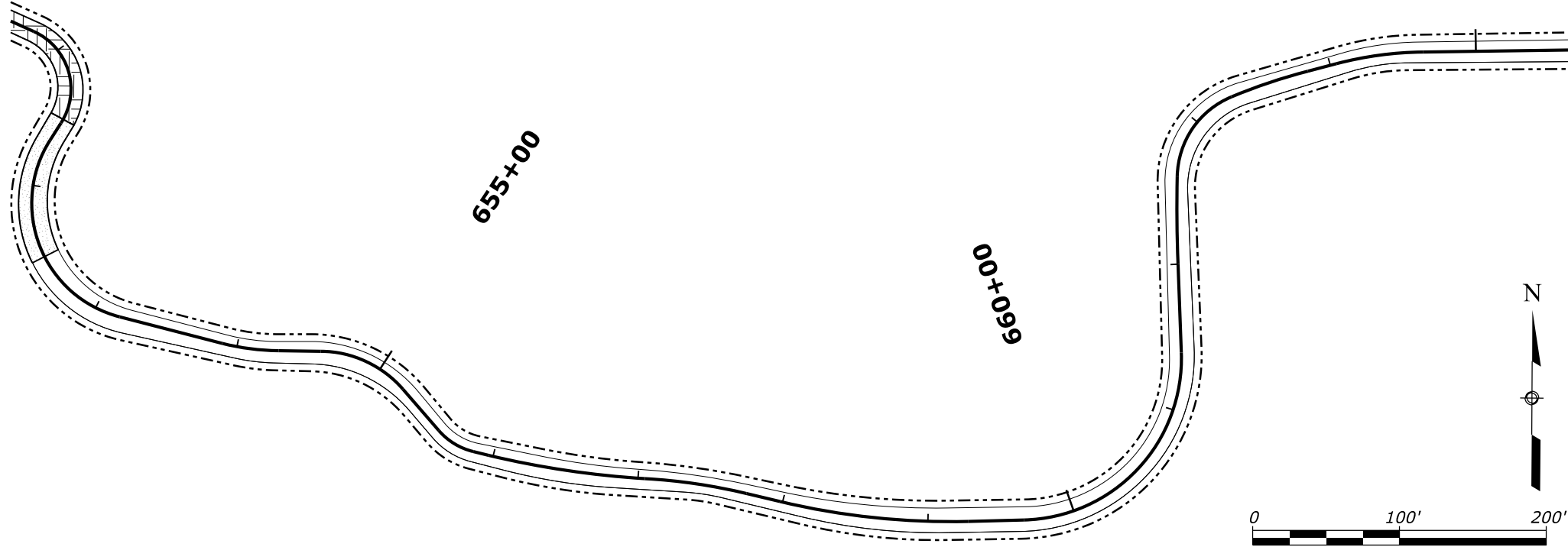
1. Install graded ditch from station 651+00 to 680+00.



Sequoia Mitigation 1  
See Sheet 308-A

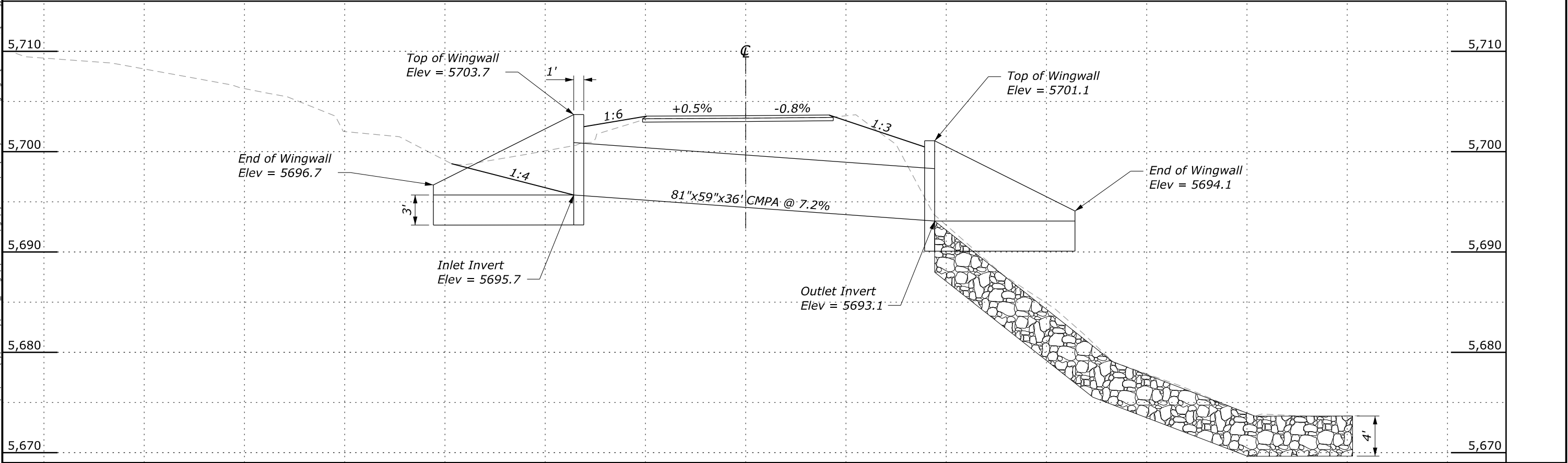
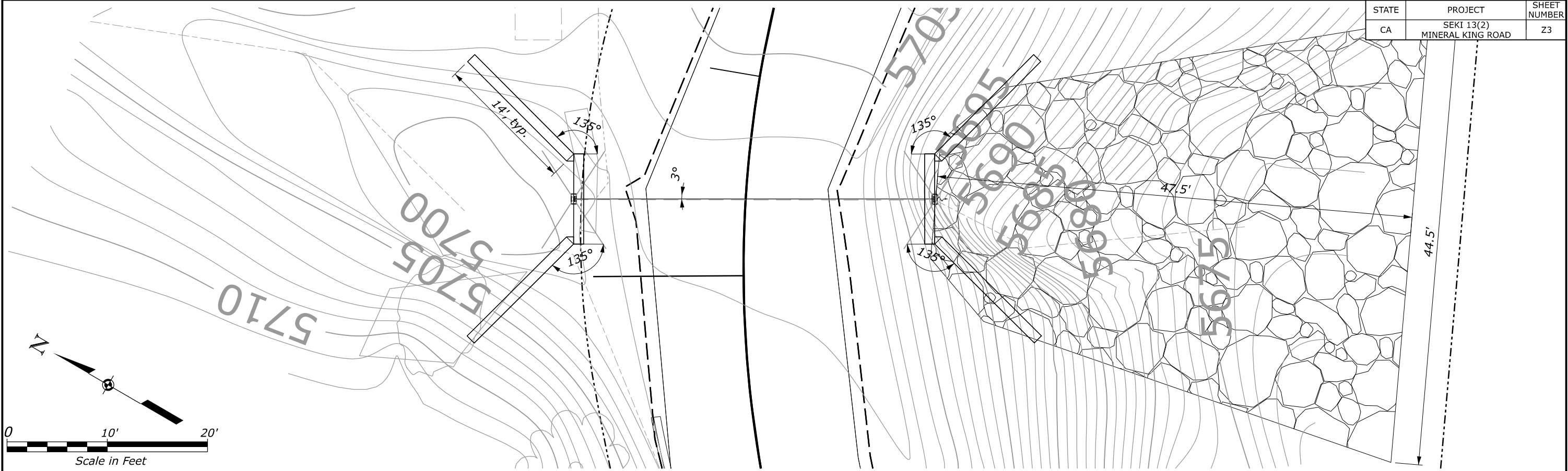


Sequoia Mitigation 2  
See Sheet 308-A



MINERAL KING ROAD  
PLAN SHEET  
651+00 TO 680+00

STATE	PROJECT	SHEET NUMBER
CA	SEKI 13(2) MINERAL KING ROAD	Z3

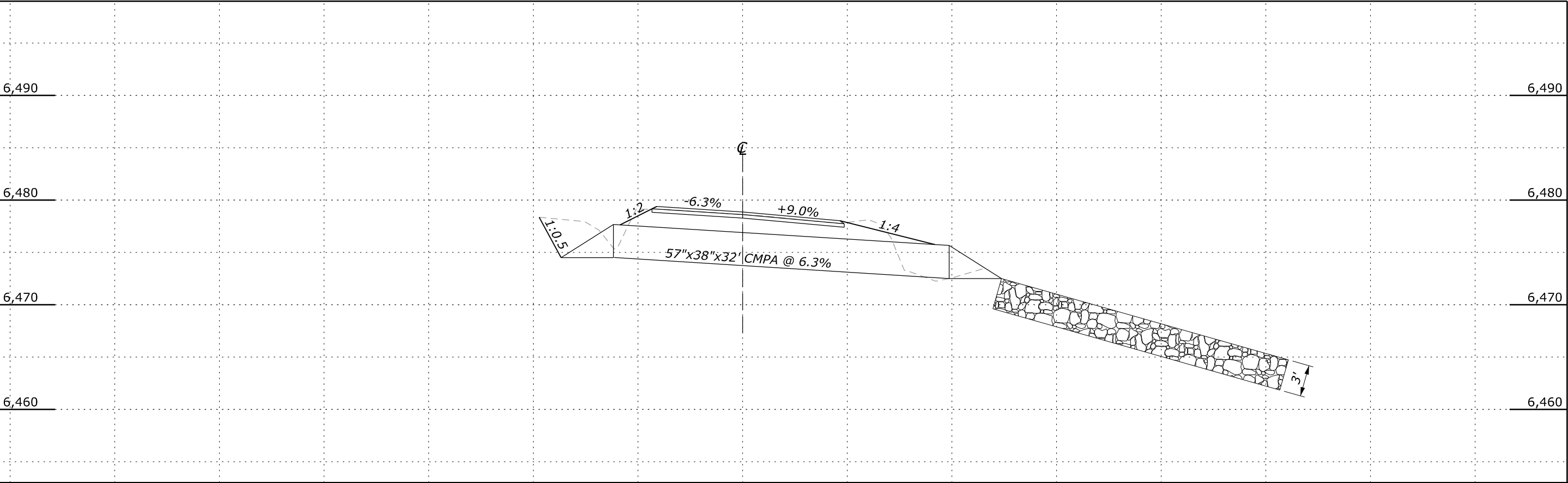
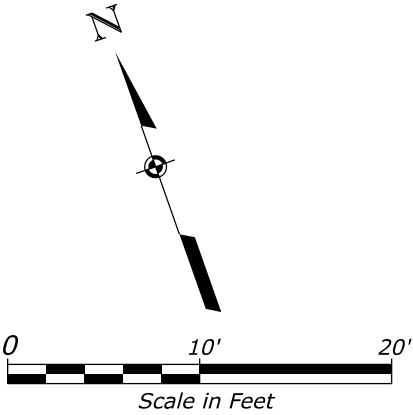
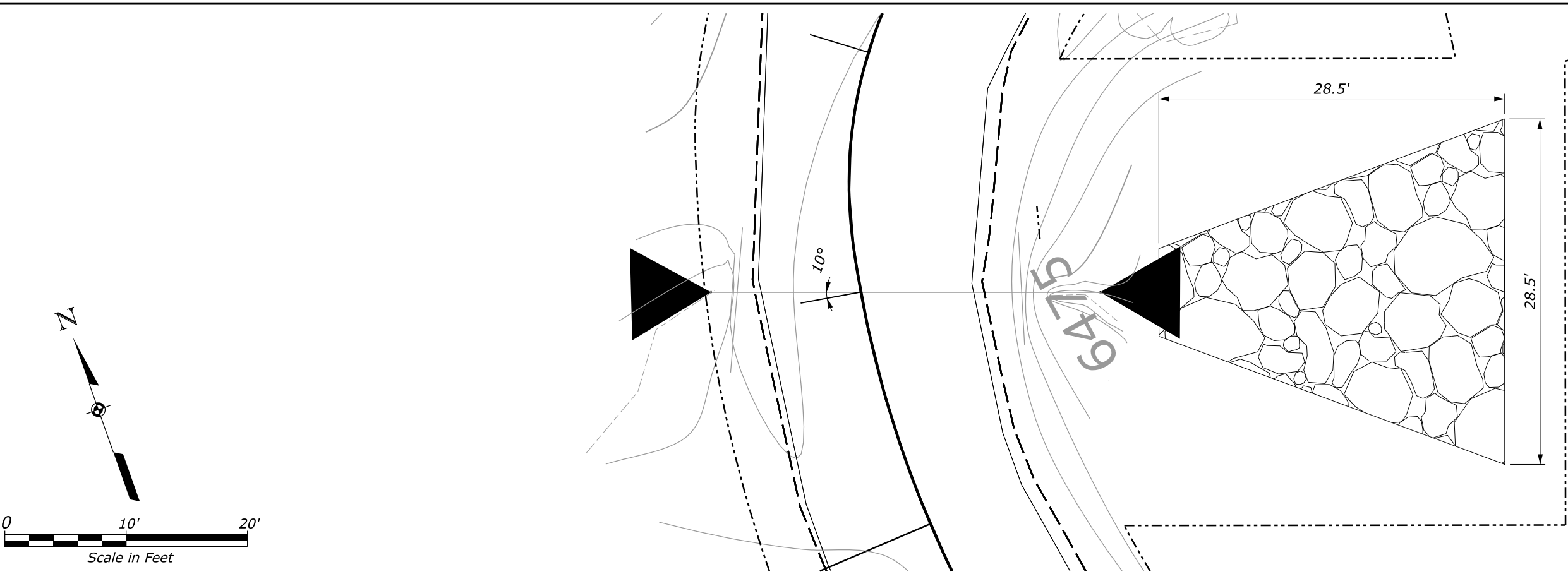


**444+07.58**  
**Culvert Cross Section**

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10 April 2022 6:34 PM



STATE	PROJECT	SHEET NUMBER
CA	SEKI 13(2) MINERAL KING ROAD	Z4



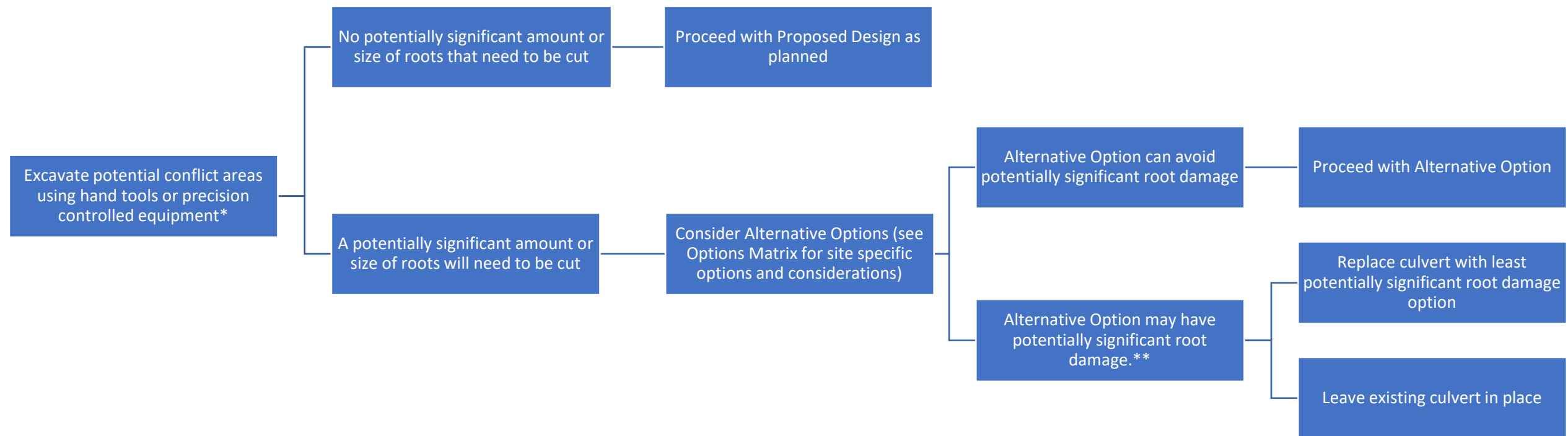
**590+19.97**  
**Culvert Cross Section**

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Exhibit B

Sequoia Mitigation Plan – Culvert Conflict Areas Process Flow Chart and Options Matrix

## Mineral King Road Project - Sequoia Root Mitigation Culvert Conflict Areas Process Flow Chart



\* A NPS biological monitor must be present when excavating in the vicinity of giant sequoia trees

\*\* The Park to determine if the culvert should be replaced and approved/rejected by the Superintendent. Decision needs to be made between taking on increased risk of road/culvert failure in lieu of risk of sequoia mortality as a result of culvert replacement root damage.

Mineral King Road Project - Sequoia Root Mitigation Culvert Conflict Areas Options Matrix								
<i>Approach and Matrix Use Summary:</i> The locations identified below are the primary areas of concern regarding the culvert replacements and potential sequoia root conflicts on the Mineral King Road Project. The general approach for the replacement of the culverts is to initially assume the most preferred option identified below in the design and construction contract. The contract documents will include language that these areas will have to be hand excavated (or other approved non destructive method) to determine any conflict locations prior to the culvert procurement/installation by the contractor. This excavation will be supervised by appropriate NPS staff who will be responsible for determination of sequoia impacts and design option. In the event that sequoia root conflicts are determined too substantial to proceed with the proposed design, this matrix will be used to evaluate next most preferred option for replacement at that specific location.								
<u>Culvert Location/Description</u>	<u>Existing Culvert Size (Diameter)</u>	<u>Proposed Culvert Size (Diameter)</u>	<u>Option A - Proposed Design (Most Preferred)</u>	<u>Option B</u>	<u>Option C</u>	<u>Option D (Least Preferred)</u>	<u>Proposed Design accommodates Fisher Crossing (Y/N)</u>	<u>Considerations/Notes</u>
Station 444+07/Redwood Creek	48"	66"	66" culvert with concrete headwall and wingwalls	66" culvert with concrete headwall and dry stack rock wingwalls	Culvert diameter reduction in 6" increments from proposed recommendation (including concrete headwall)	Existing culvert to be left in place	Y	Existing culvert hydraulically inadequate. Carries confined stream that carries significant debris load. Root disturbance is expected. Largest culvert size possible with headwall at a minimum is highly recommended at this location.
Station 563+52/ Milepost 18.54	18"	36"	36" culvert	36" culvert in alternate alignment	30" culvert	Existing culvert to be left in place	Y	Existing culvert hydraulically inadequate. 36" culvert required for debris condition and Fisher crossing. 30" adequate for design storm event. Potential at this area for realignment if needed.
Station 590+20/Atwell Creek Tributary	30"	57" x 38" elliptical	57" x 38" elliptical culvert with headwall	Reduced culvert size with additional adjacent culvert to meet hydraulic criteria. Reduction in size may result in loss of Fisher crossing.	Culvert diameter reduction in 6" increments from proposed recommendation	Existing culvert to be left in place	Y	Existing culvert hydraulically inadequate. Hydraulic model indicates there are relatively large flows passing through culvert in large events.
Station 610+62/Atwell Mill Campground	18"	24"	24" culvert	18" culvert	N/A	Existing culvert to be left in place	N	Minor drainage location. 24" inch recommended for maintenance/limit clogging.
Station 613+42/Atwell Mill Campground	8"	18"	18" culvert	N/A	N/A	Existing culvert to be left in place	N	Existing culvert is hydraulically inadequate. A 35" x 24" is required to be hydraulically adequate. Recommendation ties to 18" downstream and limited cover.
Station 643+87/Unpaved Area	12"	24"	24" culvert with inlet shifted toward road	18" culvert	N/A	Existing culvert to be left in place	N	Minor drainage location. 24" inch recommended for maintenance/limit clogging.



## ENVIRONMENTAL SCREENING FORM (ESF)

Updated Sept 2015 per NPS NEPA Handbook

### A. PROJECT INFORMATION

Project Title: Rehabilitate 15.29 Miles of the Mineral King Road in Sequoia National Park  
PEPC Project Number: 69154  
PMIS Number:  
Project Type: Repair/Rehabilitation (REHAB)  
Project Location:  
County, State: Tulare, California District, Section: Ash Mt, Other: Mineral King  
Project Leader: Brian Horton

### B. PROJECT DESCRIPTION

This project proposes to rehabilitate the full length of the Mineral King Road within Sequoia National Park and formalize and pave seven parking lots that serve as trailheads for stock users, day-hikers, and backpackers seeking to access thousands of acres of Wilderness within and beyond the Mineral King valley.

Key components of this project include the following:

- Grind, recycle, and overlay existing pavements, including excavation of existing roadbed;
- Replace failed base courses and poor subgrade materials;
- Regrade/super-elevate the road in sections to correct and direct drainage to the upslope side of the road (to reduce erosion and undercutting of the roadway, and improve vehicular safety);
- Pave all 15.29 miles of the road, including 1.38 miles that are currently unpaved;
- Pave pullouts that are currently paved; all pullouts that are unpaved would remain unpaved;
- Pave some short driveway aprons to unpaved secondary roads and campgrounds, such as the Atwell Campground, to protect grades and minimize erosion at points of entry/exit between differing surface materials;
- Spot-stabilize and reinforce 6,000 linear feet of outside edge of the roadway, including the installation of several retaining walls (8,800 square feet);
- Replace, and in most cases enlarge, approximately 205 culverts that are in poor condition and install approximately nine additional culverts for improved drainage;
- Clean and rehabilitate drainage structures, including ditches;
- Brush the roadway within 10 feet of the road edge on either side to maintain visibility for safety;
- Replace existing signs and object markers, such as culvert markers and mileage posts, with standard signage along the roadway;
- Replace two existing metal gates along the roadway.
- Re-pave the parking lot at the Ranger Station and formalize, grade, pave, and at least partially stripe six additional trailhead parking lots near or at the end of the road (This includes a slight expansion of the parking lot at the end of Mineral King Road and the development of a small accessible interpretive and/or picnic area near the trailhead.);
- Install pre-manufactured, metal bike racks within newly paved parking lots;
- Relocate and, in some instances, install new bear-proof food storage boxes and trash/recycling containers within the developed footprint or along the perimeters of existing parking lots;

- Relocate and, in some instances, install new interpretive media including waysides and orientation signage with frames made of weathering steel (unpainted) or powder-coated metal near the perimeters of existing parking lots;
- Revegetate areas adjoining the road that are disturbed by construction and revegetate and obliterate areas where social use has expanded the developed footprint of parking lots beyond intended use.

All work would strive to be constructed to Universal Design Standards to remove existing ABA barriers to extent possible or provide an equivalent alternate experience.

More specific information about this proposed action is included internal documents, Pre 95% Designs.

### C. RESOURCE IMPACTS TO CONSIDER:

Resource	Potential for Impact	Potential Issues & Impacts
Air Air Quality <i>Short-Term Air Quality</i>	Potential	<p>Issue: Emissions from equipment and particulates from moving fill and soil</p> <p>Impact: Earthwork and equipment operation during construction will temporarily increase dust and vehicle emissions in the immediate vicinity of the project area. Hauling construction and fill material and operating equipment during construction will result in increased vehicle exhaust and emissions (hydrocarbons, nitrogen oxide, and sulfur dioxide emissions), which will be expected to rapidly dissipate upon cessation of the activity. Both emissions and project related dust are likely to adversely affect air quality within the project area on and off (i.e., as earthwork and equipment operation occurs) for the duration of the project (2-5 years), though mitigations to protect air quality will result in these impacts being largely immeasurable. For example, resource protection measures for dust control will reduce the potential for fugitive dust. Post construction, it is anticipated that construction related emissions and particulate matter will immediately return to pre-project levels.</p> <p>Greenhouse gases (GHG) emitted during project construction will consist of truck and equipment exhaust, but emissions will be short-term and will end with the cessation of construction. Any effects of construction-related GHG emissions on climate change will be localized and will not be discernible at a regional scale, as it is not possible to meaningfully link the GHG emissions of such individual project actions to quantitative effects on regional or global climatic patterns.</p> <p>Road rehabilitation and the resulting improved road conditions could increase the amount of vehicular traffic on Mineral King Road over 10 years following the project, when the road condition is expected to remain high. As such, the project may have the potential to change historic levels of GHG or air pollutant generation from vehicles driving into the park over the long term. However, it is unlikely that travel associated emissions will be measurable at the local or regional scale.</p>
Air Air Quality <i>Long-Term Air Quality</i>	Potential	Issue: Paving existing gravel roads and parking lots

		Impact: Paving the unpaved sections of road and parking areas will likely result in a reduction of dust particulates in affected areas, resulting in a localized benefit to air quality and visibility over current conditions. These benefits will be realized immediately following each pavement project (i.e., once each parking lot is paved) and will extend indefinitely into the future.
<b>Biological</b> Nonnative or Exotic Species <i>Non-native invasive species</i>	Potential	<p>Issue: Invasive species introduction from construction material, equipment, and ground disturbance activities</p> <p>Impact: During project implementation, construction equipment—which will have operated in other locations with potential non-native, invasive species—will disturb, if not directly remove, existing vegetative cover, thereby exposing soils and increasing the potential for invasive exotic species to become established. Additionally, this project will require the import and use of large amounts of engineered materials (e.g., approximately 1,400 cubic yards of backfill, 5,000 tons of aggregate, and 2,900 cubic yards of riprap) that have the potential to introduce non-native plant material to the project area. Direct project related impacts will typically be localized to the project site and/or its immediate surroundings unless left uncontrolled. Most of the engineered material will be subsurface and project mitigations have been identified to help prevent the likelihood of introducing or spreading non-native plant species, but these measures cannot eliminate the potential for invasive species introduction. Monitoring and control of any introduced propagules will be implemented to mitigate potential introduction and spread of non-native plant species. Therefore, it is not anticipated that this project will result in the introduction of new populations of non-native or invasive species in the long term (more than 5 years from project completion).</p>
<b>Biological</b> Vegetation	Potential	<p>Issue: Direct damage from use of heavy construction equipment; direct vegetation trimming and/or removal during brushing and excavation activities (particularly culvert removal and installation); root exposure and potential damage during excavation and road pulverization activities</p> <p>Impact: A variety of vegetation communities occur within the project area, which extends linearly from 3,400 ft elevation to 7,830 ft along the East Fork of the Kaweah River. California Wildlife Habitat Relationships Habitat Types in the action area are primarily sierra mixed conifer, montane hardwood, and Jeffrey pine (66%); chaparral habitats (23%); and lesser acreages of montane riparian and wet meadows (3.3%); other tree types (juniper, white fir, and red fir) (4.2%); and barren areas and sagebrush (2.7%). For detail and reference of SEKI vegetation classifications within the project area, see the SEKI vegetation classification maps and legend. The project area also encompasses 3.85 miles through portions of two giant sequoia groves, the Atwell Grove (227 acres) and the Redwood Creek Grove (13 acres). A part of Mineral King Road also passes near the East Fork Grove of giant sequoias, but that grove is not within the project area.</p> <p>Notably, the 2021 KNP Complex Fire burned across the first approximate 9 miles of the Mineral King Road within Sequoia National Park (MP 0.0-MP 8.9). In the lower portions of these nine miles, the fire largely consumed all fuels adjacent to the road; a variable amount of fuel—ranging from ground</p>

		<p>clearing to a total loss of vegetation—was consumed in the upper portions of the burned area. Additionally, fire crews cleared above the road cut along much of these nine miles to create a more effective fire break during active fire suppression activities in fall 2021.</p> <p>The use of heavy construction equipment can compact soils and directly damage the bole of trees due to the close proximity of large trees to the road corridor. Mitigation measures have been identified, including fencing around the drip line and/or boles of large trees, such that measurable damage to roots from soil compaction and direct damage to the bole of large trees should be rare and are generally not anticipated.</p> <p>The proposed project will also trim and potentially remove small vegetation and brush within 10 feet of either side of the road corridor during brushing activities. Although the vegetation may return overtime, maintenance brushing is intended. This impact is therefore expected to continue into the future such that little vegetative cover protrudes into the road corridor (measured with the 10 foot buffer on either side) for the approximate 15.29 miles of road, or across 37 acres. Notably, sections of road are adjacent to rock walls or cliffs such that no to little vegetation will require brushing in these areas.</p> <p>This project will also directly remove a number of trees and other vegetation adjacent to culverts in order to access the culvert, install the new culvert and headwall, and install riprap at the downstream side of the culvert. This permanent loss of vegetation will occur in a relatively small area, will affect a plant community that is abundant in the Mineral King area, and will again, be partly offset by revegetation.</p> <p>Additionally, all roots within the first four inches under the existing roadbed will be pulverized during re-pavement activities, except in areas of reduced-depth pulverization (in which case only the first two inches will be removed), and small roots (2 inches and smaller in diameter) will be cut during excavations around all culverts. This root damage, which may be more likely in vegetation located on the uphill slope of the road, could slow the growth of surrounding trees should they lose a large percentage of root mass and may kill small brush within the immediate vicinity of the road along the full 15.29 miles of the Mineral King Road. Pulverization and excavation activities will also expose the roots of surrounding vegetation which could indirectly introduce pathogens or root rot to a tree such that a tree is weakened and eventually dies overtime. Mitigation measures have been identified to protect roots from these impacts, and thereby protect vegetation, such that the NPS does not anticipate losing any trees from these indirect impacts. Revegetation will also occur in areas denuded of ground cover during construction activities to restore vegetative cover to pre-project conditions with regards to vegetative density and diversity. In the long-term (post project and into the future), the NPS anticipates some beneficial impacts to roots that are currently exposed within the roadbed (particularly in areas that are currently unpaved) as they will be protected from day-to-day vehicular traffic.</p>
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		<p>Finally, in improving the drainage along the full 15.29 miles of the Mineral King Road, this project will beneficially impact vegetation by 1) reducing erosion and additional downcutting (including prevent further gullyng) under the road that might otherwise undermine vegetation as well as 2) minimizing future washouts of the roadway during large precipitation or rain on snow events. This aspect of the project is expected to have a long-term beneficial impact to surrounding vegetation by protecting slopes and minimizing catastrophic vegetation loss within drainages along the roadway.</p>
<b>Biological Vegetation</b> <i>Giant sequoias</i>	Potential	<p>Issue: Direct damage from use of heavy construction equipment; root damage and exposure during culvert excavation and road pulverization activities</p> <p>Impact: See impacts to “vegetation” above, except no sequoias will be directly removed during project implementation. More specifically:</p> <ul style="list-style-type: none"> <li>• Construction equipment can damage roots or boles (trunks) of giant sequoias that grow immediately adjacent to the narrow road corridor. In particular, there is one pinch point between two sequoias where the road narrows to approximately 17 feet wide; the trees show ongoing damage to their boles from vehicular traffic along the road. Mitigation measures have been identified, including fencing around the boles and fining the contractor for any direct damage to trees, such that direct damage to the boles of large trees should be rare and is generally not anticipated. Additionally, in raising the road at existing pinch points between two sequoias, the project will slightly widen the road at these points, enough to minimize the likelihood that the individual trees will be struck by vehicles into the near (next 25 years) future.</li> <li>• Proposed construction activities (namely, removing pavement, pulverizing existing roadbed, removal of subsurface materials around existing culverts, and installation of larger culverts with headwalls) have the potential to disturb the roots of sequoias, either by directly cutting or exposing roots to fungal attack. Root removal could also increase the likelihood of structural failure, especially within 1-1.5 x dbh (diameter breast height) of bole. These impacts are most likely in locations where culverts are planned to be replaced in close proximity to a large sequoia. Based on a study of 48 giant sequoias that experienced root damage, including two of which experienced about 30% of root system removal, all sequoias survived post construction but experienced measurable decreases in growth rate (Hartesveldt, 1962). Based on a NPS 2D GIS model, sequoias that could be impacted by adjacent culvert replacements could see between a 0.3% and 25.6% loss in root area (i.e., the portion of rooting area impacted by excavation). (This analysis assumed that roots are equally distributed around the base of a sequoia, that roots extend 200 feet from the bole, and that all roots within the potential excavation area will be cut—which is not the case). Although the results of this 2D model suggest that no sequoia impacted by this action will experience a 30% root system removal (which sequoias have shown to survive), ground penetrating radar (GPR) surveys will be completed in areas planned for excavation (culvert replacement) near giant sequoias prior to finalizing construction drawings. The intent of the GPR survey is to attempt</li> </ul>

		<p>to identify the extent/amount of subsurface root mass in these areas prior to construction. Based on the findings of this GPR and exploratory excavation findings, the Superintendent may decide to alter the extent of the proposed action, which could include implementing an alternative or modifications to one or more of the culvert locations to avoid damaging critical root mass of one or more sequoias in the vicinity of the culvert. Exhibit B includes a flow chart/decision matrix and associated options at these culvert locations. Given mitigations in place to protect large roots during excavation and pulverization, the history of disturbance along the road corridor within the living history of these trees, the results of the 2D modelled analysis, and future efforts to identify root mass prior to disturbance and the integrated options in place to avoid action that could greatly impact sequoia roots, the NPS anticipates that while all sequoias in the project area will survive post construction, the growth rate of some of these sequoias may slow due to root damage.</p> <ul style="list-style-type: none"> <li>• Improvements to road drainage also have the potential to reduce available water for giant sequoias, especially in culvert replacement areas where water may be shed more efficiently from areas where pooling currently occurs.</li> <li>• Notably, a detailed, site-specific sequoia mitigation plan has been developed to minimize the potential damage sequoias or their roots to the greatest extent practicable. This includes modifications to the original design as well as conditions of construction that will be implemented throughout project implementation. These project modifications and mitigations further reduce the likelihood of noticeably harming a sequoia.</li> </ul> <p>In recent years, park staff and scientists have documented increasing threats to giant sequoias from drought, bark beetles, wildland fire, and higher temperatures. In addition, our best source of knowledge on the impacts of this construction on giant sequoias is from studies with small samples sizes conducted 60 years ago, at one geographic location, under different climatic conditions. It is possible, that the cumulative impact of these stressors and the road construction will have greater impacts than anticipated to individual sequoia trees but these impacts will likely be immeasurable and difficult to attribute to any given action or stressor. Out of an abundance of caution, the NPS has identified extensive mitigations to minimize if not avoid additionally impacting individual sequoias within the project area.</p>
<b>Biological</b> Vegetation Species of Special Concern or Their Habitat <i>Special Status</i> Plants	Potential	<p>Issue: Direct vegetation trampling and/or removal of special status understory plants during use of heavy equipment on vegetated surfaces, brushing, and excavation activities (particularly culvert removal and installation)</p> <p>Impact: Construction equipment can damage or kill special status understory plants within the project area. One location of <i>Angelica callii</i> (CA RPR 4.3) was documented near the road in a botanical survey in 2022 for previously documented <i>A. callii</i> locations near the road. No special status plants were found during botanical surveys of roadside, pullouts, parking lot perimeters, and culvert areas in 2021. Additional, targeted surveys are planned for 2023. Mitigation measures have been identified—including re-surveys of previously documented locations prior to construction, mapping</p>

		and fencing the occurrences of these species—such that no impacts to these rare plants are anticipated from project implementation.
<b>Biological</b> Wildlife and/or Wildlife Habitat including terrestrial and aquatic species <i>Wildlife: small and large mammals, reptiles</i>	Potential	<p>Issue: Noise and crew presence</p> <p>Impact: Construction activities, such as human presence, noise generation, and vibration from heavy equipment, may interfere with rearing of dependent young, migratory patterns, or foraging for individuals of a number of mammalian species, and may specifically cause wildlife to vacate the project area. Mitigations have been identified to minimize sound levels and prevent project activities from directly impacting wildlife, but displacement of wildlife is expected in proximity to construction activities. As there is an abundance of comparable wildlife habitat in close proximity to the project area, individuals will not have to travel far to find suitable habitat for rearing young or foraging. When construction is complete, wildlife is expected to return to the area. Long term reproductive and/or migratory impacts are not anticipated to be measurable at a population level.</p>
<b>Biological</b> Species of Special Concern or Their Habitat <i>CA spotted owl and other nesting birds and roosting bats</i>	Potential	<p>Issue: Noise and crew disturbance of CA spotted owl and other nesting birds</p> <p>Impact: CA spotted owls (<i>Strix occidentalis occidentalis</i>), whose habitat exists throughout the road project corridor, may be disturbed by vibrations from heavy machinery, project related noise, and human presence if nesting in close proximity to the project area. These disturbance causing activities, especially when conducted during the sensitive nesting period of March 1-August 15, could lead to territory abandonment and subsequent failure of up to 3-4 owl nests. Other nesting birds and roosting bats exhibit a similar vulnerability during the March-August nesting window, though the response to disturbance is dependent on the species and weather conditions for a given year.</p> <p>Noise during construction activities may temporarily deter birds from nesting in nearby trees, and, depending on proximity to nests during the active breeding season, may cause birds to abandon existing nests. Vegetation brushing and vegetation or other tree removal during excavation activities also has the potential to disturb active bird nests. However, mitigations have been identified to avoid direct disturbance to nests (such as surveying prior to work and avoiding activities that will impact a nest) and to minimize sound levels and disturbance during acoustically sensitive times of day (i.e., dawn and dusk) when birds may be more active. Implementation of these mitigations will avoid direct nest disturbance and will reduce the likelihood of nest avoidance or abandonment, such that nest abandonment, if it occurs, will be limited to a few individuals and will not noticeably affect the populations of migratory birds within the park. There is also an abundance of nesting habitat surrounding the project area such that displaced individuals will not have to travel far to find suitable habitat for nesting. Given measures to avoid direct nest disturbance and minimize sound levels to reduce nest abandonment, and, given the abundance of surrounding habitat to accommodate displaced birds, project related disturbance is unlikely to have long term localized impacts after project completion or be measurable at a population level.</p>
<b>Biological</b> Species of Special Concern or Their	Potential	Issue: Construction noise, vegetation removal, and overall disturbance

Habitat <i>Fisher</i>		Impact: Construction noise, vegetation removal, and crew disturbance <i>may affect</i> denning fisher ( <i>Pekania pennanti</i> ). The NPS consulted with U.S Fish and Wildlife Service per Section 7 of the Endangered Species Act. Refer to Other Compliance Consultations for project effect determinations, consultation details, and conservation measures.
<b>Biological</b> Species of Special Concern or Their Habitat <i>Fisher</i>	Potential	<p>Issue: Culvert replacement</p> <p>Impact: Post project, it is anticipated that replacement and upsizing of culverts will result in a long term benefit for fisher by providing safer crossing opportunities for fisher; reducing potential for road mortality due to auto collisions and improving habitat connectivity. These benefits will extend to the life of the culverts and are dependent upon culverts being appropriately cleared and maintained so fisher are able to utilize them.</p> <p>Again, the NPS consulted with U.S Fish and Wildlife Service per Section 7 of the Endangered Species Act. Refer to Other Compliance Consultations for project effect determinations, consultation details, and conservation measures.</p>
<b>Cultural</b> Archeological Resources	None	<p>Issue: Ground disturbing activities have the potential to disturb or unearth archeological resources, if present.</p> <p>Impact: Engineering and project design data was overlaid with the site boundaries to ascertain which portions of each site is located within the project APE and potentially subject to direct effects resulting from ground disturbing activities associated with the proposed project. This project will have no adverse effect to archeological sites determined eligible for listing on the National Register of Historic Places.</p>
<b>Cultural</b> Cultural Landscapes <i>Mineral King Road Cultural Landscape District</i>	Potential	<p>Issue: The entire project area falls within the Mineral King Road Cultural Landscape District. All activities have the potential to impact the District and its contributing resources.</p> <p>Impact: This project will have no adverse effect on the Mineral King Road Cultural Landscape District (including all contributing elements). The minor modifications to the existing road, culverts, and parking areas meet the Secretary of the Interior's Standards for Rehabilitation by preserving the historic character of the district and improving the condition of the district. Refer to Enclosure A – Assessment of Effect associated with the April 7, 2022 letter to the CA State Historic Preservation Officer for additional details on project effects.</p>
<b>Cultural</b> Ethnographic Resources	None	The NPS knows of no ethnographic resources within the project area, and no ethnographic resources were identified through tribal consultation (initiated in July 2021) (Deur et al, 2018).
<b>Cultural</b> Museum Collections <i>Catalogued table and bottles on display in Alles Cabin</i>	None	<p>Issue: Dust penetration into buildings where catalogued items are on display</p> <p>Impact: There are currently catalogued items on display within the Alles Cabin (i.e., a table and bottles), which is immediately adjacent to the Mineral King Road. Although construction activities are not anticipated to impact the <i>exterior</i> of the Alles Cabin, dust could penetrate this building during construction activities which may fall onto these collections. Because of the resiliency of the catalogued materials (i.e., the items can be easily cleaned</p>

		and dust removed), no impacts are anticipated to museum collections. Additionally, the catalogued items may be deaccessioned prior to construction as the Alles Cabin is not currently open to the public.
<b>Cultural</b> Prehistoric/historic structures <i>Historic cabins and troughs within the Mineral King Historic District</i>	Potential	<p>Issue: The entire project area falls within the Mineral King Road Historic District. Construction activities have the potential to impact the District and its contributing resources.</p> <p>Impact: This project will have no adverse effect on the Mineral King Road Historic District (including all contributing elements like historic structures). The project was specifically designed to avoid impacts to all historic structures. Again, the minor modifications to the existing road, culverts, and parking areas meet the Secretary of the Interior's Standards for Rehabilitation by preserving the historic character of the district and improving the condition of the district. Refer to Enclosure A – Assessment of Effect associated with the April 7, 2022 letter to the CA State Historic Preservation Officer for additional details on project effects.</p>
<b>Geological</b> Geologic Features and Processes	Potential	<p>Issue: Exposed soils during excavation; import of engineered materials; improvements to drainage</p> <p>Impact: Road rehabilitation activities will occur primarily within areas of existing disturbance, and most of this disturbance will be revegetated or stabilized during and following construction activities.</p> <p>Excavation for culvert replacement will result in temporary incidental impacts on soils, and exposed soil material during construction will be subject to erosion until stabilized or revegetated. These impacts will be local, short-term (cease upon covering soils or diminish as area becomes revegetated), and adverse, but planned use of temporary and permanent erosion control best management practices (BMPs) will reduce the potential for erosion and soil loss.</p> <p>Additionally, this project will require the import and use of close to 3,000 cubic yards of riprap that will be placed at the outlet of culverts, introducing a non-local material within drainages. This impact will be permanent and localized, but will not modify the overall soil profile within the project area.</p> <p>In fact, the drainage improvements, culvert inlet and outlet protection, and correction of deteriorating road pavement will allow the road to better handle water and will reduce the potential for erosion and soil loss. By repairing road conditions that currently generate erosion, project implementation will result in a local long-term beneficial effect on soil resources, preserving them in their current condition for decades to come.</p>
<b>Lightscares</b> Lightscares	Potential	<p>Issue: Night-time work</p> <p>Impact: In accordance with NPS Management Policies 2006, the NPS strives to preserve natural ambient lightscape, which are natural resources and values that exist in the absence of human-caused light. The parks strive to limit the use of artificial outdoor lighting to that necessary for building security and human safety. The parks also strive to ensure that all outdoor lighting is shielded to the maximum extent possible to keep light on the intended subject and out of the night sky. No new permanent outdoor lighting is proposed as part of the proposed action, but night-time construction, which could theoretically occur every night throughout the</p>

		summer months, will have a short-term impact on night skies within the project area, impacts that will be commensurate with its use. When necessary to enable road closures for deep excavations, concrete curing, etc. and night work is approved by the NPS, temporary night sky impacts will occur within and surrounding the project area of that work and for the duration of the approval. Impacts will be minimized as much as possible using best management practices and appropriately directed lighting, and will not occur within a quarter mile of locations where people sleep (campgrounds, cabin communities, etc.). These negative impacts will cease immediately upon cessation of the night time work.
<b>Soundscapes</b> Soundscapes	Potential	<p>Issue: Construction-related noise</p> <p>Impact: Road rehabilitation work will result in temporarily elevated noise levels along the 15.29 miles of road related to the use of heavy construction equipment, including road pulverization equipment, graders, trucks, backhoes, and other equipment or machinery. Specifically, short-term, localized adverse impacts is expected during pavement pulverization, excavation activities, and the installation of soldier pile and soil nail walls, which could all increase sound levels beyond 100 dBA within the immediate vicinity (50 ft). However, best management practices have been identified for noise mitigation (such as ensuring that motorized vehicles and equipment have properly functioning mufflers and construction equipment and other motor vehicles do not idle longer than is necessary) to minimize the duration and intensity of these impacts. Overall, these human-caused sounds will be temporary and localized, terminating upon immediate cease of equipment use.</p>
<b>Other</b> Human Health and Safety	Potential	<p>Issue: Construction activities and addressing existing safety concerns along the Mineral King Road as part of project design</p> <p>Impact: Construction activities expose both workers and visitors to heavy construction equipment, extreme environmental conditions (e.g., large excavation holes, sun, snow, erosion, etc.), and differing traffic patterns which can cause confusion. By implementing a site-specific safety plan and traffic plan, the risk of potential injury or fatality to contractors, NPS staff, or visitors is expected to be very low such that any safety incident is anticipated to result in minimal rest and recovery and have a low likelihood of requiring formal medical attention (such as sunburn, tick bite, jammed finger, etc.).</p> <p>In the long term, proposed rehabilitation and improvements will address public safety concerns associated with the Mineral King Road. Improvements to road pavement, visibility, and drainage will improve safety and driving conditions indefinitely, or certainly for as long as the pavement surface remains in better condition than pre-construction condition. Overall, this project will result in local long-term beneficial effects on public safety from improvements to the structural features of the road and safety measures that reduce the potential for accidents.</p>
<b>Socioeconomic</b> Socioeconomic	Potential	<p>Issue: Construction related spending; delays/closures along Mineral King Road</p> <p>Impact: This project will have regional short-term beneficial effects on the economy from construction-related spending and employment in the Visalia-Three-Rivers-Mineral King area. However, some short term minor adverse economic impacts to the few businesses in the Mineral King area are</p>

		<p>expected as well should traffic delays deter some visitors from visiting the valley during the summer seasons. While some park visitors may be inconvenienced during construction, no substantial change in visitor attendance is anticipated. All of the trails in the Mineral King area as well as the Cold Spring Campground will remain open and accessible.</p> <p>Long-term socioeconomic effects will be beneficial to local businesses from improvements to the quality of the visitor experience along the Mineral King Road.</p>
<b>Socioeconomic</b> Minority and low-income populations, size, migration patterns, etc. <i>Gateway communities</i>	Potential	<p>Issue: Delays/closures along Mineral King Road</p> <p>Impact: Local residents and visitors from gateway communities utilizing Mineral King Road may have their travel delayed by 1-2 hour daytime and full nighttime closures during the summer months and some may be deterred by a few days during any scheduled winter closures such that they need to reschedule trips to the area. However, the project will not result in the displacement of any residents, businesses, or community resources. The effects of delays and closures on these communities will last the duration of the project. Post project travel schedules will resume to pre-project levels.</p>
<b>Viewsheds</b> Viewsheds	Potential	<p>Issue: Modifications within historic district, specifically installation of metal culverts that run down the slope of an embankment and installed riprap at outlet of culverts.</p> <p>Impact: The repavement of 15.29 miles of road, pavement of parking lots, and replacement of over 200 culverts within the road prism (with riprap) will modify the appearance of the road and its associated features for at least a number of years as the materials will be clean and new (as opposed to dirty and old) and as vegetation, which used to screen some of the facilities from obvious view, grows back following the recent 2021 KNP Complex Fire and from construction disturbance. These viewshed impacts may be most notable in locations where corrugated metal culverts are installed down a slope in the lower stretches of the road to avoid/minimize future erosion under the road and in locations where large amounts of rip rap have been placed at the outlet of a new culvert. Without vegetation present, riprap will be visually apparent and these new culverts may reflect sunlight to drivers heading down the road and driving into a drainage (thereby looking across at the culverts on the opposite side of the drainage). The effect of this is expected to amount to annoyance by any visitors who observe the effect, but these viewshed impacts will be short term – dissipating as soon as the culverts (and all other new facilities) lose their shine and lacquer and become, again, screened by vegetation along the roadway. No long term impacts to viewsheds are expected as the material within the viewshed will remain consistent with existing conditions.</p>
<b>Recreational Resources</b> Parking Lot Capacity in Mineral King Valley, Improved Accessibility, and Interpretive Media	Potential	<p>Issue: Paving and striping parking lots; accessibility improvements; installation of interpretive media</p> <p>Impact: Existing, public parking capacity estimates from NPS staff as well as residents in Mineral King range from roughly 115 to 135 informal parking spaces (on the road and within parking areas) between the Mineral King Ranger Station and the Eagle and Mosquito Lake Trailhead (G. Cunningham, Personal Communication, August 12, 2021; M. Megalli, Personal Communication, August 6, 2021). Residents, who shared personal</p>

		<p>vehicle counts from summer 2021, documented days in which as many as 58 vehicles were parked along the road on busy summer weekends (M. Megalli, Personal Communication, August 6, 2021). Ironically, during these surveys, there may have been parking availability in another parking lot east of the Ranger Station, but the demand for a particular trailhead on any given date, may exceed the parking capacity at that given location, resulting in roadside parking. This is particularly true when some visitors park haphazardly or inefficiently in parking areas and the vehicle remains in place for multiple days.</p> <p>This project will establish approximately 131 POV parking spaces (including several accessible parking spaces) as well as two parking spaces for vehicles with small trailers, such as for stock, between the Mineral King Ranger Station east to the end of the road. Additionally, modifications and the slight expansion to the parking area for the trails to Eagle and Mosquito Lakes will provide ample turn around space for a truck and trailer, which is not provided for currently, especially when vehicles are parked haphazardly in that location. Although the formalization of parking may slightly reduce the number of cars that could theoretically fit within a parking area (e.g., one resident observed 18 cars parked in the Upper Sawtooth Parking Lot; the plans would formalize 12 in this location), the NPS assumes that additional cars will be able to park in these lots given additional space and observed parking behaviors such that the parking experience and availability of parking in Mineral King will generally but not substantially increase in perpetuity, and access that has not been provided to some user groups will be provided (e.g., accessible parking and parking for stock trailers).</p> <p>This project will also improve the overall accessibility of facilities within Mineral King. In addition to formalizing accessible parking – which will notably improve access to otherwise accessible restrooms, this project will also install an accessible route to the Ranger Station which at this time requires access via stairs for the general public.</p> <p>Finally, in updating interpretive signage within Mineral King, grading those sites for accessibility, and installing new interpretive waysides and a scenic viewpoint at the parking lot at the trailhead for Eagle and Mosquito Lakes, this project will noticeably increase the number of and improve universal access to recreational resources within Mineral King.</p>
<b>Visitor Use and Experience</b>  Visitor Use and Experience <i>Mineral King Area</i>		<p>Issue: Road delays and road and parking lot closures; noise from construction activities; improved road condition</p> <p>Impact: The quality of the visitor experience will be temporarily and adversely affected during construction from traffic delays and short-term closures, closed parking areas and pullouts, increased noise, and a change in scenic quality from construction equipment and disturbances. The proposed improvements will provide long-term benefits to the visitor experience by improving the road surface, formalizing the parking experience, and ultimately ensuring ongoing access to the Mineral King area.</p>



		<p>Road construction closures are expected to delay daytime visitors traveling along the Mineral King Road by 1-2 hours while nighttime closures will prohibit travel along the road entirely. Such delays may adversely affect visitor experience by preventing them from reaching their destination at their desired time. Whether experience is adversely affected is specific to the individual and is influenced by visitor expectations which will be mitigated by regular and frequent communications from the NPS via all available channels (phone, email, news releases, social media, signage). Evidence of impacts is anecdotal, but reported as feelings of annoyance to outright anger associated with impacts to a visitor's schedule. These delays and closures will also likely result in the short-term displacement of visitors to other areas within the parks or to surrounding public lands for recreation as they seek to avoid construction activities. Given the beauty of the Mineral King area and its unique access to the surrounding wilderness, the NPS does not anticipate that displacement levels will be high or particularly noticeable in overall visitation to Mineral King and Sequoia National Park.</p> <p>Low frequency and high amplitude noise generated from construction activities can modify natural soundscapes, which may adversely affect the experience of those desiring to hear only natural sounds. Adverse effects are most likely to occur for those people who choose to hike in the project vicinity near Atwell Grove, Cold Springs Campground, and/or Mineral King Valley. The extent to which soundscapes are modified and how far construction noise is expected to travel will vary with terrain, timing and decibel level of equipment used, and all impacts will be short-term, termination when use of equipment ceases or moves to a different location in the project area. Post project, local soundscapes are anticipated to return to pre-project levels.</p> <p>Long-term (for the next 5-10 years or so long as the pavement remains in good condition), the visitor experience will be enhanced by well-maintained facilities and a smoother driving experience. These beneficial impacts will be noticeable to anyone who has observed pre-construction conditions, and it may enable visitors who would otherwise be detoured from visiting to travel to the area. Given the poor condition of the first 11 miles, the length of the overall access route to Mineral King (25 miles; over 1.5 hours of driving), the in and out nature of access, and the narrow and winding character of the road, Mineral King is unlikely to become the next Giant Forest, but some slight increase in visitation is expected such that parking congestion will continue to be an issue.</p> <p>Ultimately, there will be no change in the fundamental nature and quality of the visitor experience or recreational opportunities within the Mineral King Valley. The highway will remain open, in better condition and will some minor, additional visitor facilities (i.e., interpretive media), and visitors will continue to have access to park resources.</p>
<b>Water Floodplains</b>	None	

<b>Water</b> Water Quality or Quantity <i>Water Quality</i>	Potential	<p>Issue: Construction materials, heavy equipment, earth moving near drainages during culvert replacement; altering drainage along the roadway and within parking lot; paving parking lots</p> <p>Impact: Impacts to water quality from construction materials moving into waterways, equipment leaks, and/or erosion of destabilized surfaces have the potential to occur absent preventative mitigations and thereby temporarily and adversely affect local water quality in tributaries of the East Fork of the Kaweah River. The proposed road rehabilitation will temporarily expose soil and increase the potential for erosion and stream sedimentation until vegetation is established, paving is completed, drainage work is installed, and other stabilization work is finished. Construction of drainage improvements will temporarily introduce sediments into drainages, but these drainage improvements will have a long-term benefit (in perpetuity) by restoring or improving drainage functions and protecting structural and natural features. Furthermore, mitigations to prevent materials from leaving the road corridor, prevent heavy equipment leaks on site, and prevent erosion using erosion control BMPs will be followed to minimize the potential for any impacts on water quality. Overall, proposed drainage improvements such as culvert replacement, culvert cleaning, and other drainage work will improve hydrologic conditions, prevent erosion, and protect water quality in the long term.</p> <p>There will be a small permanent increase in impervious surface area (roughly 4-5 acres) from paving the current unpaved section of the road and paving several parking lots that are currently gravel. However, most parking lots in the Mineral King Valley have bedrock immediately beneath them or otherwise function as bedrock given compaction onsite over time. In addition, the unpaved road sections and parking surfaces where rehabilitation would occur were compacted during initial construction and have been continually compacted through maintenance and use. Because infiltration is already limited by previous compaction and existing sub-surface barriers, paving is not expected to result in a significant change in overall infiltration in these areas. Rather, any impacts to runoff and surface flows from 4-5 acres of new pavement will have a local long-term, mostly unmeasurable adverse effect on runoff and surface flow that is mitigated by improved drainage across these lots.</p> <p>Overall, the planned road structural and drainage improvements will result in a local short-term minor adverse impact on water resources from ground disturbances that introduce sediment into drainages and a long-term beneficial effect from rehabilitation of deteriorating road conditions and improved drainage conveyance.</p>
<b>Water</b> Wetlands	Potential	<p>Issue: Riverine wetlands are present at some locations where culvert replacements are planned and at the end of the Mineral King Road, adjacent to the parking lot for the trails to Eagle and Mosquito Lakes. Narrow wetlands occur in some locations along the uphill side of the road due to the current configuration of the road and poor drainage which causes some water to pool above the road.</p>

		<p>Impact: Direct impacts to wetland soils, vegetation, and hydrology will occur from excavation related to culvert replacements and brushing within wetland boundaries. These impacts will largely be temporary and will return largely to preconstruction conditions post project implementation and planting. The expansion of the parking area at the Eagle-Mosquito Lake Trailhead (by 35 feet) will also get closer to a wetland along the East Fork of the Kaweah River, but the parking area drains away from the wetland such that any contaminants from the parking lot are filtered and will not drain directly toward the wetland.</p> <p>Where wetlands have formed unnaturally along the road under poor drainage conditions, this project will reduce soil moisture in the long term by replacing culverts and changing the slope of the road such that drainage may not occur in these areas in the future. These impacts would be long term, in perpetuity.</p>
<b>Wilderness</b> Wilderness <i>Opportunities for Solitude</i>	Potential	<p>Issue: Noise and visual disturbance of solitude</p> <p>Impact: Hikers in adjacent wilderness areas may be impacted during construction activities that raise noise above normal ambient levels. These activities may result in a diminished wilderness experience for those visitors. Prior notice to the public of louder activities such as the soldier pile wall and soil nail wall construction and suggestions of alternate trails by wilderness rangers may mitigate this impact. No long-term impacts to wilderness character are reasonably foreseeable.</p>

#### D. ESF ADDENDUM QUESTIONS:

Question	Answer	Notes
<b>PIO: Does the proposed action warrant media coverage or outreach to area communities? If so, enter the type of coverage and timeframe project lead should initiate coordination.</b>	Yes	Public outreach will occur regularly throughout the project using various media outlets in order to reach out to the local community and the broader park user. AC and AB. See mitigations to address concerns. ELB.
<b>District Ranger: Are there concerns of the chief ranger or district rangers? If so, please provide specific concerns and/or coordination needed to mitigate concerns.</b>	Yes	Adequate clearing will be conducted to the landing zone in Mineral King and the East Fork Helispot prior to road closures. DF. See mitigations to address concerns. ELB
<b>FMO: Are there concerns of the SEKI or district FMOs? If so, please provide specific feedback on concerns and/or coordination needed to mitigate concerns.</b>	Yes	Emergency services and wildfire suppression response could be impacted during road closure times where pass through is not feasible. AB. See mitigations to address concerns. Emergency access must be available at all times during project implementation. ELB.
<b>Facility Manager: Are there concerns relating to buildings, utilities (water, sewer, power, telecom), or grounds? If so, please explain concerns and/or coordination needed to mitigate concerns.</b>	No	None identified. ELB.

<b>Facilities/Project Shop Staff: Does the proposed action require engineered drawings and/or review and approval by the park engineer?</b>	No	Designed by Federal Highways; no additional review of plans by park engineer required beyond existing project coordination.
<b>Concessions Specialist: Are there concerns relating to park concessions? If so, please provide specific feedback on concerns and/or coordination needed to mitigate concerns.</b>	Yes	Mineral King Special Use Permit holders may be impacted by delays and closures. Communication is limited in cabin locations, so an effort will be made to ensure that cabin holders are updated using all available avenues, including signage. AB. See mitigations to address concerns. ELB.
<b>Forester: Are there any existing hazardous trees which might pose safety risk to workers, or would there be any site disturbance(s) or new construction which might create tree hazards?</b>	Yes	Existing previously-identified tree hazards are visibly marked with paint and additional surveys will be conducted prior to construction. New unmarked tree hazards will exist due to current drought conditions and associated increased mortality. New construction activities will implement mitigations to reduce root or bole damage which may result in defects or tree hazards. AB/TW.
<b>Roads/Trails Staff: Are there concerns relating to roads, automobiles, or trails? If so, please provide specific feedback on concerns and/or coordination needed to mitigate concerns.</b>	Yes	Significant traffic issues will occur, given scheduled delays, pass through times, and closures. Communication with the public will occur regularly to minimize the potential impacts on the public/visitor experience and residents. AC and AB. See mitigations to address concerns. ELB.
<b>Telecom Staff: Are there questions or concerns regarding IT network or telecom connectivity or services? If so, please provide feedback on concerns and/or coordination needed to mitigate concerns.</b>	No	No concerns identified. ELB.
<b>GIS Staff: Does the proposed action generate data and/or the need for GIS office support? If so, provide specific feedback on what is needed.</b>	Yes	Will need to change road type, gather locations of culverts, signs, etc. See mitigations. PEH
<b>Research Staff: Would the proposed action affect any research or monitoring sites? If so, please provide feedback on specific effects and/or coordination needed to mitigate effects.</b>	No	None identified. ELB.
<b>Plant Ecologist: Are plant surveys needed? If so, enter timeframe by which surveys can feasibly be accomplished or concerns that may affect timeframe.</b>	Yes	One location of Angelica callii (CA RPR 4.3) was documented near the road in a botanical survey in 2022 for previously documented A. callii locations near the road. No special status plants were found during botanical surveys of roadside, pullouts, parking lot perimeters, and culvert areas in 2021. Additional, targeted surveys are planned for 2023. AH.
<b>Restoration Ecologist: Is a wetland delineation needed? If so, enter timeframe by which a delineation can feasibly be</b>	Yes	Federal Highways completed wetland delineations in 2021. ELB.

accomplished or concerns that may affect timeframe.		
<b>Restoration Ecologist: Would site disturbance(s) that cause the need for site restoration and/or revegetation of the project area? If so, by when should the project lead coordinate restoration?</b>	Yes	Native seed collection, invasive species control, and revegetation will occur. AB.
<b>Wildlife Biologist: Are wildlife surveys needed? If so, enter timeframe by which surveys can feasibly be accomplished and/or concerns that may affect timeframe.</b>	No	Not required; may complete some surveys prior to or during project implementation to further protect species. ELB.
<b>Wildlife Biologist: Does the action require Section 7 Consultation? If so, enter timeframe by which consultation can feasibly be accomplished or concerns that may affect consultation timeframe.</b>	Yes	Consultation initiated October 8, 2021. Concurrence with determination of “may affect, likely to adversely affect” the fisher and take permit received March 31, 2022. ELB.
<b>Cultural Staff: Are archaeological surveys needed? If so, enter timeframe by which surveys can feasibly be accomplished or concerns that may affect timeframe.</b>	Yes	Archeological Surveys completed. ELB.
<b>Does the area have a grove or individual trees that have special social significance (i.e. high levels of visitation, historical or cultural significance, or exceptional beauty)?</b>	Yes	Atwell grove of giant sequoias is within the construction zone. Monitors will be on site during construction to ensure root damage is minimized and bole damage does not occur. AB. See mitigations to address concerns. ELB.
<b>106 Coordinator: Does the proposed action require consultation with SHPO? If so, enter timeframe by which consultation can feasibly be initiated or concerns that may affect consultation timeframe.</b>	Yes	SHPO Consultation completed. Initiation letter sent July 1, 2021, and response received September 2, 2021, and assessment of effect letter was sent April 7, 2022. In a letter dated May 18, 2022, SHPO raised no objection to the proposed Finding of No Adverse Effects to historic properties.
<b>106 Coordinator: Does the proposed action require a Determination of Eligibility (DOE)? If so, enter timeframe by which a DOE can feasibly be accomplished or concerns that may affect timeframe.</b>	No	DOE completed. ELB.
<b>Tribal Liaison: Does the proposed action require Tribal Consultation? If so, enter timeframe by which consultation can feasibly be initiated or concerns that may affect consultation timeframe.</b>	Yes	Email and letter to tribes was sent 7/7/2021. The Santa Rosa Rancheria Tachi-Yokut Tribe responded on 8/5/2021 requesting to continue consultation; the NPS provided a status update on the project at the 2022 tribal forum on May 11, 2022 and will continue to provide project updates to tribes on an annual and as requested basis throughout project implementation. ELB.
<b>Wilderness Coordinator: Does the proposed action require an MRA? If so, enter timeframe by which project lead should initiate the MRA process or any concerns that may affect review.</b>	No	Project is not within Wilderness. ELB.

**IDT Team Members:**

Nathaniel Aldrich - Roads Supervisor  
Jessica Barr - Sub-District Ranger  
Elizabeth Boerke - NEPA Specialist  
Daniel Boiano - Aquatic Ecologist  
Juanita Bonnifield - NHPA Specialist  
Ginger Bradshaw - NEPA Specialist  
Christy Brigham - Chief of Resources Management and Science  
Andrew Carl - District Interpreter  
Christopher Carpenter - Project Manager  
Tyler Coleman - Wildlife Biologist  
Annie Esperanza - Air Resources Specialist  
Matthew Fagan - District Interpreter  
Elle Farias - Historical Architect  
Theresa Fiorino - NEPA Specialist  
Amy Brown – Environmental Protection Specialist  
Catherine Fong - Hydrologist  
Dave Fox - District Ranger  
Erik Frenzel - Wilderness Coordinator  
Daniel Gammons - Wildlife Biologist  
Vida Germano - Historical Landscape Architect  
Joshua Handel - Transportation Specialist  
Paul Hardwick - GIS Specialist  
Michael Hogan - Project Leader  
Brian Horton - Project Manager  
Ann Huber - Ecologist  
Sintia Kawasaki-Yee - Public Information Officer  
Nicole Mason - Project Manager  
Erik Meyer - Ecologist  
Todd Payne - Safety/Hazmat  
Monica Rinne - Concessions  
Denise Robertson - Management Assistant  
Blaine Spaulding - Telecommunications Manager  
Richard Thiel - Biological Technician  
Tom Warner - Forester  
Erika Williams - Visual Information Specialist  
Andrew Bishop – Restoration Ecologist  
Rick Hall – Chief of Facilities, Maintenance, and Construction

## Works Cited

- Deur et al. 2018. Homelands of the Sierra Crest and Ethnographic Overview and Assessment Relating to Tribes Associated with Sequoia-Kings Canyon National Parks and Devils Postpile National Monument. Portland State University. Portland Oregon, 238 pgs
- Fris, M. 2022, March 31. Michael Fris to Clayton Jordan regarding Appendage of the Sequoia/Kings Canyon National Park Mineral King Road Rehabilitation to the Programmatic Biological Opinion on Proposed Activities of the National Park Service that May Affect the Southern Sierra Nevada Distinct Population Segment of the Fisher (08ESMF00-2020-F-2011-1), Reference Number 2022-0008585-S7, March 31, 2022 [Memorandum]
- Hartsveldt, R. J. 1962. The Effect of Human Impact Upon Sequoia Gigantea and its Environment in the Mariposa Grove, Yosemite National Park, California. University of Michigan.
- Jordan, C.F. 2022. Clayton F. Jordan to Julianne Polanco, April 7, 2022 [Letter and Enclosure A: Assessment of Effect]
- Polanco, J. 2022. Julianne Polanco to Clayton F. Jordan, May 18, 2022 [Letter]



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## Categorical Exclusion Documentation Form (CE Form)

**Project:** Rehabilitate 15.29 Miles of the Mineral King Road in Sequoia National Park

**PEPC Project Number:** 69154

**Description of Action (Project Description):**

This project proposes to rehabilitate the full length of the Mineral King Road within Sequoia National Park and formalize and pave seven parking lots that serve as trailheads for stock users, day-hikers, and backpackers seeking to access thousands of acres of Wilderness within and beyond the Mineral King valley.

Key components of this project include the following:

- Grind, recycle, and overlay existing pavements, including excavation of existing roadbed;
- Replace failed base courses and poor subgrade materials;
- Regrade/super-elevate the road in sections to correct and direct drainage to the upslope side of the road (to reduce erosion and undercutting of the roadway, and improve vehicular safety);
- Pave all 15.29 miles of the road, including 1.38 miles that are currently unpaved;
- Pave pullouts that are currently paved; all pullouts that are unpaved would remain unpaved;
- Pave some short driveway aprons to unpaved secondary roads and campgrounds, such as the Atwell Campground, to protect grades and minimize erosion at points of entry/exit between differing surface materials;
- Spot-stabilize and reinforce 6,000 linear feet of outside edge of the roadway, including the installation of several retaining walls (8,800 square feet);
- Replace, and in most cases enlarge, approximately 205 culverts that are in poor condition and install approximately nine additional culverts for improved drainage;
- Clean and rehabilitate drainage structures, including ditches;
- Brush the roadway within 10 feet of the road edge on either side to maintain visibility for safety;
- Replace existing signs and object markers, such as culvert markers and mileage posts, with standard signage along the roadway;
- Replace two existing metal gates along the roadway.
- Re-pave the parking lot at the Ranger Station and formalize, grade, pave, and at least partially stripe six additional trailhead parking lots near or at the end of the road (This includes a slight expansion of the parking lot at the end of Mineral King Road and the development of a small accessible interpretive and/or picnic area near the trailhead.);
- Install pre-manufactured, metal bike racks within newly paved parking lots;
- Relocate and, in some instances, install new bear-proof food storage boxes and trash/recycling containers within the developed footprint or along the perimeters of existing parking lots;
- Relocate and, in some instances, install new interpretive media including waysides and orientation signage with frames made of weathering steel (unpainted) or powder-coated metal near the perimeters of existing parking lots;
- Revegetate areas adjoining the road that are disturbed by construction and revegetate and obliterate areas where social use has expanded the developed footprint of parking lots beyond intended use.

All work would strive to be constructed to Universal Design Standards to remove existing ABA barriers to extent possible or provide an equivalent alternate experience.

More specific information about this proposed action is included internal documents, Pre 95% Designs.



## Project Locations:

### Location

<b>County:</b>	Tulare	<b>State:</b>	CA
<b>District:</b>	Ash Mt	<b>Section:</b>	
		<b>Other:</b>	Mineral King

## Mitigation(s):

### Park Operations & Mgmt

1. The Sequoia and Kings Canyon National Parks (SEKI) Project Manager is responsible for ensuring that the mitigation requirements are followed and that these measures are incorporated into any contracts for this project and implemented by the staff assigned to undertake the work.
2. If, for any reason, mitigation measures cannot be accomplished due to budget or timeframe or there is a change in project scope or project leader, the SEKI Project Manager must contact the SEKI Environmental Planning and Compliance Office before proceeding with the project.
3. A representative from the National Park Service (NPS) (e.g., SEKI Resources Monitor) will be designated to conduct on-site inspections during construction operations and to provide information on resource-related concerns and other park information.
4. The coordinates of new or relocated NPS infrastructure will be provided to the SEKI GIS/Data Management Office upon project completion. Contact the SEKI GIS Coordinator at 559-565-3725 for more information.  
*Comment:* This is the opportunity to collect the locational and physical attributes of culverts, gates, signs, and other infrastructure associated with the road.
5. As necessary, future NPS utility conduits may be incorporated into the project to reduce the damage to and/or removal of any new road surface in the future.
6. Mineral King Special Use Permit holders may be impacted by delays and closures, and communication is limited in Mineral King once cabin residents are in the area. As such, SEKI's liaison with the Mineral King community will share all public communications about the project with the Mineral King District Association and Mineral King Preservation Society who can amplify these communications and broaden awareness of the construction schedule, etc. See also mitigations identified under "Visitor Experience".
7. A SEKI Environmental Protection Specialist and the SEKI Tribal Liaison will provide project updates to tribes on an annual basis and as requested throughout project implementation.

### General Resource Mitigations

8. All protection measures will be clearly stated in the construction specifications/special construction requirements, and workers will be instructed to avoid conducting activities beyond the construction limits as defined by construction plans or marked limits.
9. The clearing limits (construction limits) outside of the existing road prism will be clearly marked or flagged prior to construction. All construction activities, including staging areas, will be located within previously disturbed areas and fenced, if necessary.
10. Special sequoia mitigation zones will be identified and clearly staked in the field prior to construction by the contractor per the project plans (based on giant sequoia mitigation plan).
11. All wetlands in the project area will be identified and clearly staked/flagged in the field prior to construction per wetland delineations.
12. No construction activity will be permitted outside the construction limits.
13. If construction is non-active for a period of 6 months or longer, turnouts will be cleared of all construction storage equipment and materials.
14. A hazardous spill plan will be in place, stating what actions will be taken in the case of a spill, notification measures, and preventive measures to be implemented, such as the placement of refueling facilities, storage, and handling of hazardous materials.
15. Where appropriate and available, "environmentally friendly" grease, hydraulic oil, and bar and chain oil will be used. These lubricants are vegetable or mineral oil based, less toxic, and biodegradable.

16. All equipment on the project will be maintained in a clean and well-functioning state to avoid or minimize contamination from mechanical fluids as well as meeting California Air Resource Board "Off-Road" and On-Road emission requirements. All equipment will be checked daily.
17. Asphalt plants will be located outside the park. Small quantities of asphalt may be stored short term only at the designated staging areas.
18. Any "hotwork" such as welding requires a permit from the SEKI Fire Management Office. Hotwork conditions will be incorporated into contract specifications and a permit, if needed, will be issued to contractor prior to any hotwork.
19. All tools, equipment, barricades, signs, surplus materials, and rubbish will be removed from the project work limits upon project completion. Any asphalt surfaces or utility lines damaged during construction of the project will be repaired to original conditions. All demolition debris will be removed from the project site, including all visible concrete and metal pieces. This material, including construction debris, will be disposed of outside the park in an approved location.

### Air Quality and Soundscapes

20. Dust control will occur, as needed, on active work areas where dirt or fine particles are exposed—including, but not limited to, unpaved surfaces and exposed stockpiles—using water from developed sources.
21. Cover all haul trucks carrying construction materials or debris.
22. Adhere to the SEKI "no idling policy" whenever and wherever mechanically feasible; otherwise abide by California State vehicle idling regulations; e.g., 5 minute limit for heavy diesel equipment. This mitigation applies to vehicles as well as other power tools and engines.
23. Whenever feasible, contractor will select and utilize construction equipment that has the lowest possible noise emissions. For example, hydraulically or electrically powered impact tools and chainsaws will be used instead of traditional gas-powered equipment when feasible.
24. Use of equipment such as backhoes, jackhammers, augers, and loaders will be minimized to the greatest extent possible during construction activities.
25. Mufflers and sound attenuation devices (such as rubber strips or sheeting) will be installed and maintained on all equipment, if feasible. This includes truck tail and other gate dampeners (both opening and closing) for all dump trucks in the project area. Mufflers will conform to original manufacturer specifications and will be in good working order.
26. All construction equipment will be kept in proper operating condition and the location of stationary, noise emitting equipment will be strategically placed and covered with a noise dampening enclosures, when possible, to reduce noise emissions.
27. Consider noise effects when scheduling project work (e.g., establish quiet hours on visitors, employees, and park natural and cultural resources).
28. As a general practice, construction and maintenance work will not occur during acoustically sensitive times of day (dawn/dusk).
29. Wherever feasible, vehicles requiring backup alarms will be outfitted with broadband backup alarms.
30. Use of air horns within the park will be limited to emergencies and as a safety signal for blasting operations.

### Cultural Resources

31. Archeological resources will be avoided during construction; no resources shall be disturbed or removed from site.
32. All workers will be informed of the criminal penalties for illegally collecting artifacts or intentionally damaging any archeological or historic property. Workers will also be informed of the correct procedures should previously unknown resources be uncovered during construction activities (see other mitigations below).
33. All new stone masonry features or rehabilitation of an existing historic stone masonry feature will be completed in accordance with the Secretary of the Interior Standards for the Treatment of Historic Properties (1992a), Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings (Weeks and Grimmer 1995), and per the National Park Service Programmatic Agreement (NPS 2008).
  - a) Dry-stacked masonry headwalls/endwalls will be restacked in-kind.

- b) If the culvert currently has a masonry head wall or end wall and is to be replaced with concrete head/end walls, existing material should be used as facing with matching material added to complete the full facing of the head/end wall. Most of these appear to be field stone that are not in a symmetrical/uniform pattern.
  - c) If the culvert does not currently have a masonry headwall/endwall and one is proposed, colored concrete without facing will be used to blend the headwall into the surrounding soil in order to minimize the visual intrusion of the headwalls along the road corridor and differentiate them from the historic headwalls/endwalls.
- 34. A soldier pile and lagging wall and a soil nail wall will be installed in one segment to repair the roadway and retain the alignment and width of the road. These walls will be designed to blend with the surrounding soils and rock to minimize the visual impact to the road corridor.
- 35. For the new features associated with the ABA trail at the Mineral King Ranger Station, any new retaining walls will be made of stone that is a stone of similar size and color as the existing rock wall; the surface of the trail will be of a material/color to blend with surrounding soils (e.g., asphalt); and the ramp to the porch will be wood that is painted the color of the existing porch deck and railing.
- 36. Riprap should match local/native material in color and texture. The Project Contracting Officer (CO) or designee will verify the color for areas where riprap will be more visible.
- 37. In addition to historic troughs within several drainages of the Mineral King Road, there are five general locations within the project area that contain cultural resources that must be avoided during and protected from construction activities. Prior to construction, the SEKI Cultural Resources Branch will identify all known historic sites and documented/isolated cultural resources that must be avoided and protected from construction equipment and activities during project implementation. This information will be shared directly with the SEKI Project Manager and CO or their designee.
  - a) The contractor will install and maintain fencing or equivalent protection around these identified cultural resources such that no construction activities will impact/damage these resources.
  - b) A SEKI Resources Monitor will be on site to monitor when construction activities are taking place immediately adjacent to these identified resources or otherwise during activities that have a potential to damage the resources. Depending on the risk to impact these resources, as determined by the SEKI Cultural Resources Branch, this could be limited to periodic spot checks.
- 38. Should construction activities or project work inadvertently harm a known cultural resource, work will be halted in the area, the site will be secured, the SEKI Cultural Resources Branch Chief and SEKI Superintendent will be immediately notified. NPS staff will consult with the CA State Historic Preservation Office (SHPO), tribes, and/or other interested parties in accordance with 36 CFR 800.13. During consultation, reasonable measures will be taken, as identified by the SEKI Cultural Resources Branch Chief, to protect the resource, including any appropriate stabilization or covering.
- 39. In the event of the inadvertent discovery of historic properties such as archeological resources, suspected human remains, funerary objects, sacred sites, or objects of cultural patrimony, work will be halted in the discovery area, the site will be secured, the SEKI Cultural Resources Branch Chief and SEKI Superintendent will be immediately notified. NPS staff will consult with the CA State Historic Preservation Office (SHPO), tribes, and/or other interested parties in accordance with 36 CFR 800.13 and, as appropriate, provisions of the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA). During consultation, reasonable measures will be taken, as identified by the SEKI Cultural Resources Branch Chief, to protect the discovery site, including any appropriate stabilization or covering to ensure the confidentiality of the discovery site and to restrict access to the discovery site.
- 40. Where feasible, the edges of riprap will be revegetated to be less visibly apparent into the future.

## Human Health & Safety

- 41. Contractor will develop a Safety Plan and a Safety Communications/Transportation Plan and share this with the SEKI Project Manager, CO or their designee, and the SEKI Safety Officer for comment and compliance with park health and safety regulations 30 days prior to any construction activities.
- 42. Traffic control will be provided by the contractor. Traffic monitors will have park radios with the appropriate park frequency, appropriate safety clothing, and reflective signs.
- 43. Construction zones will be signed at approach points.
- 44. Vehicles not directly associated with project implementation will not be allowed to stop/park in a pullout or on the road in the construction zone. Emergency vehicles will be allowed on an as-needed basis.

45. Subject to funding and hiring constraints, SEKI staff will be available to respond to and coordinate access for visitors potentially trapped by construction activities and to provide adequate response for law enforcement and emergency services.
46. Prior to the first anticipated road closure and periodically throughout project implementation, SEKI staff will ensure the landing zone in Mineral King and the East Fork Helispot are adequately maintained and prepared for use such that aircraft can access these areas in case of an emergency during project implementation.

#### **Wildlife - General**

47. All contractor employees must attend an NPS-led bear training class that includes discussion on food storage and garbage removal.
48. Feeding or approaching wildlife will be prohibited by construction personnel.
49. Any wildlife collisions will be reported to a SEKI wildlife biologist.
50. A SEKI wildlife biologist and SEKI ranger will be notified if bears loiter in the area or if fisher sightings occur.
51. All food, including empty coolers, will be covered so as to not be visible to bears, and whenever possible, all food will be stored in bear-proof containers. Spilled food will be cleaned up immediately. The NPS may be able to provide bear-proof food storage lockers and garbage containers upon request.
52. Garbage, trash, and other solid waste associated with construction operations will be disposed of in bear-proof trash bins and disposed of weekly or sooner if warranted, outside the park.
53. The project site will be cleaned up at the end of each day the work is being conducted (i.e. trash disposed of/secured appropriately, scrap materials picked up) to minimize the likelihood of wildlife visiting the site. A SEKI Resources Monitor will conduct periodic spot checks to ensure adequate project clean-up measures are being appropriately undertaken.
54. A SEKI wildlife biologist shall be notified/consulted when any wildlife must be disturbed or handled. They will be available to assist with moving/relocating wildlife, when necessary; and/or to make recommendations for relocating any disturbed animals.
55. Vegetation clearing and tree removal of standing vegetation shall be avoided to the greatest extent possible during the primary nesting season between early-March and mid-August. (Notably many species fledge earlier.) If vegetation clearing must occur within the primary nesting season, surveys for active nests shall be conducted by a qualified biologist, and vegetation clearing would not occur within 100 feet of an active nest within the primary nesting season or shall only be allowed after a qualified biologist determines that no nests are present or they are inactive (e.g., repeat surveys). In compliance with the Migratory Bird Treaty Act (MBTA) [16 USC 703], any active nest shall be left in place and undisturbed until the young hatch and depart.
56. If feasible, tree removal should be additionally avoided between March 1 and November 1 to avoid impacting actively roosting bats. If tree removal occurs during this time, cut trees will be allowed to lie for 24 hours before being sectioned, chipped, or mulched to allow foliage roosting bats to arouse and leave.
57. SEKI Resource Monitor(s) will complete a pre-construction survey for spotted owl nests prior to all spring/summer construction seasons. If active nests are located, high intensity noise disturbance (such as use of jack hammers) and tree removal will be limited within ¼ mile from an active nest from March 1 through August 15 or until such a time that a qualified biologist can confirm the nest is no longer active (e.g., fledging typically occurs in July so window may be shortened based on surveys).
58. For any projects involving trenching or digging holes, provisions (generally in the form of ramps; with a slope < 45°) must be made every 20-50' to allow for the escape of animals that may fall into these recesses, and/or they must be covered in such a way as to prevent animals (vertebrates) from falling in them.

#### **Wildlife - Rare, Threatened & Endangered Species**

59. Construction personnel will be informed of the occurrence and status of special status species and will be advised of the potential impacts on the species and penalties for taking or harming a special status species. A SEKI wildlife biologist can provide a list of all species of special status potentially within the project area upon request.
60. The SEKI Environmental Planning and Compliance Office will require that all personnel associated with this project are made aware of the following conservation measures (#61-#79) and the responsibility to implement them fully.

61. The SEKI Project Manager will include full implementation and adherence to conservation measures (#62-70 outlined below; #71-#79 to be included only as applicable) as a conditions of any contract issued for the proposed project.
62. Construction personnel will be taught how to identify fishers and den trees. Construction personnel will contact a SEKI wildlife biologist immediately if a fisher is seen in or near proposed project activities. If a fisher is spotted within the construction sites, work will cease until the animal moves on without disturbance. If a fisher is spotted in a potential den tree, work will cease, and a SEKI wildlife biologist will be contacted, who will then contact US Fish and Wildlife Service for further guidance.
63. All food and garbage will be stored in vehicles or in NPS-approved containers so fishers cannot obtain it.
64. All project staff will follow posted speed limits but will be directed to reduce their speed by an additional 5 mph during dawn and dusk.
65. As feasible, road-killed wildlife will be rapidly removed from roads in suitable habitat so fishers are not killed while feeding.
66. All construction fencing will allow for the safe passage of fishers and will not cause entrapment. For linear fencing, provisions must be made every 50' to allow for safe passage of fishers.
67. Pipes, water tanks, and other such structures will be retrofitted with capping, screening, and escape ramps to avoid entrapment of wildlife.
68. Fungicides to treat cut trees must be non-toxic (e.g., borax) and must dry within eight hours of application.
69. Following tree removal, down wood will be left in open areas to create habitat structure where possible. At a minimum, try to leave the thickest part of the trunk on site for ground cover.
70. From March 1 to June 30 (fisher limited operating period (LOP)), project implementation will avoid, to the extent feasible:
  - a) Landing helicopters or dropping sling loads in fisher suitable habitat within the project area. (This LOP can be lifted on June 1 if pre-project surveys document absence of fisher or may otherwise be waived or modified if a SEKI wildlife biologist determines that the project is unlikely to result in breeding disturbance due to the intensity, duration, timing, and specific location of the activity.);
  - b) Creating noise of a higher decibel or distinctly different frequency than ambient noise (due to project activities or increased human presence) within potential denning or high quality denning habitat. (This LOP can be lifted on June 1 if pre-project surveys document absence of fisher or may otherwise be waived or modified if the SEKI wildlife biologist determines that the project is unlikely to result in breeding disturbance due to the intensity, duration, timing, and specific location of the activity.);
  - c) Creating high and extreme noise (>81 dB) activities within and adjacent to high and moderate fisher reproductive habitat and any areas of recent fisher detections within the project area;
  - d) Modifying fisher habitat or conducting disturbance-causing activities within potential or high-quality denning habitat or within 370 acres of known active natal or maternal dens; and
  - e) Removing trees, conducting mastication, and vegetation management that involves habitat modification or disturbance within potential or high quality denning habitat from March 1 to May 31 or within den clusters from March 1 to June 30. (This LOP within den clusters can be lifted on June 1 if pre-project surveys document absence of fisher or may otherwise be waived or modified if a SEKI wildlife biologist determines that the project is unlikely to result in breeding disturbance due to the intensity, duration, timing, and specific location of the activity.) If tree removal must occur during this time, a SEKI wildlife biologist will check for the presence of active fisher dens prior to the removal of any trees of suitable size for fisher use.
  - f) NOTE: A SEKI wildlife biologist can generate an updated map of all types of fisher habitat and areas of recent fisher detections upon request.
71. To further promote safe road-crossing by fishers, the size of all newly installed road culverts will be increased above existing conditions where feasible.
72. Road culverts will be maintained in good condition to allow fisher passage. This includes repairing perched inlets/outlets, draining pools blocking entrances, removing debris blocking entrances, and creating pathways directing animals to culverts.
73. Maintain all high-quality trees (i.e., trees with broken tops, cavities, large branches, or other deformities that occur in high quality fisher habitat, especially live hardwood >20 inches in dbh, live conifers >30

inches in dbh, dead hardwoods >27 inches in dbh, and dead conifers >35 inches in dbh), particularly potential natal and maternal den trees and resting sites for fisher, to the extent practicable.

74. Maintain and enhance desired stand-level characteristics in suitable fisher habitat; maintain and enhance habitat heterogeneity within and between core habitat areas; and maintain and enhance cover between habitat patches to allow for connectivity.
75. A SEKI Resources Monitor shall monitor the proposed project to ensure that construction noise does not occur on more than 2,742 acres of fisher reproductive habitat.
76. As feasible, a SEKI Resources Monitor will monitor noise levels throughout the construction period and will work with a SEKI wildlife biologist to update the US Fish and Wildlife Service on their findings.
77. A SEKI environmental protection specialist and a SEKI wildlife biologist shall ensure compliance with the reporting requirements set forth in the term and conditions of the 2020 Programmatic Biological Opinion.
78. In the unanticipated event that a fisher is directly injured or killed during project implementation, a SEKI wildlife biologist will be immediately notified who will then contact the Sierra/Cascades Division Supervisor of the Endangered Species Program at the Sacramento Fish and Wildlife Office at 916-414-6621. Injured fisher must be cared for by a licensed veterinarian or other qualified person(s), such as a US Fish and Wildlife Service-approved biologist. Dead individuals must be sealed in a plastic bag with information detailing the date and time when the animal was found, the location where it was found, and the name of the person who found it. The specimen should be stored in a freezer located in a secure site, until instructions are received from the US Fish and Wildlife Service regarding the disposition of the dead specimen.
79. If new species or critical habitat are listed as threatened or endangered prior to or during implementation, consultation with the United States Fish and Wildlife Service may be necessary and the overall compliance documentation updated based on the outcome of the determination of impacts to said species or critical habitat. The SEKI Project Manager will consult with the SEKI Environmental Planning and Compliance Office at key milestones (i.e., prior to submitting the contract for bid, prior to awarding the contract, and prior to initiating construction) to check on the status of listed species. A SEKI Environmental Protection Specialist will advise the SEKI Project Manager if listing of a species or critical habitat is anticipated prior to implementation.

## **Vegetation and Soil**

80. Contractor will develop an Erosion and Sediment Control Plan and will share this with the SEKI Project Manager, CO or their designee, and a SEKI ecologist for comment and compliance 30 days prior to any construction activities.
81. Introduction of nonnative/noxious plant species will be minimized by implementing several BMPs, including:
  - a) Minimize soil disturbance.
    - Limit vehicle parking to existing roads, parking lots, or access routes, staging areas.
    - Limit disturbance to roadsides and culvert areas, including limiting equipment to the roadbed area; no machinery or equipment should access areas outside the construction limits.
  - b) Pressure wash and/or steam clean all construction equipment to ensure that all equipment and machinery are cleaned and weed free before entering the parks. Construction equipment will be inspected by a SEKI ecologist or designee prior to entering the parks to ensure compliance with cleanliness requirements; inadequately cleaned equipment will be rejected. (See #84-85 below.)
  - c) Cover all haul trucks bringing fill materials (excluding asphalt) from outside the parks to prevent seed transport and dust deposition along the road corridor. (See #86-87 below.)
  - d) Obtain all fill, rock, or other earth materials from the project area, if possible. If not possible, obtain weed-free earth materials from NPS- approved sources outside the parks. (See #88-89 below.)
  - e) Scrape away topsoil at the quarry, acquiring freshly exposed material with minimal seed deposition, and washing coarse materials (riprap) if the contractor cannot locate weed-free quarry sources.
  - f) No hay or straw bales will be used during revegetation or for temporary erosion control.
  - g) Initiate revegetation of disturbed sites as soon as possible following construction activities per NPS Revegetation Plan.

82. NPS staff will remove existing populations of invasive non-native vegetation prior to project activities, as feasible, and conduct appropriate monitoring and follow-up treatment after project.
83. Local staging areas outside the park must be inspected for invasive plants and approved prior to use.
84. Pressure wash equipment to remove all dirt and plant parts before entering the park for the first time, paying special attention to undercarriage and grill/radiator; subsequent entries will not require pressure washing unless the vehicle shows signs of mud, plant material, or other substances that could be considered harmful. Project manager will inspect equipment for compliance prior to entry into the park, and reject equipment that is not adequately clean.
85. The Mineral King Road project spans a wide spectrum of elevation and weed infestations. To reduce the spread of weed seeds from higher infested, low-elevation areas, the contractor will provide a self-contained weed wash station to be deployed as close to the Redwood Creek crossing as possible. Construction equipment will be washed when moving from below Redwood Creek to above.
86. In addition to covering all haul trucks carrying fill materials from outside the park (see #81 above), cover (tarp) loaded trucks when directed by the CO for safety or environmental concerns. No direct compensation will be made to the contractor for covering truck loads.
87. Materials must also be transported and stored such that they will not acquire invasive non-native plant seeds from adjacent vegetation. If vegetation does become established on or at the toe of either import piles or storage piles, remove vegetation as directed by the CO. Store import material on plastic or fabric if in contact with bare ground, as practicable. The CO, in consultation with the SEKI Project Manager and a SEKI ecologist, will decide if a non-native plant is potentially invasive based on its presence on the Federal or California noxious weed list, the California Invasive Plant Council's weed list, the Sequoia Kings Canyon National Park weed list, or other sources of weed information.
88. Sources of rock, sand, gravel, earth, subsoil, or other natural material must be inspected for noxious weeds prior to acceptance. Submit to the CO a list of proposed sources for import material 30 calendar days in advance of importing material. Ensure list includes the end use and any temporary storage requirements of those materials. The CO, in consultation with a SEKI ecologist or their designee, will inspect sources of materials that pose a risk, either by their end use or storage requirements, of allowing invasive non-native plants (noxious weeds) to establish in the park. Materials may be rejected if non-native invasive plants are present at the source and seeds could be present in the material. At the discretion of the CO, potentially contaminated materials may be accepted if mitigating measures are implemented. Mitigation may include, but is not limited to, stripping the top 12 inches of source material, requiring fresh material stored less than one month, pressure washing the material (rock), or sterilizing the material. Contaminated materials that contain fines and have an end-use on the surface will require mitigations or sterilization before importing to the park.
89. Rock riprap shall be obtained from designated sources. At least 30 days before rock is delivered, the contractor shall designate, in writing, the source from which rock material will be obtained and provide information satisfactory to the CO that the material meets contract requirements. The contractor shall provide the CO and a SEKI ecologist or their designee free access to the source for the purpose of materials inspection and obtaining samples for testing. Rock from approved sources shall be excavated, selected, and processed to meet the specified quality and grading requirements at the time the rock is installed. The rock riprap shall be free from dirt, clay, sand, rock fines, and other material not meeting the required gradation limits. Dirt, clay, sand, rock fines and other materials adhering to riprap shall be pressure washed off, or otherwise removed, prior to transport into the park.
90. Ship import material directly from the source to Sequoia Kings Canyon National Park without intermediary storage or staging.
91. A revegetation plan will be developed by SEKI resource management staff for disturbances outside of the existing road pavement.
92. To maximize vegetation restoration efforts after completion of construction activities, the following measures will be implemented:
  - a) Distribution of salvaged topsoil for use in restoration of disturbed areas.
  - b) Incorporating native litter and duff layer in forested sites for replacement over salvaged topsoil.
  - c) Surveying for and treating invasive plants prior to and one to three years after construction.
93. Topsoil will not be imported.
94. Weed-contaminated soils will not be moved to weed-free locations within the project.

95. Topsoil that is removed from areas of construction will be stored and covered for later reclamation use. The topsoil will be redistributed as near the original location as possible and supplemented with scarification, mulching, seeding, and/or planting with native species.
96. Ground surface treatment will include grading to natural contours, conserving and replacing topsoil and, where necessary, hand-seeding, hydroseeding, or planting with native species. In some locations, topsoil placement and mulching with litter and duff will be the primary treatment. If insufficient litter and duff is salvaged from the project area, additional litter and duff will be gathered from adjacent areas to place mulch over disturbed soil.
97. Reclaimed areas will be monitored after construction to determine if reclamation efforts are successful or if additional remedial actions are necessary, as outlined in the revegetation plan developed by the SEKI Vegetation Program.
98. Remedial actions will include installing erosion-control structures, reseeding, conserving and replacing topsoil and/or replanting the area, and controlling nonnative plant species with herbicide.
99. Prior to construction, the SEKI Vegetation Program will identify exposed tree roots and tree trunks that require protection from construction equipment. These trees will be fenced prior to construction to keep equipment and materials at bay.
100. There are two locations in the road where roots from special trees of interest (not giant sequoias) are causing uplift in pavement surface. Prior to construction, the SEKI Vegetation Program will provide locations to contractor where, as practicable, the contractor will excavate cautiously to avoid damage to major roots.
101. No trees or other plants will be removed or injured without prior approval of the CO in consultation with the SEKI Vegetation Program. All tree trimming, pruning, and transplanting will be done under the direction of the CO and SEKI Project Manager in consultation with the SEKI Vegetation Program.
102. Damaged vegetation will be treated and repaired in accordance with the practices specified by the National Arborist Association, the International Society of Arboriculture, or as directed by the SEKI Forester.
103. Outside of excavation areas (i.e., those within #109e below or in other areas as directed by the CO), exposed tree roots shall be preserved and will be immediately covered with wet burlap and plastic and rewetted to keep roots moist until roots can be covered with dirt. Roots will be reburied as soon as possible.
104. Outside of Sequoia Mitigation Areas (see #109 below), any living roots larger than 1 inch diameter that are damaged during pulverization will be given a clean straight cut on the exposed end with a saw or loppers. All tools will be disinfected between cuts with a 10% bleach solution or 70% isopropyl alcohol.
105. In order to create an incentive for protecting vegetation, the contract will allow for assessment of monetary damages for causing certain types of damage to trees, roots, and other vegetation.
106. Construction personnel will be informed of the occurrence and status of special status plant species and will be advised of the potential impacts on the species and penalties for taking or harming a special status species. The SEKI Vegetation Program can provide a list of all species of special status potentially within the project area upon request.
107. Populations of special status plant species within the project's area of potential effect will be protected by limiting disturbance to the actual project footprint when working in the vicinity of the plant. At least one species has been found within the project area, Call's angelica growing near a culvert replacement area. Special status plant locations will be mapped and provided to the contractors prior to the beginning of the project and will be flagged on the ground by a SEKI ecologist or their designee.
108. Sugar pine trees greater than 36" DBH within the project footprint will be treated by the SEKI Vegetation Program with mountain pine beetle anti aggregation treatments in the spring during and/or after project completion to protect trees whose roots might have been impacted by excavation or pavement pulverization.
109. Specific mitigations have been integrated into plan designs to protect giant sequoia trees as identified within the Sequoia Mitigation Plan (Exhibit A) and will be implemented by a specialist in the field during construction. These mitigations include, but are not limited to: reduced depth pulverization, removal of existing asphalt by bucket or other non-destructive means, and, in some cases slightly elevating the road to avoid disturbance of sequoia roots. Specifically, near Sequoias that are immediately adjacent to the roadway, an elevated aggregate road base over Sequoia Roots will be installed to reduce soil compaction over roots. Specifically, the following measures will be used to protect sequoia trees throughout the project area:



- a) A SEKI ecologist or their designee will identify trees that must be protected during/from construction activities. These trees will be fenced prior to construction to keep equipment and materials at bay.
  - b) A SEKI Resources Monitor must be present during removal of asphalt in the vicinity of giant sequoia roots.
  - c) In Sequoia Mitigation 1 Areas, pavement will be pulverized only to a depth of 2 inches.
  - d) In Sequoia Mitigation 2 Areas, asphalt pavement will be sawcut and removed with minimal disturbance to underlying aggregate base or subbase (as opposed to pulverization).
  - e) Excavation within Sequoia Mitigation Areas, in or other areas as directed by the CO:
    - i. The contractor will mark extent of excavations, which will be approved by the CO prior to excavation in consultation with a SEKI ecologist.
    - ii. The contractor will notify the SEKI Vegetation Program at least two weeks prior to planned excavation or exploratory excavation in Sequoia Mitigation Areas.
    - iii. A NPS Resources Monitor must be present when excavating in the vicinity of giant sequoia trees. The monitor will document presence of, impacts, and mitigation measures taken to sequoia roots. Guidance for the monitor will be provided by a resources monitor checklist as part of the Giant Sequoia Mitigation Plan.
    - iv. During all excavation activities, the contractor will excavate cautiously to detect and preserve major roots. Excavation in these areas will be completed using hand tools, an air knife or other precision-controlled equipment to preserve major roots as defined by the of International Society of Arboriculture (2 inches diameter or larger).
    - v. Major roots (2 inches in diameter or larger) that are encountered during excavation and trenching shall be preserved and covered with wet burlap and plastic or rewetted to prevent sun scald until the trench or excavation is backfilled.
    - vi. Any damaged living roots from 1 to 2 inches diameter that require removal will be given a clean straight cut on the exposed end with a saw or loppers. Any roots greater than 2" that are approved for cutting by the CO will also be cleanly cut with a saw or loppers. All tools will be disinfected between cuts with a 10% bleach solution or 70% isopropyl alcohol.
    - vii. Roots over 2 inches in diameter will be left in place, unless approved by the CO, and the trench will be hand excavated to the specified depth.
    - viii. The contractor may request cutting roots larger than 2 inches in diameter. In these situations, SEKI must provide a response within 48 hours of the request. Approval, which will be made in consultation with the SEKI Chief of Resource Management (or designee) and the SEKI Superintendent, will depend on site specific conditions such as the number major roots potentially affected and location of those roots. The decision matrix, outlined below, will also be consulted when major roots will be potentially cut or a significant area of roots will be removed.
  - f) Avoid driving over exposed roots whenever possible. In an emergency event when this cannot be avoided, protective measures will be implemented to avoid damaging or severing roots.
110. Prior to construction, GPR analysis and exploratory excavation will be required at culvert locations 444+07.58, 563+51.94, 590+19.97, 610+62.85, 613+42.00, and 643+87.83 to verify proposed culvert size and locations will not unduly impact underground Sequoia roots. Based on the GPR and exploratory excavation findings, the SEKI Superintendent may decide to alter the extent of proposed action, which could include implementing an alternative or modifications to one or more of the culvert locations to avoid damaging critical root mass of one or more sequoias in the vicinity of the culvert. Exhibit B includes a flow chart/decision matrix and associated options at these culvert locations.
111. No construction material will be located so as to affect vegetation outside of the work limits or protected vegetation within the work limits.

### Visitor Use and Experience

- 112. Construction delays and closures will be minimized to the extent practicable while still completing the overall project in as few of years as possible.
- 113. A detailed traffic control plan will be implemented to minimize impacts on visitors and complete construction work as quickly and efficiently as feasible.
- 114. Access to all approach roads, access roads, parking areas, pullouts, and trails must be maintained during construction and when temporary closures are not in effect.

115. Access to trailhead parking lots will remain open during construction, subject to traffic delays.
116. Emergency access must be accommodated as needed.
117. Delays for emergency response vehicles will be kept to a minimum by having the emergency responders notify the traffic monitors via park radio/frequency immediately when the vehicle is dispatched, thus allowing approximately 10 minutes to clear the road before the arrival of the emergency vehicle.
118. No daytime closures would be allowed between June and August. Although nighttime closures would be allowed during these months, the road must be opened every two hours between 8:00 PM and 6:00 AM on Friday, Saturday, and Sunday nights during these months.
119. Delays should be limited to no more than 15 minutes at a time between 6:00 AM and 8:00 PM (day) from June through August, and no more than 2 hours at time between 8:00 PM and 6:00 AM (night) from June through August (applicable only to Friday, Saturday, and Sunday nights) and at any time in September and October.
120. No daytime weekend construction will be allowed from June through August and only by NPS approval in September and October.
121. The lower section of the road must be paved for maintenance throughout the winter. The upper section of the road must be paved for maintenance in May and November.
122. No night work will be allowed within one-quarter mile distance to the nearest lodge, campground, or occupied building.
123. The NPS will provide information to inform visitors, landowners and Special Use Permit Holders, other partners, and employees of when road closures or traffic delays will occur. Information will be posted in neighboring communities, on the park website, in the National Park Service mobile app, at visitor centers, and at entrance stations and may be in the form of brochures, signs, digital media content, and interpretive programs, among others.
124. At the traffic delay locations and if conditions warrant, a SEKI interpreter will be present to answer questions from visitors and advise them of procedures and construction expectations.

## Water Quality & Hydrology

125. Aspects of this project are subject to SEC. 404. [33 U.S.C. 1344], and SEC. 401. [33 U.S.C. 1341]) of the Clean Water Act. Water quality permits and certifications (Section 404 permits and Section 401 water quality certifications) must therefore be obtained for the performance of project work involving discharges of fill into the jurisdictional waters of the U.S. prior to project implementation, and all terms and conditions of these permits/certifications must be followed.
126. Develop and implement a stormwater pollution prevention plan that meets federal, state, and county standards. This includes ensuring that soils/sediments do not have an opportunity to enter any naturally-occurring waterbody or storm drain system.
127. BMPs for drainage and sediment control, as identified and used by the FHWA and NPS Stormwater Pollution Prevention Plan, will be implemented to prevent or reduce nonpoint source pollution and minimize soil loss and sedimentation in drainage areas. Use of BMPs in the project area for drainage area protection will include all or some of the following actions, depending on site-specific requirements:
  - a) Keeping disturbed areas as small as practicable to minimize exposed soil and the potential for erosion.
  - b) Locating waste and excess excavated materials outside of drainages to avoid sedimentation.
  - c) Installing silt fences, temporary earthen berms, temporary water bars, sediment traps, stone check dams, or other equivalent measures (including installing erosion-control measures around the perimeter of stockpiled fill material and/or covering stockpiled fill material) prior to construction.
  - d) Conducting regular site inspections during the construction period to ensure that erosion-control measures were properly installed and are functioning effectively.
  - e) Storing, using, and disposing of chemicals, fuels, and other toxic materials in a proper manner.
128. Sediment traps, erosion checks, and/or filters will be constructed above or below all culvert drains (if such drains are required) and in all other ditches before the water (runoff) leaves the project construction limits.
129. At all cut and fill areas, erosion and sedimentation control will be implemented to minimize impacts on water quality.
130. Surface restoration and revegetation of disturbed soils will be implemented to minimize long-term soil erosion.

131. Water needed for construction and dust control will come from the existing developed water systems within the parks and will not be diverted from surface waters.

**Wetlands**

132. For project work proposed in wetlands and/or waterways, notification and permitting may be needed from the Corps of Engineers and/or Regional Water Quality Control Board. (See mitigations to water quality and hydrology.)
133. Wetland locations within the project area will be identified by a wetland delineation and will be flagged prior to the construction period.
134. Topsoil from delineated wetlands that is removed during project work will be replaced in the same location post construction.
135. Excavation and other project related disturbance to wetlands should be kept to as minimal an area as possible and completed in as short of a timeframe as possible.
136. Cut vegetation from brushing activities and other debris related to project activities should not be left or stored in wetlands.

**CE Citation:** 3.3.C.9 Repair, resurfacing, striping, installation of traffic control devices, repair/replacement of guardrails, etc., on existing roads.

**CE Justification:**

This project entails the rehabilitation of an existing road within its road prism, including the replacement of all culverts, the pavement of a small gravel section of road, and the pavement of existing parking lots. Disturbance will largely occur within previously disturbed areas.

**Decision:** I find that the action fits within the categorical exclusion above. Therefore, I am categorically excluding the described project from further NEPA analysis. No extraordinary circumstances apply.

**Signature**

**Superintendent:** \_\_\_\_\_ **Date:** \_\_\_\_\_  
Clayton F. Jordan

**Extraordinary Circumstances:**

If implemented, would the proposal...	Yes/No	Explanation
<b>A.</b> Have significant impacts on public health or safety?	No	None anticipated through implementation of project specific safety plan. See ESF.
<b>B.</b> Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation, or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order 11990); floodplains (Executive Order 11988); national monuments; migratory birds; and other ecologically significant or critical areas?	No	None anticipated. See ESF.
<b>C.</b> Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources (NEPA section 102(2)(E))?	No	Public scoping was completed for this proposed action in March 2021. A public comment and response report is included within the project files. No highly controversial environmental effects were identified through public or internal scoping and no conflicts concerning alternative uses of available resources have been identified.
<b>D.</b> Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks?		Although there is some uncertainty with regards to the amount and size of roots (namely those of sizable giant sequoias) within proposed excavation areas, the NPS will be conducting further investigation into these conditions prior to implementation (i.e., GPR surveys and exploratory excavation) and has factored some flexibility into this decision such that the action can be scaled back so as to minimize if not entirely avoid impacts to large giant sequoias should large roots or a significant root mass otherwise be impacted/removed by taking action. See ESF for further discussion and analysis.
<b>E.</b> Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?	No	Action is a one time rehabilitation project to protect the Mineral King Road into the future. It does not establish precedent or a decision in principle about future actions.
<b>F.</b> Have a direct relationship to other actions with individually insignificant, but cumulatively significant, environmental effects?	No	To complete the full scope of this project, the NPS does need a scenic easement from a private landowner that owns the land that the end of the road and a parking lot are on. Such an easement has no additional environmental effects beyond that which is already occurring onsite and that which is anticipated within this project and its documentation.
<b>G.</b> Have significant impacts on properties listed or eligible for listing on the National Register of Historic Places, as determined by either the bureau or office?	No	In consultation with the SHPO, the NPS determined that this proposed action will have no adverse effect to historic properties.

<b>H.</b> Have significant impacts on species listed or proposed to be listed on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species?	No	In consultation with the USFWS, the NPS determined that this proposed action may affect and is likely to adversely affect fisher in that it may result in the temporary injury (reduced feeding opportunities) of two fisher kits throughout project implementation. In the accompanying appendage to the 2020 Programmatic Biological Opinion, the USFWS determined that this level of anticipated take from the proposed project is not likely to result in jeopardy to the fisher.
<b>I.</b> Violate a federal, state, local or tribal law or requirement imposed for the protection of the environment?	No	This action will be conducted in compliance with environmental protection laws.
<b>J.</b> Have a disproportionately high and adverse effect on low income or minority populations (EO 12898)?	No	This action will have no effect on these populations.
<b>K.</b> Limit access to and ceremonial use of Indian sacred sites on federal lands by Indian religious practitioners or adversely affect the physical integrity of such sacred sites (EO 130007)?	No	This action will have no effect on these populations.
<b>L.</b> Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112)?	No	Mitigations will be implemented to prevent the introduction and spread of invasive plants and the future monitoring and treatment of such species such that the NPS does not anticipate any new populations of non-native or invasive species resulting from the impacts of this proposed action.