

Last Chance Grade Permanent Restoration Project Alternatives Analysis Methodology Workshop #2 Summary of Results

Submittal #029
April 2021



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I. Introduction

Workshop Purpose and Format

The Last Chance Grade (LCG) Permanent Restoration Project is a project proposed by the California Department of Transportation (Caltrans) to find a permanent solution to the instability and roadway failure on a 3-mile segment of U.S. Highway 101 in Del Norte County. As part of the process in selecting a safe and reliable long-term solution to this problem, Caltrans is conducting an alternatives analysis to determine if any of the seven build alternatives can be eliminated from further study. An alternatives analysis tool is being developed based on criteria and performance measures for the project's major objectives, which include providing a long-term safe and reliable roadway, reducing maintenance costs, and protecting the economy and natural and cultural resources.

Caltrans is hosting a series of workshops to solicit and refine LCG stakeholder input on the methodology and criteria. The purpose of each round of workshops is as follows:

- **Workshop Round 1:** Present initial alternatives analysis methodology and obtain initial stakeholder input. Based on stakeholder input, consider data needed to achieve each metric, determine whether another metric could serve as a proxy, or if the metric is useful in differentiating one alternative from another.
- **Workshop Round 2:** Discuss initial alternatives analysis results and recommended alternatives for further study using refined methodology and criteria. Assess further refinements to methodology and criteria based on stakeholder input.
- **Workshop Round 3:** Share the results of the final alternative analysis results and alternatives for further study completed using the refined criteria and methodology.

The structure of the process was to conduct the same workshop with each of the four working groups. These groups include:

- Cultural Resources Working Group: Members have responsibilities for cultural resources management.
- Biological Resources Working Group: Members have responsibilities for natural resource management and permitting.
- Last Chance Grade Partners: Members have land ownership and land management responsibilities.
- Congressman Huffman's Stakeholder Group: Members include representatives from local governments, tribal groups, businesses, agencies, and environmental groups who provide feedback to all the partners involved.

The first workshop of this series was conducted with each of the four working groups between December 14 and 17, 2020. Participants identified the metrics of greatest importance and identified additional metrics for consideration. The results of the workshops were documented in a summary report, dated February 2021, that was provided to workshop participants.

During the second round of workshops, which was again conducted with each of the four working groups between March 1 and 4, 2021, the project team presented the results of the

initial alternatives analysis using the refined methodology based on stakeholder input, an assessment of each alternative, and solicited stakeholder input on these results.

Workshop 3 will be scheduled in April 2021 and will most likely be convened as one workshop for all four working groups.

Some organizations are members of more than one working group and were welcome to participate in multiple meetings; however, if they were limited on time, they were encouraged to choose the group(s) in which they'd most like to share their views.

The workshops, three of which were held via Zoom and one using Webex, were designed to be interactive. Participants viewed a presentation (Appendix A) on the alternatives analysis process, purpose, and timeline, the value of screening alternatives prior to further study, highlights of the findings from Workshop 1, and preliminary results of the alternatives assessment.

The presentation explained the process whereby the alternatives were assessed. The analysis criteria and performance metrics were refined and grouped into categories based on stakeholder input during the initial round of workshops. These categories included:

- Core factors identified as most important across all working groups. These included major trees including old growth redwoods, construction costs, and mitigation costs, and were weighted most heavily in the analysis.
- Operational factors: road closure potential and cost to maintain
- Construction factors: time to construct, cut and fill amounts, etc.
- Natural resource factors: impacts on animals, vegetation, and waters

It should be noted that that two types of criteria and performance metrics were removed from consideration as part of the assessment tool. Metrics related to cultural resources were removed since the suggested metrics did not appropriately describe the resources and the resources will be discussed in greater detail during direct communications with Native American tribes in the area. There is also close alignment of cultural resources and natural resources. The performance metrics related to the risk of litigation were also removed. The project team found the metrics were highly speculative and did not speak to impacts which is the focus of the current assessment.

The Project Team developed numeric-based metrics and identified high, medium, and low risk ranges with corresponding color-coding in red, yellow, and green. The lowest scores, coded green, were considered most desirable in terms of each of the metrics. The performance of each alternative was assessed based on the metrics and assigned weighting. The team also varied the assigned weights for the metrics and tested the results to demonstrate how weighting variations could change the score. However, in several scenarios tested, while the scoring changed, the rank order by performance did not. Of the seven build scenarios currently under

consideration, Alternatives F and X consistently ranked highest; the A1 and A2 alternatives ranked strong in terms of operational factors but in the middle of the pack for all other factors; and Alternatives G1 and G2 consistently ranked low.

For more information on the alternatives, see the presentation reproduced in Appendix A. The proposed alignment maps and matrix showing how scores were assigned based on various combinations of factors and information on how the criteria were assessed are included in Appendix B.

The team demonstrated that based on the evaluation matrix, alternatives X and F scored higher and were likely to be carried forward for further study and the other alternatives dropped from consideration.

Upon stakeholder request, the project team provided more detailed information regarding the assessment process and results, including: how the criteria and performance metrics were refined; details regarding data collection methods; specific examples of how weighting variations would affect the results; maps showing construction and resource impact footprints for the different alternatives; and a chart comparing estimated tree removal counts by type for each of the alternatives.

Following the presentation, participants were asked to provide feedback, as well as ask any questions they might have regarding the alternatives assessment process and preliminary results.

Participants used the videoconferencing chat feature and spoken discussion to provide input. Their comments, along with information from the project team in response to their questions, were recorded on a digital whiteboard (Appendix B). Note that project information as represented in the digital whiteboard comments is not necessarily complete or presented with full context; it is intended to show the types of questions and comments shared and include a summarized record of the project team's responses to stakeholder questions and comments.

Following the discussion, participants were asked to identify their level of support for the alternatives assessment process and recommendations as discussed. Options for levels of support included: highly supportive, somewhat supportive, neutral, somewhat unsupportive, or do not support. It was emphasized that this was not intended to be a binding vote, but simply a way to get a sense of the general level of support for the process as discussed. The polling results are also included in Appendix B.

-   RUDISILL ROAD TO LCG TUNNEL
-   RUDISILL ROAD TO DAMNATION TRAILHEAD
-   RETREAT FROM RUDISILL ROAD TO LCG TUNNEL
-   RETREAT FROM RUDISILL ROAD TO DAMNATION TRAILHEAD
-  LCG TUNNEL PARALLEL TO EXISTING ALIGNMENT
-  UPSLOPE REALIGNMENT
-  ON ALIGNMENT IMPROVEMENTS

Workshop Attendance

In addition to Caltrans District 1 and project team staff, the following organizations were represented at the four workshops:

<p>Cultural Resources Working Group</p> <ul style="list-style-type: none"> ▪ California State Parks ▪ Elk Valley Rancheria ▪ Redwood National and State Parks ▪ Resighini Rancheria ▪ Tolowa Dee-Ni' Nation ▪ Tolowa Nation 	<p>Partner Working Group</p> <ul style="list-style-type: none"> ▪ California State Parks ▪ Elk Valley Rancheria ▪ Redwood National and State Parks ▪ Tolowa Dee-Ni' Nation
<p>Biological Resources Working Group</p> <ul style="list-style-type: none"> ▪ California Coastal Commission ▪ California State Parks ▪ National Park Service ▪ Resighini Rancheria ▪ State Water Resources Control Board ▪ US Army Corps of Engineers ▪ US Environmental Protection Agency ▪ US Fish and Wildlife Service 	<p>Huffman Stakeholder Group</p> <ul style="list-style-type: none"> ▪ California State Parks ▪ Crescent City ▪ Crescent City-Del Norte Chamber of Commerce ▪ Del Norte County Board of Supervisors ▪ Del Norte Local Transportation Commission ▪ Environmental Protection Information Center (EPIC) ▪ Friends of Del Norte ▪ Green Diamond Resource Company ▪ Humboldt County Association of Governments ▪ Humboldt County Board of Supervisors ▪ Office of Representative Jared Huffman ▪ Redwood National and State Parks ▪ Resighini Rancheria

II. Key Findings

A. Results of the Alternatives Analysis

The following summarizes the preliminary results of the alternatives assessment that was shared with the participants.

The initial application of the criteria and performance metrics yielded the following assessment of each of the alternatives. The Project Team developed numeric metrics and identified ranges (high, medium, and low) with corresponding colors red, yellow, and green. High scores correlated with high impacts and were coded red. Scores in the medium range were coded yellow and low scores, considered most desirable, were coded green.

The project team assessed the performance of each alternative. The team also assigned weights and tested the results to demonstrate how weighting could influence the final score. The team looked at a variety of scenarios that changed the final scores but there were few modifications that resulted in a change in the rankings. The alternatives are listed in rank order of performance from lowest (or best performing) to highest (or worst performing).

Alternative X – Re-Engineering along Generally Current Alignment

Alternative X was developed at the request of the Federal Highway Administration (FHWA). FHWA wanted to make sure that Caltrans had given full consideration to a holistic effort to reengineer a roadway generally along the current alignment to increase long-term stability through large-scale dewatering, walls and other structures, terracing, alignment retreat in specific locations and other improvements. To date, most repairs and improvements made to Last Chance Grade have been in reaction to earth movement. Alternative X had positive performance on most of the criteria and performance metrics. For example, Alternative X has by far the lowest construction cost and the smallest project footprint, limiting potential impacts. However, Alternative X performed relatively poorly on the operations metrics, eliciting concerns from some working group participants. Caltrans responded to such concerns by noting its successful implementation of dewatering activities at other locations and intention to further develop and refine this alternative prior to the environmental document.

Alternative F – LCG Tunnel

Alternative F includes approximately one mile of tunnel that runs generally parallel to the existing alignment to greatly reduce potential impacts to natural and cultural resources including old growth trees. Limited geotechnical studies support the feasibility of this alternative. While Alternative F is the second highest cost alternative (scoring poorly), Alternative F has lower resource and construction impacts and performs well on operation metrics. Alternative F's relatively lower environmental impacts also correlate with reduced mitigation costs.

Alternative L – Upslope Realignment

Alternative L is an alignment that would be located upslope of the existing roadway. The intention of Alternative L was to achieve a higher level of stability relative to the existing roadway. Recent geotechnical analysis revealed unanticipated results that the desired level of stability would likely not be achieved. The poor performance on the related metrics, along with the substantial impacts created by cutting a new path through current park land, resulted in a higher than expected score on this alternative and potential for it to be removed from consideration. While no formal decision was made, there were no voiced objections to removing Alternative L from further study.

Alternatives A – East Side Realignment (A1 Short Tunnel, A2 Long Bridge)

A1 and A2 go to the east of the ridge above Last Chance Landslides. A1 includes a short section of tunnel to rejoin US 101 on the north and A2 includes a long bridge to rejoin US 101 on the north. Both have significant cuts and fills creating a very large footprint that would require significant soil disposal and other construction impacts, which strongly impact environmental resources. While A1 performs well on operations, A1 is mostly located in current park land resulting in poor scores in related metrics. There were no voiced objections to removing the A alternatives from further study.

Alternatives G – West Side Realignment (G1 Short Tunnel, G2 Long Bridge)

Alternatives G1 and G2 are just east of the ridge above the Last Chance Grade Landslides in Redwood National Park and Del Norte Coast Redwood State Park. These were the two lowest performing alternatives across all metrics. Like alternatives A1 and A2, these have a large project footprint and thus substantial construction impacts. G1 and G2 were consistently scored medium and high in the metrics; the alternatives did not receive a "green" rating on any of the

performance metrics. There were no objections voiced in response to a suggestion to drop the two alternatives from further consideration.

B. Overall Assessment Process

A summary of stakeholders' comments from across the four workshops is provided below. The project team will consider all comments received in preparation for the final workshop.

Participants were largely satisfied with the detail included in the analysis and expressed confidence or satisfaction with the analysis process. Some expressed their appreciation for the rigor used in the process and how clearly it was explained during the workshop. Some found the maps and charts very useful, adding considerably to their understanding of the impacts and footprints of each alternative and their ability to provide useful feedback. Some participants were surprised by the initial results, but the explanation and additional information led to a change of opinion regarding the perceived impacts of particular alternatives.

- There were requests for more detailed information, including:
 - A complete summary of the information in the preliminary analysis;
 - Maps that clearly show the position of the most likely alternatives and associated structures, as well as potential new edges;
 - An overall timeline of the project including what studies are ongoing and which are scheduled to begin soon;
 - More specific information regarding natural resources metrics and mitigation (see below); and
 - A copy of the analyses and presentation slides.
- Overall, participants supported reducing the list of alternatives to be studied to increase efficiency, decrease costs and lessen the time needed for analyses. However, they noted the importance of including an analysis of the alternatives eliminated from further study in the environmental document. This will help clarify to the public why they are no longer being studied / considered, as well as satisfying the requirements of some permit evaluation processes.
- Although most felt that the rankings of the alternatives were consistent with their expectations, some were surprised that various alternatives ranked either higher or lower than they expected.
- Comments and questions about the metrical analysis and ranking process included:
 - It is important to note the concerns expressed even when they did not change the score for the metrics or alternatives.
 - Did any of the scoring take engineering feasibility into account?
 - How did climate change resiliency – specifically, planning for extreme weather events – figure into these metrics?
- Working Group participants responded positively to a proposal by Caltrans that Workshop 3 should be convened as one large meeting rather than four separate stakeholder group meetings. They also asked that information used in the alternatives analysis process be sent to all working group members.

- Participants expressed their appreciation for Caltrans' ongoing work to identify a long-term solution while keeping the current road open during landslide repairs. Several noted that they find Caltrans very open to stakeholder input and appreciate their willingness to provide project information. They appreciate the dialogue between stakeholders with a variety of perspectives and consider that reducing the alternatives to be studied to a manageable number is a great accomplishment.

C. Comments on Specific Metrics

Operations

- Some participants elevated the importance of operations as a metric, especially given closures due to the recent rock and landslides, emphasizing that the entire purpose of the project is to keep the road open and safe. Although there was agreement that it is crucial to avoid or mitigate impacts to the environment, they questioned whether the risk of road closure should be considered among the core factors and/or weighted more heavily.

Cultural Resources

- Participants expressed some concern that cultural resources were eliminated as a metric because those resources are an important consideration in the selection of an alternative. They were pleased that the project team considers these resources to be a key concern and will present detailed information for discussion at tribal council meetings, as well as performing ethnographic interviews with tribes, in the very near future. Tribal input is paramount in the consideration of impacts to cultural resources.
- Tribal participants explained that natural resources and cultural resources overlap, even though the law defines them separately. Some stakeholders were curious to know whether the value of natural resources metrics would be increased if their cultural value were integrated.
- It was appreciated that traditional cultural properties and gathering areas were mentioned, since resources of significance include more than those discovered through archeological activities. The value of cultural resources cannot be determined by prioritizing them based on the number or location of artifacts or other specific metrics.
- It is an ongoing challenge to share cultural knowledge with young people given the loss of access to resources caused by growing population and other existing impacts. It is therefore crucial to avoid further impacts as much as possible.
- Recommendations for providing information to tribal councils included:
 - Provide a breakdown of details for the natural resource metrics.
 - Visuals such as maps are very helpful; they should include topographic and landscape details to clarify how the alternatives are situated in the landscape.
 - For tribal council presentations only, document the general location of tribal cultural resources on maps.
 - Information should be sent out prior to the council meetings.
 - Operational measures must also be discussed as closures have had a profound impact on tribal government.

Natural Resources

- Concerns and questions expressed regarding impacts to trees included:
 - Knowing approximately how many trees are likely to be removed per alternative will help stakeholders give better feedback on the assessments.
 - Trees should be documented regardless of size as they are still valuable resources—both natural and cultural.
 - People were curious to know whether trees come down during slides, rather than just resulting from construction impacts. The video of trees sliding down the ridge during the current slide was a great illustration that trees are indeed impacted by landslides.
 - Heavy winds often create blow-overs after logging. Has the possibility of blow-overs on the ridgeline or new edges created by construction been considered among the impacts?
- Other natural resources related concerns and questions included:
 - Have the impacts of the alternatives on all animals been considered, studied and documented?
 - Is there any flat land that could be offered as a new state park or other recreational asset, possibly as a source of revenue?

Mitigation

- Stakeholders wanted to know more about Caltrans' plans for mitigation, including methods, locations, and costs. Specific questions included:
 - Were construction costs weighted similarly to an equivalent amount in mitigation costs?
 - Were the number of acres considered in relation to the cost of mitigation?
 - Is Caltrans considering the acquisition of offsite lands to assist in mitigation, and have those costs been factored into the analysis?

D. Highest Ranking Alternatives

Stakeholders were generally comfortable with the designation of alternatives X and F as the highest ranking, particularly because they seem the least impactful. While many were satisfied with the recommendation to limit further study to these two alternatives, some concern was expressed for limiting further study to only two build alternatives, especially given doubts about Alternative X and whether these two alternatives will be accepted by the public (see below for more details).

Alternative X

- Stakeholders requested a better understanding of Alternative X, including:
 - How distinct is this alternative from the current alignment; what distinguishes it from simply continuing to repair the current road?
 - How long it will take to obtain additional data to assess its feasibility and compare it to the better studied alternatives?
 - How well does it perform in terms of the operations metrics? Will it require closing the roadway during construction?

- If dewatering is potential mitigation for slope instability, should it be part of the ongoing process of road repair already? How does dewatering affect erosion and does it lower the risk of slope instability?
- Do the estimated costs for alternative X include funding for current repairs?
- Some were uncomfortable with the high ranking of Alternative X and that all but one other build alternative may be eliminated from study without knowing whether X is feasible. It may be difficult to get popular support for this option because many people are frustrated with the never-ending repairs on the existing road, and have difficulty believing that Alternative X is different from just continuing to fix the existing road. It is likely that many will object to anything being done on the current alignment.
- Information provided in the workshop makes the distinction clear and clarifies why Alternative X is being considered, but this needs to be carefully explained to stakeholders and the broader public. Recommendations for doing so include:
 - Present X with well-considered messaging. Characterize it as a proactive, holistic, global solution that addresses root causes, and emphasize that it is a new build. Focus on the lack of tree impacts and cost savings from discontinuing study of the alternatives with much larger footprints.
 - Present the alternatives that are top performers first and those that perform less well last.
 - Use visuals to convey the message, such as an aerial view with an outline to give a better idea of how it will look that can be played on a loop at the opening of meetings.
 - If people call for bringing the “A” alternatives back online for study, be prepared to clarify how they perform less well as demonstrated by metrics. Demonstrate that they provide no more advantage for the larger cost and impacts.

Alternative F

- Some were surprised by the high ranking of Alternative F, and that its cost and impacts were lower than expected; many expected it to be recommended for elimination from study. Satisfaction was expressed that it ranked high given its comparatively low impacts and good performance on operations metrics.
- Concerns and questions included:
 - Has Alternative F been determined to be viable, given the geotechnical and safety concerns? Curious to know what kept it in consideration.
 - How far underground will the tunnel be in relation to the forested landscape (both surface and roots)?
 - What is the extent of tree impacts at the tunnel portals?
 - Has a bike lane been considered in the tunnel?
- Suggestion that many members of the public are not in favor of this alternative. Public comfort with the alternative may include:
 - Explain that more certainty has been gained about the stability of the tunnel due to completed and ongoing studies; note how it reduces impacts on the surface.

- Consider using music or sound effects in the tunnel to help relieve stress and claustrophobia (e.g., I-5 bridge outside Eugene which plays a melody as you cross).
- Turn the tunnel into an amenity through the addition of art installations or other features.

E. Lower Ranking Alternatives

Alternatives A1 and A2

- Stakeholders were mostly satisfied with the idea of removing these alternatives from further study, given their large footprints, significant construction and natural resource impacts, and overlap with tribal lands.

Alternative L

- Some stakeholders were surprised that L did not rank more highly. They had hoped that its location upslope from the current alignment would provide more geologic stability. They had not understood that L has an entirely new footprint and would have significant natural resource impacts, including a large number of old growth redwoods.

Alternatives G1 and G2

- Stakeholders agreed that eliminating the G alternatives from further study or consideration is logical based on the analysis and prior discussion. They do not seem viable due to their large scale, high impacts, and poor performance in the metrical analysis.

III. General Findings

Participant comments and feedback from the four workshops indicated there was general support for the criteria and performance metrics used and the rigor of the analysis applied to the assessment that identified Alternative X and F as the two highest performing. Given the substantial difference in performance between X and F and the remaining alternatives, participants appeared open to the recommendation to drop the other five alternatives from further study. There was concern voiced related to studying X given the history of the roadway, current slide activity and little information known about its viability. Should X prove not to be viable, the process would have only one build alternative which features a tunnel.

IV. Polling on Level of Support

Before the close of each meeting, participants were asked to identify their level of support for the refined criteria and initial alternatives assessment. The polling was not considered a binding vote but was intended as feedback on the direction provided to the project team.

The level of support for the overall process as described was neutral or greater across all four workshops, except for a single “somewhat unsupportive” response from Congressman Huffman’s Stakeholder Working Group. There were no responses of “do not support.” The Cultural Resources Working Group had the highest percentage of those who were neutral (43%); in all other groups, the percentage of those who were either highly or somewhat supportive was greater than the percentage of those who were neutral. The highest level of

agreement was among members of the LCG Partners Working Group, with 100% highly supportive.

When asked to comment on responses that were less than supportive, stakeholders replied as follows:

- So much of the discussion, particularly in relation to cultural resources, rests on tribal input rather than on metrical analysis.
- As a relative newcomer to the group, currently just listening and learning.

Appendix A: Workshop Materials



Alternatives Analysis Methodology – Workshop #2

Cultural Resources Working Group

Monday, March 1, 2021

10:00 a.m. – 12:00 p.m.

Biological Resources Working Group

Tuesday, March 2, 2021

3:00 p.m. – 5:00 p.m.

Partner Working Group

Wednesday, March 3, 2021

3:00 p.m. – 5:00 p.m.

Huffman Stakeholder Group

Thursday, March 4, 2021

3:00 p.m. – 5:00 p.m.

Workshop Objectives:

- Review how the results from Workshop #1 were integrated into the process of the alternatives analysis.
- Get agreement on the process for evaluating the alternatives.
- Get agreement on the results of the assessment and the alternatives to be fully studied.

Topic	Speaker	Discussion Tool
Welcome and Agenda Review	Jaime Matteoli, Caltrans Joan Chaplick, MIG	Chat and Raise Hands
Highlights of the findings from Alternatives Analysis Workshop #1	Joan Chaplick, MIG	Chat and Raise Hands
Overview of revisions to the criteria and performance metrics	Dina Potter, HNTB John Cook, ICF	Chat and Raise Hands
Presentation and discussion of the initial application of criteria and performance metrics	John Cook, ICF Joan Chaplick, MIG All participants	Chat and Raise Hands
Level of Support for Process to Date	Joan Chaplick, MIG All participants	Polling, Chat and Raise Hands
Next Steps and Closing Comments	Jaime Matteoli	Chat and Raise Hands



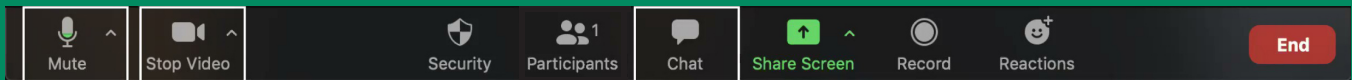
LAST CHANCE GRADE

Alternatives Analysis Methodology
Workshop 2

March 2021



Virtual participation on Zoom



1 Audio & Video

Computer

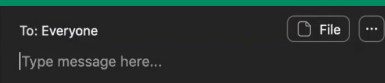
- Use the toolbar

Phone

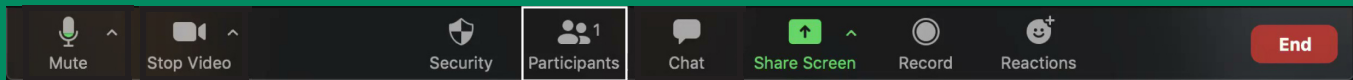
- Access dial-in number
- Use *9 to raise hand

2 Chat

- Click on the chat and type your comments and questions
- We'll take comments throughout the workshop

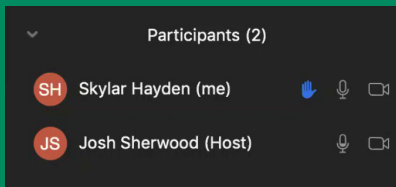


Virtual participation on Zoom



Participants

- Select icon on the toolbar to open the participants' window
- Select 'Raise Hand' button



Purpose



Purpose of the Alternatives Analysis

- Assess the alternatives and advance those that best meet the project objectives to be further studied in the environmental document

Purpose of Today's Workshop

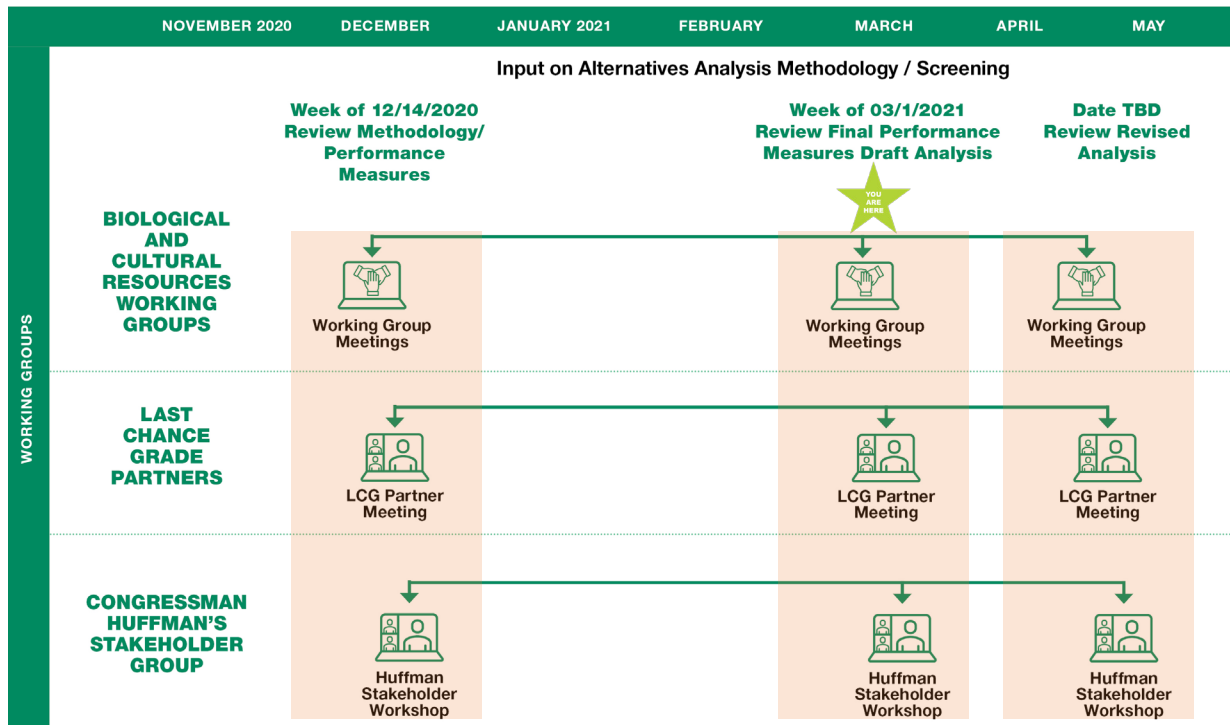
- Get agreement on how the alternatives are assessed by providing input on the criteria and performance measures and potential weighting
- Review and discuss the results of the assessment
- **Explore the best alternatives** to carry forward into the environmental document

Value of Screening Alternatives



- Save time and resources – reduce footprint to be studied and cost of studies, select final alternative sooner
- Reduces extent of ground-disturbing studies
- Recognize alternatives that don't perform well when assessed based on these metrics
- Design and study resources go further, allowing for more in-depth work
- Provides higher level of certainty, lowered risk of schedule delay

Alternatives Analysis Process



Agenda



- Highlights of the Findings from Workshop #1
- Revisions to the Criteria and Performance Metrics
- Discussion of the Results of the Initial Application of the Criteria & Performance Metrics
- Levels of Support for Process to Date
- Next Steps and Closing Comments





Workshop 1

Highlights of Findings

Highlights of Results of Workshop #1



- Assessed five objectives, 11 criteria with 16 performance measures
- Identified the core factors that seemed most important across groups
- Removed criteria and performance metrics related to cultural resources
- Removed litigation as a performance metric; focus of assessment is impacts
- Refined and added metrics related to natural resources



Preliminary Results of Alternatives Assessment

Preliminary Results of Alternatives Assessment



- F and X rise to the top when looking at **all** factors
 - F consistently ranks in top 2
 - X strong except in Operations
- G Alternatives consistently rank low
- A Alts rank strong in Operations but middle of pack for all other factors

- Core Factors (Major Trees, Construction Costs, Mitigation Cost)

X	L	F	A1	A2	G1	G2
1	3	2	3	3	7	3

- Operational Factors (Road Closure Potential, Cost to Maintain)

X	L	F	A1	A2	G1	G2
6	6	1	1	1	4	4

- Construction Factors (Time to Construct, Cut and Fill, etc)

X	L	F	A1	A2	G1	G2
2	3	1	5	3	5	5

- Natural Resource Factors (Animals, Vegetation, Waters)

X	L	F	A1	A2	G1	G2
2	3	1	4	4	6	6

- All Factors Together

X	L	F	A1	A2	G1	G2
2	5	1	4	3	7	6



Discussion

Polling on Overall Process in Today's Workshop



- *The poll is anonymous and is not a binding vote. It is intended as a way to gauge general support for the process that has been discussed.*
- What is your level of support for the alternatives assessment process as discussed today?
 - Highly supportive
 - Somewhat supportive
 - Neutral
 - Somewhat unsupportive
 - Do not support

Next Steps and Next Meeting



- Meeting format is being replicated with all four groups
- Project Team will collectively review feedback and update the analysis
- Project Team will recommend to the groups the alternatives that will be included in the impact analysis
- Project Team will seek agreement with the groups on the alternatives

LAST CHANCE GRADE

Alternatives Analysis Methodology
Workshop 2

March 2021



How We Responded to the Comments and Requested Revisions



- Looked at the availability of the data
- Considered if the requested data is needed now (at the alternatives stage) or would it be more definitive during the impact analysis
- Looked at the criteria and metrics in the context of other metrics- collectively what do they tell us about the alternative

Methodology

- Working Group feedback informed:
 - Refinements/Additions to factors
 - Grouping of factors
 - Core Factors
 - Weighting of Factors
 - Scoring System
 - Core Factors: weighted most heavily (5 out of 5)
 - Others: Weights assigned by staff, based on Working Group feedback

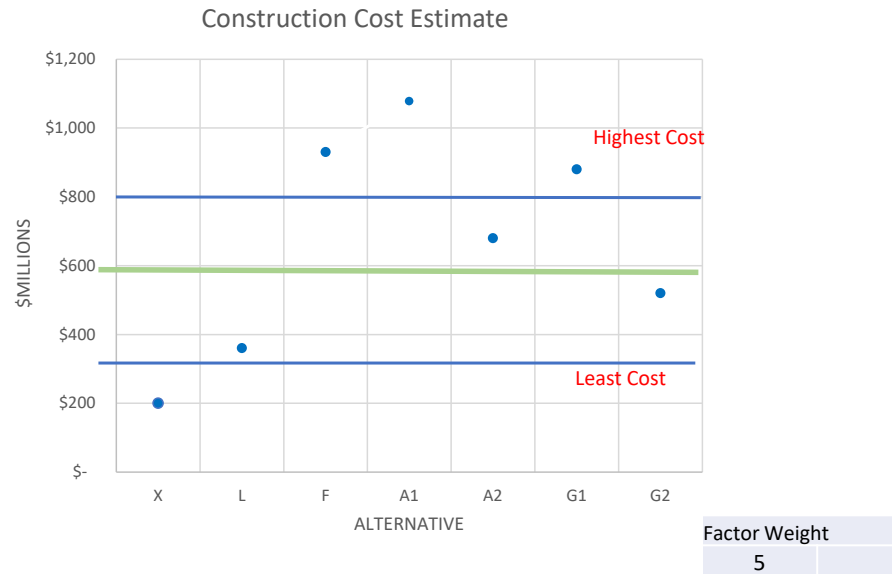
Cost to construct, millions	X	L	F	A1	A2	G1	G2
Weighted Score	\$220	\$360	\$930	\$1,078	\$690	\$880	\$520
Cost to Construct Score	1	1	5	5	3	5	3

Core Factors

- Trees - Areas predominantly:
 - Redwoods
 - Old Growth
 - Mature (Slide Compromised)
 - Green Diamond Marbled Murrelet preserve area
 - Other Mature Conifers
- Cost to build
- Cost to mitigate

Example: Cost to Construct

- District 1 identified Construction Cost as one of many important performance measures
- Working Group Round 1 Meetings – broad agreement cost is “make or break”
- District 1 elevated cost to a “Core Factor”
- Scoring/Weighting
 - **Score**
 - Costs for each alternative compared against each other
 - **Lowest** cost → Lowest (best) score (1 on scale of 1 to 5)
 - **Middle** Cost → 3 on scale of 1-5
 - **Highest** cost → Highest (worst) score (5 on scale of 1 to 5)
 - **Weight**
 - “Core Factors” have heaviest possible weight (5 on scale of 1 to 5)
 - **Weighted Score** = Score X Weight
 - Best Possible = 5
 - Worst Possible = 25



	X	L	F	A1	A2	G1	G2
Cost to construct, millions	\$220	\$360	\$930	\$1,078	\$690	\$880	\$520
Score	1	1	5	5	3	5	3
Weighted Score	5	5	25	25	15	25	15

Alternatives Ranking Matrix

CORE FACTORS	X	L	F	A1	A2	G1	G2	Factor Weight	Equalized Factor Weight
Trees (Sum of all Redwoods (incl GDRC MAMU Preserve) + Other Mature Conifers - acres)	13.9	72.5	1.6	2.3	4.7	4.9	7.2	5	3
Weight	3	5	1	1	3	3	3		
<i>Tree Score (Weight Score X Factor Weight)</i>	15	25	5	5	15	15	15		
Cost to construct, millions	\$220	\$360	\$930	\$1,078	\$690	\$880	\$520	5	3
Weighted Score	1	1	5	5	3	5	3		
Cost to Construct Score	5	5	25	25	15	25	15		
Cost of Mitigation	Medium	Very High	Medium	Very High	Very High	Very High	Very High	5	3
Weight	3	5	3	5	5	5	5		
Cost of Mitigation Score	15	25	15	25	25	25	25		
Total Score, Core Factors	35	55	45	55	55	65	55		
<i>Best Possible Core Factors Score</i>									
	15								
<i>Worst Possible Core Factors Score</i>									
	75								
Ranking, Just the Core Factors	1	3	2	3	3	7	3		

Key:

Green / low number - Best; Red / high number - Worst

GDRC = Green Diamond Resource Company

MAMU = marbeled murrelet (protected species)

Alternatives Ranking Matrix, Page 2

OPERATIONAL FACTORS	X	L	F	A1	A2	G1	G2	Factor Weight	Equalized Factor Weight
Road Closure Potential	H	H	L	L	L	M	M	4	3
Weight	5	5	1	1	1	3	3		
Road Closure Potential Score	20	20	4	4	4	12	12		
Cost to maintain (relative to existing)	H	H	L	L	L	M	M	1	3
Weight	5	5	1	1	1	3	3		
Cost to maintain Score	5	5	1	1	1	3	3		
Traffic Mobility	H	H	L	L	L	M	M	3	3
Weight	5	5	1	1	1	3	3		
Traffic Mobility Score	15	15	3	3	3	9	9		
	X	L	F	A1	A2	G1	G2		
Total Score, Operational Factors	40	40	8	8	8	24	24		
<i>Best Possible Operational Score</i>									
	8								
<i>Worst Possible Operational Score</i>									
	40								
Ranking, Just Operational Factors	6	6	1	1	1	4	4		

Key:

Green / low number - Best; Red / high number - Worst

Alternatives Ranking Matrix, Page 3

CONSTRUCTION FACTORS	X	L	F	A1	A2	G1	G2	Factor Weight	Equalized Factor Weight
Footprint Size (acres)	35.7	167.5	15.4	359.9	371.6	348.7	359.5	4	3
Weight	1	3	1	5	5	5	5		
Footprint Size Score	4	12	4	20	20	20	20		
Time to Construct (years)	3.5	3.5	7	5	3	5	3	3	3
Weight	3	3	3	3	3	3	3		
Time to Construct score	9	9	9	9	9	9	9		
CY of cut/fill deposited within project area	0	0	0	6.8M	7.1M	5.6M	5.9M	4	3
Weight	1	1	1	5	5	5	5		
CY cut/fill deposited on site score	4	4	4	20	20	20	20		
CY of cut/fill to be deposited offsite	400K	2.4M	650K	0	0	0	0	4	3
Weight	3	5	3	1	1	1	1		
CY cut/fill deposited off site score	12	20	12	4	4	4	4		
Trail Relocation Potential (number of trail intersections)	3	7	2	4	2	3	3	2	3
Weight	3	5	1	3	1	3	3		
Trail Relocation Score	6	10	2	6	2	6	6		
Total Score, Construction Factors	35	55	31	59	55	59	59		
<i>Best Possible Construction Score</i>									
	17								
<i>Worst Possible Construction Score</i>									
	85								
Ranking, Just Construction Factors	2	3	1	5	3	5	5		

Key:

Green / low number - Best; Red / high number - Worst

CY = Cubic yards

Alternatives Ranking Matrix, Page 4

NATURAL FACTORS	X	L	F	A1	A2	G1	G2	Factor Weight	Equalized Factor Weight
Other Vegetation-Related Natural Factors (Excludes Redwoods and Mature Conifers - see Core Issues)									
Red Alder (Parks + GDRC)	12.3	61.1	8.0	69.4	69.4	102.9	103.2	3	3
Weight	1	3	1	3	3	5	5		
Red Alder Score	3	9	3	9	9	15	15		
Coastal Scrub/Grassland (Parks + GDRC)	2.5	19.7	0.5	6.0	6.0	23.2	23.4	3	3
Weight	1	5	1	1	1	5	5		
Coast Scrub/Grassland	3	15	3	3	3	15	15		
New Edges - Natl + State Parks (miles)	1.4	2.7	1.7	0.8	0.5	2.2	1.9	3	3
Weight	1	5	3	1	1	3	3		
New Edges - Natl + State Parks	3	15	9	3	3	9	9		
New Edges - GDRC	0.0	0.0	0.0	2.2	2.5	1.0	1.3	1	3
Weight	1	1	1	5	5	3	3		
New Edges - GDRC	1	1	1	5	5	3	3		
Other Green Diamond Land (e.g., logged 2000-2010, logged 2010-2020, other conifer young, and young redwood)	0	0	0	273.3	282.9	192	200.2	2	3
Weight	1	1	1	5	5	5	5		
Other Green Diamond Land Score	2	2	2	10	10	10	10		
	X	L	F	A1	A2	G1	G2		
Combined Score, Other Vegetation-Related Natural Factors	12	42	18	30	30	52	52		
Best Possible Other Vegetation Score									
	12								
Worst Possible Other Vegetation Score									
	60								
Vegetation Factors - Ranking	1	5	2	3	3	6	6		

Key:

Green / low number - Best; Red / high number - Worst
 GDRC = Green Diamond Resource Company

Alternatives Ranking Matrix, Page 5

NATURAL FACTORS (continued)	X	L	F	A1	A2	G1	G2	Factor Weight	Equalized Factor Weight
Wildlife-Related Natural Factors									
MAMU <i>occupied</i> habitat	0.0	0.0	0.0	0.4	0.4	0.4	0.4	4	3
Weight	1	1	1	1	1	1	1		
MAMU occupied habitat score	4	4	4	4	4	4	4		
MAMU <i>designated critical habitat</i> (acres)	57.2	137.7	13.7	7.60	10.0	54.8	57.1	2	3
Weight	3	5	1	1	1	3	3		
MAMU critical habitat score	6	10	2	2	2	6	6		
Marten <i>Core</i> habitat (acres)	17.2	36.6	2.4	44.70	56.9	46.1	56.2	3	3
Weight	3	3	1	3	3	3	3		
Marten core habitat score	9	9	3	9	9	9	9		
Potential to Disrupt Wildlife Connectivity (Rating)	Low (1.5)	Low (2)	Low (1.0)	High (4.5)	High (5)	High (3.5)	High (4)	3	3
Weight	1	1	1	5	5	5	5		
Wildlife Connectivity Score	3	3	3	15	15	15	15		
NSO suitable habitat (acres)	14.0	72.5	3.9	146.6	152.5	72.6	79.2	4	3
Weight	1	3	1	5	5	3	3		
NSO suitable habitat score	4	12	4	20	20	12	12		
Combined Score, Wildlife-Related Natural Factors	X	L	F	A1	A2	G1	G2		
Best Possible Wildlife Score	26	38	16	50	50	46	46		
16.0									
Worst Possible Wildlife Score									
80									
Ranking: Wildlife Factors	2	3	1	6	6	4	4		

Key:

Green / low number - Best; Red / high number - Worst

MAMU = marbled murrelet (protected species)

NSO = northern spotted owl (protected species)

Alternatives Ranking Matrix, Page 6

NATURAL FACTORS (continued)	X	L	F	A1	A2	G1	G2	Factor Weight	Equalized Factor Weight
Waters-Related Factors									
New Tributary Crossings	0	1	0	7	8	5	7	3	3
Weight	1	1	1	3	3	3	3		
New Tributary Crossings Score	3	3	3	9	9	9	9		
Wilson Creek Watershed disturbance (acres)	1	66.2	4.5	159	177.6	83.6	91.2	1	3
Weight	1	3	1	5	5	3	3		
Wilson Creek watershed disturbance score	1	3	1	5	5	3	3		
	X	L	F	A1	A2	G1	G2		
Combined Natural Factors (Vegetation + Wildlife + Waters)	42	86	38	94	94	110	110		
Best Possible Natural Factors Score									
	32								
Worst Possible Natural Factors Score									
	160								
Ranking: All Natural Factors	2	3	1	4	4	6	6		

Key:

Green / low number - Best; Red / high number - Worst

Alternatives Ranking Matrix, Page 7

	X	L	F	A1	A2	G1	G2
ALL FACTORS COMBINED - WEIGHTED	152	236	122	216	212	258	248
Best Possible Score							
72							
Worst Possible Score							
360	X	L	F	A1	A2	G1	G2
Ranking All Factors Combined, Weighted	2	5	1	4	3	7	6
	X	L	F	A1	A2	G1	G2
ALL FACTORS COMBINED - ALL FACTORS WEIGHTED EQUALLY (3)	147	225	105	207	201	243	237
Best Possible Score							
72							
Worst Possible Score							
360	X	L	F	A1	A2	G1	G2
Ranking: All Factors Equal Weight	2	5	1	4	3	7	6
Core Factors + Natural Factors	77	141	83	149	149	175	165
Best Possible Score							
47.0							
Worst Possible Score							
235							
Ranking: Just Core Factors + Natural Factors	1	3	2	4	4	7	6

Key:

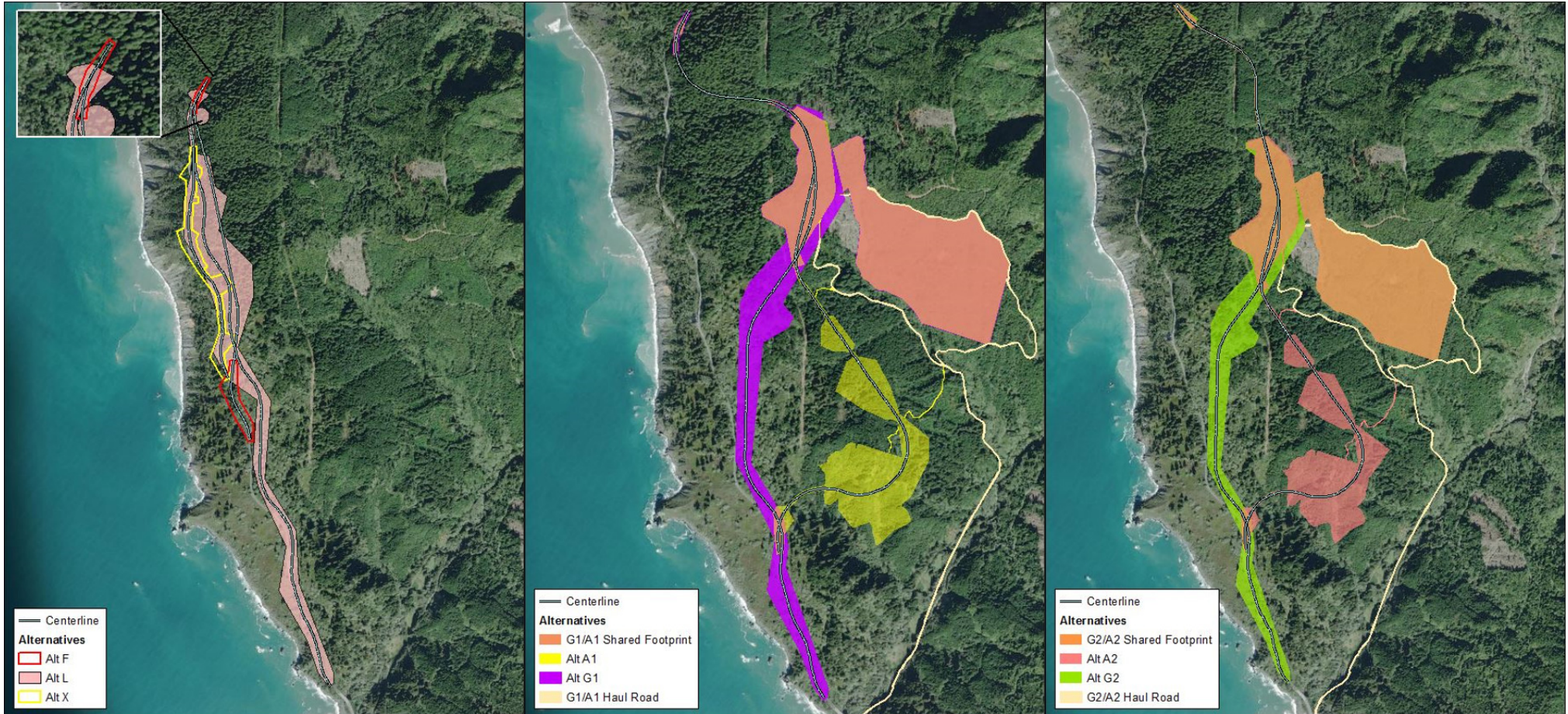
Green / low number - Best; Red / high number - Worst

Alternatives Maps: Proposed Alignments Overview

"West Side"
X (Yellow), F (Red), and L (Peach)

A1 and G1

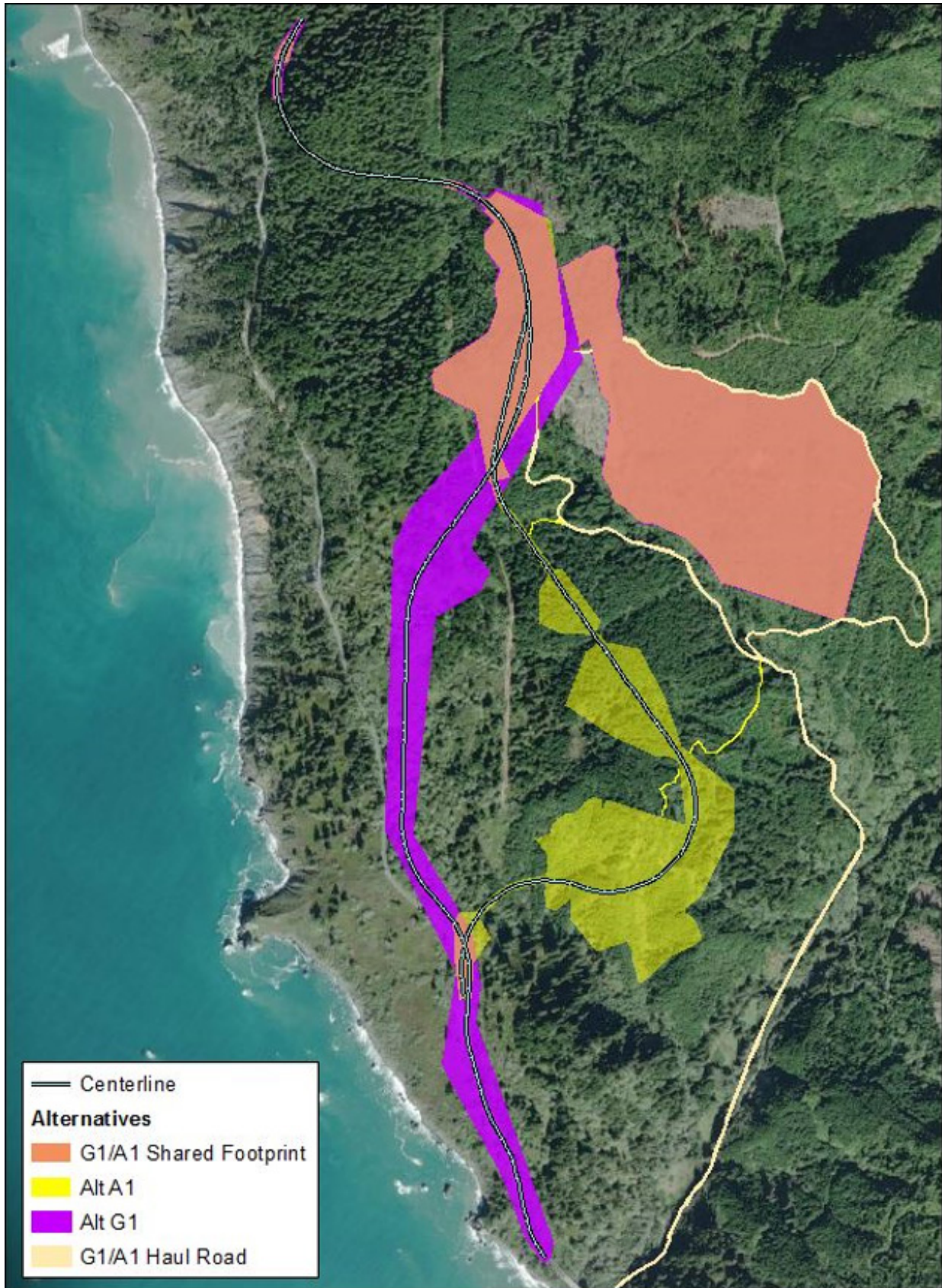
A2 and G2



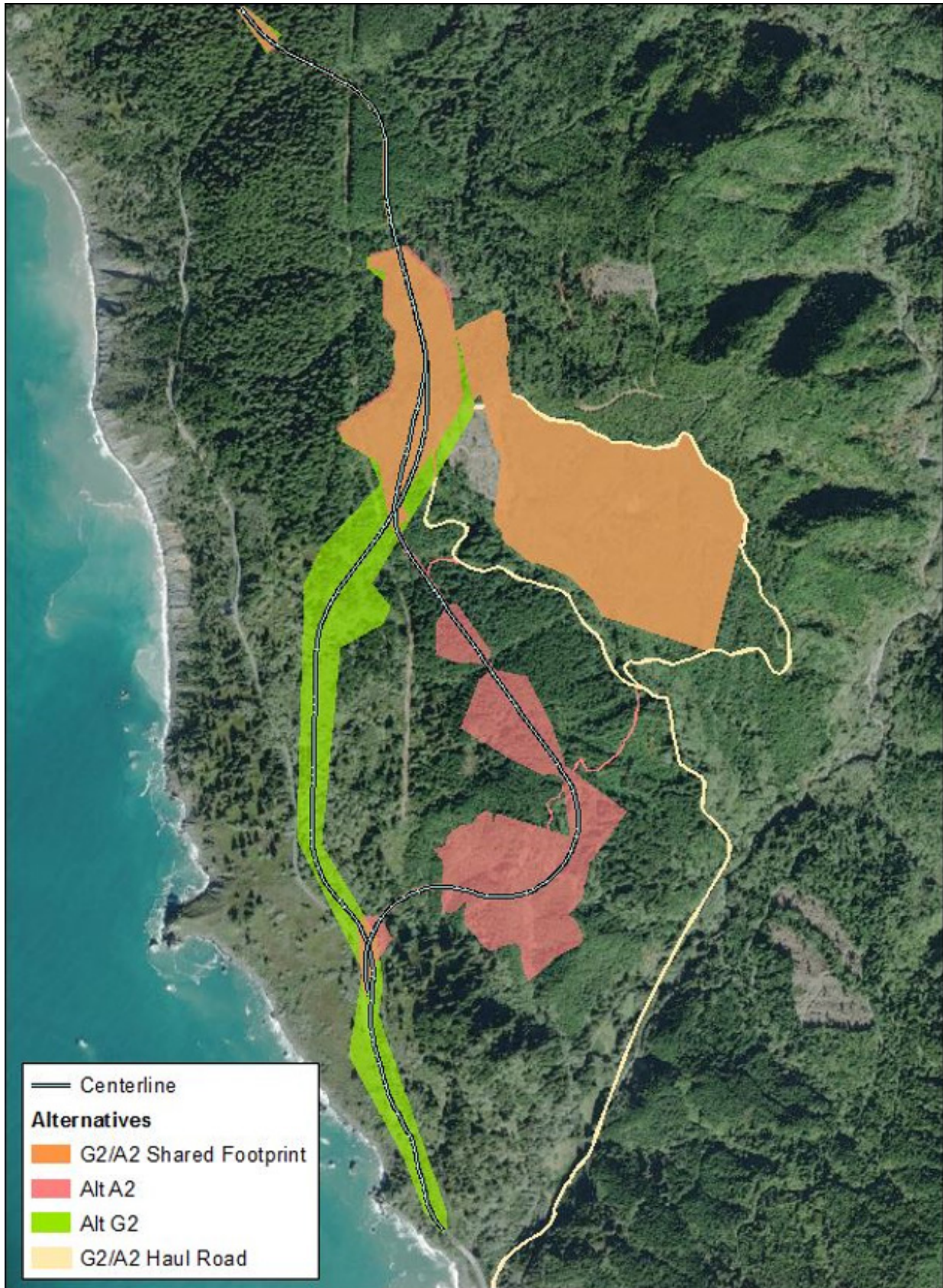
"West Side"
X (Yellow), F (Red), and L (Peach)



A1 and G1



A2 and G2



Appendix C: Workshop Attendance, Polling and Whiteboard Results

**Last Chance Grade Permanent Restoration Project
Alternatives Analysis Methodology – Workshop #2
Record of Working Group Invitations and Attendance**

Cultural Resources Working Group Monday, March 1, 2021, 10:00 a.m. – 12:00 p.m.	
Attended	Invited, Did Not Attend
Stakeholders	
<p><u>California State Parks</u></p> <ul style="list-style-type: none"> • Greg Colins, Cultural Resources Program Manager, North Coast Redwoods District <p><u>Elk Valley Rancheria</u></p> <ul style="list-style-type: none"> • Dale Miller, Chairman • Crista Stewart, Tribal Historic Preservation Officer (THPO) • Richard Warner, Vice-Chairman, Transportation <p><u>National Park Service / Redwood National & State Parks</u></p> <ul style="list-style-type: none"> • Karin Grantham, Chief, Resource Management and Science • Kevin McCardle, Historical Landscape Architect • Saylor Moss, Chief of Planning and Compliance <p><u>Resighini Rancheria</u></p> <ul style="list-style-type: none"> • Kathy Dowd, THPO, Councilperson • Megan Van Pelt, Executive Director <p><u>Tolowa Dee-ni' Nation</u></p> <ul style="list-style-type: none"> • Leann Babcock, Chair • Amanda O'Connell, Tribal Historic Preservation Officer (THPO) <p><u>Tolowa Nation</u></p> <ul style="list-style-type: none"> • Charlene Storr, North Coast Director 	<p><u>California State Parks</u></p> <ul style="list-style-type: none"> • Amber Barton, Associate State Archaeologist <p><u>Elk Valley Rancheria</u></p> <ul style="list-style-type: none"> • Kevin Mealue, Cultural Resource Specialist (Att. 3/3) <p><u>Resighini Rancheria</u></p> <ul style="list-style-type: none"> • Shaunna McCovey, Director of Natural Resources & Governmental Affairs <p><u>Tolowa Dee-ni' Nation</u></p> <ul style="list-style-type: none"> • Karin Levy, Cultural Resource Specialist • Marvin Richards, Senior Tribal Council <p><u>Tolowa Nation</u></p> <ul style="list-style-type: none"> • Max Keyes, Chairman • Raja Storr <p><u>Yurok Tribe</u></p> <ul style="list-style-type: none"> • Don Barnes, Director, Office of Self-Governance • Rosie Clayburn, Tribal Historic Preservation Officer (THPO) • Grant Klopmeyer, Transportation Planner • Brandi Natt, Transportation (no longer works for Yurok Tribe) • Samantha Reid, Cultural Resource Specialist
Project Staff	
<p><u>Caltrans District 1 Staff</u></p> <ul style="list-style-type: none"> • Steven Croteau, Senior Environmental Planner, North Region Environmental • Tim Keefe, Senior Environmental Planner • Alexis Kelso, Project Planning Liaison • Jaime Matteoli, Last Chance Grade Project Manager • Whitney Petrey, District 1 Native American Coordinator, North Region • Stacey Zolnoski, Associate Environmental Planner / Archaeologist <p><u>Project Team (Consultants)</u></p> <p><u>HNTB</u></p> <ul style="list-style-type: none"> • Dina Potter, Project Manager • John Litzinger, Group Director / Senior Project Manager <p><u>ICF</u></p> <ul style="list-style-type: none"> • John Cook, Environmental Planning Principal <p><u>MIG</u></p> <ul style="list-style-type: none"> • Joan Chaplick, Public Engagement Manager • Maria Mayer, Senior Project Associate 	<p><u>Caltrans District 1 Staff</u></p> <ul style="list-style-type: none"> • Sara Atchley-Thomas, District Native American Liaison • Alexandra Thiel, Environmental Planning, Biologist (Att. 3/2) <p><u>Project Team (Consultants)</u></p> <p><u>ICF</u></p> <ul style="list-style-type: none"> • Karin Lilienbecker, Environmental Manager <p><u>Area West Environmental</u></p> <ul style="list-style-type: none"> • Aimee Dour-Smith (Att. 3/2)

Biological Resources Working Group
Tuesday, March 2, 2021, 3:00 – 5:00 p.m.

Attended	Invited, Did Not Attend
Stakeholders	
<p><u>California Coastal Commission</u></p> <ul style="list-style-type: none"> • Tamara Gedik, Coastal Program Analyst • Amber Leavitt, Transportation Program Analyst • Bob Merrill, North Coast Director <p><u>California State Parks</u></p> <ul style="list-style-type: none"> • Lathrop Leonard, Forester I • Keith Slauson, Wildlife Program Leader • Carol Wilson, Environmental Scientist <p><u>National Park Service / Redwood National and State Parks</u></p> <ul style="list-style-type: none"> • Leonel Arguello, Chief, Resource Management and Science • Keith Bensen, Fish and Wildlife Biologist, Redwood National Park <p><u>Resighini Rancheria</u></p> <ul style="list-style-type: none"> • Kathy Dowd, THPO, Councilperson (Att. 3/1) <p><u>State Water Resources Control Board</u></p> <ul style="list-style-type: none"> • Susan Stewart, North Coast Regional Water Control Board <p><u>US Army Corps of Engineers</u></p> <ul style="list-style-type: none"> • Daniel B. Breen, Senior Regulatory Project Manager <p><u>US Environmental Protection Agency</u></p> <ul style="list-style-type: none"> • Carolyn Mulvihill, NEPA Reviewer - Transportation <p><u>US Fish and Wildlife Service</u></p> <ul style="list-style-type: none"> • Gregory Schmidt, Fish and Wildlife Biologist 	<p><u>California Coastal Commission</u></p> <ul style="list-style-type: none"> • Tami Grove, Transportation Program Manager <p><u>California Department of Fish and Wildlife</u></p> <ul style="list-style-type: none"> • Jennifer Olson, Senior Environmental Scientist, Coastal Conservation Planning <p><u>California State Parks</u></p> <ul style="list-style-type: none"> • Victor Bjelajac, District Superintendent II (Att. 3/3 & 3/4) • Shannon Dempsey, North Coast Redwoods District • Amber Transou, Environmental Scientist - North Coast Redwoods District • Brett Silver, District Superintendent I <p><u>County of Del Norte</u></p> <ul style="list-style-type: none"> • Taylor Carsley, Planner <p><u>Elk Valley Rancheria</u></p> <ul style="list-style-type: none"> • Crista Stewart, THPO (Att. 3/1) • Kevin Mealue, Cultural Resource Specialist (Att. 3/3) <p><u>National Oceanic and Atmospheric Administration</u></p> <ul style="list-style-type: none"> • Dan Free, Fisheries Biologist • Jeffrey Jahn, Branch Chief, West Coast Regional Office • Mike Kelly, Fisheries Biologist <p><u>National Park Service</u></p> <ul style="list-style-type: none"> • David Best, GIS Coordinator, Redwood National Park <p><u>National Park Service / Redwood National and State Parks</u></p> <ul style="list-style-type: none"> • Dave Roemer, Deputy Superintendent (Att. 3/3 & 3/4) <p><u>Resighini Rancheria</u></p> <ul style="list-style-type: none"> • Brad Norman, Wetlands Coordinator • Megan Van Pelt, Executive Director (Att. 3/1 & 3/4) • Erika Partee, Natural Resources Director • Karin Levy, Cultural Resource Specialist <p><u>US Army Corps of Engineers</u></p> <ul style="list-style-type: none"> • Sarah M. Firestone • L.K. Sirkin, Lead Biologist <p><u>US Environmental Protection Agency</u></p> <ul style="list-style-type: none"> • Jennifer Siu, Wetlands Section <p><u>Yurok Tribe</u></p> <ul style="list-style-type: none"> • Chris West, Senior Wildlife Biologist • Dave Hillemeier, Director, Fisheries Department • Joseph James, Chairman • Louisa McCovey, Environmental Director • Matthew Hanington, Water Division Manager • Richard Nelson, Director, Watershed Restoration • Rosie Clayburn, THPO • Suzanne Fluharty, Division Manager, Community and Ecosystems

Biological Resources Working Group
Tuesday, March 2, 2021, 3:00 – 5:00 p.m.

Attended	Invited, Did Not Attend
Project Staff	
<p><u>Caltrans District 1 Staff</u></p> <ul style="list-style-type: none"> • Alex Arevalo, NPDES Storm Water Coordinator • Steven Croteau, Senior Environmental Planner, North Region Environmental • Kellie Eldridge, Environmental Planner • Stephanie Frederickson, Senior Resource Specialist • Alexis Kelso, Project Planning Liaison • Jaime Matteoli, Last Chance Grade Project Manager • Alexandra Thiel, Environmental Planning, Biologist <p><u>Project Team (Consultants)</u></p> <p><u>HNTB</u></p> <ul style="list-style-type: none"> • Dina Potter, Project Manager • John Litzinger, Group Director / Senior Project Manager <p><u>ICF</u></p> <ul style="list-style-type: none"> • John Cook, Environmental Planning Principal <p><u>Area West Environmental</u></p> <ul style="list-style-type: none"> • Aimee Dour-Smith <p><u>MIG</u></p> <ul style="list-style-type: none"> • Joan Chaplick, Public Engagement Manager • Maria Mayer, Senior Project Associate 	<p><u>Caltrans District 1 Staff</u></p> <ul style="list-style-type: none"> • Brandon Larsen, Senior Environmental Planner <p><u>Project Team (Consultants)</u></p> <p><u>ICF</u></p> <ul style="list-style-type: none"> • Karin Lilienbecker, Environmental Manager

Partner Working Group
Wednesday, March 3, 2021, 3:00 – 5:00 p.m.

Attended	Invited, Did Not Attend
Stakeholders	
<p><u>California State Parks</u></p> <ul style="list-style-type: none"> • Victor Bejlaiac, District Superintendent II <p><u>Elk Valley Rancheria</u></p> <ul style="list-style-type: none"> • Kevin Mealue, Cultural Resource Specialist <p><u>National Park Service / Redwood National and State Parks</u></p> <ul style="list-style-type: none"> • Steve Mietz, Superintendent, Redwood National and State Parks • Dave Roemer, Deputy Superintendent <p><u>Tolowa Dee-Ni' Nation</u></p> <ul style="list-style-type: none"> • Zack Chapman, TERO Director 	<p><u>California State Parks</u></p> <ul style="list-style-type: none"> • Brett Silver, District Superintendent I <p><u>Elk Valley Rancheria</u></p> <ul style="list-style-type: none"> • Crista Stewart, THPO (Att. 3/1) • Richard Warner, Vice-Chairman, Transportation (Att. 3/1) <p><u>Green Diamond Resource Company</u></p> <ul style="list-style-type: none"> • Craig Compton, North Coast Director <p><u>Resighini Rancheria</u></p> <ul style="list-style-type: none"> • Kathy Dowd, THPO, Councilperson (Att. 3/1) • Moonchay Dowd, Vice-Chairperson, General Assistance Program (GAP) Manager • Megan Van Pelt, Executive Director (Att. 3/1 & 3/4) <p><u>Tolowa Dee-ni' Nation</u></p> <ul style="list-style-type: none"> • Tim Hoone, Transportation Planning Director • Amanda O'Connell, Tribal Historic Preservation Officer (THPO) (Att. 3/1) <p><u>Yurok Tribe</u></p> <ul style="list-style-type: none"> • Rosie Clayburn, Tribal Historic Preservation Officer (THPO) • Joseph James, Chairman • Brandi Natt, Transportation (no longer employed by Tribe)
Project Staff	
<p><u>Caltrans District 1 Staff</u></p> <ul style="list-style-type: none"> • Steven Croteau, Senior Environmental Planner, North Region Environmental • Alexis Kelso, Project Planning Liaison • Jaime Matteoli, Last Chance Grade Project Manager <p><u>Project Team (Consultants)</u></p> <p><u>HNTB</u></p> <ul style="list-style-type: none"> • Dina Potter, Project Manager • John Litzinger, Group Director / Senior Project Manager <p><u>ICF</u></p> <ul style="list-style-type: none"> • John Cook, Environmental Planning Principal <p><u>MIG</u></p> <ul style="list-style-type: none"> • Joan Chaplick, Public Engagement Manager • Maria Mayer, Senior Project Associate 	<p><u>Caltrans District 1 Staff</u></p> <ul style="list-style-type: none"> • Sara Atchley-Thomas, District Native American Liaison • Tim Keefe, Senior Environmental Planner (Att. 3/1) • Rebecca Law, Project Management Support <p><u>Project Team (Consultants)</u></p> <p><u>ICF</u></p> <ul style="list-style-type: none"> • Karin Lilienbecker, Environmental Manager <p><u>Area West Environmental</u></p> <ul style="list-style-type: none"> • Aimee Dour-Smith (Att. 3/2)

Huffman Stakeholder Group
Thursday, March 4, 2021, 3:00 – 5:00 p.m.

Attended	Invited, Did Not Attend
Stakeholders	
<p><u>California State Parks</u> <ul style="list-style-type: none"> • Victor Bjelajac, District Superintendent II </p> <p><u>Community Representative</u> <ul style="list-style-type: none"> • Kurt Stremberg </p> <p><u>Crescent City</u> <ul style="list-style-type: none"> • Jason Greenough, Mayor </p> <p><u>Crescent City-Del Norte Chamber of Commerce</u> <ul style="list-style-type: none"> • Cindy Vosburg, Executive Director </p> <p><u>Del Norte County Board of Supervisors</u> <ul style="list-style-type: none"> • Valerie Starkey, Supervisor, 2nd District </p> <p><u>Del Norte Local Transportation Commission</u> <ul style="list-style-type: none"> • Gerry Hemmingsen, Commissioner; Del Norte County Board of Supervisors, District 4 </p> <p><u>EPIC</u> <ul style="list-style-type: none"> • Tom Wheeler, Executive Director </p> <p><u>Friends of Del Norte</u> <ul style="list-style-type: none"> • Don Gillespie </p> <p><u>Green Diamond Resource Company</u> <ul style="list-style-type: none"> • Craig Compton, North Coast Director </p> <p><u>Humboldt County Association of Governments</u> <ul style="list-style-type: none"> • Gordon Johnson, Council Member, City of Rio Dell </p> <p><u>Humboldt County Board of Supervisors</u> <ul style="list-style-type: none"> • Steve Madrone, Supervisor, 5th District </p> <p><u>Office of Representative Jared Huffman</u> <ul style="list-style-type: none"> • Ciara Emery, Field Representative • John Driscoll, District Representative </p> <p><u>Redwood National Parks</u> <ul style="list-style-type: none"> • Dave Roemer, Deputy Superintendent </p> <p><u>Resighini Rancheria</u> <ul style="list-style-type: none"> • Megan Van Pelt, Executive Director </p>	<p><u>C. Renner Petroleum</u> <ul style="list-style-type: none"> • Sabina Renner, CEO / Secretary </p> <p><u>California Highway Patrol</u> <ul style="list-style-type: none"> • Lieutenant Larry Depee, Commander </p> <p><u>California State Parks</u> <ul style="list-style-type: none"> • Brett Silver, District Superintendent I </p> <p><u>Elk Valley Rancheria</u> <ul style="list-style-type: none"> • Richard Warner, Vice-Chairman, Transportation (Att. 3/1) </p> <p><u>Rumiano Cheese</u> <ul style="list-style-type: none"> • Gary Smits </p> <p><u>Save the Redwoods League</u> <ul style="list-style-type: none"> • Laura Lalemand, Forest Ecologist </p> <p><u>Yurok Tribe</u> <ul style="list-style-type: none"> • Joseph James, Chairman </p>

Huffman Stakeholder Group <i>Thursday, March 4, 2021, 3:00 – 5:00 p.m.</i>	
Attended	Invited, Did Not Attend
Project Staff	
<p><u>Caltrans District 1 Staff</u></p> <ul style="list-style-type: none"> • Steven Croteau, Senior Environmental Planner, North Region Environmental • Alexis Kelso, Project Planning Liaison • Clayton Malmberg • Jaime Matteoli, Last Chance Grade Project Manager • Charlie Narwold, Chief of Geotechnical Services • Karen Sanders, Transportation Engineer, RE, Emergency LCG Projects • Matt Smith, Design <p><u>Project Team (Consultants)</u></p> <p><u>National Center for Conflict Resolution</u></p> <ul style="list-style-type: none"> • Joy Keller-Weidman, Senior Program Manager, Huffman Stakeholder Group Facilitator <p><u>HNTB</u></p> <ul style="list-style-type: none"> • John Litzinger, Group Director / Senior Project Manager <p><u>ICF</u></p> <ul style="list-style-type: none"> • John Cook, Environmental Planning Principal <p><u>MIG</u></p> <ul style="list-style-type: none"> • Joan Chaplick, Public Engagement Manager • Maria Mayer, Senior Project Associate 	<p><u>Caltrans District 1 Staff</u></p> <ul style="list-style-type: none"> • Sebastian Cohen, Construction Management <p><u>Project Team (Consultants)</u></p> <p><u>HNTB</u></p> <ul style="list-style-type: none"> • Dina Potter, Project Manager (attended all other meetings, had conflict on this date) <p><u>ICF</u></p> <ul style="list-style-type: none"> • Karin Lilienbecker, Environmental Manager <p><u>Area West Environmental</u></p> <ul style="list-style-type: none"> • Aimee Dour-Smith (Att. 3/2)

Last Chance Grade Working Group Alternatives Analysis Methodology Workshop 2 - Polling Results

What is your level of support for the alternatives assessment process as discussed today?	Highly supportive		Somewhat supportive		Neutral		Somewhat unsupportive		Do not support		Total #
	%	#	%	#	%	#	%	#	%	#	
Cultural Resources Working Group	43%	3	14%	1	43%	3	0%	0	0%	0	7
Biological Resources Working Group	82%	9	0%	0	18%	2	0%	0	0%	0	11
LCG Partners	100%	4	0%	0	0%	0	0%	0	0%	0	4
Huffman Stakeholder Group	62%	8	31%	4	0%	0	8%	1	0%	0	13

MURAL Whiteboard Notes
Cultural Resources Working Group, 3-1-2021
Page 1

KEY			
Comments	Questions	Responses from Jaime Matteoli, Caltrans Project Manager	Responses from Caltrans D1 / project team

Is X no build or the construction higher up the hill?	Response from Jaime Matteoli: Developed after feasibility study; FHWA requested landslide mitigation	This will improve stability without major change in location	Minor changes in horizontal position of roadway	Potential to retreat toward hill, possibly new retaining walls	Will analyze data to understand if we can remove water	Need time to develop concept
Happy to see that F consistently ranked high	Hoping to discuss cultural resources	Response from JM: More important to have conversation about concerns than use as a metric	Waiting concerns from tribes very heavily, e.g. Wilson Creek	Happy to present and hear concerns at tribal councils	Would like cultural resources documented on map to show how they're being avoided	Show general area, and for tribal council presentations only
I didn't think it was being removed. I thought it was to qualify it as process-based and then use a tiered scale to assess Tribal involvement in that process.	JM: What would tiered scale show - level of involvement?	Response from D1: Showing general significance - plan was not to show as numerical value	Inappropriate for Caltrans to provide values	Previously ranked risk of each location in terms of closeness to site and risk of impacting it	Haven't assessed many factors with cultural resources	Cultural resources working group will get more details for own assessment
Okay, because the other tiered scale assessments are actually based on quantifiable measures then? Am I understanding that right?	Project team responds with footprint maps	D1: Footprint map is preliminary; do not have all data	JM: re footprint map - yes, will give more detail	Have varying amounts of data on different areas	Large fill areas may change to structures, making footprint smaller	
I agree that assessing the risk rather than "prioritizing" cultural resources is a better way to be productive in this.	(Agreement received from several stakeholders)	Also, thank you for mentioning traditional cultural properties and gathering areas.	The natural resources are significant culturally to the tribes	Natural resources and cultural resources are one in the same for the Tribes.	Although the laws don't define them that way	- however, gathering areas that don't have archaeological deposits in them are still highly significant for the Tribe
Good map, shows what you're been doing, but more in-depth study needed	Parks - no comments	I know for sure that any oak groves will be a concern of mine. If those can somehow be recorded by biological that would be great.	SOD has entered Del Norte County. Keeping oak groves healthy is a priority as acorns are a staple traditional food.	JM: re. "natural and cultural resources being the same"	Assessing natural resources should also cover cultural values for the purposes of this assessment	

MURAL Whiteboard Notes
Cultural Resources Working Group, 3-1-2021
Page 2

KEY			
Comments	Questions	Responses from Jaime Matteoli, Caltrans Project Manager	Responses from Caltrans D1 / project team

D1: Should natural resources then be given more weight?	D1: can we include oak in the trees category? Or was it already included?	Project Team Response: Different types of trees / vegetation included; no separate category for oaks	Tan oaks mostly in coastal scrub, low density	Can we see vegetation metrics on a map?	Project team: Yes, map can be shown; maps showing other metrics are available as well
This map will be important to have at Tribal Council meeting	Could the map be sent before a meeting with council?	Yes if that vegetation map can be emailed out to our CRWG that would be helpful.	Include the alternatives map that shows topography/elevation and/or "scenery" base map.	So they can clearly see where the alternatives are on the landscape.	In addition to cultural and natural resources, Elk Valley will be interested in discussing operational measures as closures, both temporary and intermittent, have had a profound impact to government.
If cultural value of natural resources were integrated, would that increase their value?	ICF: Yes, would increase weight score but it wouldn't change the outcome of ranking for alternatives	Is that true for all the natural resources and not just Redwood? i.e. animals and other plant species?	ICF: True - demonstration provided using scoring table	Changes resultant score of alts but not their ranking; X and F still top 2	The area of impact is much less for X & F than for A; much smaller footprint
In the near future, preferably before Council meeting, can you email out the breakdown of the natural resources metric.	Important to note concerns expressed even though they don't change score	D1: Yes, that data is included in the overall table tracking all metrics	Will be included in overall report	List of specific vegetation concerns passed on to Caltrans biologist and ICF	Rare, threatened or endangered species will be documented Can't capture every single plant but areas of high density will be documented
Would still like to see, for instance, oak groves recorded regardless of size	Plan on not mapping trees below a certain size	Have a plan to ID as much info as possible given time / funding constraints	Thanks, also helps us give feedback on these assessments		

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Cultural Resources Working Group, 3-1-2021
Page 3

KEY			
Comments	Questions	Responses from Jaime Matteoli, Caltrans Project Manager	Responses from Caltrans D1 / project team

Haven't seen much info on fauna located in area	How much has that been studied or documented?	Didn't look at entire spectrum of resources for alts analysis	Looked at most predictive: owl, marten, murrelet	Will survey for all animals later in process		
JM response: Have connectivity measure: new edge, stream crossings, etc.	Alt F would be a one-mile wildlife crossing; this factor included	ICF: There are elk, but picking things easily quantified for this study	Will definitely assess all moving forward	When will the ethnographic interviews with tribes occur?	D1: We hope to begin this spring/summer. We will be setting up another focused meeting soon.	Probably right after we address monitoring for wetland delineation.
Looking at all 7 alts - pleased w/those ranking highest, seem least impact	Concern re. what is lost when changes made	Makes it difficult to share knowledge with young people if not easy access to resources	Resources impacted by growing population, etc.	Will weigh in further at council meetings		
JM: ideally council mtgs near the end of March - early April	Will bring more info re. resources to those meetings	D1: Need to set up various meetings - wetland designations, ethnographic interviews	Prioritizing all - council meetings sooner than later.	Will have biologists present		
I would also suggest making sure to have overall timeline of the project - what studies are currently going on and which are coming up soon.	Please contact [specific contacts w/ Tolowa Dee-Ni' Nation identified]	Need to communicate what's happening in each working group to all				
Need communication at tribal level and info from all	Ethnographic meetings need to happen soon; please prioritize	JM: considering one large meeting for final workshop	Tolowa Dee-Ni' would appreciate that	Others agree	Facilitator: Any feedback from those who are "neutral" in support of process discussed today?	NPS is neutral because a lot of this discussion weights on Tribe input.

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Biological Resources Working Group, 3-2-2021
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Comments	Questions	Responses from Jaime Matteoli, Caltrans Project Manager	Responses from Caltrans D1 / project team
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Based on what we talked about in all the different Biological Resources Working Group meetings, this ranking is entirely consistent with what we discussed.	No big surprises here. Good to see the rigorous analysis process laid out so clearly.						
How did climate change resiliency figure into these metrics?	Specifically, planning for extreme weather events	ICF: Not expressly considered; didn't come up in previous meetings	Used a narrower band of factors based on information we have	Will be getting more date later	Not a direct factor but indirect factors that speak to it		
		Jaime: Geotech team considering potential for higher rainfall events and sea level rise	Plays into risk for alternatives on west side of ridge	HNTB: Goes back to geotech factors	Represented although not considered specifically as a separate factor		
Based on BRWG meetings, there have been some preliminary studies	Have you summarized that information to help us understand how you're narrowing range of alternatives?	Can you show us how resources have been assessed thus far?	ICF showing how analysis was done in more detail	Master spreadsheet analyzing all metrics based on first round of workshops	Example: Cost to Construct (see slides)		
Does any of the scoring take into account the engineering feasibility?	HNTB: Yes, several criteria assessed and compared between alternatives	Not a baseline but comparative approach	X and L are still in landslide areas; F is below landslide	Geology more favorable on east side	Looked at years for time to construct, impact on existing roadway	Amount of cut and fill and where deposited	A variety of engineering factors; includes earthworks, tunnels, walls & bridges
Has it been figured out that Alt F is actually possible, given the geotechnical/driver safety concerns?	HNTB: At this time, it appears feasible; can be built below slip plain of landslides	Once tunnel is in place, it has resiliency vs. earthquakes and other factors	Free from landslides, slip plains, landflows	Continuing to gather geotech info and refine picture	Jaime: X is in infancy for developing scope; need to know more about water and instability	Uncertainty taken into account in geotech analysis	

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Biological Resources Working Group, 3-2-2021
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KEY

Comments	Questions	Responses from Jaime Matteoli, Caltrans Project Manager	Responses from Caltrans D1 / project team
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Are \$1M of construction costs weighted similarly to \$1M of mitigation?	ICF: Construction and mitigation costs given highest weight	Not estimating \$ yet; based on engineering / environmental experience	Not dollar for dollar; weighted evenly	Jaime: ROW included in cost of mitigation. Didn't separate by higher or lower	The # of acres is related to that as well?	Jaime: Yes, and location		
ICF summarizing how natural resources factors affected the analysis	Can we get a copy of these analyses?	Would like a closer look at fragmentation / new edge	Is that mapped out somewhere?	Some edges might be more dangerous / fragmented than others	Jaime: Will provide these analyses once ready	ICF showing series of maps which show edge effects of each alternative		
Have you split new edge in parklands vs. Green Diamond?	Yes, maroon color is Green Diamond land	Park land weighted higher than Green Diamond (known to be diminished natural resources)	Those maps are great. This is the first time I've seen a "true" footprint for each route/alternative. Really informative.					
How far below the surfact is the tunnel in Alt F in relation to forested landscape on surface / roots?	HNTB: assuming a 20 ft. depth as a no-disturb zone					Bored tunnel at least 60 ft. below ground	Under higher land, several 100 ft. underground	Footprint impact area higher at the ends

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Biological Resources Working Group, 3-2-2021
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KEY

Comments	Questions	Responses from Jaime Matteoli, Caltrans Project Manager	Responses from Caltrans D1 / project team
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MIG: Comfort level with removing G alternatives from study?	No decisions today - wondering if anything is missing from analysis that would make you uncomfortable in removing them	Getting rid of the G alternatives seems very logical to me based on the analysis and everything we've discussed in the past.	Asked about degree to which there is core scale analysis so far	No issue with honing the list to be efficient		
Coastal development permit evaluation - will be important to track level of analysis done for all alternatives to track what went into honing list	Will want to understand what went into eliminating alts		Clearly, some are less desirable; won't just be Caltrans relying on this analysis	Must analyze rejected alts in EIR to clarify to public why they are no longer being studied / considered		Show why selected alternatives are best
D1: yes, will be a robust section explaining this in the EIR	Will show evidence why not moving forward	HNTB: A alts mostly drop out because they are long with significant disposal	Gs perform similar to As but have geoflow issues; also in the middle of park	L creating more geotech hazard than X by going into slope	Will also include alts eliminated in earlier rounds	
Approximately how many redwood trees will be removed per alternative?	D1: showing estimated tree removal table	Rough estimates of numbers of trees removed by diameter for each alternative	Took sample data throughout area; extrapolated #s based on acreage	Oldest trees tended to be smaller diameter (due to instability of area)	Not less valuable, but not what people typically think of as old growth	Those areas mostly in Alternative L - further up on slope compared to other alts
For the L alternative - highest # of old growth trees to be removed	Yet it scored low on the graph. How do the two relate to each other?	ICF: L scored poorly. X and F scored best.	Great graphs (tree removal chart)	Jaime: Update from construction team on ongoing repair work - about 20-30 small conifers have come down	Reminder that trees at risk even with no-build option	

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Comments	Questions	Responses from Jaime Matteoli, Caltrans Project Manager	Responses from Caltrans D1 / project team
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Old growth trees are within portion of park considered to be old growth?	D1: yes, that is considered the community type, not largest trees; includes Doug Firs, etc.	Showing vegetation map; negligible effect on A's and G's, none in X, F, L	Trees in parkland mostly alder and coastal scrub; no old growth or mature site compromised on Green Diamond Land			
How and where is Caltrans looking at mitigation?	Are you considering lands offsite, etc.?	Would be ideal to see planning for advanced mitigation	Jaime: have thought more about process than mitigation at this point	Need more data to discuss mitigation - will be engaged, complex, and require agreement on what will best mitigate	Need to know more about impacts, then bring people to and keep them at the table	Caltrans preparing a document for work at Red Schoolhouse; possible opportunities for advance mitigation
D1: mitigation top of our priority list; will have group meetings, make sure all is considered	Are you thinking about costs in terms of land acquisition?	Remind us how you're considering that	Jaime: thinking in terms of some land acquisition	Best approach is to work with working groups; go with what is already considered a good idea!		
Neutral on poll because I'm just listening and learning at this point	I agree that you could probably drop the G alternatives	Jaime: what do people think of having one big workshop for Round 3? Any concerns?	I like the idea	Yes, a big meeting would be good	Large group meeting sounds good	

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Partner Working Group, 3-3-2021
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KEY

Comments	Questions	Responses from Jaime Matteoli, Caltrans Project Manager	Responses from Caltrans D1 / project team
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Please explain why cultural resources were removed as a metric	Jaime: The process of speaking to the tribes is more important than assigning our own value assessment	Need to respect tribes' assessment of resource value	The tribes have all information; we will discuss further and get feedback during meetings with tribal councils	Please review alignment of Alt X	Jaime: Assuming retaining walls entire length - footprint very similar with minor cuts into the hill	Map doesn't show drainage system; will go toward ocean. Must be developed
Curious why L and X weren't more distinct in analysis.	Specifically with regards to operations.	Hoped that L would offer advantages for being upslope, providing more stable geometry.	Jaime: Geotech team doesn't see a huge increase in stability for Alt L	HNTB: L and X cross the same landslide; need more study & data to differentiate	L has less hill above it that can come down, but still lacking data	HNTB: Performance was similar but impacts greater for L
Will the planned geotech work reveal if you're able to anchor to something more stable?	HNTB: yes, it will. Also, with L, you're blazing a new trail up the slope	Will also create more edges which shows up in the rankings as more impact	Is dewatering needed for both?	After you log, heavy winds will create blow-overs; have you considered whether there will be blow-overs on new road edges / ridgeline?	Jaime: have not heard a discussion of that; will make a note of it	
Can we weigh in on additional or eliminating alternatives?	Have we talked to either cultural or natural resource depts. from Yurok or Tolowa Dee-ni' about these impacts?	The footprint for the A and G alts overlaps those lands	Jaime: yes, they are involved in working groups	HNTB: We are proposing that L, A1, A2 and G2 be dropped	That will leave X and F with a tunnel - minor cut and fill, no need to go offroad	

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KEY

Comments	Questions	Responses from Jaime Matteoli, Caltrans Project Manager	Responses from Caltrans D1 / project team
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Thanks for previewing the final scene! I'll be interested to hear the things we've learned about F that keeps it in the analysis.	I had previously thought that the tunnel might land on the dropped alternative side.	Curious to hear more about that. Had heard that tunnel performed low	Jaime: tunnel performed well but thought cost was prohibitive; we were also surprised	Cost estimate was lower than tunnel cost for A1	Put it ahead of A1 and G1; cost comparable and mitigation less	
Tunnel entrance and exit clearcut zones - what is the extent of that for each alignment?	ICF: reviewed how costs and impacts were weighted to arrive at these results	Suggest that you label the data points more clearly on the chart in the "Cost to Construct" slide	How were the tree removal estimates arrived at - through LIDAR?	D1: Mapped sample plots and extropolated	ICF: Plan for a more precise tree census; estimation adequate for assessment	Impressive analysis!
D1: Re slight compromise: identifying areas where trees are in slides	versus trees on the other side or in a more stable geologic formation	If the slides continue to move, the trees will shift as well	Jaime: Some trees have come down in current slide	The video of slide damage is a great demonstration	Estimated tree removal graph is clear and very helpful	
Again, surprised that L isn't more of a contender	HNTB: It's virgin ground, gain nothing by going farther uphill	L carves through Green Diamond land; A alternatives more in parkland	A alternatives have huge footprint	What about considering impacts on animals?	ICF / D1: showing how natural resource impacts re animals and habitat were considered	

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Partner Working Group, 3-3-2021
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KEY

Comments	Questions	Responses from Jaime Matteoli, Caltrans Project Manager	Responses from Caltrans D1 / project team
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Is there an "ask" today?	D1: It is - are you comfortable with this methodology now that you have seen "under the hood?"	Will come to you w/a recommendation in April w/alts to be eliminated	First want to ensure you're comfortable			
HNTB: How do you feel about F and X going forward?	Makes sense after seeing the analysis; seems solid, good process, I feel satisfied	Happy with eliminating Alternative L	Like the analysis and how well it has been explained	Makes sense to me	Surprises: thought tunnel would be priced out and that L would be closer to X	Comfortable with results
HNTB: with Huffman group, should we show details first?	"Spoiler" at front end makes it easier to understand	This are good metrics; I was also surprised at results	Understand now that L is a new footprint	Would like to see more map detail on most likely alts; hillside	Zoom in on details and structures	
Have you considered emotional reaction that people will have to on-alignment alt?	Probably tunnel vs. current alignment will be polarizing	Many will object to current alignment; tunnel never popular	Think carefully about how to frame these results	Explain that there is more certainty about stability of tunnel due to completed and ongoing studies	Clarify how metrics are being used to make decision	
Film aerial view with outline to give better impression of how timber, mountain, etc. will look	Put it on a loop at the opening of the meeting	Note: drones not usually permitted on state park land	D1: also have 3D modeling / topo maps that may help			

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KEY			
Comments	Questions	Responses from Jaime Matteoli, Caltrans Project Manager	Responses from Caltrans D1 / project team

Thinking ahead: what happens to balance extra costs with tunnel option?	How does Caltrans make that choice between X and F?	Jaime: good question. Will need to have clear concept for Alt X	Will have a better model, conceptual design for de-watering and maybe a preliminary design	Will have a much better design and sense of whether we have confidence in it or not	Hopefully can determine within 3 years
If public support, may be able to accept latent risk in an alt that otherwise performs better	F is a big ask when compared with X	Is there any flat land that could be offered as a new state park or other asset for some additional profit?	Jaime: Biggest economic consideration is having a reliable road	There are opportunities for recreational assets; e.g., Devil's Slide trail	Will be considered and discussed
MIG: what else can we do to increase comfort level with a tunnel?	Bridge outside of Eugene on I-5 plays a melody as you cross	Use similar music or sound effects in tunnel to relieve stress / claustrophobia	Art installations also a possibility; turn it into an amenity	Note how it reduces impacts on surface	

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Comments	Questions	Responses from Jaime Matteoli, Caltrans Project Manager	Responses from Caltrans D1 / project team
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Have you considered bike lane in tunnel?	There will be a standard width shoulder in tunnel	Jaime: what do you think people will think of X?	Everyone's pretty finished with the existing alignment	Seems like a neverending process of repair		
Is it sliding because we keep digging or just because that's what it does?	Jaime: That's what it does	Haven't detected movement on the east side; little risk of reactivating dormant slides	Curent road is moving because of water and weather	Hope to demonstrate and prove that water is the issue	The question: can we address that root cause?	
Tribes seeking alternative without devastation to the environment	Jaime: haven't yet taken a global proactive approach to addressing landslides	Fixing areas one at a time; have not previously considered proactive mitigation	That's the distinction between current situation and Alt X	Characterize X as proactive, holistic, global, addressing root causes	And emphasize that it is a new build!	Hard to get people to believe you're not just fixing the existing road
MIG: do you think there will be a call for one more alt because they don't trust X?	Or will analysis clarify?	Depends on how you present it. Use marketing techniques	If you focus on lack of tree impacts, it will go over well	Cost savings to be put back into existing road	Tolowa tribal council is very visual; maps are helpful	Push the alts that are the top performers first, those that perform less well last
Re. people wanting to bring A alts back online; be prepared to clarify how they perform less well as demonstrated by metrics	Demonstrate that they provide no more advantage for the larger costs and impacts					

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Huffman Stakeholder Group, 3-4-2021
Page 1

KEY

Comments	Questions	Responses from Jaime Matteoli, Caltrans Project Manager	Responses from Caltrans D1 / project team
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Thanks, Caltrans, for the work on keeping the road open during the current slides	I want to just express how impressed I am by all of the good work that Caltrans has put into this project. Nice job y'all! ✓	Have the construction costs for Alt F been revised? They were previously very high.	ICF: F still among highest cost alternatives	Construction cost, along with mitigation cost and old growth impacts, weighted most heavily	However, F is lower impact / smaller footprint than most others so it still comes out on top
The alignment for L has changed. Surprised by the # of old growth redwoods.	ICF: showing maps comparing the footprint of alternatives	F has a smaller footprint than several other alts	L will require a large footprint with lots of tree removal, cut & fill		
Can moving higher upslope improve geotech stability?	D1 Geotech: the idea was to retreat from coastal erosion	Also get closer to headscarp and stabilize	There is relief in terms of drainage	However, during studies found a lot of large diameter redwoods on the slope - more than expected	

KEY

Comments	Questions	Responses from Jaime Matteoli, Caltrans Project Manager	Responses from Caltrans D1 / project team
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How much would it take in time to find out how X would rank given the research needed to compare?	Jaime: will take a couple years.	Will study geotech, ground water and movement	Will have an answer after publication of EIR but prior to choosing final alternative	D1 Geotech: Environmental and Engineering progressing at the same time
So it will be carried forward along with other alts to be studied to provide more time to study?	Yes, and we'll continue to study until we know whether or not it's feasible	If it proves unfeasible, we'll drop it from consideration	Based on suggestion from FHWA to consider global mitigation approach	
Does X require closing roadway during construction?	Jaime: we'd keep the road open but there would be traffic impacts	Down to one lane at times during construction		

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Huffman Stakeholder Group, 3-4-2021
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Comments	Questions	Responses from Jaime Matteoli, Caltrans Project Manager	Responses from Caltrans D1 / project team
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If X involves dealing with waterflow on that bank - wouldn't that be part of ongoing process now to salvage road bank we have?	Would you start drilling to capture water and steer it away from the road?	If chosen, will you start spending money on mitigating water problems?	Why is this not happening already?			
Jaime: good question! Have never been able to do this.	Have not had global, holistic program to study the groundwater	Had to drop rigs in state parks	Have never understood the groundwater	Took 3 years to get the borings in place; now able to study	Can't just drill a hole and try it; will be a very specific, dynamic design	Will take much design, consideration and analysis
D1 Geotech: lowering the groundwater surface elevation within the landslide	Large dewatering system on I-80: entails large diameter shaft	Thousands of feet of horizontal drains - runs on a series of pumps	Once constructed & turned on; no longer any water in landslide.	If proves to be feasible, will be done.	Like pulling a drain while it's draining	
Doesn't removing the groundwater effect the erosion of the toe?	Jaime: part of overall mitigation strategy	Studying whether toe erosion is part of the problem	May be part of Alt X, will generate environmental issues; needs to be studied	Geotech: dewatering only effective if we can mitigate landslide depredation	Must partially retreat as well as mitigate erosion	
Jaime: move road inland and also retaining walls along entire length of landslide	Doing everything we can to mitigate, will be millions of \$ of mitigation	I would like to get an electronic copy of all of these excellent slides of the analysis of options. Thanks for all the great work.				

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Comments	Questions	Responses from Jaime Matteoli, Caltrans Project Manager	Responses from Caltrans D1 / project team
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Can you go back to the "Operations" consideration please?	When discussing operations and closures - seems the whole point of project is to deter that	If picking a project that will spend millions of dollars and still have 3-week closures, what's the point?	Understand need to care for natural resources, but trying to make road safer and open for a long period of time	Finding metrics frustrating	Low marks in metrics equate to safety risk	
Jaime: same concerns on our mind.	If X is not a safe, reliable roadway, we won't build it, but there is potential it can be.	Disturbed that it's still at the top - many don't think it's a viable option	Understand it's there as a control group			
Geotech / ICF: looked at "what if" scenarios	F and X keep coming out on top even if tripling weight of core factors	Same if trees are weighted more heavily	Even weighting all factors equally, they still come out on top	What would need to change to disrupt that dominance?	If operations are weighted twice as high as all other factors, X would drop to fourth after A1 and A2	
What is most disturbing?	Eliminating options without knowing if X is feasible	Jaime: studying A alts - such a large footprint that it would have resource impacts	in addition to more cost and time for studies	Want to spend \$10M on analyzing what seem to be more likely solutions	Will be spending some money on design	If we had all money in the world, would study all of them
Transportation dollars are limited	Take the decision very seriously, won't propose anything that won't keep people safe					

KEY

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So are you advocating a tunnel or the existing roadway?	As a newer member to this group I remember my shock when I discovered that ALL THE OPTIONS came with great disadvantages.	And I remember Jaime looking at me and nodding, that yes, the choices were not good but were the best we had.	Looks like "what if" scenarios would eliminate the G options		
Are you suggesting road closure be a "core" item then? Or weight it more, perhaps?	ICF: was in the operations grouping with weight of 4	Showed X and L doing very poorly	If included in core factors and weighted more heavily - would add a few points to total score	Simply moving it to core factors wouldn't change results	Giving it a much higher weight would change results
When looking at current alignment - X would be a significant change	If you could dewater and tore up the toe, would it lower the risk?	Jaime: likely, but possible it remains high risk and then we'd weigh heavily	Does this include funding for current repairs?	Jaime: No, that is emergency funding that is completely separate	
Agree with Jaime re cost / probability of litigation with many alts	We're probably looking at a long tunnel and needing to get a billion in funding	Can eliminate a lot of alts here			

KEY

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Is X a relatively new suggestion? Or has this been an option all along?	It has been an option for a number of years. L is a newer option.	Interesting point re time to study As and Gs. Do we have data to decide if F is viable?	Jaime: have early data, need more geotech investigation	In design and possibly in current phase
Trying to grasp X; understand why it's being considered	Is X not an alternative route? Is it subject to this process? Can it be evaluated differently?	Question raised by FHWA; have you considered mitigation alternatives?	Would need that if funding	Introduced to this group in 2018 and group agreed
For NEPA/CEQA purposes, X is a new alternative and not the "no build" alternative.	X would effectively be a "new build" of the road, relatively (but not wholly) within the current alignment. Right?	Yes	It is a build alternative; current highway is no-build, all agree not sustainable	ICF: No build is required to be on the table
G options do not look like viable options	If we eliminate "bypass" alts, does that speed up EIR process?	Jaime: if we can do, that can probably deliver EIR one year early	Will help keep us on schedule, although tunnel will take about 7 years to build	

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Was surprised that cost and impacts of F were not greater	Also surprised that L didn't score higher	Walking through analysis makes it clear that X and F perform better	Think there's a strong rationale for focusing on those two alts	Second that response; surprised by old growth impacts for L	This process helps to figure real costs	
Still don't like A2 but surprised impacts were lower than expected	This has helped change my mind	Just what this group is for; thank you Caltrans	Agreed	Many in group agree with idea of one large meeting for Round 3	Jaime: will also be presenting same information to tribal council meetings	This communication more important than including cultural resources as a metric
This group has been key; dialogue between different backgrounds great	Getting down to manageable # of alts: great accomplishment	As stakeholders, our voice is important	Encourage reaching out to Jaime with additional concerns	Jaime: would love to meet one-on-one		
D1 Geotech: Any benefit to sharing information from other groups' workshops?	MIG: Cultural resources group identified what would be of greatest value to tribal councils	Many questions going deeper into metrics, high level of support for process	Jaime: stated importance of documenting process	Have mostly heard supportive, a few neutral		
Great work on the analysis, much appreciated. Really helps the decision making process!	Looking forward to seeing the presentation and dialog with the Resighini Tribal Council next month.	NCECR: Often lack of support for process rests in concern re. an outcome	Encourage speaking to Jaime to determine what was behind that	I sooo appreciate this presentation. As the new kid, I am grateful to have really understood the information	Thanks everyone for your time and work	