

Appendix A: Workshop Materials



Alternatives Analysis Methodology – Workshop #3

Thursday, April 22, 2021
2:00 p.m. – 4:30 p.m.

Workshop Objectives:

- Review and Endorse the Alternatives Assessment Methodology and Process
- Review and Confirm the alternatives selected by Caltrans (X & F) for further study in the impact analysis

Topic	Speaker	Discussion Tool
Welcome and Agenda Review	Jaime Matteoli, Caltrans Joan Chaplick, MIG	Chat and Raise Hands
Review Alternatives Process & Results	Dina Potter, HNTB John Cook, ICF	Chat and Raise Hands
Review Alternatives X & F and why they were selected for further study	Dina Potter, HNTB John Cook, ICF	Chat and Raise Hands
Review Alternatives L, A1, A2, G1 & G2 and why they were not selected for further study	John Cook, ICF	Chat and Raise Hands
Group Discussion	Joan Chaplick, MIG All participants	Chat
Poll Level of Support	Joan Chaplick, MIG Karen Wang, HNTB	Polling
Discuss Next Steps	Jaime Matteoli	Chat and Raise Hands



LAST CHANCE GRADE

Alternatives Analysis Workshop #3

April 22, 2021

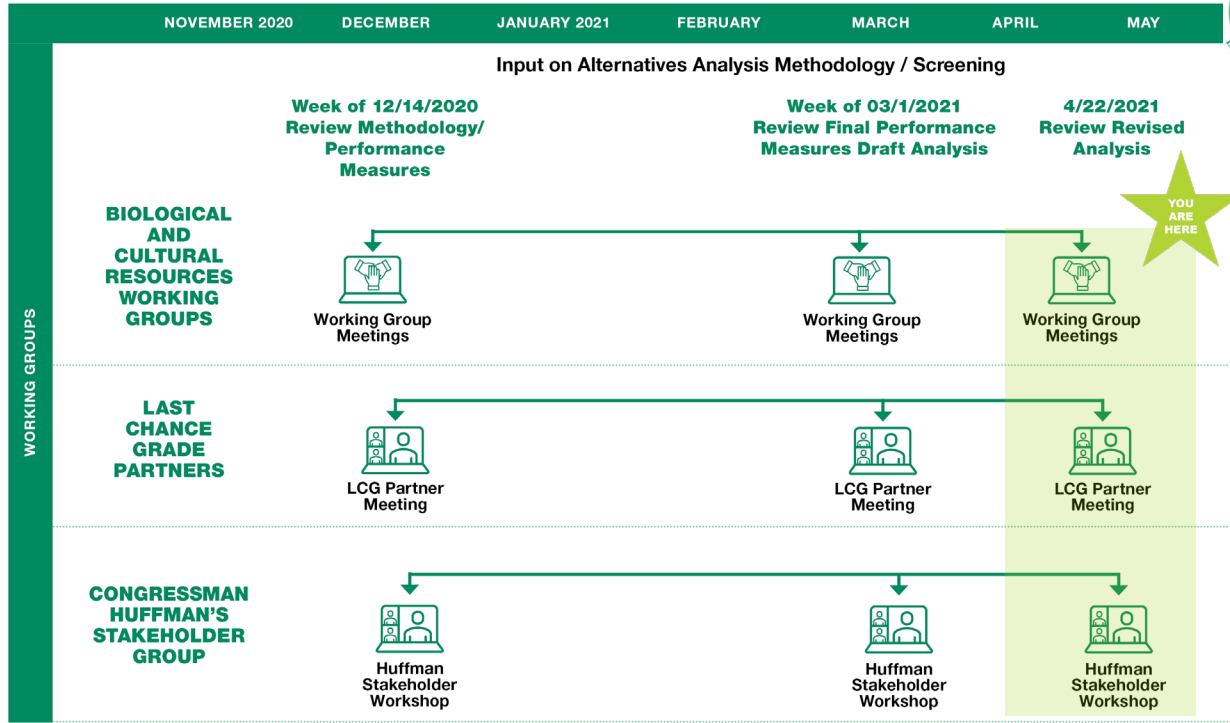


Workshop Objectives



- Review and support the Alternatives Assessment Process
- Understand the alternatives (F and X) selected by Caltrans for further detailed study in the environmental document
- Assess the level of support for Caltrans' decision
- Hear from each other and share perspectives

Alternatives Analysis Process



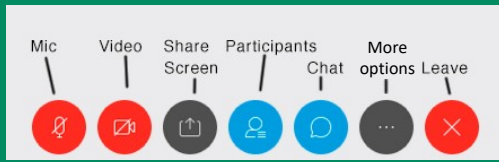
Agenda



- Review alternatives analysis process and results
 - Alternatives F and X and why they were selected for further detailed study
 - Alternatives A1, A2, G1, G2 and L and why they were not selected for further detailed study
- Stakeholder Questions and Comments
- Polling on Levels of Support
- Next Steps



Virtual participation on Webex



1 Audio & Video

Computer

- Use the toolbar

Phone

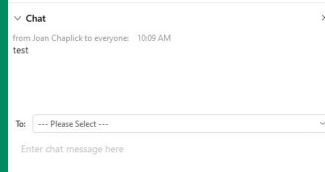
- Access dial-in number

Video

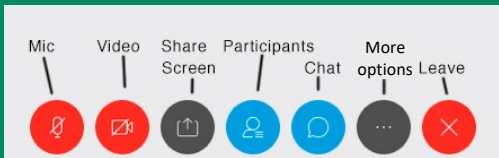
- Use “+” and “-” controls to zoom in or out

2 Chat

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

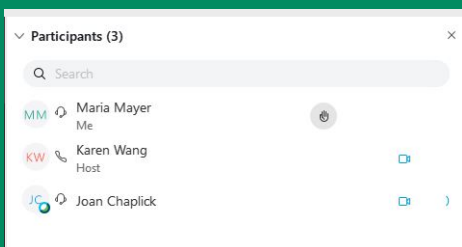


Virtual participation on Webex

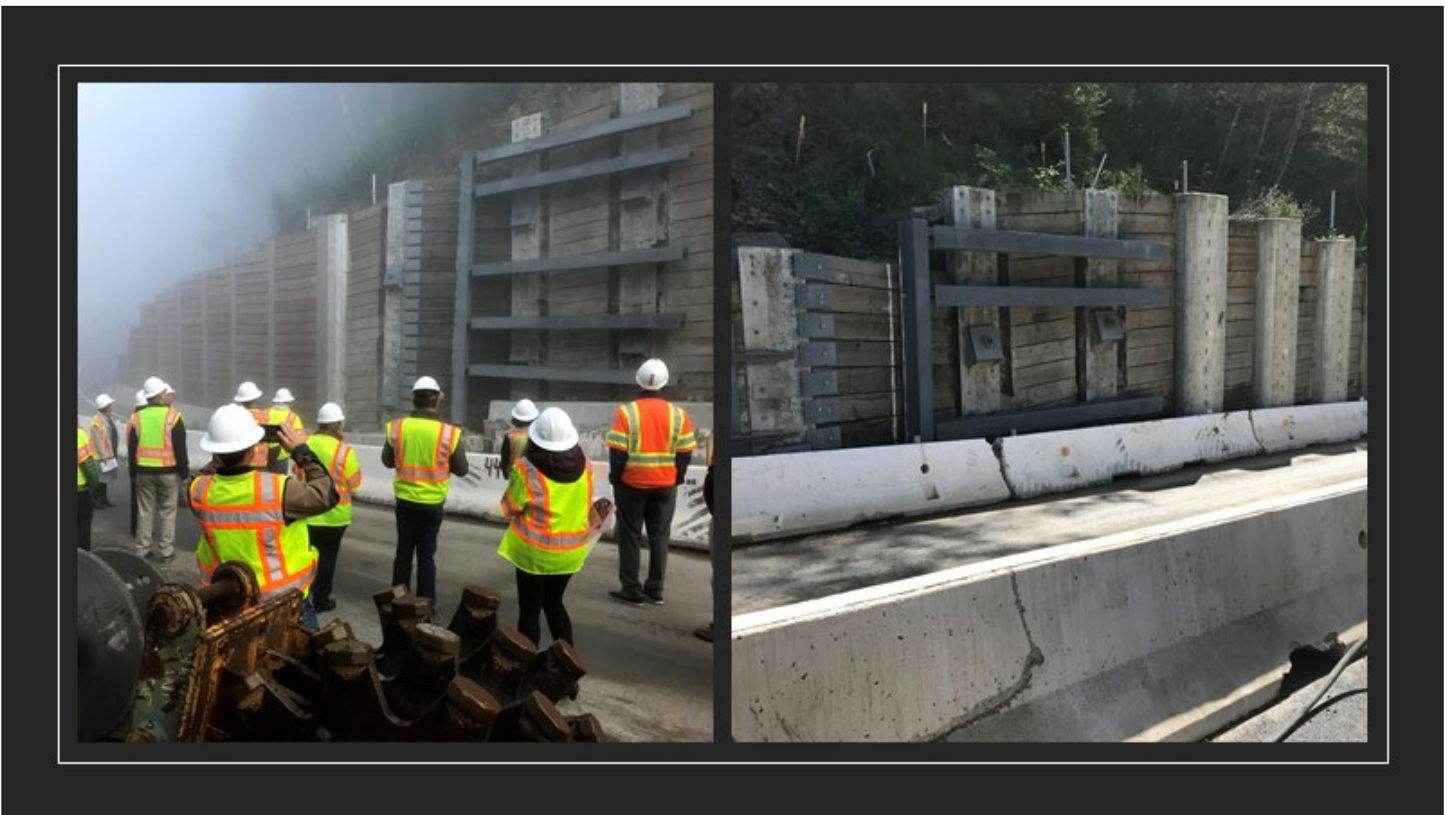
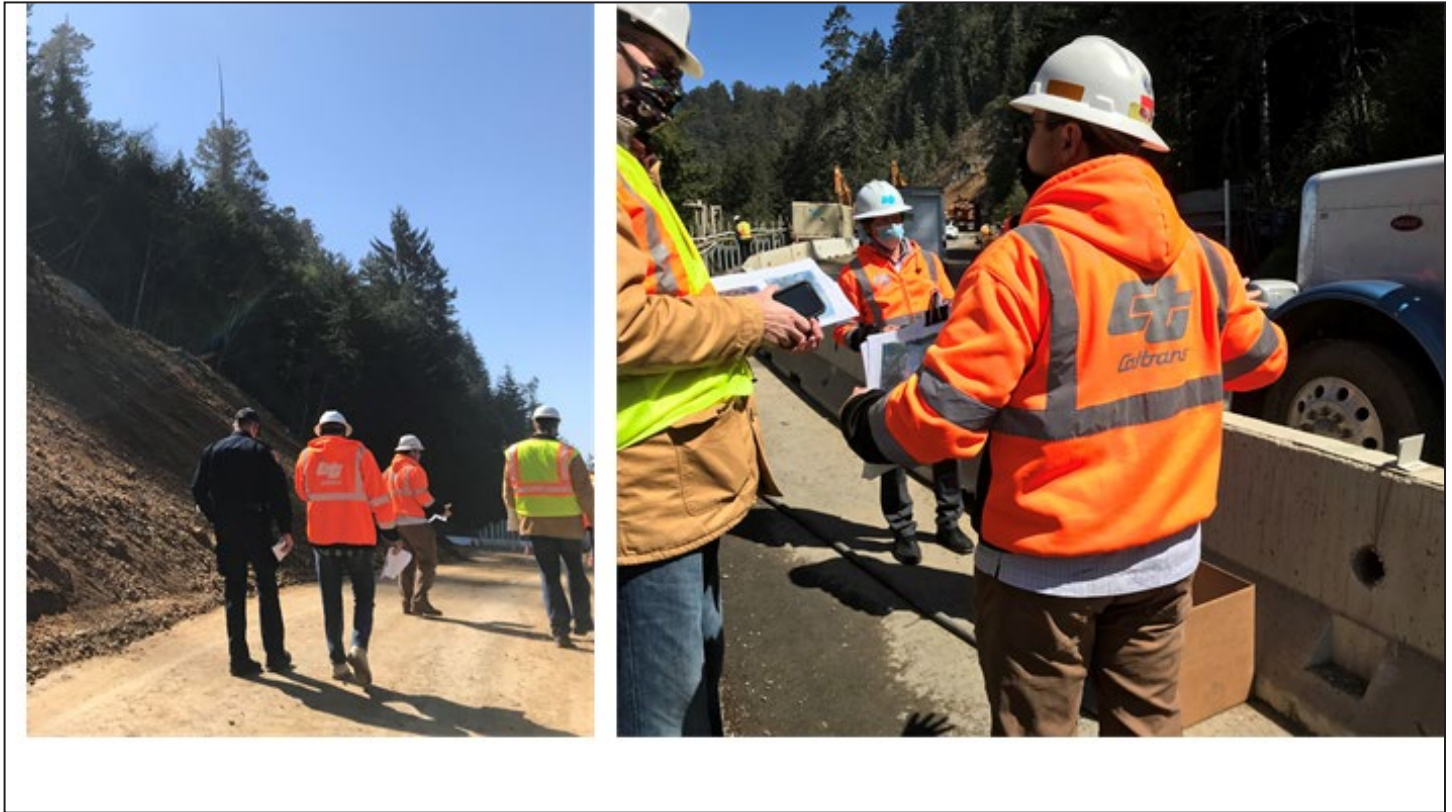


Participants

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



Note: The following 3 slides depict a field trip to Last Chance Grade provided on April 21, 2021, with Caltrans' Chief Deputy Director, James Davis, in attendance, showing substantial progress made on recent repairs to damaged caused by landslides



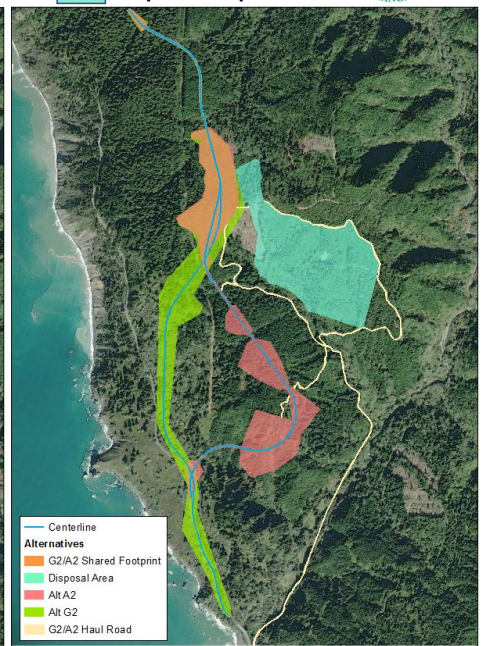
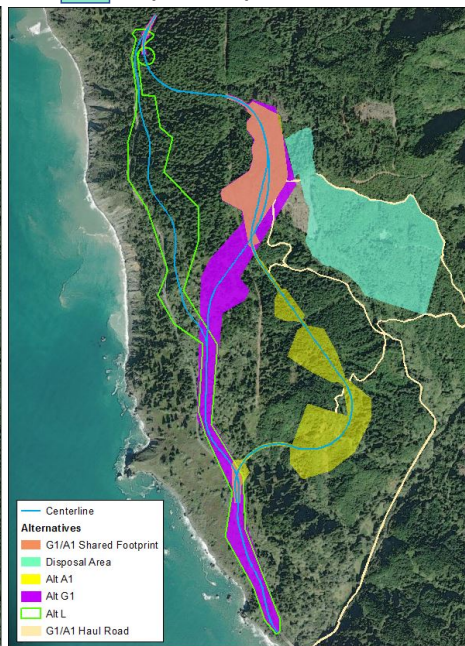


Alternatives Overview

- X - Yellow
- F - Red

- L - Green
- A1 - Yellow
- G1 - Purple
- A1/G1 Overlap - Peach
- Disposal - Aqua

- A2 - Brick red
- G2 - Green
- A1/G1 Overlap - Peach
- Disposal - Aqua



Value of Alternatives Assessment to Identify Alternatives for Further Detailed Studies



- Assesses the range of possible alternatives
- Identifies the technically and economically feasible alternatives for further detailed study in the environmental document
- Saves time and resources by conducting detailed studies on a smaller footprint area
- Reduces the area and extent of ground-disturbing studies for selection of final alternative
- Provides higher level of certainty, lowered risk of schedule delay

Final Alternatives Assessment Results



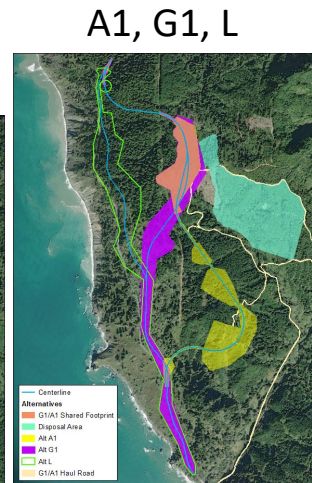
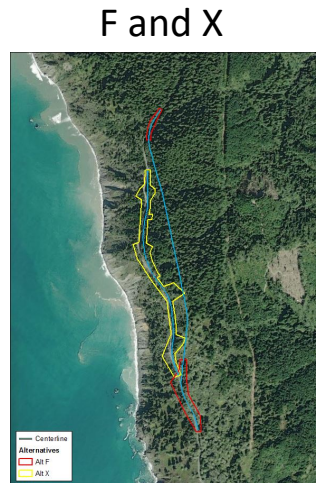
- F and X are top two in overall performance
 - F ranks high in all factors (landslide avoidance)
 - X strong except in Operations (landslide mitigation)
- All other alternatives perform lower than F or X

	X	L	F	A1	A2	G1	G2
Core Factors (Trees, Construction and Mitigation Costs)	1	3	2	3	3	7	3
Operational Factors	6	6	1	1	1	4	4
Construction Factors (Time to Construct, Cut and Fill, etc)	2	3	1	5	3	5	5
Natural Resource Factors (Animals, Vegetation, Waters)	2	3	1	4	4	6	6
All Factors Together	2	5	1	4	4	7	6

Why Not Further Study A1/A2, G1/G2, L?



- All have substantially higher environmental impacts
- Gs and L have “medium” geotechnical risk
- As and Gs have longer construction duration



Why Further Study F and X?



- Best performers using agreed criteria
- Saves \$10M this year
- Reduces environmental schedule by one year
 - 2026 becomes 2025
- Reduces risk of delays and cost increases



Why is X Being Studied Further?



- Environmental document must include a reasonable number of alternatives that are technically and economically feasible with fewer environmental impacts – **currently F and X are the most feasible**
- X is currently technically feasible with lower environmental impacts and costs relative to A1/A2, G1/G2 and L. Caltrans has a fiduciary responsibility to study this alternative in more detail
- **Further study of X does not mean it will be built!**

Landslide Stabilization and Avoidance

Emergency Repairs

Localized

1. Avoidance - **None**
2. Stabilization
 - Retaining structures
 - Soldier pile-lagging/ ground anchors
 - Steel-reinforced concrete walls

Alternative X

End-to-End

1. Avoidance – **Mitigation**
2. Stabilization
 - Retaining structures
 - Tiered walls
 - Soldier pile-lagging/ ground anchors
 - Steel-reinforced concrete walls
 - Dewatering/ Subsurface Drainage
 - Soil/Rock Removal
 - Regrade at a flatter angle
 - Benching

Alternative F

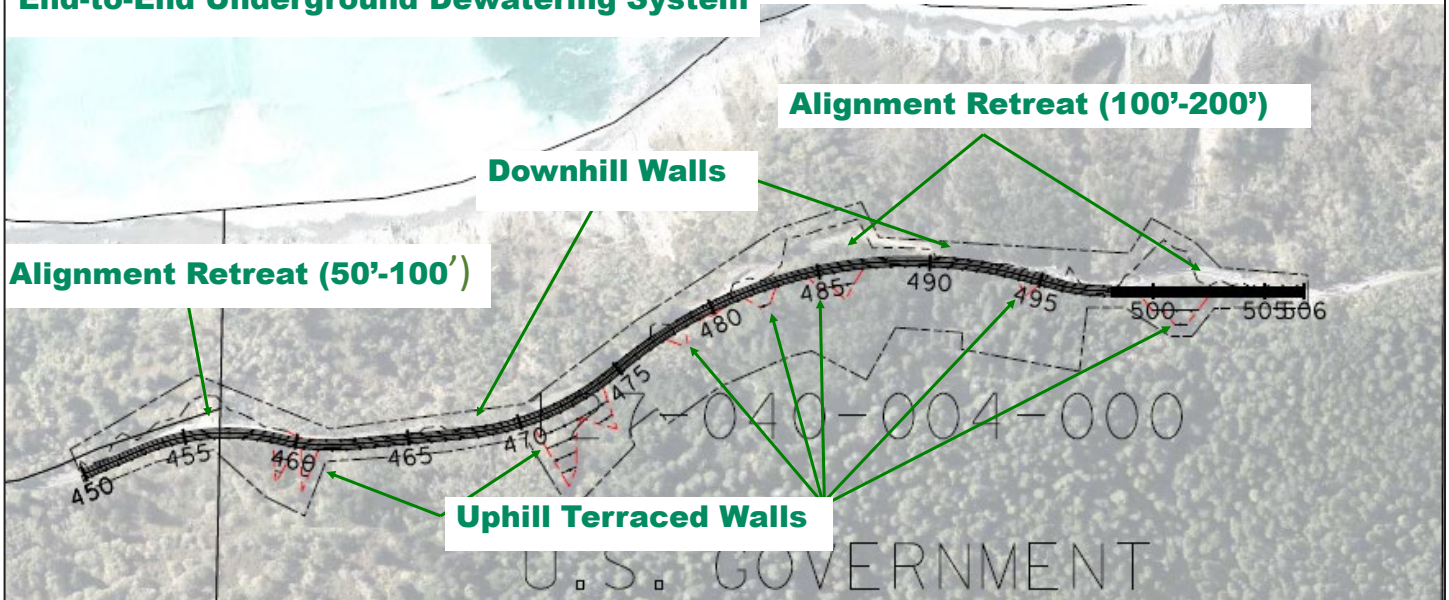
End-to-End

1. Avoidance – **Realignment w/ Tunnel**
2. Stabilization at Portals
 - Retaining structures
 - Tiered walls
 - Dewatering/ Subsurface Drainage

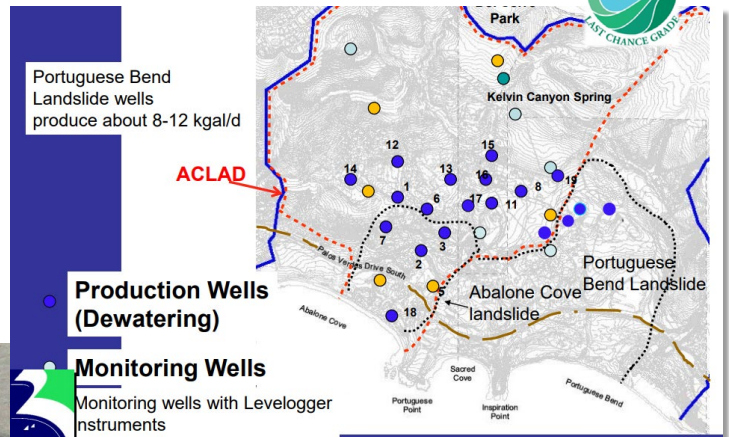
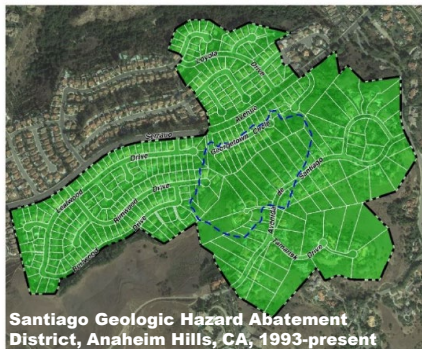
Alternative X – Holistic Mitigation



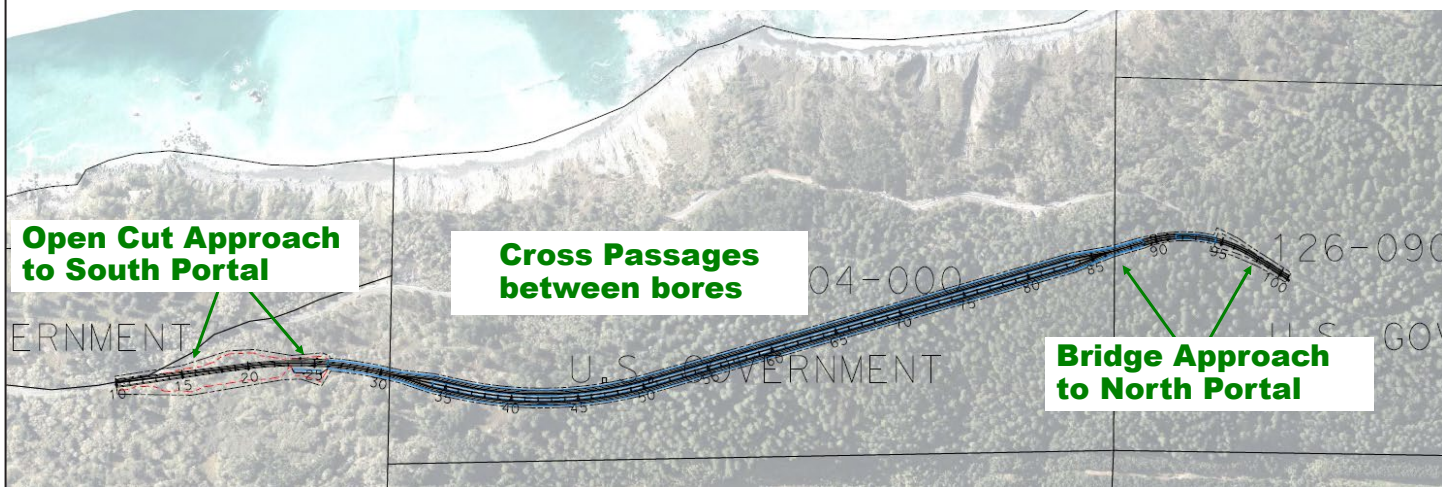
End-to-End Underground Dewatering System



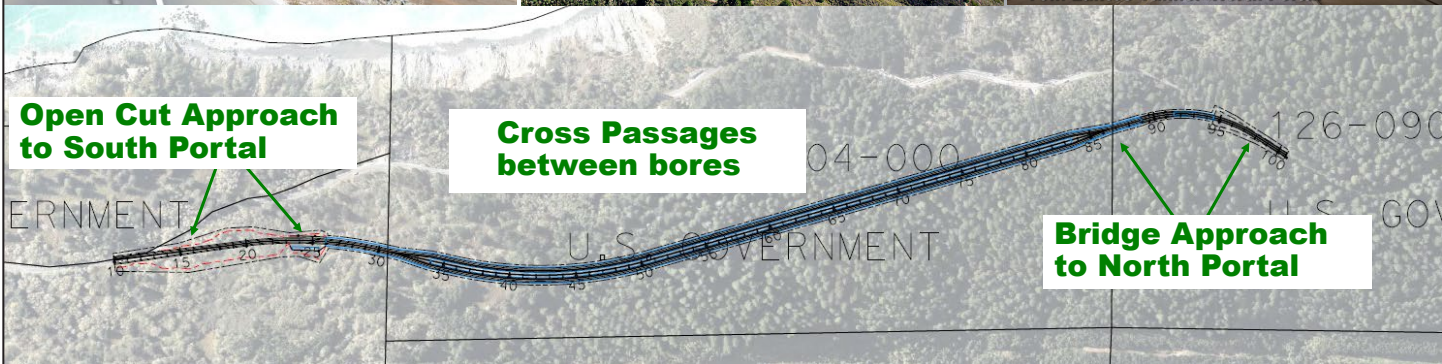
Dewatering System Examples (SoCal)



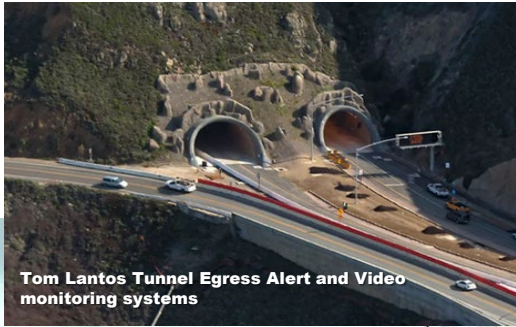
Alternative F Tunnel -Avoidance



Tunnel Portal Examples



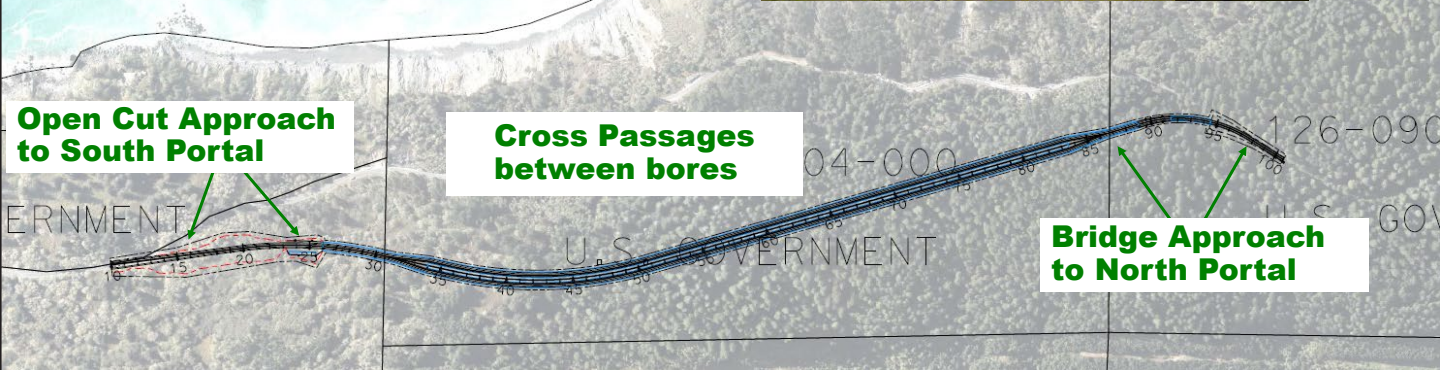
Tunnel Safety Examples



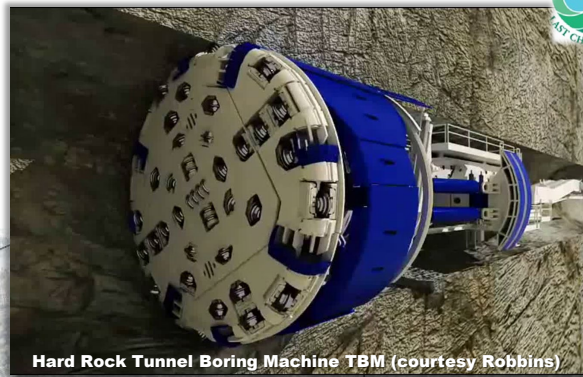
Open Cut Approach to South Portal

Cross Passages between bores

Bridge Approach to North Portal



Tunnel Construction Examples



Open Cut Approach to South Portal

Cross Passages between bores

Bridge Approach to North Portal



What's still on your mind?



Participants, please take a moment to:

- Enter any thoughts and questions in the chat.
- We'd like a response from everyone
- If you don't have a question, please enter "ok" in the chat.

Polling Slides – 4 Questions



1. Level of support for the overall process used to analyze the alternatives
2. Level of support for X being studied further in the impact analysis
3. Level of support for F being studied further in the impact analysis
4. Level of support for L, A1, A2, G1 and G2 being removed from further study

Next Steps



- Environmental field studies
- Value Analysis/ Constructability review
- CEQA/ NEPA scoping meeting
- Engineering and environmental technical studies
- Draft Environmental Document
- Public Hearing
- Final Environmental Document

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