COMMUNITY MEETING
2nd UPDATE ON ASILOMAR BOULEVARD STREET STABILIZATION PROJECT
City of Los Angeles Bureau of Engineering
July 12, 2017
Meeting Agenda

Meeting Purpose & Agenda Review (7:00 to 7:10)

Project Goals & Overview of Project Status (7:10 to 7:30)
  • Results of Pre-Design Report
  • Review of Alternatives
  • Proposed Alternative

Next Steps & Proposed Schedule (7:30 to 7:45)
  • Pilot Study
  • Schedule
    Upcoming Meeting (Environmental Review)

Questions & Answers (7:45 to 8:25)

Wrap-up & Close (8:25 to 8:30)
Who are we?

City of Los Angeles Bureau of Engineering, Asilomar Boulevard Street Stabilization Project
Project Goals: To stabilize Asilomar Boulevard and protect the public right-of-way

Asilomar Boulevard Dewatering Project
• Project will install 3 new dewatering well and modify 2 existing wells
• Dewatering system will remove some of the groundwater in the landslide area
• Project is in construction and is anticipated to complete by October 2017

Asilomar Boulevard Street Stabilization Project
• Project has completed the Pre-Design Report
• Today we will present the results of the Pre-Design Report
• Discuss next steps and proposed schedule
• Recap of previously presented info
• Review of Alternatives
What have we learned - Geology

Base map source: Town of Asilomar Landslide Area, LAROE

LEGEND

af  Artificial Fill
Qals Active Landslide Deposit
Qt  Terrace Deposits
Tm  Morro Bay Formation

- Possible Location of Landslide Slip Surfaces
- Bedding Orientation
- Water Table Used in Slope Stability Analysis
- Geologic Contacts

Location of Proposed Wall and Grading
Borehole Lithology Index:
- Terrace Deposits (Qt)
- Siltstone
- Sandstone

Asilomar Landslide
Section D-D'

City of Los Angeles Bureau of Engineering, Asilomar Boulevard Street Stabilization Project
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What have we learned - Geology

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What have we learned - Geology

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Possible Location of Landslide Slip Surfaces
Bedding Orientation
Water Table Used in Slope Stability Analysis
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Location of Proposed Wall and Grading

Borehole Lithology (index):
Terrestrial Deposits (Qt)
Siltstone
Sandstone

Asilomar Landslide
Section D-D'

City of Los Angeles Bureau of Engineering, Asilomar Boulevard Street Stabilization Project
Options we considered
Alt 1A - Retaining Wall with Tiebacks and Slope Reconstruction

Features
• Soil/rock anchors (tiebacks)
• Soldier piles
• Drainage panels
• Permanent facing (shotcrete or cast in place)

Advantages
• Conventional construction
• Limited construction zone on Asilomar Blvd.
• Adaptable design
• Allows drainage of groundwater

Benefits
• Improved access road
• Aesthetics
Alt 1B - Soil Nail Wall and Slope Reconstruction

Features
• Soil Nail
• Shotcrete facing
• Drainage panels behind shotcrete facing

Advantages
• Minimal construction zone on Asilomar Blvd
• Conventional construction
• No permanent wall facing needed
• Allows drainage of groundwater

Benefits
• Improved access road
• Aesthetics
Alt 2 - Large Diameter Concrete Piles

Features
- Large diameter concrete piles
- Permanent facing (shotcrete or cast-in-place)
- Drainage panels behind facing

Advantages
- Limited construction zone on Asilomar Blvd
- No tiebacks needed
- Allows drainage of groundwater

Benefits
- Improved access road
- No tiebacks beneath road
Alt 3 - Deep Soil-Cement Mixed (DSM) Columns

Features
• Deep-Soil-Cement (DSM) mixed columns

Advantages
• Improves ground in-place
• No construction on slope
• End product completely underground
• Small volume of off haul material

Benefits
• Natural look preserved
• Limited construction traffic
• Aesthetics
• Sustainable construction

4” DIAMETER DSM COLUMNS
Considerations:

• Aesthetics
• Construction Impact (noise, vibration)
• Neighborhood Impact (traffic)
• Alternative Performance/Sustainability/Resilience
• Right of way (ROW)
• Maintenance
• Construction Duration and Cost
Proposed Alternative - Deep Soil-Cement Mixed (DSM) Columns

Features
- Deep-Soil-Cement (DSM) mixed columns

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Benefits
- Natural look preserved
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- Sustainable construction
Deep Soil Mixing – Process

Step 1: Setting up auger rig at pile position.

Step 2: Augering with the required size auger. Tungsten carbide drill bits are used.

Step 3: Pumping of cement grout while augering.

Step 4: Mixing is by auger rotation as a form of mechanical agitation.

Step 5: Withdraw auger in anti-clockwise rotation.

Step 6: Installation of grout-mix column is completed.
Deep Soil Mixing – Process

DMC(DEEP MIXING SOIL) METHOD.mp4
Deep Soil Mixing - Equipment
Deep Soil Mixing – Outcome
Next Steps & Proposed Schedule

1. Deep Soil Mixing (DSM) Pilot Study

2. Asilomar Boulevard Street Stabilization Project
   - Environmental Review Process
   - Coastal Development Permit
   - Final Design
Deep Soil Mixing (DSM) Pilot Study
Deep Soil Mixing (DSM) Pilot Study Area

City of Los Angeles Bureau of Engineering, Asilomar Boulevard Street Stabilization Project
Deep Soil Mixing (DSM) Pilot Study

Key information:
• Expected to be performed in Summer 2018
• Field activities duration expected to go for about 2 weeks
• Follow up testing to be performed about month later with about 1 to 2 weeks duration

Benefits:
• Will provide information to refine the design for the Asilomar Blvd Street Stabilization Project
• Reduce the potential for different site conditions during construction of the Asilomar Blvd Street Stabilization project
• Will allow the City to collect data to increase and expand the City’s knowledge of Deep Soil Mixing as a construction method for potential future projects in the City
Anticipated Schedule
Updated Project Schedule

1. Asilomar Boulevard Street Stabilization Project Pre-Design Phase
   - Geotechnical Study/Borings
   - Development & Analysis of Alternatives
   - Presentation of Alternatives
   - Community Meeting #1
   - Community Meeting #2
   - Selection of Final Alternative

2. Asilomar Boulevard Street Stabilization Project Design Phase
   - Design Development of Asilomar Blvd Street Stabilization Project
   - Environmental Impact Report (EIR)
   - Permitting from Coastal Commission (19 months)
   - Construction of Pilot Study Project

3. Asilomar Boulevard Street Stabilization Project Construction Phase (18 months)
   - Start of Construction
   - Construction Progresses
   - Completion of Asilomar Blvd Street Stabilization Project

Timeline:
- March 2016
- August 24, 2016
- July 2017
- Summer 2018
- Early 2020
- Summer 2021

All dates are approximate.
A Notice of Preparation will be available, and a Scoping Meeting will be held in Summer 2017.
Questions and Answers