



Emergency Coastal Rail Projects Update and Planning for the Future

Regional Transportation Planning Committee • March 4, 2024



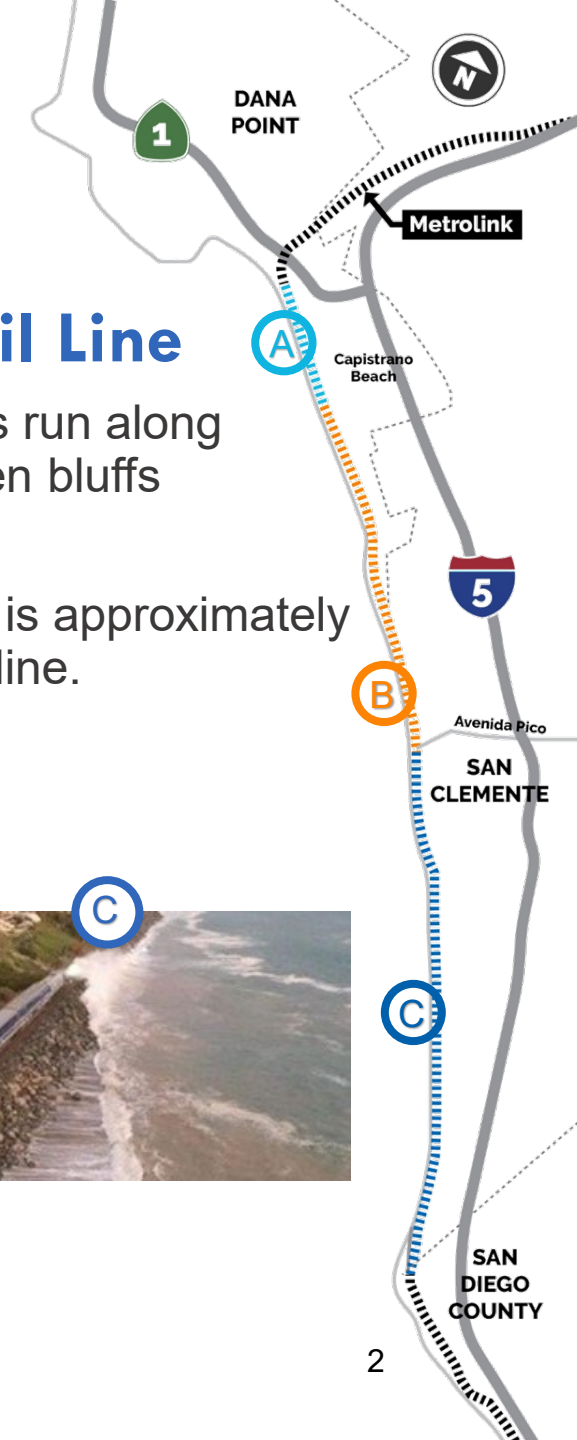
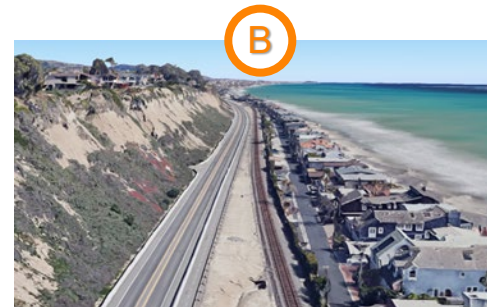
OCTA's Role in the LOSSAN Corridor

- Owns 40+ miles of the corridor, including seven miles of critical coastal track in south Orange County
- Serves as the managing agency for the LOSSAN Rail Corridor Agency
- Member of the Southern California Regional Rail Authority (Metrolink) joint powers authority that uses the LOSSAN corridor

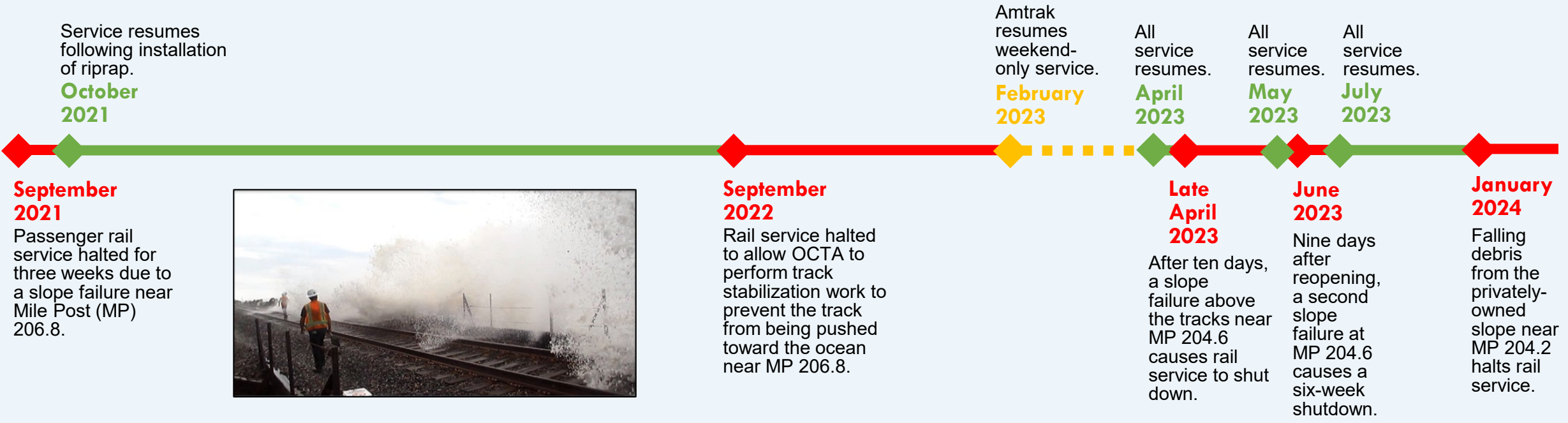
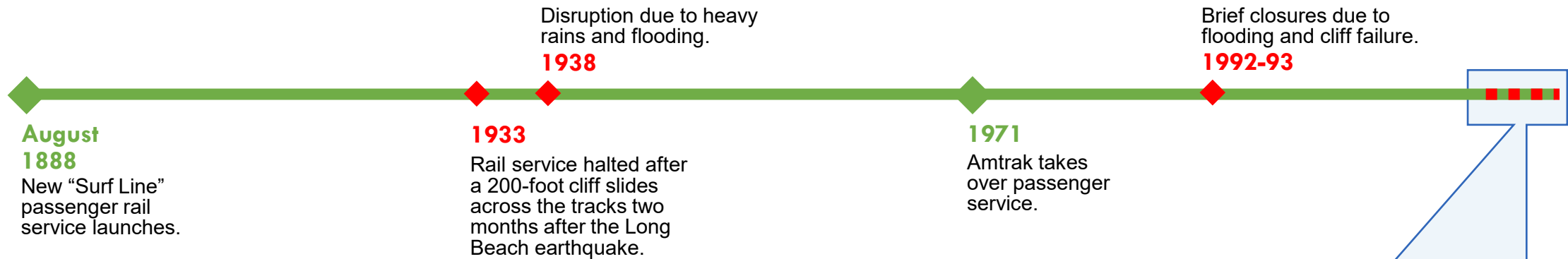
OCTA's Beachside Rail Line

In south Orange County, tracks run along the beach, sandwiched between bluffs and the ocean.

Most of this beachside rail line is approximately 200 feet or less from the coastline.



Passenger Rail Closures



■ Passenger rail open
 ■ ■ ■ ■ Limited passenger service available
 ■ Passenger rail suspended

Changing Conditions



Milepost 206.8



- Beach erosion
- Recent coastal studies
- Prior studies by state/federal agencies
- Milepost 206.8 incident
- Need to develop phased solutions to address infrastructure impacts

Cyprus Shore Track Stabilization Project (MP 206.8)



Project Cost: ~\$21.7 million

- **\$8 million** – OCTA funds
 - Initial track stabilization work
- **\$6 million** – Federal Surface Transportation Block Grant Program
- **\$6 million** – State Interregional Transportation Improvement Program
- **\$1 million** – Federal Coronavirus Response and Relief Supplemental Appropriation Act
- **\$700,000** – OCTA funds



- Homes constructed on historic landslide
- Landslide movements pushed tracks toward the ocean
- Solution – Installed tieback anchors to stabilize the slope
- Project in close-out stages, pending resolution of right-of-way (ROW) considerations
- Passenger rail operations resumed April 2023



San Clemente Track Protection (MP 204.6)



Project Cost: \$6 million

- **\$3 million** – OCTA funds
- **\$3 million** – State Interregional Transportation Improvement Program

- Installed temporary barrier wall to prevent debris on track
- Removed landslide soil on rail side of wall
- Cleared project site for reinstatement of rail service
- Passenger rail service restored July 2023
- Remove temporary wall after City of San Clemente installs permanent solution

Mariposa Point Track Protection (MP 204.2)



Project Cost: ~\$10 million

- Caltrans issued an emergency declaration on Feb. 1, making \$10 million in State funding available
- **\$2 million** – Phase 1 (cleanup)
- **\$8 million** – Phase 2 (barrier wall)



- Removed two damaged spans of the pedestrian bridge
- Grading the slope and clearing debris
- Placement of Visqueen plastic, and other best management practices to prevent surface water infiltration
- Debris cleared and limited freight service restored on January 29, 2024
- Work advancing to build barrier wall to protect tracks

Coastal Rail Resiliency Study *short- to medium-term solutions*

- Develop options to protect seven miles of coastal rail infrastructure at various sea levels
- Gain an understanding of climate effects on coastal rail infrastructure
- Identify potential solutions, including sand replenishment / retention
- Engage key stakeholders / agencies
- OCTA Board of Directors (Board) awarded contract August 14, 2023
- **Next Step:** Environmental for Coastal Rail Infrastructure Resiliency Projects

Coastal Rail Long-Term Solutions Study

- Develop options for potential long-term solutions for the coastal section of rail line
- Create an action plan for key elements
- Partner with LOSSAN, state and federal agencies
- Engage key stakeholders / agencies

- Continual stakeholder engagement
- Minimize passenger and freight service disruptions
- Protect the railroad in place (up to 30 years)
 - Assess, identify, and develop a program of capital projects within the OCTA ROW
 - Develop short-term (ten years) and medium-term (30 years) conceptual alternatives
 - Work with adjacent stakeholders to develop a comprehensive coastal capital program with roles and responsibilities beyond the OCTA ROW





- Conduct an Initial Assessment along OCTA's Coastal Railroad ROW (MP 200 – MP 207.4)
- Identify activities for immediate action
- Builds on previous efforts to maintain railroad operations
- Identify potential solutions and strategies
- Emergent issues, monitoring, and reinforcement areas



Monitoring Area #1

- MP 200.80 - 201.00
- South Doheny Beach Erosion
- Recommendation: monitor riprap condition & beach erosion (semi-annually)



Monitoring Area #2

- MP 202.70 Poche Beach Outfall and Pedestrian Underpass
- Recommendation: monitor beach erosion & scour protection around structures (quarterly)



Monitoring Areas 3, 4, & 5



Monitoring Area #3

- MP 203.65 - 203.70

North Beach

- Recommendation: monitor riprap condition and beach erosion (semi-annually)



Monitoring Areas #4, #5

- MP 204.00 – 204.30 Mariposa Pedestrian Bridge, MP 204.50 – Linda Lane

- Recommendations: #4 – install sensors to monitor potential track-bed movement (monthly)
- #5 – monitor riprap condition and beach erosion (semi-annually)



Monitoring Areas 6 & 7



Monitoring Area #6

- MP 206.10 Calafia State Beach
- Recommendation: monitor effectiveness of culvert replacement (post-storm)



Monitoring Area #7

- MP 206.70 – 207.25
- Cyprus Shore to County Line
- Recommendation: monitor effectiveness of emergency riprap (semi-annually)



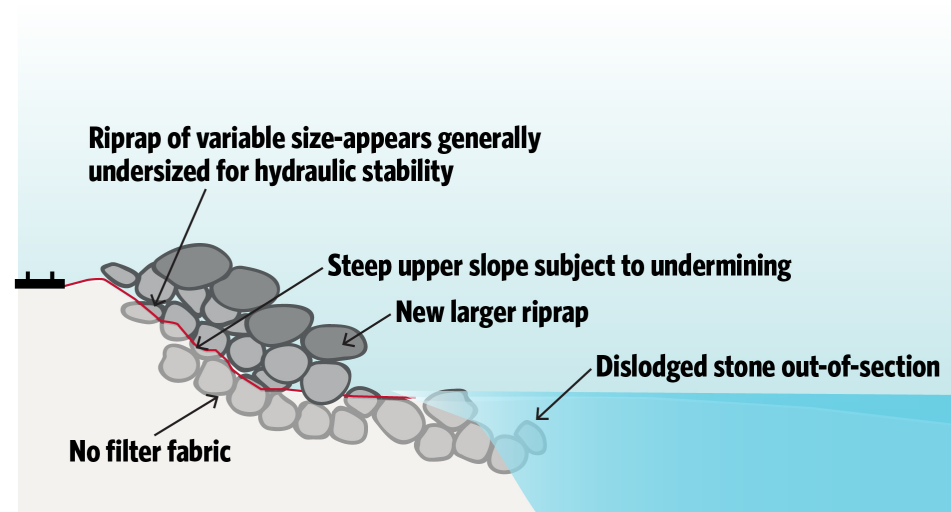
Existing Condition



MP 203.80 - 203.90:
Erosion Hazard deteriorating

Possible Solution

- Stabilize track by repairing/augmenting existing riprap



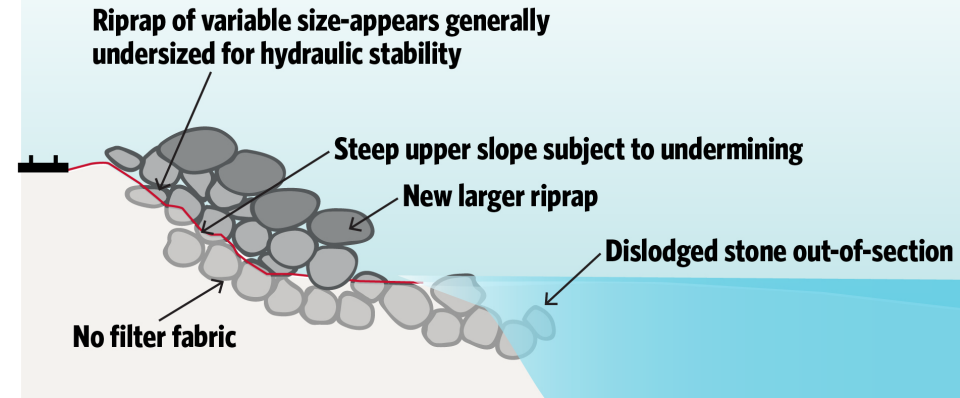
Existing Condition



MP 204.00 - 204.40:
Erosion - no beach at high tide and
direct wave attack

Possible Solution

- Reinforce riprap section as needed to stabilize track

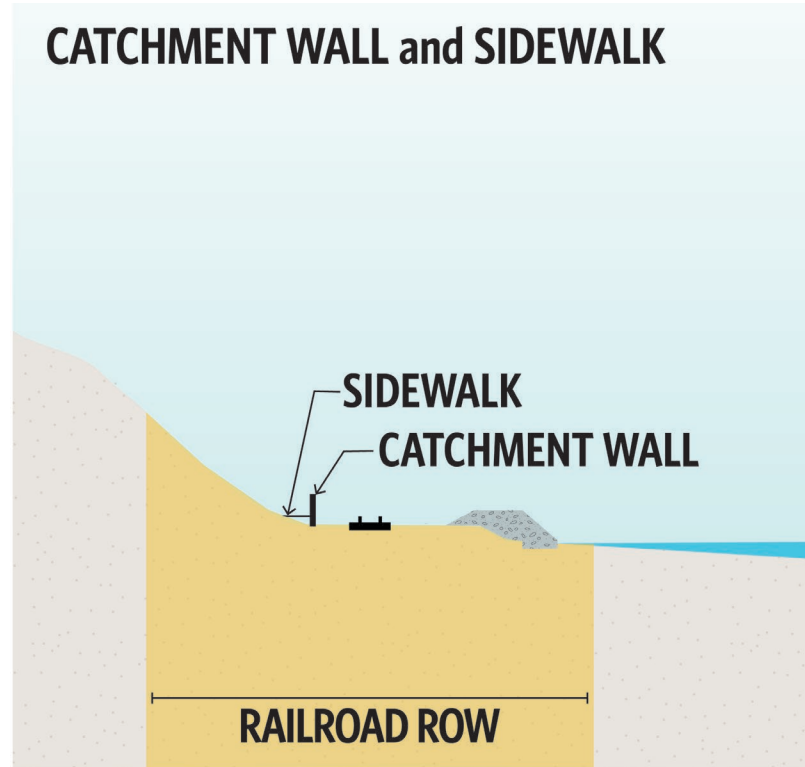


Potential Reinforcement Area 3

Existing Condition



Possible Solution



MP 204.00 - 204.50: Steep bluffs, potential to impact tracks, poor track side drainage with potential for liquefaction.

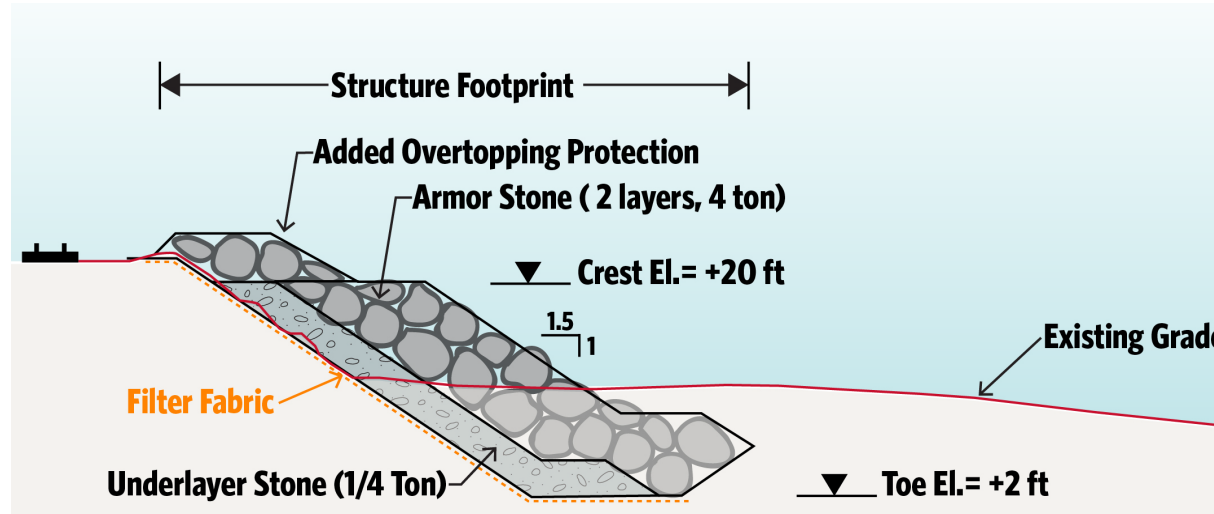
Potential Reinforcement Area 4

Existing Condition



MP 206.00 - 206.67: North End of Cyprus Shore Project – Erosion exposing rock and creating a shelf adjacent to tracks where riprap once existed.

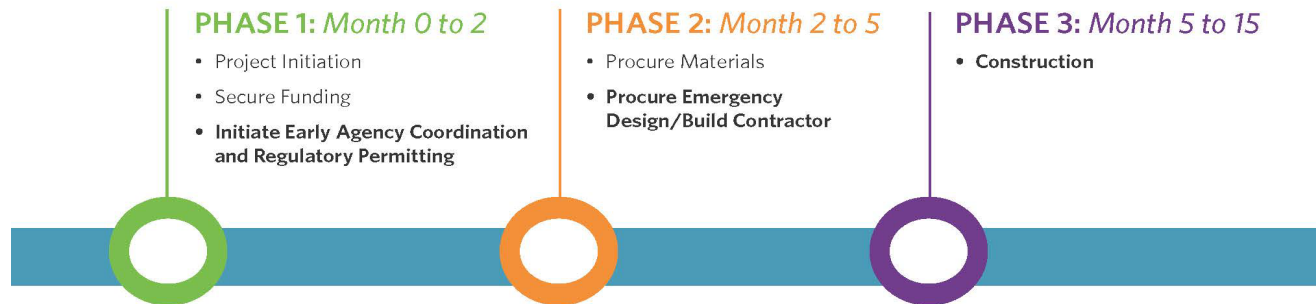
Possible Solution



Initial Assessment Implementation

CRITICAL PROJECT ROADMAP

- OCTA conducted an Initial Assessment as a part of the Coastal Rail Resiliency Study (CRRS) to identify imminent threats that impact railroad operations and require immediate action.
- The imminent threats were identified in January 2024, but other imminent threats may emerge due to the dynamic nature of the coastal rail corridor.
- Two of the locations have already required reinforcements due to emergencies
- Proposed schedule assumes emergency permitting and emergency design/build procurement**



REQUIRED FUNDING

Rough Order of Magnitude: \$200M

Includes Up to:

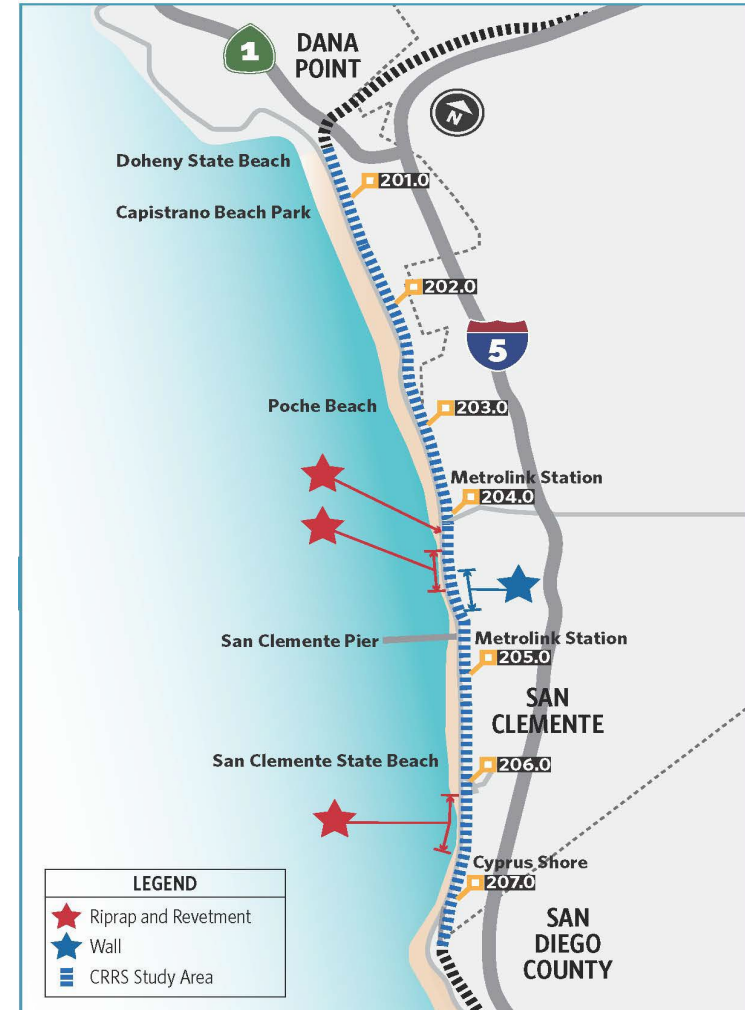
- 0.50 miles of wall
- 0.67 miles of engineered revetment
- 0.50 miles of rock placement

ROLES & RESPONSIBILITIES

- Outreach - OCTA
- Funding - CALSTA, CALTRANS
- Concept Design - OCTA
- Design/Build Contract - SCRRRA
- Permitting/Environmental - OCTA
- Pedestrian Path Restoration - City of San Clemente

OCTA - Orange County Transportation Authority
 SCRRRA - Southern California Regional Rail Authority
 CALSTA - California State Transportation Agency
 CALTRANS - California Department of Transportation

February 2024 



Map of Critical Project Areas

- Listening Sessions
- Draft Concept Outreach
- Draft Plan Outreach
- Support community engagement
 - Feedback loop



- Consider other natural solutions
- Seek partnering opportunities
- Continue streamlined communication of service disruption
- Concern regarding impacts to employee commute patterns and regional tourism
- Support for early, comprehensive, preventive action
- Seek partnering opportunities to minimize overlapping efforts



Initial Assessment

- Address Owner/Operators concerns regarding imminent issues affecting the railroad
- Focused on protecting rail operations, track infrastructure, and maintaining railroad service
- Identified Areas of Concern
 - Monitoring Areas
 - Potential Reinforcement Areas
- Identify Next Steps



LISTENING SESSIONS

- Engage with a wide range of stakeholders with unique and diverse backgrounds and needs
- Obtain feedback from stakeholders and interest groups: Winter '24

INITIAL CONCEPT DEVELOPMENT

- Draft Concepts: Spring to Fall '24
- Obtain feedback from stakeholders and interest groups: Fall '24

DRAFT FEASIBILITY STUDY REPORT

- Draft Report: Spring '25 – Summer '25
- Obtain feedback from stakeholders and interest groups

INITIAL ASSESSMENT

- Initiated: November '23
- Potential reinforcement areas identified: December '23
- Release Report: February '24

PURPOSE AND NEED/ EVALUATION CRITERIA

- Draft: Spring '24
 - Informed by Listening Session feedback

REFINEMENT OF CONCEPTS

- Refined Concepts: Spring '25
- Obtain feedback from stakeholders and interest groups: Spring '25

FINAL FEASIBILITY STUDY REPORT

- Final Report: Fall '25
- **Present to Board/Publish Final Report: Fall '25**