

Naples Island Seawalls Project Update and Next Steps

December 9, 2024

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Review of Today's Discussion & Presentation

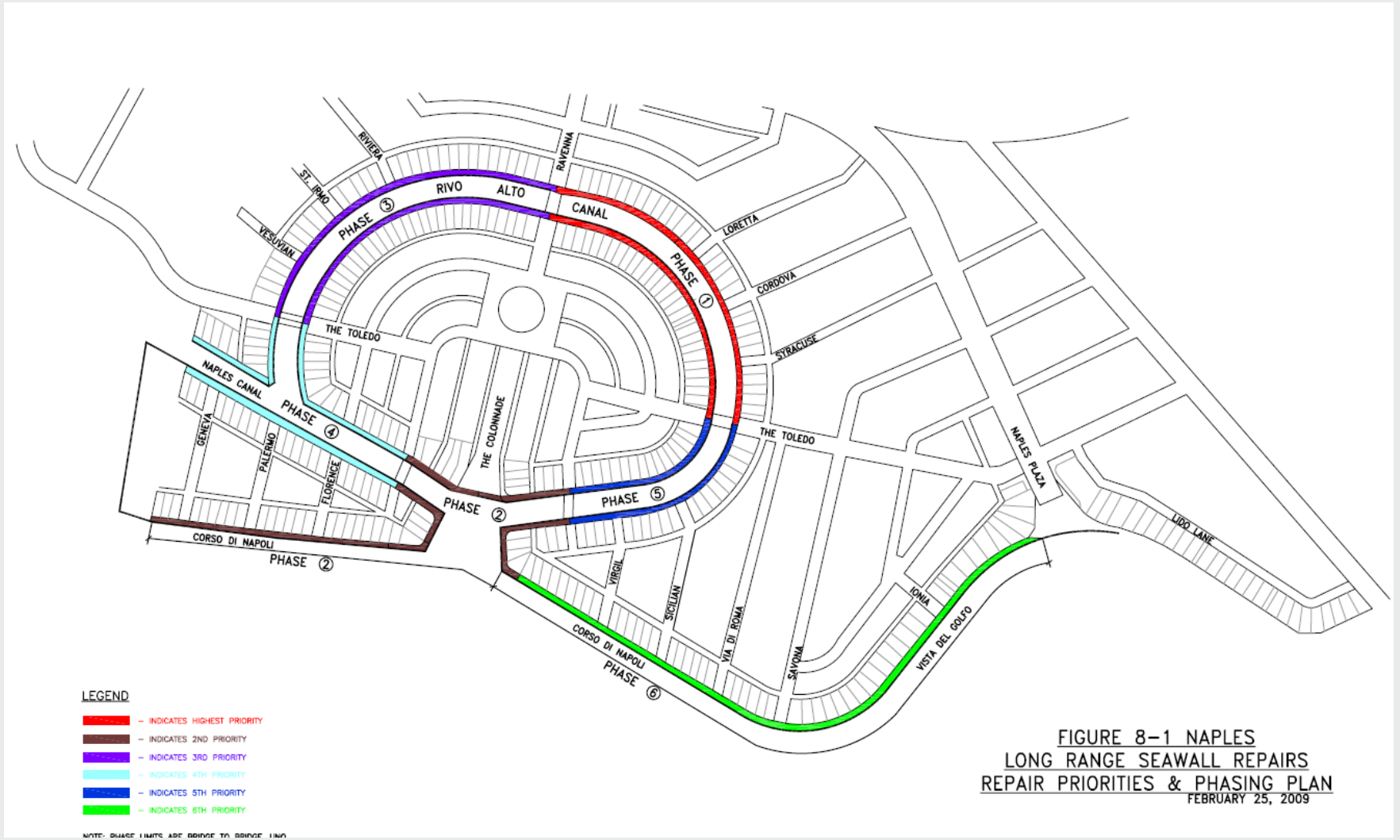
- Long Beach's coastal resources and waterfront, including the Naples Island seawalls, are a major public asset
- 2008-2009, the City prepared its first comprehensive Seawalls Inspections Report, which informed the seawalls replacement phasing plan
- Since that study, the City has completed two major seawalls replacement efforts (Phase 1 and Phase 2) at a total cost of $32 million
- Phase 1 and 2 Seawalls were identified as those in the most critical condition due to observed sulfate deterioration
- This year, the Seawalls Conditions/Inspections Report was updated and provides recommendations
- Discuss the phased strategy for seawalls replacement
- Review financial challenges, interim repairs, and the replacement phasing plan
- Review overall next steps

Purpose of Updating Conditions Assessment

- The City hired TranSystems, Inc in 2008 to conduct a comprehensive seawalls assessment, which recommended the original seawalls replacement and phasing plan
- The City hired Tetra Tech in 2023 to update the report and to:
  - Prepare a supplement to the previous report and document the current known state and condition of the existing seawall system
  - Identify areas of immediate concern
  - Confirm the priority of the seawall replacement (phasing plan) and identify repair priorities
  - Develop rough order magnitude (ROM) costs for remaining seawall phases

Naples Seawalls Project Update

2009 TranSystems' Recommended Seawalls Replacement Phasing



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Naples Seawalls Project Update

History

- **2011 -** the City began developing design options, regulatory engagement and permitting for the Phase 1 Seawalls Repairs;
  - Construction contract: began May 2014 and substantially complete Oct 2015
- **2012-2014** - the City began developing the mitigation plan for all 6 Phases of seawalls impacts. Compensatory Mitigation established at Colorado Lagoon for shallow subtidal loss, including some eelgrass impacts
- **2018** - City began design and permitting of Phase 2 Seawalls;
  - Construction contract: began Oct 2019 and substantially complete Oct 2020
- **Phase 1 and Phase 2 Seawall repairs were identified as critical due to observed sulfate deterioration on seawall panels, resulting in thinning and brittleness**

Naples Seawalls Project Update

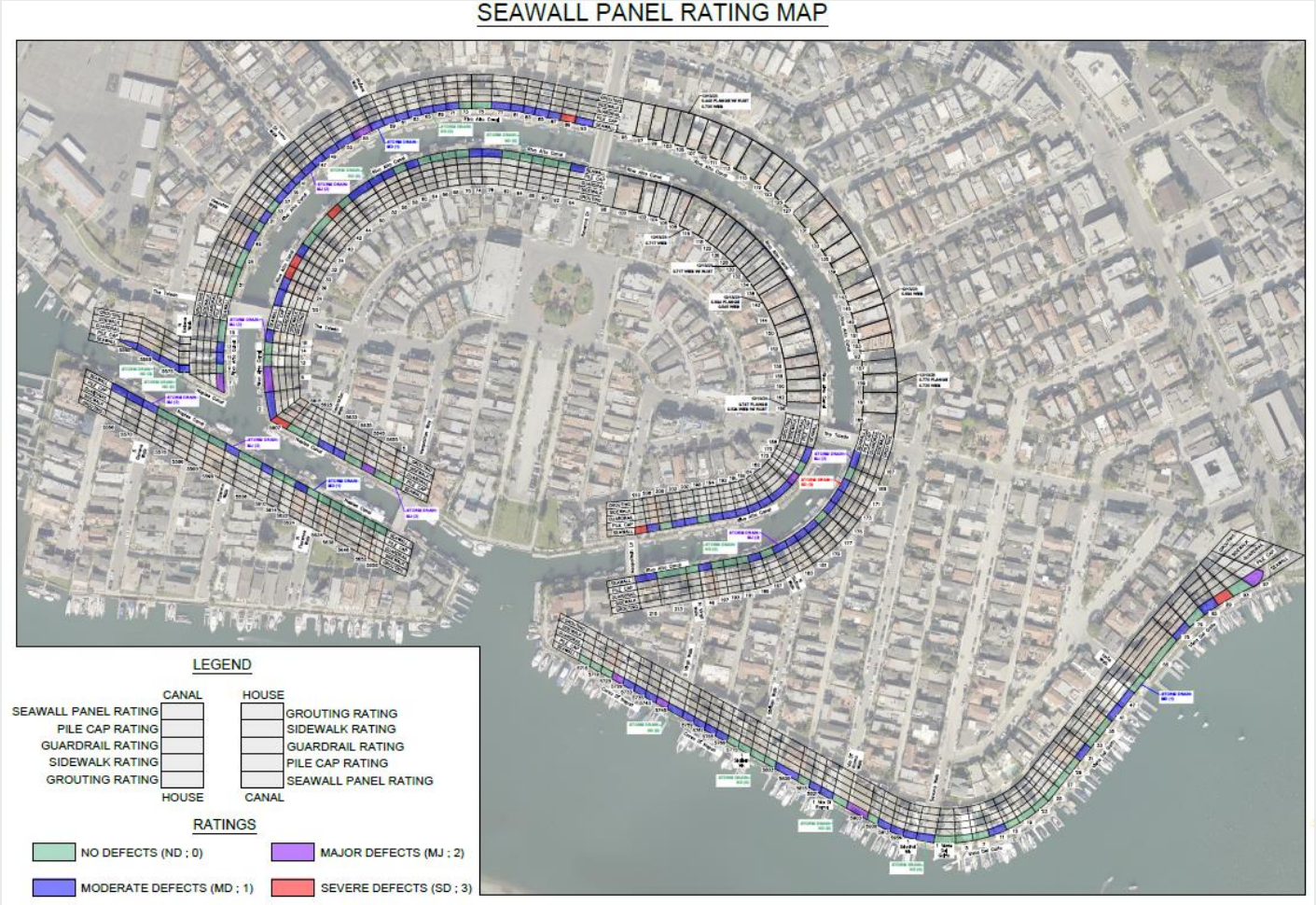
What did the 2024 Conditions Assessment entail?

- Tactile and visual inspections were conducted of the seawall elements including:
    - Seawall Panel
    - Pile Cap and Cap Extension
    - Soil Loss (Grouting)
    - Guardrail
    - Sidewalks
    - Street ends
    - Private improvements
- Underground divers and landside engineers performed Level 1 and Level 2 inspections and provided scores for each element by property. The following ratings were used:
    - 0 - NO DEFECT
    - 1 - MODERATE DEFECT
    - 2 - MAJOR DEFECT
    - 3 - SEVERE DEFECT

Naples Seawalls Project Update

How are the results presented?

- The scoring for each element of the seawall system is captured in the Inspection Forms and discussed throughout the report.
- Color-coded Rating Maps visually represent the current state of each element (panel wall, cap, rail, etc) and visually document the conditions.
- The 2024 Report identifies Priority Repairs with this data.



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Naples Seawalls Project Update

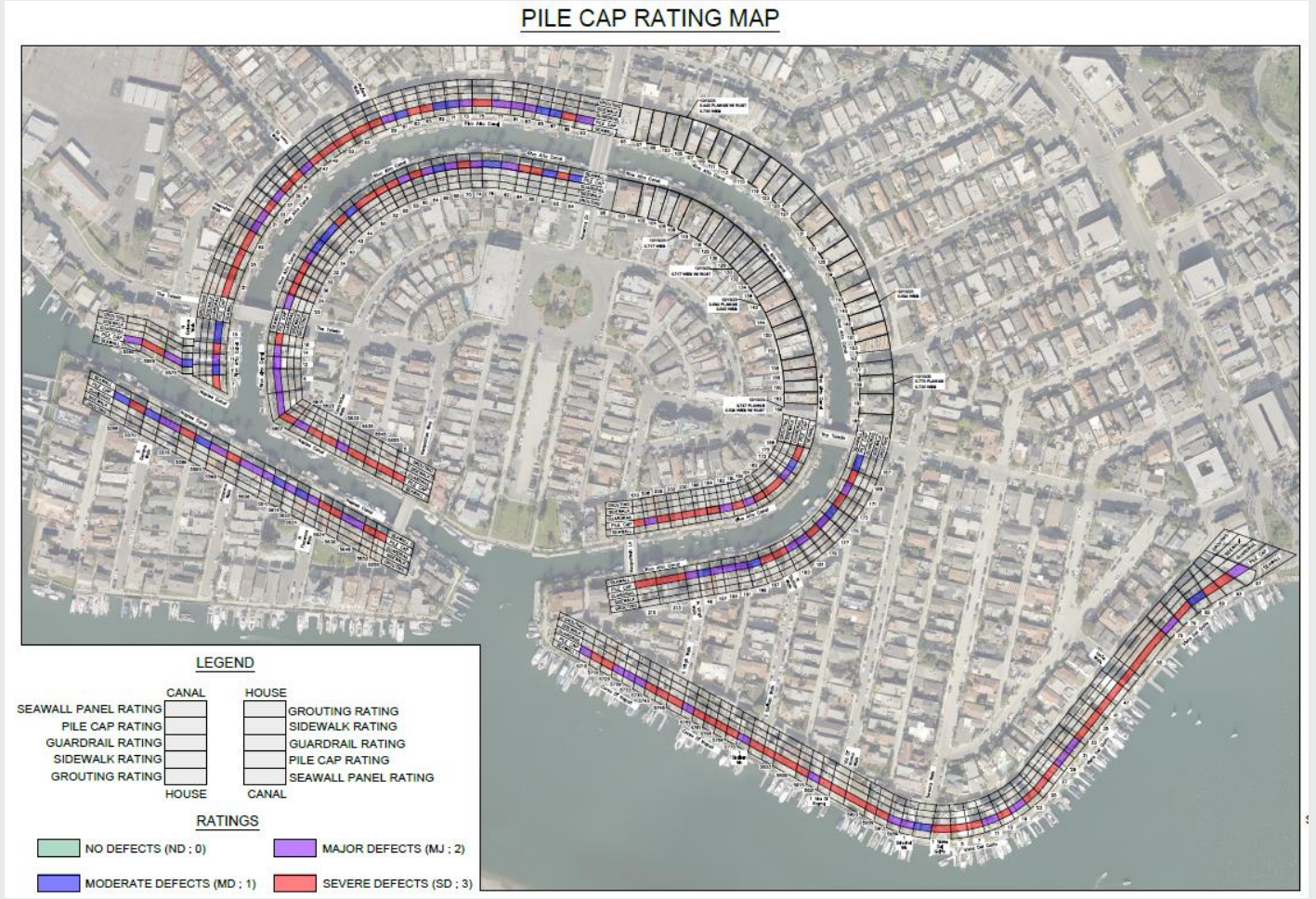
Overall Summary of Findings

- The 2024 Tetra Tech Report recommends a full replacement of the Naples Seawalls.
- The seawalls are stable under static load, but at risk during a seismic event as they were not designed to current seismic codes or standards.
- The pile caps have worsened as evidenced by large longitudinal spalls and cracking along the outer caps.
- The quantity and severity of voids behind the seawall panels have increased due to missing grout beads between tongue-and-groove paneling.
    - Over time, this has resulted in water intrusion and soil loss behind the walls.

Naples Seawalls Project Update

Other Report Findings- Panel & Pile Cap

- The remaining unimproved seawall panels (see Slide 7 for graphic) have, on average, a 0-to-1 rating, showing NO to MODERATE DEFECTS with a limited number in MAJOR or SEVERE DEFECT conditions.
- The remaining unimproved pile caps (see image to the right) show on average, MODERATE to SEVERE DEFECT conditions of pile caps in the remaining Phase 4-6 areas.

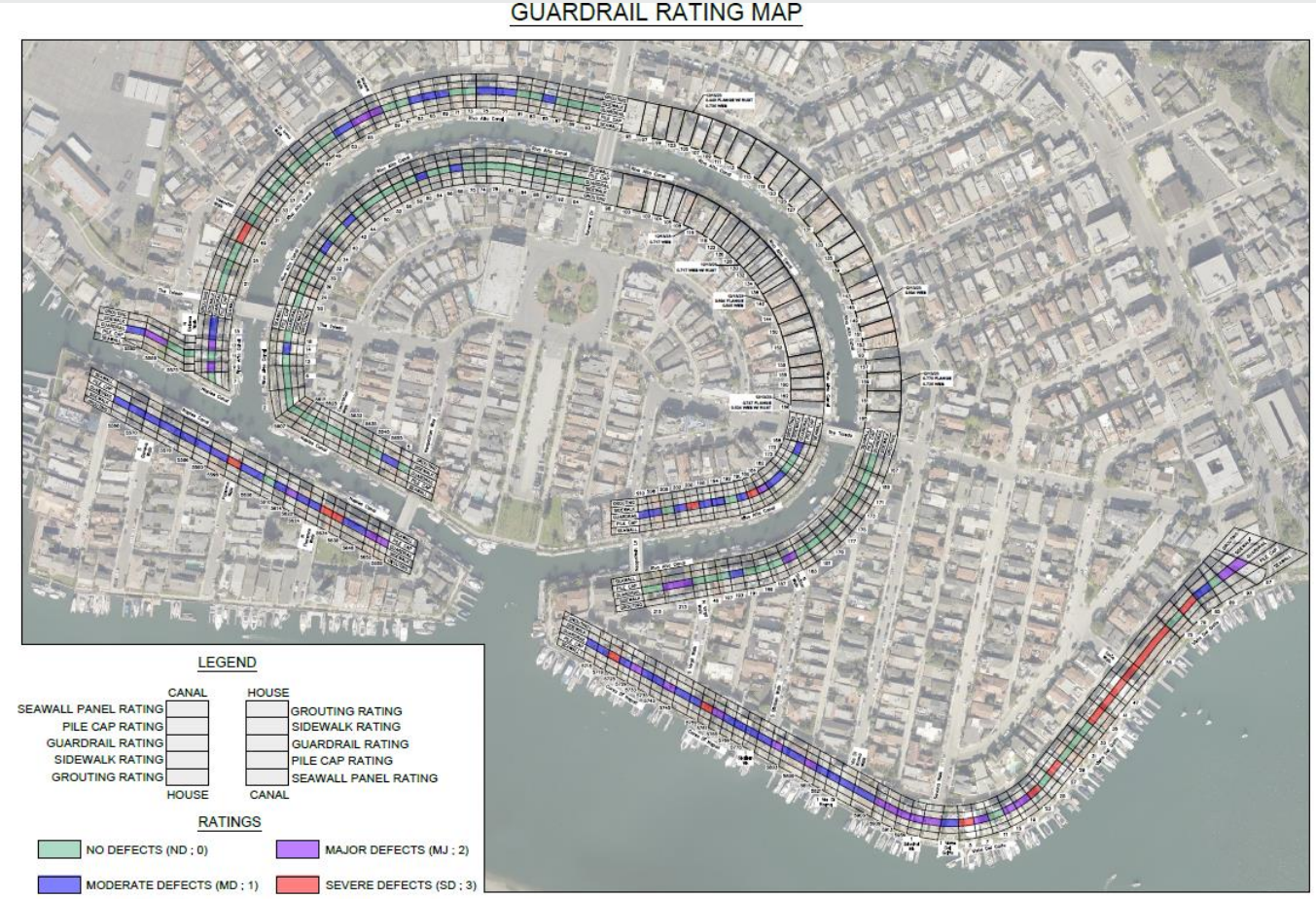


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Naples Seawalls Project Update

Other Report Findings-Guardrail

- The remaining unimproved guardrails have, on average, a 0-to-1 rating, showing NO to MODERATE DEFECTS with a limited number in MAJOR or SEVERE DEFECT conditions.

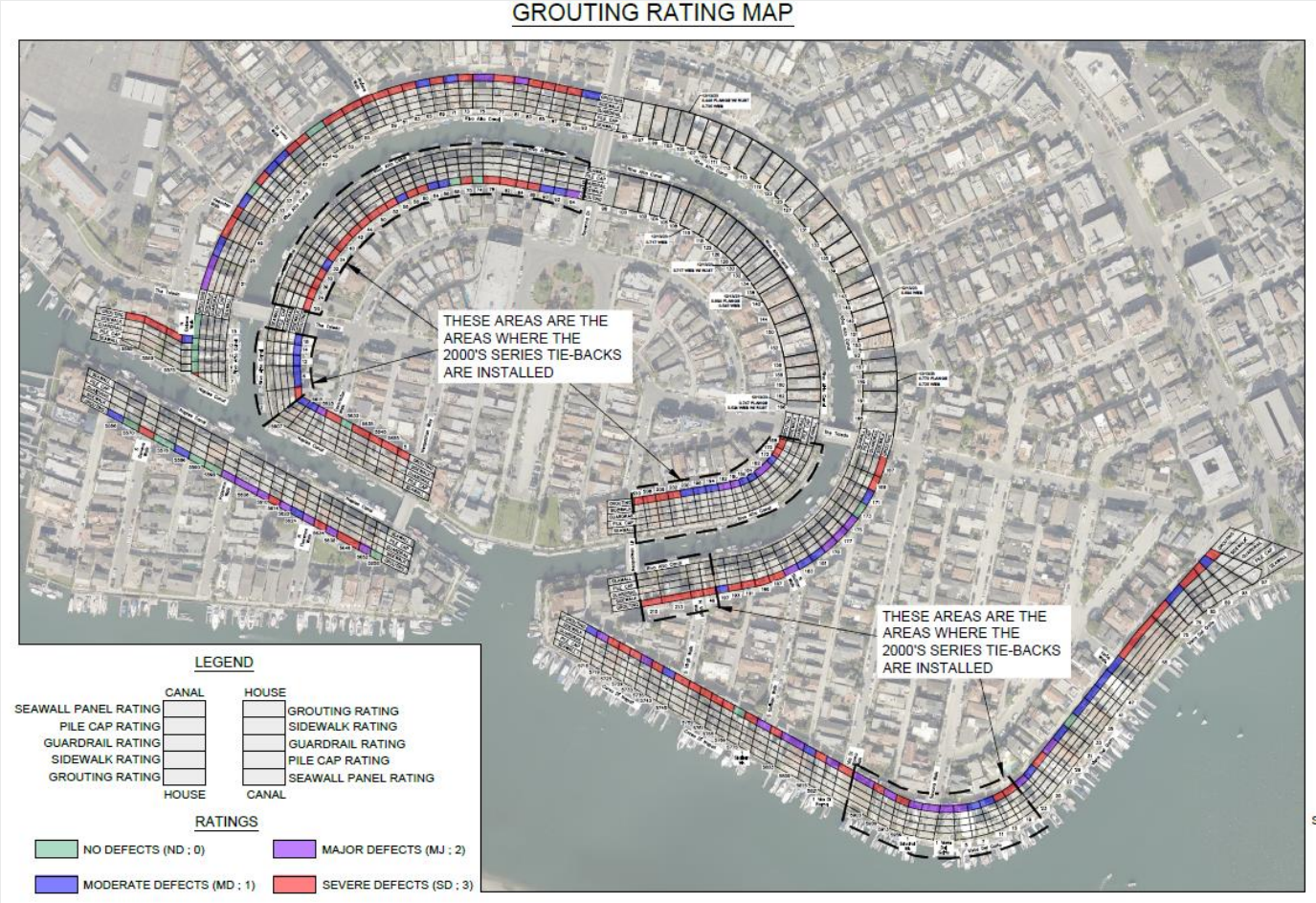


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Naples Seawalls Project Update

Other Report Findings-Grouting

- The grouting rating map represents soil loss (grouting) in the area and shows on average MAJOR and SEVERE defects in the soil conditions behind the wall and beneath the right-of-way
- While soil loss repair is recommended, the report indicates:
  - *"These grouting efforts marginally contribute to the wall stability of the seawall system, but the increase to stability is difficult to quantify."*



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Naples Seawalls Project Update

Summary of City's Recommendation

- Full replacement of Naples Seawalls in the same sequence established in 2009.
- Begin Planning & Design of the Northwest Quadrant (Phase 3 area)
- Install tiebacks along the last remaining convex geometry walls without tiebacks (11 to 29 VdG - Phase 6 area)

Current Funding Available

- Along with funding the 2024 Conditions Assessment/Inspections Report Update, City Council approved a funding set-aside over the last (3) fiscal years to begin Phase 3 Planning and Design upon the completion of the 2024 Report
- Partial funding has been set aside for planning and design of proposed tiebacks

Naples Seawalls Project Update

Primary Recommendation and Priority Repairs (As recommended by 2024 Tetra Tech Report)

- Primary Recommendation:
  - Full replacement of seawalls, continuing with Phase 3
- *Priority Repair* #1 - Install tiebacks
  - Proposed in remaining locations, which have convex-geometry (11 to 29 VdG – Phase 6 area) and perform pile cap repairs in severe defect areas



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Naples Seawalls Project Update

Primary Recommendation and Priority Repairs (As recommended by 2024 Tetra Tech Report)

- *Priority Repair* #2 – Perform street end repairs, install new catch basins, drainage pipe, valve, and repair sidewalks.
  - Identified locations – 5 street end repairs have been completed. 10 street end repairs remaining:
    - **Phase 6 Area:** Virgil Walk
    - **Phase 5 Areas:** North Virgil Walk, North Sicilian Walk
    - **Phase 4 Areas:** Corinthian Walk, South Geneva Walk, Palermo Walk, Florence Walk
    - **Phase 3 Areas:** Riviera Walk, St. Irmo and Vesuvian

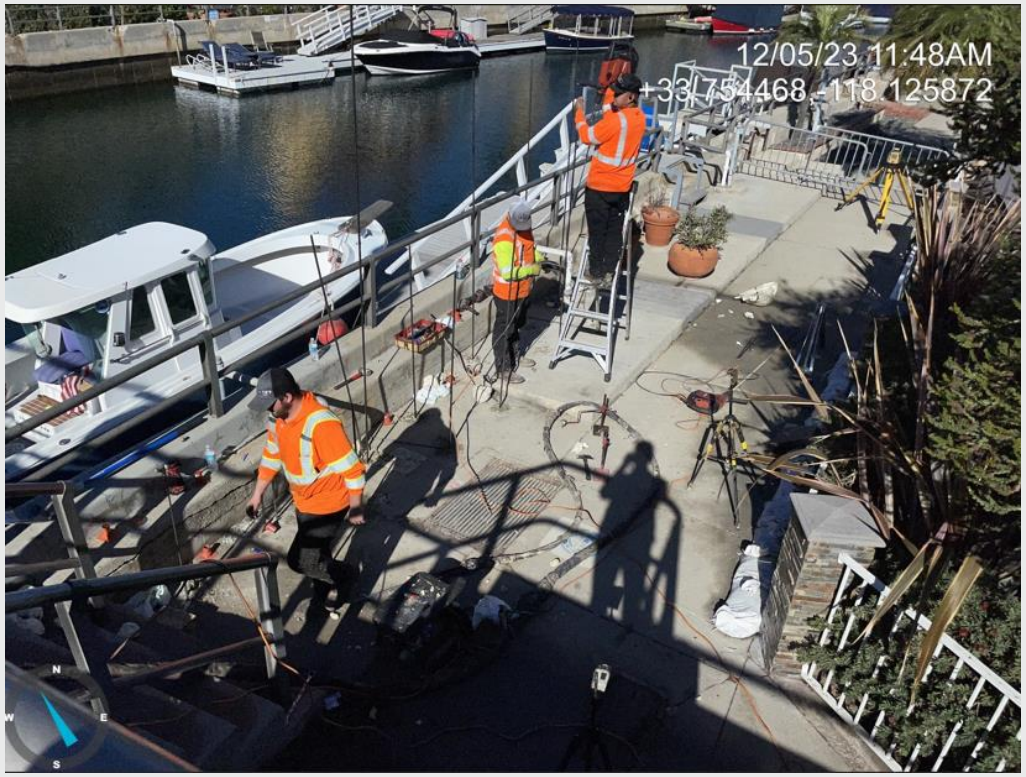


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Naples Seawalls Project Update

Primary Recommendation and Priority Repairs (As recommended by 2024 Report)

- Priority Repair #3 – Seawall cap repairs
  - Prioritize cap repairs in the Bayfront (Ph 6), followed by Naples Canal (Ph 4), the Southwest Quadrant (Ph 5) and then the Northwest Quadrant (Ph 3)
- Priority Repair #4 – Address Soil Loss through Grouting Repairs
  - Prioritize areas with a rating score of 3 or higher (severe) as identified in the report



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Naples Seawalls Project Update – Work Completed to Date

Replacement Phases, Mitigation, and Monitoring

- Completed both Phase 1 and Phase 2 Seawalls Replacement
- Established mitigation program at Colorado Lagoon for required soft-bottom subtidal for all six phases; and partial eelgrass mitigation with on-going monitoring



Figure 4-7. Eelgrass Cover mapped in Naples Seawall Shallow Subtidal Mitigation area in 2024.

On-going monitoring and reporting of established mitigation for Naples Seawalls



Naples Phase 1



Naples Phase 2

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Naples Seawalls Project Update – Work Completed to Date

Recent Repairs

- Completed street-end and catch basin repairs at five locations
- Pile cap, sidewalk, and compaction or chemical grouting repairs conducted in prior years.



Sicilian Walk Street Ends (2024)



Savona Walk Street Ends (2024)


Rivo Alto Cap (2018)

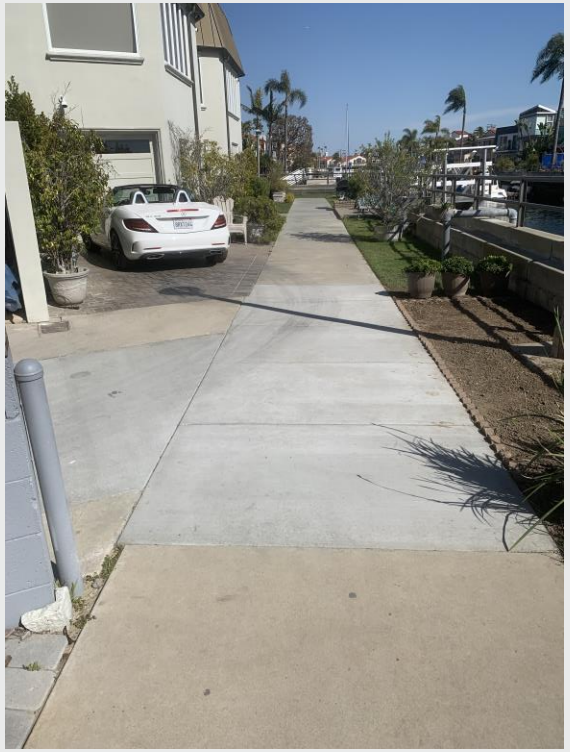
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Naples Seawalls Project Update – Work Completed to Date

Recent Repairs



Rivo Alto Sidewalk/Drain (2023)





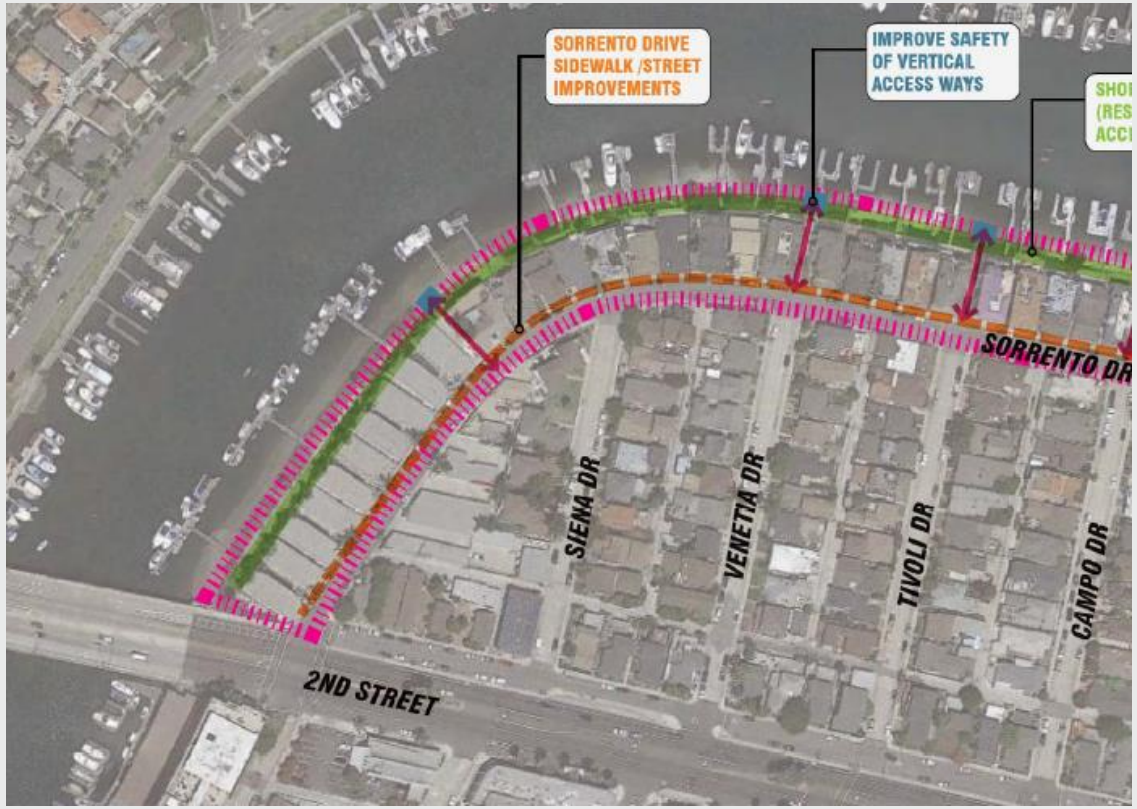
Rivo Alto Storm Drains (Jan 2023)

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Naples Seawalls Project Update

Agency Requirement at Sorrento Trail

- Each Phase of the Naples Seawalls is tied to completion of improvements at Sorrento.
- Coastal Development Permit No. 5-11-085-A1 requires Segment One of the Sorrento Shoreline Trail to be constructed *prior* to the submittal of the Phase 3 Seawalls CDP application.
- Segment Two of Sorrento must be completed prior to the submittal of the Phase 4 Seawalls CDP Application, and so forth.
- [Copies of Naples Seawalls permits can be found on the Phase 1 and Phase 2 Project pages]
- To date, completed preliminary design & received Local Coastal Development Permit.



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Naples Seawalls Project Update - Funding Considerations

Funding Approved Across Multiple Budget Years

Fiscal Years	Projects	Allocated Amounts
Prior FY11	Phase 1 - Replacement Northeast Quadrant	14.0M
FY12-FY16	Establishment of Mitigation Program at Colorado Lagoon	2.0M
FY12-19	Phase 2 - Replacement Treasure Island/Colonnade/Canal Entrance	18.0M
FY14	Sorrento Drive and Walkway	900K
FY20	Maintenance - Cap Repairs and Grouting (Various)	215K
FY22 & FY23	Maintenance - Street End and Grouting Repairs (Various)	700K
FY23, FY24 & FY25	Seawalls Inspections Report and Phase 3 - Replacement Northwest Quadrant Planning & Design	1.75M
FY24	Maintenance - Tiebacks and Cap Repairs (Vista del Golfo)	750K
Annual	Annual Agency Required Mitigation Monitoring & Reporting for Naples	510K
	Approximate Total Funds Approved to Date	**$ 38.8M**

Naples Seawalls Project Update - Funding Considerations

Remaining Work - Rough Order Magnitude Cost Estimates

ROM Seawall Replacement Costs & Special Conditions	ROM Cost
Phase 3 - Replacement Northwest Quadrant	32.2M
Phase 4 - Naples Canal	32.8M
Phase 5 - Southeast Quadrant	18.0M
Phase 6 – Bayfront	28.9M
Street End Repair	1.1M
CCC Special Conditions (Trail, Street, Sidewalks, Utilities, Regulatory Coordination)	12.0M
Approximate Total	**$ 125.0M***
**2022-2025 Market Adjustment Factor Used*	

Naples Seawalls Project Update - Funding Considerations

Funding Options and Constraints

Local Tidelands Funds

- Funded earlier improvements to the Tidelands areas and Naples Phase 1 and 2 Seawalls
- Fund is expected to be severely impacted due to SB1137 – Restrictions on Oil Drilling – (see Auditor's Report)

Infrastructure Grants at State and Federal levels

- Competitive process and smaller amounts available at the State level
- Grants focus on transportation, climate, energy and the environment, and broadband

Updated Citywide Infrastructure Package and Debt Issuance (2/3 Vote)

- Naples could be incorporated into a standalone or larger investment package if Mayor and City Council express interest and support
- Based on November 2024 election, local infrastructure bond still requires supermajority vote

Naples Seawalls Project Update - Funding Considerations

Funding Options and Constraints

Establishment of a Benefit District by Residents

- Optional - establishment of a local assessment district by residents to expedite delivery of seawalls projects

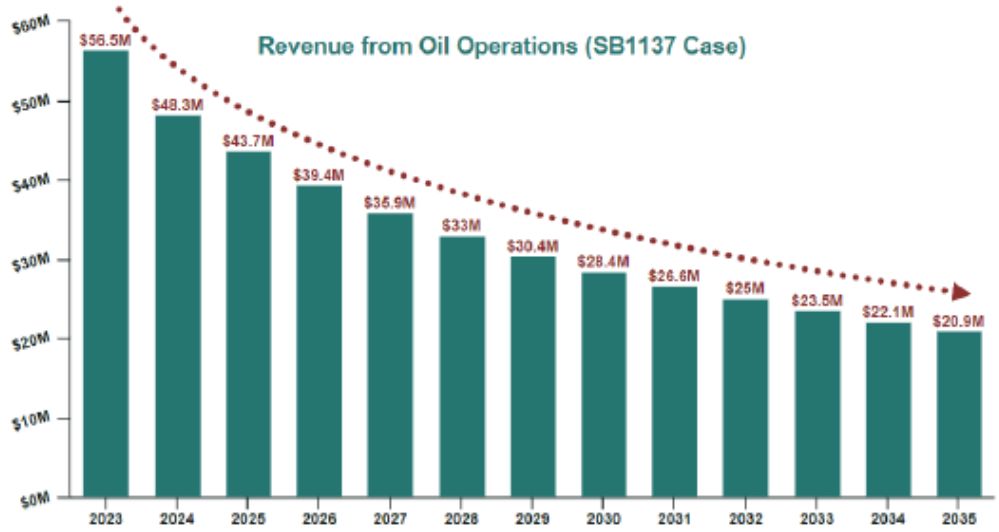
Measure A

- Policy decision by Mayor and City Council for the use of any potential, excess revenues beyond those necessary to fund Elevate ‘28 Infrastructure and Investment Plan

Naples Seawalls Project Update - Funding Considerations

City Auditor Report – June 2024

- Auditor's Office prepared a review of Economic Impacts to the City of Long Beach associated with California's Anticipated Transition Away from Crude Oil and Natural Gas Production
- The report finds the City is projecting a $301M total decrease in oil revenue by 2035 due to production decline and SB1137
- The report shows revenue deficits beginning in FY2024, while City is obligated to fund its share of oil-abandonment



Year	SB1137 Case Using 2023 Baseline Revenue	
	Annual Deficit	Cumulative Revenue Deficit
2024	$ (8,269,280)	$ (8,269,280)
2025	$ (12,834,439)	$ (21,103,719)
2026	$ (17,178,647)	$ (38,282,366)
2027	$ (20,692,330)	$ (58,974,696)
2028	$ (23,532,248)	$ (82,506,944)
2029	$ (26,120,920)	$ (108,627,864)
2030	$ (28,190,813)	$ (136,818,678)
2031	$ (29,900,654)	$ (166,719,332)
2032	$ (31,500,210)	$ (198,219,542)
2033	$ (33,092,920)	$ (231,312,462)
2034	$ (34,467,859)	$ (265,780,321)
2035	$ (35,633,883)	**$ (301,414,204)**

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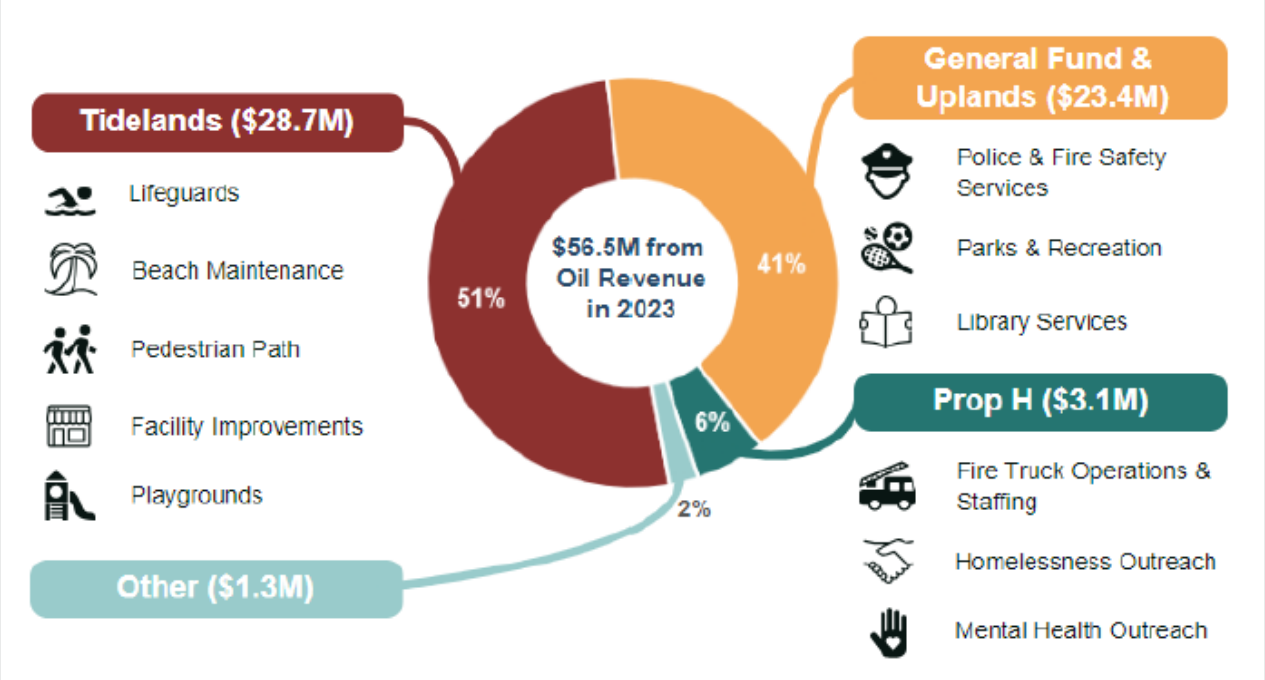
Naples Seawalls Project Update - Funding Considerations

City Auditor Report – June 2024

- Auditor's Office Report concluded with the declining trend in oil production, the City must develop and execute alternative strategies and opportunities over the next decade to bridge the anticipated $301M revenue shortfall.

The Auditor's report concludes:

- "…the City needs to plan accordingly as the revenue shortfall will significantly impact funding for capital projects, public safety operations, and all other essential City services that residents rely upon."



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Naples Seawalls Project Update - Funding Considerations and Elevate '28 Infrastructure & Investment Plan

- The Elevate '28 Plan includes over 180 projects, in addition to various right-of-way improvements, totaling **$933 million** spread across eight funding categories:
  - 2028 Olympic Legacy: **$210,527,918**
  - Community & Cultural Investments: **$17,000,000**
  - Gold Medal Park Refresh Projects: **$61,915,000**
  - Mobility & Safety Improvements: **$422,594,818**
  - Park Improvements: **$44,065,244**
  - Public Facilities: **$50,115,000**
  - Right-of-Way / Water Quality / Climate Action and Adaption Plan: **$107,450,000**
  - Critical Facilities and Grant Match Funding Reserve and Other Critical Needs: **$19,100,241**
- The 5-year Infrastructure and Investment Plan will be repaid through 30 years of anticipated Measure A revenues.

Naples Seawalls Project Update

Next Steps

- Share and discuss the findings from the updated report (Today's meeting)
- Prepare engineering and design of Priority Repair #1 – Tiebacks and Cap Repairs at Phase 6 - $750K set aside. (Authorize scope in Dec 2024)
- Begin Phase 3 Seawall Replacement Planning, Permitting, and Design - $1.75M set aside. (Ready to assign resources and initiate project in 2025)
- Sorrento Trail Segment One design, engineering and community engagement (Ready to resume 2025)
- Establish and maintain database of reported seawall conditions from residents
- Continue to explore a variety of funding options

Thank you

Department of Public Works

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