

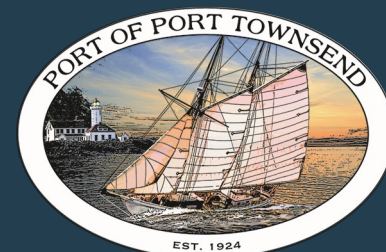


SLR Project Status

- BRICS 2023 Round – Passed
- Preliminary Design
 - Alignment
 - Cross Sections

Forthcoming: Cost Estimates

BRICS 2024 Round: On Schedule



SLR Project – Design Principles

- Complete Protection from Bluff near LST Mile 0 to Ferry Terminal
- Protection + Waterwalk – need not be congruent!
- Design height for protection varies
- Design solutions vary
- Minimize cost, environmental impacts by employing different solutions for different locations



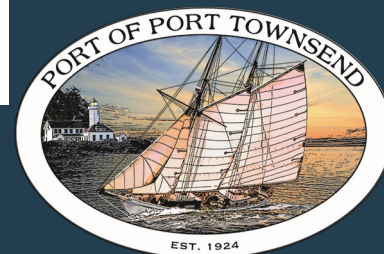
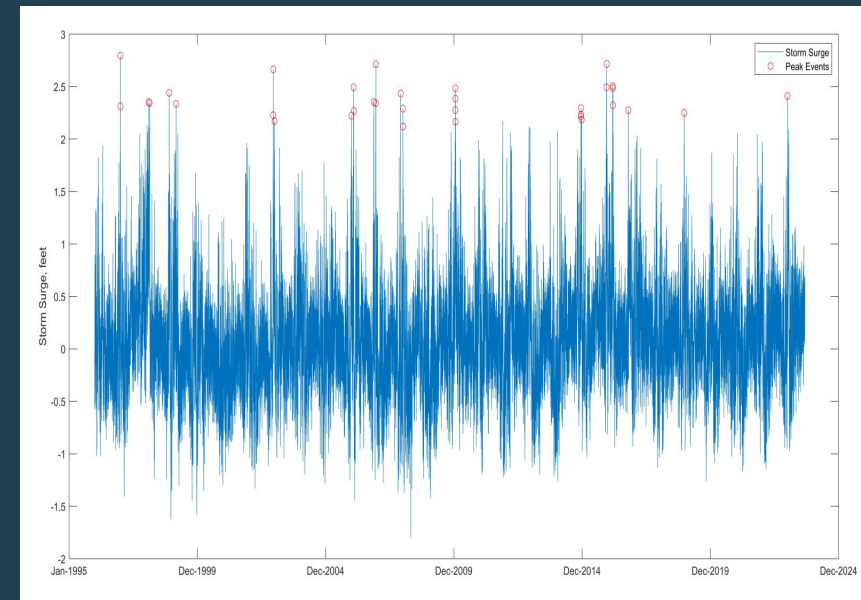
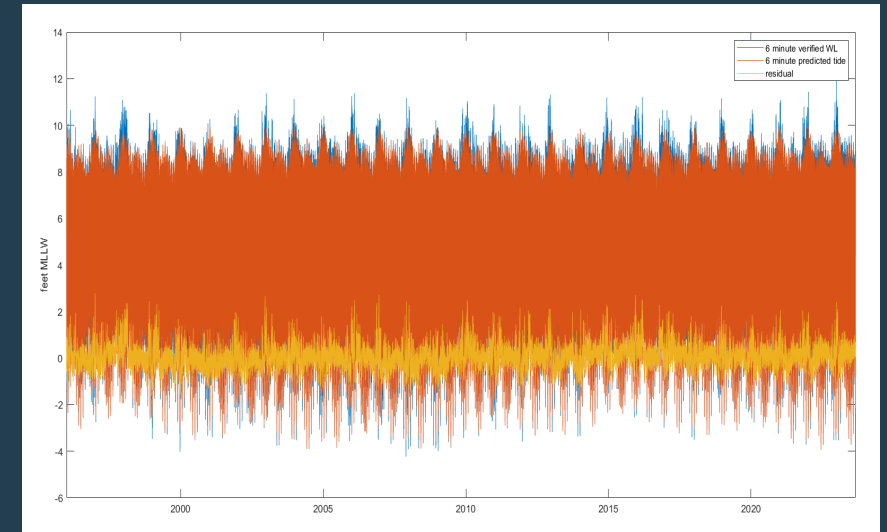
Glossary: Still Water Level

Tidal

Storm Surge

Sea Level Rise

Still Water Level = Tides + Storm + SLR



Glossary, Pt. 2: Total Water Level

Add Wave Runup to SWL

$$\text{TWL} = \text{SWL} + \text{Wave Runup}$$





Design Parameters

Design Life: 50 years (Year 2075)

Still Water Level : SWL (includes SLR)

Total Water Level : TWL

Design Elevation = TWL + Freeboard



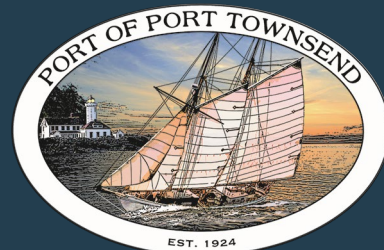
Design Parameter: SLR

RCP 8.5 (high emissions)
scenario

50% exceedance

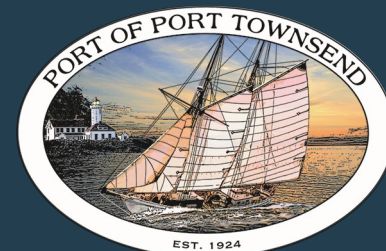
50 years - 2075

Design SLR 1.45'



Design Parameters

Wave Run-up and Total Water Level (TWL), Extreme Case								
Section / Concept	Slope	100-year Wave Ht / Period	>100 yr SWL + 50 yr SLR (ft NAVD88)	R _{2%}	Total Water Level (TWL (ft))	Overtopping (l/s/m)*	Structure Crest Height (ft NAVD88)	Freeboard (above TWL)
A	2H:1V	3.9 ft / 3.7 s	12.6	broken waves	12.6	-	13.5	0.9
B	2.5H:1V	4 ft / 3.8 s	12.6	5.5	18.1	45.0	14.5	1.9
C1	vertical	1.1 ft / 1.5 s	12.6	1.1	13.7	1.0	14.0	1.4
C2	vertical	1.1 ft / 1.5 s	12.6	broken waves	12.6	-	13.5	0.9
D	2.5H:1V	4.2 ft / 3.8 s	12.6	5.7	18.3	28.0	15.0	2.4
E	2.5H:1V	4.3 ft / 3.8 s	12.6	5.7	18.3	29.0	15.0	2.4
					*50 l/s limit for revetment & 1 l/s for vertical wall			



Why do heights vary?

Wave Action

Breakwater

Vertical walls vs. Sloped
berms





Beach!
Ecology & Wetland

Soft Edge

Boats!
Boathaven and Port

Hard Edge

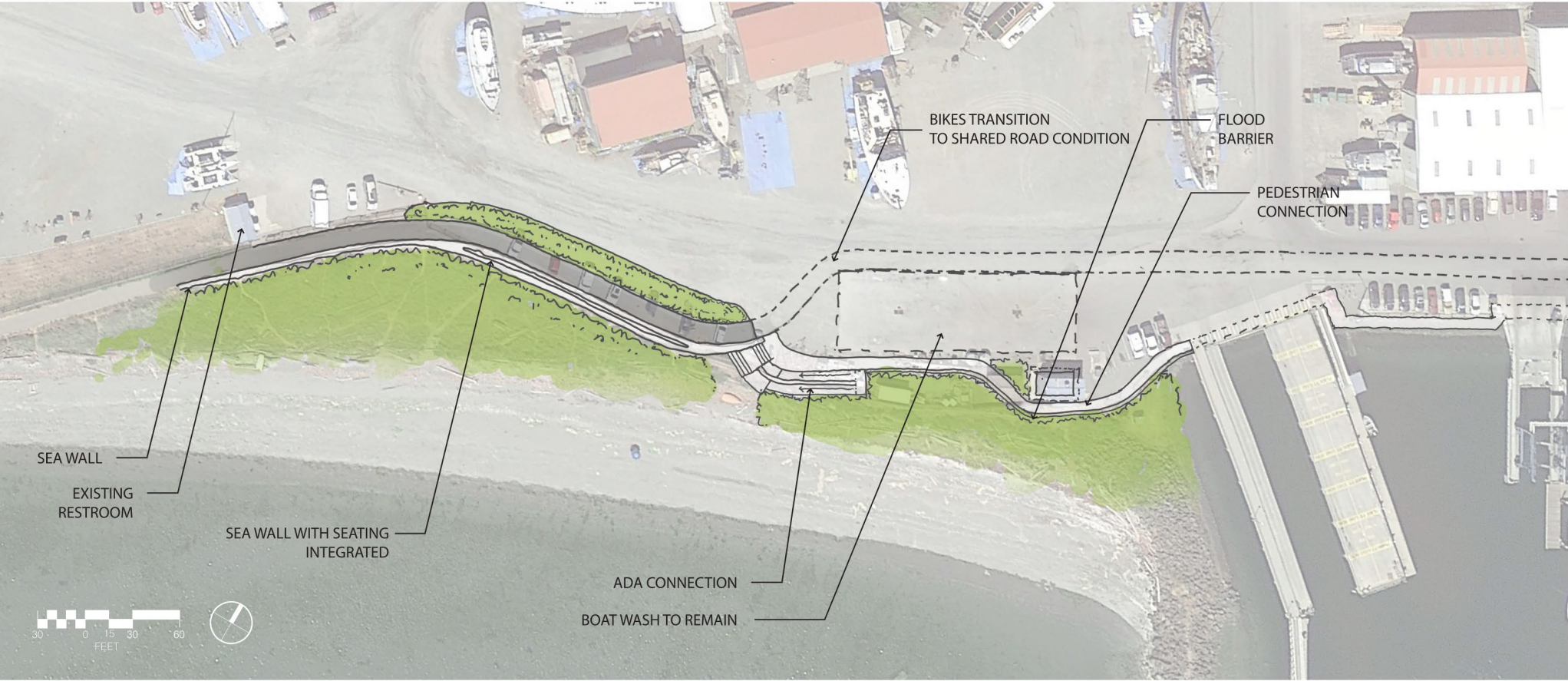
Community!
Neighborhood / Street Ends

Soft / Hard Edge

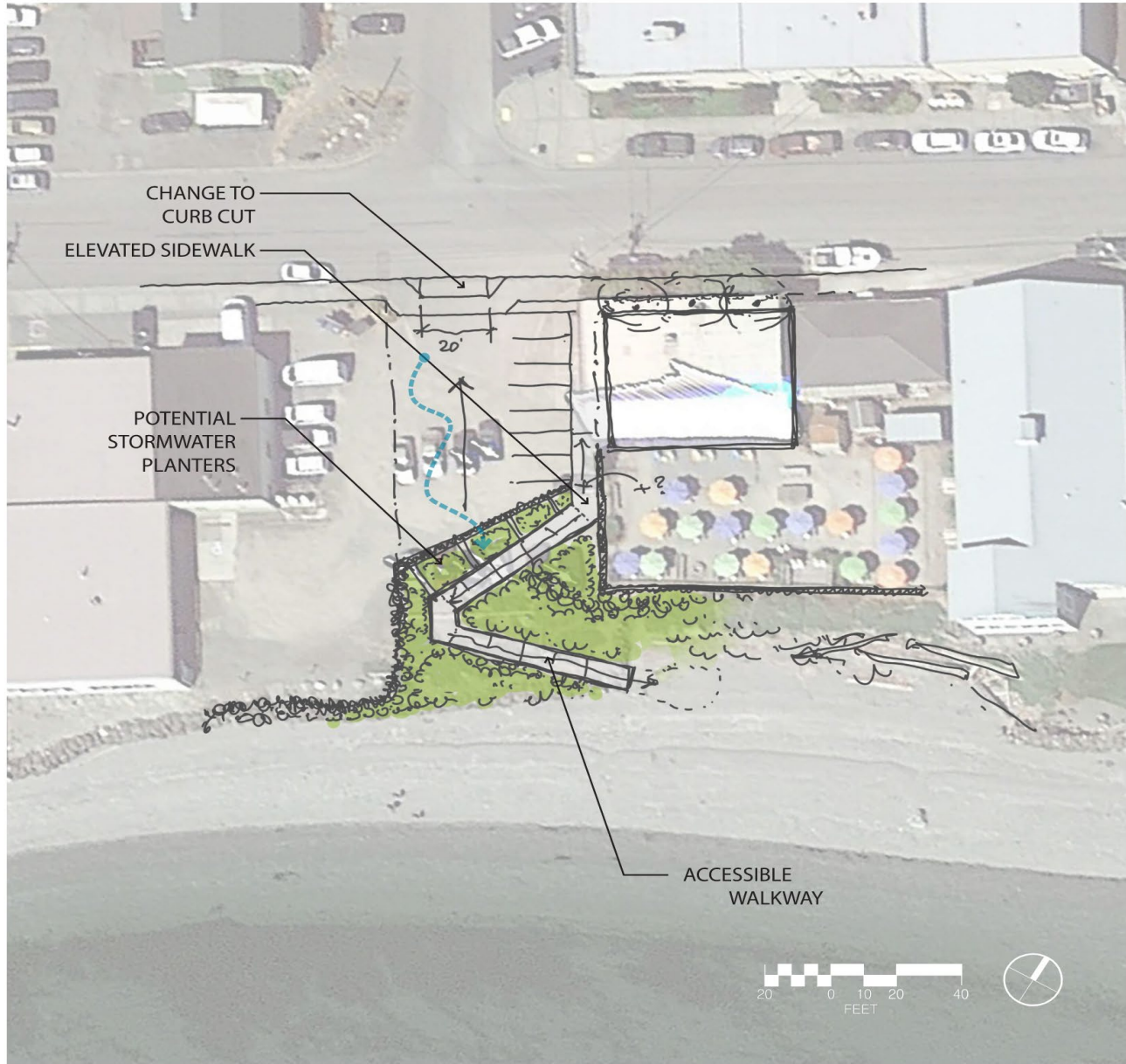
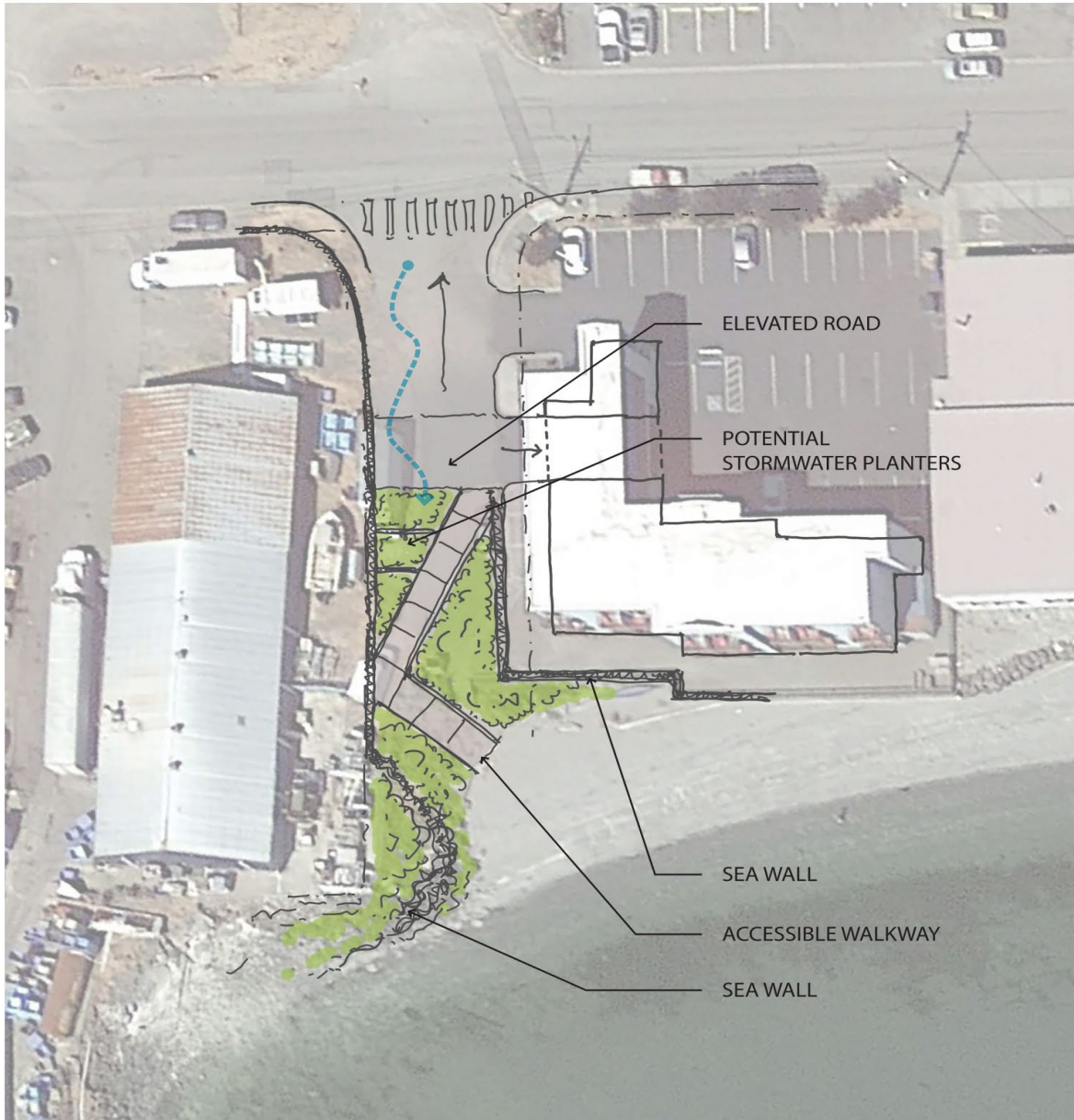


BEACH / TRAILHEAD STUDY

ALTERNATE 2 - BARRIER ON WATER SIDE

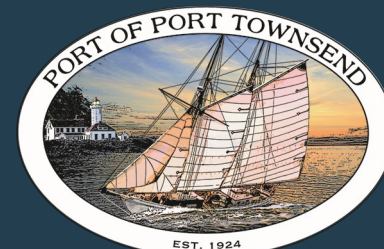
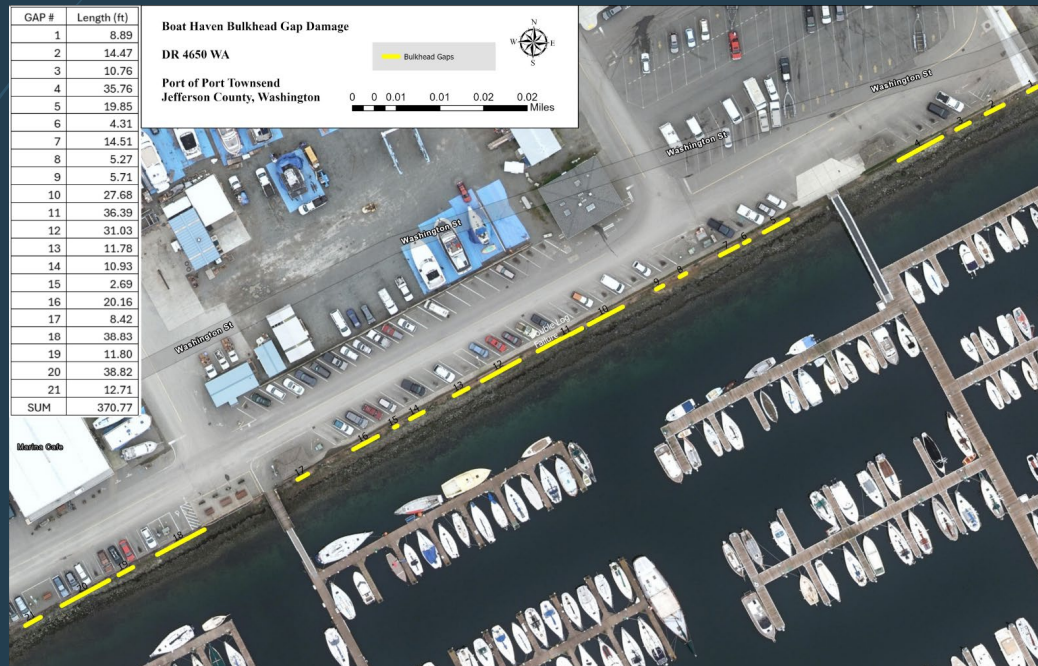


STREET END STUDIES



SLR – Nexus with Other Projects

- Bulkhead/Parking Lot Repair (FEMA PA)
- RAISE Grant PS2P
- Boatyard Stormwater



SLR – Next Steps

- Refine/Pick Alignment/X-Sections
- Cost Estimate
- Rerun BCA
- (Re)Apply for BRICS

