Rapid Coastal Assessment & Annapolis Adaptation Alternatives

Weather It Together

U.S. Army Corps of Engineers
Annapolis Shoreline ~ 16.5 Miles

- Steep natural
- Steep shallow
- Bulkhead
- Stone structure
- Living shoreline
- Marsh
- Sand beach
~ ½ Mile of Shoreline
What can you think of?
What have others done?
Adaptation Alternatives

- Raise road
- Raise parking lot
- Raise bulkhead
- New seawall
The Other 16 Miles
Adaptation Alternatives

- Floodwall, H-pile
- Levee embankment
- Timber bulkhead
- Stone sill, living shoreline
- Sector gates
Annapolis Shoreline Alternatives
Road Raising

Applicability:
A 2-foot raising of Compromise Street would help reduce the frequency of road flooding, provide a barrier between flood waters from the city dock area and properties to the west of Compromise Street and improve emergency access and egress during flood events. A 2-foot road raising would also provide some mitigation against Sea Level Rise (SLR).

Advantages:
- Provides increased access and egress during a flood/high tide
- Acts as a barrier against flooding of properties on the land side of the road

Disadvantages:
- Road elevations would need to be chased until a tie-in location can be achieved
- Existing sidewalks and businesses would need to be modified
- Limit to how high the road can be raised due to tie-ins
- May need drainage modifications and pump stations for interior drainage

Description:
For this concept, a 30-foot by 100-foot portion of Compromise Street would be raised 2 feet. The existing property entrances just off the street would be below the raised surface as seen in the Miami FL raised roads and sidewalks image above. Now transitions into those properties such as driveway adjustments, step down interfaces or possible sidewalk and building raising would be needed. To take this concept forward a detailed design with access, transitions and drainage would be needed. The road raising concept was explored for raising a section of road 2 feet high by 30 feet wide. Assumptions include demolition of existing 8” of bituminous pavement, installation of 21.5” structural fill, 6” graded aggregate base, 3” bituminous base course and 1.5” bituminous surface course.

The storm water system and other utilities would need to be modified to meet elevated drainage inlets. The current cost estimate accounts for manholes, drainage, utilities, gas & water. It does not include curb and sidewalks, transitions to private property, and other appurtenances like telephone poles or parking motors.

Additional Points:
- Thought will need to be taken on how to tie in local businesses and properties to the elevated street

Operations & Maintenance:
Asphalt streets would receive normal preventative maintenance.

Parametric Costs*:
Costs for a 2-foot road raising on a 100-foot section of road, 30 feet wide (i.e. Compromise Street)

2-foot road raising ~ $875/ft & $87,500/100ft

*Costs are general estimations of key features only

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Find, Learn & Thank

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