

ANALYSIS OF THE MERCATOR POLICY OPTIONS

***I-77 EXPRESS
LANES***

August 15, 2018

Agenda – Meeting #8

- **Introductions**
- **Review of options**
- **Secretary's update**
- **Technical review**
- **Closing**



Local Advisory Group

- **Established in December 2017 with 12 members**
 - Advise and provide input for the NCDOT Secretary
- **Seven meetings to date**
 - January 2018 through May 2018
- **Discussion topics**
 - Project history and overview
 - Mercator options and associated pros and cons
 - Member feedback
 - Additional options for consideration

Mercator Policy Options

- **Option A:** Terminate the CA and complete the express lanes project using public funding or financing as it becomes available
- **Option B:** Terminate the CA and allow CRTPO to determine whether express lanes should remain in the transportation plan or be replaced or supplemented with other improvements based on available resources
- **Option C:** Negotiate modifications to the project scope and/or the terms of the CA, such as:
 - **C-1** - Deferring or eliminating tolling of certain lanes
 - **C-2** - Reducing the financial impact on local residents by establishing frequent user discounts or toll credits
 - **C-3** - Revising the truck restrictions to allow larger vehicles that can use the express lanes safely
 - **C-4** - Encouraging greater use of new capacity by allowing HOT2+ for some period of time
 - **C-5** - Modifying the compensation provisions for unplanned revenue impacting facilities
- **Option D:** Work with CRTPO to identify and advance additional improvements to address mobility issues in the corridor
- **Option E:** Develop preliminary plans to negotiate and finance the purchase of the express lanes project after completion
- **Option F:** Complete and delete

Options Currently Under Evaluation

| Options Discussed | | Summary of Local Advisory Group Input |
|-------------------|---|---|
| Option C-1 | Negotiate contract modification - defer or eliminate tolling of certain lanes | Evaluate costs to convert to 3 GP lanes and 1 EL between exits 23 and 28. |
| Option C-2 | Negotiate contract modification - frequent user discounts or toll credits | Potential benefits and costs of discounts can be better evaluated after initial operating data is available. |
| Option C-3 | Negotiate contract modification - allow medium trucks | Consider modifications to truck restrictions based on project performance. Evaluate potential toll rates and revenue impact. |
| Option C-5 | Negotiate contract modification - change compensation provision for unplanned revenue impacting facilities | Determine what potential improvements within the airspace are desirable and feasible over next 10 years and evaluate potential compensation cost, if any. |
| Option E | Develop preliminary plans to negotiate and finance the purchase of the express lanes project after completion | Evaluate legal and financial aspects associated with assuming existing project debt and financing termination costs. |
| Option F | Complete and delete | Evaluate legal and financial aspects associated with financing termination costs and expediting regulatory approvals. |
| Option G* | Run cars on the shoulder during peak hours where opportunities exist | Identify potential locations and travel time benefits; evaluate costs and schedule. |
| Option H* | Add more capacity (non-tolled) over the causeway | Evaluate potential costs and schedule - build a third GP lane in each direction between exits 28 and 36. |
| Option I* | Maintain 3 GP lanes throughout project | Evaluate potential costs and schedule - convert to 3 GP lane and 1 EL between exits 23 and 28 and build a third GP lane in each direction between exits 28 and 36 (combination of Options C-1 and H). |

***Additional Options Suggested by LAG**

Note: Information presented here is a summary of feedback provided by LAG. These comments do not necessarily represent the opinions or policies of NCDOT or NCTA.

Based on input from the May 10, 2018 Local Advisory Group meeting, the following options are not being evaluated at this time

| Options Discussed | | Summary of Local Advisory Group Input |
|-------------------|---|--|
| Option A | Terminate the CA and complete the express lanes project using public funding or financing as it becomes available | Significant cost and schedule impacts; similar outcome can be pursued after completion of construction. |
| Option B | Terminate the CA and develop alternative through CRTPO processes | Significant cost; uncertain when alternative improvements can be identified, funded, and completed. |
| Option C-4 | Negotiate contract modification - HOT2+ for some period of time | Consider changing HOT3+ to HOT2+ based on project performance and usage. Evaluate potential toll rates and revenue impacts of this change. |
| Option D | Work with CRTPO to identify and advance additional improvements to address mobility issues in the corridor | Option is currently available and does not require NCDOT resources. |



NORTH CAROLINA

Department of Transportation



Secretary Jim Trogdon

Options Evaluated with Hypothetical STI Statewide Scores

| Option | | Estimated Cost Impacts | Hypothetical Score ⁺ |
|--------|---|-------------------------|---------------------------------|
| C-1 | Convert 1 EL to GP lane (change from 2+2 to 3+1) exit 23 to 28 and convert 1 EL to GP lane (change from 2+1 to 3+0) exit 28 to 36 | \$400M | 50-55 |
| E | Purchase the contract and keep express lanes as planned | \$392M-\$623M* | 45-50 |
| F | Purchase the contract and convert all EL to GP lane | \$540M-\$771M** | 45-50 |
| H | Add 1 GP lane (change from 2+1 to 3+1) exit 28 to 36 | \$350M-\$600M | 70-75 |
| I | Convert 1 EL to GP lane (change from 2+2 to 3+1) exit 23 to 28 and add 1 GP lane (change from 2+1 to 3+1) exit 28 to 36 | \$550M-\$800M | 70-75 |
| J | Add auxiliary lane exit 23 to 25; exit 25-28; or exit 33-35 (scored by segment) | \$40M (each segment) | 60-65 |

Note: P5.0 score for I-77 South is 89 and for I-77 North is 85.

⁺Actual score is dependent on competition against other projects and availability of funding at the time of prioritization/ranking.

*Does not include demobilization costs, breakage costs, or additional allowable costs.

**Includes \$86M of BA Payback.

Main Objective

***Ultimately, the State of North Carolina
will Operate this Facility***

How Do We Get There?

Improve, Expand and Protect

Improve

- Negotiate better terms for drivers:
 - Toll caps (option C-2-2)
 - Frequent user discounts (option C-2-1)
 - Allow medium size trucks use of express lanes capacity (option C-3)

Expand

- Work to expand non-toll capacity options being pursued
 - Harden shoulders during peak periods (option G)
 - Convert one express lane to a general purpose lane (3+1) exit 23-28 and add one general purpose lane (3+1) exit 28-36 (option I)
 - Develop and implement a process to continually evaluate contract purchase under Strategic Transportation Investments (required process to reach goal of operating facility) (option E)
 - Add auxiliary lanes exit 23-25, 25-28 and 33-35 (option J)

Protect

- Operate in an open and transparent process to ensure North Carolinians have an opportunity to participate **BEFORE** decisions are final
- Ensure options are legal and fiscally responsible
- Work on multiple solutions simultaneously until the most effective and efficient solution is completed to ensure results
- Continue to engage the I-77 Local Advisory Group regarding this plan

Constraints

- Strategic Transportation Investments (STI) Law
 - Requires projects be scored based on data and then be prioritized for funding
- State Law (2018 Budget – Senate Bill 99)
 - Requires NCDOT to report any proposed contract modifications or cancellations to the NC General Assembly at least 60 days in advance
 - Defines impacts to funding for other projects as it relates to the bonus allocation and project (corridor) cap
- Existing contract
 - New or modified construction will require design time/possible permitting
 - Contract modifications must be negotiated

Summary

- **Improve**
 - Negotiate better terms for drivers
- **Expand**
 - Work to expand non-toll capacity options being pursued
- **Protect**
 - Continue to engage the public in an open and transparent manner

TECHNICAL REVIEW

Negotiate Better Terms for Drivers

- **Frequent user discounts**

- Typically, presented as discount or credit to users who meet a given criteria
- Actual discount amount, timeframe for discount and specific criteria for potential discount are subject to negotiation with the Developer

- **Toll caps**

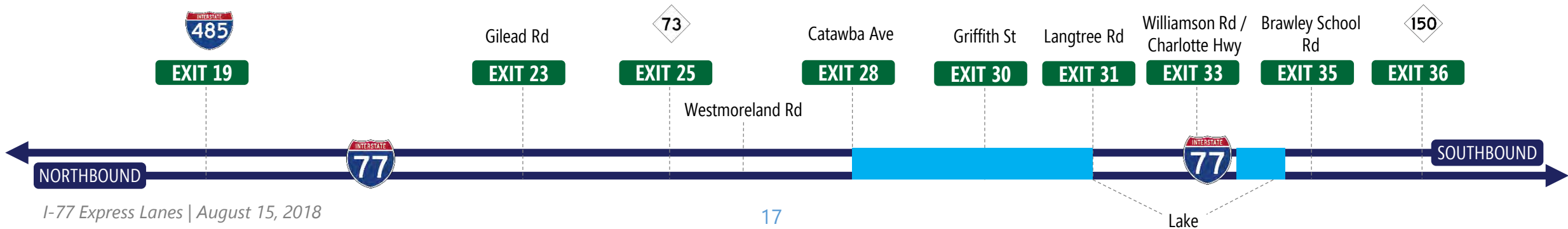
- Limits the maximum toll a user would pay to travel the corridor
- Initial toll cap and annual increase of toll cap are subject to negotiation with the Developer

- **Allow medium trucks**

- Current contract does not allow vehicles with more than two axles
- Type and length of allowed trucks as well as toll rate differential are subject to negotiation with the Developer

Option G - Hardened Shoulder: Exit 23 to Exit 35

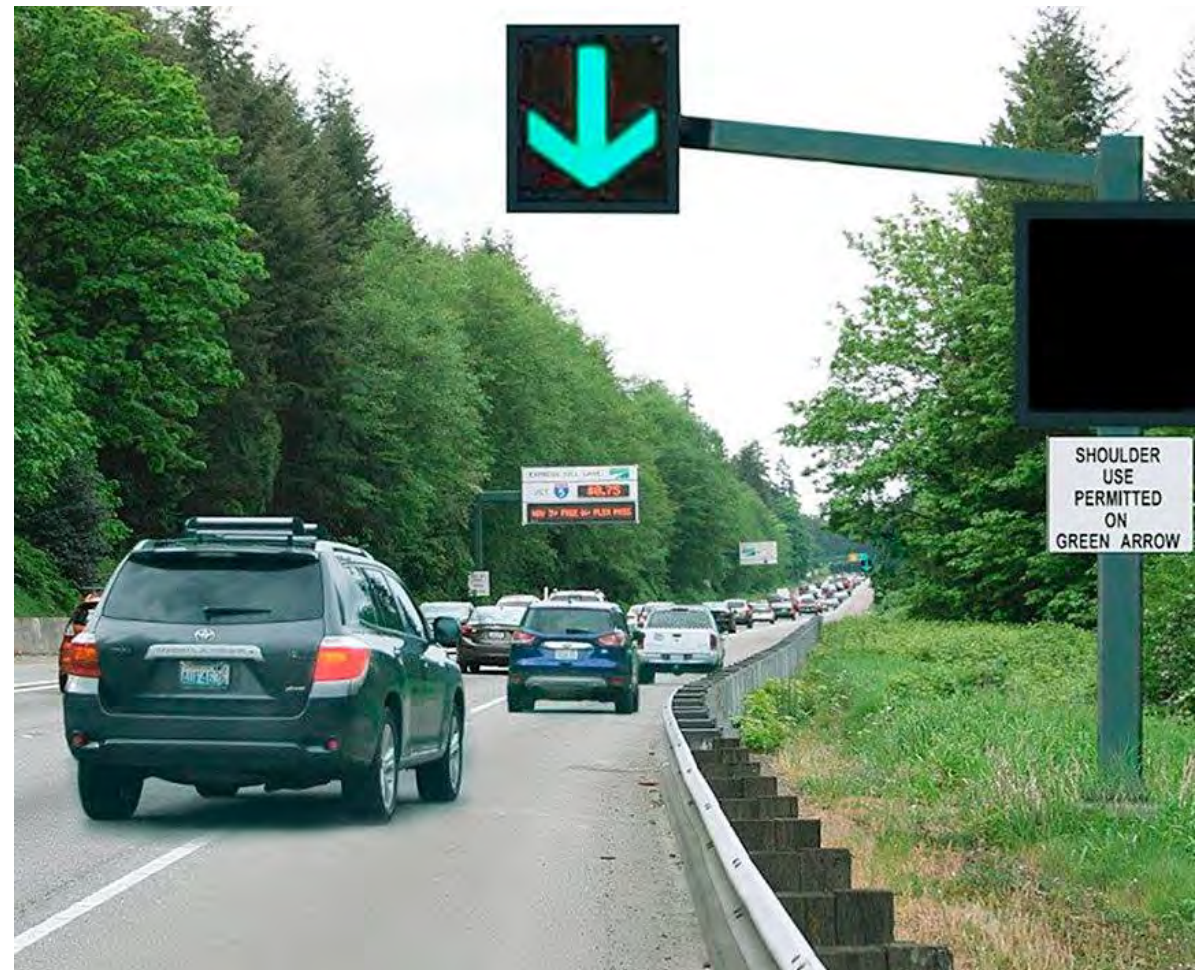
- **Harden outside shoulder for use during peak periods**
- **Intended to help local travel between interchanges**
- **Considered to be a mid-term implementation**
- **Can be implemented in phases**
- **Used in cities across US**
 - I-405 in Washington, I-66 in Virginia, etc



Hardened Shoulder: Examples



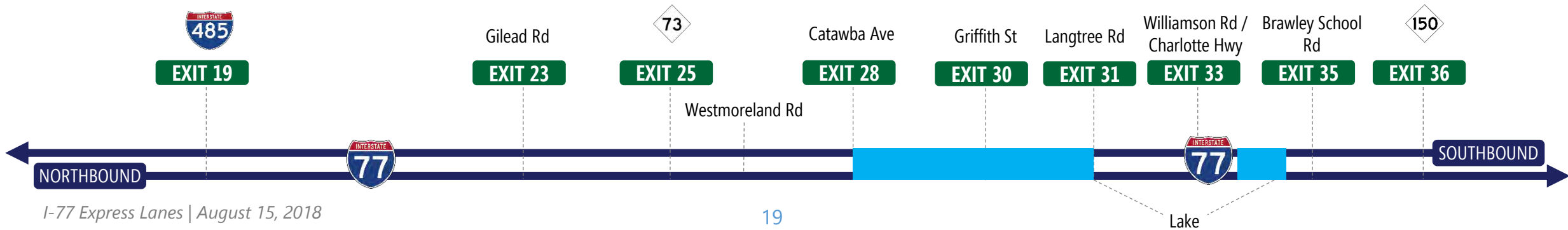
I-66, Virginia (Source: Goodman Realtors)



I-405, Washington (Source: HeraldNet)

Option I - Three GP Lanes: Exit 23 to Exit 36

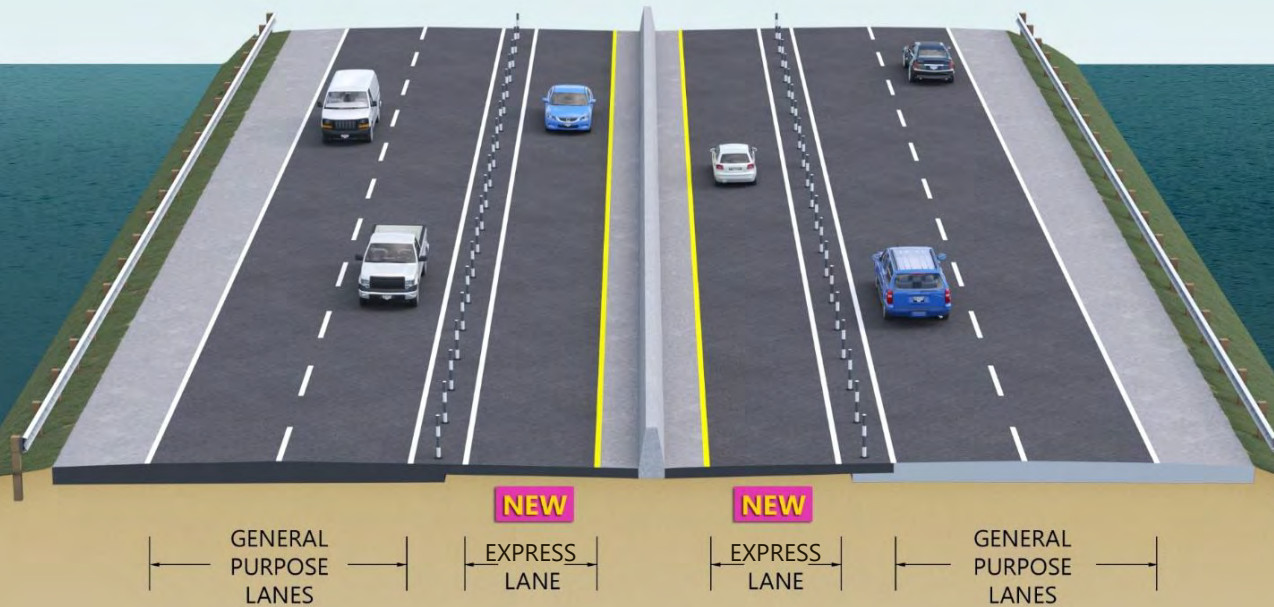
- **Considered to be a long-term implementation**
- **Convert one express lane to general purpose lane between exit 23 and 28**
- **Add a new general purpose lane between exit 28 and 36**
 - Requires Federal Energy Regulatory Commission (FERC) permit to cross the 760' elevation
 - Other environmental permits may be required



I-77 Over Causeway – As Currently Designed

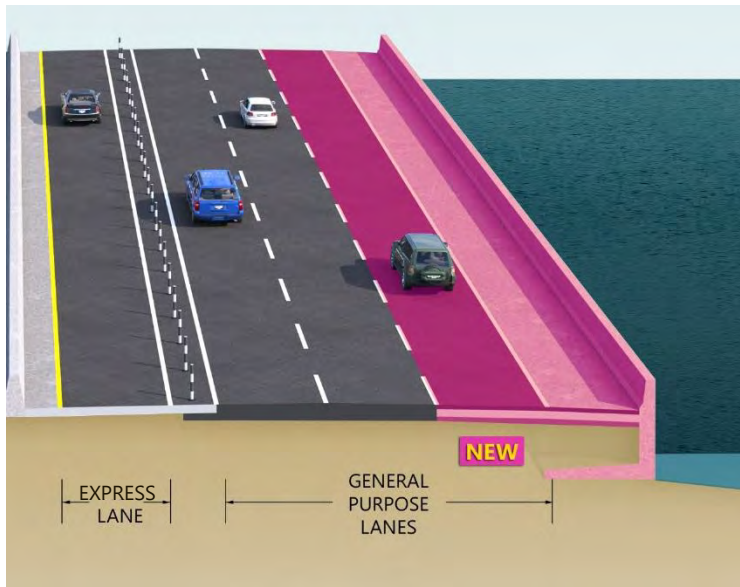
Notes:

- 2 GP lanes in each direction
- 1 new express lane in each direction
- Median barrier wall
- All work in median

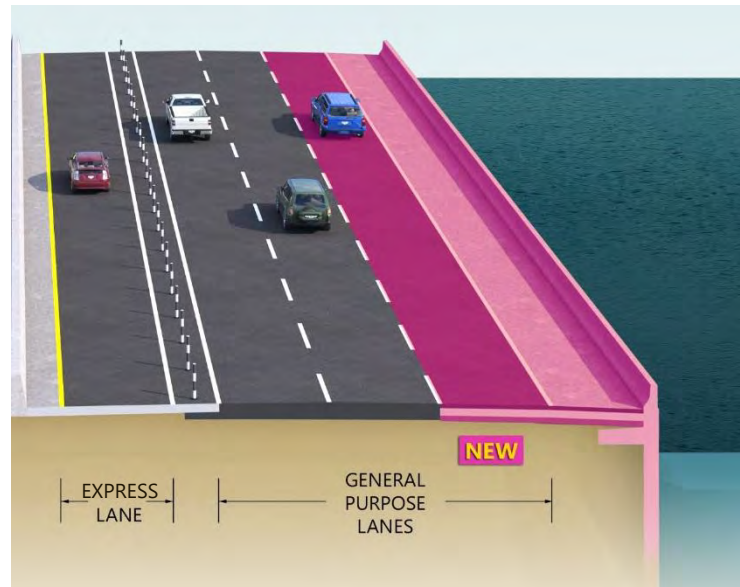


Widening Over the Causeway

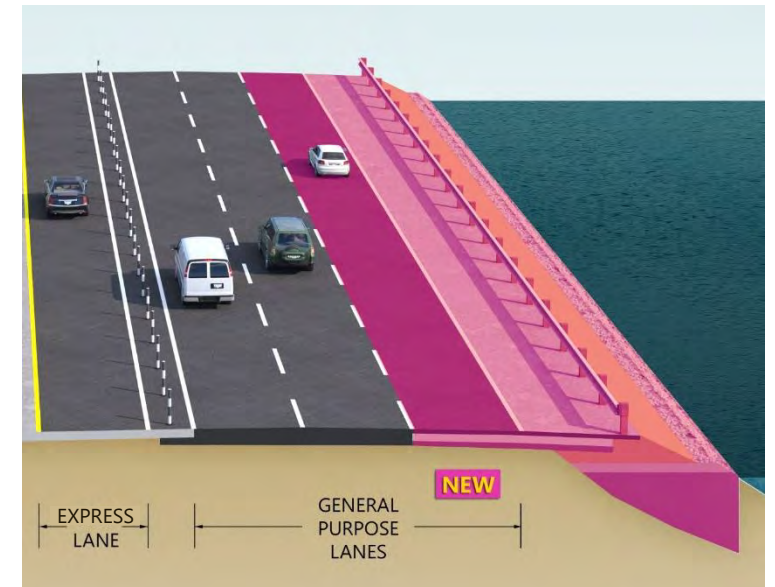
- Reviewed various possibilities to widen over the causeway including, but not limited to, the following three concepts:



Widening through moment slab



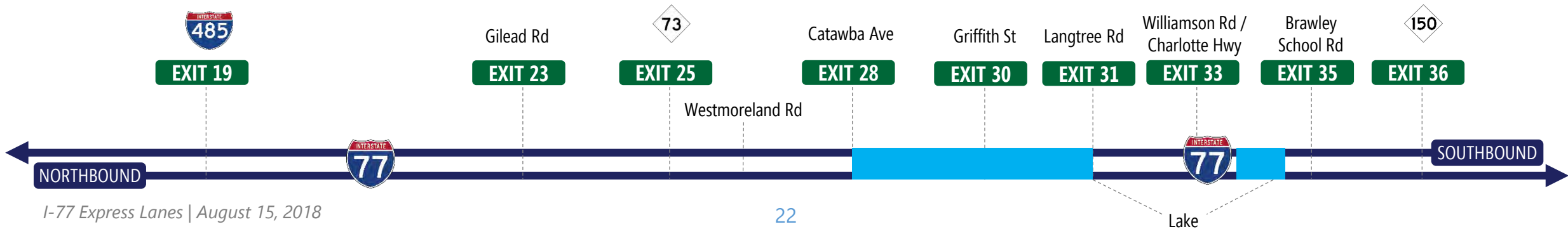
Widening through sheet piles



Widening through earthen fill

Option J - Add Auxiliary Lanes North of Exit 23

- **New option developed based on feedback from the Local Advisory Group**
- **Considered to be a long-term implementation**
- **Add auxiliary lanes where they do not exist**
 - Between exit 23 and 25
 - Between exit 25 and 28
 - Between exit 33 and 35
- **Intended to help local traffic between interchanges**



Closing

- Great participation and discussion by all Local Advisory Group members
- Today's materials will be posted on project website
- Will provide intermediate information as it becomes available
- Discuss status and updates at the next meeting
- Appreciate your continued support of the transportation needs in the region

THANK YOU!