

ANALYSIS OF THE MERCATOR POLICY OPTIONS

***I-77 EXPRESS
LANES***

February 20, 2019




Agenda – Meeting #9

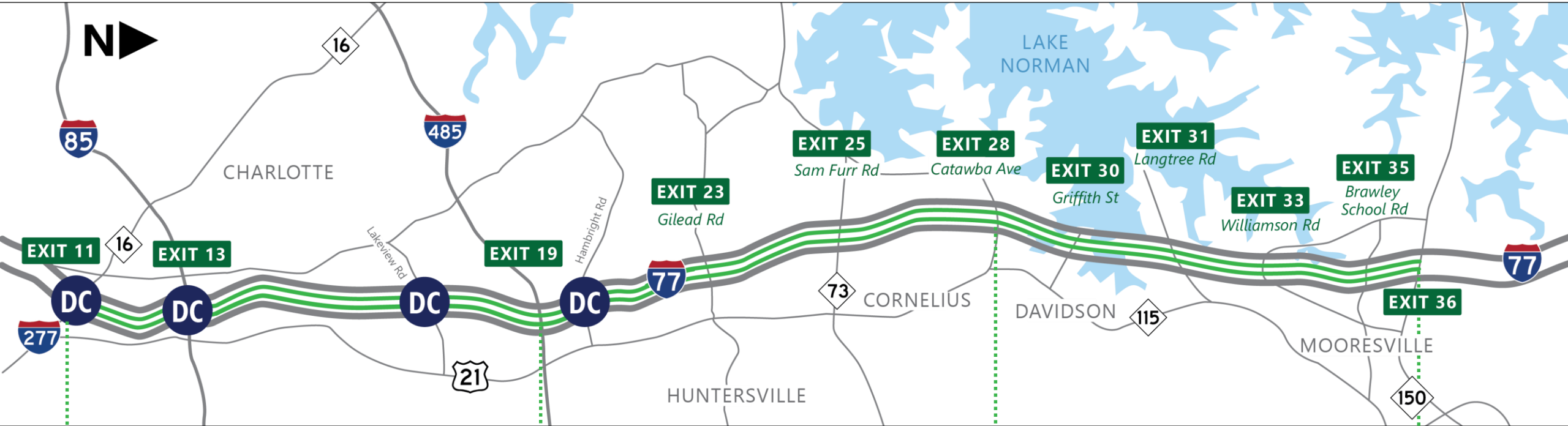
- 1. Introductions**
- 2. Project Update**
- 3. Update on Contract Improvements**
- 4. Closing**



I-77 Express Lanes Project Scope

LEGEND

-  Express Lanes
-  General Purpose Lanes
-  Direct Connector (DC)



South
(I-277 to I-485):
 2 Express Lanes +
 3-4 GP Lanes in each direction

Central
(I-485 to Catawba Avenue):
 2 Express Lanes +
 2-3 GP Lanes in each direction

North
(Catawba Avenue to NC 150):
 1 Express Lane +
 2 GP Lanes in each direction



NORTH CAROLINA

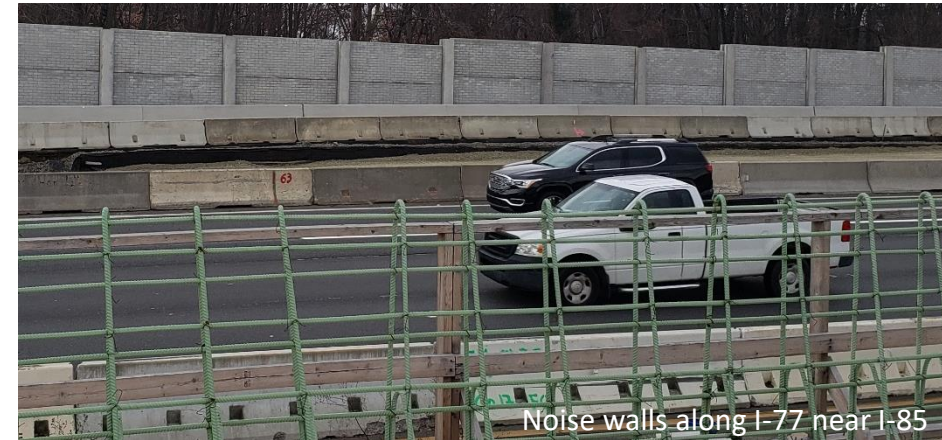
Department of Transportation



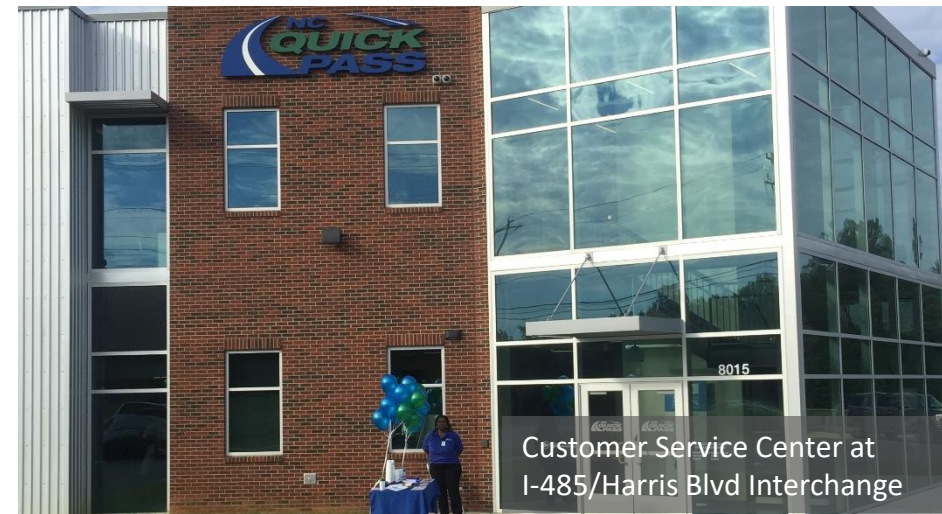
Project Update - Construction

Project Update – Construction

- Recent construction progress
 - I-277 to I-77 southbound flyover opened on February 11, 2019
 - The Turnpike Authority (NCTA) Customer Service center is open (at I-485/Harris Boulevard interchange)
 - Torrence Creek Greenway tunnel (near the I-77/Gilead Road interchange) is complete
 - Construction of I-77 tunnel at I-85 is nearly complete
 - Hambright Road bridge over I-77 is anticipated to open in spring 2019
 - All of the noise walls are currently under construction



Noise walls along I-77 near I-85



Customer Service Center at I-485/Harris Blvd Interchange

Project Update – Construction (Continued)

- Developer anticipates opening a portion of the project spring 2019
 - Approximately from I-485 to the northern limits
 - Direct connectors at Lakeview Road and Hambright Road will open later this year
- Construction activities will continue through fall 2019
 - Developer can open the rest of the project (between I-277 and I-485) upon reaching substantial completion
 - Final surfacing of the corridor will commence spring 2019
 - Final acceptance date is October 31, 2019



I-77 Express Lanes near I-85

Project Update – Construction (Continued)

- Lighting
 - Interchange lighting in the northern section should be functional by spring 2019
 - Roadway lighting between Sunset Road (exit 16) and I-277 should be functional by summer 2019
 - New lighting will be installed at the I-485 interchange
 - Since construction is ongoing, installing some lights will wait until most of the work is completed
 - I-77 includes lights from statewide LED lighting contract



Project Update – Construction (Continued)

- Flexible Delineators
 - Current delineators are in a temporary location to allow space for crews to safely pave
 - Once final paving is finished, they will be placed about two feet away from traffic, except along the causeway, where they will be about 1.5 feet back
 - Purpose is to separate the express lanes from the general purpose lanes while allowing emergency vehicles to drive over them to respond to incidents



Project Update – Construction (Continued)

- Pavement Markings and Markers
 - Long-life pavement markings and the remainder of the snow-plowable markers to be installed on final surface
 - The temporary markings have been refreshed for the majority of the project
 - Crews are updating and refreshing areas as weather conditions allow, and work areas are being evaluated for visibility several times each week



NORTH CAROLINA

Department of Transportation



Project Update - Safety and Work Zone

Project Update - Safety

- Crash statistics are compiled every quarter
- Compared to the three years prior to construction
 - Total crashes increased by 69%
- As compared to similar work zones (barriers and volumes)
 - I-40/Wade Avenue, Raleigh: total crashes increased by 57%
 - I-40 (Fortify Project), Raleigh: total crashes increased by 98%

Project Update - Work Zones

- Division 10 performs daily inspection of work zone areas and directs the Contractor to take identified corrective measures
- In addition, an outside consultant performs random work zone reviews on a monthly basis
 - This is focused on the traffic control items
 - Any discrepancies are reviewed with NCDOT WZ Traffic Control, and if appropriate Division 10 will provide direction to the Contractor
- Night-time inspections also occur twice weekly

*UPDATE ON
CONTRACT
IMPROVEMENTS*

Local Advisory Group History

- **Established in December 2017 with 12 members**
 - Advise and provide input to the NCDOT Secretary
- **This is the ninth meeting held**
 - Previous eight meetings: January 2018 through August 2018
- **Discussion topics**
 - Project history and overview
 - Mercator options and associated pros and cons
 - Member feedback
 - Additional options for consideration

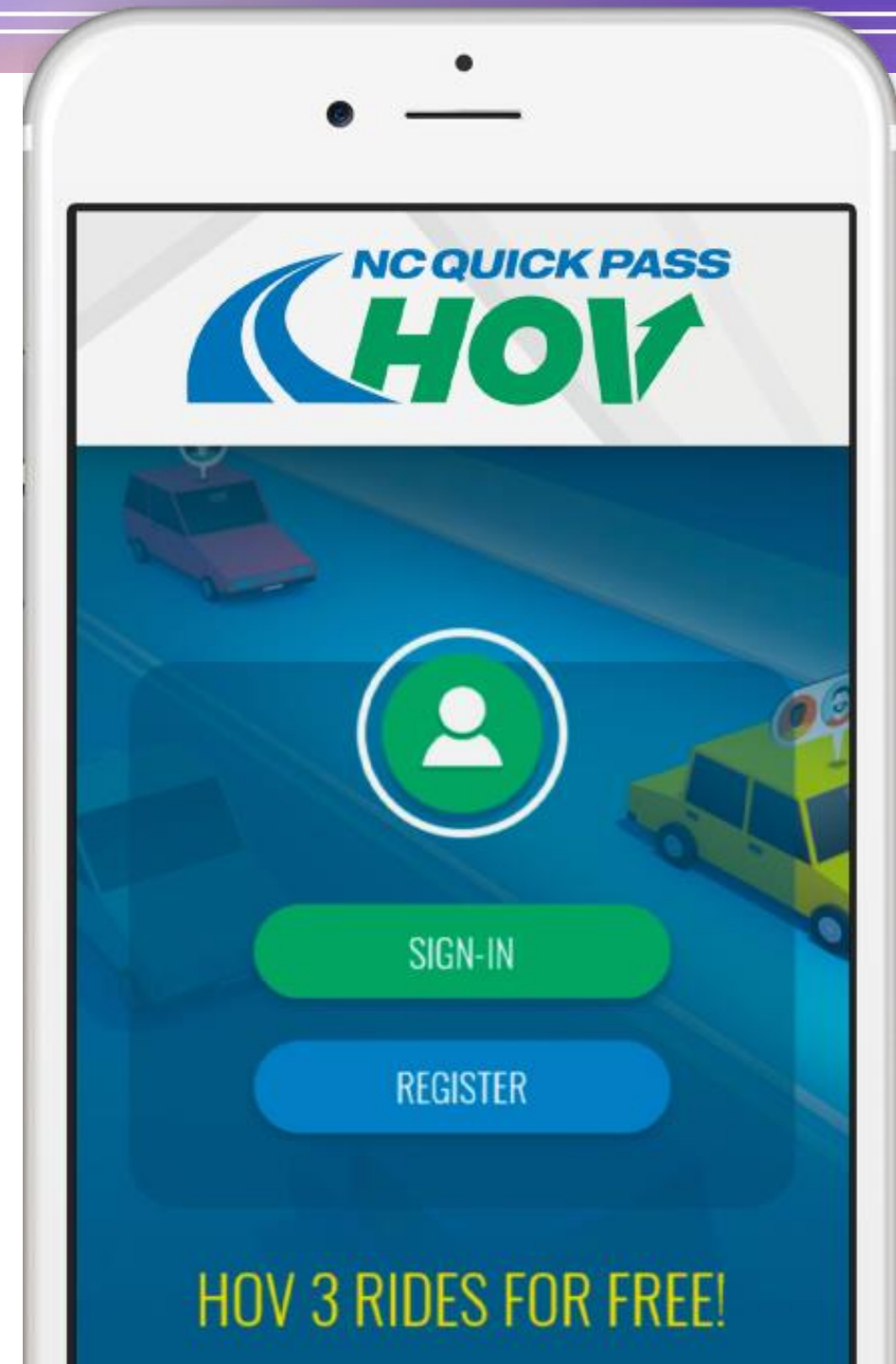
August 15, 2018 Meeting Recap

Secretary Trogdon identified a strategy to move forward based on feedback from the group and the communities

- **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

NCDOT Status – Improve Terms

- **Customer service enhancements added to the Comprehensive Agreement (CA) to date:**
 - NCTA will now handle all customer service account functions
 - NCTA will now handle all customer dispute resolutions
 - Ensures billing consistency and provides for more efficient transaction processing
 - Enables NCTA to introduce a new mobile application for drivers to set HOV status in combination with a free transponder



NCDOT Status – Improve Terms (Continued)

- **Additional enhancements to the CA that are being discussed:**
 - Increasing transparency on maximum toll rates and toll setting methodology
 - Establishing a program to allow larger vehicles to safely use the express lanes
 - Enabling NCDOT to create frequent user rebate program
 - Anticipated schedule:
 - Negotiate framework in spring 2019
 - Finalize CA revisions and anticipate submitting to the applicable Legislative Committees in summer 2019

NCDOT Status – Expand

- **Two potential improvement options being evaluated**
 - Peak Period Shoulder Lanes (near term operational improvements)
 - Add non-toll capacity (longer term improvements)

Peak Period Shoulder Lanes

- **Usage of outside shoulder during peak periods**
- **Shoulders act as auxiliary lanes to help local travel between interchanges**
- **Can be implemented in phases (one segment or group of segments at a time)**
- **Used in cities across US**
 - I-405 in Washington, I-66 in Virginia, I-85 in Georgia, etc

Peak Period Shoulder Lanes: Examples



Interstate I-66, Virginia (Source: Goodman Realtors)

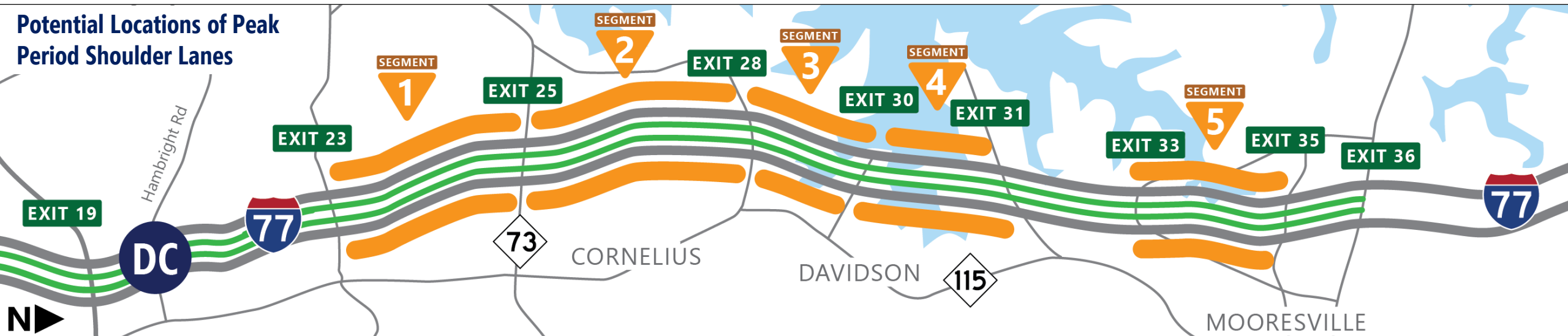
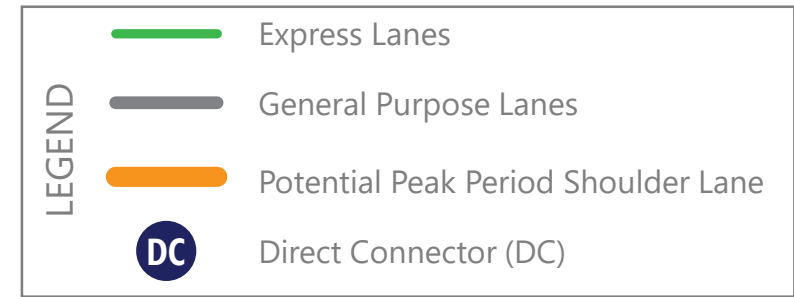


Interstate I-405, Washington (Source: Google Earth)

Peak Period Shoulder Lanes

Current status and next steps

- Initiated studies to develop preliminary designs and cost estimates
- Evaluating options to fund construction, possibly implemented in phases along the corridor
- Assessing requirements and FHWA approvals
- Expect to discuss implementation with the group this fall



Previously Identified Options

- **Add non-toll capacity**

- Convert one express lane to a general purpose lane between Gilead Road (exit 23) and Catawba Avenue (exit 28) and add one general purpose lane between Catawba Avenue (exit 28) and NC 150 (exit 36)
- Add another general purpose lane between Gilead Road (exit 23) and NC 150 (exit 36)

- **Purchase the project**

- NCTA would operate the express lanes

- **Submit these options to SPOT 6.0 for prioritization and funding**

NCDOT Status – Protect

- **Implement customer service enhancements**
- **Continue to engage this group and provide updates**
- **As the “Expand” options develop, we will engage the public and gather feedback**

Next Steps

- **Perform multi-faceted work zone safety inspections**
- **Work on “Improve Terms” and amend the CA for submission to the applicable Legislative committees**
- **Plan for another meeting in late summer/early fall 2019**
 - Discuss implementation of the Peak Period Shoulder Lanes
 - Define projects to be submitted to SPOT 6.0 for the “Expand” option
- **Present longer term “Expand” options’ prioritization scores**

THANK YOU!