COMMONWEALTH *of* VIRGINIA

Office of the

SECRETARY *of* TRANSPORTATION

VTrans Multimodal Project Pipeline

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Performance-Based Planning and Programming Cycle

- VTrans analyzes the current conditions of the transportation network and identifies key needs
- SMART SCALE evaluates specific projects to address these needs and funds cost-effective projects
  - Other programs also help fund these needs
- Transportation performance measures track progress over time and estimate future system performance based on funded projects

Multimodal Project Development Pipeline

- In 2017, CTB prioritized needs identified in the last VTrans and adopted Tier I recommendations
- In January 2018 CTB adopted a resolution requiring that VDOT's project development activities for capacity expansion projects be linked to the Tier I recommendations
- Intent was to ensure limited funds available for planning were linked to the Board adopted VTrans needs

What is the Multimodal Project Pipeline?

- Process to identify needs to study for potential future projects and strategies with planning dollars
  - Projects and strategies could be then be considered for funding in SMART SCALE, Revenue Sharing, Interstate and other programs
- Per Board policy adopted in January 2018 planning funds for enhancements to the system are focused on top VTrans needs

What is the Multimodal Project Pipeline?

- Multimodal Project Pipeline has no impact on a project's SMART SCALE score or whether a project is eligible
- It has no impact on whether a project can be considered for construction funding in any program
- It will focus planning funds on top VTrans needs
- Projects developed using performance-based planning principles have had greater success in receiving funding in past rounds of SMART SCALE

Why Establish the Multimodal Project Pipeline?

- No consistent statewide process exists today – only ad-hoc, district-by-district actions
- Formalize connection between VTrans (planning) and programming
- Optimize results of project prioritization process
  - Prioritization process is only as good as projects it considers
  - Need to re-stock the application pool with new concepts every few years

Performance-Based Planning

STARS studies procedures should be the rule not the exception to the rule

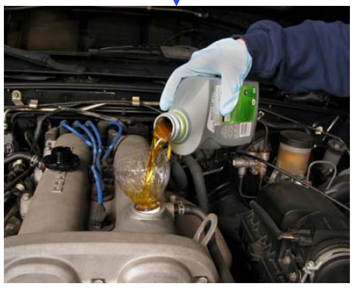
New Engine

New Car

Performance-Based Planning

Understand the problem

Develop/Test Solutions



Performance-Based Planning

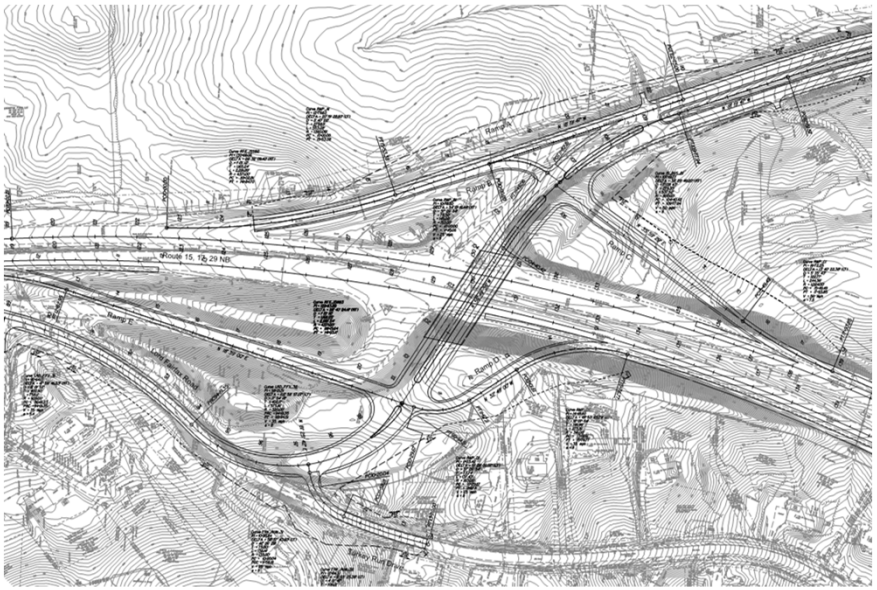
Key Principles—

- **Approach each need with goal to find most cost effective solution**
- **Consider operations and transportation demand management options that improve existing system first**
- **If those concepts cannot address the need then consider system expansion**

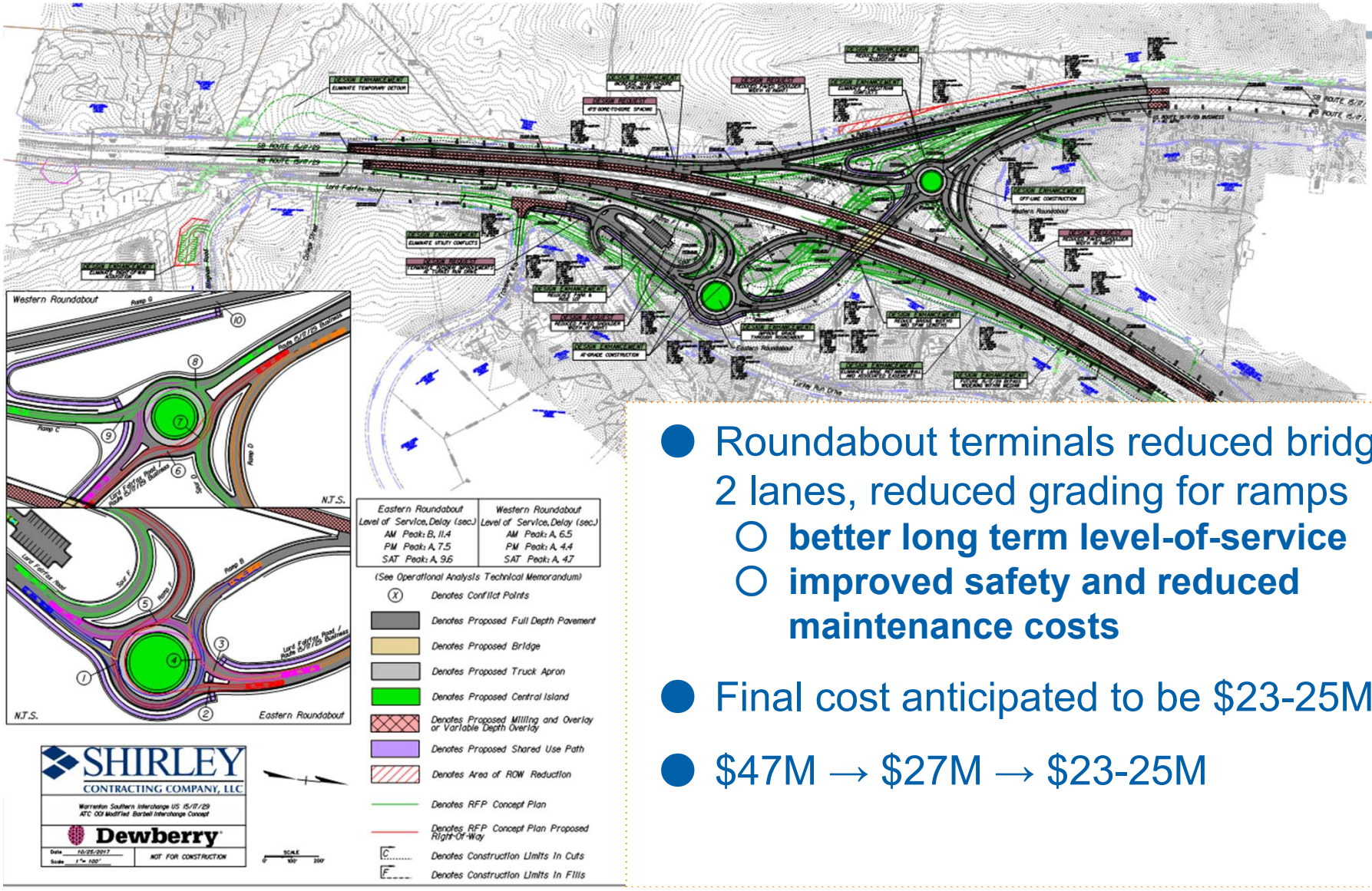
Case Study - Warrenton Southern Interchange

- **Initial project full diamond interchange with >$45M estimate**
- **Significant bridge costs**
- **Significant width ramps to accommodate volumes**
- **Project was selected but budget was reduced to $27M - but needed to maintain benefits**

Warrenton Interchange Final Design



Warrenton Southern Interchange



- Roundabout terminals reduced bridge to 2 lanes, reduced grading for ramps
  - **better long term level-of-service**
  - **improved safety and reduced maintenance costs**
- Final cost anticipated to be $23-25M
- $47M → $27M → $23-25M

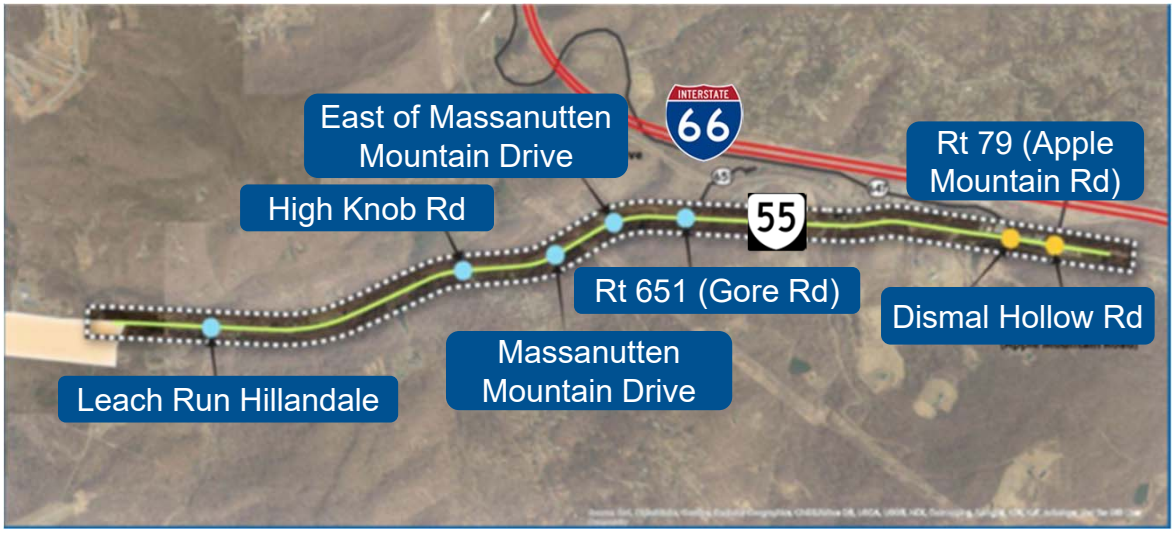
Case Study – Route 7 - Route 9 to Dulles Greenway

- STARS study was undertaken in 2017 to assess congestion and safety issues on Route 7 and to develop and analyze targeted improvements
- Preferred alternative from study recommended extension of acceleration lane onto EB Route 7 from NB Route 9 by just under a mile
- Ramp extension would reduce friction through interchange as vehicles travel uphill and around a curve, reducing delay and mitigating sideswipe crashes
  - Also avoided costly RW and utility relocation

Route 7 - Route 9 to Dulles Greenway

Need/Problem	EB congestion in morning peak at the Route 9 interchange due to friction through this interchange as vehicles merge while traveling uphill and around a curve	
Solution	Round 4 Submitted Project	Recommendation from STARS Study
Scope of Work	Widen 6.5 miles of Route 7 in both directions between Dulles GW and W Market Street	- Relocating Dry Mill Road to bypass the southern Route 9 roundabout - Extend acceleration lane onto Route 7 EB from Route 9 by 4,850 feet
Requested Cost	**$130,120,198**	**$20,00,000**
Benefit Points	**53.2**	**30.7**
SMART SCALE SCORE	**4.09**	**15.35**

Route 55 East/John Marshall Highway



Existing Conditions

- Poor pavement markings
- Need for signage upgrades
- Sight distance issues
- Deficient traffic control elements
- Rear-end/Fixed object off-road crashes
- 121 crashes over 5-year period
- Localized congestion at Rt 79 intersection only

Route 55 East/John Marshall Highway

- **2013** Comprehensive Plan Update
- **2015** SMART SCALE Round 1 Application
- **2016** SMART SCALE Round 2 Application
- **2018** SMART SCALE Round 3 Application
- **2023** SMART SCALE Round 3 Application

Rounds 1 and 2

- Widen to 4-lane divided
- $24-32 million
- Benefit points less than 1
- SMART SCALE score <0.5
- Near bottom in District rankings

Round 3

- Added targeted spot safety improvements
- $1.6 million
- Benefit points > 4
- SMART SCALE score > 25
- 3rd highest ranked project in district

- Rumble strips
- Raised pavement markings
- Guardrail improvements
- Sign improvements
- Speed feedback signage
- Variable message boards
- Fixed object removal

Key Considerations to Implement Project Pipeline

- There are over 30,000 directional roadway miles with one or more transportation need
- There is ~$12M/year available annually to develop projects that enhance our transportation system
  - STARS studies and corridor studies will become a part of the project pipeline
- Resources will allow for study of a limited number of these needs

VTrans Needs Prioritization

- VTrans needs prioritization will help identify top needs that should be considered for study using our limited planning dollars
- Project Pipeline has no impact on a project's SMART SCALE score or whether a project is eligible
- It has no impact on whether a project can be considered for funding in another program

How will Prioritized Needs be Used?

- **OIPI will work with each Board member to identify a limited number of priority 1 needs for study**
  - **OIPI, in coordination with VDOT and DRPT, would provide recommendations for up to 5 needs for study to each member**
    - Certain needs will cost more to study than others so the actual number will vary based on actual needs selected for study
  - **Board members would have flexibility to modify recommendations among priority 1 needs**
    - Board would be able to select a non-priority 1 VTrans need, to address potential concerns about geographic diversity and/or other local knowledge about specific needs

Moving Forward

- Board consideration of VTrans Mid-term Needs Prioritization Policy in March
- OIPI to coordinate with each Board member by March/April on priority 1 needs to study
- Complete studies by late Fall to provide new pool of potential projects for consideration in Round 5 of SMART SCALE and other funding programs