PLANNING COORDINATION ADVISORY COMMITTEE  
Wednesday, September 28, 2022, 6:30pm  
3040 Williams Drive, Suite 200  
Fairfax, Virginia 22031

This meeting will be conducted virtually over ZOOM and livestreamed via YouTube.

AGENDA

I. Call to Order/Welcome  
   Action  
   Chair Colbert

II. Summary Notes of June 22, 2022 Meeting  
   Recommended action: Approve meeting notes  
   Chair Colbert

Discussion/Information

IV. Status of TransAction Plan Update  
   Mr. Jasper,  
   Principal, Transportation Planning and Programming

V. NVTA Updates  
   Ms. Backmon, CEO

VI. Adjourn

Next Meeting  
October 26th, 2022
MEETING SUMMARY

I. Call to Order/Welcome

- Mayor Colbert, Chair of the Committee, welcomed Committee members and called the meeting to order at 6:35 p.m.

- Attendees:
  - **PCAC Members:** In-person –Mayor Colbert (Chair, Town of Vienna); Council Member Selonia Miles (Vice-Chair, Town of Dumfries); Board Member Karantonis (Arlington County); Supervisor Alcorn (Fairfax County); Council Member Duncan (City of Falls Church); Council Member Stehle (City of Fairfax); Vice-Mayor Banks (City of Manassas Park); Council Member Friedrichs (Town of Herndon).
  - Remote – Supervisor Franklin (Prince William County).
  - Alternate – Council Member Ralph Smith (City of Manassas, for Vice-Mayor Pamela Sebesky).
  - **NVTA Staff:** Monica Backmon (Chief Executive Officer); Keith Jasper (Principal, Planning and Programming); Sree Nampoothiri (Senior Transportation Planner); Harun Rashid (Transportation Planner); Amanda Sink (Executive Assistant to NVTA CEO), Jonathan Davis (NVTA Board Secretary).
  - **Other:** Noelle Dominguez (Fairfax County), Jaleh Moslehi (Town of Herndon).

II. Summary Notes of May 25, 2022 Meeting

- The May 25, 2022, meeting summary was approved, with abstentions from members who did not attend the May 25 meeting.

III. Review FY 2022-2027 Six Year Program Staff Recommendations

- Mr. Jasper presented on NVTA’s past funding programs for contextual reference, with details on selection criteria for funding recommendations. Following topics were covered:
  - A summary of NVTA’s previous funding programs and current set of candidate projects. First, a table was presented identifying total regional fund investments to-date in each modal category. For all roadway projects, total new roadway lane-miles with NVTA’s investment only constitute a little over 3% in Northern Virginia roadway network.
  - Key components of the project selection process. NVTA staff project selection recommendations are not based on a single factor, although Congestion Reduction
Relative to Cost (CRRC) provides the initial ranking. Following is the full process work-flow:

**Eligibility review:** Whether the proposed project is contained in current TransAction plan, with substantially located in Northern Virginia.

**Quantitative analysis:** This consists of a number of metrics, namely – congestion reduction relative to cost, or CRRC ratio; a set of performance measures with other benefits, that constitute TransAction ratings.

**Qualitative analyses:** Whether a project received previous NVTA funding (Continuation project); past performance in terms of project delivery; other funding leverage/funding gap/project readiness; supporting resolutions from other Governing Bodies; other factors specific to individual candidate projects, modal and geographic balance.

**Public comments:** Received during the public comment period (online, email, testimony, USPS/delivery, phone)

**Long term benefit:** Requirement of the Code of Virginia, enacted through House Bill 2313 (2013), means NVTA must ensure that, over the long term, each member jurisdiction receives a benefit that is approximately equal to the share of regional revenues attributed to that locality. A chart was presented showing results of the most recent analysis, showing each of the nine member jurisdiction’s current performance.

Following this section of the presentation, Mr. Jasper displayed the full list of candidate projects, with their performance for these quantitative and qualitative measures.

- Mr. Jasper then provided an overview of NVTA staff recommendations, which included explanation of projects that were considered for full or partial funding, or no funding in this cycle. Funding recommendations, if approved by NVTA, will result in:
  - **Multimodal/corridor focus** - Continued emphasis on roadway/Bus Rapid Transit (BRT) in the Route 1 corridor, and in the Fairfax County Parkway corridor.
  - **Transportation technology** - Intelligent Transportation Systems deployment in the Route 7 corridor (first NVTA-funded technology project outside of Arlington/Alexandria); continued commitment to decarbonization of transit fleets.
  - **Geographically/modally balanced** - Projects recommended for 8/9 applicants includes projects for all primary modes requested (roadway, transit, intersection, bike/pedestrian, transportation technology) with all transit, bike/pedestrian, and transportation technology projects recommended for full funding.

This was followed by summary tables of funded projects by modes and each jurisdiction’s share of funding. Other features of funded projects were also covered, such as - three largest recommended funding allocations to continuation projects; ten projects that are recommended for the first time; six projects are not being recommended for funding (with rationales); and long term benefits principles affecting two funding recommendations.

- During and after this presentation, committee members asked various clarifying questions. Below is a summary of these questions and NVTA staff responses:
  - **Explain reasons for partial funding of Van Buren Road North Extension project based on public comments.** This project has received majority opposing comments, citing its negative impacts to existing residential communities and
environment. The funding recommendation is to conduct preliminary engineering to identify these impacts in detail.

- **Regarding roadway lane-miles analysis and population/job growth, can travel demands be met with a multi-modal approach?** The answer is yes. NVTA’s funding track records show substantial funding for various BRT and Metrorail projects, in fact the largest single investment from NVTA’s funding programs to-date is for the Richmond highway BRT project. The lane-mile analysis is to highlight the small proportion of new NVTA funded roadway lane-miles compared to the overall network.

- **Explain negative impact of long-term benefit analysis for Neabsco Road Improvement project.** Prince William County has outpaced every other jurisdiction in terms of its benefits received versus revenues contributed. In an effort to balance this disparity in this round of funding recommendation, this lower CRRC-ranked project was not recommended for funding.

- **Route 15 Leesburg Bypass/Edwards Ferry Road Interchange project was not recommended?** Yes, because the applicant did not identify secured funding for the construction phase. Without that, NVTA cannot commit funds only in the right-of-way phase without assurance the project will be completed.

### IV. Status of TransAction Plan Update.
- Mr. Jasper provided a brief update on the current status of TransAction and outlined the proposed timeline for public comment periods and events with the goal to adopt the plan at the December 2022 Authority meeting. He stressed on the point that after its adoption, TransAction’s project list will constitute the basis for candidate projects’ initial eligibility review in the next three funding cycles.

### V. NVTA Update
- NVTA Chief Executive Officer, Ms. Backmon, mentioned the General Assembly, in their Special Session, passed a budget which does not include a gas tax suspension. Additionally, due to the new Freedom of Information Act (FOIA) remote participation eligibility/requirements, the PCAC is eligible to meet remotely once the Authority updates its remote meeting participation policy. It is anticipated that the policy will be updated in September.

### VI. Adjourn
- Chair Colbert adjourned the meeting at 7:40 pm.
TransAction Work Session

Project Update

presented to
Planning Coordination Advisory Committee
Topics

1. Welcome & Introductions
2. Update on TransAction Progress
3. Public Comments on TransAction
4. Modeling Results
5. Scenario Analysis
6. Next Steps/Future Meetings
TransAction Activities and Schedule

» Nov/Dec 2021: NVTA approved TransAction goals, objectives, performance measures, and weights

» Winter/Spring 2022: Transportation Perception Survey, web post series, TransAction project modeling and analysis

» Summer 2022: Public comment period – August 1 – September 18th

» Fall 2022: Finalization of plan and project list based on public and stakeholder comments

» December 2022: NVTA adopts TransAction
TransAction Public Engagement 2022

» Public comment period: August 1 – September 18th
  • Detailed on-line comment form
  • TransAction Plan 2022 Update – Draft Summary
  • TransAction Plan 2022 Update – Draft Project List, containing 429 projects
  • Other supporting information

» Draft Summary document and comment form available in English, Spanish, and Korean

Your voice is important!
Share your input now through September 18, 2022.
Public Comments Received

» Total Comments Received
  • 223 comments received
    ▪ 193 comments through web comment form
    ▪ 21 comments heard at public hearing
    ▪ 6 letter responses
    ▪ 2 emails
    ▪ 1 voicemail
  • 222 comments in English and 1 in Korean
  • 205 unique commenters

» Where public heard about survey
  • Where people heard about the survey?
    ▪ Roughly ⅓ from email, news, or social media
    ▪ Roughly ¼ from community/interest groups
    ▪ The rest from various other sources

Note: Analysis of comments is still being run – these are preliminary observations
Public Comments Received

» Themes of Comments
  • Most Common
    ▪ Against roadway or widening
  • Common
    ▪ Environmental concern
    ▪ Increase/improve transit
    ▪ Improve bike-ped routes
  • Other
    ▪ Plan process
    ▪ Safety
    ▪ Noise
    ▪ Want more information
    ▪ Other

» Type and Direction of Feedback
  • Roughly 65% were negative
  • Roughly 35% were positive or neutral
  • Of the comments and suggestions:
    ▪ Roughly ¾ were comments
    ▪ Roughly ¼ were suggestions (action)

» Modes Mentioned
  • Most Common: Roadway
  • Common: Transit, Bike-Ped

Note: Analysis of comments is still being run – these are preliminary observations
Modeling Results
TransAction 2045 Build Networks for Testing

**Build**
- Complete project list except for select systemwide improvements (Regionwide TDM, CAV, and microtransit projects)

**Modal Tests**
- Highway Only (includes roadway, interchanges and intersections, and HOV/HOT)
- Transit Only

**Project Packages**
- Interchanges and intersections
- Transit service improvements
- Transit access improvements
- Roadway improvements (multiple)
- Technology

**Individual Project Runs**
- Large individual projects (highway and transit)
- Systemwide tests (TDM, technology)

All Build networks evaluated relative to the 2045 No Build network.
## Build Network Results

<table>
<thead>
<tr>
<th>Daily Travel</th>
<th>2017 Base</th>
<th>2045 No-Build</th>
<th>2045 Build</th>
<th>% Change 2017 to 2045 No-Build</th>
<th>% Change 2045 Build vs. 2045 No-Build</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto Person Trips</td>
<td>6.74 M</td>
<td>8.22 M</td>
<td>8.15 M</td>
<td>22.0%</td>
<td>-0.8%</td>
</tr>
<tr>
<td>Transit Person Trips</td>
<td>0.26 M</td>
<td>0.39 M</td>
<td>0.43 M</td>
<td>47.5%</td>
<td>12.1%</td>
</tr>
<tr>
<td>Non-Motorized Person Trips</td>
<td>0.85 M</td>
<td>1.36 M</td>
<td>1.35 M</td>
<td>59.3%</td>
<td>-0.2%</td>
</tr>
<tr>
<td>Total Person Trips</td>
<td>7.86 M</td>
<td>9.97 M</td>
<td>9.94 M</td>
<td>26.9%</td>
<td>-0.2%</td>
</tr>
<tr>
<td>Person Miles Traveled (PMT)</td>
<td>70.69 M</td>
<td>91.16 M</td>
<td>94.70 M</td>
<td>29.0%</td>
<td>3.9%</td>
</tr>
<tr>
<td>Vehicle Miles Traveled (VMT)</td>
<td>52.42 M</td>
<td>66.12 M</td>
<td>68.53 M</td>
<td>26.1%</td>
<td>3.6%</td>
</tr>
</tbody>
</table>

- Total person trips remain essentially the same between the 2045 No-Build and 2045 Build analysis.
- Number of transit trips increases by 12% due to the significant investment in proposed in transit projects.
- Vehicle miles traveled (VMT) increase by 3.6% between the 2045 No-Build and 2045 Build analysis, as highway capacity improvements and reduced travel delay lead to some increases in the length of auto trips.
Build Network Results

Evaluation Results—Northern Virginia Regional Totals

- Person hours of delay decreases by 19.5% for auto trips and by 31.4% for transit trips representing significant improvements in congestion across the region.
- Hours of severe congestion decrease by 29.8%.
- Accessibility to jobs improves by 20.0% overall, and slightly more (27.0%) for Equity Emphasis Area (EEA) residents.
- Emissions impacts are highly dependent on electrification of vehicles - emissions could be reduced by up to 54%.
Transit trips show the largest percentage increase (22.2%) in the Outer Suburbs as transit options expand.

VMT changes vary considerably by subregion, with a decrease (-3.1%) in the Central jurisdictions; modest increase (+1.1%) for Inner Suburbs; and a larger increase (+9.2%) in the Outer Suburbs.

Reductions in total person hours of delay are distributed more evenly throughout Northern Virginia.
 Transit projects and highway projects appear to be serving very different markets and are only in competition with one another in very limited cases:

- Transit-only network shows only a small percentage increase in transit trips relative to the Build network (12.6% vs. 12.1%)
- VMT difference between Build and Transit-only is less than 1%

Roadway projects have a bigger impact on reducing congestion in the region than other modes:

- Roadway projects alone reduce delay by 17.6%
- Addition of the remaining projects further reduces congestion to a total of 19.9%
Scenario Analysis
Dealing with Uncertainty

» The TransAction process includes analysis to better understand uncertainty:
  • Plausible futures, but not necessarily preferred or predicted
  • Assumptions-based using proxy metrics than can be modeled
  • May identify potential investment obsolescence

» Three specific alternative futures (scenarios):
  • Post-Pandemic ‘New Normal’
  • Transportation Technology
  • Transportation Policy/Mechanisms
What could happen to transportation in Northern Virginia by 2045?

» Post-Pandemic “New Normal” Scenario:
  Reduction of work-related trips, reduction of shopping trips, increase in delivery trips, increase in non-motorized trips.

» Technology Scenario:
  Increased market penetration of CASE vehicles, changes in operating costs for automated vehicles, increases in effective roadway capacity, changes in trip generation, and automated transit shuttles at all rail stations

» Incentives/Pricing Scenario:
  VMT pricing on all roads with discounts for lower-income households, increase in parking costs across the region, free transit (no fares), and shift in travel times from peak hours
Change in 2045 No-Build Results Under Each Scenario

» Post-Pandemic ‘New Normal’ scenario:
  • Fewer commute trips in the peak period results in less congestion: person-hours of delay decreases by 15%
  • Decreases also seen in VMT (-4%) and overall emissions

» Technology scenario:
  • Decreases in person hours of delay (-23%) and in duration of severe congestion (-36%)
  • Transit trips decrease (-13%) due to the combined effects of reduced trips and transit trips shifting to CASE vehicles
  • Emissions decrease by 28% as a result of electrification.

» Incentives/Pricing scenario:
  • Transit trips increase by 12%, with gains in transit use offset by reduced work trips
  • Decreases in VMT (-9%), person hours of delay (-20%) and in duration of severe congestion (-25%) are more significant because of the reduced work trips.
Robustness of TransAction Investments

» Tested how well the TransAction projects would perform in each of these potential futures

» Scenario build network compared with scenario no-build

What are the potential benefits of the TransAction projects?
Performance of TransAction Projects by Scenario

As compared to the standard forecast:

» The increase in transit trips in the New Normal (13%) and Incentives/Pricing+ (21%) scenarios is greater than in the standard forecast (12.1%)
  • Transit projects included in the TransAction Plan are more attractive under the assumptions of those two scenarios

» TransAction projects have a similar impact on congestion in the alternative future scenarios

» TransAction projects have the biggest impacts in the Incentives/Pricing+ scenario; increasing transit trips by 21%, decreasing emissions by up to 61% and resulting in the smallest increase in VMT of any of the four futures considered
Next Steps
Remaining TransAction Activities

» Complete public comment report

» Finalization of plan and project list based on public and stakeholder comments

» PCAC Role:
  • October: Review any refinements to plan and project list
  • November: Endorsement of TransAction

» December 2022: NVTA adopts TransAction
Post-Pandemic New Normal Scenario

» What if trends observed during the pandemic continue into the long-term future?

» Key Assumptions:
  • Reduction of work-related trips (HBW, NHW) by 21%
  • Reduction of shopping trips by 5.6%
  • Increase in delivery trips (1 delivery for every 3 shopping trips removed)
  • Increase in non-motorized trips by 5%
  • No Land Use changes assumed
Technology Scenario

Focus on implementation of Connected/ Automated/ Shared/ Electric vehicles (CASEs)

- Market Penetration:
  - Private Vehicles: 20%
  - TNCs: 100% fully automated within Northern Virginia, DC, Montgomery & Prince George’s
  - Large Trucks: 33%
  - Transit Buses: not automated
  - Shuttle buses: 100% automated

All automated vehicles are assumed to also be Connected and Electric

Lower operating costs

Cost-per-Mile

- Private CAE
- Private Auto
- Public Transit
- CASE
- TNC
- Taxi

Operating cost per mile:
- $0.50
- $1.00
- $1.50
- $2.00
- $2.50
- $3.00
Focus on implementation of Connected/Automated/Shared/Electric vehicles (CASEs)

Changes to trip making:
- CAE owners make more trips
- CAE owners make longer trips

Zero-Occupancy Vehicle (ZOV) trips:
- Remote parking of private vehicles
- CASE relocation between passengers

Capacity Increase:
- Freeways: 15%
- Major Arterials: 5%

Automated Shutles available at all rail stations (FM/LM)

No Land Use changes assumes
Incentives/Pricing Scenario

» Implementing transportation pricing and incentive mechanisms to manage travel demand

» Key Assumptions:
  • VMT Pricing on all roads: 25¢ peak, 12¢ off-peak
    ▪ Discounts for lower-income households
  • Increase in parking costs across the region
  • Free transit

<table>
<thead>
<tr>
<th>Area Types</th>
<th>Baseline 2045</th>
<th>Scenario 2045</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 1</td>
<td>$2.00</td>
<td>$4.00</td>
</tr>
<tr>
<td>Type 2</td>
<td>$1.00</td>
<td>$2.00</td>
</tr>
<tr>
<td>Type 3</td>
<td>$0.25</td>
<td>$0.90</td>
</tr>
<tr>
<td>Type 4</td>
<td>$0.00</td>
<td>$0.25</td>
</tr>
</tbody>
</table>

All costs in 2007$