

July 7, 2022

MEMORANDUM

TO: Members, Transportation Technical Committee
 FROM: Cristina Finch, AICP, LEED AP, Secretary to the Transportation Technical Committee
 SUBJ: July 14, 2022 TTC Work Session/Agenda

A Work Session of the Transportation Technical Committee (TTC) will be held Thursday, July 14, 2022 at 1:30 p.m. at the Roanoke Valley-Alleghany Regional Commission office (Top Floor Conference Room), 313 Luck Avenue, SW, Roanoke, VA.

TTC WORK SESSION AGENDA

1. Welcome, Call to Order *Vice Chair Maguire*
2. Roll Call (including consideration of remote participation) *Vice Chair Maguire*
3. Continued Development of the Update to the Roanoke Valley Transportation Plan, pp. 2 – 3 *RVARC Staff & David Jackson, Cambridge Systematic*
4. First Draft of Amendment #6 to the Vision 2040: Roanoke Valley Transportation Plan *Cristina Finch*
 - A. Projects with Cost Increases 10% or More, pp. 4 – 5 *Alison Stinnette*
 - B. Review of Inclusion of SMART SCALE Round 5 Candidate Projects, pp. 6 – 9 *Bryan Hill*
 - C. Inclusion of New Projects to the Plan, p. 10 *Bryan Hill*
5. Pursuit of Federal Grant Opportunities *Jonathan Stanton*
6. Adjournment (by 3:30 p.m.)

TPO POLICY BOARD: Cities of Roanoke and Salem; Counties of Bedford, Botetourt, Montgomery and Roanoke; Town of Vinton; Greater Roanoke Transit Company (*Valley Metro*); Roanoke-Blacksburg Regional Airport; Virginia Department of Rail & Public Transportation; Virginia Department of Transportation

STAFF BRIEFING
TTC Meeting July 14, 2022

SUBJ: Continued Development of the Roanoke Valley Transportation Plan

The RVTP plan development team continues to implement the new performance-based planning process being developed by the OIPI GAP-TA team to identify potential solutions, highlight preferred solutions, and establish projects, services, studies, and policies for potential inclusion in the RVTP.

Identify and Prioritize Potential Solutions

In June, the RVTP team developed a list of potential solutions for each initial priority gap need and met with TTC members to receive feedback, including insight on the status of ongoing studies and existing proposed (but not yet funded) projects/services. The insight from two rounds of meetings with TTC members is being combined with a solutions prioritization process (developed by GAP team) in order to develop a preferred solution for each priority gap need.

Translate Solutions into Projects/Services/Studies

Some priority gap needs and preferred solutions will evolve into projects/services for consideration by the RVTPO as priority investments to pursue. These projects/services will represent those that address the highest priority needs in the region. These projects/services may be considered ready to compete for grant funding and hopeful inclusion in the forthcoming updates to the SYIP and TIP. The translation from preferred solution to a project/service will happen in different ways, including:

- There is existing agreement on a comprehensive solution consistent with RVTP goals and objectives that addresses the priority gap need based on an existing proposed (but not fully funded) project/service
- There is an ongoing study developing project or service recommendations that is anticipated to address the priority gap need, be consistent with RVTP goals and objectives, and be ready to compete for funding in near-term grant cycles
- The RVTP planning process has identified a preferred solution that comprehensively addresses a priority gap need (without prior or ongoing project or study recommendations) and can quickly evolve into a project/service for RVTP inclusion

Some priority gap needs and preferred solutions will require additional study. These efforts could be pursued by the RVTPO and its local and state partners and may be noted within future unified planning work programs. The results of these studies may become projects that are included in future RVTPs, compete for funding, and are included within future SYIPs and TIPs

Some priority gap needs and preferred solutions will require systematic regional policies and priorities that may help address multiple priority gap needs. In these cases, the RVTP may identify a new regional policy within the RVTP that help prioritize RVTPO staff resources and guides regional and local decision making.

Next Steps

- The NEST is available here:
<https://experience.arcgis.com/experience/7c2b2fb55b1b42c58954799c2156b922/>

Updates continue to be made, and members are invited to provide feedback on how this new tool can be made easier to use.

- The RVTP team will identify preferred solutions for each priority gap need consistent with insight received to date and the process outlined by the GAP-TA team. The preferred solutions will be shared with the TTC by mid-July for review.
- The RVTP will also progress into identifying projects/services, studies, and policies for the preferred solutions to priority gap needs for potential inclusion in the RVTP. These projects/services, studies, and policies will be refined based on TTC input in July and be finalized for review in August.
- The RVTP team will complete templates (developed by the GAP team) describing the rationale and outcome for each step of the process from need to priority gap need to potential solution to preferred solution to project/service for each individual or set of projects/services. Ultimately these templates will be included in the RVTP.

TTC Action: None.

STAFF BRIEFING

July 14, 2022 TTC Work Session

**First Draft of Amendment #6 to the Vision 2040: Roanoke Valley Transportation Plan:
Projects with Cost Increases 10% or More**

In the FY23 Final Six-Year Improvement Program (SYIP), there are projects with an updated estimated cost greater than 10 percent of the previously identified cost in the Vision 2040: Roanoke Valley Transportation Plan. The list of projects is presented in the table, including the identifying UPC, currently listed cost, new estimated cost, percentage increase and status of the project. The 14 projects exceeding the 10 percent increase ranges from 11 to 112 percent increase. Staff is requesting any feedback on the rational regarding the project cost increases from the project sponsor and/or VDOT to better inform the Policy Board when it considers this amendment to the plan.

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| Previous Project # | RVTP ID # | UPC # | Project | Cost from A4 | FY 23 Final Estimated Cost | % Increase | Current Status | Cost Increase Rationale TBD |
|--------------------|----------------|--------|--|--------------|----------------------------|------------|--------------------------------------|-----------------------------|
| A2-13, A4-2 | 2040.071 7.012 | 117994 | 9TH STREET MULTIMODAL IMPROVEMENTS | \$625,000 | \$889,000 | 42.24% | PE Underway RW N/A CN FY24 | |
| 59, A2-37, A4 Adj. | 2040.071 7.013 | 117995 | GLADE CREEK GREENWAY PHASE 2B | \$476,000 | \$785,000 | 64.92% | PE Underway RW FY23 CN FY25 | |
| A4-21 | 2040.071 7.003 | 113138 | ROANOKE RIVER GREENWAY BRIDGE THE GAP PHASE II SEGMENT 2 | \$7,985,000 | \$9,726,000 | 21.80% | CN Underway | |
| A1-6, A4-Adj. | 2040.071 7.035 | 111649 | WALNUT AVE BIKE/PED ACCOMMODATIONS (5TH ST TO TOWN LIMIT) | \$1,684,030 | \$2,068,000 | 22.80% | CN Underway | |
| 56 | 2040.071 7.036 | 113567 | ROANOKE RIVER GREENWAY THROUGH EXPLORE PARK | \$3,020,308 | \$4,222,000 | 39.79% | CN FY24 | |
| 43 | 2040.071 7.039 | 108882 | #SMART18 - WEST MAIN STREET SIDEWALK INSTALLATION | \$1,037,000 | \$1,152,000 | 11.09% | CN Underway | |
| A4-46 | 2040.071 7.051 | 110887 | RTE 220 ACCESS MANAGEMENT IMPROVEMENTS PROJECT | \$10,196,000 | \$11,696,000 | 14.71% | PE Underway RW FY23 CN FY24 | |
| A1-13, A4-11 | 2040.071 7.041 | 113947 | PEDESTRIAN IMPROVEMENTS ON ROUTE 11 (WILLIAMSON ROAD) | \$1,500,000 | \$2,573,000 | 71.53% | PE Underway RW FY23 CN FY24 | |
| A-32 | 2040.071 7.097 | 107309 | DRY HOLLOW ROAD SAFETY IMPROVEMENTS | \$2,185,000 | \$4,637,000 | 112.22 % | RW Underway CN FY23 | |
| A4-38 | 2040.071 7.113 | 113142 | DOWNTOWN SALEM - ROANOKE BOULEVARD | \$1,000,000 | \$1,841,000 | 84.10% | RW Underway CN FY27 | |
| A1-4 | 2040.071 7.117 | 113566 | ELIZABETH GREENWAY | \$1,104,400 | \$1,832,000 | 65.88% | RW Underway CN FY24 | |
| A4-39 | 2040.071 7.147 | 110574 | #SGR18LB - APPERSON DRIVE BRIDGE REPLACEMENT | \$7,497,000 | \$8,438,000 | 12.55% | RW Underway CN FY24 | |
| A4-1 | 2040.071 7.151 | 117221 | FRANKLIN ROAD SIDEWALK IMPROVEMENTS - RT. 220 B- PHASE 2 | \$1,791,000 | \$2,241,000 | 25.13% | PE Complete RW N/A CN Underway | |
| 16 | 2040.071 7.154 | 111370 | #SMART18 - HOLLINS RD & ORANGE AVE INTERSECTION IMPROVEMENTS | \$3,552,000 | \$5,117,000 | 44.06% | Complete | |

TTC Action: None.

STAFF BRIEFING
JULY 14, 2022 ttc Work Session
First Draft of Amendment #6 to the Vision 2040: Roanoke Valley Transportation Plan:
Review of Inclusion of SMART SCALE Round 5 Candidate Projects

Based on information obtained and provided to staff, the following is a list of FY24 (Round 5) project applications from RVTPO localities which are either currently included in the Roanoke Valley Transportation Plan (RVTP) and may require revision or are new projects. Also, lists of the urbanized area applications from the RVTPO and RVARC are included.

Locality Applications

| Locality | Project Name | RVTP Project Description | SMART SCALE Project Description | RVTP Cost Estimate | FY24 SMART SCALE Cost Estimate | Listed in RVTP |
|------------------|---|---|--|-----------------------|--------------------------------|---------------------------|
| Botetourt County | Route 220 Superstreet Improvement | Safety | Convert crossovers along the Route 220 Corridor in Daleville to RCUT's to provide a superstreet concept. | \$15,461,000 | N/A | Yes (A4-19, p. 165) |
| Botetourt County | Rt 779 Appalachian Trail Safety Improvements | N/A | Pedestrian improvements to correct vehicular and pedestrian conflicts along Route 779, allowing users of the Appalachian Trail to safely cross under I-81. | N/A | \$1,140,045 | No new project |
| Botetourt County | Route 220 Access Management - Route 11 to Appalachian Trail Note: this is split into two access management projects | Improvements to the safety and traffic flow at the existing intersection and associated northbound movements to and from Interstate 81. | Improvements to the Exit 150 1-81/220 interchange to address safety, traffic flow, and access concerns largely associated with weaving from tractor-trailers and other vehicles exiting the interstate. | \$22,831,000 | N/A | Yes (2 and A2-30, p. 164) |
| Botetourt County | Rt 220 Access Management/Park & Ride - AT to Commons Pkwy | Improvements to the safety and traffic flow at the existing intersection and associated northbound movements to and from Interstate 81. | Addition of multi-use path along 220 N and 220 S to Commons Parkway to provide Appalachian Trail users safe crossing of 220, including a traffic signal restricting cross-traffic from Wesley Rd to Commons Pkwy. Additionally, the construction of a new Park and Ride facility with greater capacity than the current site. | \$22,831,000 | N/A | Yes (2 and A2-30, p. 164) |
| City of Roanoke | STARS 460/Orange Ave - 11th to 24th Improvements | Widening to six lanes, reconstruct traffic signals, curb, gutter, sidewalk and drainage improvements | Traffic operational improvements along Orange Avenue from 11th Street, N.E intersection to 24th Street, N.E. | \$25,000,000 | \$17,850,502 | Yes (p. 192) |
| City of Roanoke | Williamson Road Corridor – Safety Improvements | Road diet & streetscape improvements | This corridor-wide safety improvements project along Williamson Road from Hershberger Rd to Wells Ave includes lane reallocations, a two-way left-turn lane, the inclusion of bicycle lanes where none currently exist, pedestrian sidewalk, and crosswalk improvements, and traffic signal optimizations. The project's goals are to improve access and safety for the traveling public along the corridor. | Unknown (Vision List) | N/A | Yes (p. 191) |

| Locality | Project Name | RVTP Project Description | SMART SCALE Project Description | RVTP Cost Estimate | FY24 SMART SCALE Cost Estimate | Listed in RVTP |
|-----------------|--|--|---|-----------------------|--------------------------------|----------------|
| City of Roanoke | STARS 460/Orange Ave - Plantation Rd Improvements | Alternative intersections to limit some turn movements and increase traffic flow on U.S. 460. See Route 460 Operational Improvements Study for detailed intersection recommendations. | The proposed improvements for this project include widening the northbound Kimball Avenue and southbound Plantation Road approaches to Route 460 to provide three approach lanes. The northbound approach would be widened within the median along Kimball Avenue to provide a left-turn lane, a through lane, and a right-turn lane. The southbound approach would be widened to provide a left-turn lane, a through lane, and a shared through/right-turn lane. In addition, the westbound Route 460 left turn lane is proposed to be extended to the railroad overpass to reduce the potential for left-turning vehicles extending out of the turn lane, which was observed under existing conditions. | Unknown (Vision List) | \$3,989,595 | Yes (p. 192) |
| City of Roanoke | Campbell Avenue Corridor Bicycle and Pedestrian Improvements | Streetscape improvements would consist of sidewalk, curb and gutter, street trees, and milling and resurfacing the existing roadway and any related stormwater improvements. | This project provides and improves pedestrian and bike accommodations from 3rd Street, SE to Tinker Creek, with a future shared use path connection to Tinker Creek Greenway. The project will support the economic development plans developed by the Lucas Thornton group along Campbell Avenue, SE, and approved by the City of Roanoke. | \$3,300,000 | \$19,109,162 | Yes (p. 191) |
| City of Salem | <i>None disclosed to date</i> | | | | | |
| Roanoke County | I-581 at Exit 2 Interchange Improvements | Reconstruct interstate interchange to improve turning movements and access to Valleypointe Blvd, Thirlane Rd (Roanoke City), and Thirlane Rd (Roanoke County). | Close two I-581 off-ramps with substandard weave movements. Signalize remaining I-581 off-ramps, restrict left turns from SB Thirlane Road to minimize conflict points near interchange ramps. Add a downstream U-turn along Peters Creek Rd for re-directed left turns. Add a second EB Peters Creek left turn lane onto Valleypointe Pkwy to increase capacity. Add pedestrian and bicycle accommodations along Peters Creek Rd. | \$28,225,000 | N/A | Yes (p. 197) |
| Roanoke County | East Roanoke River Greenway Gap, Phase 2 | Construct a 10' wide paved greenway trail for approximately 1.2 miles along the Roanoke River. | Construction of the Roanoke River Greenway from the Water Pollution Control Plant to VRFA property | \$6,605,000 | N/A | Yes (p. 199) |
| Roanoke County | Route 419/Electric Road Safety Improvements | Construct bicycle and pedestrian accommodations, including pedestrian signals and crosswalks at intersections. Incorporate streetscape improvements along the corridor. (approx. 2500 ft.) | Activities for this project include: an RCUT on Grandin Rd. Ext., Keagy Rd. South crosswalk, sidewalk from Grandin Rd. Ext. to Keagy Village on the County side, sidewalk from Starbucks to Keagy Rd. South on the City side, Keagy Rd. North crosswalks. | Unknown (Vision List) | N/A | Yes (p. 198) |
| Roanoke County | Walrond Drive Pedestrian Improvements | Construct multimodal accommodations to connect the Plantation Road shared use path and sidewalk to Walrond Park | Improvements along Walrond Drive from Plantation Road to Walrond Park. | \$1,000,000 | N/A | Yes (p. 200) |
| Town of Vinton | Roundabout at Hardy Rd (Rte. 24/634) and Bypass Rd (Rte. 24) | Improvement TBD in order to improve traffic control and reduce congestion at this intersection. | Convert the intersection of Hardy Road/Bypass Road (Rt. 24) and Hardy Road (Rt. 634) from a signalized intersection to a two-lane roundabout. The project includes sidewalk and a shared use path in the immediate area of the roundabout. | Unknown (Vision List) | \$4,097,039 | Yes (p. 204) |

RVTPO Applications

| Locality | Project Name | RVTP Project Description | SMART SCALE Project Description | RVTP Cost Estimate | FY24 SMART SCALE Cost Estimate | Listed in RVTP |
|-----------------|---|---|--|-----------------------|--------------------------------|---------------------|
| City of Roanoke | Orange Avenue and Williamson Road Intersection Improvements | Modify intersection to accommodate geometric and signal timing changes - dual EB left turn lanes, improvements on the north leg of Williamson Road. More specific project recommendations to be developed during a study in FY22. | The STARS Route 460 (Orange Avenue) study has identified operational and safety issues for the 460 corridor. The study's findings suggest improvements proposed for the Orange Ave and Williamson Rd intersection, including a signalized off-ramp from I-581, an additional eastbound left-turn lane, and additional lanes on Williamson Rd north of the intersection. These solutions mitigate the identified safety issues, improve traffic operations, and alleviate congestion. | Unknown (Vision List) | N/A | Yes (p. 192) |
| Roanoke County | Route 419/Electric Road Pedestrian Signal Improvements | Install pedestrian signals and crosswalks at the traffic signals. | Construct pedestrian signals and crosswalks at two adjacent Route 419/Electric Road intersections: Route 221/Brambleton Avenue and Postal Drive/Berry Lane. Consider connecting both intersections with pedestrian accommodations. | \$615,000 | \$1,019,065 | Yes (A4-45, p. 179) |
| Roanoke County | West Main Street Pedestrian Improvements, Phase 3 | Complete sidewalk on both sides of West Main Street (City of Salem to Alleghany Drive on the south side, Daugherty Road to Technology Drive on the north side). | This project will complete the missing sidewalk pieces that could not be constructed from UPC 108882, West Main Street Pedestrian Improvements, Phase 2, due to insufficient funds. Those segments include the south side of West Main Street between the City of Salem and Daugherty Road and the north side of West Main Street between Daugherty Road and Technology Drive. The sidewalk will be five feet wide concrete with pedestrian crosswalks at public roads. | \$2,700,000 | \$3,048,117 | Yes (p. 200) |
| Roanoke County | Williamson Road Sidewalk, Plymouth Dr. to Clubhouse Dr. | Pedestrian improvements along Williamson Road. | Extend sidewalk along the western side of Williamson Road from Plymouth Drive to Clubhouse Drive, with pedestrian signals and crosswalks at the Williamson/Clubhouse/Dent signalized intersection. | \$1,500,000 | \$4,450,234 | Yes (p. 185) |

RVARC Applications

| Locality | Project Name | RVTP Project Description | SMART SCALE Project Description | RVTP Cost Estimate | FY24 SMART SCALE Cost Estimate | Listed in RVTP |
|-----------------|--|---|--|-----------------------|--------------------------------|----------------|
| City of Roanoke | I-581/U.S. 460/U.S. 11 Improvements | Potential signalization of I-581 off-ramps (NB and SB) to eliminate weaving issues. More specific project recommendations to be developed during a study in FY22. | The STARS Route 460 (Orange Avenue) study has identified operational and safety issues for the 460 corridor. The study's findings suggest improvements proposed for the Orange Ave and Williamson Rd intersection, including a signalized off-ramp from I-581, an additional eastbound left-turn lane, and additional lanes on Williamson Rd north of the intersection. These solutions mitigate the identified safety issues, improve traffic operations, and alleviate congestion. As noted in the STARS Route 460 (Orange Avenue) study, the I-581 interchange at Route 460 has vehicular, pedestrian, and bicycle-related safety and congestion issues. This project will provide solutions to mitigate the safety issues for all users, provide additional travel mode choices, improve traffic operations, and alleviate congestion. | Unknown (Vision List) | N/A | Yes (p. 191) |
| Roanoke County | U.S. Route 11/460 at Dow Hollow Road Safety Improvements | Improve safety at the intersection by installing a three-phase traffic signal and providing appropriate access to adjacent properties. | The proposed project will improve the intersection of U.S. Route 11/460 and Dow Hollow Road which is a three-leg, stop controlled intersection located just south of Interstate 81 at Exit 132. A three-phase traffic signal is proposed for the intersection which will improve traffic operations and safety during typical and interstate detour operations. Pedestrian signals and crosswalks may also be included. | \$2,000,000 | N/A | Yes (p. 200) |

STAFF BRIEFING
July 14, 2022 TTC Work Session
First Draft of Amendment #6 to the Vision 2040: Roanoke Valley Transportation Plan:
Inclusion of New Projects to the Plan

As the FY23-28 Six-Year Improvement Program was adopted last month, this discussion will include a list of new projects to the Roanoke Valley Transportation Plan (RVTP) that have received funding since the most recent amendment.

TPO POLICY BOARD: Cities of Roanoke and Salem; Counties of Bedford, Botetourt, Montgomery and Roanoke; Town of Vinton; Greater Roanoke Transit Company (*Valley Metro*); Roanoke-Blacksburg Regional Airport; Virginia Department of Rail & Public Transportation; Virginia Department of Transportation