



Chapter 8: Conclusions and Implementation

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The Central Virginia Metropolitan Planning Organization, like other MPOs, is charged with recommending both the long range plan recommendations (through the LRTP) and the short range programming recommendations (through the TIP) for transportation in its region. The LRTP in particular is intended to describe the region's long term priorities for transportation and how transportation fits into the overall future vision for the communities and citizens in the region. The CVLRTP 2040 update has addressed this basic mission of an LRTP within the context of three important themes that served as the foundation for the planning process in this update:

- 1. Stronger linkages between transportation and economic priorities in the region** - through greater outreach with key business stakeholders in the region, coordination with the regional CEDS plan, and through the inclusion of economic development factors in the project evaluation framework, this update has been more closely linked than any prior update to the future economic vision for Region 2000.
- 2. Greater responsiveness to policy shifts and funding opportunities** - the planning evaluation framework implemented in this plan update will bring the MPO in line with emerging policy shifts at both the federal level (through MAP-21) and state level (through HB2). As both state and federal performance based planning systems get implemented by 2016, the Central Virginia region will be well prepared for meeting new standards through its data-guided project evaluation system.
- 3. Improved consistency and transparency of regional transportation planning** - The project evaluation framework developed in the CVLRTP 2040 update lays out a very systematic and transparent methodology for selecting priority projects to advance in the region. As this methodology is deployed in this and future plan updates, it will be possible for any community representative or any citizen to see how a particular project fares in the project evaluation process through the use of consistent, measurable criteria and a transparent methodology for evaluation.

Financially Constrained Transportation Plan

The financially constrained transportation improvement project list is limited by a reasonable estimation of future state and local transportation funding sources through year 2040. Once the total amount of anticipated funding has been allocated, the LRTP is established, and remaining projects fall into the unconstrained, or vision, list. Figure 8.1 details the projects that make up the constrained plan.

LRTP projects that fall within the first six years of the plan are part of the VDOT's six year improvement program (SYIP) and represent the MPO's greatest transportation improvement needs. These projects were chosen prior to the CVLRTP planning process and thus were not analyzed using its evaluation program.

The projects included in the current FY 2016 SYIP will not all be completed at the end of this six year period in 2021. The outstanding balance of these projects beyond 2021 is expected to be approximately \$56,436,000. This amount effectively utilizes all of the funding that is projected to be available for construction projects in the MPO through year 2040. As such, given the current funding situation the CVMPO is unable to add any projects to its Constrained List beyond those identified on the FY 2016 SYIP.



Figure 8.1: CVLRTP 2040 Update Financially Constrained Project List

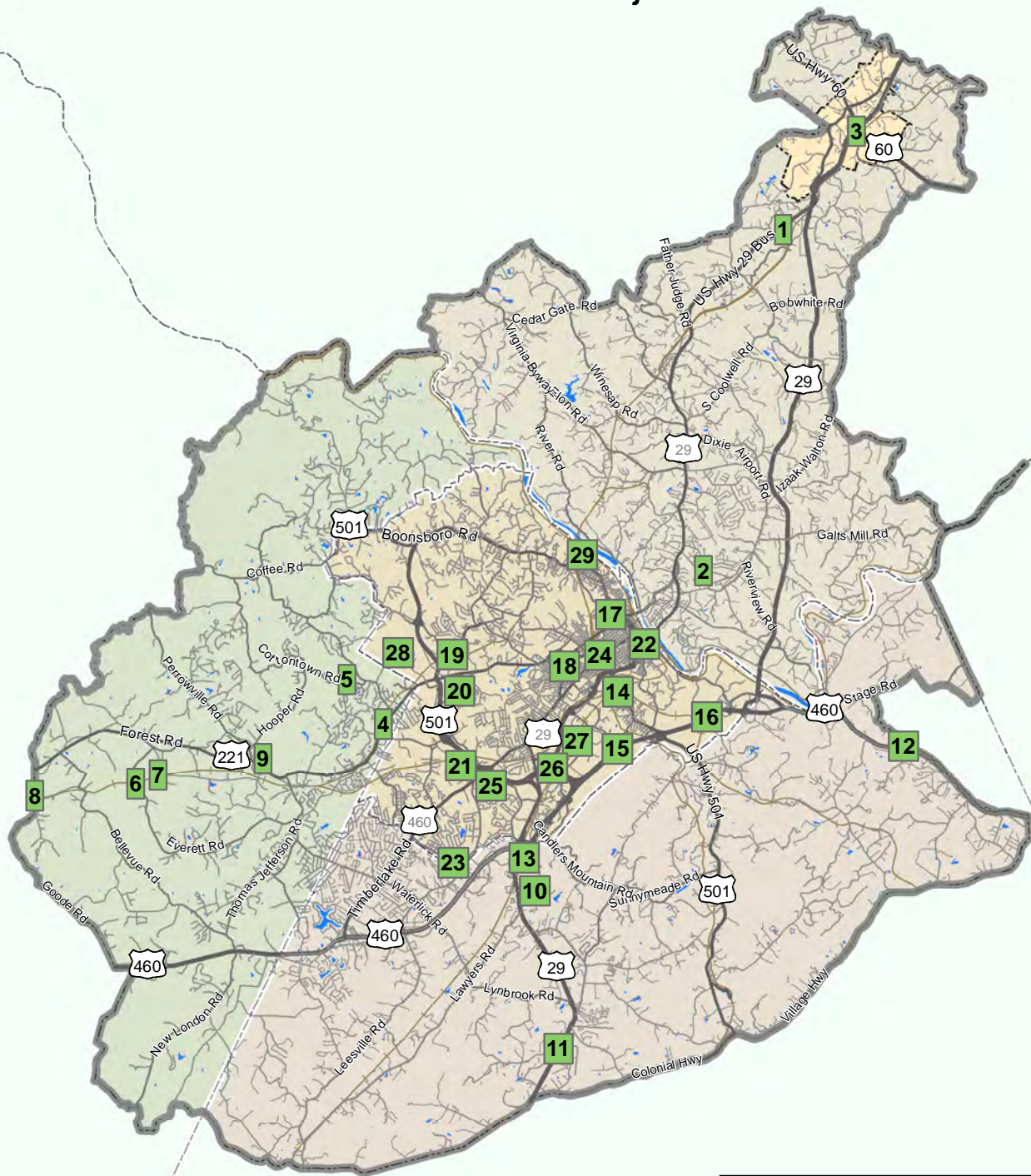
Map ID	Jurisdiction	Route #	Project Description	Estimated Cost	Previous Funding	Funding for FY 16 - FY 21	Balance
1	Amherst County	7029	Bus 29- Shoulder Widening	\$3,700,000	\$0	\$3,500,000	\$200,000
2	Amherst County	681	Replace bridge over Williams Run (Fed ID #01524)	\$2,183,000	\$0	\$330,000	\$1,853,000
3	Amherst County	--	Town of Amherst- Depot Relocation and Renovation	\$1,749,000	\$1,965,000	\$0	-\$216,000
4	Bedford County	221	Rt 221 Bedford County- Bike and Ped Safety Improvements	\$2,550,000	\$0	\$2,550,000	\$0
5	Bedford County	621	Rt 621 over Ivy Creek (Str. ID 02707)- Bridge Replacement	\$3,542,000	\$794,000	\$302,000	\$2,446,000
6	Bedford County	622	Rt 622 over NS RR (Str. 02708)- Bridge Replacement	\$3,380,000	\$556,000	\$500,000	\$2,324,000
7	Bedford County	666	Rt 666 over NS RR (Str. 02780)	\$3,873,000	\$0	\$153,000	\$3,720,000
8	Bedford County	668	Rt 668 over NSRR (Str. 02785)- Bridge Replacement	\$5,058,000	\$3,621,000	\$1,438,000	\$0
9	Bedford County	--	Extend Corporate Park Dr	\$1,000,000	\$0	\$60,000	\$940,000
10	Campbell County	29	Bridge and approach over NS RR, northbound lanes(Fed ID #04144)	\$10,110,000	\$805,000	\$9,305,000	\$0
11	Campbell County	29	Rte 29- Right turn lane at Rte 688 (Patterson Rd)	\$252,000	\$252,000	\$0	\$0
12	Campbell County	460	Rte 460 Right turn lane at Rte 752 (Mt Olivet Church Rd)	\$208,000	\$208,000	\$0	\$0
13	Campbell County	907	FR-907- Complete Liberty Mtn Rd and 1st phase Mtn Lake Rd	\$5,428,000	\$5,428,000	\$0	\$0
14	City of Lynchburg	29	Bridge and approach over NSRR, northbound and southbound lanes (Fed ID #20579 & #20580)	\$11,161,000	\$800,000	\$7,782,000	\$2,579,000
15	City of Lynchburg	29/ 460	Odd Fellows Rd Interchange and Extension	\$38,538,000	\$11,270,000	\$27,268,000	\$0
16	City of Lynchburg	29/ 460	Rte 29/460- Access Management	\$19,092,000	\$9,794,000	\$8,298,000	\$0
17	City of Lynchburg	163	Rte 163- Reconstruction	\$3,000,000	\$0	\$1,570,000	\$1,430,000
18	City of Lynchburg	163	Intersection Improvement- Lakeside/Park/Memorial	\$1,530,000	\$1,760,000	\$0	-\$230,000
19	City of Lynchburg	221	Rte 221- Intersection Improvements	\$47,921,000	\$6,267,000	\$0	\$41,654,000
20	City of Lynchburg	221	Rte 221- Intersection Improvement	\$1,600,000	\$1,600,000	\$0	\$0
21	City of Lynchburg	460	Timberlake Ramp/Intersection Improvements	\$3,790,000	\$3,765,000	\$0	\$25,000
22	City of Lynchburg	501	Main Street bridge replacement	\$5,076,000	\$3,026,000	\$2,300,000	-\$250,000
23	City of Lynchburg	6056	Greenview Dr: Widen from 2-4 lanes	\$16,443,000	\$4,970,000	\$11,474,000	\$0
24	City of Lynchburg	--	Midtown Connector- New 2 lane with flush median, curb and gutter, sidewalk	\$26,703,000	\$27,814,000	\$0	-\$1,111,000
25	City of Lynchburg	--	Wards Ferry Rd widening	\$2,002,000	\$0	\$980,000	\$1,022,000
26	City of Lynchburg	--	Construct new road- Access to Liberty University Facilities	\$2,500,000	\$2,480,000	\$0	\$20,000
27	City of Lynchburg	--	Phase II- Construct new roadway access to Liberty University Facilities	\$3,200,000	\$0	\$3,180,000	\$20,000
28	City of Lynchburg	--	Lynchpin Industrial Park Sidewalk	\$234,000	\$224,000	\$0	\$10,000



Map ID	Jurisdiction	Route #	Project Description	Estimated Cost	Previous Funding	Funding for FY 16 - FY 21	Balance
29	City of Lynchburg	--	Riverside Park Master Plan	\$1,266,000	\$1,266,000	\$0	\$0
NA	City of Lynchburg	--	Citywide- Pavement Overlay	\$3,000,000	\$0	\$3,000,000	\$0
NA	MPO-Wide	--	Safety/traffic operations/transportation system management: Covers general improvements to traffic safety and operations; the individual projects are each generally low cost improvements	Determined on an annual basis			
NA	MPO-Wide	--	Transportation Enhancements: Improvements to expand transportation choices through such activities as safe bicycle and pedestrian facilities, scenic routes, and beautification	Determined on an annual basis			
NA	MPO-Wide	--	Rail Crossing Safety: Improvements to increase safety at locations where roads and railroads cross	Determined on an annual basis			
NA	MPO-Wide	--	General system maintenance: Roadway maintenance funds on an MPO-wide basis	Determined on an annual basis			
Total Values				\$227,089,000	\$88,665,000	\$80,990,000	\$56,436,000



CVL RTP 2040 Update Constrained Projects



Legend

- Constrained List Projects



Unconstrained (Vision) Plan

Vision plan projects include future-year transportation improvements that address existing or anticipated needs but cannot be included within the financially-constrained LRTP project list due to funding limitations. As the LRTP is revised regularly and future funding sources are uncovered it is common for previous vision plan projects to move up to the financially constrained list. It is not required, however, that vision plan projects become financially-constrained projects even if additional funding becomes available. Figure 8.2 provides the CVLRTP 2040 Update's Unconstrained (Vision) Plan projects, in order of priority. For more information regarding how these projects have been ordered and prioritized, please see Chapter 7 of this document.



Figure 8.2: Unconstrained (Vision) Plan

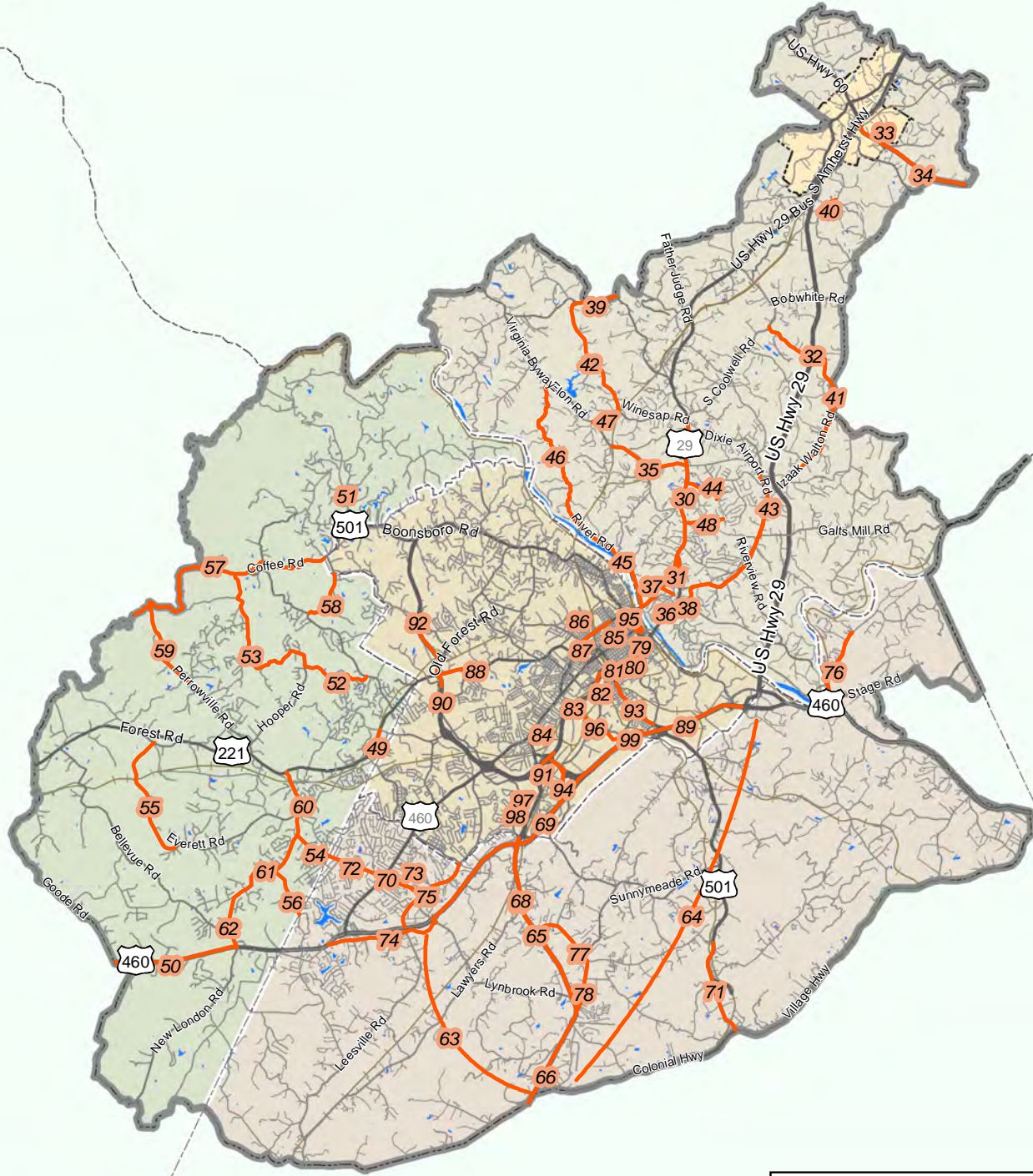
Map ID	Jurisdiction	Route #	Route Name	From	To	Project Description	Estimated Cost
49	Bedford County	221	Forest Rd	Gristmill Dr (Rt 1426)	Graves Mill Rd (Rt 126)	Access Management and Intersection Improvements	\$3,140,000
70	Campbell County	460	Timberlake Rd	Waterlick Rd (Rt 622)	--	Median & turn lane improvements, add lanes	\$2,344,000
90	City of Lynchburg	501	Lynchburg Expressway	S of Rt 221	Northwest Expressway (Rt 501)	New 4 lane road (One way pairs)	\$37,383,000
30	Amherst County	29	South Amherst Highway	Amherst St (Rt 163)	S Coolwell Rd (Rt 604)	Traffic Operations/ Signal Coordination	\$1,625,500
68	Campbell County	29	Wards Rd	English Tavern Rd (Rt 738)	Terminal Dr	Access Management	\$4,000,000
91	City of Lynchburg	501	Candlers Mountain Rd	Richmond Highway (US 460)	Lynchburg Expressway (US 29)	Widen to 6 lanes	\$23,068,000
83	City of Lynchburg	29	Lynchburg Expressway	Odd Fellows Rd	--	Improve interchange	\$7,320,000
84	City of Lynchburg	29/ 501	Lynchburg Expressway	Candlers Mountain Rd (Rt 501)	--	Improve interchange	\$16,220,000
80	City of Lynchburg	29	Lynchburg Expressway	Miller St/Robbin Rd	--	Improve interchange	\$200,000
67	Campbell County	29	Wards Rd	S of Calohan Rd (Rt 685)	City of Lynchburg Corp Limits	Access mgmt, traffic ops, safety improvements	\$10,000,000
89	City of Lynchburg	460/ 29	Richmond Highway	Campbell Ave (Rt 501)	Monacan Parkway (US 29)	Widen to 6 lane limited access highway	\$39,927,900
31	Amherst County	29	South Amherst Highway	Amherst St (Rt 163)	--	Add ramp to complete interchange	\$12,000,000
82	City of Lynchburg	29	Lynchburg Expressway	James St/Stadium Rd	--	Improve interchange	\$12,220,000
88	City of Lynchburg	221	Lakeside Dr	Lynchburg Expressway (Rt 501)	Forest Brook Rd	Widen to 4 lanes	\$19,211,175
79	City of Lynchburg	29	Lynchburg Expressway	Main St/Church St	--	Improve interchange	\$2,700,000
81	City of Lynchburg	29	Lynchburg Expressway	Kemper St/ Campbell Ave	--	Improve interchange	\$14,900,000
87	City of Lynchburg	163	Memorial Ave	NS Railway	Langhorne Ave	Reconstruct road and ped, add streetscape	\$2,000,000
63	Campbell County	29	US 29 Southern Bypass (Western Alternative)	S of Rt 24	Richmond Highway (US 460)	New 4 lane limited access facility	\$244,951,000
64	Campbell County	29	US 29 Southern Bypass (Eastern Alternative)	S of Rt 24	E Lynchburg Salem Turnpike (US 460)	New 4 lane limited access facility	\$363,245,000
92	City of Lynchburg	501	Northwest Expressway	Old Forest Rd	Wiggington Rd (Rt 620)	Widen to 4 lanes	\$27,652,950
95	City of Lynchburg	--	Downtown Streets	--	--	Implement downtown complete streets	\$50,000,000
93	City of Lynchburg	501	Campbell Ave	Edmunds St	Florida Ave	Roundabouts, Road Diet, Rail to Trail	\$6,100,000
69	Campbell County	460	East Lynchburg Salem Turnpike	Waterlick Rd (Rt 622)	Campbell Ave (Rt 501)	Increase to 6 lanes	\$173,356,000
65	Campbell County	29	Wards Rd	Calohan Rd (Rt 685)	City of Lynchburg corp limits	Widen road (rural 6 lane with median)	\$63,784,500
94	City of Lynchburg	670	Candlers Mountain Rd	Mayflower Dr (Rt 128)	Richmond Highway (US 460)	Widen to 4 lanes	\$17,283,000
72	Campbell County	622	Waterlick Rd	Bedford County Corp Limit	Rainbow Forest Dr (Rt 1520)	Widen to 4 lanes	\$23,480,500
50	Bedford County	460	E Lynchburg Salem Turnpike	Goode Rd (Rt 668)	Thomas Jefferson Rd (Rt 811)	Construct paved shoulder and access management	\$8,000,000
96	City of Lynchburg	--	Odd Fellows Rd	Richmond Hwy (US 460)	Lynchburg Expressway (US 29)	Roundabouts, bridge replacement, corridor balance	\$13,000,000
66	Campbell County	29	Wards Rd	Colonial Highway (Rt 24)	Calohan Rd (Rt 685)	Widen road (rural 6 lane with median)	\$23,486,000
36	Amherst County	163	South Amherst Highway	River Rd (Rt 685)	US 29 Business	Widen to 4 lanes with bike lane	\$34,153,000
86	City of Lynchburg	163	5th St	Taylor St	NS Railway Bridge	Reconstruct road and ped, add streetscape	\$2,000,000
97	City of Lynchburg	--	Wards Ferry Rd	Harvard St.	--	Construct Roundabout	\$1,100,000
73	Campbell County	622	Waterlick Rd	Timberlake Rd (US 460)	Leesville Rd (Rt 682)	Widen to 4 lanes	\$20,889,000
54	Bedford County	622	Waterlick Rd	Thomas Jefferson Rd (Rt 811)	Campbell County Corp Limits	Widen to 4 lanes	\$19,211,500
60	Bedford County	811	Thomas Jefferson Rd	Forest Rd (Rt 221)	Waterlick Rd (Rt 622)	Widen to 4 lanes	\$34,153,000
71	Campbell County	501	Campbell Highway	Village Rd (Rt 24)	Suburban Rd (Rt 680)	Widen to 4 lanes	\$27,387,500
34	Amherst County	60	Richmond Highway	Rt 606W	CVMPD Boundary	2 lane improvements	\$14,904,000
35	Amherst County	130	Elon Rd	NS Railroad	South Amherst Highway (US 29 Bus)	Widen to four lanes	\$40,556,500



Map ID	Jurisdiction	Route #	Route Name	From	To	Project Description	Estimated Cost
51	Bedford County	501	Boonsboro Rd	Winding Creek Ln (Rt 647)	--	Relocate intersection, construct turn lane	\$1,625,500
85	City of Lynchburg	163	5th St	Jackson St	Taylor St	Streetscape improvements	\$2,000,000
33	Amherst County	60	Richmond Highway	US 29 Bypass	Rt 606W	2 lane improvements	\$9,349,000
99	City of Lynchburg	--	New Road	Campbell Ave (Rt 501)	Odd Fellows Rd	Construct new roadway	\$10,000,000
98	City of Lynchburg	--	Wards Ferry Rd	Atlanta Ave	--	Add turn lanes	\$495,000
76	Campbell County	726	Mt. Athos Rd	Richmond Highway (US 460)	Babcock and Wilcox	Upgrade existing 2 lane road	\$13,614,000
38	Amherst County	622	New Wright Shop Rd	Colony Rd (Rt 210)	Dixie Airport Rd (Rt 677)	Reconstruct 2 lane road	\$19,657,000
32	Amherst County	29	Monacan Parkway	Izaak Walton Rd (Rt 663)	--	New access ramps	\$10,000,000
44	Amherst County	682	Woody's Lake Rd	South Amherst Hwy (US 29 Bus)	End	Reconstruct Roadway	\$7,202,500
74	Campbell County	681	Sunburst Rd	Richmond Highway (US 460)	Waterlick Rd (Rt 622)	Reconstruct 2 lane roadway	\$21,736,000
61	Bedford County	811	Thomas Jefferson Rd	Waterlick Rd (Rt 622)	Great Oak Rd (Rt 704)	Widen to 4 lanes	\$49,095,000
62	Bedford County	811	Thomas Jefferson Rd	Great Oak Rd (Rt 704)	US 460	Widen to 4 lanes	\$25,615,000
75	Campbell County	682	Leesville Rd	City of Lynchburg corp limits	Richmond Highway (US 460)	Widen to 4 lanes	\$41,663,500
46	Amherst County	685	River Rd	Rt 130	NS Railroad	Reconstruct 2 lane roadway	\$26,877,000
45	Amherst County	685	River Rd	NS Railroad	Rt 163	Reconstruct 2 lane roadway	\$21,459,500
78	Campbell County	738	English Tavern Rd	Wards Rd (US 29)	Suburban Rd (Rt 680)	Widen to 24 ft	\$10,032,000
37	Amherst County	210	Colony Rd	Rt 163	Rt 1034	2 lane reconstruction with shoulder	\$2,815,000
48	Amherst County	--	(New Road)	South Amherst Highway (US 29 Bus)	Fernwood Dr	New 2 lane connector road	\$6,232,000
77	Campbell County	738	English Tavern Rd	Suburban Rd (Rt 680)	Wards Rd (US 29)	Widen to 24 ft	\$13,376,000
56	Bedford County	623	Turkey Foot Rd	Thomas Jefferson Rd (Rt 811)	Campbell County Corp Limits	Widen pavement to 24 ft	\$9,030,000
43	Amherst County	677	Dixie Airport Rd	Amelon Rd (Rt 699)	Galts Mill Rd (Rt 622)	Reconstruct 2 lane roadway	\$10,255,500
40	Amherst County	661	Old Stage Rd	Sweet Briar Ln (Rt 624)	London Ln	2 lane improvements	\$2,849,000
58	Bedford County	659	Hawkins Mill Rd	Old Farm Rd (Rt 660)	Lynchburg Corp Limits	Reconstruct 2 lane roadway	\$9,783,000
57	Bedford County	644	Coffee Rd	Elk Valley Rd (Rt 665N)	Lynchburg Corp Limit	Reconstruct 2 lane roadway	\$45,140,500
47	Amherst County	795	Winridge Rd	Rt 130	Rt 675	Reconstruct 2 lane roadway	\$9,429,000
41	Amherst County	663	Izaak Walton Rd	Glade Rd (Rt 130)	S Coolwell Rd (Rt 604)	Reconstruct 2 lane roadway	\$25,651,000
39	Amherst County	652	Cedar Gate Rd	Rt 657	Rt 675	2 lane reconstruction	\$6,271,000
53	Bedford County	621	Cottontown Rd	Coffee Rd (Rt 644)	Hooper Rd (Rt 662)	Reconstruct 2 lane roadway	\$28,660,000
42	Amherst County	675	Winesap Rd	Rt 652	Rt 795	Widen pavement to 22 ft	\$17,671,000
52	Bedford County	621	Cottontown Rd	Hooper Rd (Rt 662)	Hawkins Mill Rd (Rt 660)	Reconstruct 2 lane roadway	\$12,793,000
55	Bedford County	622	Everett Rd	Kensington Pkwy	Gladden Cir (Rt 646)	Reconstruct 2 lane roadway	\$14,330,000
59	Bedford County	663	Perrowville Rd	Quail Ridge Rd (Rt 1431)	Coffee Rd (Rt 644)	Reconstruct 2 lane roadway	\$15,047,000

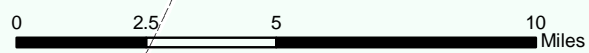


CVL RTP 2040 Update Unconstrained (Vision) Projects



Legend

— Vision List Projects



The Story Behind the Data

The project evaluation system developed in this update was extensively reviewed and vetted by the Transportation Technical Committee for the MPO, and its development was also reviewed at every stage in the process by the MPO Policy Board. It yielded a list of prioritized projects that was also extensively reviewed by these bodies and by the public and input received indicated that the results were consistent with general perceptions of important regional transportation priorities. Moreover, the resulting priority projects were consistent with many of the project priorities in the last LRTP update and with projects in the region's most recent Transportation Improvement Program.

These are indicators that this new project evaluation methodology did indeed yield results that matched local priorities and that it likely will in the future as well. However, it is anticipated that the project evaluation system will evolve over time, as regional priorities evolve. There are several mechanisms built into the project evaluation system that allow it to evolve and be modified without needing to retool the methodology itself:

- **The ability to add or remove new goals under the basic Vision Themes** – the five Vision Themes are broad enough to accommodate new goals that may emerge, while the Vision Themes themselves – Safety, Mobility, Economy, Community/Environment and Efficiency – contain the most basic categories of criteria under which transportation projects are typically measured.
- **The ability to change measures as new data emerges** – new data is being developed all the time and this project evaluation framework allows new metrics or indicators to be added under each Vision Theme. The Vision Themes help organize all the measures and relate them back to the region's overall policy goals.
- **The ability to adapt as priorities shift** – A key feature of this project evaluation system is its flexibility to change priorities through modifying weighting. Both the Vision Themes and the measures have weights that control how important they are in the final project scoring results. As policies or priorities shift in the region, the weights can be modified to better reflect the desired outcomes for project evaluation in the future.

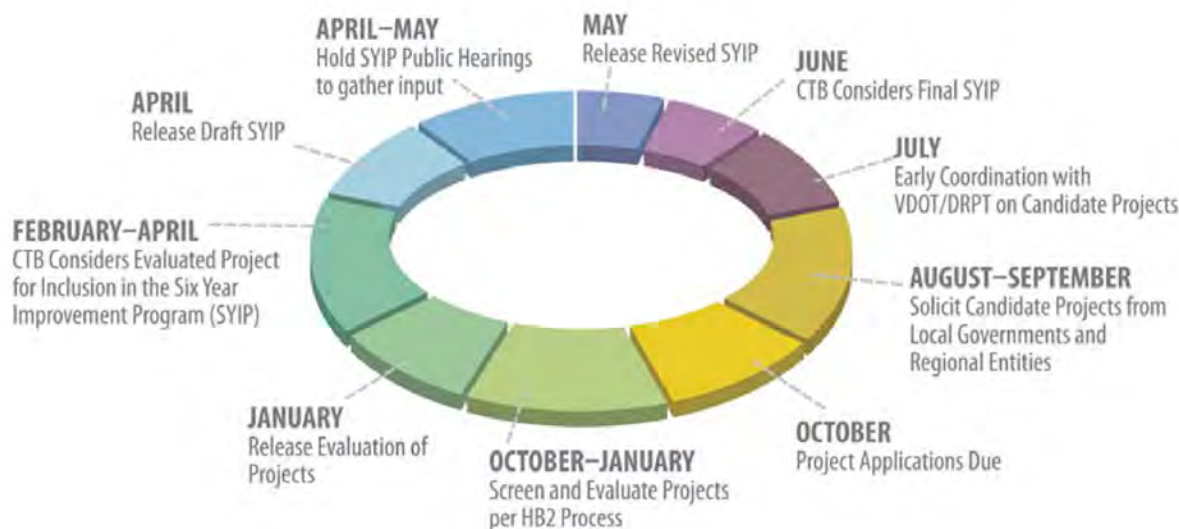
Implementation under HB2

As discussed above, one of the most important transportation policy shifts at the state level in recent decades has been the adoption of the HB2 project prioritization system. The project evaluation system developed in this CVLRTP 2040 update makes the MPO more ready to adapt both to MAP-21 at the federal level and HB2 at the state level.

As the HB2 process is fully deployed over the next year, the state's project evaluation metrics and process will become finalized and all projects subject to HB2 screening will be nominated by localities and MPOs according to an annual cycle (see Figure 8.3 on the following page).

The importance of the CVLRTP project evaluation system in relation to HB2 is not in using

Figure 8.3: HB2 Annual Cycle from the State’s HB2 Policy Guide



the same criteria or project evaluation metrics but in having a flexible framework that is similar to that used by HB2 but is tailored to regional, not statewide priorities and goals. As the HB2 project rating system becomes finalized and rating results become available for each region, the MPO may want to consider some modifications to its project evaluation system, particularly with respect to the weights for various measures. However, it is not recommended that the MPO’s project evaluation system be revised to exactly mirror that used by the state under HB2 for some very important reasons, as noted:

- **Regional priorities may not be state priorities** – the goals that serve as the foundation for this region’s project evaluation system are specific to Region 2000 and may not reflect statewide priorities (such as a greater regional emphasis on economic development over congestion relief)
- **Funding sources are broader** – The LRTP addresses projects that can be implemented through all funding sources normally available for transportation, while HB2 covers only select funding sources. In fact, OIPI has emphasized that HB2-eligible funding represents only 8% of the state’s overall transportation budget.
- **Time frames differ** – HB2 time frames are geared towards the Six Year Improvement Plan cycle and its annual updates, whereas the LRTP focuses on a 20–30 year long planning horizon.

However, it is important to continue to monitor the evolution of the HB2 process at the state level. In the coming year or two, MPO staff may consider the following follow up implementation steps in relation to the HB2 funding process:

- Continue to lobby for clear and predictable estimates of anticipated revenue through the VDOT district, so that future planning can take into account realistic funding forecasts
- Consider modifications to the MPO’s project evaluation system before the next LRTP update, once one or two rounds of HB2 project ratings have come out, in order to better position the region’s top projects for being funded under HB2 in the future.
- Share lessons learned with OIPI and the Secretariat on the details of the MPO’s project



evaluation system and suggestions for improvements to the HB2 prioritization system.

In summary, a continued robust dialogue between the MPO and the Commonwealth is recommended as both entities develop in the new era of performance based planning and develop consistent project evaluation systems that will guide their planning in the future.