

BLUEFIELD 2020 TRANSPORTATION PLAN

**DEVELOPED BY THE
TRANSPORTATION PLANNING DIVISION
OF THE
VIRGINIA DEPARTMENT OF TRANSPORTATION
IN COOPERATION WITH
THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY
ADMINISTRATION
&
THE TOWN OF BLUEFIELD**

March 2002

This report does not constitute a standard specification, regulation or provide a funding mechanism for the included transportation recommendations.

INTRODUCTION

The Bluefield 2020 Transportation Plan was developed as a joint effort between the Virginia Department of Transportation and the Town of Bluefield. The purpose of the study was to evaluate the transportation system in the Bluefield area and to recommend a set of transportation improvements that could best satisfy existing and future transportation needs. This study identified needs which are based upon capacity, roadway safety, geometric conditions, and land use.

Improved transportation systems remain vital to Virginia's, as well as the local area's, continued economic growth and development. The provision for the effective, safe and efficient movement of people and goods is a basic goal of all transportation programs in the Commonwealth of Virginia. It is with this basic goal in mind, and with further consideration of environmental issues and local desires, that this transportation plan has been developed.

The Virginia Department of Transportation will use this plan when evaluating requests from the local governments for specific transportation projects and/or for implementing projects that the Department initiates. The list of recommendations will also be used in the statewide transportation planning process in order that the statewide magnitude of needs can be better quantified.

STUDY AREA THOROUGHFARE SYSTEM

The Town of Bluefield is located in southwest Virginia along US 460 in Tazewell County at the foot of the East River Mountain, and is adjacent to the Thomas Jefferson National Forest. Bluefield College is located in the southeast section of Town near College Avenue and Stadium Drive. The Town of Bluefield, Virginia is located to the west of the City of Bluefield, West Virginia. A finite urban area was established for purposes of this transportation study, which followed the corporate limits of the Town of Bluefield.

Inside the study area limits, a specific set of highways that have been approved by the Virginia Department of Transportation, the Federal Highway Administration, and the Town of Bluefield have been selected and designated as the area's urban thoroughfares. The urban thoroughfare system is identified as roads that are functionally classified as collectors or arterials. The subsequent analysis and recommendations were limited to those designated roadways, with the exception of any recommended facility on new location and those improvements that have been requested by representatives of Bluefield on the local unclassified street system. In addition, improvements to the following other modes of transportation have been evaluated: bicycle and pedestrian facilities; intercity rail, bus and air travel; transit, paratransit, and taxi; and goods movement.

DEMOGRAPHIC OVERVIEW

Between 1990 and 2000, the population of the Town of Bluefield declined from about 6,300 to 5,100, which represents a yearly decline of approximately one percent. Tazewell County had a population drop in the early 1980s, and it declined by a total of three percent in the 1990s. However, with 11 percent employment growth in the county from 1990 to 2000, and continued development, Tazewell County is projected to grow at close to a one percent annual growth rate in the future.

PHASE ONE: BASE YEAR ROADWAY RECOMMENDATIONS***Intersection of Virginia Avenue & Montrose Street***

The recommendation at this location is to improve safety at the at-grade rail crossing by providing a traffic signal at the intersection of Virginia Avenue & Montrose Street that is coordinated with the rail crossing. The Federal Railroad Administration has also recommended that the crossing have a double gate system installed on each side of the crossing. The estimated cost of this recommendation is \$540,000.

Valley Dale Street (US 460 western interchange to Fincastle Lane)

Reduce the posted speed limit on this section of Valley Dale Street from 35 miles per hour to 25 miles per hour. Due to the geometric conditions of this roadway, safety is a concern. The recommended cost of this recommendation, which includes signage, is \$6,000.

Virginia Avenue (Depot Street to West Virginia State Line)

Provide access management on Virginia Avenue by constructing sections of missing curb and providing parking on one side of the roadway. A number of businesses currently exist in close proximity to the roadway along this section of Virginia Avenue. The current pavement width varies from approximately 28 feet to 30 feet. The estimated cost of construction is \$156,400. No additional right-of-way is projected to be required.

North College Avenue (Thayer Street to North Corporate Limits of Bluefield)

The recommendation at this location is to widen to a standard two-lane urban cross-section to improve the geometric deficiencies. The length of this recommended improvement is approximately 0.37 miles. The estimated cost of this recommendation is \$1,387,000 (\$990,700 for construction and \$387,000 for right-of-way).

South College Avenue (Valley Dale Street to Rollins Street)

Provide access management by consolidating business entrances and providing a traffic signal at a single intersection that will provide access to the commercial development in this area. The purpose of this recommendation is to address the conflicting traffic movements that exist in the area, which can result in a safety hazard. Upon installation of the traffic signal, additional warning signs should be located on the approaches, particularly for vehicles traveling downgrade in the northbound direction. The estimated cost of this recommendation is \$500,000.

Intersection of South College Avenue & Valley Dale Street

Extend the left-turn storage lane on South College Avenue southbound. Currently vehicles queue past the designated storage area during particular time periods. A grass median exists where the storage lane could be extended. The estimated construction cost of this recommendation is \$45,000.

Intersection of US 460 Bypass & Leatherwood Lane

Extend the left-turn storage lane on US 460 eastbound to provide more storage capacity for this movement. Currently vehicles queue past the designated storage area during peak time periods. Modify the southbound Leatherwood Lane right-turn movement from a yield to a stop-controlled movement with a right arrow. The improvements would address safety concerns at this intersection and are estimated to cost \$69,000. Right-of-way will not be required, given that the location of the left-turn lane is located in the limited access control of US 460.

South College Avenue (Stadium Drive to Commerce Drive)

Widen to a standard two-lane urban cross-section with a minimum pavement width of 30 feet. The existing pavement width of this well-traveled roadway is 22 feet. During peak traffic times, eastbound traffic is backed up along a significant portion of this street. Provide turn-channelization to businesses and residents, including three sets of left- and right-turn lanes, as well as a center turn-lane for a section of this segment. This recommendation is estimated to cost \$3,536,000 (\$2,720,000 for construction and \$816,000 for right-of-way).

Stadium Drive (South College Avenue to West Virginia State Line)

Widen to a standard two-lane urban cross-section with a minimum pavement width of 30 feet and provide left-turn lanes to Bowen Field and Bluefield College. The current pavement width of this roadway is approximately 22 feet. This recommendation is projected to cost approximately \$726,000 for construction and \$327,600 for right-of-way, for a total cost of \$1,053,600.

Intersection of South College Avenue & Stadium Drive

The recommendation at this location is to relocate the intersection to the west approximately 1000 feet and provide turn lanes and a traffic signal at the realigned T-intersection. This recommendation should be coordinated with the recommended widening of Stadium Drive and South College Avenue. The total estimated cost of the recommendation is \$810,000 (\$600,000 for construction and \$210,000 for right-of-way).

South College Avenue (West Virginia State Line to Stadium Drive)

Re-stripe the pavement to create a right-turn lane leading to the intersection of South College Avenue and Leatherwood Lane. The intersection and signalization are located in Bluefield, West Virginia. It seems likely that West Virginia would stripe the remainder of the intersection up to the signal to match Virginia if this change were made. Estimated cost of this recommendation is \$4,200. This recommendation should be coordinated with the recommended relocation of the South College Avenue & Stadium Drive intersection. During peak times, traffic is backed up to the intersection with West Cumberland Road, and at times, traffic is stalled on U.S. Route 460. Traffic is also backed up to the main entrance of Bluefield College. The local improvement to extend West Cumberland Road would provide an alternate route for through-traffic.

Edgewood Road (Hillcrest Drive to Ridgeway Drive)

Reconstruct Edgewood Road between Hillcrest Drive and Ridgeway Drive to improve inadequate vertical sight distance. Edgewood Drive is used as an alternative to Hockman Pike. The construction cost of this Phase I recommendation is estimated at \$105,000.

Intersection of Tazewell Avenue and South College Avenue

Provide a traffic signal at this intersection. Sight distance is a problem at this intersection, creating a safety problem for turning movements. The total estimated cost of this recommendation is \$120,000.

PHASE TWO: INTERIM YEAR (2010) ROADWAY RECOMMENDATIONS***Hockman Pike***

Reconstruct Hockman Pike to a standard urban cross-section with a minimum pavement width of 30 feet, from Fincastle Turnpike to Parkview Drive and from Edgewood Road to Montrose Street. The current pavement width of this roadway varies between 14 and 16 feet. The estimated cost of this recommendation is \$1,953,000 (\$1,302,000 for construction and \$651,000 for right-of-way).

South College Avenue (Tazewell Avenue to Graham Avenue) & Walnut Street (Graham Avenue to Virginia Avenue)

Convert South College Avenue from Tazewell Avenue to Graham Avenue and Walnut Street from Graham Avenue to Virginia Avenue to a one-way pair. This recommendation would address the capacity issue projected on South College Avenue in the year 2020. The estimated cost of re-striping the roadway and providing signage is \$3,400. A recommendation is also being made on Walnut Street from Virginia Avenue to Tazewell Avenue to complete the one-way pair.

Walnut Street (Virginia Avenue to Tazewell Avenue)

Reconstruct Walnut Street from Virginia Avenue to Tazewell Avenue to a two-lane, one-way urban roadway. This recommendation would address the capacity issue projected on the parallel section of College Avenue in the year 2020. The estimated construction cost of this recommendation is \$190,600. This recommendation would be done in concert with the recommendation of converting the adjacent section of Walnut Street / Virginia Avenue & South College Avenue to a one-way pair.

South College Avenue (Valley Dale Street to Tazewell Avenue)

Widen this section of South College Avenue to four lanes to address substandard geometry and a projected capacity issue. Displacements in this area are consistent with the need for removal of dwellings in flood-prone areas. The projected cost of this recommendation is \$7,944,000 (\$5,280,000 for construction and \$2,664,000 for right-of-way).

PHASE THREE: STUDY YEAR (2020) ROADWAY RECOMMENDATIONS***Tazewell Avenue (Montrose Street to Schenley Avenue)***

The recommendation at this location is to widen the roadway to a standard two-lane urban cross-section with a minimum pavement width of 30 feet. The approximate length of this roadway is 0.66 miles. A geometric deficiency exists in that the current pavement width of this roadway is approximately 18 feet. The estimated cost of this improvement is \$1,732,500 including \$1,386,000 for construction and \$346,500 for right-of-way.

Valley Dale Street (US 460 western interchange to Fincastle Lane)

Widen to a standard two-lane urban cross-section with a minimum pavement width of 30 feet. The current pavement width at this location is approximately 20 feet. This improvement is recommended to extend to the point where Valley Dale Street widens to a four-lane cross-section. The estimated total cost of this recommendation is \$3,780,000 (\$2,520,000 construction costs, and \$1,260,000 right-of-way costs).

Intersection of US 460 Bypass & Commerce Drive

Replace signalized intersection with a grade-separated interchange. Commerce Drive north of the US 460 Bypass is currently well-traveled and development is projected to occur south of the US 460 Bypass. The projected total cost of this improvement is \$54,000,000 (\$36,000,000 construction costs, and \$18,000,000 right-of-way costs).

OTHER MODES OF TRANSPORTATION**Parking**

On-street parallel parking and off-street parking facilities exist throughout the Town of Bluefield. Parallel parking is provided on Virginia Avenue and College Avenue in the business district. Off-street parking affects travel on Virginia Avenue and is being addressed with an access management recommendation at that location. There are no other parking recommendations being made as part of this plan. There is, however, a perceived parking shortage in the downtown business district due in part to employee use of accessible parking.

Bicycle / Pedestrian

Currently there are no dedicated bicycle facilities within the corporate limits of Bluefield. Sidewalks exist on one side or both sides of many of the thoroughfare roadways, including Virginia Avenue and sections of College Avenue. In addition, pedestrian movements will be improved during the reconstruction of Valley Dale Street, College Avenue, and Stadium Drive at which point sidewalks will be constructed. There are no bicycle or pedestrian recommendations being made as part of this plan.

Transit, Paratransit, and Taxi

The Town of Bluefield owns and operates *Graham Transit* which provides deviated fixed-route service throughout the Town between residential, shopping, and employment areas. *Graham Transit* operates Monday through Friday, and the first Saturday of every month, excluding holidays. Taxi service is also provided by private companies in the Town. No recommendations associated with transit, paratransit, and taxi services are being made as part of this plan.

Goods Movement

With the reconstruction of Route 102 north of Town, additional through trucks appear to be in the downtown area. On-street parking modifications were made by the Town to address turning radius restrictions downtown. There are no recommendations being made as part of this transportation plan that are specific to goods movement.

Intercity Rail, Bus and Air Travel

Currently, there is no passenger rail service, bus service or air service located in the Town of Bluefield. The nearest passenger bus service is available from Greyhound Bus Lines in Green Valley, West Virginia, approximately 7 miles north of Bluefield. Air travel is available at the Tazewell County airport near Richlands, Virginia which handles mostly recreational and instructional services. Air travel, including commercial service, is also available at the Mercer County Airport in Bluefield, West Virginia. There is no passenger rail service located in Southwest Virginia. Due to the lack of intercity rail, bus or air travel in the vicinity of Bluefield, no improvements are recommended at this time.

LOCAL ROADWAY PROJECTS

There are three local projects of interest to the Town of Bluefield involving roadways that are not part of the VDOT thoroughfare system.

Intersection of Leatherwood Lane and West Cumberland Road

The Town of Bluefield has recently completed a curb and gutter project along Leatherwood Lane and a portion of West Cumberland Road. This intersection, along with the problems associated with U.S. Route 460 and South College Avenue and recent commercial development, has seen increased accidents and traffic backups. The Town is interested in the realignment of this intersection along with ramp improvements to U.S. 460 to help alleviate the problems. The estimated cost of this local recommendation is \$588,000 and is a Base Year recommendation. The thoroughfare recommendations include short-term and long-term improvements to the US 460 and Leatherwood lane intersection that also will improve safety and circulation in this area.

Walnut Street Extension

This recommendation is to extend Walnut Street from Tazewell Avenue to a point on South College Avenue north of Stockton Street. The Town already owns a substantial amount of right-of-way in this area. This recommendation would help to improve the traffic flow in and around the downtown area. The new facility would be a two-lane roadway with a minimum pavement width of 30 feet. This Phase III improvement is estimated to cost \$393,800 (\$315,000 construction costs, and \$78,800 right-of-way costs). (The Town has preliminary approval from FEMA to buy the properties along Walnut Street and remove the structures for floodplain management.)

West Cumberland Road

The Town is considering making West Cumberland Road a through street (right-of-way already in place) to College Avenue at the main entrance with Bluefield College, which would create a new four-way intersection in this portion of College Avenue. This improvement would include a new traffic signal on College Avenue. The new segment will be 0.11 miles long and the estimated cost is \$411,000 (\$231,000 for construction, \$180,000 for the traffic signal).

ENVIRONMENTAL OVERVIEW

An environmental overview has been conducted for the roadway recommendations that included widening (providing additional travel lanes) or development of new roadway facilities for the Town of Bluefield. The results of the environmental overview were included in the analysis of the recommended improvements for the Bluefield 2020 Transportation Plan Technical Report.

LOCAL COORDINATION & CITIZEN PARTICIPATION

The development of the Bluefield 2020 Transportation Plan included several coordination meetings with local staff members of the Town and a public meeting held with VDOT representatives, PDC representatives, Town officials, and residents of Bluefield. For information for all thoroughfare roadways, contact the Town of Bluefield or visit the project web site at <http://www.vdoturbanplans.com>.

The coordination meetings consisted of a kick-off meeting, an existing conditions meeting, and a draft recommendations meeting. The kick-off meeting, held in February, 2000, enabled the project team to discuss with local staff the purpose and scope of the study, the schedule for data collection and plan preparation, and the coordination process. The second meeting (existing conditions), held in February, 2001, allowed the project team to present the results of baseline and horizon year traffic analysis and also allowed local staff to communicate desired transportation needs. Finally, at the draft recommendations meeting, held in May, 2001, the project team presented and discussed with Town officials the draft 2020 Transportation recommendations. Input was provided by Town staff that was then used to draft the final recommendations.

A public meeting was held at Graham Middle School on February 25, 2002. The purpose of this meeting was to present the recommendations to Town officials, citizens, and other interested parties, and to receive comments on the plan.

PLAN ADOPTION

The Bluefield Town Council adopted the Bluefield 2020 Transportation Plan at the Council meeting on March 25, 2002.

ADDITIONAL INFORMATION

More details on the development of the Bluefield 2020 Transportation Plan and the study recommendations are available in the Bluefield 2020 Transportation Plan Technical Report and the Bluefield 2020 Transportation Plan website, <http://www.vdoturbanplans.com/Bluefield.htm>.

In addition to this 2020 transportation plan for the Town of Bluefield, the Virginia Transportation Development Plan (VTDP) also addresses transportation needs. The VTDP is a comprehensive listing of transportation projects scheduled for construction or improvement over the next six fiscal years, as well as anticipated funding allocations. Projects included in the Virginia Transportation Development Plan (VTDP) are not part of this recommendations package. The VTDP can be reviewed online at VDOT's website, <http://virginiadot.org/>. Information on VTDP projects for the Town of Bluefield can also be found by contacting the VDOT Resident Engineer at the Tazewell Residency Office in Tazewell, Virginia (540-988-2566).

BLUEFIELD TRANSPORTATION RECOMMENDATIONS

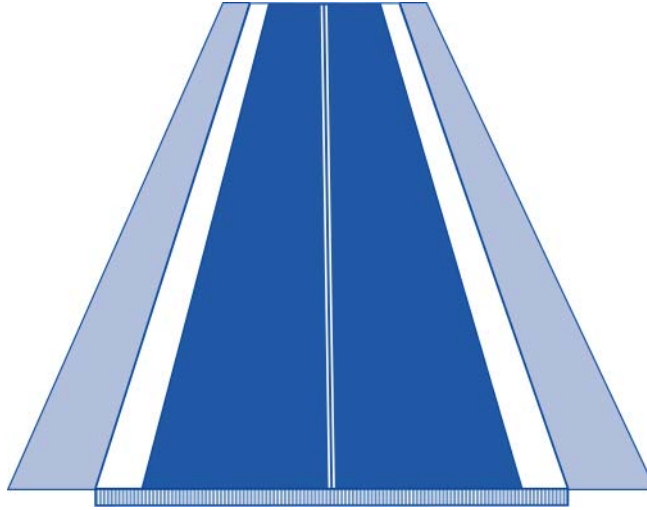
Route	Facility Name	From	To	Road Segment Length (miles)	Recommendation	Cost (Year 2000 \$)	Existing Typical Section (Width)	Recom. Typical Section (Width)	Average Daily Traffic (ADT)	
									Year 2000	Year 2020
	Intersection Improvement	Virginia Avenue	Montrose Street	N/A	Install traffic signal at the intersection of Virginia Avenue & Montrose Street and coordinate with the rail crossing and add double gates to crossing (Base Year)	540,000	N/A	N/A	N/A	N/A
	Fincastle Tpk / Valleydale St	Route 460 Bypass	Mountain Lane Avenue	1.00	Reduce speed limit to 25 mph (Base Year) and widen to a standard two-lane urban roadway (2020)	3,153,000	R2 (20')	U2 (30')	8,160	12,240
	Valley Dale Street	Mountain Lane Avenue	Fincastle Lane	0.20	Reduce speed limit to 25 mph (Base Year) and widen to a standard two-lane urban roadway (2020)	633,000	R2 (20')	U2 (30')	8,160	12,240
US 19	Virginia Avenue	Depot Street	Hicks Street	0.28	Provide access management by constructing missing curbs and providing parking on one side of roadway (Base Year)	64,400	U2 (30')	U2 (30')	7,600	9,120
US 19	Virginia Avenue	Hicks Street	WV State Line	0.40	Provide access management by constructing missing curbs and providing parking on one side of roadway (Base Year)	92,000	U2 (28')	U2 (28')	8,250	9,900
	North College Avenue	Thayer Street	NCL Bluefield	0.37	Reconstruct to a standard two-lane urban roadway (Base Year)	1,387,000	R2 (22')	U2 (30')	6590	9230
VA 102	South College Avenue	Valley Dale Street	Rollins Street	0.80	Provide access management by consolidating business entrances and providing a traffic signal (Base Year). Widen to a four-lane roadway (2010)	6,644,000	U2 (22')	U4 (48')	11,570	16,200
	Intersection Improvement	South College Avenue	Valley Dale Street	N/A	Extend left-turn storage lane on southbound College Avenue to provide more storage (Base Year)	45,000	N/A	N/A	N/A	N/A
	Intersection Improvement	US 460 Bluefield Bypass	Leatherwood Lane	N/A	Reconstruct left-turn storage lane on eastbound Bluefield Bypass to provide more storage and convert right-turn on southbound Leatherwood Lane from a yield to stop-controlled (Base Year)	69,000	N/A	N/A	N/A	N/A
VA 102	South College Avenue	Stadium Drive	Commerce Drive	0.68	Reconstruct to a standard two-lane urban roadway with turn channelization (Base Year)	3,536,000	R2 (22')	U2 (30')	13,620	20,430
	Stadium Drive	South College Avenue	WV State Line	0.26	Reconstruct to a standard two-lane urban roadway and provide two left-turn lanes (Base Year)	1,053,600	R2 (22')	U2 (30')	7,560	10,580
	Intersection Improvement	South College Avenue	Stadium Drive	N/A	Relocate intersection to the west and provide traffic signal (Base Year)	810,000	N/A	N/A	N/A	N/A
VA 102	South College Avenue	WV State Line	Stadium Drive	0.07	Re-stripe to provide additional lane approaching intersection of South College Avenue and Leatherwood Lane (Base Year)	4,200	U2 (32')	U2 (32')	13,250	19,880
	Edgewood Road	Hillcrest Drive	Ridgeway Drive	0.05	Improve sight distance (Base Year)	105,000	R2 (26')	R2 (26')	2,500	3,000
	Intersection Improvement	Tazewell Avenue	College Avenue	N/A	Provide a traffic signal (Base Year)	120,000	N/A	N/A	N/A	N/A
	Hockman Pike	Fincastle Turnpike	Parkview Drive	0.22	Reconstruct to a standard two-lane urban roadway (2010)	693,000	R2 (16')	U2 (30')	2,350	2,820
	Hockman Pike	Edgewood Road	Montrose Street	0.40	Reconstruct to a standard two-lane urban roadway (2010)	1,260,000	R2 (14')	U2 (30')	2,340	2,810
VA 102	South College Avenue	Tazewell Avenue	Route 19 (Virginia Avenue)	0.08	Convert from two-way to one-way roadway (2010)	1,400	U2 (32')	U2 (32')	9,910	13,870
VA 102	South College Avenue	Route 19 (Virginia Avenue)	Graham Avenue	0.05	Convert from two-way to one-way roadway (2010)	900	U2 (39')	U2 (39')	5,600	7,840
US 19	Walnut Street / Virginia Avenue	Graham Avenue	Virginia Ave	0.06	Convert from two-way to one-way roadway (2010)	1,100	U2 (38')	U2 (38')	5,860	7,030
VA 102	Walnut Street	Virginia Avenue	Tazewell Avenue	0.09	Reconstruct to a standard two-lane urban roadway and convert to a one-way roadway (2010)	190,600	U2 (20')	U2 (30')	N/A	N/A
VA 102	South College Avenue	Rollins Street	Tazewell Avenue	0.30	Widen to a four-lane roadway (2010)	1,800,000	U2 (22')	U4 (48')	9,610	13,450
	Tazewell Avenue	Montrose Street	Schenley Avenue	0.66	Reconstruct to a standard two-lane urban roadway (2020)	1,732,500	R2 (18')	U2 (30')	1,860	2,230
	Intersection Improvement	US 460 Bluefield Bypass	Commerce Drive	N/A	Construct diamond interchange in place of signalized intersection (2020)	54,000,000	N/A	N/A	N/A	N/A
Local Roadway	Intersection Improvement	Leatherwood Lane	W Cumberland Road	N/A	Realign intersection (Base year)	588,000	N/A	N/A	N/A	N/A
New Local Roadway	Walnut Street	Tazewell Avenue	South College Avenue	0.15	Extend Walnut Street from Tazewell Avenue to College Avenue north of Stockton Street (2020)	393,800	N/A	U2 (30')	N/A	N/A
New Local Roadway	West Cumberland Rd	South College Avenue	Existing W. Cumberland Rd	0.11	Extend W. Cumberland Road to College Avenue and Install a traffic signal at College Ave. (2020)	411,000	N/A	U2 (30')	N/A	N/A
Total Cost *						\$77,935,700				

* Total cost does not include local roadway and new roadway projects since these locations are not currently included in the Town's thoroughfare system.

TYPICAL SECTIONS¹

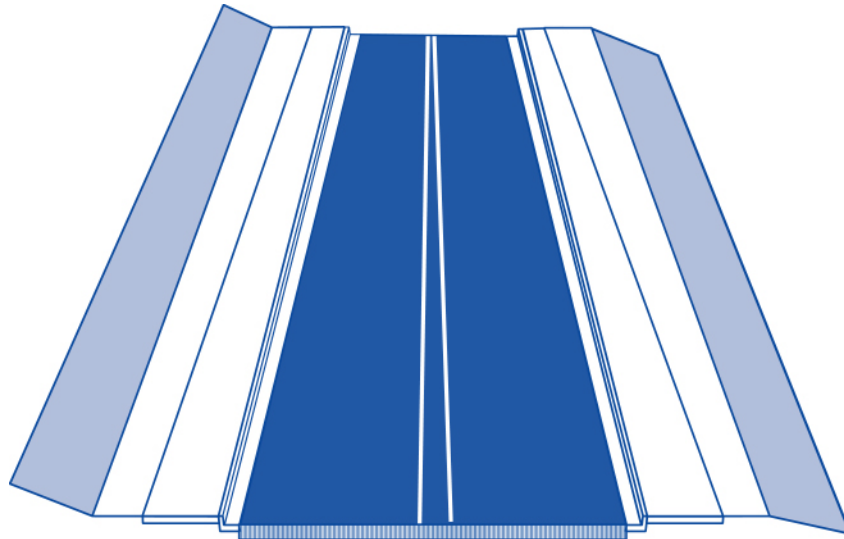
R2

Rural two-lane roadway with standard shoulders and ditches



U2

Urban two-lane roadway with curb and gutter



¹ Recommended typical sections assume 12' wide travel lanes.

U4
Urban four-lane roadway with curb and gutter

