2.1 ROADWAY CLASSIFICATIONS

Functional classification is the process by which the nation's network of streets and highways are ranked according to the type of service they provide. It determines how travel is "channelized" within the roadway network by defining the part that any road or street should play in serving the flow of trips through a highway network. Functional classification is also used in transportation planning, roadway design, and for the allocation of federal roadway improvement funds.

The majority of the study corridors contained in the Plan are functionally classified as urban minor arterials, which interconnect with the urban principal arterial system and provide service to trips of moderate length at a lower level of travel mobility than principal arterials. As depicted in Image 2.1, urban minor arterials place more emphasis on land access, offering a lower level of traffic mobility.

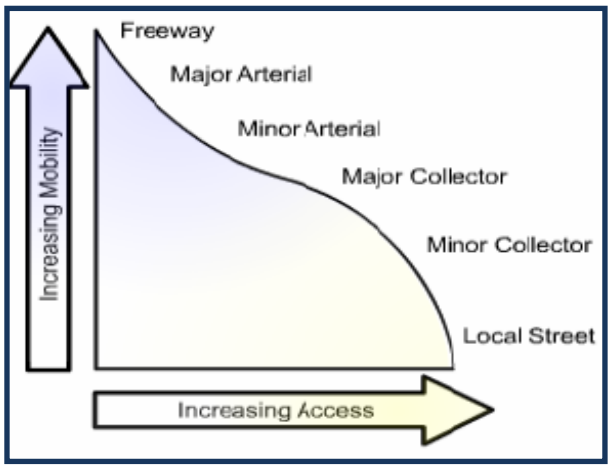

Image 2.1 Federal Functional Classification of Highways: The purpose of access management is to balance mobility versus access. Source: VDOT

Two of the study corridors, South Pollard Street and Walnut Avenue, are classified as urban collectors, which provide land access and traffic circulation within residential neighborhoods, commercial, and industrial areas. Urban collectors function within the transportation network by collecting traffic from local streets and channeling it to the arterial system.

2.2 ROAD CHARACTERISTICS

2.2.1 Washington Avenue (Route 24)

Washington Avenue extends from South Pollard Street in Downtown Vinton, east to the limits of Bedford County. It is a four-lane urban minor arterial with a divided median over most of its area. A portion of Washington Avenue from South Pollard Street to North Mitchell Road is not divided with a median. From South Pollard Street to Marshall Avenue, Washington Avenue is bounded by sidewalks with curb and gutter. The remaining portion, mostly in Roanoke County, has an earthen shoulder with no sidewalks.

Image 2.2.1 View west of the earthen shoulder along Washington Avenue in front of William Byrd Middle and High Schools.

According to the VDOT, the 2008 Daily Traffic Volume Estimates indicated that the annual average daily traffic (AADT) on the segment of Washington Avenue from Bypass Road to the eastern Town of Vinton limits carries 25,000 vehicles per day. The 2008 AADT for the segment of Washington Avenue from the Town limits east to Bedford County is 22,000 vehicles per day, an increase of approximately 5% since 2007.

2.2.2 Hardy Road (Route 634)

The portion of Hardy Road included in the study area extends from Chestnut Street in the Town of Vinton, through Roanoke County, to the western border of Bedford County. For purposes of describing the roadway characteristics of Hardy Road, this study corridor is broken into three segments.

Image 2.2.2 The bicycle lanes along Hardy Road were the first in the Roanoke Valley.

The first segment of Hardy Road, from Chestnut Street to Bypass Road, is a four-lane urban minor arterial. This segment contains curb and gutter, with intermittent sidewalks on both sides.

The second segment of Hardy Road, from Bypass Road to the eastern town limits, is a four-lane collector with a continuous two-way, left-turn lane (TWLTL) located in the middle of the roadway. This segment contains curb and gutter, sidewalks on both sides, and designated bike lanes.

According to VDOT, the 2008 AADT count on these two segments of roadway is 12,000 vehicles per day, an increase of 9% since 2007.

The third segment of Hardy Road, from the limits of Roanoke County to Bedford County, tapers to a two-lane urban minor arterial with earthen shoulders and no sidewalk or bike lanes. According to VDOT, the 2008 AADT count on this segment of roadway is 11,000 vehicles per day.

It is important to note that at the commencement of this Plan, the second segment of Hardy Road was listed on the Six-Year Secondary Road Improvement Plan. This project proposed to widen the existing two-lane section to four-lanes. Due to poor economic conditions and State budget deficits, this project has been removed from the Six-Year Road Improvement Plan. For more information regarding the Six-Year Secondary Road Improvement Plan, see Section 2.7 of this Chapter.

2.2.3 Virginia Avenue (Route 24)

Virginia Avenue (Route 24) extends from the eastern limits of the City of Roanoke, through the Town of Vinton to Chestnut Street. This segment of Route 24 is a divided, four-lane, urban minor arterial. Both sides of Virginia Avenue have

Table 2.2 Roadway Characteristics

Route	From	To	Lanes	Lane Width (ft.)	Shoulder Surface	Speed Limit (mph)	Sidewalks
Washington Avenue	South Pollard Street	Mitchell Street	4	12	Curb & Gutter	25	Both Sides
Washington Avenue	Mitchell Street	Bypass Road	4	12	Curb & Gutter	35	Both Sides
Washington Avenue	Bypass Road	Vinton CL	4	12	Earthen	35	Partial
Washington Avenue	Roanoke County CL	Bedford CL	4	12	Earthen	45	None
Hardy Road	Chestnut Street	Vinton CL	4	12	Curb & Gutter	35	Both Sides
Hardy Road	Roanoke County CL	Bedford CL	2	12	Earthen	45	None
Virginia Avenue	City of Roanoke CL	South Pollard Street	4	12	Curb & Gutter	35	Both Sides
Virginia Avenue	South Pollard Street	Clearview Drive	4	12	Curb & Gutter	35	Both Sides
Walnut Avenue	City of Roanoke CL	2nd Street	2	12	Earthen	25	None
Walnut Avenue	2nd Street	West Lee Avenue	2	12	Curb & Gutter	25	Partial
Gus Nicks Boulevard	City of Roanoke CL	South Pollard Street	4	12	Curb & Gutter	35	Both Sides
Bypass Road	Washington Avenue	Hardy Road	4	12	Curb & Gutter	35	None
South Pollard Street	Washington Avenue	Virginia Avenue	2	12	Curb & Gutter	25	Both Sides

Source: Statewide Planning System. Virginia Transportation and Mobility Planning Division. Richmond, 2007

intermittent sidewalks with curb and gutter. According to VDOT, the 2008 AADT count on the portion of Virginia Avenue from the western limits of the Town of Vinton to South Pollard Street is 27,000. The remaining portion of this roadway from South Pollard Street to Chestnut Street is 24,000, an increase in over 4% since 2007.

2.2.4 Walnut Avenue

The portion of Walnut Avenue located in the Town of Vinton extends from the limits of the City of Roanoke east to West Lee Avenue. According to the 2008 AADT count, this segment of Walnut Avenue is a two-lane, urban collector that carries 7,300 vehicles per day, an increase in 2.8% since 2007. The eastern portion of the road near Downtown Vinton has sidewalks with curb and gutter, while the western portion near the City of Roanoke only has a paved or earthen shoulder.

Image 2.2.4 Intersection of Walnut Avenue and 8th Street

This roadway is listed on the Urban Road Systems Six-Year Improvement Program. Improvements are planned to widen the road, make intersection improvements at Walnut Avenue and 8th Street, and replace the low water bridge over Glade Creek. For more information regarding this project, please see Section 2.7 of this Chapter.

2.2.5 Gus Nicks Boulevard

The portion of Gus Nicks Boulevard extending from the limits of the City of Roanoke to South Pollard Street is a four-lane, urban minor arterial. According to VDOT, the 2008 AADT volume is 21,000 vehicles per day for this segment of road. Gus Nicks Boulevard has curb and gutter, as well as sidewalks on both sides.

2.2.6 Bypass Road

Bypass Road connects Washington Avenue to Hardy Road as part of the Route 24 corridor. This road is a four-lane, divided, urban minor arterial with curb and gutter, but no sidewalks. According to VDOT, the 2008 AADT volume is 15,000 vehicles per day.

2.2.7 South Pollard Street

South Pollard Street travels through the heart of Downtown connecting Washington Avenue to Virginia Avenue. This road is a two-lane, urban collector with curb and gutter, sidewalks and decorative crosswalks. According to VDOT, the 2008 AADT count on South Pollard Street between Washington Avenue and Jackson Avenue is 6,800. The AADT between Jackson Avenue and Virginia Avenue is 7,100.

A map depicting the AADT of the study corridors can be found in Appendix A.

2.3 TRAFFIC VOLUMES AND LEVELS OF SERVICE

2.3.1 Traffic Volumes

Each year VDOT updates daily traffic volumes estimates for interstate, arterial, and primary routes. The volumes are projected as an AADT, which is an estimate of typical daily traffic on a road segment for all days of the week, Sunday through Saturday, over the period of a year. The roadways and streets within the study area have current traffic volumes that range from 6,800 AADT to upwards of 27,000 AADT. Based on VDOT's Statewide Planning System data (see Table 2.3.1, VDOT Current and Projected Traffic Volumes), traffic volumes are projected to increase annually by 0.66% to as high as 1.33%. Route 24 (Washington Avenue, Bypass Road, Hardy Road and Virginia Avenue) has the highest current AADT and the highest annual growth rate.

2.3.2 Levels of Service

Table 2.3.1 VDOT Current and Projected Traffic Volumes					
Route	From	To	2007 AADT	Annual Growth Rate	Projected 2035 AADT
Washington Avenue	South Pollard Street	Mitchell Street	22,000	1.33%	31,941
Washington Avenue	Mitchell Street	Bypass Road	19,000	0.66%	20,808
Washington Avenue	Bypass Road	Vinton CL	25,000	1.29%	36,173
Washington Avenue	Roanoke County CL	Bedford CL	21,000	1.05%	29,615
Hardy Road	Chestnut Street	Vinton CL	11,000	1.03%	13,555
Hardy Road	Roanoke County CL	Bedford CL	11,000	0.82%	11,954
Virginia Avenue	City of Roanoke CL	South Pollard Street	26,000	1.03%	33,712
Virginia Avenue	South Pollard Street	Clearview Drive	23,000	1.00%	31,356
Walnut Avenue	City of Roanoke CL	2nd Street	7,100	0.66%	8,257
Walnut Avenue	2nd Street	West Lee Avenue	7,100	0.66%	8,257
Gus Nicks Boulevard	City of Roanoke CL	South Pollard Street	21,000	1.66%	29,869
Bypass Road	Washington Avenue	Hardy Road	15,000	1.18%	19,981
South Pollard Street	Washington Avenue	Virginia Avenue	6,750	n/a	n/a

Source: Statewide Planning System. Virginia Transportation and Mobility Planning Division. Richmond, 2007

Roadway level of service (LOS) is a measurement of the quality of service provided by a facility. Much like a student's report card, LOS is represented by the letters "A" through "F", with "A" generally representing the most favorable driving conditions and "F" representing the least favorable. LOS A is the best, described as conditions where traffic flows at or above the posted speed limit and all motorists have complete mobility between lanes. LOS F is the lowest measurement of efficiency for a road's performance. Flow is forced; every vehicle moves in lockstep with the vehicle in front of it, with frequent drops in speed to nearly zero mph.

The Highway Capacity Manual and AASHTO Geometric Design of Highways and Streets ("Green Book") list the following levels of service:

- A = Free flow
- B = Reasonably free flow
- C = Stable flow
- D = Approaching unstable flow
- E = Unstable flow
- F = Forced or breakdown flow

Based on the VDOT Statewide Planning System, in 2005 most of the roadways in the study area have a LOS of A, B, or C (see Appendix A). LOS C is the target for urban highways in many jurisdictions, because at this level of service, most experienced drivers are comfortable driving on roads with this classification, roads remain safely below but efficiently close to capacity, and posted speed is maintained. South Pollard Street, Virginia Avenue and the Roanoke County portion of Hardy Road all have a LOS of D, which means traffic is approaching unstable flow and most drivers are restricted in the freedom to select their own speeds.

Assuming annual traffic growth, continued land development, and little change to the roadways; level of service for the study area is expected to degrade over time (see Appendix A). By 2035, most of the roadways are projected to be a LOS C or lower. South Pollard Street, Washington Avenue (Bypass Road to Feather Road), and Hardy Road are all projected to have an LOS of F, which means that they will have unacceptable congestion and stop-and-go traffic.

2.4 TRAFFIC OPERATIONS AND SAFETY

2.4.1 Route 24 Travel Time

In 2003, updated in 2009, the Roanoke Valley-Alleghany Regional Commission completed a travel time study of the Route 24 corridor as it travels through the City of Roanoke, the Town of Vinton and Roanoke County. The western limit of this study is located at the intersection of Jefferson Street and Elm Street (Route 24) in the City of Roanoke. The study continued to evaluate travel times along Route 24 as it passes east through the City of Roanoke and the Town of Vinton. As it passes through the two localities, the road name changes several times: Bullitt Avenue, Jamison Avenue and Dale Avenue in the City of Roanoke; then Virginia Avenue, Hardy Road, Bypass Road and Washington Avenue in the Town of Vinton. The eastern limit of this study is located along Washington Avenue (Route 24) in Roanoke County just east of the East Vinton Plaza.

Travel Time is defined as the time it takes to move the distance between two points of interest. Travel time is made up of two basic components, running time and stopped delay time. Running Time is the time period when the vehicle or person is in motion. Stopped Delay Time is the time period when the object or person has stopped moving or has almost stopped moving (typically less than 5 mph according to federal guidelines).

An example of Stopped Delay Time is the time period when a vehicle is stopped at a stoplight. Select portions of the study results have been provided in Tables 2.4.1.

2.5 BRIDGE AND CULVERT CONDITIONS

As a result of bridge incidents such as the devastating I-35 bridge collapse in Minnesota, vigilant efforts to increase bridge safety nationwide have been on the rise. Within 24 hours of the I-35 incident, VDOT had completed a detailed review of the Commonwealth's 20,842 structures. In addition to the review, VDOT amended the Commonwealth's

Table 2.4.1 Route Travel Time Comparison

2009				2003			
Date	Period	Average Speed (mph)	Elapsed Time (h:mm:ss	Date	Period	Average Speed (mph)	Elapsed Time (h:m:s)
3/10/2009	Eastbound Non-Peak	25.66	0:10:41	2/3/2003	East Peak	13.0	0:20:48
3/10/2009	Westbound Non-Peak	20.61	0:13:14	6/6/2003	East Peak	17.0	0:15:56
3/19/2009	Eastbound Peak	25.19	0:10:50	6/6/2003	West Peak	22.2	0:12:11
3/19/2009	Westbound Peak	22.49	0:12:09	2/14/2003	West Non-Peak	23.5	0:11:32
4/7/2009	Eastbound Non-Peak	19.98	0:13:42	2/14/2003	East Non-Peak	23.7	0:11:24
4/7/2009	Westbound Non-Peak	22.11	0:12:25	2/4/2003	West Peak	19.8	0:13:39
4/9/2009	Eastbound Peak	18.78	0:14:35	2/4/2003	East Peak	20.5	0:13:12
4/9/2009	Westbound Peak	20.83	0:13:12	2/3/2003	West Peak	14.6	0:18:36
	Average	21.96	0:12:36	2/3/2003	West Non-Peak	19.6	0:13:47
				2/3/2003	East Non-Peak	26.1	0:10:20
				1/24/2003	West Non-Peak	25.3	0:10:42
				1/24/2003	East Non-Peak	26.3	0:10:17
				Average		21.0	0:13:32

Table 2.5 Vinton Area Corridors Plan - Bridge & Culvert Conditions

Crossing	Type	Year Built	Deck Cond.	Super Cond.	Sub Cond.	Culve -rt Cond.	Sufficie -ncy Rating	Function- ally Obsolete	Structura lly Deficient	Last Inspected	Respon -sibility
Wolf Creek	Bridge	1937	6	7	6	N	58.8	Yes	No	3/4/2009	VDOT
Wolf Creek	Culvert	1966	N	N	N	8	80	No	No	2/6/2007	VDOT
NS Railway	Bridge	1983	7	7	7	N	70.7	Yes	No	7/23/2007	Town
Glade Creek	Bridge	1932	6	6	7	N	72.8	No	No	6/12/2008	Town

Source: "Bridge and Culvert Conditions: Salem District." Virginia Department of Transportation, 2008.
* Condition ratings range from 0 (failed condition) to 9 (excellent)

bridge inspection standards to address the Federal Highway Administration (FHWA) technical advisories and recommendations which stemmed from information following the Minnesota bridge collapse. VDOT has an aggressive bridge inspection and safety program which goes beyond federal requirements. Bridges in Virginia are inspected in accordance with National Bridge Inspection Standards. According to VDOT, between 11,000 and 12,000 bridge inspections are conducted each year. Two terms used to summarize bridge deficiencies are "structurally deficient" and "functionally obsolete". As of July 19, 2008, VDOT reported that 755 bridges are listed as structurally deficient and 3,133 are listed as functionally obsolete.

According to the FHWA website, "structural deficiencies are characterized by deteriorated conditions of significant bridge elements and reduced load-carrying capacity". This term does not imply that a bridge is likely to collapse or unsafe, but it does mean that the bridge must be monitored, inspected and maintained on a more frequent basis.

The FHWA states that "functional obsolescence is a function of the geometrics of the bridge not meeting current design standards". As with the term "structural deficiency", this term does not indicate that a bridge is unsafe or likely to collapse. Typically, a functionally obsolete bridge was built to standards that are not used today. A bridge with this classification may have inadequate lane widths, shoulder widths, or vertical clearance to serve the current traffic demand. A functionally obsolete bridge may also be prone to flooding. The low-water bridge on Walnut Avenue is an example of a functionally obsolete bridge.

The FHWA states that bridges in rural areas often have a higher percentage of structural deficiencies, while bridges in urban areas have a higher incidence of functional obsolescence due to rising traffic volumes. Three bridges and one culvert are located along the study corridors. According to VDOT, two of the three bridges are classified as functionally obsolete; however, none of the structures are identified as being structurally deficient. Basic information regarding these structures is provided in Table 2.5.

Image 2.5 The culverts under Washington Avenue serve as a pedestrian crossing for the Wolf Creek Greenway.

2.6 LONG RANGE TRANSPORTATION

In order to be eligible for federal funding, all transportation improvement projects in the Town of Vinton and Roanoke County must be included in the Roanoke Valley Area Metropolitan Planning Organization's Long Range Transportation Plan (LRTP).

The 2025 LRTP list three projects for the Town of Vinton for which funding will likely be available to complete during the 20 year timeframe:

- **Walnut Avenue, Phase I**: Improve the intersection of Walnut Avenue and 8th Street and replace the bridge over Glade Creek near 5th Street
- **Walnut Avenue, Phase II**: Improve Walnut Avenue to an urban two-lane with curb and gutter, bicycle lanes, and sidewalks; from 5th Street to Lee Avenue (funding reductions will likely result in this being moved to the "Vision List")
- **Mountain View Road, Phase I**: Improve Mountain View Road to an urban two-lane with curb and gutter, bicycle lanes, and sidewalks; from Washington Avenue to Ruddell Road (funding reductions will likely result in this being moved to the "Vision List")

Additional "Vision List" projects identified in the LRTP, which may be completed if additional funds become available, include:

- **Mountain View Road, Phase II**: Improve Mountain View Road to an urban two-lane with curb and gutter, bicycle lanes, and sidewalks; from Ruddell Road to Bush Farm Drive
- **Mountain View Road, Phase III**: Improve Mountain View Road to an urban two-lane with curb and gutter, bicycle lanes, and sidewalks; from Bush Farm Drive to Town corporate limits.

The 2025 LRTP lists one project for Roanoke County for which funding will likely be available to complete a reconstruction of Hardy Road, from Vinton Town Limits to Bedford County Line, including bicycle lanes.

2.7 THE SIX-YEAR IMPROVEMENT PROGRAM

The Six-Year Improvement Program allocates funds for transportation projects proposed for construction, development or study in the next six fiscal years. The program is updated annually and is categorized into urban, primary and secondary systems projects.

The Commonwealth Transportation Board (CTB) held a special meeting on Friday, Feb. 13, 2009 to approve a rare mid-year revision of the Six-Year Improvement Program for Fiscal Years 2009-2014. The revision reduced funding for public transportation, rail and highway projects. Shrinking transportation revenues, the increasing cost of maintenance and construction projects, and the uncertainty surrounding long-term federal funding sources all contributed to the need for this revision.

2.7.1 Primary Roads System

The CTB is responsible for making decisions regarding the primary system. The localities are responsible for decisions regarding secondary and urban highway system projects. VDOT provides assistance to the CTB and the localities. There are no primary road projects pertaining to the study corridors.

2.7.2 Urban Roads System

The FY 2009-2014 Six-Year Improvement Program indicates that Walnut Avenue is in the urban roads system. This project proposes to upgrade Walnut Avenue with curb, gutter, bike lanes and sidewalks from the East City of Roanoke line to Lee Avenue in the Town of Vinton.

This project has multiple components, but the key priorities are to replace the low-water bridge and make improvements to the 8th Street and Walnut Avenue intersection. The estimated cost of this project is $7,474,000. The funding for this project was reduced to $1,570,812 (FY 2010-2015). This

overall project is not fully funded; however, preliminary engineering is fully funded. Right-of-way acquisition is not scheduled to begin until FY2015 with construction beginning in FY2016.

Image 2.7.2 A flood in 2003 left the bridge on Walnut Avenue completed submerged.

2.7.3 Secondary Roads System

The Code of Virginia requires the Roanoke County Board of Supervisors to approve the allocation of funds for projects identified within the Secondary Roads System Six-Year Plan. In order for a project to remain on the Six-Year Plan, the project must receive sufficient funding to begin the preliminary engineering process within the six-year time frame. As all of the requests cannot be funded due to budget constraints, the requests are prioritized based upon traffic counts, existing and future development, pavement conditions, drainage, safety, and the economic benefit of the project.

The County of Roanoke and VDOT are continuously reviewing and updating the Secondary Roads System Six-Year Improvement Plan. Each fiscal year, staff receives requests concerning secondary roads in Roanoke County. Secondary roads are defined as any route number 600 or greater. The requests are reviewed and classified as maintenance or construction projects. Requests receive maintenance status when the activities involve preserving or restoring the roadway, facility or structure to its original condition; construction improvements generally change or add characteristics to a roadway, facility or structure. Maintenance projects are normally referred to VDOT's Resident Administrator for immediate correction, but some of the projects are added to the Revenue Sharing Program list.

Construction projects usually take more than one (1) fiscal year to complete, because these requests require right-of-way acquisition, additional funding, and/or preliminary engineering. Due to the complex nature of construction projects, these requests are put on file to be reviewed during the Six-Year or Revenue Sharing yearly updates.

There are two funding categories in the Six-Year Plan: *County-Wide Incidental Construction Items* and *Numbered Projects*. VDOT defines incidental improvements as any operation, usually constructed within one year, which changes the type, width, length, location, or gradient of a road, facility or structure. Incidental improvements could also include features not originally provided for such road, facility, or structure. The categories of Incidental Construction Services are: traffic services, pipe installation/private entrances, preliminary engineering and surveys, fertilization and seeding, subdivision plan review, right-of-way engineering, traffic calming and rural addition.

The majority of Roanoke County's allocated funds are for Numbered Projects. The Secondary Roads System Six-Year Improvement Plan for FY 2008-2014 indicates that Hardy Road (Route 634) is Priority Project Number 11. The proposed improvements include the reconstruction of 0.90 mile of existing roadway. The project boundaries will extend from the east corporate limits of the Town of Vinton to 0.01 mile east of Feather Road (Route 654).

Hardy Road has an average annual daily traffic count of 11,000 vehicles (2007 AADT). This secondary road has seen increased development activity and increasing traffic to and from Bedford County. The project was added to the Six-Year Plan in 2004. The FY 2010-2015 Six-Year Improvement Program indicates the total estimated cost of the project to be $11,304,000.

Image 2.7.3 Hardy Road tapers from four lanes to two lanes in Roanoke County near the Town of Vinton.

As of the time of this corridor study, this project has been removed from the Secondary Roads System Six-Year Improvement Plan due to state budget cuts. Preliminary engineering has not been conducted, as no phase of this project is fully funded. Preliminary engineering is not scheduled to begin until FY2012.

2.8 THE REVENUE SHARING PROGRAM

The VDOT Revenue Sharing Program provides Roanoke County with an annual opportunity to receive State matching funds for the construction, maintenance, and improvements to primary and secondary roads in the State's highway system. VDOT and County staff review and evaluate each request received for inclusion in the Revenue Sharing Program. An application for Revenue Sharing Program funding must be made by resolution of the Roanoke County Board of Supervisors. Project funding is allocated by resolution of the Commonwealth Transportation Board. Construction may be performed by VDOT, or where appropriate, by Roanoke County under an agreement with VDOT. The maximum state participation amount is $1 million per locality. The Revenue Sharing Projects in Roanoke County receive $500,000 in County funds and $500,000 in State Matching funds.

2.8.1 William Byrd Traffic Impact Analysis

In 2007, Roanoke County consulted Ramey, Kemp and Associates, Inc. to evaluate the traffic operations at the entrance of William Byrd High and Middle Schools located on Washington Avenue (Route 24), as well as the internal circulation on campus. Since there is one access point for both schools on Route 24, the traffic problems are compounded with excessive queues in both directions even with a crossing guard positioned at the intersection to guide traffic flow. The traffic engineering services included a 12-hour traffic count, field operations, development of a Synchro/SimTraffic Model of the existing conditions, identification of problems and potential solutions and recommended improvements.

The extension of the existing east bound turning lane in front of William Byrd High School on Washington Avenue (Route 24) was added to the FY2009/2010 Revenue Sharing Project list. The Project is being administered by VDOT.

2.9 ACCIDENT DATA

Accident reports were collected from Roanoke County and the Town of Vinton for a three year period from 2006 to 2008. An accident spot map (Appendix A) was developed which shows a point where each of the accidents occurred during the period of time, as well as the type of accident (accident type was not available for the Town of Vinton). This map is used to get a picture of where accidents cluster in smaller areas.

Based on the reports and mapping, locations were ranked by the number of accidents from 2006-2008 (Table 2.9). A majority of the top intersections are signalized, which is not surprising since they are often the most heavily traveled intersection types and generally make up more than 50% of all accidents in urban areas (FHWA 2007).

The vicinity of the Washington Avenue and Feather Road intersection was the highest ranked accident location along the study corridors, with 40 accidents

during the three year period. A majority (57%) of the accidents at this intersection were rear-ending collisions where the driver was following too closely or not paying attention. Twenty percent (20%) of the accidents were angle collisions with other vehicles. Most of the drivers involved in these accidents were cited with disregarding a traffic signal or failure to maintain control. The remaining 23% were made up of accidents involving deer, fixed objects, or sideswiping another vehicle.

Table 2.9 Top 10 Vinton Area Accident Locations (2006-2008)

Ranking	Route	Intersection	Number of Accidents
1	Washington Avenue	Feather Road	40
2	Hardy Road	Spruce Street	8
3	Walnut Avenue	8th Street	8
4	Washington Avenue	Maplewood Drive	7
5	Hardy Road	Feather Road	7
6	Virginia Avenue	4th Street	7
7	Hardy Road	McGeorge Drive	6
8	Hardy Road	Finney Drive	6
9	Washington Avenue	Spring Grove Drive	6
10	Hardy Road	Beechwood Drive	5

Source: Roanoke County and Town of Vinton Police Departments

2.10 PUBLIC TRANSPORTATION

2.10.1 Valley Metro

Valley Metro is the public transportation provider in the Roanoke Valley. The services provided by Valley Metro include fixed bus routes, specialized transportation for the disabled and special event shuttles. There are twenty-four (24) fixed bus routes in the Roanoke Valley, two of which serve the Town of Vinton. The routes serving the Town of Vinton operate Monday through Saturday from approximately 5:45 a.m. until 8:45 p.m. on Washington Avenue, Virginia Avenue, Bypass Road, and South Pollard Street. At the time of this study, there are no bus routes serving eastern Roanoke County. A map of the Valley Metro Routes is available in Appendix A.

Image 2.10.1 Two Valley Metro routes serve the Town of Vinton.

2.10.2 S.T.A.R.

In accordance with the American's with Disabilities Act (ADA), Valley Metro also offers S.T.A.R. (Specialized Transit Arranged Rides) for individuals who are functionally unable to ride a regular bus due to a disability. S.T.A.R. is operated by RADAR, a non-profit corporation that has provided rural public transit services and paratransit in the Roanoke Valley for over 33 years. RADAR drivers are trained in passenger assistance, defensive driving, CPR, and wheelchair securement procedures. Limited driver assistance is available for boarding and unboarding of patrons. A driver may not enter a building to provide assistance.

The S.T.A.R. service area includes the City of Roanoke, City of Salem and Town of Vinton. To be eligible for the S.T.A.R. service, individuals who have special transportation needs must first complete an application through Valley Metro. After an applicant is qualified, they may call to reserve a bus to pick them up anywhere within ¾ of a mile on

either side of one of the current bus routes. The cost per trip is $3.00 and reservations must be made at least one day in advance of the desired transportation time. The service is offered 5:45 a.m. until 8:45 p.m., Monday through Saturday. S.T.A.R. services are not operated on New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving and Christmas, or any day when Valley Metro is operating on snow routes.

2.10.3 CORTRAN

The County of Roanoke Transportation service (CORTRAN), also operated by RADAR, is available to qualified Roanoke County residents who may be transported to and from destinations in the County of Roanoke, City of Salem, City of Roanoke and Town of Vinton. To qualify for CORTRAN service, a patron must be a Roanoke County resident and certified through Roanoke County's application process as a senior citizen (60 years or older) or as ADA Paratransit Eligible. The cost per trip is $3.50. The CORTRAN service hours are 7:00 a.m. to 6:00 p.m., Monday through Friday. The CORTRAN service is not operated on the same holidays as the S.T.A.R. service or when Roanoke County Schools are closed.