

Roanoke Valley Urban Signage Study



Roanoke Valley Area Metropolitan Planning
Organization

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Study Background

Purpose and Study Area

Commission staff initiated the Roanoke Valley Area MPO Urban Signage Study. The primary goal of the study was designed to examine prominent signage to major destinations. The signs examined included the blue information signs, brown guide signs and green education signs. A secondary element of the study was to note other signage issues, both site-specific and regional, that were observed in the field. The fieldwork would be conducted from the viewpoint of a visitor to the Roanoke Valley. The study area consisted of the City of Roanoke, City of Salem, County of Roanoke, County of Botetourt and the Town of Vinton (see Map 1).

Study Methodology

The study had several components as described below:

1. Consult with localities on signage issues or the application of signage standards.
2. Identify major destinations, as signed from Interstates 81, 581 and the Roy L. Weber Expressway (US 220). Verify if 'GUIDE' signage is adequate.
3. Examine "GUIDE" signage on US 460, US 11, US 220, US 221 and Route 419 to determine if there are any potential issues.
4. Document any other signage issues noted in the field.

The staff of the Regional Commission was aware the City of Roanoke had formed a Wayfaring Signage Team to examine the issues of signage in downtown Roanoke. Commission staff attended meetings of the Wayfaring Team, but purposely did not address downtown signage, to avoid duplication of effort.



Map 1-Metropolitan Planning Organization Study Area

Traffic Control Devices and Signage

Traffic control devices are defined as all signs, signals, markings, and other devices used to regulate, warn, or guide traffic, placed on, over, or adjacent to a street, highway, pedestrian facility, or bikeway by authority of a public agency having jurisdiction.

Traffic signs are devices placed along, beside, or above a highway, roadway, pathway, or other route to guide, warn, and regulate the flow of traffic, including motor vehicles, bicycles, pedestrians, equestrians, and other travelers.

According to federal guidelines, there are five requirements for effective traffic control devices:

- Fulfill a need
- Command attention
- Convey a clear and simple meaning
- Command respect from road users
- Give adequate time for proper response

Signs should be placed only where warranted by facts and engineering studies. Studies have shown that signs that are unwarranted or ineffective may distract road users from more important traffic control devices, may breed disrespect for all signs in the area, and unnecessarily use public agency and taxpayers' resources.

Signs should be placed as necessary for safety and proper regulation of traffic. However, the use of too many signs in a given location may reduce the effectiveness of all the signs at that location. (*Manual of Traffic Signs, Richard C. Moeur*)

Sign Functions

Signs are defined by their function as follows:

- A. Regulatory signs give notice of traffic laws or regulations.
- B. Warning signs give notice of a situation that might not be readily apparent.
- C. Guide signs show route designations, destinations, directions, distances, services, points of interest, and other geographical, recreational, or cultural information.

This study focused on "GUIDE" signage.

Signage Standards

The Manual on Uniform Traffic Control Devices (MUTCD) is the national standard for all traffic control devices installed on any street, highway, or bicycle

trail open to public use. However, the application of these standards varies and is dependent on the agency or government body responsible for the roads maintenance. The Federal Highway Administration (FHWA) publishes the MUTCD.

The MUTCD is a national standard, intended to ensure that signing is consistent throughout the United States. The standards apply to such items as sign color, size and lettering. Each state has adopted either the Federal MUTCD, or the Federal MUTCD modified with a state supplement. In the Commonwealth of Virginia, the MUTCD is accepted, but there is also an older state supplement; available only in hardcopy.

The MUTCD is developed and modified by FHWA through the Federal Register rulemaking process. As a part of this process, the National Committee on Uniform Traffic Control Devices (NCUTCD), a private non-profit organization, submits suggestions and recommendations to FHWA for consideration for inclusion in the MUTCD. The MUTCD is updated every few years. (*Manual of Traffic Signs, Richard C. Moeur*)

As previously mentioned, the agency or government responsible for the road maintenance performs the application of the standards. While locally maintained roads are not subject to the standards, any road that receives federal construction or maintenance funds is subject to the MUTCD standards according to VDOT.

VDOT Integrated Directional Signing Program (IDSP)

The Virginia Department of Transportation has initiated an Integrated Directional Signing Program (IDSP) to create a “one point of contact” for Virginia motorist service businesses, attractions, tourist destinations and other points of interest. The program is managed by a private contractor and is based on VDOT rules and regulations. The program is divided into four types of signage.



1. Specific Travel Services (Logo) Signs-Logo signs guide the motorists to specific gas, food, lodging, camping and attraction locations along interstates and controlled-access highways. These exist along I-81 and have recently been placed on I-581. Fees vary, but are generally \$1000 per year. The facility must be within 3 miles of the interchange. Logos can also be “bumped”.



2. Tourist-Oriented Directional Signs (TODS) are used along roads that do not have limited access, such as most primary and secondary highways, to guide motorists to businesses, services, recreation and other facilities nearby. The facility must meet certain criteria and be of regional interest. They are not used in cities or towns with more than 5,000 residents. Fees start at about \$450 per year. Staff is not aware of any usage of these signs in the region.



3. Supplemental Guide Signs are used to guide motorists traveling from outside the immediate area to specific cultural, recreational, historical, governmental, educational, military and other sites of interest. Only certain facilities qualify, and commercial entities are required to pay various fees. Commercial fees range from \$250-\$700 per year.



4. General Motorist Services Logo Signs use symbols or general terms to let motorists know that services such as hospitals, public phones, gas, food, lodging, or camping are nearby. Gas, food and lodging must meet certain criteria and be within 3 miles. Camping must be within 15 miles. A hospital must provide continuous public care, have a doctor at all times, and be open 24 hours a day, 7 days a week.

VDOT oversees several other specialized signage programs. These include: Civil War trails, Birding and Wildlife Trails, Virginia Waterways, State Scenic Rivers, and wayfaring pilot studies. Virginia also has special regulations for integrating Winery signage into the new IDSP standards.

Signage Inventory and Field Observations

The study was started in the summer of 2005. Each locality was contacted to determine current practices and standards. In all cases, local governments did not have their own standards, nor did they indicate that the MUTCD was followed. While most major signage was managed by VDOT, city, county or town employees often created local signs.

It was at this point in the study that commission staff was informed of the City of Roanoke's intention to develop a wayfinding sign system for downtown. Since the existing signage in downtown was also outdated, especially with recent changes in traffic flow, the downtown area was not included in this study. However, some general comments about the downtown area are mentioned in the recommendations section.

The next phase of the study focused on a "GUIDE" sign inventory on I-81, I-581 and the Roy L. Weber Expressway (US 220). Using a video camera, staff recorded all signage on these corridors. A large size inventory map (Appendix A) was created as a reference.

Signage Inventory by Destination

The following section details twenty-seven destinations as signed from Interstate 81, Interstate 581 and the Roy L. Weber Expressway (US 220). The fieldwork and observations were made from the viewpoint of a visitor to the Roanoke Valley.

Roanoke Regional Airport



Figure 5-Airport Sign

The signage to Roanoke Regional Airport is very good. There are multiple locations throughout the Roanoke Valley that give direction and distance markings to the airport (see Figure 5).

Signage from the airport directs travelers to prominent destinations adequately. I-81, I-581, Blacksburg, and Virginia Tech and downtown Roanoke are all signed from Airport Road. One of the signs on Interstate 581 North mentions that the Airport is accessible from the "Next 3 Exits" (see Figure 6). This does not appear to be the case. The first two exits (Valley View Boulevard and Hershberger Road East) are correct Airport Exits. The third "Exit" is Hershberger Road west, which does not go to the airport. The sign should read "Next 2 Exits". The intention of the sign is that Peters Creek Road is the third exit, but Peters Creek Road is not signed as an Airport exit from I-581.



Figure 6- should read “NEXT 2 EXITS”

Blue Ridge Parkway/Explore Park (Destination)

The Blue Ridge Parkway has signs on I-81 for Exit 143 (I-581). Once on I-581, it is about 9 miles to the Blue Ridge Parkway. It might be beneficial that once on I-581 south, there was a mileage sign to show the distance to the Parkway. While Elm Avenue and Walnut Avenue can be used to get to the Parkway, the US220 interchange is more accessible and easier to locate. The Walnut Avenue access could be signed for local traffic as part of Roanoke City’s wayfaring system.

Explore Park is signed at all major Parkway intersections such as US220 and US460. It is not signed from I-81 or I-581.

Blue Ridge Parkway (Origin)

The Blue Ridge Parkway has well signed intersections with major roads such as US 220, Route 24, and US460. Signage on the Parkway at Mill Mountain Spur intersection, directs motorists to the Historic Star, Mill Mountain Zoo, Downtown Roanoke, the Roanoke Campground and a Regional Information Center. See the section on Mill Mountain Zoo on page 22 for more information. Signs along the Parkway seem adequate.

Center in the Square (Museums, Theater, Arts, Planetarium)

These cultural attractions are signed from I-81, I-581 south and US 220 north. Exit 5 is used for I-581 south and Exit 6 is used for US220 north. This study did not attempt to examine existing downtown signage. Staff believes that existing signage should be checked for accuracy or updated as part of the City’s wayfaring sign system. Center in the Square may also qualify for the VDOT “Attraction” sign program. In either case, Center in the Square should be signed as a single facility.

Roanoke Civic Center



Figure 7- Roanoke Civic Center I-581

The Roanoke Civic Center uses a logo based sign system from I-581 (see Figure 7). Signs appear adequate and parking is accessible from both Williamson Road and Gainsboro Road. There are two signs at Exit 4 that only use the logo without text. Future signs should use the logo and text for clarification. Travelers may miss the first sign that associates the logo with the civic center and the logo by itself is not intuitive. The local civic center signage will likely be part of the City's wayfinding system. The Civic Center is also signed from I-81. However, the I-81 signs do not specifically say "Roanoke Civic Center". There is a slight potential of confusion between the Roanoke and Salem Civic Centers, especially with I-81 south, since both exit 143 and 141 are Civic Center exits, but to different Civic Centers.



Figure 8- "Civic Center" I-81 South

Salem Civic Center

The Salem Civic Center is signed clearly from I-81 at Exit 141. Clear signs are also at the Route 419 and East Main Street intersection at Lakeside Plaza. However, staff believes the local signage is not adequate. The Salem Civic Center website directs all I-81 traffic to access the Civic Center via Route 419 and Texas Street. Figure 9 shows the approach to Texas Street from 419. Traffic should bear right (US 11 and 460). The Civic Center sign is too small and placed in the wrong location. In fact, the sign is placed after the turn.

The lettering on the sign is about four inches tall and should be at least six inches tall. The font size for the Visitor Center is also too small. The "Taliaferro Complex" reference is not well known, especially for visitors. If all the facilities are part of the Taliaferro Complex, perhaps the Taliaferro heading should be at the top of the sign; however, the other text should be at least six inches tall. Staff would suggest using a larger, stand-alone sign for the Civic Center, since it is signed from the interstate. Other local signs in the area could also benefit from larger font.

While visible from Texas Street, there is no signage to indicate that the civic center building is the Civic Center on the Texas Street approach. The turn from Texas Street to Boulevard (the main entrance) is also not signed.

Finally, the directions on the Salem Civic Center website have the wrong directions since some stoplights have been added at the Exit 141 interchange.



Figure 9-Salem Civic Center signage on Electric Road/Texas Street

Conference Center (The Hotel Roanoke and Conference Center)

The Conference Center is signed from I-81 and I-581. Local signs are functional and will probably be updated as part of the City's wayfinding efforts. From Williamson Road, the hotel is not very visible because of trees; so new signs should provide clear navigation.

Higher Education Center



The Roanoke Higher Education Center is signed from I-581 for Exit 4E northbound and Exit 5 southbound. Currently, no sign exists at the end of the Interstate ramp and the intersection of Wells Avenue, and this should be corrected. Local signage is provided by Roanoke City's

Figure 10-Higher Education Center

system, which is being updated as part of their wayfinding initiative. The existing signs direct people to the Jefferson Street entrance, but the building is not clearly marked from the street (Figure 10). There is a sign over the door, but it can only be seen when you are directly in front of the building. It may be easier to have people enter the rear parking from Wells Avenue, since the rear entrance is more prominent. An attractive signboard could be more easily placed in the median or parking lot entrance if the Wells Avenue parking entrance is used.

Roanoke Historic Market District

The Historic Market District has a sign on southbound I-581 for Exit 5. There are no signs on northbound I-581 or US 220. Existing local signs may be incomplete and should be updated as part of the city's wayfinding project.

Hollins University



Figure 11-Hollins University I-81



Figure 12-“Hollins” at Plantation/US 11

Hollins University has signs on both northbound and southbound I-81 at Exit 146 (see Figure 11). The exit ramps have appropriate signs to direct drivers to turn south on Plantation Road. As drivers approach Williamson Route (US 11) on Plantation, there is no official sign to direct people to turn left on US 11. The preceding signs to Hollins University used a special font, however, the sign at US 11 uses a standard font, and refers to Hollins as a place (town), rather than the University (see Figure 12). First-time visitors may continue on Plantation because of the lack of clear signage that the University requires a left turn on US 11. It is recommended that a matching “Hollins University” sign be placed at the intersection of Plantation and Williamson to indicate the left turn. The sign could be placed on or near the signboard in Figure 12.

Jefferson College of Health Sciences

The Jefferson College of Health Sciences is signed from I-581 for Exit 6. The main entrance is on Jefferson Street. When fieldwork was first completed, there was no sign directing drivers to turn left from Elm Avenue onto Jefferson Street. A sign has since been added on Elm Avenue. The local signs should be reviewed or updated as part of the City's wayfaring system.

Lewis Gale Hospital

The Lewis Gale Hospital has appropriate signs at Exit 141 (Electric Road) on I-81. The signs on the ramps and along Electric Road are also easy to follow. When the Community Hospital closes in downtown Roanoke, Lewis Gale Hospital will probably be the closest hospital to serve the I-81 corridor. It is recommended that travel times be reviewed and that hospital signs be removed from Exit 143 if appropriate.

National College of Business and Technology

The signs for the National College of Business and Technology are very clear and the facility is easy to find. Signs on Interstate 81 direct vehicles to Exit 141, then Electric Road and East Main Street. No improvements or changes are suggested.

National D-Day Memorial

While some distance from the Interstate, the National D-day Memorial has special logo signs for Interstate 81 Exit 150 in Botetourt County. The 20 plus mile route to the memorial is well signed.

Roanoke Valley Visitors Center

The Visitors Center is located in downtown Roanoke and is signed very well from I-81 and I-581. The center has a nice sign that is visible from southbound Williamson Road. Roanoke City's wayfaring system should be able to incorporate appropriate local signage to make the Visitors Center easy to find. Federal guidelines also suggest that visitor information centers have clearly marked return routes to the main highway. The exit from the Roanoke Valley Visitors Center forces visitors to make a right turn onto Williamson Road. Figure



13 illustrates that drivers must turn right. An additional sign should indicate that they could get back to I-581 by turning right. A sign on Williamson Road, near Campbell or Church Avenues, should indicate that the route back to 581 is via Williamson Road south. There is already a "To 581" near the intersection of Williamson Road and Elm Avenue.

Figure 13-Visitors returning to 581 can't turn left and may be confused when forced to turn right.

Campbell Court Transportation Center

While not signed from Interstate 581, the facility has some logos and signs on the ramps at Exits 5 and 6. Existing local signage is not adequate and should be incorporated in the City of Roanoke's wayfaring program. In particular, the Greyhound station offers service to a wide area outside of the Roanoke Valley and people from outside the immediate region may need clear markings to the terminal. If the facility is not signed locally, the signs on the ramps should be removed since they really don't serve any purpose.

Salem Visitors Center

The Visitors Center is located in the Salem Civic Center. The Salem Visitors Center is well signed on Interstate 81 for Exit 141. However, once on Electric Road, local signage is rather small. On urban roads with speeds above 25mph, MUTCD standards call for such signage to have letters at least six inches tall. The primary sign for Texas Street is actually after the turn. Please see Figure 9 and the discussion of the Salem Civic Center for more details. The blue visitor



center signs on Texas Street and Roanoke Boulevard are also a little small and could benefit from better design standards. The return trip from the Visitors Center is adequate, except the I-81 signboard on Roanoke Boulevard (Figure 14) The sign should indicate that a right turn is “TO 81” not just 81 north. The existing sign may confuse travelers needing I-81 south.

Figure 14- “To North 81” should be “To 81” for visitors returning from the Salem Visitors Center.

Roanoke College

Roanoke College has signs on Interstate 81 for Exit 140. The signs at the interchange are clear and the College should benefit from its new entrance on Thompson Memorial Drive. No improvements are recommended.

Carilion Roanoke Community Hospital

The hospital has signs on I-81 for Exit 143 and I-581 for Exit 6. When the fieldwork for this study was first conducted, the signs on I-81 were on signposts by themselves. No exit information was given and it was unclear if the signs meant hospital ahead or take the next exit (see Figure 15).



Figure 15- Lone hospital signs on I-81

After staff consulted with VDOT officials, the signs were modified by adding a small “next right” or “next left” sign under the “H”. Other areas of the state use even clearer markings such as Figure 16. When the Community Hospital closes in downtown Roanoke, Lewis Gale Hospital will probably be the closest hospital to serve the I-81 corridor. It is recommended that travel times be reviewed and that hospital signs be removed from Exit 143 ,if appropriate.



Figure 16-Hospital signs on I-81 and I-64 near Fishersville clearly indicate the Exit number for the Augusta County Medical Center. Signs in the Roanoke Valley could be updated to such standards.



Exit 143 also lists services on a vertical signboard as illustrated in Figure 17. To be consistent this sign should also include an “H” for Roanoke Community Hospital; however, VDOT staff does not agree that an “H” should be a service displayed on this signpost.

Figure 17-Services at Exit 143 do not include Hospital even though a Hospital is accessible via this exit

Carilion Roanoke Memorial Hospital

Signs to the Carilion Roanoke Memorial Hospital seem to be adequate. The hospital can be found using existing signage from the Roy L. Weber Expressway. When Roanoke Community Hospital closes, research should be conducted on travel times from the I-81 corridor to the two hospitals in the region. Hospital signs on 81 should direct people to nearest hospital based on travel time, so it is possible that the Hospital signs at Exit 143 on Interstate 81 should be removed at that time.

Roanoke Downtown

On southbound I-581, there is a sign that directs people the “Historic Market District” via Exit 5. There is not a specific sign for downtown. On northbound US 220, there is a sign for “Downtown Exit 6” near Tanglewood Mall. This sign is several miles before the exit. Because of the proximity of downtown buildings to I-581, the downtown area should not be too difficult to locate. The downtown is also signed from the Blue Ridge Parkway. Local wayfaring signs should help fill in gaps from Exits 4, 5, 6 and the Blue Ridge Parkway.

Salem Downtown

The City of Salem has three interstate exits (137, 140 and 141). The downtown area is not specifically mentioned at any of the exits. It may be beneficial to sign Exit 140 as “Downtown Salem” to help distinguish the three Salem exits.

Vinton Downtown



Vinton has signs on Interstate 581/US 220 for Exit 6, Elm Avenue. The town can be accessed via Route 24 and local signage (see Figure 18) in Vinton directs drivers to downtown.

Figure 18-Attractive sign directing motorists on Route 24 to downtown Vinton. Such signs should meet MUTCD standards in terms of font and arrow size. Note the sign congestion of three other signs in the vicinity.

State Police Division Headquarters

On northbound Interstate 81, the State Police Division Headquarters has a sign for Exit 132. On southbound Interstate 81 the office can be found via Exit 137. Figure 19 shows clear directions from the northbound exit ramp at Exit 132. However, the driver reaches the intersection with US11/460 and has no indication whether to turn left or right (see Figure 20). Since this has possible safety implications (someone needing police assistance), a sign at the intersection of Dow Hollow Road and US/11/460 should indicate that a left turn is required. Since the office is several miles away, a distance measure may also be of value.



Figure 19-Clear directions on Interstate 81 north and Exit 132 ramp for the State Police Division Headquarters



Figure 20-No sign at intersection with US11/460 indicating whether to turn left or right to get to the State Police Division Headquarters.

VA Medical Center/Hospital

The Veterans Affairs Medical Center has signs on Interstate 81 for Exit 141, Electric Road. The facility can be found by using existing signs; however, the font size may not meet MUTCD guidelines for the traffic speed of Electric Road. The letters should be at least six inches tall.

Virginia Museum of Transportation

The Virginia Museum of Transportation is located in downtown Roanoke and has signs on Interstate 81 for Exit 143. There is an additional sign on I-581 southbound, Exit 5 for the museum. There does not appear to be a sign on US220 north. Once off at the correct downtown exit, the local Roanoke City signs would then direct visitors to the Transportation Museum. These local signs should be reviewed and updated as part of the City's wayfinding sign efforts. Additional signs could be incorporated into the new "attraction" signs in VDOT's IDSP program.

Virginia Western Community College

Virginia Western Community College has signs on Interstate 81 (for Exit 143) and the Roy L. Weber Expressway for the Wonju/Colonial Avenue exits. The college has adequate signs on all turns and can be located easily.

Park and Ride Lots



Park and Ride lots exist at Interstate 81 Exits 150, 141 and 140. Consideration should be given to adding park and ride lot signs to those exit signs (See figure 21 for an example). It should be noted that in our region, the park and ride lots already lack space to serve current demands.

Figure 21-Sample Park and Ride sign

Mill Mountain Zoo/Mill Mountain Spur Road

The Mill Mountain Zoo does not appear to be signed from I-581, Route 24 or US 220. Visitors from Bedford or Franklin Counties could access the zoo easily via the Blue Ridge Parkway, but there are no signs at the parkway interchanges. Once on the Parkway, the zoo has adequate signage. Local wayfaring signs should be reviewed carefully and updated to include easy access to the Zoo.

When visitors park at the Zoo, it is not very clear where to buy tickets or access the zoo. According to City of Roanoke Parks staff, many zoo visitors enter the “Discovery Center” to buy tickets, but the center is not associated with the zoo. This issue should be examined and resolved by better pedestrian signage or relocation of the zoo ticket office. The directions on the Zoo’s website are also incorrect.



Figure 21-Discovery Center (left) and pathway to zoo (on right)

A “Regional Information Center” is signed from the Parkway and on the Mill Mountain Spur, but there is no signage on Mill Mountain. The Information Center is in the “Discovery Center”, but visitors have no way to know this since it is not marked. Additional signs should be added.



Figure 22-Mill Mountain destinations are clearly marked, except for the “Regional Information Center”.



Local wayfaring signs on Mill Mountain indicate that the features in Figure 23 are accessible by the Fishburn Parkway. A sign near the intersection of Walnut and Jefferson Streets does direct visitors to the River's Edge Sports Complex, but not to the other features on the sign. Local wayfaring signs should be added at the intersection of Walnut and Jefferson Streets for the remaining attractions (Figure 24)

Figure 23-Sign on top of Mill Mountain directing visitors to Roanoke via Fishburn Parkway and Walnut Avenue



Figure 24-Intersection of Walnut Avenue with Jefferson Street. Signage exists to Sports Complex and downtown, but not to the other attractions in Figure 23. A similar signpost to Figure 23 should be added with a right turn arrow.

Other Field Observations

While performing the sign inventory and driving other major roads in the area, staff noted other signage issues that should be addressed.

Sign Size/Font Size

According to the MUTCD standards: “ The principal legend on guide signs shall be in letters and numerals at least 150 mm (6 in) in height for all capital letters, or a combination of 150 mm (6 in) in height for upper-case letters with 113 mm (4.5 in) in height for lower-case letters. On low-volume roads (as defined in [Section 5A.01](#)), and on urban streets with speeds of 40 km/h (25 mph) or less, the principal legend shall be in letters at least 100 mm (4 in) in height. However, with an aging population, consideration should be given to making all type at least 6 inches in height.”



Figure 25-Font size of four inches is too small for traffic speed on Route 419. Where possible, all letters should be six inches tall.

Sign Colors

The MUTCD standards provide clear guidelines on the use of color in sign design. While local governments may have limited resources, compromises should not be made on regulatory signs that may affect road safety.



Figure 26-Mis-matched sign colors. All regulatory signage should meet MUTCD color criteria.

Sign Placement

Signs should be placed in accordance with MUTCD standards whenever possible. This is in regards to heights, approach distances and proximity to other signs and obstructions. Figure 27 illustrates some examples from the MUTCD of sign installation standards.

Figure 27 Examples of Heights and Lateral Locations of Signs for Typical Installations



Source: Manual on Uniform Traffic Control Devices, 2003.
Federal Highway Administration.



While desirable to have signs combined on a single signpost in some instances, Figure 28 illustrates a locally installed speed limit sign that is the incorrect height. Such regulatory signs in an urban area with sidewalk should be placed seven feet off the ground (see Figure 27). The sign in the foreground is a better example of combining signs on a single signpost to avoid clutter. Figure 29 illustrates how signs can conflict if located incorrectly.

Figure 28-Good and poor examples of combining signs on a single signpost. The speed limit sign should be place 7 feet off the ground



Figure 29-A series of five signs that are placed in a single line of sight. Such conflicts should be avoided through better sign placements.



Figure 30-Another example of a sign placed in a poor location. The brown sign (on the right) should be placed closer to the through road on the left, and preferably before the turn.

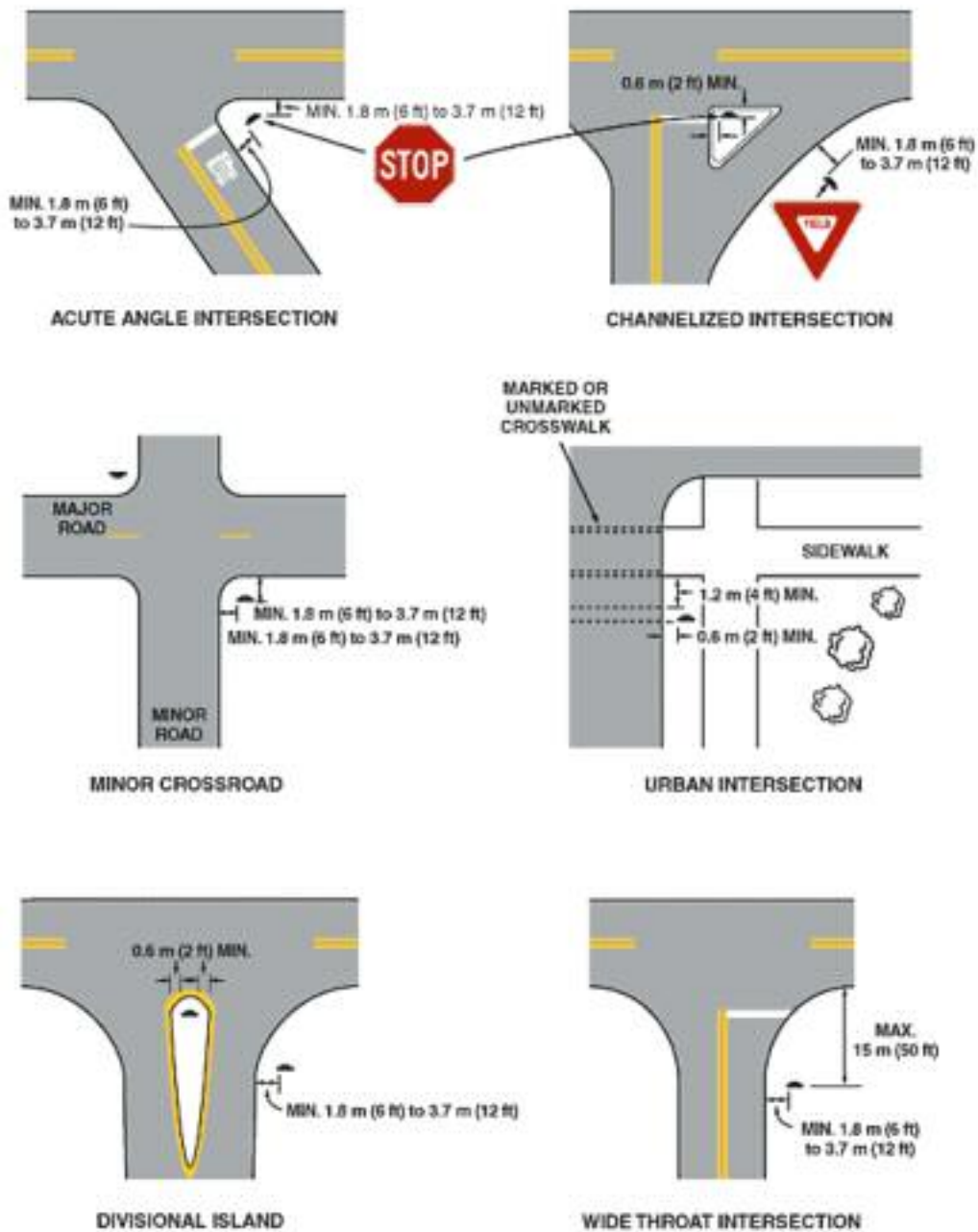
There are also several instances of improper/incomplete stop sign placements in the Roanoke Valley. Figure 31 illustrates an example of a “T” intersection with incorrect stop sign placement. Adding to the potential confusion in the example below is the lack of a stop line on the pavement. While local drivers may be used to the traffic flow, visitors, inexperienced drivers or inattentive drivers may be looking in the wrong place for the stop sign. Figure 32 illustrates proper stop sign locations.



Figure 31-Improper stop sign location at “T” intersection. Regulatory signs should be placed in standard and expected locations.

As previously mentioned above, sign “clutter” is a problem in many urban areas. There is a fine line between giving enough information and giving too much information. Drivers can read only so much at any given speed. However, it is desirable to combine certain types of signs on a single signpost.

Figure 32-Examples of Locations for Some Typical Signs at Intersections



Note: Lateral offset is a minimum of 1.8 m (6 ft) measured from the edge of the shoulder, or 3.7 m (12 ft) measured from the edge of the traveled way. See Section 2A.19 for lower minimums that may be used in urban areas, or where lateral offset space is limited.

Source: Manual on Uniform Traffic Control Devices, 2003.
Federal Highway Administration.

Street Sign and Stop Sign Coordination

Most localities in the Roanoke Valley maintain their own street signs. In many cases these signs are placed at intersections, in proximity to stop signs. In urban localities, the stop signs are maintained locally, while the county stop signs are usually maintained by VDOT. There should be an attempt to locate street signs and stop signs on the same post when feasible. The co-location of signs saves resources and reduces sign clutter. Better coordination and policies could allow for more co-locations.



Figure 33-Street sign and stop sign on separate posts. Street sign obscured.



Figure 34-Street sign and stop sign on single post

Unnecessary Signs



Figure 35-Rusty educational sign in urban area.

Figure 35 illustrates an unnecessary sign that is in poor condition. Signs should serve a specific purpose; provide information, regulate traffic, or provide warnings. While educational signs can serve a useful purpose, they are not advised for urban traffic conditions that already have many distractions. These types of signs also require maintenance resources which must be considered.

Vegetation

Vegetation sometimes obscures signs as in Figures 36 and 37. While requiring extra resources, efforts should be made to keep signs, especially regulatory signs, visible.



Figure 36-Signs obscured by vegetation



Figure 37-Route 11 route marker sign obscured by bush at the intersection of Brandon Avenue and Grandin Road.

Private Signs

Signs on private property are difficult to regulate. Localities and VDOT may have existing regulations about private development and the interface with public roads. In any regards, private shopping centers, malls and other areas that have high internal traffic should be required to have traffic control devices that meet MUTCD standards. Figure 38 shows stop signs at Towers Mall that probably do not meet federal standards.



Figure 38-Signs on private property at Towers Mall. While not required to meet MUTCD standards, unless by local regulation, traffic control devices on private property have the potential to regulate the flow of thousands of vehicles a day.

Route Markers

Staff reviewed several of the primary corridors in the Roanoke Valley. These corridors included US 11, US 220, US 460, US 221, Route 311, Route 419 and Route 24. Many of these routes use an older style route marker, as pictured in Figure 39. These route markers are harder to see than the newer style signs that are on a black background. The older style signs also appear to be slightly smaller in scale.



Figure 39-Older route markers on white background



Figure 40-Newer route markers on black background

While most routes are easy to follow, there are two potential problem areas. US 11A/US460 switches from Melrose Avenue to Orange Avenue in the City of Roanoke. The westbound signs are visible in the center of Figure 41.



The signs could be clearer if the newer style route markers are used. For visitors and through travelers, the US460 shift from Melrose to Orange Avenues is unexpected and slightly confusing.

Figure 41-Route markers on Alt US 11/US 460 in the City of Roanoke

The routing of US 11 through the Roanoke Valley is difficult to follow and explain. Probably dating to the early days of settlement, the route has been retained through both Salem City and Roanoke City before going north into Botetourt County. Alternative routes have been added such as “Alternate 11” and “Business 11”. The routes snake through the valley in the form of a giant “U” , linking the city and business centers of the region. Route 11 could be greatly simplified if it followed Main Street in Salem, Peters Creek Road in Roanoke City and Roanoke County, and then continuing on its existing route from Hollins. However, the outcry from the business community and other hurdles would not permit such a change.

Finally, in regard to route markers, Gus Nicks Boulevard in the City of Roanoke is a popular route between Vinton, Route 24 and US460 (Orange Avenue). A route signboard on Gus Nicks Boulevard should show the US460/221 intersection and possible include a “TO I-81” sign (Figure 42)



Figure 42-Travelers on Gus Nicks Boulevard may benefit by a US 460/221 and TO-81 signpost.

Local Information Radio



The City of Salem operates a local information radio station on 1610AM. Over the course of the past year, staff was unable to tune into this station. If the station is no longer operational, the signs should be removed. If the broadcast is only made during special events, a flip-down sign or sign with flashing lights may be more desirable.

Figure 37-Salem Radio off the air?

Exit Only Lane-Hershberger Road

A common complaint among area residents is that the right lane in Figure 38 is an on-ramp to I-581. Local traffic often has to merge left at the last minute when they realize the lane ends. This situation could be improved by an "EXIT ONLY" sign on the overhead, or by pavement markings with a similar message.



Figure 38-Hershberger Road exit only lane to I-581 north could benefit by better marking on an overhead sign or on the pavement

Local Wayfaring and Local Guide Signs

Local guide and informational signs did not seem to be of a consistent size, font, color or design. It is recommended that these signs meet MUTCD standards. Most localities do not have a local standard for such guide signs. Local attempts to standardize these signs should be part of a regional approach to make a visitors experience in the Roanoke Valley more pleasant.

The City of Roanoke has been working on a wayfaring guide system for over a year. There should be an effort to coordinate with other localities on common elements, such as color or font, that can be used consistently throughout the region. Figure 40 shows such an example that could be used across multiple jurisdictions.

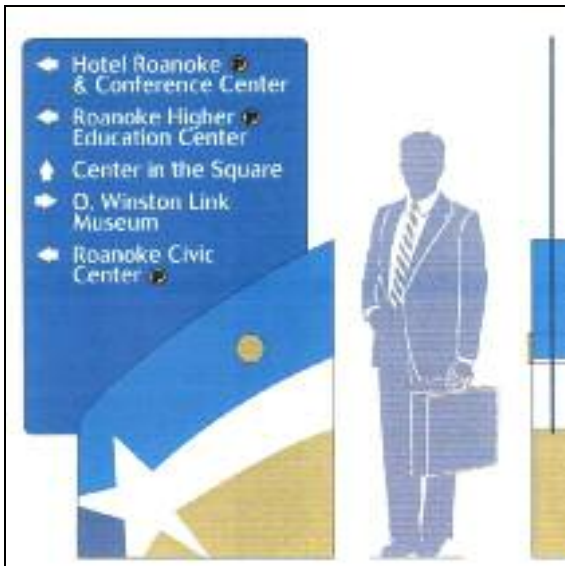


Figure 39-Conceptual wayfaring sign form City of Roanoke DRAFT wayfaring plan



Figure 40- Wayfaring sign in the City of Staunton, VA

General Recommendations and Conclusions

1. This study lists many site specific sign improvements that could be addressed by VDOT or local governments. These recommendations are made in the **Sign Inventory** and **Field Observations** sections of this study.
2. Each locality should establish and follow standards for the design and placement of regulatory, guide, and warning signs. This is easily accomplished by accepted the FHWA MUTCD standards as discussed in **Study Background** section of this report. MPO staff should work with the FHWA to see if training is available for MUTCD sign standards. MPO could then determine if the localities are interested in attending a regional workshop on such standards.
3. Localities should consider a regional approach to a wayfaring system for key tourist attractions. While most of these are in the City of Roanoke, a valley-wide standard would be more desirable, since most visitors are not aware of political boundaries. Ideally, such a sign system would have a common element such as color and font, but have a portion that could be customized for each locality if they so desired.
4. Reduce sign clutter by combining signs on a single post when feasible and in accordance to MUTCD standards. Develop a formal policy for combining street and stop signs when possible.
5. Establish standards for private development signage through the development review process, if not already required.
6. Consider removing signs that are damaged, not relevant, or do not serve a specific function.

Appendix A

Guide Sign Inventory Map (I-81, I-581 and Roy L. Weber Expressway-US220)