Recommendations Report

Richmond Area Complete Streets
Recommendations for the Richmond Region and Ashland, VA
October 2019

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Preface

PlanRVA/the Richmond Regional Transportation Planning Organization (RRTPO), the regional planning organization for the Richmond region, engaged the National Complete Streets Coalition (NCSC) to work with localities in the region, and the Town of Ashland in particular, to identify strategies for developing a regional Complete Streets toolbox over six months. This effort included two in-person Complete Streets workshops that took place in Ashland on April 25 and June 25-26, 2019. The following report summarizes the project and provides recommendations for both the Town of Ashland and broader Richmond region.

NCSC's facilitation team for this project included the following individuals:

- Emiko Atherton, Director, National Complete Streets Coalition
- Fred Jones, Senior Project Manager, Michael Baker International
- Rayla Bellis, Program Manager, Smart Growth America
- Natasha Riveron, Program Associate, National Complete Streets Coalition

Workshops included participation from the following localities and organizations: PlanRVA, Town of Ashland, Counties of Chesterfield, Hanover, Charles City, Goochland, Henrico, Powhatan, City of Richmond, Virginia Cooperative Extension-City of Petersburg, Richmond Area Bicycling Association, Rogers-Chenault Inc, and Ashland residents and stakeholders.

Acknowledgements

NCSC thanks Barbara Jacocks and Phil Riggan with PlanRVA and Nora Amos, Planning Director for the Town of Ashland, for their guidance throughout this effort and support planning Complete Streets workshops; and the local and regional staff and stakeholders who attended the Complete Streets workshops in Ashland and the public meeting in September at Henrico County's Tuckahoe Library.

About the National Complete Streets Coalition

The National Complete Streets Coalition, a program of Smart Growth America, seeks to fundamentally transform the look, feel, and function of the roads and streets in our communities, by changing the way most roads are planned, designed, and constructed. Complete Streets policies direct transportation planners and engineers to consistently design with all users in mind.

The Coalition launched the Complete Streets movement in 2004. Today, over 1325 agencies at the local, regional, and state levels have adopted Complete Streets policies, totaling more than 1,500 policies nationwide. Learn more at www.smartgrowthamerica.org/complete-streets.

I. Introduction

What are Complete Streets?

Streets are a vital part of livable, attractive communities. Everyone, regardless of age, ability, income, race, or ethnicity, should have safe, comfortable, and convenient access to community destinations and public places—whether walking, driving, bicycling, or taking public transportation. This vision underlies the concept of Complete Streets, which has grown over the past decade from an idea to a national movement.

Complete Streets is an approach to public decision-making, not a product. A Complete Streets approach changes how transportation networks are planned, funded, designed, built, operated, retrofitted or adapted, and maintained to focus on people and place, not just vehicle travel. This approach redefines what a transportation network looks like, which goals a public agency aims to meet, and how communities prioritize their transportation spending.

There is no single right way to design Complete Streets, nor do all streets need to meet the comprehensive needs of all users. Streets that meet the needs of people walking, biking, and transit in less populous areas will look very different than main streets, urban streets, or suburban commercial corridors. In a town center, a Complete Street might have wide sidewalks, frequent crosswalks, and potentially bike lanes, whereas a more rural highway might have a separated bicycle and pedestrian trail. In a residential neighborhood, a Complete Street might simply be a street where people who walk and bike can share the road safely with very low-speed traffic.

Complete Streets in different contexts

Top row: Photos courtesy of Phil Riggan, PlanRVA. Bottom row: Photos courtesy of Phil Riggan, PlanRVA and Emiko Atherton, the National Complete Streets Coalition.

Why Complete Streets: Improving safety and economic vitality

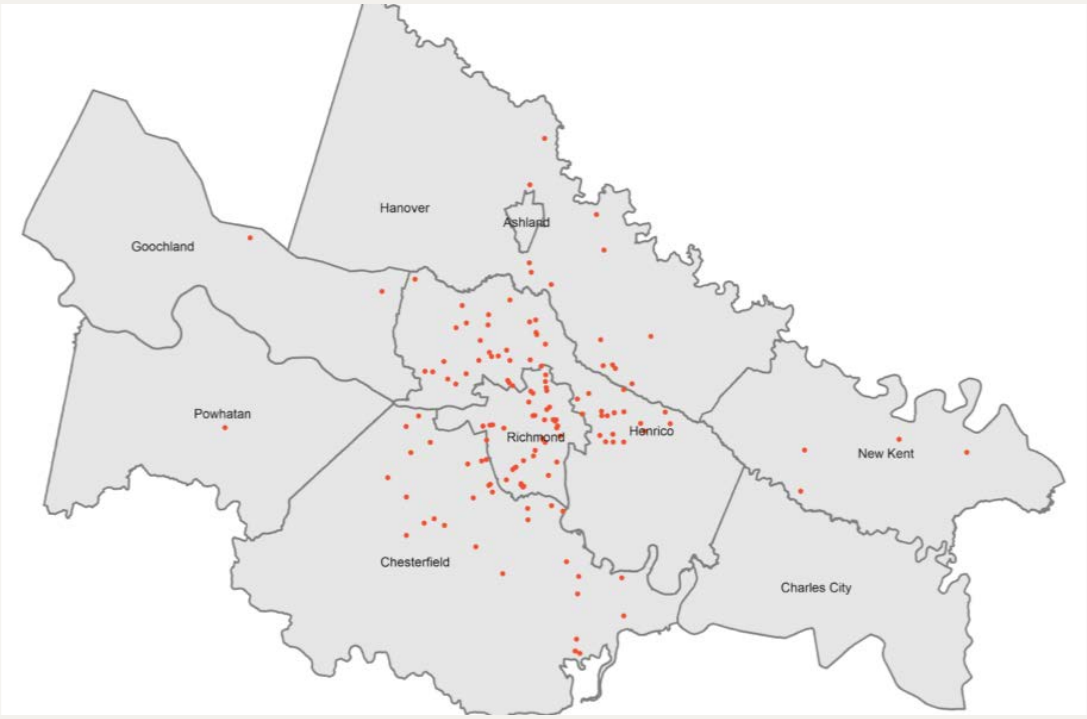
Complete Streets designed for people walking, biking, driving, and taking transit have many benefits. They improve safety, promote community health by encouraging physical activity, improve resilience, support local economic vitality, and contribute to more livable neighborhoods.

Many localities first turn to a Complete Streets approach to address a safety crisis in their community. Pedestrian fatalities have been steadily increasing nationwide, growing by 35% between 2008 and 2017. Drivers struck and killed 49,340 people who were walking on streets nationwide over that decade, more than 13 people per day. In the Richmond region between 2008 and 2017, 143 pedestrians were struck and killed by drivers while walking. The majority of these fatalities occurred in Henrico County, the City of Richmond, and Chesterfield County.[1] These statistics do not capture non-fatal crashes or areas where people simply are not walking because conditions are too dangerous.

Many of these deaths occur on streets with fast-moving cars and poor pedestrian infrastructure. Streets without safe places to walk, cross, catch a bus, or bicycle put people at risk. Communities around the country have adopted a Complete Streets approach to stop these preventable deaths.

[1] Smart Growth America. (2019) *Dangerous by Design*. http://www.smartgrowthamerica.org/documents/safer-streets-stronger-economies.pdf.

Pedestrian fatalities in the Richmond Region

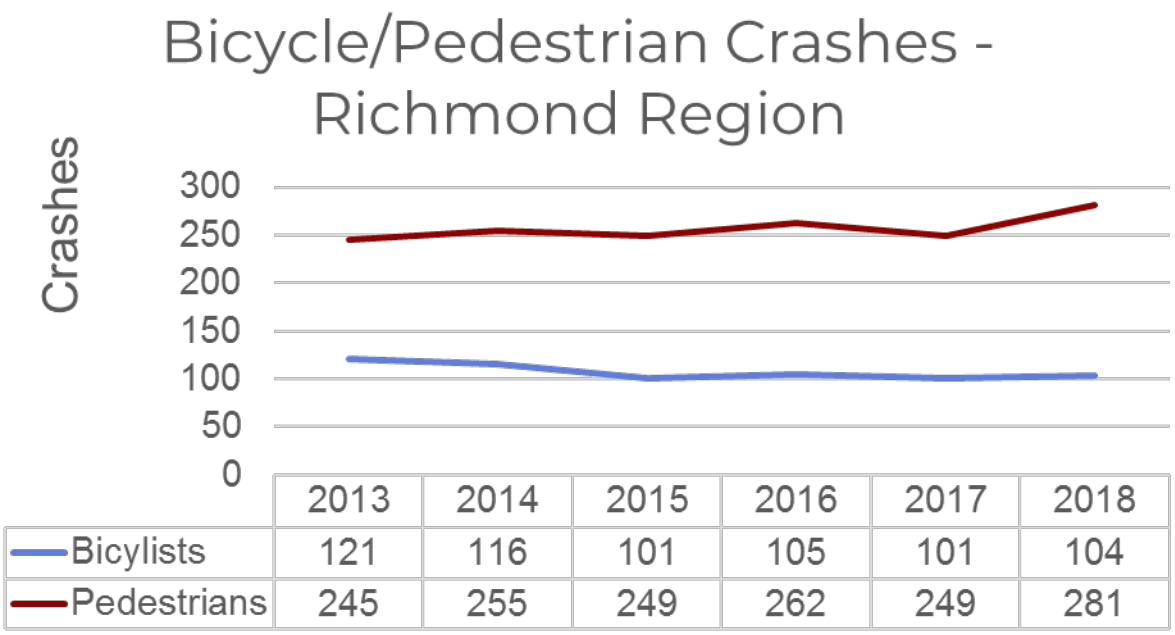


For more information, see: https://smartgrowthamerica.org/dangerous-by-design/

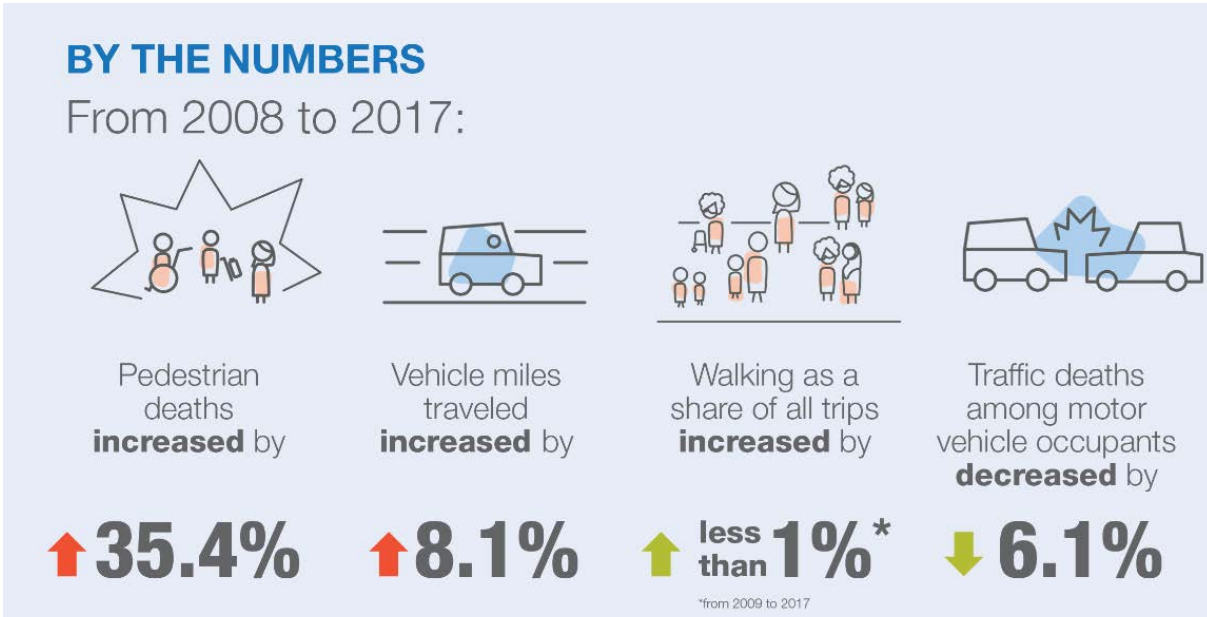
Beyond safety, making communities more walking-, bicycling-, and transit-friendly also frequently promotes economic development and tourism. There is a growing market demand nationwide for vibrant, walkable neighborhoods with a variety of transportation options, and companies around the country are responding by moving to walkable town downtowns to attract and retain talent.[2] Individual Complete Streets projects can also produce economic benefits. A 2015 analysis conducted by NCSC evaluated 37 projects around the country and found that projects to support walking and biking reduced crashes and injuries, as well as the costs associated with them. The analysis found that the safer conditions saved a total of $18.1 million in collision and injury costs in one year alone. A number of these projects also boosted employment levels, property values, investment from the private sector, and net new businesses.[3]

[2] Smart Growth America. (2015) *Core Values: Why American companies are moving downtown.* http://www.smartgrowthamerica.org/documents/core-values.pdf.

[3] The National Complete Streets Coalition. (2015) *Safer Streets, Stronger Economies.* http://www.smartgrowthamerica.org/documents/core-values.pdf.



	2013	2014	2015	2016	2017	2018
Bicylists	121	116	101	105	101	104
Pedestrians	245	255	249	262	249	281



How Complete Streets projects benefit local economies

When **Dubuque, IA**, was planning the redevelopment of its historic Millwork District, local leaders knew the project's success hinged on whether people would want to walk or bike there. So the city replaced sidewalks, made it easier to cross the street, added new street lights, painted "sharrows," and created a multi-use trail. Within a year, bicycling use increased by 273 percent—and that was just the beginning.

Since the project's completion, the neighborhood has experienced more than $34 million in new private investment, with another $150 million in the pipeline. The first warehouse to be redeveloped is leasing 72 residential units, 39,000 square feet of retail and commercial space, and 20,000 square feet for an incubator for arts and nonprofit organizations. The fact that the neighborhood's streets work for everyone who uses them is a key part of this success.

In **Normal, IL**, private companies invested $160 million in the town's Uptown District after that area's Complete Streets project was completed. The new roundabout that replaced a complicated intersection now serves as the heart of the uptown District and is a place that residents of all ages can enjoy. "People love Uptown Normal," said Normal Mayor Chris Koos. "They ride the bus, they bike the trail, they shop, they socialize, and they recreate in a wonderful urban center."

Washington, DC and **Raleigh, NC**, saw new or renovated apartment buildings and hotels built along their Complete Streets projects, totaling $63.3 million and $25.5 million, respectively.

More information about the benefits from these and other Complete Streets projects is available within NCSC's report, *Safer Streets, Strong Economies*: http://www.smartgrowthamerica.org/documents/safer-streets-stronger-economies.pdf.

Complete Streets in the Richmond region

PlanRVA, the regional planning body for the greater Richmond region, includes nine localities: the Town of Ashland, Counties of Charles City, Chesterfield, Goochland, Hanover, Henrico, New Kent, Powhatan, and the City of Richmond. PlanRVA is working to assist the region's localities in bringing a Complete Streets approach into their decisions and projects.

The City of Richmond has taken significant strides in recent years. The City adopted a Complete Streets policy in 2014 to support a comprehensive, integrated, connected multimodal transportation network that balances access, mobility, health, and safety needs of all users.[4] Richmond's Mayor Stoney made a public commitment to a Vision Zero approach in 2017, extending a resolution approved by the City Council in 2016 to reduce fatalities on city streets to zero by 2030, and the City has since developed a Vision Zero Action Plan to advance that goal.[5] Most recently, the City unveiled a new *Better Streets Manual* providing guidance for designing, constructing, operating, and maintaining complete streets throughout Richmond. This manual will serve as an excellent resource to both the City and peer communities nationwide.[6]

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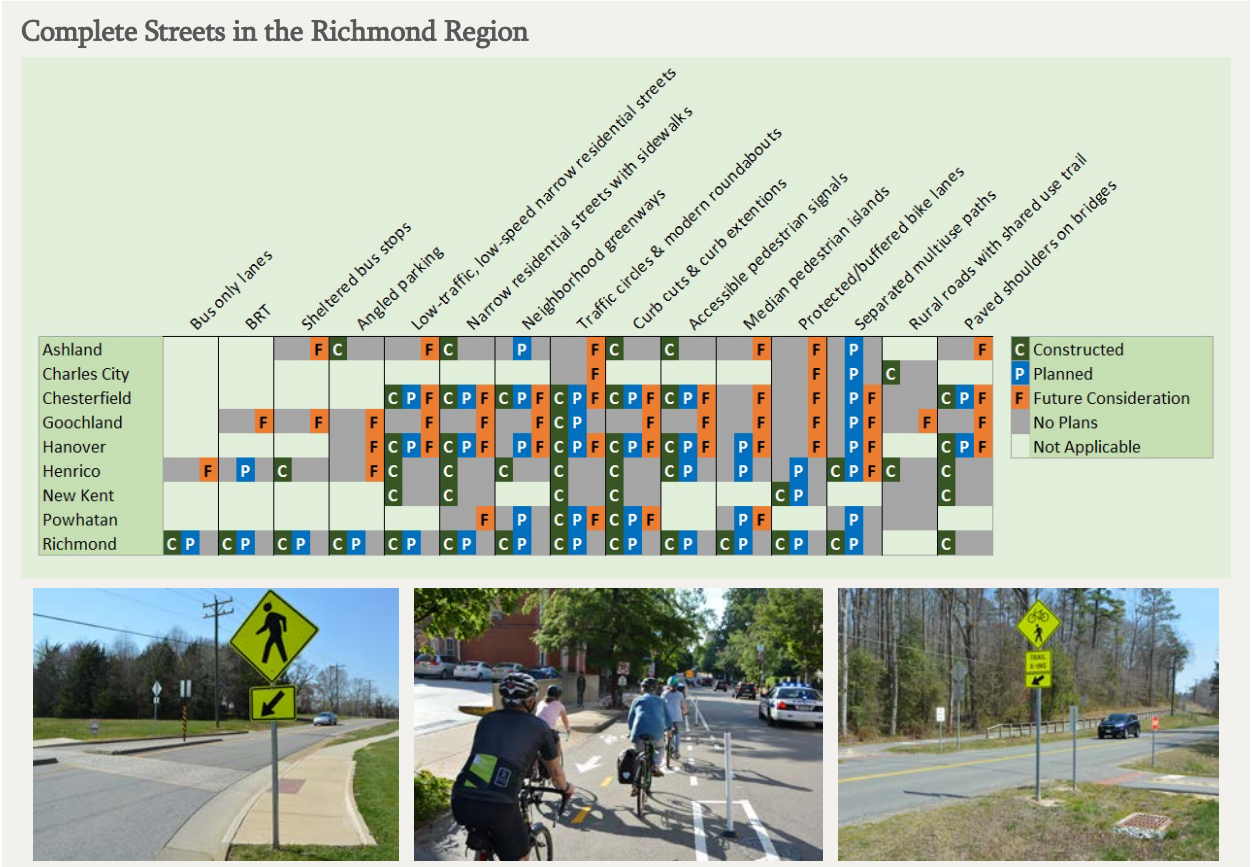
[4] Resolution No. 2014-R172-170, introduced September 8, 2014. http://eservices.ci.richmond.va.us/applications/clerkstracking/getPDF.asp?NO=2014-R172-170.

[5] Vision Zero: Richmond, VA (2017). http://www.richmondgov.com/PublicWorks/documents/VisionZero-RichmondActionPlan.pdf

[6] City of Richmond. (2018) Better Streets. http://www.richmondgov.com/PublicWorks/documents/RightOfWay/Better_Streets_2018_Part_I.pdf.

Other localities in the region are also taking action to make Complete Streets happen, though generally more incrementally, by initiating conversations with key stakeholders or bringing walking, biking, and transit infrastructure into specific projects. These localities are experiencing unique challenges and opportunities to bring Complete Streets into their communities more systematically.



Matrix by PlanRVA. Photos: A crosswalk with pedestrian median in Powhatan County, separated cycle track on Franklin Street in Richmond, and a multiuse trail crossing in the County of Charles City. All by Phil Riggan, PlanRVA.

Project overview

PlanRVA engaged Michael Baker, International and NCSC to support the region's Complete Streets efforts, including PlanRVA's plan to develop a Complete Streets toolbox that provides a framework to help the region's localities implement Complete Streets. As a subcontractor to Michael Baker, NCSC worked with PlanRVA and the region's localities to lay a foundation for the development of the region's new toolbox and broader Complete Streets work.

NCSC conducted two Complete Streets workshops for localities in the Richmond region on April 25, 2019 and June 25-26, 2019. Topics covered during these workshops are summarized in the table below.

Table I: Summary of Richmond Region Complete Streets Workshop topics

Workshop #1 (April 25, 2019)
• Introduction to Complete Streets • Elements of roadway and community design that impact Complete Streets • Audit of documents, policies, and practices that affect Ashland's streets • Complete streets implementation • Identifying priorities
Workshop #2 (June 25-26, 2019)
• Local context: The City of Richmond's Vision Zero initiative and Better Streets Manual • Design guidelines from the inside out • Elements of a Complete Streets policy • Local context: Experiences in Ashland • Crafting a Complete Streets policy • Walking audit and design exercise of State Route 54

The Town of Ashland as a pilot community

Through this project, PlanRVA selected the Town of Ashland to serve as a Complete Streets pilot community for the region. Both Complete Streets workshops took place in Ashland and focused on Ashland's specific opportunities, challenges, and key corridors. PlanRVA's goal was to provide visible examples of how to implement a Complete Streets approach that other jurisdictions could apply in their communities.

The Town of Ashland serves as a useful pilot community in several ways. Ashland already has a small walkable downtown core on Railroad Avenue and has implemented projects to improve safety and enhance the vibrancy of downtown. The Town has articulated a need for Complete Streets in its existing Comprehensive Plan and is currently in the process of updating the plan's transportation element, providing an ideal opportunity to integrate Complete Streets more fully. The Town has a strong sense of identity that aligns well with the goals of Complete Streets, including preserving small-town character and promoting compact, walkable development. Ashland also has car-oriented commercial corridors located adjacent to I-95 that provide a substantial share of the Town's tax revenue, and the town faces many of the common Complete Streets challenges other communities face along similar suburban commercial corridors.

In other ways, however, Ashland's experiences with Complete Streets are unique compared to the other localities in the region. In particular, Ashland, the City of Richmond, and Henrico County manage most of their own roads, whereas roads in the region's other localities are largely managed by the Virginia Department of Transportation (VDOT). This difference has significant implications. While Ashland and the other municipalities have some common opportunities and challenges in how they regulate and approve new private development, most of the counties have significantly less leverage in making changes to the existing road and street network. This means that some Complete Streets strategies that may work well in Ashland will have limited effectiveness elsewhere.

Ashland's State Route 1 and its intersection with Route 54 (right photo) exemplifies many of the common Complete Streets challenges of a car-oriented commercial corridor: for example, a lack of sidewalks, long distances between crosswalks, and wide vehicle lanes that encourage higher travel speeds.

Photos: Fred Jones, Michael Baker International

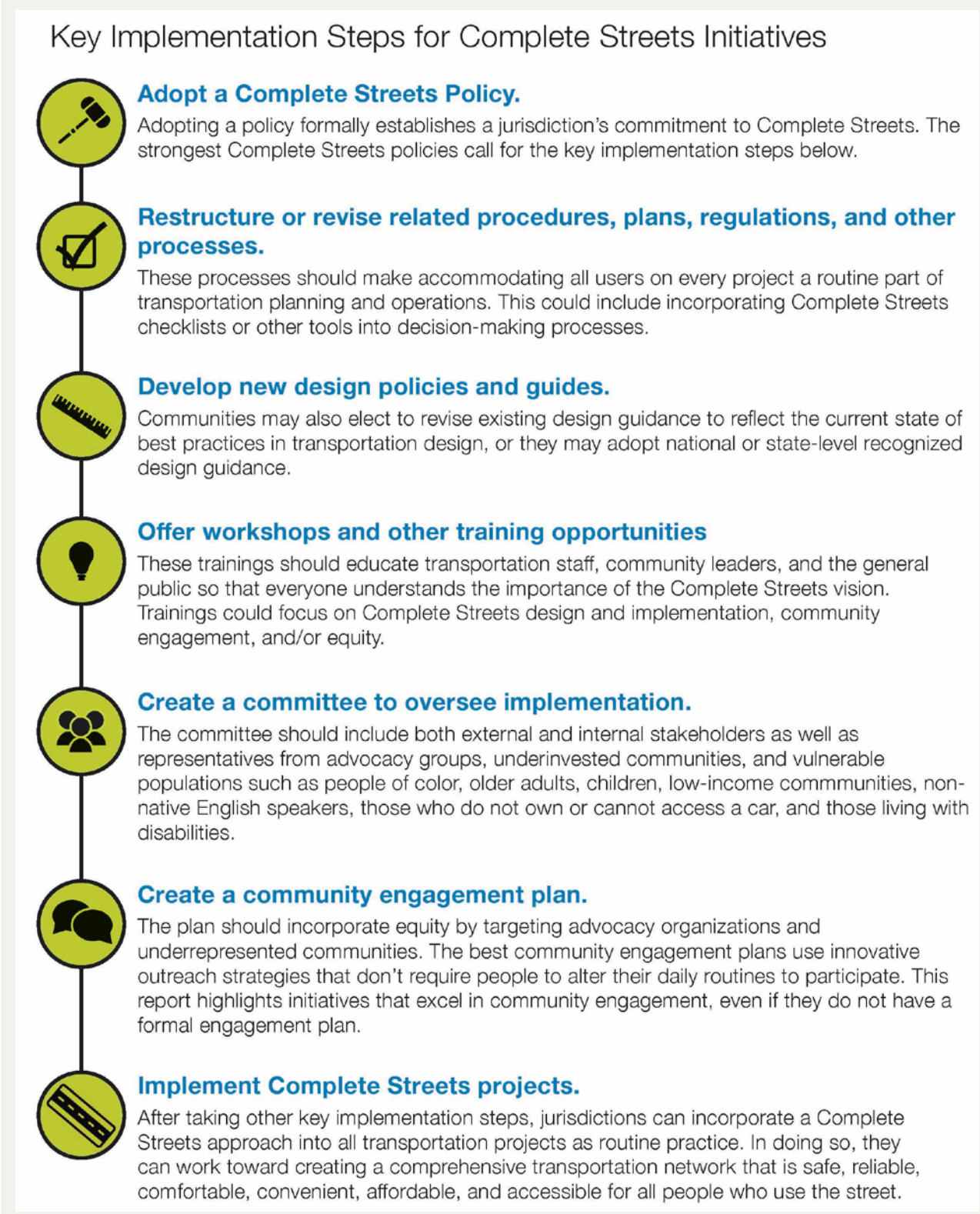
Focusing on two Complete Streets strategies

To narrow the focus of this initiative and explore aspects of Complete Streets implementation in greater depth, Ashland selected two priorities from NCSC's national framework for Complete Streets implementation: 1) developing a Complete Streets policy and 2) updating design guidance to support Complete Streets.

Ashland chose these two priorities from a list of key implementation steps that NCSC recommends all communities take, summarized in the image on the following page.

Purpose of this report

This report provides recommendations for the Town of Ashland in the two aspects of Complete Streets implementation selected by Ashland: policy development and design guidance. This report also provides recommendations for how the findings from Ashland can be applied in other localities throughout the Richmond region. While those localities may not currently be pursuing a Complete Streets policy or design guidance, they are grappling with related challenges in making systematic changes to decision-making and roadway design to make their streets safer for bicyclists and pedestrians and enhance economic vitality.



For more information about these steps for Complete Streets implementation, see:
https://smartgrowthamerica.org/tag/complete-streets-policy-implementation-resources/

II. Recommendations for Ashland

This section provides recommendations for the Town of Ashland focused on the two aspects of Complete Streets implementation selected by Ashland: policy development and design guidance. NCSC developed these recommendations based on the Complete Streets workshops conducted in Ashland on April 25 and June 25-26, 2019, as well as an "audit" NCSC conducted of Ashland's existing policies, regulations, and guidance. See *Appendix A* for more detailed discussion of the audit findings.

Recommendations for Ashland include the following:

A. Adopt a Complete Streets Policy
B. Adopt and update Complete Streets design guidance
C. Make other updates to plans, procedures, and regulations to align with the policy
D. Focus on commercial arterials like SR-54—transportation "futons"

A. Adopt a Complete Streets Policy

Complete Streets policies formalize a community's intent to plan, fund, design, and maintain streets so they are safe for all users of all ages and abilities and a variety of modes of travel. Ashland staff and certain members of the Town Council have identified developing a Complete Streets policy as a key short-term step for the Town. This section provides recommendations on how to structure and build support for a Complete Streets policy. The following section recommends other procedural changes to increase the effectiveness of Ashland's new policy.

Identify the right type of policy

A key first step for Ashland will be identifying the right type of Complete Streets policy for the town. While Ashland already intends to incorporate a Complete Streets section into its Comprehensive Plan, NCSC recommends that Ashland pursue a stand-alone legally binding Complete Streets ordinance to give Complete Streets greater weight in decision-making. Participants in the Complete Streets workshop on June 25-26 also recommended an ordinance as the best option for the Town.

Section III: Applying recommendations to the rest of the Richmond region provides further discussion of different types of Complete Streets policy commitments localities can pursue, including ordinances, resolutions, departmental policies, guidance, and commitments in local plans.

Conduct engagement and build support for a Complete Streets policy

Ashland staff will need to continue to educate decision-makers and the public about the need for Complete Streets and the economic development benefits that walkability and placemaking can provide. NCSC recommends that Ashland planning and public works staff do significant engagement during the policy development process to provide education and collect feedback from residents about who should be served or called out within the policy and what community values the policy should address.

This engagement could take the form of traditional community forums, but can also include creative community events to help residents envision how a Complete Streets policy will help support the town's values as it grows and changes over time.

For example, staff could do a demonstration project event to help generate awareness and build support for Complete Streets. One approach would be to take a weekend to make temporary changes

on State Route 54/England Street along the portion of the corridor closest to Railroad Avenue. Ashland could host an event or block party in the vicinity to engage community members and spark ideas about what that segment of the corridor could look like in the future with a different street configuration and more pedestrian-oriented buildings (for examples of how to create very short term pop-up demonstration projects that change the feel of a corridor, visit betterblock.org or streets-plans.com).

Examples of Complete Streets demonstration projects from other communities

Photos from left: Demonstration projects in South Bend, IN and Pittsburgh, PA. Photos courtesy of the cities and NCSC.

In building support for Complete Streets, staff should continue their current work to make the case for the value of local street connectivity in both residential neighborhoods and commercial development. NCSC recommends highlighting the negative impacts on traffic congestion caused by poor connectivity (for more discussion of this, see the following section, *Section III: Applying recommendations to the rest of the Richmond region*).

Develop the policy

Ashland staff should use NCSC's ten elements of a comprehensive Complete Streets policy to guide the policy development process.[7] Participants in the second Complete Streets Workshop brainstormed initial ideas to include in each section of the policy, summarized below. These ideas will provide a valuable starting point for Ashland but should not be considered exhaustive or representative of the broader community.

Table II: Summary of ideas brainstormed for Ashland's Complete Streets policy during workshop on June 25-26

1. **Vision and intent:** Includes an equitable vision for how and why the community wants to complete its streets. Specifies need to create complete, connected, network and specifies at least four modes, two of which must be biking or walking.
Workshop participants recommended that Ashland pursue a Complete Streets ordinance rather than something less binding. They noted that Ashland's residents value a pedestrian-friendly environment,

[7] For more information about the ten elements of a comprehensive Complete Streets policy, see: https://smartgrowthamerica.org/resources/elements-complete-streets-policy/

transportation choices, and reduced traffic congestion. They also emphasized that policy development should include a robust community engagement process.

2. **Diverse users:** Benefits all users equitably, particularly vulnerable users and the most underinvested and underserved communities.

Workshop participants suggested that it is especially important to consider the needs of aging residents and children, as well as residents who are handicapped, impoverished, or do not own cars. They noted that funding, politics, and the limitations of existing infrastructure are some of the biggest barriers to change.

3. **Commitment in all projects and phases:** Applies to new, retrofit/reconstruction, maintenance, and ongoing projects.

Participants listed a number of upcoming projects, including the Trolley Line Trail, among others. They suggested that it would be great to see more projects to improve sidewalks, as well as new dedicated bike lanes. They noted that during construction, it would be valuable to provide parking maps, signage, and promotion of alternative options on social media.

4. **Clear, accountable expectations:** Makes any exceptions specific and sets a clear procedure that requires high-level approval and public notice prior to exceptions being granted.

Workshop participants suggested that exceptions to the policy should be used sparingly. The process and roles for reviewing and approving exceptions should be spelled out very clearly in the policy, both in how the policy pertains to publicly managed streets and new private development.

5. **Jurisdiction:** Requires interagency coordination between government departments and partner agencies on Complete Streets.

Participants specified that the policy should apply to private development. They noted that all levels of government should be involved in its implementation.

6. **Design:** Directs the use of the latest and best design criteria and guidelines and sets a time frame for their implementation.

The Town of Ashland currently uses VDOT's roadway design standards, but has significant flexibility to deviate since they maintain their own roads. This provides clear benefits and also poses challenges. Workshop participants noted that there are some issues in how the roadway design process currently happens, and suggested a need for greater public engagement.

7. **Land use and context sensitivity:** Considers the surrounding community's current and expected land use and transportation needs.

Ashland's Town Code plays a significant role in land use patterns as Ashland develops. Participants noted that while Ashland has made incremental updates to its zoning code, it has not done a comprehensive update in several decades. Participants also brainstormed the qualities that make Ashland great and should be considered in any discussion of context within the policy: authenticity, historic homes, safety, Ashland's train culture, arts, and the town's unique character coupled with its location near Richmond.

8. **Performance measures:** Establishes performance standards that are specific, equitable, and available to the public.
Workshop participants brainstormed goals that should be captured in performance measures the town uses for transportation decisions, including safety, walkability, business health, and tourism.
9. **Project selection criteria:** Provides specific criteria to encourage funding prioritization for Complete Streets implementation.
Participants noted that projects are currently proposed by the town planning and public works departments and approved by the Town Council. The approval process is relatively unstructured. Some participants raised a need for greater public input in the process.
10. **Implementation steps:** Includes specific next steps for implementation of the policy.
Workshop participants suggested that planning and public works should oversee implementation of the Complete Streets policy. NCSC recommends that Ashland's policy clearly articulate what role each department will play in implementation. NCSC also recommends designating one point-person on the Town's staff to oversee implementation. Other communities have found that implementation stalls without a clear lead individual or committee driving the process.

B. Adopt and update Complete Streets design guidance

Ashland identified design guidance as the Town's second Complete Streets priority for relatively near-term action. Staff focused on the town's guidance for private development when they raised this need. However, the town also has broader opportunities unavailable to many of the other Richmond region localities because it maintains its own roads.

Adopt national and/or regional roadway design guidance for public streets

As a key first step, NCSC recommends that Ashland adopt design guidance for the public roads the town maintains that is more explicitly supportive of Complete Streets than VDOT's standards. Many communities have chosen to adopt the National Association of City Transportation Officials' (NACTO) *Urban Streets Design Guidance*. The City of Richmond chose to take this approach in the interim while developing their new Better Streets Manual.

Other communities have opted to establish in departmental policy that staff can use several external design guides as resources: for example the NACTO guidance, as well as DRPT's *Multimodal System Design Guidelines*,[8] and even Richmond's manual. The Federal Highway Administration's *Small Town and Rural Multimodal Networks Guide is* another option the town may want to consider.

Ashland should ensure that this guidance applies and is consistently referenced by staff during repaving projects as well as new construction to look for potential changes to current street configurations that can be accomplished during those projects.

[8] The Virginia Department of Rail and Public Transit. (2013) Multimodal System Design Guidelines. http://www.drpt.virginia.gov/transit/planning/multimodal-guidelines/.

Update design guidelines for developers and make Complete Streets development easier

Ashland's existing Development Guidelines Handbook[9] for private developers provides a good initial foundation for Complete Streets in its section on streets. Moving forward, town staff would like to encourage more local street connectivity, as well as more consistency in the design of pedestrian and bicycle trails.

For encouraging greater connectivity, NCSC recommends building additional traffic calming design treatments into Ashland's existing guidance. Members of the community have concerns about cut-through traffic, but that concern can largely be addressed by reducing the speed cars can travel on those roads to make those cut-through routes unappealing.

In addition, Ashland should work to make the types of residential development the Town wants to see as easy for developers to do as possible. Developer feedback during the second Complete Streets workshop indicates that the following changes would help:

- Allowing narrower streets in residential development to support traffic calming
- Allowing development of more lots per acre
- When possible, doing large master plan developments that allow the town to plan for connectivity on a larger scale

Giving stakeholders who oppose the change a chance to provide feedback can help build support. For example, have emergency service vehicles do a 'test drive' of proposed narrower lanes or tighter turns to provide input before making changes permanent.

For residential development, Ashland should promote and point developers toward the existing projects in their community that align with their Complete Streets goals, some of which were discussed during the second Complete Streets workshop.

Ashland also likely has opportunities to better incentivize the type of development the Town wants to see in areas they hope will transition to more pedestrian-friendly development in the future, such as along the portion of SR-54 between Railroad Avenue and Route 1. For example, the Town Code currently permits shared use parking, but staff noted that there has not been much uptake from businesses. Making shared use parking the easiest route—removing steps in the approval process for businesses seeking it, providing template shared use parking agreements, etc.—could help encourage greater adoption. This same principle also applies to other development features the town wants to encourage.

C. Make other updates to plans, procedures, and regulations to align with the policy

Ashland's Complete Streets policy should be coupled with other procedural and regulatory changes to increase the policy's impact:

Update the Comprehensive Plan

Ashland already intends to include a Complete Streets chapter in its updated Transportation Plan, currently undergoing revision. This is a logical initial step for the Town. NCSC recommends that Ashland

[9] Town of Ashland. Development Guidelines Handbook. https://www.ashlandva.gov/DocumentCenter/View/101/Development-Guidelines?bidId=.

also review the full plan language submitted by the Town's consultants to ensure a Complete Streets approach is integrated throughout (not just in that chapter).

However, NCSC recommends that the Town not rely on the comprehensive plan as its primary vehicle for driving its Complete Streets efforts, as plans are difficult to enforce and do not carry substantial weight during decision-making in many communities. In fact, Ashland's existing Comprehensive Plan already includes plenty of Complete Streets supportive language throughout the document—a desire to maintain the small-town character of neighborhoods and downtown and numerous references to supporting all modes of travel and promoting compact, walkable development and all modes of travel. Even with a more explicit emphasis on Complete Streets, the plan alone will only be the first step.

Update the Town Code

NCSC recommends that Ashland update the Town's zoning and subdivision code to support Complete Streets. While a full comprehensive update to the Town's code would be a significant undertaking and may not be feasible or necessary in the near term, there are several incremental changes the Town could make to better support Complete Streets:

Option 1: Targeted updates to the code*:* The Town could make targeted changes to the Town Code to ensure that new development and redevelopment consistently support the needs of people walking and biking. This should include encouraging greater local street connectivity within residential and commercial development and encouraging a transition to more compact, walkable development along the town's commercial corridors, particularly closer to downtown. Ashland should consider allowing greater density along these corridors and requiring that buildings be located adjacent to the street and parking be located to the side or rear of buildings. A more detailed discussion of potential changes is provided in *Appendix A.*

Option 2: Overlay district(s): Ashland could also consider an overlay district on SR-54, and potentially other major corridors the town would like to see transition. This would allow the Town to encourage new development and redevelopment that is more pedestrian-oriented along those corridors without doing a full update to the Town Code.

Option 3: Form-based code: Ultimately, NCSC recommends pursuing a form-based code for the Town, which would provide the regulatory framework for mixed-use, walkable development while requiring new development to match the aesthetics of the town's historic character.[10] Ashland's existing Comprehensive Plan also includes language recommending that the Town pursue a form-based code.

Ashland could also adopt a form-based code for a specific corridor or corridors (see Leesburg, VA example below). Coupled with the new Complete Streets policy, this could help catalyze a change in the built environment along the corridor over time as the existing car-oriented development eventually turns over and new development takes its place. Form-based codes provide substantial benefits, including creating an easier review and approval process for developers, thereby helping to encourage new development and redevelopment along commercial corridors like SR-54.

[10] For more information, resources, and technical assistance on form-based codes, see the Form Based Codes Institute's website: https://formbasedcodes.org/.

Virginia communities are embracing form-based codes

Form-based codes provide a regulatory framework to create vibrant, walkable areas by regulating the form and design of buildings and public spaces rather than what land uses are permitted. Form-based codes can guide development at many scales—corridors, neighborhoods, or entire cities or towns.

In October 2017, the **Fauquier County** Board of Supervisors approved a form-based code for Marshall, VA to support the historic core of Marshall and preserve community character. Charlottesville, VA is also currently considering a form-based code.

In 2013, the **Town of Leesburg** adopted a hybrid zoning code for the 423-acre Crescent Design District (CDD), an auto-oriented, suburban strip commercial area adjacent to the historic downtown. The goal of the rezoning was to achieve a more urban-style infill and redevelopment of the District reminiscent of the adjacent Historic Downtown Leesburg with its grid of streets, buildings located along street frontages and parking screened or behind buildings. While the Town Council considered a more typical form-based code, several key elements got removed during the adoption process. As a result, initially little development occurred in the CDD, and some of the development that the Town approved received multiple modifications.

A developer seeking to do a mixed-use project on the corridor helped catalyze needed changes to the CDD code by pointing out that the project would not be feasible under the existing code. This prompted the Town to seek assistance from the Form Based Code Institute to do a code update. To encourage more infill and redevelopment, the Town is now in the process of revising the regulations and review and approval process to improve clarity, ease of use, and predictability. The Town has adopted interim zoning amendments, allowing the developer's project to begin the approval process, and has issued an RFP for a full code update to implement a true form-based code for the corridor.

Leesburg's car-oriented Crescent Design District (right) is just a short walk from the historic downtown (left). Images: m01229 via Flickr; google maps.

Develop access management standards

Access management must be a central focus of Ashland's Complete Streets implementation effort. The frequency of business and private driveways poses a significant safety issue for people walking on the town's commercial roads like SR-54, and any other changes to roadway design and surrounding land use will have limited impact if the town does not work to reduce its driveway access points on those roads over time. Ashland already limits driveways in the Central Business area within its Town Code on the

principal frontage street when side street or alley access is available. Ashland should update the code to limit driveways along its commercial corridors as well.

Currently the Town informally follows VDOT's roadway design standards. However, because VDOT does not actually manage Ashland's roads, this informal use of the standards makes it difficult to push back when developers request additional access points. Ashland needs its own access management regulations.

Option 1: Adopt or adapt VDOT's regulations: One approach would be for Ashland to adopt a policy to follow VDOT's Access Management Regulations[11] or adapt portions of VDOT's regulations into the Town Code. VDOT's regulations state that VDOT is not obligated to permit the most convenient access to a parcel; the use of shared entrances between adjacent properties shall be the preferred method; and vehicular and pedestrian connections are required between parcels on corridors of certain functional classifications. VDOT's regulations also name circumstances when access points must be designed to limit certain traffic movements.

In addition, VDOT's standards reference specific spacing between access points in VDOT's Roadway Design Manual, Appendix F that would present a departure from current conditions.[12] For example, England Street/State Route 54 currently has nearly 30 commercial and private driveways between Railroad Avenue and Route 1, a segment that is 0.5 miles long. By contrast, VDOT's standard for minimum spacing between full access entrances on a minor arterial suggests that this segment of the corridor should have fewer than half that many driveways in addition to the existing unsignalized intersections.

Ashland should ideally reevaluate access points each time properties along SR-54 redevelop, so the Town would need to structure its regulations to allow this. VDOT's regulations name specific circumstances when and reconstruction, relocation or consolidation of existing commercial entrances may be required at the property owner's expense.

Option 2: Form-based code: A second, more holistic approach would be to adopt a form-based code for the full town or specific corridors, as discussed above. Form-based codes help reduce driveways by catalyzing a shift in the type of development along the corridor over time: moving parking to the rear of buildings, encouraging vehicle access via alleys and smaller local roads behind the properties, and generally emphasizing the pedestrian perspective.

Implement road diets

In some cases, Ashland streets may be able to support current (and even projected) vehicular traffic volumes with fewer lanes than the road currently has. The Federal Highway Administration (FHWA) advises that four-lane roads with average daily traffic of 20,000 vehicles per day or less may be good

[11] VDOT Access Management Regulations: 24VAC30-73 (2013).
http://www.virginiadot.org/info/resources/Access_Management_Regulations_24_VAC_30-73.pdf.
NOTE: See VDOT's Frequently Asked Questions for a user-friendly overview of these regulations:
file:///Users/raylabellis/Downloads/asset_upload_file519_62098.pdf

[12] VDOT Roadway Design Manual. (2019) Appendix F: Access Management Design Standards for Entrances and Intersections.
https://www.virginiadot.org/business/resources/LocDes/RDM/AppendF.pdf.

candidates for a road diet and should be evaluated for feasibility.[13] Repurposing a lane of traffic can provide the opportunity for wider sidewalks, separated bicycle facilities, or both. Road diets also often provide the additional benefit of slowing down traffic speeds and reducing the distance pedestrians need to walk to cross the road, creating a safer and more comfortable environment for people walking and biking.

D. Focus on commercial arterials like SR-54—transportation "futons"

Ashland's commercial arterials pose a significant Complete Streets challenge because they are serving two distinct roles in the community that stand in direct conflict to one another: regional through-traffic and local economic activity. Much like a futon serves as both a bed and a couch but does not play either role very well, suburban commercial arterials often do not function well for people traveling through or people making local trips, including local drivers as well as people walking and biking. In Ashland, these roads hinder non-car travel between the neighborhoods on either side and also act as barriers between the highway-oriented development around I-95 and Ashland's walkable downtown.

Participants in the Complete Streets workshops noted that there is a significant portion of interstate traffic and tourists that never travels all the way west on SR-54 into downtown, meaning that those travelers are not patronizing many of Ashland's locally owned businesses. These travelers exit I-95 for food and gas, unaware that a charming downtown is just a couple miles down the road. Transitioning SR-54 over time to be more pedestrian-friendly could help create a sense of place and draw residents and tourists alike into downtown.

NCSC recommends that Ashland integrate a clear vision for these corridors into its Comprehensive Plan update and implement roadway redesign projects as a medium-term implementation step. During the second Complete Streets workshop, participants brainstormed ideas for SR-54 (discussed below). Ashland should also consider similar re-envisioning for other corridors like Ashcake Road and Route 1. The walking audit previously conducted along Ashcake provides a good foundation.

As noted above, it will be crucial that Ashland also adopt access management standards that apply to these commercial corridors.

Complete Streets workshop participants making observations during a walking evaluation of SR-54 in Ashland.

Photos by Phil Riggan, PlanRVA.

Specific ideas for State Route 54

During the second Complete Streets workshop on June 25-26, 2019, workshop participants conducted a walking evaluation of SR-54 along two segments: between Railroad Avenue and Route 1 and East of Route 1. Participants identified the current major issues along the corridor for people walking and biking, and then brainstormed ideas for how to transform the corridor over time.

[13] FHWA (2014). *Road Diets Information Guide*. https://safety.fhwa.dot.gov/road_diets/guidance/info_guide/.

Observations: For the segment of the corridor between Railroad Avenue and Route 1, participants observed that the corridor currently has several elements of a walkable place, but that the high speed traffic, noise and dust, and proximity of the existing narrow sidewalks to traffic makes it an unpleasant walk (and potentially dangerous with a child or a pet). Participants also observed that driveway access points for businesses are very frequent, and many of the sidewalk ramps are in poor repair or would otherwise be difficult to navigate by a person in a wheelchair.

The character of the corridor changes east of Route 1, with more travel lanes, larger parking lots and greater distance between destinations. Participants observed that pedestrians do not have sufficient time to cross many of the intersections with the existing signal timing. They noted that the walk is surprisingly pleasant in places where the sidewalk is set back from traffic with tree cover, but feels dangerous in areas where the sidewalk is adjacent to the street. Again, frequent wide driveways pose a significant issue, especially because vehicles are entering and exiting those parking areas frequently and at high speeds.

Ideas for the future: The workshop participants also brainstormed ideas to transform the corridor over time in small table groups. Major ideas generated are summarized below:

- Move sidewalks further from the travel lanes east of Route 1 to provide separation.
- Increase the surrounding connectivity to take traffic pressures off of SR-54; add rear or side entrances to the parking lots along the corridor.
- Add a greenway trail to the south of the corridor; the Parks and recreation chapter of Ashland's 2016 comprehensive plan already includes language to "investigate the creation of a Greenway along Mechumps Creek and consider access on both sides of the highway."
- Add more street trees for shade and make other aesthetic improvements.
- Introduce one or more "gateway" features such as an archway over the corridor to create a sense of place and draw visitors into downtown.
- Reduce business access points for vehicles.
- Introduce roundabouts to slow traffic.
- West of Route 1, consider accentuating alternative pedestrian routes with amenities on streets parallel to England Street/Route 54 such as Robinson Street from Railroad Avenue to the U.S. Post Office.

Participants also discussed the major barriers and tradeoffs involved in implementing these changes to the corridor, including tradeoffs involved in decreasing the current convenience for car travelers, challenges posed by the fact that the corridor is already partially developed (without the desired side street connectivity), and the difficulty of reducing access points for businesses.

Conceptual ideas for the future from the project team: Michael Baker, International also developed concepts and renderings to help staff and residents of Ashland imagine what a vibrant, walkable version of the US-54 corridor could look like, and what would need to change.

The proposed changes include:

- Converting from the current six lanes to four lanes with protected bike lanes in both directions. Average daily traffic volumes on this segment of SR-54 suggest the potential to convert one or two vehicle travel lanes, though additional study would be needed.[14]
- Providing wider sidewalks and tree-lined buffer areas.
- Minimizing curb cuts in accordance with current VDOT Access Management Standards, reducing the number of current driveways between Hill Carter and Cottage Green from 16 to 5.
- Reducing left turn lane tapers, deceleration and storage lengths to accommodate mid-block crossing opportunities.
- Eliminating the right turn channelization ("pork chop") at the intersection of Route 1 to provide a safer crossing environment for pedestrians.
- In the longer-term, changing the configuration of the I-95 interchange from the current diamond configuration to a single-point urban interchange (SPUI) to reduce the speed of vehicles coming off the interstate (note: VDOT recently reconstructed the existing bridge. Adding a bike connection across I-95 could be a shorter-term incremental improvement.)

Reimagining a pedestrian- and bicycle-friendly SR-54 corridor

All images by Michael Baker, International

[14] The average daily traffic on this segment of SR-54 is approximately 25,000 vehicles per day, suggesting an opportunity to remove one or two lanes of traffic. This is below the capacity threshold of 28,800 for a 4-lane "interrupted flow" roadway, and well below the capacity threshold of 44,900 for a 6-lane roadway. However, the Town would need to conduct additional study of turning movements and other factors on SR-54 to determine whether removing these lanes would actually be feasible.

Source for capacity thresholds: Florida Department of Transportation (2013). FDOT Quality/Level of Service Handbook. https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/content/planning/systems/programs/sm/los/pdfs/2013_qlos_handbook.pdf?sfvrsn=22690bd2_0.

Reimagining a pedestrian- and bicycle-friendly SR-54 corridor (cont.)

All images by Michael Baker, International

Reimagining a pedestrian- and bicycle-friendly SR-54 corridor (cont.)

Proposed single-point urban interchange (SPUI) for I-95 and SR-54

All images by Michael Baker, International

III. Applying recommendations to the rest of the Richmond region

This section provides a framework for how other localities in the Richmond region can advance Complete Streets, building on the recommendations developed for Ashland. This framework focuses on the two elements of Complete Streets implementation chosen by Ashland: adopting a Complete Streets policy and developing or updating existing design guidance.

However, since all of the Richmond region localities are at different stages of planning for Complete Streets, this section also discusses key steps to lay a foundation for Complete Streets policy formalization by defining goals and areas of impact and building support over time. These are crucial early steps for implementing Complete Streets. This section also provides recommendations about other procedural changes localities in the region should consider.

Recommendations for the region include the following:

A. Lay a foundation for Complete Streets through policy (and beyond)
B. Adopt or update Complete Streets design guidance
C. Make other updates: Remove barriers to Complete Streets in land use and community design
D. Focus on arterial commercial corridors—transportation "futons"

A. Lay a foundation for Complete Streets through policy (and beyond)

Why adopt a Complete Streets policy?

NCSC recommends that all localities working to advance Complete Streets goals adopt a policy as a key early step in their efforts. While a traditional Complete Streets policy may not currently be the right approach for every locality in the region, NCSC still recommends working toward putting some kind of official policy commitment to Complete Streets in place.

There are a number of reasons why a formal commitment to Complete Streets is beneficial.
All other aspects of implementing Complete Streets are generally easier and more effective with a policy in place, whether prioritizing more biking and walkable projects for funding or ensuring sidewalks are included in new development projects. A policy provides the vision and intent that sets a clear direction for city or county staff. Complete Streets policies can give communities additional leverage in negotiating with private developers. While jurisdictions with good department leadership or champions on staff can do great Complete Streets projects without a policy in place, they will be less likely to make headway in systematically changing how transportation projects get prioritized. A Complete Streets policy institutionalizes the commitment to live beyond current leadership and staff.

Complete Streets policies are not one-size-fits-all. Nationwide, many policies take the form of ordinances and resolutions (including Richmond's policy), but they can also be internal memos from directors of local agencies, policies adopted by city and county councils, executive orders from elected officials, or imbedded within a local plan. However, the best Complete Streets policies are legally binding as an adopted ordinance. Policies can also make use of different terminology than "Complete" Streets" while still addressing many of the same goals.

When localities working to implement Complete Streets choose not to pursue a policy, it is frequently because elected leaders and the public do not yet have a basic understanding of the process and goals of Complete Streets needed to gain their support, meaning the locality needs to do additional education

first. While certain types of Complete Streets policies require less broad support than others (for example, an internal departmental directive), those policies are also less far-reaching and effective as a result. Any Complete Streets efforts will have limited success without broad buy-in, so building elected and public support will always be a necessary early step. However, even communities without current broad support for Complete Streets can (and should) still take steps to integrate some formal commitment to all users in their processes as they work to build that support.

Build buy-in for Complete Streets and make incremental change

Lack of education about Complete Streets among decision-makers and the public is currently a key barrier in the Richmond region. Auto-dependent, relatively low-density development patterns, focus on highway congestion; and concerns about gentrification and displacement all contribute to a challenging context in which to retrofit complete streets principles.

It can be challenging to jump straight to a systematic Complete Streets approach, especially if there are few comprehensive examples of Complete Streets projects that have produced desired results in the region. The value of Complete Streets for local economies and community vitality often becomes more readily apparent in localities that are already seeing some transition from car-oriented development toward more mixed-use, walkable community centers. In communities where that transition has not happened or is in the early stages, supporters of Complete Streets can still make progress by being intentional in the following ways to involve decision-makers and the public in understanding the concepts:

1) Temporary demonstration projects: Demonstration projects are a great way to help lay a foundation for more community support. Changes to the built environment can feel very permanent. Piloting temporary changes to roadway design helps make those changes less intimidating. “Temporary” could mean installing temporary sidewalk extensions using removable planters to slow traffic. It could also mean much shorter-term changes like closing a lane of traffic during an event or festival to test the impact on congestion or using a parking lot for a pop-up market to test the impact on parking availability. Localities can also solicit ideas for demonstration projects from elected leaders or the community.

2) Showing the need to improve safety: As discussed in the *Why Complete Streets* section at the beginning of this report, the nation is facing a pedestrian safety crisis. In the Richmond region between 2008 and 2017, 143 pedestrians were struck and killed by drivers while walking. Localities can emphasize the urgency of this need to decision-makers by:

- Highlighting these statistics
- Raising the profile high-crash corridors where roadway design contributes to unsafe conditions
- Gathering personal stories and testimonials

3) Promoting examples of successful projects elsewhere in the region that make specific functional improvements to the community can also demonstrate the positive value of Complete Streets. One of the most effective ways to mitigate concerns from elected leaders and the public is to demonstrate how the projects have worked well and achieved desired goals in peer communities to catalyze economic revitalization.

4) Demonstrating economic benefits: Talking about Complete Streets in terms of economic benefits can be more compelling to a broad range of decision-makers, stakeholders, and the public. The region may

already have examples of economic impacts from Complete Streets investments—for example, improved bicycle and pedestrian connections to the new Greater Richmond Transit Company bus lines and Pulse stations. Collecting data and specific anecdotal examples show decision-makers why Complete Streets projects support their goals.

NCSC's report, *Safer Streets, Stronger Economies* provides a number of examples of Complete Streets projects in communities around the country that produced economic benefits.[15] These projects, produced safer conditions leading to a total savings of $18.1 million in collision and injury costs in one year alone, catalyzed significant private investment, and saw increases in nearby property values (see examples from Dubuque, IA and Normal, IL on page 6 and Edgewater Drive in Orlando, FL on page 34 of this report, and more examples within *Safer Streets, Stronger Economies*).

Smart Growth America, NCSC's parent organization, also provides other resources on the economic benefits of walkable communities that can support Richmond localities in making the case.[16] These resources show how compact, walkable town centers can help:

- Reduce costs of infrastructure and services for municipalities
- Increase property values
- Attract and retain residents of all ages
- Draw businesses looking to attract talented workers

5) Building and harnessing advocates: Richmond localities can also make headway in building support for Complete Streets by **mobilizing supporters** to weigh in during key decisions and **engaging the right spokespeople.** When proposed Complete Streets projects are under consideration, simply taking the step of reaching out to residents and community groups who are supportive to make sure they attend public meetings and speak up can go a long way. These stakeholders may not be aware that their vocal support can help tip a project over the edge to receive approval. Often, stakeholders whose interest in Complete Streets is unexpected are the most compelling messengers, such as real estate developers or business owners who see the benefits of Complete Streets projects for their bottom line.

[15] Smart Growth America. (2015) *Safer Streets, Stronger Economies*. https://smartgrowthamerica.org/resources/evaluating-complete-streets-projects-a-guide-for-practitioners/.

[16] See: Smart Growth America. (2015) *Core Values: Why American companies are moving downtown*: https://smartgrowthamerica.org/resources/core-values-why-american-companies-are-moving-downtown/;
(2015) *The Fiscal Implications of Development Patterns*. https://smartgrowthamerica.org/resources/the-fiscal-implications-of-development-patterns-overview/;
(2016) *Amazing Place: Six cities using the new recipe for economic development.* https://smartgrowthamerica.org/resources/amazing-place/.

Examples of Complete Streets demonstration projects from other communities

The **Orlando metropolitan region** has long had notoriously dangerous roadways, especially for people walking. A team from the City of Orlando launched a demonstration project on Curry Ford Road, a commercial arterial with a history of crashes involving people walking and biking that spans both the city's and county's jurisdictions. By collaborating with Orange County staff and with local elected officials, the team transformed this five-lane speedway into a three-lane Complete Street with protected cycle tracks and a mid-block crossing with a painted pedestrian refuge. Although local business owners and nearby residents supported the demonstration project, people who commute through the neighborhood were resistant to the changes, which raised important questions about the necessary trade-offs between safety and speed.

To address recurring, dangerous speeding problems on neighborhood streets, the City of **South Bend, IN** launched a demonstration project to test out traffic-calming tools they had never used before including traffic circles, chicanes, and bump outs. They worked closely with the local community to decide where these traffic-calming strategies were most needed. They also added educational signs to help teach people how street design can improve safety by encouraging drivers to slow down while simultaneously creating more vibrant places for people. As a result of this demonstration project, drivers drove slower on these streets, and South Bend also built trust with the community.

The **City of Durham, NC** recognized their demonstration project as an opportunity to try out more intensive, inclusive methods of community engagement to reach segments of their community they have not connected with in the past. They identified a dangerous site along West Club Boulevard, where a frequently used bus stop across from a shopping mall offered no safe, convenient way for bus riders to cross. The team conducted intercept surveys at the bus stop to learn more about the safety challenges people experienced and to guide the design of their demonstration project. Based on these insights, the team reduced the number of lanes on West Club Boulevard and installed a new mid-block crossing, resulting in safer, slower driving speeds and better yielding to people crossing.

Photos from left: Orlando, South Bend, and Durham. Photos are courtesy of the cities and the National Complete Streets Coalition.

More information about these and other Complete Streets demonstration projects is available at the following links:

- Safety Demonstration Projects: Case studies from Orlando, FL, Lexington, KY, and South Bend, IN: https://smartgrowthamerica.org/resources/safety-demonstration-projects-case-studies-from-orlando-fl-lexington-ky-and-south-bend-in/.
- Safety Demonstration Projects: Case studies from Durham, NC, Huntsville, AL, and Pittsburgh, PA: https://smartgrowthamerica.org/resources/safety-demonstration-projects-case-studies-from-durham-nc-huntsville-al-and-pittsburgh-pa/.

Identifying opportunities for impact (whether pursuing a policy or not)

Regardless of whether they are currently pursuing a Complete Streets policy, Richmond region localities will need to have a clear sense of:

- What they are trying to achieve
- Where they can have an impact.

Localities that do not manage their own roads will want to focus more heavily on how they can change land use and development decisions, as well as off-road multiuse trails. They will need to take stock of how those decisions are currently made and what elements of the process are producing environments that are unsafe or uninviting for people walking and biking.

The following table provides key questions to help localities focus their Complete Streets efforts.

Table III: Key questions to lay the foundation for Complete Streets implementation

Key starting questions for Complete Streets implementation	How to use the answer
1) **What are the key objectives you are trying to achieve?** (For example: safer streets, serving vulnerable residents, creating a sense of place, improving public health, etc.)	These objectives should set the foundation for a locality's Complete Streets work. They should directly inform the "vision" within a locality's Complete Streets policy. They should also be used in communicating with decision-makers and the public.
2) **What is currently standing in the way of those objectives at a high level? What problem(s) are you trying to solve?**	Localities should use the answer(s) to this question to focus their efforts on the greatest or most pressing need, whether stakeholder education, policy, and procedural change.
3) **In what ways does your jurisdiction impact the built environment and who makes those decisions?**	Answers to the questions below should inform key elements of a Complete Streets policy and its application: what types of projects will the policy apply to and what role will different jurisdictions play? These questions also help localities identify other areas where they may have leverage to make change (for example, within local zoning).
a. What is the decision-making process for **roadway projects** in the community? What departments are involved? **Who** makes the decisions at each step? (If VDOT leads these decisions, what role does the locality play in VDOT's process?)	
b. How are transportation projects selected for the Capital Improvement Program?	
c. What is the decision-making process for **new development and redevelopment** in your community? How does the current local zoning impact the walkability of the community? What requirements are involved in development siting, plan submittal, review, and approval? **Who** makes the decisions at each step?	
d. What decisions are currently made through collaboration between jurisdictions? (For example, across municipality boundaries, in partnership with the TPO, etc.)	

e. Which of these decisions are currently creating the biggest barriers to building safe, inviting environments for people walking, biking, and taking transit? **Who** is involved in those decisions?	
4) What existing plans, policies and procedures impact the built environment?	Answers to the questions below should inform which local documents, procedures, and guidance should be updated to support and align with a Complete Streets policy, and who the locality should involve in making and implementing those revisions to ensure the changes are actually enforced.
a. What plans, policies, and procedures guide **transportation decisions?** What do these documents currently say about accommodating all users?	
b. What plans, policies, and procedures guide **land use and development decisions?** Do these documents currently support or hinder compact, connected, walkable development? How?	
c. **Who** uses each of those plans, policies, and procedures to make decisions?	
d. How consistently are each of those plans, policies, and procedures **actually used or enforced?** If they are not enforced, why not?	
5) What steps can you take now?	Localities should use the questions below to help identify interim actions that can help build support for a Complete Streets policy and other changes that can be made now.
a. Who in the decision-making structure is already supportive of Complete Streets and can become a champion for adoption and implementation? Who is currently posing a barrier?	
b. What can be changed now?	
c. Which key stakeholder groups or decision-makers in the community do not currently support Complete Streets, and why? Do those stakeholders hold any values that overlap with Complete Streets goals?	

Determining the right type of Complete Streets policy for your locality

Richmond jurisdictions ready to move toward policy guidance should identify the right policy type based on:

- What will be most effective in sparking change, and
- What the locality can realistically support and implement successfully based on current decision-making structures and public support.

The table above can help answer these questions.

Major categories of policies are discussed below. NCSC's *Complete Streets Local Policy Workbook* provides more information about these and other policy approaches, as well as worksheets to help develop a policy.[17]

[17] The National Complete Streets Coalition. (2013). Complete Streets Local Policy Workbook. https://smartgrowthamerica.org/app/uploads/2016/08/cs-policyworkbook.pdf.

Ordinance: Ordinances are enforceable by law, making them the most effective way to adopt a Complete Streets approach. However, jurisdictions need a broad base of support to adopt an ordinance. Ordinances legally require that the needs of all users be addressed in transportation projects and change city code accordingly. To be effective, an ordinance should also apply to private developers by changing zoning and subdivision requirements.

Resolution: Issued by a jurisdiction's governing body, resolutions are non-binding, official statements of support for approaching local transportation projects as a way to improve access, public health, and quality of life. The City of Richmond's policy is a resolution. Unlike ordinances, resolutions are not legally binding, but can still be an effective step. NCSC recommends pairing a Complete Streets resolution with a detailed Complete Streets implementation plan assigning actions, roles, and timelines to avoid losing momentum.

Local policy developed by staff: A city, town, or county elected board may also approve a Complete Streets policy developed by an internal group of stakeholders. While similar to the ordinances and resolutions described above in the adoption process, this type of policy differs in that city staff typically drives its development. This might include representatives from planning, engineering, economic development, health, and/or elected officials, or a broader group that includes community stakeholders. This document is then taken to the full Council for discussion and a vote. These policies tend to be lengthier and more detailed than resolutions or ordinances. Their development can build partnerships between agencies, community members, and decision makers in a more robust way.

Local Plan: Complete Streets goals, objectives, and policies can be expressed through comprehensive plans or transportation plans. The process of updating a plan, or adopting a new one, provides an opportunity to do the engagement needed to build support for Complete Streets. Plans can also provide some implementation guidance by identifying changes for specific corridors. However, to be effective within a plan, the Complete Streets approach must be integrated into all aspects of the plan, not just mentioned in a specific section or chapter. In addition, this approach will only be effective if a locality's plan actually informs the budgeting process and holds real weight in decision-making—and in many communities, this is not the case.

Departmental policy: A relatively uncommon, but still useful, policy adoption method is for a city or county department to issue its own Complete Streets policy directive. These policies generally spell out more detailed procedural changes and can therefore be very useful in leading to substantive change in day-to-day decision-making. This can be a good near-term option for communities that have strong departmental leadership and commitment from staff but lack elected officials' support.

Guidelines: A Complete Streets policy commitment can also be embedded within design guidelines for public streets or private development. Creating new guidance or updating existing guidance are great ways to ensure that each street project's design is compliant with Complete Streets goals. Guidance is not legally binding and must be used or enforced to be effective, so this method will work best if city staff or elected leaders are already bought into the concept of Complete Streets. Design guidance is discussed in greater detail later in this section.

Table IV: Complete Streets policy types

Policy Type	How is it adopted?	Advantages	Challenges
Ordinance	Local legislation enacted by majority vote	NCSC's recommended approach; enforceable by law, and cannot be repealed without another ordinance.	Requires broad public and elected support for Complete Streets to enact.
Resolution	Issued by local governing body	Can be an easier first step than enacting an ordinance while achieving many of the same goals.	Not legally binding, and still difficult to achieve without elected support.
Local policy developed by staff	Voted on by council, but developed by staff	Policy development process can foster inter-agency partnerships, hopefully leading to a lasting push for implementation.	Not legally binding, and still difficult to achieve without elected support.
Comprehensive Plan	Through a plan update	The process of updating a plan provides a good vehicle for community engagement; can also support implementation through inclusion of recommendations for specific corridors that would not be present in other types of policies.	Will have no impact unless the Comprehensive Plan carries real weight in budgeting and other decisions.
Departmental policy	Issued internally by a local public works department	Offers an option for communities with good departmental leadership but limited elected support. Can also lead to more substantive change in how projects get built.	Will have narrower impact than an ordinance or resolution and limited effectiveness without broader community and elected support.
Guidelines	By creating new or updating existing guidance for design of public streets or private development	Can give bought-in city staff or developers the guidance and tools they need to bring walking and biking needs into projects across a variety of contexts.	Not legally binding, so must be enforced to be effective.

How to structure a Complete Streets policy

NCSC has identified 10 essential elements of a comprehensive Complete Streets process to help communities develop and implement policies and practices. More information about each element is available in NCSC's resource, Elements of a Complete Streets Policy.[18]

1. Vision and intent: Includes an equitable vision for how and why the community wants to complete its streets. Specifies need to create complete, connected, network and specifies at least four modes, two of which must be biking or walking. NCSC recommends that policies be legally binding in the form of an ordinance.
2. Diverse users: Benefits all users equitably, particularly vulnerable users and the most underinvested and underserved communities.
3. Commitment in all projects and phases: Clear guidance for consideration on all new, retrofit/reconstruction, maintenance, and ongoing projects. While not all projects will warrant the same types of accommodation for people walking and biking, those needs should be considered upfront during every project.
4. Clear, accountable expectations: Makes any exceptions specific and sets a clear procedure that requires high-level approval and public notice prior to exceptions being granted.
5. Jurisdiction: Requires interagency coordination between government departments and partner agencies on Complete Streets. In the Richmond region, all policies should specify that they apply to private development.
6. Design: Directs the use of the latest and best design criteria and guidelines and sets a time frame for their implementation.
7. Land use and context sensitivity: Considers the surrounding community's current and expected land use and transportation needs.
8. Performance measures: Establishes performance standards that are specific, equitable, and available to the public.
9. Project selection criteria: Provides specific criteria to encourage funding prioritization for Complete Streets implementation.
10. Implementation steps: Includes specific next steps for implementation of the policy.

B. Adopt or update Complete Streets design guidance

In some localities, the street design manual is the go-to reference for all transportation projects. If it is not supportive of flexible, context-sensitive, and multi-modal approaches, it can be the largest barrier a community faces. A flexible manual can empower planners and engineers to develop design solutions that meet the needs of all users in ways that suit the context of the surrounding neighborhood. Localities can also create or update existing guidance for private development to ensure that all new roadways and planned developments are aligned with the community's Complete Streets goals.

However, sometimes design guidance for streets is not the primary barrier to creating more pedestrian, bicycle, and transit-friendly streets. The current development patterns along a corridor can be a major impediment to walkability, and addressing that over time often requires making changes to zoning and subdivision codes and access management standards. Localities also frequently face issues enforcing or encouraging the use of the guidance and regulations they already have in place.

[18] The National Complete Streets Coalition. (2018). *Elements of a Complete Streets Policy.* https://smartgrowthamerica.org/app/uploads/2018/02/CS-Policy-Elements.pdf

In the Richmond region, many of the localities should likely prioritize addressing these other design-related barriers over developing or improving guidance itself. This section provides recommendations for determining whether and how to improve local street design guidance, as well as what else Richmond region localities can do to bring Complete Streets into roadway design. The following section discusses strategies for removing barriers in community design through land use regulation and policy.

Why consider Complete Streets roadway design guidance?

Bringing a Complete Streets approach to roadway design requires more than simply adding bike lane or a sidewalk—it takes an intentional shift away from the way most states and localities design roads by default.

In the US, the default approach to street design places the emphasis on moving cars quickly through an area. Road design standards point engineers toward building roads that are wide and straight so cars can travel at high speeds as safely as possible. These standards are appropriate for the limited access highways they were initially created to address, but typically get applied to varying degrees in most other contexts as well, including suburban commercial corridors, local main streets, and even neighborhood roads. Unfortunately, moving cars quickly through an area is often directly at odds with other local goals, like providing a safe environment for people walking, generating neighborhood economic activity, promoting active transportation, and creating a sense of place.

Localities like Ashland that manage a large portion of their own roads have a significant opportunity to change how they design their streets, and design guidance can sometimes be an important part of that shift, especially when staff routinely apply Complete Streets guidance during road repaving projects as well as new construction projects (which are usually much less frequent).

Jurisdictions that do not manage most of their local streets—much of the Richmond region—will need to work with VDOT to encourage these changes. However, they can still change their local code, site plan review, and development approval process to bring Complete Streets to new private development.

The basics of good Complete Streets design guidance

Roadway design guidance with a Complete Streets approach can take many forms, but generally includes two major elements: 1) A discussion of the needs of people walking, biking, and taking transit and a menu of design treatments that can support those needs; and 2) Guidance on how to design streets to meet those needs in different community contexts.

A number of existing national and regional resources provide detailed design considerations and a menu of treatment options for the specific needs of people walking, biking, and taking transit that localities in the Richmond region can reference. These resources include, but are not limited to:

- The National Association of City Transportation Officials' *Urban Street Design Guide*[19] and related design guidance.[20]
- The City of Richmond's new *Better Streets Manual.*[21]

[19] National Association of City Transportation Officials. Urban Street Design Guide. https://nacto.org/publication/urban-street-design-guide/

[20] See: https://nacto.org/publications/design-guides/

[21] City of Richmond. (2018) Better Streets. http://www.richmondgov.com/PublicWorks/documents/RightOfWay/Better_Streets_2018_Part_I.pdf.

- The Federal Highway Administration's *Small Town and Rural Multimodal Networks Guide*.[22]
- The Virginia Department of Rail and Public Transportation's *Multimodal System Design Guidelines*.[23]

Good design guidance not only suggests street design treatments for those different needs, but also acknowledges that there are inherent tradeoffs between the needs of different modes (especially between people driving and people walking and biking) and provides a framework for making decisions between competing needs.

Context is crucial to making those decisions about tradeoffs. Good Complete Streets design guidance provides a framework to consider the neighborhood context surrounding the streets and make decisions based on that context. While traditional road design standards typically apply a one-size-fits all approach that puts high-speed car travel first, local Complete Streets design guidance should be structured to account for the variety of roles streets play in a community—such as "neighborhood connector streets," "town main streets," or "commercial corridors"—and offer different priorities and design treatments for each.

Richmond's *Better Streets Manual* includes contexts that could be adopted or adapted to other localities in the region.

Determine why and whether improved design guidance is needed

Despite the important role roadway design plays in Complete Streets, developing or updating existing design guidance is not always the solution. The first step for localities in Richmond should be to determine whether a lack of design guidance (or inflexible or incomplete existing guidance) is actually producing a barrier to Complete Streets. In many cases, existing guidance is not being used or enforced effectively due to a lack of strong policy behind it, buy-in, or political will. While design guidance can be a powerful tool in a locality's toolbox for implementing Complete Streets, it is only as good as how it is used.

Communities in the Richmond region can consider:

1. Adopting existing national, state, or regional guidance
2. Developing new local design guidance or updating existing guidance
3. Enforcing or incentivizing the use of existing guidance

Adopting national, state, or regional roadway design guidance: If a locality's primary need is providing staff with options and ideas for context-appropriate pedestrian and bicycle treatments, they can often fill that need by adopting outside guidance, such as the National Association of City Transportation Officials (NACTO)'s *Urban Streets Design Guide* or Richmond's own *Better Streets Manual*. Richmond adopted NACTO's *Urban Street Design Guide* in the interim while developing their new manual. These and other existing resources are graphics-heavy and can serve as great communications tools with stakeholders.

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[22] Federal Highway Administration (2017). Small Town and Rural Multimodal Networks Guide. https://altaplanning.com/resources/small-town-rural-multimodal-networks-guide/.

[23] Virginia Department of Rail and Public Transportation. Multimodal System Design Guidelines. http://www.drpt.virginia.gov/transit/planning/multimodal-guidelines/.

Updating existing local roadway and/or development design guidance: Richmond localities should generally consider updating their existing design guidance—for locally-managed public roads, new private development, or both—if that guidance is actively sending staff or developers in the wrong direction: toward wide, high-speed roads by default without consideration of context and the needs of people walking and biking. Localities can also update guidance to encourage desired actions from developers: for example, encouraging the use of "stub roads" (roads that are currently dead ends next to adjacent parcels) in suburban subdivisions to support future connectivity as neighboring parcels develop in the future.

Updating existing guidance for public roads can be helpful if staff need clearer direction on how to follow a Complete Streets design process—how to consider context, what questions to ask about the needs of people walking, biking, and taking transit, and how to do so early in the process before project scopes and budgets are set.

As noted in the recommendations for Ashland, giving stakeholders who might oppose a change to street design practices a chance to provide feedback can help build support. For example, have emergency service vehicles do a 'test drive' of temporary narrower lanes or tighter turns using traffic cones so they can provide input before the locality updates its guidance.

Enforcing or incentivizing the use of existing guidance: Frequently, however, localities face issues enforcing or incentivizing the use of their guidance already in place, particularly design guidance for private development. Decision-makers want to see new development come to the community and will grant developers flexibility as a result. This challenge is exacerbated in Virginia communities where localities have limited authority in what they can require of developers. In these cases, updating and tweaking existing design guidance that already generally supports Complete Streets will have little to no impact. Instead, localities will need to make sure it is 1) possible, and 2) easy and appealing for private developers to create residential or commercial development that supports Complete Streets. This generally means either updating the local code or enforcing the existing code, or both.

Localities in the region should evaluate and clarify in policy how design guidance should be used. In addition to the design of new roads, localities should also use Complete Streets design guidance to retrofit roads during routine resurfacing projects for the streets they manage. Resurfacing projects are an often-overlooked opportunity to make streets safer for people walking and biking, including through low-cost changes like restriping narrower vehicle lanes.

C. Make other updates: Remove barriers to Complete Streets in land use and community design

In the Richmond region, VDOT operates and maintains most roads in the jurisdictions with the exception of the Town of Ashland, City of Richmond, and Henrico County, and VDOT's design standards apply to those roads. Localities that do not manage their own roads will have more limited influence in this area, though they can work to build the case for needed changes using statistics on crashes and high conflict areas between vehicles and pedestrians and bicycles.

However, there are many other aspects of community design and land use planning that influence whether an area is safe and attractive for people walking, bicycling, and taking transit. Local zoning and subdivision codes play a significant role in supporting or undermining Complete Streets goals. In localities where VDOT controls most of the roads, these are the areas where the local government can still have significant influence.

NCSC recommends that localities in the Richmond region pursue updates to their local zoning, particularly toward form-based codes. Form-based codes provide the regulatory framework for mixed-use, walkable development by regulating the design of a community (for example, how far buildings should be set back from sidewalks, where parking should be located, how much window area buildings must have, etc.) rather than which land uses are permitted in which areas.[24] Other communities in Virginia are currently pursuing form-based codes, including Charlottesville, Leesburg, and Marshall (see page 14).

NCSC identified the following community design principles as especially important for the Richmond region. These four areas should be considered as localities update their zoning code, private development guidelines, and local land use plans and guidance for developers.

1. Promoting connectivity: A lack of local road connectivity within neighborhoods and commercial areas means people have to go onto major roads even for very short trips (such as between a grocery store and adjacent pharmacy that do not have connected parking lots). This means trips take longer, making walking a less viable option and encouraging or forcing more people to drive. It also means those major roads carry more local traffic between nearby destinations than they otherwise would if other routes were available. This heavier traffic contributes to a less inviting environment for people walking and accelerates the need to expand those roads, making them less and less pedestrian-friendly in a vicious cycle. As a result, providing pedestrian and bicycle trails between otherwise disconnected cul-de-sacs or parking lots—while better than nothing—is less impactful than creating a well-connected network of smaller local streets.

2. Access management—reducing vehicle driveways: Frequent driveways along commercial corridors and collector streets create an unsafe and uninviting environment for people walking and biking by increasing the conflict points where they will have to navigate cars entering and existing. This barrier is even greater for people traveling with mobility impairments or simply pushing a stroller. For the same reason, a lack of access management also creates more dangerous conditions for drivers and can exacerbate backups and congestion. However, businesses on currently car-oriented commercial corridors generally want as much vehicle access as possible, so managing access can require having a firm policy or standards in place and leadership to back it up.

3. Orienting buildings to the street and parking in the rear: Buildings set back behind parking lots undermine all other design criteria for an inviting street. The physical separation between the building and sidewalk creates an isolating environment for pedestrians. When the front of a building is scaled to and designed for cars, it encourages people to drive to the destination rather than walk. By contrast, when buildings are positioned next to the roadway, the

[24] For more information and resources on Form Based Codes, see the Form Based Codes Institute's website: https://formbasedcodes.org/.

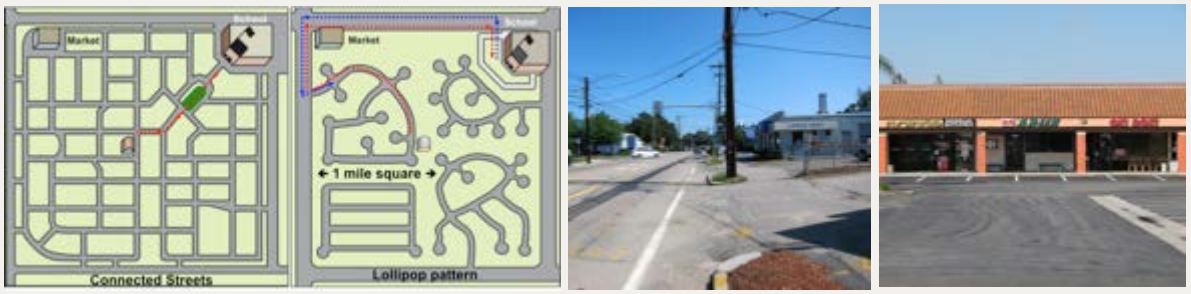
community feels connected and people walking feel like they belong in the space. This attracts people to spend time in an area, allows for window shopping and browsing, and encourages them to patronize local businesses.

4. Clustering development and encouraging a mix of land uses: Many areas limit housing and development density and separate housing from commercial uses. Part of the goal is often to avoid a big city feel, but these requirements tend to produce sprawling development that attracts big city traffic congestion despite fewer people. If a community's goal is to create a safe conditions for everyone—whether in an urban area, suburban area, or small town—then spread out development puts destinations too far away to make walking and biking viable travel options. Even with great sidewalks and bike lanes in place, people will not use them if every trip is a major undertaking in terms of distance and time.

5. Ground, street-level activity and visibility-store windows at pedestrian scale with transparent activity visible to the street provides interest and engagement in the space for people walking or riding by.

Visual examples of how community design can undermine Complete Streets

From left: **Poor local street connectivity** makes it so people have to drive onto major roads even for very short local trips that could otherwise have been taking by walking or biking. **A lack of access management** adds frequent conflict points where cars are exiting and entering parking lots. **Buildings set back behind parking** make a corridor less safe and inviting for people walking.



Image/photos credits from left: James Wagner, INCOG; Bike Newton via flickr; Steven Damron via flickr.

Making the community design you want easy for developers to do

Richmond communities can make it easier and more appealing for developers to propose local site designs that support Complete Streets, even if they cannot require it. They can also make it easier and more appealing for local officials to enforce the existing code and guidance in reviewing planned development.

Community leaders generally grant flexibility to developers because they, understandably, do not want to lose development altogether. The developer is understandably trying to build the way they always have; building differently can cause the project to take longer and makes it more unpredictable, and therefore more costly. Fortunately, the marketplace is responding to demands for more walkable types of development which translates to greater economic return to both developers and jurisdictions.

The first step is to make sure the local zoning and subdivision codes allow developers to design their projects in line with Complete Streets goals: narrower streets to the extent feasible for emergency response vehicles, other traffic calming measures, good street connectivity, and sidewalks on all streets with high enough car volumes to warrant them. Richmond localities should also strongly consider allowing development throughout the community (not just the central downtown core) that is mixed-use and higher-density with buildings oriented to the streets throughout the community—for example, by adopting a form-based code as discussed above.

For localities that allow Complete Streets development, the next step is to make sure the approval process is not making it more difficult to build that type of development through additional required steps or justifications. Whether a locality does not allow Complete Streets development or simply makes it harder than car-oriented development, the result will be the same.

Finally, localities can seek ways to actively encourage a Complete Streets development approach by making it the easiest or most appealing route for private developers to take. Some strategies that have worked in other communities include:

Providing incentives: Incentives do not need to be monetary if they will reduce costs or red tape for the development. For example, make the administrative processes easier for Complete Streets-supportive development and harder for development that promotes high-speed car travel. Localities can do so by evaluating and changing what circumstances require developers to submit additional paperwork or studies.

Clarifying circumstances for waivers and exceptions: Make sure that the language and policies around granting waivers and exceptions to Complete Streets-oriented zoning are specific, rather than vague and open-ended.

Having a clear vision for, and promoting, the community design the locality wants to see: Localities can also provide examples of the type of development they want to attract. If there is a good local example of what the community wants to see more often, profile and promote it to developers in the area. Localities can also specifically point out model developments to those that express interest in developing another parcel. This can encourage developers to propose projects they believe will be approved more easily.

Involving developers directly while making changes to local codes and guidance: Bringing developers into the process can give them a better sense of the locality's Complete Streets policy and goals. One way to do this is to aggressively reach out to regional developers and involve them in the discussions about rule changes or even create a developer advisory committee to assist with the changes.

D. Focus on arterial commercial corridors—transportation "futons"

As in Ashland, suburban commercial arterials in other communities tend to be especially dangerous for people walking and biking. They have high vehicle speeds and are otherwise inhospitable to people outside a car. However, unlike limited access highways, they also have destinations and will therefore draw some level of pedestrian traffic from people that cannot drive or do not have access to a vehicle.

Commercial arterials pose a significant Complete Streets challenge because they are typically serving two distinct roles in the community that stand in direct conflict to one another: regional through-traffic and local economic activity. Much like a futon serves as both a bed and a couch but does not play either role very well, suburban commercial arterials often do not function well for people traveling through or people making local trips, including drivers as well as people walking and biking.

These challenges cannot be addressed without making difficult choices about priorities. While it can be tempting to focus Complete Streets work in less challenging areas, these arterials often bisect communities and serve as the key barriers to walkability and local neighborhood vitality. Therefore, localities must work with their state partners to make decisions upfront about what role the road should play in the surrounding community and region to provide a framework for guiding future transportation and land use decisions. The best way to do so is by having tough but necessary conversations about tradeoffs.

To support Complete Streets, the four community design principles discussed above are especially relevant on these corridors: 1) Promote connectivity between and within development parcels; 2) Manage vehicle driveway access; 3) Require that parking be located to the rear and sides of buildings; and 4) Allow, incentivize, or require clustered, mixed-use development.

For roads that are locally managed, localities have more flexibility in redesigning the road to balance goals like biking and walking safety and comfort. They should also focus on strengthening access management standards or adopting VDOT's standards. For roads that are managed by VDOT, localities should focus on encouraging changes to the surrounding land use and development to produce a more pedestrian-friendly environment.

Retrofitting commercial corridors that are already largely developed and heavily car-oriented can be a significant challenge for localities, though not insurmountable (see the following page for an example of a corridor's transition in Orlando, FL). Since it can take many years before some of the existing businesses turn over, localities should focus their efforts on specific nodes with the best opportunities for redevelopment and work to get everything right in those areas: ensuring that new buildings are oriented to the sidewalk, improving roadway design and crossings, and making other changes to make that node feel more like a "place." It can be easier to catalyze a broader transition with those initial nodes in place.

A futon's transition: Edgewater Drive, FL

Edgewater Drive acts as the main street for College Park, a neighborhood four miles north of downtown Orlando, FL. When the street was scheduled to be resurfaced in 2001, the community saw an opportunity "to reinvent Edgewater Drive into a vibrant, pedestrian-friendly commercial district with cafes and shops." The City of Orlando proposed a 4-to-3 lane conversion for 1.6 miles between Par Street and Lakeview Street, adding bicycle lanes, a center turn lane, and wider on-street parking. With resident input, the City of Orlando devised an extensive series of performance measures to monitor the project's progress. These measures included travel times, traffic volumes for all modes, and safety-related crash and injury rates, and speeding data.

The newly improved street was clearly safer than before. Total collisions dropped 40 percent, from 146 to 87 annually. The crash rate was nearly cut in half, from 1 crash every 2.5 days to 1 crash every 4.2 days. Injuries fell by 71 percent. These safety findings are particularly impressive considering that automobile traffic only decreased 12 percent within a year following the redesign, while bicycle counts surged by 30 percent and pedestrian counts by 23 percent.

As a result, more people want to be on Edgewater Drive. The corridor has seen **77 net new businesses** open and **560 new jobs** created since 2008. Average daily automobile traffic, which saw a slight dip following project completion, has returned to its original pre- project level and on-street parking use has gone up 41 percent. The most dramatic results, however, were in long-term real estate and business investment. Since the project was first proposed, the **value of property adjacent to Edgewater Drive has risen 80 percent**, and the value of property within half a mile of the road has risen 70 percent. The street was resurfaced again in 2012. No one suggested it should go back to its original configuration.

This case study is an excerpt from Smart Growth America's 2015 report, Safer Streets, Stronger Economies. For more information, visit: http://www.smartgrowthamerica.org/documents/safer-streets-stronger-economies.pdf.

Photos by the City of Orlando.

IV. Conclusion and next steps

Localities in the Richmond region are in different stages of implementing Complete Streets, whether considering Complete Streets policies, educating stakeholders, or identifying opportunities to better support people walking and biking within individual projects. PlanRVA will be developing a Complete Streets toolbox for the region to help give the localities the guidance to move their efforts forward from wherever they are today. The toolbox will also be folded into the implementation guidance provided in the update of the Regional Bike/Ped Plan underway in 2020.

This report recommends several key near-term steps for the Town of Ashland to take based on Complete Streets workshops conducted in the region and an evaluation of Ashland's existing policies, regulations and guidance:

- Adopt a Complete Streets policy
- Adopt and update street and community design guidance
- Make other updates to plans, procedures, and regulations to align with the policy
- Focus on commercial arterials like SR-54—transportation "futons"

This report also provides general recommendations for other localities in the region. For many of these jurisdictions, conducting education and building buy-in for Complete Streets should be the primary focus initially. This report provides guidance on ways to build support for Complete Streets, as well as key questions to answer to lay a foundation for Complete Streets policy and implementation. This report also recommends ways localities should bring a Complete Streets approach into roadway design and private development by updating or adopting new design guidance, making changes to zoning codes, and making development that supports Complete Streets easier to do.

While each locality faces challenges in bringing Complete Streets into their communities systematically, all of them have opportunities to make progress in the short term. PlanRVA's forthcoming guidance, along with an updated regional bicycle and pedestrian plan as part of the 2045 Long Range Transportation Plan will be instrumental to these efforts. Through sustained partnership, localities in the region have the power to enhance the region's economic vitality, improve safety, and create vital community centers where people want to live.

Appendix A: Findings from an audit of Ashland's existing policies, regulations, and guidance

NCSC developed the following analysis to help communities in the Richmond region evaluate their local policies, standards, plans, and zoning to support Complete Streets. This analysis is based on a review of documents and policies that influence the implementation of Complete Streets in the Town of Ashland and the region more broadly, conversations with local and regional stakeholders, and similar work conducted with other communities. While the findings below are from Ashland, other localities can use a similar approach to identify needed changes to policies, regulations, and guidance to support Complete Streets.

Note that segments of this analysis are repeated elsewhere within this report.

Overview

This analysis discusses four primary areas for Ashland and other localities in the Richmond region to consider in evaluating existing policies, procedures, regulations, and guidance:

1. Roadway design
2. Prioritizing Complete Streets projects for funding
3. Land use and community design
4. Making the development you want easy to do

1. Roadway design

As discussed elsewhere in this report, in the US, the default approach to street design places the emphasis on moving cars quickly through an area. These standards are appropriate for the limited access highways they were initially created to address, but typically get applied to varying degrees in most other contexts as well. Unfortunately, moving cars quickly through an area is often directly at odds with other local goals, like providing a safe environment for people walking, generating neighborhood economic activity, promoting active transportation, and creating a sense of place.

State and local roadway design standards and guidance are the place to make needed changes. Many of the roads in the Richmond region are operated and maintained by VDOT and subject to VDOT's standards. VDOT headquarters encourages a greater degree of roadway design flexibility than some state departments of transportation (though VDOT regional offices likely vary in interpretation), and VDOT includes an appendix in its design standards on multimodal design.[25] However, like other state DOTs, VDOT's standards primarily emphasize vehicular needs.

Findings from Ashland

Unlike most of the counties in the Richmond region, Ashland manages all of the roads within the Town limits with the exception of I-95. This provides Ashland with greater control in bringing pedestrian and bicycle considerations into roadway design than many of the other jurisdictions. Ashland has

[25] Virginia Department of Transportation (2019). Road Design Manual. http://www.virginiadot.org/business/locdes/rdmanual-index.asp

opportunities to support Complete Streets roadway design for both public streets managed by the town and streets built through new private development projects:

- Ashland currently uses VDOT's roadway design standards in maintaining public streets, though the town does not have a formal policy in place requiring the use of VDOT's standards. These standards generally allow for pedestrian and bicycle accommodations but do not prioritize them. Ashland has opportunities to adopt street design guidance that prioritizes pedestrian and bicycle needs more explicitly, such as the National Association of City Transportation Officials (NACTO)'s *Urban Streets Design Guide*[26] and/or FHWA's *Small Town and Rural Multimodal Networks Guide*.[27] The City of Richmond adopted NACTO's guidance in the interim while developing its own Better Streets Manual.
- Ashland also has design guidance for new private development in the form of the Town's Development Guidelines Handbook,[28] including guidance for street design. This guidance generally supports Complete Streets goals already: it emphasizes the need to accommodate pedestrians and bicyclists, allows for 10 foot lanes on smaller residential streets, and encourages slower traffic speeds on residential streets.
- Staff indicated a desire to update the Town's guidance for new development to encourage greater street and trail connectivity between both residential and commercial development, as well as greater consistency in pedestrian and bicycle trail design. While those changes would be beneficial, Ashland's greater challenge will likely be enforcing the existing guidance as the Town's larger parcels get developed.

2. Prioritize Complete Streets projects for funding

Establishing a system to prioritize projects that support walkability and biking needs with limited funding is a crucial part of implementing Complete Streets. The best way to do this is by moving away from ad hoc project prioritization and establishing formal criteria to prioritize projects based on pedestrian and bicycle safety needs, economic development goals, and other policy objectives. Even subjective/qualitative criteria for evaluating potential projects against policy goals can help ensure that decision-makers are moving projects forward that align with Complete Streets and other local plans.

Findings from Ashland

- Ashland's approach for prioritizing transportation projects for funding locally is currently an informal ranking process conducted by the Town Council. Creating more formal prioritization criteria would help the Town ensure that investments align with its goals.
- The 2020 Transportation Plan update process also provides an opportunity to establish more formal prioritization criteria. This could include a Complete Streets network plan with desired pedestrian and bicycle connections ranked by priority level. Other localities have found this type of plan helpful in directing resources to the greatest needs as state and regional funding becomes available.

3. Land use and community design

[26] National Association of City Transportation Officials. Urban Street Design Guide. https://nacto.org/publication/urban-street-design-guide/

[27] Federal Highway Administration (2017). Small Town and Rural Multimodal Networks Guide. https://altaplanning.com/resources/small-town-rural-multimodal-networks-guide/.

[28] Town of Ashland. Development Guidelines Handbook. https://www.ashlandva.gov/DocumentCenter/View/101/Development-Guidelines?bidId=.

Land use and community design play a significant role in supporting or undermining Complete Streets goals. Localities should always review local plans and zoning and subdivision codes to ensure that they are promoting walkable, bikeable development where appropriate rather than encouraging car-oriented development by default.

There are many aspects of land use and community design and site design for new development that influence whether an area is safe and attractive for people walking, bicycling, and taking transit. The National Complete Streets Coalition reviewed Ashland's comprehensive plan, town code, and other relevant local plans with five primary areas of focus that contribute to safe, inviting environments for people walking and biking and more transit-oriented (note that the first four of these areas are discussed in the recommendations in this report, while NCSC omitted 'reducing parking minimums' after deeming it less urgent for Ashland).

- Promoting connectivity
- Access management – reducing vehicle driveways
- Orienting buildings to the street and parking in the rear
- Clustering development and encouraging a mix of land uses
- Reducing parking minimums

Findings from Ashland

Overview

In general, the language in Ashland's Comprehensive Plan is supportive of Complete Streets. It recommends that staff should adopt a Complete Streets policy as part of the 2020 Transportation Plan update. Ashland's desire to maintain the small-town character of neighborhoods and downtown also comes through clearly, and the Plan includes numerous references to supporting all modes of travel and promoting compact, walkable development and all modes of travel. Ashland's Comprehensive Plan and Parks and Recreation Master Plan[29] also both identify improved connectivity for people walking and biking through bike trails and lanes, sidewalks, and walking trails as a high priority.

Having this language consistent throughout the plans is important in establishing an overall vision for the type of community Ashland wants to be, though plans alone can be difficult to enforce and carry limited weight in decision-making in many localities. Ashland's update to the Transportation element of the Plan provides an opportunity to outline more specific plans for the Town's larger corridors like SR-54 and Route 1.

The current zoning[30] for Ashland's Central Business area (the historic downtown and England street adjacent to downtown) generally promotes pedestrian-friendly main street development: it does not include minimum building setbacks, requires that parking be located to the sides and rear of buildings, and limits vehicular driveways. The Comprehensive Plan outlines a vision for England Street adjacent to the central historic district transitioning to a "lively retail environment bustling with pedestrians." The Town also has a current streetscaping plan for England Street that will support transition.

[29] Town of Ashland (2017). Parks and Recreation Master Plan. https://www.ashlandva.gov/515/Parks-and-Recreation-Master-Plan.

[30] Town of Ashland. Town Code. https://ashland.municipalcodeonline.com/book?type=code#name=Preface

Most other areas are zoned for a single use type (residential, commercial, etc.). The current zoning for other commercial areas is less supportive of Complete Streets-friendly development: it includes larger minimum building setbacks, no requirements about parking location, no restriction on vehicle access points, etc. The Comprehensive Plan envisions some areas and corridors transitioning in the future (the Route 1 corridor, for example). The Town should consider updating the zoning of the commercial areas in particular to encourage denser, walkable mixed-use development over time.

As discussed in the recommendations in this report, the Town has several options for making incremental updates to the existing Town Code rather than doing a full code update: 1) making targeted changes to the code, 2) doing overlay districts for key corridors, and 3) implementing a form-based code. Specific suggested changes are discussed below.

Promoting connectivity

- Language in the Town's plans and feedback from staff both indicate that improving connectivity in both residential and commercial areas (for all modes) is a major priority. However, Ashland's Town Code generally does not have any overarching requirements for road or sidewalk connectivity between parcels. The Town should add vehicle and pedestrian connectivity requirements for residential and commercial areas, including encouraging alleys and smaller streets behind commercial parcels.
- The code language for Highway Commercial Districts does have some language to encourage local connectivity: "parking areas shall be designed to connect to similar adjoining parcel(s) via a stub-out to the property line(s) with the objective of providing internal vehicular and pedestrian access between neighboring commercial parcels." However, the code also includes language granting the Zoning Administrator leeway to waive this connection requirement.
- Ashland also has several areas zoned for planned development, including a number of Planned Shopping Centers (PSCs), an area zoned for Planned Office Businesses (POBs), and two major areas zoned for Planned Unit Developments (PUDs). The Town will need to focus on bringing connected, pedestrian-oriented development to these areas.
- The Town's 2017 Parks and Recreation Master Plan identifies and maps potential, proposed, and funded sidewalk and trail connections in the town. The plan also includes a goal that every Ashland resident to live within a 10-minute walk of an Ashland park facility. Staff conducted a GIS network analysis to determine the number of Ashland residential parcels that are located within a 10-minute walk of an Ashland park facility using Town of Ashland sidewalks and trails. This analysis of "walksheds" could be a valuable resource for the Town, and could be replicated for other destinations, such as grocery stores.

Access management – reducing vehicle driveways

- Ashland's zoning code restricts vehicular driveways in the Central Business zoning area, stating, "No driveway intersecting a street that constitutes the principal frontage of the lot shall be permitted when other street frontage or alley access is available to serve the lot."
- However, other zoned areas generally do not have restrictions on the number of driveways in the Town Code, and the Ashland's roads are not officially subject to VDOT's access management standards because the Town manages the roads.[31] The town's major commercial corridors generally have a high frequency of driveways, making the areas feel less walkable. Adopting access management standards should be a central priority for the Town to address.

[31] VDOT Access Management Regulations: 24VAC30-73 (2013). http://www.virginiadot.org/info/resources/Access_Management_Regulations_24_VAC_30-73.pdf.

Orienting buildings to the street and parking in the rear

- Ashland's comprehensive plan includes numerous references to making commercial corridors—especially Route 1, and Route 54 east of Route 1—more pedestrian-oriented as they redevelop over time. For example, the Plan establishes a policy (CD.23) to create a Design Overlay District for Route 1.
- Ashland's Town Code partially encourages main street-type development in the Central Business zoned area. The code does not have a minimum building setback for this area, requires at least 1 pedestrian entrance per building with street frontage, and requires that parking be oriented to the side or rear of the building.
- However, other zoned areas in the Town have minimum setback requirements. For example, the Highway Commercial zoning areas and Residential Multifamily zoning areas both have minimum setback requirements of 20 feet from the right-of-way. The building setbacks in these zoned areas contribute to a less pedestrian-friendly environment (in conjunction with high-speed adjacent vehicle traffic).
- Ashland's zoning for the Town's commercial corridors should be updated to encourage buildings oriented next to the sidewalk and parking in the rear in line with the Comprehensive Plan.

Clustering development and mixing land uses

- Ashland's Comprehensive Plan indicates a desire to move toward more mixed-use development along the town's key commercial corridors. The Plan introduces "Mixed Use Designations" to the future land use plan for the historic downtown, England Street North, and England Street South. The plan states, "This compact development is intended to reduce the public investment in infrastructure, enable creative site design and preserve open space areas that provide benefit to the community as a whole. Mixed-use developments combined with pedestrian friendly streets tend to reduce the number of trips as well as the number of miles driven and ideally encourage less dependency on the automobile."
- The Town Code currently permits a variety of land use types in the Central Business zoned area, including commercial, retail, and apartments located above retail or offices. However, other areas are generally zoned by use: residential, commercial, light industrial, or higher education (though residential areas do allow community spaces, churches, community gardens, etc.). Ashland should consider permitting mixed-use development throughout, potentially through the use of a form-based code.
- Ashland's Comprehensive Plan also includes an action item to implement form based zoning in the future where applicable. NCSC recommends taking this approach. A form-based code would provide a regulatory framework for mixed-use, walkable development while requiring new development to match the aesthetics of the town's historic character.

Reducing parking minimums

- Ashland's Town Code has minimum off-street parking requirements tied to use type. For residential uses, the minimums range from 1 for efficiency units to 2.5 for multifamily dwellings with three or more bedrooms. For other uses, parking minimums are typically tied to building square footage. These minimums are not egregious but could be reduced to encourage greater walkability and economic development. For example, 2.5 units may be especially high for three or more bedrooms (it seems unlikely that half of the units will have three cars).
- Ashland's Town Code also sets a parking maximum of 140% of the number of required spaces for each use, "in an effort to establish a limit on the amount of impervious surfaces and to

reduce the urban heat island effect." However, the Code includes a note that the planning director may approve parking spaces in excess of the maximums if "the applicant has proven that the additional spaces are necessary for the normal operation of the business or organization"—which may grant a lot of leeway for businesses.
- The Town Code also allows the zoning administrator to authorize shared use parking in commercial and industrial zoned areas, and the Town's Comprehensive Plan includes language encouraging shared use parking agreements in the Downtown.

4. Make the development you want easy to do

Getting the rules and language right is an important part of Complete Streets implementation, but it is not enough. To have heft, those rules must be enforceable.

Local agency staff from communities around the country often express frustrations that decision-maker support for Complete Streets is not present when it counts. Communities spend time developing rules to bring development to the street, reduce parking, require accessible sidewalks and increase densities, only for a developer to request waivers or special exceptions to these rules.

In other cases, communities allow Complete Streets-supportive development, but do not require it, sometimes even requiring additional steps to get it approved. In both cases the result is the same—new development continues to be vehicle-oriented.

Elected leaders generally grant waivers to developers because they, understandably, do not want to lose development altogether. The developer is understandably trying to build the way they always have; building differently can cause the project to take longer and makes it more unpredictable, and therefore more costly. Therefore, as localities are reviewing rules and policies to find changes that will support Complete Streets, they also need to find ways to make a Complete Streets development approach the easiest route for developers to take.

Strategies include:
- Having a clear vision in place for the type(s) of community design the locality wants to see—this can encourage developers to propose projects in line with the vision because they believe they will be approved more easily.
- Making the administrative processes easier for Complete Streets-supportive development and harder for development that promotes high-speed car travel.
- Providing other incentives to do the kinds of development the locality wants to see.

Findings from Ashland

- Developer feedback during the second Complete Streets workshop indicates that the following changes would help make Complete Streets development easier:
    - Allowing narrower streets in residential development to support traffic calming
    - Allowing development of more lots per acre
    - When possible, doing large master plan developments that allow the town to plan for connectivity on a larger scale
- Ashland also likely has opportunities to better incentivize the type of development they want to see in their Central Business zoned area, as well as areas they hope will transition to more pedestrian-friendly development in the future.

- For example, the Town Code currently permits shared use parking, but staff noted that there has not been much uptake from businesses. Making shared use parking the easiest route—removing steps in the approval process for businesses seeking it, providing template shared use parking agreements, etc.—could help encourage greater adoption.

Appendix B: Summary of Ashland Workshops and Open House

Complete Streets Ashland Workshop
April 25, 2019

Attendees: Phil Riggan, PlanRVA; Barbara Jacocks, PlanRVA; Nora Amos, Ashland; Michael Lambreth, Hanover Fire/EMS; Chris Anderson, Hanover Fire/EMS; Joe Vidunas, Hanover County; Chessa Faulkner, Chesterfield County; Myles Busching, Charles City County; Rachel Chieppa, Chesterfield County; Nick Britton, Michael Baker International; Annette Schanz, Ashland; Upton Martin, CTAC; Doug Cole, Henrico County; Will Tucker, Ashland; Rosemary Deemer, Henrico County; Aimee Crady, Henrico County; Alan Abbott, Hanover County; Sarah Shaughnessy, Richmond Health Department; Gretchen Biernot, Hanover County; Gregory Martin, Hanover Fire/EMS; Tom Dickerson, Ashland; Wood Hudson, DRPT; John Hodges, Ashland; Fred Fisher, CTAC; Tom Coleman, Goochland County; Bud Vye, CTAC; Amber Lancaster, CTAC.
Presenters: Emiko Atherton, Rayla Bellis, Natasha Riveron, Smart Growth America; Fred Jones, Michael Baker International.

Presentations:
- Introduction
- Proximity & Connectivity
- Ashland Implementation
- Where Are We Now?

NOTES: More than 1,400 Complete Streets policies nationwide (local, regional, statewide)

-Fred Jones with image of the map of pedestrian/bike deaths nationwide, zoomed to Jacksonville.
- https://smartgrowthamerica.org/dangerous-by-design/
- https://smartgrowthamerica.org/resources/dangerous-by-design-2016/

-Complete Streets - About placemaking.
-Displayed an image of an old Richmond street (Broad Street) with streetcars. "We've known how to do it for a long time..." but got away from it to accommodate car volume and increasing speed. "Not anti-car, but pro-person, pro mode choice." Think about everyone as people, not cars, buses, trucks, pedestrians, cyclists, wheelchairs, etc.

-IDEA: Put engineers in wheelchairs to let them experience.
-Communities of color and lower income are disproportionally disadvantaged.

-Discussed how to educate people on Complete Streets principles - value proposition, self-fulfilling, can't see changes without changing (like counting bikes on roadways that are too dangerous for bikes)

-There is no one-size-fits-all solution - urban, suburban, rural

-"Safer Streets, Stronger Economies"
• Economic benefits, positive changes in employment
• Projects that include bike/ped infrastructure create more jobs
• Think about the money saved in avoiding "collision costs."

-Is congestion reduction your main goal? Safety?
-Walk Score bring better property values (and equity)
-Businesses get involved to advocate for infrastructure helps their customers (elderly & disabled, like drugstores working to improve)

-"What is the cost of the lives of your constituents?"
- "To place" vs "Through place" - are you creating a destination or are people going to be passing through the area
-Talked about dangers of frequent driveways ingress/egress (harder for pedestrians, more car conflict points)
-Connecting places that people want to be, not just building infrastructure where it is convenient for a DOT, locality, etc.

Complete Streets Ashland Workshop

June 23-24, 2019

Attendees: Phil Riggan, PlanRVA; Barbara Jacocks, PlanRVA; Nora Amos, Ashland; Ingrid Stenbjorn, Ashland; Michael Lambreth, Hanover Fire/EMS; Chris Anderson, Hanover Fire/EMS; Joe Vidunas, Hanover County; Myles Busching, Charles City County; Rachel Chieppa, Chesterfield County; Nick Britton, Michael Baker International; Annette Schanz, Ashland; Will Tucker, Ashland; Rosemary Deemer, Henrico County; Alan Abbott, Hanover County; Sarah Shaughnessy, Richmond Health Department; Gretchen Biernot, Hanover County; Wood Hudson, DRPT; John Hodges, Ashland; Fred Fisher, CTAC; Tom Coleman, Goochland County; Bud Vye, CTAC.
Presenters: Emiko Atherton, Rayla Bellis, Natasha Riveron, Smart Growth America; Fred Jones, Michael Baker International; Will Tucker, Town of Ashland; Michael Sawyer and Jakob Helmboldt, City of Richmond.

Presentations:

- City of Richmond Better Streets Policy
- Complete Streets Design Guidelines
- Elements of a Complete Streets Policy
- Jumpstarting Complete Streets Policy
- Rethinking England Street

DAY 1

-"Futons of transportation." – term used several times during the workshop, quite popular
-Yield! We need to be a "Yield to Pedestrians" region.
Mike Sawyer and Jakob Helmboldt, City of Richmond Link totheir presentation)
Mike Sawyer

- Yield! We need to be a "Yield to Pedestrians" region.
- Vision Zero, Better Streets, Smart cities their complete streets policy
- Sawyer talked about traffic fatalities – how many are acceptable? In your town, region, state?
- Encouraged the development of a regional vision zero task force.
- "Speed is the largest factor" in traffic deaths.
- How do we change safety culture? To make pedestrians have priority over cars on our streets?
- (Suggested a book: Careful! A Users Guide to Our Injury-Prone Minds" by Steve Casner.)

Jakob Helmboldt

- Talked about how the GRTC Pulse changed Broad Street and the road/sidewalk patterns
- So far, statistics show that there have been fewer crashes, which was unexpected
- Oliver Hill Way plan is to have roundabouts added, which will help slow cars and redistribute vehicular traffic through the street grid, instead of just funneling to Broad Street.

"Futons of transportation." – term used several times during the workshop, quite popular

DAY 2

Will Tucker, Ashland – Presented on complete streets in the town

- How to expand out from the original 100-150 year old town grid
- Faced a lot of push back
- He presented on several developing residential areas within the town of Ashland, several with limitations due to incomplete subdivisions and neighboring projects.

Todd Rogers – RCI developer in the Ashland/Hanover area

Defended some of the wider neighborhood streets that are lower traffic (he said walkers may prefer them over having narrow streets with narrow sidewalk, which is also more expensive to build and maintain for developers and localities). Also:

- Sidewalk can be obstacle to utilities
- Physical challenges to placing utilities, storm drains, etc.
- Physical fitness and health have become a huge push with developers
- Everything adds some extra costs per unit

Narrower streets are better for traffic calming. Curb and gutter creates velocity, it's own issue (stormwater management).

September 23 Workshop-Tuckahoe Branch Library in Henrico

Attendees: Phil Riggan, Barbara Jacocks, Sara Rozmus, Myles Busching, Dan Motta, PlanRVA; Nora Amos, Ashland; Nick Britton, Michael Baker International; Will Tucker, Ashland; Bret Shardein, Powhatan County; Todd Eure, Henrico County; Amber Lancaster, CTAC; Sarah Shaughnessy, Richmond Health Department; John Hodges, Ashland; Tiffany Dubinsky, DRPT; Desmond Smallwood, VDOT; Virginia Cowles, CTAC; Stewart Schwartz, PSG; Lauren Fishbein, PSG; Cassi Patterson, VHB; John Sydnor, Enrichmond Foundation; Nelson Revely, RVA Rapid Transit; Betsy Hodges; Upton Martin; Tracy Winkelman; Nicholas Smith; Steven Truvett; Bethany Spalding; Ginger Spencer; Scott Clark; Jim Barrett; Savannah Kappler; Casey McQuinlan; Jungwook Jun; Abigail

Patterson; Tyler Walter; Patricia Bradby; Patricia Robinson; Arden Stevens; Josh Gillespie; Erika Carson; P. Hamilton Stubbs; Mania Zimmerman; Teresa Dulaney Dewald; Matt Dewald.

Presentations:

- Complete Streets Presentation
- Complete Streets Informational Flyer

Presenters: Emiko Atherton, Smart Growth America; Barbara Jacocks, PlanRVA.

Format:

Summary of Survey Results

Q3 What purpose(s) do you think making streets more "complete" for everyone accomplishes?

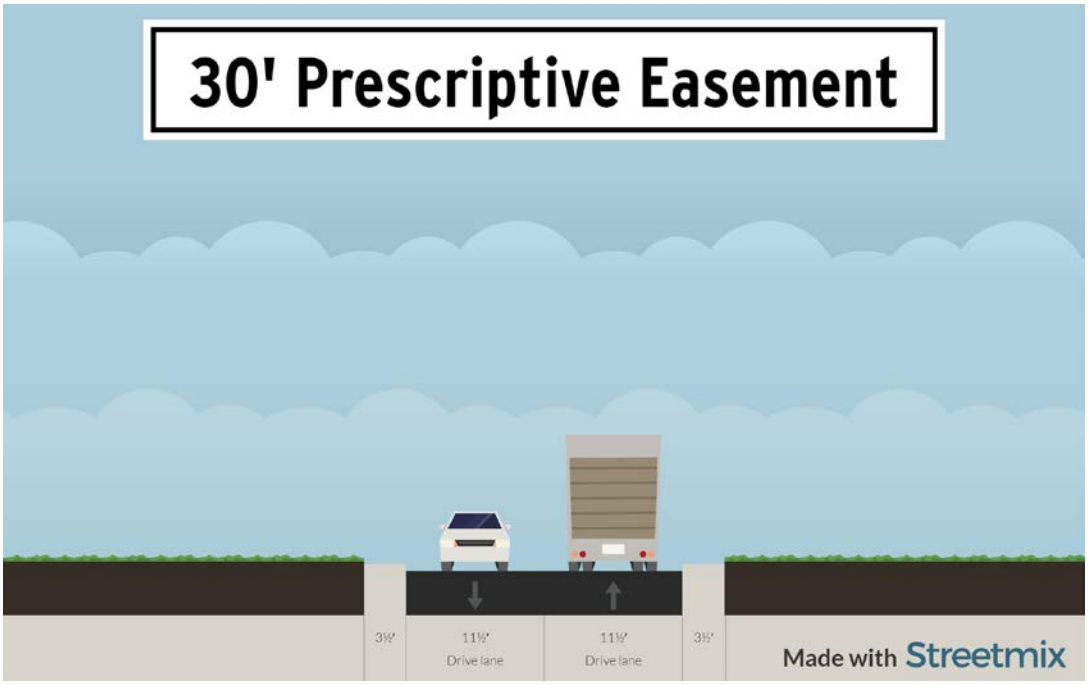
- Safety, less reliance on autos, lower emissions, connecting communities.
- Access, equity, feeling of community pride.
- Complete Streets can create a safer, more livable, and attractive street, neighborhood, and city to live in.
- Safer and more varied mobility options for all which also helps with access to jobs, tourism, and more.
- A more 'complete' street is more inviting for people to use - if public transit looks easy and safe to use, people are more likely to use it and not feel intimidated. Same for bike lanes and sidewalks.
- Getting people to places: schools, grocery stores, jobs, restaurants, services, shopping.
- Healthy, livable, safe, fun.
- Safety, better quality of life, increase revenue.
- Safety, improves neighborhood aesthetics, health.
- Makes mobility (and consequently access to resources) more equitable; improves safety, increases physical activity and improves health outcomes; reduces GHG emissions; spurs local economic development.
- Safe, accessibility for all people regardless of socio-economic background.

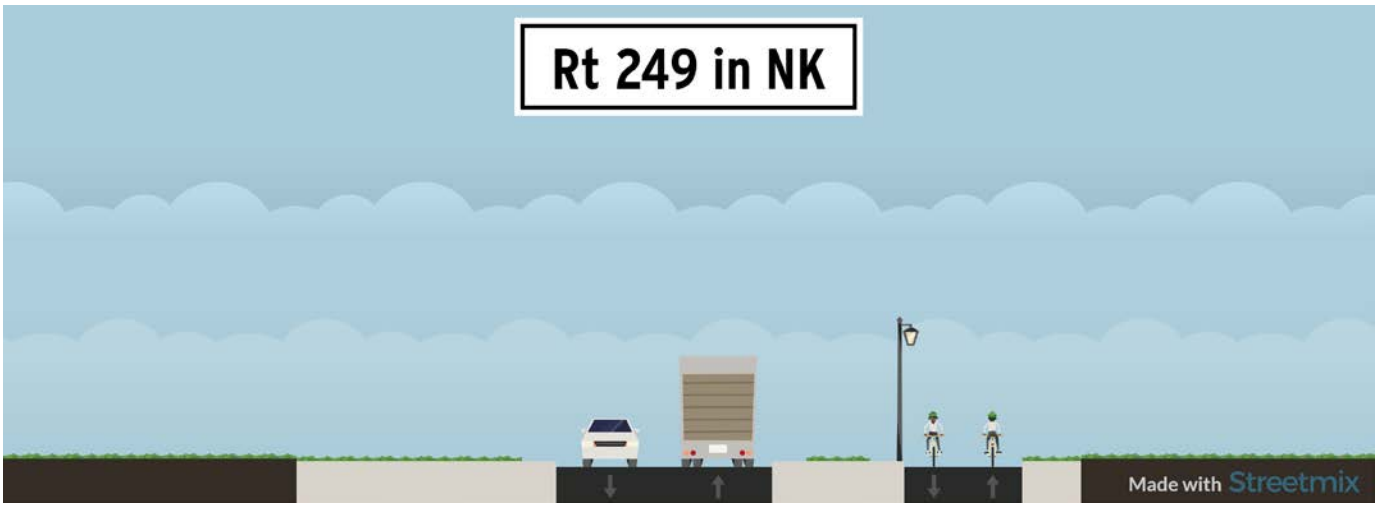
Q4 Are there any streets in your community that would benefit from a Complete Streets approach? Please provide the name of a street you think would be a good candidate for improvement?

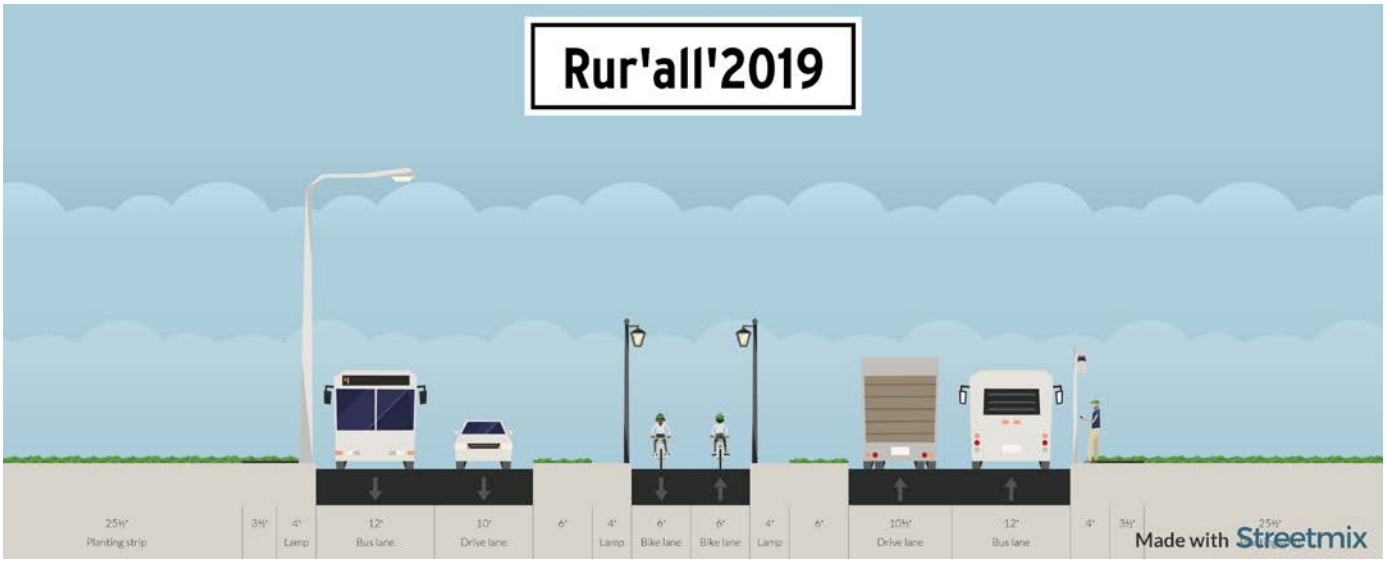
- STARLING DRIVE! Between Patterson and Regency, pedestrians and bicyclists literally take their lives in their hands if the walk/ride here.
- Broad St out toward Western Richmond/Henrico county. Staples Mill to Short Pump. Should be a dedicated bus lane or dedicated to transit. a separate bike lane, sidewalks, and wider sidewalks.
- Huguenot, Midlothian Turnpike. Sidewalks, buffered bike lanes, improved/consistent median, trees, reduced speed through business districts
- Intersection of Stony Run Pkwy and East Richmond Road.
- Commerce Road in Manchester. It has three lanes in each direction but are only for cars. I believe they should add a buffer bike lane of some sort.

- Patterson Ave, Quioccasin Rd, Parham Rd. SIDEWALKS, bus stops that are more than signs on the curb, MORE bus stops, bike lanes, crosswalks and crossing lights.
- Nine Mile Rd btw A.P Hill Ave & N Airport Dr, Maury St btw Cowardin Ave & Commerce Rd. Wide streets that have a variety of uses on them, including schools, recreation, businesses and other amenities. Bike lanes, slower speeds, street trees, infill opportunities, inviting gateways, fun features, placemaking, ADA infrastructure, and widening sidewalks could all be potential changes.
- Main Street / Cary Street / N Boulevard / Broad Street / Brook Road / 9th Street (would love to see the BridgePark come to life) / Basically any main thoroughfare to help connect the city. More bike lanes, benches, and parklets/greenery.
- With the renovations at Regency and the improvements at Parham and Patterson, the Parham Road corridor should be an ideal candidate. Bike lanes and sidewalks for residents to use to the bus stop at Regency (which is proposed to be a sort of hub/changing station) or for students to get to Freeman. And sidewalks for the residents in the neighborhoods around to SAFELY walk along Parham and cross the street!
- Hull Street Road, Chesterfield; Jefferson Davis Highway/US1; River Road in villages of Ettrick and Matoaca. Road diets, plantings, lighting, sidewalk and/or trails.
- The streets around Regency Mall and between Tuckahoe Middle, Ridge Elementary, and Freeman High. Sidewalks, crosswalks, traffic signals for students to cross the road safely.
- Patterson, Broad, Three Chopt. Sidewalks, crosswalks, light them up. Most people don't stop (need more signs). Straighter roads.
- Patterson Avenue in Henrico is perfect for putting in a bike lane. It would get huge use and help calm traffic a bit. (And streets connecting to schools, not just street black immediately in front of school). It needs a bike lane. Lots of potential bike commutes and straight shot into Richmond.
- Arthur Ashe Blvd, Hull Street, Janke Rd, Canal St. Road diets to reduce speed, crosswalks added (raised in some areas) protected bike lanes.
- Woodman Rd./Hermitage Rd., Lakeside Ave. Safe routes to schools (protected facilities, sidewalks for students with in their neighborhood). Add bike lanes since Hermitage is a bike route. Road diet Lakeside, many people that walk/bike to shops and Lewis Ginter for the Holidays.

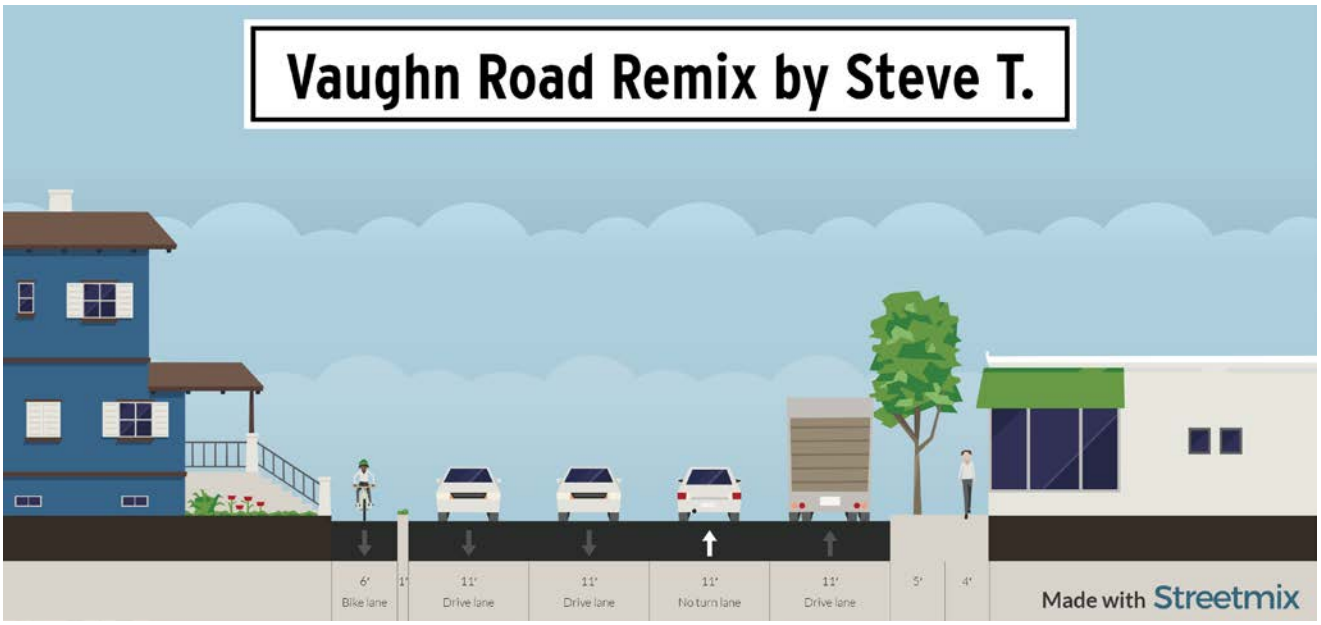
Responses from Streetmix Exercise
September 23, 2019

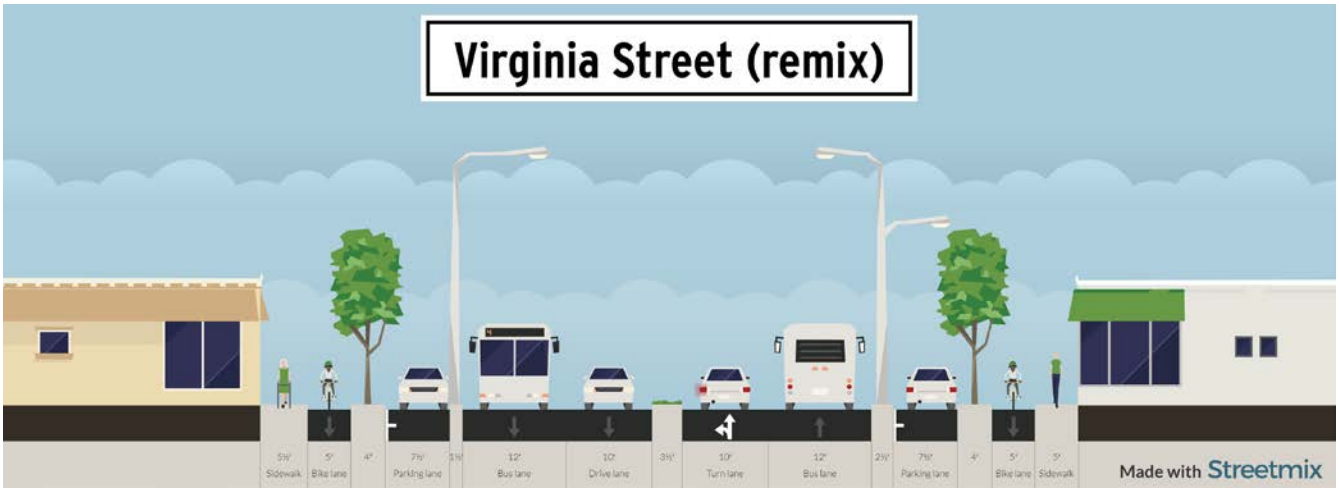


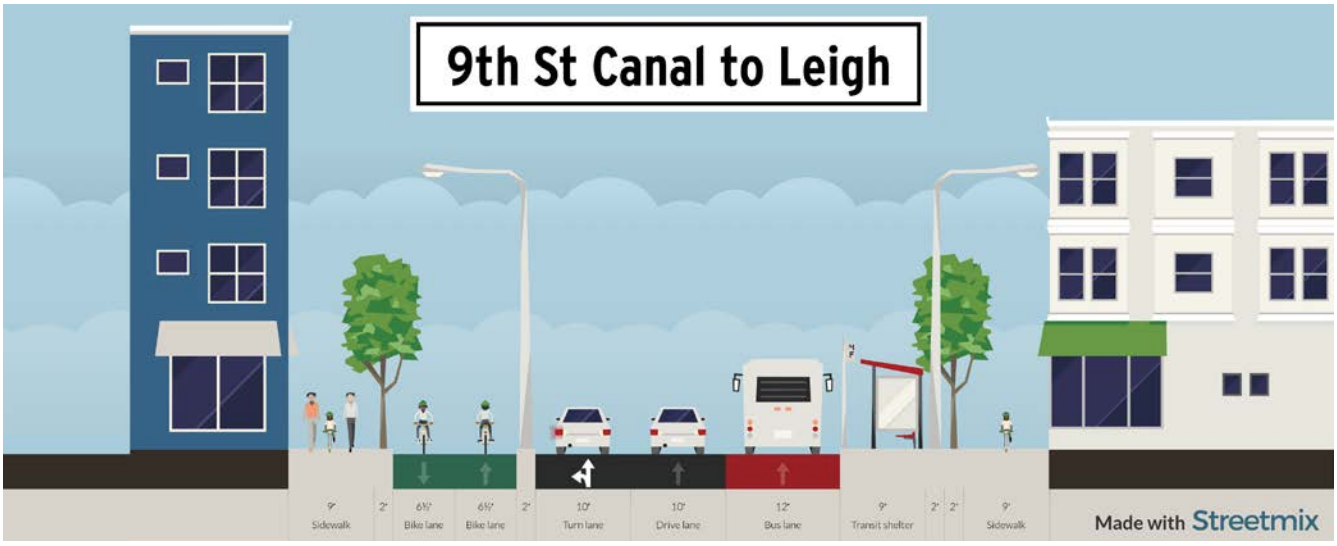

Rt 249 in NK
Made with Streetmix

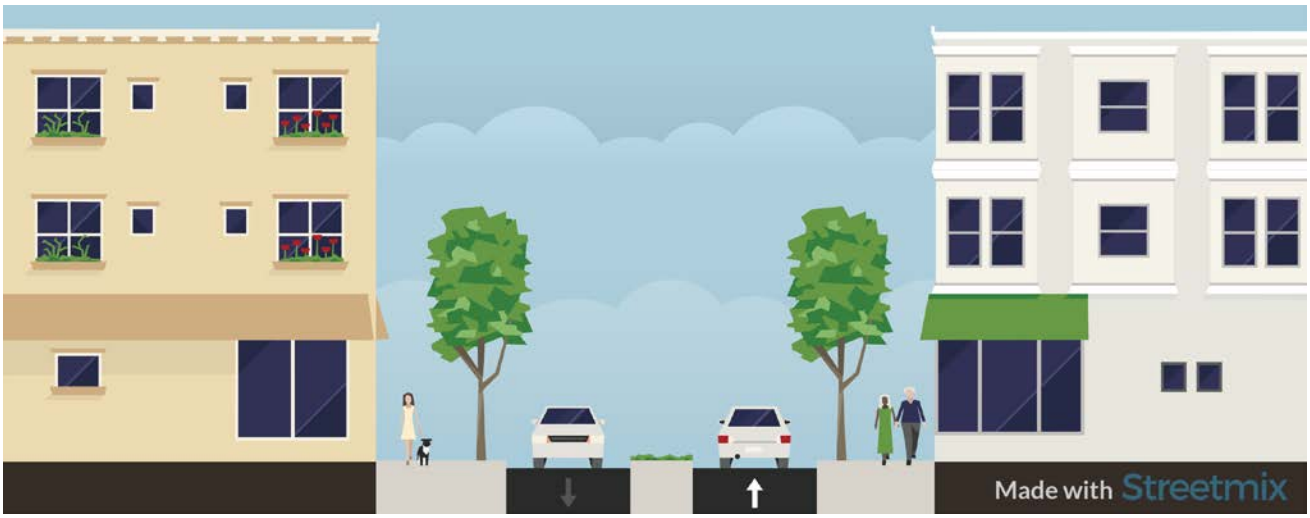

Rur'all'2019
25½'
Planting strip
3½'
4'
Lamp
12'
Bus lane
10'
Drive lane
6'
4'
Lamp
6'
Bike lane
6'
Bike lane
4'
Lamp
6'
10½'
Drive lane
12'
Bus lane
4'
3½'
25½'
Made with Streetmix


Tropical Remix
27'
Planting strip
3½'
11'
Drive lane
3½'
11'
Drive lane
8'
Planting strip
6'
Bike lane
6'
Bike lane
4'
Bench
Made with Streetmix


Vaughn Road Remix by Steve T.
6'
Bike lane
1'
11'
Drive lane
11'
Drive lane
11'
No turn lane
11'
Drive lane
5'
4'
Made with Streetmix


Virginia Street (remix)
5½'
Sidewalk
5'
Bike lane
4'
7½'
Parking lane
1½'
12'
Bus lane
10'
Drive lane
3½'
10'
Turn lane
12'
Bus lane
2½'
7½'
Parking lane
4'
5'
Bike lane
5'
Sidewalk
Made with Streetmix


9th St Canal to Leigh
9'
Sidewalk
2'
6½'
Bike lane
6½'
Bike lane
2'
10'
Turn lane
10'
Drive lane
12'
Bus lane
9'
Transit shelter
2'
2'
9'
Sidewalk
Made with Streetmix


Made with Streetmix


Made with Streetmix