



## Draft Policy of the SC Livable Communities Alliance

### Intent

It is the intent of this policy to address the safe mobility needs of the non-motorized public, including but not limited to: all people walking, bicycling, and/or accessing public transit.

In order to implement this policy, with economy and equity, the SCDOT shall adopt a set of flexible policies and procedures, providing for facilities for non-motorized users, as intended by the following **Warrants for Accommodation**, and only proceed without such facilities within defined exceptions. SCDOT shall also adopt a set of **design** guidelines based on street type, as outlined in the 2018 AASHTO Guide, that address complete streets concepts in a context sensitive approach.

### Planning

The following are **Standard Warrants for Accommodation** on state owned streets. These will be translated into a **point system** that SCDOT devises to reflect each of these Standard Warrants. These should be layered into a GIS aggregation that cumulatively reflects a “proposed facilities” map for pedestrian and bicycle facilities. SCDOT has the bones of this process already contained within their internal mapping software, from the 2015 development of the Multimodal Plan, but for bike facilities only. It can be done for pedestrian facilities too.

As **repaving, re-construction, and construction** projects emerge, SCDOT shall cross reference with the proposed pedestrian and bike facilities map. Then SCDOT will know which projects contain Warrants for Accommodation. SCDOT shall then work with other agencies as appropriate within the state, on assessing and planning to meet those identified gaps, particularly when a robust Plan is present. The public shall be granted a **public input** opportunity when significant streetscape changes are proposed, such as Road Diets, Widening, and ROW incursions, for either resurfacing, reconstruction, or construction.

#### *Pedestrian Facility Warrants:*

1. **Demand:** Establish a value that aggregates the following:
  - a. **Evidence:** where worn pathways exist, there is significant pedestrian traffic, requiring the provision of sidewalks or shoulders and high visibility crosswalks.
  - b. **Schools:**
    - When a **SC Safe Routes School Travel Plan or Safety Audit is present**, provide for physical changes with sidewalks, high visibility roadway crossings and trails leading to their campus
    - In the **absence of Travel Plans**, construct sidewalk facilities and high visibility crosswalks, when **all** of the following conditions exist: 1) within 1.5 mile of every school (elementary, middle, and high), 2) on arterials and streets that connect directly to the school, and 3) within any Urbanized Area, as defined by the US Census.
  - c. **Vulnerable Population** measure: either utilize the publicly accessible “Social Vulnerability Index”, or create an aggregate GIS layer of
    - High % Seniors over 65,
    - High % Children under 14,

- High % Non-White population,
  - High % Low Income Households
  - High % Limited Vehicle Access Households
  - High % Linguistically Isolated Populations
  - High % SNAP recipients
- d. **Safety / Equity:** Pedestrian crashes are a measure of road usage. Utilizing pedestrian crash data in a data-driven approach, SCDOT shall determine which limited set of criteria are most closely associated with those recurring incidents. Those factors more likely to be closely associated with non-motorized crashes are:
- % households with 1 or fewer cars
  - % households with Low to Moderate Income
- e. **Transit:** construct sidewalks, high visibility crosswalks, and pedestrian refuge islands or mid-block crossings (when appropriate), and other appropriate countermeasures, when located within 0.5 mile of every transit stop.
- When any sidewalk facility is added, or upgraded, in the immediate vicinity of a transit stop, a Boarding and Alighting (B&A) area is required for ADA compliance. This is a firm, stable, slip-resistant surface measuring 5'x8', perpendicular to the sidewalk and extending to the curb. The sidewalk counts as part of this area a five-foot sidewalk adjacent the curb, for example, would require only a 5'x3' area at the rear of the sidewalk to be fully compliant).
- f. **Density and destinations:** Construct sidewalks and high visibility crosswalks in locations within 0.5 mile of colleges, hospitals and parks, dense shopping areas, neighborhoods, government facilities or other obvious pedestrian destinations.
2. **Deficiency/Barrier:** Establish a value that aggregates the following:
- a. **Crash history:** Establish a minimum threshold of concern, based on fatalities and all injuries within a defined linear distance or square area,
  - b. **Traffic volume & Speed:** these factors create unsafe conditions.
3. **Local Policy:** Establish a value that indicates the presence of an existing, local Policy or Plan: Pedestrian, Greenway, Neighborhood, Community and/or Corridor **Master Plans**, that specifically have Project Prioritization Criteria (PPC). Those plans without PPC are likely not robust enough for state implementation.

***Bicycle Facility Warrants:***

1. **Demand:** Establish a value that aggregates the following:
  - a. **Safety / Equity:** Bicycle crashes are a measure of road usage. Utilizing bicycle crash data in a data-driven approach, SCDOT shall determine which limited set of criteria are most closely associated with those recurring incidents. Some factors more likely to be closely associated with non-motorized crashes are:
    - % households with 1 or fewer cars
    - % households with Low to Moderate Income

- b. **Vulnerable Population** measure: either utilize the publicly accessible “Social Vulnerability Index”, or create an aggregate GIS layer of
    - High % Seniors over 65,
    - High % Children under 14,
    - High % Non-White population,
    - High % Low Income Households
    - High % Limited Vehicle Access Households
    - High % Linguistically Isolated Populations
    - High % SNAP recipients
  - c. **Transit:** If transit stops exist, bike demand will be higher and bike accommodations should be considered.
  - d. **Density and destinations:** Within 0.5 mile of colleges, hospitals and parks, dense shopping areas, neighborhoods, government facilities or other obvious pedestrian destinations, bike demand will be higher and bike accommodations should be considered.
  - e. **State Bike Routes map,** generated from the State Trails Map, coming soon from partnership with SCPRT. On each of these, add a minimum four (4’) foot shoulder. This will contain the United States Bicycle Route System (USBRS: routes\_1, 5, and 84, and a limited number of other roads.
2. **Deficiency/Barrier:** Establish a value that aggregates the following:
    - **Crash history:** Establish a minimum threshold of concern, based on fatalities and all injuries within a defined linear distance or square area,
    - **Traffic volume & Speed:** these factors create unsafe conditions.
  3. **Local Policy:** Establish a value that indicates the presence of an existing, local Policy or Plan: All Bicycle, Greenway, Neighborhood, Community and/or Corridor **Master Plans**, that specifically have Project Prioritization Criteria (PPC). Those plans without PPC are likely not robust enough for state implementation.

Additionally, SCDOT shall coordinate with Metropolitan Planning Organizations (MPOs), Councils of Governments (COGs), and local governments to ensure that planning recommendations are vetted against design constraints and shall employ flexibility based on design realities

## Project Development

As projects are added to the Transportation Improvement Programs (TIPs) of MPOs and COGs, the **Purpose and Need Statement** shall specifically include pedestrian and bicycle facilities and community context considerations, described in all of the above **Warrants for Accommodation**.

The preliminary design process shall include a robust assessment of bicycle and pedestrian needs so that those needs can be addressed in the **initial cost estimate**. In addition, coordinate with the associated public transit agency to ensure that ADA compliance occurs, so these improvements are also put into the project scope.

As projects are added to SCDOT’s long-term repaving, replacement, or reconstruction program, they should be checked against the above **Warrants for Accommodation**, so that adding accommodations (IE, restriping of



routes, widening of shoulders, or others warranted) can be duly considered in time to be included in the work schedule. Both central and District offices of SCDOT shall review long-range and mid-range plans, in collaboration with each other, and with local government agencies as they are adopted, in order to facilitate cooperation on projects and to provide local governments the time to adopt any budgetary plans necessary for these collaborative projects.

Aiding that, SCDOT shall annually notify local governments of their **two (2) year list for repaving projects**, to better improve state/local coordination, planning needs, and engagement opportunities, with regards to pedestrian, transit, and bicycle accommodations, as handled by the local entities.

In addition, SCDOT shall annually notify local governments of their two (2) year list of future **Rumble Strip projects on roads designated for bicycle use**, specifically so local authorities can contribute financially for 4' shoulders not already covered by state funds.

To this end, SCDOT shall work with SCDPS to ensure that, once verified, crash data shall be made readily available to both local planning professionals and SCDOT staff, through the provision of an interactive online mapping tool.

## Design

SCDOT shall utilize the Local Plans described above, when available, as guidance regarding facility type in SCDOT design, construction, reconstruction, and resurfacing/repaving.

For the local design context to generally be respected, SCDOT will establish at least five (5) context zones, per the **2018 AASHTO Green Book**, recognizing and employing **flexibility** for the following context-sensitive factors:

1. **Lane Widths** – consideration of narrower lane widths to accommodate bicycle facilities, on-street parking or pedestrian refuges;
2. **Design speeds** – consideration of lower design speeds in downtown areas, residential areas and special pedestrian-dense areas near mixed use development or institutional uses;
3. **Curb Radii** – consideration of balancing pedestrian safety with truck movement, including the reasonable availability of alternate routes;
4. **Road Reconfiguration** – consideration of the reallocation of right-of-way, to allow the provision of additional safety-oriented facilities in the existing right-of-way;
5. **Streetscaping and Traffic Calming** – consideration of the allowance for landscaping, tree planting, and other streetscaping measures to reinforce or modify the safety-oriented design speeds.

The following **multimodal design guidelines are endorsed by FHWA and shall be endorsed by SCDOT**, or studied further through a **Beta program** that gradually adopts all well-researched elements into the SCDOT design guide. SCDOT shall adapt and develop transportation design manuals, standards and guidelines based upon best practices in safe systems and street and highway design. The manual must be made publicly available online.

1. 2018: A Policy on Geometric Design of Highways and Streets, from the American Association of State Highway and Transportation Officials (**AASHTO green book**);

2. Designing Walkable Urban Thoroughfares: A Context Sensitive Approach: An **ITE** Recommended Practice, from the Institute of Transportation Engineers;
3. The Institute of Transportation Engineers (**ITE**) **Implementing Context Sensitive** Design Handbook
4. Guide for the Development of **Bicycle Facilities (AASHTO, most recent)**;
5. Guide for the Planning, Design and Operation of **Pedestrian Facilities (AASHTO)**;
6. Public Rights of Way Accessibility Guidelines, from the U. S. Access Board;
7. **FHWA Achieving Multimodal Networks: Applying Design Flexibility**;
8. **FHWA Incorporating On-Road Bicycle Networks** into Resurfacing Projects;
9. Other prescribed by FHWA in their 2013 Memorandum on Bicycle and Pedestrian Facility Design Flexibility: the **NACTO** Urban Bikeway Design Guide, the online **FHWA Bicycle and Pedestrian Design Guidance**;
10. **All NACTO Design Guides**, including but not limited to the Urban Street Design Guide Urban Streets Design Guide, and the Transit Street Design Guide.
11. **Americans with Disabilities Act** Accessibility Guidelines, 2006, which specifies pedestrian and transit design and access
12. Others as they emerge from FHWA.

**Regarding Rumble Strips**, amend ED 53 to **establish a policy** that recognizes designated and potential Bicycle Routes in a State Bike Routes map (in construction), and that advances Bicycle Friendly Rumble Strips on those routes in the following manner, in consideration of Vehicular Run-Off-The-Road crashes statewide:

- Add and maintain a minimum 4' of shoulder clear of the rumble strip, or
- exclude rumble strips where the shoulder is less than 4' and the speed limits are 50mph or less.

## General Maintenance

**Establish statewide policy for cost-share** of maintenance responsibilities among state/local partners, to provide more predictable planning and budgeting for all parties involved. Assign these responsibilities to those parties, IE city, county, MPO, COG, and/or CTC, etc, and make the policy public so stakeholders are informed.

- Ensure adequate maintenance of grass at the edge of **shoulders**, to prevent grass encroachment, so provision of shoulder accommodation is maximized for vulnerable road users.
- Where on-street bicycle facilities are provided, establish state-local responsibilities for a regular **sweeping** schedule to remove hazards.
- Where **sidewalks** are located, ensure maintenance of edge grass, especially when vehicular travel is immediately adjacent.

## Exceptions

SCDOT shall not make an exception to providing these accommodations described unless one or more of the following circumstances arise:

1. Use prohibited by law;
2. A documented absence of current or future need;
3. Cost of accommodations is excessively disproportionate to need, which is defined as exceeding 15% of total project cost. The cost should consider construction, required right-of-way, environmental impacts, and in some cases operation and maintenance. Where accommodations provide safety benefits to

pedestrian and bicycle crash history, these benefits must be considered as a part of the cost benefit analysis;

4. Emergency repairs such as a water main leak that requires immediate, rapid response; however, temporary accommodations for all modes should still be made. Depending on severity of the repairs, opportunities to improve multimodal access should still be considered where possible.

Proposed exceptions require written documentation, for each mode, with supporting data and approval from the review arm of SCDOT, via a **Design Variance**. Where cost is excessively disproportionate to need, alternate routes can be recommended that are equally efficient and effective.

SCDOT shall **consult** local and regional plans and leaders, **as appropriate**, in assessing exceptions. Written reasons should be provided in writing to the agency with the adopted plan, and a comment period shall be scheduled for further discussion, before a final, written decision is submitted to that agency. Documentation of any granted exceptions shall be made publicly available and shared with the SCDOT Pedestrian/Bicycle Advisory Committee in a timely manner.

## Evaluation and Reporting

SCDOT shall:

1. Be responsible for establishing **benchmarks** and collecting, monitoring and reporting data as related to implementing this policy, especially in the area of equitable impact. Collect and monitor data to determine compliance with SCDOT benchmarks. Data must be made publicly available online. This information might also be reported to the U.S. Department of Transportation (USDOT), pending future USDOT guidance on reporting.
2. Report the above findings to the agency staff who can implement the solutions. Also report the findings to the Bicycle/Pedestrian Advisory Committee.

## Bicycle/Pedestrian Advisory Committee

A Bicycle/Pedestrian Advisory Committee shall **utilize the Reports** listed above, in order to assist the Department in policy implementation. The Committee shall be provided technical support from Department administration, and shall include five (5) representatives from local government technical staffs, five (5) representatives of bicycle or pedestrian interest groups including equity partners, and five (5) members at-large with an interest in transportation issues and roadway design. Committee composition should be carefully considered to ensure that bicycle and pedestrian interests are equally represented. The Advisory Committee shall meet a minimum of two times per calendar year.

The charge of this group will include working with Department staff to:

1. Assist SCDOT in hosting or contributing to **trainings** or workshops.
2. Assist SCDOT in A) **understanding the disparities** in ped/bike crashes by income and car ownership, and B) **defining and implementing solutions** to reduce those disparities, C) Assist SCDOT in improving methods of **engagement**.
3. Establish a procedure for obtaining **formal comments from local jurisdictions** where bicycle or pedestrian plans have been adopted, ensuring that these comments are to be obtained early enough in the process allow for consideration and design of bicycle and pedestrian facilities where recommended.



4. Specify the conditions and schedule of the **state/local review process**;
5. Consider how to establish and communicate a **clearinghouse** for attribute-specific GIS data tied to bicycle and pedestrian plans for use by SCDOT and the public.
6. **Assist SCDOT in revising** existing plans or policies, or developing new designs policies; and
7. Define the specific areas of allowable **flexibility** to facilitate the implementation of the policy.

## Training

Provide collaborative training opportunities to local governments for doing effective **engagement**, at both large and small scales, IE plan and project level engagement.

### Policy Review Team

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