BCDCOG

Transit and Bus Stop Design Guidelines

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BCDCOG
BERKELEY-CHARLESTON-DORCHESTER
COUNCIL OF GOVERNMENTS

CARTA

TRICOUNTY LINK
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1 INTRODUCTION

Bus stops are the "front door" of transit systems. Their location, design, and maintenance influence how riders experience transit. This document provides bus stop guidance for the Berkeley-Charleston-Dorchester region.

About the Transit and Bus Stop Design Guidelines

This document—the **Transit and Bus Stop Design Guidelines**—is a tool to help the Berkeley-Charleston-Dorchester Council of Governments (BCDCOG), Charleston Area Regional Transportation Authority (CARTA), and TriCounty Link (TCL), and its regional partners deliver transportation choices that link people, jobs, and community conveniently, consistently, and safely. The intent of the Guidelines is to facilitate the proper siting, design, installation, and maintenance of either existing or proposed bus stops throughout the Tri-county Region. These guidelines were developed by BCDCOG for CARTA. As TCL service evolves into an urban area system, they can be applied.

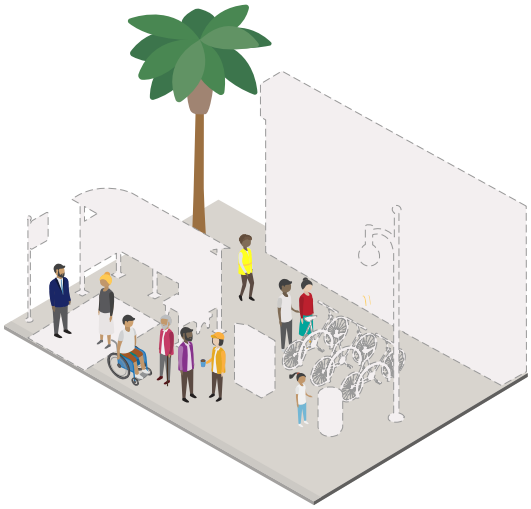
CARTA stop on Rivers Avenue at Remount Road

Why It's Important

Well-designed bus stops enhance the transit experience, decrease perceived wait times for transit services, and can contribute to increased ridership. Conversely, poorly designed bus stops can decrease customer satisfaction, make transit less attractive to potential new customers, and potentially make waiting at stops unsafe for riders.

Who Should Use these Guidelines

The information in these Guidelines will be of use to anyone involved in the planning, design, construction, maintenance, and/or use of bus stops: community members, transit staff, planners at the municipal, county, and state level, and developers and private landowners. More information on these audience types is available in the **How to Use this Guide** section.



No Two Transit Stops Are Identical

Every bus stop has unique site characteristics, which can make designing a consistent bus stop challenging. The Transit and Bus Stop Design Guidelines outline best practices for bus stop design and present clear and practical recommendations for processes such as choosing bus stop locations, placing amenities at bus stops, and prioritizing stop upgrades. These Guidelines are applicable to bus stops used by CARTA and TriCounty Link.

Guidance and Standards

Much of the content in this document is not intended to be strict standards, but rather to provide **guidance** and inform design decisions within the site context. Flexibility is central to the development of these guidelines, especially given the fact that the region is subject to earthquakes, hurricanes, and flooding. Site contexts and these potential impacts must be considered when designing a bus stop.

However, information pertaining to the Americans with Disabilities Act (ADA) for making bus stops accessible are **standards** that should be followed.

This document incorporates the latest mandates and best practices as of September 2021.

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About BCDCOG

BCDCOG is an association of, by and for local governments that helps Berkeley, Charleston and Dorchester county leaders plan for common needs, cooperate for mutual benefit and coordinate for sound regional development, including oversight for two public transit programs—CARTA and TriCounty Link (TCL).

CARTA Approved and Funded Amenities

CARTA's over 860 stops vary in terms of their ridership, existing condition, and level of service. These guidelines include the process for CARTA to prioritize capital improvements at stops. Importantly, they also describe the approved amenities for CARTA stops that the agency could fund for stops. The amenities and the baseline capital costs for each that CARTA could cover are summarized below. These amenities are described in detail in Chapter 5 Bus Stop Amenities.

#	CARTA-Approved Amenity	Total Cost (see note)
1	Bus stop post and sign	$150
2	ADA-compliant landing pad	$4,825
3	Bike rack	$168
4	Solar shelter lighting	$1,550
5	Bench	$906 - $1,620
6	Trash can	$105 - $525
7	Shelter	$12,495
8	Digital signage (not pictured)	$8,515 - $9,315

Notes:

Minimum amenities at all CARTA bus stops are a bus stop post, sign, and ADA compliant landing pad. If a municipality calls for additional amenities, CARTA would pay for the baseline cost of those amenities. Any additional costs due to upgraded or additional amenities, including variations in paint schemes, must be borne by the relevant municipality requesting that upgraded amenity. Developers would cover all costs of any new stop or stop improvements, including the installation.

The costs above for bus stop capital items do not include engineering or install fees. Those additional fees are below:

- Engineering fees ranging from $10,000 to $20,000 per shelter/bench
- Shelter installation at approximately $6,500

- Bench installation at approximately $1,500
- Digital signage installation at approximately $750
- LED signage installation at approximately $1,100

In this Chapter

The rest of this chapter includes three sections: (1) structure of the guidelines, (2) design principles, and (3) how to use this guide.

CARTA Is Here to Help

CARTA receives requests year-round and implements modifications to bus stops on an as-needed and approved basis.

To make a bus stop-related request for CARTA, email Transit Planning at belenv@bcdcog.com or call BCDCOG at (843) 529-0400.

STRUCTURE OF THE GUIDELINES

The Guidelines include the following sections:

Chapter	What Questions It Answers
1 Introduction	▪ What are design guidelines? Who are they for?
2 Bus Stop Placement	▪ Where do bus stops go? What factors are important?
3 Bus Stop Configuration	▪ How can bus stops be configured in different roadway environments?
4 Bus Stop Typologies	▪ What are the different types of bus stops in the system? How do they differ in terms of their minimum, preferred, and optional amenities?
5 Bus Stop Amenities	▪ What amenities can be found at bus stops? How should they be placed?
6 Bus Stop Modifications	▪ What are the processes to request changes to a bus stop?
7 Operational Considerations	▪ What else should be considered when designing a bus stop?
8 Implementation	▪ How are bus stop investments prioritized? ▪ How much do bus stops cost? ▪ Who installs and maintains amenities?

DESIGN PRINCIPLES

A high-quality transit stop is one that is well connected to the neighborhood or community it serves, accommodates the needs of all transit passengers freely and comfortably, increases the safety of those boarding, alighting, waiting for, or riding the bus and permits efficient transit operations. Bus stop design should be guided by the following principles:

Locate Bus Stops in Convenient and Comfortable Locations

Bus stops should be located in places that are convenient to where people are traveling to and from, including concentrations of residences or jobs and major destinations such as social services or shopping destinations.

Locate Bus Stops in Safe Locations

Bus stops should be located where passengers feel comfortable, which is a location with enough people, activity, and/or lights to not feel isolated. In addition, the location of the stop itself should be well lit, and the stop should provide adequate space for waiting riders to sit or stand, away from other pedestrian flow and street traffic.

Make Bus Stops Visible and Easily Identifiable

Bus stops should be located in easily identifiable places, so they can be found without difficulty by riders and bus drivers alike. Stops should follow CARTA or TCL branding guidelines so that they are a recognizable component of the transit infrastructure.

Provide Amenities to Make the Wait Comfortable

Providing amenities, such as benches, lighting, bike facilities, trash cans, etc. at stops make waiting for the bus more comfortable. While it is not practical nor cost-effective to provide all amenities at all stops, more extensive amenities should be provided at high need locations.

Provide Information on Available Services

Bus stops should make it intuitive for riders to know when and where they're traveling. Bus stop signs should provide basic service information such as route number and destination. Higher volume stops should have schedule and route information at the stop.

Integrate Bus Stops into Street Design Processes

When new developments are constructed, the stops should be designed as part of the overall project, rather than placed as an afterthought. Similarly, when roads and/or sidewalks are reconstructed, bus stops should be developed as part of the overall design.

Provide Good Pedestrian and Bicycle Access to Bus Stops

Bus stops should be located at sites that provide safe, ADA-accessible pedestrian access to the surrounding area, especially to the other side of the street. This should include well-defined and contiguous pathways to and from the stop, as well as crosswalks. ADA compliance is a primary concern in the Tri-County Region. As pedestrian and bicycle infrastructure develops, the responsible agencies will need to encourage pedestrian pathways, especially pathways to/from high volume bus stops.

HOW TO USE THIS GUIDE

These Guidelines are designed for many different target audiences. BCDCOG partners with relevant parties for the design and placement of high-quality bus stops.

To help explain roles and responsibilities, this document organizes audiences into four categories: (1) community members, (2) BCDCOG staff, (3) agency at the city, county, and state level, and (4) developers and property owners.

Start Here: In Which Group Do You Belong?

COMMUNITY

Transit riders, residents, elected officials, employers

BCDCOG/CARTA STAFF

CARTA staff, TriCounty Link staff

OTHER AGENCY STAFF

Municipal, county, and state planners and engineers

DEVELOPERS

Developers and property owners

Community

For Information On:	Go To
Bus stop typologies and their minimum, preferred, and optional amenities	▪ Chapter 4 Bus Stop Typologies
ADA Accessibility Overview	▪ Chapter 5 Bus Stop Amenities ▪ Appendix D Bus Stop Accessibility and ADA Standards
Requesting Bus Stop Modifications	▪ Chapter 6 Bus Stop Modifications
Amenity Installation and Maintenance Responsibilities	▪ Chapter 8 Implementation
Temporary bus stop modifications during construction	▪ Chapter 6 Bus Stop Modifications, page 6-9 ("Modifications During Construction")

BCDCOG/CARTA Staff

For Information On:	Go To
Bus Stop Spacing and Placement Guidelines:	▪ Chapter 2 Bus Stop Spacing and Placement
Configurations for Different Roadway Contexts	▪ Chapter 3 Bus Stop Configurations
Bus stop typologies and their minimum, preferred, and optional amenities	▪ Chapter 4 Bus Stop Typologies
Guidance for the selection and placement of amenities for bus stops	▪ Chapter 5 Bus Stop Amenities ▪ Appendix G
ADA Accessibility Overview	▪ Chapter 5 Bus Stop Amenities ▪ Appendix D Bus Stop Accessibility and ADA Standards
Guidance for attaining encroachment permits, private property use agreements, and municipal review committees	▪ Chapter 6 Bus Stop Modifications, pages 6-10
Operational considerations for operators and bus stop placement	▪ Chapter 7 Operational Considerations
Prioritizing bus stop investments	▪ Chapter 8 Implementation
Amenity Installation and Maintenance Responsibilities and Amenity Cost Estimates	▪ Chapter 8 Implementation
Checklist for Bus Stop Inventory Field Visits	▪ Appendix B
Amenity Standards and Specifications	▪ Appendix E
Bus Stop Modifications Checklist	▪ Appendix F
Bus Stop Database	▪ Appendix H

Other Agency Staff

For Information On:	Go To
Bus stop typologies and their minimum, preferred, and optional amenities	▪ Chapter 4 Bus Stop Typologies
Bus Stop Spacing and Placement Guidelines	▪ Chapter 2 Bus Stop Spacing and Placement
Configurations for Different Roadway Contexts	▪ Chapter 3 Bus Stop Configurations
Requesting Bus Stop Modifications	▪ Chapter 6 Bus Stop Modifications
ADA Accessibility Overview	▪ Chapter 5 Bus Stop Amenities ▪ Appendix D Bus Stop Accessibility and ADA Standards

Developers

For Information On:	Go To
Checklist to begin with	▪ Appendix C Developer Checklist
Bus stop typologies and their minimum, preferred, and optional amenities:	▪ Chapter 4 Bus Stop Typologies
Guidance for attaining encroachment permits, private property use agreements, and municipal review committees	▪ Page 6-10 Encroachment Permits, Private Property Use Agreements, and Municipal Review Committees
Amenity Installation and Maintenance Responsibilities and Amenity Cost Estimates	▪ Chapter 8 Implementation
Amenity Standards and Specifications	▪ Appendix E
Temporary bus stop modifications during construction	▪ Page 6-9 Modifications During Construction