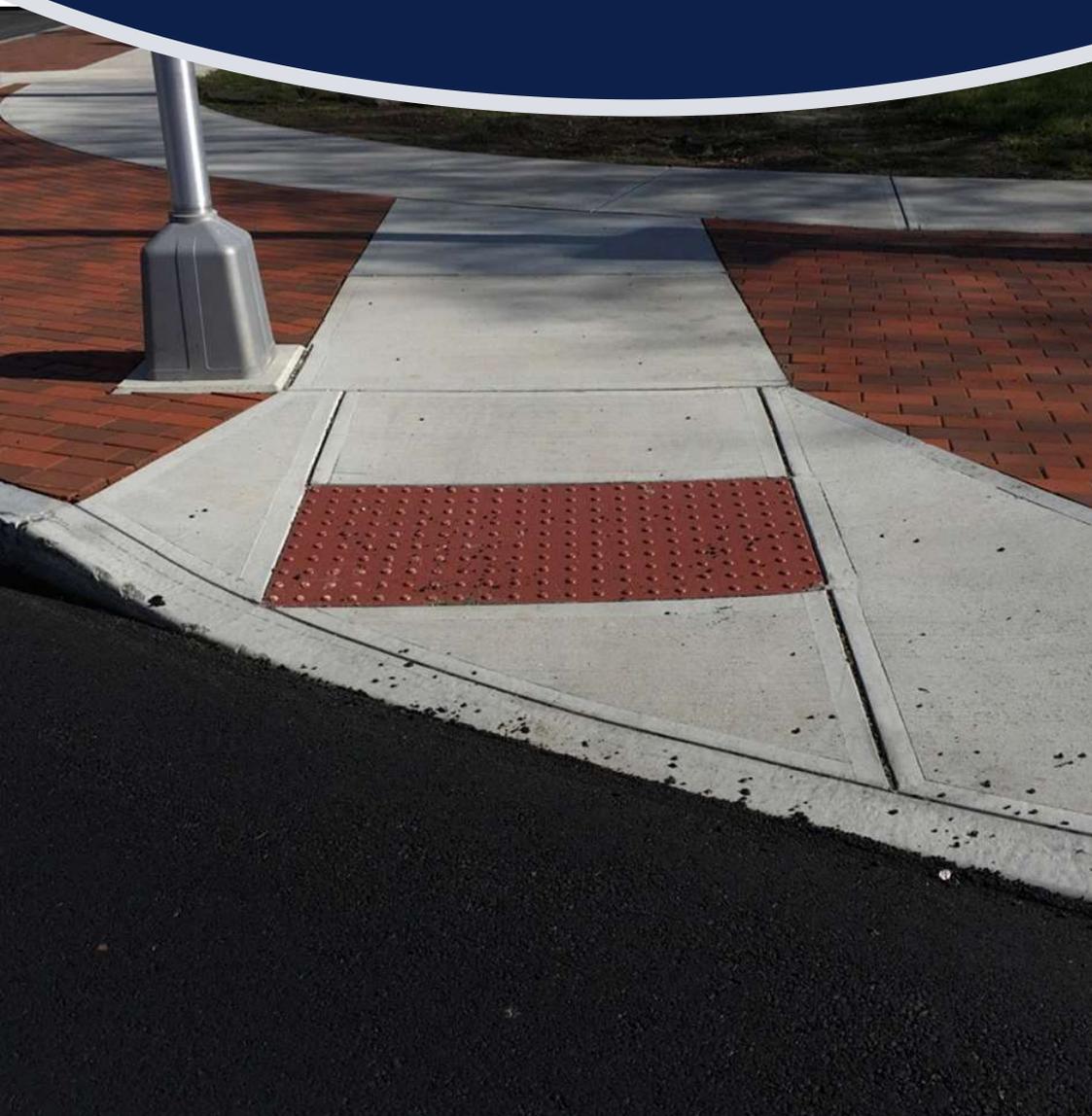


City of Bristol, Connecticut

ADA Self Evaluation and Transition Plan - Sidewalks and Curb Ramps



Prepared For:
Department of Public Works
City of Bristol
111 North Main Street
Bristol, CT 06010



Prepared By:
BETA Group, Inc.
1010 Wethersfield Avenue
Suite 305
Hartford, CT 06114

March 2023

Table of Contents

Section 1 - Introduction	1
1.1 Background	1
1.2 Mission	1
Section 2 - Accessibility Requirements and Regulations	2
2.1 Americans with Disabilities Act (ADA) of 1990	2
2.2 Rehabilitation Act of 1973	2
2.3 General Statutes of Connecticut	2
2.4 Connecticut Department of Transportation (CTDOT)	2
2.5 Adoption of Proposed Regulations/Guidelines	2
Section 3 - Proactive Measures	3
3.1 City Policies for Work Conducted Within the Public Right-of-Way	3
3.2 Complete Streets Training	3
3.3 Community Connectivity	3
3.4 Scope of Projects	3
Section 4 - Assessment Approach	4
4.1 Overview	4
4.2 Priority Areas	4
4.3 Pedestrian Network	5
Section 5 - Field Data Collection Program	6
5.1 GIS Base Mapping	6
5.2 Inventory Standards	6
5.3 Sidewalks	7
5.4 Curb Ramps	7
Section 6 - Summary of Findings	9
6.1 Initial Sidewalk Findings	9
6.2 Initial Curb Ramp Findings	10
6.3 Curb Ramp Compliance	10
Section 7 - Schedule of Improvements	11
7.1 Cost Estimating	11
7.2 Proposed Plan of Improvements	11
7.3 Funding	13
7.4 Implementation	14
7.5 Recommendations	15
7.6 Conclusion	15

Section 1 - Introduction

1.1 Background

The City of Bristol retained BETA Group, Inc. (BETA) to provide Planning, GIS, and Asset Management services to develop an inventory and assessment of sidewalks and curb ramps along City and State roadways in Bristol. This study was undertaken to establish a database of sidewalks and curb ramps to produce a prioritized list of improvements pertaining to the American Disabilities Act (ADA) standards to preserve infrastructure and to enhance the walkability in our community. This study is a planning tool intended to provide the foundation to manage the City's asset resources by combining professional engineering metrics with local institutional knowledge. These efforts create a Prioritization Plan for the City's overall pedestrian network (Sidewalks & Curb Ramps).

BETA and City Staff worked together to identify goals regarding existing conditions and the City is committed to maintaining and improving its ADA compliance status. However, this can only be achieved by preserving existing infrastructure to the greatest extent and constructing new compliant sidewalks and curb ramps.

This report is designed to act as a planning level tool and to provide the foundation for managing the City's resources by combining local knowledge with engineering judgment. It should be noted that City Buildings, Parks, Cemeteries, and School Properties were not included as part of the study's scope of work.

1.2 Mission

The Department of Public Works (DPW) aspires to create and conserve a comprehensive transportation network in Bristol. This in turn provides safe and accessible options for all modes of travel and for people of all ages and abilities. The City is committed to accessible principles in policy and practice and has partnered with BETA Group, Inc. to develop this evaluation and Prioritization Plan. The City of Bristol has taken multiple steps to create workflows, shape internal policies and allocate funding to transform its transportation infrastructure into an accessible compliant network.

Section 2 - Accessibility Requirements and Regulations

The City of Bristol is bound by the following Federal and State Governing Acts and Regulations:

2.1 Americans with Disabilities Act (ADA) of 1990

The Americans with Disabilities Act (ADA) ensures that qualified disabled individuals shall not be excluded from participation in, or denied benefit of, or be subject to discrimination under any public program or activity. The Titles of the ADA that affect the operations of the Department of Public Works include:

Title II: Public Services

Title III: Public Accommodations

Title V: Miscellaneous Provisions (i.e. Construction Standards and Practices)

2.2 Rehabilitation Act of 1973-Section 504

Section 504 of the Rehabilitation Act of 1973 ensures that no otherwise qualified individuals with a disability in the United States shall, solely by reason of his or her disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

The City of Bristol may receive funding directly from Federal sources or via third party transactions through State agencies with the purpose of meeting ADA compliance.

2.3 General Statutes of Connecticut

The General Statutes of Connecticut, revised January 1, 2019, reinforces standards set to accommodate persons with physical disabilities. The standards incorporate construction, design, and arrangement of all buildings and building elements to be in substantial compliance with the provisions of the ADA.

2.4 Connecticut Department of Transportation (CTDOT)

The Connecticut Department of Transportation (CTDOT) maintains its own Construction Standards and Policies that must be adhered to, especially if such a project will be funded by the Department in full or in part.

2.5 Adoption of Proposed Regulations/Guidelines

The United States Access Board (USAB) has developed guidelines for ADA and the Architectural Barrier Act (ABA) that focus mainly on facilities and sites. While these Acts address certain features common to public sidewalks, further guidance is necessary to address conditions and constraints unique to public rights-of-way. Although not yet approved, The Architectural and Transportation Barriers Compliance Board is proposing accessibility guidelines for the design, construction and alteration of pedestrian facilities in the public right-of-way, known as the Draft Proposed Rights-of-Way Accessibility Guidelines (PROWAG) that can be used by organizations to ensure compliance with other accessible standards.

Section 3 - Proactive Measures

3.1 *City Policies for Work Conducted Within the Public Right-of-Way*

The City of Bristol has employed a workflow to tackle barriers to accessibility as outlined through this Prioritization Plan. The Department of Public Works (DPW) has also developed internal policies relating to construction within the rights-of-way, such that all projects constructed by the City shall be designed and constructed to meet federal regulations associated with pedestrian access. There are conditions which will be encountered where full compliance is structurally unfeasible and the cost of compliance is excessive without substantial benefit to persons with disabilities, or prohibitive in some other manner. In these cases, variances from the rules and regulations are required.

3.2 *Complete Streets Training*

The City of Bristol was selected by Smart Growth America to participate in the 2022-2023 Complete Streets Leadership Academies which will develop a demonstration project in order to improve safety for cyclists and pedestrians. The training will include 15 City staff comprised of engineers, planners, public health practitioners, community advocates, and other related professionals who will attend the workshop sessions and help plan the demonstration project. The workshop will run until the end of June 2023 with the presentation of the final local project.

3.3 *Community Connectivity*

The City of Bristol has participated in the Community Connectivity Grant Program administered by the CTDOT. Through this program the City replaced 96 curb ramps, 30,000 SF of sidewalks, and 40 crosswalks between 2020 and 2021.

3.4 *Scope of Projects*

The development of this Plan is intended to assist the City and its DPW to be able to understand its assets and to systematically improve its transportation network. Improvements targeted through this plan focus what will benefit and improve access for all users.

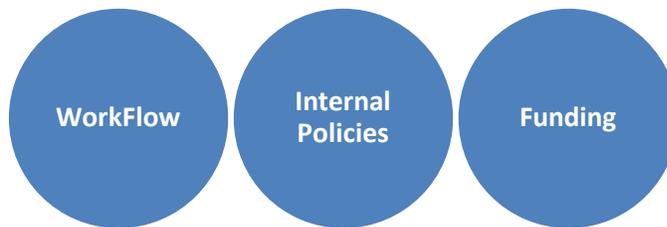
Although improvements are named specifically in this document, actions to implement such work will be at the sole discretion of the City and will be achieved based on available and allocated funding, feasibility of construction and other attributes. It is the responsibility of the designers, engineers and contractors that the end results meet all applicable accessible statutes and standards.

Section 4 – Assessment Approach

4.1 Overview

Through the initial planning stages, meetings were held with the City of Bristol’s Director of Public Works to align goals and set strategic milestones for the project. The overall outline for the development of the Assessment follows these key actions:

1. Review existing City-provided curb ramp inventory (**1,863** existing ramp location)
2. Identify and Classify Priority Locations (Areas A, B, C, and D))
3. Conduct desktop inventory of sidewalks (**210 miles**) and preliminary ADA compliance assessment of curb ramps (up to **1,000 locations**) in select area identified by City using Eagleview ortho-photography
4. Analyze Data and generate summary reports for planning purposes
5. Conduct field assessment of select curb ramps (**226 locations**) passing preliminary inventory
6. Produce Deliverables from Existing Conditions and Discussion of Findings
7. Provide Recommendations and Establish Schedule of Improvements



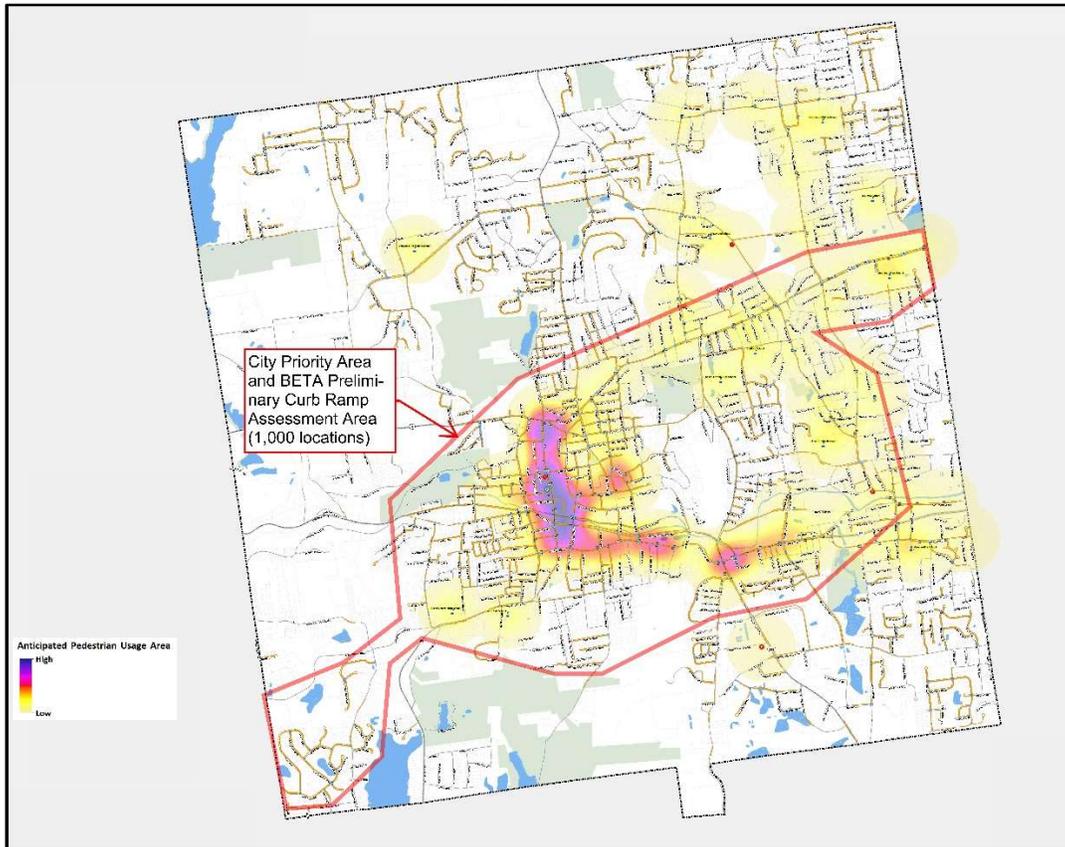
4.2 Priority Areas

Creating a system that prioritizes key areas is vital for both planning and transitioning areas from non-compliance to compliance regarding ADA standards. Therefore, a tiered approach was utilized to classify priority locations that are prone to several variables. These variables include high pedestrian volumes, deterioration from weather such as flooding, snow and ice, or simply an aging infrastructure. Each priority area differs based on its respective variables and must adapt accordingly in order to meet compliance. The City is then provided a set of priority areas directly related to the given variables observed in each area. Pertaining to the City of Bristol, the four priority areas are explained below:

- Priority Area A: Schools (plus ¼-mile buffer)
- Priority Area B: Downtown Central Business District (plus ½ -mile buffer)
- Priority Area C: City Services including City Hall, Senior Center, Libraries, Public Safety, Transit Stops (plus ¼-mile buffer)
- Priority Area D: Remaining Areas

Figure 4.1 displays the 4 Priority Areas that were combined to form a heat map of anticipated pedestrian activity, and which contributed to the overall Prioritization Plan. The red boundary was provided by the City to define the focus area.

Figure 4.1



4.3 Pedestrian Network

Multiple factors can contribute to create gaps or barriers in the pedestrian network. In creating a comprehensive walking network, it is important to identify and eliminate these obstacles. Some of these obstacles can include:

- Lack of sidewalks on one or both sides of the street
- Lack of available marked crosswalk locations
- Missing sidewalk panels
- Poor condition of sidewalks such as; broken, uplifted, depressed panels, etc.
- Crosswalk locations that lack compliant accessible curb ramps on one or both sides
- Intersection corners where sidewalks lack curb ramps
- Some obstructions restrict the clear access to ramp or landing width such as: catch basins, curbing, fire hydrants, utility/light posts, signs and signal posts

Section 5 - Field Data Collection Program

5.1 GIS Base Mapping

Following industry standards and goals established during planning stages, a sidewalk and curb ramp inventory program was developed of each existing asset. The database is structured to facilitate the development of a Prioritization Plan to enhance the pedestrian network in the City.

GIS base mapping used for this Project includes the following data layers for reference:

- Existing Road Centerline
- Buildings
- Parcels
- Aerial Imagery

The availability of this base mapping allows the field inspection team to use a GIS-based data collection approach to optimally provide record keeping and tracking for current and future maintenance.

The City provided an initial inventory of curb ramps that included **1,863** point locations. There was no additional data associated with these locations.

5.2 Inventory Standards

To develop an inventory, sidewalks and curb ramps located along the accepted street rights-of-way were inventoried using Eagleview orthophotography and other desktop tools. Sidewalks were inventoried for overall area and surface material city wide.

The City identified a focus area within the City's pedestrian network and budgeted approximately 1,000 ramp locations. Curb ramps were assessed for preliminary compliance against limited ADA criteria. This allowed the City to efficiently use their field assessment budget efficiently. Only those ramps that were identified in the pre compliance assessment as having concrete surface material and a detectable warning panel at the ramp opening were included in the field assessment set of ramps. Understanding this concept allowed for the most cost-effective results, while factoring prioritization of non-compliant assets.

The attribute data collected by asset is shown in tables on the following page.

Table 5.2.1 Sidewalk – Attribute Data Collected

Data Category	Description
Geographic Location	Street Name, Street Segment
Material Type	Concrete, Asphalt, Brick, Other
Width	Back of curb to back of sidewalk width in feet
Length	Segment length in feet

Table 5.2.2 Curb Ramp – Attribute Data Collected (BETA – Desktop) – 1,000 Total

Data Category	Description
Geographic Location	Street Name, Street Segment, Intersecting Street
Material Type	Concrete, Asphalt, Brick, Other
General Condition	Good, Fair, Poor
Detectable Panel	Presence of detectable warning panel, Yes/No

Table 5.2.3 Curb Ramp – Additional Attribute Data Collected (BETA - Field) - 226 Total

Data Category	Description
Panel Damage	Is the panel damaged, Yes/No
Ramp Opening	Width of ramp opening in inches
Ramp Landing	Presence of a landing, Yes/No
Ramp Slope	Smart Level reading in %
Ramp Cross Slope	Smart Level reading in %
Landing Opening	Width of landing opening in inches
Landing Depth	Length of landing in inches
Landing Slope	Smart Level reading in %
Landing Cross-Slope	Smart Level reading in %
Photograph	Taken at each point

5.3 Sidewalks

As mentioned, sidewalks were inventoried using Eagleview orthophotography provided by the City. This portion of the Desktop Data Collection Program was completed in the **Spring of 2021** and included approximately **210 miles of sidewalk**. A line feature was created and spatially located utilizing the GIS base mapping as each sidewalk was evaluated. Each sidewalk segment was tagged with data that included material type and average width as specified by the City.

5.4 Curb Ramps

The curb ramp inventory includes a combination of the following:

1. Total curb ramps City-wide (**1,863**) point locations provided by City (no additional data)
2. Preliminary ADA Compliance Assessment of **1,000/1,863** ramp locations by BETA using Eagleview orthophotography and other desktop tools
3. ADA Compliance Assessment of **226/1,000** ramps which passed preliminary ADA compliance assessment by BETA field inspectors.

The field portion of the Data Collection Program was completed by BETA in the **Summer of 2021**. The field crew inspected intersections along accepted street rights-of-way to inventory all existing curb ramps, which totaled **226 curb ramps**. The physical inspection allowed for the condition and dimensions for each curb ramp to be measured. The slope of each curb ramp was collected using a smart level while all curb ramp dimensions were recorded using a tape measure. Date stamped pictures were also compiled and linked to the database, allowing each curb ramp to be viewed digitally.

Sample criteria and pictures are illustrated in the table on the following page.

Table 5.4.1 Curb Ramp – Condition Criteria

Condition Detail	Photographic Example
<p>Good: No distresses identified, only minor surface blemishes and deterioration observed on ramp. <i>Ramp does not require repairs.</i></p>	
<p>Fair: Distresses start to develop, but provide minimal to no impedance (cracks, grass, depressions, bumps & patches). <i>Minor attention needed for ramp.</i></p>	
<p>Poor: Distresses and obstructions are actively found, proving the ramp to be hazardous. <i>Ramp requires replacement</i></p> <p><i>*All Ramps rated as "Poor" are considered Non-Compliant*</i></p>	

Table 5.4.2 Curb Ramp – Findings

	Tier Area <u>A</u>	Tier Area <u>B</u>	Tier Area <u>C</u>	Tier Area <u>D</u>	<u>Total</u>
City-Wide Sidewalk Inventory (Mi.)	30.7	52.9	34.0	92.0	209.6
City-Wide Curb Ramp Inventory	253	449	320	841	1,863
Concrete Ramps with DWP In Tiers B, C	N/A	177	49	N/A	226

Section 6 - Summary of Findings

6.1 Initial Sidewalk Findings

Overall, BETA created **210 miles** of sidewalk line features city wide. Additional data collected included surface material. The majority of sidewalks in the City are concrete (**204.15 miles**) while the remainder are asphalt (**5.28 miles**). **0.16 miles** of sidewalk surface was identified as “other”. Figure 6.1.1 shows the distribution of sidewalk miles within priority areas. Figure 6.1.2 shows the distribution of sidewalk surface material.

Chart 6.1.1 Sidewalk Priority Location Distribution (mi.)

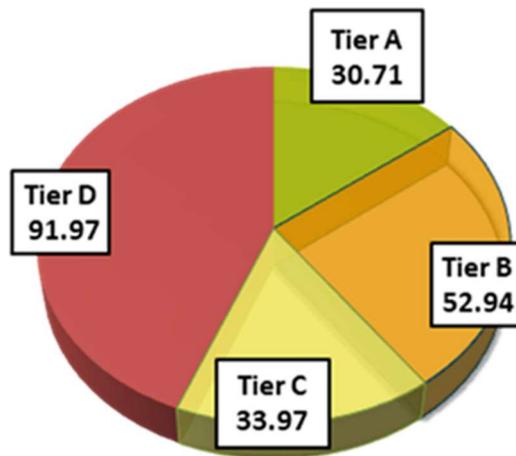
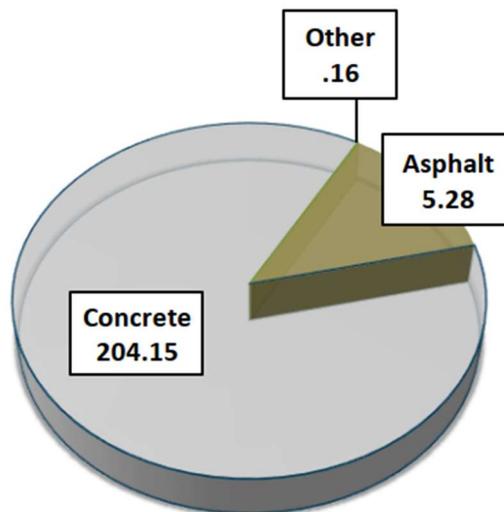


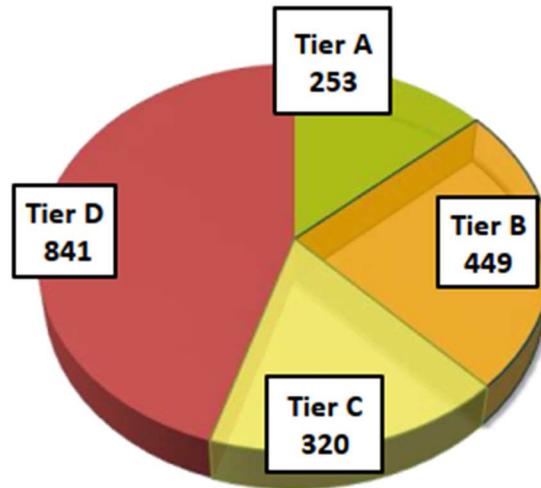
Table 6.1.2 Sidewalk Material (mi.)



6.2 Initial Curb Ramp Findings

Based on a review of the inventory data, a baseline of **1,863 Curb Ramp** point features was created.

Chart 6.2.1 Curb Ramp Priority Location Distribution



From the preliminary assessment, which included **1,000/1,863** total locations, concrete curb ramps that contained a detectable warning panel at the ramp opening, were identified and selected for detailed assessment against additional ADA compliance criteria as described above. This set of ramps included **226** curb ramp locations. Of these ramps most (222) were concrete, while the remainder (4) were asphalt.

6.3 Curb Ramp Compliance

Per ADA standards, each curb ramp was classified as either compliant or non-compliant based on current ADA criteria (ADAAG). Of the 1,000 curb ramps identified within the City's Priority Area, 226 total ramps were selected for a detailed ADA assessment based on a preliminary compliance review. Of those, 16 total ramps passed with compliance, while 210 failed due to one or more of the attributes mentioned. In all, **984/1,000** ramps within the priority area did not pass the comprehensive ADA compliance test for one or more reasons.

For the purposes of this city-wide ADA assessment, the remainder of the curb ramp inventory (1,863 Total), or 1,847 curb ramps are considered non-compliant.

Section 7 - Schedule of Improvements

This Schedule of Improvements is based on the timing of when this report is issued to the City and is subject to change. Factors for change would be the paving program, conditions of sidewalks and ramps, land development, and other projects. Current capital improvement plans call for \$80,000 per year over the next twenty-five years but is subject to change.

7.1 Cost Estimating

Costs associated with the proposed improvements were developed using unit costs provided by the City as follows¹:

Improvement Type	Unit Cost	Unit of Measure
Sidewalk Reconstruction - All	\$ 12.00	per SF
Curb Ramp Replacement or New Construction	\$ 3,000	per EA

7.2 Proposed Plan of Improvements

After establishing priority zones and collecting inventory data of sidewalks and curb ramps, a schedule of improvements was established. **Figures 7.2.1 -7.2.2** on the following page show the existing backlog for replacing sidewalks and curb ramps.

The City intends to prioritize sidewalk and curb ramp improvements in areas that have been identified within areas A, B, and C as funding allows.

¹ \$12/sf=\$315,000/mi.

Table 7.2.1 Sidewalk Backlog Prioritized by Priority Tier

Tier	Sidewalks - Asphalt	Sidewalks - Concrete/ Other Materials	Total Sidewalks (mi.)	Total Sidewalk Backlog ^{1,2}
2021 Status	5.28	204.31	209.59	\$ 66,020,850
Tier A - (Schools - 1/4 Mile)				
A	0.74	29.97	30.71	\$ 9,673,650
Tier B (Business District - 1/2 Mile)				
B	0.17	52.77	52.94	\$ 16,676,100
Tier C (Municipal Services - 1/4 Mile)				
C	1.33	32.64	33.97	\$ 10,700,550
Tier D (Remaining Areas)				
D	3.04	88.93	91.97	\$ 28,970,550
Total				
Total	5.28	204.31	209.59	\$ 66,020,850

Notes:

¹ Sidewalk reconstruction is priced at \$12/sf based on a width of 4 feet. Pricing includes replacement in-kind and does not include curbing.

² Estimated construction costs provided by City January 2023.

Table 7.2.2 Sidewalk Backlog Prioritized by Priority Tier

Tier	Total Non-Compliant Curb Ramps to be Replaced	Total Curb Ramp Backlog
2021 Status	1847	\$5,541,000
Tier A - (Schools - 1/4 Mile)		
A	258	\$774,000
Tier B (Business District - 1/2 Mile)		
B	434	\$1,302,000
Tier C (Municipal Services - 1/4 Mile)		
C	316	\$948,000
Tier D (Remaining Areas)		
D	839	\$2,517,000
Total		
Total	1847	\$5,541,000

Notes:

¹ Curb Ramp reconstruction is priced at \$3000/ea.

² Estimated construction costs provided by City January 2023.

7.3 Funding

The City's goal is to fund sidewalk and curb ramp improvements using a combination of both local funds and competitive grants. The City has indicated that local funds will amount to **\$80,000 annually**. Competitive grant programs available from the State of Connecticut provide additional funding to municipalities for improvements that include sidewalks and curb ramps.

Annual Budget Sidewalks and Curb Ramps	
Funding Source	Potential Funding (\$\$)
Local Funds	\$ 80,000
Community Connectivity	up to \$ 600,000
LOTICIP	up to \$ 2,000,000
TOD-OPM	up to \$ 500,000
State TIP,LOCIP, etc.	TBD
Anticipated Total	\$ 3,180,000

It should be noted that the City has received an average of **\$3.7 Million** in Municipal Grant Aid from State and Federal sources in both FY2021 and FY2022 and anticipate a similar level of funding for FY2023. These funds are not guaranteed on an annual basis over the long term and are not included in the schedule of improvements.

7.4 Implementation

For the purposes of this project, the City has identified that the annual budget will be distributed evenly between sidewalk and curb ramp improvements at **\$40,000** for sidewalks and **\$40,000** for curb ramps annually.

To implement the recommended improvements, a two-track method is proposed to replace existing sidewalks and deficient curb ramps. A forecast of improvements made with local funds (**Track 1**) and competitive grants (**Track 2**) are shown below. Improvements will be made as funding is available and until improvements to the backlog of existing sidewalks and deficient curb ramps is completed.

The City is considering the following implementation scenario, subject to available funding:

Track 1: 25 years at **\$80,000/yr.** from Local Funds

Proposed Annual Budget Scenario (2023 Dollars)	Annual Budget - Sidewalks		Annual Budget - Curb Ramps		25- Year Cost/Benefit Combined	
	Existing Sidewalk Reconstruction (mi.)	Estimated Construction Cost	Existing Curb Ramp Replacement (Ea)	Estimated Construction Cost	Total Spending (2023 Dollars)	% of Overall Backlog
\$ 80,000	0.13	\$ 40,000	13	\$ 40,000	\$ 2,000,000	2.80%

Track 2: 25 years at **\$2.8M/yr.** from competitive grants

Proposed Annual Budget Scenario (2023 Dollars)	Annual Budget - Sidewalks		Annual Budget - Curb Ramps		25- Year Cost/Benefit Combined	
	Existing Sidewalk Reconstruction (mi.)	Estimated Construction Cost	Existing Curb Ramp Replacement (Ea)	Estimated Construction Cost	Total Spending (2023 Dollars)	% of Overall Backlog
\$ 2,782,474	8.26	\$ 2,600,834	61	\$ 181,640	\$ 69,561,850	97.30%

Combined Tracks 1 and 2:

Proposed Annual Budget Scenario (2023 Dollars)	Annual Budget - Sidewalks		Annual Budget - Curb Ramps		25- Year Cost/Benefit Combined	
	Existing Sidewalk Reconstruction (mi.)	Estimated Construction Cost	Existing Curb Ramp Replacement (Ea)	Estimated Construction Cost	Total Spending (2023 Dollars)	% of Overall Backlog
\$ 2,862,474	8.38	\$ 2,640,834	74	\$ 221,640	\$ 71,561,850	100%

For detailed 25-year schedules of improvement see the Appendix.

7.5 Recommendations

- Additional curb ramp assessments should be conducted on the approximately 900 curb ramps in an effort to identify additional compliant locations. This could potentially allow the City to reduce the backlog of curb ramp replacements.
- A field condition audit should be conducted in an effort to identify sidewalks in good/fair/poor condition. This will allow the City to prioritize improvements based on “poor” condition sidewalks only, to reduce the backlog.
- With new construction or curb ramp replacement projects, a City representative should confirm ADA compliance during the design, construction and project close out phases.
- With new construction or curb ramp replacement projects, a City representative should update location, dimensions, photo and other data attributes to each reconstructed or newly constructed curb ramp or sidewalk segment.
- City should assign actual cost and funding source to each reconstructed or newly constructed curb ramp or sidewalk segment to track total spending
- City should update relevant tables in this report to track the City’s overall progress in remediating ADA deficiencies identified in the Self Evaluation.

7.6 Conclusion

This study allowed for the City of Bristol to create a Transition Plan regarding the City’s sidewalks and curb ramps. The proposed improvement projects will be implemented over the next 25 years, concluding in fiscal year 2047.

The database generated from this exercise provided the City a prioritized list of assets in need of improvements to meet ADA standards. In addition to meeting a Federal ADA compliance requirement, the City can use this Plan as a tool for managing asset resources that will only strengthen the overall pedestrian network moving forward.

As improvements are made the plan should be updated to reflect the City’s compliance status. While the detailed accessibility assessment was limited to a small area of the City, likely resulting in an understatement of actual ADA compliance, an expanded assessment effort can serve to update this plan in future years to minimize the backlog of needed improvements. These improvements, and future new construction, will look to adhere to the overall vision and goals set forth by City staff and required by the Americans with Disabilities Act (ADA).

The systematic approach for improving the various areas shown in this report maximizes the overall accessibility, safety and efficiency of Bristol’s pedestrian network. The result is a network that produces not only improved infrastructure, but also overall quality of life, public health and economic opportunity.

Appendices

A. Transition Plan – Improvement Schedule Details

1. Track 1: Sidewalk Improvements 25 years at **\$40,000/yr.** from Local Funds
2. Track 1: Curb Ramp Improvements 25 years at **\$40,000/yr.** from Local Funds

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Track 1 Schedule of Improvements – Sidewalks only:

Baseline	Sidewalk Reconstruction (mi.)	Annual Budget Required (2023 Dollars)	Estimated Total Construction Cost (2023 Dollars)
2023 Status	3.17	\$ 40,000	\$ 1,000,000

Program Year	Sidewalks to be Replaced Annually (mi.)	Sidewalk Remaining (mi.)	Estimated Annual Budget Required ³
2023	0.13	3.05	\$ 40,000
2024	0.13	2.92	\$ 42,000
2025	0.13	2.79	\$ 44,100
2026	0.13	2.67	\$ 46,305
2027	0.13	2.54	\$ 48,620
2028	0.13	2.41	\$ 51,051
2029	0.13	2.29	\$ 53,604
2030	0.13	2.16	\$ 56,284
2031	0.13	2.03	\$ 59,098
2032	0.13	1.90	\$ 62,053
2033	0.13	1.78	\$ 65,156
2034	0.13	1.65	\$ 68,414
2035	0.13	1.52	\$ 71,834
2036	0.13	1.40	\$ 75,426
2037	0.13	1.27	\$ 79,197
2038	0.13	1.14	\$ 83,157
2039	0.13	1.02	\$ 87,315
2040	0.13	0.89	\$ 91,681
2041	0.13	0.76	\$ 96,265
2042	0.13	0.63	\$ 101,078
2043	0.13	0.51	\$ 106,132
2044	0.13	0.38	\$ 111,439
2045	0.13	0.25	\$ 117,010
2046	0.13	0.13	\$ 122,861
2047	0.13	0.00	\$ 129,004
TOTAL			\$ 1,909,084

Notes:

1. Construction cost estimate is for planning purposes only.
2. Estimate based on unit cost for typical sidewalk reconstruction (\$12/SF) provided by the Town January 2023
3. Annual budget values assume 5% annual growth of construction cost.

Track 1 Schedule of Improvements – Curb Ramps only:

Baseline	Non-Compliant Ramps to be Replaced/Retrofit, Priority ABC (each)	Annual Budget Required (2023 Dollars)	Estimated Total Construction Cost (2023 Dollars)
2023 Status	333	\$ 40,000	\$ 1,000,000

Program Year	Non-Compliant Ramps to be Replaced Annually (each)	Non-Compliant Ramps Remaining (each)	Estimated Annual Budget Required ³
2023	13	320	\$ 40,000
2024	13	307	\$ 42,000
2025	13	293	\$ 44,100
2026	13	280	\$ 46,305
2027	13	267	\$ 48,620
2028	13	253	\$ 51,051
2029	13	240	\$ 53,604
2030	13	227	\$ 56,284
2031	13	213	\$ 59,098
2032	13	200	\$ 62,053
2033	13	187	\$ 65,156
2034	13	173	\$ 68,414
2035	13	160	\$ 71,834
2036	13	147	\$ 75,426
2037	13	133	\$ 79,197
2038	13	120	\$ 83,157
2039	13	107	\$ 87,315
2040	13	93	\$ 91,681
2041	13	80	\$ 96,265
2042	13	67	\$ 101,078
2043	13	53	\$ 106,132
2044	13	40	\$ 111,439
2045	13	27	\$ 117,010
2046	13	13	\$ 122,861
2047	13	0	\$ 129,004
TOTAL			\$ 1,909,084

Notes:

1. Construction cost estimate is for planning purposes only and addresses all non-compliant curb ramps town-wide.
2. Estimate based on unit cost for typical curb ramp replacement (\$3,000/ea.) provided by the Town January 2023
3. Annual budget values assume 5% annual growth of construction cost.

B. Maps

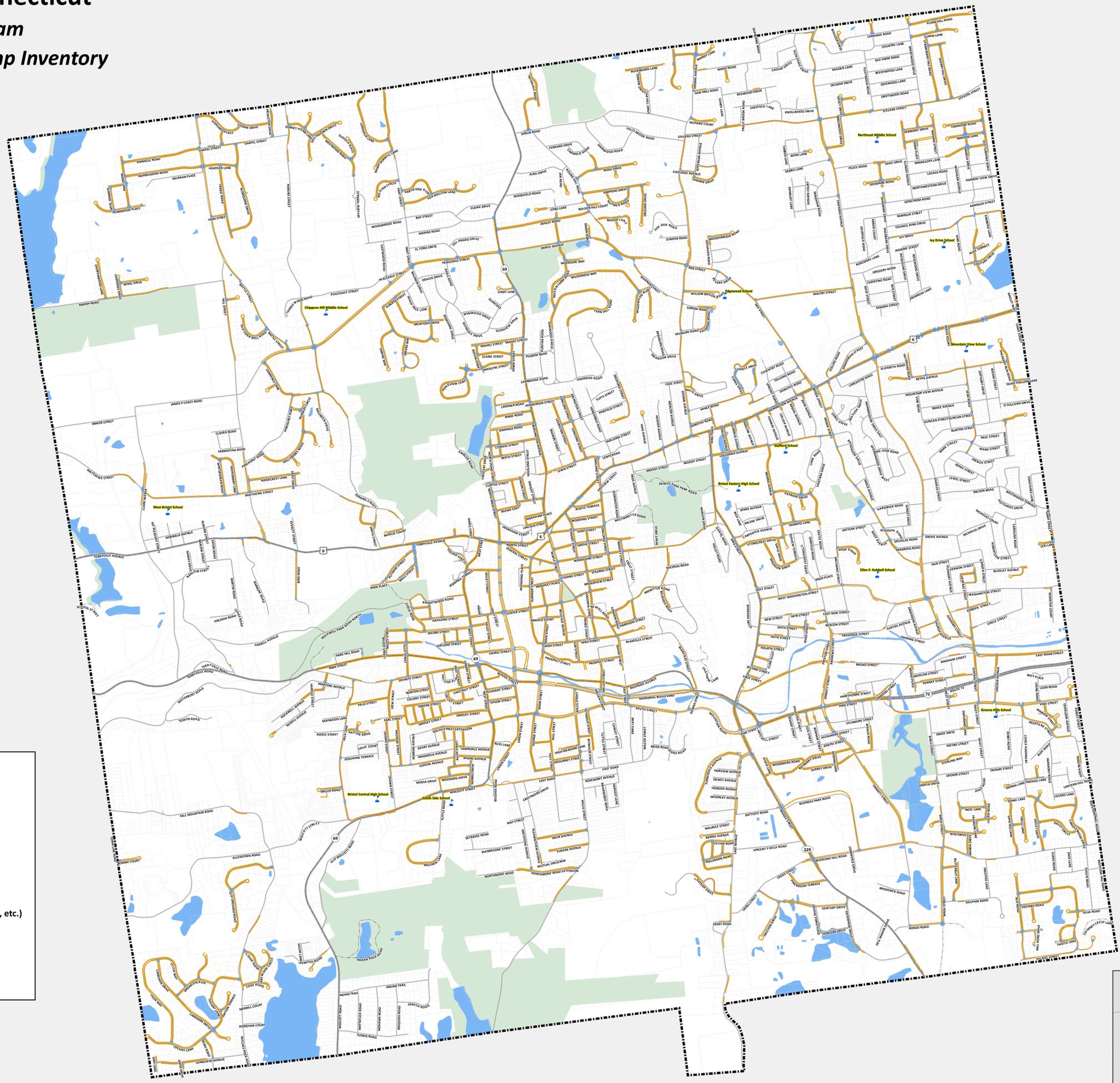
1. Map 1 Citywide Sidewalks (36x48)
2. Map 2 Pedestrian Density Heat Map (36x48)
3. Map 3 Focus Area Curb Ramps (36x48)

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City of Bristol, Connecticut

ADA Compliance Program

Sidewalk and Curb Ramp Inventory



Legend

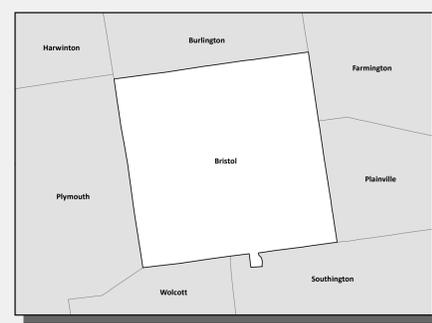
- Curb Ramp
- Sidewalk
- ▲ Schools

Roadway Status

- City Maintained
- State
- Other (Privates, Parking Lots, etc.)

Other

- Open Space
- Waterbodies



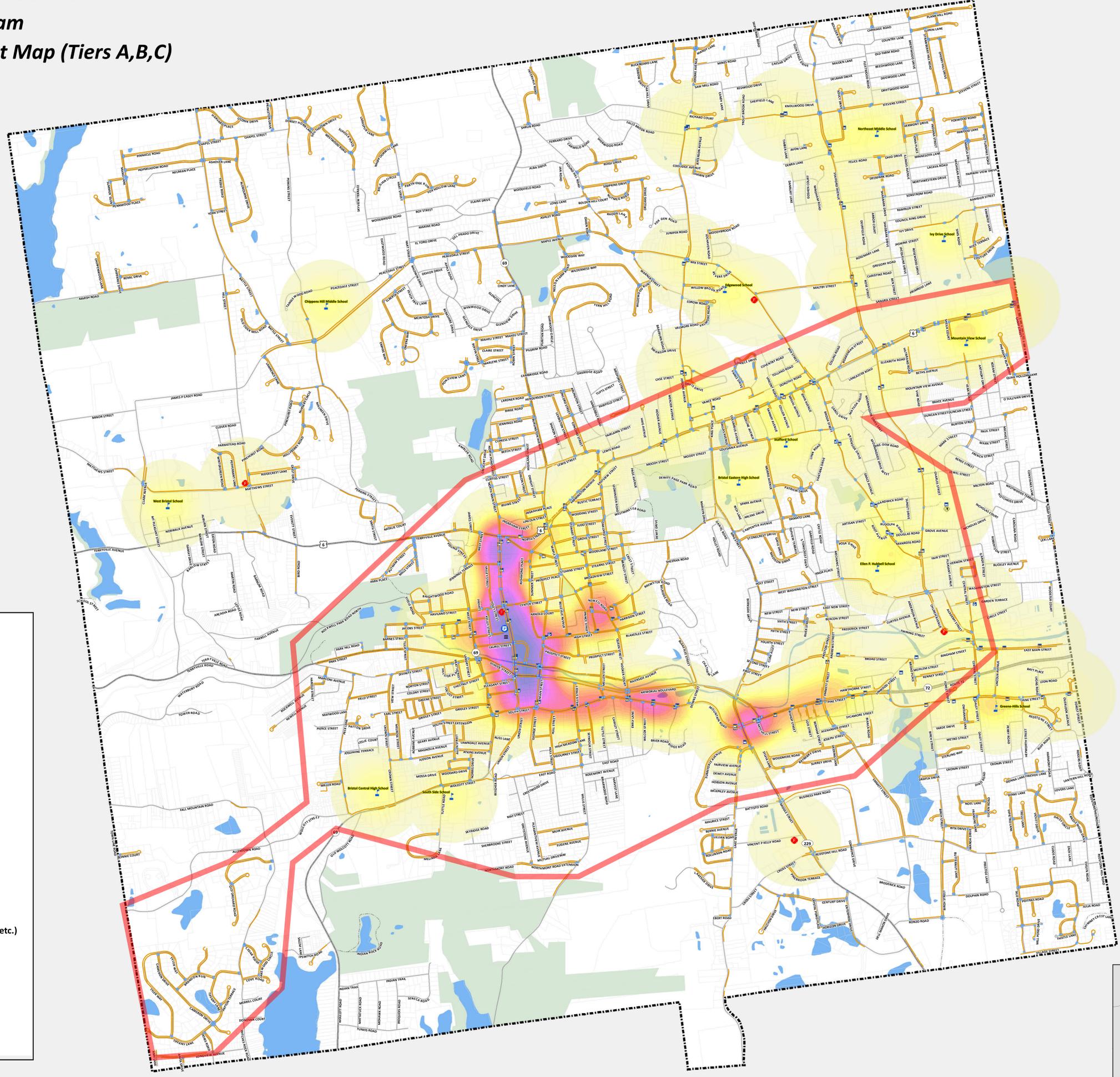
Issue Date: March 31, 2021
 This Map is Intended for Planning Purposes Only



City of Bristol, Connecticut

ADA Compliance Program

Pedestrian Density Heat Map (Tiers A,B,C)



Legend

Usage Level

High (Red to Purple gradient)

Low (Yellow to Green gradient)

Infrastructure

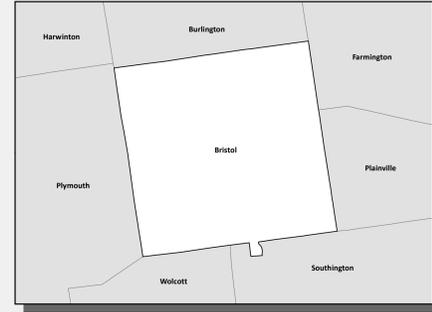
- Curb Ramp (Blue square)
- Sidewalk (Orange line)
- Schools (Blue flag icon)
- Bus Stop (Blue square with 'B')
- Senior Center (Blue house icon)
- Public Library (Blue book icon)
- City Hall (Blue building icon)
- Public Safety (Police/Fire) (Blue and red circle icon)

Roadway Status

- City Maintained (Solid grey line)
- State (Dashed grey line)
- Other (Privates, Parking Lots, etc.) (Dotted grey line)

Other

- Open Space (Green area)
- Waterbodies (Blue area)
- Focus Area (Red outline)



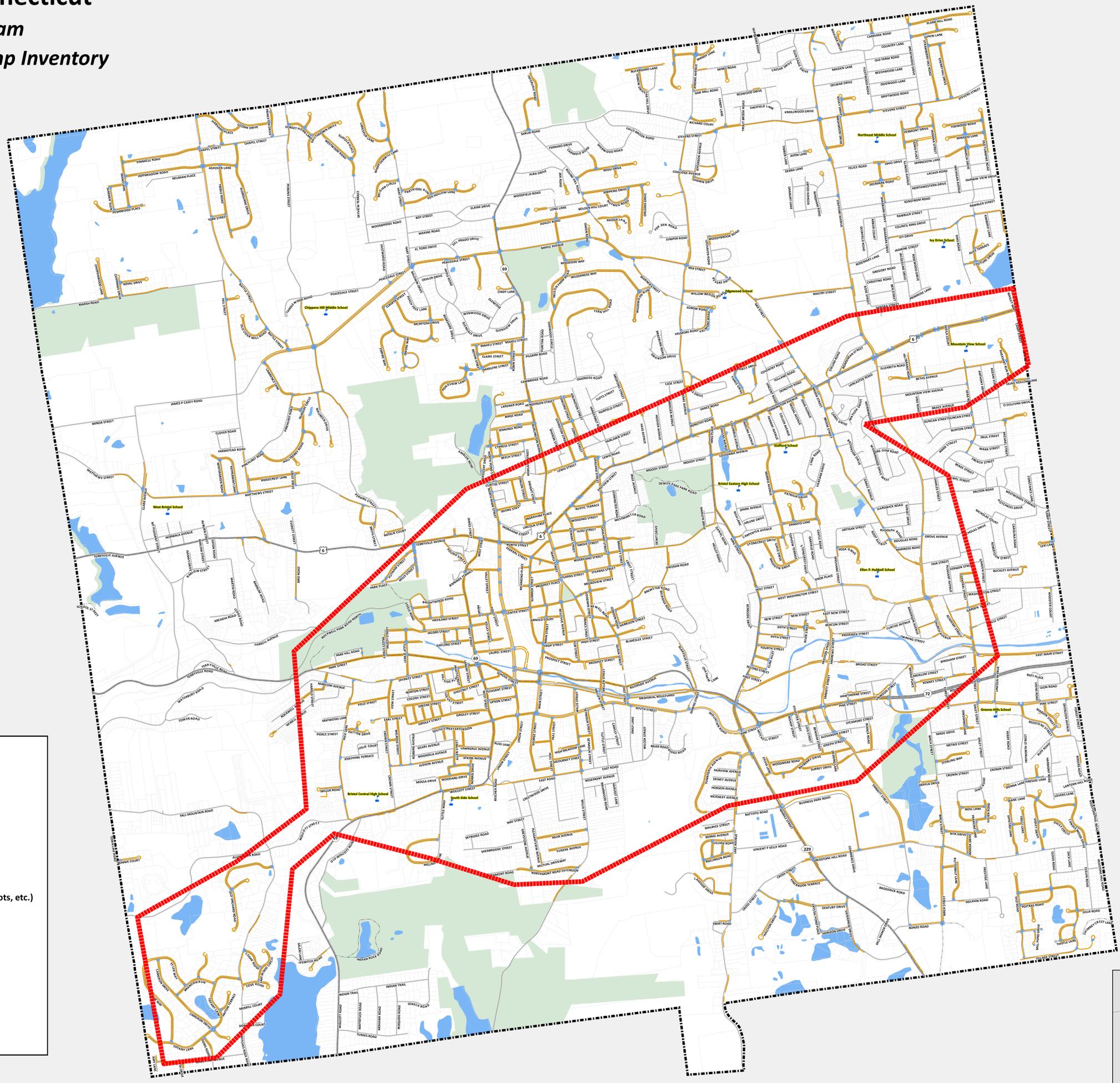
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City of Bristol, Connecticut

ADA Compliance Program

Sidewalk and Curb Ramp Inventory



Legend

- Curb Ramp
- Sidewalk
- Schools

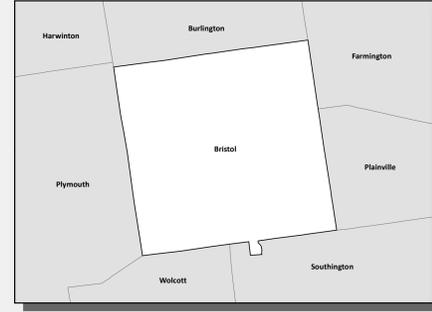
Roadway Status

- City Maintained
- State
- Other (Privates, Parking Lots, etc.)

Other

- Open Space
- Waterbodies

Focus Area



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