



COMMUNITY
connectivity program

Bristol

School Street and Park Street (Route 72) and Memorial
Boulevard – Road Safety Audit

April 17, 2017



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Acknowledgements:

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With assistance from AECOM Transportation Planning Group

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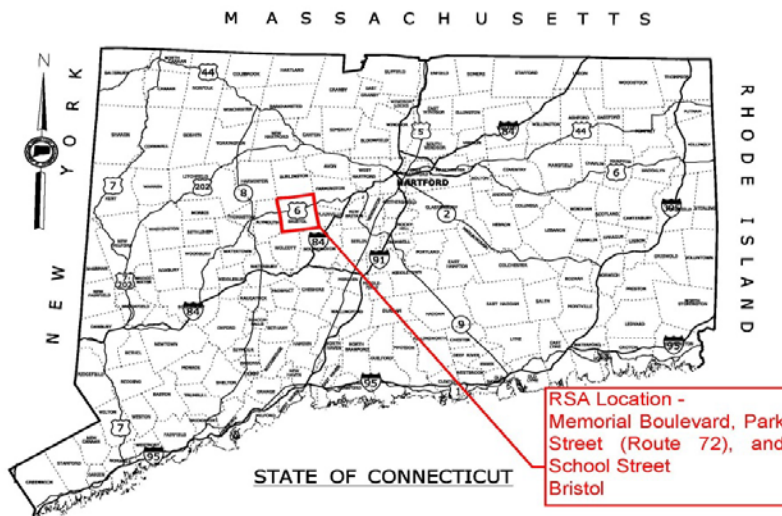
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The Connecticut Department of Transportation (CTDOT) is undertaking a Community Connectivity Program that focuses on improving the state's transportation network for all users, with an emphasis on bicyclists and pedestrians. A major component of this program is conducting Road Safety Audits (RSA's) at selected locations. An RSA is a formal safety assessment of the existing conditions of walking and biking routes and is intended to identify the issues that may discourage or prevent walking and bicycling. It is a qualitative review by an independent team experienced in traffic, pedestrian, and bicycle operations and design that considers the safety of all road users and proactively assesses mitigation measures to improve the safe operation of the facility by reducing the potential crash risk frequency or severity.

The RSA team is made up of CTDOT staff, municipal officials and staff, enforcement agents, AECOM staff, and community leaders. An RSA Team is established for each municipality based on the requirements of the individual location. They assess and review factors that can promote or obstruct safe walking and bicycling routes. These factors include traffic volumes and speeds, topography, presence or absence of bicycle lanes or sidewalks, and social influences.

Each RSA was conducted using RSA protocols published by the Federal Highway Administration (FHWA). For details on this program, please refer to www.ctconnectivity.com. Prior to the site visit, area topography and land use characteristics are examined using available mapping and imagery. Potential sight distance issues, sidewalk locations, on-street and off-street parking, and bicycle facilities are also investigated using available resources. The site visit includes a "Pre-Audit" meeting, the "Field Audit" itself, and a "Post-Audit" meeting to discuss the field observations and formulate recommendations. This procedure is discussed in the following sections.



1 Introduction to the Route 72, Bristol RSA

The City of Bristol submitted an application to complete an RSA along Memorial Boulevard and Route 72 from Riverside Avenue to Waterbury Road at Rockwell Park to improve safety for pedestrians and bicyclists. The 2.5 mile corridor begins at the eastern end of Memorial Boulevard, continues through the southerly end of downtown Bristol, along the primary travel corridor in the West End neighborhood (Bristol's most urbanized neighborhood), and ends at Rockwell Park. The corridor and immediate environs includes Veterans Memorial Park, the future SGU National Monument, Memorial Boulevard School, Brackett Park, Clara T. O'Connell Elementary School, Bristol City Hall, the Police Department, Superior Court, U.S. Post Office, Bristol Board of Education, Barnes Manufacturing/Associated Spring, Barnes Corporate Office, Bristol Hospital (future medical office building site), Depot Square, Muzzy Field and Rockwell Park. This area also encompasses a variety of small scale retail, industrial, office, banks, and hospitality businesses. Bristol is looking to install a bicycle and pedestrian path along the corridor to foster transportation-oriented development. Establishing a marked pathway that links city businesses and amenities such as parks and museums would be a great asset for Bristol residents and visitors alike. Creating bicycle and pedestrian paths along this corridor would be the first step in creating connections with trails in the neighboring communities of Plainville, Southington and Burlington.

The City of Bristol's application contained information on traffic volumes, crash data, and mapping of the corridor. The application and supporting documentation are included in Appendix A.

1.1 Location

The RSA corridor includes Memorial Boulevard, School Street and Park Street between Riverside Avenue and Waterbury Road (Figure 1). School Street and Park Street are classified as Principal Arterials – Other, and Memorial Boulevard is classified as a Minor Arterial. The Route 72 Average Daily Traffic (ADT) ranges from 8,200 to 14,300 vehicles per day (vpd.), and is highest in the vicinity of the West Street Intersection. These are moderate volumes of traffic for the corridor to process. Figure 2 shows the regional context of the study area.

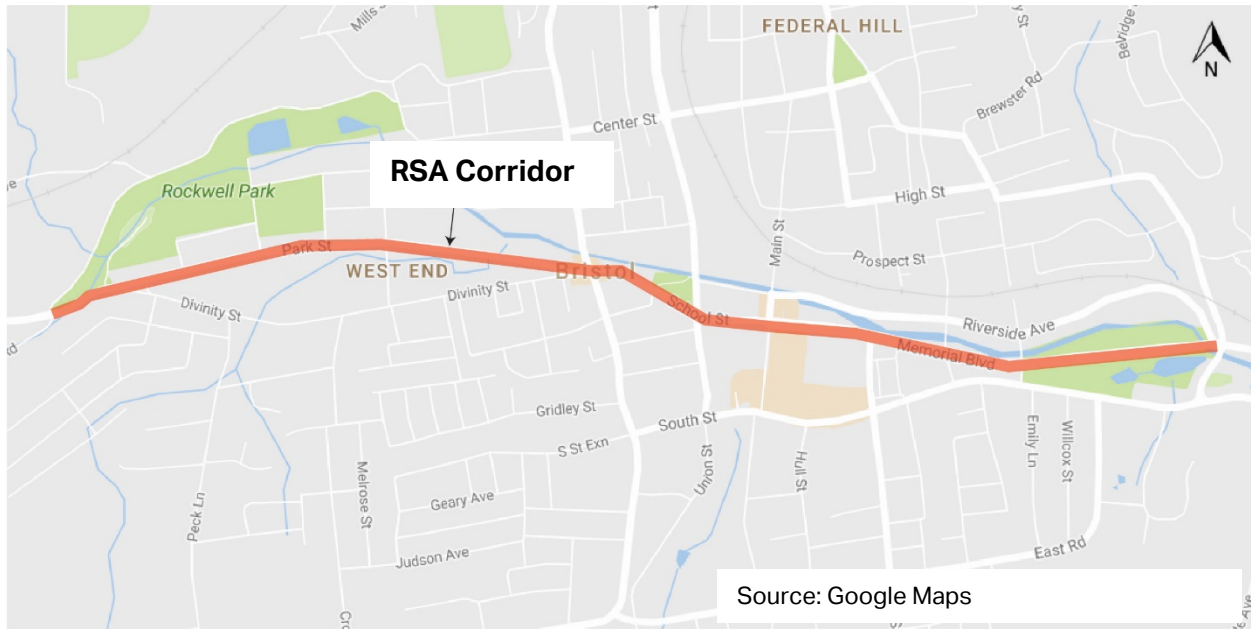


Figure 1. Bristol RSA Corridor



Figure 2. Regional Context

2 Pre-Audit Assessment

2.1 Pre-Audit Information

Between 2012 and 2014 there were 183 crashes in the RSA Area. The majority of crashes (74%) reported in this area resulted in property damage only; however 26% of crashes did result in an injury (Table 1). Two crashes involved bicyclists and none involved pedestrians. The two bicycle crashes occurred at the eastern edge of the corridor at the Blakeslee Street / Route 72 / Memorial Boulevard / Downs Street intersection. In the first crash it was raining and the roads were wet, and a car failed to grant right-of-way when turning right onto Blakeslee Street. No injury occurred. The second crash occurred at dusk when a vehicle turning right on red from Downs Street did not yield to a bicycle. This crash resulted in a serious injury.

The most common type of crash (42%) was a rear-end collision (Table 2). Fifty-five percent of the rear end crashes occurred at intersections. The contributing factor for 92% of the rear-end crashes was following too closely. Figure 3 displays crashes that occurred in this area during 2015. The crash history for year 2015 shows that they are spaced along the entire corridor.

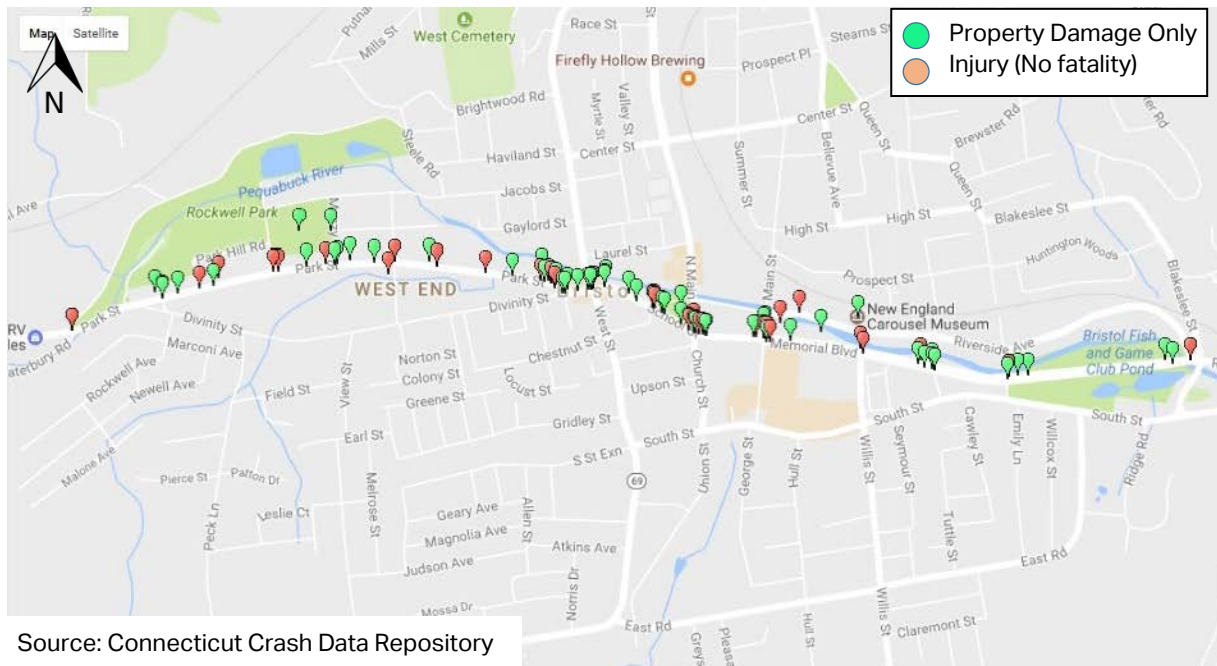


Figure 3. Crashes that Occurred in 2015 (Connecticut Crash Data Repository)

Severity Type	Number of Accidents	
Property Damage Only	136	74%
Injury (No fatality)	47	26%
Fatality	0	0%
Total	183	

Table 1. Crash Severity 2012-2014

Source: UConn Connecticut Crash Data Repository

Manner of Crash / Collision Impact	Number of Accidents	
Unknown	1	1%
Sideswipe-Same Direction	16	9%
Rear-end	77	42%
Turning-Intersecting Paths	16	9%
Turning-Opposite Direction	15	8%
Fixed Object	17	9%
Backing	9	5%
Angle	11	6%
Turning-Same Direction	4	2%
Moving Object	4	2%
Parking	1	1%
Pedestrian	0	0%
Overturn	3	2%
Head-on	2	1%
Sideswipe-Opposite Direction	6	3%
Miscellaneous- Non Collision	1	1%
Total	183	

Table 2. Crash Type 2012-2014

Source: UConn Connecticut Crash Data Repository

Route 72 is a state owned road with a speed limit of 25-30 mph. Memorial Boulevard is a four lane divided roadway and School Street and Park Street are two lane roads. There is sidewalk along both sides of the roadway from the eastern end to the western end of Divinity Street. Between Divinity Street and Waterbury Road, a distance of 750 feet, there is no sidewalk. The geometry of the corridor is shown in Figure 4 and described in Table 3. There is one mid-block crossing in front of the old Clara T. O'Connell Elementary School, six signalized intersections, two all-way stop controlled and several side streets that are stop controlled. Many of the side streets do not have crosswalks.

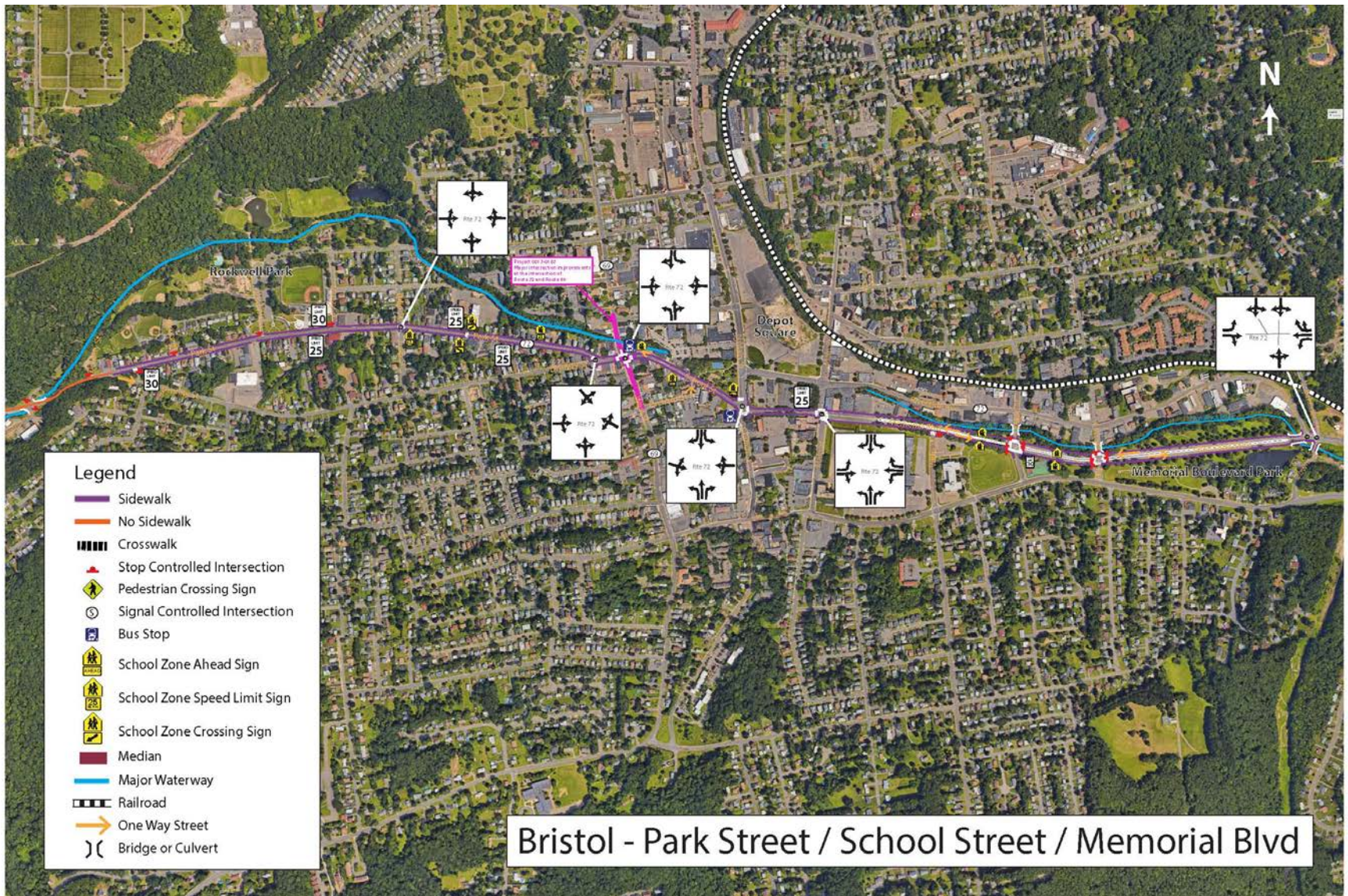


Figure 4: Route 72 Roadway Geometrics

Street Name	Route	Travel Direction	Lane Width	Sidewalk				Curb	Parking	Shoulder	Ramps	
				Side	Type	Width	Condition*				Exist	Compliant
Park Street at Landry Street and Divinity Street	72	west	13'	North	concrete	5'	good	Bit-asphalt	no	no	yes	no
	72	east	15'	South	concrete	5'	good	Bit-asphalt	no	no	yes	no
Divinity Street and School Street at West Street	72	west	15'	North	concrete /brick	10'	good	granite	no	no		no
	72	east	15'	South	concrete /brick	10'	good	granite	no	no		no
School Street at Church Street and North Main Street	72	west	17'	North	concrete	6-7'	good	granite	one hour west of north Main	no	yes	no
	72	east	17'	South	concrete	6-7'	good	granite	no	no	no ramp on northeast corner	no
School Street between North Main street and Main Street	72	west	17'	North	concrete	7'	good	granite	no	no	Yes	Yes
	72	east	17'	South	concrete	7'	fair	granite	no	no	Yes	Yes
Memorial Boulevard	na	west	Two lanes 12'	North	concrete	6'	fair	Yes Low reveal	no	no	Yes	Yes
	na	east	Two Lanes 12'	South	asphalt	6'	fair	Yes Low reveal	no	no	Yes	Yes
Addison Street	na	north	15	east	concrete	4-5'	good	concrete	yes	no	yes	no
	na	south	15	west	concrete	4'	good	concrete	no	no	yes	no
Barnes Street	na	east	15'	south	concrete	5'	fair-good	partial	yes	no	yes	no

	na	west	15'	north	concrete	5'	fair-good	partial	yes	no	yes	no
Francis Street	na	north	14	east	concrete	5	fair	concrete	no	no	yes	no
	na	south	14	west	concrete	5	fair	concrete	yes	no	yes	Southwest corner
Gaylord Street	na	east	14'	south	concrete	8'	good	concrete	intermittent	no	yes	no
	na	west	14'	north	concrete	10'	good	concrete	intermittent	no	yes	no
Jacobs Street	na	east	15'	south	concrete	5'	fair-good	Bit-asphalt	no	no	yes	no
	na	west	15'	north	concrete	6'	fair-good	low reveal	yes	no	yes	no
Laurel Street	na	east	14'	south	concrete	4-8'	Fair-good	Bit-asphalt	no	no	yes	no
	na	west	18'	north	concrete	5'	Fair	Bit-asphalt	intermittent	no	some	no
Tulip Street	na	north	15''	east	concrete	5'	fair	concrete	yes	no	yes	no
	na	south	15'	west	concrete	5'	fair	concrete	yes	no	yes	no

***CONDITION – “Good” is Serviceable Condition that meets current design standards. “Fair” is generally serviceable, but may need minor repairs, or may not completely align with current design standards. “Poor” is not serviceable, and generally inadequate for continued long-term use.**

Table 3. Street Inventory

2.2 Prior Successful Efforts

A number of best practices have already been applied to this corridor and include several parks, the Proposed Special Guerrilla Unit National Monument, and the proposed redevelopment of two decommissioned schools. Veterans' Memorial Park and Boulevard, located at the eastern end of the corridor, is a 25-acre historic park given to the City of Bristol in 1921. Located at Main Street and Memorial Boulevard, the park dedicates itself to many World War I, World War II, and Korean War U.S. servicemen who lost their lives in battle. The boulevard consists of landscaping with a granite World War I monument. Facilities at the park include fishing ponds, tennis courts, memorial monuments, athletic fields, and a walking trail. Brackett Park was purchased by the City of Bristol in 1917 and named after Dr. A. S. Brackett. The "vest-pocket" park, located at North Main Street and School Street, is 2.3 acres in size and includes a basketball court, gazebo, playground, walking/bike paths, and a memorial garden. Renovations of about \$1,000,000 were made to the park in 2006, which included landscaping and gateway treatments. Muzzy Field is a stadium-type field located on Muzzy Street. The 8.5 acres were given to the City of Bristol by Commissioner Adrian Muzzy in 1912. The field was built in 1914 and its current uses include a lighted baseball, football, and soccer stadium. It is currently the home field of the Bristol Blues of the Futures Collegiate Baseball League. Renovations to the 1939 grandstand are currently underway to provide a new concourse and additional ADA seating. These repairs began in 2015 and are budgeted at \$2,500,000.

Rockwell Park is a historic 104-acre park given to the City of Bristol in 1911 by Albert and Nettie Rockwell (see Figure 5). It was built in 1921 located near Park Street, Jacobs Street, and Terryville Road. The park's facilities include a fishing pond, playground, swimming pool, picnic areas, basketball and volleyball



Figure 5: Rockwell Park

courts, hiking trail, pavilion, and a dog park. Renovations totaling nearly \$7,000,000 were made to the park from 2004 to 2009, and include gateway treatments, pedestrian access, a wetlands boardwalk, two new playscapes, and a skateboard park.

The City-owned property at 15 Downs Street, on the shore of the Pequabuck River, is the proposed location for the Special Guerrilla Unit (SGU) National Monument, a project administered by the SGU Monument Committee, a non-profit organization. The monument, which is dedicated to the heroism of Hmong and Laotian soldiers who assisted U.S. soldiers during the Vietnam Conflict will feature a real UH4E "Huey" helicopter atop a stone foundation.

Memorial Boulevard School is a former middle school that was decommissioned by the City in 2011. The multi-story, 105,000-square-foot building, which includes a 900-seat theater, is now being actively considered by the City for adaptive re-use as a mixed-use arts and

community center. A portion of the adjoining site contains several athletic fields managed by the Park Department for recreational use. The Clara T. O'Connell Elementary School, originally built in 1940 as the Park Street Elementary School, was decommissioned by the City in 2011. It has since been approved by the City for conversion by a private developer into 40 units of active adult housing, thus adding a new residential component to the highly walkable West End neighborhood.

Current Projects:

- Centre Square Project (Figure 6) - The City plans on building a public road through the current empty parking lot on the east side of North Main Street. This road will link Laurel Street to Riverside Drive and provide bicycle lanes.
- Route 72 at Route 69 will be realigned by the CTDOT to the north to provide a more conventional intersection alignment. The proposed improvements will address vehicular and pedestrian safety concerns and improve traffic operations. The current schedule indicates that the design will be completed in January 2019, with construction anticipated to start in summer 2019.
- Memorial Boulevard Plan - The City plans to reduce the number of lanes from two lanes in each direction to one lane, with bike lanes on both sides. The design phase is 100% complete. The City would like to extend the bike lanes west of this section.



Figure 6: Centre Square Bristol Conceptual Plan

2.3 Pre-Audit Meeting

The RSA was conducted on April 17, 2017. The Pre-Audit meeting was held at 8:30 AM in the Bristol DPW located at 111 North Main Street, Bristol, CT, 06010.

The RSA Team was comprised of staff from CTDOT AECOM, and VN Engineers, Inc., and representatives from several Bristol departments and organizations including the Police Department, Public Works, Engineering Department, and local cycling advocates. The complete list of attendees can be found in Appendix B. Materials distributed to the RSA Team, including the agenda, audit checklist, ADT counts, crash data and road geometrics, can be found in Appendix C.

RSA Team members from Bristol presented relevant information for the audit, including:

- The population of Bristol is 60,556.
- Within the vicinity of Park Street/School Street/Memorial Boulevard, up to 40% of residents are below the state poverty level and within the vicinity of this corridor the percentage of minorities is 40%; this exceeds the state average of 30.53%.
- The RSA Corridor runs east-west and is composed of Route 72 (locally named Park Street, School Street, and a short section of Divinity Street) and Memorial Boulevard.
- Memorial Boulevard is classified as a Minor Arterial.
- Park, School and Divinity Streets are classified as a Principal Arterial-other.
- The posted speed limit is 30 MPH on Park Street and 25 MPH for the remaining corridor segments (see Figure 7).
- There are no trucks allowed on Memorial Drive; they are routed to Riverside Drive (Route 72) which runs parallel to the north of Memorial Drive.
- There is intermittent parking allowed on School Street for westbound traffic.
- Most cyclists in this corridor are transportation oriented users. The current corridor structure does not provide travel amenities so recreational biking is scarce. There is a popular bike store, "The Biker's Edge" located at 99 Main Street (see Figure 8). The store organizes group rides but none of the Bristol groups convene in this corridor. They have an off-site rendezvous location.
- There is a longstanding desire by biking and hiking enthusiasts in Bristol to connect with the trails in Plainville and Southington, and the trails that exist on the Farmington River in Burlington.
- Younger cyclists ride on the sidewalks through this corridor.
- Naugatuck Valley Council of Government's predecessor, the Central Connecticut Regional Planning Agency, did a Bike and Pedestrian Plan for the City in 2005.
- The City does not remove snow from sidewalks along this corridor.



Figure 7: Speed Limit Posting along Route 72



Figure 8: Biker's Edge Cycling Store

- There is street lighting along Route 72 and Memorial Drive.
- The City asked the RSA team to also evaluate an alternative bike corridor, not included in the application, along the following streets: Jacobs Street, Gaylord Street, West Street, Laurel Street, Tulip Street, Francis Street, and Addison Street.
- The LTA is the Police Board Commissioner.
- Two crashes involved bicyclists.
- The Police confirmed that most crashes are due to queuing traffic, high volumes, and distracted drivers.
- The west end of the corridor has higher traffic volume and speeds.
- The intersection of Route 69 and Route 72 has high traffic volumes.
- 31% of accidents occurred between the times of 3:00 PM and 6:00 PM.

3 RSA Assessment

3.1 Field Audit Observations

Intersection 1: Memorial Boulevard, Blakeslee Street, Downs Street, and Riverside Avenue

- This is a five-way signalized intersection with two northern legs.
- There are no crosswalks across any of the legs.
- The eastern approach has three approach lanes with dedicated right, through and left turn lanes. The western approach has two approach lanes with a dedicated left turn lane and shared right and through lane.
- The remaining legs have single lane approaches.

Intersection 2: Memorial Boulevard and Mellen Street

- This is a four-way Stop controlled intersection with landscaped medians on Memorial Boulevard and a statue in the center of the intersection.
- There are crosswalks on all legs with handicap ramps and detectable warning strips.
- Both the northern and southern approaches have a single lane. The eastbound and westbound approaches have two lanes without turn restrictions.

Intersection 3: Memorial Boulevard and East Street

- This is a four-way Stop controlled intersection with a landscape median on Memorial Boulevard.
- There are crosswalks on all legs with handicap ramps and detectable warning strips.
- The northbound and southbound approaches have one lane and the eastbound and westbound approaches have two lanes without turn restrictions.

Intersection 4: School Street, Memorial Boulevard, and Main Street

- This is a four-way signalized intersection with crosswalks on all legs (Figure 9).
- Main Street (north and south) and Memorial Boulevard (westbound leg) have three approach lanes with dedicated left, right and through lanes.
- School Street has two approach lanes with a dedicated left lane and shared right and through lane.
- There are pedestrian signal heads and buttons for all crosswalks.
- There are handicap ramps and detectable warning strips on all corners.



Figure 9: School Street, Memorial Boulevard and Main Street

Intersection 5: School Street, Church Street and North Main Street

- This is a four-way signalized intersection with crosswalks across all legs (Figure 10).
- Crosswalks (faded) are striped along all legs of the intersection (Figure 11).
- There are no handicap ramps at crosswalks on School Street (faded) and the east side of North Main Street. There are no detectable warning strips.
- The eastbound and westbound approaches have one lane and the northbound and southbound approaches have three lanes dedicated left, right and through turn lanes.
- There are pedestrian signal heads and buttons for each crosswalk. The exclusive pedestrian phase is 25 seconds long.



Figure 10: Intersection of School Street, Church Street and North Main Street

Intersection 6: School Street, West Street and Divinity Street

- This is a four-way signalized intersection with crosswalks across all legs.
- There are handicap ramps, but no detectable warning strips.
- The eastbound and westbound approaches have one lane and the northbound and southbound approaches have two lanes. The northbound and southbound approach lanes have a dedicated left turn lane and a shared through and right turn lane.
- There are pedestrian activated signals and buttons on all corners. The exclusive pedestrian phase is 25 seconds long. There are pedestrian refuges on the northern and southern legs of this intersection (Figure 12).
- A Park-and-Ride lot is located along the north side, adjacent to the Pequabuck River.



Figure 11: Crosswalks across School Street (Route72)



Figure 12: Park Street, School Street and West Street

- This intersection is being redesigned by the CTDOT as mentioned under the section *Prior Successful Efforts*.

Intersection 7: Park Street, Landry Street and Divinity Street

- This is a four-way signalized intersection with Park Street entering at a skewed angle.
- The northern leg of Park Street has a crosswalk, but the remaining three legs do not. The crosswalk is faded (Figure 13).
- There are no detectable warning strips. The crosswalk is connected to the brick sidewalks on both sides.
- There are pedestrian signal heads and buttons on the Park Street and Divinity Street intersection legs.
- All four approaches have a single lane.



Figure 13: Intersection of Park Street, Landry Street and Divinity Street

Intersection 8: Park Street and Tulip Street

- This is a four-way signalized intersection with a crosswalk across both legs of Park Street.
- The crosswalk is connected to sidewalks on both sides.
- There are pedestrian signal heads and buttons on all corners, except the southwest corner.
- All four approaches have one lane.
- The western segment of the corridor has residential land use.
- Pavement is in fair to poor condition.



Figure 14: Route 72 between Main Street and North Main Street

Additional Streets: Jacobs Street, Gaylord Street, West Street, Laurel Street, Tulip Street, Francis Street, and Addison Street. These are all local streets located north of Route 72 and west of North Main Street and provide access to Rockwell Park and Muzzy Field from the downtown area. These roadways are being considered for bicycle accommodation in addition to, or instead of Route 72 (Figure 14 and Figure

15). All of these roads are two-way, with sidewalks on both sides, parking on one side and lower traffic volume than Route 72. See Table 3 for more details about the street inventory.

3.2 Post-Audit Workshop - Key Issues

- Beginning along the east side of the corridor, the City wants to extend the planned bicycle lanes on Memorial Boulevard west of Main Street. The current design shows the eastbound bike lane beginning just east of Main Street, and the westbound bike lane ending east of Main Street (Figure 15). The City would like to provide accommodations for bicyclists and wants to study the feasibility of using some of the current sidewalk width on the north side of Memorial Boulevard to provide a westbound bike lane that continues from the proposed bike lane termination point west across Main Street.
- Between Main Street and West Street, the corridor's travel lanes measure 17 feet wide, which is sufficient space for one 11-foot travel lane and a 5-foot bike plus buffer on both sides of Route 72. Delineators or buffers could be installed to offer visual or physical protection for cyclists.
- The City would like to coordinate with the CTDOT District office to determine when Route 72 is scheduled for Vendor In-Place (VIP) paving. This could be an opportunity to stripe 11-foot travel lanes and bike lanes where feasible along Route 72.
- The intersection of Route 72 and North Main Street is very wide, has no ADA ramps, and the crosswalks are faded. This current configuration is challenging to non-motorized users.
- Drivers illegally park along the south side of School Street during church services or events, primarily due to limited parking in the designated lot behind the church building. This could pose a challenge for cyclists on this section of roadway.



Figure 15: Memorial Boulevard concept plan

- There is sufficient space for a bike lane along the northern side of School Street between North Main Street and West Street adjacent to Bracket Park (Figure 16).
- The City would like to explore an option for a bike facility to follow the Pequabuck River where it resurfaces west of Bracket Park. The challenges here are with private property owners abutting the river (Figure 17).
- The City would like to recommend bike lanes be incorporated into the CTDOT concept plan for improving/re-aligning the intersections of Route 72/Route 69 and Park Street/Divinity Street, Project number 0017-0187.
- West of the Route 69/72 intersection, there is adequate space for a bike lane if travel lanes are narrowed and the sidewalk buffer strip is encroached upon.
- The City would like to explore an option of continuing the bike lane onto the former Clara T. O'Connell Elementary School Property on the north side of Route 72 and proceed behind the property along the Pequabuck River (Figure 18), connecting to Barnes Street, and into Rockwell Park. The City has an easement along the rear of the school property. Sharrows could be added to indicate shared road usage along Barnes Street and Tulip Street.
- The City would like to review the possibility of a bike lane or sharrows along Jacobs Street, Francis Street, Addison Street, Gaylord Street, West Street, and Laurel Street.
- Centerlines and sharrows would provide visual cues for motorists and cyclists along these six streets. West Street currently has shoulders and center lines.
- Jacobs Street would have to have an offset center line to accommodate both bicycles and parking.



Figure 16: Route 72 between North Main Street and West Street



Figure 17: Private properties abutting the Pequabuck River



Figure 18: City easement along the back side of the Clara T. O'Connell Elementary School

4 Recommendations

From the discussions during the Post-Audit meeting, the RSA team compiled a set of recommendations that are divided into short-term, mid-term, and long-term categories. For the purposes of the RSA, **Short-term** is understood to mean modifications that can be expected to be completed very quickly, perhaps within six months, and certainly in less than a year if funding is available. These include relatively low-cost alternatives, such as striping and signing, and items that do not require additional study, design, or investigation (such as right-of way acquisition). **Mid-term** recommendations may be costlier and require the establishment of a funding source, or they may need some additional study or design to be accomplished. Nonetheless, they are relatively quick turn-around items, and should not require significant lengths of time before they can be implemented. Generally, they should be completed within a window of eighteen months to two years if funding is available. **Long-term** improvements are those that require substantial study and engineering, and may require significant funding mechanisms and/or right-of-way acquisition. These projects generally fall into a horizon of two years or more when funding is available.

4.1 Short Term

1. City to provide planned striped bicycle lanes in both directions on Memorial Boulevard between Riverside Avenue on the east side and Main Street (eastbound direction) and where the median ends (in the westbound direction).
2. City to evaluate the potential to use a portion of the existing sidewalk on the north (westbound) side of Memorial Boulevard between the median and Main Street to provide a cycle track or bike lane. The existing sidewalk is approximately 12 feet wide. There are three light poles and one traffic signal span pole at the corner of Main Street that would need to be relocated.
3. City to coordinate with the CTDOT repaint faded crosswalks and install missing handicap ramps and detectable tactile warning strips at study intersections including Memorial Boulevard/School Street/Main Street; School Street /North Main Street; School Street/Orchard Street; and Park Street/Tulip Street (Figure 19).
4. City to coordinate with the CTDOT upgrade the existing signals at Memorial Boulevard/School Street/Main Street; School Street/North Main Street; and Park Street/Tulip Street with pedestrian countdown signals (see Figure 24). The pedestrian signals will be upgraded at School Street-Divinity Street (Route 72)/West Street (Route 69) and Park Street (Route 72)/Divinity Street as part of CTDOT's intersection improvement project.
5. City to coordinate with the CTDOT evaluate providing striped bicycle lanes and painted buffer strip on both sides of School Street between Main Street and North Main Street and narrowing the travel lane width to 11 feet. Check with CTDOT for re-pavement schedule in Vendor In-Place program.

6. City to coordinate with the CTDOT evaluate the feasibility of providing a striped six-foot wide shoulder on both sides of School Street between North Main Street and West Street (Route 69). The striped shoulder on the north (westbound side) would serve as a lane for on-street parking and can accommodate bicycles when no vehicles are parked. The shoulder on the south (eastbound) side will serve as the bike lane since parking is prohibited; however, it is understood that church patrons may park in it (illegally) for church events. The striped shoulders will allow 11-foot travel lanes which will help to slow motorist's travel speeds. The CTDOT will be reconstructing the intersection of School Street/West Street and Park Street/Divinity Street which will transition into School Street on the east side.
7. City to coordinate with the CTDOT review the preliminary plans for intersection realignment and improvements at the intersections of School Street (Route 72)/Divinity Street/West Street (Route 69) and Park Street (Route 72)/Divinity Street to provide bicycle accommodations.
8. City to coordinate with the CTDOT remove the school zone signage on Park Street at the Clara T. O'Connell Elementary School. The school was decommissioned in 2011 and is planned to be converted to 40 units of active adult housing. CTDOT to evaluate the need for the mid-block crossing at the former school to serve the adult housing residents. If determined to remain, appropriate pedestrian crosswalk and advance signage should be provided by the CTDOT.
9. City to coordinate with the CTDOT to identify the planned schedule for repaving the Route 72 through the Vendor In-Place (VIP) program.
10. City to coordinate with the CTDOT to stripe Park Street between Divinity Street (east) and Divinity Street (west) with 11-foot travel lanes and three-foot wide shoulders which will provide bicycle accommodation on both sides.
11. City to begin evaluating the potential for providing bicycle facilities/accommodations on local roads in conjunction with, or in place of bicycle facilities being considered along Route 72. These include:
 - a. Laurel Street, Gaylord Street, Francis Street, Addison Street, Jacobs Street, Tulip Street, Steele Road and the northern road in Rockwell Park between Steele Road and Park Street/Waterbury Road. City to conduct a pilot program for one or two of these local low-volume roadways to provide pavement marking sharrows and Share the Road signs. Because of the low volume and low traffic speeds on these roadways, formal striped bicycle lanes are not recommended.
 - b. City to research parcel and property lines along the Pequabuck River and evaluate the potential for obtaining easements to provide a new multi-use path facility along the river. This includes an option to use the City's easement along the back side of the former Clara T. O'Connell Elementary

School. This could provide connections to a potential river front path and/or a connection between Park Street and Barnes Street.

Figure 20, Figure 21 and Figure 22 depict these recommendations.



Figure 19. Example of Detectable Warning Strips

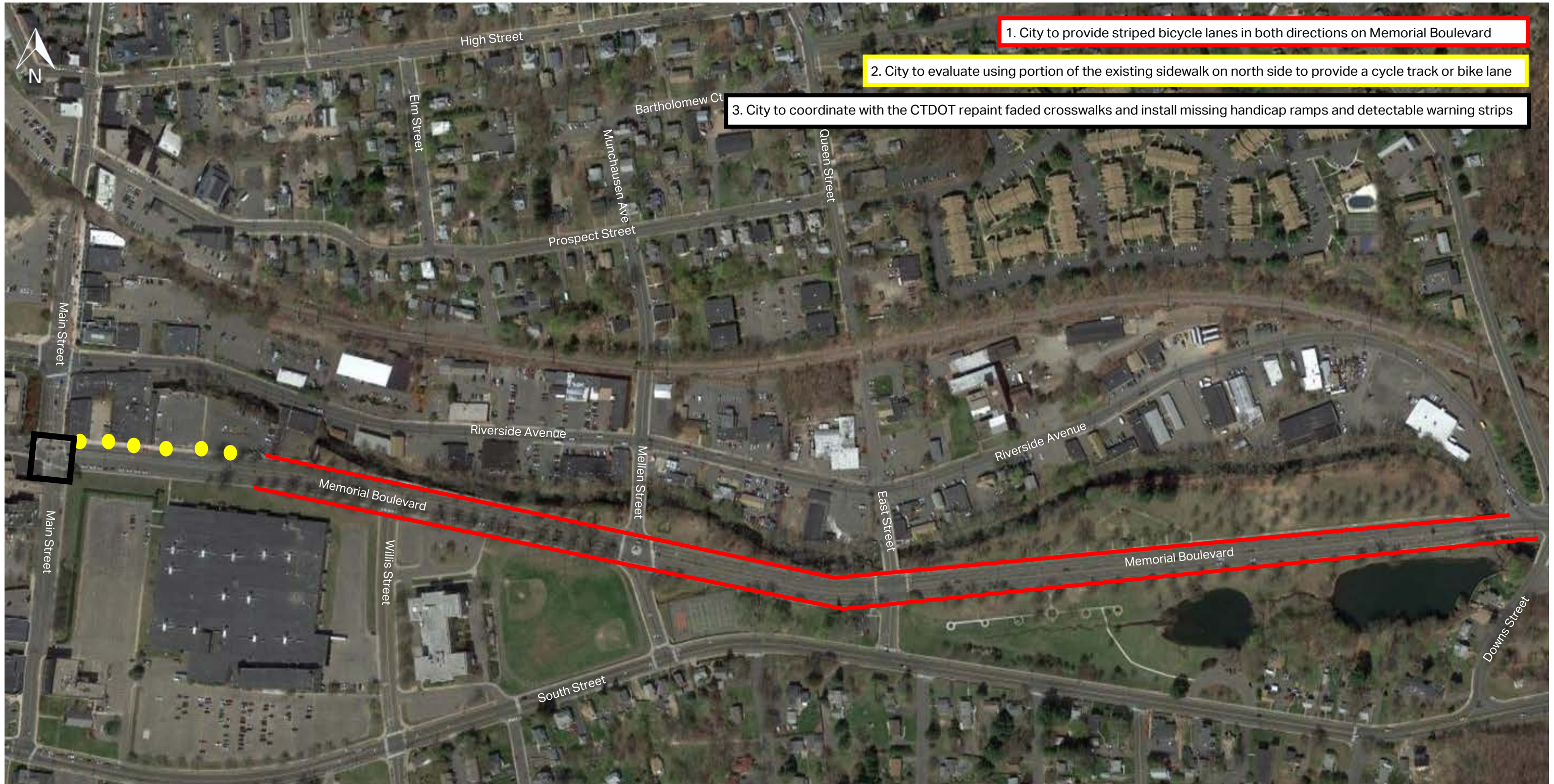


Figure 20. Short Term Recommendations



Figure 21. Short Term Recommendations

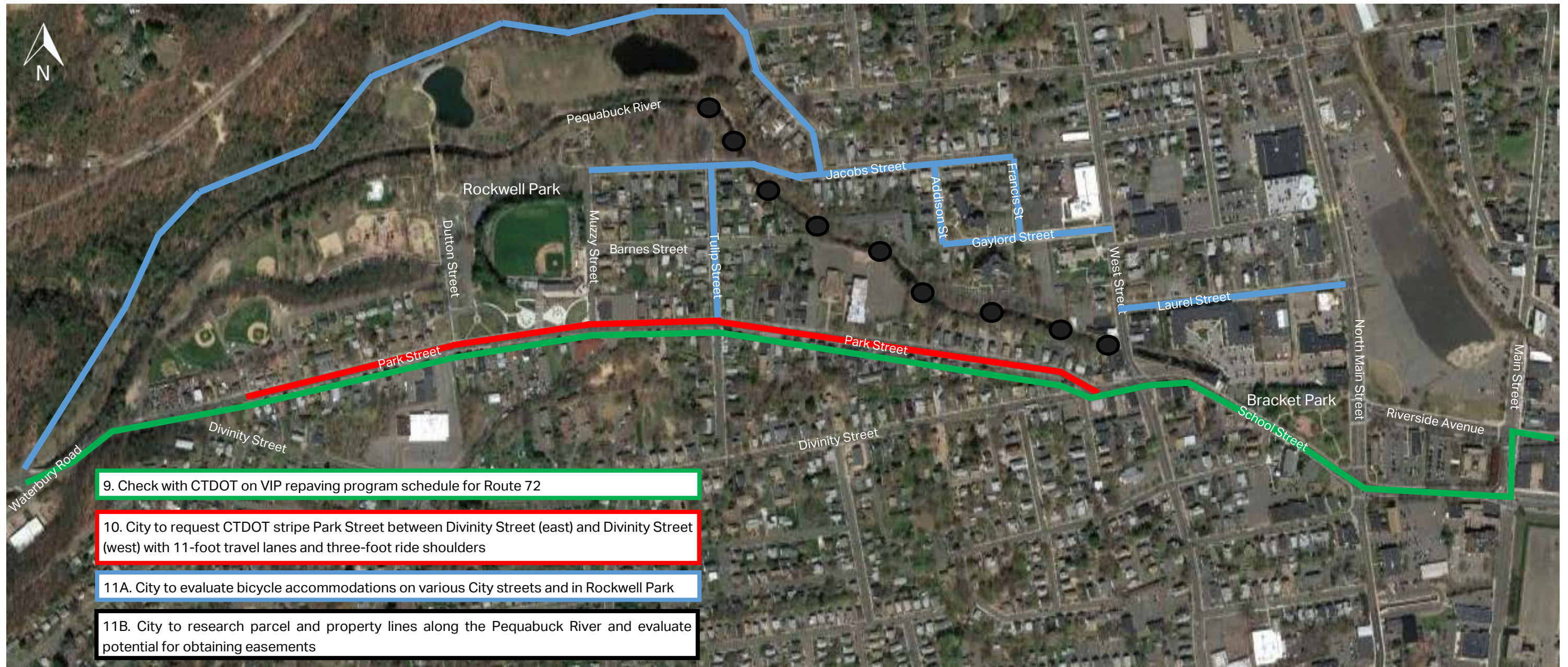


Figure 22. Short Term Recommendations

4.2 Medium Term

1. City to coordinate with CTDOT to develop a draft concept plan for providing bicycle facilities within and in the vicinity of the Route 72 corridor including a connection to Memorial Boulevard. The plan should identify route options along Route 72, local roadways and the Pequabuck River and identify potential phasing of the project.
2. City to coordinate with the CTDOT to complete revised design plans for the intersection realignment and improvements project at the intersections of School Street (Route 72)/Divinity Street/ West Street (Route 69) and Divinity Street/Park Street (Route 72) to provide for bicycle accommodations. The revised plans should provide transitions into other planned/proposed bicycle facilities/accommodations on the east and west ends of the project limits on Route 72.
3. City to coordinate with the CTDOT to stripe Park Street between Divinity Street (east) and Divinity Street (west) with 11-foot travel lanes and three-foot wide shoulders to provide bicycle accommodation on both sides.
4. City to coordinate with the CTDOT to evaluate the feasibility of providing bicycle facilities on Park Street between Divinity Street and Waterbury Road:
 - a. Between Divinity Street (east) and Muzzy Street and between Dutton Avenue and Divinity Street (west), the current curb-to-curb width of Park Street is approximately 28 feet with 4-5 foot grass buffer strips and sidewalk on both sides. Utility poles are located on the south (eastbound) side in the grass buffer. The feasibility of utilizing a portion of the grass buffer on each side to provide a 5-foot wide bike lane on each side should be evaluated.
 - b. Between Muzzy Street and Dutton Avenue, there is land available in back of the north sidewalk along the frontage to Muzzy Field Park that may be utilized for a bicycle facility. There is 4-5 foot grass buffer and sidewalk on the south side.
 - c. Between Divinity Street (west) and Waterbury Road, there are striped shoulders on both sides, but no sidewalks. Because of the S-curve and high vehicle speeds in this section, a separated bicycle facility on one or both sides should be considered, using the wooded areas on both the south and north (Rockwell Park) sides of the road. The steep slope in this area is a constraint.
5. LTA to coordinate with the CTDOT to evaluate providing bike accommodations on West Street (Route 69) between School Street/Divinity Street and Gaylord Street. Measures may include reducing the travel lane widths from 12 to 11 feet and removing parking on one side to provide striped bike lanes. If requested by town's Local Traffic Authority, the Department can remove on-street parking on Route 69.
6. The City to complete construction of the planned new roadway at Centre Square on the east side North Main Street connecting Laurel Street with Riverside Avenue. The new roadway will include striped bike lanes on both sides. See Figure 23.

7. City to coordinate with the CTDOT upgrade the existing signals at Memorial Boulevard/School Street/Main Street; School Street/North Main Street; and Park Street/Tulip Street with pedestrian countdown signals (see Figure 24). The pedestrian signals will be upgraded at School Street-Divinity Street (Route 72)/West Street (Route 69) and Park Street (Route 72)/Divinity Street as part of CTDOT's intersection improvement project.



Figure 23. Planned Center Square Improvements



Figure 24: Countdown Signal

Figure 25 depict these recommendations.

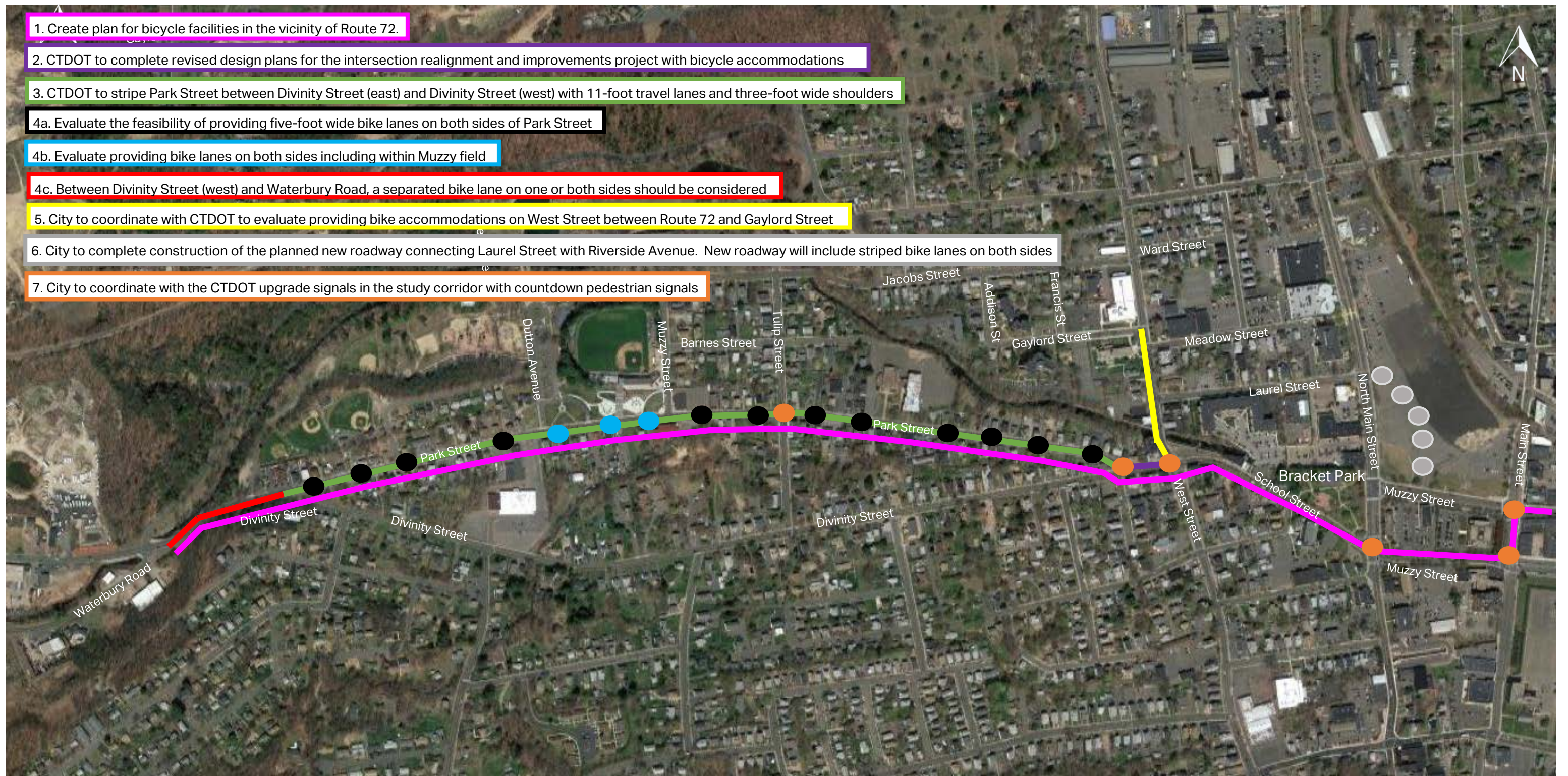


Figure 25. Medium Term Recommendations

4.3 Long Term

1. City to coordinate with CTDOT to construct/provide bicycle facilities/accommodations along the Route 72 corridor and West Street between Route 72 and Gaylord Street.
2. City to construct/provide bicycle facilities/accommodations on local roadways/river corridor.
3. City to investigate the potential for providing a bicycle facility within or adjacent to Bracket Park. This may include a two-way multi-use path along the park on the north side of School Street. There may be opportunities to continue an off-street path through adjacent private parcels; although it is acknowledged this would require negotiations with land owners.
4. City to coordinate with the CTDOT to develop design plans for the intersection realignment of route 72 at the intersection of Riverside Ave, Memorial Boulevard, Blakeslee Street and Downs Street.

Figure 26 depicts these recommendations.

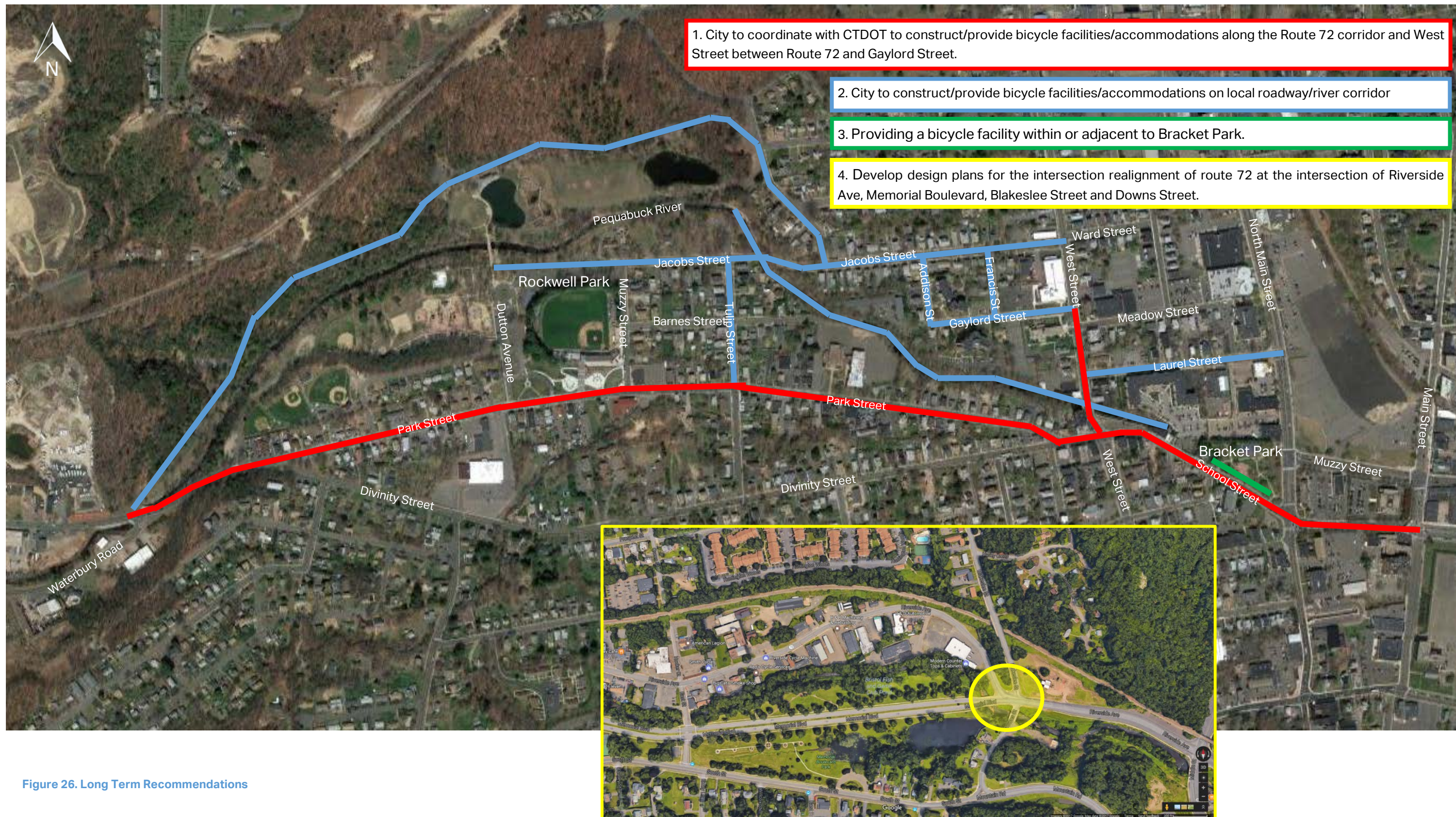


Figure 26. Long Term Recommendations

4.4 Summary

This report outlines the observations, discussions and recommendations developed during the RSA. It documents the successful completion of the City of Bristol RSA and provides an outlined strategy to improve the transportation network along Memorial Drive and Route 72 from Main Street to Rockwell Park for all road users, particularly focusing on pedestrians and cyclists. Moving forward, Bristol may use this report to prepare strategies for funding and implementing the improvements, and as a tool to plan for including these recommendations into future development for Memorial Drive and Route 72 from Main Street to Rockwell Park.



COMMUNITY
connectivity program

Appendix A



AECOM
Built to deliver a better world

Welcome to the Community Connectivity Program Application



Please fill in the following information to provide the Audit team leaders with a comprehensive description of the area contained in this application.

1. Applicant contact information

Name	<input type="text"/>
Title	<input type="text"/>
Email Address	<input type="text"/>
Telephone Number	<input type="text"/>

2. Location information

Address	<input type="text"/>
Description	<input type="text"/>
City / Town	<input type="text"/>

3. Roadway type
(Please select all that apply)

State road

Local road

Private Road

Other (please specify)

4. Zoning
(Please select all that apply)

Industrial

Residential

Commercial

Mixed Use

Retail

N/A (not applicable)

Other (please specify)

5. Approximate mile radius around the location

Other (Please Specify)

6. Community Sites
(Please select all that apply)

Community Centers

Business Districts

Restaurant/Bar Districts

Churches

Housing Complexes

Proximity to Schools

Tourist Locations (examples – Casino, Malls, Parks, Aquarium, etc...)

N/A (not applicable)

Other (please specify)

7. Employment Facilities
(Retail, Industrial, etc...)

Yes

No

If Yes please describe (please specify)

8. Educational facilities

(Please select all that apply)

Public, Parochial, Private Schools (more than 1 school within a ½ mile)

University / Community Colleges

N/A (not applicable)

Other (please specify)

9. Transit facilities

(Please select all that apply)

Bus

Rail

Ferry

Airport

Park and Ride Lot

N/A (not applicable)

Other (please specify)

10. Safety Concerns
(Please select all that apply)

Traffic (volumes & speed)

Collisions

Sidewalks

Traffic Signals

Traffic Signs

Parking Restrictions / Additions

Drainage

ADA Accommodations

Agricultural & Live Stock crossing

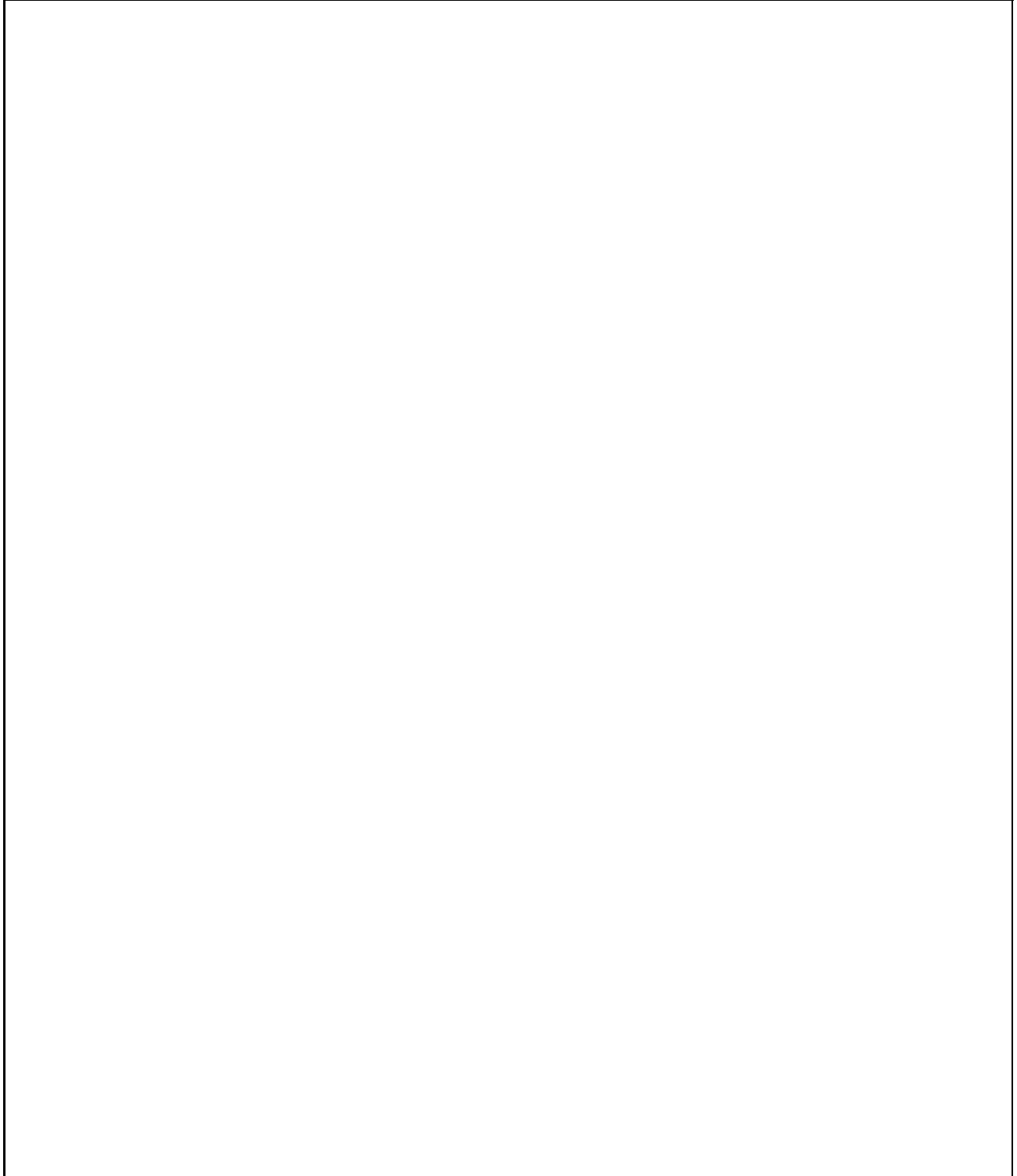
Maintenance issues (cutting grass, leaves, snow removal)

N/A (not applicable)

Other (please specify)

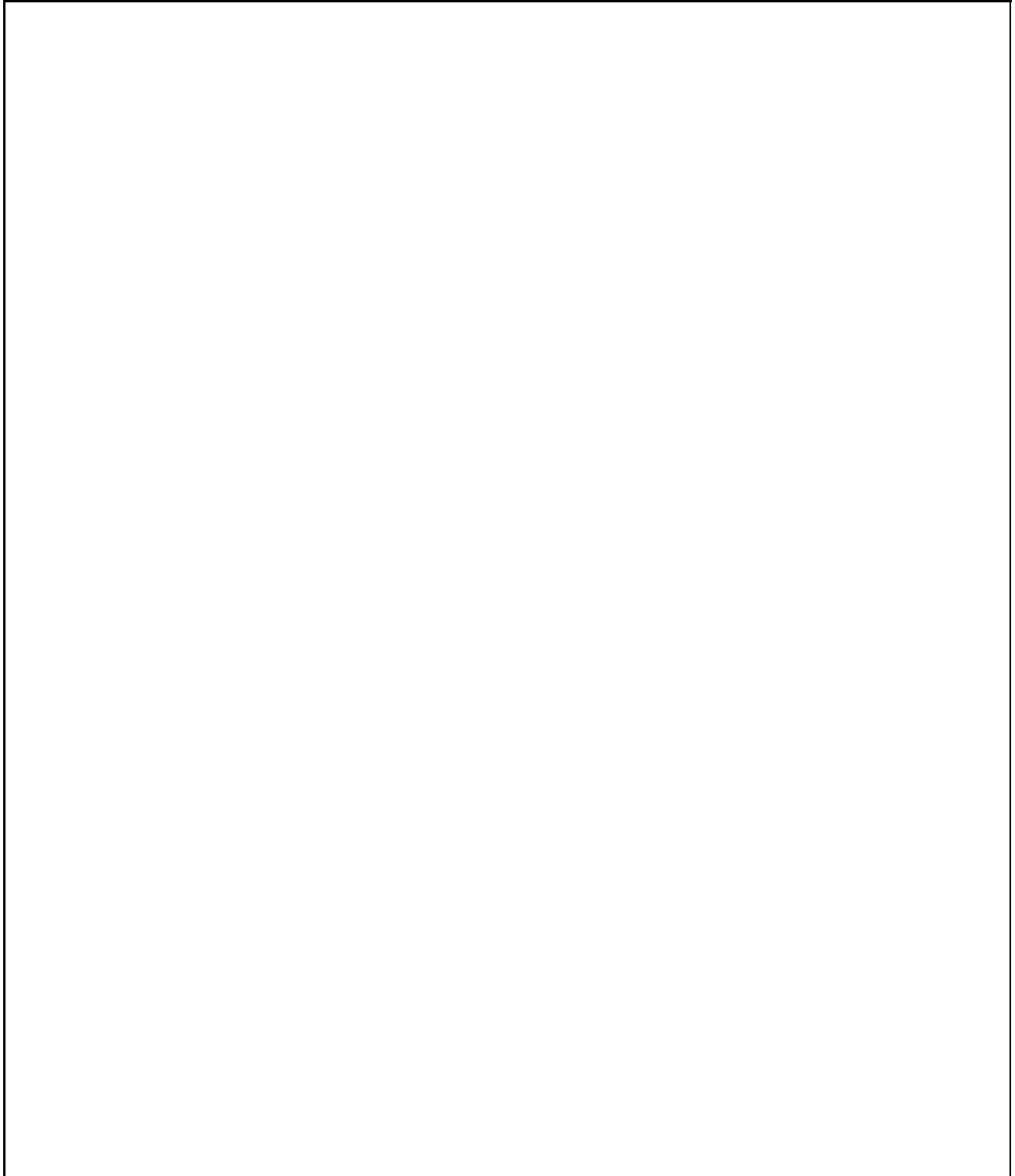
11. Are there any past, current or future transportation/economic development projects near this location (i.e. Federal, State or local projects)?

If Yes please describe and list all projects.

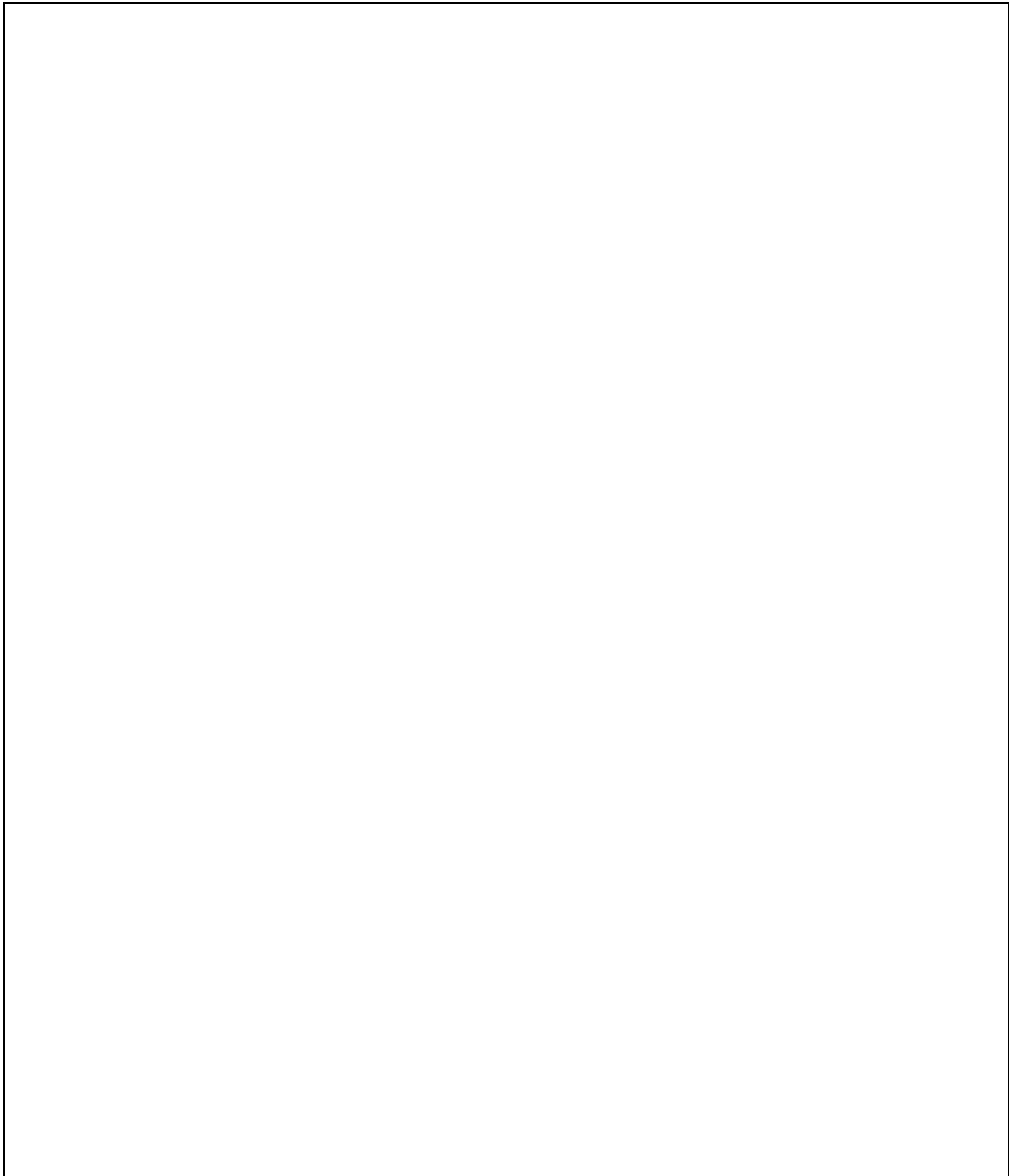
A large, empty rectangular box with a thin black border, intended for the user to describe and list any past, current, or future transportation or economic development projects near the location. The box is currently blank.

12. Environmental Concerns:

If Yes please describe and list.

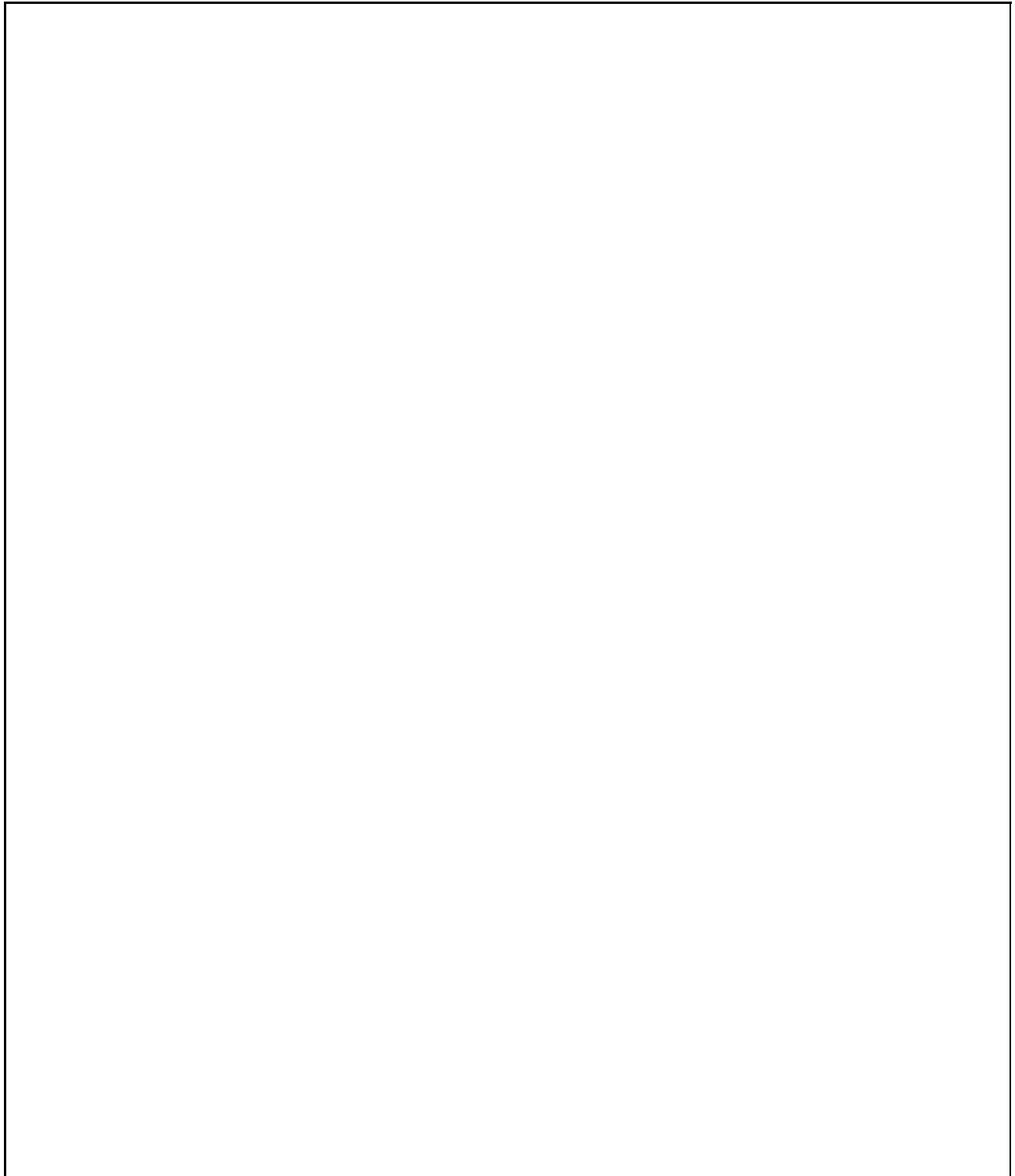
A large, empty rectangular box with a thin black border, intended for the user to describe and list any environmental concerns. The box occupies most of the page's vertical space below the instruction.

13. Please explain why this location should be considered for an RSA

A large, empty rectangular box with a thin black border, intended for the user to provide an explanation for why a location should be considered for an RSA. The box occupies most of the page's vertical space below the question.

14. Are there plans to expand the area?

(Transportation Oriented Development, Economic Development, housing, etc...)



15. Any other pertinent information that is unique to this location?

A large, empty rectangular box with a thin black border, intended for the user to provide any other pertinent information unique to the location.

Thank you for completing the Community Connectivity application.

Please click on the "submit button" below and include the following attachments

- 1 Location map (google, GIS) **(Required)**
- 2 Collision data (If available)
- 3 Traffic data (ADT or VMT) (If available)
- 4 Pedestrian/bicycle data (If available)

Average Daily Traffic Count- City of Bristol Pedestrian/Bike Path Corridor

Location		ADT (2012)
Riverside Ave	W of Middle St	21,900
Memorial Blvd	E of Mellen St	8,200
School St	W of Main St	10,900
School St	E of West St	12,500
School St	W of West St	14,300
Park St	W of Landry St	8,900
Park St	E of Divinity St	10,200
Park St	W of Divinity St	12,300

NOTE: Pedestrian/Bicycle data not available

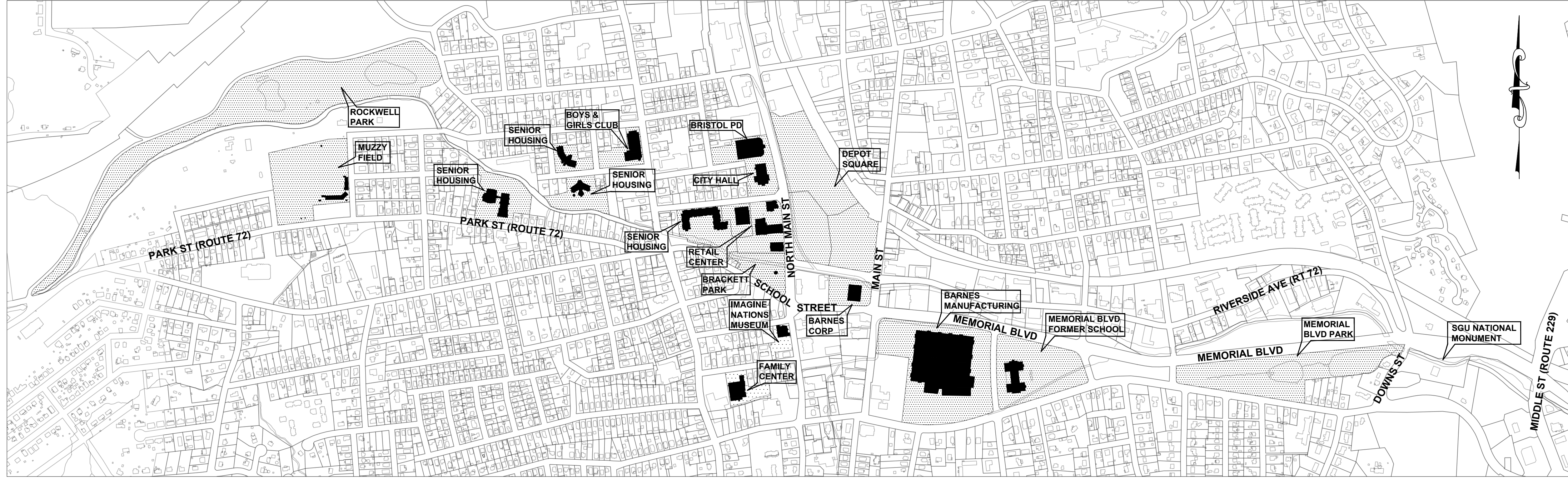
Bristol Police Department
 Crash Data for RT 72 & Memorial Blvd
 YEARS 2014 & 2015

2014	INJURY	NO INJURY	UNKNOWN	HIT & RUN	PEDESTRIAN
Terryville Rd	2	15	0	0	0
Park St	6	16	0	2	0
School St	0	5	0	0	0
Main St	0	1	0	0	0
Riverside Ave	9	32	2	4	1
Subtotal:	17	69	2	6	1
2014 CRASH TOTAL:	95				

2015	INJURY	NO INJURY	UNKNOWN	HIT & RUN	PEDESTRIAN
Terryville Rd	2	9	0	0	0
Park St	6	16	0	1	0
School St	2	7	0	1	0
Main St	0	1	0	0	0
Riverside Ave	11	25	0	2	0
Subtotal:	21	58	0	4	0
2015 CRASH TOTAL:	83				

2014	INJURY	NO INJURY	UNKNOWN	HIT & RUN	PEDESTRIAN
Memorial Blvd	3	8	0	1	0
Subtotal:	3	8	0	1	0
2014 CRASH TOTAL:	12				

2015	INJURY	NO INJURY	UNKNOWN	HIT & RUN	PEDESTRIAN
Memorial Blvd	6	9	0	3	0
Subtotal:	6	9	0	3	0
2015 CRASH TOTAL:	18				



Community Connectivity Program
 at Memorial Boulevard
 Bristol, Connecticut

PLAN

DRAWING NUMBER:

1

DESIGN BY: JCO
 DRAFTED BY:
 CHECKED BY:
 SCALE: 1" = 50'
 DATE: 02/24/16
 PROJECT NO.:

NO. DATE COMMENTS:

NO.	DATE	COMMENTS

PREPARED BY:

City of Bristol
 Department of Public Works

111 North Main Street
 Bristol, Connecticut 06010



Tel. 860-584-6125
 Fax 860-584-3838
 c.bristol.ct.us

SGU NATIONAL MONUMENT COMMITTEE

PAT NELLIGAN, CO-CHAIR
BRISTOL VETERANS COUNCIL

SAR PHOUTHASACK, CO-CHAIR
SGU LAO HMONG VETERANS

TOM BATTLES

ZOE BELCHER

DENNIS BUDEN

BOB BUTLER

DAVE CARELLO

GEORGE CASTLE

AL CIANCHETTI

DAVID DIXON

DONNA DOGNIN

BOB RENTAS

ANNALISA RUSSELL-SMITH

DENNIS TARICANI

DAN THURSTON

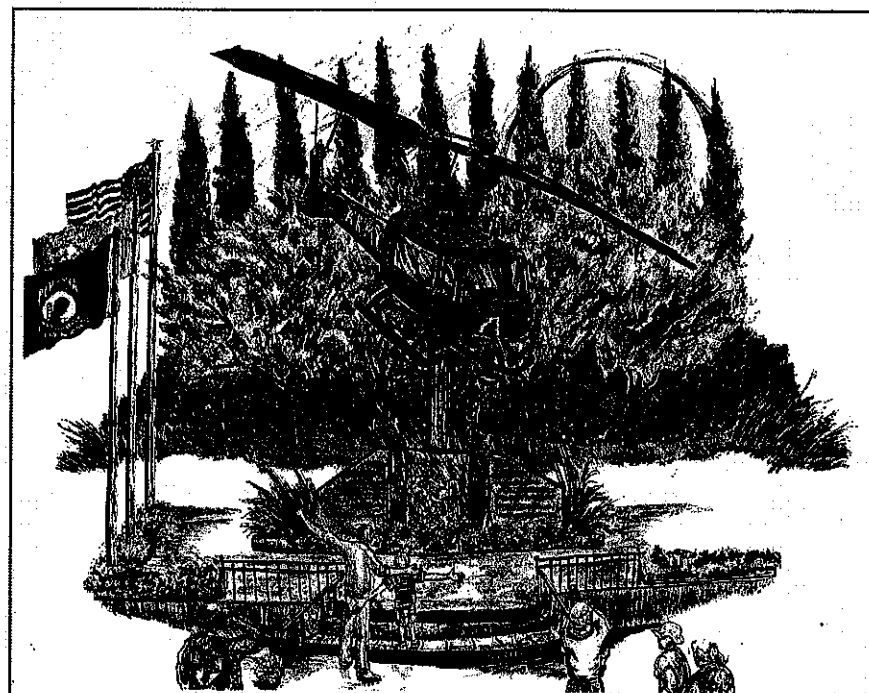
RUSS TRUDEL

CARL VENDITTO

BOUA TONG XIONG



*“HONORING THOSE
WHO HAVE HONORED US.”*



**SGU (SPECIAL GUERRILLA UNIT)
NATIONAL MONUMENT**

BRISTOL, CONNECTICUT

What is the SGU National Monument?

The **SGU (Special Guerilla Unit) National Monument**, currently in the early planning and fundraising stages, will honor the service and sacrifice of the **Special Guerilla Unit**, a “secret army” of multi-ethnic Laotian freedom fighters recruited, trained and directed by the United States Government to provide aid and support to U.S. troops in Vietnam.

How did the SGU assist the United States?



The SGU provided critical support to American troops throughout Southeast Asia from 1960-1975. U.S.-trained Laotian forces, primarily **Lao Hmong** troops, gathered intelligence, thwarted the North Vietnamese along the Ho Chi Minh Trail, coordinated air

strikes, protected radar sites, served as jungle fighters and rescued countless American pilots downed behind enemy lines. Tens of thousands of SGU freedom fighters lost their lives aiding the U.S. and its troops.

Why is this monument so important?

For decades, the “Secret Army” was just that—a vital, but unknown, part of America’s intervention in Southeast Asia half a century ago. Today, the story of the service and sacrifice of the SGU and Lao Hmong people is finally being told. Following the fall of Saigon in 1975, thousands of SGU freedom fighters were imprisoned in North Vietnamese POW camps or escaped to refugee camps in Thailand. Many thousands ultimately made their way to the United States. Just as monuments across the nation honor American war veterans and so many we’ve lost, so too must we honor the Special Guerilla Unit.

Where will the monument be located?

The monument will be located next to the historic Downs Street Cemetery in Bristol, at the easternmost end of Memorial Boulevard, site of the former Trudon & Platt Trucking Company.

Who is behind this monument?

The monument is a project of the **Bristol Veterans Council**, with the assistance of **SGU Lao Hmong veterans, the City of Bristol, HRP Associates, Milone & MacBroom** and others. A volunteer committee consisting of members of the Bristol Veterans Council, Connecticut and SGU veterans and local veterans supporters is managing the project.

What will the monument look like?

The monument is in its earliest conceptual stages. The vision is to honor the SGU by depicting an iconic scene — that of SGU freedom fighters coming to the aid of a downed U.S. pilot. A donated Huey helicopter, a mainstay in Vietnam, would hover above black granite blocks laser engraved with scenes of the rescue. The story of the SGU would be engraved in English and in Lao. American, Lao, POW/MIA, Connecticut and Bristol flags would fly before a backdrop of flowering trees.



What will the monument cost and how will it be paid for?

The **SGU National Monument Committee** is now in the process of assessing site work, design options/costs and materials/construction considerations and will be establishing a fundraising goal and project timetable this summer. The monument will be entirely paid for through a major public fundraising effort.

PLEASE MAIL YOUR TAX-DEDUCTIBLE DONATIONS TO BRISTOL VETERANS COUNCIL/SGU MONUMENT, PO BOX 2634, BRISTOL, CT 06011

THE BRISTOL VETERANS COUNCIL IS A 501(C)(3) NON-PROFIT ORGANIZATION.



COMMUNITY
connectivity program

Appendix B



AECOM
Built to deliver a better world



Road Safety Audit

Town: Bristol
RSA Location: Route 72
Meeting Location: Bristol Department of Public Works
Address: 111 North Main Street, Bristol, CT 06010
Date: 4/17/2017
Time: 8:30AM

Participating Audit Team Members

Audit Team Member	Agency/Organization
Audit Team Member	Agency/Affiliation
Stephen Mitchell	AECOM
Bridget Boucaud	VN Engineers
Marlon Pena	CTDOT
Anna Bergeron	CTDOT
Priscilla Ouellette	CTDOT
Raymond Rogozinski	City of Bristol
Russ Marcham	City of Bristol
Bob Desmarais	Bikers Edge - Owner
Walter Veselka	Bristol Public Works
Todd Kozaryn	Bristol Police
John Oliveto	Bristol Engineering



COMMUNITY
connectivity program

Appendix C



AECOM
Built to deliver a better world



Road Safety Audit – Bristol

Meeting Location: Bristol DPW
Address: 111 North Main Street, Bristol, CT 06010
Date: 4/17/17
Time: 8:30 AM

Agenda

- Type of Meeting:** Road Safety Audit – Pedestrian Safety
- Attendees:** Invited Participants to Comprise a Multidisciplinary Team
- Please Bring:** Thoughts and Enthusiasm!!
- 8:30 AM** **Welcome and Introductions**
- Purpose and Goals
 - Agenda
- 8:45 AM** **Pre-Audit**
- Definition of Study Area
 - Review Site Specific Data:
 - Average Daily Traffic
 - Crash Data
 - Geometrics
 - Issues
 - Safety Procedures
- 10:00 AM** **Audit**
- Visit Site
 - As a group, identify areas for improvements
- 12:00 PM** **Post-Audit Discussion / Completion of RSA**
- Discussion observations and finalize findings
 - Discuss potential improvements and final recommendations
 - Next Steps
- 2:30 PM** **Adjourn for the Day – but the RSA has not ended**

Instruction for Participants:

- Before attending the RSA, participants are encouraged to observe the intersection and complete/consider elements on the RSA Prompt List with a focus on safety.
- All participants will be actively involved in the process throughout. Participants are encouraged to come with thoughts and ideas, but are reminded that the synergy that develops and respect for others' opinions are key elements to the success of the overall RSA process.
- After the RSA meeting, participants will be asked to comment and respond to the document materials to assure it is reflective of the RSA completed by the multidisciplinary team.



Audit Checklist

Pedestrians and Bicycles	Comment
<p>Pedestrian Crossings</p> <ul style="list-style-type: none">• Sufficient time to cross (signal)• Signage• Pavement Markings• Detectable warning devices (signal)• Adequate sight distance• Wheelchair accessible ramps<ul style="list-style-type: none">○ Grades○ Orientation○ Tactile Warning Strips• Pedestrian refuge at islands• Other	
<p>Pedestrian Facilities</p> <ul style="list-style-type: none">• Sidewalk<ul style="list-style-type: none">○ Width○ Grade○ Materials/Condition○ Drainage○ Buffer• Pedestrian lighting• Pedestrian amenities (benches, trash receptacles)• Other	



Bicycles <ul style="list-style-type: none">• Bicycle facilities/design• Separation from traffic• Conflicts with on-street parking• Pedestrian Conflicts• Bicycle signal detection• Visibility• Roadway speed limit• Bicycle signage/markings• Shared Lane Width• Shoulder condition/width• Traffic volume• Heavy vehicles• Pavement condition• Other	
--	--

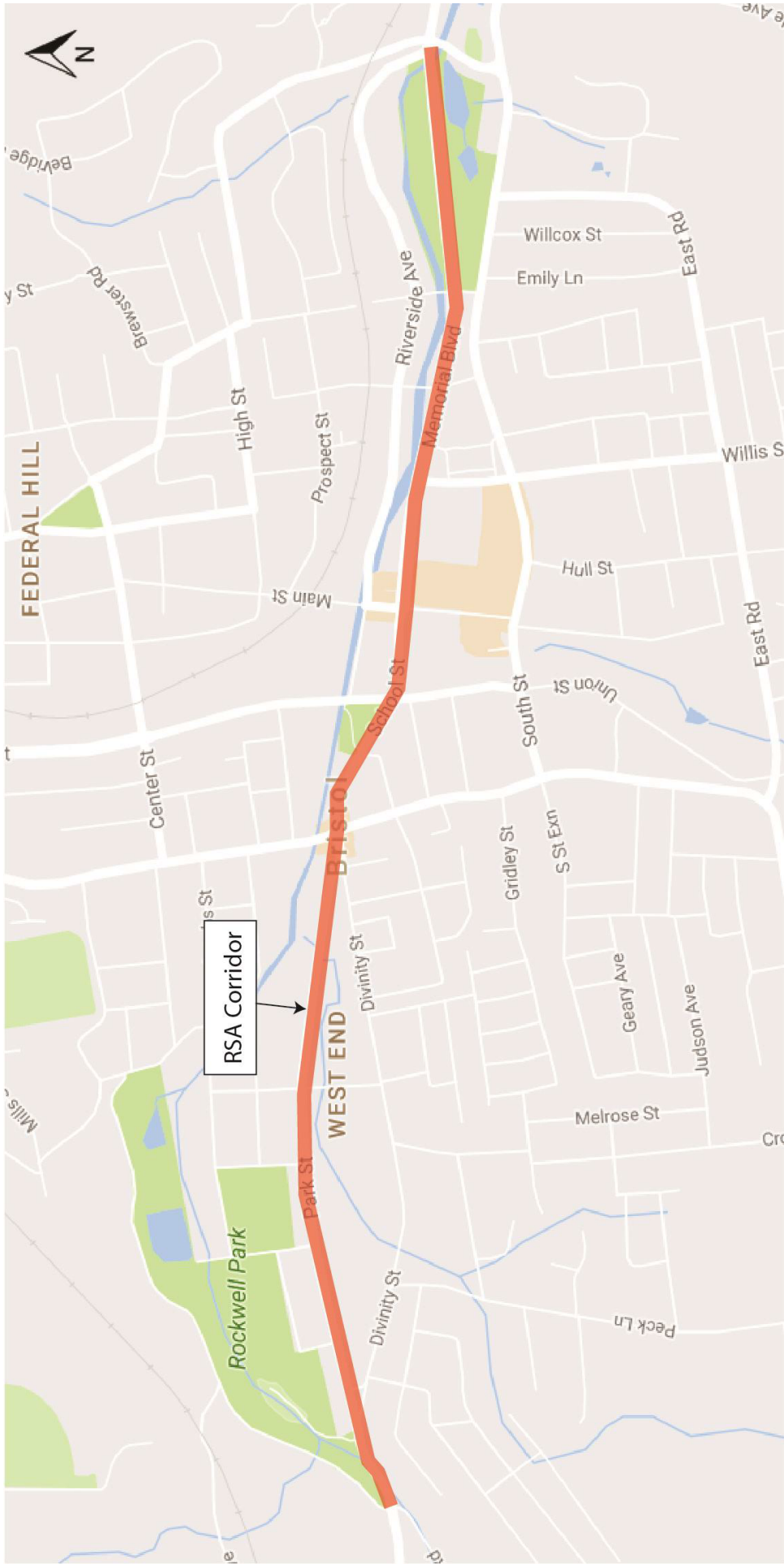
Roadway & Vehicles	
<ul style="list-style-type: none">• Speed-related issues<ul style="list-style-type: none">○ Alignment;○ Driver compliance with speed limits○ Sight distance adequacy○ Safe passing opportunities	
<ul style="list-style-type: none">• Geometry<ul style="list-style-type: none">○ Road width (lanes, shoulders, medians);○ Access points;○ Drainage○ Tapers and lane shifts○ Roadside clear zone /slopes○ Guide rails / protection systems	

<ul style="list-style-type: none">• Intersections<ul style="list-style-type: none">○ Geometrics○ Sight Distance○ Traffic control devices○ Safe storage for turning vehicles○ Capacity Issues	
--	--

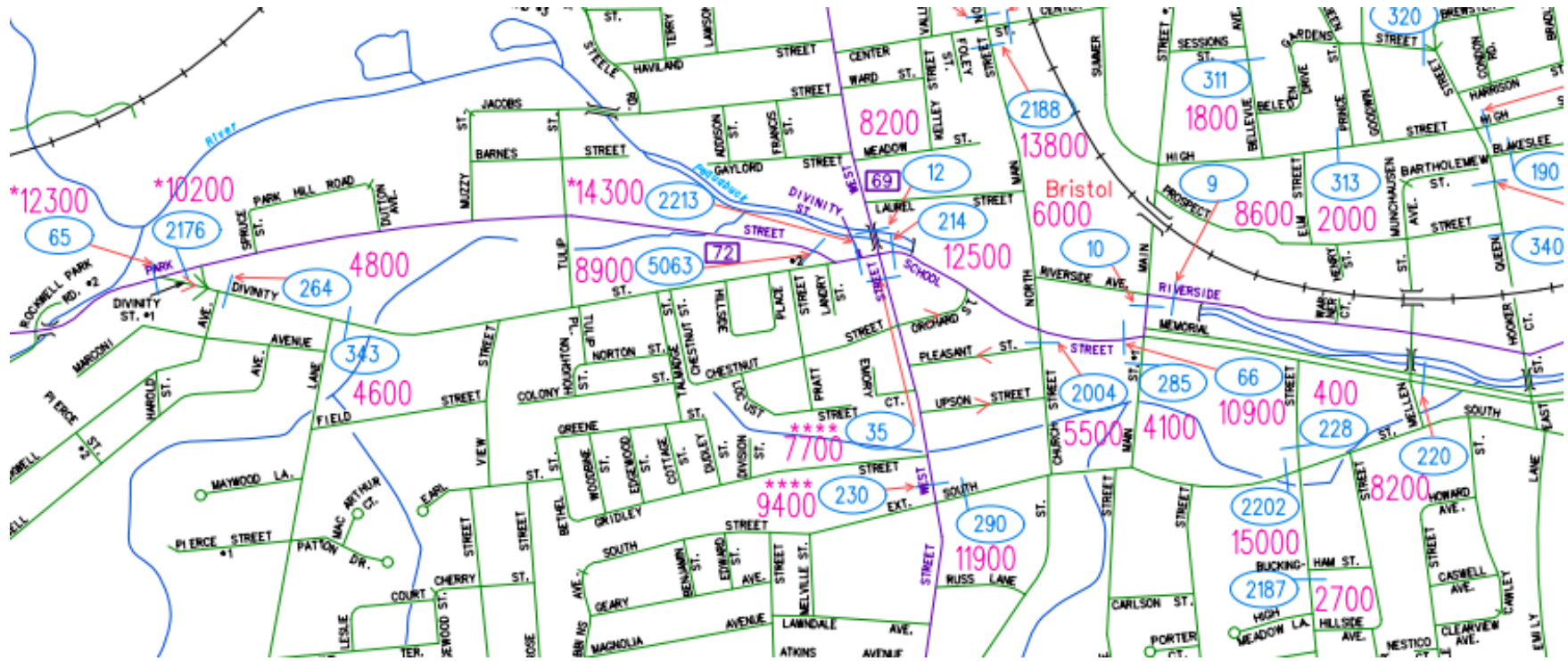


<ul style="list-style-type: none">• Pavement<ul style="list-style-type: none">○ Pavement Condition (excessive roughness or rutting, potholes, loose material)○ Edge drop-offs○ Drainage issues• Lighting Adequacy	
<ul style="list-style-type: none">• Signing<ul style="list-style-type: none">• Correct use of signing• Clear Message• Good placement for visibility• Adequate retroreflectivity• Proper support	
<ul style="list-style-type: none">• Signals<ul style="list-style-type: none">○ Proper visibility○ Proper operation○ Efficient operation○ Safe placement of equipment○ Proper sight distance○ Adequate capacity	
<ul style="list-style-type: none">• Pavement Markings<ul style="list-style-type: none">○ Correct and consistent with MUTCD○ Adequate visibility○ Condition○ Edgelines provided	
<ul style="list-style-type: none">• Miscellaneous<ul style="list-style-type: none">○ Weather conditions impact on design features.○ Snow storage	

Location Map



ADT MAP



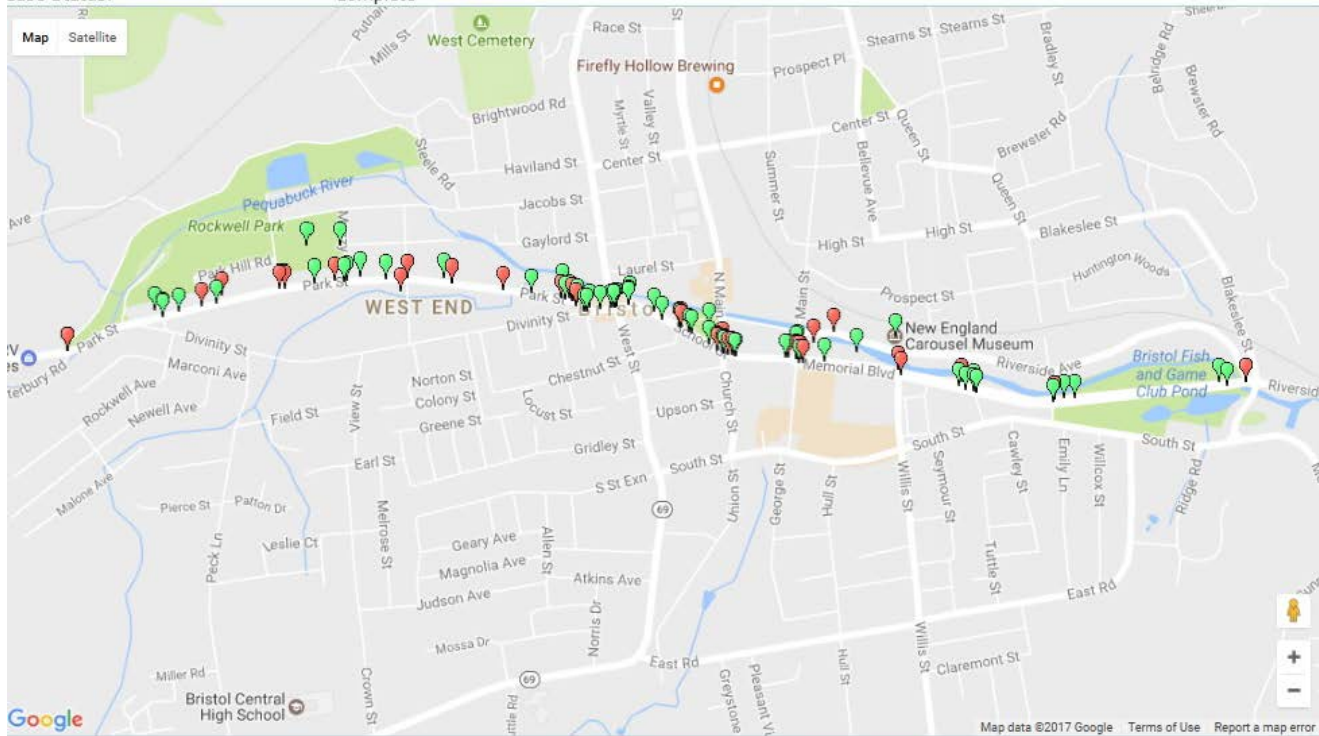
2015/2016 Crashes

UConn

Connecticut Crash Data Repository

Search Criteria:

Dataset: mmucc
Towns: Bristol
Town & Route: 17 Route:367 Intersection:undefined Milepost:-
Town & Route: 17 Route:72 Intersection:undefined Milepost:9.5-11
Crash Severity: Injury of any type (Serious, Minor, Possible), Fatal (Kill), Property Damage Only
Case Status: Complete



Injury of any type (Serious, Minor, Possible) Fatal (Kill)
 Property Damage Only
Route Segment Scale
0 0



Road Safety Audit – Bristol

Crash Summary

Data: 3 years (2012-2014)

There were 3 crashes that involved pedestrians.

There were 3 crashes involving bicyclists.

Severity Type	Number of Crashes	
Property Damage Only	136	74%
Injury (No fatality)	47	26%
Fatality	0	0%
Total	183	

Manner of Crash / Collision Impact	Number of Crashes	
Unknown	1	1%
Sideswipe-Same Direction	16	9%
Rear-end	77	42%
Turning-Intersecting Paths	16	9%
Turning-Opposite Direction	15	8%
Fixed Object	17	9%
Backing	9	5%
Angle	11	6%
Turning-Same Direction	4	2%
Moving Object	4	2%
Parking	1	1%
Pedestrian	0	0%
Overturn	3	2%
Head-on	2	1%
Sideswipe-Opposite Direction	6	3%
Miscellaneous- Non Collision	1	1%
Total	183	



Weather Condition	Number of Crashes	
Snow	10	5%
Rain	16	9%
No Adverse Condition	154	84%
Unknown	0	0%
Blowing Sand, Soil, Dirt or Snow	1	1%
Severe Crosswinds	0	0%
Sleet, Hail	2	1%
Other	0	0%
Total	183	

Light Condition	Number of Crashes	
Dark-Not Lighted	3	2%
Dark-Lighted	27	15%
Daylight	150	82%
Dusk	1	1%
Unknown	0	0%
Dawn	2	1%
Total	183	

Road Surface Condition	Number of Crashes	
Snow/Slush	13	7%
Wet	29	16%
Dry	139	76%
Unknown	0	0%
Ice	1	1%
Other	1	0.5%
Total	183	



Time		Number of Crashes	
0:00	0:59	1	1%
1:00	1:59	2	1%
2:00	2:59	1	1%
3:00	3:59	1	1%
4:00	4:59	0	0%
5:00	5:59	3	2%
6:00	6:59	2	1%
7:00	7:59	5	3%
8:00	8:59	7	4%
9:00	9:59	13	7%
10:00	10:59	13	7%
11:00	11:59	13	7%
12:00	12:59	14	8%
13:00	13:59	13	7%
14:00	14:59	9	5%
15:00	15:59	20	11%
16:00	16:59	20	11%
17:00	17:59	17	9%
18:00	18:59	10	5%
19:00	19:59	7	4%
20:00	20:59	1	1%
21:00	21:59	3	2%
22:00	22:59	7	4%
23:00	23:59	1	1%
Total		183	



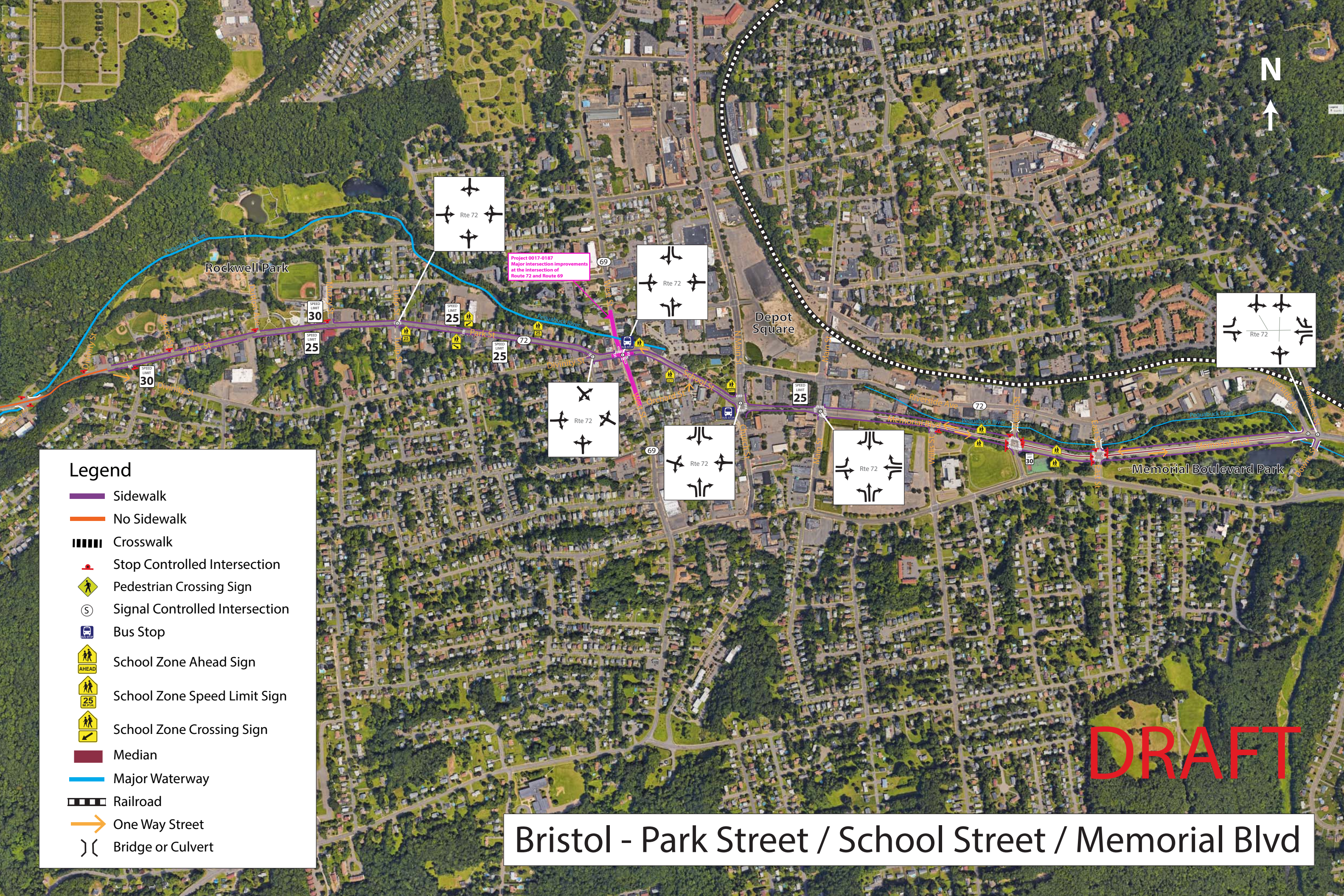
Project 0017-0187
Major Intersection Improvements
at the Intersection of
Route 72 and Route 69

Legend

- Sidewalk
- No Sidewalk
- Crosswalk
- Stop Controlled Intersection
- Pedestrian Crossing Sign
- Signal Controlled Intersection
- Bus Stop
- School Zone Ahead Sign
- School Zone Speed Limit Sign
- School Zone Crossing Sign
- Median
- Major Waterway
- Railroad
- One Way Street
- Bridge or Culvert

Bristol - Park Street / School Street / Memorial Blvd

DRAFT





Post-Audit Discussion Guide

Safety Issues

- Confirmation of safety issues identified during walking audit

Potential Countermeasures

- Short Term recommendations

- Medium Term recommendations

- Long Term recommendations

Next Steps

- Discussion regarding responsibilities for implementing the countermeasures (including funding)



Road Safety Audit – Bristol

Fact Sheet

Functional Classification:

- Memorial Blvd is classified as a Minor Arterial
- School St is classified as a Principal Arterial – other
- Park St is classified as a Principal Arterial - other

ADT

- ADT on Memorial Blvd is 8,200
- ADT on School St is 10,900-14,300
- ADT on Park St is 8,900 – 12,300

Population and Employment Data (2014):

- Population: 60,556
- Employment: 61,977

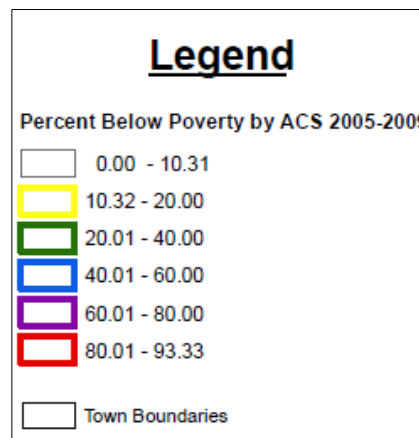
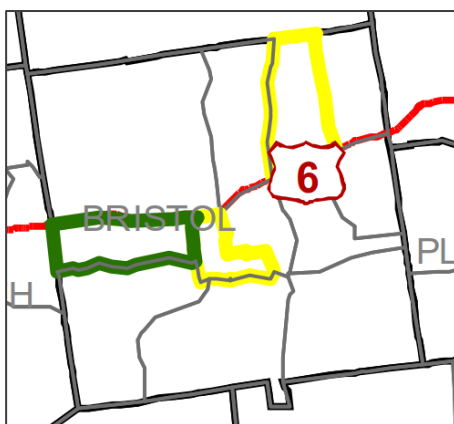


Urbanized Area

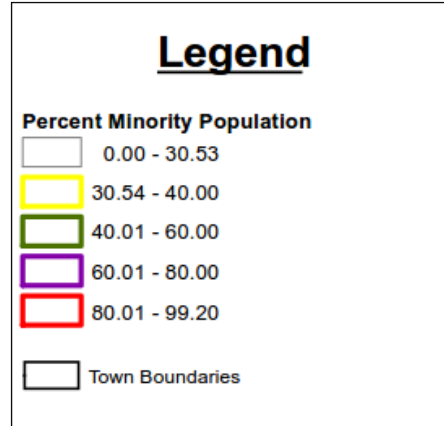
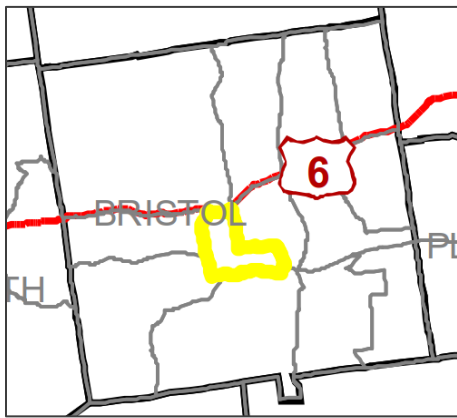
- Bristol is in the Hartford Urbanized Area

Demographics

- The statewide average percentage below the poverty line is 10.31%. Within the vicinity of Park Street/School Street/Memorial Blvd up to 40% of residents are below the state poverty level.



- The statewide average percentage minority population is 30.53%. Within the vicinity of Park Street/School Street/Memorial Blvd up to 40% of residents are minorities.



Air Quality

- Bristol's CIPP number 204
- Bristol is within the Greater CT Marginal Ozone Area
- Bristol is within a CO Attainment Area