Elmwood Avenue Enhancement

Providence, Rhode Island

COMMUNITYWORKS RHODE ISLAND

PREPARED BY L+A LANDSCAPE ARCHITECTURE

JULY 1, 2010

“We know we’re always going to have streets for people to drive on, but we know that people want to bike and hike and walk. And we want to provide those opportunities for the exercise it provides, for the family opportunities for people to be together, to get outdoors, and so many other things that come about as a result of it.

– Ray LaHood United States Secretary of Transportation

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Prologue

Streets are the largest public space in our cities.

The recommendations in this report will enhance the public safety, accessibility, and environmental beauty of historic Elmwood Avenue so that the s treet can again fulfill its' role as the neighborhood "Main Street."

Overall strategies for improvement along the entire avenue are proposed — with three zones along the avenue being identified in community meetings and conversations with critical constituents as priorities for the current Elmwood Avenue/RIDOT project:

- *The School Zone / Safe Route to Schools: addresses safety and pedestrian access to the academic and civic institutions clustered near the Knight Memorial Library.*
- *Columbus Square: addresses the potential of this area to be the vital social and economic center of the Elmwood, Reservoir, and West End neighborhoods with improved access, enlarged and renovated public spaces, and development opportunities for neighborhood commercial businesses.*
- *The South Elmwood Bikeway: address easier and safer pedestrian and bicycle access from the neighborhood to Roger Williams Park. Improvements along this length of the avenue not only serves the neighborhood, but also serves all of those in the city seeking safe access to the city's landmark public park.*

In addition, overall strategies for improvements along the entire avenue are proposed.

These recommendations represent the aspirations of the neighborhoods for a complete, multi-modal, pedestrian and bicycle accessible, public space that enhances the everyday lives of residents.

Senator Juan Pichardo
Senate District 2, Rhode Island

Carrie Marsh, executive director
CommunityWorks Rhode Island

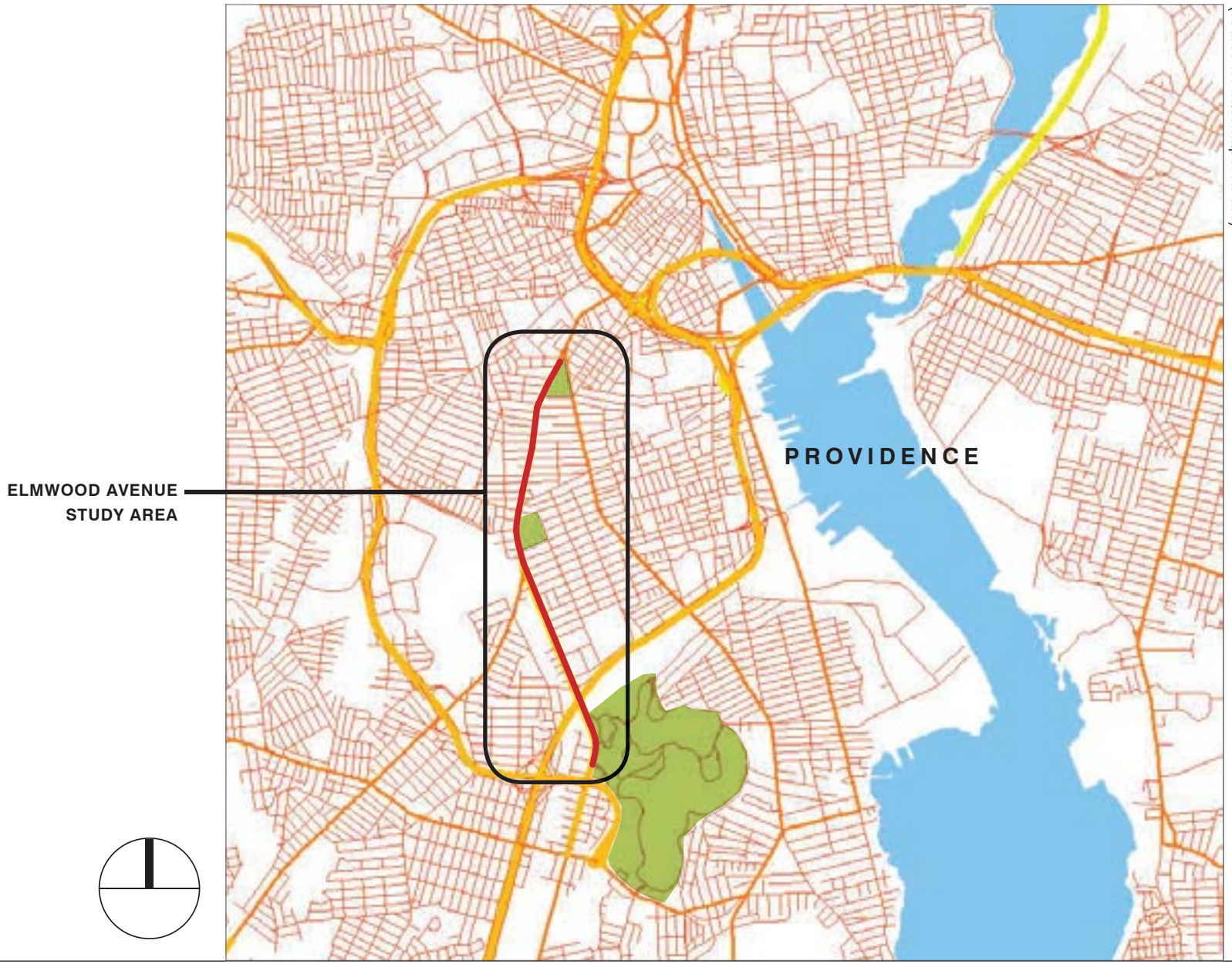
Study Area

Elmwood Avenue is part of US Highway 1, the historic federal route that extends from Maine to Florida and which has been superceded by Interstate 95. Due to the status of the street as a federal highway, the maintenance and engineering of Elmwood Avenue is the responsibility of the Rhode Island Department of Transportation (RIDOT).

Elmwood Avenue was among the first of the Providence's streets along which streetcars travelled. It was an elegant elm-lined street with broad sidewalks and a gracious public realm that connected downtown Providence at Trinity Square to the City's pre-eminent public space, Roger Williams Park in the south. It was also an early center of automobile culture in the city with showrooms and service stations clustered near Columbus Square.

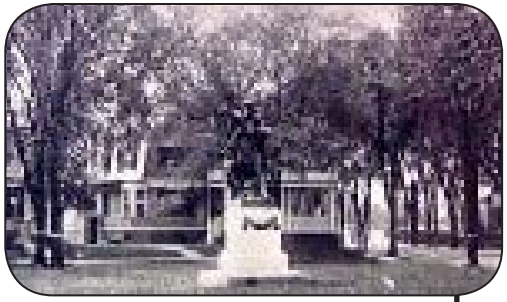
The current configuration of the street largely dates from the late 1930s when the electric trolleys were replaced, the street widened, and the elms — the tree that gave the neighborhood and street its name were removed. The southern end of the street was modified for the construction of Interstate Highway 95 in the early 1960s, which also cut the neighborhood off from Roger Williams Park.

The Study Area for this Report comprises the full length of Elmwood Avenue in Providence - from Trinity Square in the north to Roger Williams Park in the south.



(source for basemaps: RI GIS)

Cady Map



View of Elmwood Avenue south from Sprague Street

1750

1801 Platting began by Benjamin Dyer along Peace and Plenty Street.

1843 J. J. Cooke began to develop area between Congress and Sackett Street to Adelaide Avenue. He named his development ELMWOOD

1855 Elmwood Omnibus Company (horse drawn coaches) running from Market Square downtown to Elmwood at Potters

1865 Civil War ends with Providence a prosperous manufacturing center

1871

Initial planning, land acquisition, and development of Roger Williams Park

Anna Mann Gates at Roger Williams Park

1894

Citizens donate statue of Christopher Columbus designed by Bartholdi, sculptor of the Statue of Liberty, and cast at nearby Gorham Silver. Union Railroad Company electrified

1899

By 1900, real estate along Elmwood Avenue was fully developed out to Roger Williams Park

1880's – 90's Elmwood was home to numerous manufacturers of jewelry, metals and textiles. Fruit of the Loom, one of the world's largest manufacturers operated 21 mills in RI and MA. Gorham factory opened near Mashapaug Pond.

Image source: RI Historical society

construction of I-95 complete. Looking south from Roger Williams Avenue

1923

Knight Memorial Library built. Automobiles, garages, car sales, service stations proliferate along Elmwood Avenue

Widening of Elmwood Avenue commences with cutting down of 189 trees, mostly healthy elms

1935

Note the line of elm tree stumps that stretch out along the trolley line

1946

Planning for thoroughfares

Traffic on Elmwood Avenue 1936

1950's Elmwood loses suburban character: deterioration of housing stock, single family homes convert to apartments, middle class population moved further outside Providence.

1956

After decades of debate and planning, Congress passed the federal-aid Highway Act, and the interstate network is born.

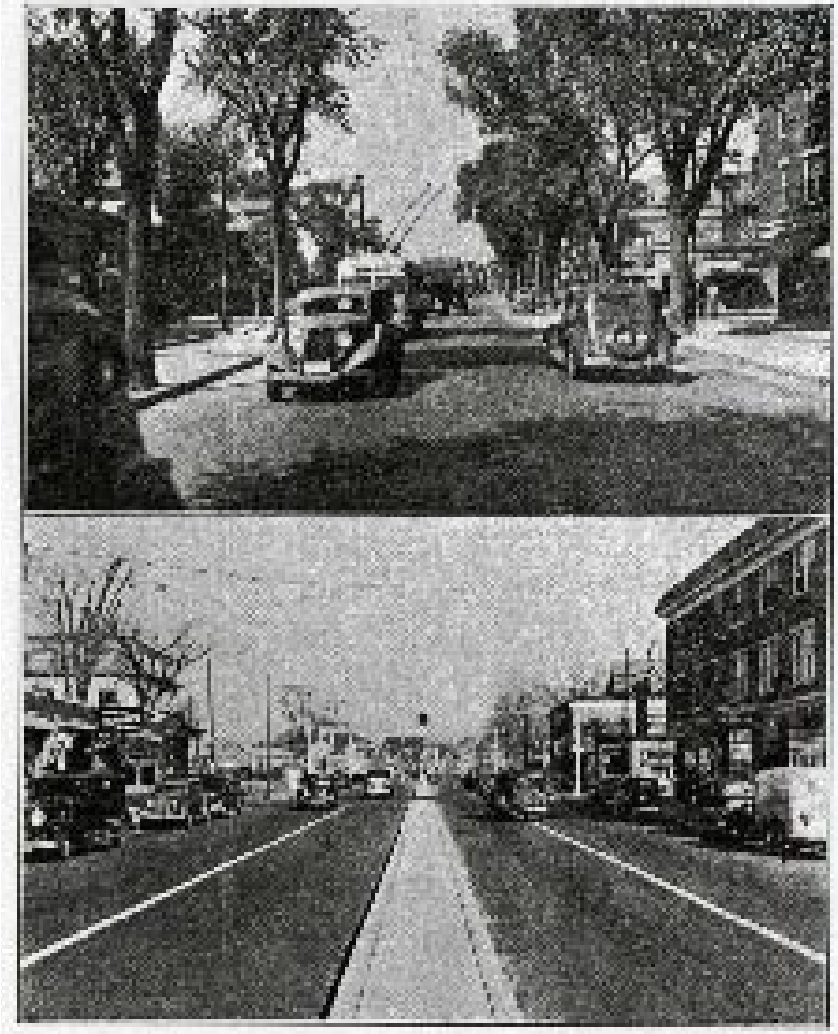
1970s By the early to mid 70's urban decay becomes highly visible: vacant property, spot demolition, lower property value, disinvestment.

1980 Elmwood Historic Districts established

Historical Timeline of Elmwood Avenue

Fig. 59: Elmwood Avenue north of Daboll Street before its reconstruction in 1936; photograph, c. 1936.

Fig. 60: Elmwood Avenue north of Daboll Street following its reconstruction in 1936; photograph, c. 1937.



ELMWOOD AVENUE, PROVIDENCE, RHODE ISLAND
Columbus Square to Park Avenue
Comparative conditions prior to and after reconstruction and widening of pavement and elimination of trolley tracks.

Image source: RI Historical society

ELMWOOD AVENUE BEFORE THOROUGHFARE WAS WIDENED
From Willemin Collection

Bus service replaces street cars. as a result, Elmwood Avenue was widened substantially and the elms that J.J. Cooke had planted were removed, thereby changing the character of the neighborhood forever.

In order to obtain the width required it was necessary to remove many large trees and also the trolley tracks which existed on each side of the street. An innovation in this construction was the provision of a raised medial island for the separation of opposing lines of traffic…

Statewide Historic Report: Elmwood 1979

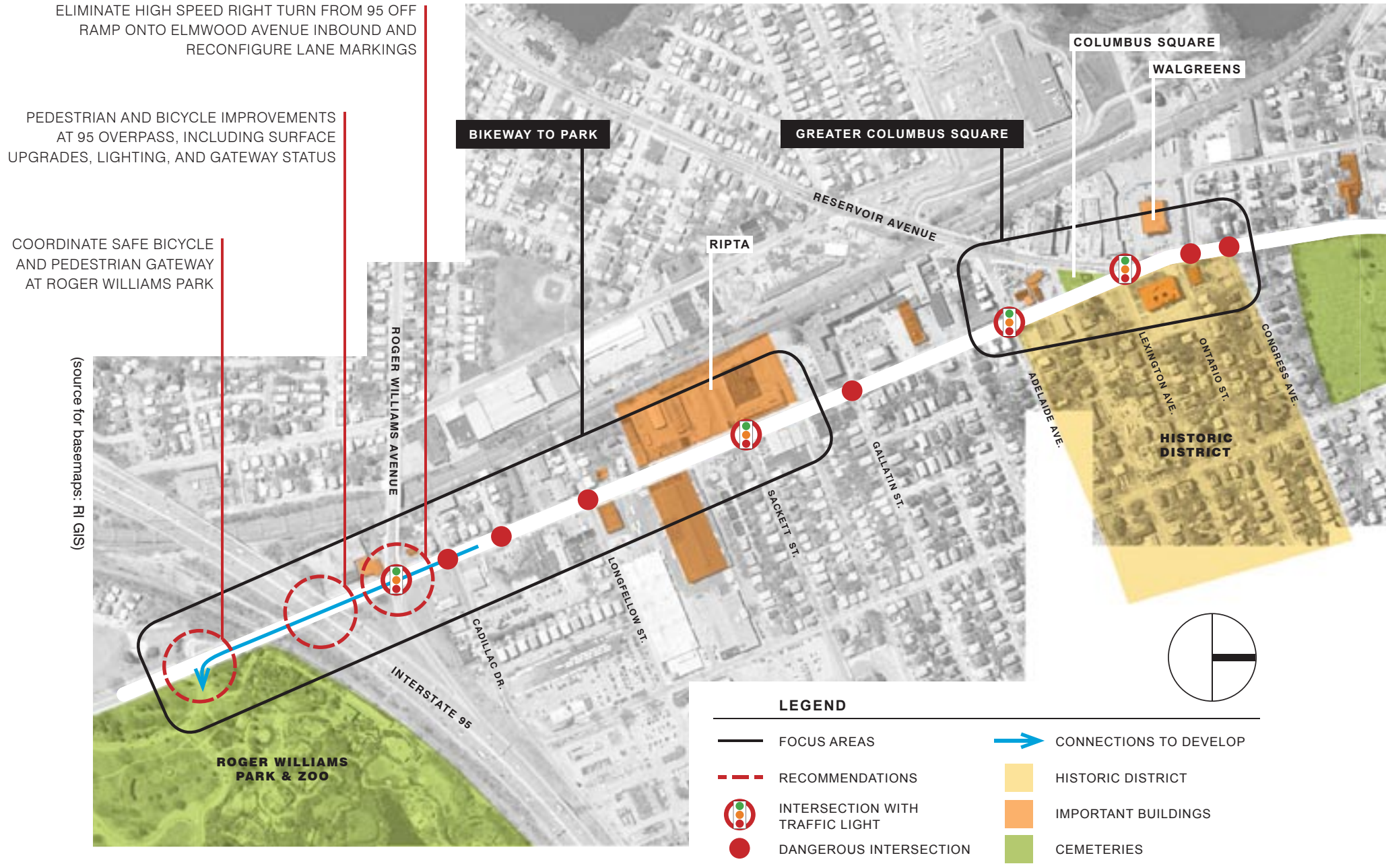
ONE OF ELMWOOD AVENUE'S DOOMED ELMS

Dec. 5, 1935

Far be it from me to attempt to block civilizations' greatest God, Progress, but I cannot refrain from adding the cry of an out-of-towner to the protest against the destruction of the Elmwood Avenue elms, which belong not just to a few who are citizens of Providence, but to all of us who call Rhode Island home, and to whom these elms represent more than sentiment...

Providence Journal Bulletin,
signed: A suburbanite, Apponaug

Historical Timeline of Elmwood Avenue


ELIMINATE HIGH SPEED RIGHT TURN FROM 95 OFF RAMP ONTO ELMWOOD AVENUE INBOUND AND RECONFIGURE LANE MARKINGS
PEDESTRIAN AND BICYCLE IMPROVEMENTS AT 95 OVERPASS, INCLUDING SURFACE UPGRADES, LIGHTING, AND GATEWAY STATUS
COORDINATE SAFE BICYCLE AND PEDESTRIAN GATEWAY AT ROGER WILLIAMS PARK
(source for basemaps: RI GIS)
BIKEWAY TO PARK
GREATER COLUMBUS SQUARE
COLUMBUS SQUARE
WALGREENS
RIPTA
RESERVOIR AVENUE
ROGER WILLIAMS AVENUE
ADELAIDE AVE.
LEXINGTON AVE.
ONTARIO ST.
CONGRESS AVE.
HISTORIC DISTRICT
GALLATIN ST.
SACKETT ST.
LONGFELLOW ST.
CADILLAC DR.
INTERSTATE 95
ROGER WILLIAMS PARK & ZOO
LEGEND
FOCUS AREAS
RECOMMENDATIONS
INTERSECTION WITH TRAFFIC LIGHT
DANGEROUS INTERSECTION
CONNECTIONS TO DEVELOP
HISTORIC DISTRICT
IMPORTANT BUILDINGS
CEMETERIES

IMPROVE SAFETY AT ELMWOOD AVE. AND POTTERS AVE., THE INTERSECTION WITH THE MOST TRAFFIC ACCIDENTS.

SCHOOL ZONE "HYPER BLOCK" BETWEEN PRINCETON AND DABOLL STREETS

SCHOOL ZONE FROM PLENTY STREET AT DHS TO THE NORTH AND MAWNEY STREET TO THE SOUTH

PATH LINKS TO CITY

COORDINATE WITH CEMETARY MASTER PLAN IMPROVEMENTS

Recommendations

Community Outreach and Process

CommunityWorks Rhode Island with the assistance of L + A Landscape Architecture coordinated a series of public meetings with Elmwood neighborhood groups. The purpose of the meetings was to gain concensus from several groups as to what the major concerns are. We met with school and local officials, bicycle groups, and residents all of whom expressed a desire to see Elmwood Avenue become a safer, pedestrian- friendly and bike friendly street.

L+A presented preliminary design ideas for three locations along Elmwood Avenue; The library/ school zone, Columbus Square/ Walgreen's and the southern leg of Elmwood which connects to Roger Williams Park (Bike Path).

The library/ school zone has a high volume of pedestrian activity due to he Gilbert Stuart Elementary School located behind the library and a number of high schools in the vicinity. There are also a lot of vehicular drop-offs here as well as a bus stop which adds to the congestion. The community turned down the idea of any temporary devices to narrow the crossings such as concrete barriers or bollards however they were overwhelmingly in favor of our proposed crosswalk bump-outs which they would like to see all along Elmwood. Some people were concerned that the bump-outs would eliminate parking for the businesses on the east side of the street. Everyone agreed that the bump-outs would take up the corners where people park illegally anyway.

Columbus Square/ Walgreen's is another high pedestrian area. The Walgreen's at this location has the highest customer volume of any Walgreen's in the state. It is possible that locals use it as a grocery store because there are no other grocery stores in the area. This area suffers as well from too many curb cuts and inconvenient places for pedestrians to cross. The Community was in favor of 'corrals' which direct pedestrians to cross at specific locations. Everyone responded favorably to the expansion of Columbus Square. People suggested a farmer's market, music etc. There was some concern about closing off Atlantic Avenue at the southern end of Columbus Square and making Reservoir Avenue one way south from Columbus Square, re-routing north traffic to Elmwood Avenue via Adelaide.

Community Outreach and Process

From Adelaide south to Roger Williams Park we presented a bike path which takes over a parking lane on the east side of the street and adds a planted parking lane between the bike path and traffic. This allows a safe place for families and children to connect to Roger Williams Park from the Elmwood neighborhoods without going out into traffic. Most people thought this was a good idea and a couple representatives of local bicycle groups were in favor, however, there was another cyclist who thought it would be more dangerous and not suited to Elmwood Avenue. The Church at Longfellow Street needs more parking especially on Friday nights and Sundays. Everyone was in favor of eliminating the 'turbo lane' at the 95 off ramp. There was a suggestion to add a commuter lot here.

In general, people were in favor of the bump-outs for all of Elmwood Avenue. They were in favor of the 'corrals' at Walgreen's. They want more pedestrian traffic signals, historic looking traffic and street lighting, and street amenities. It was suggested that the timing of lights needs to be fixed in order to slow down traffic. It seems that most people, especially business owners are in favor of having as much parking as possible. Everyone would like to see Columbus Square expanded. There was a lot of discussion about trash cans and tree pits and who would be responsible for cleaning them if, and when, they were installed. The community is in favor of putting Elms back on Elmwood.

Priorities

1. Pedestrian Safety; crosswalks, bus stops, safe routes to school. People over cars.
2. Economy, businesses- Bring business and development to Elmwood, parking
3. Neighborhood character must be improved; visual appeal amenities, lighting (lights in crosswalks, flashing signs, speed limit signs), garbage cans, elms, art
4. Bike Safety; designated bike lanes, bike paths
5. Connections to downtown and Roger Williams Park

Observations and Analysis

McMahon Associates Review and Recommendations

As requested, McMahon Associates has reviewed the Design Study Report (DSR) for the 1R Highway Safety Improvements, Contract 1, Elmwood Avenue, Park Avenue to Trinity Square, City of Providence, prepared for the Rhode Island Department of Transportation (RIDOT) by Crossman Engineering Inc and dated August 2006. RIDOT is reconsidering the scope of this project. The purpose of our review is to offer recommendations for project modifications from a traffic engineering perspective.

Design Study Report Summary

Elmwood Avenue Facts from Design Study Report:

- Project is 2.6 miles with 55 intersections, 13 of which are signalized
- Speed Limit= 25 mph, Design Speed=30 mph
- RIPTA commuter bus route with bus stops
- Average Daily Traffic (ADT)= 17,400 in 2000, Projected 2011 ADT= 18,800 based on a 0.7% per year growth rate

Hourly Traffic Distribution:

A review of the traffic counts indicates that the corridor experiences a morning peak in the vicinity of 8 AM. The traffic declines slightly in the following hours and then proceeds to build. By noon, the traffic volumes on Elmwood Avenue are comparable to the AM peak hour volumes. The traffic continues to increase thru the afternoon hours with a peak occurring around 4-5 PM. The afternoon peak hour traffic volumes are approximately 30-40% higher than the AM peak hour volumes.

The DSR included an analysis of a two-lane section, which was based upon AM and PM peak hour traffic volumes. The mid-day hours are not substantially different than the peak hour volumes.

High Accident Locations:

Table 13 (right) of the Design Study Report cited the top ten intersection accident locations within the corridor based on accident data for 2001-2003. Most of the high accident locations are located in the southern portion of the project, between the Route 10 ramps and the Elmwood Ave/Gallatin Street intersection. There were three fatal accidents during the 3-year period. Two fatal accidents occurred in 2002 and involved pedestrians crossing in crosswalks at night; one near Congress Ave and one at Longfellow Street. The 2003 fatality involved a rear-end collision in the vicinity of Dixon Street.

Top 10 Intersection Accident Locations 2001-2003 by Rank

RANK	STREET[1,2]	SIGNAL	3–YEAR ACCIDENT TOTAL	COMMENTS
1	Potters Ave	YES	83	47% Angle/Broadside 20% Rear-End
2	Cadillac Drive/ Roger Williams Court	NO	44	71% Angle/Broadside
3	Longfellow St	NO	33	70% Angle/Broadside
4	Gallatin St[3]	NO	32	50% Angle/Broadside
5	RI Rte. 10 Northbound Ramps	YES	31	39% Angle/Broadside 27% Rear-End
6	Roger Williams Ave/I-95 Southbound Off-ramp	YES	22	82% Angle/Broadside
7	Congress St	NO	21	32% Angle/Broadside 32% Rear-End
7	Ontario St[4]	YES	21	48% Angle/Broadside
7	Public St/Stanwood St	NO	21	52% Angle/Broadside
8	Witmarsh St	NO	20	95% Angle/Broadside

1 The Park Avenue and Broad Street intersections were not include in this Study
2 Table includes all intersections having 5 or more accidents in all three years (2001, 2002, and 2003)
3 No accidents were recorded for Gallatin Street in 2001
4 Only two accidents were recorded for Ontario Street in 2001

High Pedestrian Volumes:

Based upon the manual turning movement counts collected for the project, the pedestrian volumes are summarized with the highest four pedestrian locations highlighted.

Number of Pedestrians Based on 12–hour Count Data

INTERSECTION	SB	WB	NB	EB	TOTAL
Elmwood Ave/Sackett St	8	88	2	NA	98
Elmwood Ave/Adelaide Ave	10	393	59	77	539
Elmwood Ave/Lexington Ave/Reservoir Ave	63	183	100	34	380
Elmwood Ave/Ontario St/Walgreens	45	238	373	90	746
Elmwood Ave/Potters Ave	33	172	28	168	401
Elmwood Ave/Greenwich Ave	45	320	7	181	553
Elmwood Ave/Daboll St	244	409	80	255	988
Elmwood Ave/Plenty St/Bellvue Ave	49	334	56	369	808
Elmwood Ave/W Friendship St	55	108	98	487	748

McMahon Associates Review and Recommendations

Project Modifications Considered

Ideas for Pedestrian Crosswalks:

- Lighted crosswalks, flashing in-road crosswalk lights
- Colored crosswalks
- Bump outs arranged in a series, particularly at the school zone
- Crossing islands
- Flashing LED crossing signs
- “Road diets”; reducing the roadway to three travel lanes

Ideas for School Crossings:

- Waiting pads can be designated within the sidewalk area by sidewalk markings and signs. The waiting pads indicate where students should wait for pick up. Waiting pads can be enhanced with “stand back lines,” which are typically painted 5-10 feet beyond the area of crossing. Stand back lines are intended to direct students to stand at a reasonable distance from the moving traffic.
- In street signing consisting of narrow school crossing signs which are placed in the middle of the crosswalk along the roadway centerline.
- Designated school drop-off location

Potential Cross-Sections Modifications:

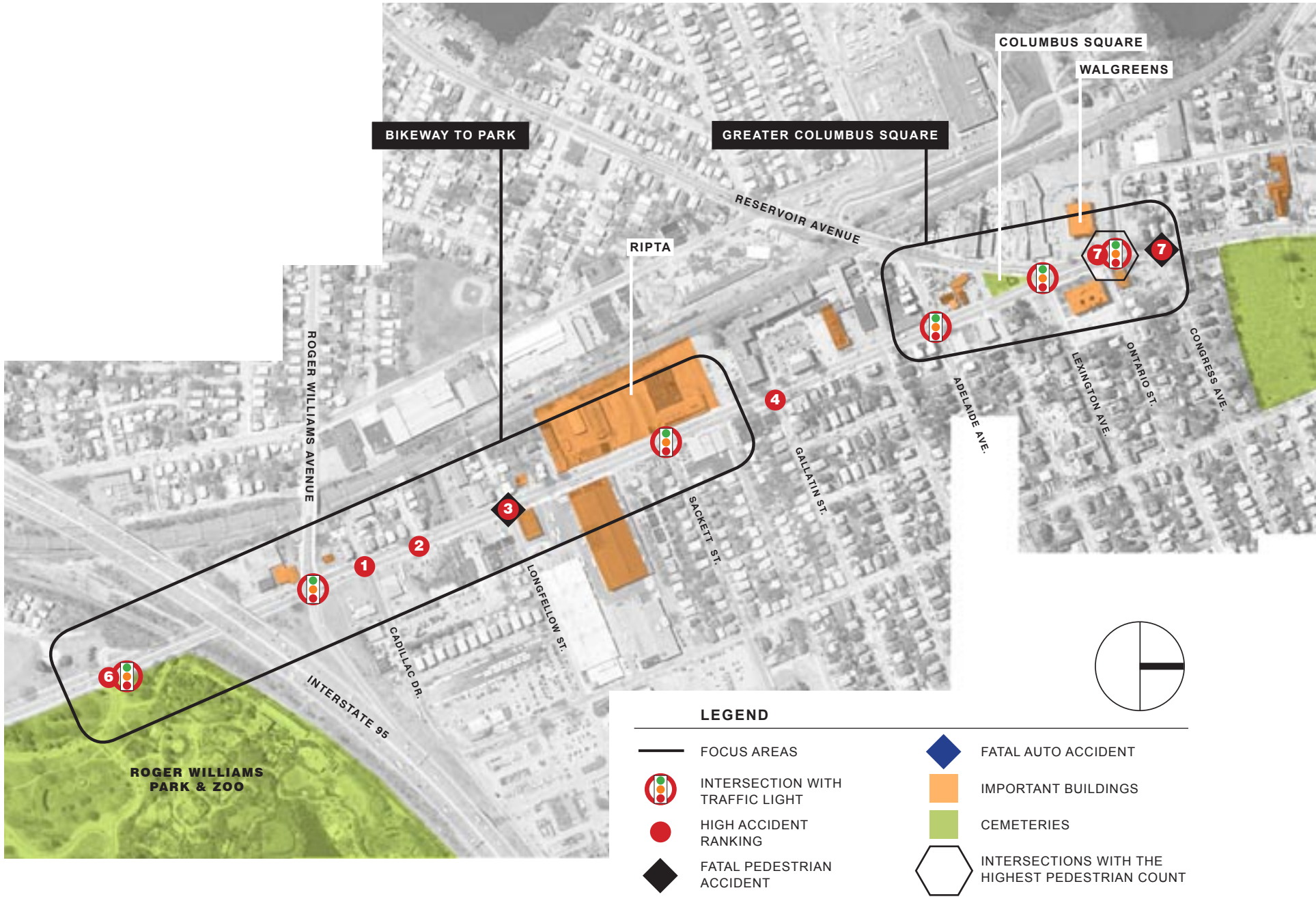
A two-lane cross-section along Elmwood Avenue was analyzed as part of the 1R project and is summarized in the Design Study Report. The two-lane section was not recommended in the DSR because:

- Poor intersection level of service results with the two-lane cross section. If a two-lane cross-section were to be implemented, the roadway would have to widen to include auxiliary lanes at many of the intersections.
- Poor levels of service are projected for the roadway segments along Elmwood Avenue based on a two-lane scenario, particularly in the southern portion of the project.

A bike lane could be incorporated into the roadway cross-section on Elmwood Avenue south of Reservoir Avenue, if one of the two on-street parking lanes were removed. We recommend that a parking study be performed on Elmwood Avenue between the Roger Williams Park Entrance and Reservoir Avenue to assess the parking utilization and need. If a bicycle lane is added to the roadway cross-section, there should be a minimum 4-foot bike lane in each direction. If the bicycle lane is added as a pathway separate from the roadway, then the bike path should be vertically separated from the travel way and the sidewalk. Details such as drainage, snow removal, and vertical separation would need to be resolved.

A three lane section may be desirable between Congress Street and Trinity Square, where there is not an existing or proposed median. The middle lane would serve as a two-way left turn lane (TWLTL). At major intersections, the TWLTL would convert to exclusive left turn lanes. The three lane section would reduce the number of lanes, reduce the pedestrian crossing area within the portion of roadway with moving vehicles, and can provide additional capacity at major intersections.

The proposed cross-section for this segment of Elmwood Avenue includes narrow parking lanes (7.5 feet) and four narrow (10 foot) travel lanes. The curb-to-curb roadway width could be maintained under the three lane section by adding two 9-foot parking lanes, two 12-foot travel lanes, and a 13-foot TWLTL.



(source for basemaps: RI GIS)

Accidents & Dangerous Intersection Map

Federal Initiatives

Safe Routes to School

Safe Routes to School (SRTS) programs are sustained efforts by parents, schools, community leaders and local, state, and federal governments to improve the health and well-being of children by enabling and encouraging them to walk and bicycle to school.

SRTS programs examine conditions around schools and conduct projects and activities that work to improve safety and accessibility, and reduce traffic and air pollution in the vicinity of schools. As a result, these programs help make bicycling and walking to school safer and more appealing transportation choices thus encouraging a healthy and active lifestyle from an early age.

Successful Safe Routes programs may include policy development, planning and implementation of strategies such as improvements to streets and sidewalks, education and encouragement of children and parents, and increased enforcement of traffic laws.

Programs can include:

- Walkability and bikeability audits of the safety of streets around schools
- Programs to improve sidewalk conditions near schools
- Use of traffic calming devices to slow traffic and give pedestrians priority
- Programs that educate children on walking and biking safely, and challenge them to walk or bike often
- “Walking school buses” in which one or two parents or volunteers escort a group of children on the walk to school
- Increased traffic enforcement around schools
- School construction that includes renovation and improvement of existing schools, and locating new schools to reduce walking hazards and avoid major traffic threats
- Cooperation among school officials, law enforcement officials, and transportation planners.

(source: *www.saferoutesinfo.org*)

Complete Streets

The Complete Streets movement represents a newer, bolder approach to making streets safe, accessible and multi-modal. Advocates have shifted their tactics: Instead of improving streets one block or intersection at time, they are working towards new design standards that can be implemented on a grand scale as streets come up for reconstruction or resurfacing. In much the same way that the motor-vehicle lobby irrevocably altered streetscapes in the early 20th century, Complete Streets advocates are creating the blueprints for 21st century streets.

Change begins with the question, "What does each street user — bicyclist, pedestrian, wheelchair user, bus rider — require to move safely and comfortably in the street?" On a Complete Street, car travel lanes are narrowed, curbside parking is reduced or removed, and that space is repurposed as broader sidewalks, protected bike lanes, secure rights of way for buses and more pedestrian-oriented intersections.

(source: *Completing NYC Streets For The Next Century,* Brooklyn Eagle, March 11,2008)

Federal Initiatives

Green Streets Initiative

The Green Streets Initiative is an international grassroots organization based in Cambridge, MA that celebrates, promotes, and advocates for the use of alternative transportation.

Through educational efforts, and the opportunity to experience and practice alternative transportation, they help individual citizens, children, and families, discover how alternative modes of transportation can enhance their lives by creating safe, healthy, friendly communities for all.

The Green Streets Initiative is best known for the creation of monthly Walk/Ride Days. Walk/Ride Days occur on the last Friday of every month. The vision of Greenstreets is to create a monthly city-wide party, which celebrates alternative transportation, gives people an opportunity to make community connections, and promotes a festive local atmosphere.

(source: *www.gogreenstreets.org)*

Childhood Obesity Task Force

The Childhood Obesity Task Force, convened by the White House, has prepared an action plan: Solving the Problem of Childhood Obesity Within a Generation , defines "solving the problem of childhood obesity in a generation" as returning to a childhood obesity rate of just 5 percent by 2030, which was the rate before childhood obesity first began to rise in the late 1970s. In total, the report presents a series of 70 specific recommendations, many of which can be implemented right away. The recommendations are summarized into five categories, one of which **"Getting Children More Actively Fit"** is more fully described below:

Getting children a healthy start on life

Empowering parents and caregivers

Providing healthy food in schools

Improving access to healthy, affordable food, and,

Getting children more physically active through quality physical education, recess, and other opportunities in and after school; addressing aspects of the "built environment" that make it difficult for children to walk or bike safely in their communities; and improving access to safe parks, playgrounds, and indoor and outdoor recreational facilities.

(source: *www.letsmove.gov)*

"We are discouraging transportation investments that negatively affect cyclists and pedestrians. And we are encouraging investments that go beyond the minimum requirements and provide facilities for bicyclists and pedestrians of all ages and abilities.
To set this approach in motion, we have formulated key recommendations for state DOTs and communities:

- Treat walking and bicycling as equals with other transportation modes.
- Ensure convenient access for people of all ages and abilities.
- Go beyond minimum design standards.
- Collect data on walking and biking trips.
- Set a mode share target for walking and bicycling.
- Protect sidewalks and shared-use paths the same way roadways are protected (for example, snow removal)
- Improve nonmotorized facilities during maintenance projects.

Now, this is a start, but it's an important start. These initial steps forward will help us move forward even further."

– Ray LaHood, United States Secretary of Transportation

Statewide Planning

An excerpt from ***Transportation 2030 (2008 Update)***
RI Statewide Planning Program:

Of 1,128 miles of state roads, 400 miles have sidewalks. It is not known how many miles of sidewalks there are on local roads, but they are generally found in most downtown areas and urban neighborhoods. Suburbs and rural areas are typically lacking in sidewalk infrastructure. Although there is high demand for new sidewalks, many of these projects are prohibitively expensive due to drainage, utility and right of way issues. In 2000, a Pedestrian Safety Plan was drafted by the RI Department of Transportation to inform state and local agencies, the private sector and individuals how transportation policy, planning and practice can be integrated to better meet the walking needs of residents and visitors. The plan encourages strong local initiatives in identifying, planning, prioritizing and funding pedestrian improvements because most walking trips are local. The data analyzed in this report show that most pedestrian fatalities occur while attempting to cross the street. Improving the walking infrastructure has many benefits, including health, safety, and helping to meet environmental justice goals.

Future pedestrian needs are staggering. Maintenance of existing crossings, signals, and sidewalks is daunting in and of itself. Achieving ADA compliance on all sidewalks is expected to cost $65 million in Providence County alone (RIDOT Pedestrian Safety Plan). Improving safety (especially at crossings) and constructing new sidewalks are critical, and will require substantial state and federal funding and cooperation with local governments and developers. Mixed use centers, commercial areas, schools, and recreation areas should be prioritized. SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users) created a new Safe Routes To School Program for kindergarten through eighth grade through which RI is allocated $1 million per year for 5 years. The first project solicitation resulted in $1.8 million being awarded to ten communities for a variety of infrastructure and non-infrastructure projects. RIDOT and RI Statewide Planning share responsibility for implementing this program.

Transportation 2030 did not identify Elmwood Avenue as a "congested highway" in 2000 and did not identify it as potentially congested in 2030. (VHB, updated 2008)

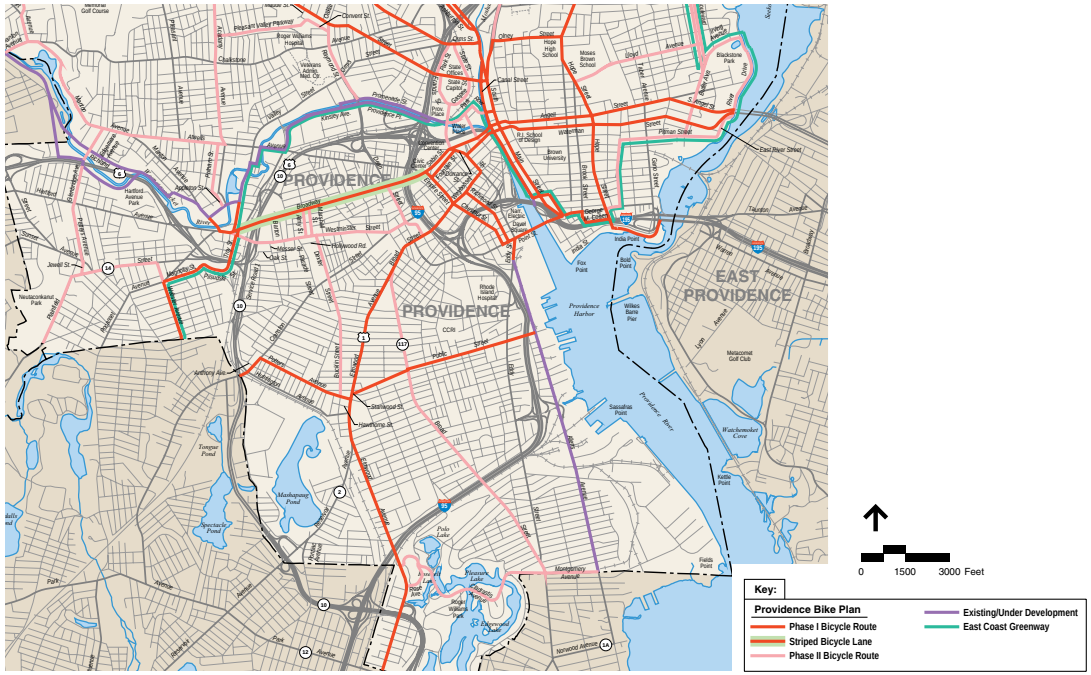
RI State-wide cycling map

Trees 2020

Trees 2020 is an initiative to increase Providence's tree cover to 30% by the year 2020, which will boost air and water quality, moderate temperatures, and improve public health. Led by Groundwork Providence and the City of Providence, the effort will leverage the planting of 40,000 trees collectively by homeowners, land-owning institutions, and city-sponsored tree planting programs. A healthy tree in your yard contributes to the urban tree canopy, which benefits the environment and all city residents.

Street tree planting is handled through the Providence Neighborhood Planting Program, a separate program for Providence residents who wish to obtain curbside trees for their street at no cost to their neighborhood. The Providence Neighborhood Planting Program (PNPP) is a street tree planting and maintenance partnership between the Mary Elizabeth Sharpe Street Endowment, the City of Providence and the residents of Providence. From 1989 to 2010t, the PNPP has planted over 7,000 street trees with the assistance of neighborhood volunteers each spring and fall.

Since 1988, The Mary Elizabeth Sharpe Street Tree Endowment has matched Providence Parks Department funds to provide sidewalk preparation, new soil, trees, and tree delivery at no cost to Providence residents who apply and receive a Neighborhood Street Tree Planting Award.



Excerpt from "Proposed Bicycle Routes" (VHB, 2007) shows Elmwood Avenue in red as a Phase 1 Bicycle Route.

Elmwood Neighborhood

The Elmwood neighborhood, through a variety of community-based initiatives, is active in projects that are influenced by the condition of Elmwood Avenue.

Among the important and/or recent initiatives that affect Elmwood Avenue:

- designation of two National Historic Districts that touch the eastern side of Elmwood Avenue
- redevelopment efforts nearby by CommunityWorks Rhode Island, SWAP, Habitat for Humanity, and the West Broadway Neighborhood Association
- Elms for Elmwood
- Grace Cemetery master plan
- Southside Community Land Trust urban agriculture task force work in Locust Grove Cemetery
- construction of new RIPTA facilities
- ongoing efforts to initiate an Elmwood Avenue Business Association
- The Elmwood Neighborhood Revitalization Plan
- Sierra Club's Complete Streets Initiative
- development of bicycle routes and advocacy

(source for basemaps: RI GIS)

Key Locations For Improvement

Recommendations

In the process of receiving input from the neighborhood in public meetings and interviews, three locations for improvements emerged as most important. While there are a series of general recommendations that can apply to the overall length of the street, this report will emphasize these three areas:

1. **School Zone**
   near the Knight Memorial Library
2. **Columbus Square**
   at the intersection of Elmwood Avenue and Reservoir Avenue
3. **Elmwood Avenue Bikeway**
   connecting the neighborhood safely to Roger Williams Park.

Recommendations

School Zone (top priority)

The area identified as the most important to make substantial changes is the School Zone and it is this area that the report identifies that Enhancement Funds should be primarily directed. The School Zone encompasses a collection of neighborhood public facilities that bridge the two neighborhoods on each side of Elmwood Avenue: Elmwood and the West End. The School Zone is intended to provide greater safety and generous public access across and along Elmwood Avenue near the Gilbert Stuart Elementary School, Dexter Street Playground, Knight Memorial Library, and the Department of Human Services offices.

School Zone and Hyper Block (source for basemaps: RI GIS)

School Zone

Recommendations

School Zone “Hyper” Block

The heart of the school zone is the area in front of the Knight Memorial Library. This “hyper” school zone encompasses the portion of the street that is the primary crossing area for school children and for visitors to the library. **Improvements for the hyper school zone may include:**

- an elevated road bed
- an “all cross” zone in front of the library
- pavement upgrades with textures or materials
- enhanced crosswalk markings
- school zone signs with permanent traffic speed display monitors
- bump outs at all corners
- loading zone in front of the library
- pedestrian walk lights that automatically change with the lights but also have push buttons to expedite light changes for crossing
- pedestrian-scaled light fixtures to replace cobra-head fixtures

School Zone and Hyper Block (source for basemaps: RI GIS)

School Zone Hyper Block

Columbus Square

Columbus Square was the center of fashionable Elmwood during the early years of the neighborhood. The Slade Mansion, perhaps Providence's largest residence, was on the west side of Elmwood Avenue where the Walgreen's is now. Columbus Square was fronted by large homes with front lawns that overlooked the small public square graced by the statue of Christopher Columbus designed by Bartholdi (who was the sculptor of the Statue of Liberty) and cast by the nearby Gorham Company. Many consider the statue the most artful of all the public sculptures in Providence and it remains in a public space that deserves a better setting.

In the early 20th Century, Columbus Square became a center of automobile sales. The Slade Mansion was first subdivided and an auto showroom built on the new parcel and it was later demolished to make way for another showroom. Corner service stations also grew near the intersection of Elmwood Avenue and Reservoir Avenue.

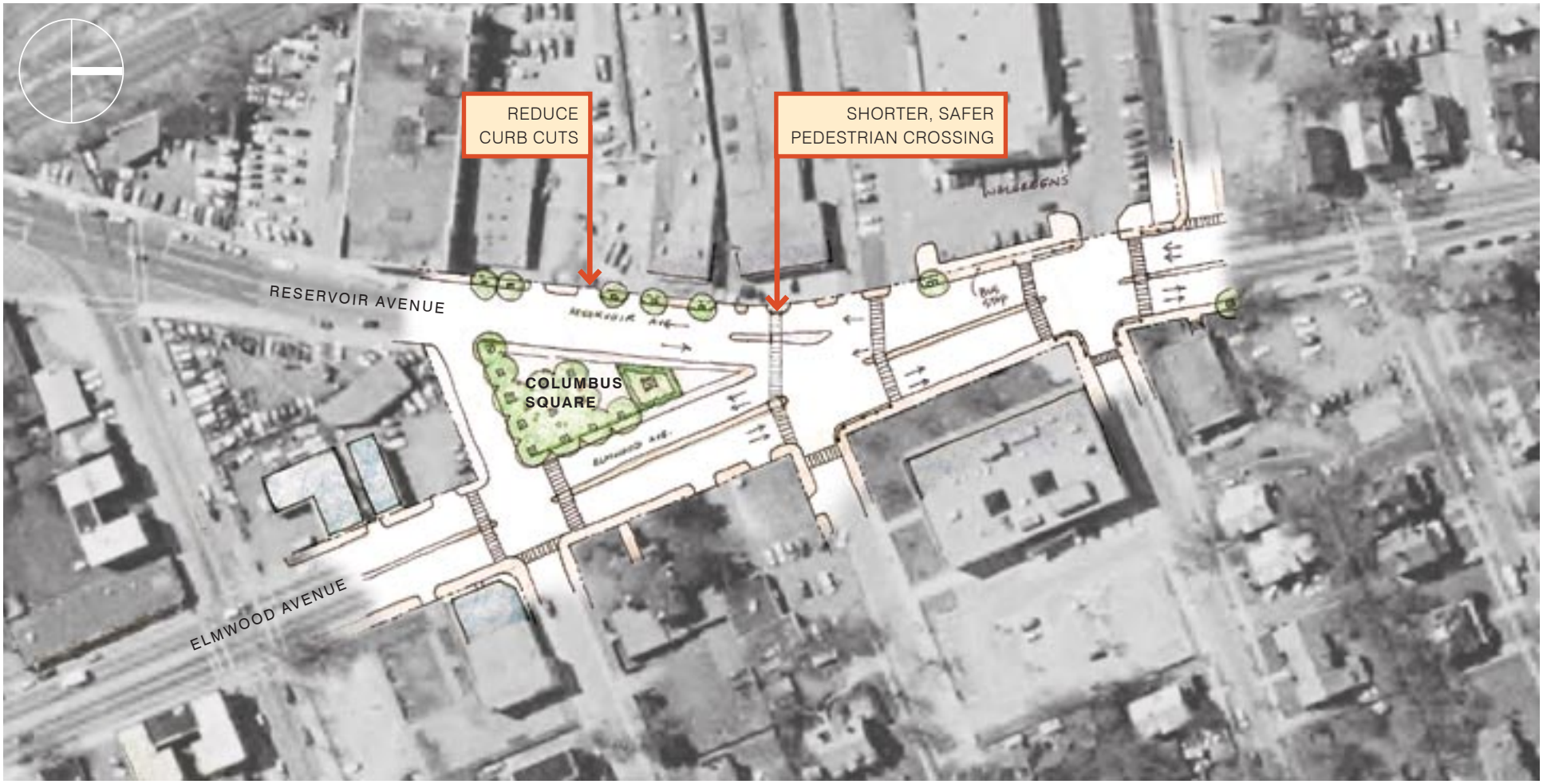
Recommendations for Columbus Square

A long term plan for greater Columbus Square includes a new traffic pattern that will provide safer pedestrian crossing and an enhanced Columbus Square park. The scope of this improvement is beyond that which can be achieved in the current RIDOT funding so both the long-term vision and an interim step have been indentified.

The short term plan includes:

- pedestrian control rails, such as those used in many cities, to direct pedestrians to safe crossing areas
- seek to reduce the number, frequency, and size of curb cuts in the area to increase potential crosswalk areas

Columbus Szuare Expansion (source for basemaps: RI GIS)



Columbus Square Expansion: Phase 1

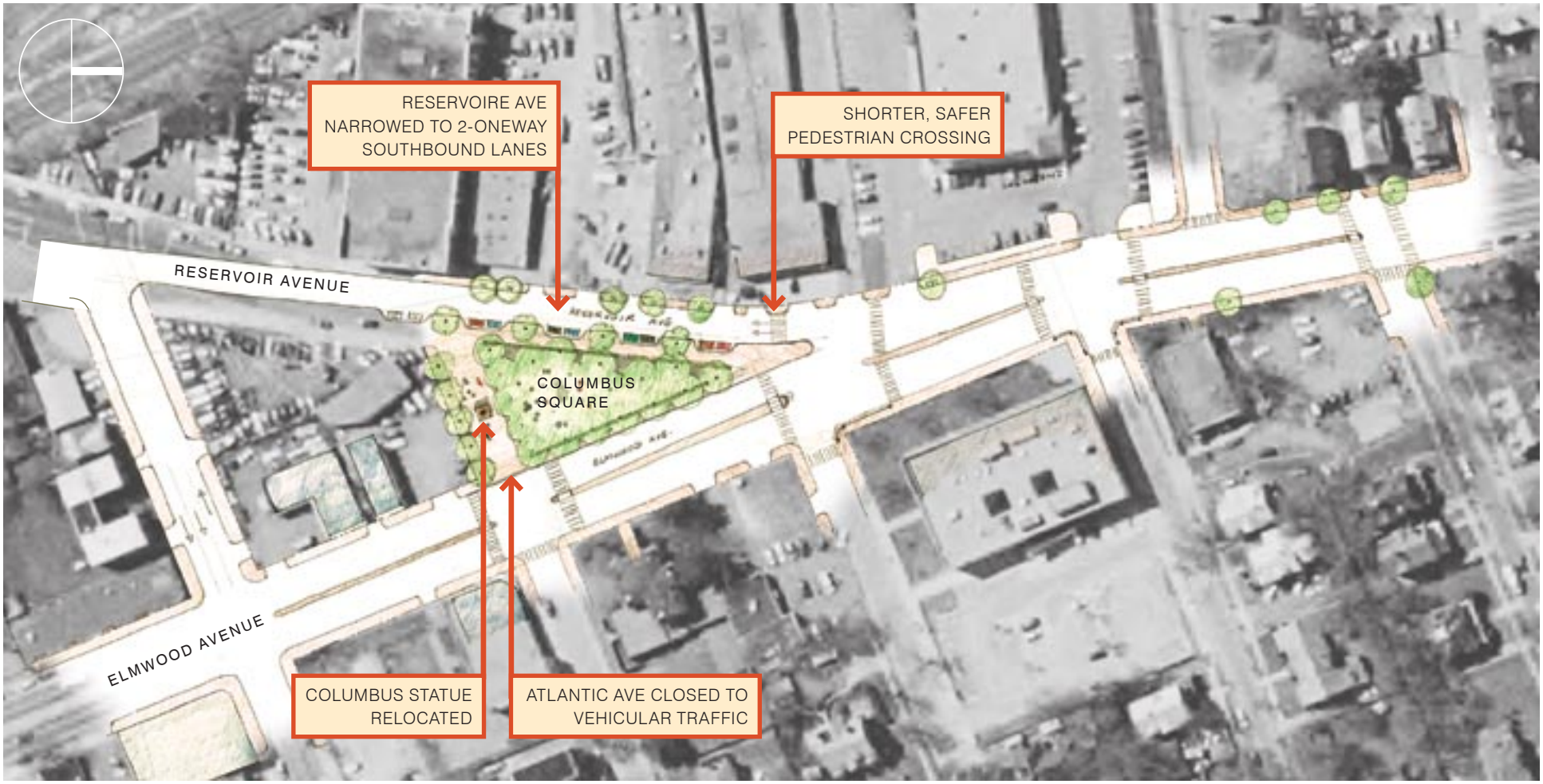
Recommendations

Columbus Square

The long term plan includes:

- safer pedestrian crossings by shortening the distance across Elmwood Avenue and Reservoir Avenue
- new traffic pattern to direct inbound Reservoir Avenue traffic to Elmwood Avenue before Columbus Square
- this new traffic pattern allows an enhancement of parking and extension of Columbus Square park
- consider moving the statue of Christopher Columbus to a position facing east along Atlantic Avenue as the new focal point for the park located farther from the noisy intersection
- economic development that will likely occur with a safe, well-designed public space

Columbus Square Expansion (source for basemaps: RI GIS)



Columbus Square Expansion: Phase 2

Recommendations

Elmwood Avenue Bikeway to Roger Williams Park

The construction of Interstate Highway 95 in the early 1960s broke the connection between the Elmwood neighborhood (and the City of Providence) with the front gate of Roger Williams Park. Connection to the park is across a treacherous intersection at the off ramp of 95 south and Roger Williams Drive. It also includes an inhospitable and debris-filled passage under the highway.

In order to provide a greater connection to the park for the entire city, a bikeway is recommended for the southern end of Elmwood Avenue that would allow bicyclists, bladers, and pedestrians enhanced safe access to the park.

There are two options recommended for the bikeway. In both, reconfiguration of the intersection of Elmwood Avenue at Roger Williams Drive and the 95 off ramp is necessary for pedestrian safety.

Recommendations for the intersection include:

- bumpouts
- elimination of the right turn only “turbo lane” from the off ramp to Elmwood Avenue northbound (inbound) which would reduce the pedestrian crossing distance by over fifty feet

Bikeway Option 1

Creating space for the bikeway can be accomplished by:

- eliminating one row of car parking on the east side (inbound) of the street

The bikeway configuration for option 1 includes:

- a two-way bikeway along the eastern side of the street

Separation of the bikeways is accomplished with:

- a granite curb line separating traffic or parking from the bikeway (the curb could have intermittent gaps to allow the current drainage pattern to remain)

Bike Path Zone (source for basemaps: RI GIS)

Bikeway Option 1

Bikeway Option 2

Creating space for the bikeway can be accomplished by:

eliminate one inbound lane of traffic which is possible given the traffic counts that indicate only one lane of traffic is really necessary to accommodate the traffic volumes inbound from the park to Columbus Square.

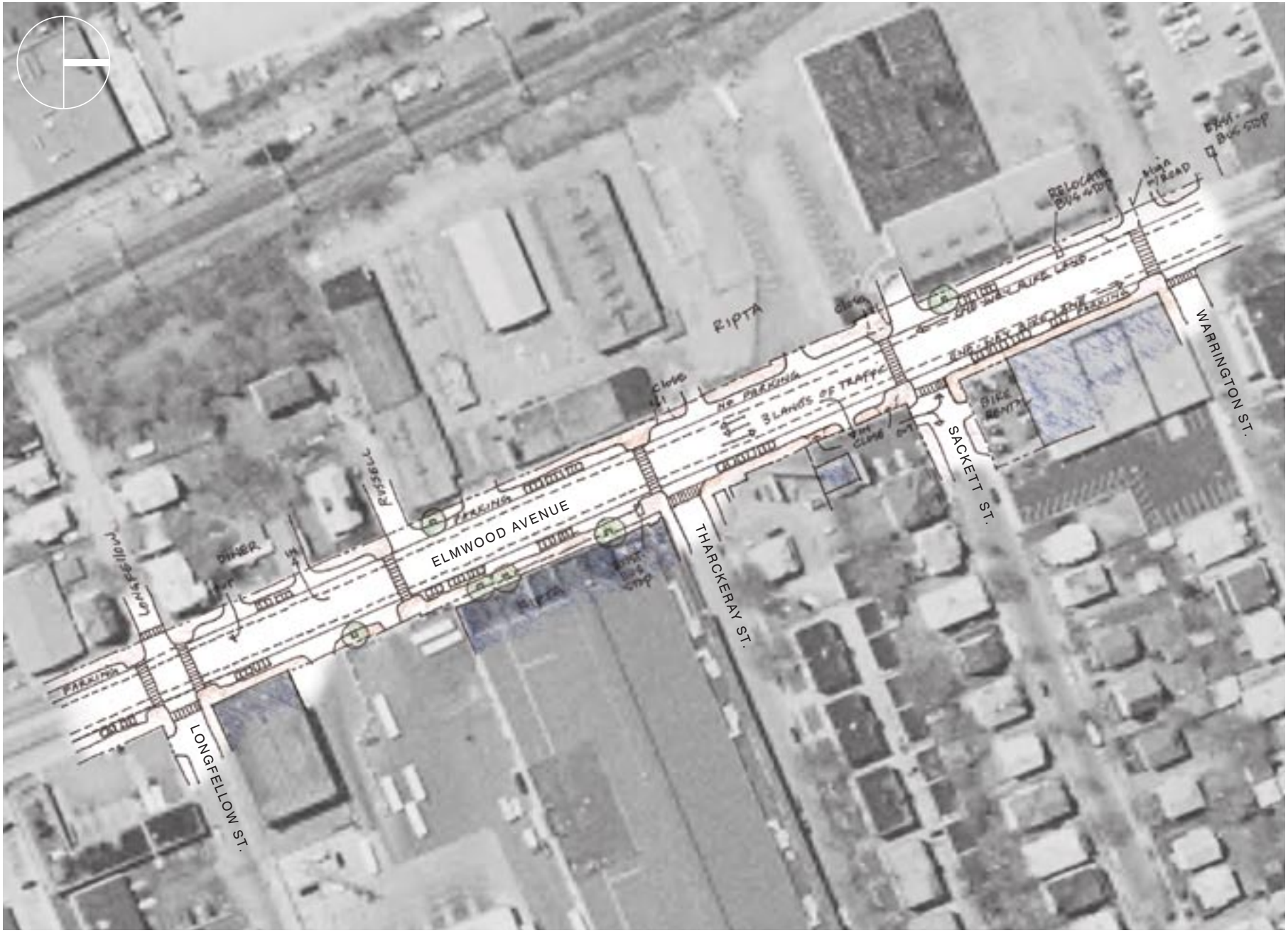
The bikeway configuration for option 2:

narrower bikeways on each side of the road with bicyclists travelling along with the traffic direction.

Separation of the bikeways is accomplished with:

expedient and removable, but effective, devices such as quick-curbs, water-filled jersey barriers, or other dividers can be easily installed (not dissimilar to the way construction zones are protected)

Bike Path Zone (source for basemaps: RI GIS)



Bikeway Option 2

Recommendations

Overall Length of Elmwood Avenue

Cross-section Recommendations:

Reconsider cross-section of Elmwood Avenue between Roger Williams Park Entrance and Reservoir Avenue to include bicycle accommodations. Conduct parking study to determine whether one parking lane could be eliminated.

Reconsider cross-section of Elmwood Avenue between Congress Street and Trinity Square to reduce from four to two through lanes and implement a two-way-left-turn lane. To evaluate this “road diet” scenario, an arterial analysis should be conducted to determine if the two-way-left-turn lane is warranted and whether the revised cross-section can accommodate the traffic volumes.

Traffic Calming and Pedestrian Enhancements:

- Include a series of curb bump-outs to calm traffic and reduce the length of pedestrian crossing. Bump-outs should be strategically placed and should include the school zone.
- To better alert motorists, install colored cross-walks. Consider installation of in-road flashing crosswalk lights.
- Install flashing LED crosswalk signs. Investigate whether these can be powered by solar energy.
- Install speed limit signs with radar speed detection panel. Investigate the potential to power with solar energy.
- At school crossings, designate drop-off locations. Utilize in street school crossing signs at crosswalks.
- Provide clearly designated bike routes for the entire length of Elmwood Avenue using a combination of segregated and shared bike lanes.

Bring the Elms Back to Elmwood

Elmwood Avenue and the Elmwood neighborhood are named after the native American elm tree, Ulmus americana. The elm was THE urban tree of America until the middle of the 20th century. It's tall vase-shaped habit provided lofty shade, a cathedral-like civic space beneath, and yellow fall foliage that added brightness to the shortening autumn days. Elmwood Avenue was lined with elms on both sides of the street from Trinity Square to Roger Williams Park - the elms establishing a green corridor linking the denser urban downtown of Providence to the city's signature large green space, Roger Williams Park.

This green corridor was destroyed with the widening of Elmwood Avenue in the late 1930s which also coincided with the replacement of trolleys with electric buses. The new street did not replace the generous and elegant civic realm that had defined Elmwood Avenue. Part of the work that is currently being undertaken is to restore, in some small way, the civic realm of this great street.

Among the aspects of the plan is the incorporation of the Elmwood Avenue Street Tree Inventory and Planting Plan previously prepared by L+A Landscape Architecture in collaboration with the City of Providence City Forester, Doug Still. This plan considers current best practices which recommend against planting a monoculture of species which, in the event of a pathogen that attacks one species of tree, would be decimated in such a case. Instead, current practice recommends planting a variety of species - and that is the recommendation in the plan. Along Elmwood Avenue from Columbus Square to Roger Williams Park, however, a new long stretch of the street is recommended to be planted with new disease-resistant elms whose canopies can once again shade the neighborhood's path to the park.

Elmwood Avenue reinvisioned with mature elm trees, bike lanes, and safer crosswalks for pedestrians.

"The avenue's aesthetic quality was determined by the large elms with which its route was lined, the frequent open spaces, and the large estates which fronted on it. Trinity Square, a spacious plaza edged by large Victorian churches and homes and focusing on the tree-framed superintendent's cottage of Grace Church Cemetery, formed a dramatic entrance to Elmwood from the downtown."

–Statewide Historic Report: Elmwood 1979

Links

COMMUNITY WORKS RHODE ISLAND communityworksri.org

L+A LANDSCAPE ARCHITECTURE LplusA.net

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

HURRICANE EVACUATION MAPS riema.ri.gov/hazards/hurricane_evac.php

HAZARD QUICK LINKS riema.ri.gov/hazards/hurricane.php

DEM: TMDL DOCUMENTS dem.ri.gov/programs/benviron/water/quality/rest/reports.htm

DEM 303d dem.ri.gov/pubs/303d/index.html

COMPLETE STREETS completestreets.org

GREEN STREETS INITIATIVE gogreenstreets.org

CHILDHOOD OBESITY TASK FORCE LetsMove.gov

SAFE ROUTES TO SCHOOL saferoutesinfo.org

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Elmwood Avenue Cultural Landscape Report, L+A Landscape Architecture, 2008
prepared for The Elmwood Foundation (now Community Works Rhode Island)
with funding from the Antoinette Downing Fund, National Trust for Historic Preservation

Policies and Regulations, The City of Charlotte, Department of Transportation

Transportation 2030 (2008 Update) RI Statewide Planning Program

Statewide Historic Report: Elmwood 1979, Muench, S.T., Anderson, J.L., Hatfield, J.P.,
Koester, J.R., & Söderlund, M. et al. (2010).

Greenroads Rating System v1.0. (J.L. Anderson and S. T. Muench, Eds.).
Seattle, WA: University of Washington.

Pedestrian Corrals and Crosswalks

Pedestrian corrals and crosswalks

Pedestrian corrals, crosswalks and median

Pedestrian corrals and crosswalks

Bike Lanes

Bike Lanes

Barriers and Medians

Temporary water filled interlocking barriers

Movable fence barrier

Striped paint barrier with quick bollards

Quick curb

Jersey barriers filled and planted as median

Tree Planting Best Practices

Tree trenches

Tree trench with aeration

Appendix: Details and Examples

COMMUNITYWORKS RHODE ISLAND

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Rachel Newman Greene, community strategies manager

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Tanya Kelley, project landscape architect, project director and community outreach

Kate Dana, project assistant and graphic design

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