# The Buffalo Corridor Management Project
PIN 5756.29

## Volume 7
### Buffalo Waterfront Corridor Initiative:
## *Expanded Project Proposal - Porter Avenue*

Draft in Final Review
January 1, 2005

**Buffalo Waterfront Corridor Initiative**

City of Buffalo
Office of Strategic Planning

The Urban Design Project
University at Buffalo The State University of New York

WENDEL DUCHSCHERER
ARCHITECTS & ENGINEERS

# TRANSPORTATION

## BUFFALO CORRIDOR MANAGEMENT PLAN

## NYSDOT P.I.N. 5756.29

## CITY OF BUFFALO WATERFRONT TRANSPORTATION CORRIDOR INITIATIVE

**Porter Avenue Waterfront Gateway**
**(AMVETS Drive to Niagara Street)**

**January 2005**

# EXPANDED PROJECT PROPOSAL

## Review Copy

**PROJECT REPORT**


**CITY OF BUFFALO**
**DEPARTMENT OF PUBLIC WORKS, PARKS & STREETS**
**ERIE COUNTY, CITY OF BUFFALO, NEW YORK**

**NEW YORK STATE**
**DEPARTMENT OF TRANSPORTATION**
**George E. Pataki, Governor**
**Joseph Boardman, Commissioner**

**UNITED STATES**
**DEPARTMENT OF TRANSPORTATION**
**FEDERAL HIGHWAY ADMINISTRATION**

# EXPANDED PROJECT PROPOSAL

## Buffalo Corridor Management Plan

## NYSDOT P.I.N. 5756.29

## City of Buffalo Waterfront
## Transportation Corridor Initiative

## Porter Avenue Waterfront Gateway
## (AMVETS Drive to Niagara Street)

**PREPARED FOR:**

City of Buffalo, Department of Public Works, Parks & Streets

**PREPARED BY:**

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In Association With:

Urban Design Project
In the University at Buffalo School of Architecture and Planning

# TABLE OF CONTENTS

## CHAPTER III ALTERNATIVES



## CHAPTER IV SOCIAL, ECONOMIC AND ENVIRONMENTAL CONSIDERATIONS

## Tables



## Figures



## APPENDICES



## SEPARATE APPENDICES



## REFERENCES

1. Buffalo Waterfront Corridor Initiative Report

## CHAPTER I INTRODUCTION / PROJECT SUMMARY

The 1.08km (0.7 mile) segment of Porter Avenue from AMVETS Drive to Niagara Street has been identified by the Buffalo Corridor Management Project (PIN 5756.29) as part of the City of Buffalo's Waterfront Corridor Initiative (WCI) as a key feature for multi-modal travel from the City of Buffalo's interior to the Lake Erie waterfront. In essence, Porter Avenue will function as one of the gateways to the City of Buffalo's waterfront and international border crossing.

The City of Buffalo has prepared this Expanded Project Proposal to document a study that identifies feasible highway alternatives and streetscape features needed to accomplish the transformation of Porter Avenue to one of the gateways for the City of Buffalo's waterfront. The improvements would create a facility that enhances the experience for travelers as well as enhancing the appearance of the surrounding residential, business, and recreational character.

The study recommends that the following alternatives be advanced for further evaluation in the preliminary design phase.

Alternative 1: No Action

This alternative would not make improvements to Porter Avenue. Routine maintenance work would be performed to extend the service life of the pavement and structures. Routine maintenance would be a temporary solution and would not eliminate or substantially improve the pavement. Nor would routine maintenance address the need to transform Porter Avenue into a gateway for the City of Buffalo's waterfront. Although this alternative is not desirable, it will be retained as a baseline for evaluation of the feasible alternative(s) and will not be discarded until a decision is made regarding a build alternative.

Alternative 2: Three-Lane Roadway

Alternative 2 would reduce the number of travel lanes from two lanes eastbound and westbound to one lane in each direction with a center two way left turn lane. This alternative would reduce the overall "footprint" of Porter Avenue. To meet the objective of establishing Porter Avenue as a gateway to the waterfront, this alternative would include streetscape features such as a double row of trees on both sides of Porter Avenue, new sidewalks, multi-use paths, bicycle lanes, landscaping, improved function and appearance of street lights and signs, and gateway features on or near the bridge over I-190 such as planters, artwork and special lighting.

Alternative 3: Two- Lane Roadway

Alternative 3 would reduce the number of travel lanes to one lane in each direction with on street parking on both sides on the road. Like Alternative 2, this alternative would include streetscape features such as a double row of trees on both sides of Porter Avenue, new sidewalks, multi-use paths, bicycle lanes, landscaping, improved function and appearance of street lights and signs, and gateway features on or near the bridge over I-190 such as planters, artwork and special lighting.

Alternative 4: Four- Lane Roadway

Alternative 4 would provide four travel lanes, two in each direction with curb offsets and no center median from the New York State Thruway Bridge to Niagara Street. From the west side of the Thruway Bridge to the waterfront, the roadway would transition to one lane in each direction with an additional westbound bypass lane to avoid left turning vehicles. Like

Alternatives 2 and 3, this alternative would include streetscape features such as a double row of trees on both sides of Porter Avenue, new sidewalks, multi-use paths, landscaping, improved function and appearance of street lights and signs, and gateway features on or near the bridge over I-190 such as planters, artwork and special lighting.

All improvements would be progressed in accordance with the National Environmental Policy Act (NEPA), New York State Department of Transportation's (NYSDOT) Environmental Action Plan (EAP), and the New York State Environmental Quality Review Act (SEQR). Under NEPA the improvements would be progressed as a Class II Action with the FHWA as the lead agency; and a Type II action under SEQRA with the City of Buffalo as the lead agency.

Permits and outside agency approvals that may be required will be obtained if a project is advanced to the preliminary design phase.

Copies of this EPP will be distributed for review and comment to affected federal, state, and public agencies.

The City of Buffalo has a grant to construct the "Foot of Porter Avenue Observation Point" project between the waterfront and I-190 that is funded under Title 11 of the Environmental Protection Fund by Agreement #C006310 with the New York State Department of State. The grant stated that the observation point was going to be constructed along with improvements to LaSalle Park. However, since the WCI identified Porter Avenue from Niagara Street to the waterfront as a primary initiative the "Foot of Porter Avenue Observation Point" will be included as part of the Porter Avenue project described in this EPP and has been removed from the project to improve LaSalle Park. In coordination with the Buffalo Olmsted Parks Conservancy, the City of Buffalo continually strives towards the revitalization of the historic Frederick Law Olmsted parks and parkway system. Lengthening of this project to include Porter Avenue from Niagara Street to Symphony Circle is in line with that vision. This segment is included in the 2006-2010 Transportation Improvement Program. In discussing waterfront revitalization, Mayor Masiello stated "Connecting Erie Street to the waterfront Downtown and making Porter Avenue a great Olmsted boulevard again are immediate and do-able projects to make our vision for the waterfront a reality." Construction documents for Porter Avenue from the Foot of Porter Avenue including "Observation Point," continuing to Symphony Circle will be prepared after this EPP is finalized.

Additional information about this study can be obtained by contacting:

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## CHAPTER II: IDENTIFICATION / PROJECT SUMMARY

### A. PROJECT IDENTIFICATION

1. Project Type
   This is a study that will evaluate the existing and projected conditions to identify problems, issues, and concerns. Roadway alternatives with streetscape features will also be identified to address those problems, issues and concerns.

2. Project Location / Description
   a. Description

| | |
|---|---|
| (1) Highway Description: | Urban - Principal Arterial - other |
| (2) Municipalities: | City of Buffalo |
| (3) County: | Erie |
| (4) Project Length: | 1.08km (0.7 miles) |
| (5) Project Termini: | AMVETS Drive to Niagara Street |
| (6) Reference Markers: | None |
| (7) School District: | Buffalo Public Schools |
| (8) Fire Districts: | Buffalo Fire Department |

   b. Figures II-1 and II-2 show the location of the project area.

### B. PROJECT EVOLUTION

The 1.08km (0.7 mile) segment of Porter Avenue from AMVETS Drive to Niagara Street has been identified by the Buffalo Corridor Management Project (PIN 5756.29) as part of the City of Buffalo's Waterfront Corridor Initiative (WCI) as a key feature for multi-modal travel from the City of Buffalo's interior to the Lake Erie waterfront. In essence, Porter Avenue will function as one of the gateways to the City of Buffalo's waterfront.

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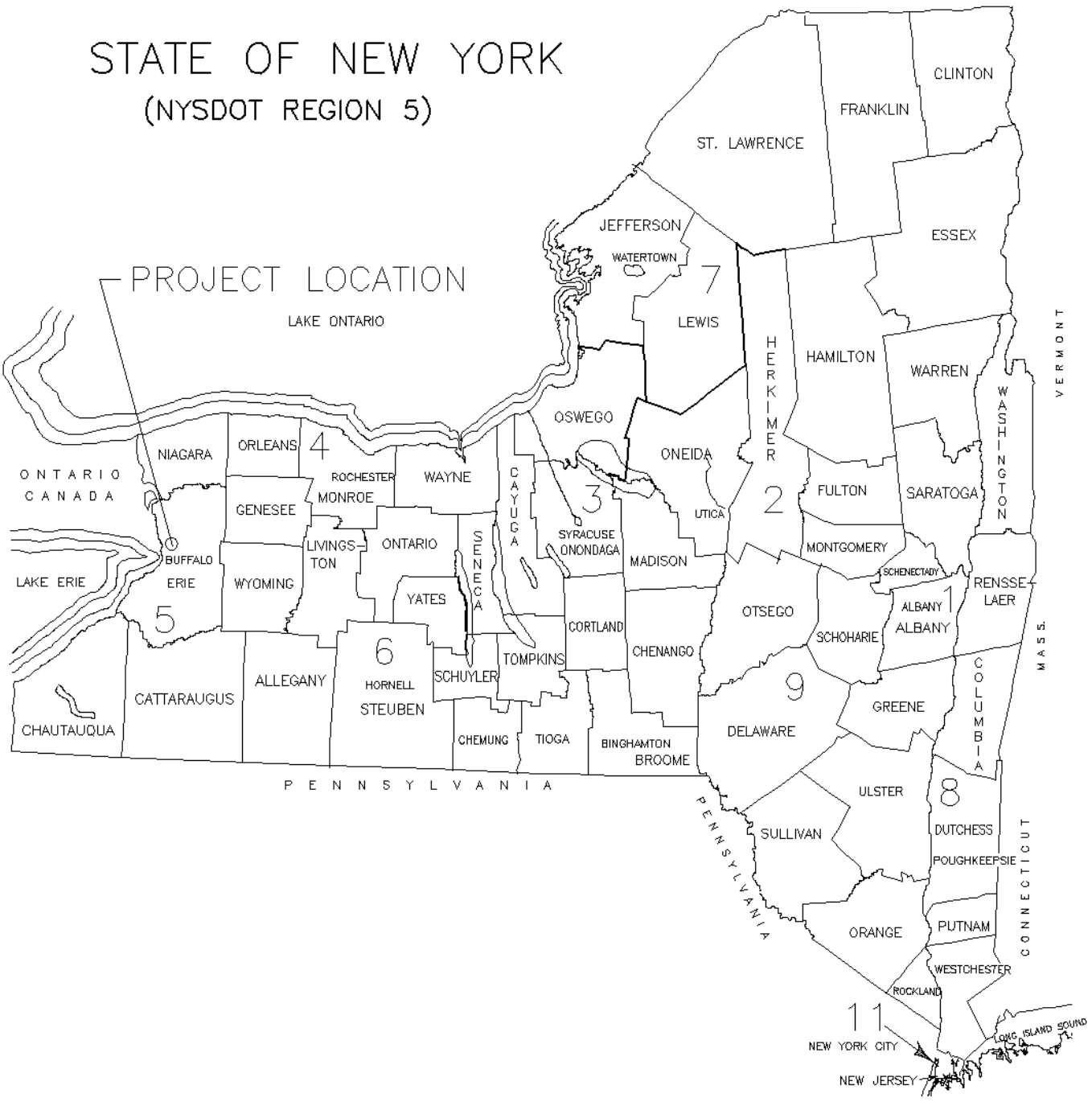
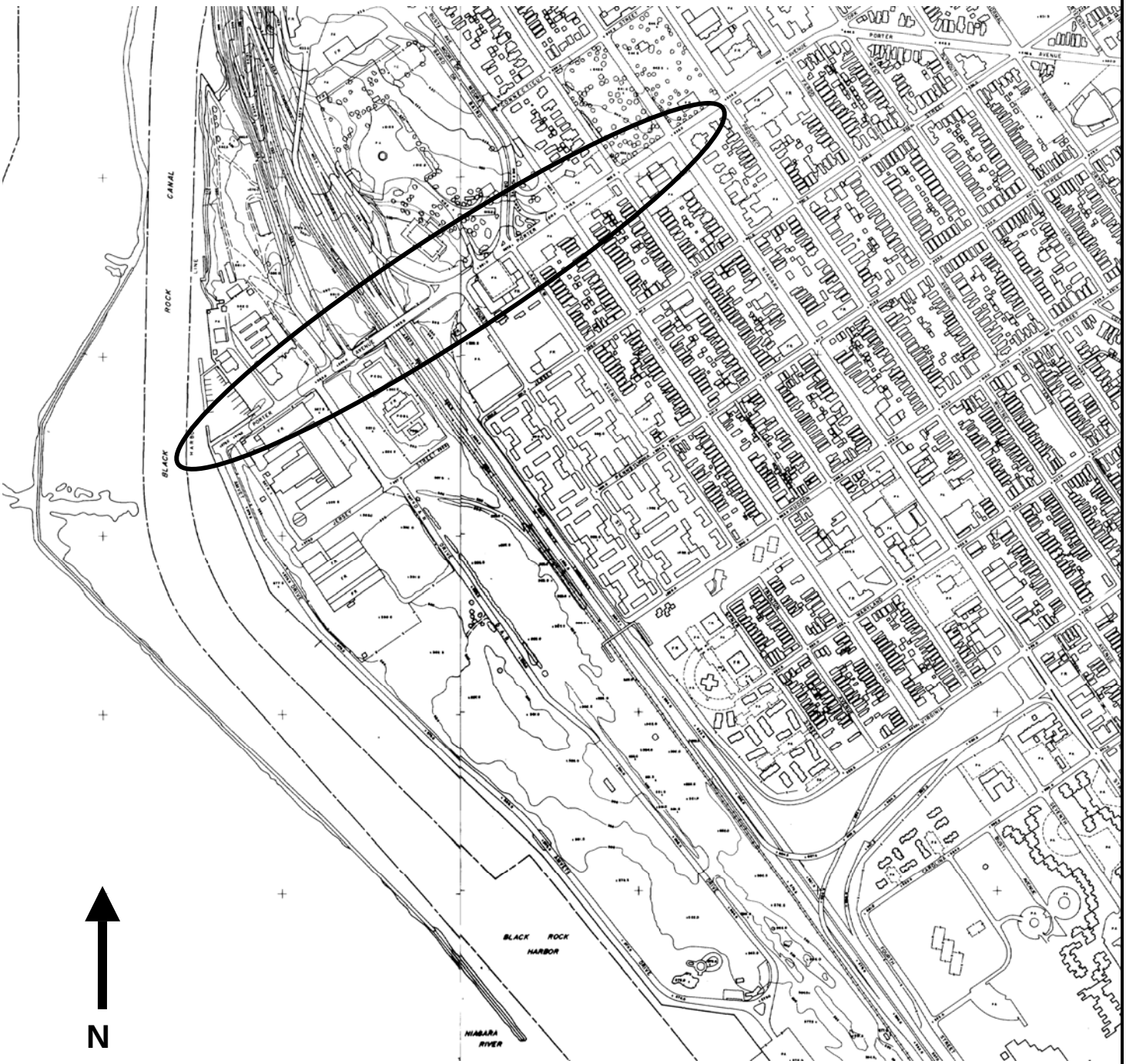



| | | |
|---|---|---|
| WENDEL DUCHSCHERER ARCHITECTS & ENGINEERS<br>AMHERST, NY<br>LOCKPORT, NY<br>ALBANY, NY<br>www.wd-ae.com | FIGURE II-1<br>STATE LOCATION MAP | Proj. No. 2747.19A<br>Date January 2005 |
| | P.I.N. 5756.29 Buffalo Corridor Management Plan – EPP<br>City of Buffalo Waterfront Transportation<br>Corridor Initiative – Porter Avenue Waterfront Gateway | Ref. Dwg. N / A<br>No. II-1 |

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| WENDEL DUCHSCHERER ARCHITECTS & ENGINEERS<br>AMHERST, NY<br>LOCKPORT, NY<br>ALBANY, NY<br>www.wd-ae.com | FIGURE II-2<br>CITY LOCATION MAP | Proj. No. 2747.19A<br>Date January 2005 |
| | P.I.N. 5756.29 Buffalo Corridor Management Plan – EPP<br>City of Buffalo Waterfront Transportation<br>Corridor Initiative – Porter Avenue Waterfront Gateway | Scale: Not to Scale<br>No. II-2 |

## C. CONDITIONS AND NEEDS

### 1. Transportation Conditions and Engineering Considerations

#### a. Functional Classification

Porter Avenue is classified as an urban principal arterial - other, and is not on the National Highway System (NHS). It is however, on the Surface Transportation Program (STP).

#### b. Ownership / Maintenance Jurisdiction

Porter Avenue is owned and maintained by the City of Buffalo, Department of Public Works, Parks & Streets.

#### c. Culture, Terrain and Climatic Conditions

##### (1) Culture

The western end of Porter Avenue connects a rich array of Buffalo historic and cultural resources. As part of Frederick Law Olmsted's park and parkway plan for the City, Porter Avenue connects Front Park overlooking the waterfront with Symphony Circle, Richmond Avenue, Bidwell and Lincoln Parkways and on to Olmsted's central park for Buffalo, Delaware Park. Adjacent to Front Park was Fort Porter, removed during original construction of the Peace Bridge. All of the Olmsted-designed parks and parkways are included in a National Historic District, a Local Historic Preservation District, and a National Thematic District.

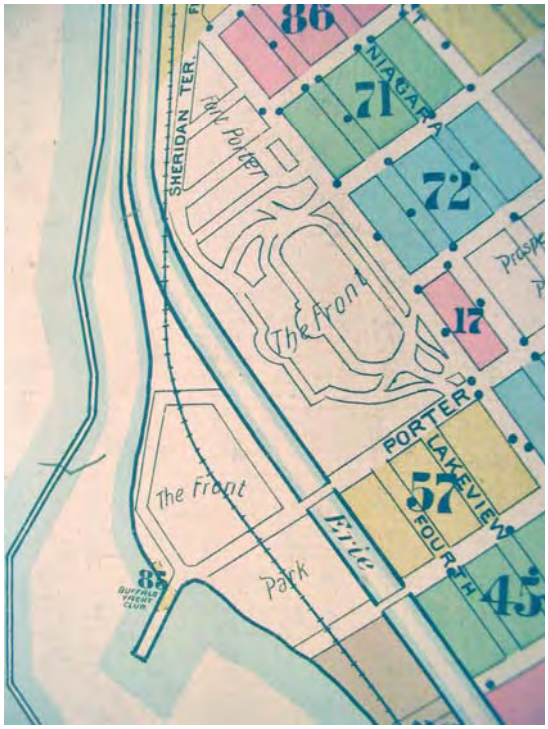
Not part of Olmsted's plan was LaSalle Park, created on filled land along the waterfront nearby and also connected to the system by Porter Avenue. Two smaller parks on the north side of Porter Avenue – Prospect Park on the east side of Niagara Street and Columbus Park on the west – are in or near the area of this proposal.

Porter Avenue also crossed over the Erie Canal before terminating at a short pier in the Black Rock Channel. Remnants of the foundations of the Porter Avenue bridge across the canal remain and traces of the canal can still be seen on the property of the West Side Rowing Club north of Porter Avenue – where the canal joined the Black Rock Channel.

At the foot of Porter Avenue is a collection of important resources including the Colonel Ward Pumping Station, which helps provide fresh water for all of Buffalo, and several facilities clustered at a site known as Cotter Point. These include the Chief Petty Officer's Club, the historic Buffalo Yacht Club, the aforementioned West Side Rowing Club, and the emerging waterfront campus of Buffalo State College, including their Great Lakes Research Center. Opposite the foot of Porter is the Bird Island Pier that runs from the south end of Squaw Island and provides opportunities for fishermen, bird watchers, and strollers.

Several blocks east of the water's edge near Niagara Street is another cluster of important facilities, including Public School No. 3 at Niagara and Porter, a branch of the Buffalo and Erie County Public Library on Porter Avenue at the edge of Prospect Park. D'Youville College occupies several blocks east of Niagara, and within a block is the Connecticut Street Armory, which was restored after a devastating fire in 1982.

**FIGURE II-3: 1914 SANBORN MAP**




(2) Terrain

The existing terrain is generally characterized as flat.

(3) Climatic Conditions

There are no unusual weather conditions that may effect the project design for Porter Avenue.

d. Control of Access

There is no control of access within the study area. There are eleven commercial driveways and four private drive entrances along Porter Avenue.

e. Existing Highway Sections

(1) Right of Way (ROW) Width

The ROW width on Porter Avenue is 30.5m (100 ft.)

(2) Lane and Shoulder Widths

<u>AMVETS Drive to D.A.R. Drive</u>

The pavement width is 12.2m (40 ft.) from AMVETS Drive to D.A.R. Drive. This segment of Porter Avenue currently has one 6.1m (20 ft.) travel lane in each direction divided by a double yellow painted stripe. There are no curb offsets or shoulders within this segment.

D.A.R. Drive to Lakeview Avenue

This segment of Porter Avenue transitions from a two-lane roadway to a four-lane roadway and the pavement width varies from 15.2m to 18.9m (50 ft. to 62 ft.). There is an auxiliary right turn lane for I-190 Northbound on ramp located west of Lakeview Avenue. There are no curb offsets or shoulders within this segment.

Lakeview Avenue to Niagara Street

This segment of Porter Avenue currently has two 3.0m (10 ft.) travel lanes in each direction divided by a 3.0m (10 ft.) center painted median and/or left turn bay. The pavement width is 15.2m (50 ft.). There are two-foot wide brick gutters along Porter Avenue between Busti Avenue and Niagara Street. There are no curb offsets or shoulders within this segment.

(3) Curb or Uncurbed

There is a mixture of granite and sandstone vertical faced curb with some concrete patches within the study area. The granite curb is in good condition with four to six inches of reveal. The sandstone curb is primarily between Seventh Street/Columbus Parkway and Niagara Street and on the approaches to the bridge over I-190. The sandstone curb is in poor condition with little to no reveal.

(4) Type and Width of Median, and Width of Existing Clear Zones

Between AMVETS Drive and Niagara Street there are no raised medians. There is a 3.0m (10 ft.) painted center median from Lakeview Avenue to Niagara Street. The existing clear zone width is 0.6m (2 ft.) beyond the face of curb. There are no curb offsets or shoulders.

(5) Grades and Curves

Record drawings are not available for Porter Avenue. From site visit investigations the grades appear to be less than 5%. The only horizontal curve within the project area occurs at the foot of Porter Avenue. The approximate radius is 21.3m (70 ft.). The existing grades, horizontal and vertical curves will be more precisely defined if a project is advanced to the next step in the process required to progress a project to construction.

(6) Intersection Geometry and Conditions

All roadways crossing Porter Avenue intersect at 90 degrees with the exception of Baird Drive and Moore Drive slip ramps. There are four signalized intersections on Porter Avenue located at Lakeview Avenue/Baird Drive, Busti Avenue, Seventh Street/Columbus Parkway and Niagara Street. Each of the signalized intersections has auxiliary left turn lanes with bays that vary in length from 15.2m (50 ft.) to 54.3m (178 ft.). There are eight unsignalized intersections on Porter Avenue within the project area that are stop controlled on the side street. They are located at AMVETS Drive, D.A.R. Drive, I-190 Southbound off ramp, Fourth Street, and driveways at Col. Ward Pumping Station, Buffalo Yacht Club, Naval and Marine Corps Reserve Center and Front Park access road.

(7) Parking Regulations

Parking is prohibited on Porter Avenue within the study area, but is allowed on the side streets.

(8) Roadside Elements

(a) The snow storage area is inconsistent from block to block and varies from 0m to 5.2m (0 ft. to 17 ft.) along Porter Avenue from AMVETS Drive to Niagara Street. There is a 1.8m (6 ft.) wide concrete sidewalk on both sides of Porter Avenue for the entire length of the project. There are no designated bikeways, bus turnouts or transit/pedestrian shelters. There are two NFTA bus stops within the project area located at the intersections of Seventh Street/Porter Avenue and Niagara Street/Porter Avenue.

(b) There are eleven commercial driveways and four private drive entrances.

f. Abutting Highway Segments and Future Plans for Abutting Highway Segments

At the west end, Porter Avenue terminates at the intersection with AMVETS Drive. The abutting eastern terminus of the project segment is a continuation of Porter Avenue to the east. East of the project limits (Niagara Street) Porter Avenue consists of four travel lanes, with two lanes in each direction. Lane widths are 3.8m (12.5 ft.) with curbs and no curb offsets or shoulders.

Recently completed projects in the area include the resurfacing of Porter Avenue between Lakeview Avenue and Niagara Street in 2003 by the City of Buffalo Department of Public Works and traffic signal upgrades installed under a Congestion Mitigation and Air Quality (CMAQ) Improvement Program in 2003.

g. Speeds and Delays

The posted speed limit on all the city streets within the project area is 30 miles per hour (mph). The 85$^{th}$ percentile speed is considered the operating speed (30-mph) on the city streets. The design speed is assumed to be 5-mph above the posted speed limit.

h. Traffic Volumes

(1) Existing Traffic Volumes

The existing Annual Average Daily Traffic Volumes (AADT) are summarized in Table II-1. The AADT information was obtained from the Greater Buffalo Niagara Regional Transportation Council (GBNRTC).

**Table II-1: ANNUAL AVERAGE DAILY TRAFFIC (AADT) VOLUMES**

| SEGMENT | Eastbound AADT | Westbound AADT |
|---|---|---|
| I-190 Bridge to Niagara Street | 3,770 | 4,475 |

*Source: GBNRTC, October 2001*

The collection of existing traffic volumes and future design year volume forecasts are beyond the scope of this report. If the project is advanced, the existing traffic volumes

and forecasted traffic volumes would be determined during the preliminary design phase required to advance the project to construction if necessary.

i. Level of Service

Level of service analysis is beyond the scope of this report. If the project were advanced, the level of service conditions would be determined during the preliminary design phase required to advance the project to construction if necessary.

j. Non-Standard Features and Non-Conforming Features

The existing roadway elements were evaluated to determine whether appropriate geometric design criteria or criteria for other controlling parameters defined in Chapter III were met. There are currently two non-standard features on the project; lane width and horizontal curve. The existing lane width is 3.0m (10 ft.) from Lakeview Avenue to Niagara Street does not meet the minimum standard width of 3.3m (11 ft.). The existing radius of curvature for Porter Avenue at AMVETS Drive is approximately 21.3m (70 ft.) does not meet the minimum standard radius of 135m (443 ft.).

k. Safety Considerations, Accident History and Analysis

An accident analysis was conducted to identify accident clusters in the project area. An accident cluster is an abnormal occurrence of a specific accident type occurring at approximately the same location or resulting from the same geometric features. Accident data for the study area intersections and roadways were evaluated for the most recent three-year period data was available; that is, 2000, 2001 and 2002. The accident data provided by the City of Buffalo Traffic Engineering Department is a summary of all the accidents that occurred within the study area and are listed by the Accident Identification Number, date of the accident, location, kind of accident, type of accident, directional analysis, road conditions and light conditions.

Table II-2 classifies the accidents by year and severity. During the study period, a total of 52 accidents occurred, resulting in 20 personal injury accidents and 32 collisions involving property damage only (PDO). The accident data did not include non-reportable accidents. A non-reportable accident does not involve personal injuries and has property damage less than $1,000.

**TABLE II-2 ACCIDENTS BY YEAR AND SEVERITY**

| Year | Fatal | Injury | Pedestrians/ Bicycles | PDO* | Total |
|---|---|---|---|---|---|
| 2000 | 0 | 7 | 0 | 9 | 16 |
| 2001 | 0 | 9 | 0 | 15 | 24 |
| 2002 | 0 | 4 | 0 | 8 | 12 |
| **Total** | 0 | 20 | 0 | 32 | 52 |
| **Percentage** | *0 %* | *38 %* | *0 %* | *62 %* | *100 %* |

* PDO = Property Damage Only (in excess of $1,000)

Table II-3 lists a summary of accidents by severity and road surface conditions. As shown, poor weather conditions could have been a contributing factor in approximately 33 percent of study period accidents.

**TABLE II-3: ACCIDENTS BY SEVERITY AND ROAD SURFACE CONDITIONS (2000-2002)**

| Road Surface Conditions | Fatal | Injury | Property Damage Only | Pedestrians/ Bicycles | Total | Percentage |
|---|---|---|---|---|---|---|
| Dry | 0 | 15 | 20 | 0 | 35 | 67 % |
| Wet | 0 | 4 | 11 | 0 | 15 | 29 % |
| Snow or Ice | 0 | 1 | 1 | 0 | 2 | 4 % |
| **Total** | 0 | 20 | 32 | 0 | 52 | 100 % |

Table II-4 presents a summary of accidents by severity and lighting conditions. Approximately 73 percent of project area accidents occurred during the daylight hours, 6 percent at dawn and 21 percent during the nighttime hours.

**TABLE II-4: ACCIDENTS BY SEVERITY AND LIGHTING CONDITIONS (2000–2002)**

| Lighting Conditions | Fatal | Injury | Property Damage Only | Pedestrians/ Bicycles | Total | Percentage |
|---|---|---|---|---|---|---|
| Dawn | 0 | 1 | 2 | 0 | 3 | 6 % |
| Day | 0 | 16 | 22 | 0 | 38 | 73 % |
| Dark | 0 | 3 | 8 | 0 | 11 | 21 % |
| **Total** | 0 | 20 | 32 | 0 | 52 | 100 % |

Table II-5 presents a summary of accidents by severity at the study area intersections. The maximum number of accidents occurred at the intersection of Porter Avenue and Niagara Street, which represents 44 percent of intersection accidents within the study area.

**TABLE II-5: ACCIDENTS BY SEVERITY AND INTERSECTION LOCATION (2000 – 2002)**

| Location | Fatal | Injury | PDO | Pedestrians/ Bicycles | Total | Percentage |
|---|---|---|---|---|---|---|
| Porter Ave. at Niagara St. | 0 | 9 | 14 | 0 | 23 | 44 % |
| Porter Ave. at Seventh St. | 0 | 2 | 5 | 0 | 7 | 13 % |
| Porter Ave. at Columbus Pkwy. | 0 | 1 | 1 | 0 | 2 | 4 % |
| Porter Ave. at Busti Ave. | 0 | 4 | 6 | 0 | 10 | 19 % |
| Porter Ave. at Moore Dr. | 0 | 0 | 0 | 0 | 0 | 0 % |
| Porter Ave. at Baird Dr. | 0 | 1 | 1 | 0 | 2 | 4 % |
| Porter Ave. at Lakeview Ave. | 0 | 3 | 0 | 0 | 3 | 6 % |
| Porter Ave. at Fourth St. | 0 | 0 | 1 | 0 | 1 | 2 % |
| Porter Ave. at I-190 On Ramp | 0 | 0 | 2 | 0 | 2 | 4 % |
| Porter Ave. at I-190 Off Ramp | 0 | 0 | 0 | 0 | 0 | 0 % |
| Porter Ave. at D.A.R. Dr. | 0 | 0 | 1 | 0 | 1 | 2 % |
| Porter Ave. at AMVETS Dr. | 0 | 0 | 1 | 0 | 1 | 2 % |
| **Total** | 0 | 20 | 32 | 0 | 52 | 100 % |

Accident rates are dependent upon the intersection volume.

l. Pavement and Shoulder Conditions

The pavement surface condition within the project area is generally in good condition. The City of Buffalo Department of Public Works resurfacing program resurfaced the segment on Porter Avenue between Lakeview Avenue and Niagara Street in 2003. There are two-foot wide brick gutters along Porter Avenue between Busti Avenue and Niagara Street.

The most recent overlay was performed in 2003 to place a 63.5mm to 76mm (2.5" to 3") asphalt overlay on top of the existing pavement. New York State's 2000 Highway Sufficiency Ratings identifies that alligator cracking and faulting are not evident and the pavement is in good condition with some distress beginning to show.

m. Guide Rail, Median Barriers and Impact Attenuators

There are no median barriers or impact attenuators on Porter Avenue, nor are any warranted within the project limits. There is a mixture of w-beam and box beam guide rail located intermittently along either side of Porter Avenue at the western end of the project. There is corrugated w-beam guide rail on both sides of Porter Avenue between the south bridge abutment and D.A.R. Drive in areas of steep side slopes and to shield bridge abutments. The guide rail does not meet the standard for a smooth transition from a pedestrian railing to guide railing, and has exposed blunt ends in the direction of traffic. Metal railings also exist on the approaches to the bridge and are in poor condition with substantial amount of corrosion and missing panels that create a non-continuous face of rail on the traffic side. There is box beam guide rail located at the west end of Porter Avenue and AMVETS Drive in an area of a sharp horizontal curve. The box beam railing is in poor condition with the majority of railing separated from the posts and improper end assemblies.

n. Traffic Control Devices

There are four signalized intersections within the study. The signals are located at the intersections of Porter Avenue/Lakeview Avenue and Baird Drive, Porter Avenue/Busti Avenue, Porter Avenue/Seventh Street and Columbus Parkway and Porter Avenue/Niagara Street. The signals on Niagara Street, Lakeview Avenue, Busti Avenue and Seventh Street are owned and maintained by City of Buffalo. Each of the four signalized intersections has pedestrian push button actuation and solid state controllers. The traffic signals were recently installed under a Congestion Mitigation and Air Quality (CMAQ) Improvement Program in 2003.

There are four post-mounted traffic signals at the west end of Porter Avenue. Each traffic signal has a flashing yellow indication with a steady, left turn green arrow indication. The group of traffic signals is positioned in a row to warn motorists of the sharp curve to AMVETS Drive. The unsignalized intersections along Porter Avenue are located at AMVETS Drive, D.A.R. Drive, I-190 Southbound off ramp, Fourth Street, Front Park Access Road and Baird Drive slip ramp and are controlled by stop signs on the side streets. There are three private driveways also controlled by stop signs, the Col. Ward Pumping Station, the Buffalo Yacht Club and the Naval and Marine Corps Reserve Center. The traffic signs are in fair condition.

o. Structures

The existing Porter Avenue bridge over the New York State Thruway / I-190 and CSX Railroad will be utilized to link the City of Buffalo to the waterfront. The 2000 Bridge Inspection Report from the New York State Thruway Authority is included in Appendix D. Table II-6 below describes additional characteristics for the bridge. This bridge provides

adequate horizontal and vertical clearances; is not closed or load posted; and is functioning as originally designed. Therefore, this bridge does not need to be rehabilitated or replaced.

Bridge ratings are describes as follows:

The Federal Sufficiency Rating is a computer average of the following factors: structural condition and adequacy, serviceability and functional obsolescence, and usefulness to the public. A sufficiency rating of 80 or less qualifies for Federal-Aid Highway Bridge Replacement and Rehabilitation (HBRR) funding for rehabilitation and 50 or less qualifies for HBRR funding for replacement.

The New York State Condition Rating is a weighted average of the ratings of selected bridge components. The ratings reflect the bridge's ability to function structurally. Rated on a scale of 1 through 7, structures rated less than 5 are defined as deficient and are eligible for replacement.

The numerical rating system used to rate bridge elements is described below in general terms.

9 - Unknown
8 - Not Applicable
7 - New or like-new condition
6 - Used to shade between 5 and 7
5 - Minor deterioration and is functioning as originally designed
4 - Used to shade between 3 and 5
3 - Serious deterioration or not functioning as originally designed
2 - Used to shade between 1 and 3
1 - Potentially Hazardous

**TABLE II-6: PORTER AVENUE BRIDGE**

| | |
|---|---|
| B.I.N. | 5512560 |
| Featured Carried | Porter Avenue |
| Feature Crossed | I-190 & CSX RR |
| Year Constructed | 1958 |
| General Rating | 5 |
| Federal Sufficiency Rating | 63.0 |
| State Sufficiency Rating | 4.44 |
| Structure Type | Steel: Stringer/Multi-Beam or Girder |
| Deck Type | Concrete |
| Wearing Surface | A.C. Overlay |
| Length | 59.28m (194.5-ft.) |
| No. of Spans | 3 |
| Out-to-Out Width | 19.00m (62.3-ft.) |
| Clear Roadway Width | 15.24m (50.0-ft.) |
| Travel Lanes | 4 |
| Skew Angle | 1.5 ° |
| Sidewalks | 1.52m (5.0-ft.) |
| Special Features Carried | None |
| Horizontal Clearance | N/A |
| Vertical Clearance Postings | None |
| Load Postings | None |

p. Hydraulics of Bridges and Culverts

Bridges over water or culverts do not exist within the project area.

q. Drainage Systems

The drainage system within the project area is a closed system with combined sanitary and storms lines. The condition and/or deterioration of the system is not known, but appears to be functioning properly. There are no plans to improve or upgrade the system in the near future.

r. Soil and Foundation Conditions

The subsurface exploration program for Porter Avenue consisted of a total of six (6) pavement core locations drilled by SJB Services, Inc., on March 29, 2004. The full pavement core and test bore logs are included in Appendix C.

The subsurface conditions encountered in the pavement cores and test borings made along Porter Avenue, consisted generally of asphalt concrete pavement at the surface with slag, gravel and crushed stone subbase material. The pavement structure materials are underlain by soil fill, clayey silt and silty clay soil subgrades. Freestanding water was not encountered in any of the pavement core and test borings.

s. Utilities

There are street light poles along the entire length of Porter Avenue with some utility poles that carry overhead lines at the western end of the project. The following utilities and utility owners are located along or across Porter Avenue within the study area:

(1) Communication - 360 Networks
(2) Cable - Adelphia Cable
(3) Telephone - Dominion Telecom
(4) Communication - Level 3 Communications
(5) Telephone - AT&T
(6) Telephone - MCI
(7) Telephone - Sprint
(8) Telephone - Verizon
(9) Sewer - City of Buffalo Sewer Authority
(10) Communication - City of Buffalo Traffic and Fire
(11) Water - City of Buffalo Water Authority
(12) Gas - National Fuel Gas
(13) Electric - Niagara Mohawk Electric
(14) Electric - New York State Thruway Authority

t. Railroads

There are no railroad at-grade crossings within the project area. There is a CSX Railroad mainline that crosses under the Porter Avenue Bridge, B.I.N. 5512560 and poses no significant design issues.

u. Visual Environment

Generally the visual environment consists of open grass areas within and beyond the 32.8m (100 ft) right of way. There are three City parks within the study area: Columbus Park, Front Park and LaSalle Park. There are grassed tree lawns between the concrete sidewalks and roadway for the majority of Porter Avenue.

From the water's edge to Niagara Street, Porter Avenue traverses a wide array of environments and conditions in a very short distance. These include institutional environments, open spaces, residential areas, suburban-style strip development, highway facilities, and vacant land. As such, the area requires description in a fairly fine grain.

(1) Foot of Porter Avenue to the Thruway Bridge

Just past the bridge, an off ramp from the southbound Thruway intersects with Porter. Beyond this ramp is an intersection with the Cotter Point access road on the north with the bike path adjacent. A little farther on to the west is the intersection with the LaSalle Park road. Beyond these intersections, Porter seems slower and quieter as it passes beneath mature trees and beside the Yacht Club and the pumping station. With traffic warning lights at the end of the street, Porter seems like a dead end, but is not. The road turns south into LaSalle Park.

(2) Thruway Bridge

The Porter Avenue bridge across the Thruway, as well as the ramps leading to and from the bridge form a distinct segment of the path to the waterfront. After descending down the incline from Niagara Street, Porter Avenue rises again to span the highway below. While the bridge itself obscures the view of the water from the east, it is also possible to see the water from the crest of the bridge and through the trees lining Porter below. Views of downtown to the south and the Peace Bridge to the north are also available from the bridge and, but for the noise and traffic, this is an interesting place from which to see the city.

(3) Thruway Bridge to Columbus Parkway and Seventh Street

From Busti Avenue to Columbus Parkway, Porter Avenue is flanked by suburban style drive-in businesses – a gas station/ convenience store and a fast food franchise – on the north side and vacant lots and empty buildings on the south side. From Busti Avenue to the bridge, Porter is bounded by Front Park on the north and more vacant land and empty buildings on the south.

Further still to the south is the Buffalo Municipal Housing Authority's federally funded Hope VI neighborhood redevelopment. As of early 2004 the first generation low rise public housing project known as Lakeview was still being demolished to provide a green space buffer between new homes and the Thruway.

(4) Columbus Parkway and Seventh Street to Niagara Street

Niagara Street and Porter Avenue form a busy urban intersection at the eastern limit of the study area. To the north are the two urban parks, Prospect and Columbus. On the southwest corner is an elementary school. Here the environment is defined by the tree

lined Porter Avenue, the park, and the substantial homes opposite the park on Columbus Parkway. Homes to the south, along Seventh Avenue are similarly substantial but not as well maintained. A statue of Christopher Columbus looks down on the scene from the edge of the park. From this elevation, travelers get a hint, but not quite a view, of the water.

v. Provisions for Pedestrians and Bicyclists

A six-foot concrete sidewalk on both sides of Porter Avenue provides for the present accommodations for pedestrians from AMVETS Drive to Niagara Street. There are wheelchair ramps located at the corners of Busti Avenue, Columbus Parkway and Seventh Street and Niagara Street. There are no provisions for handicapped accessibility on Porter Avenue west of Busti Avenue. Street crossings without curb ramps for persons with disabilities do not meet the requirements, established by the Americans with Disabilities Act Accessibility Guidelines (ADAAG). There is evidence of root flare from a row of large trees that caused heaving in some sidewalks near the Col. Ward Pumping Station. The heaving has created an uneven walking surface, which is a tripping hazard.

Both sides of the street present challenges for anyone on foot. On the park side of Porter the sidewalk is interrupted several times by entrances and exits from the Peace Bridge, by an entrance to the park, and finally by an on-ramp to the northbound I-190 or Niagara Thruway. On the south side the path is somewhat less daunting, forcing pedestrians to cross only at Busti, Lakeview, and Fourth Street, but also to traverse a bleak environment of abandoned land and buildings.

There is an existing 3.6m (12 ft.) wide bicycle path that runs parallel to the I-190 Southbound off ramp to Porter Avenue. It is part of the existing Riverwalk trail system. The trail continues along Porter Avenue on the north side of the road to AMVETS Drive and is separated from vehicular traffic. There is a separate 1.8m (6 ft) sidewalk between Porter Avenue and the trail, which terminates at the west end of Porter Avenue. The Riverwalk trail continues through LaSalle Park along the waterfront.

There are no designated bicycle lanes provided within the study area. The present accommodation for bicycle traffic on Porter Avenue is a shared 3.0m (10 ft.) travel lane in each direction.

w. Planned Development for Area

The area around Porter Avenue is mostly fully developed. The following projects are planned for the surrounding area.

<u>Front Park Restoration</u>

Front Park is an historic Olmsted Park that needs to be restored. This site provides spectacular views of Lake Erie, described by Olmsted as “approaching art”. The long-term vision for Front Park includes the restoration of the park and contiguous Fort Porter, the return of the landscape connection to the waterfront and the cultural tourism marketing of the historic Olmsted landscape. In the short term, plans call for the demolition of the brick park building that impedes views of the lake and the Niagara River, and replanting of the Commodore Perry statue grounds. In conjunction with the Seaway Trail, interpretive signs will be installed to give residents and visitors a sense of the area’s history.

LaSalle Park Restoration

LaSalle Park is Buffalo's most prominent park that presently offers waterfront public access and a variety of activities. Efforts have been focused on improving and enhancing recreational opportunities at this park. These include improving the shoreline to enable water-related recreational activities such as boat docking, strengthening the physical connection of this park to Porter Avenue and parks situated inland of the I-190 (including Front Park), and providing additional picnic and recreational amenities. A roundabout at D.A.R. Drive is being considered as an action by others in the future.

Peace Bridge Improvements

The review process is underway to expand or replace the Peace Bridge. This project includes an assessment of what kind of bridge should be constructed, its width, where it should land at each end, where plaza and related facilities should be located, and how and where customs and immigration functions should be handled. The choice of bridge, plaza location and design are central to the goal of making this area an international gateway. Improved connections to the I-190 for through traffic flow is essential. Connections with Niagara Street and security considerations will also have impact on the area. In addition, there are potential impacts that involve the reconfiguration and realignment of Busti Avenue, Baird Drive and the removal of Moore Drive due to the interim plaza improvements being conducted by the Peace Bridge Authority.

x. System Elements and Conditions

The existing deficiencies identified in Section II.c.2. are not related to other existing transportation problems in the area. There are no system deficiencies in the project area that will affect or be affected by the proposed project.

2. Needs

a. Project Level Needs

Pavement Needs

Surface deficiencies were identified for the segment of Porter Avenue from AMVETS Drive to the westbound bridge approach with the pavement surface exhibiting severe cracking and break-up.

Safety Needs

The accident analysis did not identify an accident trend. The following items were identified as having safety deficiencies:

- Improve the bridge railing on both approaches to the bridge over I-190
- Improve guide railing to conform to the latest NYSDOT standards and criteria
- Improve sidewalks and provide wheelchair ramps in conformance with ADAAG
- Improve guide, warning and regulatory signs
- Improve visibility at intersections by means of high visibility crosswalks

Bridge Structural Needs

Bridge structural deficiencies do not exist.

Capacity Needs

Capacity deficiencies are not likely to exist. If the project were advanced, the capacity deficiencies would be determined during the preliminary design phase required to advance the project to construction if necessary.

Community Character Needs

Buffalo can create great gateways to its waterfront by following a simple set of guidelines for the design and redevelopment of key connections between the city and the shoreline. The Buffalo Waterfront Corridor Initiative established the following overall goals and key principles for waterfront gateway design.

General urban design goals for the waterfront

- Improving **access** to the waterfront;
- Promoting **community and economic development**;
- Enhancing **transportation** efficiency; and,
- Supporting **historic preservation** efforts.

Urban design goals for Porter Avenue

- Make it one of Buffalo's great Olmsted avenues;
- Connect the park system to Front Park and beyond to the water's edge;
- Create a grand civic street with educational and public amenities.

Urban design guidelines for Porter Avenue

**Access:**

- Provide direct access to the water's edge for cars, bicycles and pedestrians from Symphony Circle, from the Niagara Street radial north and south, and from surrounding streets, schools and colleges;
- Create uninterrupted sight lines along Porter Avenue to the water and frame the vista with trees, lighting and street walls;
- Improve public access at the foot of Porter Avenue and maximize access to the public waterfront at Cotter Point;
- Expand waterfront activities at new venues such as the Great Lakes Research Center and boat museum, through improved fishing and boating access, and through programming;
- Improve safety and security by improving lighting for cars and pedestrians on bridges and on park edges and by promoting appropriate mixed use development along Porter Avenue;
- Transform bridge overpasses from barriers to gateways through the use of lighting, artwork, signage, and use of a recognizable waterfront marker.
- Provide an observation point at the foot of Porter Avenue to take advantage of the available view of Lake Erie, Canada and the Niagara River.

**Community Development:**

- Reinforce Niagara Street as the international gateway to Downtown through streetscape improvements, directional signage, and urban-density redevelopment;
- Over time, promote the replacement of low-density auto-oriented businesses on Porter with urban street-front development, including multi-story and mixed-use buildings with ground floor commercial and upper housing and offices;
- Develop water-dependent and water-enhanced uses within the coastal zone as consistent with the Local Waterfront Revitalization Program.

**Transportation:**

- Connect DAR Drive from LaSalle Park with access road to Cotter Point to create clear four-way intersection with Porter Avenue;
- Minimize expansion of surface parking lots by allowing on-street parking and continued parking in existing lots;
- Provide clear vehicular access to highways and from highways to the local street network through improved signage to I-190, the Peace Bridge, and routes to Downtown;
- Provide alternative access along street connections to waterfront including transit connections, designated bikeways, and safe and friendly pedestrian paths;
- Create a more walkable and bicycle friendly facility

**Historic Preservation:**

- Reestablish the Olmsted boulevard pattern and connections to and from historic Front Park through reconfiguration of pavements, sidewalks and landscaping;
- Reinforce Olmsted design standards through the use of historically appropriate lighting fixtures and patterns, street furniture, paving, etc.
- Celebrate and interpret Porter Avenue's Olmsted history, its Erie Canal history including the route of the canal and the canal bridge foundations, and other historical elements, including the West Side Rowing Club, the Col. Ward Pumping Station and the Bird Island pier.

b. Area or Corridor Needs

Modal Interrelationship

There are businesses located near the project area that use Porter Avenue for trucking and commercial transportation due to its proximity to I-190 on/off ramps. In addition, Porter Avenue services one of the main entrances and exits to the Peace Bridge. Adequate geometric design parameters need to be provided to accommodate commercial vehicles.

System Needs

Porter Avenue is not part of a system development plan.

Mobility Needs

Opportunities for implementing TSM and TDM techniques on Porter Avenue are limited due to its short length.

D. OBJECTIVES

The objective of this project is to provide a direct, safe, and efficient link from a residential neighborhood and business district with the international border crossing and underutilized waterfront.

The following goals are needed to achieve that objective:

1. Enhance the ambiance of the surrounding residential, business, and recreational land uses.

2. Improve the overall experience for motorists, pedestrians, and bicyclists as they travel through the study area and visit the waterfront.

3. Minimize disturbance and, if possible, enhance the natural environment.

4. Improve roadway conditions as well as non-standard features to the maximum extent feasible using cost effective solutions.

## CHAPTER III: ALTERNATIVES

### A. DESIGN CRITERIA

#### 1. Standards

The standards for this study were based on the following references:

- A Policy on Geometric of Highways and Streets, American Association of State Highway and Transportation Officials (AASHTO), 2001
- Highway Design Manual, (HDM), New York State Department of Transportation (NYSDOT), Chapters 2, 6, 18 and 25
- Guide for Development of Bicycle Facilities, AASHTO, 1991
- Geometric Design Policy for Bridges, NYSDOT
- NYS Manual of Uniform Traffic Control Devices, NYSDOT, 2001

#### 2. Critical Design Elements

Table III-1 contains the design criteria for critical design elements for Porter Avenue.

**TABLE III-1: DESIGN CRITERIA**

| | |
|---|---|
| Classification | Urban Principal Arterial other |
| Design Speed | 60km/h (35 mph) |
| Min. Travel Lane Width [1] | 3.3m (11 ft.) |
| Min. Shoulder Width [2] | 1.8m (6 ft.) |
| Min. Bridge Roadway Width | Width of approach |
| Max. Grade | 8% |
| Min. Radius of Curvature | 135-m (443 ft.) |
| Max. Rate of Superelevation | 4% |
| Min. Stopping Sight Distance | 85m (279 ft.) |
| Min. Lateral Clearance | 0.5m (1.5 ft.) curbed & 1.2m (4 ft.) uncurbed |
| Min. Vertical Clearance over I-190 | 5.05m (16.5 ft.) |
| Max. Pavement Cross Slope | |
| Travel Lanes | 2% (1.5% min.) |
| Parking Lanes | 5% (1.5% min.) |
| Max. Rollover | |
| Travel Lanes | 4% |
| Pavement Edges | 8% |
| Structural Capacity | MS-23 |
| Pedestrian Accommodations | Located and constructed in accordance with ADA guidelines and Chapter 18 of the Highway Design Manual |

[1] On routes designated as Qualifying Highways on the national network of Designated Truck Access highways (1982 STAA highways), travel lane width = 3.6 m (12 ft.) minimum.
[2] A minimum shoulder width is not required for curbed sections. However, a minimum 0.6 m (2 ft.) curb offset is desired for the right edge of pavement, and a minimum 0.3 m (1 ft.) curb offset is desired for the left/median edge of pavement.

3. Other Controlling Parameters

Table III-2 contains the design criteria for other controlling parameters.

**TABLE III-2: DESIGN CRITERIA FOR OTHER CONTOLLING PARAMETERS**

| | |
|---|---|
| Design Vehicle | WB-20 |
| Min. Curb Offset | 0.6m (2 ft.) |
| Min. Intersection Level of Service (LOS) | D |
| Min. Parking Lane Width | 2.4m (8 ft.) |
| Min. Turning Lane Width | 3.3m (11 ft.) |
| Min. Bike Lane Width | 1.5m (5 ft.) |

B. ALTERNATIVES CONSIDERED

1. Description of Alternatives Considered

The alternatives for Porter Avenue were developed taking into consideration the study needs and objectives identified in Chapter II. These alternatives represent an initial step towards defining the feasible alternatives. Each alternative would, to some degree, address transportation and community harmony issues.

a. Alternative 1: No Action

This alternative would not make improvements to Porter Avenue. Routine maintenance work would be performed to extend the service life of the pavement and structures. Routine maintenance would be a temporary solution and would not eliminate or substantially improve the pavement. Nor would routine maintenance address the need to transform Porter Avenue into a gateway for the City of Buffalo's waterfront. Although this alternative is not desirable, it will be retained as a baseline for evaluation of the feasible alternative(s) and will not be discarded until a decision is made regarding a build alternative.

b. Alternative 2: Three Lane Roadway

Alternative 2 would reduce the number of travel lanes from two lanes eastbound and westbound to one lane in each direction with a center two way left turn lane. This alternative would reduce the overall "footprint" of Porter Avenue. Alternative 2 was developed in response to an action proposed by others to close the I-190 on/off ramps from/to Porter Avenue. To meet the objective of establishing Porter Avenue as a gateway to the waterfront, this alternative would include streetscape features such as a double row of trees on both sides of Porter Avenue, new sidewalks, multi-use paths, bicycle lanes, landscaping, improved function and appearance of street lights and signs, and gateway features on or near the bridge over I-190 such as planters, artwork and/or special lighting.

c. Alternative 3: Two Lane Roadway

Alternative 3 would reduce the number of travel lanes to one lane in each direction with on street parking on both sides on the road. Like Alternative 2, this alternative would include streetscape features such as a double row of trees on both sides of Porter Avenue, new sidewalks, multi-use paths, bicycle lanes, landscaping, improved function

and appearance of street lights and signs, and gateway features on or near the bridge over I-190 such as planters, artwork and/or special lighting.

d. Alternative 4: Four Lane Roadway

Alternative 4 would provide four travel lanes, two in each direction with curb offsets and no center median from the New York State Thruway Bridge to Niagara Street. From the west side of the Thruway Bridge to the waterfront, the roadway would transition to one lane in each direction with an additional westbound bypass lane to avoid left turning vehicles. Like Alternatives 2 and 3, this alternative would include streetscape features such as a double row of trees on both sides of Porter Avenue, new sidewalks, multi-use paths, landscaping, improved function and appearance of street lights and signs, and gateway features on or near the bridge over I-190 such as planters, artwork and special lighting.

## C. FEASIBLE ALTERNATIVES

### 1. Description of Feasible Alternatives

The following are four feasible alternatives for Porter Avenue. To further describe the different cross sections of Porter Avenue, Alternatives 2, 3 and 4 were divided into five distinct sections. *Section A* is defined as being from AMVETS Drive to D.A.R. Drive. *Section B* is from D.A.R. Drive to the western bridge approach over CSX Railroad and I-190. *Section C* is the bridge over CSX Railroad and I-190. *Section D* is from the eastern bridge approach to Busti Avenue. *Section E* is from Busti Avenue to east of Niagara Street.

a. Alternative 1: No Action

This alternative would not make improvements to Porter Avenue. The existing roadway section would be retained with routine maintenance work being performed to extend the service life of the pavement and bridge.

Routine maintenance would be a temporary solution and would not eliminate or substantially improve the pavement or community character deficiencies identified in Chapter II. Nor would routine maintenance address the need to transform Porter Avenue into a gateway for the City of Buffalo's Waterfront. However, this alternative will be retained as a baseline for evaluation of the feasible alternatives and will not be discarded until a decision is made regarding a build alternative.

b. Alternative 2: Three Lane Roadway

Alternative 2 would reduce the number of travel lanes from two lanes eastbound and westbound to one lane in each direction with a center two way left turn lane. This alternative would reduce the overall "footprint" of Porter Avenue. To meet the objective of establishing Porter Avenue as a gateway to the waterfront, this alternative would include streetscape features such as a double row of trees on both sides of Porter Avenue, new sidewalks, multi-use paths, bicycle lanes, landscaping, improved function and appearance of street lights and signs, and gateway features on or near the bridge over I-190 such as planters, artwork and/or special lighting. The typical sections for Porter Avenue would be defined as follows:

Section A: AMVETS to D.A.R. (see Figure A-4)

- 5.2m (17 ft.) Tree Lawn
- 3.0m (10 ft.) Multi-use Trail
- 3.0m (10 ft.) Tree Lawn
- 0.6m (2 ft.) Curb Offset

- 2 - 3.3m (11 ft.) Travel Lanes
- 5.5m (18 ft.) Perpendicular Parking
- 3.0m (10 ft.) Tree Lawn
- 1.8m (6 ft.) Sidewalk
- 1.5m (5 ft.) Tree Lawn
- Approximate 100' ROW

Section B: D.A.R. to Thruway Bridge (see Figure A-5)

- 5.2m (17 ft.) Tree Lawn
- 3.0m (10 ft.) Multi-use Trail
- 3.0m (10 ft.) Tree Lawn
- 0.6m (2 ft.) Curb Offset
- 2 - 3.3m (11 ft.) Travel Lanes
- 0.6m (2 ft.) Curb Offset
- 3.0m (10 ft.) Tree Lawn
- 1.8m (6 ft.) Sidewalk
- 6.4m (21 ft.) Tree lawn
- Approximate 100' ROW

Section C: Thruway Bridge (see Figure A-6)

- 3.0m (10 ft.) Multi-use Trail
- 1.8m (6 ft.) Planter Area
- 0.6m (2 ft.) Curb Offset
- 2 - 3.3m (11 ft.) Travel Lanes
- 0.6m (2 ft.) Curb Offset
- 3.0m (10 ft.) Planter Area
- 1.8m (6 ft.) Sidewalk

Section D-1: Thruway Bridge to Front Park (Busti Avenue) (see Figure A-7)

- 3.5m (11.5 ft.) Tree Lawn
- 3.0m (10 ft.) Multi-use Trail
- 3.0m (10 ft.) Tree Lawn
- 0.6m (2 ft.) Curb Offset
- 3.3m (11 ft.) Travel Lane
- 3.3m (11 ft.) Center Two Way Left Turn Lane
- 3.3m (11 ft.) Travel Lane
- 0.6m (2 ft.) Curb Offset
- 3.6m (12 ft.) Tree Lawn
- 1.8m (6 ft.) Sidewalk
- 4.0m (13.5 ft.) Tree Lawn
- Approximate 100' ROW

Section E-1: Front Park (Busti Avenue) to Niagara Street (Figure A-9)

- 3.2m (10.5 ft.) Tree Lawn
- 2.4m (8 ft.) Multi-use Trail
- 3.0m (10 ft.) Tree Lawn
- 1.5m (5 ft.) Bicycle Lane
- 3.3m (11 ft.) Travel Lane
- 3.3m (11 ft.) Center Two Way Left Turn Lane
- 3.3m (11 ft.) Travel Lane
- 1.5m (5 ft.) Bicycle Lane
- 3.0m (10 ft.) Tree Lawn
- 1.8m (6 ft.) Sidewalk
- 3.8m (12.5 ft.) Tree Lawn
- Approximate 100' ROW

c. Alternative 3: Two Lane Roadway

Alternative 3 would reduce the number of travel lanes to one lane in each direction with on street parking on both sides on the road. Like Alternative 2, this alternative would include streetscape features such as a double row of trees on both sides of Porter Avenue, new sidewalks, multi-use paths, bicycle lanes, landscaping, improved function and appearance of street lights and signs, and gateway features on or near the bridge over I-190 such as planters, artwork and special lighting.

Section A: AMVETS to D.A.R. (see Figure A-4)

- 5.2m (17 ft.) Tree Lawn
- 3.0m (10 ft.) Multi-use Trail
- 3.0m (10 ft.) Tree Lawn
- 0.6m (2 ft.) Curb Offset
- 2 - 3.3m (11 ft.) Travel Lanes
- 5.5m (18 ft.) Perpendicular Parking
- 3.0m (10 ft.) Tree Lawn
- 1.8m (6 ft.) Sidewalk
- 1.5m (5 ft.) Tree Lawn
- Approximate 100' ROW

Section B: D.A.R. to Thruway Bridge (see Figure A-5)

- 5.1m (17 ft.) Tree Lawn
- 3.0m (10 ft.) Multi-use Trail
- 3.0m (10 ft.) Tree Lawn
- 0.6m (2 ft.) Curb Offset
- 2 - 3.3m (11 ft.) Travel Lanes
- 0.6m (2 ft.) Curb Offset
- 3.0m (10 ft.) Tree Lawn
- 1.8m (6 ft.) Sidewalk
- 6.4m (21 ft.) Tree lawn
- Approximate 100' ROW

Section C: Thruway Bridge (see Figure A-6)

- 3.0m (10 ft.) Multi-use Trail
- 1.8m (6 ft.) Planter Area
- 0.6m (2 ft.) Curb Offset
- 2 - 3.3m (11 ft.) Travel Lanes
- 0.6m (2 ft.) Curb Offset
- 3.0m (10 ft.) Planter Area
- 1.8m (6 ft.) Sidewalk

Section D-2: Thruway Bridge to Front Park (Busti Avenue) (see Figure A-8))

- 2.4m (8 ft.) Tree lawn
- 3.0m (10 ft.) Multi-use Trail
- 3.0m (10 ft.) Tree Lawn
- 2.7m (9 ft.) Parking Lane
- 0.6m (2 ft.) Curb Offset
- 2 - 3.3m (11 ft.) Travel Lanes
- 0.6m (2 ft.) Curb Offset
- 2.7m (9 ft.) Parking Lane
- 3.0m (10 ft.) Tree Lawn
- 1.8m (6 ft.) Sidewalk
- 3.6m (12 ft.) Tree lawn
- Approximate 100' ROW

Section E-2: Front Park (Busti Avenue) to Niagara Street (see Figure A-10))

- 2.1m (7 ft.) Tree lawn
- 2.4m (8 ft.) Multi-use Trail
- 3.0m (10 ft.) Tree Lawn
- 2.7m (9 ft.) Parking Lane
- 1.5m (5 ft.) Bicycle Lane
- 2 - 3.3m (11 ft.) Travel Lanes
- 1.5m (5 ft.) Bicycle Lane
- 2.7m (9 ft.) Parking Lane
- 3.0m (10 ft.) Tree Lawn
- 1.8m (6 ft.) Sidewalk
- 2.7m (9 ft.) Tree lawn
- Approximate 100' ROW

d. Alternative 4: Four Lane Roadway

Alternative 4 would provide four travel lanes, two in each direction with curb offsets and no center median from the New York State Thruway Bridge to Niagara Street. From the west side of the Thruway Bridge to the waterfront, the roadway would transition to one lane in each direction with an additional westbound bypass lane to avoid left turning vehicles. While Alternative 4 is not consistent with the Waterfront Corridor Initiative Report, it is included because existing volumes and traffic projections are not available to validate the reduction of Porter Avenue to two lanes between the Thruway Bridge and Niagara Street. Like Alternatives 2 and 3, this alternative would include streetscape features such as a double row of trees on both sides of Porter Avenue, new sidewalks, multi-use paths, landscaping, improved function and appearance of street lights and signs, and gateway features on or near the bridge over I-190 such as planters, artwork and special lighting.

Section A: AMVETS to D.A.R. (similar to Figure A-4)

- 3.0m (10 ft.) Tree Lawn
- 3.0m (10 ft.) Multi-use Trail
- 3.0m (10 ft.) Tree Lawn
- 2.7m (9 ft.) Bypass Lane
- 2 – 3.3m (11 ft.) Travel Lanes
- 0.6m (2 ft.) Curb Offset
- 3.0m (10 ft.) Tree Lawn
- 1.8m (6 ft.) Sidewalk
- 6.4m (21 ft.) Tree Lawn
- Approximate 100' ROW

Section B: D.A.R. to Thruway Bridge (similar to Figure A-5)

- 2.4m (8 ft.) Tree Lawn
- 3.0m (10 ft.) Multi-use Trail
- 3.0m (10 ft.) Tree Lawn
- 0.6m (2 ft.) Curb Offset
- 2.7m (9 ft.) Bypass Lane
- 2 – 3.3m (11 ft.) Travel Lanes
- 0.6m (2 ft.) Curb Offset
- 3.0m (10 ft.) Tree Lawn
- 1.8m (6 ft.) Sidewalk
- 6.4m (21 ft.) Tree lawn
- Approximate 100' ROW

Section C: Thruway Bridge (see Figure A-6)

- 3.0m (10 ft.) Multi-use Trail
- 1.8m (6 ft.) Planter Area
- 0.6m (2 ft.) Curb Offset
- 2 - 3.3m (11 ft.) Travel Lanes
- 0.6m (2 ft.) Curb Offset
- 3.0m (10 ft.) Planter Area
- 1.8m (6 ft.) Sidewalk

Section D: Thruway Bridge to Front Park (Busti Avenue) (similar to Figure A-8)

- 2.4m (8 ft.) Tree Lawn
- 2.4m (8 ft.) Multi-use Trail
- 3.0m (10 ft.) Tree Lawn
- 0.6m (2 ft.) Curb Offset
- 4 - 3.3m (11 ft.) Travel Lanes
- 0.6m (2 ft.) Curb Offset
- 3.0m (10 ft.) Tree Lawn
- 1.8m (6 ft.) Sidewalk
- 3.0m (10 ft.) Tree Lawn
- Approximate 100' ROW

Section E: Front Park (Busti Avenue) to Niagara Street (similar to Figure A-10)

- 2.1m (7 ft.) Tree Lawn
- 2.4m (8 ft.) Multi-use Trail
- 3.0m (10 ft.) Tree Lawn
- 0.9m (3 ft.) Curb Offset
- 4 - 3.3m (11 ft.) Travel Lanes
- 0.9m (3 ft.) Curb Offset
- 3.0m (10 ft.) Tree Lawn
- 1.8m (6 ft.) Sidewalk
- 2.7m (9 ft.) Tree Lawn
- Approximate 100' ROW

2. Engineering Considerations of the Feasible Alternatives

   a. Geometrics

      The existing horizontal and vertical alignments for Porter Avenue will be retained. Realignment of D.A.R. Drive to intersect Porter Avenue opposite the driveway to Cotter Point is proposed for Alternatives 2, 3 and 4 (see Figure A-3).

   b. Traffic Forecasts, Level of Service and Safety Considerations

      Traffic forecasts and level of service calculations were not computed and are beyond the scope of this report. If the project were advanced, the traffic forecasts and, level of service conditions would be determined during the preliminary design phase required to advance the project to construction if necessary.

   c. Pavement

      The following pavement improvements are recommended for Alternatives 2, 3 and 4:

- Mill Porter Avenue as needed to retain as much of the existing profile as possible while attaining a 150mm (6") curb reveal;
- Replace the existing curb to attain a 150mm (6") curb reveal;
- Overlay the segment of Porter Avenue between AMVETS Drive and Lakeview Avenue with 75mm to 100mm (3" to 4") of asphalt, 50mm to 60mm (2" to 2.5") of binder and 40mm to 50mm (1.5" to 2") of top.

d. Structures

See Section III.C.1. for a description of the proposed bridge section. The proposed improvements will require modifications only to the bridge deck and railings.

e. Hydraulics

Bridges over water or culverts do not exist within the project area.

f. Drainage

The drainage system for Porter Avenue is a combined sanitary and storm sewer system. Within the study area the drainage system appears to be functioning adequately. Modifications to the drainage system to accommodate the proposed roadway width will be required for Alternatives 2, 3 and 4. The combined system will be separated with a new storm sewer system to be built within the new roadway footprint. The existing system will be retained as a separate sanitary sewer system.

g. Maintenance Responsibility

Maintenance responsibilities for Porter Avenue and adjoining roads would not change as the result of the proposed improvements. All of the proposed features inside Porter Avenue's right-of-way would be maintained by the City of Buffalo Department of Public Works including streetlights, landscaping, sidewalks, and recreational trails.

h. Maintenance and Protection of Traffic

Due to the number of residents, businesses and access to the Peace Bridge that rely on Porter Avenue for travel, the use of an off-site detour is not feasible for any of the alternatives. Staged construction would be required while maintaining two lanes of traffic, one lane in each direction.

Sufficient room is available to shift two lanes of traffic away from the construction zone. Therefore, a one-lane closure, in one direction, would be permitted for construction activities, such as those listed below, that can be efficiently suspended during the peak hours to restore two lanes of traffic.

- Filling and sealing joints and cracks for pavement rehabilitation
- Resurfacing
- Milling
- Guide rail removal or replacement
- Signage removal or replacement
- Pavement marking
- Street light installation

If a project is advanced, the design of the maintenance and protection of traffic plan would be determined during subsequent phases of design required to advance a project to construction.

i. Soils and Foundations

If a project is advanced, the soils and foundation requirements would be determined during subsequent phases of design required to advance a project to construction.

j. Utilities

It is not anticipated that private or public utilities will need improvements or independent action by others. However, if a project were advanced, potential utility conflicts would be further evaluated during subsequent phases of design required to advance a project to construction.

Above or below ground changes that would result in a conflict with existing utilities are, generally, not anticipated for the proposed improvements. Locations of existing utilities would be obtained to determine potential conflicts with utilities.

k. Railroads

There are no proposed changes to the existing CSX Railroad that crosses underneath the Porter Avenue Bridge.

l. Right-of-Way

All of the improvements for the proposed alternatives would be accomplished within Porter Avenue's existing roadway width. The remaining improvements (pedestrian walkways, guide rail replacement, street light installation and sign replacement) would be accomplished within the existing right-of-way. Therefore, there is no need to acquire right-of-way for the proposed improvements.

m. Landscaping Development

Each feasible alternative is expected to have a double row of trees on both sides of Porter Avenue to form a tree lined canopy. The canopy of trees would add a more human scale to the vast openness that currently exists. Primary gateways would be included at each end of the project to accentuate the corridor. Decorative low level street lighting will adorn both sides of Porter Avenue as well as park benches and trash receptacles. Custom directional and interpretive signs for historical and cultural significance will be included as well. Overall, the project will have a positive aesthetic impact. Any negative impact associated with the removal of trees and vegetation will be compensated for by the addition of plantings and landscaping.

n. Provisions for Pedestrians, Including Persons with Disabilities

Under each feasible alternative, pedestrian traffic would be carried by a 1.8m (6 ft.) wide concrete sidewalk on the south side of Porter Avenue and a 3.0m (10 ft.) wide multi-use trail on the north side of Porter Avenue for the segment of Porter Avenue between AMVETS Drive and Lakeview Avenue. At Lakeview Avenue the trail will transition to a sidewalk for pedestrians and a 1.5m (5 ft.) bike lane for bicyclists. From Lakeview Avenue to Niagara Street sidewalks and bike lanes will be provided on both sides of

Porter Avenue. The trail and sidewalk at the intersections will have curb cuts and wheelchair ramps with detectable warning in compliance with Americans with Disabilities Act Accessibility Guidelines (ADAAG).

o. Provisions for Bicycling

Bicycle traffic will be accommodated by a 1.5m (5 ft.) wide bicycle lane on each side of Porter Avenue from Busti Avenue (Front Park) to Niagara Street. Bicycle traffic is then accommodated by a 3.0m (10 ft.) wide multi-use trail on the north side of Porter Avenue from Lakeview Avenue (Front Park) to the waterfront.

p. Lighting

Decorative low-level streetlights will replace the existing high pole, cobra head style street lighting.

D. PROJECT COSTS AND SCHEDULE

1. Costs

Table III-3 summarizes the preliminary project costs estimates for the improvements recommended for Alternatives 2, 3 and 4. All costs are in 2004-dollar values.

**TABLE III-3: Estimated Project Costs**

| | **Alternative 2** | **Alternative 3** | **Alternative 4** |
|---|---|---|---|
| Construction (includes 30% Contingency) | $ 2.3 M | $ 2.3 M | $ 2.3 M |
| Right-of-Way | $ - 0 - | $ - 0 - | $ - 0 - |
| Utility | $ 0.3 M | $ 0.3 M | $ 0.3 M |
| Maintenance of Traffic (15%) | $ 0.4 M | $ 0.4 M | $ 0.4 M |
| Railroad | $ - 0 - | $ - 0 - | $ - 0 - |
| Engineering (15%) | $ 0.45 M | $ 0.45 M | $ 0.45 M |
| Environmental Mitigation | $ - 0 - | $ - 0 - | $ - 0 - |
| Construction Inspection (15%) | $ 0.45 M | $ 0.45 M | $ 0.45 M |
| **TOTAL** | $ 3.9 M | $ 3.9 M | $ 3.9 M |

2. Schedule

The City of Buffalo has a grant to construct the “Foot of Porter Avenue Observation Point” project between the waterfront and I-190 that is funded under Title 11 of the Environmental Protection Fund by Agreement #C006310 with the New York State Department of State. The grant stated that the observation point was going to be constructed along with improvements to LaSalle Park. However, since the WCI identified Porter Avenue from Niagara Street to the waterfront as a primary initiative the “Foot of Porter Avenue Observation Point” will be included as part of the Porter Avenue project described in this EPP and has been removed from the project to improve LaSalle Park. In coordination with the Buffalo Olmsted Parks Conservancy, the City of Buffalo continually strives towards the revitalization of the historic Frederick Law Olmsted parks and parkway system. Lengthening of this project to include Porter Avenue from Niagara Street to Symphony Circle is in line with that vision. This segment is included in the 2006-2010 Transportation Improvement Program. In discussing waterfront revitalization, Mayor Masiello stated “Connecting Erie Street to the waterfront Downtown and making Porter Avenue a great Olmsted boulevard again are immediate and do-able projects to make our vision for the waterfront a reality.” Construction documents for Porter Avenue from the Foot of Porter Avenue including “Observation Point,” continuing to Symphony Circle will be prepared after this EPP is finalized.

## CHAPTER IV: SOCIAL, ECONOMIC AND ENVIRONMENTAL CONSIDERATIONS

### A. Introduction

The purpose of this chapter is to identify potential social, economic, and environmental consequences of the alternative(s) being advanced to preliminary engineering. This analysis will serve as a basis for developing the studies and concerns that should be included in the preliminary engineering phase required to advance a project to construction.

1. National Environmental Policy Act (NEPA) Classification

   The National Environmental Policy Act (NEPA) as implemented and defined in 23 CFR 771 describes the process to be used in developing Federal Highway Administration (FHWA) federal aid transportation projects for which the NYSDOT has either an implementation or funding responsibility. This is to insure full consideration of social, economic, and environmental consequences in making transportation decisions and that the public is involved in the process.

   Porter Avenue improvements recommended by all alternatives can be accomplished within the existing pavement section and within the existing right-of-way.

   Porter Avenue improvements recommended by Alternatives 2, 3 and 4 would not have a significant effect on the environment such that an Environmental Impact Statement would be required. Instead a project would be progressed as a Class II Action as defined in 23 CFR 771, which states that these actions are generally small scale projects and have little or no potential for social, economic or environmental impact. This type of project is usually excluded from the requirement to prepare an Environmental Assessment or an Environmental Impact Statement.

   A NEPA checklist would be prepared during the preliminary engineering phase required to advance a project to construction. Porter Avenue improvements recommended by Alternatives 2, 3 and 4 may qualify as either a Programmatic Categorical Exclusion or a Categorical Exclusion with Documentation. The lead federal agency for the NEPA Class II action(s) would be the FHWA.

2. State Environmental Quality Review (SEQR) Classification

   The New York State Environmental Quality Review Act (SEQRA) was enacted to provide environmental assessment and reporting for actions taken by agencies within the State. This project was evaluated in accordance with 17 NYCRR 15.14 regarding implementation of SEQRA.

   Porter Avenue improvements recommended by Alternatives 2, 3 and 4 would be progressed as a Type II Action subject to SEQRA processing. The SEQRA lead agency would be the New York State Department of Transportation. As the lead agency, The City of Buffalo would satisfy SEQRA requirements through the preparation of a NEPA Categorical Exclusion and NEPA Checklist.

3. List of Anticipated Cooperating Agencies

   - New York State Office of Parks and Recreation / State Historic Preservation Office (SHPO)
   - New York State Department of Environmental Conservation (NYSDEC)
   - New York State Department of Transportation (NYSDOT)
   - New York State Thruway Authority (NYSTA)
   - United States Army Corps of Engineers (ASACE)
   - United States Fish and Wildlife Service (USFWS)

- Peace Bridge Authority (PBA)

B. Social, Economic, and Environmental Consequences

During the preliminary design phase required to advance a project to construction, a more in-depth evaluation would be made of the potential social, economic, and environmental consequences of the improvements to Porter Avenue. The analysis below is meant to identify significant issues that would need to be addressed as part of the more in-depth evaluation.

1. Social Consequences

The social consequences expected for improvements recommended by Alternatives 2, 3 and 4 would enhance access, appearance, and safety for Porter Avenue. Therefore, the proposed improvements are expected to have a positive affect on social activities as well as the potential for population growth in the City of Buffalo. They are also expected to have a positive affect on community cohesion, school districts, recreational areas, churches, businesses, police, fire protection, and ambulance access. The proposed improvements are expected to be consistent with local planning documents.

2. Economic Consequences

The economic consequences expected for the improvements recommended by Alternatives 2, 3 and 4 would enhance access, appearance, and safety of Porter Avenue. Therefore, the proposed improvements are expected to have a benign affect on regional and local economies, highway-related businesses, and established business districts.

The proposed improvements would not require the relocation of residents or businesses.

3. Environmental Consequences

The proposed improvements for Porter Avenue can be accomplished within the existing pavement section and within the existing right-of-way.

The proposed actions would not have a harmful affect on any environmental feature, such as surface waters, wetlands, water quality, ecology, wildlife, historical and cultural resources, visual resources, parks and recreational facilities, air, noise, and energy. In addition, Porter Avenue improvements are not expected to encounter asbestos or hazardous contaminated materials.

It is anticipated that the following permits from other agencies would be required to construct the improvements proposed by Alternatives 2, 3 or 4:

- NYSDEC Section 401 – Water Quality Certification (Individual or Programmatic)
- NYSDEC SPDES General Permit for Storm Water Discharges from Construction Activity
- NYSDEC Notice of Intent (NOI) for Storm Water Pollution Prevention

In addition, approval from the New York State Office of Parks and Recreation / State Historic Preservation Office (SHPO) would be required.

## CHAPTER V: EVALUATION AND COMPARISON OF ALTERNATIVES

This chapter summarizes the advantages and disadvantages of each of the alternatives considered. The alternatives investigated are fully described in Chapter III of this report.

Alternative 1: No Action

Under this alternative no improvements would be made other than routine maintenance. This alternative would not alleviate the existing pavement deficiencies or correct the non-standard and non-conforming features that exist. Annual maintenance and user costs of the existing system would eventually exceed the costs of reconstruction or rehabilitation. The No Action Alternative would not address any of the project objectives and will not be considered further

Alternative 2: Three Lane Roadway

This alternative would provide one 3.3m (11 ft.) wide travel lane in each direction and a 3.3m (11 ft.) wide center left turn auxiliary lane between the New York State Thruway Bridge and Niagara Street. A 1.5m (5 ft.) wide bicycle lane would be added on both sides of the road from Busti Avenue (Front Park) to Niagara Street. Perpendicular parking would be provided on the south side of Porter Avenue from the waterfront to D.A.R. Drive. Improved appearance for the bridge over New York State Thruway I-190, including planters, artwork and special lighting. This alternative would also include new sidewalks, a multi-use path and landscaping including a double row of trees on both sides of Porter Avenue.

Alternative 3: Two Lane Roadway

This alternative would have the same roadway sections as Alternative 2 from the waterfront to the New York State Thruway Bridge. This alternative would provide a 2.7m (9 ft.) wide parking lane, one on both sides of Porter Avenue with a 3.3m (11 ft.) wide travel lane in each direction west of the New York State Thruway Bridge to Niagara Street. A 1.5 (5 ft.) wide bicycle lane would be accommodated on both sides of the road from Busti Avenue (Front Park) to Niagara Street. Similar to Alternative 2, Alternative 3 would include new sidewalks, a multi-use path and landscaping, including a double row of trees on both sides of Porter Avenue.

Alternative 4: Four Lane Roadway

This alternative would provide four 3.3m (11 ft.) wide travel lanes, two in each direction with curb offsets and no center median from the New York State Thruway Bridge to Niagara Street. From the west side of the Thruway Bridge to the waterfront, the roadway would transition to one lane in each direction with an additional westbound bypass lane, 2.7m (9 ft.) wide, to avoid left turning vehicles. Like Alternatives 2 and 3, this alternative would include streetscape features such as a double row of trees on both sides of Porter Avenue, new sidewalks, multi-use paths, landscaping, improved function and appearance of street lights and signs, and gateway features on or near the bridge over I-190 such as planters, artwork and special lighting.

Comparison of Alternatives

Table V-1 provides a summary that compares the advantages and disadvantages of each of the above alternatives.

**TABLE V-1: COMPARISON OF ADVANTAGES AND DISADVANTAGES OF ALTERNATIVES CONSIDERED**

| Alternative | Advantages | Disadvantages |
|---|---|---|
| Alternative 1:<br>No Action | • Maintenance cost only | • Increasing maintenance / user costs<br>• Would not address any of the project objectives |
| Alternative 2:<br>Three Lane Roadway | • Improves pavement conditions<br>• Sidewalks constructed to ADAAG Standards<br>• Provides dedicated bicycle lanes<br>• Corrects non-standard travel lane widths<br>• Meets all of the projects objectives<br>• Provides a center left turn auxiliary lane | • Does not provide on street parking east of the New York State Thruway Bridge |
| Alternative 3:<br>Two Lane Roadway | • Improves pavement conditions<br>• Sidewalks constructed to ADAAG Standards<br>• Provides dedicated bicycle lanes<br>• Meets all the project objectives<br>• Corrects non-standard travel lane widths<br>• Provides parking on both sides of the road | • Does not provide an auxiliary left turn lane east of the NYSTA Bridge |
| Alternative 4:<br>Four Lane Roadway | • Improves pavement conditions<br>• Sidewalks constructed to ADAAG Standards<br>• Corrects non-standard travel lane widths<br>• Provides a bypass lane east of the NYSTA Bridge | • Does not provide on street parking<br>• Does not provide a center left turn auxiliary lane<br>• Does not provide a designated bicycle lane<br>• Does not meet project objectives for the Waterfront Corridor Initiative Report<br>• Less pedestrian and bicycle friendly |

Conclusion:

As previously stated, the No Action Alternative (Alternative 1) does not meet all of the project objectives. Alternatives 2, 3 and 4 correct identified deficiencies, and meet project objectives. The selection of the preferred alternative, (either Alternatives 2, 3 or 4) will be determined in the future phase based on the assessment of forecasted traffic volumes for new development.

## CHAPTER VI: PROJECT COORDINATION

A comprehensive program for project coordination was developed to keep the public informed through public meetings and the dissemination of information and enlist the public, property owners and concerned citizens groups participation in workshops and stakeholders meetings throughout the study. Attendance at the workshops and stakeholders meetings was broad based, including residents, business owners, public officials and representatives of community organizations.

To date the following meetings have been conducted:

| Meeting Number | Meeting Description |
|---|---|
| 1 | Porter Avenue Improvements<br>Buffalo Olmsted Parks Conservancy<br>Advisory Committee Meeting<br>March 8, 2004 |
| 2 | Porter Avenue Gateway<br>Neighborhood Meeting<br>May 11, 2004 |
| 3 | Buffalo Waterfront Workshop<br>Public Information Meeting<br>May 15, 2004 |

Appendix B includes minutes of the meetings above. In closing, as the project to improve Porter Avenue progresses through the preliminary engineering phase required to advance a project to construction, additional public participation efforts will be required.