FINAL REPORT

Highland Park/Canalway Trail Planning and Concept Design

The City of Rochester
The Town of Brighton
and The Genesee Transportation Council
Monroe County
New York

prepared by

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Introduction

Qualifying Statement: **The following recommendations are conceptual only in nature and do not reflect the exhaustive and thorough analysis required for implementation of the plan. They do reflect the desires and wishes of Town of Brighton and City of Rochester and Genesee Transportation Council staff, knowledgeable volunteers on our Project Advisory Committee and others for the location and configuration of the trail. We offer these recommendations with the full knowledge that some may undergo significant modification or may prove to be unworkable or unnecessary when placed under the scrutiny of more thorough and exhaustive analysis. Specific elements of the recommendations which fall under the jurisdiction of the Monroe County Department of Transportation such as the configuration of road crossings at Westfall Road and Elmwood Avenue, the introduction of traffic lights at those locations, road widening, restriping and the addition of bike lanes on city streets from Highland Park to the Genesee River all must receive the appropriate attention and scrutiny when this project moves into the next stages of design and implementation.**

Project Goal:

The goal of the Highland Park/Canalway Trail Planning and Concept Design study is to develop a recommended concept engineering design for a multi-use neighborhood connector trail between the Erie Canal Heritage Trail (the "Canalway Trail") on the south, Brighton Town Park, Highland Park, and the Genesee Riverway Millennium Trail on the west near Mt. Hope Cemetery (see attached Location Map, **Figure 1A**). The trail would provide connections from neighborhoods in both the Town of Brighton and the City of Rochester to both the Canalway Trail and Genesee Riverway Trail, and would also provide statewide trail users access to several important parks and open space resources in the Town and City. A PAC (Project Advisory Committee) was assembled consisting of representatives of the City of Rochester, Town of Brighton, THE University of Rochester, and the Genesee Transportation Council and important neighborhood organizations. This group was active throughout the course of the project in decision making, review of submitted work, and meeting with consultants.

Project Objectives:

The study objectives are to:

- develop an understanding of the function and likely users of the proposed trail;
- explore alternative locations for the trail;
- select a recommended trail location;
- produce a concept design and cost estimate for the recommended trail, and
- develop an implementation plan which identifies issues involved in implementing the trail, such as land ownership, heavy traffic crossings, wetland mitigation, and funding sources.

Project Approach:

General - Multi-use trail design should employ a context-sensitive design philosophy. Trail design must satisfy two interrelated objectives, first as a transportation facility for bicycles and pedestrians and second as a recreational facility. The Highland Park/Canalway Neighborhood Connector Trail (the 'Trail') needs to satisfy the needs of trail users who fall in either of the two categories. In addition to bicyclists, it is expected that walkers, joggers, in-line skaters, skateboarders, and non-motorized scooter riders will also be using the trail and should be accounted for in the overall design philosophy.

Where twelve (12) ft. wide trails are indicated on the plans, this would be a recommended minimum width for the trail. It may be appropriate, when reviewing data on anticipated use, to build at a width of 10' or 14', however, the 12' width is recommended by FHWA and NYSDOT for higher volume traffic. Likewise, sidewalk widths of 5 ft. are considered minimum and where new or replacement sidewalks can be proposed and built, it would be prudent to consider wider widths based on anticipated use levels and surrounding land uses.

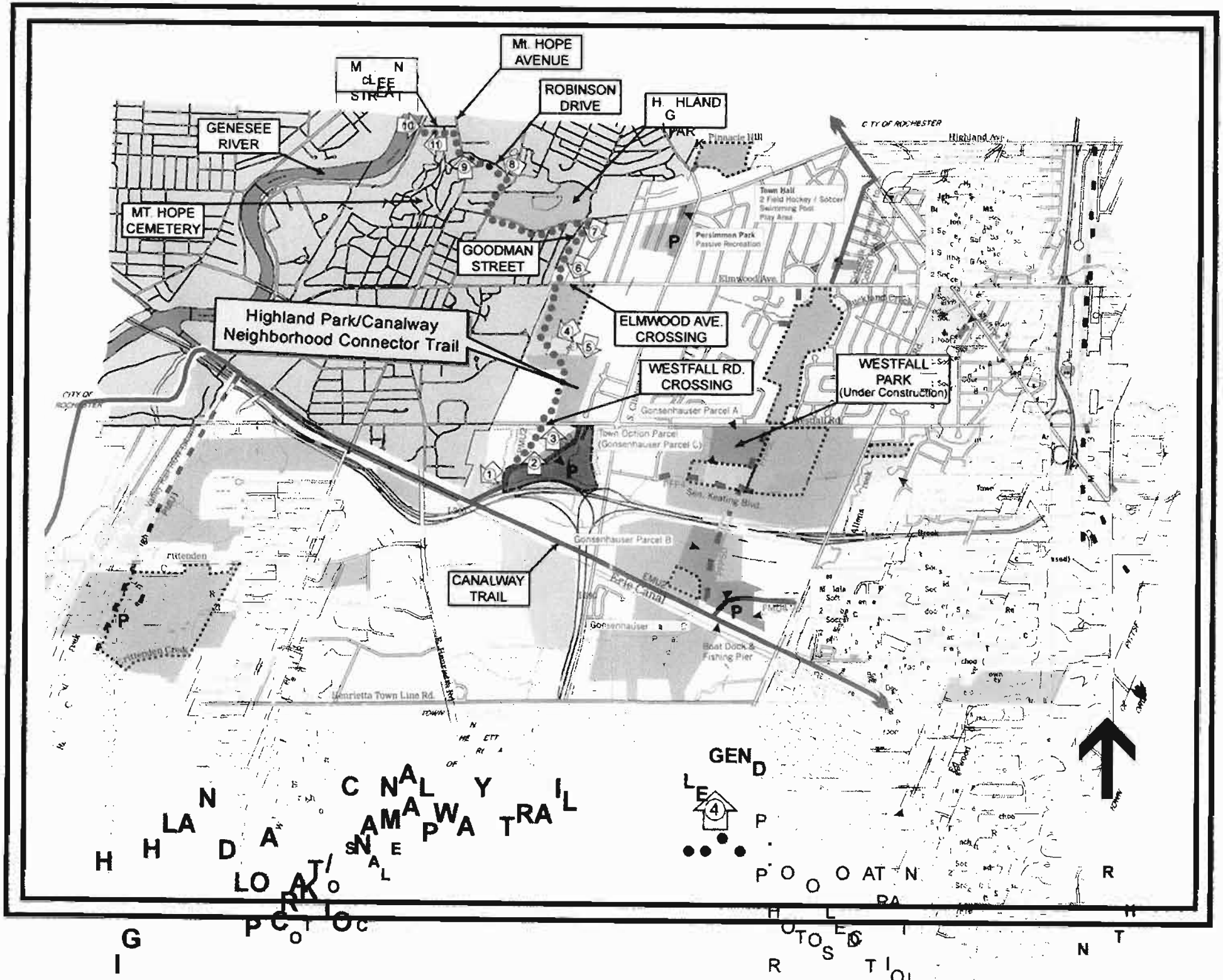
The Trail will likely utilize both public and private lands, including existing streets or street right-of-ways which will require signing and probably other upgrades. This study explores possible trail alignment alternatives such as utilization of existing trails and sidewalks in Highland Park and in lands owned or controlled by Mt. Hope Cemetery (the City of Rochester) and the University of Rochester. In the Town of Brighton, a portion of the proposed Trail alignment passes through or alongside of private lands currently being reviewed for development which contain existing NYSDEC and U.S. Corps of Engineers jurisdictional wetlands. The report will explore the adjacent land uses along the proposed project route including residential, office, and institutional developments and zoned lands and make recommendations for linkages where they are required. The project would involve two road crossings between the Erie Canal and Highland Park - Westfall Road and Elmwood Avenue. As the Trail continues north and westward, the proposed route follows existing city streets.

A memorandum addressing the wetlands and environmental issues has been prepared and is included as an appendix to this report.

A Traffic Report has been prepared as part of this study that addresses the particular concerns involved with the road crossings, and use of city streets and intersections for that portion of the on-street bicycle route. Particular suggestions are made for reconfiguration, re-striping, signage, and other improvements that will make those areas safer for the trail users.

Project Location

Figure 1a is a **Project Location Map** illustrating the general route of the proposed connector trail.


Mt. HOPE AVENUE
ROBINSON DRIVE
GENESEE RIVER
MT. HOPE CEMETERY
GOODMAN STREET
ELMWOOD AVE. CROSSING
Highland Park/Canalway Neighborhood Connector Trail
WESTFALL RD. CROSSING
WESTFALL PARK (Under Construction)
CANALWAY TRAIL
Persimmon Park
Passive Recreation
Town Hall
Gonsenhauser Parcel A
Gonsenhauser Parcel B
Town Option Parcel (Gonsenhauser Parcel C)
Boat Dock & Fishing Pier
Henrietta Town Line Rd.
Elmwood Ave.
Erie Canal
CITY OF ROCHESTER

The Trail would connect in the south to the Erie Canal Heritage Trail by way of an existing 10 ft. wide asphalt paved trail constructed as part of the I390/I590 interchange by the State of New York, and an extension of this trail constructed in 1998 by the Town of Brighton connecting to Brighton Town Park. The developers of Brighton Meadows Office Park provided an 8 ft. wide, asphalt-paved connection of this trail to Sawgrass Drive and limited parking (6 spaces) where the trail meets Sawgrass Drive. This portion of trail, approximately 320 ft. in length is somewhat overgrown with vegetation on both sides, however the trail surface and the connection all the way to the canal are of relatively recent construction, are in good to excellent condition, and no improvements other than widening of the Brighton Meadows section to a minimum width of 10 ft. and routine maintenance are required or proposed as part of this project.

Figure 1

Figure 1 shows the existing trail as it approaches Brighton Town Park from the south and from the Erie Canal Heritage Trail at I-390. The photo is taken at a juncture with a sidewalk that leads directly to the north and is a potential location for the pedestrian traffic on the trail. An existing 10 ft. wide sidewalk/"conservation easement" to the Town of Brighton is in place as part of the subdivision of the Brighton Meadows project. The easement follows the west leg of Sawgrass Drive northward to Westfall Road. The pedestrian portion of the trail could use that easement. The completion of the west leg of Sawgrass Drive is anticipated with the development of the remaining 2 lots of the subdivision and a new intersection at Westfall Road would be constructed as well. The proposed sidewalk would follow the conservation easement eastward from this intersection to the crossing point where it would link up with the proposed bike trail at the entrance to the Monroe Developmental Center.

Figure 2 shows Sawgrass Drive near the existing trail parking area. Sawgrass Drive is a private road and is 28' wide which is sufficient width for shared use by bicycle and vehicular traffic (2-14 ft. wide lanes). There are no sidewalks along Sawgrass Drive in this area. With a 60 ft. wide right-of-way available, there is sufficient space along the east side of the road to construct a separate paved trail, however, the trail would have to cross two existing driveways to large parking lots located to the east, which is generally not desirable. One alternative would be to maintain shared on-street use and construct a sidewalk on one side or possibly both sides of Sawgrass.

Figure 2

Monroe County Department of Transportation has scheduled the reconstruction of Westfall Road for the portion between South Clinton Avenue and East Henrietta Road. The Sawgrass Drive/MDC entrance intersection falls within this area. Separately, the MCDOT has given concept level approval to the provision of a traffic signal that would be installed in the next phase of the development of Brighton Meadows. A signalized intersection could enhance the safety of the crossing for trail users. There is also an opportunity to explore the use of traffic calming devices at this intersection that could add to trail user safety (e.g., a refuge island similar to the Elmwood and Goodman Street intersection, lane narrowing, and a high visibility crosswalk).

Directly north of the Sawgrass Drive intersection is the Monroe Developmental Center (MDC), the main campus of the Finger Lakes Developmental Disabilities Office. Buildings here house the administrative offices of that organization, and are also home to a large number of persons with severe disabilities. The property is 65.6 acres in size, is mostly flat, open and grassy for large areas, and represents probably the best potential route for the trail continuing northward.

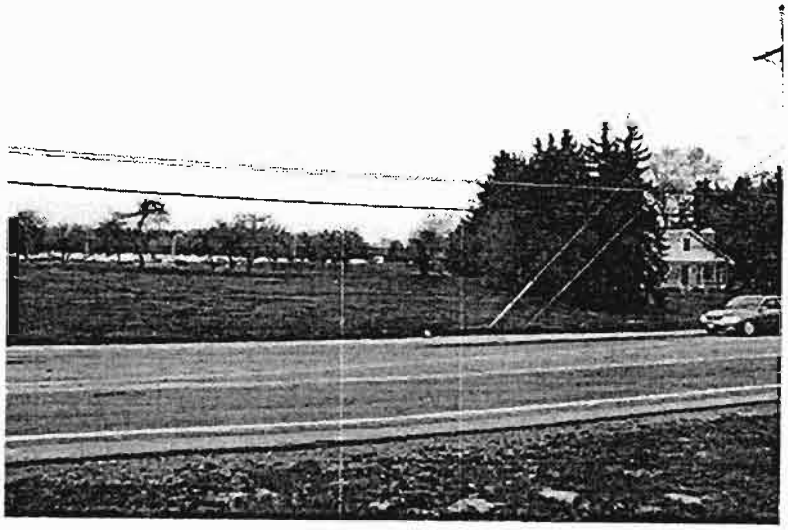


Figure 3

Figure 3 is a view of the east boundary of the MDC property looking north and with Westfall Road in the foreground. The intersection of Westfall Road, Sawgrass Drive and the MDC entrance is to the left out of the view. The photo illustrates a clear and direct route through the MDC property across open lawn areas to the north. Land to the east of the east MDC property line has been subdivided and is zoned residential. Several of the small lots have been obtained through foreclosure by the Town of Brighton and may offer a location for a trail linkage to the east to this subdivision as it becomes developed as well as other residential development

further to the east.

The rear(north) side of this property abuts the recently completed St. John's Meadows residential neighborhood for seniors, a 7.15 acre 'reserved parcel' designated to remain undeveloped, and a 7.35 acre parcel owned by the State Hospital. The reserved parcel is entirely and heavily wooded and contains portions of a designated NYSDEC regulated wetland (BR-10). The Town of Brighton has already developed a trail on this property, which consists of a wood chip path and raised wood boardwalk. **Figure 4** shows a view of the beginning of this trail at St. John's Meadows where it meets an asphalt-paved sidewalk ringing a detention pond.

Figure 4

Figure 5 photo shows the wood-chip surfaced trail, approx. 8' wide, that takes a looping route through the 'reserved' parcel. This existing cleared trail could potentially be used for the new multi-use trail. From this parcel the trail could lead directly north through a privately owned parcel on which NYSDEC regulated wetlands exist or to the west then north through NY State Hospital owned land (Rochester Psychiatric Center). A trail linkage to this senior residential community can be easily made through a relatively flat, cleared area.

Along the north edge of the MDC property running east and west is a raised berm that appears to have been built many years ago to detain surface drainage on the uphill (south) side of the berm. The berm is about 4 feet in height above the surrounding grade and mostly clear of trees for the 6 foot width of the top of this berm. It could serve as another potential location of the proposed trail. To the south of the berm, wetlands have formed in what appears to be a pond area excavated when the berm was built.

Figure 5

Much of the area along the north boundary of the MDC and both the St. John's reserved parcel and the 7.35 acre State Hospital parcel are heavily wooded and/or are covered with dense brush and undergrowth. All three contain portions of the BR-10 NYSDEC regulated wetlands and wetland buffer areas. Also, the trail will need to cross Buckland Creek at a point either on the reserved parcel or State Hospital parcel. Buckland creek is an excavated channel 10 to 12 ft wide starting at the west end of the berm and continuing northward to the main body of wetlands on the 'Mansions' property (see below). A new trail through this area will need to meet the requirements that may be imposed on such development by the NYSDEC within the boundary of the wetland and its 100 ft buffer area.

Directly north of the reserved St. John's and State Hospital parcels is a 33.74 acre parcel currently the subject of a proposed residential project, 'The Mansions at Brighton'. Plans for development of the property have been submitted to the Town of Brighton and are currently under review. The plans for development currently call for an 'up-scale' high-density townhouse and apartment residential community in this location and include the construction of trails as part of that project. The provision of a trail is in anticipation of the Town of Brighton's need to complete the north/south link of the multi-use trail from the Erie Canal trail to Highland Park and to provide a connection to the existing St. John's parcel nature trail, and to provide passive recreational opportunities for residents. The parcel is mostly flat and heavily vegetated with growth ranging from dense woods to dense brush and undergrowth, to open wet meadow areas. There are substantial areas of wetland on the property already delineated by the NYSDEC. These areas represent the largest area of the wetland known as BR-10 and are also the headwaters of Buckland Creek.

To the west of the 'Mansions' parcel is a 100 ft wide strip of land owned by the State Hospital and the former State Hospital itself on a 40+ acre parcel further to the west. The 100 ft. wide parcel is mostly wooded to the south and mostly open to the north. An existing clearing extends from south to north through this parcel which may serve as a potential alternative trail location. The northeast corner of these properties is an open grassy meadow through which the trail could pass by way of gradual horizontal curves to approach the Goodman Street/Elmwood Avenue intersection.

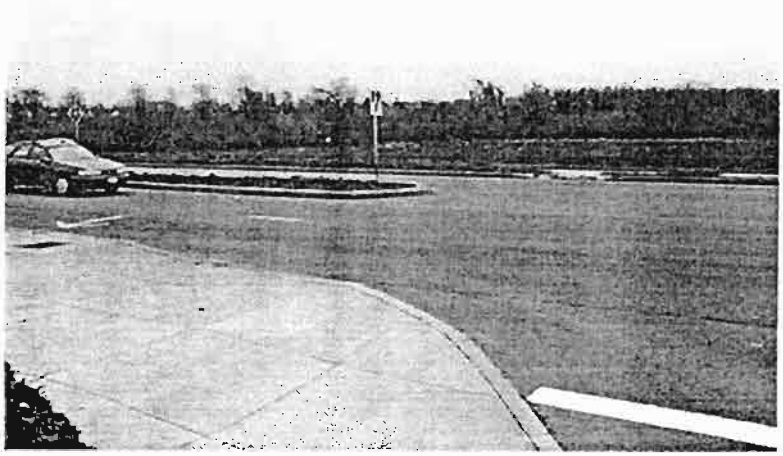


Figure 6

Figure 6 is a view looking south from the intersection of Goodman Street and Elmwood Avenue toward the State Hospital (Rochester Psychiatric Center) lands to the right and lands to the left and in the background currently proposed to be developed as 'The Mansion at Brighton'. Elmwood Avenue has recently been reconstructed in this area and sidewalks exist as well as ramps, and a curbed median island that would serve to provide a refuge and

protect trail users crossing the road at this location.

From this point, the trail could follow Goodman Street north to the intersection with Highland Avenue. The open areas on both sides of the road are Monroe County park land. There are currently no sidewalks present on either side of the road despite its close proximity to Highland Park, residential neighborhoods to the east, west and Colgate Divinity School to the north.

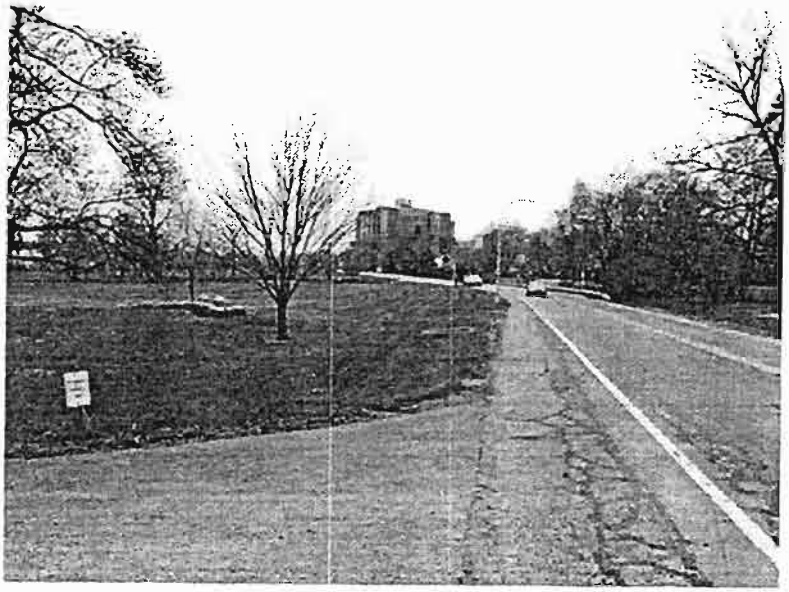


Figure 7

Figure 7 is a view looking south with Goodman Street on the right, a portion of Highland Park to the left and the former Rochester Psychiatric Center in the background (tall building in center). Between Elmwood Avenue and Highland Avenue, Goodman Street is an uncurbed 22' wide roadway in excellent condition - having recently been repaved. Existing asphalt paved shoulders 4' to 6' wide on each side are in poor condition. Bicycle traffic could stay on the road in this area or could be off-road in some fashion. There are no existing sidewalks for pedestrians. Road width is sufficient to accommodate 2-11 ft. wide travel lanes, and 2-6 ft. wide shoulders. Likewise, a separate trail parallel to and on the east side of Goodman could be accommodated. Here there is only one driveway that would need to be crossed which leads to a County Parks maintenance facility. There is insufficient space on the west side of the road for a dedicated trail. We recommend both a dedicated trail, and the provision of 6 foot wide shoulders, the latter being for bicyclists that wish to remain on the street.

Highland Park is a County Park that contains many unique landscaped areas and groves of collection plants including a large lilac collection. It is home to the annual Lilac Festival. Highland Avenue is closed to vehicular traffic during the 10-day festival.

Note: County Parks policy is to not allow bicycle traffic on trails anywhere in the park at any time. Bicyclist who wish to enter the park are required to dismount and walk their bicycles through the park.

During the course of this study, we reviewed the possibility of continuing the trail north on Goodman Street to Pinetum to where the trail would begin heading westward. This route may not be an adequate trail location for several reasons, those being: 1) the steep incline of Goodman and Pinetum, 2) Goodman Street is narrower and curbed north of Highland requiring shared use lanes for bicyclists, and 3) poor vehicle site distance for traffic heading south on Goodman from the city. Both Doctors Road and Reservoir have deep gutters along both sides of the road which are not considered safe for bicycle traffic. There are no

sidewalks on Pinetum or Doctor's Road. There is insufficient space to either side off the road to construct trail facilities due to the nearness of evergreen plant collections to the road. The Pinetum route would, however, bring bicycle traffic into the park and closer to the site of the proposed Children's Pavilion. The drawbacks of this route may outweigh the benefits.

Highland Avenue is wide enough (34 to 36 ft) for nearly its entire length to accommodate two 11 ft. wide (minimum) vehicle lanes and two 6 ft. wide paved shoulders. One problem area exists that deters continuous on-road bicycle use. There is a small area of on-street parking 300 feet long on the north side only located between the 'Lilac Crossing' and the entrance to St. John's Home. Bicyclists going west would be forced here to join a vehicular traffic lane.

The intersection of Highland Avenue with South Avenue is busy has limited available space. Traveling west and approaching South Avenue, there are 4 existing delineated vehicle lanes - one of which would need to be eliminated to accommodate the 6 ft. wide delineated shoulders. Road capacity versus existing and anticipated vehicle volumes would need to be assessed to reduce the number of lanes. Without a lane reduction, bicyclists on the road would need to merge with vehicular traffic and turn north on South Ave.

Figure 8

Foot traffic can be accommodated by either the sidewalk along the south side of Highland all the way to South Avenue or one of the numerous paved paths in Highland Park.

With the existing 4-lane road striping configuration on South Avenue north of the intersection, there is insufficient width for designated bicycle space. Without some form of re-striping, or road widening, where there is sufficient width to designate a shoulder. Bicyclists may use existing sidewalks. Experienced bicyclists can merge with vehicular traffic, get into the left lane with vehicles and turn left onto Highland Ave. Less experienced bicyclists have the option of dismounting to use existing sidewalks, and negotiating the intersection as pedestrians. Again, to accommodate a reduction in the number of lanes, a study of road capacity would need to be conducted.

South Avenue is wide enough (40 ft) for nearly its entire length to accommodate two 14 ft. wide vehicle lanes and two 6 ft. wide shoulders. From Highland Avenue north to Reservoir, this would entail a reduction in the number of northbound lanes from 2 to 1. Again, to accommodate a reduction in the number of lanes, a study of road capacity would need to be conducted. Foot traffic can be accommodated by existing sidewalks on either side of the road to Robinson. Although there is adequate space for both vehicles and

bicyclists, a left turn onto Robinson can be a relatively unsafe experience mostly due to the curves in the road immediately to the south of Robinson that reduce the site distance for vehicles approaching from that direction and also the large volume of traffic at certain times of the day. Sight distance is also critical for bicyclists trying to make the left-hand turn.

Figure 9

Robinson Drive is a lightly traveled park road, 24 ft. wide with parking available on the south side. There is sufficient width for 2-12 ft. wide lanes. There are sidewalks on both sides of the road to accommodate foot traffic. This leg of the trail could be the most pleasant and scenic because of the park conditions including the rolling hilly lawns and stately old trees and abundance of shade.

Figure 8 is a view of Robinson Drive looking west. Highland Park is on both sides of the road in this location. There are important plant collections throughout the park in this area. Highland Park is also historic and though the opportunity exists to perhaps cross over park land and create a separate bike trail, this approach would likely meet stiff resistance due to historic preservation issues that would result.

Figure 9 shows Mt. Hope Avenue looking north from the McLean St. intersection toward Robinson Drive. The road here has already been striped with a mostly 3.5 to 4 ft wide shoulder (narrower in some areas). This is not sufficient as a dedicated shoulder for bicycle use however sidewalks are present that could be used as the alternative. Pedestrian traffic could once again be accommodated by the adjacent sidewalks located on both sides of the road.

Mt. Hope cemetery was examined closely in an effort to locate an off-road route for the trail. For several reasons, a route through the cemetery is less desirable than staying on the road. They include:

1) the gated nature of the cemetery - it is entirely fenced in and closes at dusk,
2) entrapment - gates are closed at dusk and trail users may be left inside,
3) history - the cemetery is quite historic, an aspect that may present some hurdles in terms of introducing new roads or a new use to the existing roads and/or particular construction materials such as surfacing materials,
4) the remainder of the trail between the river and Goodman Street will likely be located on the existing right-of-way so it makes sense to be consistent with the project as a whole to remain on the right-of-way,
5) the dense grave and headstone configuration on cemetery ground would mean a route with numerous sharp (90 degree) turns and abrupt changes in grade, and

Figure 10

6) steep slopes along the west line of the cemetery would also present a logistical problem in bringing the trail directly to Wilson Boulevard and the Genesee River Trail.

Figure 10 shows McLean Street looking east from the southeast corner of the intersection with Wilson Boulevard. The road here is only 19 feet wide and is designated for one-way west-bound vehicular traffic only. The recently constructed concrete sidewalk (7.5 ft. wide) is owned by the University of Rochester which has indicated that it would like to limit sidewalk traffic to pedestrians only. It currently provides pedestrian access to a new university parking. lot on McLean Street and would provide a trail for walking trail users.

Figure 11 shows the sidewalk leading to Wilson Boulevard and the existing crossing that could be utilized by pedestrian trail users as well. The University of Rochester has expressed a desire to allow only pedestrian traffic on the sidewalks here and not bicycle traffic. Across the street is the Genesee Riverway Trail, an asphalt paved 10-ft wide trail that connects to the Genesee Valley Park to the south and downtown Rochester to the north. The nearby pedestrian bridge over the Genesee River as well as the Ford Street and Elmwood Avenue bridges can take trail users to the west side of the river from here.

Recommended Trail Components and Linkages

The southern connection point of the proposed Connector Trail is at the terminus of an 8 ft. wide asphalt paved trail installed as part of the Brighton Meadows Office development when that project was initiated. Plans call for widening this leg of the trail to 10 ft. for a length of approximately 230 ft. to a point where it splits to the east and west meeting an existing 10 ft. wide, asphalt-paved trail. The east leg of this trail leads to Brighton Town Park while the west leg continues approx. 2400 lf. south/southwest along a large pond and Interstate 590 and connects to the Erie Canal Heritage Trail. Signage would be added along this trail to inform users of the approaching Connector Trail route to the north and Brighton Town Park to the east. A new kiosk feature should be placed at the point where the trail meets the Canalway. The kiosk should include a map of the trail route and identify the various significant features and linkages along the route including the Brighton Town Park, the St. John's Meadows nature trail, Highland Park, etc. A second map of the Connector trail should be installed at the connection point in Brighton Meadows where there are 6 parking spaces apparently constructed as part of the initial phase of that project's development.

Sawgrass Drive/Brighton Meadows Section. Two alternative trail alignments were discussed for the Brighton Meadows Office Park from the connection point northward toward Westfall Road and the Monroe Developmental Center (MDC) property. With the selected alternative illustrated on the plans, all trail users would be directed to a separate, designated 10 ft. wide paved trail located on the east side of Sawgrass Drive (Figure below). This trail would be separated from the road by a wide tree lawn (10 ft. wide minimum), and would cross 2 driveways as it approaches the intersection with Westfall Road. Easements from the owner of the adjacent property to the east (formerly General Railway Signal) may be needed to fully accommodate the construction of this trail. The asphalt trail would consist of 2" Type 7 NYSDOT top course on 6" Type II compacted stone base. In some locations, underlying geotextile pavement reinforcement material may be required. The pavement surface should slope to one side or the other throughout at 1/8"/ft. Min. to 1/4"/ft. Max.

The second alternative would propose to bring bicycle traffic out onto Sawgrass Drive to follow the east 'leg' of that road north to Westfall Road at a point opposite the entrance to MDC.. Bicycles would be on the road, sharing a lane with vehicles in each direction. Pedestrians, skaters and other trail users would follow the existing and proposed sidewalks along the west branch of Sawgrass Drive also to Westfall Road. This sidewalk could be widened perhaps to 10 ft. at some time in the future as the developer of Brighton Meadows has previously granted to the Town of Brighton a 10 ft. wide 'Sidewalk Easement' in this location. The west intersection of Sawgrass and Westfall Road is approximately 900 ft. west of the MDC/ east Sawgrass Drive - Westfall Road intersection. Although it is believed the intent of the easement was to accommodate all trail users, it is believed bicyclists would probably take the more direct east branch route to the intersection with Westfall Road by following the east leg of Sawgrass Drive even with directional signage that could be installed. Non-bicycling trail users (walkers, skaters, etc.) Who find

themselves at the 6 parking spaces would also likely be tempted to go directly north to the east intersection - bypassing any sidewalks located in the 'Sidewalk Easement".

Westfall Road Crossing. Plans show crossing Westfall Road at the intersection of the entrance to Monroe Developmental Center - opposite Sawgrass Drive. Plans also call for the provision of a traffic signal here to assist and protect trail users as they cross this heavily traveled road. The crossing would be well marked with a high-visibility crosswalk such as a 'piano-key' style walk and designated with appropriate signage and alternative pavement materials. Additional traffic calming measures and a pedestrian refuge feature may be helpful and are described in more detail in Appendix 2 'Traffic Report' and the accompanying Figure A. Also, see Figure 23 illustrating a Typical Road Crossing. Sidewalk ramps, high-visibility crosswalks, and signage are among the improvements that would are recommended here. These pedestrian features should be included with Westfall Road reconstruction design (see below).

Westfall Road is scheduled to be reconstructed in the next few years by Monroe County as part of their capital improvement program. The east section of Westfall Road (from South Clinton to Winton Road) was recently reconstructed (completed in 2001). A signal at Westfall Road/Sawgrass Drive has been conceptually approved as part of the development of Brighton Meadows. The estimated time period for implementation by the developer is late 2004 to early 2005.

Monroe Developmental Center Section. Upon crossing Westfall Road, the Trail would then extend northward through the MDC property. Although various routes through the property were considered and discussed, the route alternative selected and shown on the plans has met with approval of the Executive and Business offices of MDC. The reasons for selecting this route include the following: sensitivity to the rights of the disabled living at the site, potential for future development of open areas of the site, and minimization of potential conflicts with vehicles, parking, and maintenance staff.

The route identified shows a jog east to the east property line immediately after crossing Westfall Road and entering the property. The trail would then continue north along side of and 15 to 20 ft. from the MDC east property line thus avoiding conflicts with vehicular traffic, parking, and pedestrians elsewhere on the property. The trail could stay to the 'fringe' of the property once it reaches the north line of the MDC property by following an existing berm westward to Buckland Creek. At this point, the trail would cross the man-made ditch and onto Rochester State Hospital lands. **Figure 13** shows a photo simulation of the trail on MDC property turning north at the east property line and continuing northward to the rear of the property.

A landscape buffer of evergreen and small flowering trees would be provided along the west side of the Trail to screen the trail from residences in the complex and to screen views of MDC buildings and parking areas from the Trail - as illustrated on the plans.

EXISTING CONDITIONS

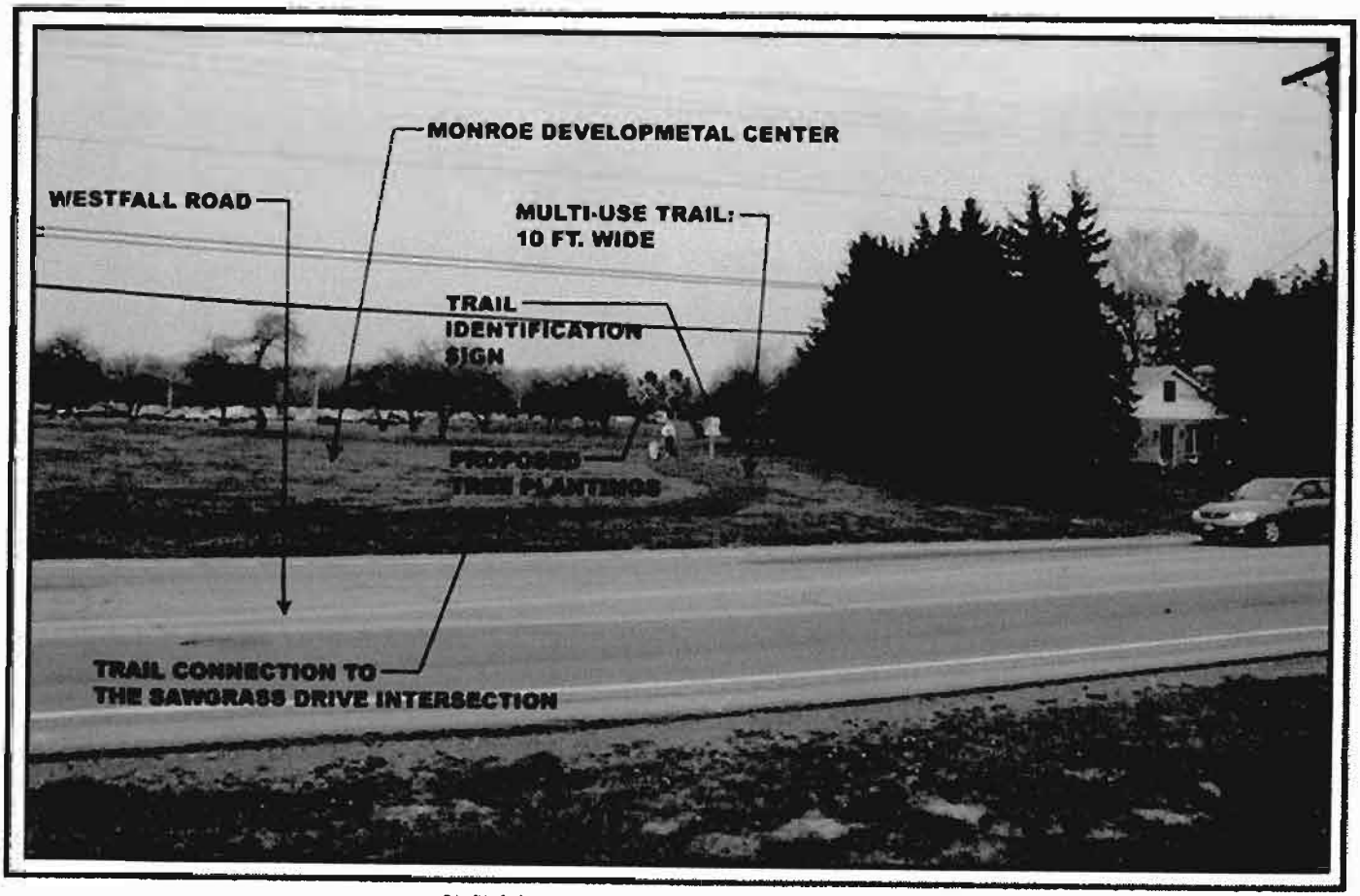
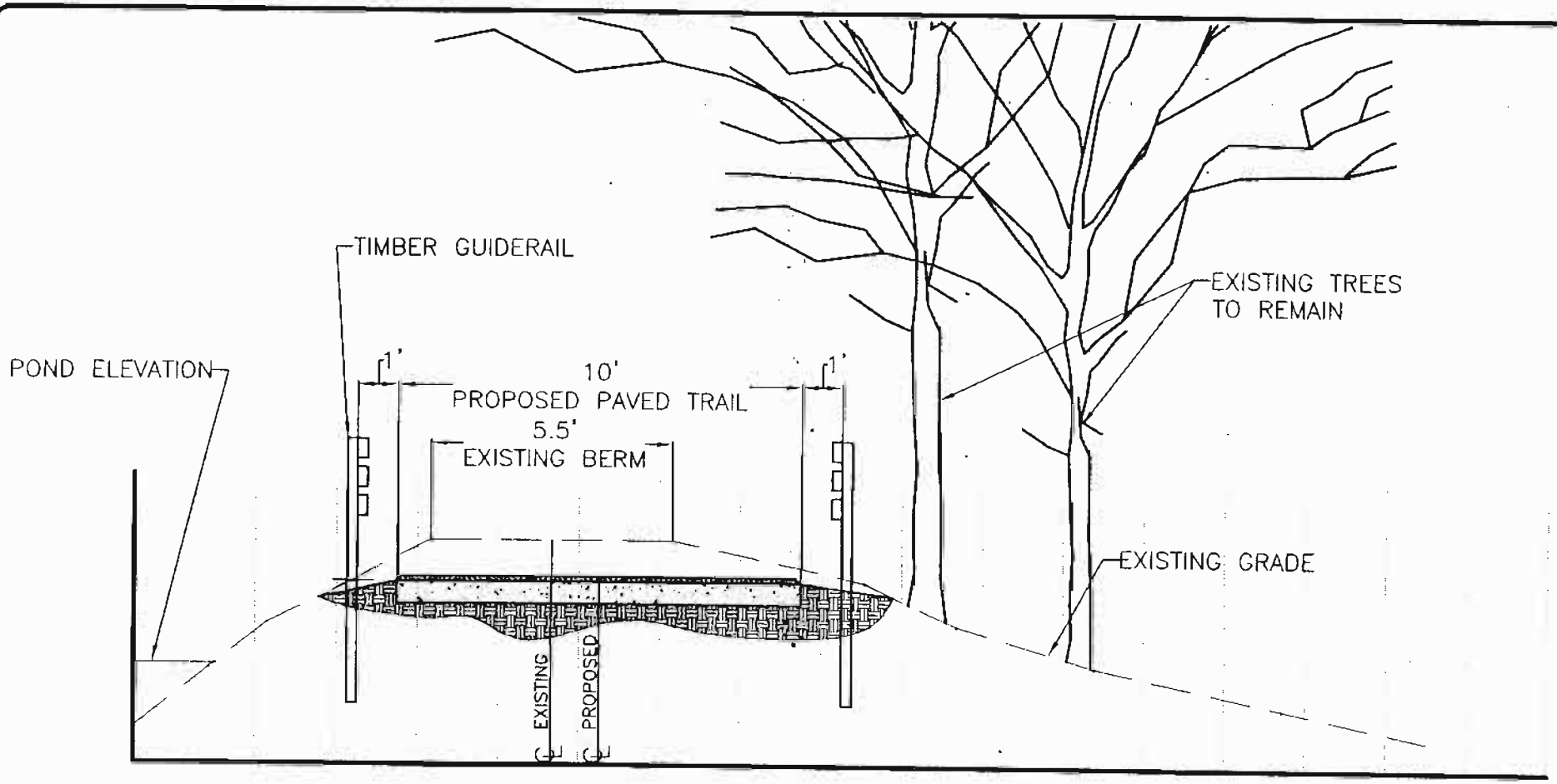


PHOTO SIMULATION OF PROPOSED CONDITIONS
WESTFALL ROAD LOOKING WEST TOWARD MONROE DEVELOPMENTAL CENTER EAST PROPERTY LINE
FIGURE 12
PREPARED BY McCORD LANDSCAPE ARCHITECTURE



SECTION A–A

VERT. SCALE: 1"=4'–0"
HORIZ. SCALE: 1"=4'–0"

HIGHLAND PARK / CANALWAY TRAIL

CITY OF ROCHESTER
TOWN OF BRIGHTON

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Landscape
Architecture

AKW 9/29/03

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Landscape
Architecture

Douglas C. McCord, ASLA
2129 Five Mile Line Road
Penfield, New York 14526

N/F
ROCHESTER STATE
HOPSITAL

EXISTING MAPPED
WETLANDS
NYS DEC BR-10

ST JOHN'S MEDOWS TRAIL SITE
7.15 ACRES

CB ELEV.
515.58

BOARDWALK CONTINUES
THROUGH POTENTIAL
WETLANDS

EXISTING MAN-MADE DITCH

EXISTING BOARDWALK

514.92

515.1

516.77
516.45

520.34

BRIDGE

TURN IN
DIKE

520.38

519.8

519.92
515.98

POND

DITCH
HEADWATERS

6 FT. WIDE ASPHALT
PAVED TRAIL

N/F
MONROE
DEVELOPMENTAL
CENTER

10 FT. WIDE ASPHALT
PAVED TRAIL

HIGHLAND PARK / CANALWAY TRAIL

CITY OF ROCHESTER
TOWN OF BRIGHTON

A trail connection should be provided to existing paved and wood-chip trails at St. John's Meadows via a proposed 6 ft. wide asphalt paved trail. Trail users could access the existing nature trail and wetlands area via this route. A second connection could be made to the east to a residential subdivision via one of several small properties owned by the Town of Brighton and right-of way already in place.

The development of the Trail within the 100 ft. wide wetland buffer area will include working with the NYS Department of Environmental Conservation and the U.S. Corp of Engineers on the precise route, trail surface materials, guide and rails and fencing that may be required. Plans call for placing the trail on an existing man-made berm as the Trail makes its way through this heavily wooded section. **Figures 14 and 15** illustrate the work proposed for the trail on this berm.

Rochester State Hospital (RSH) Section. Upon leaving the MDC property, the Trail is proposed to proceed north/northwest through a 7.35 acre Rochester State Hospital (RHS) parcel, through wetlands (portions of NYSDEC BR-10) and a somewhat densely wooded (undergrowth) area. The trail will be raised off the ground on a boardwalk where it crosses the man-made ditch and designated wetland areas. The boardwalk may be similar in nature to that currently in place as part of the nearby nature trail but wider to accommodate bicycle as well as pedestrian traffic. The Trail would proceed northward through RSH lands to the 'Mansions at Brighton' property which is similarly densely wooded and extends northward to Elmwood Avenue. Work done on the Trail and boardwalk would, again, need to be coordinated with the NYSDEC and USCOE as well as New York State.

The Mansions at Brighton Section. The property directly north of the 7.35 acre Rochester State Hospital parcel is currently under review by the Town of Brighton for a residential townhouse/attached single family home development known as the 'Mansions at Brighton'. The concept plan for the project includes a trail along the west boundary of the property which, if developed as the Connector Trail, would serve as the next link northward to Elmwood Avenue. The Trail is shown on MLA plans as a 10 ft. wide asphalt paved trail and in essentially the same location as is shown on the 'Mansions' plan. The Trail veers west as it nears Elmwood Avenue and for a distance of approximately 140 ft would be on RHS property - crossing over to a point directly opposite the Goodman Street intersection with Elmwood.

The 'Mansions' plan also calls for additional trails and/or boardwalks through the wetland area, linkages to the Town developed nature trail, and to the St. Johns Meadows trail system. This study is in full support of those linkages as they would tend to serve as another reason for development of the Connector Trail.

A second alternative route would continue west from the 7.35 acre RSH parcel to other RSH lands including a 100 ft. wide strip of land extending all the way to Elmwood Avenue. The status of all of the RHS properties at this writing is in flux as the State of New York has ceased operations at the Hospital and is reportedly weighing the option of selling it or re-using it for other operations.

Elmwood Avenue Crossing. Elmwood Avenue is perhaps the busiest road the Trail will need to cross at grade. Upon crossing the road, the trail would continue northward parallel to Goodman Street. Goodman runs through a flat and southernmost portion of Highland Park. An existing curbed traffic median

EXISTING CONDITIONS

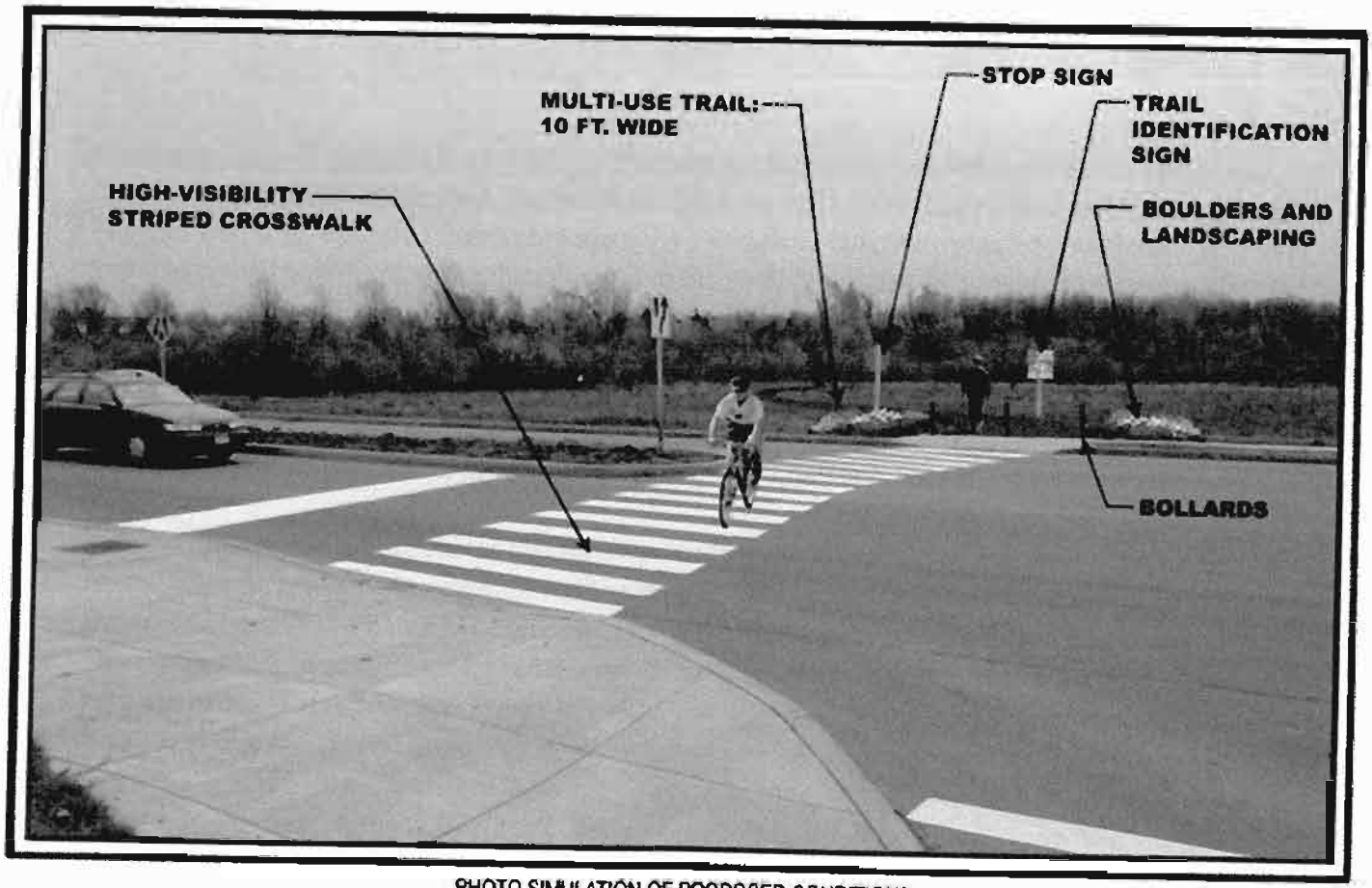


PHOTO SIMULATION OF PROPOSED CONDITIONS
ELMWOOD AVENUE LOOKING SOUTH TOWARD THE ROAD CROSSING AT GOODMAN STREET
FIGURE 15
PREPARED BY McORD LANDSCAPE ARCHITECTURE

on Elmwood at the intersection with Goodman presents perhaps the best opportunity to cross with some degree of traffic control and trail user safety. The median would act as a refuge area as it exists and would be modified with ramps, perhaps an additional curbed section to define the Trail at the island, and special pavement material to accommodate the Trail traffic. There are no known plans by Monroe County DOT or the City of Rochester to signalize this intersection or add stop signs and warrants are currently not met for provision of either device. However, we recommend a study to evaluate existing and future conditions to see if warrants might be met. See **Figure 23** and page 2 of the Traffic Analysis, Appendix 2 of this report for specific improvements suggested for this crossing. A 'gap analysis' would be required to justify a crosswalk. No further analysis is provided as part of this report. Figure 16 illustrates a photo simulation of this intersection looking south from near the Highland Park sign. Sidewalk ramps, high-visibility crosswalks, and signage are among the improvements that are also proposed here.

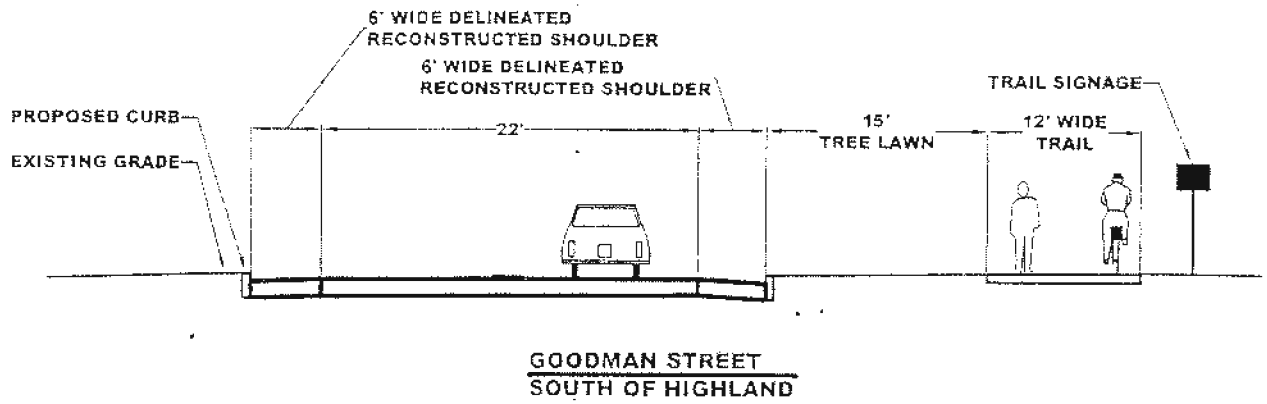


Figure 17

Goodman Street/Highland Park Section. The selected alternative would continue with a dedicated 12 ft. wide asphalt paved trail through this property along the east side of, and parallel to, Goodman Street. The trail would be separated from the roadway by a wide tree-lawn strip planted with trees. The trail is this area could be perhaps wider than the trail to the south - perhaps 14 ft. wide to accommodate the increase in trail traffic during the annual Lilac Festival and from the surrounding densely populated neighborhoods to the east and west the rest of the year. The plans also illustrate improvements to Goodman Street under this alternative that would include provision of new curbing and reconstructed, 6 ft. wide shoulders to accommodate those bicyclists who wish to remain on the street. **Figure 17** illustrates a section of the proposed trail in relation to Goodman Street and possible road improvements.

A second alternative was discussed that would provide the 6 ft. wide shoulders, one on each side of the road along with a 6 ft. wide sidewalk on the east side of the road for pedestrians, skaters, and slower bicyclists. The sidewalk would be separated from the roadway by a wide (10 to 15 ft.) tree lawn strip heavily planted with trees to reinforce the separation of road traffic from pedestrians and to reinforce the park aesthetics. This alternative would be more expensive than the off-road trail and would require the previously described road improvements.

EXISTING CONDITIONS

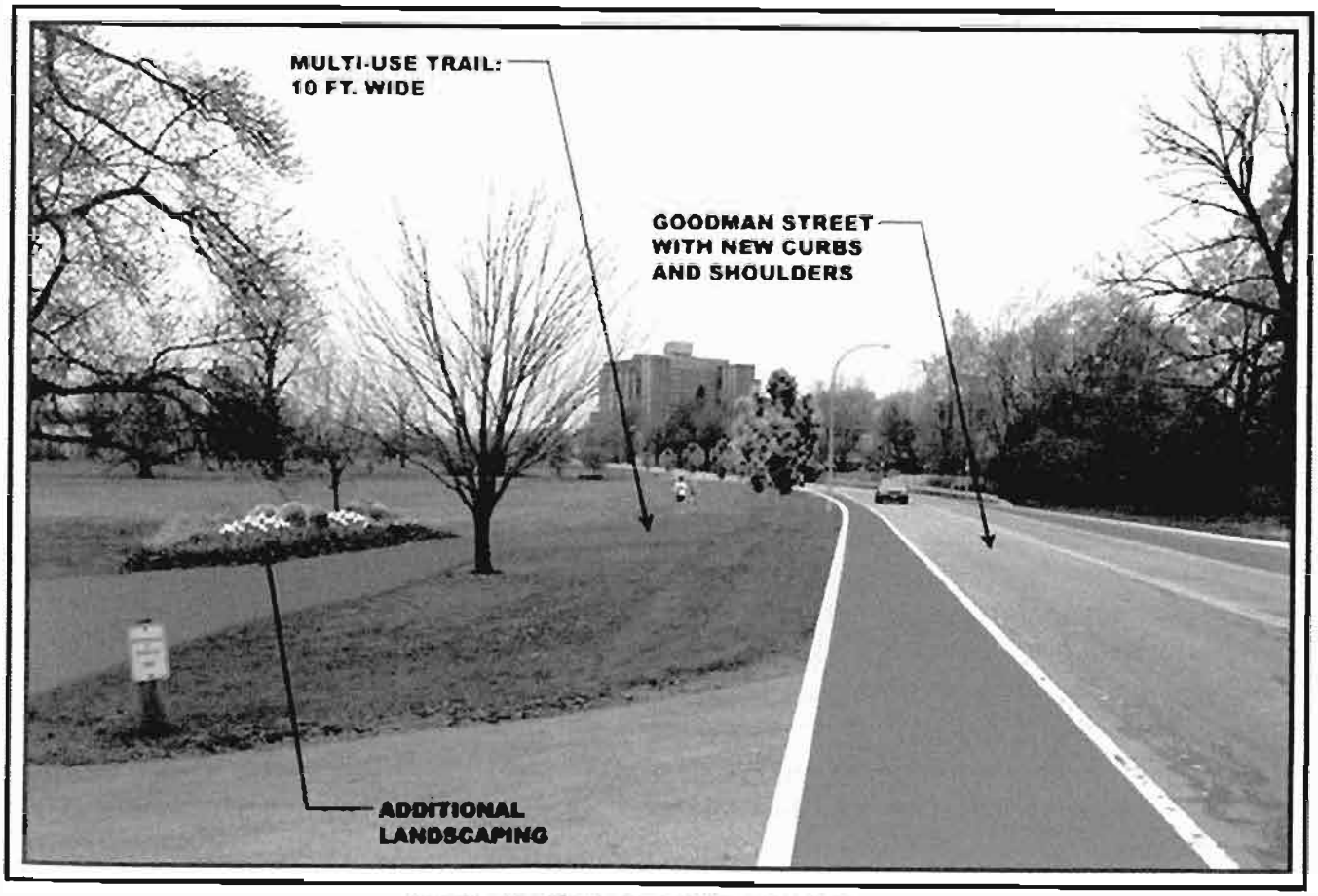
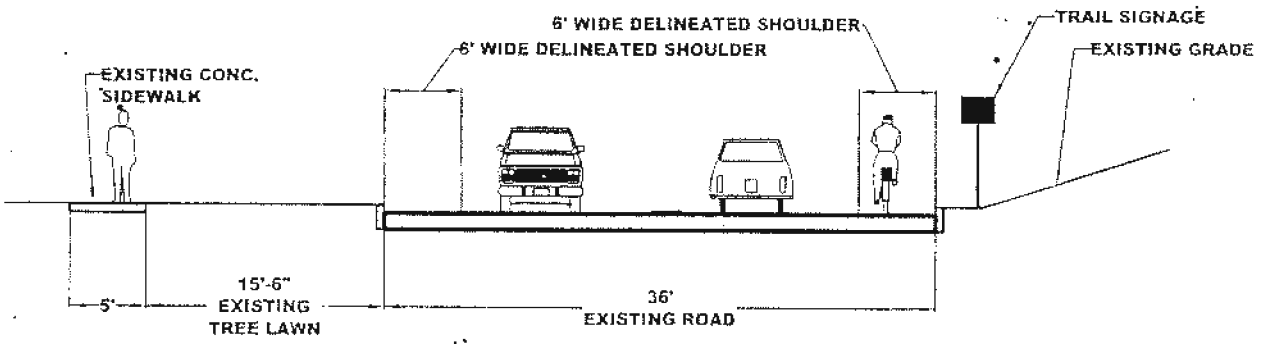


PHOTO SIMULATION OF PROOSED CONDITIONS
GOODMAN STREET LOOKING SOUTH
FIGURE 16
PREPARED BY McCORD LANDSCAPE ARCHITECTURE

A kiosk feature would be located at the southeast corner of Goodman Street and Highland Ave. The kiosk feature would have a decorative pavement surface, benches, directional signage, and a kiosk with a trail map, rules, and interpretive information. It would also explain park rules including the County Parks Department policy of not allowing bicycle or skating traffic on park trails. Concrete sidewalk connections should be provided from this corner that connect to existing sidewalks on Goodman Street to the north and Highland Avenue to the east. Directional signs to the trail should be added at various locations in neighborhoods around Goodman Street to the north of the Goodman/Highland intersection. Any future realignment of Goodman Street to create the 'parkway' design suggested by the early Olmsted plans should include the bike trail and widened shoulders in the new configuration.

Highland Park Section. Routes through and around Highland Park were discussed in detail during the course of this trail study. Specifically, the **Goodman-Pinetum-Doctor's/Reservoir** route was not considered a viable alternative for the following reasons:

1. The bicycle/vehicle conflicts anticipated at the Goodman/Pinetum intersection. Goodman is quite busy in this area, especially during rush hour.
2. The intersection is not signalized, nor is their any plan in place to provide a signal. A mid-block crossing is something that would need to meet appropriate warrants and gap study criteria to be approved by Monroe County Department of Transportation.



HIGHLAND AVENUE
LOOKING WEST

Figure 18

3. The site distance for vehicles traveling south on Goodman Street versus the required stop distance to make way for bicycle traffic turning onto Pinetum is considered unsafe.
4. The grade up Goodman Street and then up Pinetum is greater than 5% which is undesirable because the ascents are difficult for many bicyclists and the descents cause some bicyclists to exceed the speeds at which they are competent or comfortable. The route also would exceed the ADA recommended length for an acceptable recreational pedestrian trail route with a grade of more than 5%.
5. Both Reservoir Avenue and Doctor's Drive have deep gutters that may present challenges for bicycle traffic and would likely need to be improved.

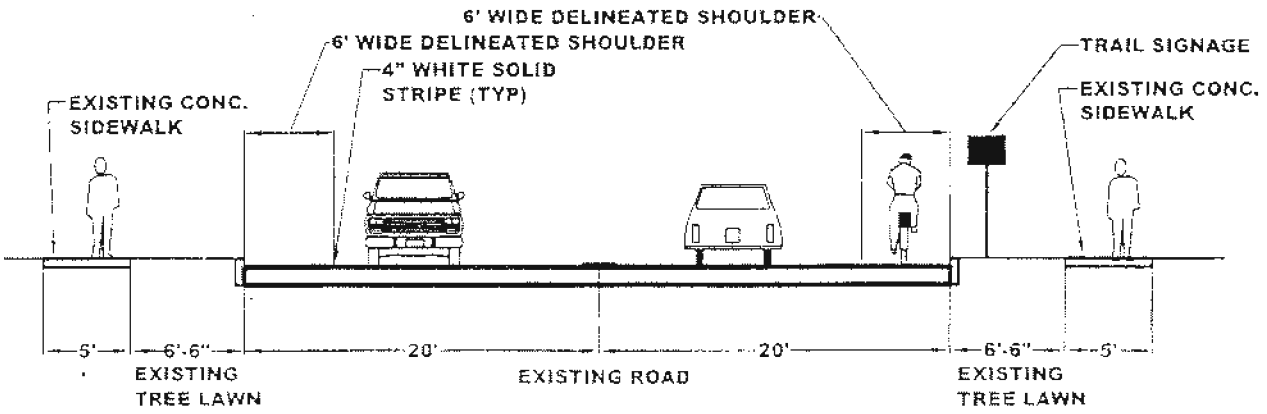
Highland Avenue is a good route for the trail because the road is wide enough from Goodman Street west to South Avenue for delineated shoulders on each side, 6 ft. wide in each direction. There are relatively few driveways - especially along the north side (the 'lilac collection' side). Traffic is relatively light when compared with traffic on both Goodman Street and South Avenue. **Figure 18** illustrates the road section and delineated shoulders that would accommodate bicycle traffic.

A second alternative, the **Highland Park Trail** route would follow Highland Avenue to the 'Lilac Crossing', at which point users would turn north, enter the park on the existing paved 10 ft. wide trail. They would follow existing trail all the way to Reservoir Avenue at the Conservatory, cross Reservoir and take a new trail next to and just east of the Conservatory all the way to the intersection of Robinson Drive and South Avenue. This route is considered less desirable than the selected route for the following reasons:

1. The County Parks Department currently does not allow bicycle traffic on park trails of any sort (paved or otherwise). This provision of the regulations would need to be changed in order to allow for bicyclists.
2. Additional signage would be required to keep bicyclists on only the one connecting or proper route - assuming the County would approve use of only the most direct path up to the Conservatory from the Lilac Crossing on Highland Avenue.
3. Part of the route has grades greater than 5% which, again, is undesirable because the ascents are difficult for many bicyclists and the descents cause some bicyclists to exceed the speeds at which they are competent or comfortable. The steep portion of the route may exceed the ADA recommended length for a recreational pedestrian trail route with a grade of more than 5%..
4. Any use of Reservoir Avenue for trail purposes would require safety improvements to that street due to the deep gutters along both sides of the street.

The selected trail route, the **Highland Avenue to South Avenue Trail**, follows Highland Avenue to South Avenue where it turns north. This route is considered the best for the reason stated above regarding the adequacy of Highland Avenue for bicycle traffic. It has two drawbacks. One is a 300 ft. length of on-street parking (12 to 14 vehicles) on the north side of the road (west-bound). The parking is located between the 'Lilac Crossing' (pedestrians) and the entrance to St. John's Home. It eliminates the possibility of a delineated shoulder in that area and signs would be required to alert bicyclists to the abrupt change to a shared 11 to 12 ft. wide lane. Plans are underway at the time of this writing to remove building(s) on the St. John's property and construct new parking areas. County and City personnel consulted on the matter were unable to confirm if or when the parking might be removed but were also in agreement that if the on-street parking were no longer needed, it should be removed, which would allow for the recommended on-street bicycle traffic configuration.

The second drawback is that, within a few hundred feet of the South Avenue intersection, the number of lanes would need to be reduced from 4 to 3 to allow for the delineated shoulders. Alternatively, if lanes cannot be eliminated due to traffic volumes, bicycle traffic would share existing lanes with vehicles or trail users would walk bicycles on the concrete sidewalks for the area near the intersection. The delineated shoulders would end before reaching South Avenue due to existing traffic lanes and pavement width



SOUTH AVENUE

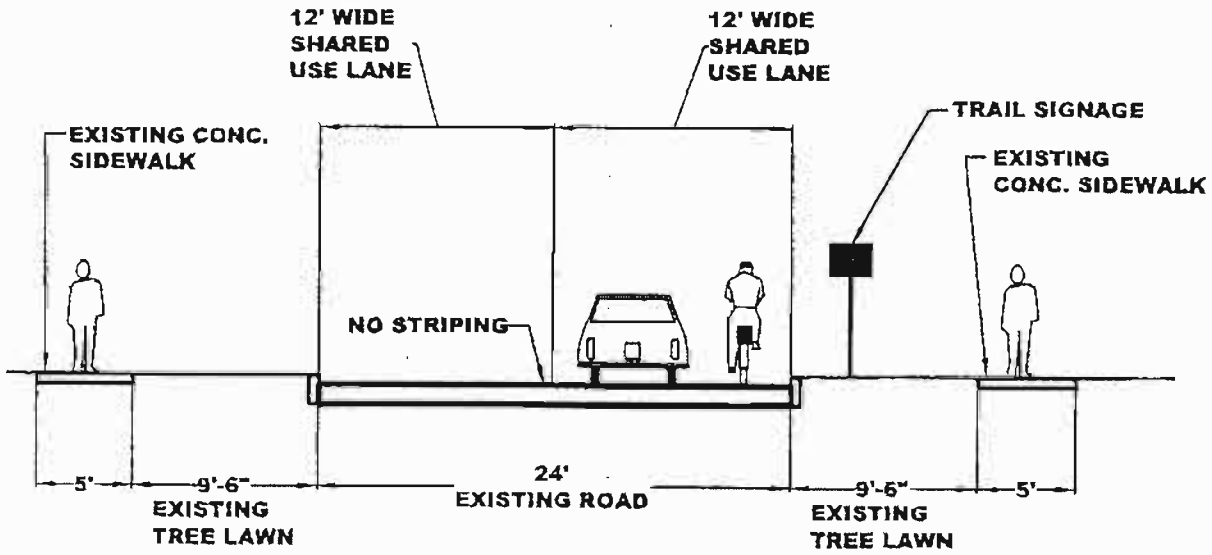
Figure 19

constraints.

The existing concrete sidewalk along the south side of the road is continuous and 5 ft. wide and would accommodate pedestrian traffic. As an alternative, a second sidewalk, 5 ft. wide on the north (or 'Lilac Collection') side of Highland Avenue should be investigated with a 6 ft. wide minimum tree lawn to additionally accommodate pedestrian traffic. This sidewalk would continue west to where it would meet the existing sidewalk adjacent to the St. John's Home.

South Avenue Section. The Highland Park / South Avenue intersection is one of the busiest and challenging section of the proposed trail, particularly for bicycle traffic. The Traffic Report (Appendix 2 - Figure A) of this document describes and shows proposed improvements to the intersection including re-striping from 4 to 2 lanes and delineation of shoulders. The 40 ft. width of the existing South Avenue road section allows ample room for a 6 ft. delineated shoulder along with one 14 ft. lane in each direction. Under existing conditions, both Highland Avenue and South Avenue approach the intersection with 2 lanes in each direction, striped to allow for a left turn lanes in each direction. Without the re-striping proposed, delineated shoulders (bicycle lanes) through the intersection in either direction are not possible and, if lanes cannot be eliminated due to traffic volumes, bicycle traffic would share existing lanes with vehicles or trail users would walk bicycles on the concrete sidewalks for the area near the intersection.

From Highland Avenue, the route proceeds north to the intersection with Robinson Drive where the trail route turns west. The delineated 6 ft. wide shoulders would continue north (with 2-14 ft. wide drive lanes) to where a left turn lane is recommended just south of and onto Robinson Drive. The paved shoulder width would narrow to 4 ft. to allow for the three vehicle lanes within the existing road cross section. Due to the volume of traffic on South Avenue, this left turn from South Avenue onto Robinson is one that will also be challenging for bicyclists traveling on the street. The left turn lane would accommodate vehicular and bicycle traffic and would require the appropriate lane-narrowing striping on the north side of the intersection to slow down traffic. See Appendix 2, Figure 'B' for more on recommended improvements to this intersection. **Figure 19** illustrates the road section and delineated shoulders that would accommodate



ROBINSON DRIVE

Figure 20

bicycle traffic. A traffic analysis would be required to determine whether a left turn lane is warranted and whether it would work with traffic volumes.
The existing 5 ft. wide concrete sidewalk along both sides of the road are continuous and are sufficient to accommodate pedestrian traffic. Pedestrian traffic following the trail would be encouraged with appropriate signs to cross at the signalized, Highland Avenue intersection. The existing concrete sidewalks along the both sides of the road are continuous and 5 ft. wide and are sufficient to accommodate pedestrian traffic.

Robinson Drive Section. Although other possible alternatives were discussed, including off-road dedicated trail, sidewalk widening, and curb relocation to accommodate parking, Robinson Drive is proposed to continue accommodating 2-way vehicular traffic as well as the proposed trail traffic in the existing two lanes - without any improvements to the road itself. Traffic counts are relatively low on this road and will continue to be low for the foreseeable future. It will likely be a more relaxing section of the trail. Intermittent parking along the south side of the road is not a desirable condition considering the narrowness of the road, however, given the light traffic flows, this was not considered a major obstacle for on-street bicycle traffic.

Figure 20 illustrates the road section and the proposed shared-lane accommodation for bicycle traffic. Pedestrian trail traffic will utilize the existing concrete sidewalks on either side of the road.

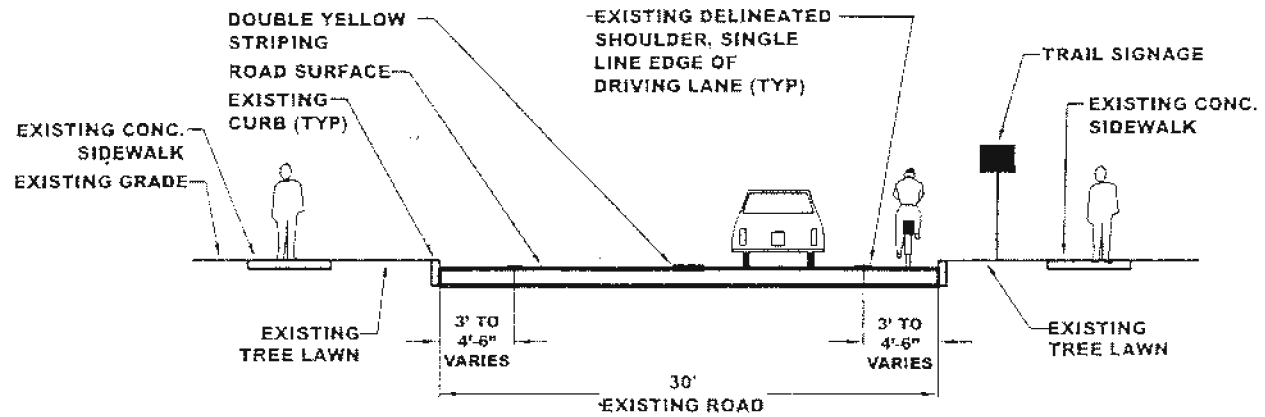
If traffic counts were to increase on Robinson Road, consideration should be given to widening of the road to better accommodate shared use of the road by vehicles and bicyclists. Parking could be located along the road in specific areas in the same fashion parking is located along the entrance road to Genesee Valley Park.

Any proposal to construct a dedicated separate trail through the important plant collections in this area, or

widening of the existing sidewalk to 10 ft wide minimum to accommodate the trail would likely both meet substantial resistance from both the Monroe County Parks Department and the public park preservation groups. Thus, this option was determined infeasible.

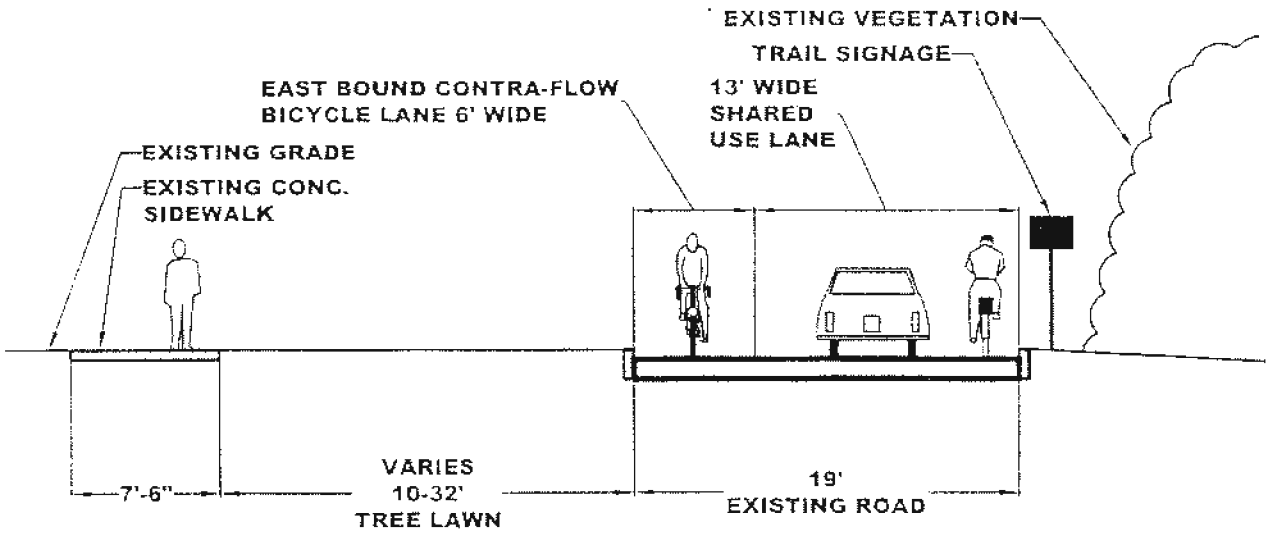
Mt. Hope Boulevard Section. Mt. Hope Boulevard is already striped for 3.5 to 4.5 ft. wide shoulders. This does not meet the minimum width for a bicycle lanes according to NYSDOT or AASHTO. We are not proposing any roadway improvements at this time due to the existing confined right-of-way parameters and the relatively recent reconstruction of Mt. Hope Avenue in this area. Additional signing and pavement marking are recommended at this time. The existing concrete sidewalks along the both sides of the road are continuous and 5 ft. wide and are sufficient to accommodate pedestrian traffic. High visibility crosswalks are recommended for pedestrians crossing at both Robinson Drive and McLean Street intersections. A 'gap analysis' traffic study would be required to justify the provision of either or both crosswalks. Pedestrian crossings at either Robinson or McLean are without benefit of a traffic signal although one should be considered with any future reconstruction of the road.

McLean Street. McLean Street is a 19 ft. wide pavement section curb to curb and currently operates one way (west-bound). The proposal for the Trail is to introduce a contra-flow east-bound bicycle lane 5 ft. wide separated from a shared use 14 ft. wide lane by a 12 inch wide double yellow stripe. McLean is a relatively lightly traveled road and there is no known reason to anticipate increases in vehicular traffic flow in the near future. **Figure 22** illustrates the road section, shared use lane, and delineated contra-flow lane that would accommodate bicycle traffic. The existing 7.5 ft. wide sidewalk is ample width to accommodate pedestrian traffic. Use of this sidewalk was considered, but the University of Rochester, which owns and maintains the sidewalk, would like to restrict use to only pedestrian traffic.



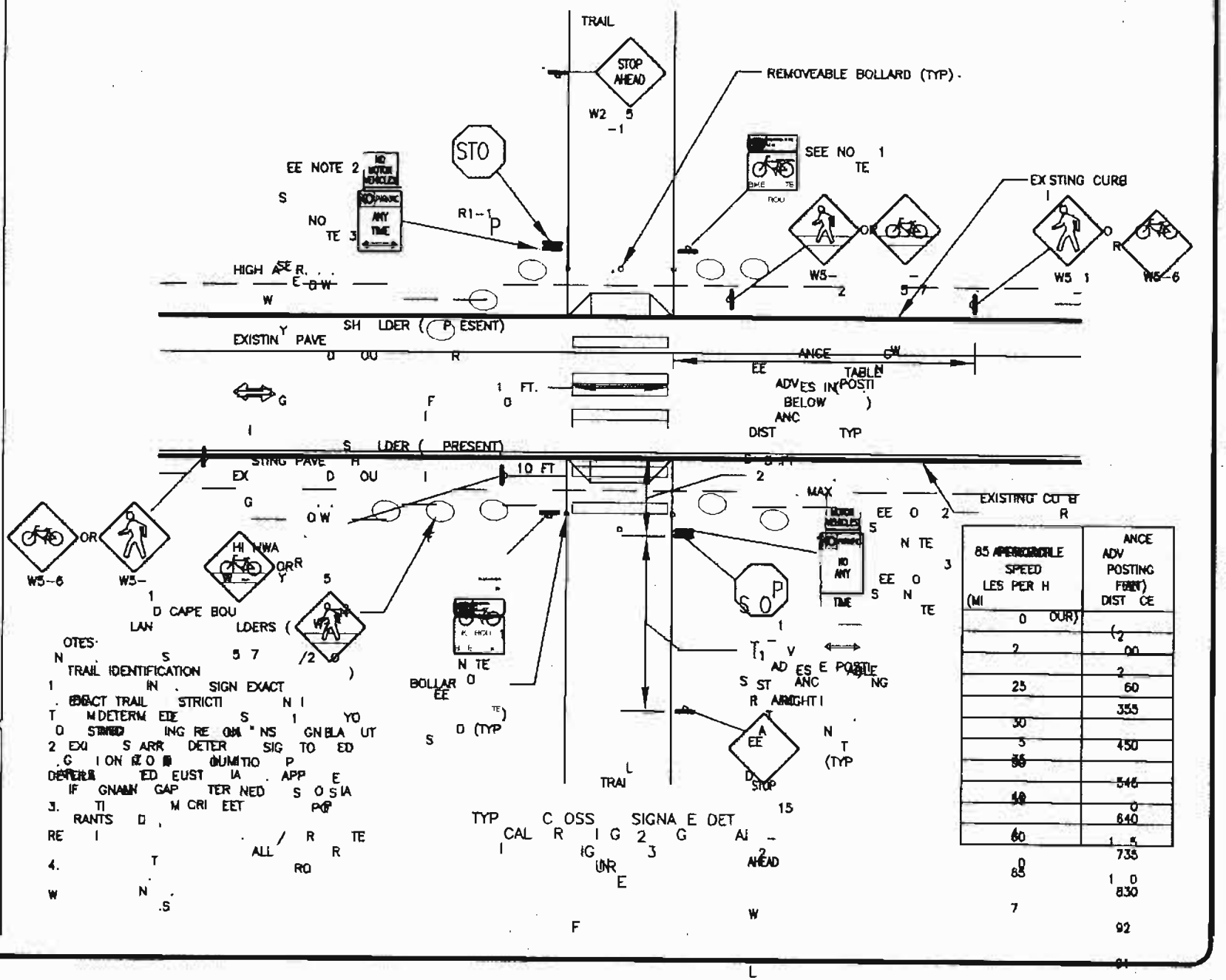
MT HOPE AVENUE

Figure 21



McLEAN STREET
LOOKING WEST

HIGHLAND PARKWAY
CONNECTOR TRAIL
TYPICAL ROAD CROSSING



General

The Genesee Transportation Council, the City of Rochester, and the Town of Brighton should undertake the capital investments required to develop the new Connector Trail as described herein and as shown on the plans. The proposed action plan assumes the recommendations of this plan will be implemented over the next five to ten years. It makes no assumptions about where funding for various portions of the project will come from, however we propose methods to obtain funding from a variety of sources to support the development of the facility.

Resources of both federal and state transportation improvement/enhancement programs must be recognized as important contributors to meeting the funding needs for construction of the Trail.

Five to Ten Year Capital Improvements Proposal and Cost Estimate

The following capital improvements are based on those recommendations of this plan which are believed to be feasible and reasonable within the five year period of the plan.

Canalway/Highland Park Connector Trail Project Estimate

Preferred Alternative

MLA Project No. 478

A. Off-Road Trail Sections

Item	Cost
[Town of Brighton]	
1. Sawgrass Drive Trail Section	
a. Asphalt Paved Trail, minimum 12 ft. wide - 735 LF @ $41/LF	$ 30,135
b. Widen existing asph. Trail from 8' to minimum12', 412 LF @ $18/LF	7,416
c. Road Crossings - complete with ramps, bollards, boulders, and crosswalk @ $3,500/EA	7,000
d. Signage (LS- materials only - installed by the Town of Brighton or City of Rochester)	3,000
e. Kiosk Feature Area	12,000
Subtotal:	$ 59,551
2. Westfall Road Crossing, complete with ramps, bollards, boulders, and crosswalk -1 @ $4,500/EA (traffic signal funded in part by Brighton Meadows Developer)	4,500
3. Monroe Developmental Center Trail Section	
a. Asphalt Paved Trail, minimum 12 ft. wide - 2,615 LF @ $41/LF	$ 107215
b. Asphalt Paved Trail, 6 ft. Wide - 220 LF @ $26/LF	5,280
c. Clearing along the north property line, LS	5,720
d. Textured/colored 10 ft. WideTrail surface -625 LF @ $42/LF	26,250
e. Signage (LS)	2,400
f. Landscape Screen Planting 35 Evergreen Trees @ $200/EA & 15 Dec. Trees @ $350/EA	12,250
g. Regrading along the north property lineand at Westfall Road & Misc. Drainage, LS	20,000
h. Timber Rail / fence, 180 LF @ $30/LF	5,400
Subtotal:	$ 184,515

4. Rochester State Hospital Trail Section

a. Raised Boardwalk, 180 LF @ $300/LF		54,000
b. Asphalt Paved Trail, minimum 12 ft. wide - 300 LF @ $34/LF		12,300
c. Textured/colored minimum 10 ft. wide trail surface -100 LF @ $42/LF		4,200
d. Clearing, Grading,and Drainage LS		15,000
d. Signage (LS)		800
	Subtotal:	$ 86,300

5. Mansions of Brighton Trail Section

a. Asphalt Paved Trail, minimum 12 ft. wide - 1,418 LF @ $41/LF		$ 58,138
b. Clearing, Grading,and Drainage LS		30,000
c. Signage (LS)		1,400
	Subtotal:	$ 89,538

[City of Rochester]

6. Elmwood Avenue Crossing- complete with ramps, bollards, boulders, and crosswalk - LS (crossing amenities by municipality developing the trail)		40,000

7. Highland Park/Goodman Street Trail Section

a. Asphalt Paved Trail, minimum 12 ft. wide - 2,125 LF @ $41/LF		87,125
b. Street Tree Planting 35 Trees @ $450/EA		15,750
c. Kiosk Feature Area		12,000
	Subtotal:	$ 114,875
Total estimated cost: Off-road trail, Canalway Trail to Highland Park:	Total:	$ 579,279
Design, Administration and other contingency (20%):		$ 115,856
	Grand Total, Say:	$ 695,135

B. On-road Trail Sections

1. Highland Avenue - Road Re-striping, Crosswalks, & Signage (LS) *		$ 20,000
2. South Avenue - Road Re-striping & Signage (LS) *		$ 20,000
3. Robinson Drive - Route Signage (LS) *		$ 4,800
4. Mt. Hope Avenue - Crosswalks & Road Signage (LS) *		4,500
5. McLean Street - Road Re-striping & Signage (LS) *		4,800
Total estimated cost: On-road Trail From Goodman Street to the Genesee River Trail:	Subtotal:	$ 54,100
Design, Administration and other contingency (LS):	Total:	$ 30,000
	Grand Total:	$ 53,300
Total estimated Project Cost (On-Road and Off-Road), Say:		$ 780,000

* Work required by the preferred alternative would include shifting traffic signal heads, replacing traffic signal loops, rearranging parking, etc.

Additional costs for traffic studies and design of facilities, Town of Brighton and City of Rochester administration, and other contingencies are also taken into account. Assuming an amount of 20% ($115,856) to cover these cost for the off-road trail sections and a lump sum $30,000 to cover these cost for the on-road trail sections, we have a total estimated development cost of $ 780,000. All cost estimated

numbers are in 2004 dollars and should be revised to reflect current costs at such time as these items are scheduled for implementation. Costs do not identify property and/or easement acquisition costs that may be necessary to construct certain segments of the trail.

Traffic Studies

A significant portion of the proposed trail route falls on existing streets and public rights-of-way, a substantial effort will be required in determining the appropriateness of the various recommendations based on existing and anticipated traffic flows including vehicular, bicycle and pedestrian traffic. The following traffic study activities are anticipated prior to moving forward with recommendations contained in this report:

- A signal warrant analysis to re-affirm the need for a traffic signal at the Westfall Road/Sawgrass Drive intersection.
- A signal warrant analysis to affirm the need for a traffic signal at the Elmwood Avenue/Goodman Street intersection. A 'gap study' to address the need for the delineated crosswalk and other traffic calming measures.
- A 'gap study' to address the need for the delineated crosswalks at the McLean Street and Robinson Drive intersections with Mount Hope Avenue.
- A capacity analysis of the South/Highland Avenues intersection to determine if the proposed re-striping is feasible from a capacity standpoint.
- A capacity analysis and left turn warrant analysis of the South Avenue/Robinson Road intersection to evaluate the feasibility of the proposed striping changes.

Operating and Maintenance Costs

The Plan as proposed and when fully implemented, would require an additional expenditure of $30,000 to $35,000 annually (based on 2004 cost estimates for similar trails) for maintenance. This figure would include the costs of such maintenance items as crack and pothole repair, fence and boardwalk repair, sign and kiosk repair or replacement, and the like. The figure is based on an estimated operation and maintenance cost of $4.00 to 4.50 per linear foot for off-road trails and 7,700 lf of trail. It is expected that numerous entities may be involved with maintenance of trail facilities including the Town of Brighton and the City of Rochester, and possibly the Monroe County Parks Department, and the Monroe County Dept. of Transportation. Some economies of scale should be anticipated as the trail inventory increases with a potential modest decrease in per-linear foot costs.

The Brighton Town Board has a consistent record with respect to appropriating the necessary funds and manpower to support parks and recreation facilities. The Board can draw on the advice of both the Parks, Recreation, and Community Service Citizens Advisory Board and the Community Services Committee to solicit ideas for handling the various new maintenance responsibilities. Both of these entities advise on policy, program, budget, and related matters on a regular basis.

The Brighton Department of Public Works maintains the Town highways and trails. The Department draws from its staff of full-time maintenance personnel and seasonal full-time employees to provide the necessary services. A significant portion of maintenance activities would be mowing, brush trimming and removal, and maintenance of drainage facilities that impact the trail. These services can be provided by the individual property owners in the cases of the Monroe Developmental Center and Monroe County Parks. At certain locations such as on Rochester State Hospital and Brighton Meadows, the Town may need to provide such services or they can be contracted out.

Snow plowing, if desired, could be done by the Department of Public Works. Snow plowing would support year-round use of the trail. Both the City and Town of Brighton have extensive plowing capacity and/or contracts for plowing. This route serves dense residential housing, several parks, several employment sites, a private college (Colgate Divinity School) and a major university (U. Of R.). It should be open year-round.

FINANCING TRAIL PROJECTS

General

Federal, state, and local resources may be combined with local funding for maximum benefit. Other local towns have already been successful at obtaining matching grants of this nature to fund development of the new trail projects. Non-profit organizations may be helpful vehicles for obtaining land or funds that might not otherwise be feasible.

The availability of federal and state assistance can vary widely from year to year. Continual monitoring of appropriations, funding programs, qualifying criteria, application procedures and schedules, and unique opportunities is particularly important. In the past 2 years, funding on the state level has been reduced dramatically from pre-2002 levels. This has affected the Environmental Protection Act funding as well as the Clean Air/Clean Water Bond funding in recent years.

A case could be made for acquisition of the 7.2 Acre Rochester State Hospital parcel by the Town of Brighton since the State is currently re-evaluating the long-term need for this land to meet State goals and objectives. Since some of the property is DEC-regulated wetland and it is contiguous to other parcels with preserved wetland and passive recreational land uses, this may prove to be a valuable and natural addition to the Town's recreational land inventory.

Federal and State Sources

This year, the Transportation Equity for the 21st Century (TEA-21), which has provided federal funding for transportation projects since 1998, will be replaced by new multi-year federal transportation legislation. Specific details about the new legislation are pending, including available funding levels and federal funding programs. Possible federal funding options based on the previous federal transportation legislation include:

1. Surface Transportation Program (STP) funds are allocated through the Genesee Transportation Council for all types of transportation projects. STP-funded projects must be selected by the GTC for inclusion in the bi-annually created Transportation Improvement Program (TIP). The process for submitting and selecting projects for the 2005-2010 TIP will begin in October 2004.

2. Transportation Enhancement Program (TEP) funds are a ten percent set-aside from the STP funds.[1] The project selection process is administered by the New York State Department of Transportation (NYSDOT). In order to maximize the use of the available TEP funding, this

[1] U.S. Department of Transportation, FHWA, www.fhwa.dot.gov/environment/te/index.htm

program provides innovative financing alternatives for local matching requirements. The list of activities eligible for Transportation Enhancement Program has expanded, but all projects must relate to surface transportation. The proposed trail is potentially eligible for TEP funding under two categories:

1. Preservation of Abandoned Railway Corridors, including conversion and use for Pedestrian and Bridge Trails;
b) Provision of facilities for bicyclists and pedestrians.

3. Recreational Trails Program - A total of $25 million *nationally* in contract authority apportioned for fiscal year 2004 to provide and maintain recreational trails.[2] States must establish a State Recreational Trails Advisory Committee that represents both motorized and non-motorized recreational trail users. Of funds distributed to a State, 30 percent must be used for motorized trails, 30 percent must be used for non-motorized trails, and the remaining 40 percent can be used for either type of trail. A typical RTP award is $50,000-$100,000. The New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP) administers this program in New York State.

Notes:

1. Federal funding sources provide up to 80% federal funding and require a 20% local match. "Soft" match provisions are allowed, including soft matches from public agencies. Examples of soft matches includes force account work by municipal forces, volunteer labor, private cash donations, and property donation.

2. Under Section 61 of the State Finance Law, any project constructed with federal funds that are administered by NYSDOT require:

- Funds used to construct/reconstruct highways, streets, and other transportation infrastructure projects require a 20-year project life;
- Funds used to acquire land for recreation projects require a 20-year easement/guarantee of ownership or permit to use.

4. Community Development Block Grant Program - Department of Housing and Urban Development
Title I of the Housing and Urban Development Act of 1974, as amended, is intended to assist in the "development of viable urban communities by providing decent housing and a suitable living environment and expanding economic opportunities, principally for persons of low and moderate income".

The program's objective of benefitting lower income areas reduces the probability of applying this

[2] U.S. Department of Transportation, FHWA, www.fhwa.dot.gov/environment/rectrails/index.htm

program toward recreational land acquisition or development in Brighton. Small grants for renovations to town facilities, ADA compliance, and similar improvements may be available.

5. Land and Water Conservation Fund - Department of Interior - This is a federal grant in aid program which provides up to fifty percent reimbursement for acquisition, development and/or rehabilitation of outdoor park and recreation facilities. New applications have not been accepted for a number of years, however, a new round of funding was scheduled to begin in 2000. The program was previously administered in New York State through the Office of Parks, Recreation and Historic Preservation. Funded projects must be identified in, or further a specific goal of, the SCORP and must be available to the general public.

6. Environmental Protection Act of 1993 - Title 9 - Grants are available from New York State for acquisition and/or development of municipal parks and for historic preservation projects. Municipal or nonprofit agencies may apply. Grants are for a maximum of fifty percent reimbursement of eligible costs.

In 1995, the initial funding period, $3,000,000 was made available statewide for municipal parks. Demand for the relatively limited funds was very high and a small percentage of applicants were funded, frequently at less than the requested amounts. Funding has continued and increased in subsequent years, but remained low in relation to demand. Only projects meeting very specific criteria are funded. It has been projected that funds available for grants in future years will increase. The original intent was that this be a predictable and consistent on-going source of assistance. The municipal parks grant program is currently administered through the New York State Office of Parks, Recreation and Historic Preservation.

7. Environmental Protection Act of 1993 - Title 3 - Acquisition of open space conservation projects is provided for in Title 3 of this act. Conservation of open spaces which have been prioritized in the 1995 State Open Space Plan may be by either the Department of Environmental Conservation or Office of Parks, Recreation and Historic Preservation. While acquisition may be by either of the two state agencies, there may be opportunities for cooperative local and state participation such as state purchase and lease back to a town of lands for recreational use. The program is primarily administered by the New York State Department of Environmental Conservation with cooperation from the Office of Parks, Recreation and Historic Preservation.

8. New York State Clean Water/ Clean Air Bond Act of 1996. - This act, approved by referendum in November 1996, authorizes the State to issue $1.75 billion in bonds for "long term improvements to the state's environmental infrastructure and natural resources above and beyond those paid for by the Environmental Protection Fund or other sources of state funding." Fifty million dollars is proposed to be available for municipal park projects, historic preservation, and heritage area projects. State assistance would be not more than fifty percent of the cost of developing, expanding, or enhancing public access to water bodies, promoting water based recreation, or enhancing the natural, cultural, or historic aspects of water bodies.

Funded projects must be available to the general public.

9. Legislative Appropriations - State appropriations for projects of local interest, such as acquisition and development of parks and recreational facilities are initiated through state legislative representatives and acted on by the state legislature. This is an important ongoing source of potential funding.

Private and Community Sources

Community foundations provide charitable contributions which may be a potential source of funding. They operate much like a private foundation, but their funds are derived from many donors rather than a single source. Furthermore, community foundations are usually classified under the tax code as public charities and therefore are subject to different rules and regulations than those which govern private foundations.

1. The Rochester Area Community Foundation is the local community foundation in Monroe County. The Rochester Area Community Foundation manages more than 500 funds that provide grants for a wide variety of arts, education, social services, and other civic purposes in the Genesee Valley region of upstate New York.

2. The Eastman Kodak Company, The Conservation Fund, and the National Geographic Society, provide small grants to stimulate the planning and design of greenways in the U.S. through the Kodak American Greenways Awards Program. The annual grants program was instituted in response to the President's Commission on Americans Outdoors recommendation to establish a national network of greenways. Made possible by a generous grant from Eastman Kodak, the program also honors groups and individuals whose ingenuity and creativity foster the creation of greenways.

3. Bikes Belong Coalition is a membership organization founded by bicycle industry leaders with the mission of "putting more people on bikes more often." Bikes Belong Coalition aims to put more people on bicycles more often by distributing grants for bicycle facility, education, and capacity projects.

4. The Genesee Region Trails Coalition has developed a small granting program for trails within the 10-county area it covers. For more information, visit the GRTC web site at www.grtcinc.com

5. The Trust for Public Land The Trust for Public Land is a national nonprofit conservation organization which has received funding from the Ford Foundation to assist it in establishing a Property Acquisition Revolving Fund to purchase real estate on behalf of community based nonprofit organizations or public agencies such as a town. Essentially, the Fund acts as a land bank until the sponsor is able to buy the property. The property must fulfill an important community

development objective and may include environmental and recreational improvements and historic properties. Preference is given to properties that incorporate an open space or land conservation component as well as other criteria. Administered through the Regional Office, The Trust for Public Land, New York City.

Trail Information Resources

1) **American Trails** is the only national, nonprofit organization working on behalf of all trail interests, including hiking, bicycling, mountain biking, horseback riding, water trails, snowshoeing, cross-country skiing, trail motorcycling, ATVs, snowmobiling and four-wheeling. American Trails members want to create and protect America's network of interconnected trails. We support local, regional, and long-distance trails and greenways, whether they be in backcountry, rural or urban areas. Our goal is to support America's trails by finding common ground and promoting cooperation among all trail interests. We're involved in everything from training trails advocates to providing increased trail opportunities for individuals with disabilities. For more information, visit www.americantrails.org.

2) **Genesee Regional Trails Coalition** is an organization whose mission is to help local communities develop and maintain a regional system of multi-use trails and promote responsible trail usage as a healthy and inexpensive recreational opportunity for all seasons. The geographic area covered by the Coalition includes the counties of Allegany, Genesee, Livingston, Monroe, Ontario, Orleans, Seneca, Wayne, Wyoming and Yates. For more information visit www.grtcinc.org.

3) **National Center for Walking and Biking (NCBW)** is the major program of the Bicycle Federation of America, Inc. (BFA), a national, nonprofit [501(c)(3)] corporation established in 1977. Our mission is to create bicycle-friendly and walkable communities. The NCBW is governed by a volunteer board of directors and operates from offices located in Washington, DC (headquarters), Middlebury, Vermont, and Missoula, Montana. Ongoing NCBW activities include:

- Providing specialized consulting services in the areas of long-range planning, policy development, public involvement, route selection, planning and design guidelines for bicycle and pedestrian facilities;
- Training programs for public health and transportation agencies;
- Economic development and tourism planning and analysis;
- Organizing and managing workshops and conferences, including the biennial Pro Bike / Pro Walk conference.

For more information, visit www.bikewalk.org.

4) **National Transportation Enhancements Clearinghouse (NTEC)** can help you learn how to use TE funds to revitalize the transportation experience in your community. In addition to the information offered on this Web site, we offer free technical support and documents on TE. Visit

www.enhancements.org.

5) **New York Parks and Conservation Association (NYPCA)** is a non-governmental, not-for profit, statewide membership organization. Our mission is to protect and advocate for existing parks and the state's natural and historic resources, and to promote the creation of new kinds of parks such as greenways, rail trails, and heritage corridors. For more information, visit www.nypca.org. [NYPCA will be renamed *Parks & Trails NY* as of June 2004]

6) **Rails-to-Trails Conservancy** is a 501(c)(3) nonprofit organization with the mission to enrich America's communities and countryside by creating a nationwide network of public trails from former rail lines and connecting corridors. RTC has more than 100,000 members and supporters. Founded in 1986, Rails-to-Trails Conservancy is located in Washington, D.C. and has offices in California, Florida, Massachusetts, Michigan, Ohio and Pennsylvania. For more information, visit www.railtrails.org.

7) The Pedestrian and Bicycle Information Center (PBIC) is a clearinghouse for information about health and safety, engineering, advocacy, education, enforcement and access and mobility. The PBIC serves anyone interested in pedestrian and bicycle issues, including planners, engineers, private citizens, advocates, educators, police enforcement and the health community. For more information, visit www.bicyclinginfo.org and www.walkinginfo.org.

8) Trails and Greenways Clearinghouse provides technical assistance, information resources and referrals to trail and greenway advocates and developers across the nation. Services are free and available to individuals, government agencies, communities, grassroots organizations and anyone else who is seeking to create or manage trails and greenways.

   The Clearinghouse is a project of Rails-to-Trails Conservancy, with support from the National Park Service's Rivers, Trails and Conservation Assistance Program and countless greenway advocates and trail builders who have provided much of the information and expertise reflected on this site. For more information, visit www.trailsandgreenways.org.

9) U.S. Department of Transportation, Federal Highway Administration web site provides many useful resources for state and local government program managers and practitioners. For more information, visit www.fhwa.dot.gov/environment/bikeped/index.htm.

Other Sources of Funding

Parks and Recreation Trust Fund

New residential development within the Town of Brighton generates additional demands for parks and recreational facilities. The trust fund is an important source of funds for capital acquisition and development in the future. The fee for each new dwelling unit should be periodically reviewed by the

Town as increases may be justified based on the anticipated average prices of new homes. Fees in nearby towns range from $600 to $ 1,000 and are much higher in some areas of the State. It is recommended that the fee be reviewed periodically, perhaps annually, and adjusted to reflect both the Town's needs and prices of new homes in the Town.

Bonding

Bonding is an appropriate form of financing capital projects. Bonds generate immediate financing and are used for specific purposes. General obligation bonds can be used for projects which benefit the public at large.

They are secured by a town's credit and taxing ability and may be subject to a permissive referendum, if so petitioned. Parks and recreational facilities are acceptable types of projects to be bonded. Bond anticipation notes are sometimes used as 'bridge' financing, particularly when expenditures are expected to be reimbursed, as with reimbursable state and federal grants.

Other Sources

Several other minor sources of financial assistance for specific types of parks and recreational facilities are available through state and federal programs. Continual monitoring of state and federal grant in aid programs is necessary to enable timely participation.

Land Purchase and Sale

The cost of land acquisition can be offset under certain circumstances by selling off a portion of the land purchased. Under the proper circumstances, this is a valid and desirable method of acquiring parkland while maintaining high value taxable land on the tax rolls. An example would be to purchase a parcel of land and resell the majority of the roadway frontage. It is important to sell off the land which is not needed for park purposes before dedicating if as parkland. State and federal grants in aid should not be used to purchase land which will be subsequently sold or otherwise alienated.

Land Rights Less than Fee Simple

Leases, permits, or easements may enable the beneficial use or control of land for long or short terms without, and often at less cost than, outright purchase. If permanent facilities are to be developed on leased land, the agreement should be sufficiently long term to cover the useful life expectancy of the improvements, to protect the Town's investment, and to qualify for financing.

RESOURCES AVAILABLE FOR OPERATIONS AND MAINTENANCE

The municipal public works departments need to take the lead in all on-going maintenance trail facilities,

followed by ancillary support from volunteers. The trail is a public facility, like a road, and needs to be maintained with similar considerations

Real estate tax revenues will for the foreseeable future to be the primary source of funds for administration, operations, and maintenance. It is expected that tax revenues and appropriations for parks and recreation will increase to reflect increases in the tax base, built facilities, and demands.

Volunteerism has been demonstrated to be a valuable resource in other towns. Individuals, service clubs, 'friends' organizations, interest groups, local foundations, and corporations can be sources of money, services, knowledge, and advocacy. Basic trail maintenance and security are just two areas in which these groups may be helpful.

Sponsorship, particularly corporate sponsorship, is a form of Volunteerism which is particularly adapted to special events programs of city-wide and town-wide interest. Foot races such as the Lilac 10-K and other celebrations, concerts, and similar events may be useful in providing funding for maintenance activities. Appropriate recognition can help encourage sponsorships.

Multi-Use Trail Planning, Design, and Development Resources

Guide for the Development of Bicycle Facilities, American Association of State Highway and Transportation Officials, August 1999. [A copy is available at the GTC library for in-office use or can be purchased from AASHTO at www.transportation.org]

Trails for the 21st Century, 2nd Edition, Charles A. Flink, Kristine Olka, and Robert M. Searns, Island Press, 2001. [A copy is available at the GTC library for in-office use or can be purchased from the Rails-to-Trails Conservancy at 202-331-9696 or www.railtrails.org]

Greenways: A Guide to Planning, Design, and Development, L. Schwarz, C.A. Flink, and R.M. Searns, Island Press, 1993. [A copy is available at the GTC library for in-office use or can be purchased at your local bookstore]

Designing Sidewalks and Trails for Access – Part I: Review of Existing Guidelines and Practices, July 1999. [A copy is available at the GTC library for in-office use or can be viewed or downloaded from http://www.fhwa.dot.gov/environment/bikeped/Access-1.htm.]

Designing Sidewalks and Trails for Access – Part 2: Best Practices Design Guide, September 2001. [A copy is available at the GTC library for in-office use or can be viewed or downloaded from http://www.fhwa.dot.gov/environment/sidewalk2/index.htm.]

Regulatory Negotiation Committee on Accessibility Guidelines for Outdoor Developed Areas: Final Report, The Access Board, September 30, 1999. [A copy of this report is available in the GTC Resource Library for on-site use or it can be viewed or downloaded from

www.access-board.gov/outdoor/outdoor-rec-rpt.htm]

Rails with Trails: Design, Management, and Operating Characteristics of 61 Trails Along Active Rail Lines, Rails-to-Trails Conservancy, November 2000. [A copy of this report is available in the GTC Resource Library for on-site use or it can be viewed or downloaded from www.railtrails.org.]

Rail Trails and Liability: A Primer on Trail-Related Liability Issues & Risk Management Techniques, Rails-to-Trails Conservancy, September 2000. [A copy of this report is available in the GTC Resource Library for on-site use or it can be viewed or downloaded from www.railtrails.org.]

FHWA Bicycle/Pedestrian/Trails Program
www.fhwa.dot.gov/environment/bikpedtr.htm

The Federal Highway Administration's Bicycle and Pedestrian Program Office is responsible for promoting bicycle and pedestrian transportation accessibility, use, and safety. This site contains many links to other web-based trail resources.

Rails-to-Trails Conservancy
www.railtrails.org

RTC is the largest trails organization in the United States and the only one dedicated to converting abandoned railroad corridors into multi-use trails. RTC provides technical assistance, public education, and advocacy for trail development.

National Transportation Enhancements Clearinghouse www.enhancements.org

The NTEC is an information service sponsored by the Federal Highway Administration and Rails-to-Trails Conservancy. It provides professionals, policy makers, and citizens with timely and accurate information necessary to make well-informed decisions about transportation enhancements.

Trails and Greenways Clearinghouse www.trailsandgreenways.org

The Clearinghouse provides technical assistance, information resources, and referrals to trail and greenway developers and advocates in the United States. Services are free and available to individuals, government agencies, communities, grassroots organizations, and anyone else who is seeking to create or manage trails and greenways.

American Trails www.americantrails.org

American Trails' mission is to create and protect America's network of interconnected trails -- local, regional, and long-distance trails and greenways, whether they be in backcountry, rural, or urban areas. American Trails supports trails by finding common ground and promoting cooperation among all trail interests. The organization is involved in everything from training trails advocates to providing increased trail opportunities for individuals with disabilities.

The Access Board www.access-board.gov

The Access Board (officially known as the U.S. Architectural & Transportation Barriers Compliance Board) is an independent Federal agency devoted to accessibility for people with disabilities. The Access Board develops and maintains accessibility requirements for the built environment, transit vehicles, telecommunications equipment, and for electronic and information technology; provides technical assistance and training on these guidelines and standards; and enforces accessibility standards for *federally funded facilities.*

USDOT Pedestrian Information Clearinghouse www.walkinginfo.org

USDOT Bicycle Information Clearinghouse www.bicyclinginfo.org

NYS Hudson River Valley Greenway Conservancy www.hudsongreenway.state.ny.us

International Mountain Biking Association www.imba.com

IMBA promotes mountain bicycling opportunities that are environmentally sound and socially responsible. IMBA encourages low-impact riding, volunteer trail work participation, cooperation among different trail user groups, and innovative trail management solutions

Appendix 1

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Trip Memorandum

To: Doug McCord, MLA
Dave Tuttle, Lu Engineers

From: Fran Reese
Date: 12/19/2003
Project: Highland-Canalway Trail Connector
Lu Project No.: 32402

Project Purpose

The purpose of the proposed project is to construct a multi-purpose connecting trail link between the existing Canalway trail system and the City of Rochester Highland Park trail system. It is anticipated that this trail link will be used by a variety of people, including pedestrians, bicyclists, in-line skaters, and wheelchair users. It is not anticipated that this trail will be used by snowmobiles or other motorized off-road vehicles.

Description and Understanding

The proposed Highland-Canalway Connector trail alignment is located between an existing trailhead on Sawgrass Drive north of the Canal, and Wilson Boulevard in the City of Rochester. The purpose of this investigation was to confirm the location of federal and State wetlands along the alignment between Westfall Road and Elmwood Avenue in the Town of Brighton.

Prior to our field inspection, we reviewed available topographic maps, soil maps, National Wetland Inventory Maps and NYS Freshwater Wetland maps for the project area. Lu Engineers also interviewed Scott Jones, Bureau of Habitat, NYS Department of Environmental Conservation (NYSDEC) and Ramsey Boehner, Planner, Town of Brighton, for this project.

Topography

Figure 1 shows the approximate trail alignment on a U.S. Geological Survey topographic base map. The topography of the site is predominantly flat, with a few mounds of soil created by earth-moving activities. The elevation of the site ranges from approximately 525 feet to 510 feet above sea level.

The proposed alignment crosses Buckland Creek, an intermittent tributary of Allen Creek. The tributary originates on the Rochester Psychiatric Center property and flows easterly and then northeasterly toward Elmwood Avenue.

NYS Freshwater Wetlands

The BR-10 wetland is mapped within the project area (Figure 2). Even though this wetland is less than the 12.4 acre threshold required for State regulations, this wetland was reclassified from a Class II wetland to a Class I wetland because it has unusual local significance. According to Scott Jones, NYSDEC Region 8 Bureau of Habitat, this wetland was recommended for preservation by the Town of Brighton because it has good habitat value for amphibians and birds, is located in an urbanizing area, and provides recreational and aesthetic benefits to local residents.

National Wetland Inventory Wetlands

The National Wetland Inventory (Figure 3) shows a 16+ acre area of palustrine, broad-leaf deciduous wooded wetland within the project area. The area is described as being flooded or seasonally saturated. This area extends further south than the mapped limits of the NYS freshwater wetland. The area includes a ponded area surrounded by berms.

Soils

The project site includes four mapped soil types (Figure 4): Hilton loam, 5-8% slopes; Cayuga silt loam, 2-6% slopes; Lakemont silt loam; and Odessa silt loam, 0-2% slopes. The Lakemont silt loam is a hydric, deep, fine-textured, poorly drained and very poorly drained, lacustrine soil. This soil type is typically found in depressional areas on lake plains. The Odessa silt loam is a somewhat poorly drained, fine-textured soil with potential hydric inclusions. This soil is found in association with Lakemont soils. Cayuga and Hilton soils are moderately well drained soils. These soils typically do not have hydric inclusions.

Findings of Site Visit

Fran Reese and John Hauber walked the trail alignment from the north side of the Monroe Developmental Center parking lot (north of Westfall Road) to Elmwood Avenue on Thursday, December 4, 2003. The ground surface was covered with approximately 2-3 inches of snow. Temperature was approximately 35 degrees F.

An existing trail leads westerly from a pond site located on the St. John's Meadows property into the BR-10 wetland. The wooded area consists primarily of white oak and hickory. Further south along the proposed alignment the wooded area is dominated by more hydrophytic species, such as green ash, red and silver maple, with smaller percentages of swamp white oak, Eastern cottonwood and American elm.

Several berms are located south of proposed trail alignment. Two ponds are located inside this area. Judging from the vegetation present (mature trees), the berms appear to be quite old (50+ years). Three small brick buildings were observed north of the tree line on the Monroe Development Center property. These features are shown in Figure 5. These buildings appear to be pump stations. The architectural style of the buildings appears to date to the late 19th or early 20th century.

Jessie Werner, a long-time member of the Brighton Conservation Advisory Board, reported that the ponds may have been used to obtain ice, and may have been used as a water supply.

The proposed Connector trail alignment parallels an existing trail constructed by the St. John's Meadow project for a short distance through the BR-10 wetland. The alignment would be located between the existing trail and the pond area. The woods in this area appear to consist primarily of white oak, shagbark hickory, and green ash with an understory of common buckthorn and tartarian honeysuckle. Vegetation on the berms north of the ponds consists largely of green ash, common buckthorn, eastern cottonwood, and honeysuckle.

Continuing west of the ice ponds, the proposed alignment crosses a tributary of Allen Creek. This tributary appears to have been straightened and channeled in the past. Side-cast dredgings are present on both sides of the channel. The channel is approximately 3-4 feet deep, with a water depth of 1.5-2 ft on 12/4/03. The channel width is approximately 8-12 feet. The current flows slowly north toward Elmwood Avenue. Both sides of the channel are well vegetated with small trees and shrubs. The channel is formed by the confluence of two piped drainages near the proposed trail crossing point. The source of these drainages appears to be the Monroe Development Center property and the Rochester Psychiatric Hospital. At least one of the pipes is partially submerged and obstructed. Probe testing showed one of the pipes to be a 24-30 in. diameter RCP. The other pipe was submerged. This channel is mapped on the USGS topographic map and qualifies as a Water of the United States.

The area immediately west of the stream channel is quite wet, with ponded water approximately 6-8 inches deep. Dominant species include red maple, Eastern cottonwood and green ash.

Continuing northwesterly, the proposed alignment passes through a very heavy shrub growth. Dominant species in this area include hawthorn, buckthorn, dogwoods, multiflora rose, and various species of crabapple.

The alignment follows the west property line of the "Mansions" property to a point approximately 250 feet south of Elmwood Avenue. The trail is proposed just east of the brush line. At this point, the alignment veers northwesterly toward the intersection of Elmwood and Lilac ~~Drive~~ Goodman St.

We also walked the stream channel from its origin at the two culverts north about 1500 feet. A wood debris dam is located approximately 300 feet north of the culverts. This dam causes a pool to form behind it. The depth of the pool is estimated at 4-5 feet. The channel width varies from 8 to 15 feet. Both banks have some side-castings present, and are well-vegetated and stable. Most of the channel is well-shaded with tree and shrub growth.

Conclusions

In general, we concur with the wetland boundaries that have been defined for the project area. Scott Jones provided a copy of a wetland boundary map surveyed by the NYSDEC in 2001. This map shows that the bermed pond area is outside the regulated wetland boundary, although it is located in the buffer zone.

These ponds are likely to be regulated under Section 404 of the Clean Water Act because they are contiguous to a "Water of the United States" as defined in 33 CFR Part 323. In our opinion, these ponds should be considered jurisdictional for both state and federal wetlands because they function as part of the hydrologic unit.

Mr. Hauber said that the total acreage of the BR-10 wetland was found to be less than the required 12.4 acres for State jurisdictional status. The NYSDEC was requested to initiate studies to determine if the wetland had characteristics of "unusual local importance" as defined under Section 24-0301(l) of the Freshwater Wetlands Act. Mr. Hauber said that he thought the public interest review of this study indicated that the State thought that this wetland merited protection under Article 24 of the Environmental Conservation Law due to its habitat value. Mr. Hauber said that six amphibian species were found to be resident in this wetland. Based on this classification, it is likely that any proposals for disturbance of the wetland are likely to be scrutinized closely for habitat impacts.

The issue of federal wetlands may require re-examination if the Corps of Engineers has not concurred with the boundary as delineated by the "Mansions of Brighton" project. This issue should be resolved prior to final trail design. Based on our field walkover, there are a few isolated areas of hydrophytic vegetation located near the west property line of the "Mansions" site that could be impacted by trail construction. If federal jurisdictional wetlands have not been defined for the "Mansions at Brighton" site, they should be formally delineated.

The BR-10 wetland provides significant recreational and aesthetic benefits to elderly populations housed at St. John's Meadows. The existing nature trail provides access for these residents for walking. The trail surface consists of bark chips and a boardwalk section through the wetland. It is not a suitable surface for bicycles or wheeled vehicles. These facilities are immediately adjacent to the BR-10 wetland.

Based on discussions with the Trail Advisory Group at their meeting on 12/8/2003, the existing trail was constructed by the Town of Brighton, and was envisioned as a public use trail. The Town would like to see a linkage between the existing trail and the proposed multiple use trail. Trail Advisory Group members would like to see trail design elements to separate "high speed" users of the multiple use trail (in-line skaters, bicyclists, runners) from the slower speed (and often more vulnerable) users of the nature trail. A concern was also expressed for the integrity of the wetland resource. Previous trail projects in environmentally sensitive areas have resulted in degradation of the habitat, including loss of nesting area and native wildflowers. Design elements should be included to minimize the incursion of off-trail use in the wetland.

Mr. Boehner also provided useful background information on the status of the "Mansions at Brighton" project. In May 2003, the Town of Brighton directed the applicant for the "Mansions" project to prepare a draft environmental impact statement for the project because it may have a significant adverse effect on the environment. Mr. Boehner said that the applicant will probably present the completed Draft EIS for public review and comments in the next few weeks.

Article 24 NYS Freshwater Wetland Permit Requirements:

1. The limits of the BR-10 wetland should be clearly established in the field prior to selection of final trail alignment. Trail designers should understand the benefits provided by this wetland, and include design elements (railings, guide rail, use of boardwalk sections, signage, etc.) to discourage off-trail use of the wetland.

2. Under 6 NYCRR Part 663.4(d)(6), walking trails are a permitted use of wetlands, where no significant impairment of the wetland or its benefits is involved. However, discussions with Scott Jones indicate that a permit application will be required for any fill or disturbance of the regulated adjacent area. Permitting criteria for this project will be subject to the standards for Class I wetlands. Standards and weighing criteria for Class I wetlands found in 6 NYCRR Part 663.5(e)(2) state: *"Class I wetlands provide the most critical of the state's wetland benefits, reduction of which is acceptable only in the most unusual circumstances. A permit shall be issued only if it is determined that the proposed activity satisfied a compelling economic or social need that clearly and substantially outweighs the loss of or detriment to the benefit(s) of the Class I wetland."*

3. Documentation of the social need for the project must cite recommendations in the Town of Brighton Comprehensive Plan (2000) (or updated), and other planning and transportation documents.

Section 404 Clean Water Act Permit Requirements

1. The proposed trail alignment will also require a Section 404 Clean Water Act permit from the Corps of Engineers to cross Buckland Creek, an intermittent tributary of Allen Creek if the bed or banks of the channel will be affected. The activity is covered under Nationwide Permit No. 42 (Recreational Facilities). This permit could be used to authorize trail construction provided that any fill does not cause the loss of greater than 0.5 acre of wetland or cause the loss of more than 300 linear feet of stream bed. It is not anticipated that more than 60 linear feet of stream channel would be affected by the proposed trail.

2. Placement of an elevated walkway (boardwalk) on pilings in the wetland is exempt from the requirements of the Clean Water Act under 33 CFR 323.3(c)(2) in non-navigable waters. Buckland Creek is a non-navigable Water of the U.S. If the boardwalk is carried over the wetland, and a bridge is constructed from top of bank to top of bank, it is possible that no permit would be required from the Corps of Engineers.

Recommendations

1. Obtain concurrence from the U.S. Army Corps of Engineers for the wetland boundary delineation completed for the "Mansions at Brighton", if not already done.

2. Determine whether project will meet the criteria for Nationwide Permit 14 or Nationwide Permit 42, and whether pre-construction notification is required to U.S. Army Corps of Engineers.

3. Coordinate trail development with property owners at St. John's Meadows and "Mansions at Brighton" to provide access to the existing nature trail. Utilize trail design elements to separate "high speed" users of the proposed multipurpose trail from slower speed users of the nature trail.

4. Locate the trail on the west side of the "Mansions of Brighton" property to minimize habitat impairment and disruption of the "Mansions" development.

5. Consider the construction of a boardwalk where needed to minimize wetland impacts.

6. Consider a "top of bank to top of bank" bridge over Buckland Creek to avoid disturbance of the bed or banks of the channel.

7. Locate the multipurpose trail along the berm on the north side of the ice ponds. Existing fill materials could be re-used as a trail base materials and would avoid the need for significant disturbance of the wetland. Guide rail would be required for safety. Additional plantings could be added to provide visual screening of the existing nature trail, and to ensure vegetative canopy regrowth.

8. Provide an adequate program for maintenance and repair of the trail. Overhanging vegetation must be trimmed, boardwalk sections inspected and repaired, and trail washouts repaired as needed. The maintenance plan should include a responsible party, an inspection schedule and a funding mechanism.

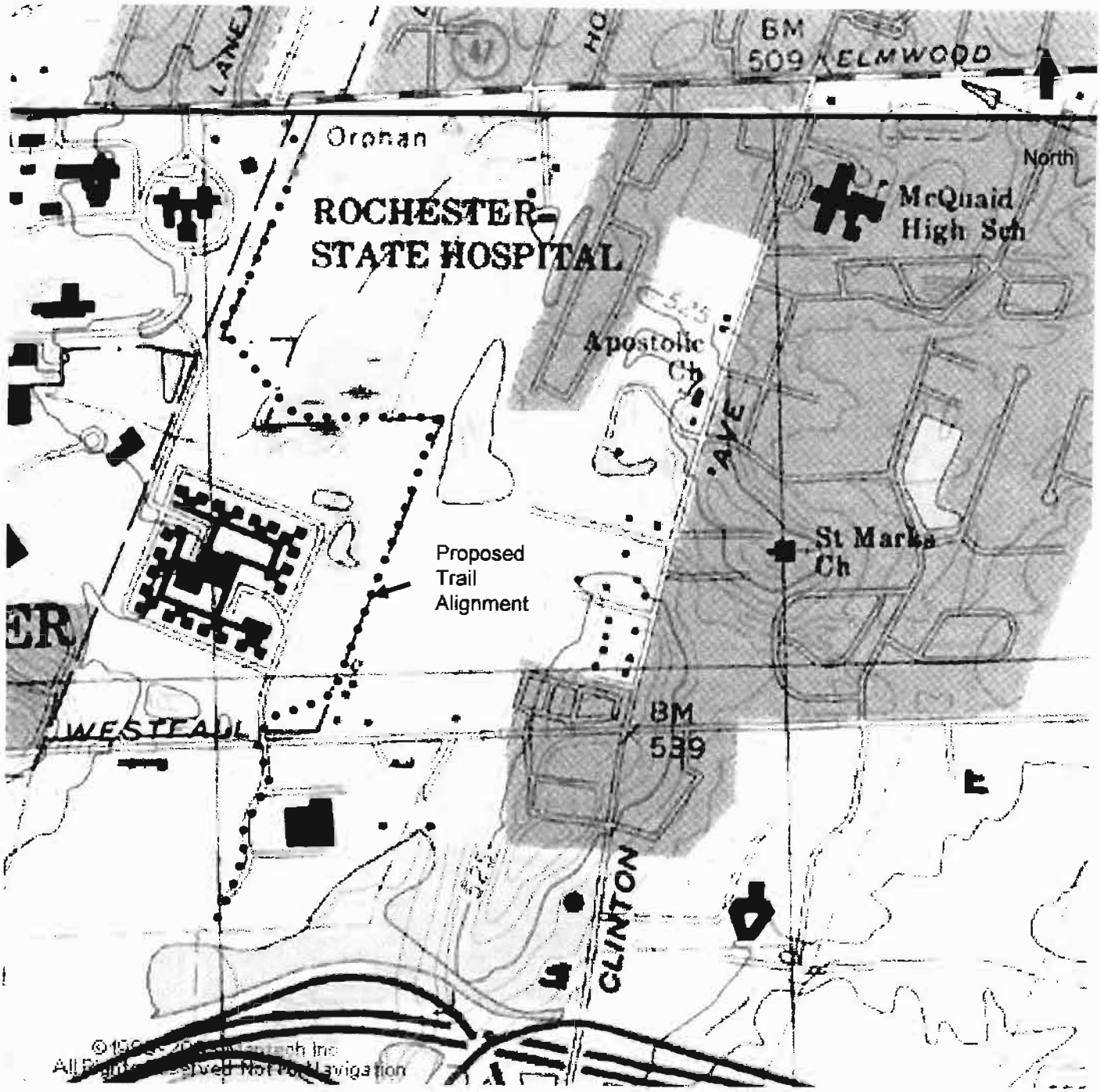

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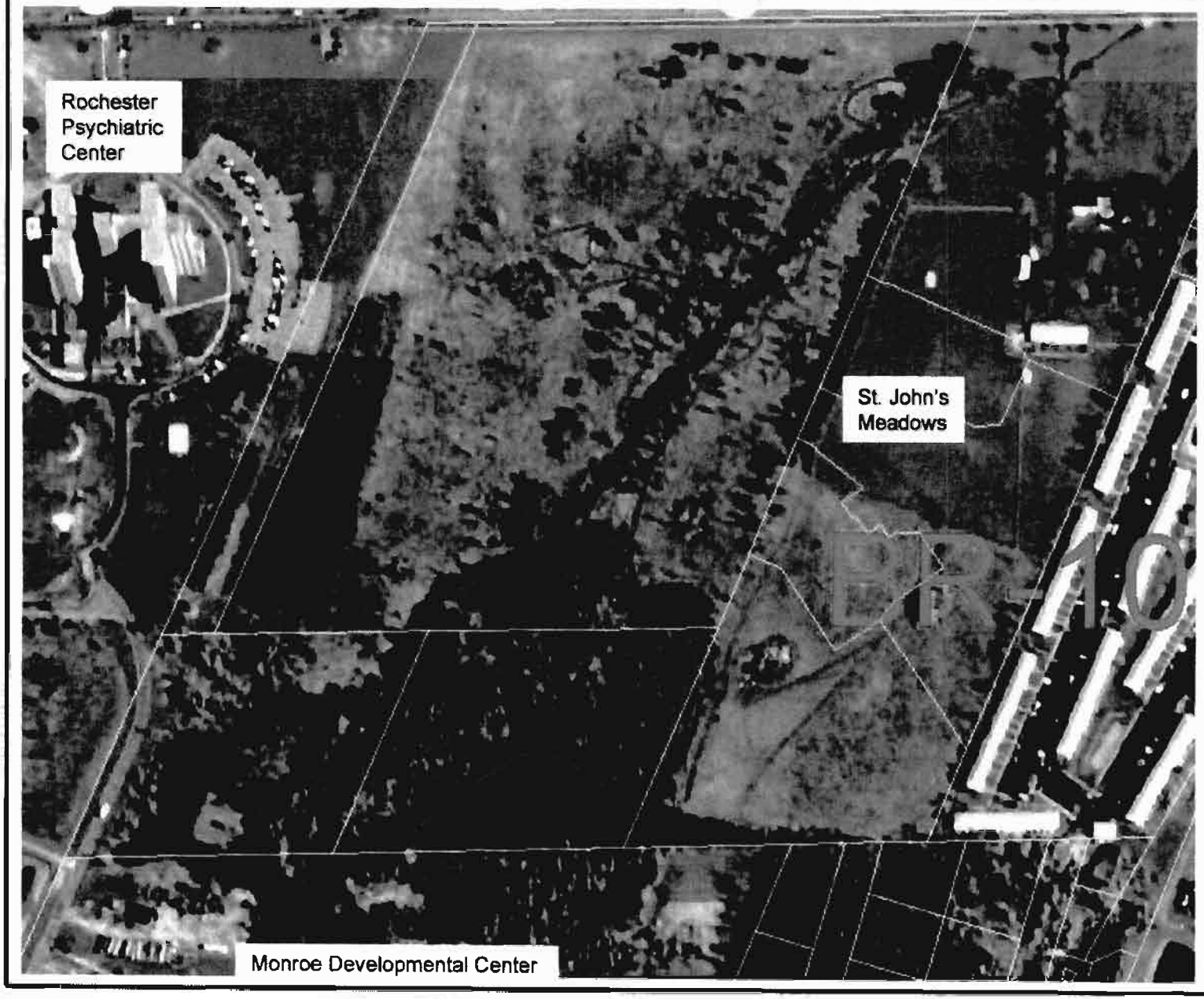
Figure 1. Topographic Map
Proposed Highland-Canalway Connector Trail
Town of Brighton and City of Rochester
Monroe County, New York

Date: December 2003
Scale: NTS
Drawn by: FAR
Source: USGS, Pittsford, NY 7.5 Quadrangle, rev. 1978



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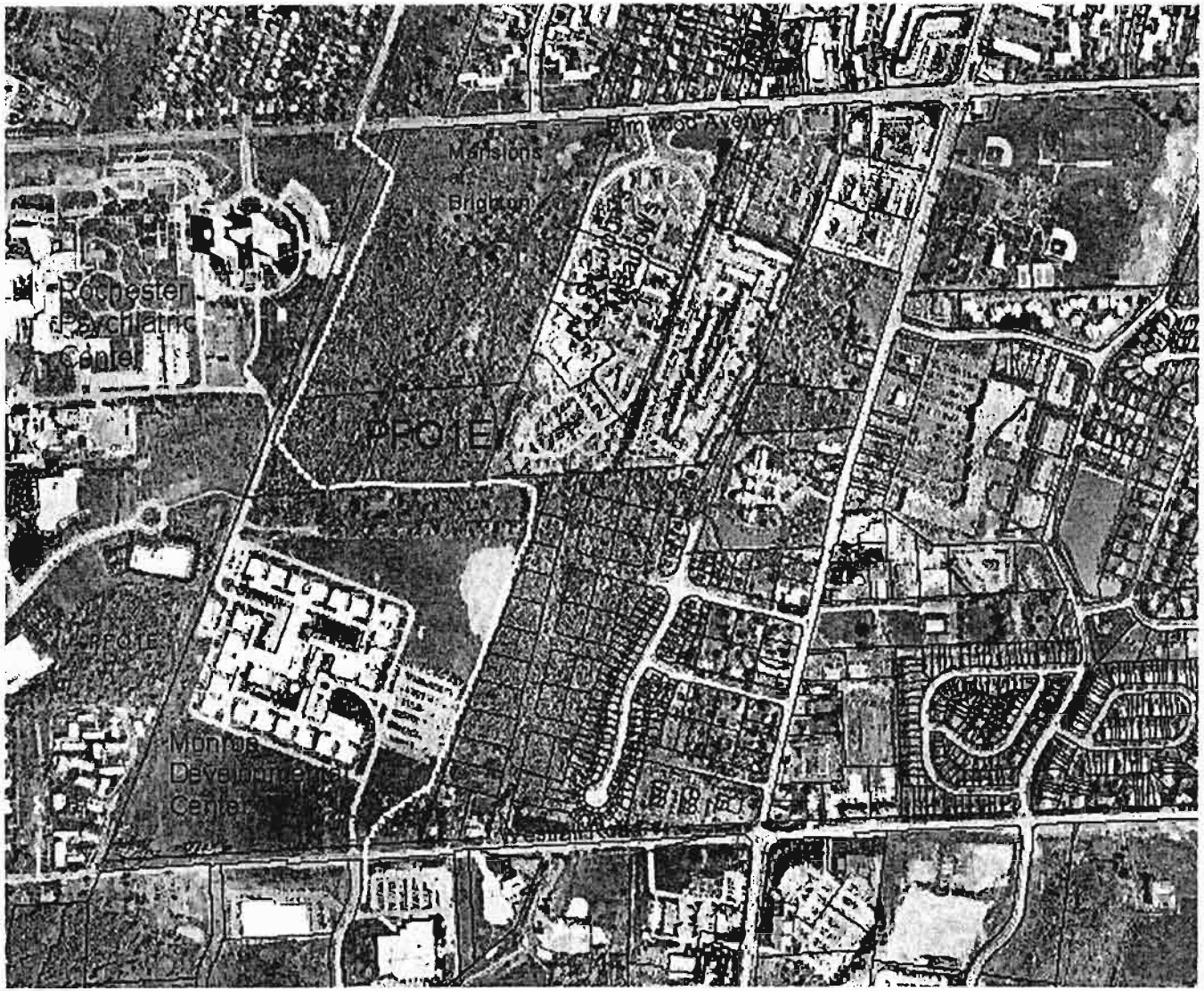
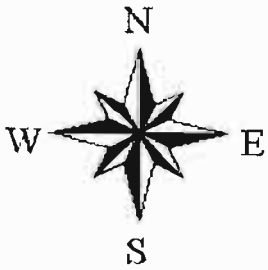
Fax: (585) 377-1266

Figure 2. Detail of BR-10 Wetland Boundary

Date: December, 2003
Scale: Not to scale
Drawn by: FAR
Source: NYS Dept. of Environmental Conservation, S. Jones, Pers. Comm.

Figure 3. National Wetland Inventory Wetlands
Westfall-Elmwood Segment
Proposed Highland-Canalway Connector Trail





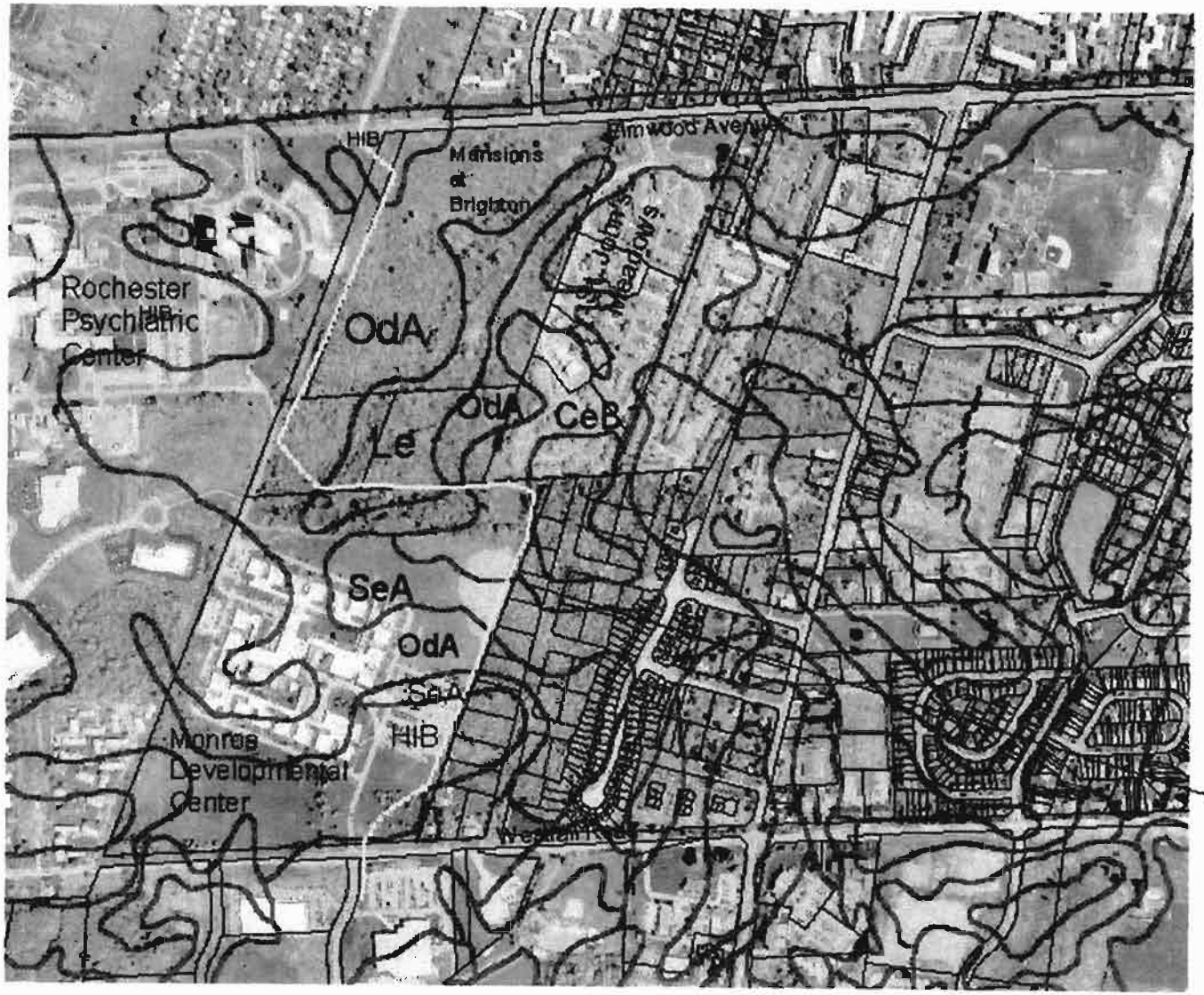
Key to Wetland
Cover Type

PFO1E - Palustrine, deciduous, broad leaf, seasonally flooded or saturated

NWI WetlandWet_fed.shp
Proposed connector trail
Bh_par.shp

2000 0 2000 4000 Feet

Figure 4. Mapped Soil Types
Westfall to Elmwood Segment
Canalway-Highland Park Connector Trail



N
W E
S

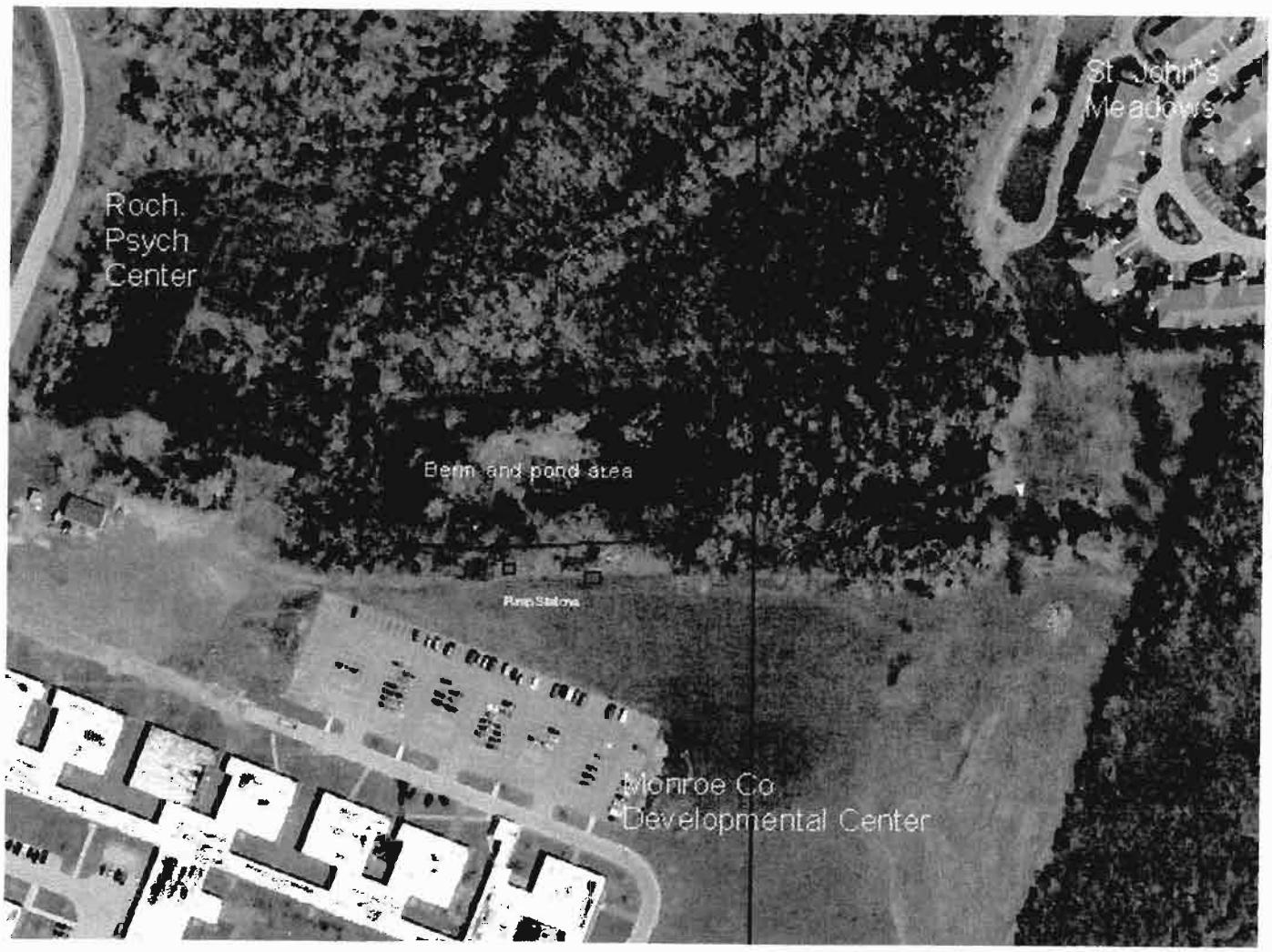
Key to Soil Types

CeB	Cayuga silt loam, 2-6% slope
HiB	Hilton loam, 3-8% slope
Le	Lakemont silt loam
OdA	Odessa silt loam, 0-2% slope

Proposed Trail Alignment

2000 0 2000 4000 Feet

Figure 5. Pond and Berm Area



Appendix 2

TRAFFIC AND SAFETY REPORT

Westfall Road at Sawgrass Drive (June 2002 traffic counts)

This section of Westfall Road has peak hourly vehicle volumes of 485 AM approaching the intersection in the westbound direction, and 578 AM vehicles in the eastbound direction. Sawgrass Drive has 113 AM vehicles approaching in the northbound direction, and 68 AM approaching vehicles in the southbound direction. Details on the turning movements are included in the attached figures.

It is recommended to cross Westfall Road on the east side of Sawgrass Drive to reduce the crossing length. The east side crossing will cross a WB lane, an WB left turn lane and an EB lane. It would be necessary to cross an extra EB right turn lane if the crossing was on the west side of Sawgrass Drive.

Additional signage, pavement markings and crosswalk marker posts to create a pedestrian gateway are recommended. An engineering study of traffic conditions, pedestrian movements and physical characteristics of this location, should be performed to determine whether installation of a traffic control signal is justified. Future development and increased traffic volumes on Westfall Road and Sawgrass Drive may warrant the installation of a traffic signal. A traffic signal with pedestrian signals will assist and provide additional safety for pedestrians and non-motorized traffic crossing Westfall Road. The installation of a traffic/pedestrian signal will eliminate the need for a median refuge or curb bump-outs.

If the County makes improvements on Westfall Road, a count down pedestrian head or roving/animated eyes are recommended. If no county improvements are anticipated, the minimum of pedestrian crossing signs (MUTCD W5-1 and/or W5-2) and pavement markings for a crosswalk are recommended. High pedestrian volumes may warrant flashing overhead caution lights or in-pavement crosswalk signals. The guidelines in the MUTCD Part 235, Chapter V would be consulted for proper sign design.

Elmwood Avenue at Goodman Street (January 1999 traffic counts)

The traffic volumes on Elmwood Avenue at Goodman Street show 1140 AM (484 PM) peak hourly vehicles in the westbound direction, and 492 AM (1283 PM) vehicles in the eastbound direction. Goodman Street has 270 AM (206 PM) southbound vehicles. Details on the turning movements are included in the attached figures.

It is proposed to cross Elmwood Avenue on the east side of Goodman Street and continue the trail northbound on the east side of Goodman Street. This location would cross 2 eastbound travel lanes, a center median (1 lane wide) and 2 westbound lanes. The southbound trail on the west side of Goodman Street will cross Goodman Street at the sidewalk and then cross Elmwood Avenue east of the intersection.

Additional signage, pavement markings and crosswalk marker posts to create a pedestrian/trail gateway are recommended. An engineering study of traffic conditions, pedestrian movements and physical characteristics of this location should be performed to determine whether installation of a traffic control signal is justified. Future development and increased traffic and pedestrian volumes on Elmwood Avenue and Goodman Street may warrant the installation of a traffic signal. A traffic signal with pedestrian signals and the existing raised median east of the intersection will assist and provide additional safety for pedestrians and non-motorized traffic crossing Westfall Road.

Specific recommendations for this intersection are the same as those for Westfall & Sawgrass). Note the W5-1 sign should not be used in advance of crossings where traffic is controlled by traffic control signals.

Goodman Street at Highland Avenue (June 1994 traffic counts)

There are single approaching northbound and southbound lanes on Goodman Street that have peak hourly volumes of 96 AM (334 PM) approaching the intersection in the northbound direction, and 396 AM (352 PM) approaching in the southbound direction. Highland Avenue has 172 AM (522 PM) vehicles approaching in the eastbound, and 487 AM (208 PM) approaching in the westbound direction. Details on the turning movements are included in the attached figures.

Highland Avenue is widened in the eastbound and westbound direction to provide 2 vehicle lanes at the intersection. The desired crossing would be to cross Goodman Street south of the intersection and then cross Highland Avenue west of the intersection. These crossings would have the least amount of vehicle conflicts compared with crossing Highland east of the intersection and Goodman Street north of the intersection.

The existing traffic signal could be used with timing modifications and possible additional pedestrian signals to cross the intersections safely. Specifically, the pedestrian signal heads could be modified with count down or roving/animated eyes and install accessible push buttons at a minimum. Additional signage, pavement markings and crosswalk marker posts to create a pedestrian/trail gateway are recommended.

See Figure 1 for the typical Bicycle and Automobile movements at intersections.

Goodman Street at Pinetum Road

This intersection was reviewed as an alternative route to travel between Goodman Street and South Avenue. Traffic counts at this intersection were not available. Rockingham Street was the closest intersection north of Pinetum Road and Highland Avenue was the closest intersection south of Pinetum Road where traffic counts were available. For the AM peak there were 486 (450 PM) peak hourly vehicles that departed in the southbound direction south of Rockingham Street. The northbound traffic approaching Rockingham Street was 245 AM (452 PM) both counts were taken in September 1997. Turning movements were not available at the Pinetum Road intersection. Pinetum Road is located on the west side on Goodman Street between Highland Avenue and Rockingham Street. The approximate vertical grade on Goodman Street is +3.6% approaching Pinetum from the south (traveling northbound). The grade on Pinetum from the intersection at Goodman Street is estimated at +4.5%. Record road plans for Pinetum Road could not be located. There is also a horizontal road curve on Goodman Street at Pinetum Road. Record road information on Goodman Street did not indicate the actual degree of curvature for this section. The horizontal and vertical constraints at this intersection present a safety concern (limited sight distance) for a trail in both the northbound and southbound direction. The steep grade on Pinetum Road would present difficulty for wheelchairs and bicyclists traveling in both eastbound and westbound directions.

From the information that was available and reviewed in the field, in our opinion, the Goodman/Highland intersection would be safer than the Goodman/Pinetum due to the steep grades at Pinetum, poor sight distance, unsignalized intersection and the amount of disturbance necessary to construct a proper lane width to accommodate bicycles from Highland to Pinetum Road.

Highland Avenue at South Avenue (July 2002 counts)

There are currently two (2) lanes approaching the intersection in the northbound and southbound direction along South Avenue. There are 453 AM (647 PM) approaching peak hourly vehicles in the northbound direction, and 549 AM (626 PM) approaching peak hourly vehicles in the southbound direction along South Avenue. Highland Avenue has 96 AM (176 PM) approaching peak hourly vehicles in the eastbound direction, and 432 AM (239 PM) approaching peak hourly vehicles in the westbound direction. Details on the turning movements are included in the attached figures.

The existing traffic signal could be used with timing modifications and possible additional pedestrian signals to cross the intersections safely. Specifically, the pedestrian signal heads could be modified with count down or roving/animated eyes and install accessible push buttons at a minimum. Additional signage, pavement markings and crosswalk marker posts to create a pedestrian/trail gateway are recommended. Creating isolated curb bump-outs are not recommended at the South Avenue and Highland Avenue intersection. Crosswalks are evident on all four road crossings and could be augmented with additional pedestrian signal notification to safely cross South Avenue and Highland Avenue. Modifications to the pavement markings, pedestrian signals, and traffic signal timing (extending the

pedestrian green time, if necessary) could make the intersection safer for pedestrians and bicycles.

One option that should be reviewed would be to transition the 2 travel lanes in the northbound direction to a single lane north of Highland (currently transitions north of Reservoir Road) and continue this to Robinson where the travel lane is reduced to one lane now. This would create a 14-foot travel lane and a 6-foot wide trail on South Avenue north of Highland. The same pavement configuration would be used in the southbound direction on South Avenue where the existing one travel lane would be extended from Robinson to Highland Avenue. Further investigation to design a "Right Lane Becomes Right-Turn-Only Lane" as indicated on the attached Figure A should be considered.

The route along Highland Avenue is recommended over Pinetum Road due to safety and accessibility concerns. Providing a proposed trail in both the eastbound and westbound direction is recommended. The existing 36 feet of pavement will accommodate 2-12 foot travel lanes and 2-6 foot trails.

South Avenue at Robinson Drive (September 1990 counts)

Vehicle traffic data was not available at the South Avenue/Robinson Drive intersection. Reservoir Road is the closest intersection where counts were available from 09/13/1990. The northbound peak hourly traffic volume on South Avenue at Robinson Drive is estimated at 768 AM (737 PM). The southbound peak hourly traffic volume on South Avenue at Robinson Drive is estimated at 595 AM and (832 PM). Robinson Drive is a two-way street that runs between Mt. Hope Avenue and South Avenue. There are no residential homes on this road. Parking is probably used during events at the park, but would probably not be utilized year round to any great extent. Although a wider road section to accommodate two lanes of bicycle traffic may be desirable at some time in the future, it is not recommended due to the parkland and historic characteristics along this road.

Trail users traveling northbound on South Avenue turning left onto Robinson Drive should be assisted with a separate left turn lane, or a crosswalk. A left turn lane could be established within the existing curbs by restricting parking on the east side of South Avenue south of Robinson Drive. Traffic continuing north on South Avenue past Robinson Drive are directed to a single through lane and a curb side parking lane. The attached Figure B illustrates a proposed re-striping of the South Avenue/Robinson Drive intersection.

An engineering study of traffic conditions, pedestrian movements and physical characteristics at this location, should be performed to determine whether installation of a traffic control signal is justified. Currently there are no crosswalks on South Avenue at this location, crosswalks exist on Robinson Drive and Alpine Street.

One alternative that should be considered would be to design a left turn lane and crosswalk on South Avenue. High pedestrian volumes may warrant flashing overhead caution lights

or in-pavement crosswalk signals. Further field investigation noted that parking is now restricted on both sides of South Avenue between Robinson and Highland.

Mt. Hope at McLean Street (January 1989 counts)

The latest traffic counts available for the Mt. Hope Ave/McLean Street was recorded in 1989. These counts do not reflect the volumes after McLean Street was designated as one way westbound. The volumes on Mt.Hope northbound, approaching the intersection were 954 AM (919 PM) vehicles. The southbound approaching vehicles were 919 AM and (1275 PM). McLean Street volumes showed 51 AM (18 PM) turning left from Mt. Hope and 121 AM (103 PM) turning right from Mt. Hope. Details on the turning movements are included in the attached figures.

Additional signage, pavement markings and crosswalk marker posts to create a pedestrian gateway are recommended. An engineering study of traffic conditions, pedestrian movements and physical characteristics of this location should be performed to determine whether installation of a traffic control signal is justified. Future development and increased traffic volumes on Mt. Hope Avenue and McLean Street may warrant the installation of a traffic signal. We suggest adding a crosswalk on Mt. Hope as there is already a left turn lane on Mt. Hope. High pedestrian volumes may warrant flashing overhead caution lights or in-pavement crosswalk signals.

A contra-flow trail lane could be established on McLean Street within the 19 feet of existing pavement. A 14-foot travel lane and 5-foot contra-flow to a 12-foot travel with a 7-foot contra flow lane would be the options available. Additional delineation between the travel lane and contra flow lane would be needed.

New Products

New products as indicated in the attached product catalog that includes: crosswalk marker posts, "Briteside" reflective panels, in-pavement flashing markers, snowplowable markers, etc. would need the road owner/agency approval before use.

Figures

The following figures (figures 1 through 5) indicate typical bicycle and automobile movements at intersections along with different scenarios of typical sections for pedestrians and bicyclists facilities. Conversions between metric and English units are as follows:

1.2 meter	=	4 feet
1.5 meter	=	5 feet
2.1 meter	=	7 feet
3.6 meter	=	12 feet
4.2 meter	=	13.5 feet
4.3 meter	=	14 feet
6.6 meter	=	21.6 feet

FACILITIES FOR PEDESTRIANS AND BICYCLISTS

Typical Bicycle and Automobile Movements at Intersections

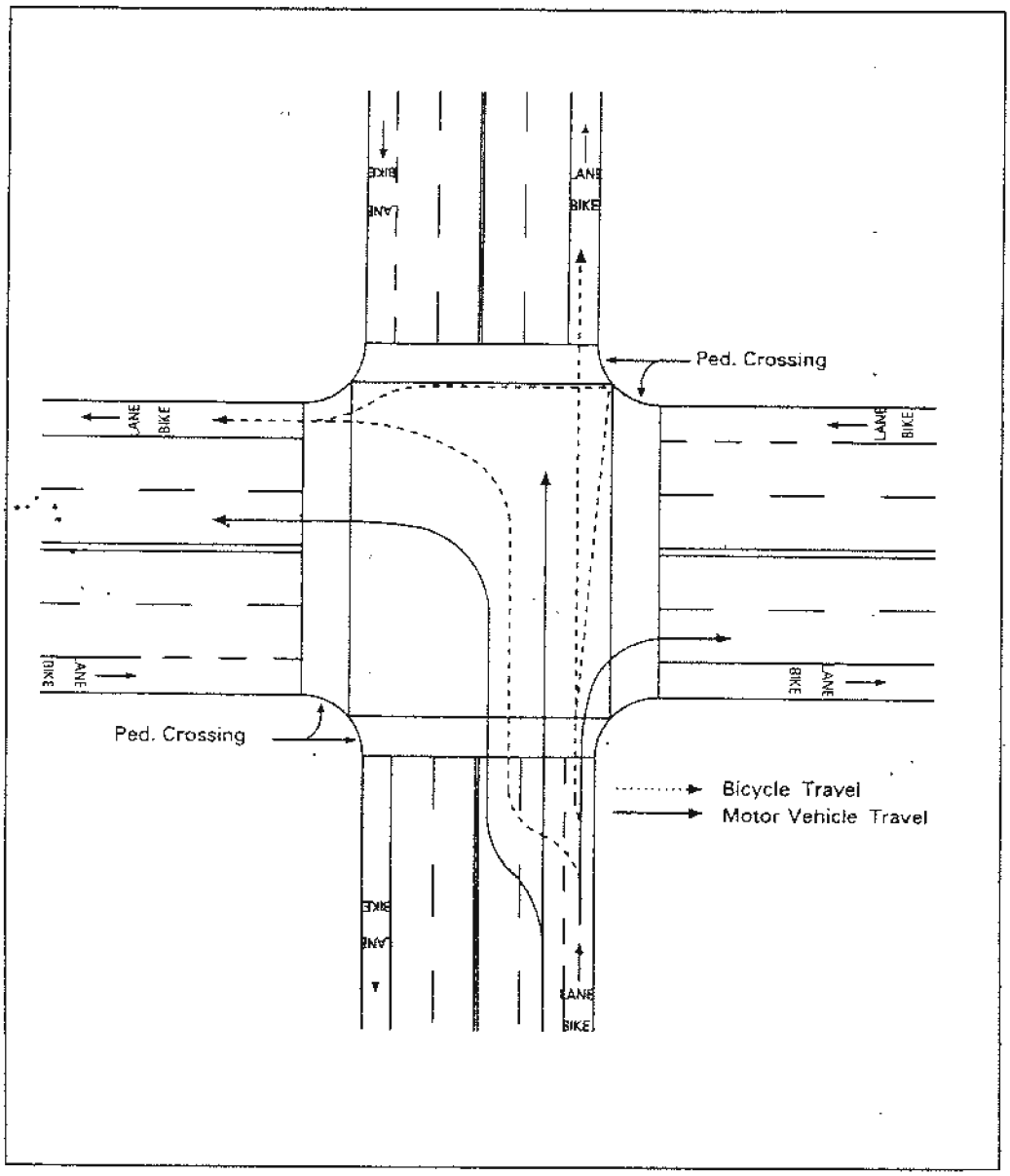


Figure 1

FACILITIES FOR PEDESTRIANS AND BICYCLISTS

Wide Curb Lane

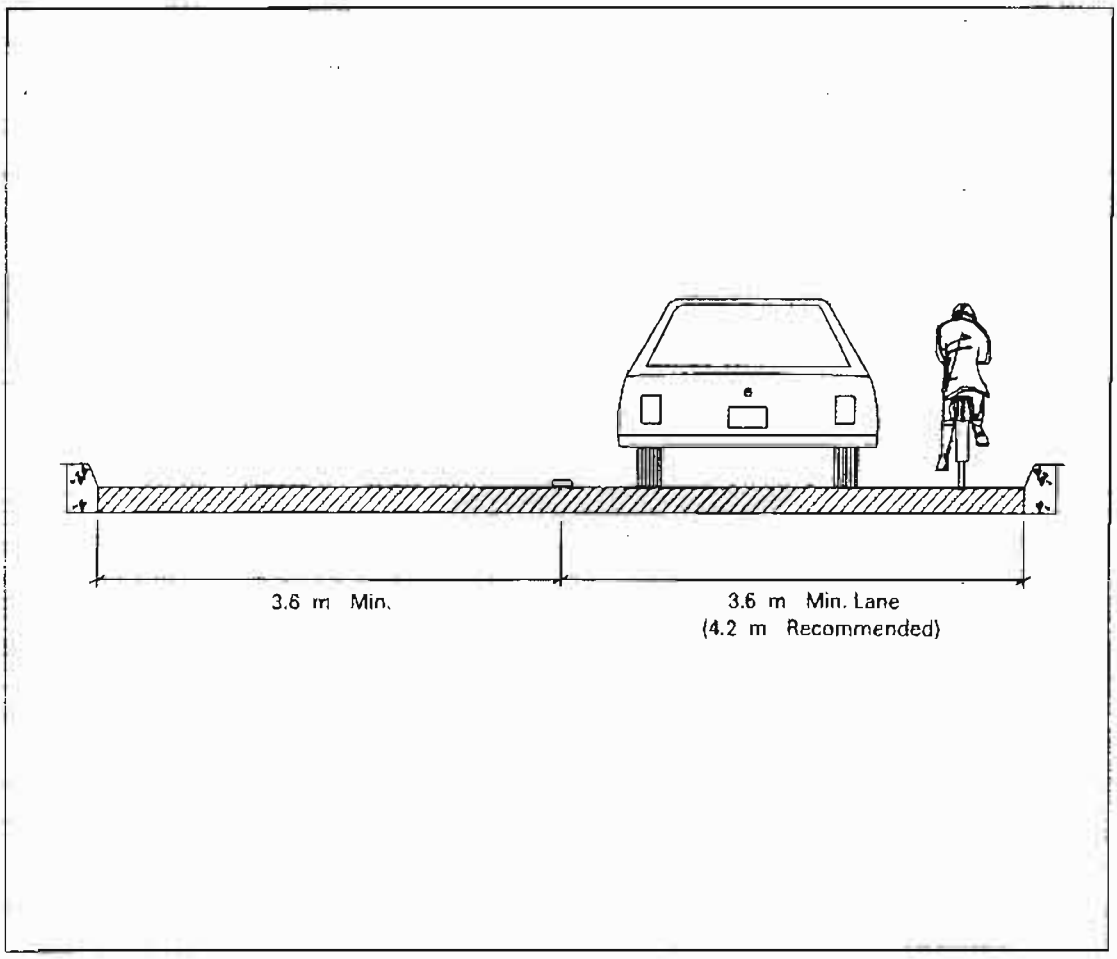


Figure 2

FACILITIES FOR PEDESTRIANS AND BICYCLISTS

Wide Curb Lane with On-Street Parking

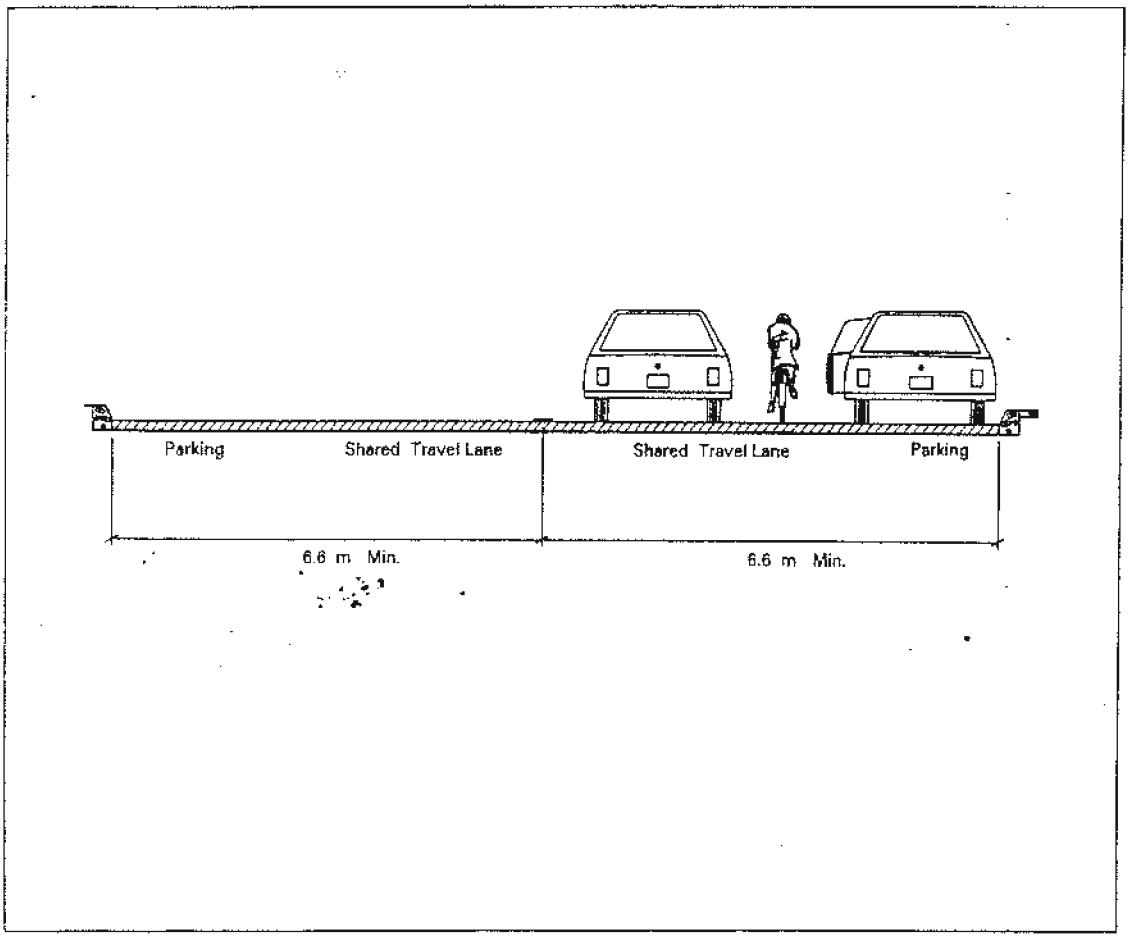


Figure 3

FACILITIES FOR PEDESTRIANS AND BICYCLISTS

Bicycle Lane (Two-way street, without parking)

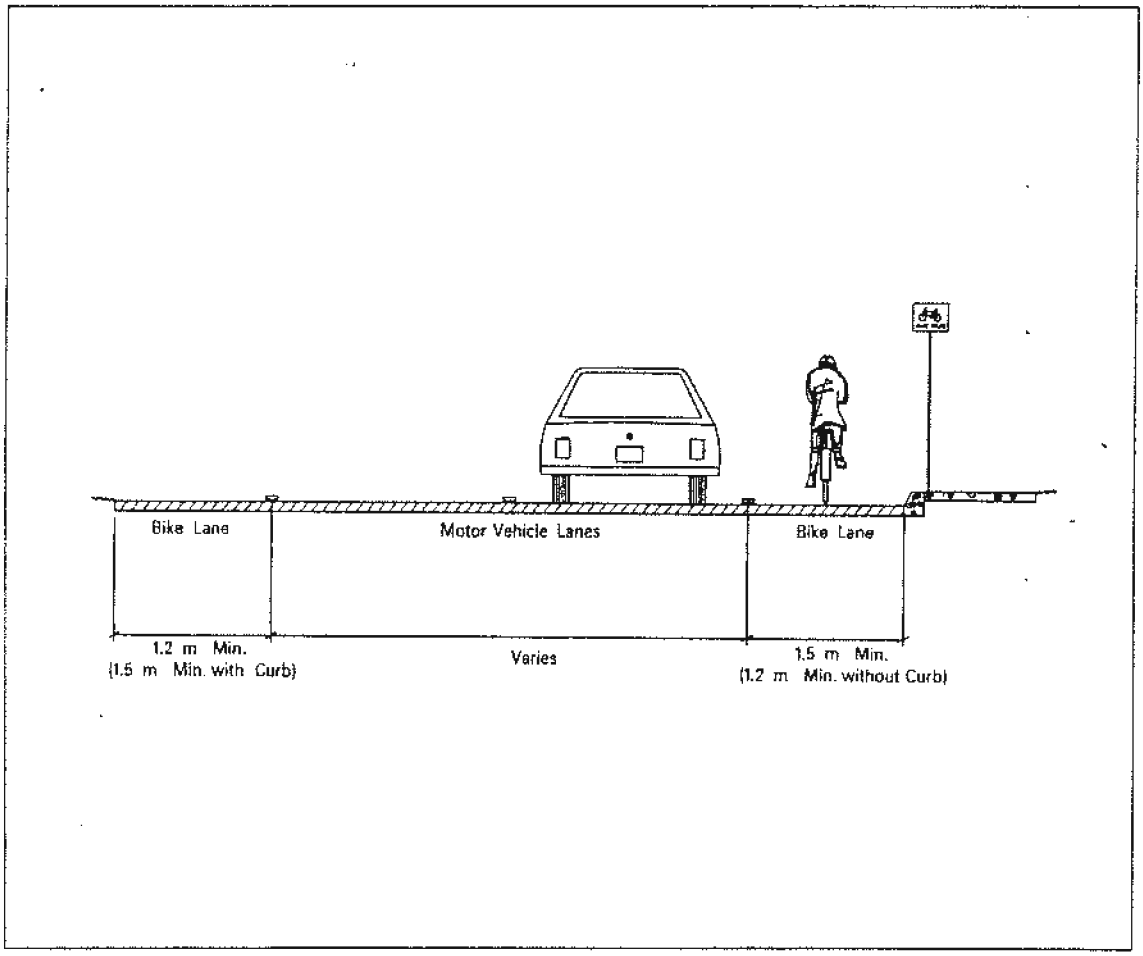


Figure 4

FACILITIES FOR PEDESTRIANS AND BICYCLISTS

Bicycle Lane (Two-way street with on-street parking)

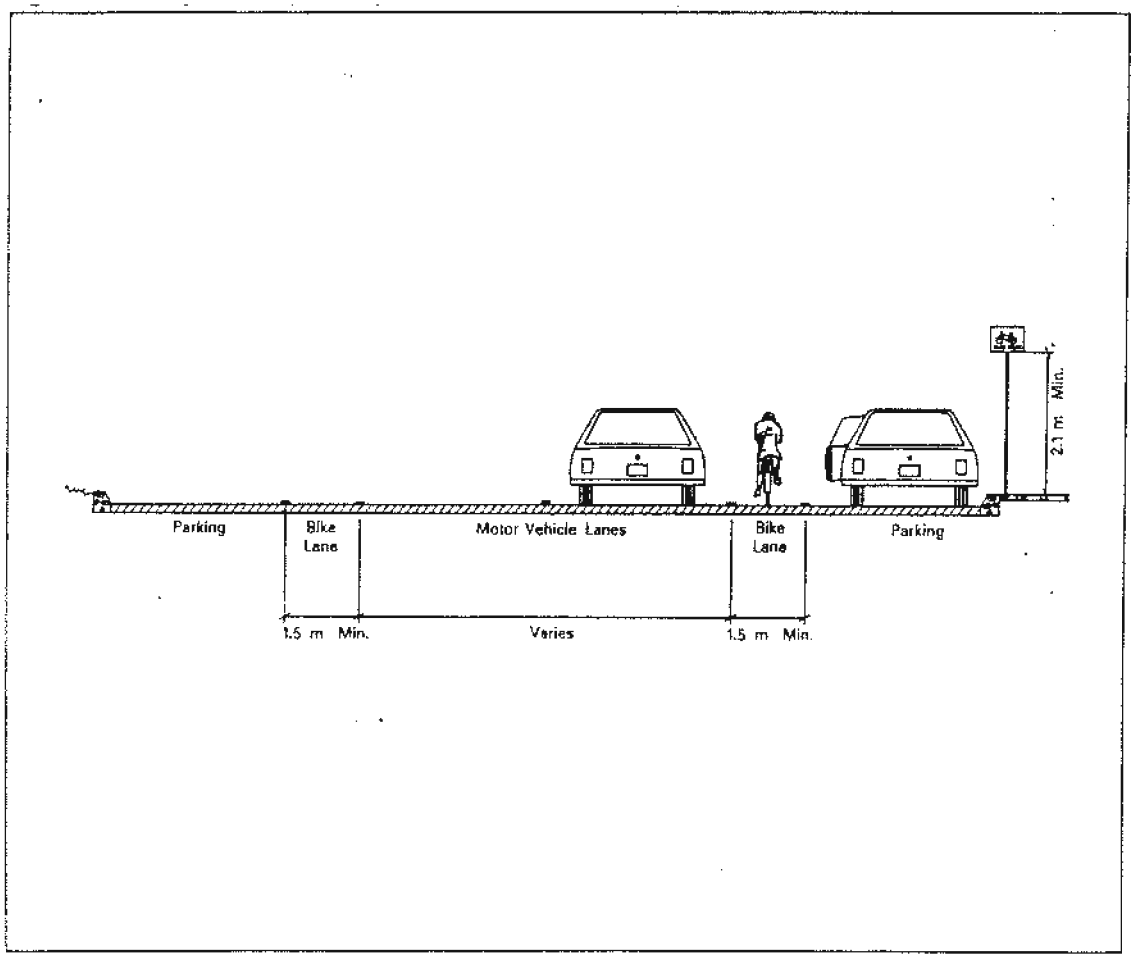
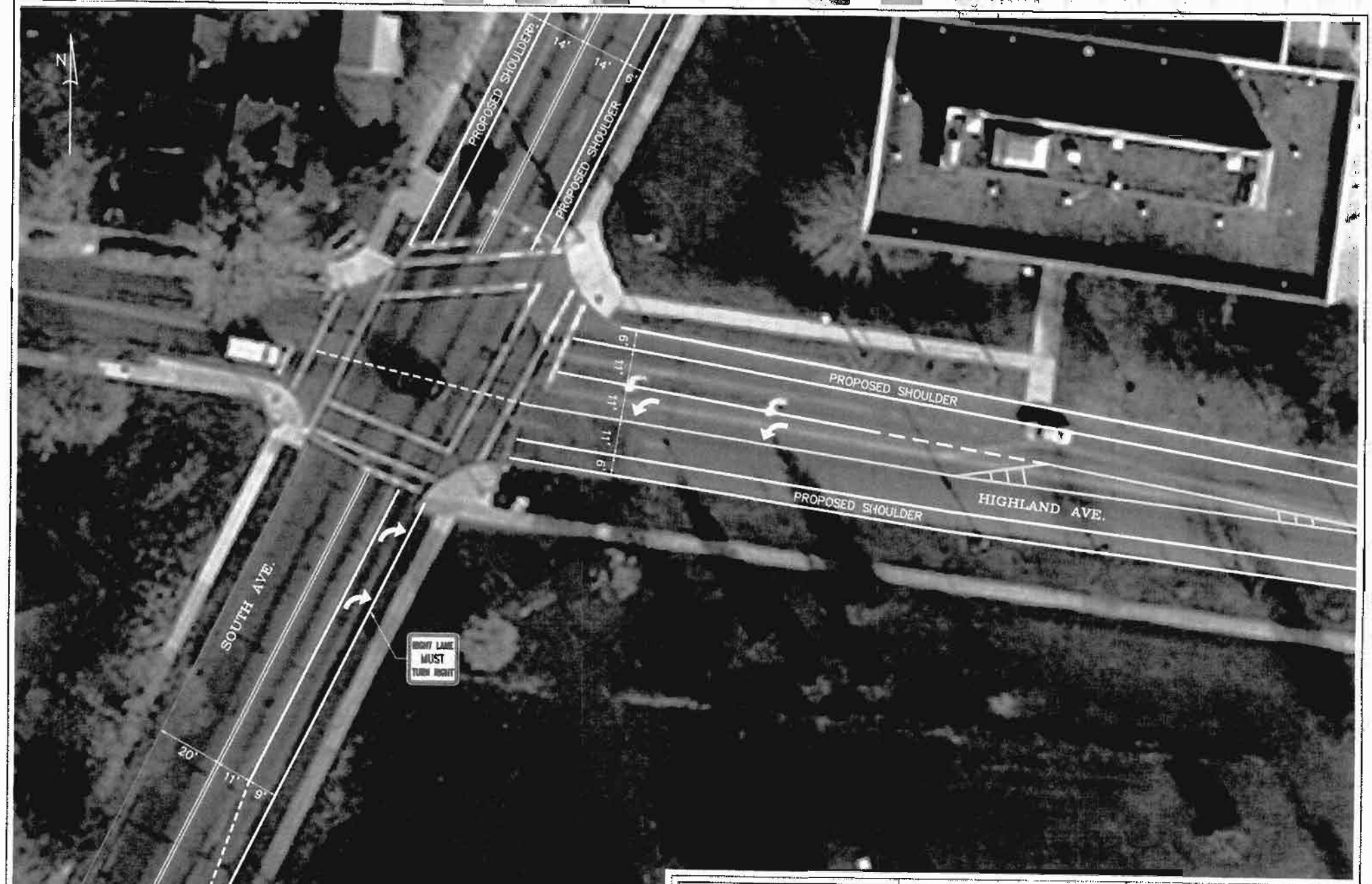
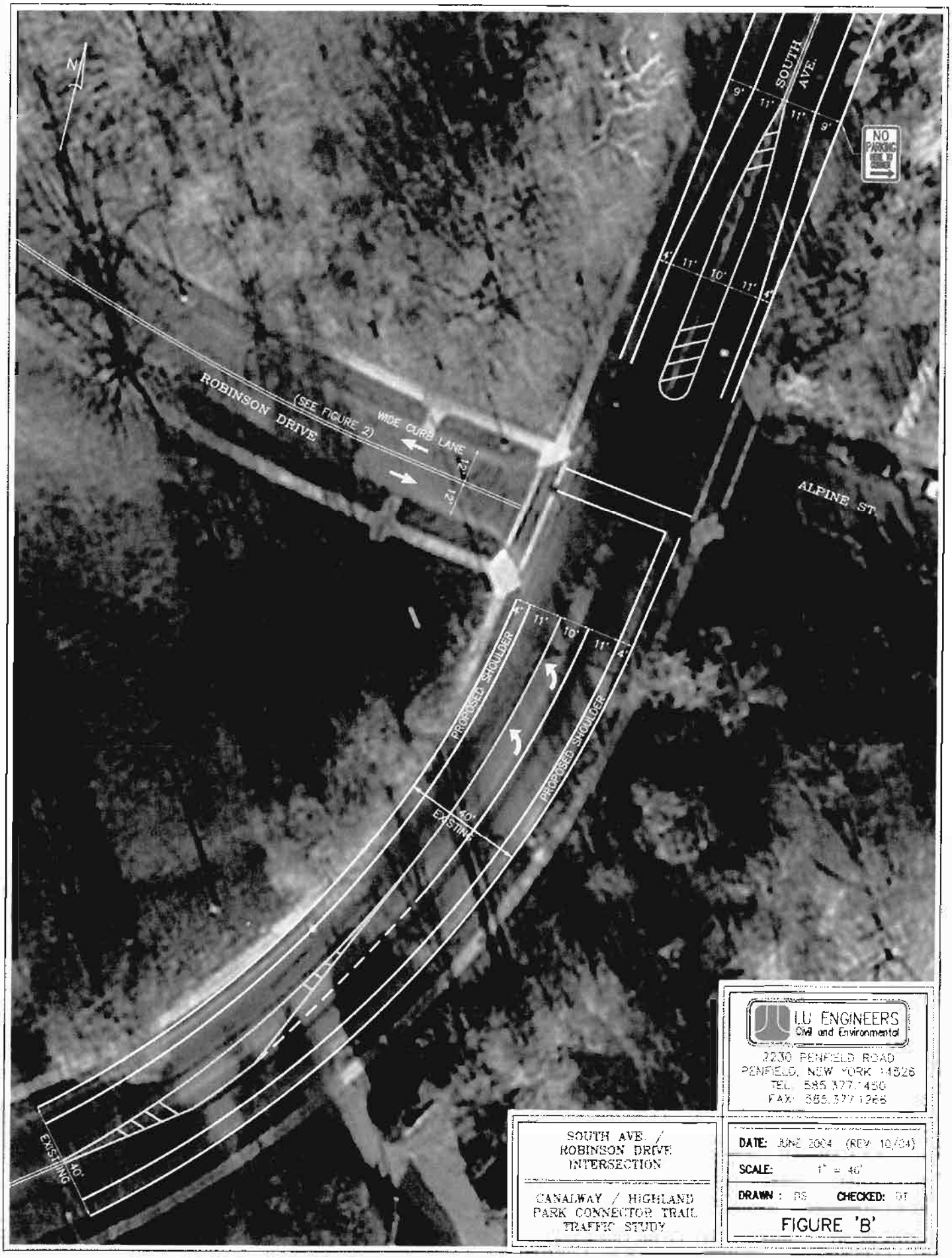


Figure 5


N
PROPOSED SHOULDER
14'
14'
6'
PROPOSED SHOULDER
PROPOSED SHOULDER
HIGHLAND AVE.
SOUTH AVE.
RIGHT LANE
MUST
TURN RIGHT
20'
11'
9'



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SOUTH AVE. / ROBINSON DRIVE INTERSECTION

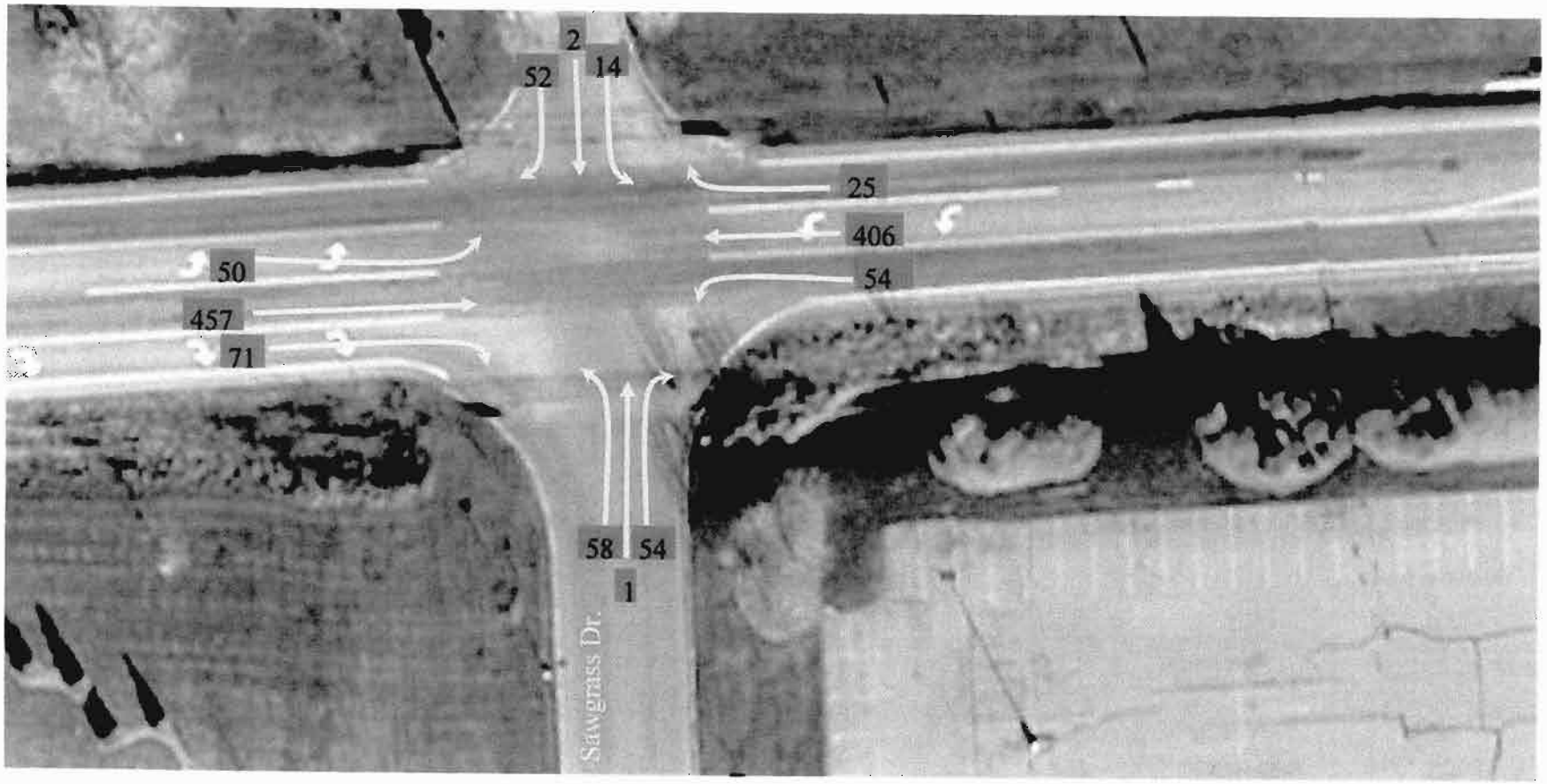
CANALWAY / HIGHLAND PARK CONNECTOR TRAIL TRAFFIC STUDY

DATE: JUNE 2004 (REV: 10/04)

SCALE: 1" = 40'

DRAWN: DS CHECKED: DT

FIGURE 'B'



Westfall Road and Sawgrass Drive
AM Peak Traffic Volumes
June 13, 2002

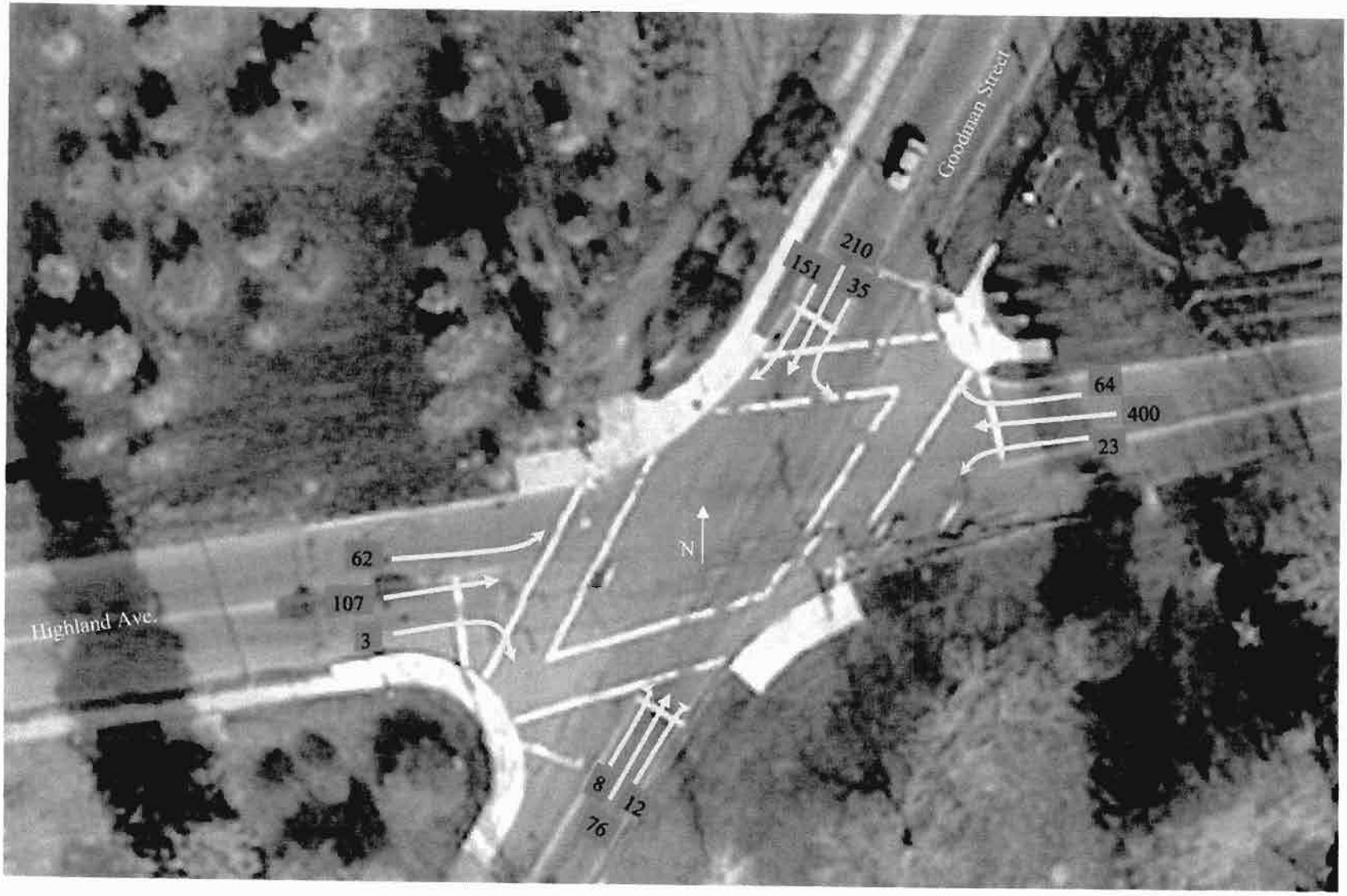
Figure 6

Elmwood Avenue and Goodman Street
AM Peak Traffic Volumes
January 5, 1999

Figure 7

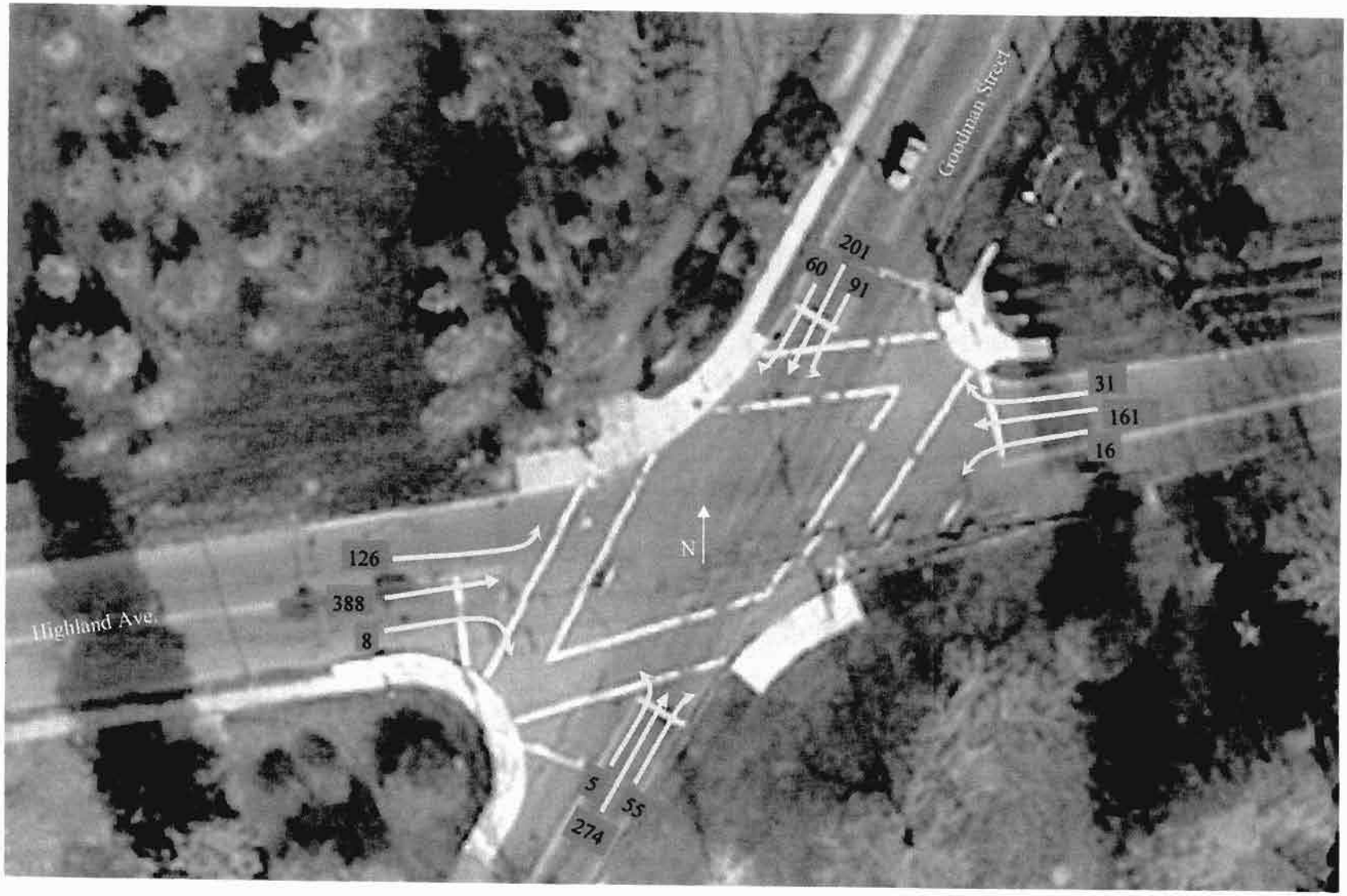
Elmwood Avenue and Goodman Street
PM Peak Traffic Volumes
January 5, 1999

Figure 8



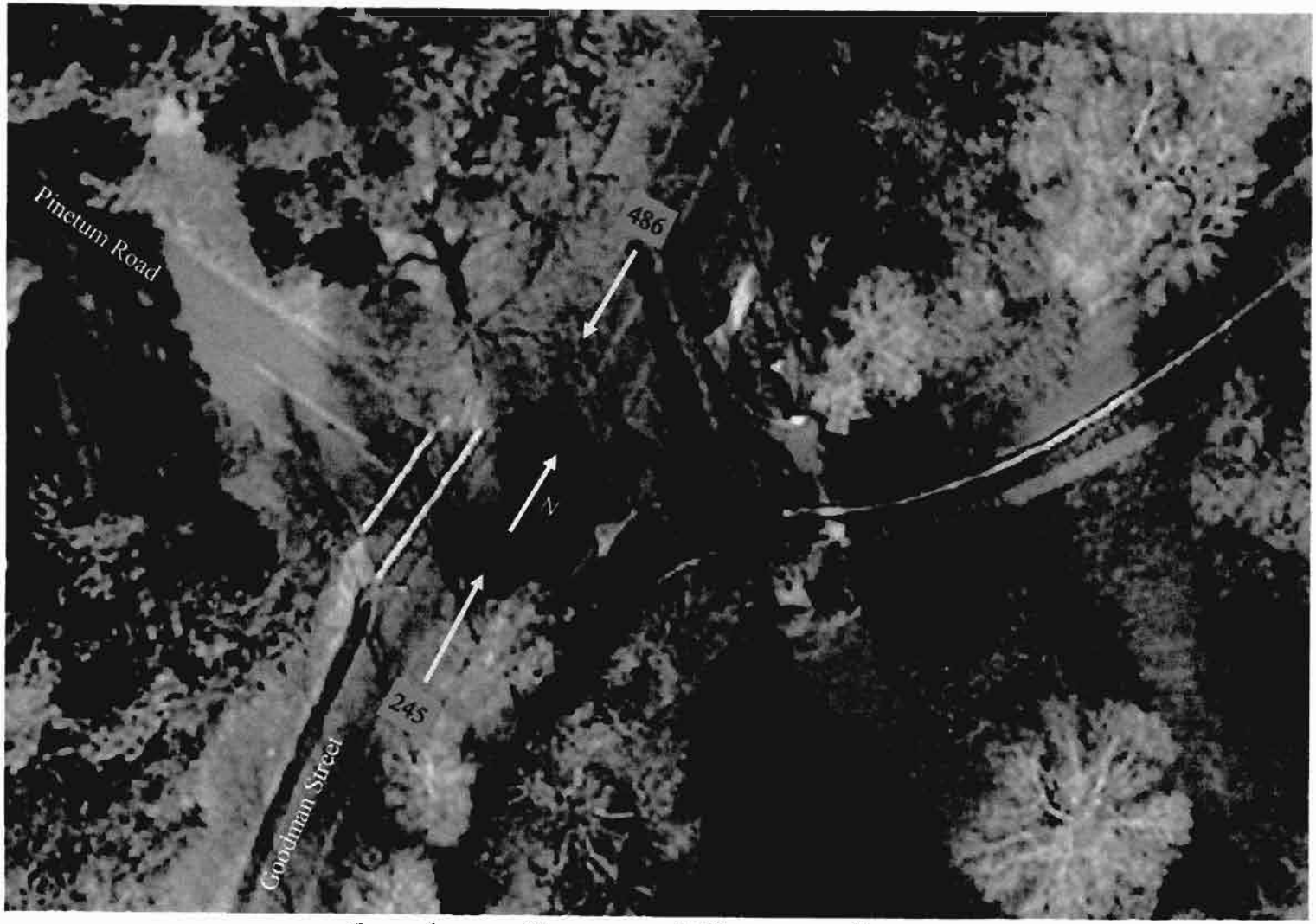
Goodman Street and Highland Avenue
AM Peak Traffic Volumes
June 21, 1994

Figure 9



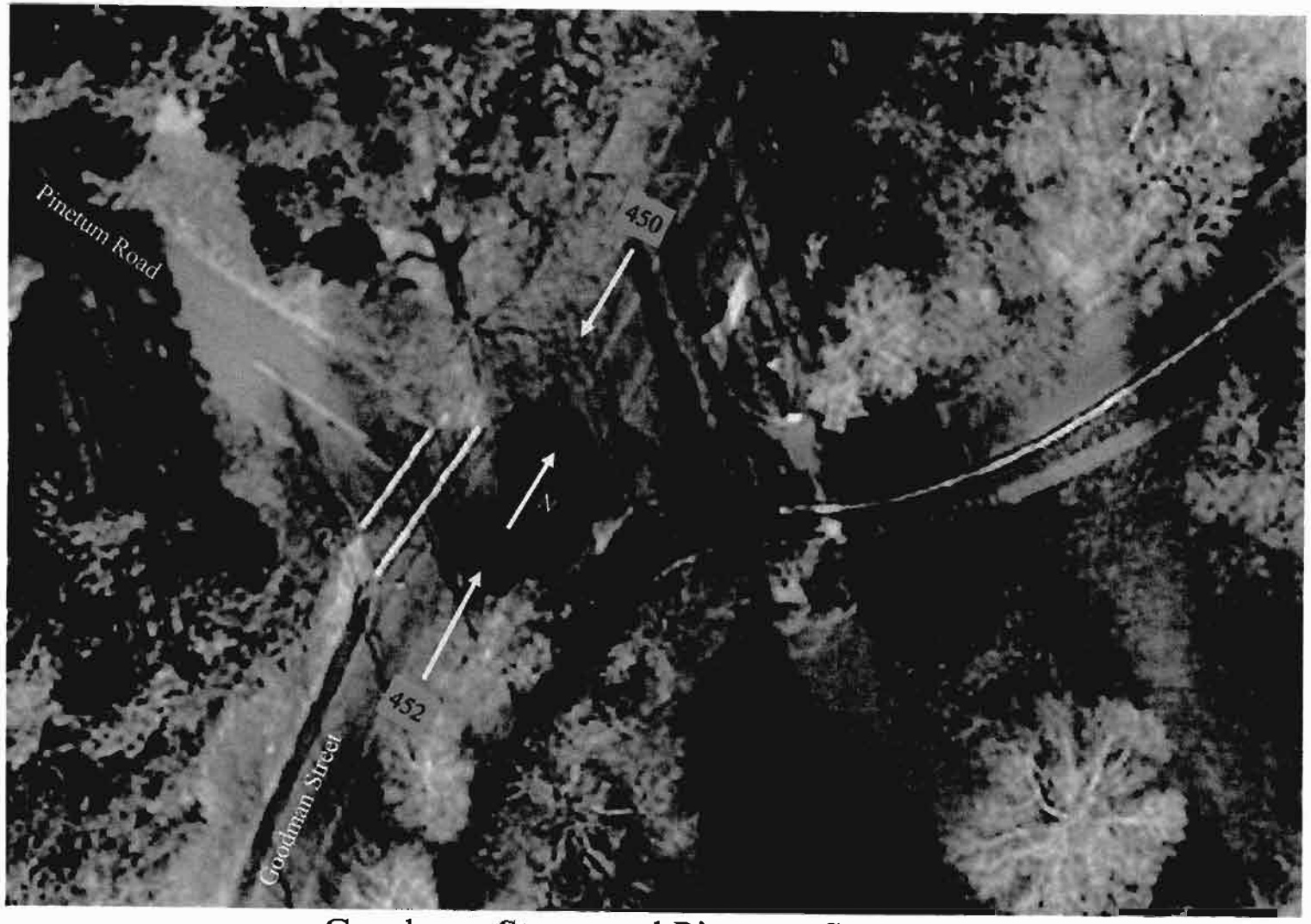
Goodman Street and Highland Avenue
PM Peak Traffic Volumes
June 21, 1994

Figure 10



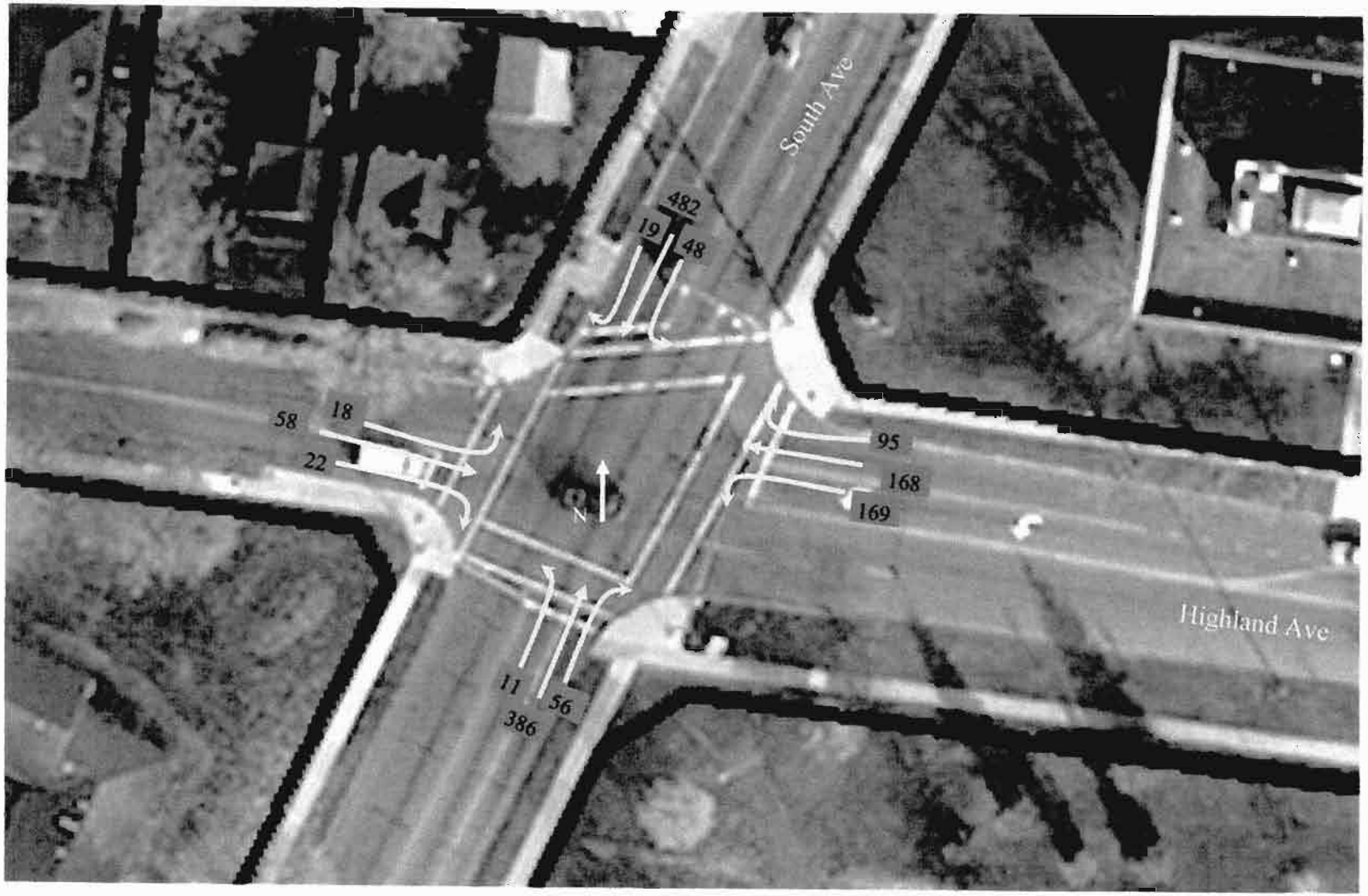
Goodman Street and Pinetum Street
AM Peak Traffic Volumes
September 25, 1997

Figure 11



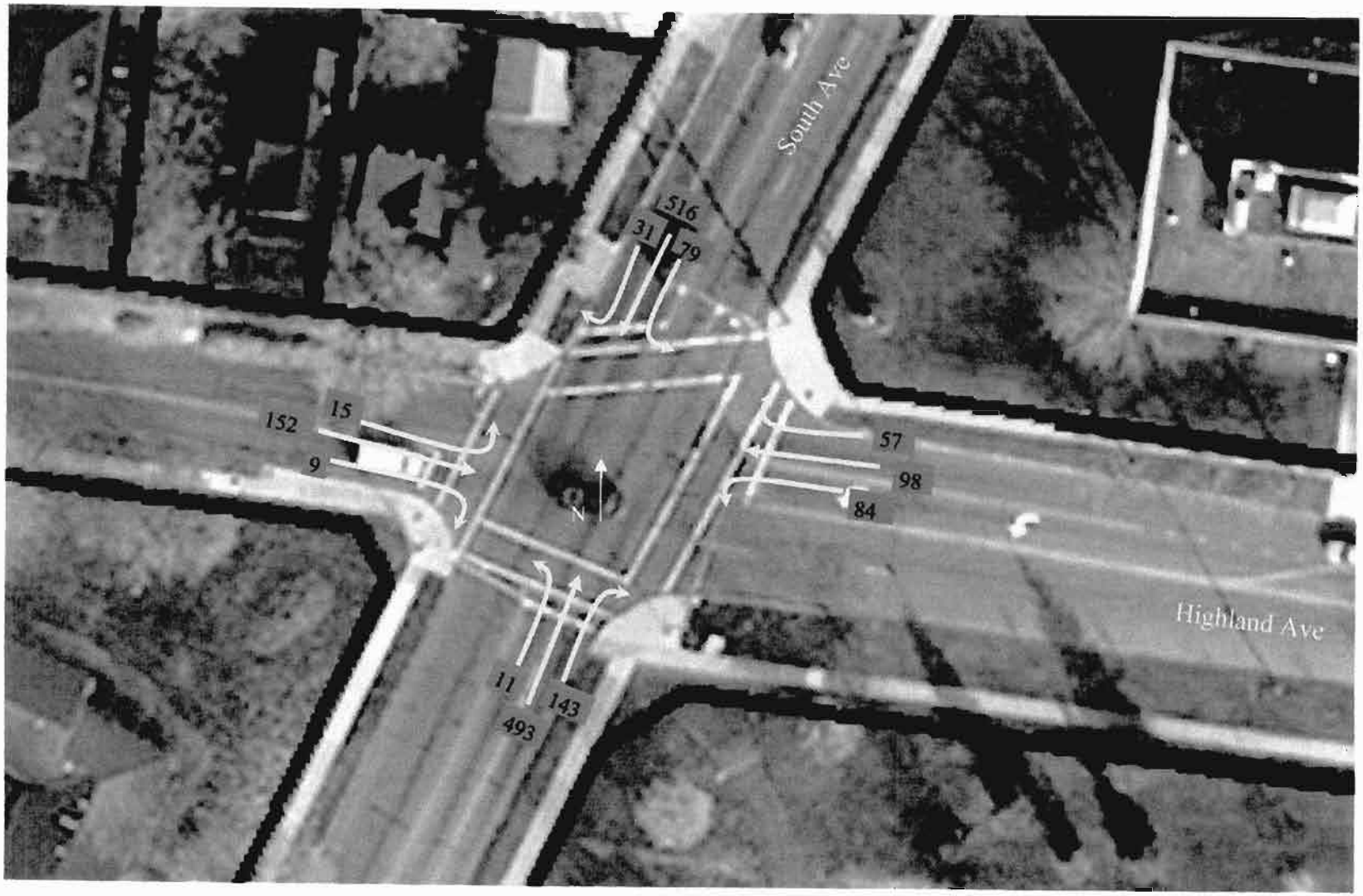
Goodman Street and Pinetum Street
PM Peak Traffic Volumes
September 25, 1997

Figure 12



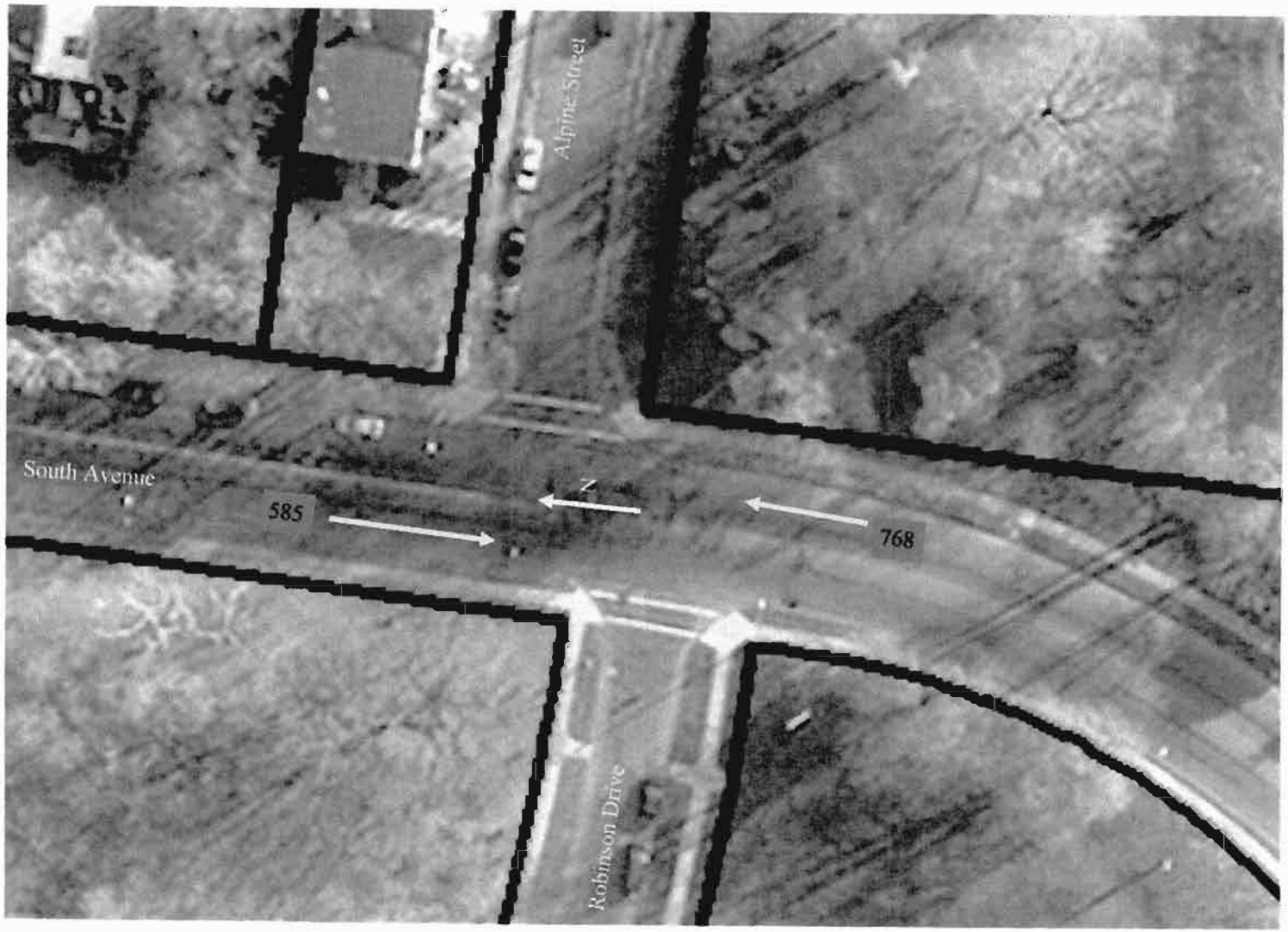
Highland Avenue & South Avenue
AM Peak Traffic Volumes
July 16, 2002

Figure 13



Highland Avenue & South Avenue
PM Peak Traffic Volumes
July 16, 2002

Figure 14



South Avenue at Robinson Drive and Alpine Street
AM Peak Traffic Volumes
September 13, 1990

Figure 15

South Avenue at Robinson Drive and Alpine Street
PM Peak Traffic Volumes
September 13, 1990

Figure 16

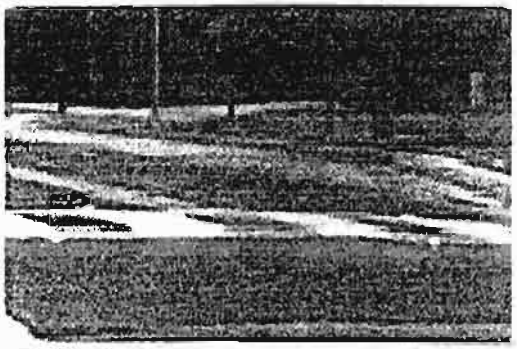
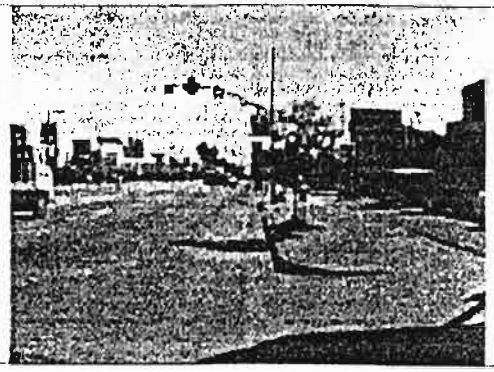
Mt. Hope and McLean Street
AM Peak Hour Traffic Volumes
January 31, 1989

Figure 17

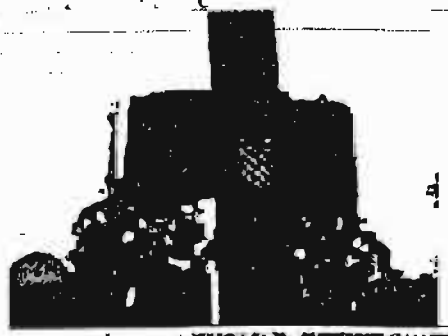
Mt. Hope and McLean Street
PM Peak Hour Traffic Volumes
January 31, 1989

Figure 18

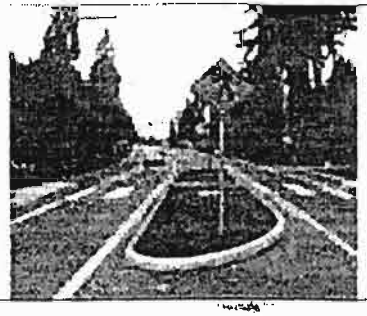
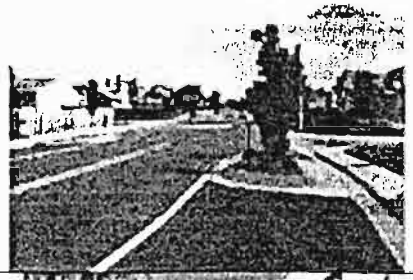
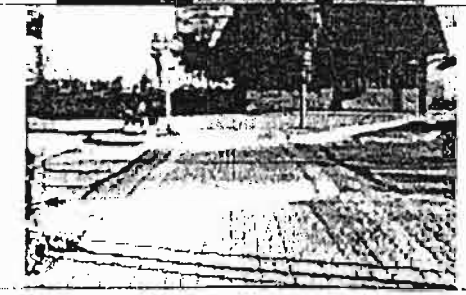
Pedestrian Treatments

Sample Safety Treatments	Description	Range/ Approximate Costs	Known Location(s)	Contact(s)
	**In-pavement lights** - used at crosswalks to alert motorists to the presence of a pedestrian crossing or preparing to cross the street. The amber lights are embedded in the pavement on both sides of the crosswalk and oriented to face oncoming traffic. When the pedestrian activates the system, either by using a push-button or through detection from an automated device, the lights begin to flash at a constant rate.	$25,000 to $35,000	Kirkland, WA	Dave Godfrey 425-828-1214
	**Roving or Animated eyes** - intended for use at pedestrian crosswalks as an alternative to conventional pedestrian signals. Animated eyes displays are expected to encourage pedestrians to look for turning vehicles traveling on an intersecting path by including a prompt as part of the pedestrian signal. The prompt is a pair of animated eyes that scan from side to side at the start of the WALK indication.	$4,000	Shoreline, WA	John Chi 206-764-6444
	**Flashing overhead crosswalk signs**- adds amber flashing beacons for the crosswalk so the motorists can see who is crossing the street. Two beacons which are pedestrian activated can be attached to the sign. The pedestrian uses the push buttons and activates the flashers to warn motorists to stop.	$70,000 with new electrical systems	Shoreline, WA	John Chi 206-764-6444

Pedestrian Treatments

Pedestrian Treatments			
			
			
			

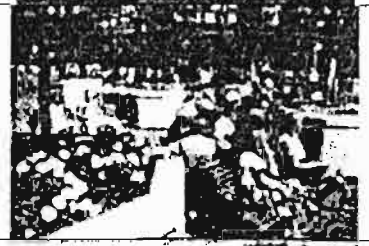
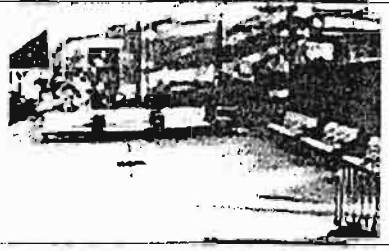
Traffic Calming and Management

Sample Safety Treatments	Description	Range/ Approximate Costs	Known Location(s)	Contact(s)
	**Refuge island** - ped refuge, a raised island in the roadway that separates a crosswalk into discrete legs and provides a refuge for crossing pedestrians.	$15,000-$30,000	University Place, WA	Pat O'Neil 253-460-2529
	**Chicane** - A series of two or more build-outs on alternate sides of the road, but not opposite one another.	$15,000 - $30,000	Seattle, WA	Patti Polinsky 206-543-7322
	**Transit bulb-out** - extended pavement to narrow roadway, or pinch throughfare, or provide space for bus stop, bench, etc.	$15,000-$55,000 depending on drainage and utility location	California, Washington and Oregon	Ross Hudson King County Metro 206-263-3178
	**Curb extension** - an area where the sidewalk and curb are extended into the parking lane, usually in order to shorten pedestrian crossing distance.	$15,000-$30,000	Ellensburg, WA	John Akers 509-962-7101

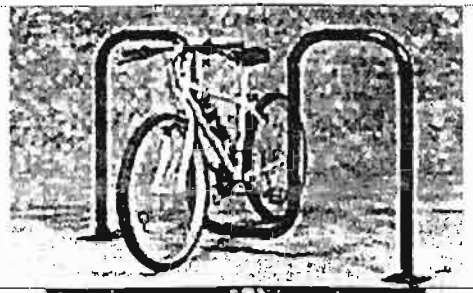
Lighting

Sample Safety Treatments	Description	Range/Approximate Costs	Known Location(s)	Contact(s)
	[illegible]	$5,000- [illegible]	Un[illegible] WA	[illegible]
	[illegible]	$5,000- [illegible]	[illegible], WA	[illegible]
	[illegible]	$-,000- [illegible]	[illegible], C[illegible]	[illegible]

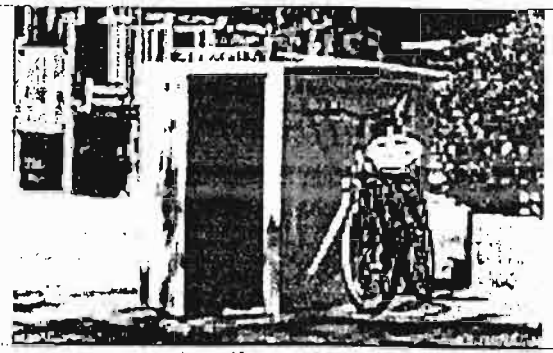
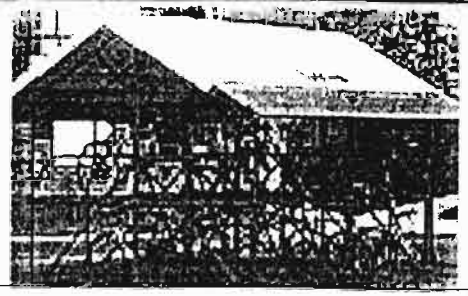
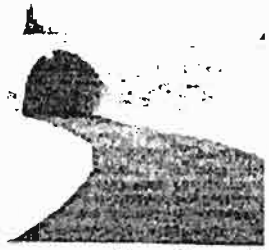
Amenities

Sample Safety Treatments	Description	Range/ Approximate Costs	Known Location(s)	Contact(s)
	**Patterned concrete or pavers** – can be used to warn motorists to expect pedestrians and create a more interesting and aesthetically appealing walkway.	Cost varies based on size of area. $3,000 for a patterned concrete crosswalk.	Ellensburg, WA	John Akers 509-962-7101
	**Wood and concrete planter boxes.**	$500-$3,000	Ellensburg, WA	John Akers 509-962-7101
	**Street trees**- tree in well with concrete.	$1,000	Portland, OR	Tom Kloster 503-797-1832
	**Wood bench #1.**	$500 each	Portland, OR	Tom Kloster 503-797-1832
	**Wood bench #2.**	$500 each	Ellensburg, WA	John Akers 509-962-7101

Bicycle Treatments

Sample Safety Treatments	Description	Range/ Approximate Costs	Known Location(s)	Contact(s)
	**Bike rack** – holding 4 bicycles.	$500	Portland, OR	Tom Kloster 503-797-1832
	**Paved bike path** – per mile.	$15,000-$30,000	Roslyn, WA	Greg Lovelady 360/ 902-3008
	**Standard striped bikeway** per 100 feet.	$500 - $2,000	Portland, OR	Tom Kloster 503-797-1832

Bicycle Treatments

Sample Safety Treatments	Description	Range/ Approximate Costs	Known Location(s)	Contact(s)
	**Bike lockers**– set of 4.	$4,000	Portland, OR	Tom Kloster 503-797-1832
	**Bike barn**- movable covered parking for 50+ bicycles.	$2,000 -$4,000		CORA 1-800-354-8624
	**Culvert tunnel- uses culvert pipe to create a tunnel for bicycles to pass through.**	$10,000 to $30,000 cost varies with size and site requirements.	Wenatchee, WA	Matt Wisen 509-667-2910

2

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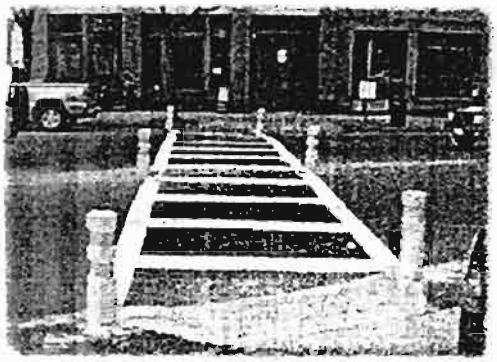
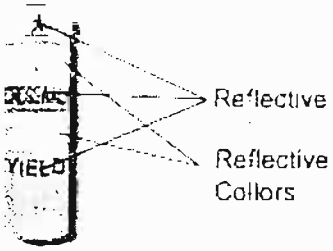
CROSSWALK MARKER POSTS



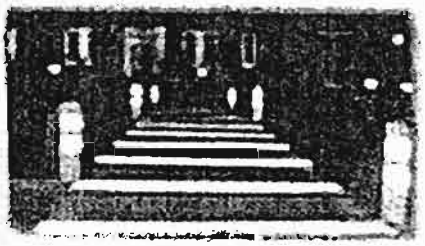
Crosswalk Marker Posts

Developed with the same technology as the famous Flexible Marker Post, these devices offer exceptional crosswalk recognition in virtually all weather conditions, thereby enhancing pathways for pedestrians.

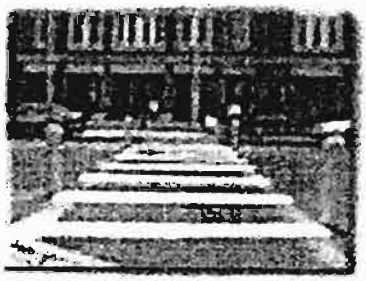
Pedestrian Gateway



- Control traffic
- Discourages illegal parking
- Identifies crosswalk boundaries
- Curb mount for snow covered crosswalks
- Resists weather and temperature differences.
- Enhances crosswalk locations from greater distance.



NIGHT



DAY

REFLECTIVE

REFLECTIVE
Posts are constructed of bright yellow materials and equipped with two 4-inch bands totaling 180 square inches. The Crosswalk marker system has all the right factors not to be passed by unnoticed.

SAFE
Center Posts identify halfway point, while curb side posts bring perspective and depth.

SAFE

WINTER

WINTER
Posts can be mounted on the sidewalk identifying the crosswalks entrance. Marke. Post will identify crosswalks when street markings are covered by snow.

IDENTIFICATION MARKINGS
Crosswalk Marker system includes two center posts with logos and lettering affixed. A host of logos or words are available, upon request, to suit the community's needs. Other popular messages include: SCHOOL, STOP, STATE LAW and FINE $100.00.

IDENTIFICATION MARKINGS

FLEXIBLE

The marker post gives under impact and then re-erects itself to the vertical position, continuing its function.

ANTI-THEFT
T-bar is used to secure the post to the pavement assuring absolute strength while the marker post stays in place using its patented anchoring system. Approximate time for removal and reinstallation of post is approximately thirty (30) seconds.

SIGNALIZATION Reflective Signs in the form of the post are available to help direct pedestrians to the nearest crosswalk location.

COLOR: Green/Yellow

PRODUCT ITEM LIST		
Kit Includes:	◯	**Kit 1 # 0450-Y: Kit includes, 6 Posts, Installation T-Bar + accessories.**
	▲	**Kit 2 # 0455-Y: Kit includes, 6 Posts + accessories.**
	★	**Kit 3 # 0460-Y: Kit includes, 6 Posts, T-Bar, Resine and accessories.**

#1	#2	#3	QTY	Image	Description	Individual Part #'s
◯	▲	★	6		Yellow Flexible Marker Posts	0401-YW
◯	▲	★	6		Pavement sleeves	0926
◯	▲	★	6		Set screws (Protection for sleeve for temporary removal of posts.)	0938
◯		★	1		Air pump (for hole cleaning during inst.)	0927
◯		★	1		T-Bar	0925
◯		★	1		EPCON Double Tube Epoxy Gun (For 7.9oz tube).	0928-A
◯		★	1		Acrylic 7. 7.9oz tube. (Installs 6 posts)	0929-A
		★	2		Self Mixing Nozzle for two part Resin. (For 7.9oz tube).	0933-A
◯	▲	★	1		Pedestrian Crosswalk signs	

Qty	Description	Part #
1	EPCON Double Tube Epoxy Gun (For 27.9oz tube).	0928-E
1	Acrylic 27,.9 oz tube. (Installs 18-24 posts)	0930-E
1	Self Mixing Nozzle for two part Resin. (For 27.9oz tube).	0934-E

PEDESTRIAN GUIDING SIGN

Qty	Description	Part #
1	Green/Yellow crosswalk location sign	7110

TRAFFIC AND PARKING CONTROL CO., INC.
800 WALL STREET
ELM GROVE, WI 53122
PHONE: 262-814-7000
FAX: 262-814-7017
TOLL FREE: 1-800-236-0112
TOLL FREE FAX: 1-800-444-0331

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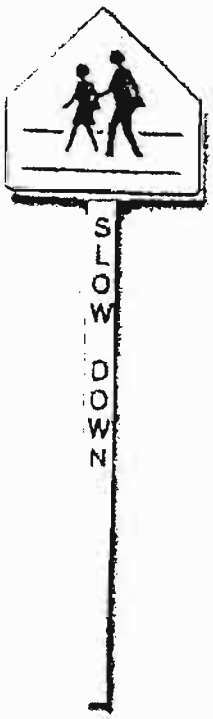
BriteSide®

Reflective Panels, Strips & Message Centers

- BriteSide®
- BriteSide® Endless Application
- Series10.1 for U-Channel
- Series 10.1.1
- Series10.1.2 Recessed for U-Channel
- Series10.2 For Round/Square/Octagonal
- Series10.3 Steel Hydrant Collars
- Series10.3.1 All Season Hydrant Markers
- Series 10.4

The Difference is easy to see.™



If higher sign visibility is the key to low traffic incidence rates, then BriteSide® is the key for improving safety.

What if you could increase the visibility of traffic signage 100... 200... 300 percent...would you?

What if you could accomplish that kind of visibility with ***a simple accessory compatible with all types of existing signs and mounting posts***...would you?

What if you could lower traffic incidents at new and existing locations with ***a simple traffic sign accessory that installs in seconds***...would you?

What if that same accessory could be used to call attention to ***dangerous roadside objects, barriers, work and school zones, handicap access areas, evacuation routes and so many other sign applications***... wouldn't you want to take advantage of this extraordinary versatility?

Of course you would. But only now can you turn those "what if's" into reality for your community... and that reality begins with *BriteSide® Panels, Strips and Message Centers.*

BriteSide® Uses The Mounting Post As A Reflective Element Of The Sign... Leading The Eye To The Message...

By using the signpost as a reflective element of the sign, the amount of reflective surface - warning to motorists and pedestrians - *is easily increased, with no need for a new or lar sign..*

- [illegible] INFORMATION

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800 WALL STREET
ELM GROVE, WI 53122
PHONE: 262-814-7000
FAX: 262-814-7017
TOLL FREE: 1-800-236-0112
TOLL FREE FAX: 1-800-444-0331
DIRECTIONS

COLD APPLIED PERMANENT MARKING TAPES

STAMARK™ 5730/6330

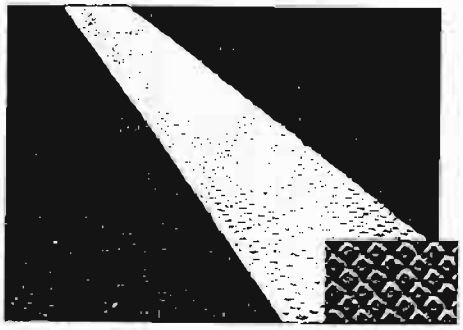
- A highly durable, conformable and moderately reflective marking.
- Designed for use as words or symbols, lane lines, edge lines and channelizing lines on newly resurfaced roads.

STAMARK with LINER

Sizes	White 6330
4" x 30 yds.	(52-114)
12" x 30 yds.	(52-213)
16" x 30 yds.	(52-212)
24" x 30 yds.	(52-214)

STAMARK without LINER

Sizes	White (SP-52-5730)
4" x 30 yds.	16" x 30 yds.
6" x 30 yds.	24" x 30 yds.
8" x 30 yds.	4" x 120 yds.
12" x 30 yds.	6" x 120 yds.



HIGH PERFORMANCE 380-I / 381-I

- Durable, conformable, and retroreflective.
- Product design that provides long-term reflectivity – material carries a 4-year warranty on long lines and a 2-year warranty on words and symbols.
- Abrasion resistant ceramic beads bonded in a highly durable polyurethane topcoat makes it the most reflective of all marking tapes.
- Patterned surface that presents a near vertical face to traffic to maximize retroreflectance.

HIGH PERFORMANCE with liner

Sizes	White L380-I	Yellow L381-I
4" x 30 yds.	(52-249)	(SP-52-381)
12" x 30 yds.	(52-39)	(SP-52-381)
16" x 30 yds.	(52-181)	(SP-52-381)
24" x 30 yds.	(52-442)	(SP-52-381)

HIGH PERFORMANCE without LINER

White (SP-52-A380) Yellow (SP-52A381)
4" x 110 yds., 5" x 110 yds., 6" x 110 yds.

INTERSECTION GRADE 420

- Durable and conformable.
- Shear and skid resistant.
- Long lasting reflectivity.
- Easy application.
- Available in rolls or in symbols.

HIGH PERFORMANCE BLACK-EDGED 380-I-5

Sizes	White 380-I-5 (without liner)
7" x 50 yds.	(52-249)
8" x 50 yds.	(52-39)
9" x 50 yds.	(52-181)
11" x 50 yds.	(52-442)

PAVEMENT MARKING ADHESIVES / LEGENDS / SYMBOLS

ADHESIVES FOR OVERLAY

E-44 Contact Cement is recommended for High performance, Intersection Grade and Stamark permanent marking tapes. Available in 1 or 5 gallon containers. Coverage is approximately 25 square feet per gallon.

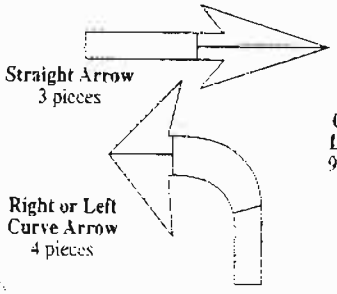
1 gallon (SP-373-PMA1)
5 gallon (SP-373-PMA2)

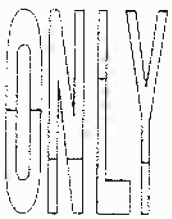
SP-44 Sprayable Adhesive is recommended to be used for long line applications only. Available in 1 or 5 gallon containers. Coverage is approximately 175 square feet per gallon.

1 gallon (SP-373-PMA3)
5 gallon (SP-373-PMA4)

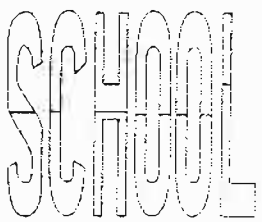
LEGENDS & SYMBOLS AVAILABLE IN 5730, 6330, L380-I, L420

Straight Arrow – 115.2" x 38.4"
Left Curve Arrow – 96" x 73"
Right Curve Arrow – 96" x 73"
ONLY Legend – 8' High
XING Legend – 8' High
SCHOOL Legend – 8' and 10' High
AHEAD Legend – 8' High
R – 72" x 11½" for Railroad Crossing
Railroad Crossing Pkg.
Consists of 2 "R"s and 1 Roll –16" x 42' for "X"
STOP Legend – 8' High
Straight Arrow – 8' High
Left Curve – 8' High
Right Curve – 8' High
Left Fillet – 8' High
Right Fillet – 8' High

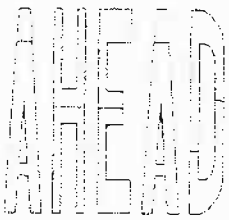




ONLY Legend 9 pieces



SCHOOL Legend 12 pieces



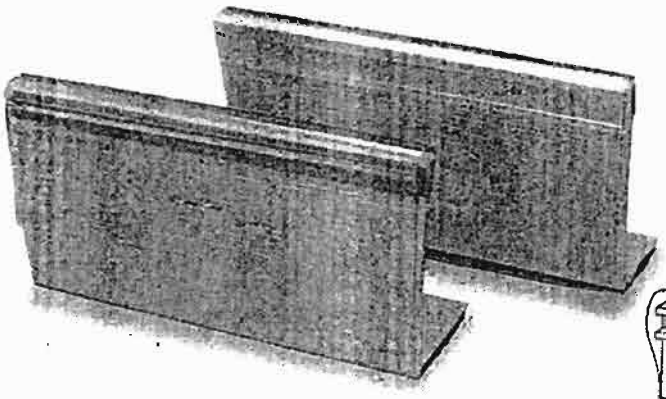
AHEAD Legend- 10 pieces

Letter R
72" x 11½" for Railroad Crossings
1 piece

Railroad Crossing Kit
2 Rs and one 16"x 42' Roll
3 pieces

STOP Legend 8 pieces

CHIP/SEAL TEMPORARY RAISED PAVEMENT MARKERS (TRPM)



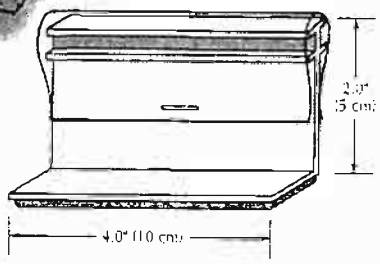
MARKER TYPES

Type Y-2 (SP-566-TRPMY2)
Amber 2-Way

Type Y-1 (SP-566-TRPMY1)
Amber 1-Way

Type W-2 (SP-566-TRPMW2)
White 2-Way

Type W-1 (SP-566-TRPMW1)
White 1-Way



AN INEXPENSIVE MEANS OF RE-ESTABLISHING LANE LINES AFTER CHIP-SEALING!

- Provides effective, temporary delineation both day and night.
- Self-adhesive, takes only seconds for easy installation prior to sealing.
- Guides striping crews for accurate and quick re-striping after sealing.
- Reduces vehicle damage and physical injuries during resurfacing projects.
- Economical, provides cost savings in highway maintenance programs.
- Retro-reflective tape (on one or both sides).

(SP-566-TRPM)

IN-PAVEMENT FLASHING MARKERS

Applications:

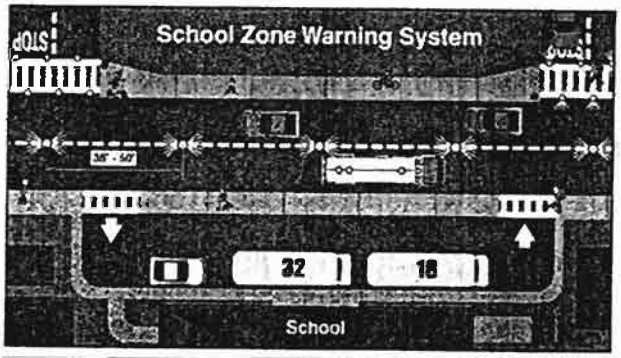
Illuminated School Zone Warning System The lights warn motorists to slow down and look for children walking to and from school. The flashing lights are activated by a timer and typically operate 1 hour before and after school when "kindertraffic" is greatest. Drivers notice the lights and slow down because they only flash when children are likely to be present.

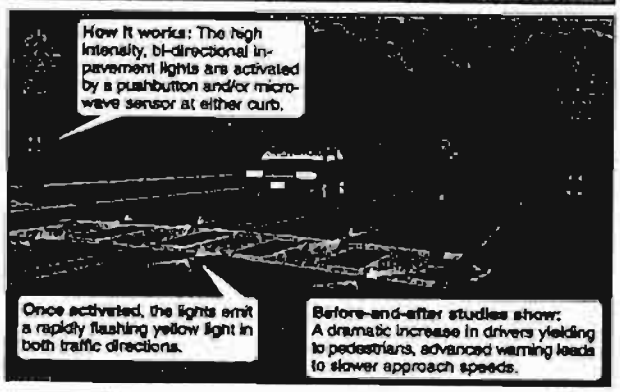
School Zone Warning System Unlike a single sign or flasher, the in-pavement lights keep drivers alert along the entire length of the zone. The lamps project a 500,000 candela per meter^2 wide-angle beam that is clearly visible in daylight and under the worst weather conditions.

Crosswalk Warning System A Crosswalk Warning System may be added to further increase safety at crossings. A pedestrian activates the lights using a push button or is detected by a microwave sensor (blue dots). Fixtures are embedded on each side of a crosswalk to silhouette pedestrians and alert drivers. Normally, the crosswalk system is activated only when the crosswalk is in use.

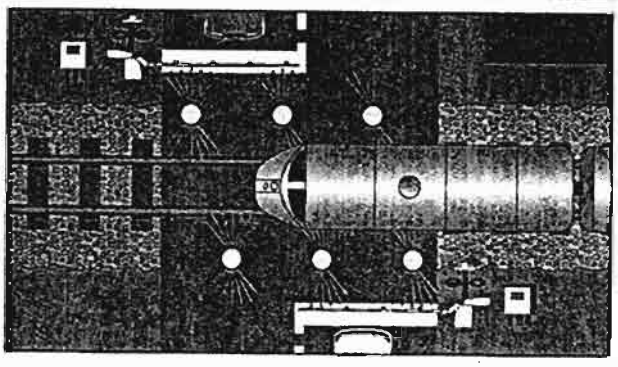
Railroad Crossing Warning System High intensity, bi-directional in-pavement lights are installed along each side of a railroad crossing to warn motorists of oncoming trains. The lights are activated by approaching trains and emit a rapidly flashing red light. The lamps project an intense wide-angle beam of red light that is clearly visible in daylight and under the worst weather conditions. The lights warn motorists of oncoming trains - even when crossing arms are broken or malfunctioning. Flashing lights form a "stop bar" which discourages motorists from driving around crossing arms.

Low-profile Snowplowable Fixtures Several in-pavement fixtures are available.

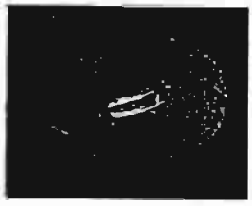




Features * Lights are visible at 200 yards or more - day, night, or fog.
* Fixtures withstand cars, trucks and snowplows - 100% satisfaction guaranteed.



In-pavement flashing markers available in Halogen and LED: (L to R) TS-500, ZA230, ZA280



SNOWPLOWABLE MARKERS

Snowplowable markers provide year-round highway guidance that won't black out in rain, sleet, fog or falling snow.

The snowplowable marker consists of a hardened iron casting containing a unique cube corner replaceable reflector with an abrasion-resistant glass face.

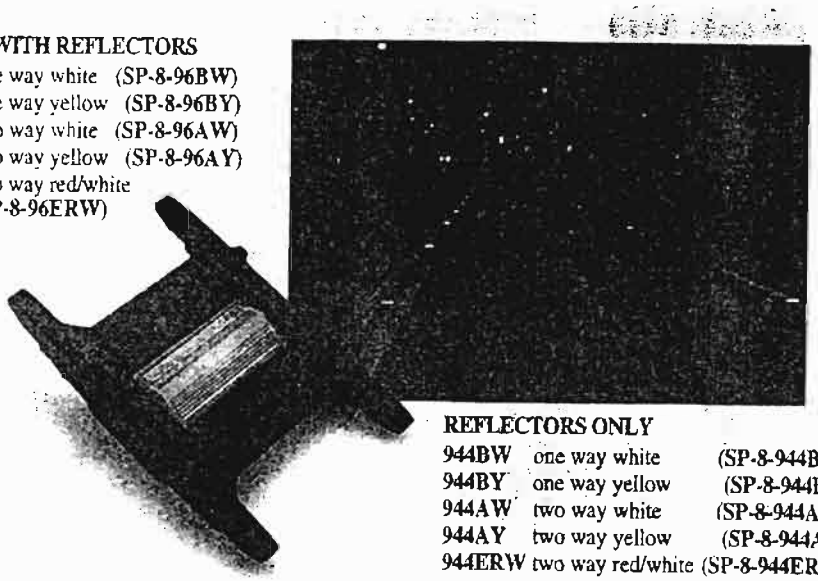
The rugged cast iron housing is firmly anchored below the road surface which allows for plowing from either direction.

AVAILABLE IN TWO MODELS

Model 96	extending ⅞" above pavement surface
Model 96LP	extending ¼" above pavement surface

CASTING WITH REFLECTORS

96BW one way white (SP-8-96BW)
96BY one way yellow (SP-8-96BY)
96AW two way white (SP-8-96AW)
96AY two way yellow (SP-8-96AY)
96ERW two way red/white (SP-8-96ERW)



REFLECTORS ONLY

944BW one way white (SP-8-944BW)
944BY one way yellow (SP-8-944BY)
944AW two way white (SP-8-944AW)
944AY two way yellow (SP-8-944AY)
944ERW two way red/white (SP-8-944ERW)

PERMANENT RAISED REFLECTIVE / CURBTOP MARKERS

TAPCO BI-DIRECTIONAL REFLECTIVE MARKERS with abrasion-resistant surface

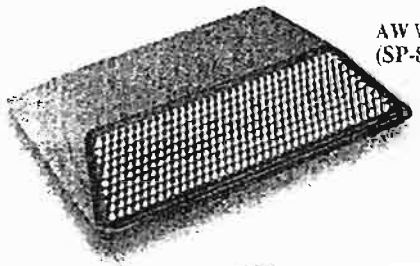
Ideal for highlighting or outlining raised curbing, roadway islands, drive-thru curbing, parking lot curbing or defining truck stalls at loading docks.

Blue markers can be located on top of curbing for locating fire hydrants.

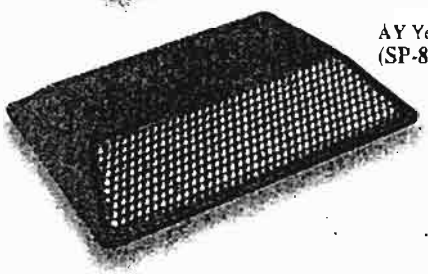
Markers are applied with a two-part epoxy adhesive.

2-way Reflective – Same Color

Color	Part Number
White	AW
Yellow	AY
Blue	AB

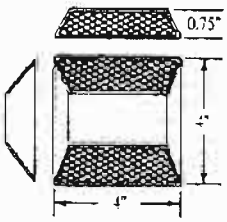


AW White
(SP-8-88AW)

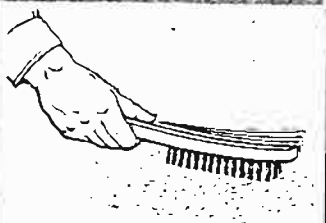


AY Yellow
(SP-8-88AY)

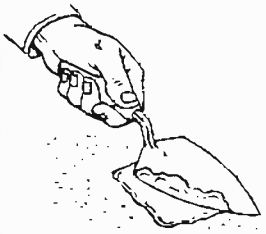
AB Blue
(SP-8-88AB)



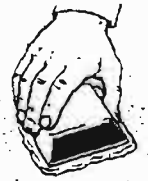
INSTALLING TAPCO REFLECTIVE MARKERS



Thoroughly clean road surface free of dust and dirt.

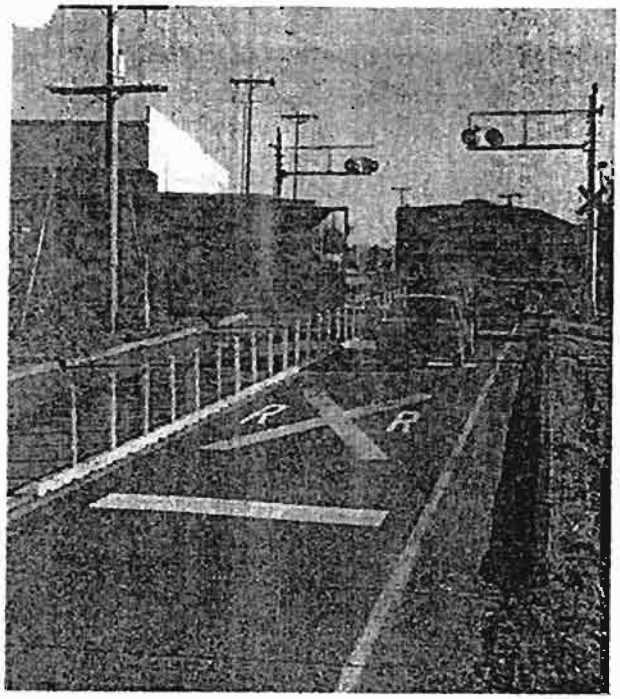


On the clean, dry surface, apply an even layer of epoxy adhesive covering an area at least the size of the marker dimensions.



Place marker on epoxy in proper alignment, applying slight pressure to force small epoxy bead around marker.

SAFE-LANE

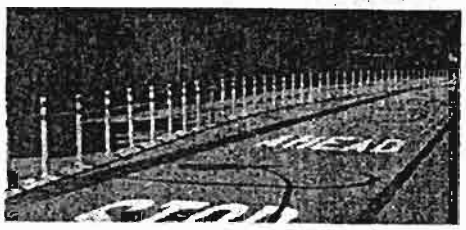


Safe-Lane is the low-cost, low maintenance solution to channeling traffic, and is easily installed for either temporary or permanent applications.

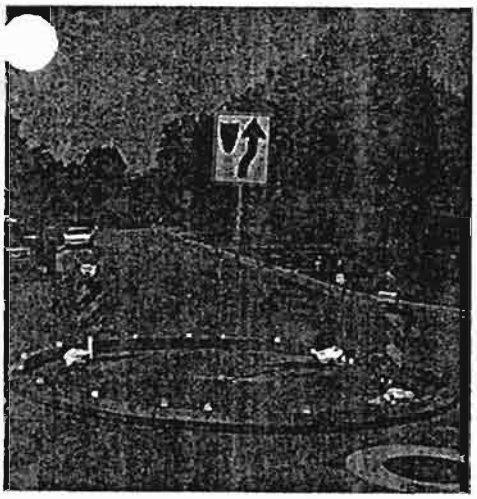
- Low cost, long life.
- Mountable by emergency vehicles.
- Round posts. Equally reflective regardless of roadway geometry.
- Post will take hundreds of hits, remain in place, and return to the upright position regardless of impact angle.
- No water damming. Scuppers provide for run-off.
- Environmentally friendly. Manufactured from recycled tire rubber.
- Standard color is yellow. Other colors available.

Uses:

- Median Barriers
- Lane separators
- Construction zone safety
- Rail crossings
- Toll booths
- Left turn lanes
- Traffic channeling



FLEX-CURB



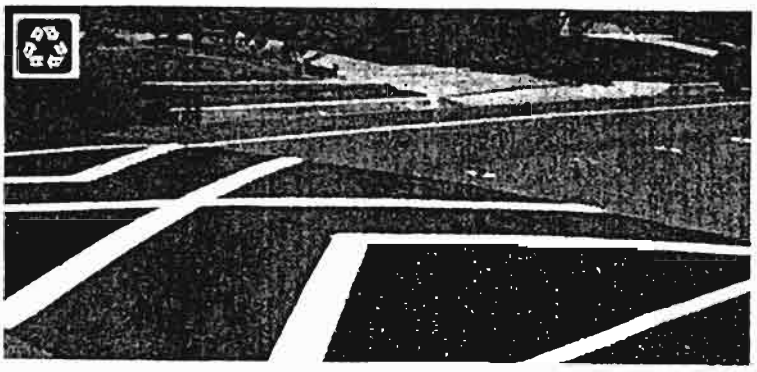
Flex-Curb may be used for both temporary and permanent installations. It works well in straight or curved applications. It can be easily formed into tight arcs.It is durable, high impact resistant. Flex-Curb is unaffected by heat, sunlight, water, salt, or freezing.It is completely reusable, with easily installed interlocking sections and end caps. You may cut and drill it in the field to accommodate any situation, with no engineering or excavation required. Available with pockets for reflector posts in colors of black or concrete gray. Environmentally friendly, made from recycled scrap tires.

USES:

- New or temporary curbing
- Curb height extenders and extensions
- Abrupt edge barriers
- Wheel stops
- Pinch points and chicanes
- Pedestrian and auto delineators
- Traffic circles and roundabouts
- Construction zone safety

THE RESTRICTOR

The Restrictor speed hump provides an efficient, cost effective solution wherever excessive speed is a concern. Models are available for 25 to 40 M.P.H. Ideal for both pilot studies and permanent installations, the Restrictor is easily installed in less than two hours by a crew of three and removed in less time with no damage to the roadway. All components are reusable and interchangeable. It maintains it parabolic shape in hot weather, so no cold flowing results as with asphalt. It can be installed under vehicles, so no road closure is required. Install it at any time, in any weather. It is identical from side ...ide, hump to hump. Environmentally friendly, the Restrictor is ...ade from recycled tire rubber. Available as speed hump or raised pedestrian walkway combinations.



SUPER DUCK

The Carsonite Super Duck® is a flexible, surface mounted delineator. It is capable of withstanding numerous vehicle impacts due to the unique support rod design which transfers the stress from an impact into the flexible boot. The interchangeable delineation devices allow for a variety of applications: construction hazards, concrete islands, medians, and parking lots. Carsonite offers many standard decals that can be used on the flat Super Duck® for parking applications in municipal or private parking lots, airports, etc. A special introductory kit is available.

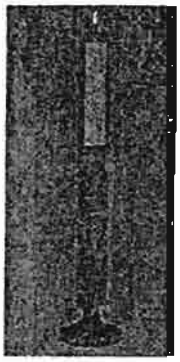
Delineator Colors (all styles):
White, Yellow, Orange

Delineator Base:
Material: Composite/
Natural Rubber
Diameter: 7"
Weight: 1 lb.
Color: Black

(SP-223-SD)

PARKING LOTS

Specifications:
FLAT 36"
Material: Polymer Alloy
Width: 4"
Length: 36"
Weight (w/base): 3.7 lbs

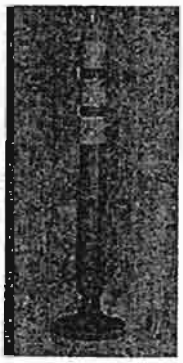


MEDIANS

Specifications:
FLAT 36"
Material: Polymer Alloy
Width: 4"
Length: 36"
Weight (w/base): 3.7 lbs

ISLAND MARKINGS

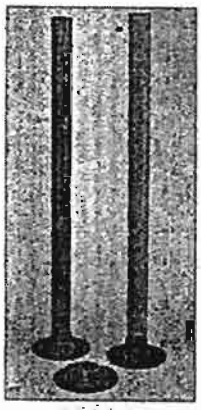
Specifications:
ROUND 28"
Material: Polymer Alloy
Diameter: 3"
Length: 28"
Weight: (w/base) 3.12 lbs.



CHANNELIZATION

Specifications:
ROUND 36"
Material: Polymer Alloy
Diameter: 3"
Length: 36"
Weight: (w/base) 3.7 lbs.

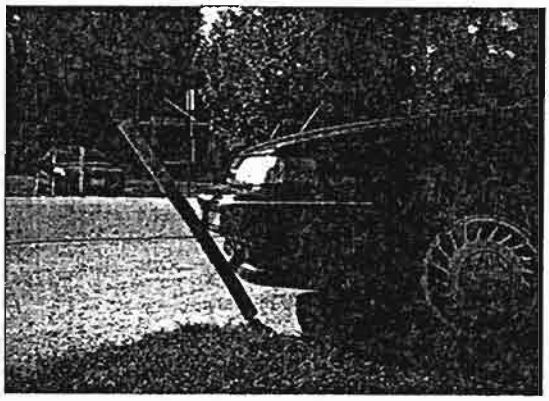
TRAF-FLEX



Traf-Flex posts bend over backwards for safety. Traf-Flex posts use a specially designed bungee cord that allows the post to flex in all directions. The two-piece high impact, all plastic design allows you to unscrew the post from the base. Available in yellow or orange with or without various width reflective strips. (7½" O.D. post)

28" Yellow **(129-1)**
38" Yellow **(129-4)**
28" Orange **(129-7)**
38" Orange **(129-6)**

Black Replacement Base **(129-5)**



PORTABLE DELINEATORS

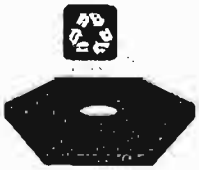
Designed for safety, the portable delineator offers total 360° brilliant reflectivity.

- VISIBILITY - Provides maximum 360° visibility.
- DURABILITY - Compound rubber base. Resistant to elements. Guaranteed not to flatten.
- RECYCLED - Made from 100% post consumer recycled materials [recycled tires and milk jugs (HDPE)].

Convenient two piece design. Base and post use simple slip over design.

42" without bands (796-1)
42" with bands (SP-796-DL)
(42" post shown)

Specify color, type and number of reflective bands.



Bases: (For Posts)
(SP-796-BS)
12 lb. 18" x 18" hex
18 lb. 18" x 18" hex

Posts:
28" (SP-796-PST1)
42" (SP-796-PST2)

This flashing portable delineator offers brilliant 360° visibility, utilizing a bright LED light to notify drivers of a dangerous condition ahead.

46" high , 3¼" diameter with 6¼" wide base.

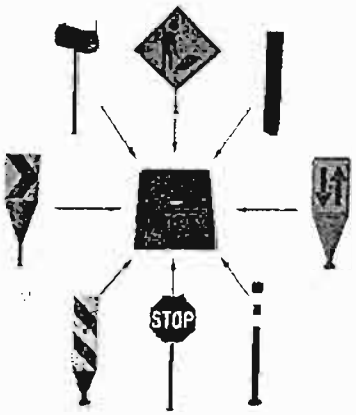
(SP-KY-FPD)

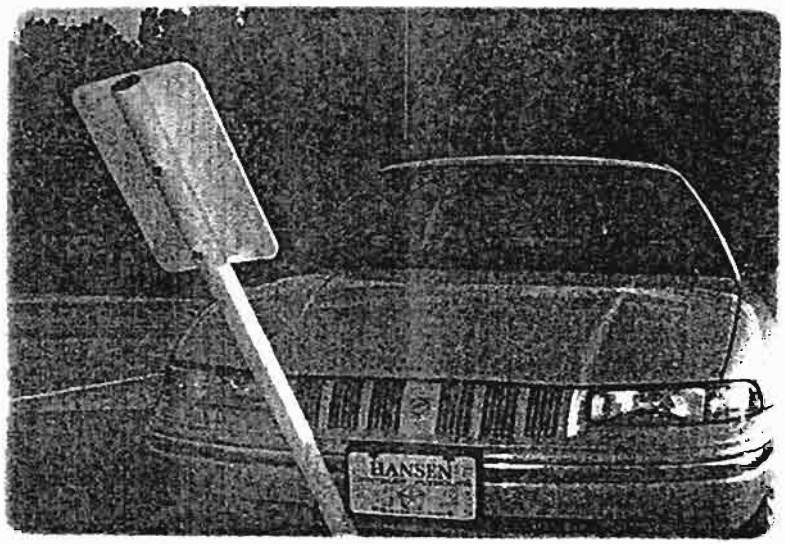
ONE BASE™ SYSTEM

The One Base™ system consists of a portable base and unique reactive spring that can be modified to become almost any kind of channelizing device. Any of the devices shown can be attached to the base by using as few as four socket-cap screws.

The interchangeable system completely eliminates the need for a different base for each of your work zone products. Reducing the number of bases in your inventory translates into better asset utilization and reduces material costs.

(SP-1636-OBS)





FLEXES ON IMPACT AND RETURNS TO UPRIGHT POSITION

PEDESTRIAN CROSSING

Yield to Pedestrian Sign (Other legends available)

Every year almost 6,000 pedestrians are killed and 90,000 are injured. Are you doing what you can to protect pedestrians?

This flexible Yield to Pedestrian sign is designed for use in the crosswalk to warn vehicle operators.

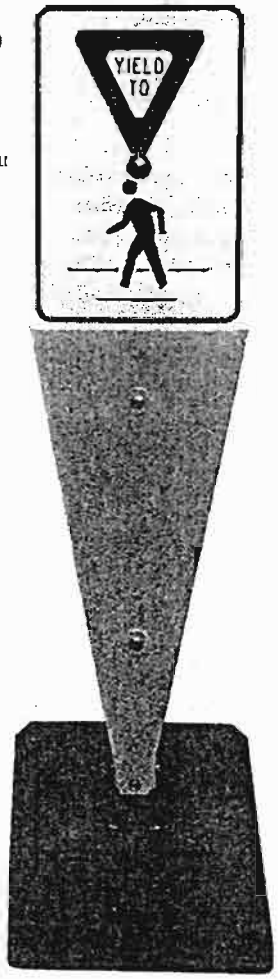
Post and panel are constructed of flexible polyethylene plastic that is resistant to UV, ozone and hydrocarbons.

12" x 48" double paneled unit has a reactive spring assembly tested at 200 lb. tension with stainless steel cable. Recommended for pedestrian crosswalks.

(SP-1636-Y2P)

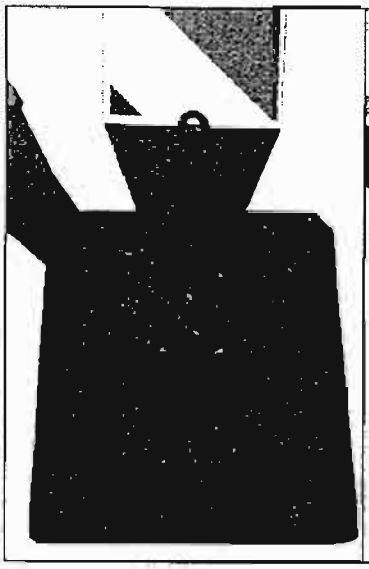
Choose your own sign legend and sheeting.

(SP-1636-MISC)

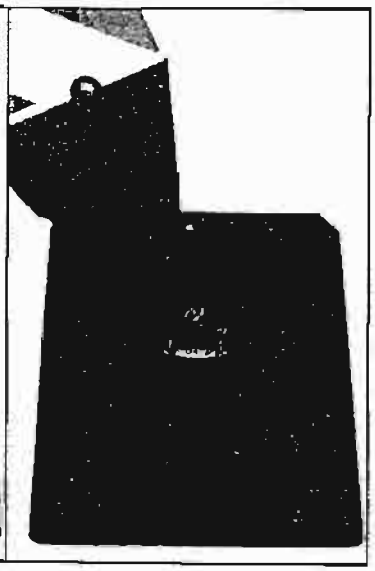


QUICK RELEASE SYSTEM

Fully Assembled

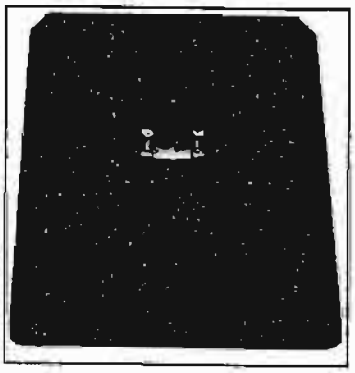


Pull the keeper pin and rotate 15° to unlock the device.



Lift the device to remove from the base.

The One Base™ system features an optional quick-release design. Changing or repairing devices takes less than ten seconds, ideal for applications where changeable and/or moveable work zone devices are required.



Disassembly complete.

Appendix 3

Appendix 4

MINUTES OF MEETING

PROJECT: **HIGHLAND PARK/CANALWAY CONNECTOR TRAIL**
PLANNING AND CONCEPT DESIGN STUDY

PROJECT NO: 478

DATE: October 14, 2003

PURPOSE: Trial Alignment

LOCATION: Brighton Town Hall.

PRESENT: Tom Low, Town of Brighton
John Thomas, City of Rochester
Judy Schwartz, Brighton resident
Kristin Bennett, Genesee Transportation council
Nancy Hilliard, City of Rochester, Div. Of Cemeteries
Steven Salatino, Elwanger/Barry Neighborhood Assoc.
Dave Rinaldo, Monroe Co. Parks
Paul Tankel, University of Rochester
David Fader, Brighton Resident
Sue Schickler, Upper Mt. Hope Neighbors
Roger Janezic, Elwanger/Barry Neighborhood Assoc.
Doug McCord, McCord Landscape Architecture
Adam Woodburn, McCord Landscape Architecture

1. **Introductions**

2. **History**
John T. gave a project overview, and short history of the project up to now.
The trail was first a concept with the town of Brighton
Application of transportation planning funds - joint project with city and town
$20,000 grant and $10,000 city funds are for the study
The trial has been approved by the planning committee

3. **Statement of Goal**
Doug M. stated that the goal of this group is to decide where the trail will be located.

4. **Trail Alignment**
Doug M. walked through the aerial photos with the trail alignment on them to start the discussion of where the trail should be located.

A. Multi-Use

Steve S. asked if the trail was going to be a multi-use trial
Doug M. - Yes used by walkers, bicyclist, skaters, non-motorized users only

B. Trials alignment- on or off street

Paul T. asked if the intent of the design of the trial is to stay off the roads, or on the roads, and how these decisions would be made. Doug M. said that is one reason this group needs to meet - to decide whether we want to keep bike traffic on the street or create a separate trail where possible.

McLean Street

Kristin B. said that she though that McLean Street would be wide enough to have the trail be on both sides of the street with users keeping to the right of car traffic on McLean so the side of the trail you would use would depend on which direction you were going. Which is possible because McLean is a one-way Street.
Doug M. said that McLean would have to be measured before the trails alignment on McLean St could be worked out

Robinson Drive

Paul T. - is there parking on Robinson?
Dave R. -Yes, but it is sporadic
Judy S. had a concern with adding new pavement in Highland park, and that the trail should be on the street

Goodman Street

Nancy H.- Goodman is a high use street during rush hour which could cause problems for the users of the trail.
Doug M. - the street is also steep along Highland Park, and line of site is limited which could cause problems, but the grade on the west side of Goodman at Highland park is steep and is a problem for aligning the trail there.

Pinetum
Steve S. Brought up the point that Pinetum can be a problem in the winter if used for the trail.
Doug M. said that the road is wide enough, but would need some shoulder improvements to be used for the trail.

Highland
Dave R. - Goodman is steep just north of Highland and also Pinetum - too steep for amateur cyclists. Use Highland Ave. as a possible route instead of continuing up Goodman past Highland Avenue, and then head north at the main crosswalk using existing trails, toward the conservatory. This would avoid the problems of Goodman St./Pinetum along the north side of the park.
Kristin B.- Highland Ave. is wide along the south side of Highland Park and good for biking.

Doug M. asked Dave R. if the trail could continue across reservoir and behind the conservatory to the corner at Robinson and South Ave. Dave R. said possibly. One person said this trail section could be stone dust rather than paved.

Reservoir Ave. is dangerous for bicyclists because of the drop-off to the drainage gutters. Parking is often on both sides.

Alpine St. - Roger J. said this street has parking on both sides and is not conducive to bike traffic.

Crossing Westfall Rd.
Doug M. - there are plans for a light at Sawgrass Drive/MDC entrance, and should be utilized as the location for the trail crossing Westfall Rd.

C. Highland Park

Doug M. - grade problems around and in Highland park which make it difficult to bike, in addition to Highland parks policy not to allow bikes to use the trails in the park. Explaining the trails alignment near Highland Park.

David F. said that maybe the use of one of the trails through the park could be used for the trail.
Paul T. said that maybe the trail could split at highland park having the pedestrians use the existing trails through the park and the bicyclist would use a separate trail routed around the park
Highland Park Extension to the South could be utilized.
Various trail alignments dealing with Highland park were brought up, and will be looked into by MLA.

D. Alignment between Elmwood and Westfall

Monroe Developmental Center
David F. - the trail should keep to the edge of the fields

Undeveloped Parcel
There is currently a plan under review with Brighton Town Planning Board for the future development of part of this parcel (called Brighton Mansions)

Brighton Mansions- Part of the requirement for the development of this parcel to be approved is to provide a trail going through the development which could be used in the overall trail system.

Wetlands
There is currently a nature trail through part of the undeveloped parcel which is adjacent to and connecting to the St. Johns Meadows development, and should be tied into in some fashion by the new trail.
David F. - the nature trail should not be paved or used as part of the trail system, and should be left as is

Doug M. -The state land associated with the State Hospital could be used for the trail.

E. Sawgrass Drive

Doug M. - The trail connects to the Erie Canal trail extension at the pond (existing) and passes through the Brighton Meadows office park following Sawgrass Drive either to the east toward the intersection with Westfall at the MDC entrance or to the west also connecting to Westfall Road but to the west of the MDC entrance. The west leg of Sawgrass has already been reserved (10' wide easement) by the Town for trail access purposes. Sawgrass Dr. is a private Road and so it is more difficult to "designate" access on our plan using the road although many cyclist may use the east leg anyway.

5. **Maintenance**

Steve S.- who will be responsible for the maintenance of the trail after it is built? (concern with which agency would be responsible and where)
Roger J. -maintenance should be a consideration, but not prohibitive to the trails implementation.
John T. - some of the maintenance will be taken on by the city as routine maintenance.

6. **Funding**

Roger J. -Where will the funding come from for this project?
John T. said no there is no funding at this time. MLA is responsible for suggesting possible funding sources for the project.

7. **For next meeting**

MLA will contact everyone via email or mail. MLA will contact people at:
Monroe Developmental Center
The State Hospital

8. **Next meeting**

Monday November 10, 4:30pm at Brighton Town Hall

The foregoing constitutes our understanding of matters discussed and conclusions reached. If there are any errors or omissions in the basic discussion, please notify the Author in writing within seven days.
Douglas C. McCord, ASLA

Distribution: All Present, Charles Runyon, Jesse Werner, Sarada George, Jerry LaVine, Finger Lakes DDSO, Mary Wells

MINUTES OF MEETING

PROJECT: **HIGHLAND PARK/CANALWAY CONNECTOR TRAIL**
PLANNING AND CONCEPT DESIGN STUDY

PROJECT NO: 478

DATE: November 10, 2003

PURPOSE: Trial Alignment

LOCATION: Brighton Town Hall.

PRESENT: Tom Low, Town of Brighton
John Thomas, City of Rochester
Judy Schwartz, Brighton resident
Kristin Bennett, Genesee Transportation Council
Steven Salatino, Elwanger/Barry Neighborhood Assoc.
Paul Tankel, University of Rochester
Sue Schickler, Upper Mt. Hope Neighbors
Doug McCord, McCord Landscape Architecture
Adam Woodburn, McCord Landscape Architecture

1. **Introduction** by Doug M. Doug explained the objectives of meeting were to:
   - look at alternatives for the trails alignment
   - discuss new information obtained about the trails alignment
   - talk about criteria for decisions about the trails alignment

2. **Trail Alignment**

A. Monroe Developmental Center (MDC)

Doug M.said he has talked with David Viggiani of MDC. Mr Viggiani's response to having the trail on MDC property was:

- They are a little leery about having the trail on the property at all.
- Routing near the new fenced area would not be possible.
- They would like the trail off the property of possible.
- An alignment along the east property line would probably be acceptable.
- He will discuss trail alignments with the facility director whom he reports to.
- Routing the trail along the top of the berm may be acceptable if it is hidden by the woods.

The MDC may want to expand to the north and east with parking and/or new building within there property lines and so we need to stay close to the east and north property lines when on MDC property. Judy S. said there had been in the past an agreement with MDC concerning a trail on there property. Tom L. said this was probably a non-written agreement. Judy S. said she would try to contact Hugh Mitchell, president of the local Sierra Club to get any additional information.

Tom L. said, regarding the property east of MDC, a right-of-way that is mapped for the paper subdivision indicates this property could perhaps be used. Although the questions concerning when it would be built, and how it would be paid for would have to be investigated and some of the lots are not owned or controlled by the town.

B. St. John's Meadows, State land, & Mansions at Brighton

Doug M. said the trail will continue north from MDC property and will have to be aligned with the wetlands and Mansions project in mind. There are two (2) routes proposed for discussion north of MDC:

- Follow east edge of Mansions property north along St. Johns Meadows and then cross wetlands at the narrowest point (50 to 60 feet wide) and then cross the Mansions development (across the mansions access road, between house units to the west property line).
- Use the existing raised dike as a trail. It could be flattened and leveled off for the trail, this option would cross the wetlands near the southwest corner of the 'nature trail' property and continue northwest across the State Hospital parcel to the south line of the Mansions project.

Tom L. suggested maybe we should use the 'nature trail' itself because of wetlands constrictions & because it already exists. The idea was discussed, however it was brought up that PAC members in attendance at the last meeting did not like the idea of using this existing trail as part of the new trail at our last meeting. A comment was that using the existing trail will get the trail to the Mansions property directly. Also, the trail should then be inside the Mansions property because they are being requested to build a trail anyway.

Tom L. asked if David Viggiani was just with MDC or is he also with the State Hospital. Doug M. said yes, he is just with MDC but Doug has telephone calls into the State to find out who we should talk to about the States land and is awaiting a response.

After some discussion about having the trail on the east side of the 'Mansions' property, Tom L. said there are problems with wetlands on that side of the property. Judy S. said we need to protect these wetlands. Lots of people worked long and hard to save the wetlands and if we propose a trail through them, there will be many unhappy people. We need to protect the wetlands, people will impact the wetlands.

Steve S. asked: What about west of MDC and straight up starting at Westfall Road? Doug M.said MDC doesn't want the trail on that side, plus there is a fenced in area on the west side of the MDC property used by residents that we cannot get close to.

Tom L. said we are doing this planning for the trail now so the Mansions project will put in their part of the trail aligned where we would like it to be. Doug M. said if the trail is built on Mansions property then, presumably, they pay for the cost of installing it.

Tom L. said the trail through the wetlands or buffer area doesn't have to be paved through this section. Kristin B. said un-paved surfaces would be prohibitive to skaters, but they could use another route around this part of the trail.

Discussion: Trail Width

Judy S. asked if we could have the trail narrower at the wetlands area? Tom L. said perhaps we could split pedestrians through the wetlands, so we could narrow the pavement for bikes, and leave the wood chips for the pedestrians.

Kristin B. said national and state trail design guidance for a multi-use trail is 10' wide for an unpaved trail (with minimum 2' buffers on each side) and 12' (national) or 4 meters (state) for a paved trail (5' buffers recommended on each side). Design allowances can be made, however, sound engineering judgement needs to be the basis of deviation from accepted national and state design and construction practices. Wothout adhering to accepted standards, the Town could be exposed to potential liabilities.

The mention of an 8' wide trail should be prefaced that this is a design exception in state and national trail design guidance for areas with low trail use (e.g. rural areas) and/or areas with mostly pedestrian trail traffic. In my opinion, this is not the case in Brighton, an urban community with dense land uses, and trail traffic is likely to be both pedestrian and bicycle. This is not a "mandate" per se but accepted design practice.

Steve S.asked if we can align the trail so that it isn't near the wetlands at all? Doug M. said no, all of the potential alignments cross wetlands at some point.

John T. asked if we could use concrete grass pavers for a bike trail? Kristin B. said it probably wouldn't work well. Doug M. said the trail could be stone dust or a similar material if there is a concern about pavement.

There was a discussion about lighting the trail and Doug M. said lighting isn't required, but we can propose it. There is no requirement for lighting a recreation trail like this.

C. Goodman Street

A discussion started with the shoulder which Doug M. pointed out was paved and 4 to 6' wide, but the condition is very poor in many areas and would need to be improved. The bike trail would be paved shoulders on the road separated from vehicle traffic by striping. After some discussion, it was agreed that there also needs to be a provision of a sidewalk, perhaps 6 ft. wide for pedestrians along the east side of the road with a substantial tree lawn to separate it from traffic. Kristin B. said bicycle riders with some skill prefer the road, but people with kids would rather be off the road. If we pave a wide trail through the park, it will be confusing, because bicyclists won't be allowed on it. The solution would be to have a separate sidewalk off the road with bicycles on the road shoulders.

Steve S.said if the design included a curb, it would help keep people from parking on the grass for festivals. A design with a sidewalk and a tree/lawn area would be nice and will fit with the park better, but it could be expensive.
Paul T. said the design should be done right, rather than worrying about cost, design it right then figure out how to pay for it. Doug M. said a curb will help the County Parks with keeping people from parking on the grass, which is a problem especially during festivals. Steve S. said trees here (between the curb and the sidewalk) would help with the feeling of being in the park and with the separation from the road.

D. Highland Avenue

Doug M. said Highland Avenue is a good width for 2 bicycle lanes with the two vehicular lanes. (See Section provided of Highland). It could be re-striped as such.
Doug M. said Dave R. (Monroe Co. Parks) responded to him after the last meeting and said that if we wanted to use exist. Highland Park trails for our trail, we would have to pursue it formally with the County Parks office.
After some discussion, it was agreed not to pursue the path through the park [opposite the 'Lilac Crossing] because the current Parks Department policy prohibits bicycles and the idea of restricting bikes to only this one trail in the Park would probably not work. If the trail stays on the road, we would have to negotiate with the least number of groups. Pedestrians could use the sidewalk on the south side of Highland Ave. and people on foot could then use the park if they wanted to.

E. South Avenue

Doug M.said South Avenue is wide enough to have the trail on the road. Bicyclists would be on the street and pedestrians would be on the sidewalk.
Kristin B. said South Avenue isn't bad for riding except the sight lines are poor at one point, but not significantly poor. After some discussion, it was agreed that if the left turn at Robinson is so poor then we should provide a left hand turn lane there. This would provide a protective pocket for bicyclists trying to turn. A traffic light would not be possible because the City does not like to use traffic lights for speed control. The other option of Pinetum is nicer, but not any safer at the Goodman St. intersection. We should include signage to direct trail users to the children's pavilion for this project. Also discussed was the down side of the route circumventing the park in that bicyclists and skaters would be directed away from the children's pavilion.

Steve S. said traffic is too fast on South Avenue and John T.said the 'pocket' would be a nice excuse for re-stripping South Ave. to slow traffic down. There has been a mind set change in the recent past from traffic flow being the more important criteria for design (leading to wide road design) to a new mind set of slowing down traffic by narrowing travel lanes.
Steve S.- It would be good to slow down traffic starting at South, drivers pick up speed as they go down the hill north of Robinson.

F. Robinson

Doug M. said the trail is being shown on the road based on discussions from the last meeting. There was no further discussion.

G. Mount Hope Cemetery

Doug M.said if we use Mt Hope Cemetery as the route of the trail, then the trail would have to close at dark. In addition, there is no good way along the north property line of the cemetery to locate the trail. There are head stones on both sides of the existing path through the cemetery up to the rear of the maintenance barn and so this wouldn't be good location for the trail.
Tom L. asked what is wrong with closing the trail after dark and Sue S. said the canal trail is closed at dark. Steve S. said there could be a problem with people getting out of the cemetery when it is being closed, they could get stuck in the cemetery.
Doug M.- Mount Hope Avenue is wide enough for the trail and lanes are already striped.
Paul T.- There are side walks on Mt Hope as well - for foot traffic.

H. McLean Street

Doug M.said the plans propose a contra-flow lane on McLean Street for east-bound bicyclists. Doug M. pointed to the graphics and said a contra-flow lane is a bike lane going against the vehicular traffic flow with a 5' wide lane and double yellow stripe separating bicycle from vehicular traffic. The bicyclists going west would be with traffic and would share a 13 ft. wide travel lane.

Kristin B. said McLean Street is downhill, and is a low traffic volume street. She had looked up the numbers, they were a little older, but the volume was low. There was discussion about whether drivers will know how to handle this new type of road design. Kristin B. noted that the pavement markings would be the same as on a standard roadway, with a double yellow line dividing the contraflow bike east-bound lane and the one-way, 13 ft. wide, shared vehicle/bicycle west-bound lane. The double yellow line divides the traffic the same as standard roadway travel lanes.

Kristin B. said drivers will learn about it and John T. agreed this could be the first of many (contra-flow lanes) in the area.
Paul T. asked if the sidewalk would be for pedestrians only and Doug M. said yes, the existing sidewalk would be for foot traffic only.

I. Highland Park

John T. asked what about pedestrians and how we get them around Highland Park. Kristin B. answered, though the park. The plans should indicate the trail from the corner of Goodman and Highland directly to the top of the hill, near the proposed Children's Pavilion. John T. said a dotted line could be used to show routes that pedestrians could take through the park.

Next Meeting December 8, 2003 at 4:30 pm in the Brighton Town Hall
The foregoing constitutes our understanding of matters discussed and conclusions reached. If there are any errors or omissions in the basic discussion, please notify the Author in writing within seven days.

Douglas C. McCord, ASLA

Distribution: All Present, Charles Runyon, Jesse Werner, Sarada George, Jerry LaVine, David Viggiani (Finger Lakes DDSO), Mary Wells, Tom Low, Town of Brighton, Nancy Hilliard, City of Rochester, Division of Cemeteries, Dave Rinaldo, Monroe County Parks, David Fader, Brighton resident, Roger Janezic, Elwanger/Barry Neighborhood Association

MINUTES OF MEETING

PROJECT: **HIGHLAND PARK/CANALWAY CONNECTOR TRAIL**
PLANNING AND CONCEPT DESIGN STUDY

PROJECT NO: 478

DATE: December 8, 2003

PURPOSE: Trial Alignment

LOCATION: Brighton Town Hall.

PRESENT: Sara Rubin, Brighton resident
Jessie Anne Werner, Brighton Conservation Board
Fran Reese, Lu Engineers
John Thomas, City of Rochester
Kristin Bennett, Genesee Transportation Council
Steven Salatino, Elwanger/Barry Neighborhood Assoc.
Paul Tankel, University of Rochester
Sue Schickler, Upper Mt. Hope Neighbors
Doug McCord, McCord Landscape Architecture
Adam Woodburn, McCord Landscape Architecture

1. **Presentation of Trail Plans 3 & 4** (North part of MDC, St John's Meadows, and South part of Mansions property) and discussion of the wetlands crossing issue.
Doug M.explained that the DEC normally would like us to connect to the existing trail so that the impact upon the wetland would be less. He explained that Fran Reese from Lu Engineers will be attending the meeting to talk more about the wetlands. Doug M. said the trail is now situated to avoid the wetlands on the North boarder of MDC's property. The plan now shows the man made creek (Buckland Creek) on the State Hospital property similar to the way it is shown on the 'Mansions' plan.

Fran R. discussed her walked around site with John Hauber and her conversations with DEC - her points included:
-asphalt surface not likely to be approved by the DEC for the area through the wetlands buffer area.
-Found pine tar based material used by the United Stated Forest Service in Northern Wisconsin that could be used here.
-Concern with having 2 trails that basically parallel each other through the wetlands will increase the overall disruption of the wetlands, but she does like keeping the existing trail as a nature trail.
-But if there will be different user groups on the trail then there will be conflicts between user groups, which is a reason to separate the trails.
-The question is: How much disruption do we want to inflict upon the resource?

-As an example Brighton Town park- trail that is there that has been over used and the natural resources there have been diminished because of it. If the trail is a boardwalk then the users will be separated from the resource, protecting it. Railings would be very helpful.
-the berm along the north property line of MDC could be used as the trail, it is uplands
-under clean water act we would need to apply for a permit for a trail through the wetland
-the lease invasive of the trials alignment would use the berm, it would disturb the canopy but it would grow back in.
-the trial with a boardwalk, a guard rail, vegetation screening the existing trail, and signs would separate the user from the resource protecting both the user and the resource.

Doug M. said the trail on the berm would require railings because of the water on the south side would be so close to the trail.
Conclusions - The trial should be located on the berm, trimming off the top would widen it enough for the trail.
-St Johns existing trail has a different intent (nature trail) and should be avoided.
-A boardwalk could be used to cross the creek and potential wetlands to the upland area to the north-west across the State land to the 'Mansions' property.
Doug M. said MLA will investigate the options of turning the trail north at the end of the berm to cross the creek rather than the wetlands. Either way, the trail will be within the 100' buffer of the NYS DEC wetlands for a substantial length.

2. **Intersection of Highland Ave and South Ave.**

Doug M. pointed out the following:

- Dave Tuttle of Lu Engineers is looking at the intersections for this project in addition to the other intersections and crossings discussed at previous meetings. He will be making recommendations for each area.
- Parking on Highland Ave. at St. John's Home puts the trail between the parking and travel lane. This will be a shared travel lane, 13' wide and may mean moving the centerline stripe over 2 to 3 ft.
-The intersection might have to be widened, or striping changed to allow for bike traffic. Kristin B.- Bikes could become part of the vehicular traffic at that point or the lane widths could be adjusted to allow a bike trail (10' travel lane, 4' bike lane).

Next Meeting: A next meeting will be scheduled when the traffic information is available.

The foregoing constitutes our understanding of matters discussed and conclusions reached. If there are any errors or omissions in the basic discussion, please notify the Author in writing within seven days.

Douglas C. McCord, ASLA

Distribution: All Present, Charles Runyon, Sarada George, Jerry LaVine, David Viggiani (Finger Lakes DDSO), Mary Wells, Tom Low, Town of Brighton, Nancy Hilliard, City of Rochester, Division of Cemeteries, Dave Rinaldo, Monroe County Parks, David Fader, Brighton resident, Roger Janezic, Elwanger/Barry Neighborhood Association, Judy Schwartz

McCord
Landscape Architecture Site Planning, Park & Waterfront Design, Urban Design
MLA

MINUTES OF MEETING

PROJECT: **HIGHLAND PARK/CANALWAY CONNECTOR TRAIL**
PLANNING AND CONCEPT DESIGN STUDY

PROJECT NO: 478

DATE: February 9, 2004, Revised 3/16/04

PURPOSE: Trail Alignment

LOCATION: Brighton Town Hall.

PRESENT: Judy Schwartz, Briton Neighbors Association
Jessie Anne Werner, Brighton Conservation Board
John Thomas, City of Rochester
Jeff Mroczek, City of Rochester
Kristin Bennett, Genesee Transportation Council
Sue Schickler, Upper Mt. Hope Neighbors
David Viggiani ,Finger Lakes DDSO
Dave Rinaldo Monroe County Parks
Doug McCord, McCord Landscape Architecture
Adam Woodburn, McCord Landscape Architecture

1. Monroe Developmental Center David Viggiani
MDC approved plan for the trail on MDC property (comments below)

   - Once on MDC property the trail would turn right until reaching the property line it would follow the property line North to the Northern property line.
   - The trail would follow the Northern property line west until off MDC property.
   - A landscape buffer would be put in between the trail and MDC's parking lot. Because MDC has some security concerns
   - A low maintenance design is crucial for MDC's approval.
   - MDC is willing to approve the trail, but will not be spending any money on building the trail.

2. Mansions Property
Jessie W.- why does the trail have to be 10' wide on this property?
Doug M.- We were hired to design a multi-use trail, and the minimum width for such a trail is 10'.

Jessie W.- can we have an alternative on the Mansions property with a smaller trail for pedestrians and separate out the bicyclists putting them on the proposed road for the Mansions project. (Doug- will talk to Tom Low about the possibility)

3. Trail Surface

The City of Rochester doesn't support the use of stone dust for this project because it will discriminate against user groups, and has a higher maintenance cost associated with it than asphalt or concrete pavement.

4. On Street Sections of the Trial

Sawgrass — MLA's revised recommendation is to acquire a trail easement along the east side of Sawgrass between the existing trail and Westfall Road.

Goodman — We are proposing a separate, dedicated path through the park ten foot wide or possibly wider located on the east side of the road and separated from the road by a wide tree lawn. Goodman has poor shoulders and the parks department has problems during peak use times keeping people from parking on the ever-widening shoulder. MLA proposes that Goodman would be designed with new curbing and a narrower pavement section, shoulder width would be 5 ft. wide with 11ft. wide lanes in each direction. Curbs would also help the parks department control parking along Goodman. Through the changes on Goodman, our goal is that the total amount of paved surface in this area would balance out.
Jeff M.- the city would like a connection along Goodman to the North to connect to the neighborhood to the north of Highland Park

Highland — At St, John's home the existing on-street parking might be removed through St. John's plans for a new parking configuration.
The intersection of Highland and Goodman should have the timing of the signal lights changed to accommodate bicycle traffic. Approaching the intersection from the south, route users should cross to the west first, then cross to the north.
Kristin B.- We should propose a sidewalk from the Highland Goodman intersection to the east and connect to recently constructed sidewalks in that direction. The sidewalk currently just ends at the intersection. The group present expressed agreement with showing the sidewalk connections on the plan.

Robinson — In the traffic report, Dave Tuttle is suggesting changing Robinson from it's current twenty-four foot width with two direction traffic flow to a one way. The one-way traffic direction would be chosen later if we decide that it is a good idea. The trail would be on the street going with traffic on one side of the street and a contr-flow lane would accommodate bicycle traffic going the other direction.

The group did not express much support for the one-way traffic idea. The committee felt that any change to this road was probably unnecessary given the low traffic volumes and the setting. Dave R. said curb widening to accommodate parking in particular areas (similar to the Genesee Valley Park entrance road) would probably not be received well by the County Parks advisory people or the historic park preservationists.

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Douglas C. McCord, ASLA

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