ARGO
FRAMEWORK
STUDY

Ann Arbor, Michigan

Prepared for
The City of Ann Arbor
Parks and Recreation

by
Johnson/Pollack Group

with
Park Advisory Commission
Citizen Advisory Task Force
and
Staff, Department of Parks and Recreation

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INTRODUCTION

Background
Ann Arbor is a city with a history of resource conservation. The park system, as it expanded to keep pace with a growing population, sought property for active and passive recreation, and for resource protection. The City-owned lands along the Huron River exemplify this diversity. Examples include Fuller and Riverside Parks which have sports fields and picnic areas; Gallup Park with picnic facilities, boating and fishing, and walking/running/biking trails; and, Furstenberg and Bird Hills with their walking paths for nature study. What all of these parks have in common is their proximity to the river.

The main objective behind the Argo Framework Study is to complete the public walkway/bikeway system connecting existing and planned parks that abut Argo Pond; and to link that system with existing streets, sidewalks and bikeways. Access to both adjacent neighborhoods and the larger Ann Arbor community is another objective as the river park system, from Barton to Gallup, is a city-wide resource.

The Argo planning project’s boundary stretches along a portion of the river corridor from the Maiden Lane Bridge to Barton Park. Although the land and setting is different in many ways, this segment of the river has the potential to become a significant resource for western and northern Ann Arbor as Gallup/Furstenberg is for central, eastern and southern sections of the City. An easily and fully accessible, continuous path system along the river is the ultimate goal.

Planning Process
Working together, the City staff, consultants and citizens advisory committee began the study by identifying the existing path network, and by analyzing the land/landscape in and adjacent to the project area. With problems and potentials identified, solutions could be explored and a final linkage or framework plan proposed.

This document is a record of the results of the study.
LOCATION MAP

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Project area boundaries extend from Barton Park at the northwest to the Maiden Lane bridge at the southeast.
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INVENTORY AND ANALYSIS

Urban Area Context
The study area is at once, the oldest part of the City (1830's "lower town") and the newest, as redevelopment and change continue. It is a mixture of railroad influenced industrial land uses, residential development, University of Michigan property and other publicly owned open spaces. The pattern of human transportation--the railroad, streets and highways--have also altered the natural setting.

The Huron River's landscape, typical of other Michigan waterways, is bounded by steep wooded slopes and floodplains which alternate as the river meanders. Examples are the hillsides north of Barton Pond, and north and east of Argo Pond; and, the low lying plateaus of Fuller, Riverside and Bandemer Parks, and the electric and gas companies' properties either side of the Broadway Bridge.

The single most sensitive parcel through which a path now passes is the hillside east of Argo Pond between the river and Longshore and Barton Drives. The combination of steep topography, sandy soils and a mature stand of oak/hickory dominated woods requires careful attention. Yet the path exists because of these same conditions; it is a wonderful setting for people to experience.

There is one additional overall perspective to note. It is that, in spite of the area's proximity to downtown Ann Arbor, railroad and M-14 overpasses, and industrial and residential structures which can be seen while on the river, one can, at times with imagination, believe that he or she is canoeing or walking in a rural location. The area is concurrently urban, suburban and rural.

Data collection has also resulted in the following:

Current Bicycle Use Patterns
The project area, in addition to walking and running, has several bicycle use patterns. The map illustrates existing designated bicycle routes (Wright/Chandler, Plymouth, etc.), streets and sidewalks that are used as bikeways though not so designated (Pontiac Trail, Beakes, North Main, etc.), and existing paths currently used by off-road bicycles (Bandemer, the hillside on the east shore of Argo Pond, etc.). The existence of these routes confirms the need to link the recreational and destination/transportation biking networks to each other.
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RAILROAD CROSSINGS

Unauthorized Pedestrian Grade Crossing

Motor Vehicle Only Bridge Crossing

Vehicular/Pedestrian Bridge Crossing

Vehicular Grade Crossing

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Railroad Crossings
The interaction between the railroad and the street and path system in the project area is a microcosm of a city-wide need, which is to add to the number of authorized grade crossings within city limits. That effort is underway. Discussions with Conrail began in earnest last spring. The resulting correspondence is included in the appendix of this plan.

As the map illustrates, there are 5 unauthorized pedestrian railroad crossings in the project area; all are addressed in the design section of this plan.

Vehicular Traffic Volumes
Ann Arbor's 1990 transportation plan has, as a goal, the enhancing of all non-road building options prior to actual construction. This study to improve the non-motorized path network is part of that approach. At the same time, increasing vehicular traffic will impact destination biking routes which share the right-of-way with vehicles, and with the path network as a whole where intersections occur.

The traffic maps compare the current vehicular volumes with those projected by UATS for the year 2010. There are many important streets in the non-motorized transportation network. The more critical ones in the study area continue to include North Main, Broadway Bridge/Plymouth, Pontiac Trail and Depot, where traffic is estimated to double.

Off-road non-motorized paths are the ideal, and are possible to complement North Main and Beakes, as the framework plan will illustrate. Reconstruction of the Broadway Bridge to include sidewalk and bike paths, and new authorized railroad crossings will also add to the total network in response to the possibility of greater numbers of vehicles on City streets.

Summary
The two more complicated conditions which this phase of the study confirmed are the Argo Pond hillside, with its steep topography and easily erodible soils; and the railroad crossings which are at Huron River Drive, the Hawkins property, the Broadway Bridge/Gandy Dancer, and at Argo Dam, including the need to cross the river at the dam.

Recognition that there are multiple definitions to the term "biking", which range from recreational (family to touring) to destination (long distance commuting to neighborhood shopping), and for "walking", spanning nature study to jogging, further
CURRENT TRAFFIC PATTERNS

Roadway widths reflect relative volumes of motor vehicle traffic (based upon available traffic counts)

Numbers indicate recent traffic counts (rounded) and UATS estimates

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PROJECTED TRAFFIC PATTERNS

Roadway widths reflect projected volumes of motor vehicle traffic.

Numbers indicate UATS estimates for the year 2010.

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enriches the proposed framework plan’s path network. Multiple users have varying needs.

Future development on the Hawkins Property of a Huron River Valley Interpretive Center brings with it the potential to function as both a destination for those using the path system, and as a point of beginning to a recreational/educational journey, in- and out-of-doors. There exists an opportunity to link the river path system from Barton Pond to Gallup Park with the river interpretive center serving as the keystone in the system.
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RECOMMENDED FRAMEWORK PLAN

The present system of trails, paths, bikeways and ad hoc connections has evolved in many steps over time, and not always with proper planning. Conflicts between vehicular traffic, bicycles and pedestrians are common. In some locations, little concern was given to the natural systems to which these paths and trails provide access.

Yet it IS a system. People do manage to find their way to, through and around the properties surrounding Argo Pond.

It is NOT, however, all that it could be. Examples include lack of connections on the west side of the pond, conflicts with traffic along Barton Shore Drive, mountain bikes on narrow paths in the woods and unsafe crossings of the railroad tracks.

The purpose of this study is to identify and recommend ways to make the system whole, accessible and enjoyable for those who wish to experience the many recreational opportunities that the area has to offer. Toward that end, three categories of non-motorized use were identified and discussed over the course of the study.

Walking/Running/Hiking paths are either hard or soft surfaced, utilized by pedestrians for access to and through the park system and for recreational purposes within the parks themselves.

Recreational Biking paths are hard surfaced and utilized by bikers for recreational purposes within the park system.

Destinational Biking paths utilize the paths and roadways within and adjacent to the park system to reach destinations outside of the study area.

Walking/Running/Hiking System
The walking, running, hiking system is primarily a looped path network. Although access to and through the Argo Pond area is important, a path system which provides the fewest conflicts and a convenient route around the pond and along the river is of primary importance.

The recommended system integrates existing trail and walkway segments with new links and connections to provide access to the various recreational opportunities located in the area.

At the north end, a tunnel under the railroad tracks is to connect Bandemer Park with Huron River Drive and the parks
located to the west. One of the few locations in the City where a below grade railroad crossing is possible, a properly designed tunnel should alleviate most of the unauthorized and dangerous crossings of the tracks at this location.

It will be important that this tunnel appear open and inviting at all times. Cleanliness and proper lighting at night will be critical.

At the north end of Bandemer Park, a new walk will cross the old Whitmore Lake Road bridge (presently closed for repairs) and follow Barton Shore Drive to a foot trail on the hillside east of Argo Pond. A combination of boardwalks and retaining walls will allow the Barton Drive walk to be constructed with minimal impact on existing vegetation.

Signage and possibly physical barriers will be necessary at the juncture of the Barton Shore Drive walk and the hillside foot trail to restrict bicycle access. As the analysis indicated, the slope on the east side of Argo Pond is very fragile. Much of the existing trail is situated on a side slope which approaches the natural angle of repose for soils; to widen it for bicycle usage would require costly and environmentally questionable construction techniques.

Minimal improvements are recommended, to stabilize erosion and to accommodate increased foot traffic. Small inlets to collect run-off on the uphill side of the paths and direct it to stable areas on the downhill side will reduce erosion from water sheeting over the paths. Standardizing the width of the path to a maximum of 4 feet will reduce edge wear as people pass. In addition, efforts should be undertaken to revegetate and restrict further use of the severely eroded side trails leading to the water’s edge. At two or three locations along the trail, small overlooks have evolved over time and at these locations, minor edge protection and simple benches may be appropriate to accommodate and control use.

Well traveled trails that switch back up the hill to Longshore Drive should be treated similarly although "water bars" may be necessary to interrupt water that courses down them during rainstorms.

A lightly used trail exists along the water’s edge. Care should be exercised so as not to interrupt this trail but at the same time, attention should be directed away from it so as not to encourage increased usage.

At the south end of this foot trail, a pathway connection around
the Argo Canoe Livery to the trail located on the causeway between the old Argo Power House head race and the Huron River will allow users to proceed easterly to Riverside Park and beyond.

In the near term, a reconfigured parking lot and automobile turnaround will be necessary to minimize vehicle and path user conflicts at the Argo Canoe Livery. If this facility is relocated to the Hawkins property on the west side of Argo Pond, this path connection could and should occur closer to the water’s edge.

South of the canoe livery, the Argo Dam represents one of the key links in the proposed system, presently used for crossing the pond on an unauthorized basis. A widened walkway with accessible ramps will allow safe and convenient access to activities on both sides of the water. Ideally, the width of this walkway should accommodate hikers and bikers alike (i.e. 10 feet wide) but limitations posed by the structure itself may help to determine the optimum width.

Continuing to the east, the pathway will follow the existing causeway to the old Argo Power House, pass under the Broadway Street bridge and on to the Riverside Park bike path. At the present time, the only way to cross the river in this area is at street level. The increased use of this path, made accessible by a new Argo Dam crossing, suggests that an additional footbridge be installed east of Broadway Street, connecting to Broadway Park and State Street beyond. It should be noted that the Broadway Street bridge is scheduled to be reconstructed within the next five years and if so, the recommended footbridge could be installed as an integrated part of this structure.

The worn path in Broadway Park provides ample evidence of the amount of unauthorized crossing of the railroad tracks that is occurring by those traveling from State Street to Broadway Street. With a new footbridge across the Huron River contributing to the number of users in the park, it will become all the more important that an authorized railroad crossing be installed at this location. A ramp up the slope on the south side of the railroad, is also important to allow access from State Street.

West of Broadway Street, the Michigan Consolidated Gas Company (MichCon) property presents an excellent opportunity to provide a link from Broadway Park on the south side of the river around to the Argo Dam. In keeping with the idea that, where possible, the paths located closest to the river be confined to pedestrian usage, it is appropriate this path also be closed to bicycle access. Since this property is still privately owned, an easement will be necessary.
The pathway connection from the MichCon property past the dam, up to the Hawkins property must either be located on excess railroad right-of-way or on a boardwalk along the edge of Argo Pond itself. Although questions still remain regarding the ultimate plans for the railroad property, sufficient space is available for both an additional railroad track and a separate pathway.

At the Hawkins property, it is possible for the path to once again curve away from the railroad. This study supports past recommendations that the Hawkins property be purchased by the City of Ann Arbor to allow the pathway to follow along the water's edge and connect into the proposed Bandemer Park path system closer to the water.

Vehicular access to the Hawkins property from Main Street exists by way of a private grade crossing over the railroad tracks. Although currently not built to allow for pedestrians, this crossing could be an important link to future housing developments west of Main Street. Reconstruction to accommodate pedestrians is recommended.

One additional crossing at the railroad is necessary on this side of Argo Pond. At the west end of the Argo Dam, unrestricted access across the dam will result in increased pressure to reach the sidewalk system on Main Street. A signalized crossing and connecting walkway is recommended at this location to accommodate the desired access.

**Recreational Biking**

The recreational biking system, like the walking, running, hiking system, is primarily a looped path network. Its purpose is to allow the recreational biker to experience Argo Pond and its environs without causing environmental degradation or unduly disturbing other park users.

In general, these paths must be hard surfaced. The type of surfacing is dependent upon location: asphalt and concrete are best in high use and/or urbanized areas while compacted limestone, slag or gravel is perhaps better suited to natural areas.

Due to space limitations around the pond, this system will overlap with the walking/running/hiking system in a number of places. The proposed tunnel under the tracks at the north end of Bandemer Park and the path along Barton Shore Drive are two such overlap areas. The recommended path in these areas must be hard-surfaced and 8 to 10 feet wide to accommodate both user groups.
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At the point where the foot trail begins at Barton Shore Drive, the bike path will continue along the road to Longshore Drive, which it will then follow southerly to the Argo Canoe Livery area. Numerous sidewalks exist in the neighborhoods adjacent to this road, but few of them have been extended this far west. It is recommended that all of these sidewalk connections be made.

To make room for a bike path, the northern end of Longshore Drive will require relocation to the east. While the right-of-way in this area is sufficient to allow this move, some modification to the roadway and shoulder may be beneficial.

From Argo Drive south to the nearest apartment complex, site conditions will not allow road widening or relocation. Consideration should be given in this area to one-way vehicular traffic, thereby allowing room for a separate bicycle path within the existing roadway width.

Longshore Drive between Indianola Drive and Argo Drive is paved, with concrete curb and gutter existing on both sides. As a result, additional space for the bike path may require modifications to the roadway and shoulder including possible relocation of the westerly curb line. The resulting roadway width will not allow for on-street parking, but since all of the houses along this stretch are served by driveways, this would not appear to be a hardship.

At locations where level space exists at the top of the hill, benches and perhaps a picnic table or two could be located adjacent to the path. Careful pruning of some branches and twigs at these locations is recommended to open views to Argo Pond and Bandemer Park beyond.

To minimize erosion on the hillside and the nature trail to the west, it is also recommended that all curb inlets that currently dump storm water directly down the slope be reconstructed to drain into the City storm sewer system.

From the existing boat launch, south to Argo Dam and east toward Riverside Park, the bike path once again coincides with the foot path. At such time as Argo Dam is improved to allow for bikers, the path along the causeway adjacent to the old power house head race will become a major connector between Main Street and Riverside Park. It will be important that this section of the path, in particular, be improved to handle this increased usage. The character of the causeway does, however, suggest that consideration be given to installing a compacted aggregate path in this area (rather than asphalt or concrete).
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As is the case with the foot path system, the bike path on the west side of Argo Pond must traverse railroad property and the Hawkins property prior to connecting with the Bandemer Park paths. The Bandemer Park plan locates the bike path along the western edge of the park, closer to the railroad than are the walking/running/hiking paths.

**Destinational Biking**

Unlike the previous two systems, destinational biking is basically a "through" movement activity. Bikers utilizing this system would be primarily interested in reaching destinations outside the Argo Pond area as directly as possible. The goal is to accommodate these users with a convenient network that does not interfere with the recreational use of the area. To this end, the only area of overlap with the two previously described systems is the path along Barton Shore Drive from Whitmore Lake Road to Longshore Drive and the bike path to the west side of Argo Pond from the Argo Dam to Whitmore Lake Road. In locations where all three systems use the same path, a minimum width of 10-12 feet is recommended.

East of Argo Pond, the path system herein reflects the City of Ann Arbor’s most recent Bicycle Plan. North/south bikers are directed to Wright, Chandler and Hilldale Streets with the possibility of using Pontiac Trail in the future. Those wishing to proceed north on Whitmore Lake Road will be able to utilize the proposed Barton Shore Drive path. Those wishing to proceed south will cross the Huron River by way of the Broadway Street bridge.

To facilitate access to Fuller Park and other destinations to the east, a bike path is recommended for the excess railroad right-of-way that exists south of Broadway Park and the Huron River. Bridge abutments at Fuller and Maiden Lane were constructed (1985) in anticipation of this path.

In addition to the bike path through Bandemer Park, a north/south bike route on Main Street is encouraged, particularly for those desiring to travel to Barton Park and on out Huron River Drive. To alleviate the dangerous crossing of the on and off ramps to M14, it is recommended that this path cross under the M14 bridge south of the railroad. Since portions of this path will be located on MDOT property, an easement or formal use agreement will need to be executed.
In summary, these three systems are seen as necessary, complementary paths in response to environmental conditions and user groups. The intent of all recommendations is a high quality network that accommodates the vast majority of uses and activities, although not all on the same path in every location. The following pages illustrate 16 possible solutions to the specific situations outlined during the course of the study.
LOCATION 1

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Construct a tunnel under the railroad, west of the M14 bridge to facilitate access to Barton and Bird Hills parks. The tunnel should be as short, spacious and well lit as possible. To discourage continued crossing of the tracks at grade, additional plantings, grading and fencing will also be necessary.
LOCATION 2

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Construct a separate path on the south side of Barton Shore Drive between the entrance to Bandemer Park and Longshore Drive utilizing a combination of walls and boardwalks. Where trees can be avoided, retaining walls and backfill may be possible. Conflicts with major trees or other site conditions may, however, require a boardwalk to be constructed further from the road. A 10 foot minimum width is recommended to accommodate both bikers and pedestrians.
LOCATION 3

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Stabilize the existing foot path in the woods on the east side of Argo Pond at 4 feet maximum width to better accommodate foot traffic. Direct rainwater run-off to inlets on the uphill side of the path to minimize erosion of the path surface. Improve access at all entrances.

This trail is proposed for foot traffic only. Signage and possibly physical barriers should be installed at all entrances to deter bicycle traffic.
LOCATION 4

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Construct a separate bike path adjacent to Longshore Drive extending from Barton Shore Drive to the Argo Canoe Livery. Provide additional room for this path by grading, wall construction and/or curb relocation. Install benches in locations where space is available with minor selective pruning to open views toward Argo Pond. Connect all existing storm inlets to storm sewers to minimize erosion of the hillside.

Since sufficient room does not exist for a separate bike path south of Argo Drive, consideration should be given to one-way vehicular traffic in this area. In this way, a portion of the existing road surface could be safely utilized by bikers.
Extend the existing sidewalks along Barton Shore Drive, Amherst Avenue and Indianola Drive to Longshore Drive. Install bicycle ramps at all walks that end at curb and gutter intersections.
LOCATION 6

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Complete the path connection around the Argo Canoe Livery to the Argo Dam. Restructuring of the parking lot and turnaround in this area will be necessary to avoid conflicts between bikers, hikers and vehicles.

If the canoe livery should be relocated at some future date, a preferred pathway alignment would be closer to Argo Pond.
LOCATION

If the above figure is not clear for location of some future facts, please refer to the figure.
LOCATION 7
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Reconstruct the walkway over the Argo Dam to provide a barrier free public crossing of Argo Pond. The construction of this walkway should be in keeping with the character of the dam (i.e. pipe handrails) and must be wide enough to accommodate both bikers and pedestrians. 10 feet is the recommended width, if possible.
MINIMIZE DISTURBANCE TO EXISTING
NATIVE VEGETATION AND TRIM BRANCHES THAT
INTERFERE WITH BICYCLE/PEDESTRIAN
PASSAGE.

LOCATION 8
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Improve the surface of the path on the causeway between the river
and the old head race to better facilitate bicycle traffic. Only
minor widening and edging work will be necessary since the existing
path is approximately 8 feet in width.
LOCATION 9

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Construct a new footbridge over the Huron River southeast of the Broadway Street bridge or attach a new footbridge to the abutments of the Broadway Street bridge at such time as this bridge is rebuilt.
Install a signalized grade crossing of the railroad tracks at the north end of State Street in conjunction with access improvements on the slope between the railroad and Depot Street in this area. If steps become necessary due to the existing grades, a means of walking a bike down the slope should also be provided.
LOCATION 11

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Construct a pedestrian-only path along the river on the Michigan Consolidated Gas Company connecting to Broadway Park under the Broadway Street bridge. Since this property is not yet publicly owned, an easement will be necessary.

Pathway surface should be 8 feet maximum width.
LOCATION 12

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Utilize excess railroad right-of-way from the existing private crossing to the Hawkins Property (Lakeshore Drive) at the west to Fuller Park at the east for the construction of a bicycle path. If sufficient space is not available due to other projected uses for this excess right-of-way, a boardwalk along the edge of Argo Pond may be necessary.

Fencing between the bicycle path and the railroad is suggested for the entire length of this segment.
Install an authorized grade crossing of the railroad tracks west of Argo Dam and improve access to Main Street in this location.
Continue efforts to purchase the Hawkins property and the private railroad crossing leading to it (Lakeshore Drive) so that a connecting walkway/bikeway to Bandemer Park can be constructed. Improve and possibly relocate the railroad crossing to best allow for additional access by walkers, bikers and vehicles.
Construct bikeways and walkways on City property between the Hawkins property to the south and Whitmore Lake Road to the north as indicated on the Bandemer Park Master Plan. Install fencing between the bikeway and the railroad for the entire length of the interface between the park and the railroad.
LOCATION 16

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Construct a bike path adjacent to North Main Street. North of Huronview Boulevard, continue this bike path on the east side of the M14 on-ramp, crossing under the M14 bridge south of the railroad and connecting into the bike path through Barton Park. Install fencing between the bike path and the railroad under and adjacent to the M14 bridge.

Since a portion of this path will be on MDOT property, an easement may be necessary.
Summary
The purpose of the framework plan is to guide specific design and construction projects so that the end result is a coordinated and coherent path system. That network should consider physical environmental conditions, recreation and transportation needs. The identification of three complementary path alignments---sometimes overlapping, sometimes separated---is a response to both.

Estimating the cost of this plan can only be accomplished to a planning level accuracy. The exact design specifics, and with them attendant construction costs, will not be decided until a later date. The budget estimates included in the appendix must be considered as they are meant, as planning level estimates. They, too, are a guide for setting priorities by the Ann Arbor community as a whole. With an accepted framework plan in hand, the City can proceed with deliberate, step by step plans for implementation.

The objective is a multiple path network along the river connected to the larger community. Careful access to the river and its many natural, historical and recreational resources remains the overall goal.