

FINAL DRAFT



City of Rochester New York

Marina Engineering Report and Feasibility Study

May 2009



City of Rochester Engineering Report

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EXECUTIVE SUMMARY

The Abonmarche/Passero/Edgewater design team was asked to study the feasibility of developing a marina at the 30-acre Port of Rochester site. The scope of work included a Marina Market Analysis, Feasibility Study and Engineering Analysis of the marina potentials at this site.

Our evaluation of the site is that it is an excellent parcel of land that has tremendous potentials for a mixed-use marina/waterfront project containing marina, housing and commercial development opportunities. The location is in an established neighborhood (Charlotte) and has great proximity to the Ontario Beach Park, Genesee River and Lake Ontario. The site and concept also works well with the redevelopment of the ferry terminal building.

Numerous site constraints ranging from subsurface conditions, wave dynamics, project costs and economic impacts were studied and meetings were held with key stakeholders to solicit input. The site constraints are normal for a high-profile project located at the confluence of a major river and one of the Great Lakes. With sound engineering design, these constraints can be overcome in order to develop a quality project.

The market analysis identified a number of market conditions and recommendations as follows:

- There is an existing boater demand in the Rochester harbor of 200 – 500 slips.
- 100 – 200 slips should be constructed on site.
- The project should construct marina services offsite (boat storage, haul-out equipment, etc.).
- The marina should provide a flexible mix of seasonal and transient slips in the basin.
- Development of the marina should contain a “waterfront events” area.
- The Port should continue development of cruise ships along the riverfront.

Based upon the market analysis and further public input, six plan options were developed to be reviewed and further discussed by key stakeholders for the project. The conclusion of that public input was that a recommended plan – “Option 7” – was prepared. We feel this plan best addresses all key project issues, minimizes costs and provides maximum private investment opportunities surrounding the marina basin.

Key highlights of the recommended plan include the following:

- Residential condominium development containing 280 to 430 units should be built on site.
- Commercial/retail development up to 60,000 square feet should be built along Lake Avenue and the marina basin.
- Construct a 118-slip marina with slip sizes ranging from 35 to 100 feet.
- The slip mix should be 50% seasonal / 50% transient initially, but flexible in the long run.
- All slips should be public, but some may be dedicated to adjoining private developments through a publically available slip license structure.

- Two major public spaces are recommended along the marina basin for future public use and access / marine and waterfront events and exhibitions. The entire marina promenade (extensive public boardwalk 10 feet to 30 feet in width) should be open to the public.
- The site should connect to the City's river / bike path / trail system.

Project costs are summarized as follows:

	Phase I	Phase II	Total
I. Utility Infrastructure / Roadwork / Relocations	\$5.6	\$1.3	\$6.9
II. Marina	\$5.9	\$2.5	\$8.4
III. Open Space Amenities	\$3.4	\$1.5	\$4.9
IV. Buildings	\$1.0		\$1.0
V. Required Miscellaneous Costs		\$3.9	\$3.9
Total	\$15.9	\$9.2	\$25.1

Note: Above values are represented in millions

Project economic benefits are summarized as follows:

- The marina has a direct economic benefit of \$5,020,000 based upon its revenues and is the stimulus to developing the entire project.
- Land sales to the City for residential and commercial development could generate \$5.3M to \$12.1M in net income.
- Property values on build out are estimated between \$88.9M and \$193.8M.
- The present worth of the future City taxes on build out range from \$6.1M to \$18.5M.
- The present worth of the combined city, county, school taxes on build out range from \$33.8M to \$93.4M.
- 2,500 construction jobs and 300 permanent jobs are projected to be created.
- Business activity will increase in the Charlotte area / terminal building.
- Property values will increase dramatically in the Charlotte area.

The project is planned to be developed in two phases. The initial phase would not require additional property transfers, avoid alienation of parklands, and not require boat launch relocation. Phase I could begin after an 18-month entitlement period with the marina opening in Spring 2012. Phase II could begin as soon as three years thereafter and could be open by Spring 2015, pending market conditions affecting the marina, residential and commercial development absorption in Phase I.

I. INTRODUCTION / PURPOSE OF THE STUDY

Purpose of the Study / Scope of Work

The City of Rochester and Monroe County own a 30-acre site at the mouth of the Genesee River at the confluence of Lake Ontario. The site has had a number of historical uses ranging from industrial to more recently developing the site as a fast ferry terminal. The site currently contains significant roadway and parking infrastructure for both the ferry terminal mass-transit operation, in addition to day use parking for residents utilizing Ontario Beach. The City is interested in redeveloping this site into its highest and best use, consistent with the project goals identified below.

In 2008, the City retained the Abonmarche/Passero/Edgewater design team to perform a marina market analysis, engineering and feasibility study in considering a marina and surrounding waterfront development at the existing Port of Rochester property.

Project Goals

The development goals for the project include the following:

1. Preserve and enhance the village character of Charlotte
2. Create a family-oriented, four-season development
3. Maintain and enhance the visual and physical access to the water
4. Improve access into and out of the Port area
5. Enhance economic development and business activity within the harbor-front village
6. Improve the walkability and pedestrian safety of the area
7. Protect and enhance the environmental, historic and cultural resources of the area
8. Develop a mixed-use project balancing public uses and needs with a plan that allows substantial private development that expands the tax base.

II. SITE AND MARKET ANALYSIS

Market Study

A marina/waterfront market analysis has been completed by the Abonmarche/Passero/Edgewater team and identified that the marina project is viable, given the existing and future demand for boat slips in the Rochester harbor area. The marina product recommendations in the market study included the following:

- Build a marina of 100 – 200 slips with slip sizes ranging from 35 feet to 100 feet in length (potential demand currently exists for 200 – 500 additional slips in the harbor).
- Provide marina and boat services offsite.
- Provide a "flexible" mix of seasonal and transient slips within the marina.
- Develop the marina to contain a "waterfront events" area to promote public access and usage and stimulate commercial development in the area.
- Charge \$80 to \$85 per lineal foot summer rate for the dockage.
- The slip rate results in a debt supportable cost of approximately \$32,000 per slip.

The market study also identified the following housing recommendations:

- Taller, high-density buildings should be built on site that respect views (six to ten stories) and minimize use of existing parking and parklands
- Construct 2- to 4-story townhomes and/or lofts over commercial / retail uses along the marina basin and Lake Avenue
- Construct a hotel or condominium hotel on site with conference facilities

The investment in housing and commercial development will be by private developers, and the final building programs will be determined by the private developers' analysis of each building area. The marina initially would be built by the City; however, future phases could be built by private developers.

Port of Rochester

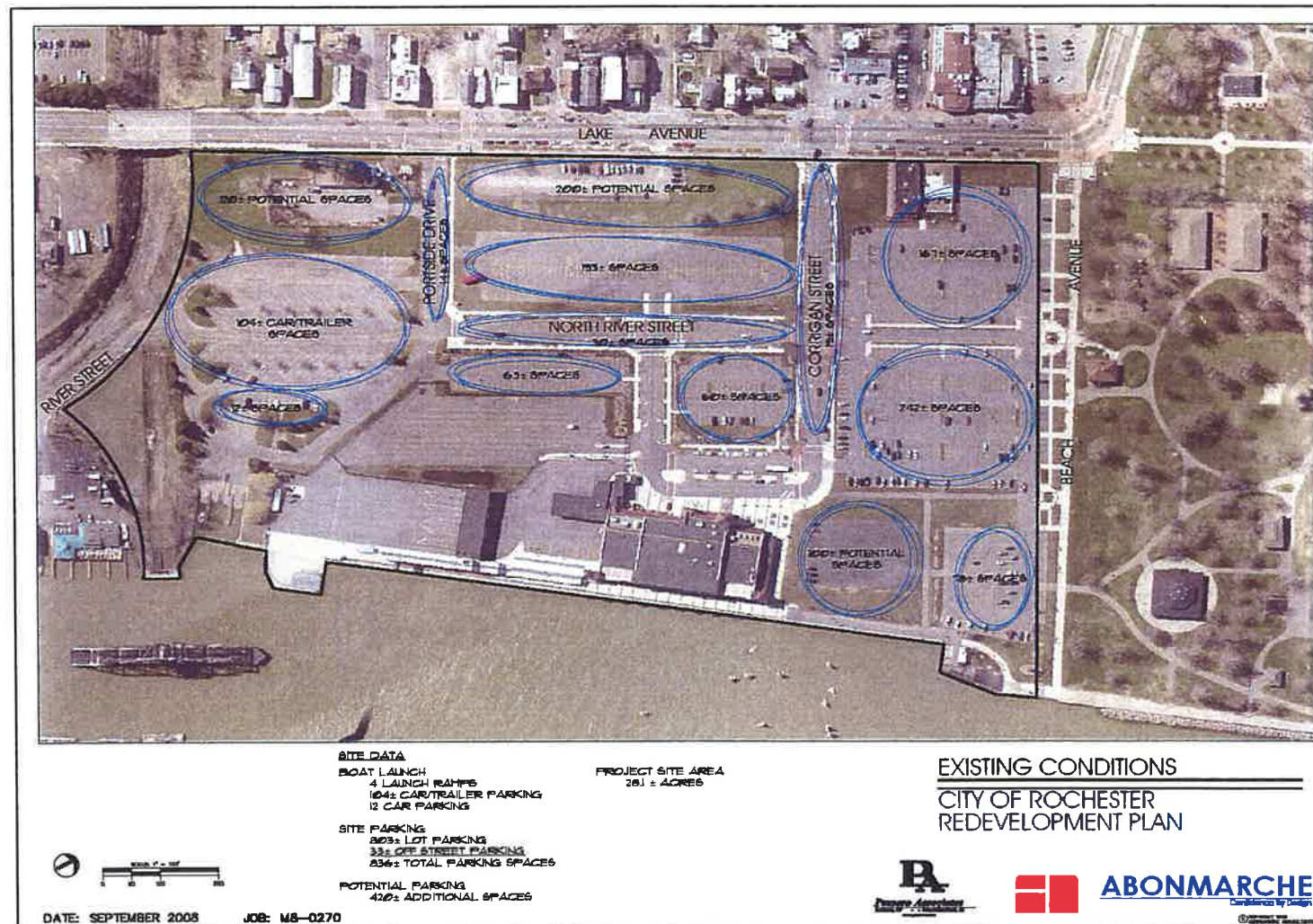
Site Description

The 30-acre Port of Rochester site is bordered to the north by Ontario Beach Park, west by Lake Avenue, south by the former CSX railroad right of way, and to the east by the Genesee River. This property contains a number of physical features, including approximately 1,400 lineal feet of river shoreline on the Genesee River. Additionally, the site contains a 53,200 square foot former ferry terminal building.

Additional features on the site include a 104-car/trailer space boat launch (owned and operated by Monroe County) and approximately 830 public parking spaces mixed between a grid pattern roadway and site utility infrastructure system. The site topography varies approximately 30 feet sloping from Lake Avenue easterly to the river's edge. Soils are generally poor throughout the site with the best soils located on the westerly portion of the property.



Existing Conditions Showing Area Features



Existing Conditions of Site

Site Considerations and Constraints

A number of site factors and constraints have been identified following (1) an analysis of the existing conditions of the property, (2) a review of the City's goals for the project, and (3) public input on the property from city meetings and hearings. The site constraints are summarized as follows:

1. Marina Entrance Wave Dynamics
2. Existing Boat Launch
3. Soils / Structural
4. Water Quality
5. Development Potential of Upland Parcels
6. Parkland
7. Zoning / LWRP
8. Public Parking
9. Existing Road / Utility Infrastructure
10. Density / Layout / Aesthetics / Public Features
11. Project Costs
12. Economic Benefits
13. Ontario Beach Park Algae / Odor

The above constraints are further described as follows:

1. Marina Entrance Wave Dynamics

In the mid-1990s, the Army Corps of Engineers constructed a wave-dampening stone revetment on the inner seawall area of the westerly breakwater of the pier structure extending into Lake Ontario. Although this structure has reduced wave energies in the harbor, it has not effectively eliminated them. During strong northerly winds, there is a 3- to 6-foot surge at the northerly end of the site, which decreases to 1 to 2 feet at the southerly end of the site. These conditions have been verified by videos of actual wave conditions during northeasterly storms. Appropriate marine and coastal engineering will need to be developed into the plan to reduce these wave energies to an acceptable condition for recreational marina / boating purposes. Accordingly, a southern marina entrance is much preferred to a northern entrance.

2. Existing Boat Launch

The existing boat launch is located within a designated parkland area and contains approximately 104 car-trailer parking spaces, in addition to a 4-lane boat launch ramp configuration. If development were to proceed in this area, a replacement launch will need to be constructed on other lands to mitigate the elimination of this launch and this parkland would need to be alienated through the State of New York process.

It is the opinion of the study team that a boat launch is not the highest and best use of this land, and it should be relocated.



Existing Boat Launch

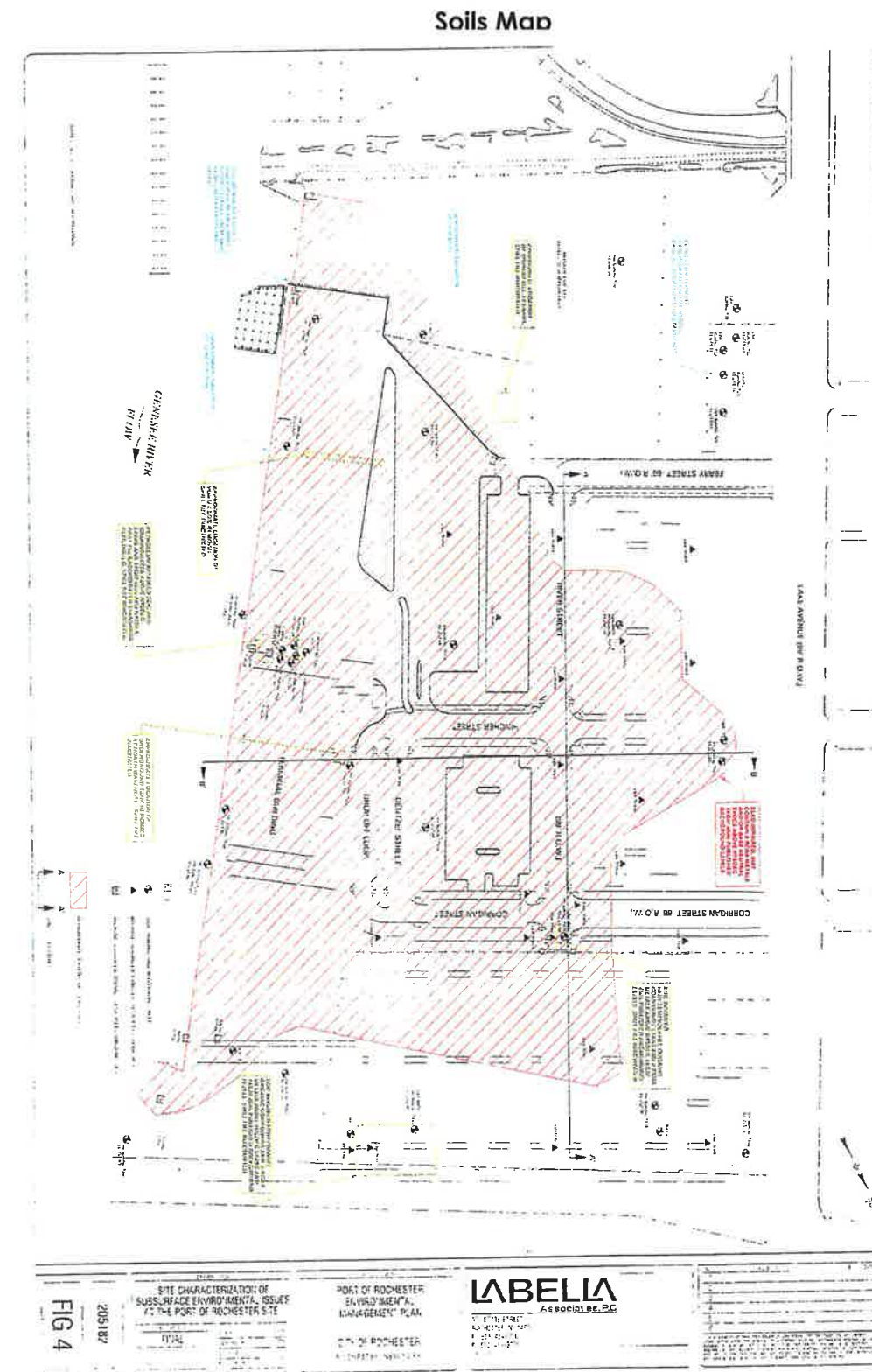
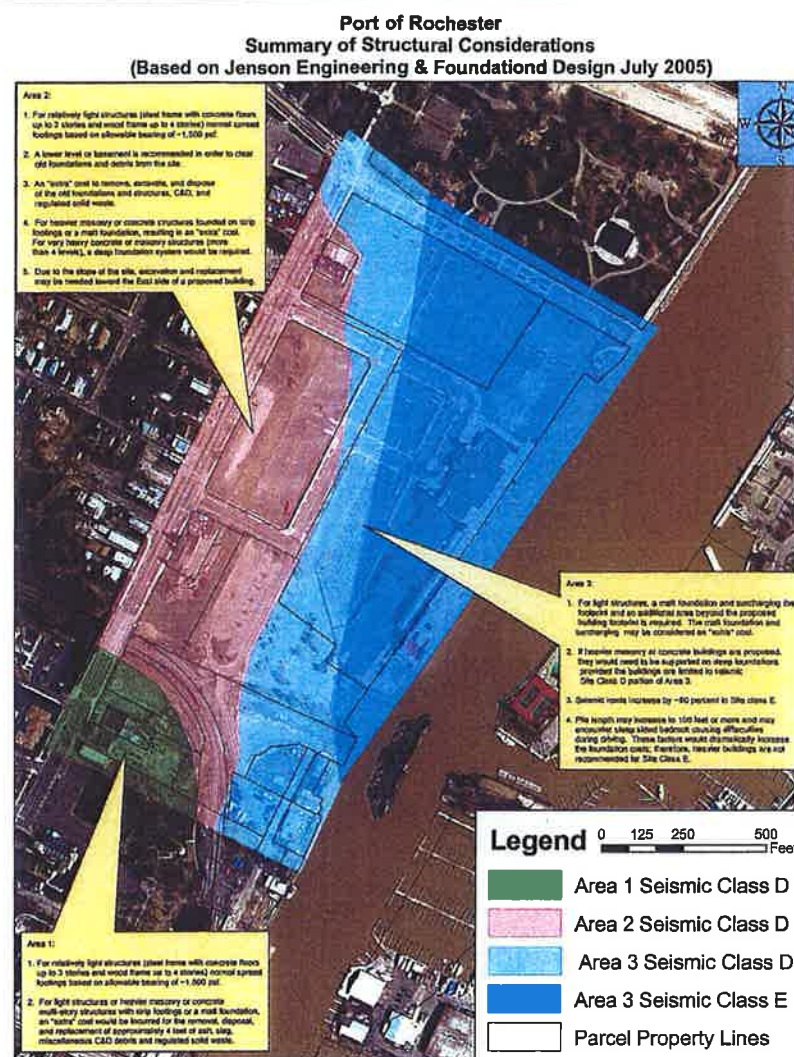


Monroe County Boat Launch

3. Soils / Structural

Most waterfront marina sites located near the confluence of a major river and the Great Lakes contain poor soils. This site follows that trend and generally speaking has poor structural bearing capacity. The easterly half of the site is much worse than the westerly half due to the geology and history of filling on the lands. The site is also a confirmed MCEMC waste site due to fill materials related to former steel mill and blast-furnace operations. Most of the fill materials are slag (a regulated solid waste). The subsurface geologic discussion is very simplistic and does not fully convey the wide variety of subsurface conditions, i.e., lithology, depth of bedrock, etc.). These constraints will translate into development concerns and perhaps limit or restrict development.

Appropriate consideration will need to be given, analyzing the poor conditions of the soils on site.



Aerial Extent of Slag Map

4. Water Quality

Based upon previous experience with the state and U.S. Army Corps of Engineers with permitting in the Genesee River system, water quality impacts will need to be addressed. Generally speaking, they would be twofold:

- a. What is the impact to water quality in the Genesee River if a marina basin is constructed at this location, and
- b. What are the anticipated water quality issues and measures (if any) which will need to be addressed in the final design of the marina, i.e., what are the conditions and solutions to minimize potential water stagnation, sedimentation, algae growth, etc., within the marina basin and how will basin flushing be planned and managed?

These are both challenging issues that can be addressed with sound marine engineering design in later stages of the project development.



5. Development Potentials of Upland Parcels

This site constraint includes developing a plan which has the highest development potentials of upland parcels. Generally speaking, bringing water within a property, i.e., internal basin design, and surrounding it with development will have much higher values and better consumer acceptance than isolating the marina at one end of the site and not surrounding it with development. The following photographs are waterfront communities developed by and/or observed in the Great Lakes by the project team.

During the course of preparing this report, meetings were held with local waterfront developers to consider their interest in the project. Support of the plan was identified in the meetings by the developers. Although current economic times are not conducive to immediate development/investment, the project timetable over the next several years seemed realistic and appropriate.



Lighthouse Point
Condominiums
& Marina
St. Joseph, Michigan



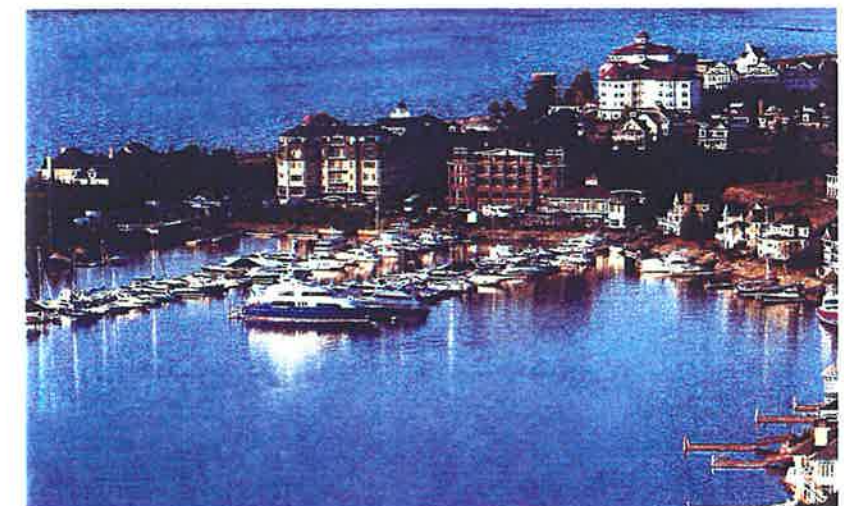
Harbor Isle Marina & Condominiums, St. Joseph, Michigan



Marina Grand Resort, New Buffalo, Michigan



Bay Harbor Hotel, Petoskey, Michigan



Bay Harbor Marina & Hotel

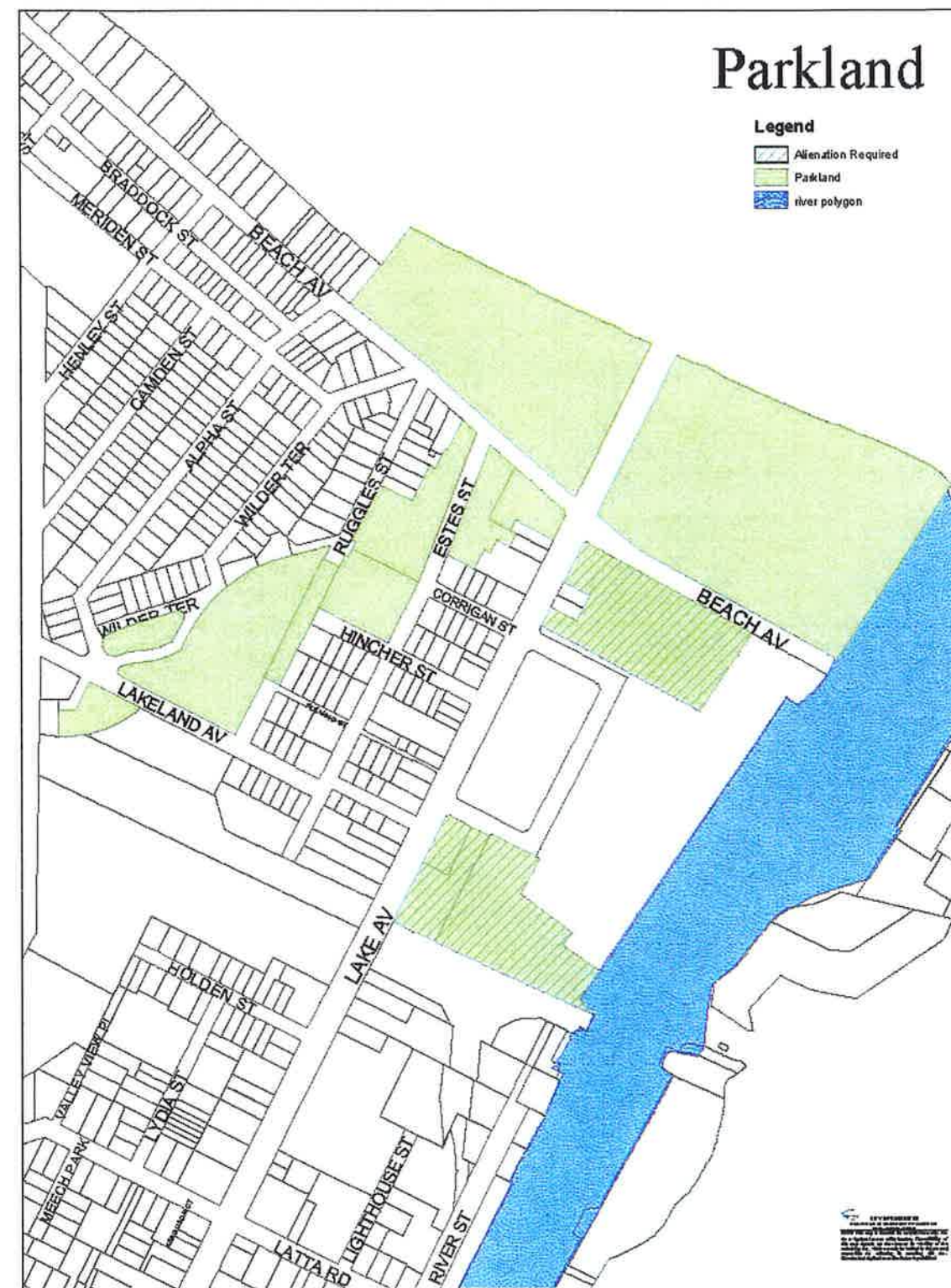
6. Parkland

Parklands are located on the site in both the northerly area adjacent to Ontario Beach Park and the boat launch area (discussed previously). If development is pursued on any of these lands, the parklands will need to be alienated in accordance with City and State of New York statutes. The parklands generally include the green areas as shown below. Ownership issues will need to be addressed between the City and Monroe County, as well as the alienation process.

Parkland - Port of Rochester



All areas are owned by City of Rochester except Monroe County ownership as shown.



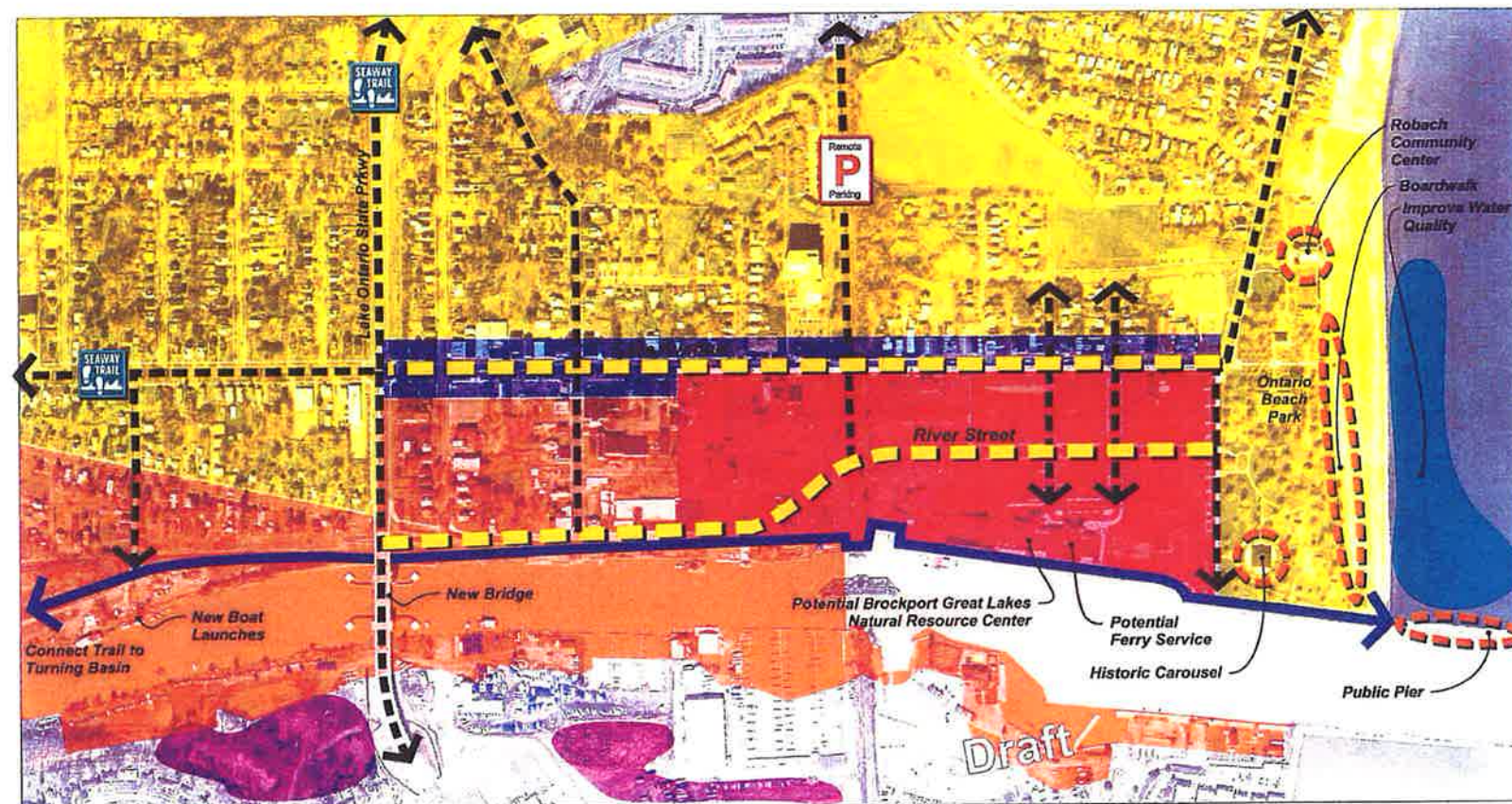
Monroe County Ownership / Parkland

7. Land Use: Zoning / LWRP

Land use at the Port of Rochester site is regulated through the City's Zoning Code (City Code Chapter 120) and the City's Waterfront Consistency Review Ordinance (City Code Chapter 112). The current zoning is Harbor Village (HV) District and Open Space (OS). The Port of Rochester site is located within the area encompassed by City's Local Waterfront Revitalization Program (LWRP). The LWRP was originally adopted by City Council in 1990 pursuant to the New York State Waterfront Revitalization and Coastal Resources Act. The plan establishes policies, objectives, and conditions for reviewable actions, such as new construction, within defined areas of the City's waterfront. The City is now in the process of amending sections of the LWRP related to the Port taking into consideration the proposed marina project, elements of the 2006 Sasaki Port of Rochester master plan, and changes that have occurred in the Port area since 1990. Chapter 112 of City Code sets forth the consistency review procedures to be used by the City when evaluating projects within the LWRP.

The proposed marina project and associated development will need to conform to City zoning and LWRP consistency requirements.

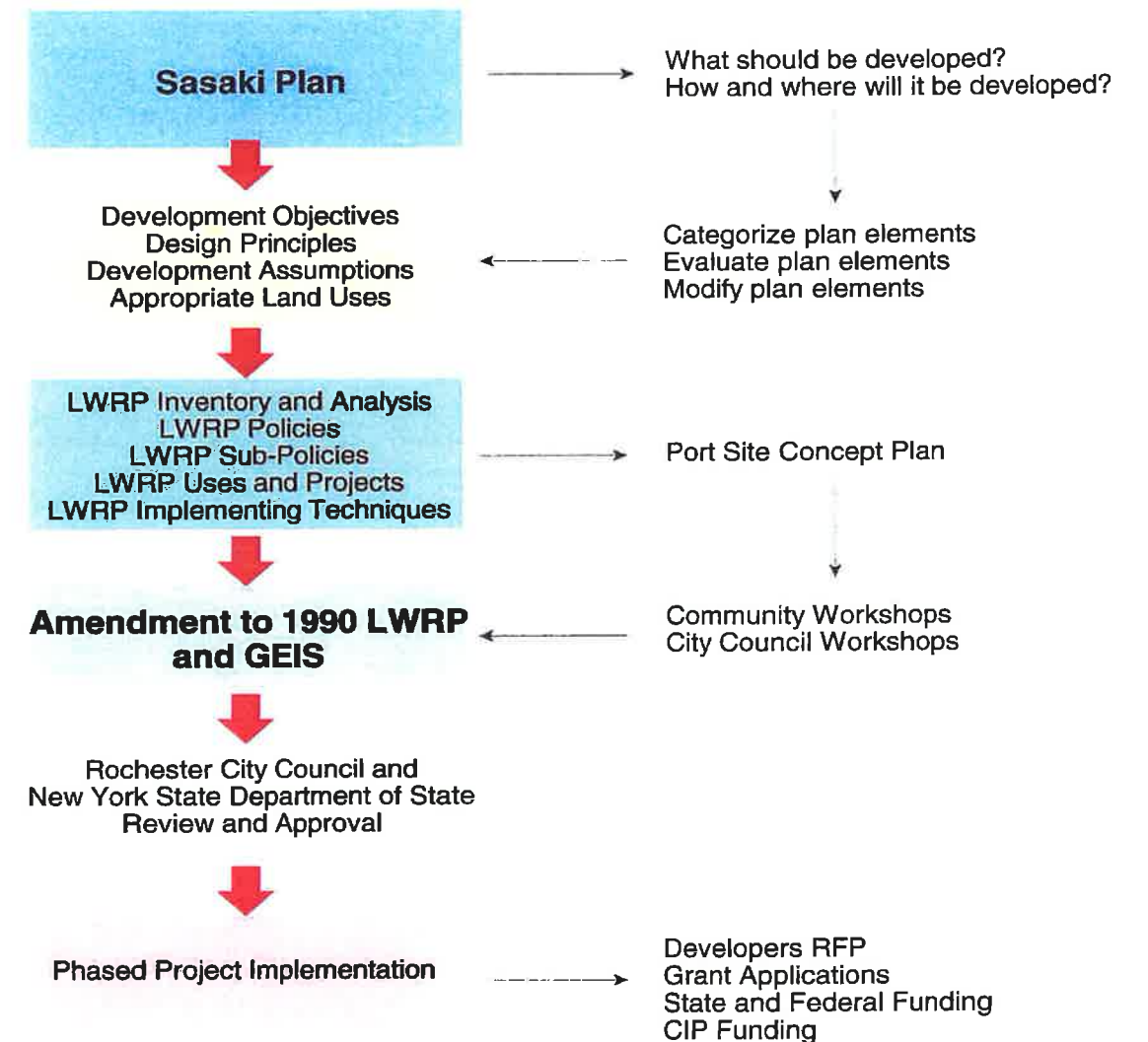
LWRP AMENDMENT PROCESS



Legend

■ Sub-Area 1 Port Area (see XX for further detail)	■ Sub-Area 2 River Street Area	■ Sub-Area 3 Harborown's "Main Street"	■ Sub-Area 4 - Existing Residential Areas / Park	 Primary Pedestrian Spines
■ Town of Irondequoit Proposed Mixed Use	 Preserve / Enhance	 Street / Pedestrian Connections	 Waterfront Trail	 Focus Area 1 Development Objectives

ingalls September 24, 2008 City of Rochester Bureau of Planning Port of Rochester - LWRP Amendment



City LWRP Process

8. Public Parking

The existing site contains approximately 830 public parking spaces, both in parking lots and on-street parking. Several times a year, there are a limited number of events that currently exceed the available 830 onsite spaces requiring offsite parking elsewhere. On these occasions, a shuttle or bus service is required to transport festival attendees from remote parking lots to the beachfront. These events include Harbor Fest, Winter Fest and the Air Shows.

In order to allow development to proceed, it will be necessary to eliminate some of these parking spaces to allow for land areas that could be utilized to develop the marina and surrounding residential development. Based upon input in the public workshops/focus groups, it was felt that public parking on site should not be reduced to less than half of the existing parking or approximately 450 spaces. Additionally, the majority of the parking nearest Ontario Beach should be preserved to the degree it can to balance the development potentials with existing and future public usage of the project site amenities and Ontario Beach Park.



9. Existing Road / Utility Infrastructure

The site has extensive roadwork and public utility systems, some of which have been recently improved in support of the ferry project over the past several years. Additionally, there are sanitary and storm water (including 72" diameter storm sewer) interceptor lines that run through the site. Relocation of these can be expensive and alternative plans should consider the least impact and cost alternatives for utility relocation.



Existing Utility Plan

10. Density / Layout / Aesthetics / Public Features

This section evaluates the public use of the project in concert with the marina and surrounding residential/commercial uses. The goal is to maximize public access and uses that will complement private development. Additionally, site features and activities which promote year-round uses are desirable. The earlier planning Sasaki process had identified plans that could consider 900 or more residential units on site and various types of configurations. Based upon our experience with numerous waterfront developments, we suggest the use of high-density, taller buildings that use up smaller footprints, which allows expanded use of public areas and parking and balances the overall interest in the site between private and public uses. Additionally, we feel that some strong public features or spaces should be considered which could allow for future public elements and uses. An example of these may be a small outdoor ice skating rink that would help bring people to the area in the winter season. During the summer, public fountains, water sprays, outdoor art, kiosks, etc., could be considered in key areas of the project site to bring people to the area.



11. Project Costs

This section essentially speaks for itself to identify the lower cost alternative (considering maximum project/development values) of the various projects as being more desirable than the higher cost/less value alternatives.

12. Economic Benefits

The economic benefits of one plan versus another should also be considered. The economic benefits would result not only from the value (income) of the marina, but also the direct and indirect economic benefits, including the potential tax base growth generated from the surrounding residential and commercial development.

Ontario Beach Park

Although not directly part of this project, we also feel that significant consideration should be given by the City to improving the Ontario Beach Park algae and odor issues that exist from a time-to-time basis during the summer. This constraint has been studied extensively by the Army Corps of Engineers through a 1,000-page document released in February 2007. If possible, it is recommended that a win-win scenario be considered which would implement the recommended beach fill expansion area along the westerly Corps of Engineers' breakwater by supplementing it with the excavation from a proposed marina basin.

Constraints Evaluation Matrix

Based upon the above-described constraints, each plan option was evaluated by the design team, City officials and Charlotte community focus groups in order to rank the plans into a preferred plan or plans. This was the tool that we used to evaluate the constraints which resulted in the evolution of Option #7, which is the recommended plan.

	CONSTRAINTS	Marina Option 1	Marina Option 2	Marina Option 3	Marina Option 4	Marina Option 5	Marina Option 6
1	Marina Entrance Wave Dynamics						
2	Existing Boat Launch						
3	Soils / Structural						
4	Water Quality						
5	Development Potential of Upland Parcels						
6	Parkland Alienation						
7	Zoning / LWRP						
8	Public Parking						
9	Existing Road / Utility Infrastructure						
10	Density / Layout / Aesthetics / Public Features						
11	Project Costs						
12	Economic Benefits						

III. MARINA CONCEPT PLAN

In order to develop a concept plan for a marina/waterfront, mixed-use development, it is necessary to evaluate a number of key issues and previously described site constraints, then balance their impacts to select a desired plan. The process to balance the impacts involves review of sound marina engineering principals, with appropriate public input and careful planning to minimize negative effects and maximize positive project benefits. Development of the concept plan would include consideration of engineering issues, such as soils, topography, wave dynamics, in addition to parkland alienation impacts, relocating the boat launch, etc. Other project issues to be considered include existing uses, such as parking, open space, roadways and impacts to existing utilities.

Once the site goals, issues, opportunities and constraints are clearly understood, alternative plans can then be prepared which weigh the benefits and advantages / disadvantages of the options to be considered. The plan alternatives then are tested with focus groups having interest in the project. Based upon this input, a recommended plan is developed. Additionally, through this process, we identified an opportunity to phase the development of the marina. Phasing would allow development to proceed with a minimal amount of impact on the constraints and/or lower initial budget.

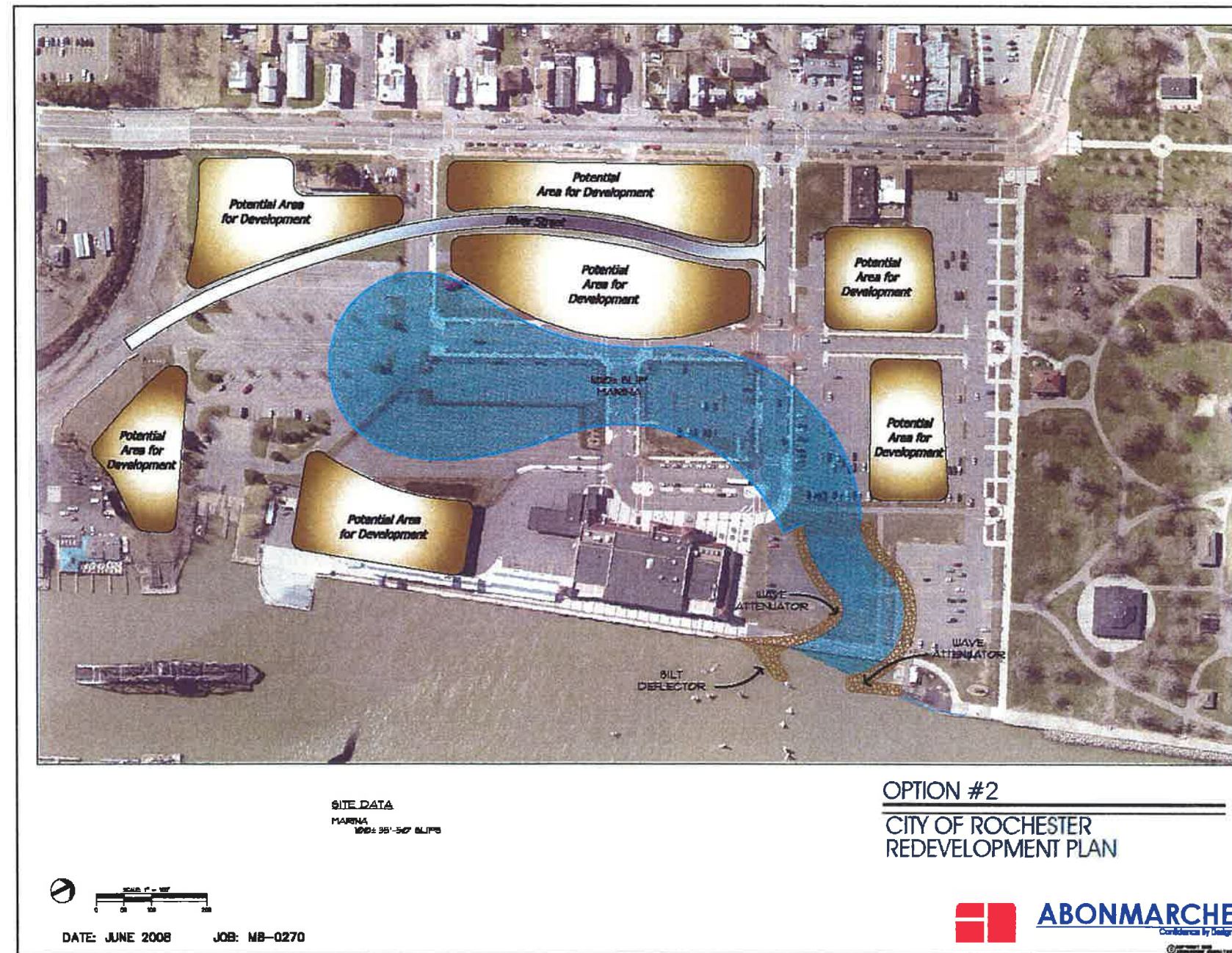
Marina Development Options

Through the course of this analysis, we identified six development options for discussion with public focus groups. The options are briefly described and illustrated as follows:

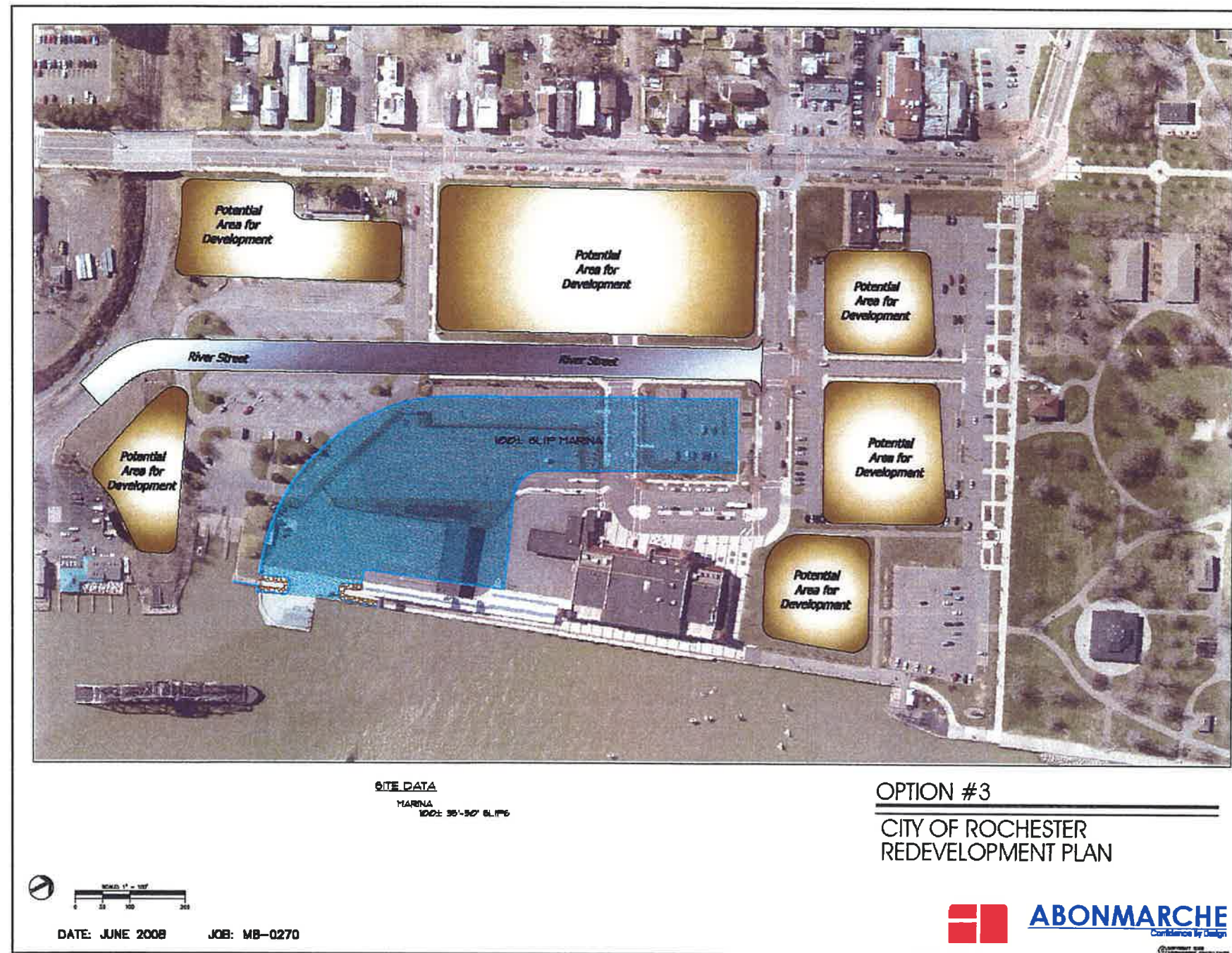
Option 1 – This included a development plan which is similar to the 2006 “Sasaki” plan which locates the marina in the northeast corner of the site and keeps a regular grid-type pattern for development throughout the balance of the property. A major concern of Option 1 is that the marina entrance opens to the existing Genesee River mouth in an area where known 3- to 5-foot surge conditions exist. It will be necessary to design an offset “S” curve entrance with extensive stone revetments and breakwaters in order to reduce this surge to a manageable wave that is less than one foot in height for the marina to function properly during major northeasterly storms. Alternative shoreline treatments should also be considered, such as a sloped stone revetment to further reduce wave energies in the marina basin, rather than creating a potential harmonic wave condition within the basin, where standing waves could be two or three times the incoming wave once they reflect, refract and diffract off the inside of the vertical walls in the marina basin. It should be noted that this option also bisects and isolates the ferry terminal building from the beach area and public, requiring an alternative access from the south. This alternative is also less convenient to the Port terminal facility, park, beach and pier access. This alternative would also likely require relocation of the 72" interceptor storm sewer.



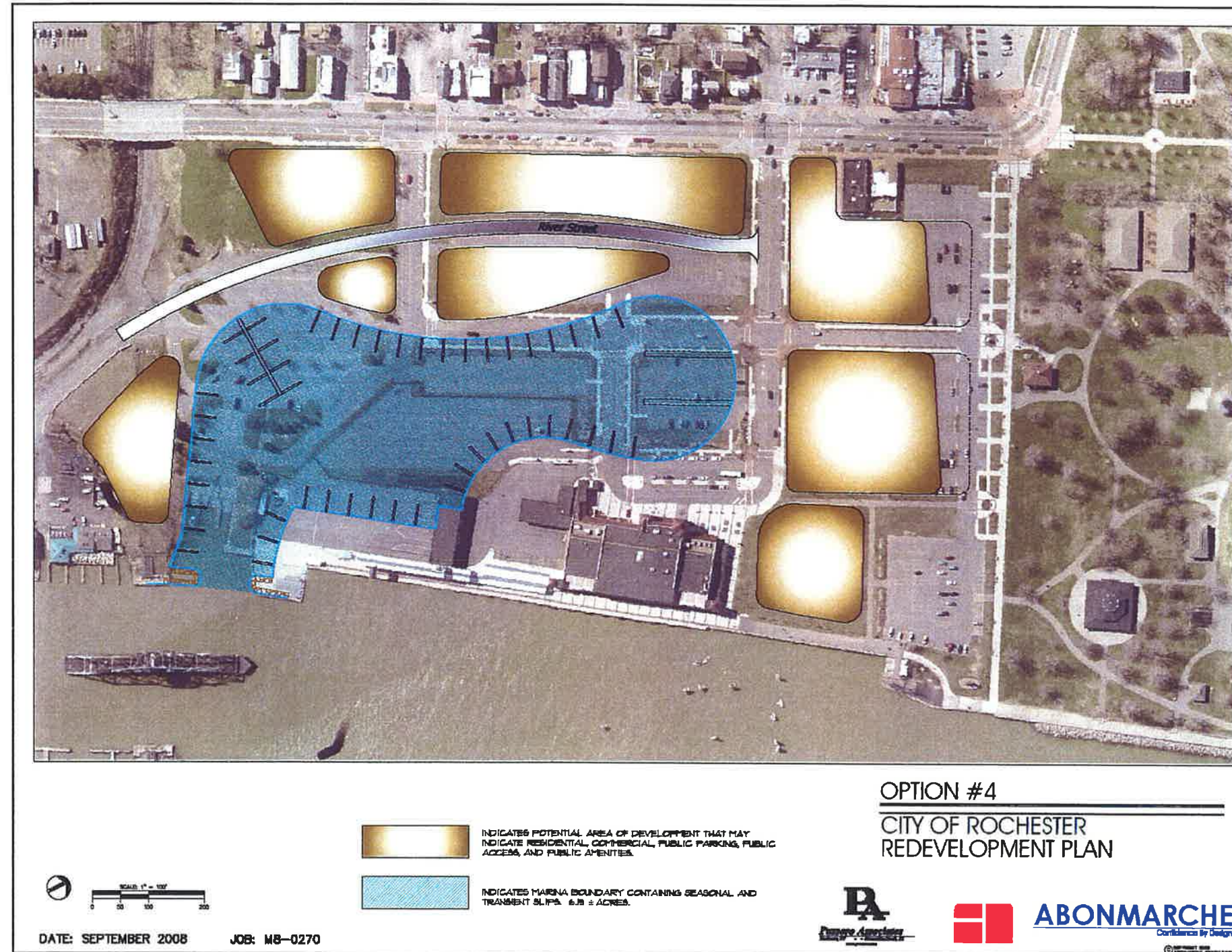
Option 2 – As part of the waterfront planning process, a goal that we frequently try to consider is bringing the marina into a site to allow a higher and best use and increase the values of the surrounding properties. Option 2 considered this type of construction with the marina entrance being located at the northerly end of the site, similar to Option 1. Option 2 is also shown with an offset “S” type marina entrance, which is intended to reduce the 3- to 5-foot wave surge outside the river mouth to a manageable wave height inside the basin. It is noted that this offset will consume nearly one acre of land within the site and will result in a more difficult navigation route as boaters maneuver through this entrance configuration. There is also a silt deflector shown, which would attempt to move river silts out into the river and keep them accumulating at the entrance, resulting in decreased maintenance dredging costs. It should be noted that this option also bisects and isolates the ferry terminal building from the beach area and public, requiring an alternative access from the south. This alternative would not require relocation of the 72” storm sewer.



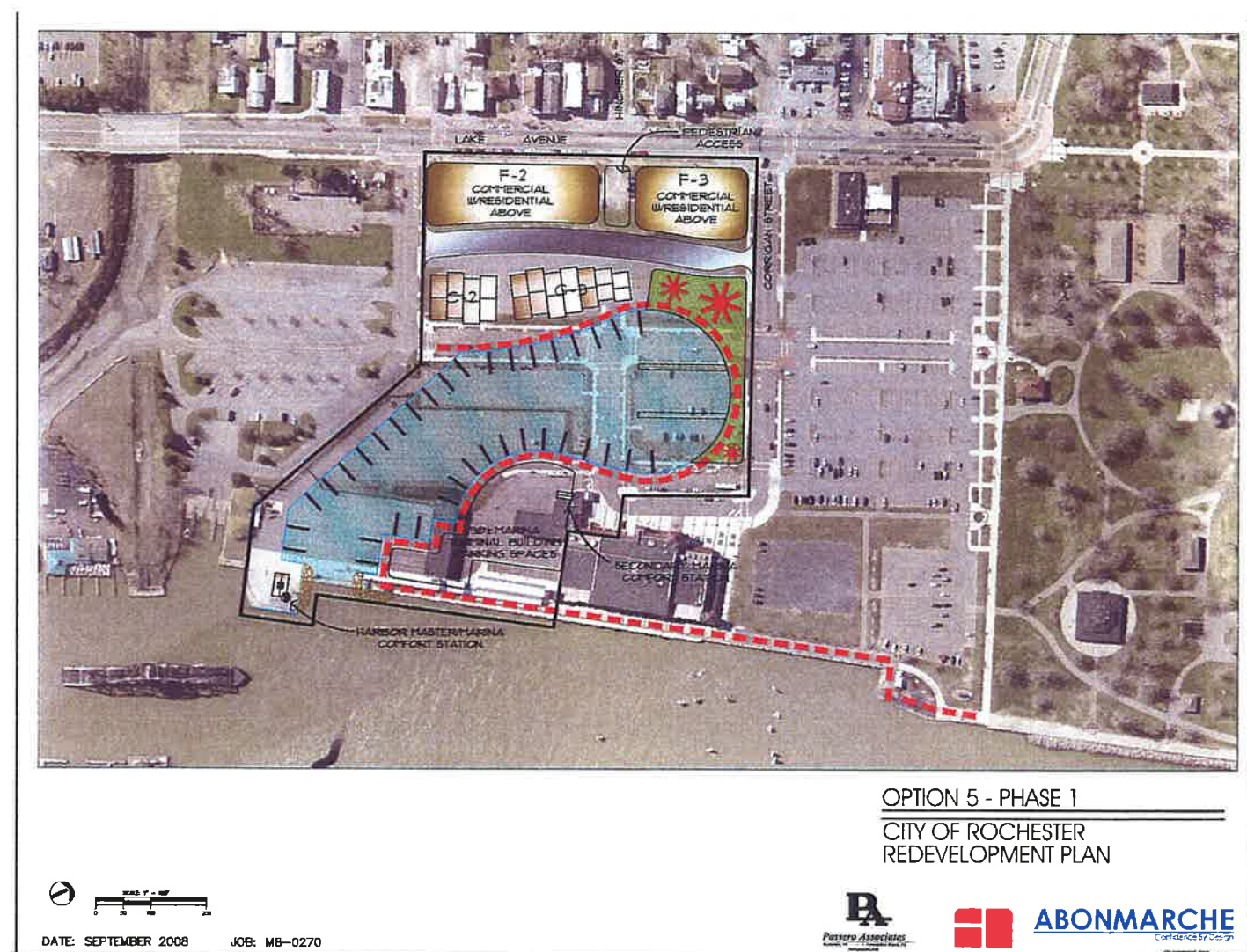
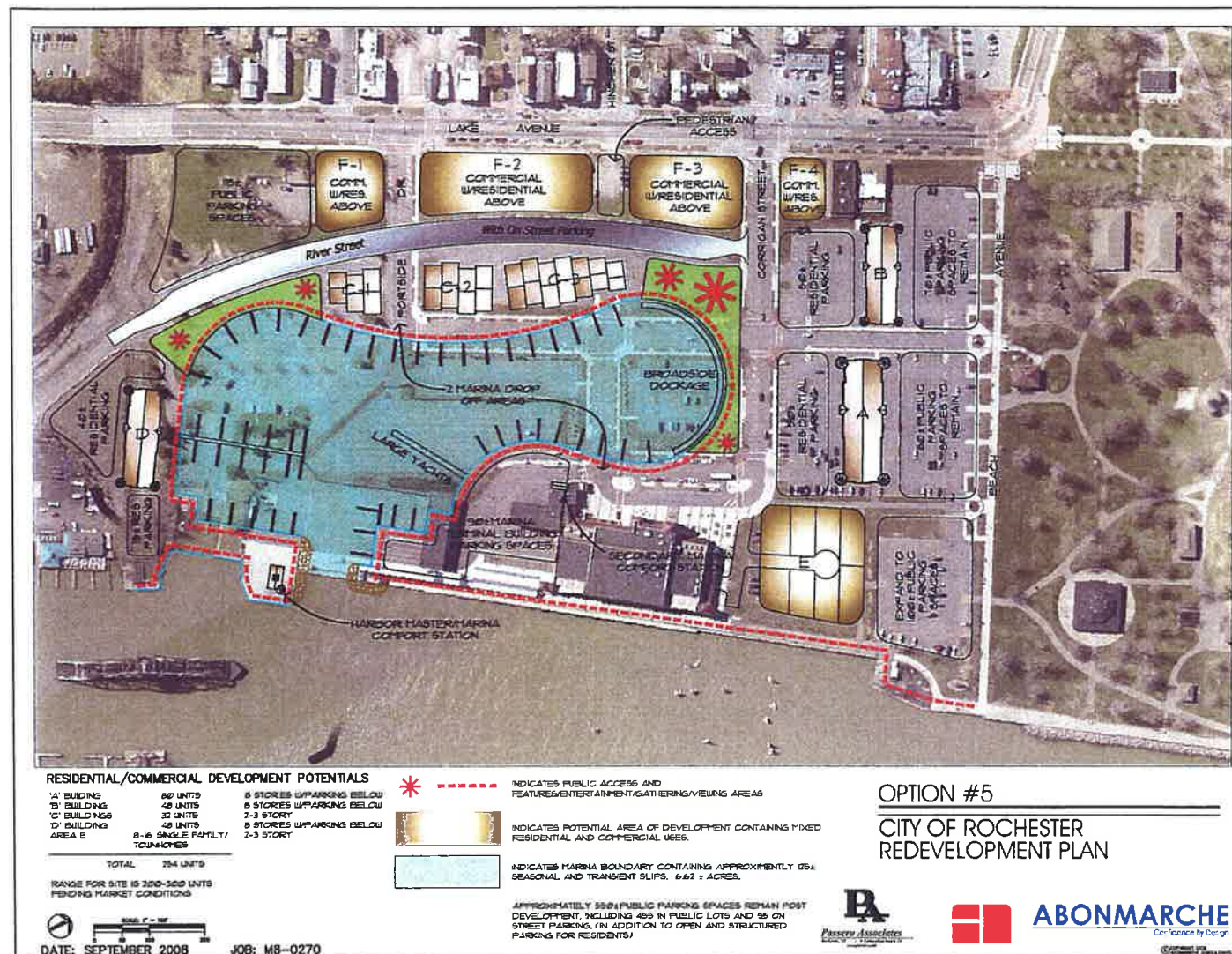
Option 3 – One of the options considered was to identify a “least impact” option taking into account all of the 13 considerations and constraints identified earlier. This least impact plan was identified as Option 3, which minimized the impacts to parkland, had no direct impact to the existing boat launch, and maintained as much of the existing roadway utility infrastructure as possible. Unfortunately, this plan would also result in a narrow linear type marina that has more of a canal appearance. This configuration also separates the marina from surrounding development properties and public roadways, which would discourage pedestrian access. The option would diminish the real estate development potential of the overall project and usage and lower real estate investment potential/values. The basin is also quite small, being approximately 3 acres, which will not properly support a critical mass / number of large boats to function properly as a recreational marina with public water events areas and public access.



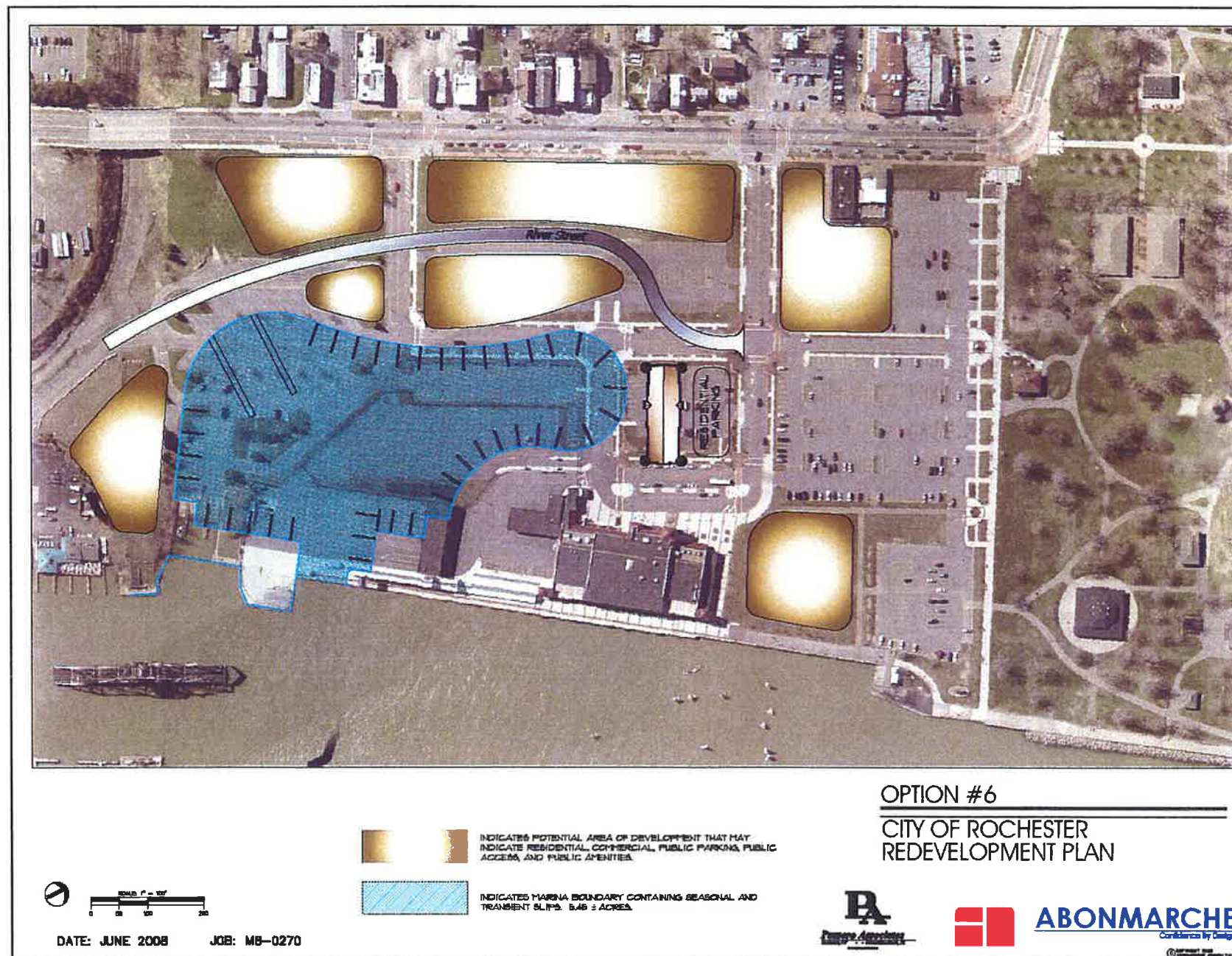
Option 4 – This option is a configuration that allows substantial development/investment of surrounding parcels and brings the public marina close to existing roadways and public spaces both at River Street extended and Corrigan Street. This plan also located the marina entrance in the most desirable wave dynamic location being the extreme southerly end of the property, south of the ferry terminal ramp structure. However, its marina entrance and location would require the removal and relocation of the existing boat launch, in order to allow the marina to proceed. Thus, the marina project would be delayed until an alternative boat launch site could be assembled, launch design and permitting finalized and the construction of the new launch completed. This process may also require alienation of existing parkland which would involve State of New York legislative approval prior to marina construction.



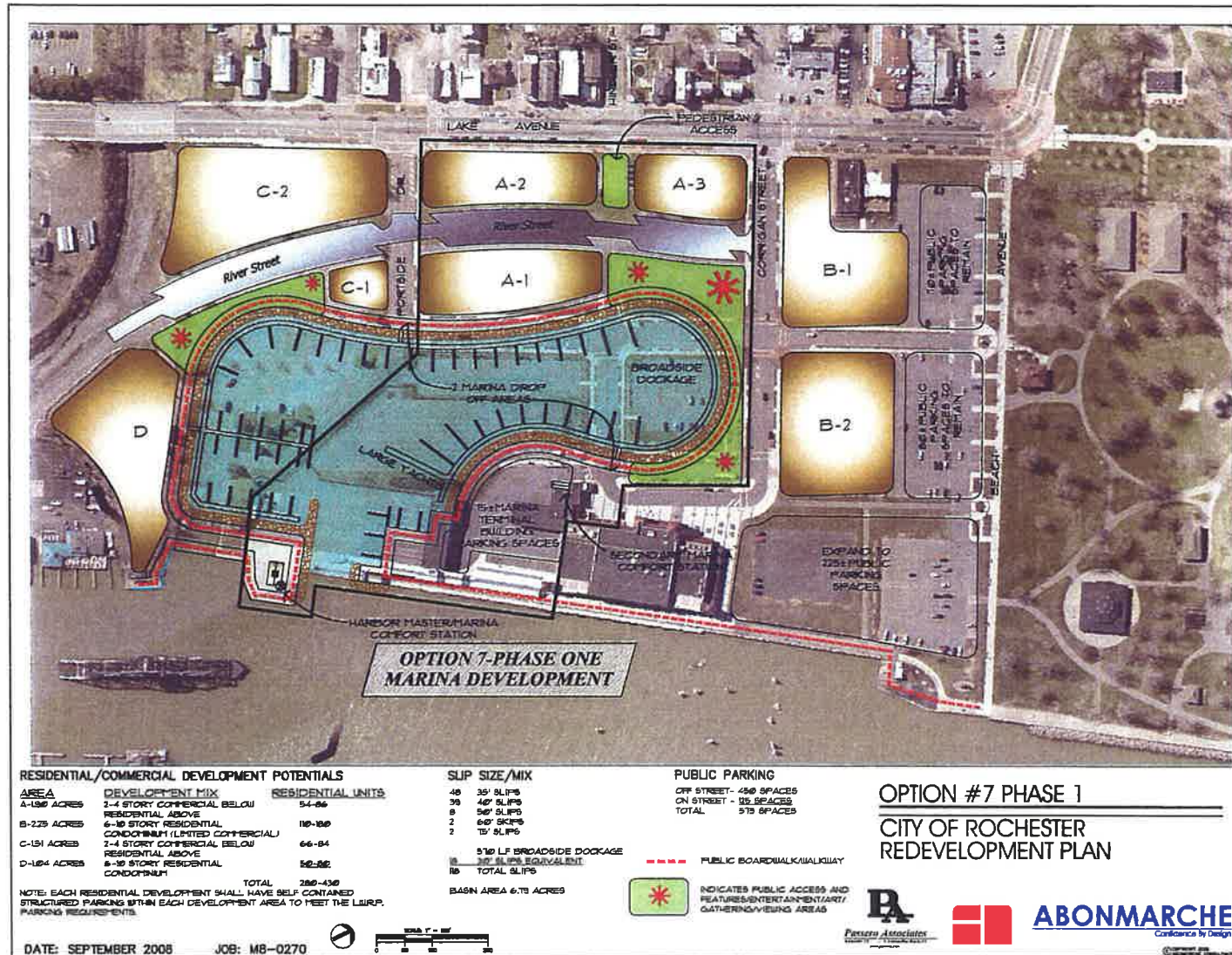
Option 5 – This option is similar to Option 4; however, it relocates the entrance to the area just north of the existing ferry terminal vehicle ramp platform structure. This plan has significant public access and space at Corrigan Street and at the new River Street location. We also evaluated the potential for phasing this marina configuration with the first phase reflected below. Phase I plans of Option 5 showed that this plan can be implemented without affecting the boat launch, existing parkland and would involve lands entirely under the ownership and control of the City of Rochester. The marina could be expanded in a southerly direction once the constraints associated with boat launch relocation have been addressed so that the entire concept plan can be completed. It may take three to four years to develop Phase I, and three to ten years thereafter to develop the balance of the Concept Plan, depending on the boat launch relocation process and market conditions.



Option 6 – This option is similar to Option 5, except that we attempted to evaluate the possibility of introducing a residential development south of Corrigan Street, adjacent to the marina basin. This approach also would allow some additional parking adjacent to the Ontario Beach Park. This layout significantly reduces the size of the marina basin and makes it very difficult if not impossible to phase the marina, since there is an inadequate critical mass for the initial marina phase. It also eliminates the potential for a public space directly off of Corrigan Street for the public to use and enjoy by isolating the marina between the roadway and a private residential development parcel.



Option 7 – This is the recommended plan which resulted from an analysis of the previously discussed options, taking all of the constraints and site conditions into consideration. Specifically, it was derived from an additional evaluation of Option 5 and helpful suggestions during meetings with the community and developers. Concept elements were developed, organized them into a program which minimizes negative impacts to the maximum degree possible, emphasizes the positive features of the project, and creates private investment opportunities to the maximum degree possible. It takes into account input provided from the local residents in the Charlotte area, private developers and input from City officials. Phasing of the project allows for the project to be completed in a timely manner and fits nicely on the site with minimal / no effect to parklands and surrounding uses. A proposed project schedule is shown on page 30 which generally allows for entitlement construction to occur over the next three years for a Phase I marina opening Spring 2012 and Phase II marina opening Spring 2015. The promenade surrounding the marina, to the pedestrian trail / linkage to River Street and Ontario Beach Park.



OPTION 7 SHOWING CONCEPT PLAN AND PHASE I & PHASE II PLANS



Option 7 – Phase I

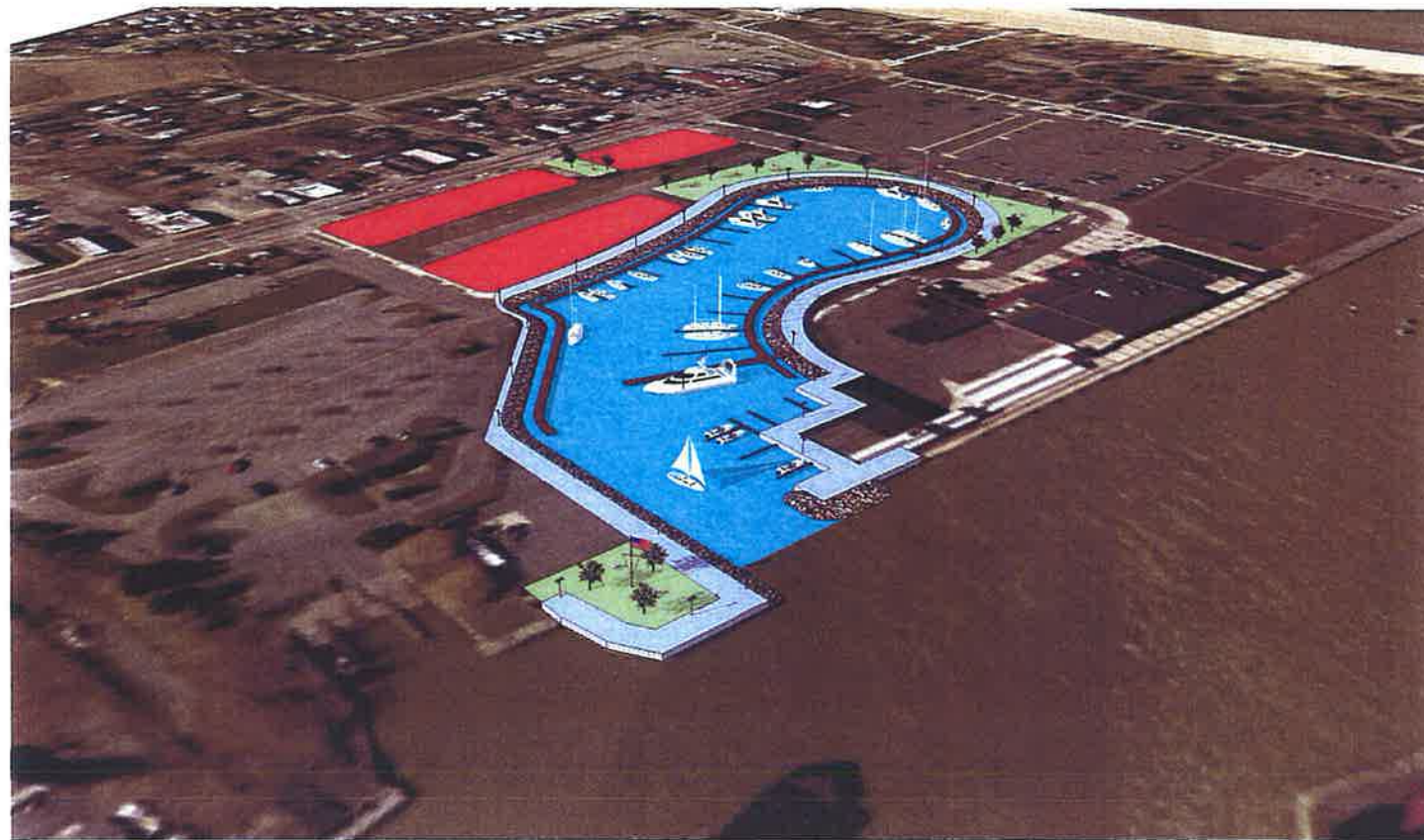


Option 7 Showing Phase I and Phase II

Views Looking Northwest

OPTION 7 SHOWING CONCEPT PLAN AND PHASE I PLAN AND DEVELOPMENT ZONES IN CORAL

The coral-colored zones indicate areas for potential residential and commercial development



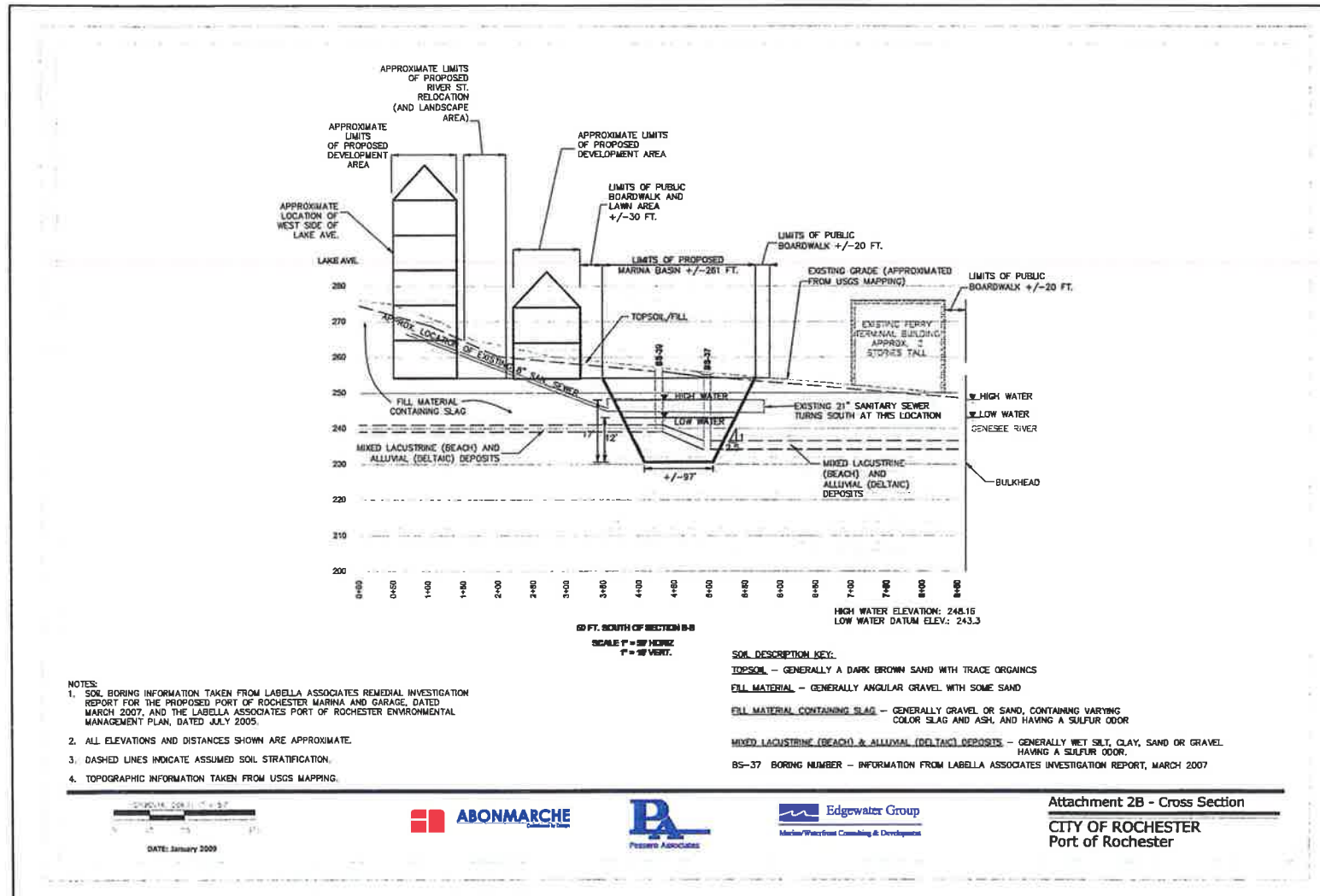
Phase I



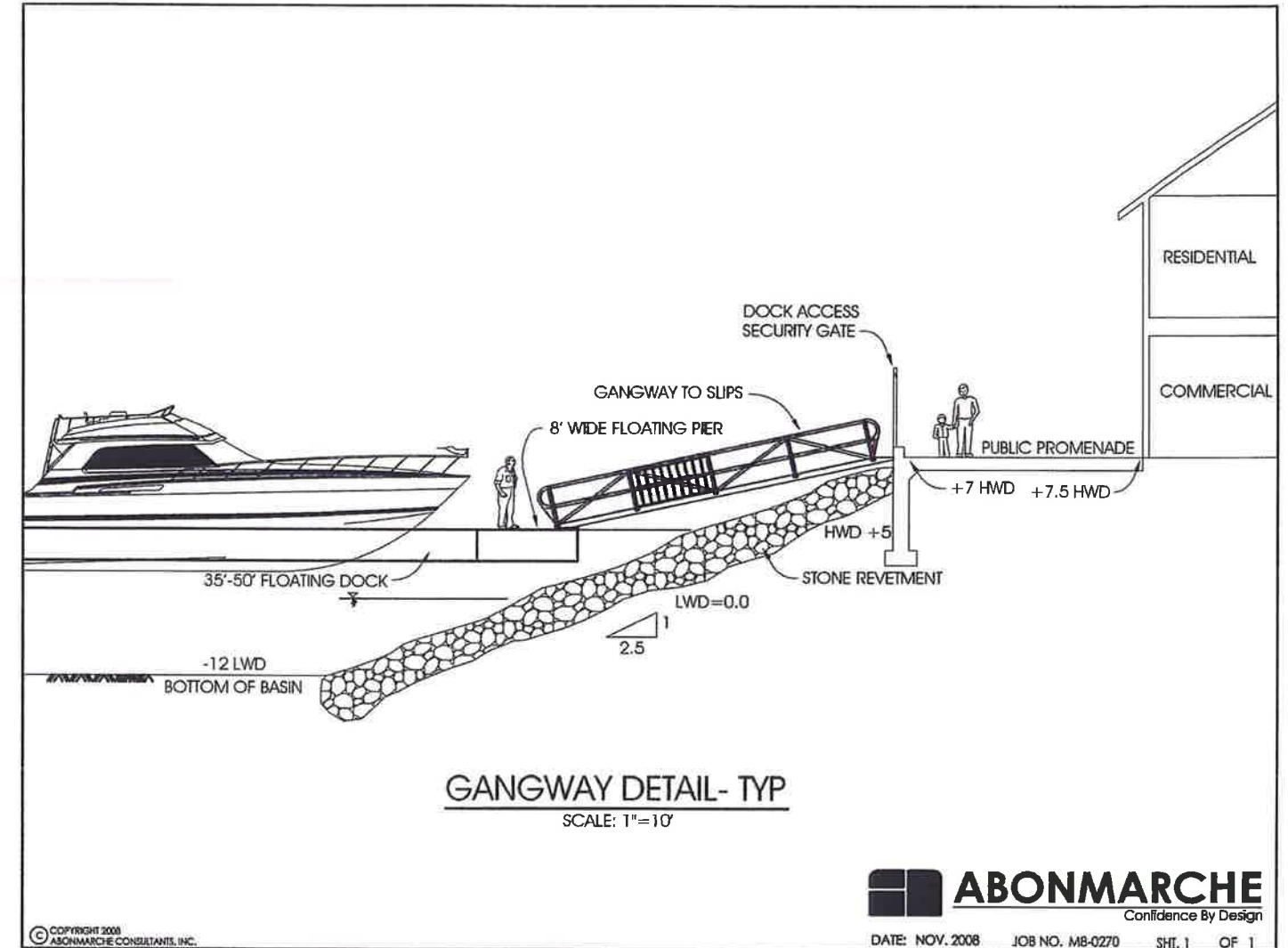
Concept Plan

Views Looking Northwest

OPTION 7 – CROSS SECTIONS



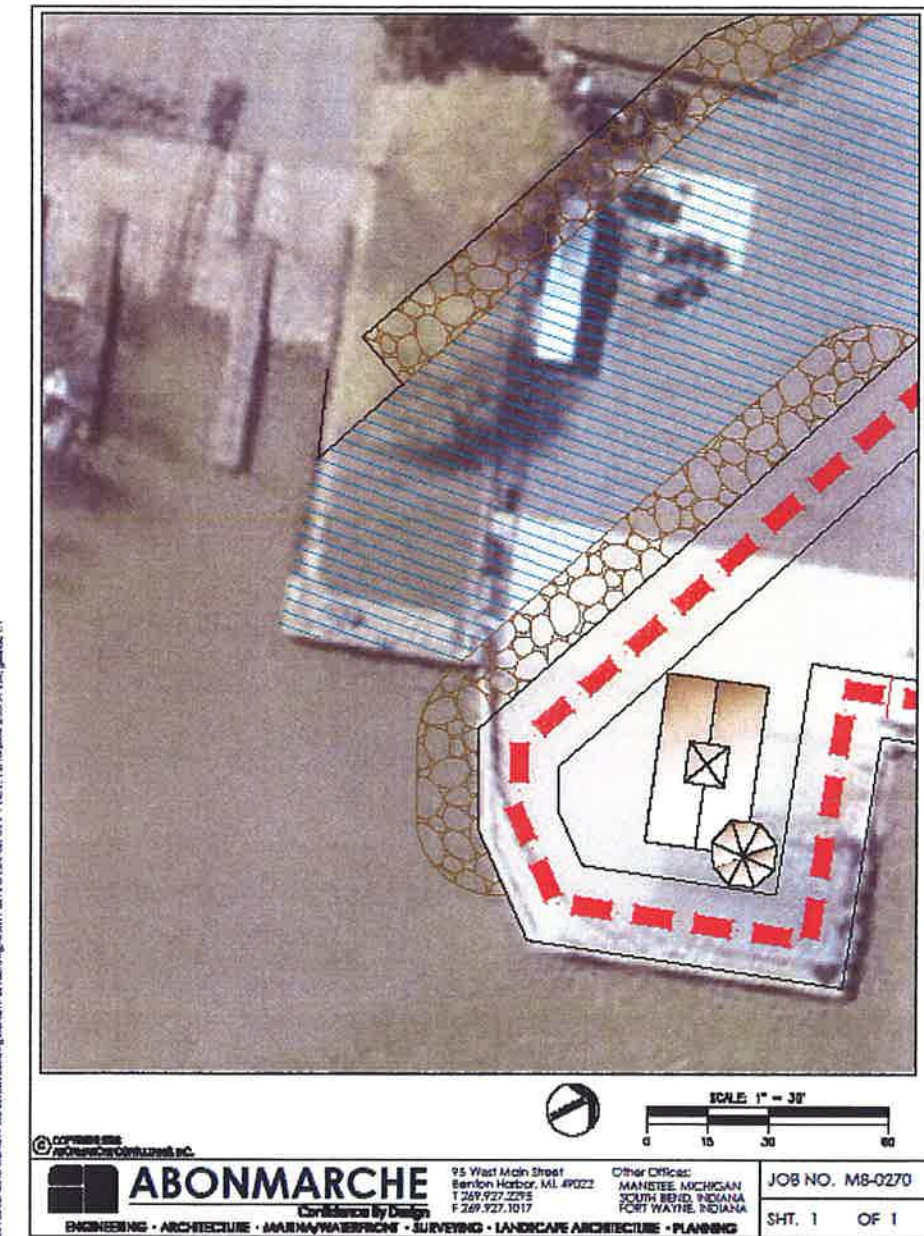
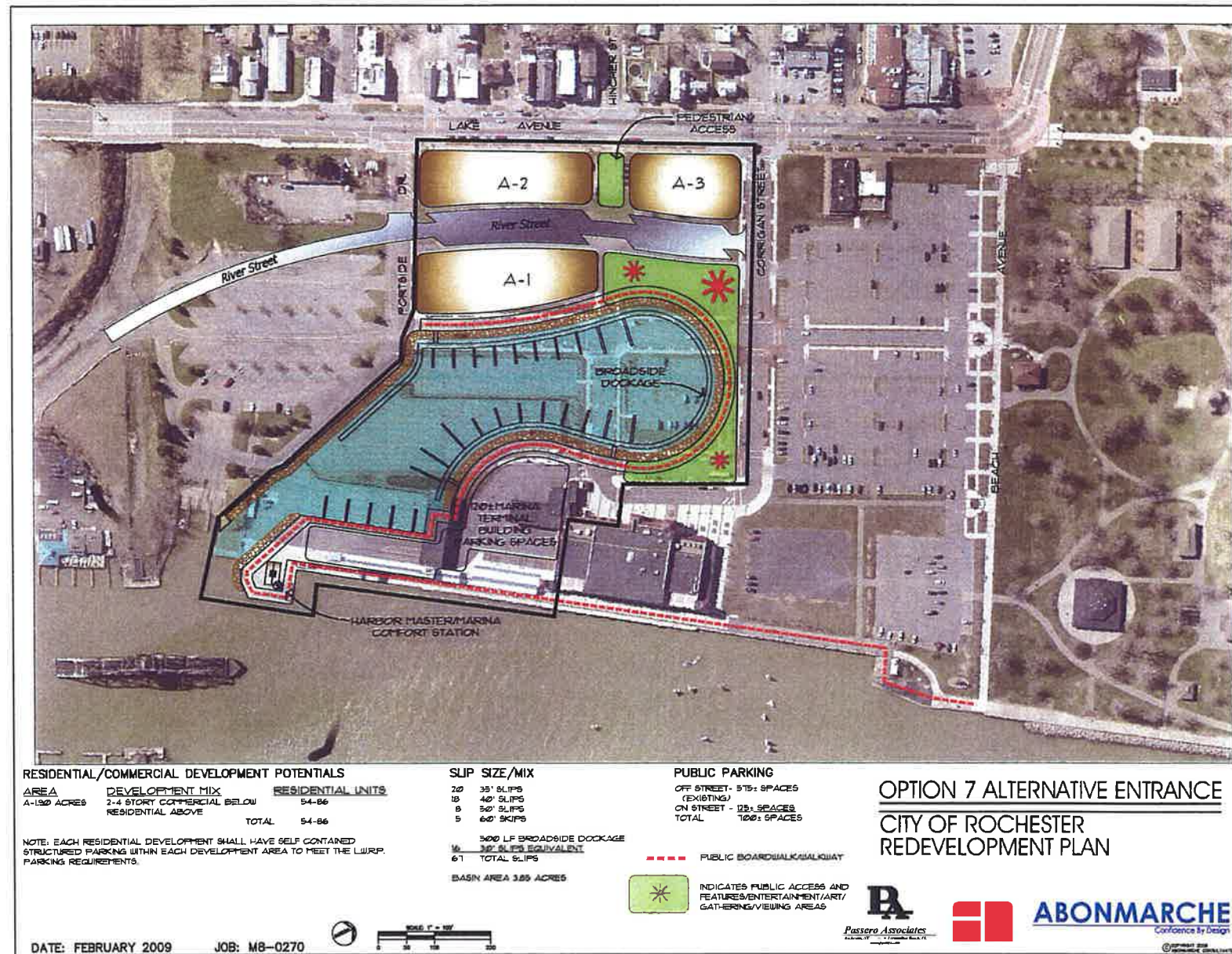
East-West Cross Section on Site Between Corrigan and Portside



Cross Section Showing Gangway, Public Promenade and Adjoining Commercial/Residential Development

OPTION 7 – ALTERNATE MARINA ENTRANCE LOCATION

After further review of wave dynamics at the proposed entrance to the marina in Option 7, we evaluated if it was possible to locate a marina entrance that has little or no impact to the boat launch operation and that would allow the entrance to be developed south of the ferry terminal vehicle ramp platform structure. After review of this location in more detail by marine engineers, we have identified that a 60-foot wide channel opening is possible for Phase I of the project. This could be increased to a 90-foot opening in Phase II, after the marina has been expanded and boat launch relocation has been completed. A 60-foot opening is a minimum-sized entrance for a marina and acceptable in this location because Phase I only contains approximately 80 slips. There are a number of marinas on the Great Lakes (Washington Park Marina, Michigan City, Indiana and West Basin Municipal Marina, St. Joseph, Michigan) that have openings of 60 feet or less, containing 100 to 300 slips. Further study will be needed to review this potential entrance location and carefully assess property ownership, parkland alienation and boat launch operation in order to design a safe marina entrance. It could also be noted that an additional benefit of this alternate configuration is that it better connects the ferry terminal building to the proposed harbormaster building / public marina space.



IV. PUBLIC INPUT / WORKSHOPS

The City has had numerous public meetings and hearings regarding development of the Port property over the past several years. Eight (8) specific meetings were held during the review process for this Marina Concept Plan / Feasibility Study Assignment. These meetings are summarized as follows:

<u>Date</u>	<u>Forum</u>
September 4, 2008	County Agencies: Parks, MCDES and MCHD
September 4, 2008	DES Staff Review
September 18, 2008	Port Redevelopment Implementation Team (PRIT)
September 30, 2008	Marina Advisory Group
October 16, 2008	Workshop with Charlotte Community Groups
October 28, 2008	Team Charlotte
November 5, 2008	Developer's Workshop Meeting
December 2, 2008	"City Hall on the Road" (Terminal Building)

The overall responses from these meetings and briefings with the City Council led us to an endorsement of Option 7 with its phasing plan and the intent to pursue development of the site as quickly as possible. Further detail on the meeting summaries is contained in Appendix B.

V. CONCEPT PLAN DATA

Project Costs and Potential Schedule

Based upon the Option 7 marina plan and phasing approach, we have prepared the following construction cost estimates (2008 costs are shown):

PROJECT COST ESTIMATE SUMMARY

	Phase I	Phase II	Total
I. Utility Infrastructure / Relocations	\$5,569,974	\$1,343,142	\$6,913,116
II. Marina	\$5,876,764	\$2,539,453	\$8,416,217
III. Open Space Amenities	\$3,428,125	\$1,484,375	\$4,912,500
IV. Buildings	\$1,000,000		\$1,000,000
V. Required Miscellaneous Costs		\$3,885,000	\$3,885,000
Total:	\$15,874,863	\$9,251,970	\$25,126,833

Note: Costs do not include optional / future costs, such as:

- A. Park / public space elements, i.e., fountains, ice rink, public art, etc.
- B. Expanding harbormaster building for community center

*Preliminary Marina /Port Development Construction Budget
City of Rochester, New York*

PHASE I

I. Utility Infrastructure / Relocations

Item #	Description	Quantity	Unit	Unit Price	Total
1.	Excavation and Disposal - Slag (Premium Cost)	30,850	CYDS	\$17.55	\$541,418
2.	Excavation & Disposal - Regulated Waste (Prem. Cost)	20,550	CYDS	\$33.95	\$697,673
3.	Excavation and Disposal - Clean Fill (Premium Cost)	113,050	CYDS	\$5.00	\$565,250
4.	River Street Extension / Construction	1,200	LFT	\$400	\$480,000
5.	Portside Drive Improvements	300	LFT	\$400	\$120,000
6.	Hincher Pedestrian Improvements	300	LFT	\$300	\$90,000
7.	Corrigan Street Modification at Terminal	500	LFT	\$400	\$200,000
8.	Demolition / Erosion Control / Miscellaneous	1	LSUM	\$380,000	\$380,000
9.	Sanitary Relocation	1,725	LFT	\$200	\$345,000
10.	Watermain Relocation	750	LFT	\$100	\$75,000
11.	Storm Sewer Relocation	500	LFT	\$75	\$37,500
12.	E-One Pumping Station	1	LSUM	\$100,000	\$100,000
13.	Sewer Trench Sheeting	9,300	SF	\$60	\$558,000
14.	Dewatering	60	DAY	\$165	\$9,900
15.	Stormwater Treatment	1	LSUM	\$100,000	\$100,000
16.	Private Utility Relocations	1	ALLOW	\$25,000	\$25,000
17.	Work Zone Traffic Control	1	LSUM	\$2,500	\$2,500
18.	Survey and Stakeout	1	LSUM	\$50,000	\$50,000
19.	Mobilization (4% of Subtotal Max.)	1	LSUM	\$145,274	\$145,274
20.	Permitting / Design / Contingency Allowance (25%)	1	LSUM	\$1,047,460.00	\$1,047,460
				Subtotal:	\$5,569,974

II. Marina

Item #	Description	Quantity	Unit	Unit Price	Total
1.	General Excavation (Base Cost)	113,050	CYDS	\$6.75	\$763,088
2.	Cutoff Wall	150	LFT	\$750	\$112,500
3.	Breakwaters	300	LFT	\$1,500	\$450,000
4.	Permanent Stone Revetment	1,500	LFT	\$750	\$1,125,000
5.	Temporary Stone Revetment	700	LFT	\$500	\$350,000
6.	Floating Docks, Pilings & Slip Utilities	80	EA	\$20,000	\$1,600,000
7.	Gangways / Security	3	EA	\$40,000	\$120,000
8.	Mobilization / Demobilization (4% of Subtotal Max.)	1	LSUM	\$180,824	\$180,824
9.	Permitting / Design / Contingency Allowance (25%)	1	LSUM	\$1,175,353	\$1,175,353
				Subtotal:	\$5,876,764

III. Open Space Amenities

Item #	Description	Quantity	Unit	Unit Price	Total
1.	Marina Edge Promenade	30,000	SFT	\$20	\$600,000
2.	Promenade Seawall	1,500	LFT	\$750	\$1,125,000
3.	River Edge Promenade	10,000	SFT	\$20	\$200,000
4.	Temporary Promenade	4,500	SFT	\$15	\$67,500
5.	Lighting Allowance	1	EA	\$500,000	\$500,000
6.	Benches / Signage / Trash	1	EA	\$250,000	\$250,000
7.	Permitting / Design / Contingency Allowance (25%)	1	LSUM	\$685,625	\$685,625
				Subtotal:	\$3,428,125

IV. Buildings

Item #	Description	Quantity	Unit	Unit Price	Total
1.	Harbormaster / Control Building	2,000	SFT	\$250	\$500,000
2.	Secondary Marina Restroom	1,500	SFT	\$200	\$300,000
3.	Permitting / Design / Contingency Allowance (25%)	1	LSUM	\$200,000	\$200,000
				Subtotal:	\$1,000,000

PHASE II - Marina / Infrastructure

I. Utility Infrastructure / Relocations

Item #	Description	Quantity	Unit	Unit Price	Total
1.	Excavation and Disposal - Slag (Premium Cost)	17,200	CYD	\$17.55	\$301,860
2.	Excavation and Disposal - Regulated Waste (Prem. Cost)	11,475	CYD	\$33.95	\$389,576
3.	Excavation and Disposal - Clean Fill (Premium Cost)	63,100	CYD	\$5.00	\$315,500
4.	Work Zone Traffic Control	1	LSUM	\$1,250.00	\$1,250
5.	Survey and Stakeout	1	LSUM	\$25,000.00	\$25,000
6.	Mobilization (4% of Subtotal Max.)	1	LSUM	\$41,327.45	\$41,327
7.	Permitting / Design / Contingency Allowance (25%)	1	LSUM	\$268,628.43	\$268,628
				Subtotal:	\$1,343,142

II. Marina

Item #	Description	Quantity	Unit	Unit Price	Total
1.	General Excavation (Base Cost)	63,100	CYDS	\$6.75	\$425,925
2.	Re-Dredge Entrance Channel	5,000	CYDS	\$30	\$150,000
3.	Stone Revetment	850	LFT	\$750	\$637,500
4.	Floating Docks, Pilings & Slip Utilities	40	EA	\$17,500	\$700,000
5.	Gangways / Security	1	EA	\$40,000	\$40,000
6.	Mobilization / Demobilization (4% of Subtotal Max.)	1	LSUM	\$78,137	\$78,137
7.	Permitting / Design / Contingency Allowance (25%)	1	LSUM	\$507,891	\$507,891
				Subtotal:	\$2,539,453

III. Open Space Amenities

Item #	Description	Quantity	Unit	Unit Price	Total
1.	Marina Edge Promenade	17,500	SFT	\$20	\$350,000
2.	Promenade Seawall	850	LFT	\$750	\$637,500
3.	Lighting Allowance	1	EA	\$100,000	\$100,000
4.	Benches / Signage / Trash	1	EA	\$100,000	\$100,000
5.	Permitting / Design / Contingency Allowance (25%)	1	LSUM	\$296,875	\$296,875
				Subtotal:	\$1,484,375

IV. Required Miscellaneous Costs

1.	County Maintenance Building Relocation (Total Cost \$1M; Balance Shown)				\$635,000
2.	Boat Launch Acquisition & Construction				\$3,250,000
				Subtotal:	\$3,885,000

Note:

A 25% permitting design contingency allowance has been provided within all aspects of the construction cost estimate. Generally speaking, these costs are broken down as follows:

- 2.0% permitting
- 5.5% design
- 2.5% construction administration/management
- 15% construction contingency
- 25%

**Rochester Marina Development
Overall Schedule/City Budget/Project Investment**

This chart identifies a potential project schedule relating the upfront permitting and design time and Phase I and II construction schedules. The potential timing of the private investment on the parcels is also shown in blue.

		Five-Year Capital Planning Period								TOTALS
		01/01/09 to 06/30/09	07/01/09 to 06/30/10	07/01/10 to 06/30/11	07/01/11 to 06/30/12	07/01/12 to 06/30/13	07/01/13 to 06/30/14	07/01/14 to 06/30/15	07/01/15 to 06/30/16	
1	Permitting	\$150	\$150							
2	Phase I – Final Design, Marina	\$150	\$650	\$200						
3	Phase I – Construction			\$2,200	\$12,400					
4	Phase I – Marina Open				Spring 2012					
5	Area A, Housing Investment				\$6,000	\$6,000	\$6,200			
6	Area B, Housing Investment					\$17,000	\$17,700			
7	Phase 2 – Final Design					\$360				
8	Phase 2 – Construction						\$8,940			
9	Phase 2 – Marina Open							Spring 2015		
10	Area C, Private Investment							\$10,000	\$10,400	
11	Area D, Private Investment							\$7,000	\$8,600	
	TOTAL CITY BUDGET	\$300	\$800	2,400	\$12,400	\$360	\$8,940			\$25,200
	TOTAL PRIVATE INVESTMENT				\$6,000	\$23,000	\$23,900	\$17,000	\$19,000	\$88,900

Note: 1. All costs are represented in \$1,000's.
 2. All costs/investments are in 2008 dollars.
 3. The low-range private investment is shown.

Private Sector Investment Analysis

Based upon our experience with Great Lakes marina/condominium developments, we have identified four private investment and development scenarios which can be utilized to calculate the values of the private components of the project upon build out. These scenarios are identified as follows:

Option 7	280 units	Conservative
Option 7	430 units	Conservative
Option 7	280 units	Probable
Option 7	430 units	Probable

It would be anticipated that up to 430 residential units could be developed on the site. Market conditions through phasing of the project will dictate the exact number which will ultimately be developed. The low range of the density (280 units) would be a minimal density which can very comfortably fit on the property and bear lower project costs to the developer (as well as lower potential returns) blending the individual projects needs (such as structured parking) within the unit area. The higher range of development (430 units) would fill the site with more units, requiring additional investment in infrastructure by the private sector.

It is assumed under all scenarios that the developer will be furnished a "development-ready" site, which would have the sewer and water lines and transportation/roadway access to the property where they could immediately build the residential and/or commercial structures, as appropriate. The private developer, however, would be responsible for all development within his parcel of land, which would include parking for the private residential units, parking for visitors for the residential units, and parking for the commercial retail uses (at least the employees working within the property limits). We recommend that future developers be responsible for addressing any special foundation/soils issues and that the City would financially and technically be responsible for addressing any development cost premiums associated with pre-existing environmental contamination conditions on the development sites.

*Rochester Port Development
Private Sector Investment Potentials
Option 7 - 280 Units - Conservative Analysis*

Area "A"					
	Quantity	Unit	Unit Price	Market Values	Totals
Residential	34	3-Bedroom	\$300,000	\$10,200,000	
	20	2-Bedroom	\$175,000	\$3,500,000	
	54				
Commercial	30,000	SF	\$150	\$4,500,000	\$18,200,000
Subtotal:					

Area "B"					
	Quantity	Unit	Unit Price	Market Values	Totals
Residential	10	Penthouses	\$600,000	\$6,000,000	
	80	3-Bedroom	\$300,000	\$24,000,000	
	20	2-Bedroom	\$175,000	\$3,500,000	
	110				
Commercial	6,000	SF	\$200	\$1,200,000	\$34,700,000
Subtotal:					

Area "C"					
	Quantity	Unit	Unit Price	Market Values	Totals
Residential	66	Units	\$300,000	\$19,800,000	
Commercial	4,000	SF	\$150	\$600,000	
Subtotal:					\$20,400,000

Area "D"					
	Quantity	Unit	Unit Price	Market Values	Totals
Residential	50	On-Site	\$300,000	\$15,000,000	
Commercial	4,000	SF	\$150	\$600,000	
Subtotal:					\$15,600,000

TOTAL MARKET VALUE \$88,900,000

Total Residential Units = 280 Units
Total Commercial Area = 44,000 SF

*Rochester Port Development
Private Sector Investment Potentials
Option 7 - 430 Units - Conservative Analysis*

Area "A"					
	Quantity	Unit	Unit Price	Market Values	Totals
Residential	56	3-Bedroom	\$300,000	\$16,800,000	
	30	2-Bedroom	\$175,000	\$5,250,000	
	86				
Commercial	30,000	SF	\$150	\$4,500,000	\$26,550,000
Subtotal:					

Area "B"					
	Quantity	Unit	Unit Price	Market Values	Totals
Residential	20	Penthouses	\$600,000	\$12,000,000	
	120	3-Bedroom	\$300,000	\$36,000,000	
	40	2-Bedroom	\$175,000	\$7,000,000	
	180				
Commercial	6,000	SF	\$200	\$1,200,000	\$56,200,000
Subtotal:					

Area "C"					
	Quantity	Unit	Unit Price	Market Values	Totals
Residential	84	Units	\$300,000	\$25,200,000	
Commercial	4,000	SF	\$150	\$600,000	
Subtotal:					\$25,800,000

Area "D"					
	Quantity	Unit	Unit Price	Market Values	Totals
Residential	80	On-Site	\$300,000	\$24,000,000	
Commercial	4,000	SF	\$150	\$600,000	
Subtotal:					\$24,600,000

TOTAL MARKET VALUE \$133,150,000

Total Residential Units = 430 Units
Total Commercial Area = 44,000 SF

*Rochester Port Development
Private Sector Investment Potentials
Option 7 - 280 Units - Probable Analysis*

Area "A"					
	Quantity	Unit	Unit Price	Market Values	Totals
Residential	34	3-Bedroom	\$450,000	\$15,300,000	
	20	2-Bedroom	\$330,000	\$6,600,000	
	54				
Commercial	30,000	SF	\$150	\$4,500,000	
			Subtotal:		\$26,400,000

Area "B"					
	Quantity	Unit	Unit Price	Market Values	Totals
Residential	10	Penthouses	\$750,000	\$7,500,000	
	80	3-Bedroom	\$450,000	\$36,000,000	
	20	2-Bedroom	\$330,000	\$6,600,000	
	110				
Commercial	6,000	SF	\$200	\$1,200,000	
			Subtotal:		\$51,300,000

Area "C"					
	Quantity	Unit	Unit Price	Market Values	Totals
Residential	66	Units	\$400,000	\$26,400,000	
Commercial	4,000	SF	\$150	\$600,000	
			Subtotal:		\$27,000,000

Area "D"					
	Quantity	Unit	Unit Price	Market Values	Totals
Residential	50	On-Site	\$450,000	\$22,500,000	
Commercial	4,000	SF	\$150	\$600,000	
			Subtotal:		\$23,100,000

TOTAL MARKET VALUE \$127,800,000

Total Residential Units = 280 Units
Total Commercial Area = 44,000 SF

*Rochester Port Development
Private Sector Investment Potentials
Option 7 - 430 Units - Probable Analysis*

Area "A"					
	Quantity	Unit	Unit Price	Market Values	Totals
Residential	56	3-Bedroom	\$450,000	\$25,200,000	
	30	2-Bedroom	\$330,000	\$9,900,000	
	86				
Commercial	30,000	SF	\$150	\$4,500,000	
			Subtotal:		\$39,600,000

Area "B"					
	Quantity	Unit	Unit Price	Market Values	Totals
Residential	20	Penthouses	\$750,000	\$15,000,000	
	120	3-Bedroom	\$450,000	\$54,000,000	
	40	2-Bedroom	\$330,000	\$13,200,000	
	180				
Commercial	6,000	SF	\$200	\$1,200,000	
			Subtotal:		\$83,400,000

Area "C"					
	Quantity	Unit	Unit Price	Market Values	Totals
Residential	84	Units	\$400,000	\$33,600,000	
Commercial	4,000	SF	\$150	\$600,000	
			Subtotal:		\$34,200,000

Area "D"					
	Quantity	Unit	Unit Price	Market Values	Totals
Residential	80	On-Site	\$450,000	\$36,000,000	
Commercial	4,000	SF	\$150	\$600,000	
			Subtotal:		\$36,600,000

TOTAL MARKET VALUE \$193,800,000

Total Residential Units = 430 Units
Total Commercial Area = 44,000 SF

**Rochester Port Development
Private Sector Investment Potential Summary**

The previous four pages are summarized in the chart below. The private investment should yield property values of \$88.9M to \$193.8M upon build out of the development.

	Conservative Analysis		Probable Analysis	
	280 Units	430 Units	280 Units	430 Units
Area "A"	\$18.2	\$25.5	\$26.4	\$39.6
Area "B"	\$34.7	\$56.2	\$51.3	\$83.4
Area "C"	\$20.4	\$25.8	\$27.0	\$34.2
Area "D"	\$15.6	\$24.6	\$23.1	\$36.6
Total	\$ 88.90	\$ 132.10	\$ 127.80	\$ 193.80

Note: Values are represented in millions

Direct and Indirect Economic Benefits

The following describes the direct and indirect economic benefits of a mixed-use marina/residential/commercial development (Option 7) at the Rochester Port.

Direct benefits are considered:

- Marina slip revenues (in excess of operating costs) and values
- Marina slip license sales (committed slips to developers)
- Land sales for the residential and commercial lands
- Property taxes paid to the City as a result of the increased tax base for residential and commercial products

Indirect benefits by developing the project are considered:

- Property taxes paid to non-city entities, i.e., county, school, etc., as a result of increased property values
- Increased sales taxes
- Increased Charlotte area property values
- Increased business on the Lake Avenue corridor
- Increased business at the terminal building
- Direct and indirect spending and jobs created by boaters
- Creation of permanent and construction jobs

Land Sales and "Committed" Slip Sales

This chart illustrates land values and committed slip license fees projected to be paid by private developers purchasing property within the development zones. Please refer to Appendix C for additional discussion on slip license fee values and analysis.

*Rochester Marina Development
Private Sector Potential - Land and "Committed" Slip Sales
Option 7 - Total Project*

	Low-Range Density			High-Range Density		
Area "A" (1.74 acres)	# of Units	Unit Cost	Total	# of Units	Unit Cost	Total
Residential Units	54	\$5,000	\$270,000	86	\$10,000	\$860,000
Commercial	30,000 s.f.		\$60,000	30,000 s.f.		\$120,000
"Committed" Slips	10	\$10,000	\$100,000	10	\$20,000	\$200,000
		Subtotal:	\$430,000		Subtotal:	\$1,180,000
Area "B" (2.16 acres)	# of Units	Unit Cost	Total	# of Units	Unit Cost	Total
Residential Units	110	\$15,000	\$1,650,000	180	\$25,000	\$4,500,000
Commercial	6,000 s.f.		\$60,000	6,000 s.f.		\$120,000
"Committed" Slips	20	\$10,000	\$200,000	20	\$20,000	\$400,000
		Subtotal:	\$1,910,000		Subtotal:	\$5,020,000
Area "C" (1.47 acres)	# of Units	Unit Cost	Total	# of Units	Unit Cost	Total
Residential Units	66	\$20,000	\$1,320,000	84	\$30,000	\$2,520,000
Commercial	4,000 s.f.		\$40,000	4,000 s.f.		\$80,000
"Committed" Slips	10	\$15,000	\$150,000	10	\$20,000	\$200,000
		Subtotal:	\$1,510,000		Subtotal:	\$2,800,000
Area "D" (1.05 acres)	# of Units	Unit Cost	Total	# of Units	Unit Cost	Total
Residential Units	50	\$25,000	\$1,250,000	80	\$35,000	\$2,800,000
Commercial	4,000 s.f.		\$40,000	4,000 s.f.		\$80,000
"Committed" Slips	10	\$15,000	\$150,000	10	\$25,000	\$250,000
		Subtotal:	\$1,440,000		Subtotal:	\$3,130,000
Total Residential Acres: 6.42 acres						
	Total			Total		
Residential Units	280			430		
Commercial Area	44,000 s.f.			44,000 s.f.		
"Committed" Slips	50			50		
	TOTAL SALES	\$5,290,000		\$12,130,000		

**Projected Annual City Tax Increase
Conservative Analysis**

**Projected Annual City Tax Increase
Probable Analysis**

The following two charts illustrate the potential project impact on city, school and county property taxes as a result of the various analyses (conservative and probable) and density (280 to 430 units):

	<u>280 Units</u>	<u>430 Units</u>
Tax Assessment Increase:	\$88,900,000	\$133,150,000
Estimated Annual Property Taxes Paid on Increased Tax Base:		
Tax Base, Allocated as:	\$88,900,000	\$133,150,000
Residential	\$81,900,000	\$126,150,000
Commercial	\$7,000,000	\$7,000,000
Taxes (Homestead)		
City	\$458,149	\$705,683
School	\$1,226,616	\$1,889,349
County	<u>\$903,430</u>	<u>\$1,391,547</u>
Total Homestead Tax Increase	\$2,588,195	\$3,986,578
Taxes (Non-Homestead)		
City	\$76,538	\$76,538
School	\$208,201	\$208,201
County	<u>\$77,216</u>	<u>\$77,216</u>
Total Non-Homestead Tax Increase	\$361,955	\$361,955
Totals:		
City	\$534,687	\$782,221
School	\$1,434,817	\$2,097,550
County	<u>\$980,646</u>	<u>\$1,468,763</u>
Total Tax Increase	\$2,950,150	\$4,348,534
Present Worth City Taxes @ 6%; 20 Years	\$6,132,817	\$8,972,013
Present Worth All Taxes @ 6%; 20 Years	\$33,837,988	\$49,877,342

Note: Residential Values are 100% Homestead

	<u>280 Units</u>	<u>430 Units</u>
Tax Assessment Increase:	\$127,800,000	\$193,800,000
Total Residential	\$120,900,000	\$186,900,000
Homestead Residential	\$60,450,000	\$93,450,000
Non-Homestead Residential	\$60,450,000	\$93,450,000
Commercial	<u>\$6,900,000</u>	\$6,900,000
Total Non-Homestead	\$67,350,000	\$100,350,000
Taxes (Homestead)		
City	\$338,157	\$522,759
School	\$905,360	\$1,399,601
County	<u>\$666,817</u>	<u>\$1,030,837</u>
Total Homestead Tax Increase	\$1,910,334	\$2,953,197
Taxes (Non-Homestead)		
City	\$736,405	\$1,097,227
School	\$2,003,191	\$2,984,710
County	<u>\$742,930</u>	<u>\$1,106,950</u>
Total Non-Homestead Tax Increase	\$3,482,526	\$5,188,887
Totals		
City	\$1,074,562	\$1,619,986
School	\$2,908,551	\$4,384,311
County	<u>\$1,409,748</u>	<u>\$2,137,786</u>
Total Tax Increase	\$5,392,861	\$8,142,083
Present Worth City Taxes @ 6%; 20 Years	\$12,325,141	\$18,581,112
Present Worth All Taxes @ 6%; 20 Years	\$61,855,690	\$93,389,050

Note: Residential Values are 50% Homestead / 50% Non-Homestead

Direct City Economic Benefits Summary

	Conservative Analysis		Probable Analysis	
	280 Units	430 Units	280 Units	430 Units
1. Land & "Committed" Slip Sales	\$5,290	\$12,130	\$5,290	\$12,130
2. Marina Supportable Cost @ \$32,000/Slip	\$3,700	\$3,700	\$3,700	\$3,700
3. A) Present Worth of City Property Tax Increase (Full Build Out) (Present Worth at 6%; 20 Years)	\$6,132	\$8,972	\$12,325	\$18,581
Direct City Economic Benefit (1+2+3A)	\$15,122	\$24,802	\$21,315	\$34,411
<i>B) Annual City Tax Increase</i>	<i>\$534</i>	<i>\$782</i>	<i>\$1,074</i>	<i>\$1,619</i>
4. A) Total Tax (City, County, School); Present Worth 6%; 20 Years	\$33,838	\$49,877	\$61,855	\$93,389
<i>B) Annual Combined Tax Increase</i>	<i>\$2,950</i>	<i>\$4,348</i>	<i>\$5,393</i>	<i>\$8,142</i>

Note: Annual marina slip revenues (net of operating costs) are estimated at \$236,000 per year.

Indirect Economic Benefits Summary

Indirect project benefits include the following:

- Increased Sales Tax Revenues
 - Increased Charlotte Area Property Values
 - Stimulate Business on Lake Avenue Corridor
 - Stimulate Business at Terminal Building
 - Create Jobs
- Construction jobs are projected as the following for both the public infrastructure and private investments:

	\$25M Public Infrastructure	\$75M Private Investment (Housing/Commercial)	Total Construction Jobs
Direct	125	375	500
Indirect	275	825	1100
Inducing	225	675	900
Total	625	1875	2500

- Direct and Indirect Permanent Jobs 300

This is the projection of permanent jobs as a result of the marina and surrounding private residential and commercial development. The total is estimated based upon similar waterfront projects in the Great Lakes region. Please also refer to the Economic Impact Analysis for the Marina found in Appendix D (pages x - xvii of this report) for an analysis of the marina's impact (non-housing or commercial) on the local economy. It is noted that the MSU model identifies that 50 jobs will be created due to the marina (both direct effect and secondary effect). The additional 250 jobs are those created due to development of the residential (condominium, hotel, etc.) and commercial components in the project (44,000 s.f. commercial). This is in addition to the jobs created due to increased business/commercial activity along Lake Avenue and due to redevelopment of the ferry terminal building.

Potential Project Funding Sources

A number of potential funding sources have been identified that may be appropriate to offset the initial public investment in the project. These are summarized as follows:

1. Federal Boating Infrastructure Grant (BIG)
Applications are due annually in October.
2. TIF Legislation
Requires new State of New York legislation.
3. Special Assessment District Combined with Empire Zone Designation
Possible "hybrid" TIF action to maximize revenues for the City to reimburse the outlay for public infrastructure.
4. Marina Phase II – Private Investment Opportunity
Private developers have expressed an interest to possibly build/pay/own Phase II of the marina.
5. U.S. Army Corps of Engineers Participation
Ongoing federal funding that may have application to some of the public infrastructure elements and potential federal appropriations under the City's \$10 million Port of Rochester WRDA 2007 authorization.
6. Federal I.T.S. Grant
7. L.W.R.P. Environmental Protection Fund (E.P.F.) (Public Promenade, Trails)
8. 2009 Federal Stimulus Money from President Barack Obama
9. Private Sector Grants for Artwork, Naming Opportunities
10. Other

**Rochester Port Development
"Next Steps"**

The following are an outline and brief description of the next steps needed to entitle the property, should the City wish to proceed. An 18-month timetable is suggested in the project schedule noted on page 29 of the report.

Regulatory Process / Tasks

- I. Preliminary Engineering & Permitting Services
 - A. Pre-Application Conference(s) with State & USACE
 - B. Preliminary Design / Complete Plans to 30%
 - C. Computer Model / Wave Study
 - D. Silt Study
 - E. Basin Flushing / Water Quality Study
 - F. Dredging / Excavation Disposal Site Alternatives
 - G. Beneficial Use Determination of Slag
 - H. Federal Boating Infrastructure Grant (BIG)
 - I. Public Right of Way Abandonment
 - J. SEQR / NEPA
 - K. Parkland Alienation / Mitigation of Boat Launch
 - L. Historic / Archeological Study
 - M. Photosimulation of Views

**Rochester Port Development
"Next Steps"**

Regulatory Process / Tasks

- II. Other Studies
 - A. Site Design Guidelines
 - B. Developer RFPs
 - C. Relocate County Maintenance Garage
 - D. Define Public Spaces

The following are studies / reports / work tasks that are anticipated to be required by state and federal agencies having jurisdiction over the application process of the project:

Permit Applications – State of New York and U.S. Army Corps of Engineers

A. Pre-Application Conference of State and Federal Agencies

This would include meetings with appropriate state and federal agencies to review the project goals and objectives and discuss the need and extent of the marina application documents and Special Technical Studies which may be needed to accompany the application.

B. Complete Design Plans to a 30% Level

This will allow a greater level of detail in the project plans to determine calculations for project quantities and additional preliminary engineering to evaluate site constraints relative to proposed plan details. Compliance with the existing storm water ordinance of the City will also be addressed in this step considering discharge to ponds and/or storm water treatment system prior to discharge to the Genesee River. Additionally, the impacts to the City utility systems and traffic engineering would be studied in greater detail.

C. Computer Model / Wave Study of Harbor

A wave study will be needed in order to optimize the design of the marina entrance whether located at the northerly or one of the two southerly locations. The study will also address the dynamics of the wave conditions created by river surges inside the marina basin and identify the need, if any, for additional wave suppression devices, such as stone revetments, internal breakwaters, underwater surge deflectors, etc. Hopefully, the wave study could be completed utilizing a computer numeric model. However, if agencies (USACE) require, a physical model could also be prepared in order to evaluate the effects of the project on wave conditions.

D. Silt Study

A simple desktop or more complex computer generated or physical silt study may be needed at the marina entrance to the Genesee River in order to evaluate the effects of additional wave protection/breakwaters impacting the flow of the Genesee River and resultant impacts of siltation/sediment transport. The proposed marina entrance structures cannot adversely affect the river flows/impacts on silt deposits in the project area.

E. Basin Flushing / Marina Water Quality

A water quality evaluation of the marina basin may be needed in order to identify basin flushing conditions, in particular during summer months with low flow periods of the Genesee River. This flushing study would evaluate circulation tubes that may be needed at the downstream end (assuming the marina entrance is at the upstream end), in addition to other mechanical devices that may be considered to move flow through the marina basin to minimize stagnation and algae growth.

F. Dredging / Excavation Disposal Site Alternatives

This would be a study of the available site alternatives, including recommendations and cost estimates identifying where the disposal sites could be permitted in the near proximity to the project. Disposal alternatives could consider: (1) onsite fill utilization where appropriate, (2) disposal at a licensed landfill, (3) disposal at a municipal property, such as an airport site, and (4) disposal to the triangular wedge/sweep between the westerly pier at Lake Ontario, adjoining the Ontario Beach Park (per previous USACE study).

G. Beneficial Use Determination of Slag

This work would include certifying through the state process that the existing slag material can be utilized on site or elsewhere for structural roadway base.

H. Federal Boating Infrastructure Grant (BIG) Application

Prepare and file the federal BIG application due in October annually (2009).

I. Public Right-of-Way and Official Map Amendment

This would include preparing survey documents and meetings and correspondence to administer the process to abandon existing and create new public road right-of-ways for project purposes.

J. State Environmental Quality Review / National Environmental Policy Act

This would include obtaining appropriate state approvals for project review purposes.

K. Parkland Alienation Mitigation Plan / Boat Launch Plans

This would include preparation of the necessary drawings, documents and meetings and/or processing of the approval process to modify the existing

Parkland Alienation Mitigation Plan and relocate the boat launch and/or parklands to appropriate other locations to allow the development to proceed.

A specific boat launch relocation plan, including appropriate permitting once the site has been identified, will need to be prepared. Please refer to Appendix A for further discussion/plans/costs of potential boat launch options.

L. Historic/Archeological Studies

This would be historical/archeological studies (SHPO), building height/view studies, zoning/Local Waterfront Revitalization Programs review or others that may arise during the course of this work.

M. Photosimulation of Views

This work would include preparing a 3-D image of the site with building heights shown, to observe public view corridors and visual impacts affecting sight lines.

Other Studies and Design Efforts

A. Site Design Guidelines

This would include preparation of design guidelines which would be adopted by the Charlotte community/city to identify what this project will look like once completed. The design guidelines could address building heights, size, density, mass and appearance, i.e., architectural themes, etc. Additionally, the guidelines could identify landscaping requirements, site planning standards (parking), etc. This could also identify the level and detail of public features that the City will commit to as part of the project, i.e., the marina, public promenades, public spaces, fountain sprays, activity centers, etc. (see item D., below).

B. Developer RFPs

This would include preparation of an RFP bid document that would be submitted to developers to bid on specific phases (or the entire project) for development. The RFP would contain appropriate background of the project, surveying geometry of the available land considered for sale/purchase, design guidelines, etc. The RFP might include the developer's proposal of the following:

1. Price for land (consider C.O.L.A. escalators/percentage of gross sales, lump sum amounts, etc.)
2. Financing plan by developer
3. Architectural design, elevations and site plans

4. Project schedule
5. Others, as appropriate

C. Relocate County Maintenance Garage

This would include preparation of appropriate plans, specifications and contract documents for relocation of the County Maintenance Garage off site. It is noted that substantial work on this has already been completed so perhaps the effort here is minor.

D. Define Public Spaces

This effort would include establishment of additional public spaces that may be desired and/or reserved within the project area. These public spaces could include, but are not limited to, the following:

- Small winter ice rink
- Artwork locations
- Fountains and sprays for children
- People gathering places for small concerts within the public promenade and public space areas
- Others, as appropriate

APPENDIX

- Appendix A Boat Launch Relocation Options and Cost Estimates
- Appendix B Public Meeting Summaries
- Appendix C Discussion on Slip License Fees and Marina Feasibility
- Appendix D Economic Impact Analysis for the Marina

APPENDIX A

BOAT LAUNCH RELATION OPTIONS AND COST ESTIMATES

The following is a detailed discussion regarding three possible boat launch relocations which may service a boat launch facility in the event the Port of Rochester boat launch (owned and operated by Monroe County) is mitigated/alienated from the Port of Rochester site. These launch locations are described as follows:

Boat Launch Alternate #1 – River Street

Description – Demolition of existing buildings and parking spaces at River Street Marina to construct proposed parking area and boat launch.

Location – West side of Genesee River, on River Street north of Latta Road.

Features – Parking for 105 (10' x 45') parking spaces for vehicles and boat trailers are accessed across River Street and CSX railroad tracks from the launch.

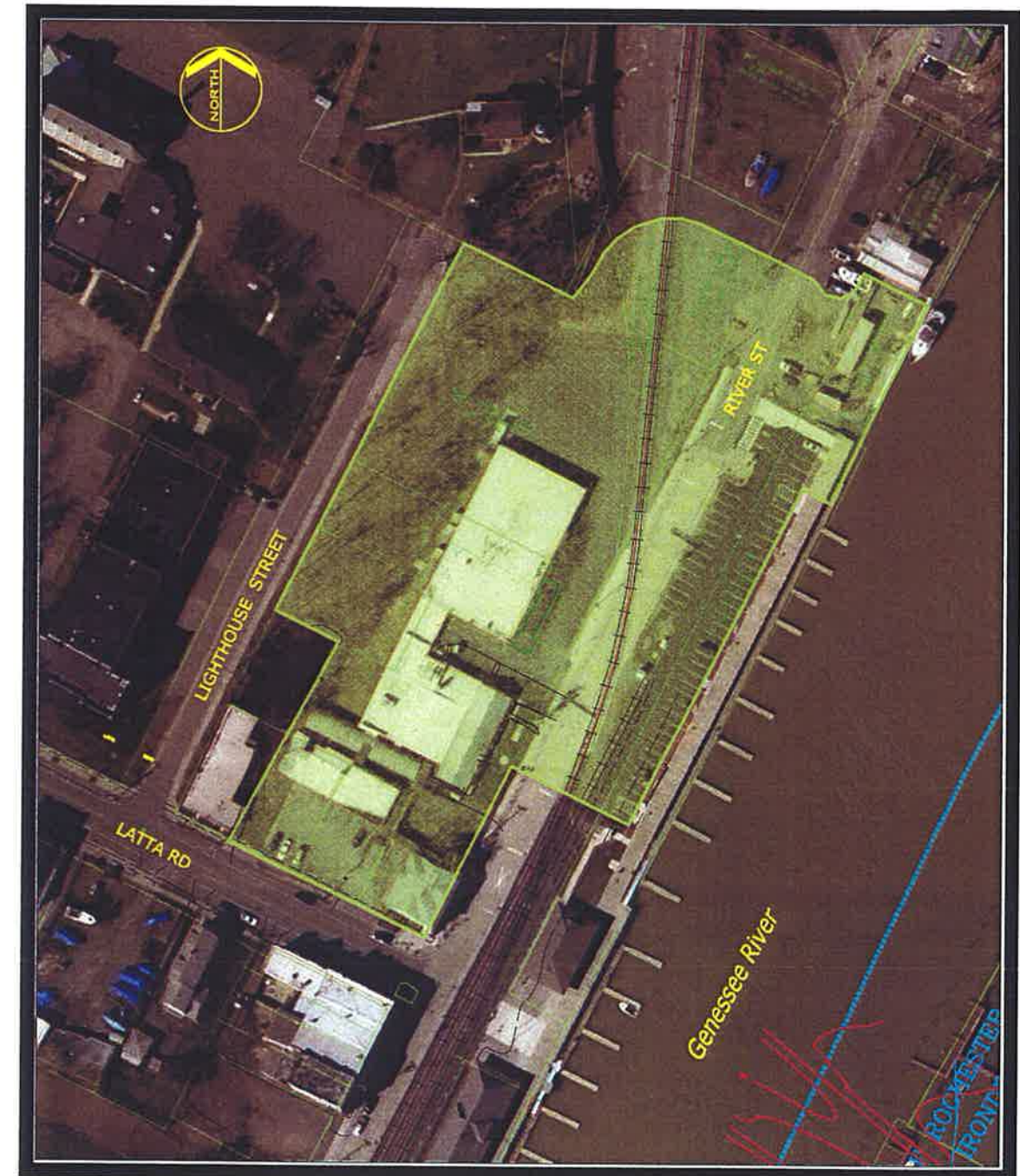
Advantages –

- Adjacent to River Street Marina
- Near current boat launch location
- Good access from River Street and Latta Road

Disadvantages –

- Property acquisition will be expensive
- Expensive construction to overcome site constraints, including retaining wall along Lighthouse Street, building demolition, removal of river wall
- Potential conflicts with vehicles, trains and pedestrians
- Most of the land is not City owned

Estimate of Design Construction Costs - \$4,500,000 (excluding property acquisition and easements)



Boat Launch - Alternate #1

**CITY OF ROCHESTER
Port of Rochester**

DATE: December 2008

Boat Launch Alternate # 2 – East Side Near O’Rorke Bridge

Description – Construct proposed parking area and boat launch on east side of river, just south of the bridge. The site, which is partially located in the Town of Irondequoit, is currently a gravel access road and boat storage area for boat slip users along the east side of the river. The City owns from 100’ – 250’ strip of land on the east side. A private marina operator leases the slips from the City. The area can be accessed from Marina Drive, off of Pattonwood Drive.

Location – East side of Genesee River, just south of the O’Rorke Bridge

Features – Parking for 105 (10’ x 45’) parking spaces for vehicles and boat trailers are accessed from Marina Drive, off of Pattonwood Drive. A portion of the parking is located under the bridge.

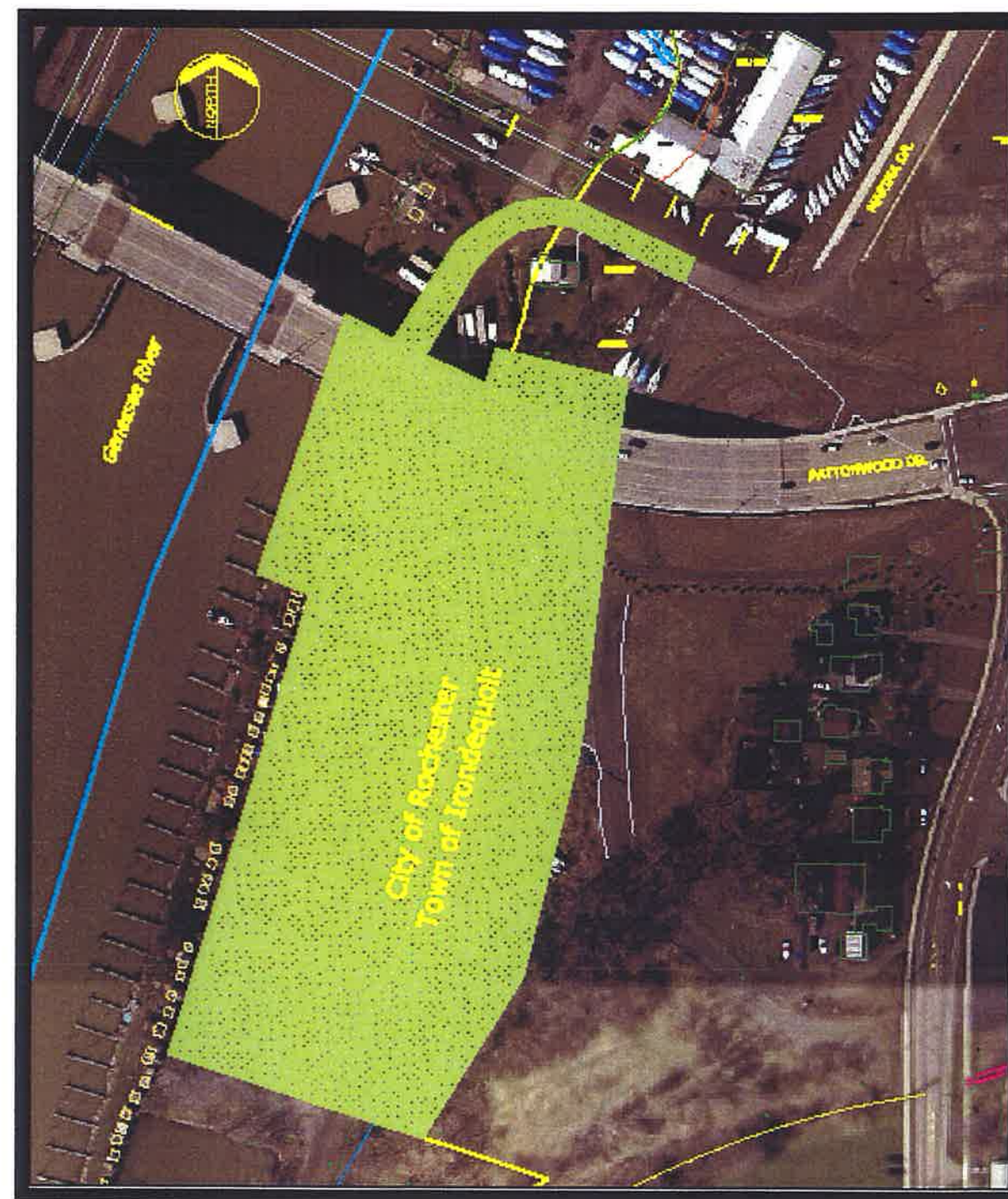
Advantages –

- City of Rochester owns most of the property
- Similar land use; area currently being used for boaters
- Layout takes advantage of un-utilized land under bridge
- Previous planning studies had envisioned a marina and boat launch at this location

Disadvantages –

- Action will require inter-municipal agreement with Town
- Distance from existing launch on opposite side of river from proposed marina
- Relocate trail around launch

Estimate of Design Construction Costs - \$3,250,000 (excluding property acquisition and easements)



Boat Launch - Alternate #2
CITY OF ROCHESTER
Port of Rochester
DATE: December 2008

Boat Launch Alternate # 3 – Petten Street

Description – Construct proposed parking area and boat launch at end of Petten Street just south of existing boat trailer parking area.

Location – West side of Genesee River, at Petten Street.

Features – Parking for 105 (10' x 45') parking spaces for vehicles and boat trailers with access from Petten Street which has a steep grade and railroad crossing.

Advantages –

- Previous planning and design efforts had envisioned a boat launch at this location and a parking lot was constructed that accommodates 9 trailer spaces and 60 vehicles
- City of Rochester owns most of the property
- Similar land use; area currently being used for boating facilities

Disadvantages –

- Difficult access thru residential area and steep grade
- Property acquisition and shared access legal issues to resolve
- Distance upriver to Port and Lake

Estimate of Design Construction Costs - \$3,800,000 (excluding property acquisition and easements)



Boat Launch - Alternate #3
CITY OF ROCHESTER
Port of Rochester
DATE: December 2008

APPENDIX B

PUBLIC MEETING SUMMARIES

The following are public meeting summaries for the focus groups / key stakeholders regarding the project.

September 4, 2008

FORUM: County Agencies: Parks, MCDES and MCHD

Several issues related with the proposed development of a marina at the Port impact County Facilities and Operations, such as, the algae odor problem at the beach, the boat launch and the County's maintenance building.

The County commissioned USACOE to study the algae odor problem and come up with recommendations. Extending the east end of the beach in a crescent shape to the end of the west pier was a viable option but rejected because of the \$23M cost to import the fill and armor stone needed. The group discussed the merits of using the basin excavated material, including slag, for the beach fill material. A second alternative looked at a mechanical pumping option to pump the algae over the pier to the river. The cost of a permanent pump station was determined to be impractical. The merits of using MCPW portable pumps on a temporary basis during peak algae periods was discussed.

September 4, 2008

FORUM: DES Staff Review

Four concept sketches of potential marina basin layouts were presented and discussed with group. Marina market study found that the Rochester market could support 400-500 additional boat slips. Site constraints limit the size of an inland basin to 100-150 slips. Slip sizes would be 35' – 100' long to accommodate larger boats.

The preferred marina layout would have its entrance south of the terminal building to minimize effect of river surge. This marina layout could be phased to avoid disturbing County boat launch to a later date when relocation issues were worked out.

Each concept sketch addressed impact on parking. There are over 800 existing parking spaces at the Port. Residents in Charlotte have stated that a minimum of 400 spaces are needed. The concept plans all provide between 400-500 spaces with 200-300 spaces nearest the park preserved.

Marina related development could occur around the marina basin to take advantage of views of the lake, river and marina. A general rule of thumb for marina developments is 1 boat slip for every 3-4 residential units.

A preliminary discussion of a project schedule identified the following items:

1. Permitting 1 – 2 years.
2. Design, acquisition and relocation of County boat launch 2 – 3 years.
3. Parkland alienation 2 – 3 years.

September 18, 2008

FORUM: Port Redevelopment Implementation Team (PRIT)

The Consultants presented results of market study and 5 concept sketches of marina layouts. The advantages and disadvantages of each option were discussed along with the impacts on the various site constraints, including, wave surge, parking, soils, upland development, boat launch, parkland alienation, utilities and costs.

Doug Benson reviewed the status of the update to the LWRP and how that process is being coordinated with the marina study.

September 30, 2008

FORUM: Marina Advisory Group

Five concept sketches for marina layouts and upland development were presented to the group for their feedback. The following represents a summary of the comments received.

1. There is still significant wave surge from northeasterly storms that causes damage up river. Design of the basin entrance will be important to mitigate the surge.
2. There was general agreement with the results of the market study that there is demand for 400-500 additional boat slips. Slips 35' – 100' long for larger vessels are needed.
3. The upland marina development layouts showed an appropriate balance of development density and scale and preservation of parking.

October 16, 2008

FORUM: Workshop with Charlotte Community Groups

Presentations were made on the LWRP update and the marina study. Six marina concept layouts were discussed. Approximately 20 people attended including the leaders of several neighborhood and business groups. Two representatives of the Department of State attended the meeting. Attendees were asked to fill out a site constraints matrix which ranked the 6 options over 12 site constraints. The group overwhelmingly chose Option 5.

October 28, 2008

FORUM: Team Charlotte

A presentation was made to the group on the various marina concept plans and the associated impacts. Approximately 40 people attended. Several people spoke in favor of the project and their preference for option 5.

November 5, 2008

FORUM: Developer's Workshop Meeting

The Consultants reviewed the Market demand study, Marina concept layouts, upland development plans and similar waterfront development concepts. The attendees included representatives from Mark IV, Riedman Development, Costello & Son and DeWolff.

The following represents a summary of the comments received.

1. Would like to see a greater density of residential development, up to a total of 600-700 units to make the project financially viable.
2. Preference for a private marina or at least a certain number of slips set a side for owners of the residential units that would be transferable with unit.
3. To mitigate negative image of mid-rise towers adjacent to public parking lots, suggestion was made to move buildings closer to marina basin.
4. Asked City to consider master developer for entire marina development to ensure overall quality of development and better coordination.

APPENDIX C

DISCUSSION ON SLIP LICENSE FEES AND MARINA FEASIBILITY

Based upon public input received from the study focus groups and our experience with similar mixed-use, marina/waterfront communities, the project team is recommending that some of the boat slips in the Port of Rochester marina be dedicated to the surrounding condominium developments. These "committed slips" could also be made available for City residents (or others) living outside of the condominium community at the Port. The dedication of those slips would allow developers to commit those slips to buyers of adjoining condominium units to add value and improve marketability of those condominiums. Because the marina is to be developed as a public marina, we feel control of the marina should, however, remain in the public's hands so the marina could be utilized both for seasonal slips, transient slips and dedicated seasonal slips, in addition to public waterfront events.

Therefore, this "committed slip" could be in the form of a personal slip license, which would be similar to the concept being considered for implementation at the Chicago Park District for its future Navy Pier Marina project. The City will need to carefully review the legality of slip licensing and its implementation program to see if it even is a possibility, given the existing laws and policies governing long-term leasing of City property.

This concept would be similar to the approach used by a private developer if he/she were to proactively build and market the marina along with the adjoining condominiums. The project team feels that under that scenario, these slips would be sold for \$30,000 to \$50,000+ each as a limited common element of a residential unit. The buyer would also need to pay an annual slip operational cost which is probably \$800 to \$1,000 per year (plus taxes) as a private slip.

This section will also discuss the marina's feasibility/cash flow to identify the economic value of the marina.

A. Slip License Fee Considerations

The value of the slip license is more or less the same as (or similar to) the value of a condominium slip. Condominium slip values tend to vary greatly; however, they are often consistent when compared with typical rental charges in an area. For example, the most recent sale prices of slips in New Buffalo, Michigan, that have nearby (not adjacent) parking have been about \$1,200 per lineal foot on average (typically about \$50,000 for a 41-foot slip). The rates for 2008 at the Oselka Marina for a 41-foot slip, which was just rehabilitated, were \$4,100 and scheduled to increase to \$4,400 in 2009. Also, rates at the Pleasure Island Marina in this same basin were \$4,500 for a 41-foot dock. A comparison of rent vs. price indicates that

price paid is about 11 to 12 times rent – a trend similar to what has been seen in other high-demand harbors. In low-demand harbors, this ratio can drop to about 8 to 1.

Let's assume value is about 10 times market rent in Rochester. Using \$85.00 per lineal foot as market rent and a ratio of 10 and standard 40-foot slip, the market value of that slip, if sold as condominium, would then be \$34,000 (40 ft. x \$85.00 per l.f. x 10).

A similar number can be supported by capitalizing the savings on taxes and reasonable dues through slip ownership.

Using the non-homestead tax rate of 5.71% of value, the taxes that would be paid on a \$34,000 purchase would be \$1,941. The following small marinas that provide summer storage only, roughly indicate that operating expenses can be expected to approximate \$800 per slip, which would be passed on to owners in the form of dues.

Comparable Expense Properties								
Comparable #	1		2		3		4	
Slips	110		63		199		26	
	Amt. per Slip	% of Inc.	Amt. per Slip	% of Inc.	Amt. per Slip	% of Inc.	Amt per Slip	% of Income
Unit Income	\$2,021	100.00%	\$1,446	100.00%	\$2,005	100.00%	\$4,831	100.00%
Expenses								
Insurance	\$71	3.50%	\$58	4.00%	\$65	3.24%	\$230	4.76%
Maintenance	\$406	20.09%	\$581	40.18%	\$64	3.19%	\$377	7.80%
Utilities	In Maint.		\$167	11.55%	\$84	4.19%	\$202	4.18%
Administration	In Maint.		\$94	6.50%	\$159	7.93%	\$126	2.61%
Wages	\$255	12.60%	\$265	18.33%	\$145	7.23%	\$0	0.00%
Total Op. Exp.	\$731	36.18%	\$1,165	80.56%	\$517	25.79%	\$935	19.36%
Reference	Woodland		Harbortown		HCN		Pleasure	
Remarks			Typical Maint. is about \$250 in two other years. High expense ratio because of low income per slip				Includes a small building with a first floor commercial space and lavs. and second floor residential unit. No wages.	

Table 1 Marina identities are confidential as Operating Statements are Privileged

Adding dues to taxes, the total annual, ongoing expense of ownership is \$2,741.

In order to place a value on the "savings," let's return to the New Buffalo, Michigan example. Slips selling for \$50,000 are paying annual taxes of about \$1,118 (5.2% on an assessed value of \$21,500). The selling realtor indicated that annual dues are \$225 per quarter (which includes electric). These ongoing expenses total \$2,018, indicating that there is a benefit to ownership of \$2,482 annually when compared with the cost to rent. This sale indicates that the expected rate of return is about 5.0% calculated by dividing the sale price of \$50,000 by the estimated annual savings of \$2,482.

<i>Slip License Fee</i>		
	<u>New Buffalo Example</u>	<u>Subject</u>
Market Rent	\$4,500	\$3,400
Taxes	\$1,118	\$1,000
Dues Based on \$225 per Quarter	<u>\$900</u>	<u>\$800</u>
Total Annual Costs	\$2,018	\$1,800
Annual Savings	\$2,482	\$1,600
Rate of Return	4.96%	/5%
Indicated Value		\$32,000

The rate of return abstracted from the example is much lower than the rate of return seen in other investments as individual slips are purchased for purposes of value "in use," not as investments. While a developer might argue that the slip licenses are being purchased as investments, the math, unfortunately, does not seem to work in that direction. First, if licenses are to be sold, they can be sold to anyone, including a user at large who, as the New Buffalo example illustrates, is perfectly willing to accept the low rate of return as value "in use." Second, the developer is getting "value in use" as the slip license will pass through to an end user – that being the person who buys the finished unit. Also, the developer has no risk in this case as the City is building the marina. Lastly, the developer benefits by purchasing the license in that they can then offer a permanent slip location, proximate to a specific slip in the marketing of the residential units.

The process is basically reversed to obtain a value for the license; by capitalizing the residual income after paying operating expenses (dues) and hypothetical taxes. The licensee will still pay rent; however, out of that rent, hypothetical taxes and dues (operating expenses) are paid. While the exact amount of taxes that a similar, non-municipal development might pay is speculative, given the rates that other marinas in this market are paying (marinas investigated only pay about \$200 per slip) a \$1,000 per slip tax estimate is very generous. Note that the lower the hypothetical taxes, the higher the value of the slip license. Therefore, it is our opinion that this results in a conservative estimate. Reversing the process used in abstracting the rate of return, the differential between market rent and what would be the annual costs to own in the Rochester market, is capitalized at 5% to obtain an indication of the license value of \$32,000 or \$800 per lineal foot. The rates utilized in the slip license fee projections "committed slips" on page 35 have conservatively been estimated beginning at \$10,000/slip in Year 1 and increasing to \$25,000 in the last phase (Years 5 to 10). As a comparison, the projections for these slip license values in Chicago are \$30,000 to \$50,000 per slip (up to \$100,000 for larger slips).

Again, as discussed earlier, the City will need to carefully review the legal issues surrounding this type of land use/licenses and identify the implementation program necessary to support this concept, if pursued.

B. Marina Cash Flows/Feasibility

The marina cash flows can be estimated using reasonable assumptions about the number of units that will be licensed and the number of units that will be leased to the public at large, plus the expenses already estimated at about \$800 per unit. While there may be different actual strategies, this illustration assumes that about 50% of the 35- and 40-foot slips will be available for license purchase. The analysis is broken down into a two-phase development with 79 units in the first phase. Phase II will consist of 39 slips of which 10 are 35-foot slips and 31 are 40-foot slips. (Phase II will also result in eliminating two 30-foot slips during the phasing/construction process.)

The following table summarizes a number of needed calculations: the approximate price of licenses by slip length, the estimated number of licenses available in each phase, the income for each slip by length, the total income, and the total income by length and by phase. The end result of the table is an estimate of income from licenses that will be immediate income in the first year of any phase, and the average income that will be produced per slip.

Average Income and License Revenue, by Phase

Phase I Slips

<u>Length</u>	<u>Qty.</u>	<u>Market Rent</u>	<u>Slip Rate</u>	<u>Total Income</u>	<u>License Fee</u>	<u>Units Licensed</u>	<u>License Revenue</u>
30	20	\$85.00	\$2,550	\$51,000	\$24,000		
35	38	\$85.00	\$2,975	\$113,050	\$28,000	16	\$448,000 47600
40	8	\$85.00	\$3,400	\$27,200	\$32,000	4	\$128,000 13600
50	8	\$85.00	\$4,250	\$34,000	\$40,000	4	\$160,000 17000
60	5	\$85.00	\$5,100	\$25,500	\$48,000		
70	0	\$85.00	\$5,950	\$0	\$56,000		
Total	79			\$250,750		24	\$736,000 \$78,200

Average Income per Slip

\$3,174

Phase II Slips

30	-2	\$85.00	\$2,550	-\$5,100			
35	10	\$85.00	\$2,975	\$29,750	\$28,000	5	\$140,000
40	31	\$85.00	\$3,400	\$105,400	\$32,000	21	\$672,000
Total	39			\$130,050		26	\$812,000

Average Income, Phase II

\$3,335

Note: The Marina Concept Plan (Option 7) will contain the following slip size/mix:

48	35' slips
39	40' slips
8	50' slips
2	60' slips
2	75' slips
	570 l.f. broadside dockage
<u>18</u>	30' slip equivalents
118	Total Slips

The 570 lineal feet is broken down as follows: 330 lineal feet located in the northerly "semi-circle" of the marina near the public events area and 240 lineal feet located on the "large yacht" pier, which is 120 feet long (and could contain two (each) 100-foot to 150-foot super yachts or up to eight small transient boats).

To summarize, the average income per slip in Phase I is \$3,174. Additionally, license fees from the sale of 35-foot, 40-foot and 50-foot slips will total \$736,000. In Phase II, average income will increase slightly as the average slip size is larger.

The average slip revenue, license sales and expenses are then combined to form the following cash flows:

Cash Flow

	Phase I			Phase II	
Average Income per Slip	\$3,174			\$3,335	
Year	1	2	3	4	5
Beginning Units	79	35	15	39	0
Units Licensed	24	0	0	26	0
New Units Leased	20	20	15	13	0
Remaining Units	35	15	0	0	0
Income					
Licenses	\$736,000	0	0	\$812,000	\$0
Units Leased	\$114,264	\$177,744	\$225,354	\$355,419	\$355,419
Total Income	\$850,264	\$177,744	\$225,354	\$1,167,419	\$355,419
Expenses @ \$800 per Leased Unit					
Net Income	-\$35,200	-\$51,200	-\$63,200	-\$94,400	-\$94,400
Terminal Value @ 8%	\$815,064	\$126,544	\$162,154	\$1,073,019	\$261,019
Cash Flows	\$815,064	\$126,544	\$2,026,925		\$3,262,738
Present Worth of Phase I @ 6%	\$2,719,545				
Cash Flows, Phases I and II	\$815,064	\$126,544	\$162,154	\$4,335,757	
Present Worth of Phases I and II @ 6%	\$4,452,025				

The previous table has several parts. The top of the table outlines the rate of lease-up assumed in the creation of the cash flows. Basically, it is reasonable to assume that 20 units per year can be leased to the public at large in addition to those units that have sold licenses and which will more than likely be leased to developers. At that pace, the first phase is leased out in three years.

About 50% of the units in Phase II are also assumed to be sold licenses. Rather than complicate the problem for a nominal difference in income in a fifth year, the remaining units (25) are assumed to all be leased in Year #4. Year #5 is included only to calculate a terminal value based on stabilized income (an assumed sale), which is then added to Year #4 cash flow.

On the expense side, expenses are based on the number of occupied units. This is an appropriate comparison since this facility should require little maintenance in the first few years. The cash flows are equal to the income from operations, plus a terminal value that is the capitalized, stable income added to the final year. For capitalization purposes and discount purposes, a rate of 8.0% has been used. This rate is roughly equal to the mortgage constant for a 20-year note bearing interest at 6.0% and is the approximate cost of money for the community (Mortgage Constant = 8.22% under these terms, assuming a single, annual payment). Discounting the cash flows from Phase I alone results in a present worth of \$2,719,545 (say \$2,720,000) and for both Phases I and II of \$4,452,025 (say \$4,450,000).

The model produced here assumes a level income stream. If an assumption is made that say, income and expenses will both increase by about 2% per year, then cash flows can either be changed completely, or the discount rate can simply be reduced to 6.0%; either way the answer is about the same. If that assumption is made, the present worth of the cash flows is \$3,040,484 rounded to \$3,040,000 for Phase I only and \$5,019,390 rounded to \$5,020,000 for both phases.

APPENDIX D

ECONOMIC IMPACT ANALYSIS FOR THE MARINA

The following is an economic impact analysis prepared for the proposed Port of Rochester Marina. This analysis does not consider the direct and indirect development impacts from the surrounding commercial/restaurant businesses, or the impacts from the condominium development impacts. This analysis is taken from a detailed study completed by Michigan State University in association with the Great Lakes Commission, U.S. Coast Guard, and the National Marine Manufacturers Association. Please note that in the study, all dollars projected to be spent are converted to 2007 dollars. (This is the only output available through that software program.) In order to convert those spending dollars into current funds, a cost of living factor would be applied. We have not applied the cost-of-living factor because it actually should be applied to the dates that the project will be completed and operational, which is more than likely 2012 or beyond. The employment section of the report, i.e., jobs created, etc., would be appropriate to any given year.

This information is identified in the Executive Summary and on page 37 of the report.

Economic Impact Analysis

CITY OF ROCHESTER, NEW YORK PROPOSED MUNICIPAL MARINA

Analysis conducted using the on-line Boating Economic Impact Model

developed by

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The On-line Boating Economic Impact Model is sponsored by
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National Marine Manufacturers Association

February 2009

Executive Summary

This report provides estimates of the economic impacts of the CITY OF ROCHESTER, NEW YORK - MUNICIPAL MARINA. The marina produces direct and indirect revenues for many different types of businesses (e.g., retail, restaurants) in the local area. It also contributes to the visual character of the waterfront and contributes to the community's quality of life. Unfortunately, the economic contributions of marinas like this often go unrecognized or are undervalued. This report provides estimates of the direct and indirect economic impacts associated with the spending by the owners of boats that rent seasonal and annual slips, and the direct spending by transient boaters (tourists) staying at the CITY OF ROCHESTER, NEW YORK – PROPOSED MUNICIPAL MARINA.

Economic impacts are estimated using a boater spending and impact model. Boater spending averages on a per day basis for trip spending and per boat basis for annual craft spending are adapted from spending profiles developed from two different national boater surveys conducted by the Recreation Marine Research Center (RMRC) at Michigan State University in 2005. Estimates of annual craft spending for boats kept at marinas are taken from a national survey of more than 12,500 boaters conducted in 2005 and 2006.

Annual craft spending averages were price adjusted to 2008 using consumer price indices for each spending category. Annual craft spending includes storage (during the boat season), insurance, taxes, replacement outboard motors, trailers, fuel, repairs & marine services and accessories. Loan payments for the year are included, but purchases of new boats are not. Since most boats, trailers, motors and other equipment purchased by boaters are not manufactured in the local area, only the retail and wholesale margins on these purchases are included as local impacts.

Trip spending estimates, including what boaters spend on groceries, lodging, entertainment and restaurants, came from a 2006 national survey of more than 6,000 boaters that gathered information about more than 13,000 boating trips. Trip sending includes what boaters spend on boating trips for fuel, groceries, lodging, entertainment, and restaurants. Spending averages were price inflated to 2008. Spending profiles were developed for different size and type boats in different regions of the country. The craft

and trip spending averages used here are for boats kept at marinas in Great Lakes Region.

The spending averages are applied to the number of slip renters and transient boaters at CITY OF ROCHESTER, NEW YORK - MUNICIPAL MARINA. Distinct spending averages are used for power and sail boats divided into two size classes. Spending is divided into 12 trip spending categories and eight craft spending categories.

Total spending by these boaters who rent slips seasonally or annually or are transient renters is applied to a set of economic ratios and multipliers that reflect the local economy. The impact region is defined to include roughly a 30 mile radius of the marina. Economic ratios and multipliers were estimated with the IMPLAN input-output modeling system. Because the size of multipliers differ depending on the size and nature (e.g., types of businesses) of the local economy distinct sets of multipliers were developed for rural (population less than 100,000), small metro (populations 100,000-500,000), and larger metro regions (population over 500,000). Multipliers representing "Large Metro Areas" were selected for this analysis. Economic ratios translate the spending into wages and salaries and jobs supported by the boater spending. Multipliers estimate the secondary effects as this spending flows through the local economy. Total effects include the (1) direct sales, jobs and income in firms selling directly to boaters, (2) indirect effects in firms that supply goods and services to boating businesses, and (3) induced effects resulting from household spending of income earned directly or indirectly from boater spending.

A total of 118 boats will be kept at CITY OF ROCHESTER, NEW YORK - MUNICIPAL MARINA. This includes 106 power boats ranging from 16' to more than 40' and 12 sailboats. It is estimated that the 118 seasonal/annual slip renters will take their boats out on the water a total of 11,375 days. The average number of boating days per boat is 31 days. The marina rented slips to transient boaters a total of 7,670 nights.

The boaters who rent slips for the season or annually contribute to the local and state economies through spending on the upkeep and maintenance of their craft and also spending on their boating trips. Boaters who keep their boats in slips will spend about 1,569 thousand dollars annually on craft upkeep and maintenance not counting fuel. This

spending is broken down as follows: 24% on slip/storage fees, 32% to loan payments including principal and interest, 19% for repairs, 6% for insurance, and 15% for accessories. Combining trip and craft spending, a typical boat spends \$302 per year on boating trips and \$202 per year on craft-related expenses.

Total trip spending by these boats kept at the marina is estimated to be \$2 million, with 19% spent on marina services, 22% on restaurants and bars, 17% groceries, 4% auto fuel and 25% boat fuel.

The direct economic effects on the local economy of this spending are 36 jobs¹, \$0.8 million in labor income and \$1.3 million in value added². The marina's non-labor operating costs such as purchases of supplies and services from other firms are not included as value added by the marina. Direct effects cover the impacts in businesses selling goods and services directly to these boaters. This includes 13 jobs in marina services, 12 jobs in restaurants and bars, and 5 jobs in retail stores.

Including secondary effects, the total impact on the local economy is 50 jobs, \$1.3 million in labor income and \$2.1 million in value added.

¹ Jobs are not full time equivalents, but include full time and part time jobs. Seasonal positions are adjusted to an annual basis, e.g., two jobs for six months equates to one job on an annual basis. Labor income includes wages and salaries, payroll benefits and income of sole proprietors. Value added includes labor income as well as profits and rents and sales taxes and other indirect business taxes.

² Value added is the income accruing to households in the region plus rents and profits of businesses and indirect business taxes. As the name implies, it is the net value added to the region's economy. For example, the value added by a marina includes wages and salaries paid to employees, their payroll benefits, profits of the marina, and sales and other indirect business taxes.

Summary of the Economic Impact Analysis Result

Table 1 - Number of Boats Kept at the Marina and Their Estimated Number of Boating Days

Boat Type and Size	Number of Boats	Average Days Per Boat	Total Boat Days
Power <40'	60	29	1,769
Power 40'+	46	32	1,490
Sail <40'	6	29	175
Sail 40'+	6	45	272
Transient Power	-	-	6,890
Transient Sail	-	-	780
Total	118	31	11,375

Table 2 - Total Spending on Boat Trips by Boats Kept at the Marina (\$ Thousands)

Category	Total	Percentage
Lodging	43.4	1.8%
Marina services	454.8	19.4%
Restaurant	527.0	22.4%
Groceries	397.9	16.9%
Boat fuel	583.8	24.8%
Auto fuel	99.9	4.3%
Repair & Maintenance	-	-
Marine supplies	-	-
Recreation & Entertainment	95.9	4.1%
Shopping	136.8	5.8%
Other services	-	-
Other goods	9.9	0.4%
Total	2,349.4	100%

Table 3 – Total Annual Craft Spending by Boats Kept at the Marina (\$ Thousands)

Category	Total	Percentage
Slip	375.9	24.0%
Loan Payments	507.9	32.4%
Motors	4.9	0.3%
Trailers	1.8	0.1%
Insurance	99.3	6.3%
Repairs	296.4	18.9%
Accessories	227.9	14.5%
Taxes	55.1	3.5%
Total	1,569.4	100%

Table 4 – Economic Impacts of Trips Spending and Annual Craft Spending by Boats Kept at the Marina

	Trip Spending	Annual Craft Spending	Total
Direct Effects			
Sales (\$ Thousands)	1,424.6	804.9	2,229.5
Jobs	26.3	10.1	36.4
Labor Income (\$ Thousands)	574.1	263.4	837.5
Value Added (\$ Thousands)	795.8	469.4	1,265.2
Total Effects			
Sales (\$ Thousands)	2,337.0	1,274.7	3,611.7
Jobs	35.3	14.8	50.0
Labor Income (\$ Thousands)	887.1	428.2	1,315.2
Value Added (\$ Thousands)	1,329.3	741.7	2,071.0

Table 5 - Economic Impact of both Craft and Trips Spending by Boats Kept at the Marina

Sector/Spending category	Sales (\$ Thousands)	Jobs	Labor Income (\$ Thousands)	Value Added (\$ Thousands)
Direct Effects				
Lodging	43.4	0.8	18.9	30.7
Marina Services	830.7	13.0	307.4	515.9
Restaurant	527.0	12.3	220.3	248.7
Recreation & Entertainment	95.9	1.5	35.5	59.6
Repair & Maintenance	296.4	1.9	60.8	139.6
Insurance & Credit	39.7	0.3	18.7	33.8
Gas Service	152.5	1.6	63.7	82.8
Other Retail Trade	243.9	5.0	112.3	154.2
Wholesale Trade	-	-	-	-
Other Local Production of Goods	-	-	-	-
Total Direct Effects	2,229.5	36.4	837.5	1,265.2
Secondary Effects	1,382.2	13.7	477.7	805.8
Total Effects	3,611.7	50.0	1,315.2	2,071.0

Detailed Results of the Economic Impact Analysis

Input to the Economic Impact Analysis Model

Table 1 - Number of Boats Kept at the Marina and Their Estimated Number of Boating Days

Boat Type and Size	Number of Boats	Average Days Per Boat	Total Boat Days
Power <40'	60	29	1,769
Power 40'+	46	32	1,490
Sail <40'	6	29	175
Sail 40'+	6	45	272
Transient Power	-	-	6,890
Transient Sail	-	-	780
Total	118	31	11,375

Spending Profiles by Boats Kept at the Marina

Table 1 - Average Spending on Boat Trips by Boats Kept at the Marina (\$ Per Boat Day)

Category	Boat Type and Size					
	Power <40'	Power 40'+	Sail <40'	Sail 40'+	Transient Power	Transient Sail
Lodging	1.1	0.4	1.8	2.7	5.2	5.1
Marina services	20.7	30.7	12.4	21.9	49.0	34.2
Restaurant	29.3	44.1	19.7	36.9	52.9	40.4
Groceries	23.9	39.2	17.7	29.5	37.8	32.9
Boat fuel	41.1	61.6	3.6	8.0	59.5	8.4
Auto fuel	9.2	8.6	5.8	6.6	9.2	5.9
Repair & Maintenance	-	-	-	-	-	-
Marine supplies	-	-	-	-	-	-
Recreation & Entertainment	4.4	5.3	2.5	7.9	10.4	7.7
Shopping	3.5	7.6	3.4	6.3	15.4	14.0
Other services	-	-	-	-	-	-
Other goods	3.0	2.2	2.4	3.4	-	-
Total	136.2	199.7	69.3	123.2	239.4	148.6

Table 2 - Average Spending on Annual Craft Spending by Boats Kept at the Marina (\$ Per Boat Per Year)

Category	Boat Type and Size			
	Power <40'	Power 40'+	Sail <40'	Sail 40'+
Slip	1,478.0	5,418.8	1,879.8	4,449.7
Loan Payments	1,368.2	8,463.4	1,061.0	5,027.8
Motors	43.2	46.7	13.4	16.6
Trailers	20.8	10.3	8.3	7.3
Insurance	366.0	1,433.4	328.8	1,574.4
Repairs	1,069.7	4,160.2	1,205.1	5,809.6
Accessories	717.9	3,325.6	1,125.7	4,183.7
Taxes	66.7	1,023.4	66.3	610.7
Total	5,130.5	23,881.8	5,688.4	21,479.8

Estimates of Total Spending by Boats Kept at the Marina

Table 1 - Total Spending on Boat Trip by Boats Kept at the Marina (\$ Thousands)

Category	Boat Type and Size						Total	Percentage
	Power <40'	Power 40'+	Sail <40'	Sail 40'+	Transient Power	Transient Sail		
Lodging	1.9	0.6	0.3	0.7	35.8	4.0	43.4	2%
Marina services	36.6	45.7	2.2	6.0	337.6	26.7	454.8	19%
Restaurant	51.8	65.7	3.4	10.0	364.5	31.5	527.0	22%
Groceries	42.3	58.4	3.1	8.0	260.4	25.7	397.9	17%
Boat fuel	72.7	91.8	0.6	2.2	410.0	6.6	583.8	25%
Auto fuel	16.3	12.8	1.0	1.8	63.4	4.6	99.9	4%
Repair & Maintenance	-	-	-	-	-	-	-	-
Marine supplies	-	-	-	-	-	-	-	-
Recreation & Entertainment	7.8	7.9	0.4	2.1	71.7	6.0	95.9	4%
Shopping	6.2	11.3	0.6	1.7	106.1	10.9	136.8	6%
Other services	-	-	-	-	-	-	-	-
Other goods	5.3	3.3	0.4	0.9	-	-	9.9	0%
Total	240.9	297.5	12.1	33.5	1,649.5	115.9	2,349.4	100%

Table 2 - Total Spending on Average Annual Craft Spending by Boats Kept at the Marina (\$ Thousands)

Category	Boat Type and Size				Total	Percentage
	Power <40'	Power 40'+	Sail <40'	Sail 40'+		
Slip	88.7	249.3	11.3	26.7	375.9	24%
Loan Payments	82.1	389.3	6.4	30.2	507.9	32%
Motors	2.6	2.1	0.1	0.1	4.9	0%
Trailers	1.2	0.5	0.0	0.0	1.8	0%
Insurance	22.0	65.9	2.0	9.4	99.3	6%
Repairs	64.2	191.4	7.2	33.7	296.4	19%
Accessories	43.1	153.0	6.8	25.1	227.9	15%
Taxes	4.0	47.1	0.4	3.7	55.1	4%
Total	481.9	595.1	24.2	67.0	1,569.4	100%

Table 3 - Numbers of Boats, Boating Days and Craft and Trip Spending by Different Size and Type Boats Kept at the Marina

Category	Boat Type and Size						Total
	Power <40'	Power 40'+	Sail <40'	Sail 40'+	Transient Power	Transient Sail	
Number of boats	60	46	6	6	-	-	118
Annual craft spending per boat	\$5,131	\$23,882	\$5,688	\$21,480	-	-	\$202
Total craft spending (\$ Thousands)	\$308	\$1,099	\$34	\$129	-	-	\$1,569
Average days per boat	29	32	29	45	-	-	31
Total boat days	1,769	1,490	175	272	6,890	780	11,375
Average trip spending per boat day	\$136	\$200	\$69	\$123	\$239	\$149	\$207
Total trip spending per boat per year	\$4,015	\$6,468	\$2,016	\$5,585	\$239	\$149	\$302
Total trip spending (\$ Thousands)	\$241	\$298	\$12	\$34	\$1,649	\$116	\$2,349
Total craft & trip spending per boat per year	\$9,146	\$30,350	\$7,705	\$27,065	\$239	\$149	\$503
Total craft & trip spending (\$ Thousands)	\$549	\$1,396	\$46	\$162	\$1,649	\$116	\$3,919
Pct of spending by boats	14%	36%	1%	4%	42%	3%	100%
Pct of boats	1%	1%	0%	0%	88%	10%	100%
Pct of boat days by boats	16%	13%	2%	2%	61%	7%	100%
Pct of spending on trips by boats	44%	21%	26%	21%	100%	100%	60%

Economic Impact Result/Tables

Table 1 - Economic Impact of Trips Spending by Boats Kept at the Marina

Sector/Spending category	Sales (\$ Thousands)	Jobs	Labor Income (\$ Thousands)	Value Added (\$ Thousands)
Direct Effects				
Lodging	43.4	0.8	18.9	30.7
Marina Services	454.8	7.1	168.3	282.4
Restaurant	527.0	12.3	220.3	248.7
Recreation & Entertainment	95.9	1.5	35.5	59.6
Repair & Maintenance	-	-	-	-
Grocery Stores (Margin&Sales)	100.7	1.9	43.1	57.6
Gas Service Stations (Margin&Sales)	152.5	1.6	63.7	82.8
Sporting Goods/Equipment Retail Margins	-	-	-	-
Other Retail Trade (Margins&Sales)	50.3	1.1	24.3	34.0
Wholesale Trade (Margins&Sales)	-	-	-	-
Local Production of Goods	-	-	-	-
Total Direct Effects	1,424.6	26.3	574.1	795.8
Secondary Effects	912.4	9.0	313.0	533.5
Total Effects	2,337.0	35.3	887.1	1,329.3

Table 2 - Economic Impact of Annual Craft Spending by Boats Kept at the Marina

Sector/Spending category	Sales (\$ Thousands)	Jobs	Labor Income (\$ Thousands)	Value Added (\$ Thousands)
Direct Effects				
Boat Manufacture	-	-	-	-
Slip	375.9	5.9	139.1	233.4
Repairs	296.4	1.9	60.8	139.6
Insurance	29.8	0.3	14.6	25.9
Credit Intermediaries	9.9	0.0	4.1	7.8
Retail Margins	92.8	2.0	44.9	62.6
Wholesale Trade	-	-	-	-
Manufacture: Motors, Trailers, Accessories	-	-	-	-
Total Direct Effects	804.9	10.1	263.4	469.4
Secondary Effects	469.8	4.7	164.8	272.2
Total Effects	1,274.7	14.8	428.2	741.7

Table 3 - Economic Impact of both Trip and Annual Craft Spending by Boats Kept at the Marina

Sector/Spending category	Sales (\$ Thousands)	Jobs	Labor Income (\$ Thousands)	Value Added (\$ Thousands)
Direct Effects				
Lodging	43.4	0.8	18.9	30.7
Marina Services	830.7	13.0	307.4	515.9
Restaurant	527.0	12.3	220.3	248.7
Recreation & Entertainment	95.9	1.5	35.5	59.6
Repair & Maintenance	296.4	1.9	60.8	139.6
Insurance & Credit	39.7	0.3	18.7	33.8
Gas Service	152.5	1.6	63.7	82.8
Other Retail Trade	243.9	5.0	112.3	154.2
Wholesale Trade	-	-	-	-
Other Local Production of Goods	-	-	-	-
Total Direct Effects	2,229.5	36.4	837.5	1,265.2
Secondary Effects	1,382.2	13.7	477.7	805.8
Total Effects	3,611.7	50.0	1,315.2	2,071.0

Terms Used in this Economic Impact Analysis

Term	Definition
Sales	Sales of firms within the region resulting from boater spending.
Jobs	The number of jobs in the region supported by the boater spending. Job estimates are not full time equivalents, but include part time positions. Seasonal jobs are adjusted to annual equivalents, e.g. four jobs for three months each equates to one job.
Income	Labor income, including wages and salaries, payroll benefits and incomes of sole proprietor's
Value added	Income accruing to households in the region plus rents and profits of businesses and indirect business taxes. As the name implies, it is the net value added to the region's economy. For example, the value added by a marina includes wages and salaries paid to employees, their payroll benefits, profits of the marina, and sales and other indirect business taxes. The marina's non-labor operating costs such as purchases of supplies and services from other firms are not included as value added by the marina.
Direct effects	Direct effects are the changes in sales, income and jobs in those business or agencies that directly receive the boater spending.
Secondary effects	These are the changes in the economic activity in the region that result from the recirculation of the money spent by boaters. Secondary effects include indirect and induced effects.
Indirect effects	Changes in sales, income and jobs in industries that supply goods and services to the businesses that sell directly to boaters. For example, restaurant supply firms benefit from boater spending in restaurants.
Induced effects	Changes in economic activity in the region resulting from household spending of income earned through a direct or indirect effect of the boater spending. For example, marina employees live in the region and spend their incomes on housing, groceries, education, clothing and other goods and services.
Total effects	Sum of direct, indirect and induced effects. <ul style="list-style-type: none"> • Direct effects accrue largely to boating and tourism-related businesses in the area • Indirect effects accrue to a broader set of businesses that serve these firms. • Induced effects are distributed widely across a variety of local businesses that provide goods and services to households in the region.
Multipliers	Multipliers capture the size of the total effects relative to the direct effects. A sales multiplier of 2.0 means that for every dollar of direct sales, there is another dollar of sales in the region due to secondary effects. Direct effect multipliers convert sales to the associated income, jobs and value added by using simple ratios. For example, nationally 34 cents of every dollar of sales in restaurants goes to wages and salaries and 48 cents to value added. There are about 22 jobs for every million dollars in restaurant sales. These ratios are used to convert estimates of sales in each economic sector to the associated income, jobs, and value added. The job to sales ratios vary from region to region.

Shown below are multipliers selected in this economic impact analysis.

Sector	IMPLAN Sector	Jobs/ MM sales	Direct effects			Total effects multipliers					
			Personal inc/sales	Property Inc/sales	Value Added /sales	Sales II	Jobs/ MMsales	Incl/ sales	VA II/sales	Sales I	RPC
Hotels and motels* including casino hotels	479	17.840	0.436	0.183	0.708	1.546	23.325	0.628	1.036	1.204	100%
Marina Services	478	15.614	0.370	0.198	0.621	1.591	21.698	0.580	0.973	1.274	100%
Food services and drinking places	481	23.326	0.418	-0.004	0.472	1.674	29.587	0.633	0.850	1.328	100%
Other asement* gambling* and recreation industri	478	15.614	0.370	0.198	0.621	1.591	21.698	0.580	0.973	1.274	100%
Automotive repair and maintenance* except car wash	483	6.289	0.205	0.224	0.471	1.583	11.701	0.404	0.790	1.363	100%
Food and beverage stores	405	18.657	0.428	0.046	0.572	1.684	25.590	0.677	0.987	1.317	100%
Gasoline stations	407	10.472	0.418	0.012	0.543	1.708	17.633	0.676	0.973	1.339	100%
Sporting goods* hobby* book and sic stores	409	25.046	0.366	0.048	0.502	1.708	32.198	0.626	0.934	1.369	100%
General merchandise stores	410	22.150	0.483	0.083	0.675	1.621	28.470	0.707	1.051	1.241	100%
Nondep credit intermediaries	425	5.010	0.410	0.325	0.791	1.432	9.470	0.564	1.055	1.088	30%
Other accommodations	480	6.669	0.129	0.162	0.310	1.745	13.760	0.385	0.752	1.534	100%
Wholesale trade	390	6.649	0.382	0.095	0.669	1.548	12.291	0.584	1.001	1.233	-
Insurance agencies* brokerages* and related	428	9.599	0.490	0.380	0.870	1.430	14.062	0.640	1.130	1.090	30%
Boat building	358	8.336	0.221	0.148	0.347	1.449	12.085	0.368	0.601	1.253	-
Other engine equipment manufacturing	286	2.293	0.150	0.130	0.290	1.449	3.321	0.250	0.540	1.253	-
Travel trailer and camper manufacturing	349	5.269	0.222	0.067	0.285	1.536	9.649	0.394	0.562	1.321	-
Sporting and athletic goods manufacturing	381	6.390	0.213	0.061	0.288	1.645	12.005	0.442	0.656	1.405	-
auto dealers	401	10.724	0.514	0.030	0.642	1.676	17.597	0.757	1.051	1.265	100%
All other food manufacturing	84	4.056	0.149	0.082	0.226	1.588	9.040	0.332	0.559	1.408	-
Cut and sew apparel manufacturing	107	6.868	0.223	0.122	0.355	1.460	11.114	0.387	0.630	1.251	-