**Acme Township Marina Feasibility Study**

**Executive Summary**

**I. Background and Time Line**
The thought of Acme Township operating a municipal marina first surfaced in Spring, 2008.

**A. 2006: Acme Township Initiates Acme Shoreline Preservation Initiative**
In 2006, a broad-based group of Acme Township Shoreline Advisory Committee members, elected officials, shoreline landowners, regional foundation and agency representatives and state legislators developed a strategic plan to open the waterfront to a broad range of public uses. They agreed on the goal of reclaiming and preserving the shoreline for public use in order to:
- Offer public access to scarce waterfront shoreline
- Showcase the natural beauty of Acme Township by opening viewscapes and providing a scenic gateway to Traverse City
- Boost tourism creating a more robust local economy
- Enhance the quality of life for Acme Township residents and those who visit
- Encourage non-motorized transportation by connecting to existing amenities, such as the nearby TART trail

**B. Spring, 2008: Community Member Brings Idea to Township Leaders**
Early in 2008, the majority slip owner of the privately-owned East Bay Harbor Corporation (EBHC) approached Acme Township leaders and asked if there was interest in purchasing his shares. The township had already started implementing its Shoreline Preservation Initiative, and the EBHC was within this 1.5-mile length of beautiful Lake Michigan shoreline. The Shoreline Advisory Committee leaders decided this potential opportunity needed its own dedicated team to focus on the pros and cons of municipal marina ownership.

**C. Fall, 2008 – June, 2009: Acme Marina Advisory Investigates the Opportunity**
In Fall, 2008, Acme Township formed the Marina Advisory and asked Acme resident and property owner, Jean Aukerman, to lead the team. She, with five other team members – Robin Ehardt, John Olson, Pat Parker, Sharon Vreeland, and Brad Zucco – studied the topic from multiple angles. The Advisory’s specific task was to advise the Shoreline Advisory Committee, the Planning Commission, and the Board of Trustees as to whether and how it would be feasible and desirable for the township to acquire the EBHC in part or total. The team met monthly through June, 2009. Among other tasks, they interviewed several state harbormasters and surveyed local slip owners, and consistently sought counsel from the MDNR Waterways Commission in Lansing regarding funding, operating, and upgrading municipal marinas. While much information was learned, one main point was clear: the township would need MDNR guidance and funding to succeed, and the MDNR would not partner with a township on partial marina ownership. This meant the township would need to acquire the entire marina – not just a majority share. After reviewing solid financial statements of other municipal marinas throughout the state that demonstrated how municipal marinas could be self-sustaining and profitable, the Advisory recommended to the Shoreline Advisory Committee, the Planning Commission, and the Board that a Marina Feasibility Study be conducted to provide ultimate township decision
makers with fact-based market and economic data focused specifically on the Acme marina question.

D. Fall, 2009 into 2010: Waterfront Design Team Hired to Conduct Feasibility Study
After soliciting bids and interviewing several firms in Fall, 2009, the township selected the nationally-recognized waterfront design firm, Edgewater Resources, based in St. Joseph, Michigan. To help fund the Study, the township applied for a MDNR Waterways Grant in April, 2010, and was awarded the grant in late Summer, 2010. Following the MDNR’s input and review of the township’s contract with Edgewater Resources, the study officially commenced on December 1, 2010.

E. December, 2010: Three Objectives Drive the Study
The Marina Feasibility Study was designed to achieve three major objectives:
1. Determine whether or not a municipally-managed marina within the Acme Shoreline project area is physically and economically viable for the short and long terms.
2. If viable, develop a concept plan that balances forward-thinking ideas and best practices with “desires” expressed by the public.
3. If project is viable, identify funding sources and a winning strategy to support it.

II The Study and Public Input Process Have Spotlighted Key Issues

A. Key Findings Were Seen in the Marina Market Analysis
- Marina slip demand in excess of 310 slips exists today in the northern Michigan area
- Slips 35’ and larger have greater occupancy than smaller slips (<30’) for smaller boats
- Amenities are fairly consistent between marinas; boaters make choices based on availability of slips, and age and quality of facilities
- Location and quality of the destination drive transient slip occupancy
- EBHC’s yearly slip rates are similar to Elk Rapids’ which has higher quality docks and amenities
- Boat launches in Acme would be a very positive addition; the east arm of Grand Traverse Bay has six boat launches and the west arm has ten

B. Area Experts and Public Provide Feedback At the April 26, 2011, Public Meeting

Mark Benedict, Harbormaster, Elmwood Township
- Good idea to build a launch on East Bay
- Elmwood Township’s launch facility is under significant pressure from East Bay boaters
- Elmwood Township Marina has 171 slips, six boat launch lanes, 134 vehicle/trailer parking spaces, and 86 vehicle parking spaces

Ben Bifoss, City Manager, Traverse City
- Oversaw marinas in Grand Haven, Manistee, and Traverse City, all of which achieved revenue positive operations
- Clinch Marina has insufficient parking for its boat launch, well below MDNR standards
• Charge $10 fee for overnight vehicle parking
• Consider peak periods when establishing parking demand
• Consider fish cleaning stations for charter fishing vessels
• Recommends running the marina like a business and creating a separate enterprise fund

Cheryl Werth, Harbormaster, Grace Marina, Elk Rapids
• Good idea to build another launch on East Bay
• All operational funds at Elk Rapids come from the boater fees
• Facility constructed with a very small initial loan, paid back from boater fees
• Marina requires dredging every year to a depth of 8’, at a cost of $25,000-$50,000 per year

Jack Kelly, Township Manager, Elmwood Township
• No general funds used to run the marina
• Consider vehicle/trailer turning movements, entry/exit to highway
• Solve parking
• Approximately 75% of transient boaters are downstate boaters looking for a place to keep their boat for the weekend, as opposed to boaters arriving via water
• Recommends running the marina like a business and creating a separate enterprise fund
• Keep politics out of the marina operation

Paul Peterson, MDNR
• MDNR provides grants for planning, design, engineering, and construction
• Funding sources include marine fuel taxes, user fees, and boat registrations
• Provide one vehicle parking space for every four transient slips provided
• Provide one vehicle parking space for every seasonal slip provided
• Provide 25 vehicle/trailer parking space for every launch lane provided

Bill Boik, MDNR
• Focus is on grant communities, not State of Michigan projects
• Funding priority is on providing boater access (boat launches)
• One key to marina success is hiring top-notch courteous staff and maintaining a clean facility
• Management is more important to the success of the marina than the facility itself
• MDNR funding does not typically allow commercial vessels, but would consider if they do not displace recreational boaters.
• MDNR would consider allowing commercial charter fishing vessels if they provide significant public access
• MDNR will fund most marina/launch construction activities except land acquisition
• MDNR is now focused on working with communities to construct facilities that align with the goals of the community, as opposed to the more “top-down” approach of the past
General Public
• Fishing is fun; modern fish cleaning stations are clean, do not smell, and attract people
• Provide ADA compliant facilities
• Provide amenities for non-boaters such as accessible fishing piers, benches, beaches, and kayak launches
• Some would prefer beaches and open views of the Bay to a marina
• Attendees applauded statements suggesting the marina would not require general funds and be operationally self-sufficient
• Some expressed concern regarding traffic issues associated with vehicles/trailers interfacing with 31
• Several expressed concern about providing adequate parking
• Some want parking west of 31 for safety reasons; others voiced concern over parking that blocks the water view
• Several expressed support for enhanced public amenities, walkways, lighting, etc
• Many expressed support for a modern, functional, and financially self-sufficient facility with boat launch

C. Four Operational Scenarios* Demonstrate a Municipal Marina Is Feasible

• **Phase One:** This scenario is predicated on EBHC facilities remaining in place. This phase envisions construction of twenty-two slips and a four lane boat launch immediately south of the existing EBHC facility in conformance with MDNR standards. It also includes a boater services building, breakwater, 25 vehicle/trailer parking spaces, 87 car parking spaces, and landside recreational amenities. Operational expenses are 50% due to small number of slips.

• **Phase Two:** This scenario envisions demolition and reconfiguration of existing EBHC marina facilities to create 71 additional slips. Phase Two construction is predicated on completion of Phase One which provides essentially all necessary landside infrastructure, including parking. Phase Two includes construction of 71 slips, breakwater, and fishing pier amenities. Operational expenses are anticipated to be 25% due to the more efficient marina size.

• **After completion of Phase Two:** One of the following scenarios could be completed, incorporating all of the improvements from Phase One and Two.
  Phase Three Alternate A: This scenario is predicated on Phase One and Phase Two being completed. This phase envisions expansion of the Phase Two facilities to create an additional 52 slips, for a total of 145 slips. Phase Three Alternate A includes construction of 52 slips, shifting Highway 31 approximately 60’-80’ to the east, construction of 100 vehicle/trailer parking spaces, 125 car parking spaces, and breakwater and fishing pier amenities, or
  Phase Three Alternate B: This scenario is also predicated on Phase One and Phase Two being completed. This phase envisions expansion of the Phase Two slips to create an additional 82 slips, for a total of 175 slips. Phase Three Alternate B includes construction of 82 slips, rerouting the downtown Acme “main street” (former Highway 31) to the east along the existing Mount Hope Road alignment, excavation of an expanded internal
marina basin, construction of 101 vehicle/trailer parking spaces, 192 car parking spaces, and breakwater and fishing pier amenities. Operational expenses are anticipated to be 25% due to the more efficient marina size.

In all four scenarios, the marinas proposed generate sufficient revenues to cover the cost of all revenue generating infrastructure, ongoing operational expenses, and contribute towards the cost of non-revenue generating infrastructure. The market analysis has clearly documented demand more than three times greater than the initial two phases proposed in this study, and nearly double the most ambitious concept considered. The ongoing success of the existing marina, preliminary assessment and analysis of the physical and coastal conditions, and conversations with MDNR, MDEQ, and MDOT indicate that a marina in this location is both physically and environmentally feasible. Therefore, all four phases described herein may be considered feasible by industry standards.

Based on the feedback received during the community outreach process, the majority of participants support the improvement of the waterfront and construction of a municipally operated marina, so long as it is financially self-supporting. The design of the marina and surrounding waterfront must consider views of the Bay, and views of parking west of Highway 31 need to be minimized. Parking and traffic considerations must be identified and resolved early in the process. Overall, the phased-in approach must be complementary to the goals of the Shoreline Preservation Initiative and comply with Acme’s Master Plan.

D. A Profitable Marina Can Possibly Become the Catalyst for Acme’s Downtown Center

- A municipal marina can become the anchor to Acme’s acclaimed shoreline preservation initiative – a “charming place with a main street or downtown”
- Transient slips, fishing piers, boat launches, beaches and parkland will welcome the public
- New attractions and businesses will help create “sense of place” and a unique feel in an area already slated for commercial growth
- An overall “plan” for the total area is a must to help ensure efficiency of commercial development and “complete street” thinking while preserving Acme’s scenic waterfront for all to enjoy

* See operational scenarios for detailed estimates on construction costs, revenues, and ideas on funding sources.
Acme Township Marina Economic Analysis

Revised Report 5-26-11

Acme Township
INTRODUCTION

The determination of feasibility of a municipal marina includes an assessment of the physical feasibility of the proposed location and marina configuration, the environmental feasibility of the proposed configuration and location, and the ability of the proposed marina to generate sufficient revenues to cover construction of revenue generating facilities, ongoing operations, and maintenance.

This report summarizes the financial analysis of four potential phases of marina development in Acme Township. It includes recommendations for phase size, marina configuration, slip size/mix, and slip lease fees to determine revenue generation. Operating costs are estimated for each marina, and the resulting net revenues are identified. An analysis of the funding capacity utilizing revenue bonds based on this net revenue is provided. Finally, the construction costs for each phase are estimated, along with potential partnership funding from MDNR, and an analysis of funding requirements is provided.

ECONOMIC ANALYSIS

Revenue / Cash Flow

Revenues included as part of this income analysis are based on seasonal slip leases, transient slip fees, and boat launch revenues. While there will be potential revenues associated with fuel and boat store sales, these revenues are expected to be minor and are not considered in this analysis.

Proposed Seasonal Rate Structure

Based on analysis of Grand Traverse Bay regional market rates, we recommend rates ranging between standard MDNR rates and the regional average:

- 30’ slips: $67 - $95lf, or $2,005 - $2,850 per year
- 35’ slips: $72 - $106, or $2,520 - $3,710 per year
- 40’ slips: $77 - $117, or $3,080 - $4,680 per year
- 45’ slips: $82 - $127, or $3,690 - $5,715 per year
- 50’ slips: $84 - $135, or $3,690 - $5,715 per year
- 55’ slips: $87 - $142, or $4,785 - $7,810 per year
- 60’ slips: $90 - $149, or $5,340 - $8,940 per year
- 70’ slips: $100 - $165, or $7,000 – $11,550 per year

Proposed Transient Rate Structure

We recommend utilizing standard MDNR Region 2 transient rates:

- 30’ slips: $35 per night
- 35’ slips: $42 per night
- 40’ slips: $49 per night
- 45’ slips: $57 per night
- 50’ slips: $69 per night
- 60’ slips: $100 per night
Propose Boat Launch Rate Structure

We recommend matching the average boat launch rates established at Elk Rapids and Elmwood Township launch facilities:

- Seasonal Launch Pass: $40 (average of Elk Rapids at $30 and Elmwood at $50)
- Individual Day Launch Pass: $5

Based on documented demand at Elk Rapids, Elmwood Township, and Clinch Marina boat launch facilities, we anticipate an initial demand for 150 seasonal passes and 2500 day pass launches per year generating anticipated yearly launch revenues of $18,500.

- Seasonal Pass Launch Revenue: $6,000
- Individual Day Launch Pass Revenue: $12,500
Expenses

The expenses considered for this marina analysis include construction costs and operational costs.

Construction Costs

Construction costs for the marina include demolition of existing facilities and construction of new revenue producing facilities including gangways, fixed or floating dock structures, anchorage systems, ice suppression, dock amenities, wave attenuation, boater services building, and utilities. Non-revenue producing elements include breakwater structures, dredging, parking infrastructure, park amenities, and fishing piers.

In determining the estimated construction costs for the revenue producing dock systems, actual 2010/2011 construction costs and bid estimates from ongoing projects on Lake Michigan and Lake Ontario were considered and inflated based on our experience in marine construction and anticipated price escalation. For the purposes of the financial analysis, we will use an average cost of $15,000 per slip. The final design process will determine whether fixed or floating docks will be utilized.

Landside infrastructure elements including roads, parking, utilities, landscape, and park elements were estimated utilizing recent 2011 construction costs and adjusted based on our experience in civil construction and anticipated price escalation.

Operational Costs

Operational expenses for medium size marinas (50-150 slips) generally range between 20% and 40% of gross revenues. The range accounts for differences in services provided, labor and benefit costs, age of facilities, maintenance requirements, and size of the facility (number of slips being the most factor).

We recommend a municipal marina operation that excludes labor intensive activities such as winter storage, lift wells, maintenance, and repair. Based on this approach, we anticipate that the operating expenses for a municipal marina in Acme Township would be as follows:

- Phase One (22 total slips: 11 seasonal, 11 transient): Based on the inherent inefficiencies of a very small marina and the high proportion of transient slips, we anticipate operational expenses of 50% of total gross revenues.
- Phase Two (93 total slips: 82 seasonal, 11 transient): 25% of total gross revenues
- Phase Three A (145 total slips: 134 seasonal, 11 transient): 25% of total gross revenues
- Phase Three B (175 total slips: 164 seasonal, 11 transient): 25% of total gross revenues
Phasing Analysis

The following scenarios assess several phased scenarios with likely phases in the development of new marina facilities in Acme Township. Phase One could be constructed immediately with or without Township acquisition of EBHC facilities, and would be a very good candidate for matching MDNR funding. Phase Two builds on Phase One and reconfigures and modernizes the EBHC facilities to contemporary MDNR standards.

Phase 3A and Phase 3B represent two alternate approaches to the ultimate potential expansion of the marina and are mutually exclusive. Phase 3A is predicated on shifting the outer breakwater further west into the Bay than the current alignment of EBHC facilities, and shifting the current alignment of Highway 31 approximately 60’-80’ to the east along the length of the proposed marina. The potential limitation on Phase 3A would be MDEQ and USACE approval of shifting the breakwater alignment to the west, and conceptual approval of this proposal cannot be obtained prior to commencement of preliminary engineering. Based on our experience and preliminary conversations with MDNR, we believe this proposal may be acceptable pending additional environmental and coastal assessment.

Phase 3B is predicated on a significant realignment of Highway 31 along the Mount Hope Road alignment, and expansion of the marina through excavation of a larger inland basin. The internal basin expansion approach will likely encounter a more streamlined environmental review process than Phase 3B, and the realignment of Highway 31 has been reviewed in concept with MDOT. MDOT expressed support for the overall concept, but indicated they have no funding available and prefer an alternate alignment that is three to four times more costly than the alignment originally proposed. Due to the uncertainty of the potential alignment, the costs for relocating Highway 31 are excluded from this summary.
Phase One

This scenario envisions construction of twenty-two slips, a four lane boat launch, boater services building, breakwater, 25 vehicle/trailer parking spaces, 87 car parking spaces, and landside recreational amenities. Operational expenses are 50% due to small number of slips. Seventy-five additional offsite vehicle/trailer spaces are required to provide adequate parking for the boat launch. A typical solution for offsite parking is to share available parking at existing public or private facilities that are typically underutilized at peak boating times rather than constructing new additional spaces. We recommend this approach and have not included construction costs for offsite parking.

Construction Costs
- Total Construction Cost Estimate: $4,572,000
- Likely DNR Funding Support @ 50%: $2,286,000
- Anticipated Local Match Costs: $2,286,000

Revenues ( Stable, year three and beyond)
- Seasonal Revenue, 100% occupancy:
  Four (4) thirty foot (30’) slips: $ 8,020
  Seven (7) forty foot (40’) slips: $ 21,560
  Seasonal Revenue Subtotal: $ 29,580

- Transient Revenue, 50% occupancy:
  Four (4) thirty foot (30’) slips at $1,750 per year: $ 7,000
  Seven (7) forty foot (40’) slips at $ 2,450 per year: $ 17,150
  Transient Revenue Subtotal: $ 24,150

- Boat Launch Revenue:
  Seasonal Pass Revenue: $ 6,000
  Day Launch Revenue: $ 12,500
  Boat Launch Revenue Subtotal: $ 18,500

Total Gross Revenue: $ 72,230

Operational costs at 50% gross revenue per year: -$ 36,115
Net Revenue: $ 36,115

Debt service generated at 4% for 30 years: $ 624,501

Revenue Producing Costs Construction cost for 22 slips @ $15,000 per slip = $330,000
Construction cost for boat launch elements = $100,000

Assessment:
Phase I as described generates sufficient revenues in excess of yearly operational costs to support revenue bond funded construction of between $624,501 and $876,620 depending on the slip rates charged. The cost of the revenue producing infrastructure in Phase One is $430,000, so slip revenues can support all revenue producing infrastructure plus an additional $194,501 and $446,620.
The total estimated construction cost for Phase One is $4,572,000. After MDNR 50% matching funding is included, total local 50% matching construction costs are anticipated to be $2,286,000. After slip revenue construction funds are included, additional local or grant funds of approximately $1,409,380 - $1,661,499 will be required. The following funding sources should be considered:

- Michigan Natural Resources Trust Fund Development Grants
- Michigan Land and Water Conservation Fund
- Clean Vessel Act
- Waterways Program Grants
- Great Lakes Fisheries Trust
- Michigan Department of Environmental Quality Grants
- Passport to Recreation Grant Funds
- Boating Infrastructure Grant – “BIG Grant”
- Michigan Habitat Improvement Fund Program Grants
- Grand Traverse Regional Land Conservancy
- Grand Vision Funds
- Other Local Agencies, Organizations, and Philanthropic Sources
Phase Two

This scenario envisions expansion and reconfiguration of the existing EBHC Marina facilities to create 71 new slips in conformance with MDNR standards. Phase Two construction is predicated on completion of Phase One, which provides essentially all necessary landside infrastructure, including parking. Phase Two includes construction of 71 slips, breakwater, and fishing pier amenities. Operational expenses are anticipated to be 25% due to the more efficient marina size, and since Phase One will be incorporated, operational expenses for Phase One will decrease by half. MDNR funding support is not likely for the elements proposed in Phase Two. Consequently, MDNR requirements for additional transient slips will not apply. Based on the market analysis, we recommend that all Phase Two slips be leased on a seasonal basis.

Construction Costs
- Total Construction Cost Estimate: $5,014,000
- Likely DNR Funding Support @ 50%: $0
- Anticipated Local Costs: $5,014,000

Revenues (Stable, year three and beyond)
- Seasonal Revenue, 100% occupancy: MDNR Rates Regional Average
  Six (6) thirty foot (30’) slips: $12,030 $17,100
  Twenty-three (23) thirty-five foot (35’) slips: $57,960 $85,330
  Twenty-two (22) forty foot (40’) slips: $67,760 $102,960
  Fourteen (14) forty-five foot (45’) slips: $51,660 $80,010
  Six (6) fifty foot (50’) slips: $25,200 $40,500
  Seasonal Revenue Subtotal: $214,610 $325,900

  Total Gross Revenue: $214,610 $325,900

  Operational costs at 25% gross revenue per year: $53,652
  Increased Phase One efficiency credit: $17,932
  Net Revenue: $178,890 $290,180

  Debt service generated at 4% for 30 years: $3,093,372 $5,017,802

Assessment:
Phase 2 as described generates sufficient revenues in excess of yearly operational costs to support revenue bond funded construction of between $3,093,372 and $5,017,802 depending on the slip rates charged. The cost of the revenue producing infrastructure in Phase Two is $1,065,000, so slip revenues can support all revenue producing infrastructure plus an additional $2,028,372 and $3,952,802.

The total estimated construction cost for Phase Two is 5,014,000, so if Grand Traverse Bay Average rates are charged, all revenue and non-revenue generating elements would be completely paid for. If MDNR standard rates are charged, additional local funds of approximately $1,920,628 would be required.
Phase Three A

This scenario envisions expansion and reconfiguration of the existing EBHC Marina facilities to create an additional 52 slips, for a total of 145 slips. Phase Three A includes construction of 52 slips, shifting Highway 31 approximately 60’-80’ to the east, construction of 75 vehicle/trailer parking spaces, 75 additional car parking spaces, and breakwater and fishing pier amenities. Operational expenses are anticipated to be 25% due to the more efficient marina size. MDNR funding support is not likely for the elements proposed in Phase Two. Consequently, MDNR requirements for additional transient slips will not apply. Based on the market analysis, we recommend that all Phase Three A slips be leased on a seasonal basis.

Construction Costs

- Total Construction Cost Estimate: $7,340,000
- Likely DNR Funding Support @ 50%: $0
- Anticipated Local Costs: $7,340,000

Revenues (Stable, year three and beyond)

- Seasonal Revenue, 100% occupancy: MDNR Rates Regional Average
  One (1) thirty foot (30’) slips: $2,005 $2,850
  Twenty-one (21) thirty-five foot (35’) slips: $52,920 $77,910
  Eighteen (18) forty foot (40’) slips: $55,440 $84,240
  Five (5) forty-five foot (45’) slips: $18,450 $28,575
  Four (4) fifty foot (50’) slips: $16,800 $27,000
  Three (3) seventy foot (70’) slips: $21,000 $34,650

  Seasonal Revenue Subtotal: $166,615 $255,225

  Total Gross Revenue: $166,615 $255,225

  Operational costs at 25% gross revenue per year: $41,654
  Net Revenue: $124,961 $213,571

  Debt service generated at 4% for 30 years: $2,161,000 $3,693,000

Assessment:

Phase 3A as described generates sufficient revenues in excess of yearly operational costs to support revenue bond funded construction of between $2,161,000 and $3,693,000 depending on the slip rates charged. The cost of the revenue producing infrastructure in Phase Three A is $780,000, so slip revenues can support all revenue producing infrastructure plus an additional $1,381,000 and $2,913,000.

The total estimated construction cost for Phase Three A is $7,340,000, so if Grand Traverse Bay Average rates are charged, all revenue generating elements would be completely paid for, and an additional $3,647,000 would be needed to cover all remaining non-revenue generating elements. If MDNR standard rates are charged, additional local funds of approximately $1,532,000 would be required.
Phase Three B

Phase Three B is predicated on a realignment of Highway 31 to the east of its current alignment. At this time, a preferred alignment has not been established by MDOT, and the cost of this realignment is not included in the estimate. This scenario envisions expansion and reconfiguration of the existing EBHC Marina facilities to create an additional 82 slips, for a total of 175 slips. Phase Three B includes construction of 82 slips, connecting the former Highway 31 alignment to the east along the existing Mount Hope Road alignment, excavation of an expanded internal marina basin, construction of 100 vehicle/trailer parking spaces, 125 additional car parking spaces, and breakwater and fishing pier amenities. Operational expenses are anticipated to be 25% due to the more efficient marina size. MDNR funding support is not likely for the elements proposed in Phase Three B. Consequently, MDNR requirements for additional transient slips will not apply. Based on the market analysis, we recommend that all Phase Three A slips be leased on a seasonal basis.

Construction Costs

- Total Construction Cost Estimate: $16,060,000
- Likely DNR Funding Support @ 50%: $0
- Anticipated Local and additional Grant Costs: $16,060,000

Revenues (Stable, year three and beyond)

- Seasonal Revenue, 100% occupancy:  
  MDNR Rates | Regional Average
  Five (5) thirty foot (30') slips: | $10,025 | $14,250
  Zero (0) thirty-five foot (35') slips: | $ | $
  Two (2) forty foot (40') slips: | $6,160 | $9,360
  Thirty-six (36) forty-five foot (45') slips: | $132,840 | $205,740
  Eleven (11) fifty foot (50') slips: | $46,200 | $74,250
  Twelve (12) fifty-five foot (55') slips: | $57,420 | $93,720
  Thirteen (13) sixty foot (60') slips: | $69,420 | $116,220
  Three (3) seventy foot (70') slips: | $21,000 | $34,650
  Seasonal Revenue Subtotal: | $343,065 | $548,190
  Total Gross Revenue: | $343,065 | $548,190

Operational costs at 25% gross revenue per year: -$85,766
Net Revenue: $257,299 | $462,424
Debt service generated at 4% for 30 years: $4,449,000 | $7,996,250

Assessment:
Phase 3B as described generates sufficient revenues in excess of yearly operational costs to support revenue bond funded construction of between $4,449,000 and $7,996,250 depending on the slip rates charged. The cost of the revenue producing infrastructure in Phase Three B is $1,230,000, so slip revenues can support all revenue producing infrastructure plus an additional $3,219,000 and $6,766,250.
The total estimated construction cost for Phase Three B is $16,060,000, so if Grand Traverse Bay Average rates are charged, all revenue generating elements would be completely paid for, and an additional $8,063,750 would be needed to cover all remaining non-revenue generating elements. If MDNR standard rates are charged, additional local funds of approximately $3,547,250 would be required.
SUMMARY ANALYSIS

In all cases described above, the marinas proposed generate sufficient revenues to cover the cost of all revenue generating infrastructure, ongoing operational expenses, and contribute towards the cost of non-revenue generating infrastructure. The market analysis has clearly documented demand more than three times greater than the initial two phases proposed in this study, and nearly double the most ambitious concept considered. The ongoing success of the existing marina, preliminary assessment and analysis of the physical and coastal conditions, and conversations with MDNR, MDEQ, and MDOT indicate that a marina in this location is both physically and environmentally feasible. Therefore, all four phases described herein may be considered feasible by industry standards.

Based on the feedback received during the community outreach process, the majority of participants support the improvement of the waterfront and construction of a municipally operated marina, so long as it is financially self-supporting. The design of the marina and surrounding waterfront must consider views of the Bay and be complementary to the goals of the Shoreline Preservation Initiative. Traffic considerations must be resolved, and views of parking west of Highway 31 minimized. Widespread public support exists for the marina as a catalyst for the transformation of downtown Acme Township, and the marina will contribute to the creation of a sense of place in downtown Acme Township, draw more people and businesses to the community, and facilitate sustained economic growth and shoreline restoration.

Should the leaders of Acme Township decide to proceed with the next step in the development of a municipal marina in Acme Township, the next steps in the process commence during “preliminary engineering”. Preliminary Engineering is a defined process that develops the concepts reviewed in the feasibility study to a higher level of detail. Tasks include:

- Survey / Bathymetry / Geotechnical
- Preliminary Engineering design and calculations
  - Initial Marine Engineering Analysis
  - Initial Structural Engineering Analysis
  - Initial Geotechnical Analysis
  - Initial Site / Civil / Accessibility Analysis
  - Refined Cost Estimate
- Permit Application / Environmental Assessment (MDEQ and USACE)
- Permit Processing
- Specialized Studies that may be required by Environmental Assessment:
  - Wind/Wave Analysis
  - Archeological Assessment / Historic Preservation Assessment
  - Threatened and Endangered Species

MDNR often provides matching funding to help cover the costs of preliminary engineering and have indicated that funds would likely be available to Acme Township if requested. While this feasibility study has identified likely sources of initial grant funding, a more comprehensive assessment of potential funding sources and development of a funding plan for non-revenue generating elements that are not covered by MDNR participation or slip revenues is also needed.