Department of Environmental Quality

Water Resources Division
120 West Chapin Street
Cadillac, MI 49601-2158
231-775-3960

File Number 11-45-0055-P

Date: January 11, 2012

PUBLIC NOTICE

Michigan Fun Venture I, LLC, Attn: Conor McCahill, 8137 South Glen Lake Road, Glen Arbor, Michigan 49636, has applied to this office for a permit under authority of Part 301, Inland Lakes and Streams, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. The applicant proposes to expand the On The Narrows Marina on Glen Lake at 8137 South Glen Lake Road to meet increased demand. Additional free-standing seasonal docks will be added and the mooring field will be expanded. Broadside dockage will be reduced by 3 feet without reducing the accommodations for mooring of boats. A new 4-foot wide by 210-foot long main pier with a 4-foot wide by 193-foot long "T" section will extend out from the existing boardwalk. A total of 20 4-foot wide by 20-foot long finger piers will provide an additional 39 slips, for a total of 46 slips. Four new mooring buoys with a 54-foot swing radius, cement block anchoring systems and 12-foot lead, will be installed east of the new docking system to increase the mooring field to a total of 16 buoys. No dredging or boat launches are proposed with this project. The project is located in T28N, R14W, Section 3, Glen Arbor Township, Leelanau County, Michigan, in accordance with plans attached to this notice.

THIS NOTICE IS NOT A PERMIT

The proposed project may also be regulated by one or more additional parts of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA) that are administered by the Water Resources Division (WRD). The requirements of all applicable parts are considered in determining if it is in the public interest to issue a permit.

When a permit application is received requesting authorization to work in or over the inland waters of the State of Michigan, pursuant to Part 301, Inland Lakes and Streams, of the NREPA, the NREPA provides that the department submit copies for review to the department of public health, the city, village or township, and the county where the project is to be located, the local soil conservation district, any local watershed council organized under Part 311, Local River Management, and the local port commission. Additional notification is provided to certain persons as required by statute or determined by the department.

Those persons wanting to make comments on the proposed project shall furnish this office with their written comments no later than 20 days from the date of this notice. Written comments will be made part of the record and should reference the above file number. Objections must be factual, specific, and fully describe the reasons upon which any objection is founded. Unless a written request is filed with the department within the 20-day public comment period, the department may make a decision on the application without a public hearing. The determination as to whether a permit will be issued or a public hearing held will be based on evaluation of all relevant factors defined in Sections 30106 and 30311, or permit criteria defined by other appropriate parts of the NREPA. These Sections address the effect of the proposed work on the public trust or interest including navigation, fish, wildlife, and water quality among other criteria. Public comments received will also be considered.

cc: Michigan Fun Venture I, LLC, applicant
DNR, Wildlife, Bay City
Leelanau County Clerk
Leelanau County Drain Commissioner
DEQ, RD, Site 45-45
Ginny Schmidt
DNR, Fisheries, Cadillac
Leelanau County Health Department
Glen Arbor Township Clerk
Leelanau Conservation District
Glen Lake Association
History Division

U.S. Army Corps of Engineers www.lre.usace.army.mil Michigan Dept of Environmental Quality www.mi.gov/jointpermit

AGENCY USE	Previous USACE File Number	Date Received	DEQ File Number
	~~USACE File Number~~ R. Schmidt	WATER RESOURCES DIVISION DEC 19 2011 CADILLAC DISTRICT	11-45-0055-P Fee received $ 250 - M-Card

Validate that all parts of this checklist are submitted with the application package. Fill out application and additional pages as needed.

- ☐ All items in Sections 1 through 9 are completed.
- ☐ Project-specific Sections 10 through 20 are completed.
- ☐ Dimensions, volumes, and calculations are provided for all impact areas.
- ☐ All information contained in the headings for the appropriate Sections (1-20) are addressed, and identified attachments (⇨) are included
- ☐ Map, site plan(s), cross sections; one set must be black and white on 8 ½ by 11 inch paper; photographs.
- ☐ Application fee is attached.

1 Project Location Information *For Latitude, Longitude, and TRS info anywhere in Michigan see www.mcgi.state.mi.us/wetlands/*

Project Address (road, if no street address)	Zip Code	Municipality Township/Village/City)	County
8137 S. Glen Lake Rd Glen Arbor, MI 49636	49636	Glen Arbor	Leelanau
Property Tax Identification Number(s)	**Latitude**		**Township/Range/Section (TRS)**
45-006-203-018-00	44.86268 N		T__ __ N or S; R__ __ E or W; Sec__
Subdivision/Plat and Lot Number	**Longitude**		OR Private Claim #
	-85.99511 W		

2 Applicant and Agent Information

Owner/Applicant (individual or corporate name)	Agent/Contractor (firm name and contact person)
McFun Venture 1, LLC - On The Narrows Marina	
Mailing Address 8137 S. Glen Lake Rd	Mailing Address
City Glen Arbor State MI Zip Code 49636	City State Zip Code
Contact Phone Number 303-324-6569 Fax None	Contact Phone Number Fax
Email ConorMccahill@mc.com	E-mail

☐ No ☒ Yes Is the applicant the sole owner of all property on which this project is to be constructed and all property involved or impacted by this project? ⇨ If no, attach letter(s) of authorization from all property owners including the owner of the disposal site.

Property Owner's Name (If different from applicant)	Mailing Address
Contact Phone Number	City State Zip Code

3 Project Description

Project Name On the Narrows Marina	Pre-Application File Number LL-45-0055-P
Name of Water body Glen Lake	Date project staked/flagged Pre App Meeting

The proposed project is on, within, or involves (check all that apply)

- ☒ an inland lake (5 acres or more)
- ☐ a pond (less than 5 acres)
- ☐ a stream, river, ditch or drain
- ☐ a legally established County Drain
  - Date Drain was established _____
- ☐ a channel/canal
- ☐ 500 feet of an existing water body
- ☐ a Great Lake or Section 10 Waters
- ☐ a wetland
- ☐ a 100-year floodplain
- ☐ a dam
- ☐ a designated high risk erosion area
- ☐ a designated critical dune area
- ☐ a designated environmental area

Project Use

- ☐ private
- ☒ commercial
- ☐ public/government
- ☐ project is receiving federal/state transportation funds
- ☐ wetland restoration
- ☐ other _____

Indicate the type of permit being applied for: ☐ General Permit ☐ Minor Project ☐ Individual (All other projects.) ⇨ See Appendix C.

Written Summary of All Proposed Activities

Due to high demand we would like to expand our boat slip and mooring offerings.

Construction Sequence and Methods

If permitted we would simply install additional freestanding seasonal docks and move and expand our mooring field. This would take place in Spring 2012

4 Project Purpose, Use and Alternatives *Attach additional sheets as necessary.*

Describe the purpose of the project and its intended use; include any new development or expansion of an existing land use.

The purpose is to expand the number of slips and moorings On The Narrows Marina can provide to the public. There is very high demand for slips and moorings on Glen Lake that we currently can not accomodate.

Describe the alternatives considered to avoid or minimize resource impacts. Include factors such as, but to limited to, alternative locations, project layout and design, and construction technologies. For utility crossings include alternative routes and construction methods.

Following our Pre Application Meeting we adjusted our layout and design to exclude a boat ramp and any dredging activity. This will require more dock sections to be used, but eliminates dredging in shallow areas.

5 Locating Your Project Site *Attach a legible black and white map with a North arrow.*

Names of roads of closest intersection M22 & W. Day Forest Rd

Directions from main intersection to the project site, with distances from the best and nearest visible landmark and water body
S. on M22 200 yards, Marina is on left (Big Glen Lake Side)

Description of buildings on the site *(color; 1 or 2 story, other)*	Description of adjacent landmarks or buildings *(address; color; etc)*
White with Blue Trim	8137 S. Glen Lake Rd. Last Building before bridge

How can your site be identified if there is no visible address? N/A

6 Easements and Other Permits

☒ No ☐ Yes Is there a conservation easement or other easement, deed restriction, lease, or other encumbrance upon the property?
⇨ If yes, attach a copy. Provide copies of court orders and legal lake levels if applicable.

List all other federal, interstate, state, or local agency authorizations including required assurances for Critical Dune Area projects.

Agency	Type of Approval	Number	Date Applied	Date approved /denied	Reason for denial

7 Compliance

If a permit is issued, when will the activity begin? (M/D/Y)	Proposed completion date (M/D/Y)
5-1-12	6-1-12

☒ No ☐ Yes Has any construction activity commenced or been completed in a regulated area?
⇨ If Yes, identify the portion(s) underway or completed on drawings or attach project specifications and give completion date(s).
☒ No ☐ Yes Were the regulated activities conducted under a DEQ and/or USACE permit?
⇨ If Yes, list the permit numbers
☒ No ☐ Yes Are you aware of any unresolved violations of environmental law or litigation involving the property?
⇨ If Yes, attach explanation.

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8 Adjacent Property Owners *Provide current mailing addresses. Attach additional sheets/labels for long lists.*

☐ Established Lake Board ☒ Lake Association	Contact Person	Mailing Address	City	State and Zip Code
		PO Box 551	Glen Arbor	MI, 49636

List all adjacents. If you own the adjacent lot, provide the requested information for the first adjacent parcel that is not owned by you.

Property Owner's Name	Mailing Address	City	State and Zip Code
Glenn Schmidt	8097 S. Glen Lake Rd	Glen Arbor	MI 49636

9 Applicant's Certification *Read carefully before signing.*

I am applying for a permit(s) to authorize the activities described herein. I certify that I am familiar with the information contained in this application; that it is true and accurate; and, to the best of my knowledge, that it is in compliance with the State Coastal Zone Management Program. I understand that there are penalties for submitting false information and that any permit issued pursuant to this application may be revoked if information on this application is untrue. I certify that I have the authority to undertake the activities proposed in this application. By signing this application, I agree to allow representatives of the DEQ, USACE, and/or their agents or contractors to enter upon said property in order to inspect the proposed activity site before and during construction and after the completion of the project. I understand that I must obtain all other necessary local, county, state, or federal permits and that the granting of other permits by local, county, state, or federal agencies does not release me from the requirements of obtaining the permit requested herein before commencing the activity. I understand that the payment of the application fee does not guarantee the issuance of a permit.

☒ Property Owner ☒ Agent/Contractor ☐ Corp. or Public Agency / Title	Printed Name	Signature	Date
	Conor McCahill		12-9-2011

10 Projects Impacting Inland Lakes, Streams, Great Lakes, Wetlands or Floodplains

- Complete only those sections A through M applicable to your project.
- If your project impacts wetlands also complete Section 12. If your project impacts regulated floodplains also complete Section 13.
- To calculate volume in cubic yards (cu yd), multiply the average length in feet (ft) times the average width (ft) times the average depth (ft) and divide by 27. Example: (25 ft long x 10 ft wide x 2 feet deep) / 27 = 18.5 cubic yards
- Some projects on the Great Lakes require an application for conveyance prior to Joint Permit Application completeness.

➪Provide a black and white overall site plan, with cross-section and profile drawings. Show existing lakes, streams, wetlands, and other water features; existing structures; and the location of all proposed structures, land change activities and soil erosion and sedimentation control measures. Review Appendix B and EZ Guides for aid in providing complete site-specific drawings.

➪Provide tables for multiple impact areas or multiple activities such as multiple fill areas or multiple culverts. Include your calculations.

Water Level Elevation

On inland waters ☐ NGVD 29 ☒ NAVD 88 ☐ other ____ Observed water elevation (ft) 595.81 date of observation (M/D/Y) 9/22/11

On a Great Lake ☐ IGLD 85 ☐ surveyed ☐ converted from observed still water elevation.

☐ A. PROJECTS REQUIRING FILL (See All Sample Drawings)

➪Attach a site plan and cross-section views to scale showing maximum and average fill dimensions with calculations.
➪ For multiple impact areas on a site provide a table with location, dimensions and volumes for each fill area.

Purpose ☐ bioengineered shore protection ☐ boat ramp ☐ boat well ☐ bridge or culvert ☐ crib dock ☐ riprap ☐ seawall ☐ swim area ☐ other_____

Dimensions of fill (ft) Length Width Maximum Depth	Total volume (cubic yards)	Volume below OHWM (cubic yards)
Maximum water depth in fill area (ft)	Area filled (sq ft)	Will filter fabric be used under proposed fill? ☐ No ☐ Yes (If Yes, type)

Fill will extend _____feet into the water from the shoreline and upland _____feet out of the water.

Type of clean fill ☐ peastone ___% ☐ sand ___% ☐ gravel ___% ☐ other _____

Source of clean fill ☐ commercial ☐ on-site ➪ If on-site, show location on site plan. ☐ other ➪ If other, attach description of location.

☐ B. PROJECTS REQUIRING DREDGING OR EXCAVATION (See Sample Drawings)

- Refer to www.mi.gov/jointpermit for spoils disposal and authorization requirements.

➪Attach a site plan and cross-section views to scale showing maximum and average dredge or excavation dimensions with calculations.
➪For multiple impact areas on a site provide a table with location, dimensions and volumes for each dredge/excavation area.

Purpose ☐ boat ramp ☐ boat well ☐ bridge or culvert ☐ maintenance dredge ☐ navigation ☐ pond/basin ☐ other_____

Dimensions (ft) Length Width Maximum Depth		Total volume (cu yds)	Volume below OHWM (cu yds)
Has this same area been previously dredged?	☐ No ☐ Yes	If Yes, provide date and permit number:	
Will the previously dredged area be enlarged?	☐ No ☐ Yes	If Yes, when and how much? _____	
Is long-term maintenance dredging planned?	☐ No ☐ Yes	If Yes, how often?_____	

Dredge or Excavation Method ☐ Hydraulic ☐ Mechanical ☐ other _____

Spoils Disposal

Dredged or excavated spoils will be placed ☐ on-site ☐ landfill ☐ USACE confined disposal facility ☐ other upland off-site
For disposal, provide a ➪Detailed spoils disposal area location map and site plan with property lines.
➪Letter of authorization from property owner of spoils disposal site, if disposed off-site.

For volumes less than 5,000 cu yards, has proposed dredge material been tested for contaminants within the past 10 years?
☐ No ☐ Yes ➪If Yes, provide test results with a map of sampling locations.

☐ C. PROJECTS REQUIRING RIPRAP (See Sample Drawings 2, 3, 8, 12, 14, 22, and 23)

Riprap water ward of the ordinary high water mark: dimensions (ft) length width depth	Volume(cu yd)
Riprap landward of the ordinary high water mark: dimensions (ft) length width depth	Volume(cu yd)
Type and size of riprap (inches) ☐ field stone_____ ☐ angular rock_____ ☐ other _____	Will filter fabric or pea stone be used under proposed riprap? ☐ No ☐ Yes, Type _____

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☐ **D. SHORE PROTECTION PROJECTS** (See EZ Guides and Sample Drawings 2, 3, and 17. Complete Sections 10A, B, and/or C.)
➪ For bioengineering projects include the list of native plants/seeds, if available.

Type and length (ft) ☐ bioengineering (ft) ___ ☐ revetment (ft) _____ ☐ riprap (ft) _____ ☐ seawall/bulkhead (ft) _____

Structure is ☐ new ☐ repair ☐ replacement of an existing structure | Will the existing structure be removed? ☐ No ☐ Yes

Proposed Toe Stone (linear feet) _____ | Distance of project from adjacent property lines (ft)

Distance of project from an obvious fixed structure (example - 50 ft from SW corner of house)

For bioengineering projects indicate the structure type ☐ brush bundles ☐ coir log ☐ live stakes ☐ tree revetment ☐ other _____

☒ **E. DOCK - PIER – MOORING PILINGS** (See Sample Drawing 10)
➪ Attach a copy of the property legal description, mortgage survey, or a property boundary survey report.

Dock Type ☐ open pile ☐ filled ☐ crib ☐ floating ☐ cantilevered ☐ spring piles ☐ piling clusters ☒ other Seasonal

Is the structure within the applicant's riparian area interest area? ☐ No ☒ Yes ➪ Show parcel property lines on the site plan. Free Standing Removable

Proposed structure dimensions (ft) length width | Use ☒ private ☒ public ☒ commercial

Dimensions of nearest adjacent structures (ft) length width | Distance of dock from adjacent property lines (ft)

☐ **F. BOAT WELL** (See EZ Guide. Complete Sections 10A and 10B)

Dimensions (ft) length width depth | Number of boats

Type of sidewall stabilization ☐ concrete ☐ riprap ☐ steel ☐ vinyl ☐ wood ☐ other _____

Volume of backfill behind sidewall stabilization (cu yd) | Distance of boat well from adjacent property lines (ft)

☐ **G. BOAT RAMP** (See EZ Guide. Complete sections 10A, 10B, and 10C for mattress and pavement fill, dredge, and riprap)

Type ☐ new ☐ existing ☐ maintenance/improvement | Use ☐ private ☐ public ☐ commercial

Existing overall boat ramp dimensions (ft)
length width depth | Type of construction material
☐ concrete ☐ wood ☐ stone ☐ other _____

Proposed overall ramp dimensions (ft)
length width depth | Proposed ramp dimensions (ft) below ordinary high water mark
length width depth

Number of proposed skid piers | Proposed skid pier dimensions (ft)
length width | Distance of ramp from adjacent property lines (ft)

☐ **H. BOAT HOIST – ROOFS** (See EZ Guide)

Type ☐ cradle ☐ side lifter ☐ other _____ | Located on ☐ seawall ☐ dock ☐ bottomlands

Hoist dimensions, including catwalks (ft) Length Width

Area occupied, including cat walks (sq ft) | Distance of hoist from adjacent property lines (ft)

Permanent Roof ☐ No ☐ Yes
➪ If Yes, how is the roof supported? | Maximum Roof Dimensions (ft): length width height

☐ **I. BOARDWALKS and DECKS In WETLANDS or FLOODPLAINS** (See Sample Drawings 5 and 6. Complete Sections 12 and/or 13)
➪ Provide a table for multiple boardwalks and decks proposed in one project; include locations and dimensions.

Wetlands		Floodplains	
Boardwalk ☐ on pilings ☐ on fill Dimensions (ft) Length Width	Deck ☐ on pilings ☐ on fill Dimensions (ft) Length Width	Boardwalk ☐ on pilings ☐ on fill Dimensions (ft) Length Width	Deck ☐ on pilings ☐ on fill Dimensions (ft) Length Width

☐ **J. INTAKE PIPES** (See Sample Drawing 16) or **OUTLET PIPES** (See Sample Drawing 22)

If outlet pipe, discharge is to ☐ inland lake ☐ stream, drain or river ☐ overland flow ☐ Great Lake ☐ wetland ☐ other

Number of pipes	Pipe diameters and invert elevations	Does pipe discharge below the OHWM? ☐ No ☐ Yes
		Is the water treated before discharge? ☐ No ☐ Yes

Type ☐ headwall ☐ end section ☐ other _____ | Dimensions of headwall OR end section (ft)
Length Width Height

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☐ **K. MOORING and NAVIGATION BUOYS** (See EZ Guide for Sample Drawing)
- ➪Provide a site plan showing the distances between each buoy and from the shore to each buoy, and depth (ft) of water at each location.
- ➪Provide cross-section drawing(s) showing anchoring system(s) and dimensions.

Purpose of buoy ☒ mooring ☐ navigation ☐ scientific structures ☐ swimming ☐ other

Number of buoys	Dimensions of buoys (ft) width	height	swing radius	chain length	Boat Lengths	Type of anchor system
16			54'	1.5 depth	0 - 25'	Cement Block

Buoy Location: Latitude ___ . _____ N Longitude --___ . _____ W. ➪ Provide a table for multiple buoys.

Do you own the property along the shoreline?	☒ No ☒ Yes	➪ If No, attach an authorization letter from the property owner(s).
Do you own the bottomlands? Yes	☐ No ☒ Yes	➪ If No, attach an authorization letter from the property owner(s).

☐ **L. FENCES**
- ➪Provide an overall site plan showing the proposed fencing through streams, wetlands or floodplains.
- ➪Provide a drawing of fence profile showing the design, dimension, post spacing, mesh, and distance from ground to bottom of fence.

Purpose of fence ☐ Airport ☐ Cervidae ☐ Livestock ☐ Residential ☐ Security ☐ Other _____

Total length (ft) of fence through	Fence height (ft)	Fence type and material
streams _____ wetlands_____ floodplains _____		

☐ **M. OTHER** - e.g., structure removal, maintenance or repair, aerator, dry fire hydrant, gold prospecting, habitat structures, scientific measuring devices, soil borings, or survey activities.

Structure description, dimensions and volumes. Complete Sections 10A-C as applicable.

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11 Expansion Of An Existing Or Construction Of A New Lake Or Pond (See Sample Drawings 4 and
- ➪Complete Section 10J for outlets and Section 17 for water control structures.
- ➪Provide elevations, cross-sections and profiles of outlets, dams, dikes, water control structures and emergency spillways to nearest water bodies.

Which best describes your proposed water body use (check all that apply)
☐ mining ☐ recreation ☐ storm water retention basin ☐ wastewater basin ☐ wildlife ☐ other _____

Water source for lake/pond
☐ groundwater ☐ natural springs ☐ Inland Lake or Stream ☐ storm water runoff ☐ pump ☐ sewage ☐ other_____

Location of the lake/basin/pond ☐ floodplain ☐ wetland ☐ stream (inline) ☐ upland

Maximum dimensions (ft) length	width	depth	Maximum Area: ☐ acres ☐ sq ft _____

Has the there been a hydrologic study performed on the site?	☐ No ☐ Yes	➪ If Yes, provide a copy.
Has the DEQ conducted a wetland assessment for this parcel?	☐ No ☐ Yes	➪ If Yes, provide a copy or WIP number:
Has a professional wetland delineation been conducted for this parcel?	☐ No ☐ Yes	➪ If Yes, provide a copy with data sheets.

Spoils Disposal

Dredged or excavated spoils will be placed ☐ on-site ☐ landfill ☐ USACE confined disposal facility ☐ other upland off-site

For disposal, provide a ➪Detailed spoils disposal area location map and site plan with property lines.
➪Letter of authorization from property owner of spoils disposal site, if disposed off-site.

18 Utility Crossings (See Sample Drawings 12 and 13, and EZ Guide)

- If side casting is proposed, complete Sections 10A and 10B. If spoils will be placed in or impact wetlands, complete Section 12.
  - ⇨Attach additional sheets or tables with the requested information as needed for multiple crossings.
  - ⇨For wetland crossings using the open trench method show clay plugs at the wetland/upland boundaries on the plans.

Crossing of ☐ Inland Lake or Stream ☐floodplain ☐ Great Lake ☐ wetlands (also complete Section 12)

What method will be used to construct the crossings? ☐ directional boring ☐ jack and bore ☐ open trench ☐ plow / knife ☐ flume

Utility Type	Number of lake or stream crossings	Number of wetland crossings	Pipe diameter with casing (in)	Pipe length per crossing (ft)	Distance below streambed or wetland (in)	Trench width (ft)
☐ sanitary sewer						
☐ storm sewer						
☐ watermain						
☐ cable						
☐ electric						
☐ fiber optic cable						
☐ oil/gas pipeline						

19 Marina Construction, Expansion and Reconfiguration (See Sample Drawing 21)

- For more information go to www.mi.gov/marinas
- Marinas located on the Great Lakes, including Lake St. Clair, may be required to secure leases or conveyances from the state of Michigan to place structures on the bottomlands. If a conveyance is necessary, an application must be submitted before the Joint Permit Application can be determined complete.
  - ⇨Fully complete Section 10 E. For multiple structures provide a table with the requested information.
  - ⇨Enclose a copy of any current pump-out agreement with another marina facility, if on-site sanitary pump out facilities are not available.
  - ⇨Attach a copy of the property legal description, mortgage survey, or a property boundary survey to your application.
  - ⇨ The WRD may require a riparian interest area (RIA) estimate survey, sealed by a licensed surveyor, in order to determine whether the proposed project will adversely impact riparian rights. Include any available sealed RIA estimate survey and/or written authorizations from affected adjacent riparian owners with your application.

Proposed Marina Activity ☐ New construction ☒ Expansion ☐ Reconfiguration

Do you have an existing Great Lake Conveyance? ☒ No ☐ Yes For more information visit www.mi.gov/deqgreatlakes.

Are sanitary pump-out facilities available? ☒ No ☐ Yes | Is there a pump out agreement? ☒ No ☐ Yes If Yes, provide a copy.

Marina Description	Current Count	Final Count
Number of boat slips/wells (do not include broadside dockage or mooring buoys)	7	46
Lineal feet of broadside dockage	71	68
Maximum number of boats at broadside dockage	3	3
Number of mooring buoys	12	16
Number of launch ramps/lanes	0	0

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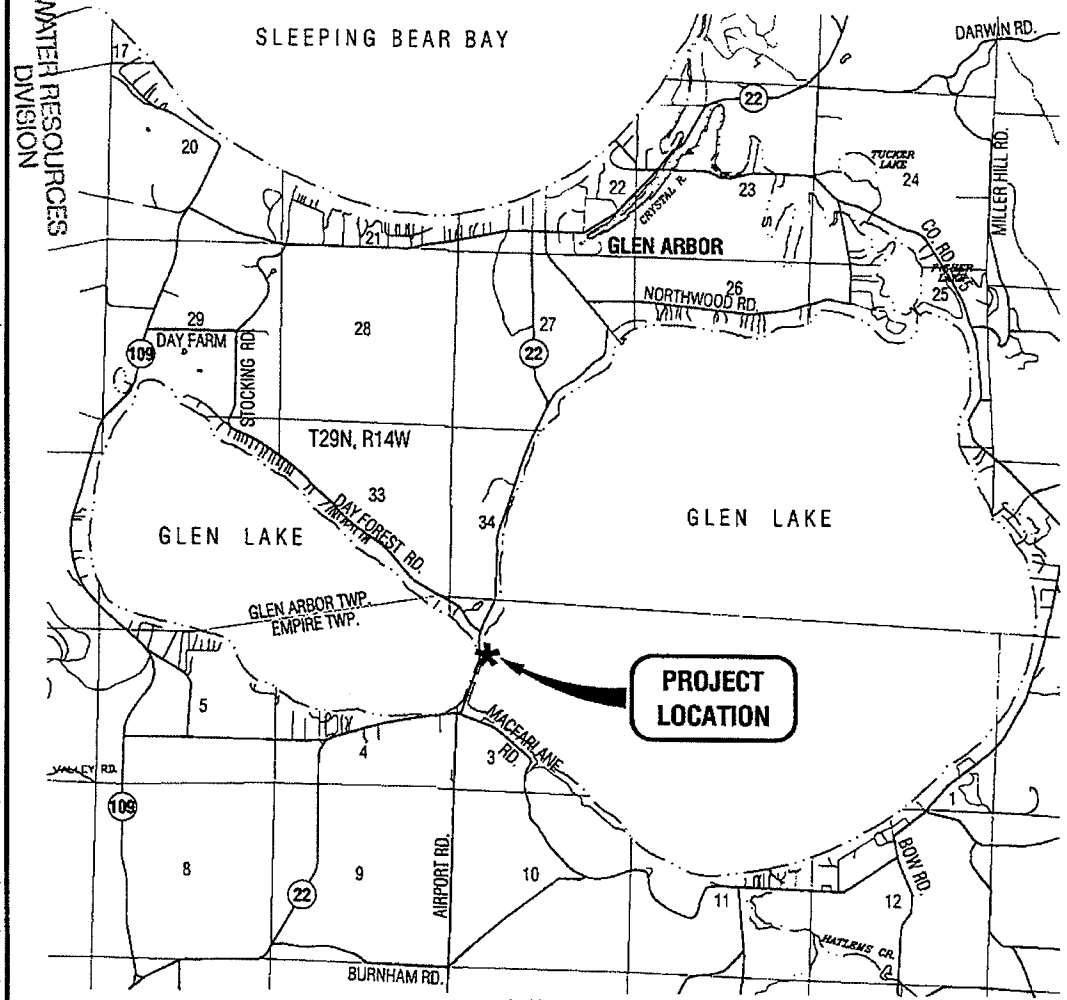


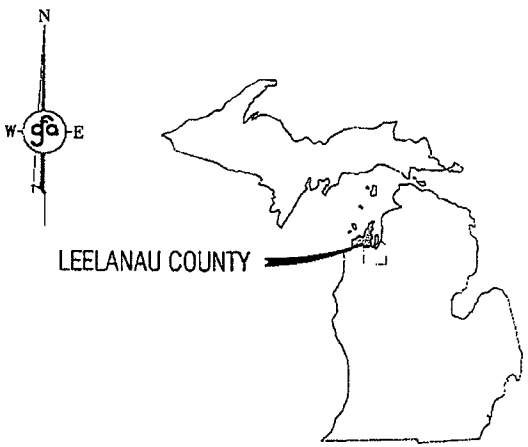
LOCATION MAP
SCALE: 1"=5,000'

DETAIL PLANS FOR

CONOR McCAHILL ON THE NARROWS MARINA

INDEX OF SHEETS

SHEET	TITLE
1	COVER SHEET
2	EXISTING CONDITIONS
3	PROPOSED SITE PLAN
4	CROSS SECTION
5	CROSS SECTION
6	MOORING BUOY PLAN
7	MOORING BUOY DETAIL



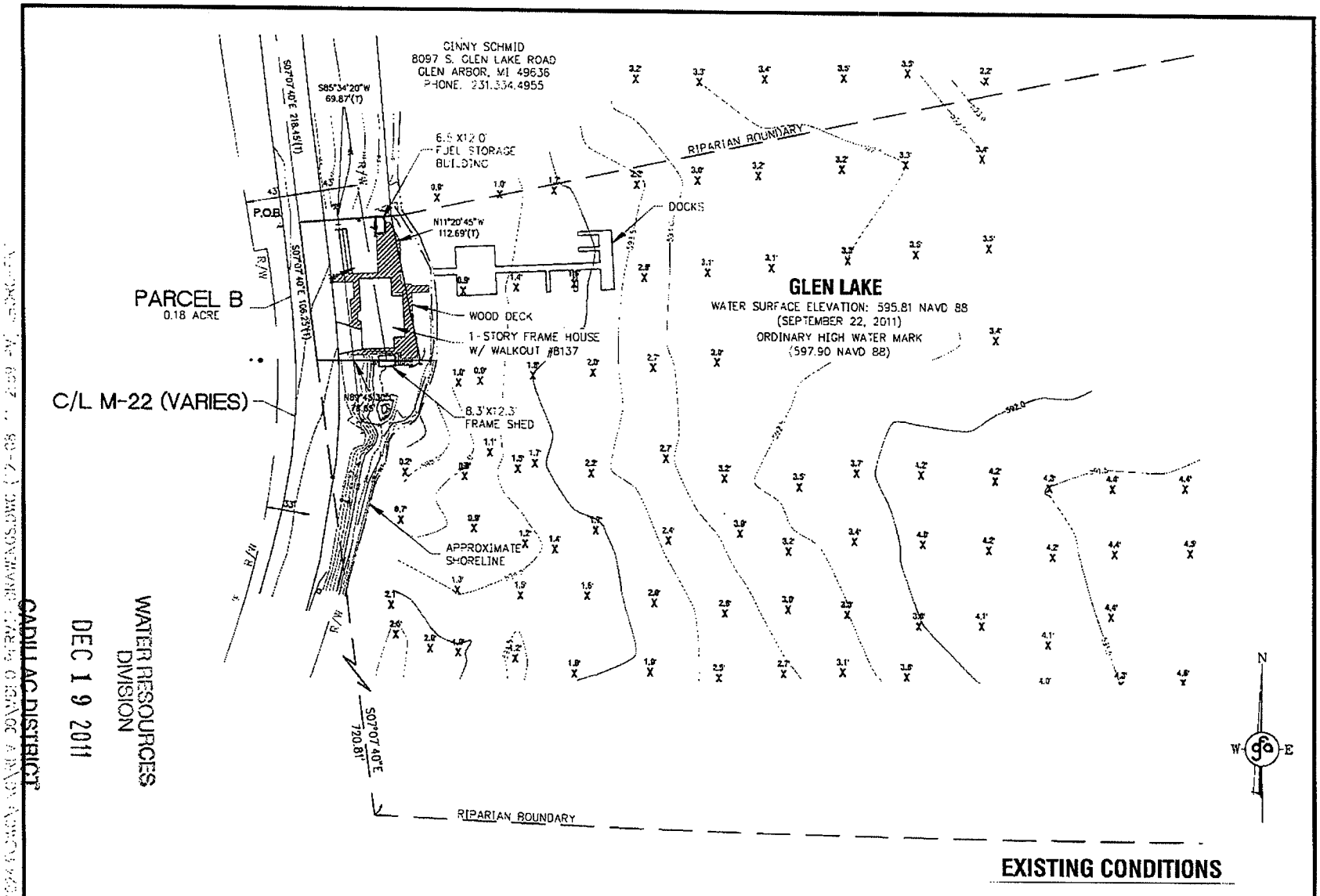
VICINITY MAP

CONOR McCAHILL
ON THE NARROWS MARINA
DEQ NO. 11-45-0055-P

OWNER: CONOR McCAHILL
WATERWAY: GLEN LAKE
COUNTY: LEELANAU COUNTY
SEC. 3, T.28N., R.14W., GLEN ARBOR TOWNSHIP

APPLICATION PREPARED BY:
GOURDIE/FRASER
SCALE: NO SCALE
DATE : 12/08/11 SHEET 1 OF 7

GFA#10243



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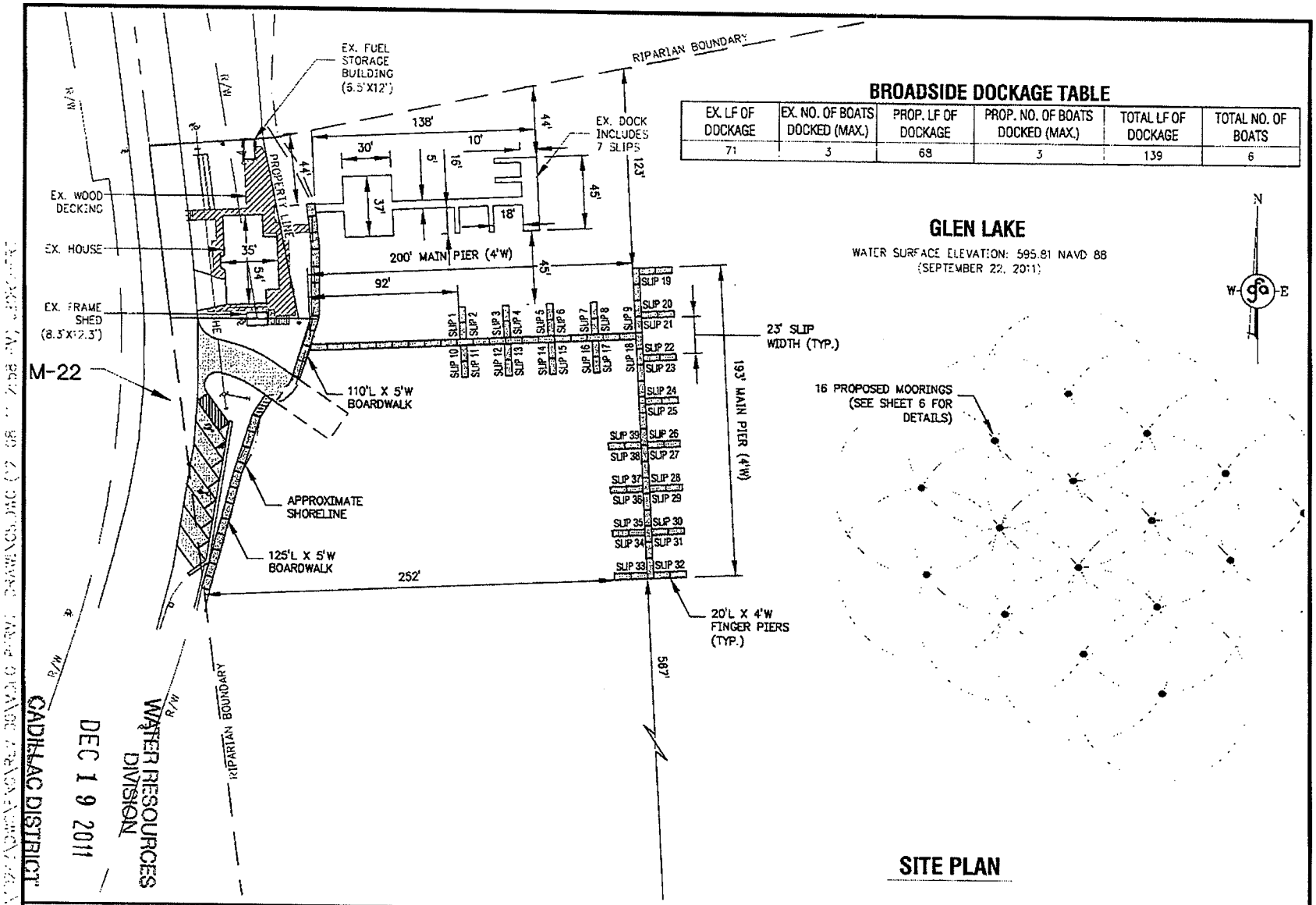
CONOR McCAHILL ON THE NARROWS MARINA DEQ NO. 11-45-0055-P	OWNER: CONOR McCAHILL WATERWAY: GLEN LAKE COUNTY: LEELANAU COUNTY SEC. 3, T.28N., R.14W., GLEN ARBOR TOWNSHIP	APPLICATION PREPARED BY: GOURDIE/FRASER SCALE: 1" = 100' DATE : 12/08/11 SHEET 2 OF 7

GFA#10243



BROADSIDE DOCKAGE TABLE

EX. LF OF DOCKAGE	EX. NO. OF BOATS DOCKED (MAX.)	PROP. LF OF DOCKAGE	PROP. NO. OF BOATS DOCKED (MAX.)	TOTAL LF OF DOCKAGE	TOTAL NO. OF BOATS
71	3	68	3	139	6

GLEN LAKE

WATER SURFACE ELEVATION: 595.81 NAVD 88
(SEPTEMBER 22, 2011)

SITE PLAN

CADILLAC DISTRICT

WATER RESOURCES DIVISION

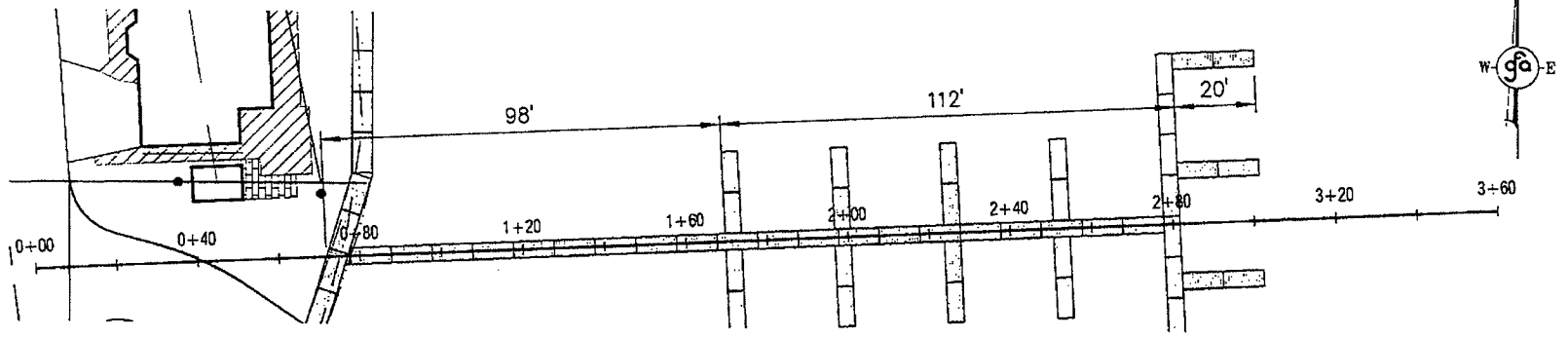
DEC 19 2011

CONOR McCAHILL
ON THE NARROWS MARINA
DEQ NO. 11-45-0055-P

OWNER: CONOR McCAHILL
WATERWAY: GLEN LAKE
COUNTY: LEELANAU COUNTY
SEC. 3, T.28N., R.14W., GLEN ARBOR TOWNSHIP

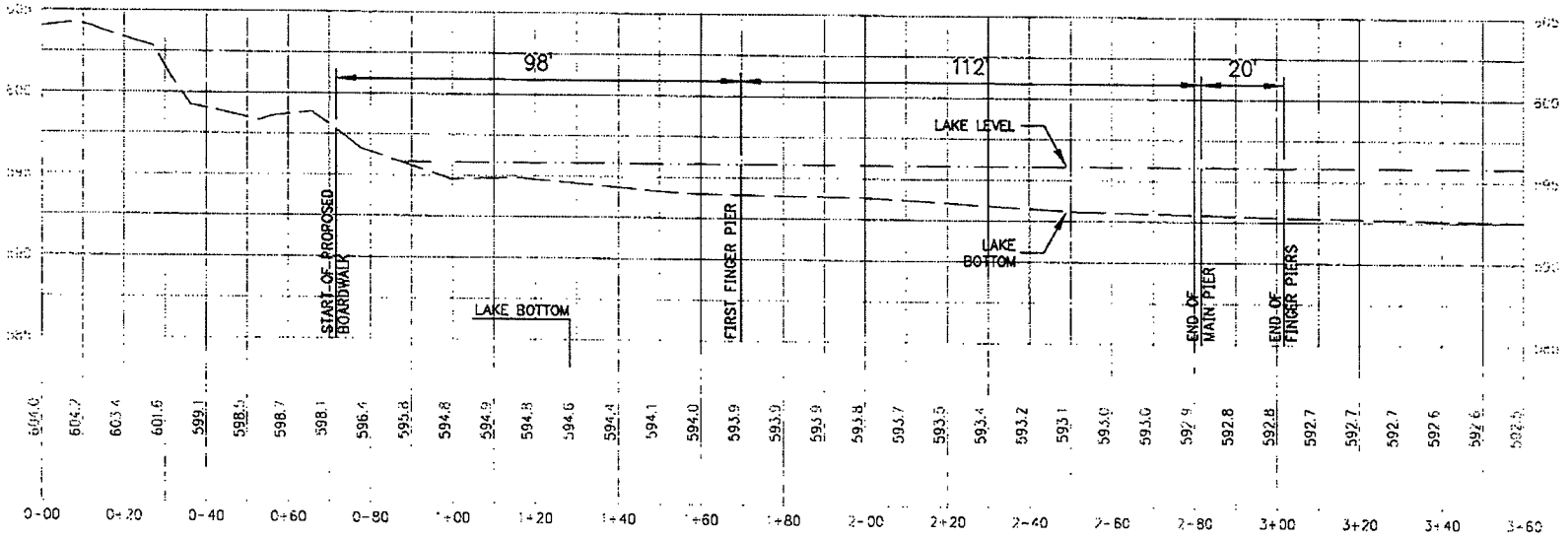
APPLICATION PREPARED BY:
GOURDIE/FRASER
SCALE: 1" = 80'
DATE : 12/08/11 SHEET 3 OF 7

GFA#10243



CROSS SECTION A-A

SCALE:
HORIZONTAL: 1"=40'
VERTICAL: 1"=10'

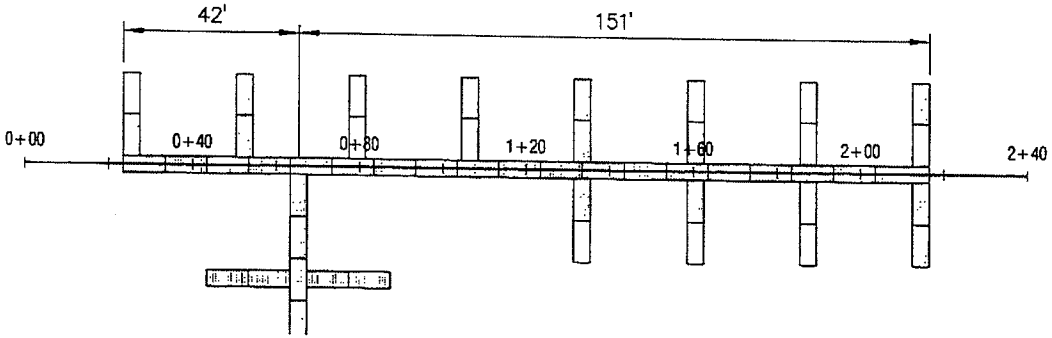


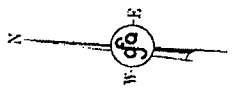
CROSS SECTION A-A

CONOR McCAHILL ON THE NARROWS MARINA DEQ NO. 11-45-0055-P	OWNER: CONOR McCAHILL WATERWAY: GLEN LAKE COUNTY: LEELANAU COUNTY SEC. 3, T.28N., R.14W., GLEN ARBOR TOWNSHIP	APPLICATION PREPARED BY: GOURDIE/FRASER SCALE: 1" = 40' DATE : 12/08/11 SHEET 4 OF 7

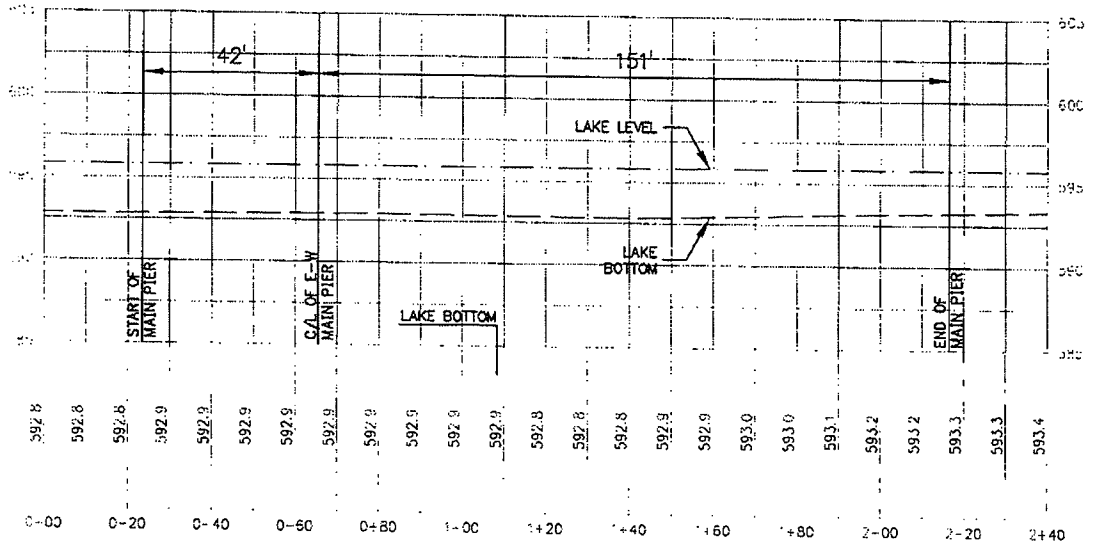
GFA#10243

RECEIVED
DEC 19 2011
WATER RESOURCES
DIVISION





CROSS SECTION B-B
SCALE:
HORIZONTAL: 1"=40'
VERTICAL: 1"=10'



CROSS SECTION B-B

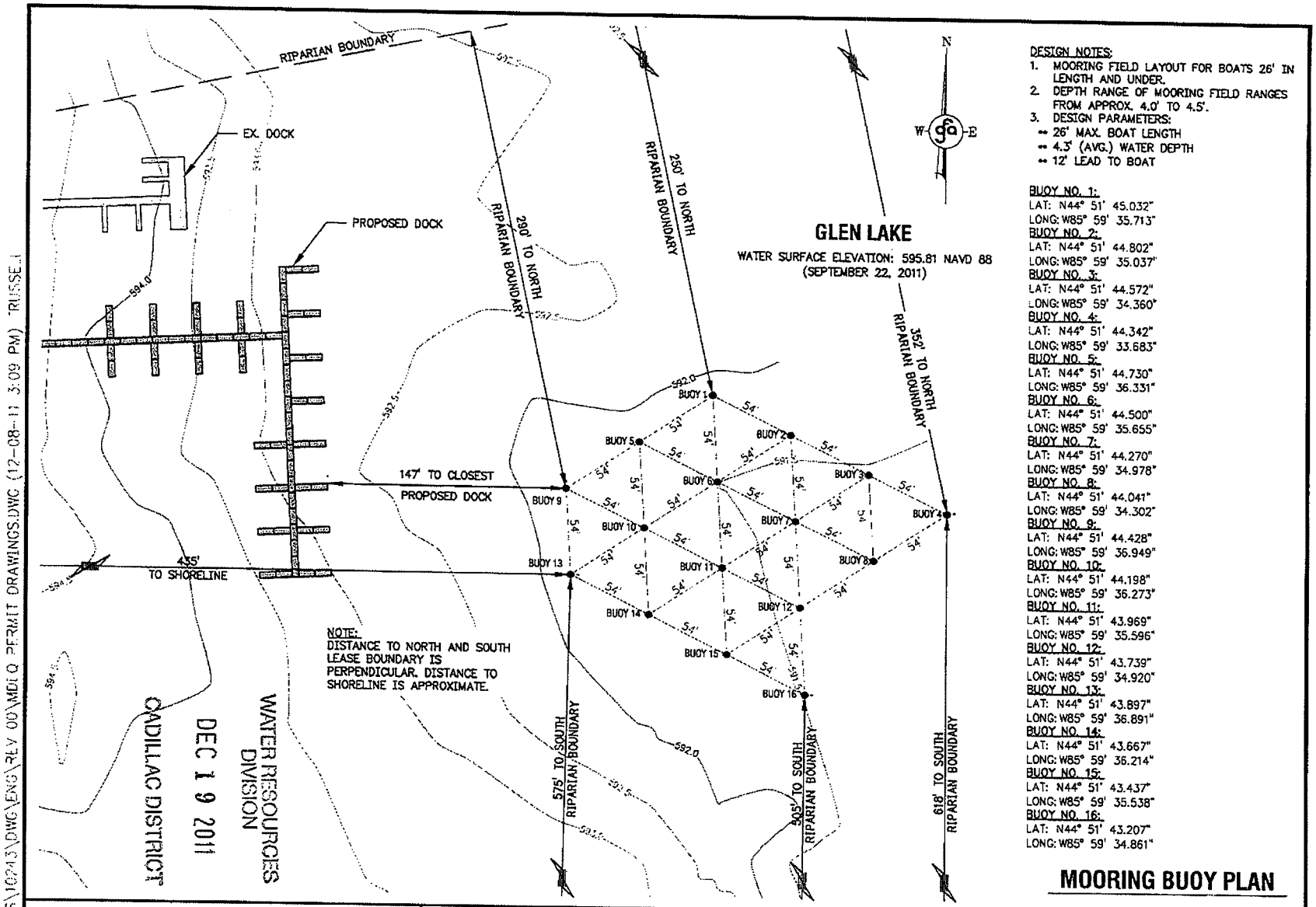
WATER RESOURCES DIVISION
DEC 19 2011
CADILLAC DISTRICT

CONOR McCAHILL
ON THE NARROWS MARINA
DEQ NO. 11-45-0055-P

OWNER: CONOR McCAHILL
WATERWAY: GLEN LAKE
COUNTY: LEELANAU COUNTY
SEC. 3, T.28N., R.14W., GLEN ARBOR TOWNSHIP

APPLICATION PREPARED BY:
GOURDIE/FRASER
SCALE: 1" = 40'
DATE : 12/08/11 SHEET 5 OF 7

GFA#10243



DESIGN NOTES:
1. MOORING FIELD LAYOUT FOR BOATS 26' IN LENGTH AND UNDER.
2. DEPTH RANGE OF MOORING FIELD RANGES FROM APPROX. 4.0' TO 4.5'.
3. DESIGN PARAMETERS:
   - 26' MAX. BOAT LENGTH
   - 4.3' (AVG.) WATER DEPTH
   - 12' LEAD TO BOAT

BUOY NO. 1:
LAT: N44° 51' 45.032"
LONG: W85° 59' 35.713"
BUOY NO. 2:
LAT: N44° 51' 44.802"
LONG: W85° 59' 35.037"
BUOY NO. 3:
LAT: N44° 51' 44.572"
LONG: W85° 59' 34.360"
BUOY NO. 4:
LAT: N44° 51' 44.342"
LONG: W85° 59' 33.683"
BUOY NO. 5:
LAT: N44° 51' 44.730"
LONG: W85° 59' 36.331"
BUOY NO. 6:
LAT: N44° 51' 44.500"
LONG: W85° 59' 35.655"
BUOY NO. 7:
LAT: N44° 51' 44.270"
LONG: W85° 59' 34.978"
BUOY NO. 8:
LAT: N44° 51' 44.041"
LONG: W85° 59' 34.302"
BUOY NO. 9:
LAT: N44° 51' 44.428"
LONG: W85° 59' 36.949"
BUOY NO. 10:
LAT: N44° 51' 44.198"
LONG: W85° 59' 36.273"
BUOY NO. 11:
LAT: N44° 51' 43.969"
LONG: W85° 59' 35.596"
BUOY NO. 12:
LAT: N44° 51' 43.739"
LONG: W85° 59' 34.920"
BUOY NO. 13:
LAT: N44° 51' 43.897"
LONG: W85° 59' 36.891"
BUOY NO. 14:
LAT: N44° 51' 43.667"
LONG: W85° 59' 36.214"
BUOY NO. 15:
LAT: N44° 51' 43.437"
LONG: W85° 59' 35.538"
BUOY NO. 16:
LAT: N44° 51' 43.207"
LONG: W85° 59' 34.861"

MOORING BUOY PLAN

CONOR McCAHILL
ON THE NARROWS MARINA
DEQ NO. 11-45-0055-P

OWNER: CONOR McCAHILL
WATERWAY: GLEN LAKE
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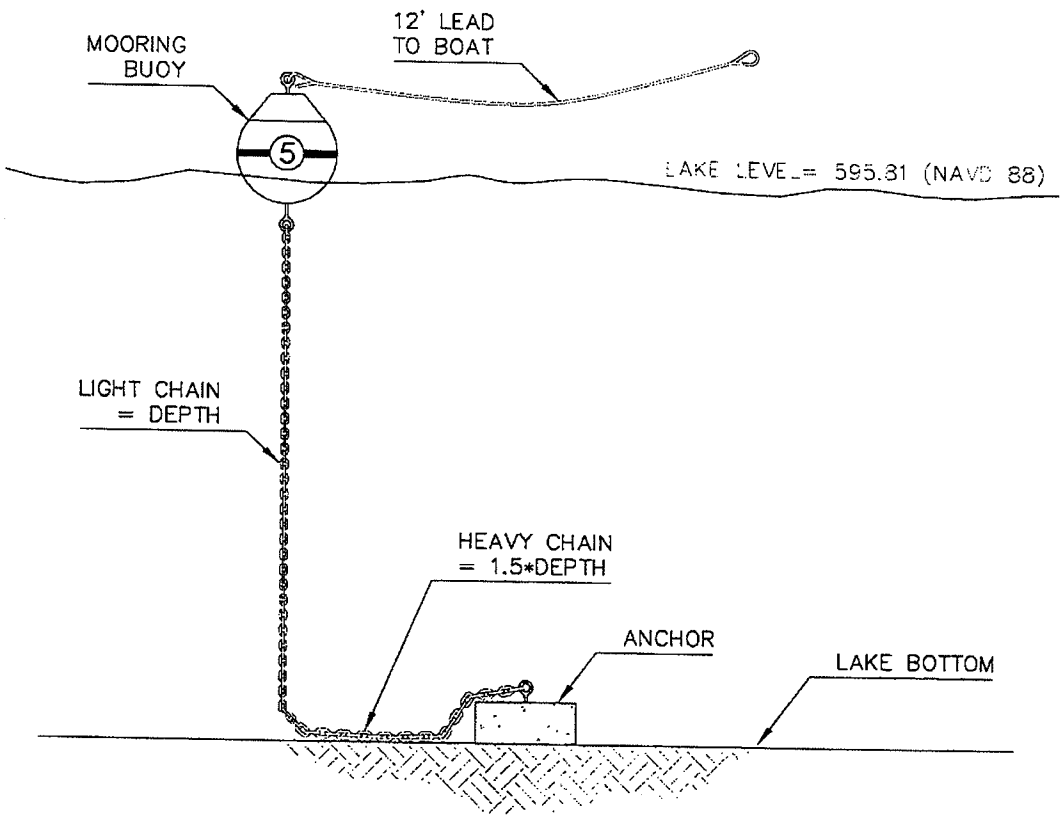
APPLICATION PREPARED BY:
GOURDIE/FRASER
SCALE: 1" = 80'
DATE : 12/08/11 SHEET 6 OF 7

gfa

GFA#10243

J:\PROJECTS\10243\DWG\ENG\REV 00\MDEQ PERMIT DRAWINGS.DWG (12-08-11 3:09 PM) TRUSSELL



CADILLAC DISTRICT
WATER RESOURCES DIVISION
DEC 19 2011

MOORING BUOY DETAIL

CONOR McCAHILL ON THE NARROWS MARINA DEQ NO. 11-45-0055-P	OWNER: CONOR McCAHILL WATERWAY: GLEN LAKE COUNTY: LEELANAU COUNTY SEC. 3, T.28N., R.14W., GLEN ARBOR TOWNSHIP	APPLICATION PREPARED BY: GOURDIE/FRASER SCALE: NONE DATE : 12/08/11 SHEET 7 OF 7	gfa

GFA#10243