

Village of Marblehead Board of Public Affairs – Special Meeting

October 16, 2021 11:00 a.m.

Johnson's Island Clubhouse

- I. Call to Order
- II. Roll Call of Officers
- III. Introductions
- IV. Overview of updated Johnson's Island Water Study by Robert L. McNutt, PE (*Refer to attachment – summary of Addendum to 2015 report*)
 - A. Welcome & Update
 - B. How much will it cost?
 - i. Water Main Sizing
 - ii. EOPPC
 - iii. Assessments
 - iv. COVID factor (inflation, material shortages, etc)
 - C. How can we get that cost down?
 - i. Advance the design – EOPPC
 - ii. Design/build – Sandusky Bay Crossing
 - iii. Perform aerial surveying (March 2022)
 - iv. Funding Opportunities
 - D. How does this benefit *ME*?
 - E. Recommendations
 - i. Advance the design, reduce unknowns – EOPPC steps
 - ii. Call your homeowners insurance company
 - iii. Calculate how much you currently pay annually
 - iv. Determine the long term value to your property
 - F. Questions & Answers
- V. Adjournment

ADDENDUM TO JOHNSON'S ISLAND FEASIBILITY REPORT – 2015 SUMMARY OF REPORT - 2021

I. Water Service Needs

- A. Off peak demands per home = 100 gallon per day (gpd) (27,000 gpd)
- B. Peak demand per home = 400 gpd (108,000 gpd)
- C. Fire flow needs 1,000 gpm for 2 hours – highest demand component

II. Water Main Sizing

- A. Sandusky Bay Crossing: 3,400 LF, 12" dia. \$2.72M
- B. Transmission Main: 13,000 LF 10" dia. \$2.23M
- C. Distribution Main: 7,000 LF 8" dia. \$1.12M (\$3.35M = B+C)
- D. Public side service line, meter setting & tap \$7,900 each
- E. Private side service line – dependent on each customer's specific needs

III. Water Main Routing Challenges

- A. Crossing Sandusky Bay & regulatory approvals
- B. Must be 10 ft offset from sanitary and storm sewers
- C. Constructed in rock for significant portion of project
- D. Need easements for installation since no public right-of-way
- E. Need location of the "existing subgrade trench"
- F. Surveying by aerial methods vs. boots on the ground (no leaves)

IV. Other Infrastructure

- A. Elevated water tank – south side by Village (150,000 gallon at TCL = 775 USGS Datum elevation) $(767 - \text{your elevation}) / 2.31 = \text{estimated pressure at your site}$.

V. Engineer's Opinion of Probable **Project** Cost (EOPPC) \$7.3M (includes engineering)

- A. Planning level: AACE Level 4 cost range: = +50%/-30%
- B. 30% design stage: AACE Level 3 cost range: +30%/-20%
- C. 60% design stage: AACE Level 2 cost range: +20%/-15%
- D. 100% design stage (bidding): AACE Level 1 cost range: +/-10%
- E. COVID related impacts are NOT included in these estimates
- F. Best way to "tighten up" EOPPC is to advance the design process

VI. Assessments \$7.3M, 20 years at 2%

- A. Parcels = 507
- B. Front Footage = 35,740 LF
- C. Acres = 248
- D. Average lot: 71 LF FF, \$204/FF, \$14,470 per average lot
- E. Per Parcel: \$14,367 each, = \$879 per year over 20 years
- F. Service cost \$7,900 per year = \$483 per year over 20 years

VII. Funding Opportunities

- A. Funding opportunities (Shovel Ready) potential grants/principal forgiveness could lower assessed cost to residents – but NO GUARANTEE. NO FREE LUNCH...
- B. Grants – very competitive, typically Financial NEEDS based (CDBG, OPWC)
- C. Principal Forgiveness – typically NEEDS based (health hazard, financial)
- D. Low Interest Loans – easier to get (WSRLA, OPWC, USDA, OWDA)
- E. Federal & State Infrastructure Funding – typically shovel ready (HB 168, proposed federal Infrastructure (2X))

VIII. Benefits to residents

- A. Potable water to your faucet 24/7, 365, no worry for haulers
- B. Known, controlled cost, economy of scale (more customers to share cost)
- C. Available fire protection near each lot
- D. MAYBE – savings for homeowners insurance due to fire hydrants
- E. Causeway & roads – less heavy traffic from water haulers = less damage
- F. Cost for water savings (4,000 gal/mo):
 - a. Hauled costs annually = \$2,400
 - b. Water purchased cost annually = \$1,800
 - c. **Savings per year = \$2,400 - \$1,800 = \$600**
- G. Potentially increase value of property for resale in future