East Reservoir
Dam Improvements

Public Briefings – May 11, 2017
Overview

- Project design updates
- Tonight’s focus: construction information and impacts
- Headline 1: Lake levels will stay the same
- Headline 2: Good news for Aqua Blvd.
- Facilitated discussion
Discussion Guidelines

- Focus: design features and construction impacts
- Respect each other’s time
- Respect each other’s ideas
- It’s okay to disagree, please don’t be disagreeable
Background: East Reservoir Dam
The Dam: Existing Project

South Spillway

North Spillway

South Embankment

Main Embankment

Main Embankment – Left Abutment (Burch’s Landing) LOW AREA

North Embankment
East Reservoir Project
Features – Typical Section

- Constructed around 1840
- Class I – High hazard dam (PMF)
- Sand embankment over a sand foundation
- Maximum height of approx. 23’
- Failed during 1913 storm event
- Top of Dam = El 993 (29NGVD)
- Normal Pool = El 989 (29NGVD)
East Reservoir

Dam Safety Concerns and Project Need
East Reservoir – Dam Safety Issues

- **Existing Dam**
  - Does not meet Ohio Dam Safety regulations
  - Uncontrolled seepage (very sensitive to pool levels)
  - *During design storm (PMF), embankment overtops by 1.7’*
East Reservoir – Results of Flood Routing with the PMF

Dam Crest Elevation = 993.0 + Crest Overtops by 1.7’ → Peak Reservoir Elevation = 994.7 (29NGVD)
Alignment TBD

East Reservoir – Improvements to Dam and Deep Soil Mixing (DSM) Gravity Section

Typical Cross Section
Proposed Improvement Design – Aqua Blvd.
South Embankment – Entrance to Iron Channel
Vibration Considerations

- Project designed to minimize vibrations
- Pre-construction surveys within 500’ of the construction limits
- Vibration monitoring during construction
Questions? Comments?

Next up: construction information and impacts
East Reservoir Dam Improvements: construction information and impacts
The Ruhlin Company Location

- **Location:**
  - Main Office located in Sharon Center, Ohio
  - Approx. 17 miles from the job site

- **Types of Work:**
  - Building
  - Heavy Civil
  - Industrial
  - Structural
The Ruhlin Company (since 1915)

1915

**Ruhlin wins first project**

Founded by John G. Ruhlin, a bricklayer, with brothers Charles and Edward, Ruhlin Brothers Construction Company wins bid to build Creston School (value $29,000)
The Ruhlin Company – Our People
Ruhlin Project Team

**Mike Ciammaichella, PE**
- Executive Oversight
- 32 Years Experience

**Mike Garver**
- Lead Estimator
- 17 Years Experience

**Doug Hartz**
- Project Manager
- 32 Years Experience

**Jim Ruhlin, Jr, PE**
- Superintendent
- 12 Years Experience
Similar Project
Buckeye Lake Dam – Sand Berm Installation
Similar Project
Buckeye Lake Dam – Sand Berm Installation Complete
Similar Project

Large Diameter Auger Mixing (GeoSolutions)
Similar Project
Large Diameter Auger (GeoSolutions)
Similar Project

Multi-auger Soil Mixing (GeoSolutions)
Similar Project

Buckeye Lake Dam
Turbidity Curtain and Dock Removal
East Reservoir Dam Improvements
South Spillway, South Embankment, Main Embankment, North Spillway, North Embankment
Two Phases of Work

**Phase 1** – DSM gravity dam and cut off wall located in the South Embankment and portion of the Main Embankment

**Phase 2** – will begin after Phase 1 and after Nov. 2 2017 to keep the Kieffer Marina open for summer 2017
Phase 1 – South Embankment
Phase 2 – Main Embankment (partial)
Phase 2 – North Embankment
Project Highlights – Sand Embankment

Approximately 100,825 Tons of Sand Embankment =

200,000 Pianos

5,041 Truckloads
Approximately 90,000 Cubic Yards of Soil Cement =

12 Goodyear Blimps
Project Highlights

Approximately 90,000 Cubic Yards of Soil Cement =

30 Olympic Sized Swimming Pools
A Critical Path Method (CPM) Schedule is currently under review.

<table>
<thead>
<tr>
<th>Milestone Dates:</th>
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<tbody>
<tr>
<td>Notice to Proceed</td>
<td>June 2017</td>
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<tr>
<td>Start Phase 1 Construction (South Embankment)</td>
<td>June/July 2017</td>
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<tr>
<td>Start Phase 2 Construction</td>
<td>After November 2, 2017</td>
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<tr>
<td>Substantial Completion</td>
<td>Winter 2018/19</td>
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<tr>
<td>Final Completion</td>
<td>Spring 2019</td>
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Traffic – What to Expect

- Aqua Blvd., Oak Grove and Durst
  - Two roads open at all times with some infrequent exceptions
- Heavy equipment movement
- Flaggers
- Other movements of traffic
- Coordinating with emergency management
Construction – What to Expect

- Pre-construction surveys
- Noise and dust
- 12-hour work days with some infrequent exceptions (7am-7pm)
- Brief utility interruptions
- Vibration monitoring
Our Commitment

THANK YOU for your time and the opportunity to share information.

We are looking forward to working in conjunction with local residents and businesses to ensure that this project is a success for everyone involved.

We are committed to communicating the information you need to minimize inconvenience as much as possible.
Communications

- E-newsletter (64%)
- Mailings (61%)
- News releases
  - The Suburbanite (35%)
  - Akron Beacon Journal (33%)
- Website: http://engineering.ohiodnr.gov/ (24%)
- Fact sheets, construction fliers, notifications of closures (22%)
- Briefings as needed

*Percentages are based on results from the East Reservoir Dam Improvements construction and communications survey*
Contacts:

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Questions? Comments?