

Williams Intercounty Drain Hearing of Necessity April 30, 2024

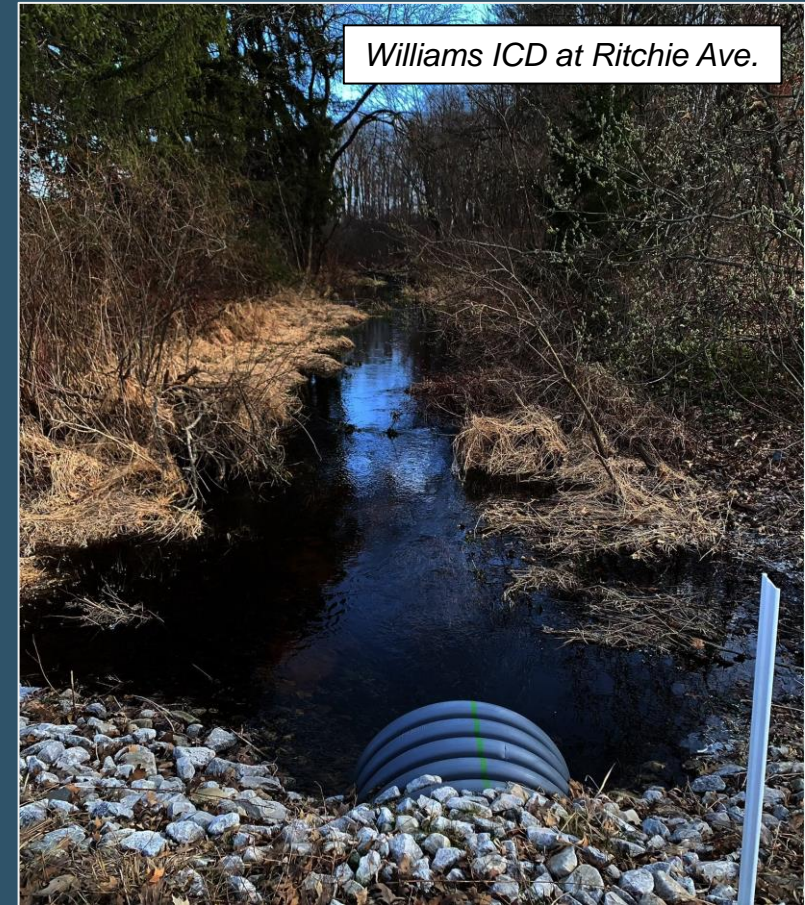
Williams Intercounty Drain Drainage Board

Kent County Drain Commissioner
Montcalm County Drain Commissioner



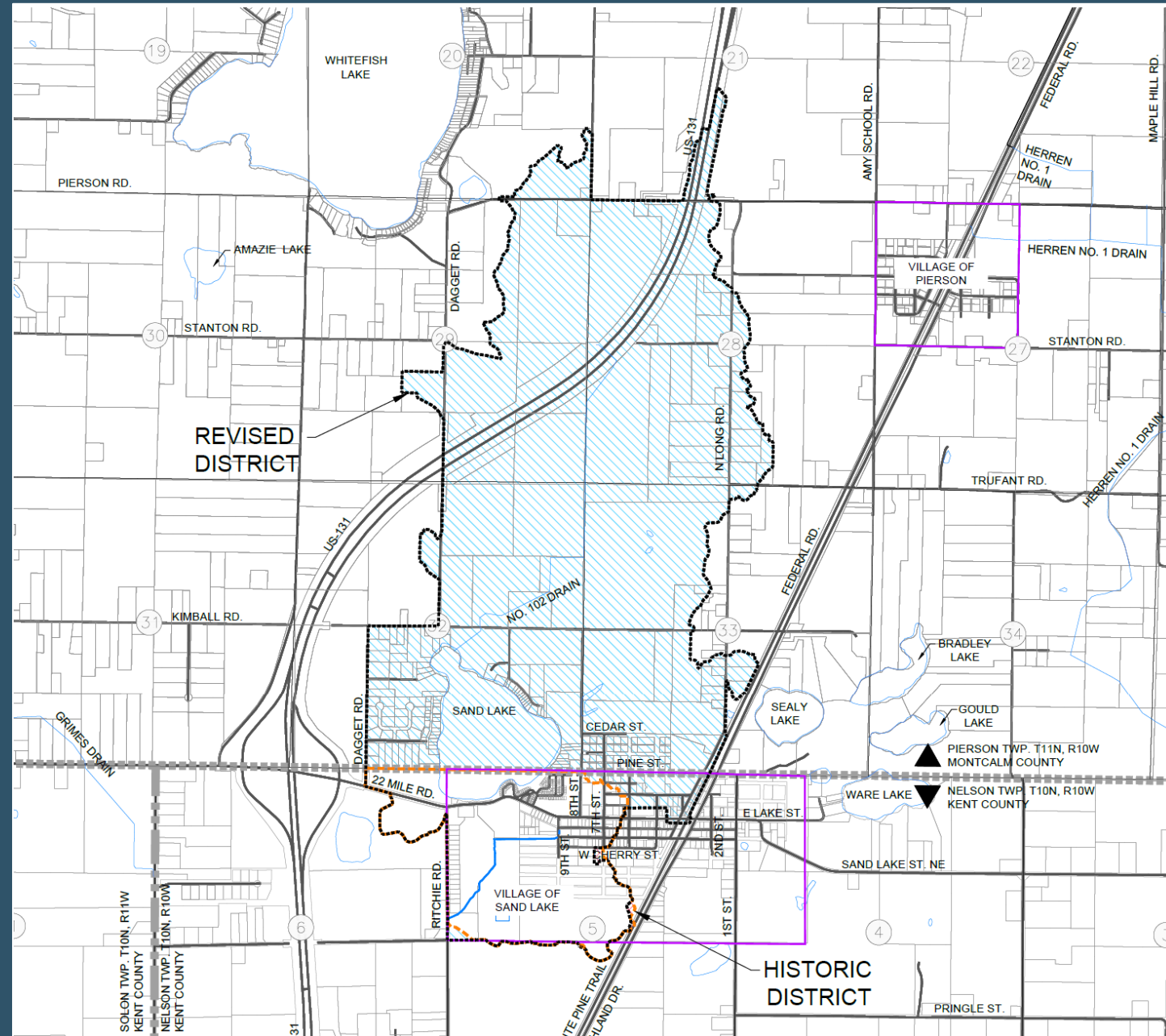
Presentation Overview

- Drain Overview
- Drain History
- Study Purpose
- Drainage Issues (Existing Conditions)
- Evaluation of Potential Alternatives
- Next Steps



Drain Overview

- Tributary to Duke Creek, Rogue River
- Drain Length – 0.6 miles
- 1642.58 Acre Watershed
- Pierson Twp. (Montcalm County), Nelson Twp. (Kent County)
- Includes Sand Lake
- Loam/Sand Soils
- Predominately Agriculture, Lakefront Residential



Drain History

- 1915 Williams Drain Established in Kent County
- 2023 Kent Count Drain Commissioner (KCDC) conducted inspection of Drain due to prolonged high-water levels in Sand Lake and determined that necessary maintenance would exceed maintenance limitations provided under Drain Code
- 2023 Petition from 6 freeholders to KCDC formerly designate Intercounty Drain, as well as potential extension, maintenance, and improvements

LRE

NOTICE OF LETTING DRAIN CONTRACT

Notice is hereby given, That I, W. T. Shafer, County Drain Commissioner of the County of Kent, State of Michigan, will, on the 25th day of November, A. D., 1915, at the Outlet in the Village of Sand Lake, in said County of Kent at ten o'clock in the forenoon of that day, proceed to receive bids for the construction of a certain drain, known and designated as "Williams Drain" located and established in the Village of Sand Lake in said County of Kent and described as follows to-wit:—

Commencing on Benjamin J. Mumah and wife Flora's land; (the w $\frac{1}{2}$, n w fr. $\frac{1}{4}$ of Section 5, except 4 acres in southwest corner thereof) at a point 391 feet north of the southwest corner thereof thence north 67 degrees, east 250 feet, thence north 34 degrees, 45 minutes, east 350 feet, thence north 30 degrees 30 minutes, east 400 feet, thence north 44 degrees, 20 minutes, east 340 feet, thence north 0 degrees, 30 minutes, west 510 feet, thence east 478 feet to east line of above description, 4 feet north of the northwest corner of Block 27, Stone & Seeley's Addition to the Village of Sand Lake.

Thence on Oak Street in the Village of Sand Lake commencing 4 feet north of the northwest corner of Block 27 Stone & Seeley Addition, thence east 627 feet, thence north 50 degrees, 30 minutes, east 130 feet to a point 4 feet west of southwest corner Block 25 said section.

Thence north on Ninth Street 85 feet to a point 212 feet south of the northwest corner of said Block 27, being the upper terminus of said proposed drain. Total length of above described drain is 3169 feet.

From Station 0 to Station 28 to be open drain.

From Station 28 to Station 31 plus 70 to be tile drain.

All open drain to have a two foot bottom with side slope of one foot horizontal to one foot vertical.

All tile drain to be 10 inch tile. Correct Attest.

T. O. WILLIAMS,
Surveyor.

Said job will be let by sections. The section at the outlet of the said Drain will be let first, and the remaining sections in their order up stream, in accordance with the diagram now on file with the other papers pertaining to said Drain, in the office of the County Drain

Commissioner of the said County of Kent to which reference may be had by all parties interested, and bids will be made and received accordingly. Contracts will be made with the lowest responsible bidder giving adequate security for the performance of the work, in a sum then and there to be fixed by me reserving to myself the right to reject any and all bids. The date for the completion of such contract, and the terms of payment therefor, shall and will be announced at the time and place of letting.

Notice is Further Hereby Given, That at the time and place of said letting, or at such other time and place thereafter, to which I, the County Drain Commissioner aforesaid, may adjourn the same, the assessments for benefits and the lands comprised within "The Williams Drain Special Assessment District," and the apportionment there of will be announced by me and will be subject to review for one day from nine o'clock in the forenoon until five o'clock in the afternoon.

The following is a description of the several tracts or parcels of land constituting the Special Assessment District of said Drain, viz:

Village of Sand Lake at Large

The w fr. $\frac{1}{4}$ of the n w fr. $\frac{1}{4}$, except a piece 20 rods n and s by 32 rods e and w in the southwest corner thereof also except that part lying n of Lake Street and e of Sand Lake, Section 5, Town 10 North, Range 10 West

The w $\frac{1}{4}$ of a piece commencing at w line of Railroad on the e and w $\frac{1}{2}$ line of Section 5, thence w 101 rods, thence n 98 rods, thence e 168 rods, thence southerly along Railroad to beginning of Section 5, Town 10 North, Range 10 West.

Stone & Seeley's Addition to the Village of Sand Lake

Lots 1, 2, 3 and 4, Block 23.

Lot 5, block 23.

Lot 6, block 23.

Lot 7, block 23.

Lot 8, block 23.

Lot 9, block 23.

Lots 10 and 12 and n $\frac{1}{2}$ lot 11 block 23

S $\frac{1}{4}$ of lot 11, block 23.

Lot 14, block 23.

Lot 15, block 23.

Lots 16 and 17, block 23.

Lots 18 and 19, block 23.

Lot 20, block 23.

Lots 21 and 22, block 23.

Lot 23, block 23.

All of block 24.

N $\frac{1}{2}$ of lots 1, 2, 3, 4 and 5, block 25.

S $\frac{1}{4}$ of lots 3, 4 and 5, block 25.

S $\frac{1}{4}$ of lots 1 and 2, block 25.

Lots 6, 7, 8 and 9, block 25.

Lots 10, 11 and 12, block 25.

Lots 1 and 2, block 26.

Lots 3 and 4, block 26.

Lot 5, block 26.

Lot 6, block 26.

Lots 8, 9, 10, 11 and 12, block 26.

Lots 1 to 10, inclusive, block 27.

Now, Therefore, All unknown and non-resident persons, owners and persons interested in the above described lands, and you Fred Ledger, President of the Village of Sand Lake, William Fassold, Lena Fassold, Laffette Stevenson, Albert C. Watling, August Thorpe, Wilson R. Williams, Mary J. Wolfe, Charles W. Williams, Moses P. Merren, William Lee, Mary A. Williams, George A. Rearick, Nathan J. Wood, Eliza Johnson, James Thorpe A. W. Burnett, E. T. Hamilton, trustee, Jennie Jones, Benjamin Mumah, Flora Mumah, S. E. Jewell, A. D. Thorpe, Mrs. Wealtha Thorpe, C. E. Bennett, Francis Lee, C. A. Twichell, D. L. Casterline, W. L. Bishop, James Simpson, Charles F. Smith, Charles Hawkins, Ellen Curtis, Frank B. Long are hereby notified that at the time and place aforesaid, or at such other time and place thereafter to which said hearing, may be adjourned, I shall proceed to receive bids on the construction of said "Williams Drain" in the manner hereinbefore stated; and also, that at such time of letting from nine o'clock in the forenoon until five o'clock in the afternoon the assessments for benefits and the lands comprised within the Williams' Drain Special Assessment Districts will be subject to review.

And You and Each of You, Owners and persons interested in the aforesaid lands, are hereby cited to appear at the time and place of such letting as aforesaid, and be heard with respect to such special assessments and your interests in relation thereto. If you so desire.

Dated, Grand Rapids, Michigan, November 3, A. D., 1915.

W. T. SHAFER,
County Drain Commissioner
of the County of Kent.

Study Purpose

- Investigate prolonged high-water levels in Sand Lake, which often exceed the legal lake level
- Identify impairments or deficiencies in the existing drainage system
- Evaluate feasible alternatives to better regulate / maintain water levels within Sand Lake



Beaver Dam Obstruction in Drain (Now Removed)

Drainage Issues

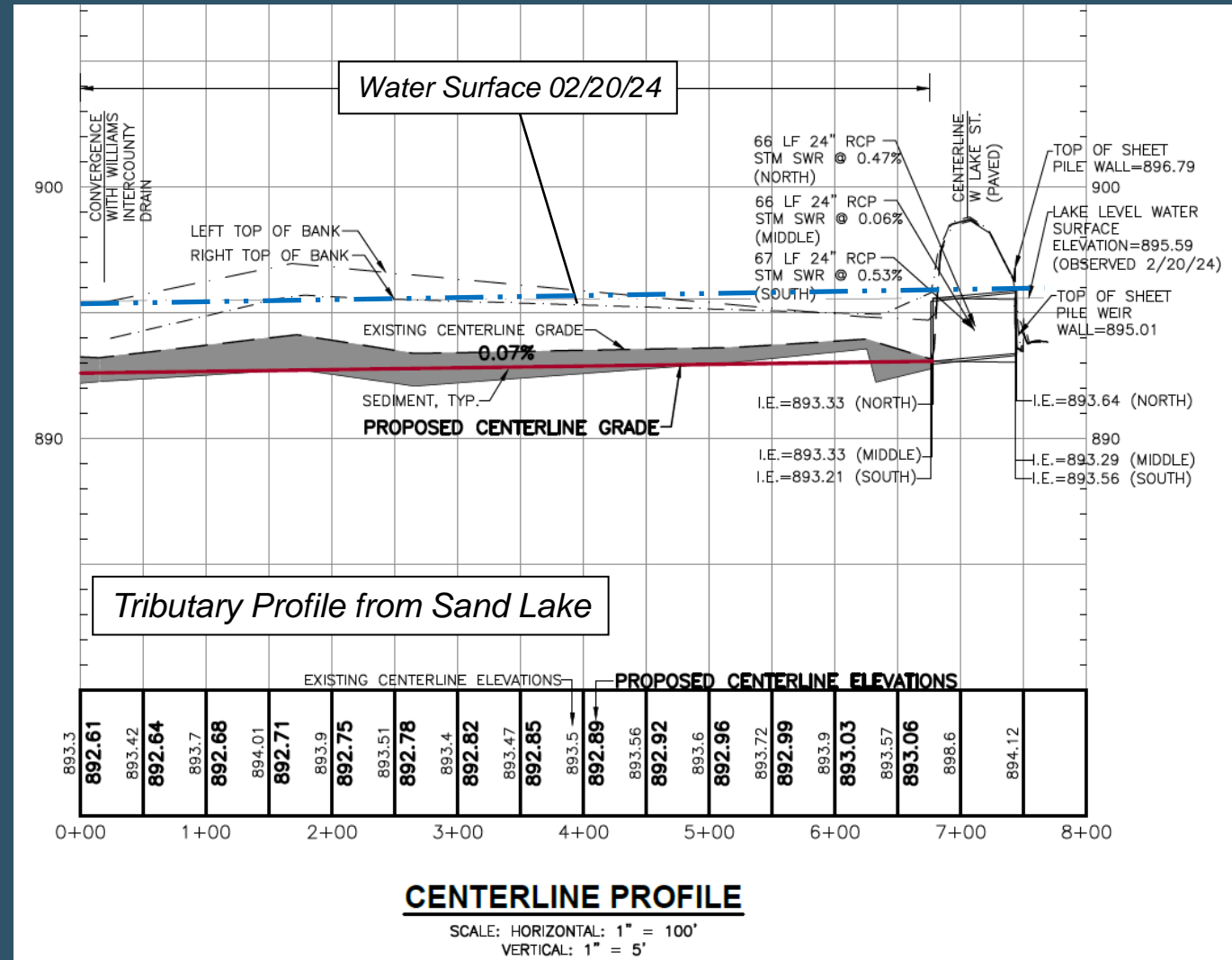
Public Health, Convenience or Welfare Issues:

- Prolonged high-water levels, exceeding legally established level of 894.95-feet (NAVD 88)
- Flooding / property damage due to high lake levels caused by hydraulic restrictions and obstructions along downstream Drain and tributary watercourse
- Potential hydraulically undersized road crossing(s)
- Emergency access becomes difficult when floodwaters overtop public roads

Drainage Issues

Hydraulic Restrictions / Obstructions:

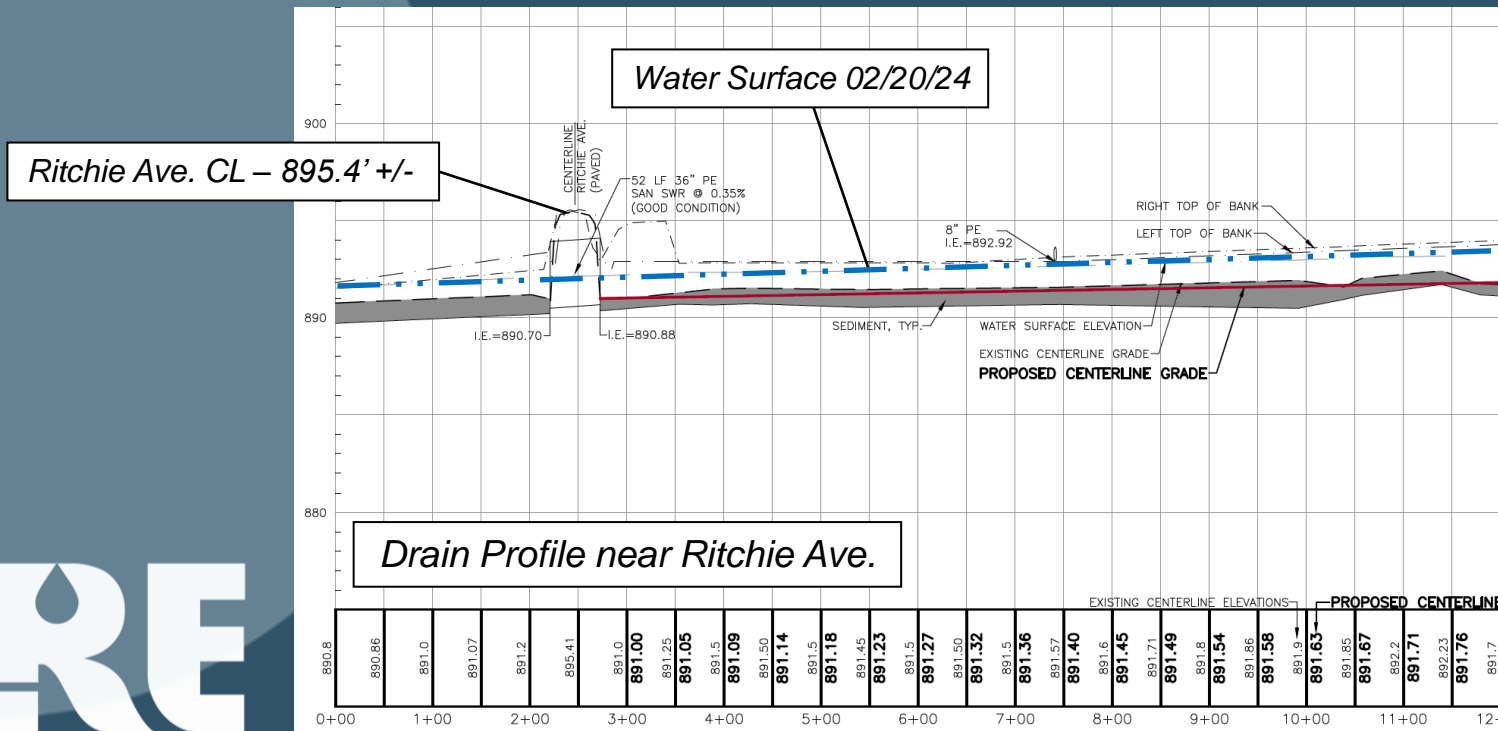
- Up to 2-feet of Sediment Buildup in Drain and Tributary as well as Woody Debris and Vegetation Obstructions
- Sand Lake level during time of survey (2/20/24) was 895.59-feet (almost 8-inches above legal level)



Drainage Issues

Road Crossings:

- Lake Street: capable of conveying approximately 12 cfs at Legal Lake Level (894.95-foot NAVD 88)
- Ritchie Avenue: hydraulic capacity of approximately 30 cfs (2-year storm per peak discharges provided by EGLE) before overtopping roadway (roadway is more than 5-inches above legal level of Sand Lake)



Evaluation of Alternatives

Evaluate Improvement Alternatives:

- Do Nothing
- Extend Drain and/or Add Branch(es)
- Improve Hydraulic Conveyance along Drain / Tributaries to Better Regulate / Maintain Water Levels in Sand Lake
- Potential Road Crossing Replacements / Upsize

Evaluation of Alternatives

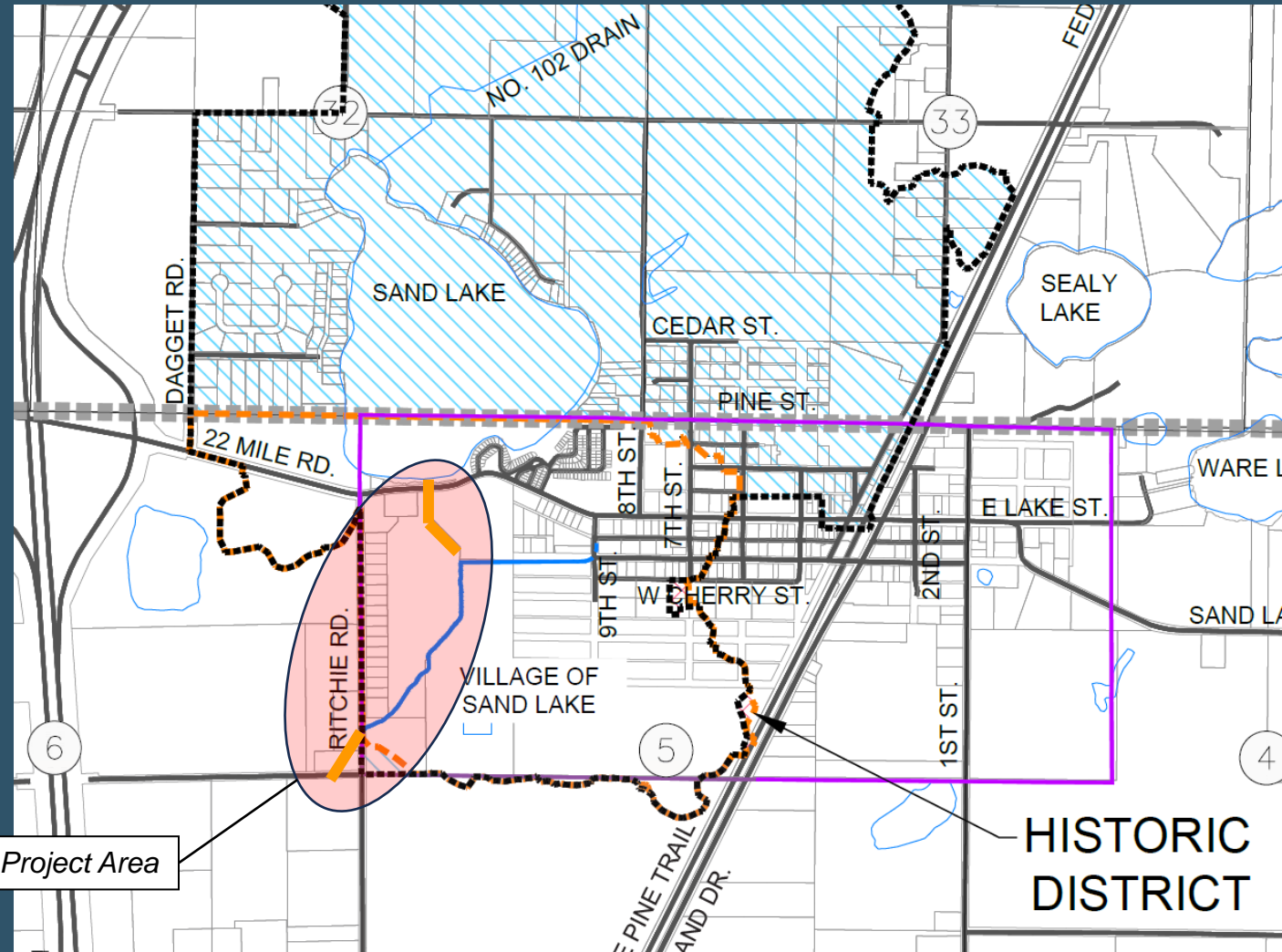
Do Nothing

- Hydraulic restrictions (sediment, woody debris, and vegetation) will continue to obstruct flow, causing water levels in Sand Lake to remain elevated above the legal lake level
- Potentially undersized road crossings may increase water levels in Sand Lake during storm events

Evaluation of Alternatives

Extend Drain / Add Branch(es):

- Extend the Drain downstream to Grimes Street and upstream to Sand Lake
- Revise Drainage District Boundary Accordingly



Evaluation of Alternatives

Improve Hydraulic Conveyance along Drain:

- Clean-out (excavate sediment and remove woody debris and other obstructions) the Drain and proposed extension to provide a free-flowing outlet from Sand Lake
 - Preliminary Estimate of Probable Construction Cost: \$85,000*
- Conduct additional engineering analysis to determine whether road crossings should be replaced / upsized.
 - Preliminary Estimate of Probable Construction Cost: \$90,000* (per crossing)

**Note – estimates do not include engineering, survey, permitting, legal, easement acquisition, mitigation, administrative or financing costs*

Next Steps

Board to decide if petition is necessary:

- If the Board finds that the petition is not necessary, the project ceases immediately and no petition can be heard for the same project until 12 months have passed.
- If the Board finds that the petition is necessary based on health, welfare or convenience, the Board proceeds with a project (the scope of which will be defined later). Each project is unique, however, in accordance with the Drain Code, the following tasks must be completed:
 1. Complete Engineering Design
 2. Obtain Easements
 3. Apply for Permits
 4. Bid Project
 5. Hold “Day of Review”
 6. Construct Project

The End

THANK YOU

LRE