

SURVEYOR'S OFFICE

Hamilton County

Kenton C. Ward, CFM
Surveyor of Hamilton County
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Suite 188
One Hamilton County Square
Noblesville, Indiana 46060-2230

December 18, 2013

TO: Hamilton County Drainage Board

RE: William Lehr Drain

Attached are plans for a partial reconstruction of the William Lehr Drain. The proposed reconstruction is part of an overall maintenance project on the Lehr Open Ditch. During the preliminary work for the dredging of the open ditch it was found that the tile section of the drain at the drains headwaters was filled with soil and is inoperable. The portion of the partial reconstruction is located in Fall Creek Township.

The proposed reconstruction is located from Station 0+57 to Station 13+68 of the original 1901 drain description as approved for construction by the Hamilton County Board of Commissioners. The project will begin at a manhole structure installed by the City of Noblesville at Station 0+57 as part of a roundabout project by the city and field verified by this office on February 25, 2011. The project shall replace the existing 12" tile with a new 12" RCP for forty (40) feet. The drain shall then be excavated as an open ditch for 1,271 feet meeting the existing open ditch at Station 13+68. The open ditch shall follow the existing alignment of the drain.

The new open ditch shall be within the existing drainage easement. Therefore, no additional easement shall be required.

A twenty (20) foot filter strip shall be installed on both sides of the new open ditch located on parcel 13-11-22-00-00-019.000 owned by Bridge, LLC. Along with this filter strip additional filter strips shall be placed on the following tracts:

<u>Parcel</u>	<u>Owner</u>	<u>Problem</u>
13-11-22-00-00-020.000	Bridge, LLC	East and West bank
13-11-22-00-00-001.000	Kevin Dennis & Joann Renfro	East and West bank
12-11-15-00-00-012.000	Sue A & James A. Spaethe	East bank
20-11-10-00-00-012.000	Ellen M. Waterman	East and West bank
20-11-10-00-00-024.000	Corby D & Robert L. Thompson	East and West bank

These tracts are located on the section of drain over which the dredging will be occurring under maintenance.

Upon review of the proposal I do not believe that any damages shall result to the landowners affected by the proposed project. Therefore, damages shall be set at \$0.00.

The cost estimate for this project is as follows:

Dredging	1,271 feet x 6.00/ft	\$ 7,626.00
12" RCP	40 feet x 54.00/ft	\$ 2,160.00
Seeding	3 acres x 2,000.00/ac	\$ 6,000.00
Filter Strip seeding	5.2 acres x 1,200.00/ac	\$ <u>6,240.00</u>
Subtotal		\$ 22,026.00
15% Contingency		\$ <u>3,303.90</u>
Total		\$ 25,329.90

At this time the maintenance fund has a balance of \$536,884.91. I recommend the Board transfer the amount above cost estimate for this work to a reconstruction fund to cover the cost of the proposed reconstruction as per IC 36-9-27-45.5.

I recommend the Board set a hearing on this for January 27, 2014.

Sincerely,



Kenton C. Ward, CFM
Hamilton County Surveyor

KCW/pll

STATE OF INDIANA)
) ss:
COUNTY OF HAMILTON)

BEFORE THE HAMILTON COUNTY
DRAINAGE BOARD
NOBLESVILLE, INDIANA

IN THE MATTER OF THE
RECONSTRUCTION OF THE
William Lehr Drain Reconstruction

FINDINGS AND ORDER FOR RECONSTRUCTION

The matter of the proposed Reconstruction of the **William Lehr Drain Reconstruction** came before the Hamilton County Drainage Board for hearing **on January 27, 2014**, on the Reconstruction Report consisting of the report and the Schedule of Damages and Assessments. The Board also received and considered the written objection of an owner of certain lands affected by the proposed Reconstruction, said owner being:

Evidence was heard on the Reconstruction Report and on the aforementioned objections.

The Board, having considered the evidence and objections, and, upon motion duly made, seconded and unanimously carried, did find and determine that the costs, damages and expenses of the proposed Reconstruction will be less than the benefits accruing to the owners of all land benefited by the Reconstruction.


The Board having considered the evidence and objections, upon motion duly made, seconded and unanimously carried, did adopt the Schedule of Assessments as proposed, subject to amendment after inspection of the subject drain as it relates to the lands of any owners which may have been erroneously included or omitted from the Schedule of Assessments.

The Board further finds that it has jurisdiction of these proceedings and that all required notices have been duly given or published as required by law.

Wherefore, it is ORDERED, that the proposed Reconstruction of the **William Lehr Drain Reconstruction** be and is hereby declared established.

Thereafter, the Board made inspection for the purpose of determining whether or not the lands of any owners had been erroneously included or excluded from the Schedule of Assessments. The Board finds on the basis of the reports and findings at this hearing as follows:


HAMILTON COUNTY DRAINAGE BOARD



PRESIDENT



Member



Member

ATTEST: 
Executive Secretary

BEFORE THE HAMILTON COUNTY DRAINAGE BOARD
IN THE MATTER OF

William Lehr Drain
(Reconstruction)

NOTICE

To Whom It May Concern and: _____

Notice is hereby given of the hearing of the Hamilton County Drainage Board concerning the reconstruction of the **William Lehr Drain (Reconstruction)** on **January 27, 2014** at **9:45 A.M.** in Commissioners Court, Hamilton County Judicial Center, One Hamilton County Square, Noblesville, Indiana. Construction and maintenance reports of the Surveyor and the Schedule of Assessments proposed by the Drainage Board have been filed and are available for public inspection in the office of the Hamilton County Surveyor.

Hamilton County Drainage Board

Attest: Lynette Mosbaugh

ONE TIME ONLY

STATE OF INDIANA)
) SS BEFORE THE HAMILTON
)
COUNTY OF HAMILTON) DRAINAGE BOARD

IN THE MATTER OF **William Lehr Drain Reconstruction**

NOTICE

Notice is hereby given that the Hamilton County Drainage Board at its regular meeting **January 27, 2014** adopted the reconstruction report of the Surveyor and the Amended Schedule of damages and assessments including annual assessment for periodic maintenance, finding that the costs, damages and expense of the proposed improvement would be less than the benefits which will result to the owner of lands benefited thereby.

The Board issued an order declaring the proposed improvement established. Such findings and order were marked filed and are available for inspection in the Office of the Hamilton County Surveyor.

If judicial review of the findings and order of the Board is not requested pursuant to Article VIII of the 1965 Indiana Drainage Code as amended within twenty (20) days from the date of publication of this notice, the findings and order shall become conclusive.

HAMILTON COUNTY DRAINAGE BOARD

BY: Mark Heirbrandt
PRESIDENT

ATTEST: Lynette Mosbaugh
SECRETARY

Wm. Lehr Drain #3

Partial Reconstruction from Sta 0+57 to 13+68

Replace 1311' of 12" tile with 40' of 12" RCP & 1271' open ditch. Cost estimate is \$25,329.50.

A 20' filter strip will be installed on parcels as listed below. Damages are set at \$0.00.

* Reconstruction to be paid from maintenance fund.

**No change in current maintenance assessment rates.

Hearing: 01/27/14

Parcel	Owner	Filter Strips	Description	Benefit	Mnt Asmt	Rec Asmt	Percent of Total
13-11-22-00-00-019.000	Bridge LLC	Filter strips on both sides of ditch	S22 T18 R5 38.41 Ac	*	**	*	16.66%
13-11-22-00-00-020.000	Bridge LLC	Filter strips on east & west bank	S22 T18 R5 18.00 Ac	*	**	*	16.66%
13-11-22-00-00-001.000	Renfro, Kevin Dennis & Joanne M	Filter strips on east & west bank	S22 T18 R5 11.25 Ac	*	**	*	16.66%
12-11-15-00-00-012.000	Spaethe, Sue A & James A CoTr	Filter strip on east bank	S15 T18 R5 21.72 Ac	*	**	*	16.66%
20-11-10-00-00-012.000	Waterman, Ellen M	Filter strips on east & west bank	S10 T18 R5 39.00 Ac	*	**	*	16.66%
20-11-10-00-00-024.000	Thompson, Corby & Robert Bowen	Filter strips on east & west bank	S10 T18 R5 76.70 Ac	*	**	*	16.66%
Parcels: 6							100.00%

This calculation is to remove the existing 18" CMP and install an open channel from 141st North to the upper end of the William Lehr open channel. 141st Street is the upper end of the drainage shed. The town of Fishers has a release rate after development of 0.10 cfs/acre for a 2/10 yr storm the 100 yr release rate is 0.30 cfs per acre

	<u>Q₁₀</u>	<u>Q₁₀₀</u>
Westminster release rates to the north to Lehr	4.9 cfs	14.5 cfs
Grover Property / Canyon Ridge	5.86	23.60 cfs
	10.8 cfs	38.1 cfs

Length of proposed open channel = 1300 LF

upstream
outlet ele. on north side of 141st ST = 805.79'

proposed flow line elevation of dredged Lehr = 801.0'

$$\text{slope of proposed channel to headwall} = \frac{805.79 - 801.0'}{1300 \text{ LF}} = 0.37\%$$

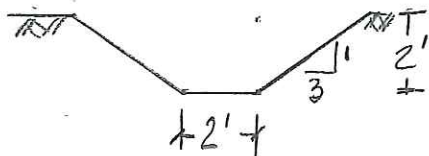
An additional 27 acres, north of 141st street drain to the proposed channel.

$$Q_{10} = 21 \text{ cfs}$$

$$Q_{100} = 30 \text{ cfs}$$

$$\text{total } Q_{10} = 10.8 \text{ cfs} + 21 \text{ cfs} = 31.8 \text{ cfs}$$

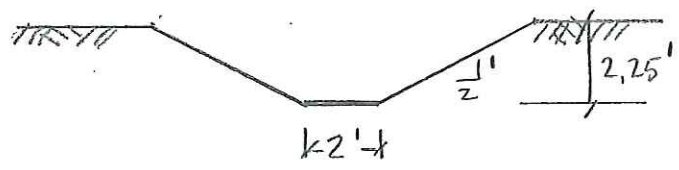
$$Q_{100} = 38.1 \text{ cfs} + 30 \text{ cfs} = 68.1 \text{ cfs}$$



b = 2' height = 2'
Side slopes 3/1

Will carry 100 yr storm
SF = 16 SF

At 2:1 side slopes $b = 2'$
 $h = 2.25'$ to carry $\Phi 100$



STAEDTLER®
No. 937 811E
Engineer's Computation Pad

Channel Report

Proposed Lehr, north of 141st Street

Trapezoidal

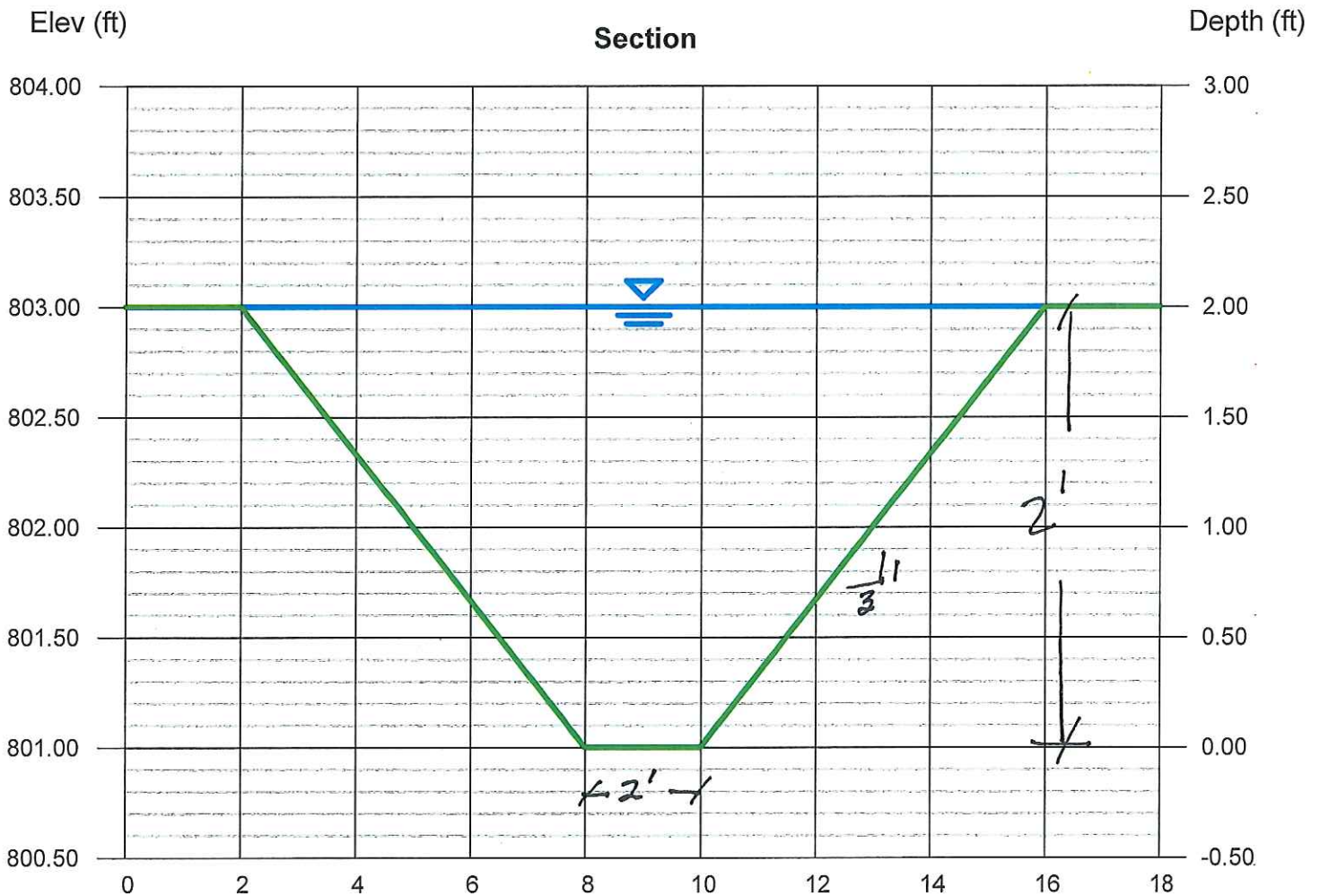
Bottom Width (ft) = 2.00
 Side Slopes (z:1) = 3.00, 3.00
 Total Depth (ft) = 2.00
 Invert Elev (ft) = 801.00
 Slope (%) = 0.37
 N-Value = 0.022

Highlighted

Depth (ft) = 2.00
 Q (cfs) = 69.72
 Area (sqft) = 16.00
 Velocity (ft/s) = 4.36
 Wetted Perim (ft) = 14.65
 Crit Depth, Yc (ft) = 1.54
 Top Width (ft) = 14.00
 EGL (ft) = 2.30

Calculations

Compute by: Q vs Depth
 No. Increments = 10



AT Headwall

Channel Report

Hydraflow Express Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc.

Wednesday, Dec 4 2013

<Name>

Trapezoidal

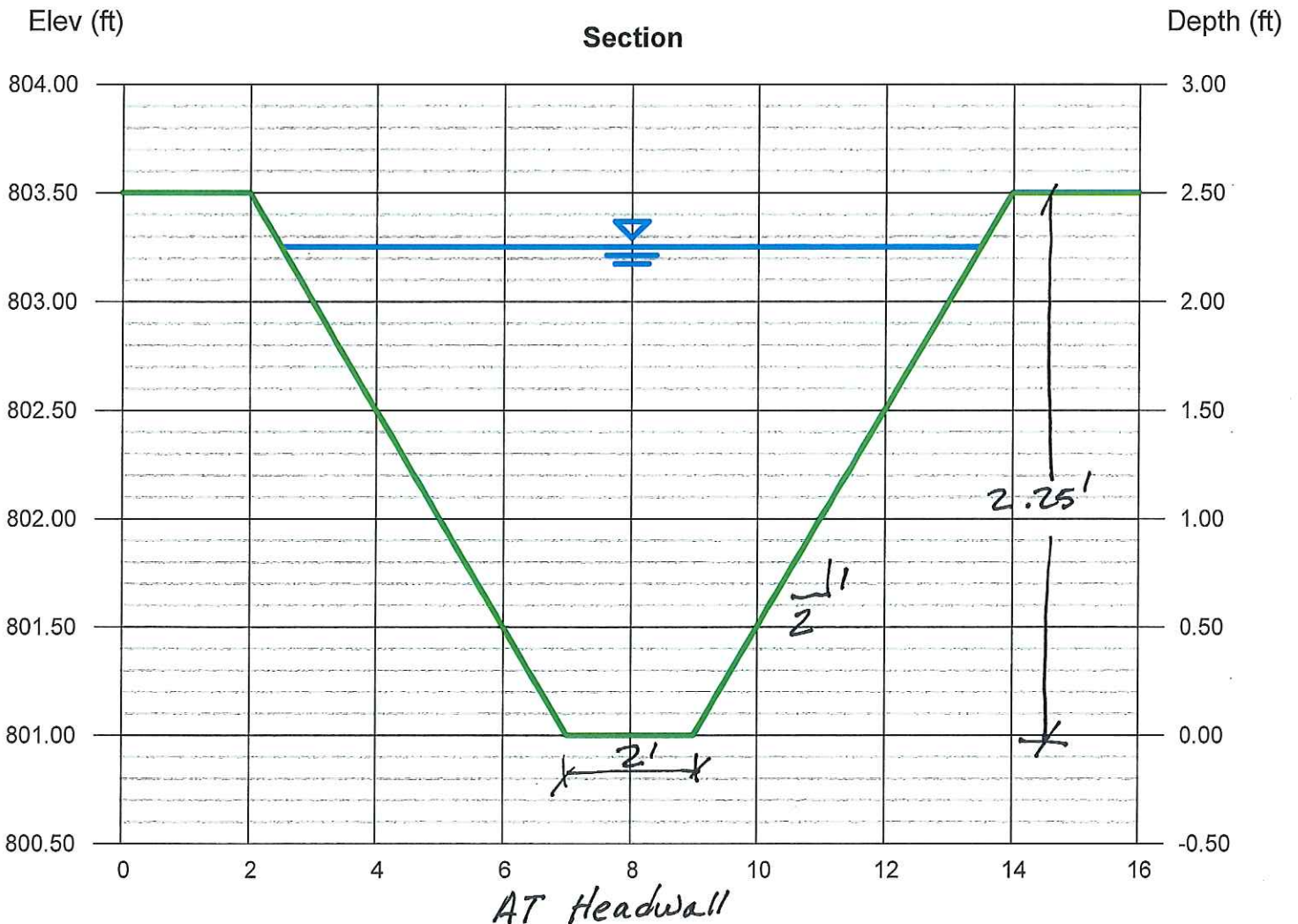
Bottom Width (ft) = 2.00
 Side Slopes (z:1) = 2.00, 2.00
 Total Depth (ft) = 2.50
 Invert Elev (ft) = 801.00
 Slope (%) = 0.37
 N-Value = 0.022

Highlighted

Depth (ft) = 2.25
 Q (cfs) = 68.33
 Area (sqft) = 14.63
 Velocity (ft/s) = 4.67
 Wetted Perim (ft) = 12.06
 Crit Depth, Yc (ft) = 1.69
 Top Width (ft) = 11.00
 EGL (ft) = 2.59

Calculations

Compute by: Q vs Depth
 No. Increments = 10





N



NO SCALE

WILLIAM LEHR - FILTER STRIPS

Date: 12/18/2013

This copy is from the Digital Archive of the Hamilton County Surveyor's Office; Noblesville, In 46060

Author: SUZANNE L. MILLS

REGULATED DRAIN

- - - CLOSED
- - - 20' FILTER STRIP
- OPEN
- - - Streams



N



NO SCALE

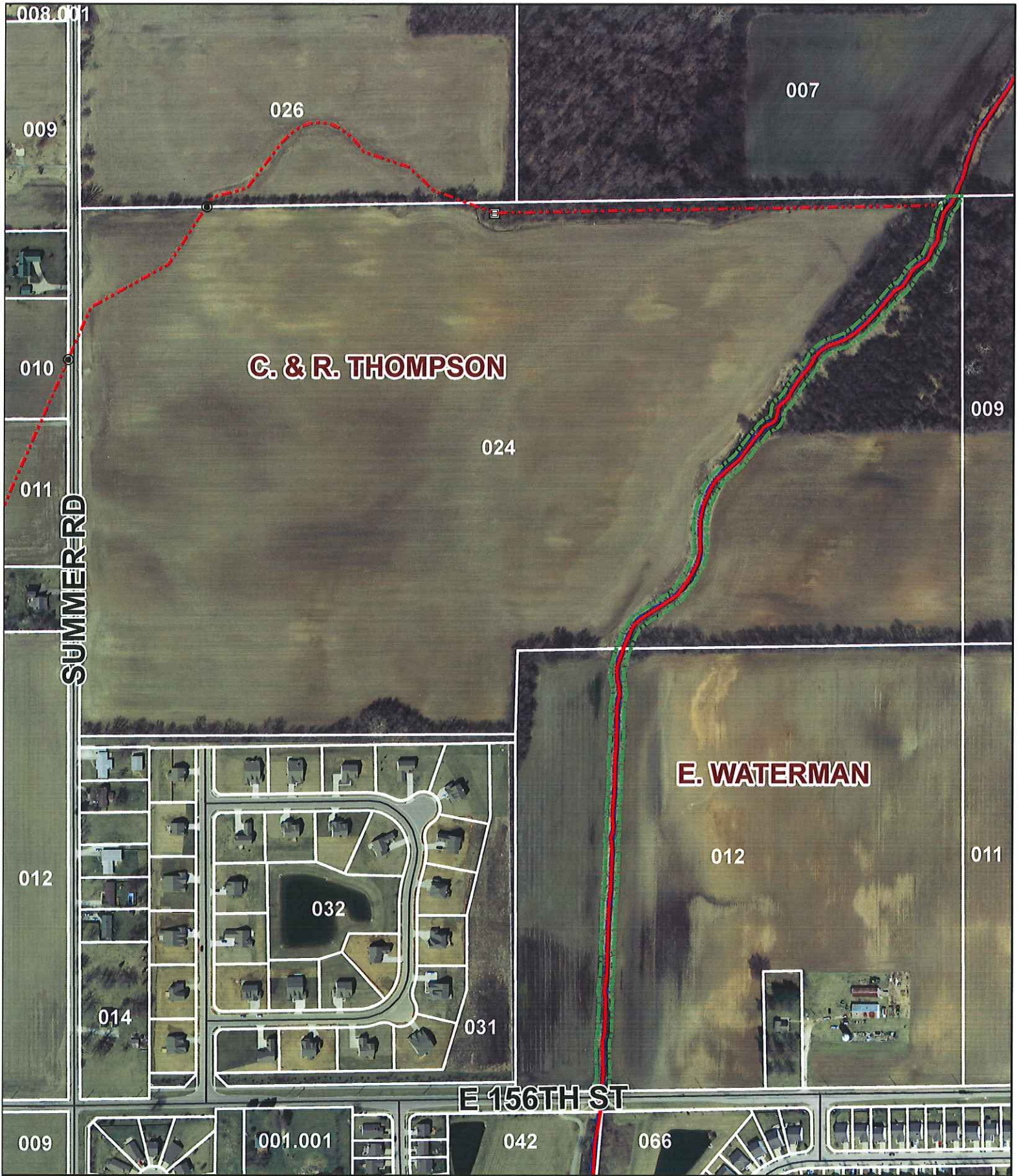
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N



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WILLIAM LEHR - FILTER STRIPS

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