

**COMMITTEE OF THE WHOLE MEETING AGENDA**  
**Monday, January 13<sup>th</sup>, 2025, 5:30 pm**  
**Eldridge Community Center – 400 S 16<sup>th</sup> Ave**

1. Call to Order and Roll Call
2. Approval of Agenda
3. Old Business
  - A. Discussion on HOA fees for maintenance of detention ponds
  - B. Goal Setting Discussion
  - C. Review of plans and specifications for the South 1<sup>st</sup> St Overlay project
  - D. Review of the preliminary plans for the 4<sup>th</sup> Ave & LeClaire Rd traffic signal project
  - E. Review of the Terracon geotechnical engineering report for the Hickory Creek pond project
  - F. Review and Discussion on TEAP Report
4. Adjournment

*Next Special Committee of the Whole Meeting: Monday, January 27<sup>th</sup>, 2025, at 6:00pm at Eldridge Community Center*

*Next Regular Committee of the Whole Meeting: Monday, February 3<sup>rd</sup>, 2025, at 6:00pm at Eldridge Community Center*

# City of Eldridge MEMORANDIUM



To: Mayor and City Council  
From: Jeff Martens, Assistant City Administrator  
Re: HOA Detention Facility Maintenance Fees  
Date: 01/13/25

At the December 16, 2024, City Council meeting I was asked to gather information on detention facility maintenance fees for HOAs within the city.

The following three HOAs mainly maintain detention facilities with their fees. There are other active HOAs in the city but their fees also include extensive lawn maintenance so we would not be able to determine the amount set aside for just the detention facilities.

**Lincoln Road Addition Homeowners** – Their fees are \$50 per year per covenant’s but currently no fee is charged as neighborhood mows around detention pond on their own.

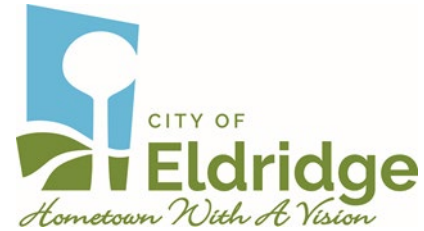


Mayor Frank King  
Councilman Adrian Blackwell

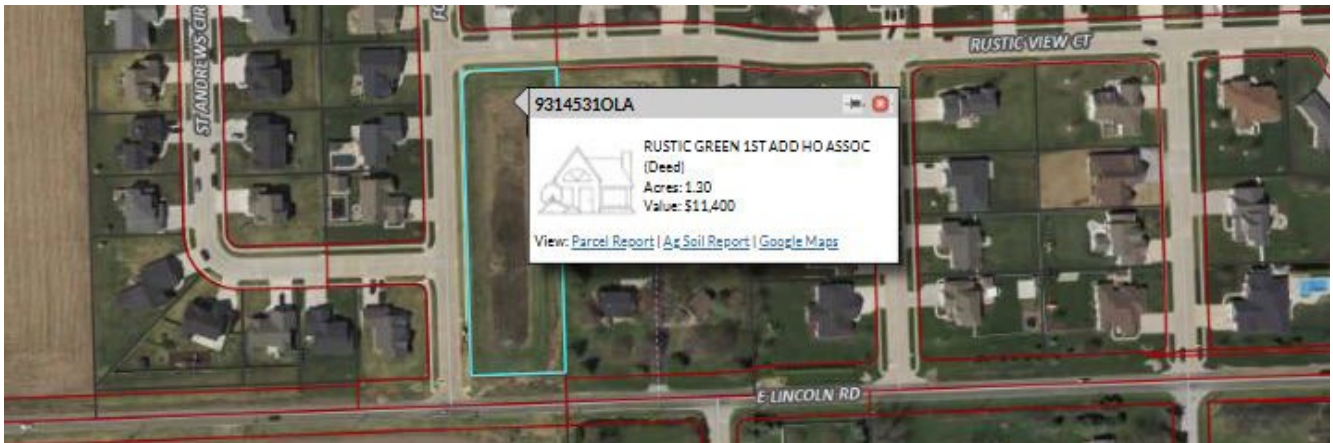
Councilman Scott Campbell  
Councilman Daniel Collins

Councilman Brian Dockery  
Councilman Ryan Iossi

# City of Eldridge MEMORANDIUM



**Rustic Green 1<sup>st</sup> Addition HO Association** – They collect assessments annually at the beginning of the year, after they have the “annual” meeting and review of expenses to determine if they need to increase or decrease the assessment for the coming year. Their bylaws only allow them to increase or decrease a maximum of 10% each year. The 2024 assessment was \$80. This covered mowing, snow removal, liability insurance and a fidelity bond for all the officers.



**Stone Brook Addition** – Two detention ponds are in this subdivision and are owned by SBK LC not an HOA. Paul Boffeli is the owner of the LC and charged 51 lot owners \$110.22 each in 2022 and \$101.74 each in 2023. Invoices are attached for each year’s service. A small portion of these fees also maintain the entrance areas. Not included in the fee to the homeowners is \$500 per year to mow the bowl of the large basin. This is paid by the owner.



Mayor Frank King  
Councilman Adrian Blackwell

Councilman Scott Campbell  
Councilman Daniel Collins

Councilman Brian Dockery  
Councilman Ryan Iossi

# Stonebrook Estates

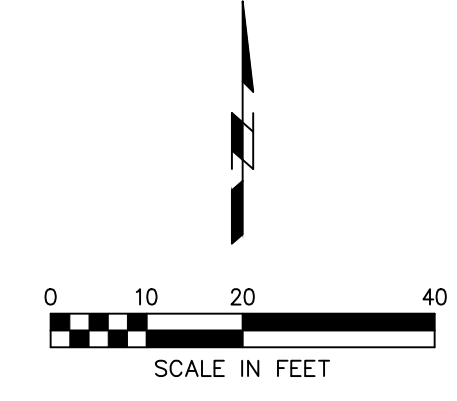
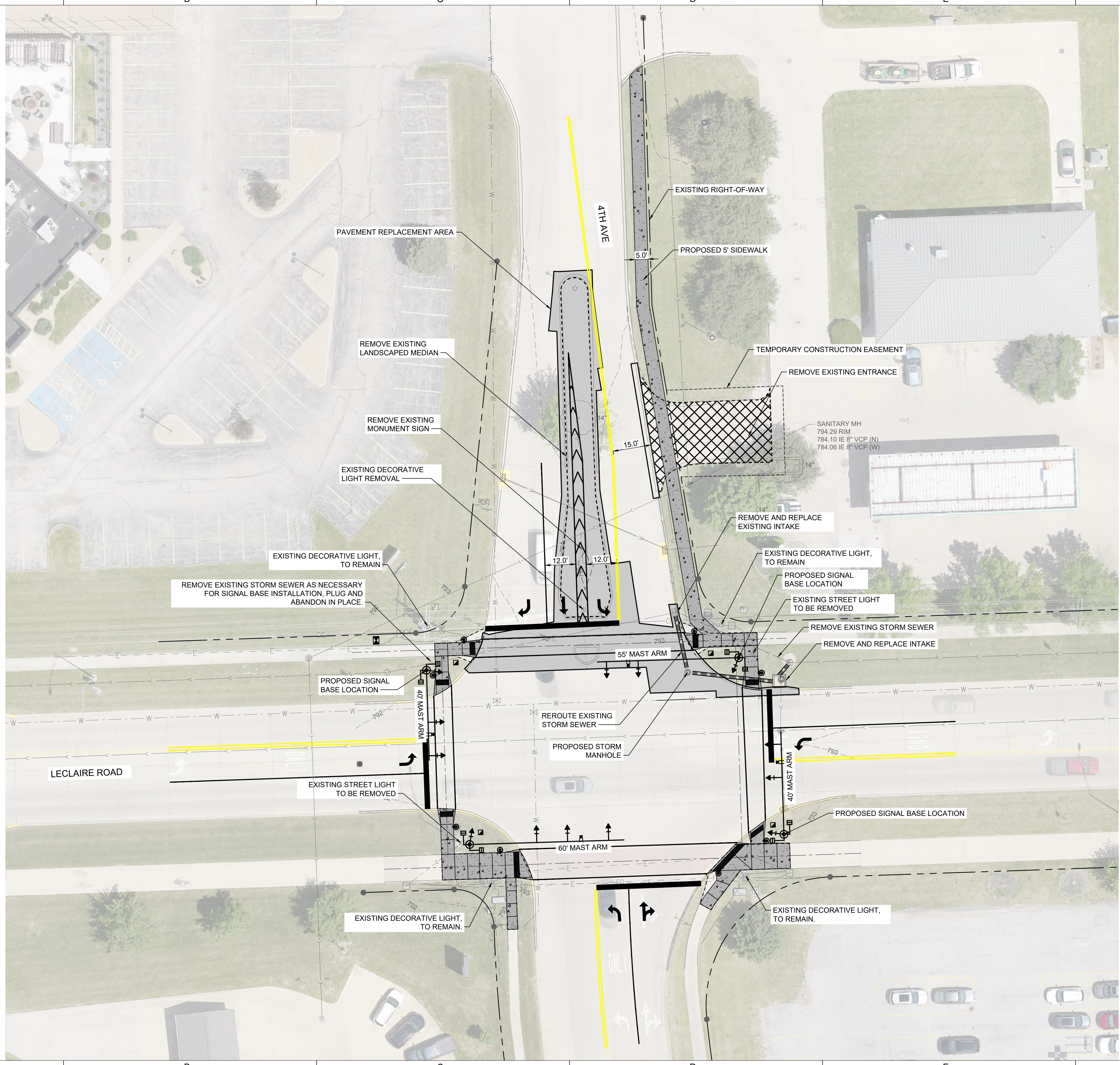
## Maintenance Assessment for 2023

4/10/2023	Mow small detention basin		\$	55.00
4/21/2023	Mow small detention basin		\$	55.00
5/5/2023	Mow small detention basin		\$	55.00
5/15/2023	Mow small detention basin		\$	55.00
5/25/2023	Mow small detention basin		\$	55.00
6/7/2023	Mow small detention basin		\$	55.00
6/16/2023	Mow small detention basin		\$	55.00
6/26/2023	Mow small detention basin		\$	55.00
7/10/2023	Mow small detention basin		\$	55.00
7/20/2023	Mow small detention basin		\$	55.00
8/12/2023	Mow small detention basin		\$	55.00
8/25/2023	Mow small detention basin		\$	55.00
9/20/2023	Mow small detention basin		\$	55.00
Multiple dates	Mow large detention basin		\$	450.00
Multiple dates	Mow blvd at large detention		\$	90.00
6/4/2023	Sickle mow large detetion basin		\$	85.00
<b>Subtotal</b>			<b>\$</b>	<b>1,340.00</b>
5/10/2023	Greenspace Assoc	Spring cleanup of entrances	\$	818.55
5/10/2023	Kappler Lawns	Lawn treat det. basins	\$	120.00
6/15/2023	Kappler Lawns	Lawn treat det. basins	\$	120.00
7 diff dates	Aqua Lawns	Deweerd entrances	\$	1,750.00
7/26/2023	Kappler Lawns	Lawn treat det. basins	\$	120.00
5/10/2023	Bob Ihrig	Repair outlet pipe @ det basin	\$	800.00
11/8/2023	Kappler Lawns	Lawn treat det. basins	\$	120.00
<b>Subtotal</b>			<b>\$</b>	<b>3,848.55</b>
<b>Total</b>			<b>\$</b>	<b>5,188.55</b>

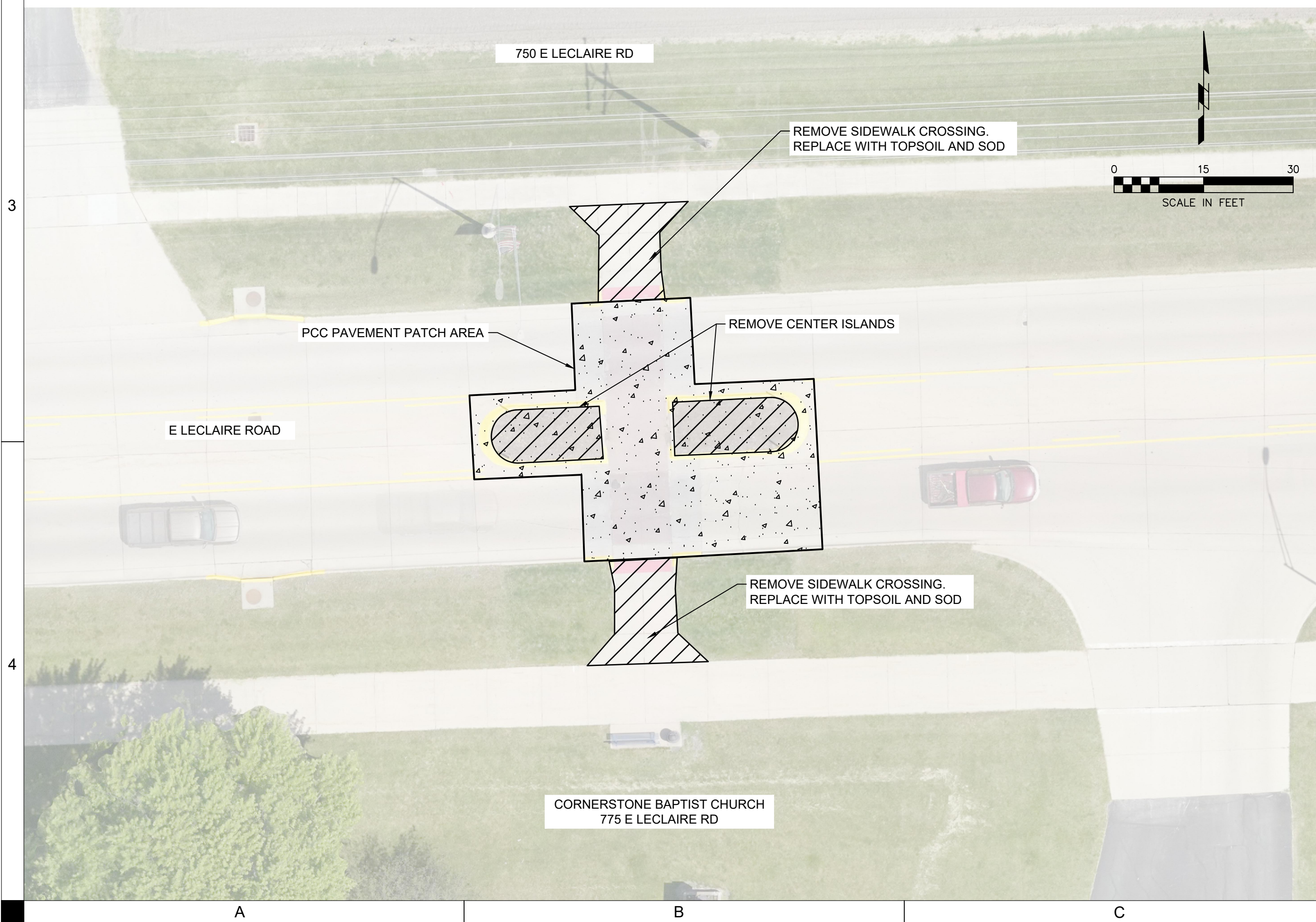
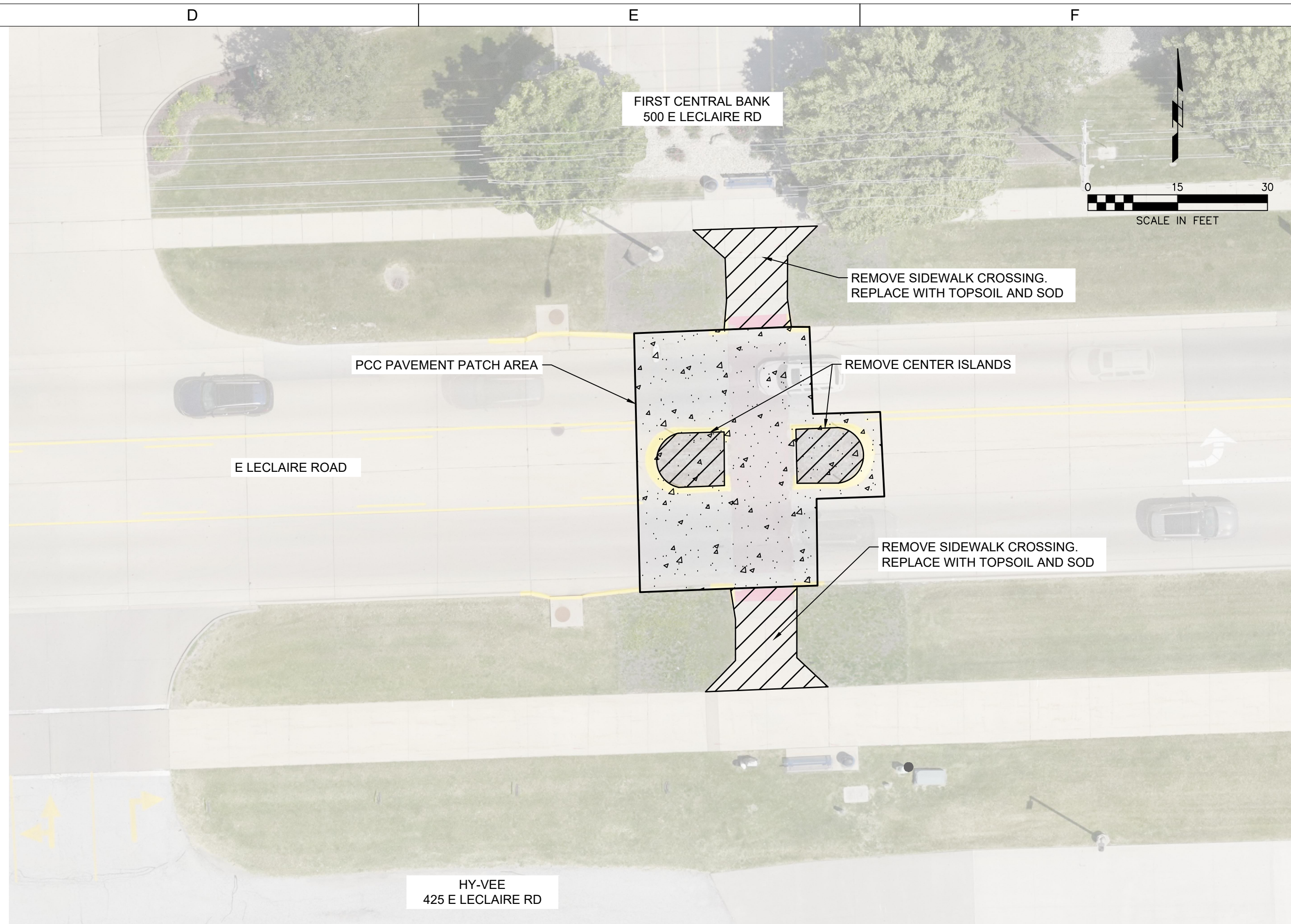
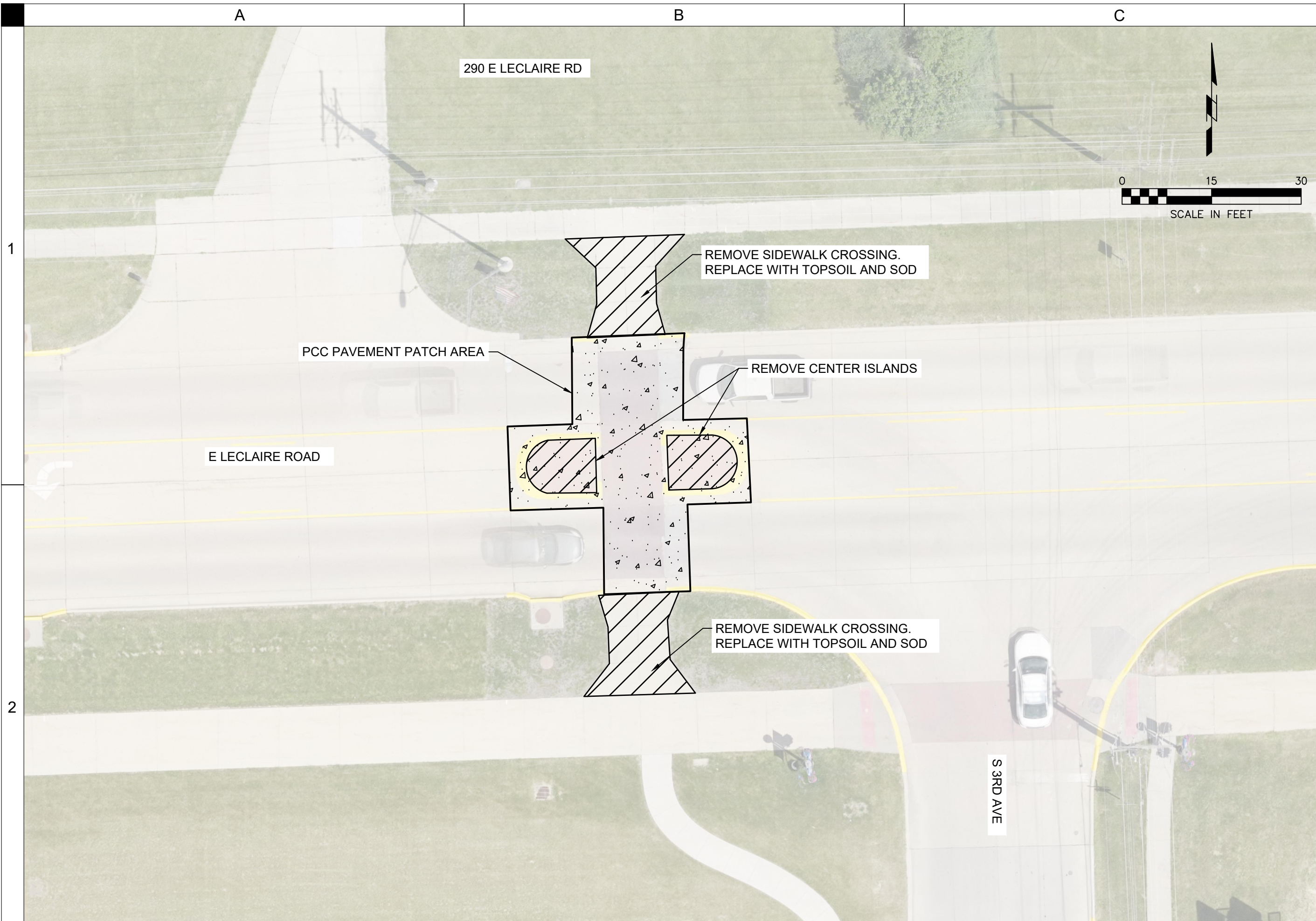
# Stonebrook Estates

## Maintenance Assessment for 2022

4/18/2022	Mow small detention basin		\$	55.00
5/1/2022	Mow small detention basin		\$	55.00
5/12/2022	Mow small detention basin		\$	55.00
5/25/2022	Mow small detention basin		\$	55.00
6/7/2022	Mow small detention basin		\$	55.00
6/25/2022	Mow small detention basin		\$	55.00
7/9/2022	Mow small detention basin		\$	55.00
7/22/2022	Mow small detention basin		\$	55.00
8/15/2022	Mow small detention basin		\$	55.00
9/12/2022	Mow small detention basin		\$	55.00
Multiple dates	Mow large detention basin		\$	500.00
Multiple dates	Mow blvd at large detention		\$	90.00
9/12/2022	Sickle mow large detetion basin		\$	85.00
<b>Subtotal</b>			<b>\$</b>	<b>1,225.00</b>
8/15/2022	River Valley Power Washing	Clean ent signs	\$	200.00
4/10/2022	Kappler Lawns	Lawn treat det. basins	\$	148.00
6/22/2022	Kappler Lawns	Lawn treat det. basins	\$	148.00
4 Diff Dates		Deweed Entrances	\$	120.00
8/20/2022	Kappler Lawns	Lawn treat det. basins	\$	148.00
5/5/2022	Aqua Lawns	Mulch Entrances	\$	2,550.00
9/30/2022	Kappler Lawns	Lawn treat det. basins	\$	148.00
<b>Subtotal</b>			<b>\$</b>	<b>3,462.00</b>
<b>Total</b>			<b>\$</b>	<b>4,687.00</b>



DRAWN BY	PJG
APPROVED BY	ZJH
ISSUED FOR	PRELIMINARY REVIEW
ISSUE DATE	12/30/2024
PROJECT NUMBER	22400184660
CLIENT PROJECT NUMBER	



LECLAIRE RD & 4TH AVE  
TRAFFIC SIGNAL

PRELIMINARY  
- NOT FOR  
CONSTRUCTION

DRAWN BY	PJG
APPROVED BY	ZJH
ISSUED FOR	PRELIMINARY REVIEW
ISSUE DATE	12/30/2024
PROJECT NUMBER	2240018460
CLIENT PROJECT NUMBER	--

MID-BLOCK  
CROSSING  
REPLACEMENT

C101

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**CLIENT:** City of Eldridge

**PROJECT:** Hickory Creek Pond – Geotechnical Investigation Memo

**PROJECT LOCATION:** Hickory Creek Park, Eldridge, IA

**DATE:** December 20, 2024

Shive-Hattery was contracted to assist the City with a geotechnical investigation for a potential pond located on Hickory Creek. See attached location map (Exhibit 1) with provided boring locations. In addition, the geotechnical report provided by Terracon is included in Attachment A.

### **Pond Sizing and Considerations**

A pond should be sized appropriately for its watershed, which typically falls within the range of 15 to 50 to 1 ratio of watershed area to pond surface area. A pond that is too large compared to its watershed can struggle to maintain a full pool while having a pond too small can lead to excess sedimentation and loss of water volume. In addition, a pond with a larger watershed ratio will require a larger, more expensive outlet to convey stormwater. The proposed pond location has a drainage area of approximately 750 acres consisting of a mix of agricultural and suburban land. This puts the ideal pond size at 15 to 50 acres for the watershed. This size may not be practical at this location, as a pond ranging from 5-10 acres may fit onto the site.

A five to ten acre pond on this site would require a large outlet works and may be prone to sedimentation and high maintenance costs. Generally, the sediment delivery to the pond is hard to predict without additional data collection. A rough estimation based on typical values for sediment delivery in agricultural landscapes yields an estimate of approximately 1,150 cubic yards of sediment accumulation per year. Using this rate, it is estimated that within 30 years the pond's average depth would reduce from 9 feet to 6 feet, accumulating approximately 35,000 cubic yards of sediment. At that time, recreational opportunities and water quality are expected to be negatively impacted (and may have been impacted for years prior) and a maintenance dredging may be needed. The estimated dredging cost will vary depending on the method of dredging (mechanical vs hydraulic) and the proposed sediment disposal site. Assuming a local spoil site within 0.5 miles of the site and a mechanical dredging, a dredging project is expected to cost approximately \$500,000 to 650,000 (2024 dollars). The pond would be drained for approximately one year and the established fishery would be lost and require restocking.

Based on lidar information, the upstream culvert at S Buttermilk Road is estimated to have an invert elevation near elevation 752. This would need to be verified by survey data in design phase. The top of embankment should not be built higher than the culvert invert, as the pond could have an adverse effect on the culvert capacity and flooding of properties east of the roadway. In addition, at least four feet of elevation difference should be included between the normal water level and the top of dam. This allows for water surface elevation fluctuations during rain events of two feet that are passed through a principal spillway pipe and an additional two' deep auxiliary spillway channel. These are minimum requirements based on typical dam design standards. This would mean a proposed water level of approximately 748 feet. The ground elevation near the embankment location, outside the channel, is approximately 745. For this reason, the pond water depth would primarily be achieved through excavation rather than constructing a tall embankment. In order to maintain fish in the pond, an area of at least twelve feet deep and 25% of the pond footprint is recommended for overwintering and avoidance of fish kills during thick ice conditions. This amount of excavation will be expensive. An estimated excavation quantity of 120,000 Cubic yards or more would be needed to achieve a mean depth near 8-9 feet in an 8-acre pool.





**Geotechnical Report**

The geotechnical report shows soil boring locations and logs as well as infiltration rates of the onsite soils. With the assumption of the pond bottom being near 735 feet, the bottom would terminate in loamy and clay loam soils. These may or may not be favorable for a pond liner and it is recommended that a compacted clay liner be constructed to minimize seepage from the pond. The clay liner material and thickness may require additional consultation with a geotechnical engineer to determine acceptable seepage rates based on the city’s goals. A suitable source of clay material for embankment and liner construction appears to be present in the upper soil strata. This select material could be stockpiled during excavation for use in the clay liner construction. A minimum of twelve inches of clay liner is expected to be needed to reduce infiltration due to sand seams and sandier soils that are expected to be present.

**Preliminary Project Cost Estimate**

Considering the excavation quantity, the large outlet pipe size, a compacted clay liner, and the need for drawdown capabilities for maintenance, the pond construction cost is estimated to be approximately \$1,250,000, which includes a 25% contingency. A twelve-inch thick clay liner for an 8-acre pool is anticipated to cost approximately \$100,000 to \$150,000 using on site suitable soils. A suitable soil stockpile or project requiring a large amount of fill would be needed for over 100,000 cubic yards of excess soils.

In addition to construction costs and permitting, engineering costs are expected to be approximately \$100,000 to provide construction documents. A permit from the Army Corps of Engineers and DNR Dam Safety will be required. Based on experience with the Army Corps of Engineers, we assume that the United States Army Corps of Engineers would have jurisdiction on Hickory Creek and that it would have a perennial stream designation. Permitting would require purchase of mitigation credits adding another \$150,000 to total project costs. Mitigation credit purchase is based on current market rates and an estimate for purchase of credits for approximately 1,000 linear feet of stream loss. Actual stream impacts and purchase price may vary depending on future environmental reviews, political climate, and the credit market at the time of purchase. Impacts to stream bed must be less than 0.5 acres for permitting under Regional Permit 42. If impacts over 0.5 acres are expected or more than 1,000 linear feet of stream, then individual permitting process will increase costs of permitting and mitigation. It will also reduce the probability that the Army Corps of Engineers will permit the site.

The total project cost is estimated to be \$1,500,000 and is summarized below. The cost below assumes an 8-acre pond with a clay liner and excess excavated materials are stockpiled on site. Hauling of excess excavation soils is not included but may be required. The cost of adjacent amenities and other park improvements are not included in these costs.

<b>Description</b>	<b>Preliminary Cost Estimate</b>
Engineering and Permitting	\$100,000
Compensatory Mitigation	\$150,000
Construction Cost	\$1,000,000
Construction Contingency (25%)	\$250,000
<b>Total</b>	<b>\$1,500,000</b>

**Recommendations**

While the geotechnical report indicates that a pond could be feasible in this location, we believe the cost of construction and permitting may be cost prohibitive for the city to pursue at this location. If desired, Shive-Hattery can develop a pond concept and more detailed cost estimate for your consideration as outlined in our full proposal.

If you have any questions regarding this memo, please contact us.

Sincerely,  
SHIVE-HATTERY, INC.

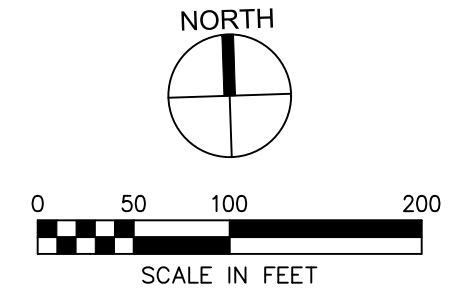
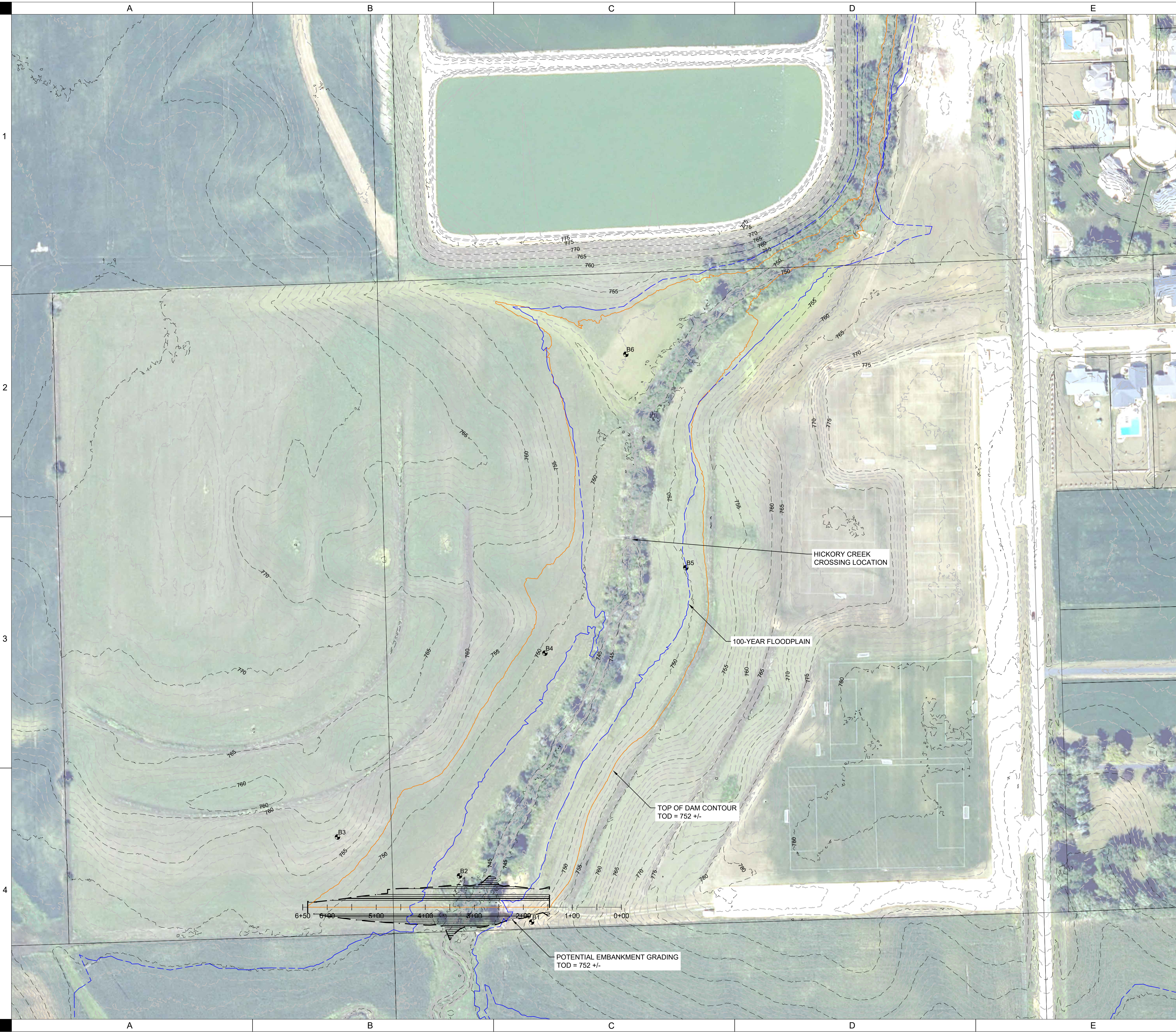


Dan Jensen, PE  
Civil Engineer  
[djensen@shive-hattery.com](mailto:djensen@shive-hattery.com)

Copies:  
Zach Howell, SH

**Attachments**

- Exhibit 1 – Boring Locations Map
- Attachment A – Geotechnical Report by Terracon



SOIL BORING TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	612090.32	2432413.56	751.61	B1
2	612184.38	2432266.39	745.27	B2
3	612263.65	2432017.52	757.50	B3
4	612638.72	2432440.58	749.55	B4
5	612812.85	2432727.90	750.17	B5
6	613248.29	2432605.66	750.74	B6

BORING LOCATIONS

HICKORY CREEK POND

SHIVE-HATTERY  
 ARCHITECTURE + ENGINEERING

PRELIMINARY  
 - NOT FOR  
 CONSTRUCTION

DRAWN BY	APPROVED BY	BORINGS	ISSUED FOR	ISSUE DATE	PROJECT NUMBER	FIELD BOOK
				09/27/2024	2240016700	

CITY OF ELDRIDGE  
 ELDRIDGE, IA

EX01