



# DANIELS DRAIN CONSTRUCTION PROJECT

***INFORMATIONAL MTG***  
***THURSDAY, AUGUST 26<sup>TH</sup>, 2021 - 6:00 P.M.***

**MERIDIAN TOWNSHIP MUNICIPAL BUILDING**  
**5151 MARSH RD.**  
**OKEMOS, MI 48864**  
***TOWN HALL ROOM***

# DANIELS DRAIN CONSTRUCTION PROJECT

## INFORMATIONAL MTG

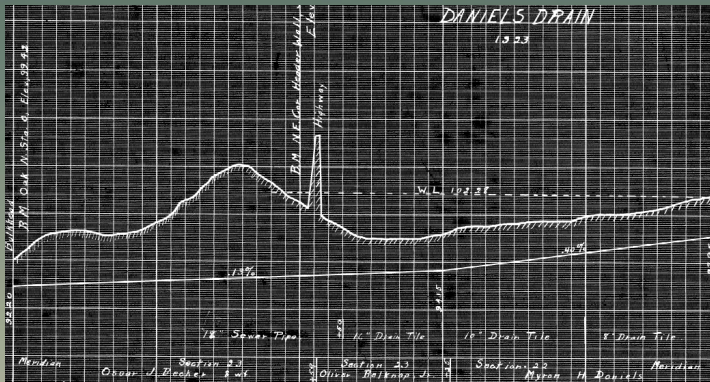


## HISTORY

1923 – DRAIN FIRST ESTABLISHED (8”–18” TILE, POND EXCAVATION)

1973 – DRAIN CONSTRUCTION IMPROVEMENT WORK ON EXTENSION DRAIN

2016 – MERIDIAN TWP. PETITION FOR DRAIN IMPROVEMENTS

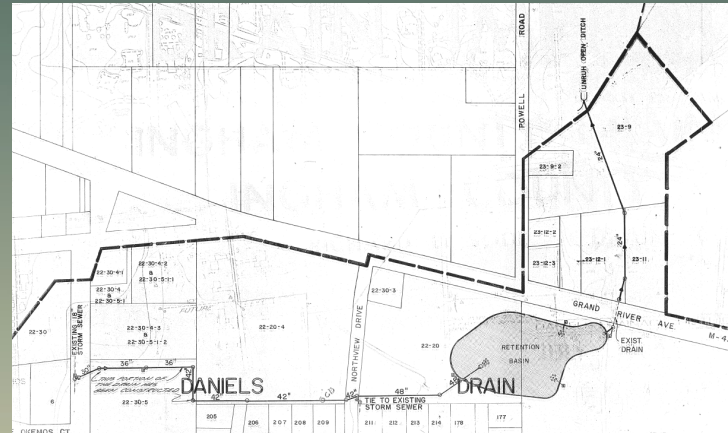


## Survey of Daniels Drain 1923

Survey of the Daniels Drain, located on sections 22 and 23, town 4 north, range 1 west, Meridian of Michigan, Township of Meridian, County of Ingham and State of Michigan, the centerline thereof being described as follows:  
Commencing in the Unruh Drain, at a point 82 ft. S and 328 ft. E of the W ¼ post of section 23, town and range aforesaid, thence over and across the following description: That part of the W ¼ of the NW ¼ of the SW ¼ of said section 23 north of the gravel road, Oscar J. Becker and wife, Nellie Edith, owners, as follows: Commencing at station 0 plus 90 ft. of said drain, thence S 13° E 600 feet, thence S 4° E 247 feet; thence S 19 ½° W, 212 feet; to station 10 plus 50 feet in the centerline

Said drain shall be constructed as a closed drain of the following diameters: Station 0 to station 11 plus 50 feet, 18-inch sewer pipe; station 11 plus 50 feet to station 15, 16-inch drain tile; station 15 to station 20, 10-inch drain tile; station 20 to station 24 plus 50 feet, 8-inch drain tile.  
The grade of said drain shall be as follows: Commencing at station 0, grade elevation, 92.20, thence a grade of 0.13% to station 15, grade elevation, 94.15; thence a grade of 0.40% to station 24 plus 50 feet, grade elevation, 97.95.  
The right of way for the construction of said drain shall include fifty (50) feet on each side of the centerline as above described.  
All work of construction shall be according to plans and specifications

1923



1974

**PETITION FOR CLEANING OUT, RELOCATING, WIDENING, DEEPENING, STRAIGHTENING, TILING, EXTENDING, OR RELOCATING ALONG A HIGHWAY FOR A COUNTY DRAIN**

To the County Drain Commissioner of the County of.....**Ingham**.....

Your petitioners hereby Petition for:.....**Enlarging, relocating and extending**.....

of the drain known and designated as the.....**Daniels & Unruh**.....

.....**drain**..... situated and established in the Township.....of.....**Meridian**.....

.....and State of Michigan.

Your petitioners further show that they constitute.....**freeholders**.....

.....**who are owners of land liable to assessment for benefits for such proposed work.**

Your petitioners further show that the said drain needs.....

**Enlarging and relocating to conform with development of the area.**

The old tile has been overloaded for years.

**PETITION FOR CLEANING OUT, RELOCATING, WIDENING, DEEPENING, STRAIGHTENING, TILING, EXTENDING, OR RELOCATING ALONG A HIGHWAY AND/OR INSTALLING DEVICES TO PERFECT THE FLOW OF THE DRAIN PERMANENT TO CHAPTER 20 OF ACT 20 OF THE PUBLIC ACTS OF 1964, AS AMENDED.**

**DANIELS DRAIN**

TO THE INGHAM COUNTY DRAIN COMMISSIONER:

The undersigned public corporation in the State of Michigan, hereby the Charter Township of Meridian, hereby petition for the construction, financing and equipping of maintenance and improvements to the Daniels Drain, consisting generally of cleaning out, relocating, widening, deepening, straightening, tiling, extending, or relocating along a highway, or required structure or mechanical devices that will properly justify or improve the flow of the Daniels Drain or purifying equipment necessary to meet or relieve the flow of the Daniels Drain, together with all the necessary interest in land, appliances and attachments therein is necessary for the public health, and is required in this case due to pollution, situation, and other impairment of the Daniels Drain resulting in pollution and impairment of the waters of the State and damage and impairment to the natural resources in or near the Daniels Drain District.

This petition has been authorized by this petitioner's governing body, as evidenced by the attached resolution.

This petition is filed pursuant to the provisions of Chapter 20 of Act No. 43 of the Public Acts of 1964, as amended.

It is understood that the sum of said petition is to be wholly assessed against public corporations, including this petitioner. The Taxes Township of Meridian may have a special assessment, charge or fee for all or a portion of the cost of this petition against benefiting properties under MCL 206.404 and conducted a hearing on January 26, 2016 as prescribed by MCL 206.405 for this purpose.

A certified copy of the Resolution of the governing body of the Charter Township of Meridian authorizing the execution of this Petition is hereby attached.

**CHARTER TOWNSHIP OF MERIDIAN**

*Brett Dreyfus* 2-3-16  
Brett Dreyfus, C.M.C.E. (P) Date  
Meridian Charter Township

2016



# DANIELS DRAIN CONSTRUCTION PROJECT

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## HISTORY:



1955



1967

# DANIELS DRAIN CONSTRUCTION PROJECT

## *INFORMATIONAL MTG*



## HISTORY:



*1981*



*1999*

# DANIELS DRAIN CONSTRUCTION PROJECT

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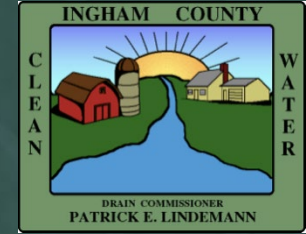
### DRAINAGE ISSUES:

- Drain has sink holes, collapsed & pipes w/ significant sediment buildup
- Flooding of nearby PCH property, damaged walkways and trees
- Walden Pond outlet issues & undersized crossing of Grand River Ave.



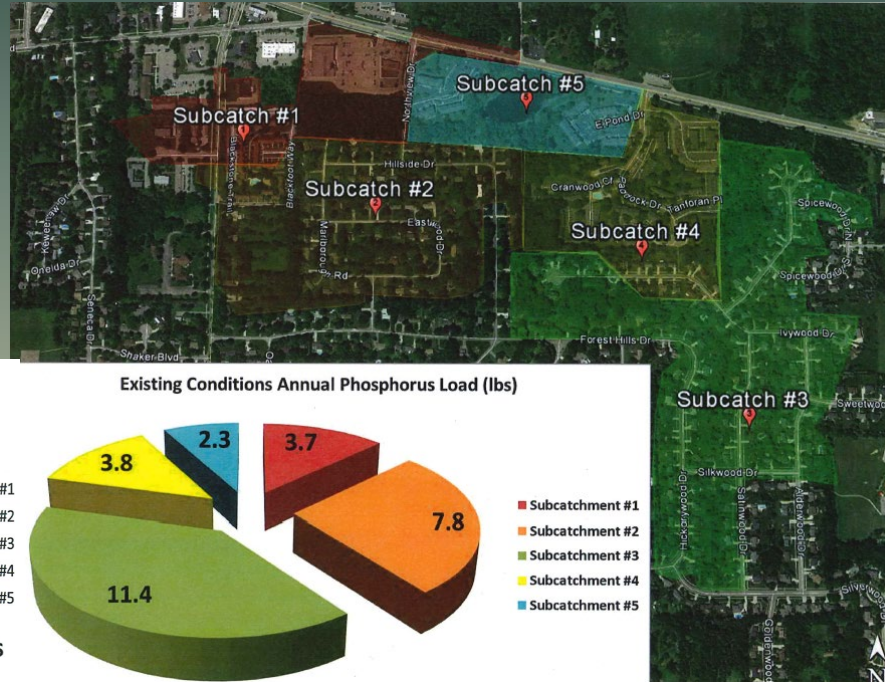
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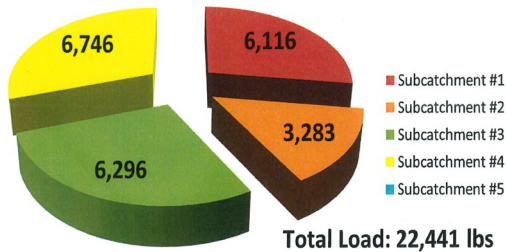


### DRAINAGE ISSUES:

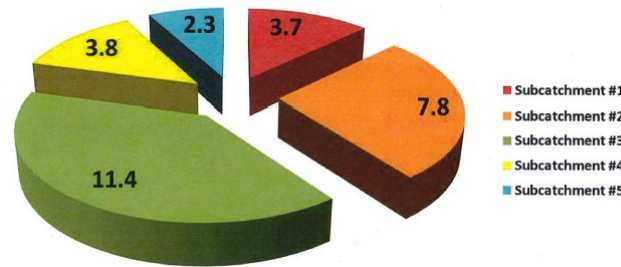
- Phosphorous and salt pollution from watershed area into Walden Pond



Estimated Annual lbs Chloride



Existing Conditions Annual Phosphorus Load (lbs)



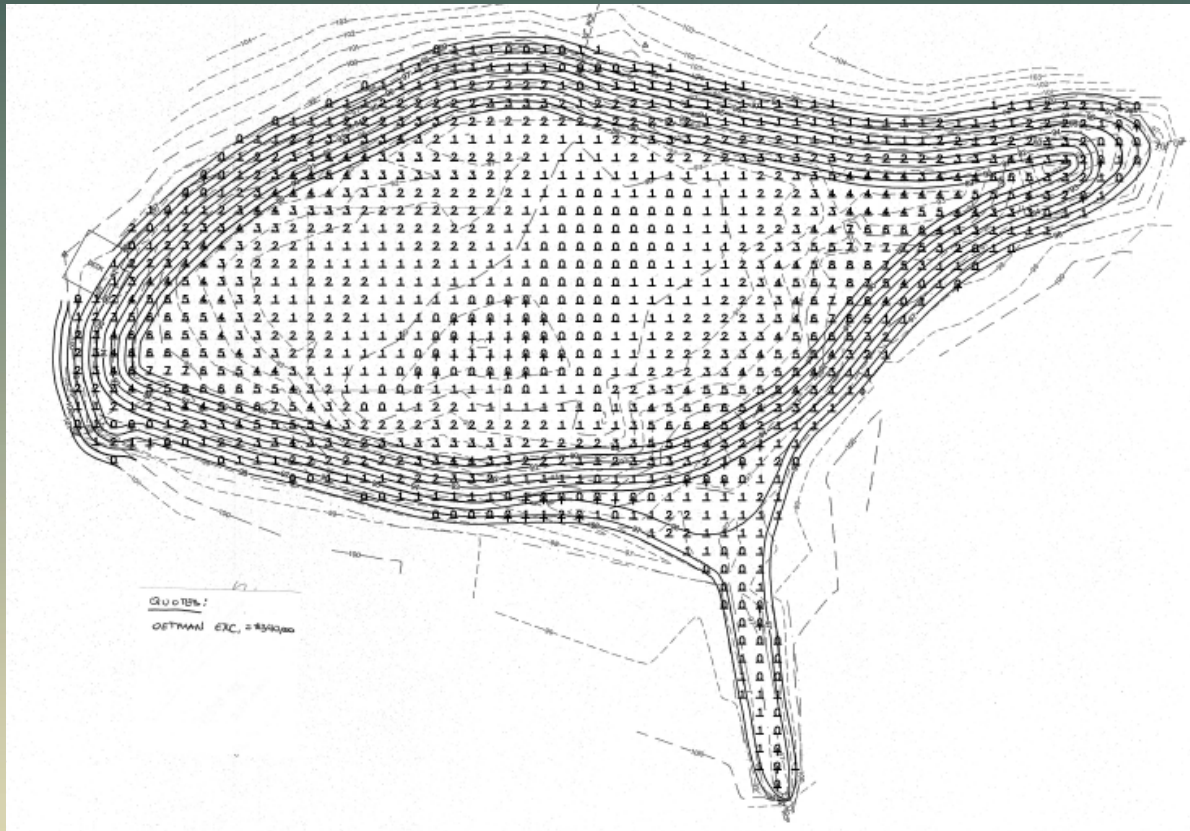
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### SURVEY OF EXISTING POND (November, 2013):

- Walden Pond = +/- 2.6 acres
- Filled in 1 to 5 feet throughout



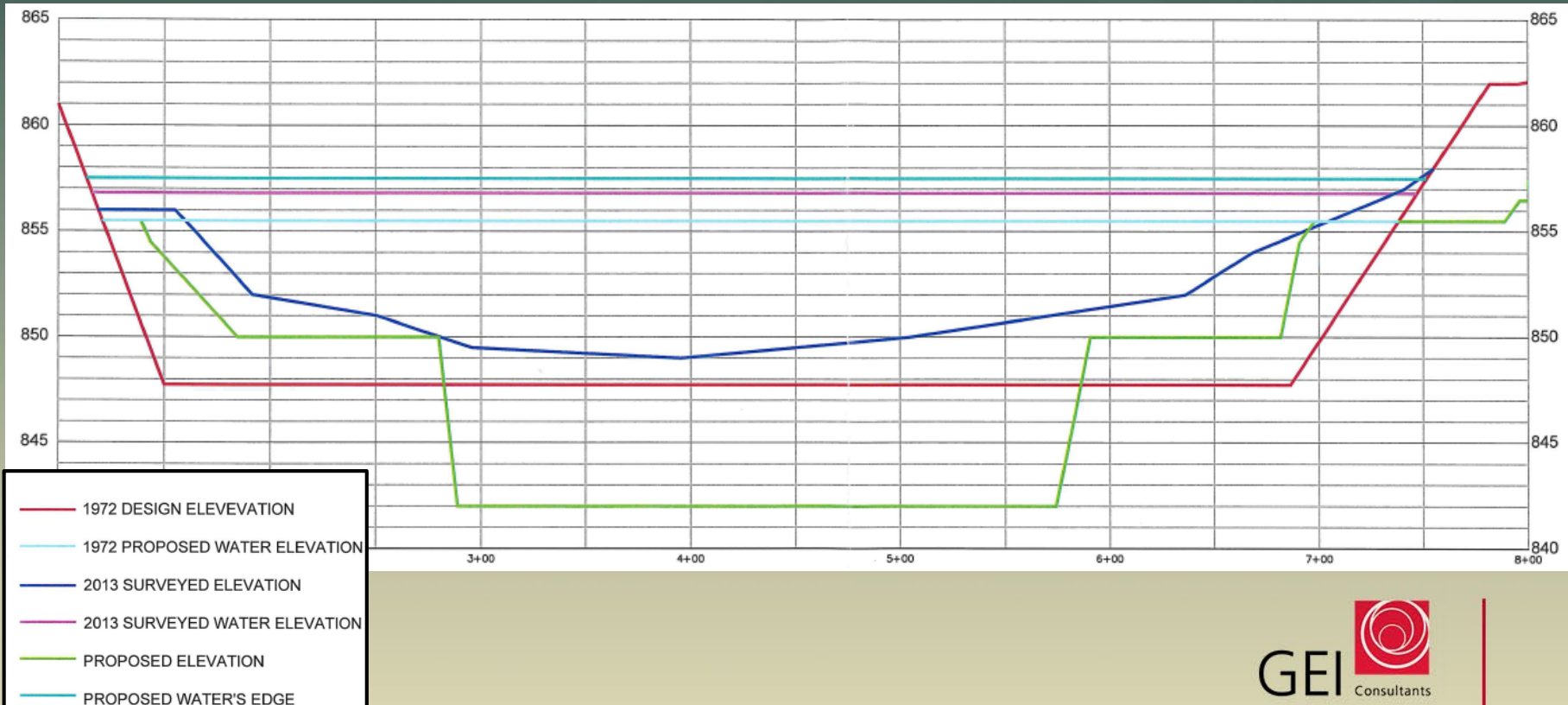
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### SURVEY OF EXISTING POND (November, 2013):

- 8,500 CYD material of excavation required to return to 1973 excavated depth



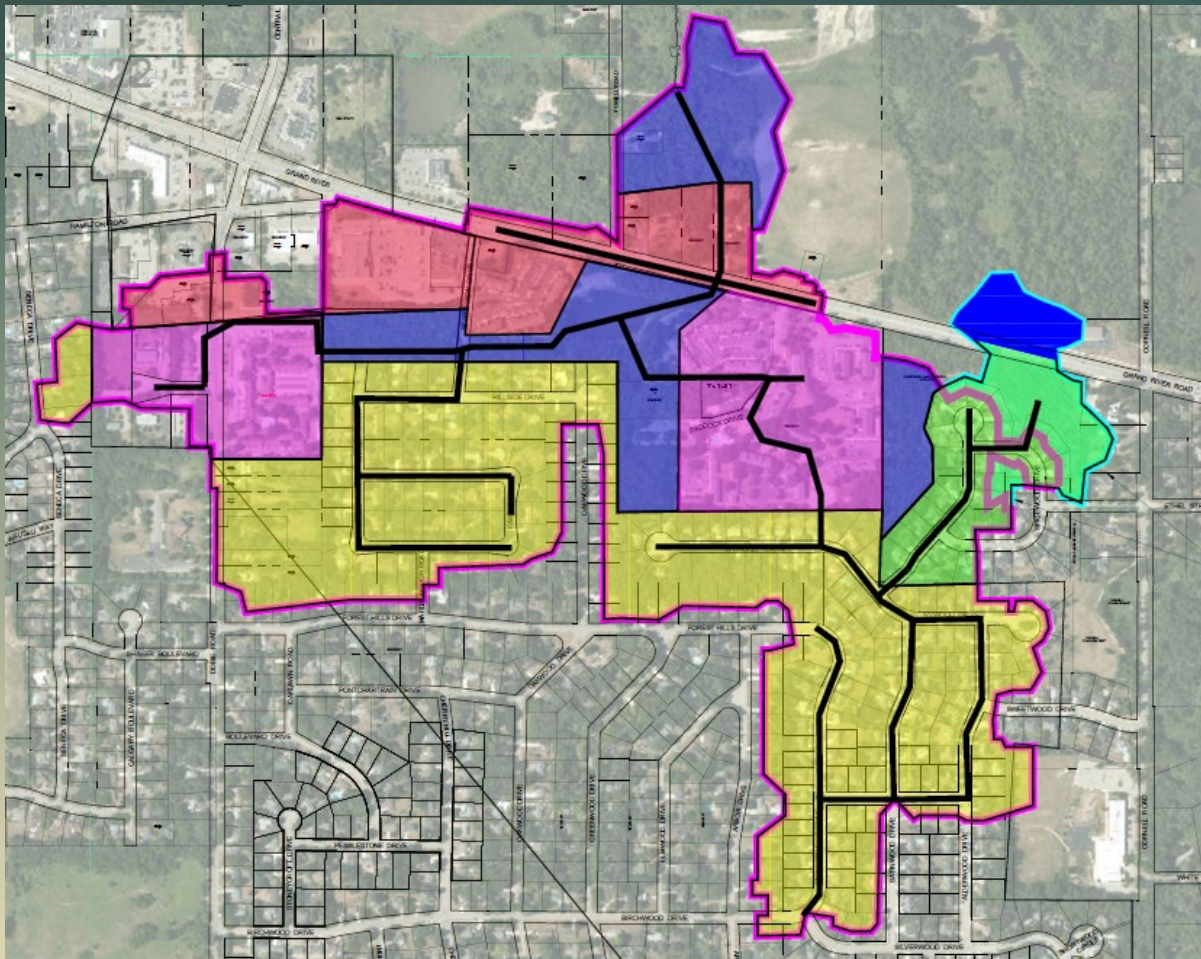


# DANIELS DRAIN CONSTRUCTION PROJECT

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## DANIELS DRAIN SERVICE AREA – APPORTIONMENT ANALYSIS



**MERIDIAN TWP = 82.76%**

**IC DEPT. OF ROADS = 13.85%**

**MDOT = 3.39%**

**TOTAL PROJECT COST:**

**+/- \$6,690,000**

**TOTAL COST OF CONST:**

**\$4,878,235.75**

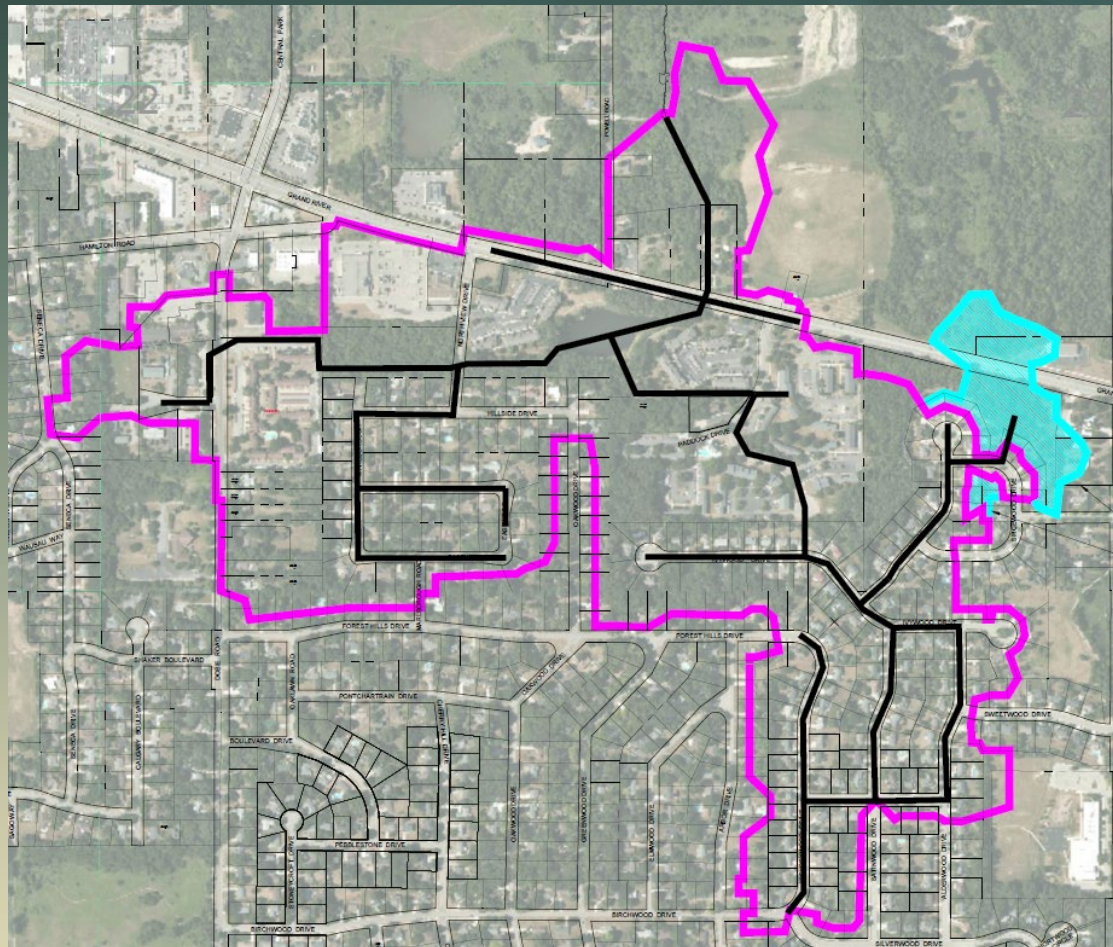
**(73% of total project cost)**

# DANIELS DRAIN CONSTRUCTION PROJECT

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## DANIELS DRAIN SERVICE AREA & STORM SEWER SYSTEM

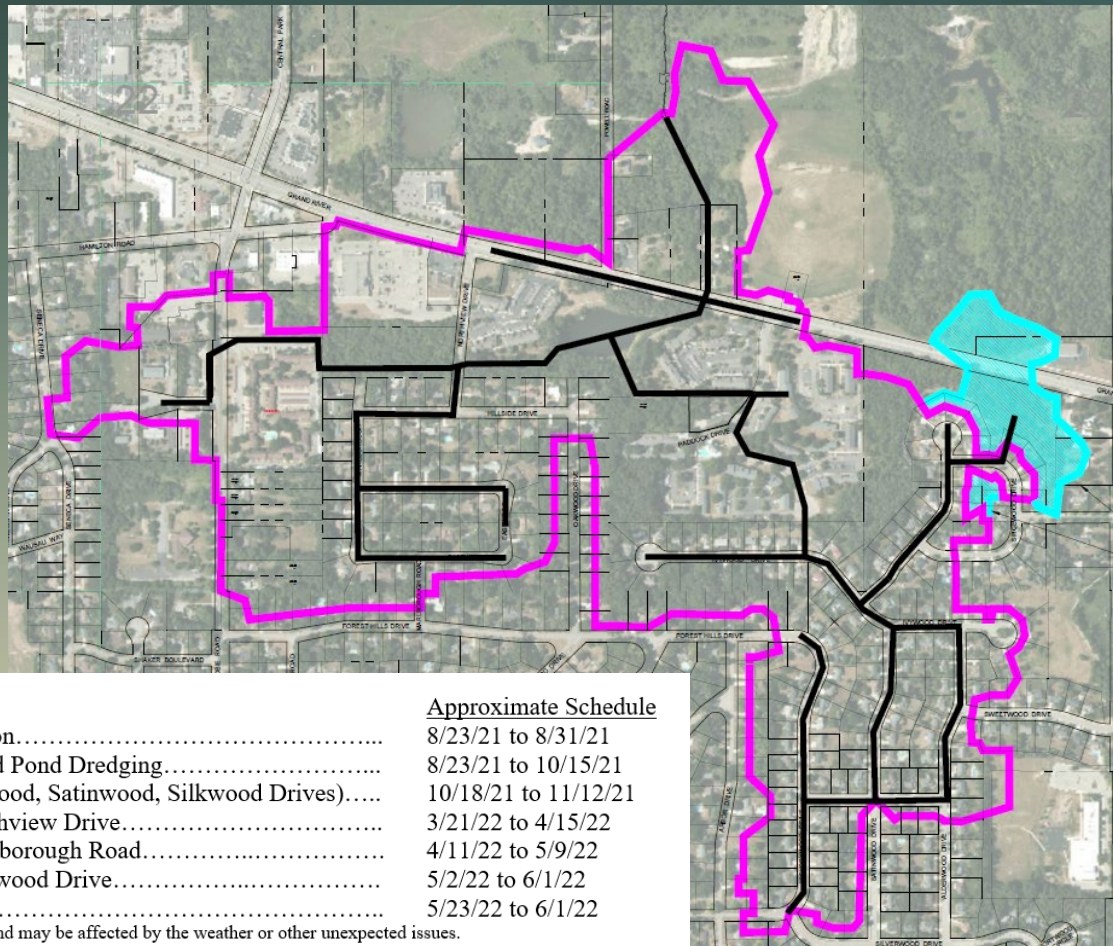


# DANIELS DRAIN CONSTRUCTION PROJECT

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### DANIELS DRAIN – PROPOSED CONSTRUCTION SCHEDULE:



Item

Mobilization and Site Preparation.....	8/23/21 to 8/31/21
Dewatering of Walden Pond and Pond Dredging.....	8/23/21 to 10/15/21
Storm Sewer Spot Repair (Ivywood, Satinwood, Silkwood Drives).....	10/18/21 to 11/12/21
Storm Sewer Installation – Northview Drive.....	3/21/22 to 4/15/22
Storm Sewer Installation – Marlborough Road.....	4/11/22 to 5/9/22
Storm Sewer Installation – Eastwood Drive.....	5/2/22 to 6/1/22
Roadway Paving.....	5/23/22 to 6/1/22

\*Note that these dates are only estimates and may be affected by the weather or other unexpected issues.

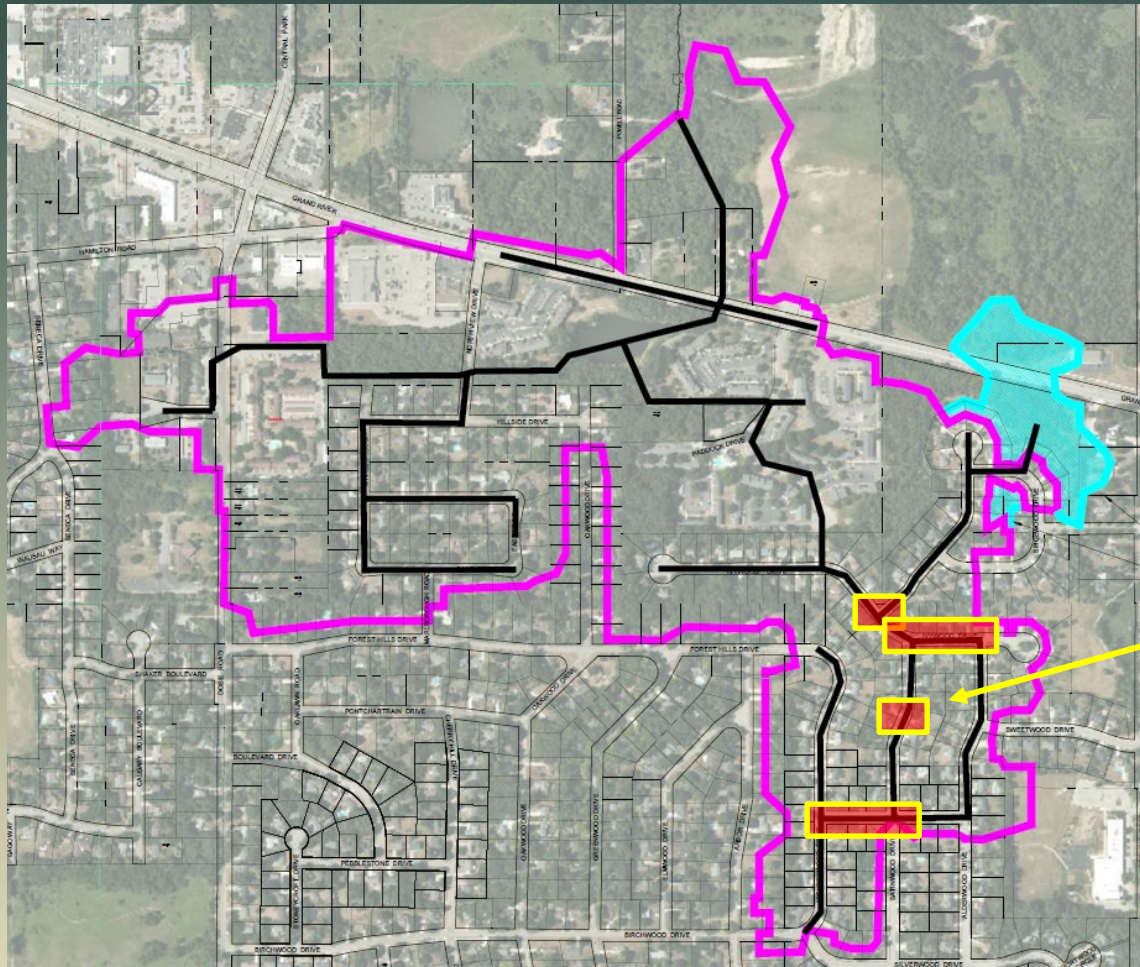


# DANIELS DRAIN CONSTRUCTION PROJECT

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### DANIELS DRAIN CONSTRUCTION PROJECT – PROPOSED WORK:



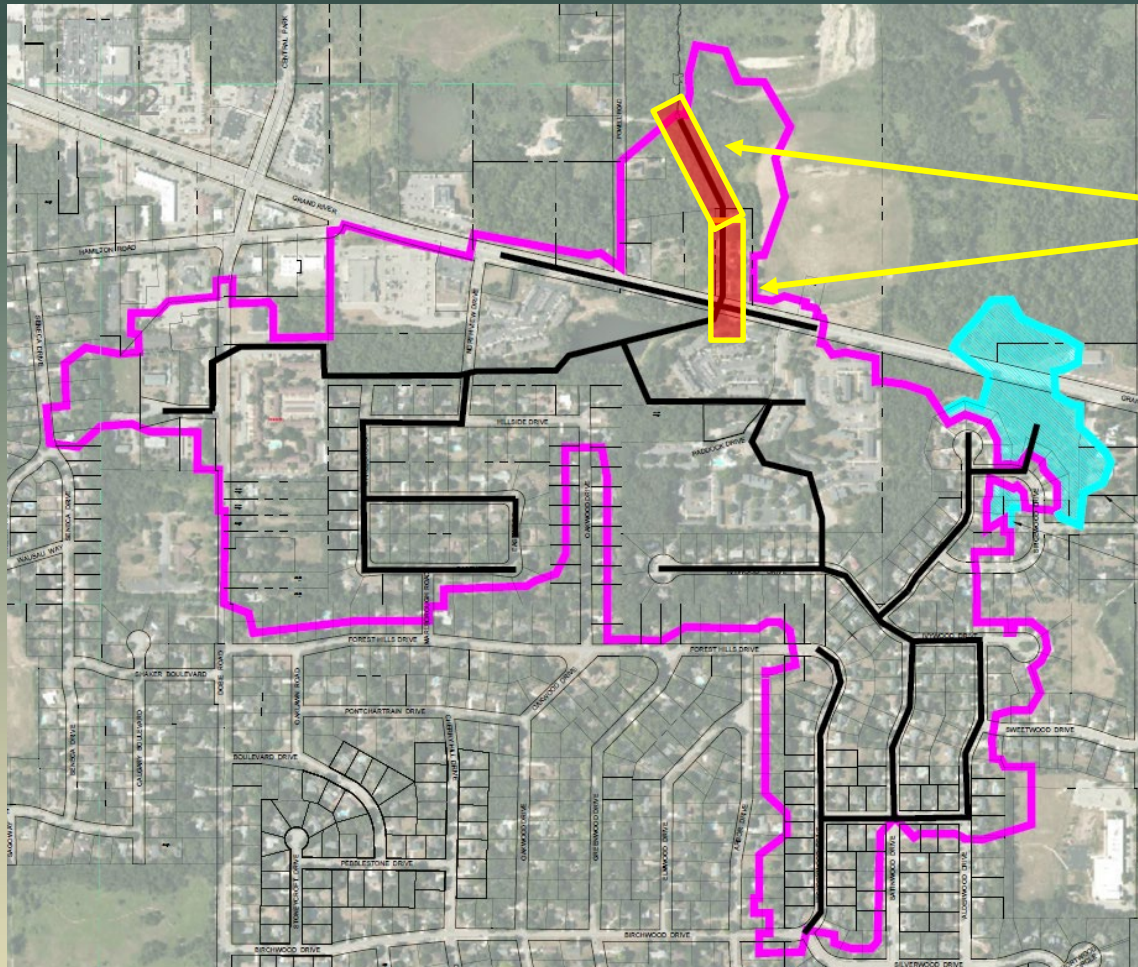
Repair work on Ivywood, Mistywood & Satinwood

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### DANIELS DRAIN CONSTRUCTION PROJECT – PROPOSED WORK:



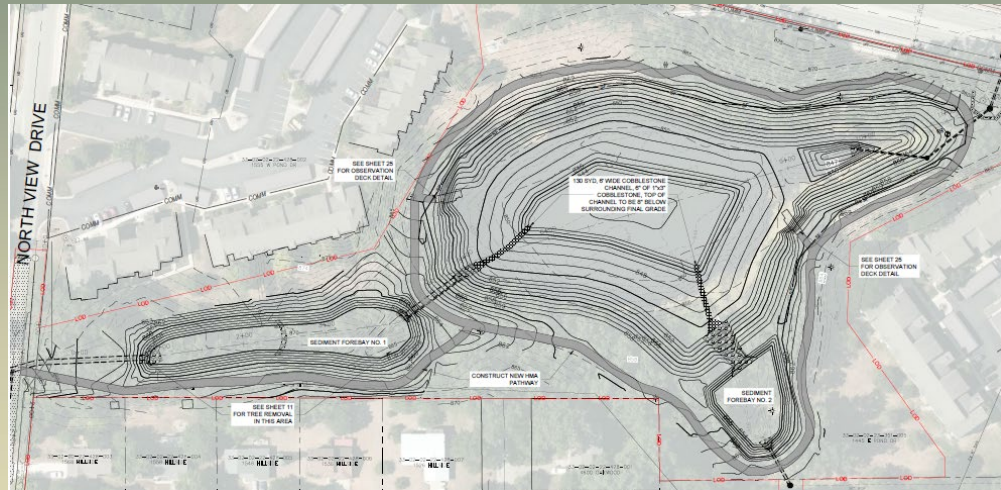
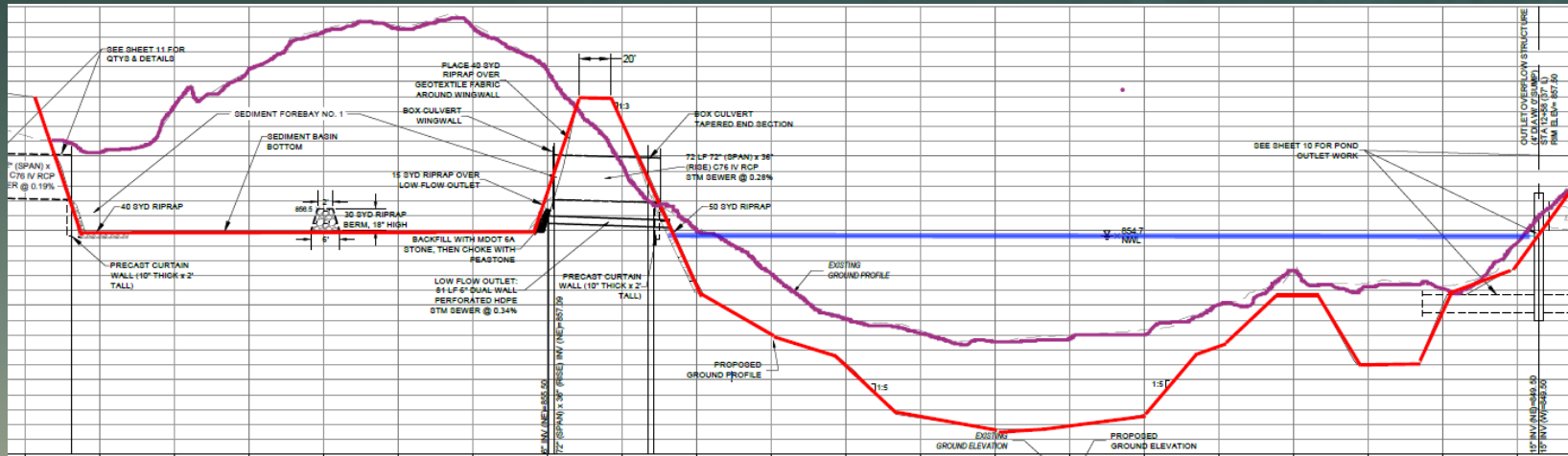
Complete pipe replacement  
under Grand River Ave.  
and north to Unruh Drain

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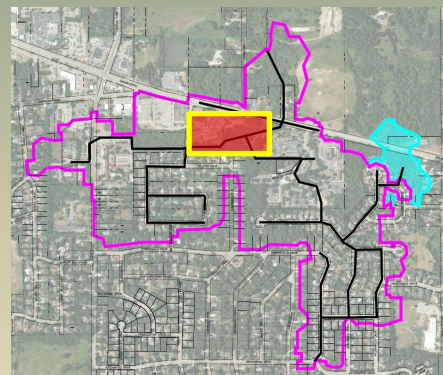
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### DANIELS DRAIN CONSTRUCTION PROJECT – PROPOSED WORK:



20,650 CYD of Pond excavation work

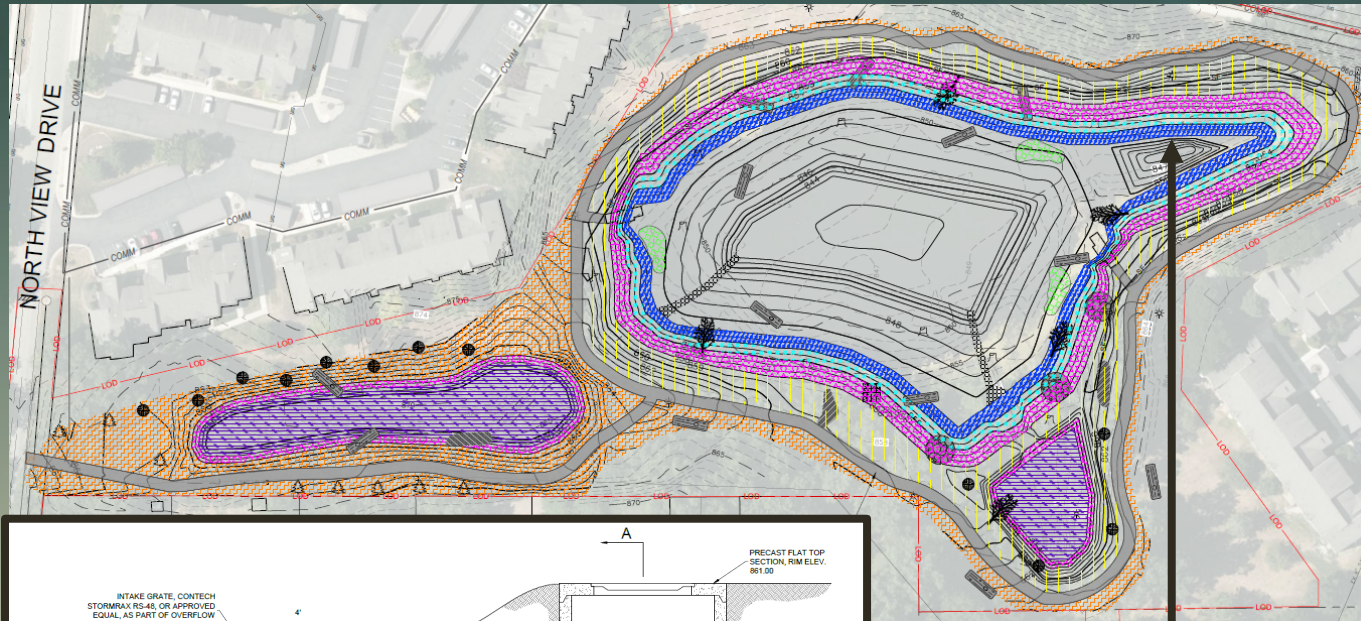


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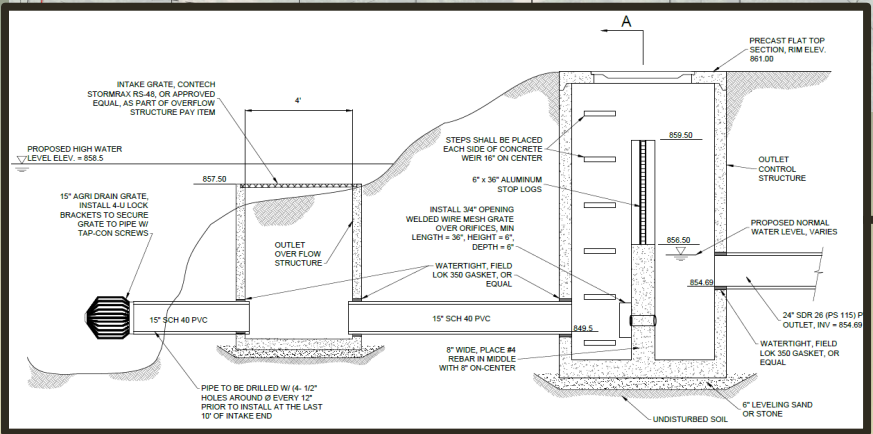
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### DANIELS DRAIN SERVICE AREA & STORM SEWER SYSTEM



- GRASS LAWN SEED MIX
- SLOPE STABILIZATION SEED MIX
- SEDIMENT FOREBAY SEED MIX
- WET-TO-MESIC TALLGRASS PRAIRIE SEED MIX
- 0-2' EMERGENT WETLAND SEED MIX
- 2-3' EMERGENT SEED MIX
- 3-6' LILY TUBER PLANTING
- TREE STUMP
- LOG
- WHOLE TREE
- BASKING ROCK PILE
- SAND MOUND
- HIBERNACULUM
- PROPOSED EVERGREEN TREE
- PROPOSED DECIDUOUS TREE



Pond restoration work,  
New outlet control structure &  
habitat mitigation structures

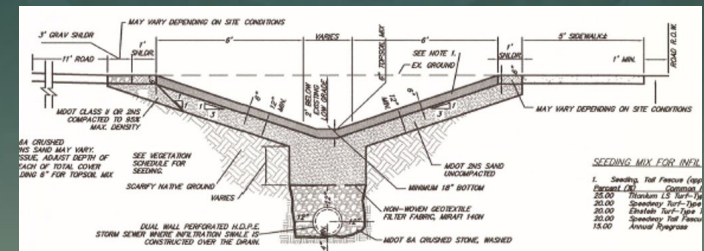
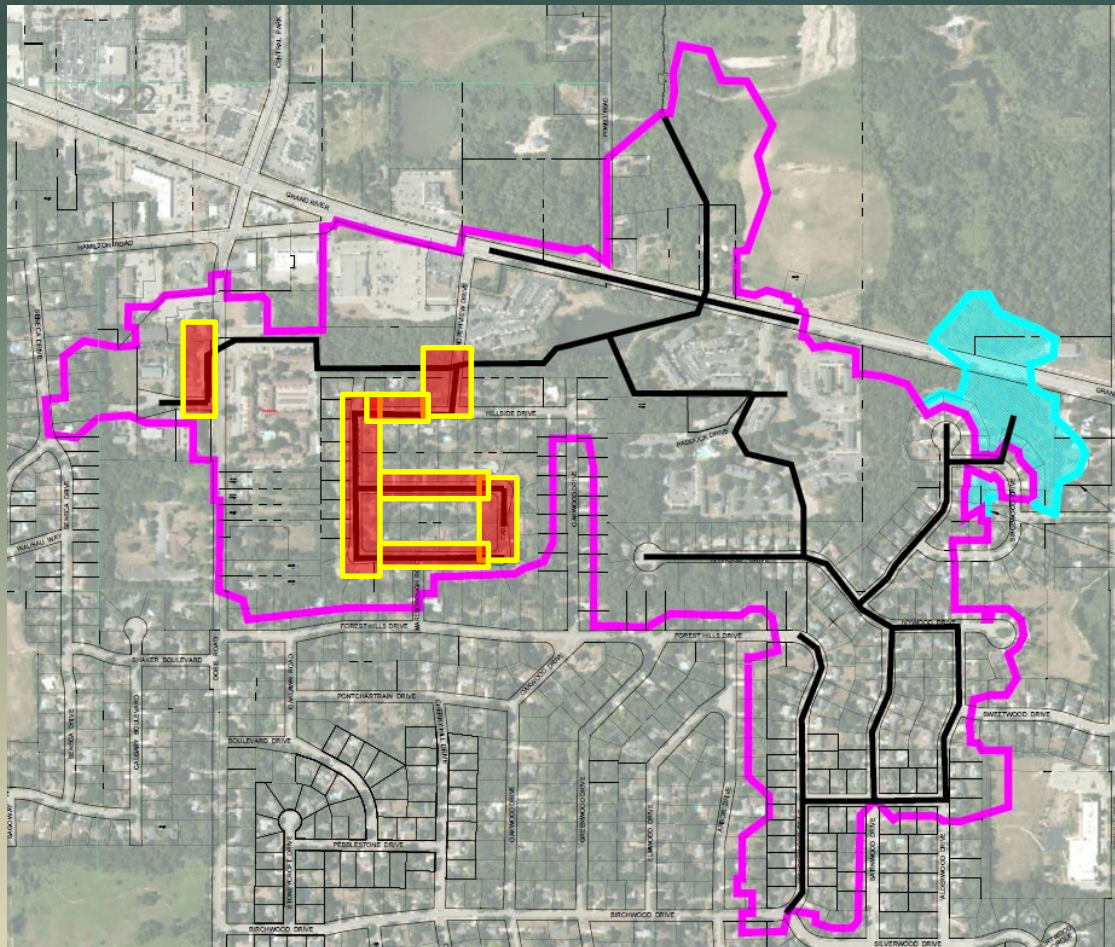


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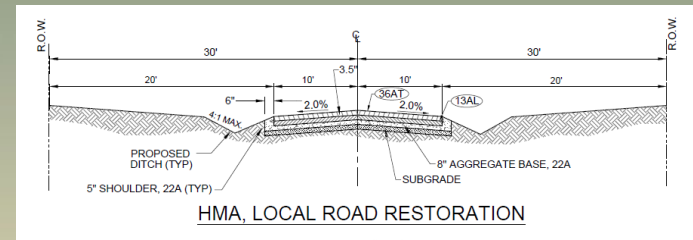
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### DANIELS DRAIN SERVICE AREA & STORM SEWER SYSTEM



Existing storm sewer pipe replacement, new asphalt roads, re-establish road ditches/swales & install 'rain lawns'





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# QUESTIONS ???

## CONTACT INFORMATION DURING CONSTRUCTION



### **Daniels Drain Project**

Contact Information:

**Ingham County Drain Commissioner  
Patrick E. Lindemann**

517-676-8395

### **GEI Consultants**

Kyle Smith

Project Engineer

(734) 904-9356

ksmith@geiconsultants.com



### **GEI Consultants**

Brian J. Cenci, PE

Project Manager

(517) 449-3478

bcenci@geiconsultants.com

