

# Managing a Large-Scale Project with Limited Resources

Limited Manpower



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**Contractors,  
engineering  
and survey  
companies?**

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• Locating field ,  
utility  
companies and  
municipalities?





How many of you are veterans ?





*Thank You*

for your sacrifice + service to our nation.

# BIO

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**Columbus City Utilities**

**Population over 50,000**

**Customers 19,000 +**





# Columbus City Utilities

## Water Distribution System

307 miles of water mains

2086 fire hydrants

4764 water valves

14,000+ meter pits (many are dual pits)

2 water treatment plants

5 water tanks

2 booster stations





# Columbus City Utilities

## Sanitary Sewer System

275 miles of gravity sanitary mains

105 miles of combined sewer

22 miles of force mains

5600 sanitary sewer manholes

83 lift stations

1 wastewater plant



• **Fiber to House**  
**coming to Columbus**  
**covering 100% of the**  
**city and majority of**  
**the county.**

Thank you for reaching out that is great to stat these discussions early as opposed to I am usually sending the first e-mail. As time goes on my team will be able to provide more color but below is a "general" idea of scale.

We hope to get to a point of about 8-10 Drill rigs that perform about 500' average per day that is a weekly total of 25k' and 5K' per day. If each ticket is roughly 1000' then we would need 5 tickets clear but in reality, we would want several tickets per drill so they can plan and maneuver for issues found in the field.

For planning purposes I would use the scenario below

Initially – 5 tickets per drill (50 tickets) this would occur while we mobilize and would have several weeks to get paint down.

On going – 1 tickets per drill per day to ensure that we can keep paint in front of the drills.

Month	Crews (Drills)	Tickets (1k' per ticket)	Footage (locate)	Production (Drill)
May	3	60	60k	30-40K
June	6	120	120k	60-80K
July	10	200	200K	100-150K
August	10	200	200k	100-150K

Hopefully the above makes sense. Let me know if you want to discuss.



We cannot hire people from outside short term to help because of city policy



Locating is one of our responsibilities ,it's not our only responsibility



There are only 2 guys that work for me in engineering



There are days where we only have 2 people trying to protect our infrastructure because of vacations ,PTO days ,sick days, ect.



Very few days that we only have 1 person

**MISSION: IMPOSSIBLE**  
**MISSION: IMPOSSIBLE**



## Start Up Fiber to House







Many challenges



Emergency Locates



Our own crews needing attention to complete our mission



Contractors calling in bad info or wrong info



Other responsibilities that must have our attention and time



Problem troubleshooting locates



Weather



Soil conditions



List

## Service Area Deliveries by Ticket Type/Function

1 of 1 | Whole Page

Service Area Ticket Deliveries by Type/Function for Tickets delivered from 01/01/2024 thru 10/26/2024

Code	Service Area Name	Damage	Design Notice	Emergency	Joint Meet	Normal Notice	Additional Notice	Cancel	Extension	Remark	Retransmission	Resend	Total
ID2419	COLUMBUS CITY UTILITIES	146	22	394		9,405	178	285	1,054	635	43		12,162
		146	22	394		9,405	178	285	1,054	635	43		12,162

Report Parameters:

Date Range is between '01/01/2024' and '10/26/2024'

Member(s): ID2419: COLUMBUS CITY UTILITIES

Submit



## **Communications**

**Bi-weekly meetings**

**Group texts with boring crew leaders ,owners and foreman**

**Construction plans were provided**

**How 2-3 employees handled this for the most part**

**Utilizing white lining**

**Utilizing rescheduling of dig tixs (law started January 2024)**

**Attaching files to your dig request**





# Communications





- **Phone Calls**
- **Emails**
- **Text Messages**
- **Onsite Visits**
- **Group Text Messages**
- **Positive Response**

5:58

99%

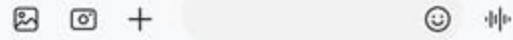
< Mass text 6 >

Kevin Wieland



I'm hoping to work this tomorrow

MMS  
3:26 PM



Mass text 8

message:

Waiting for clarification from Tim. This flowerpot is installed

MMS

Rob Newhouse

I will get with you before i mark

MMS

11:25 AM

Pat Nyffler

It will take me a day or two to check Elm print udate and approve.

MMS

11:49 AM

Friday, September 20

Adam Murray

CCU has the FP's on home and union complete. Plan on starting elm at the start of next week.

MMS

10:09 AM

Attachment icons and text input field



10:17

4G 100%

Mass text 8

11:25 AM

Pat Nyffler

It will take me a day or two to check Elm print update and approve.

MMS  
11:49 AM

Friday, September 20

Adam Murray

CCU has the FP's on home and union complete. Plan on starting elm at the start of next week.

MMS  
10:09 AM

Daniel Birt

I'll have the Elm and Maple Tickets painted for path on Monday. Received the new revised version yesterday afternoon

MMS  
10:16 AM

Enter message





**Bi-weekly meetings**



**• Held every other Thursday at 10:30 AM using Microsoft Teams Meeting with the consultant engineering company ,utilities companies ,contract locate companies ,the boring crew leaders along with damage prevention personnel from Centerpoint Energy. Recently an IN811 board member has joined our meetings .**

The slide features decorative geometric shapes in the corners. The top-left and bottom-right corners contain overlapping squares in shades of blue and grey. The top-right and bottom-left corners contain overlapping squares in shades of light blue and grey. A central horizontal bar with rounded ends is filled with a solid olive green color.

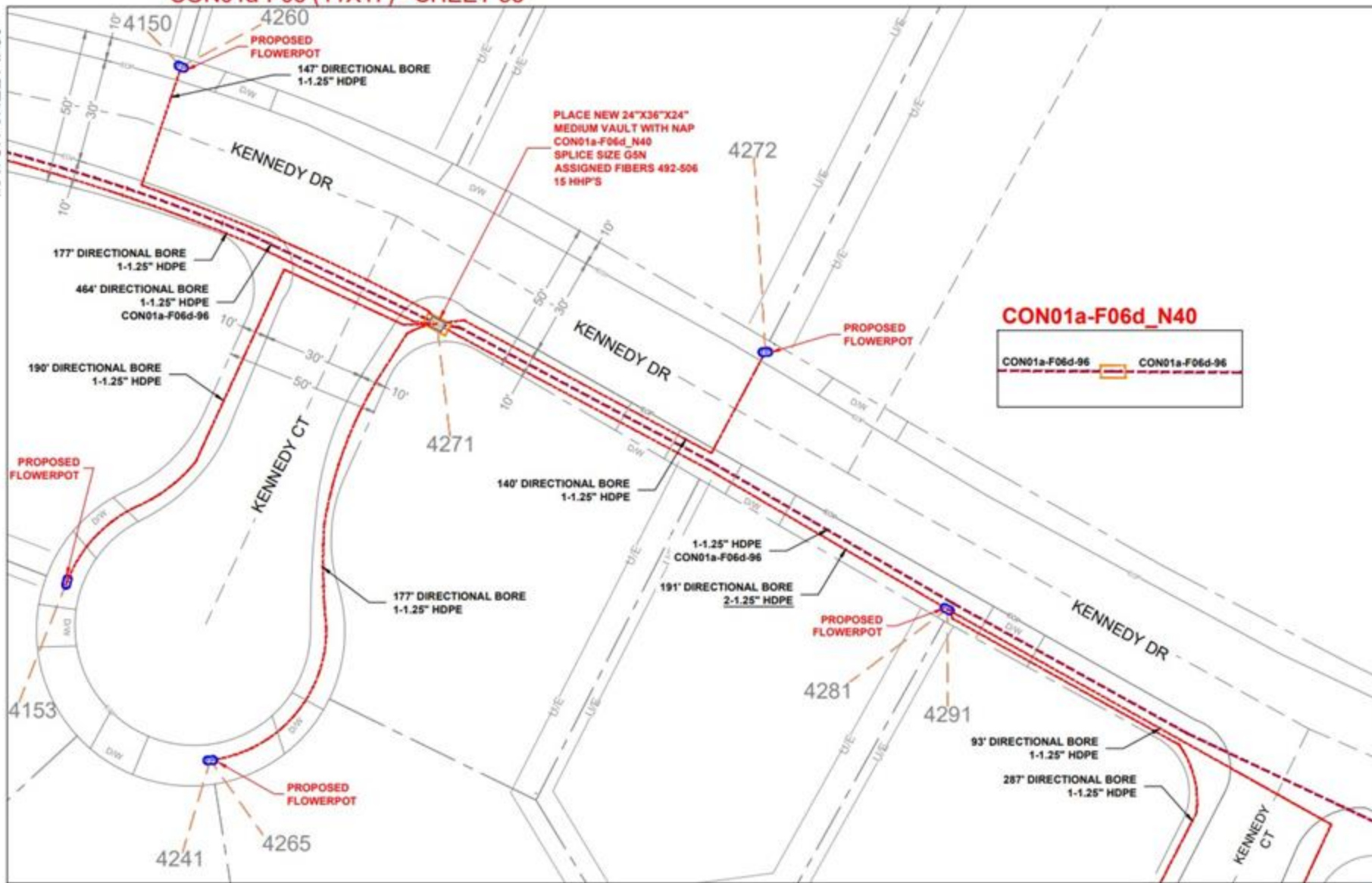
**Construction plans were provided**





CON01a-F06 (11X17) - SHEET 55

MATCH SHEET # 56



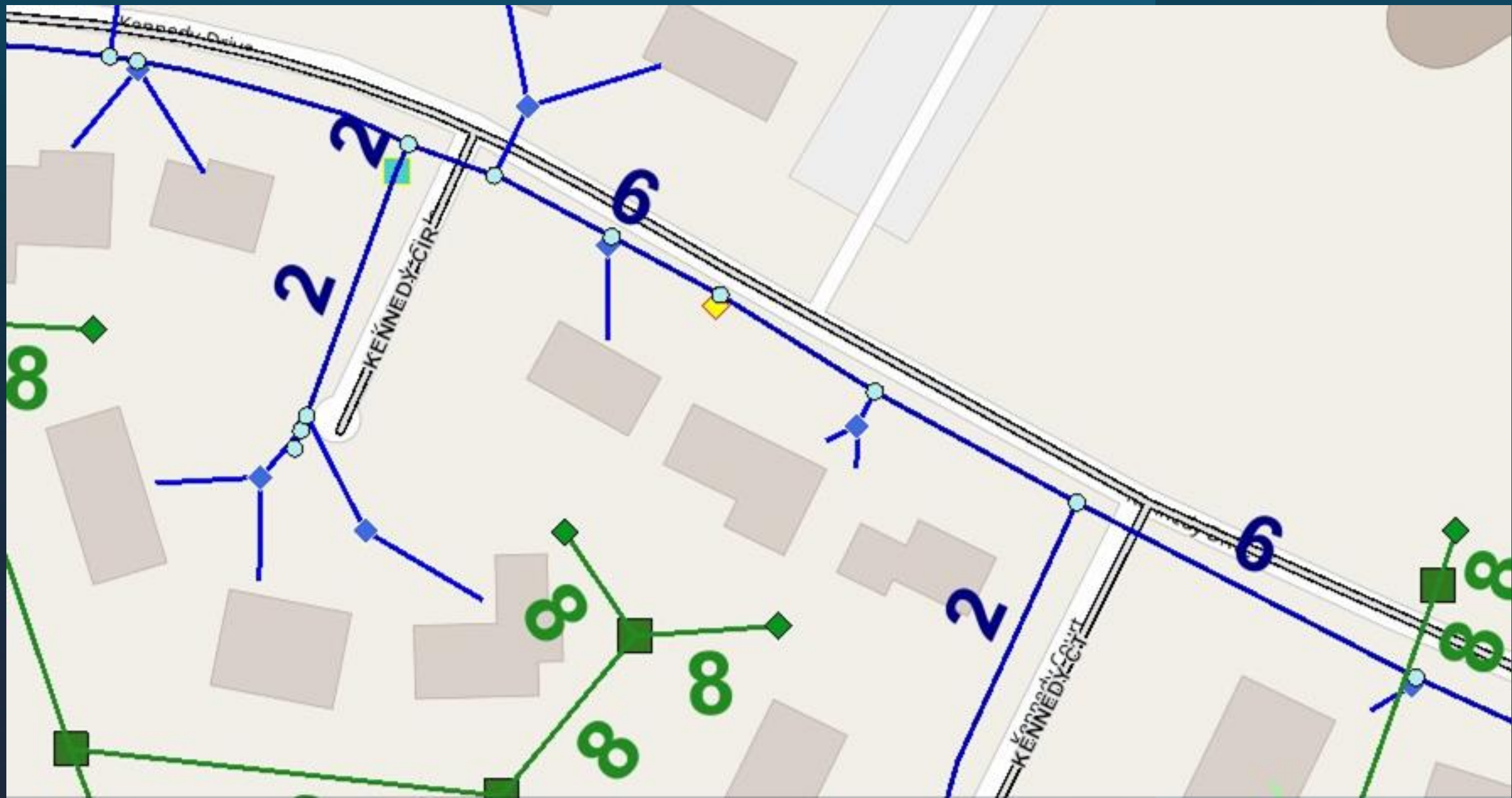
MATCH SHEET # 66

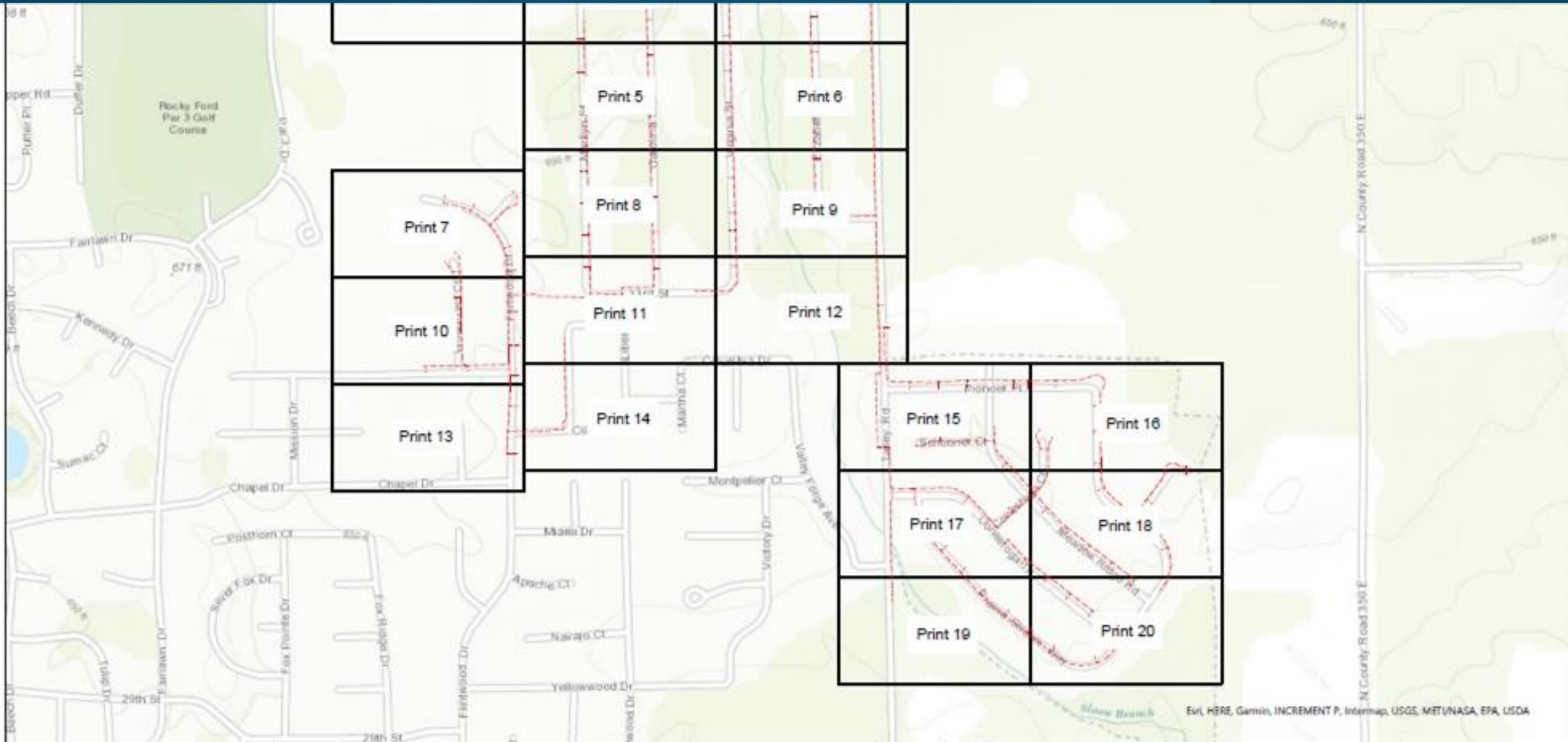
055/066

MATCH SHEET # 04





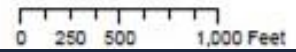




Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, MITI/NASA, EPA, USDA



Legend CON01a-F01\_Pioneer PI



- —
- - -
- Grids

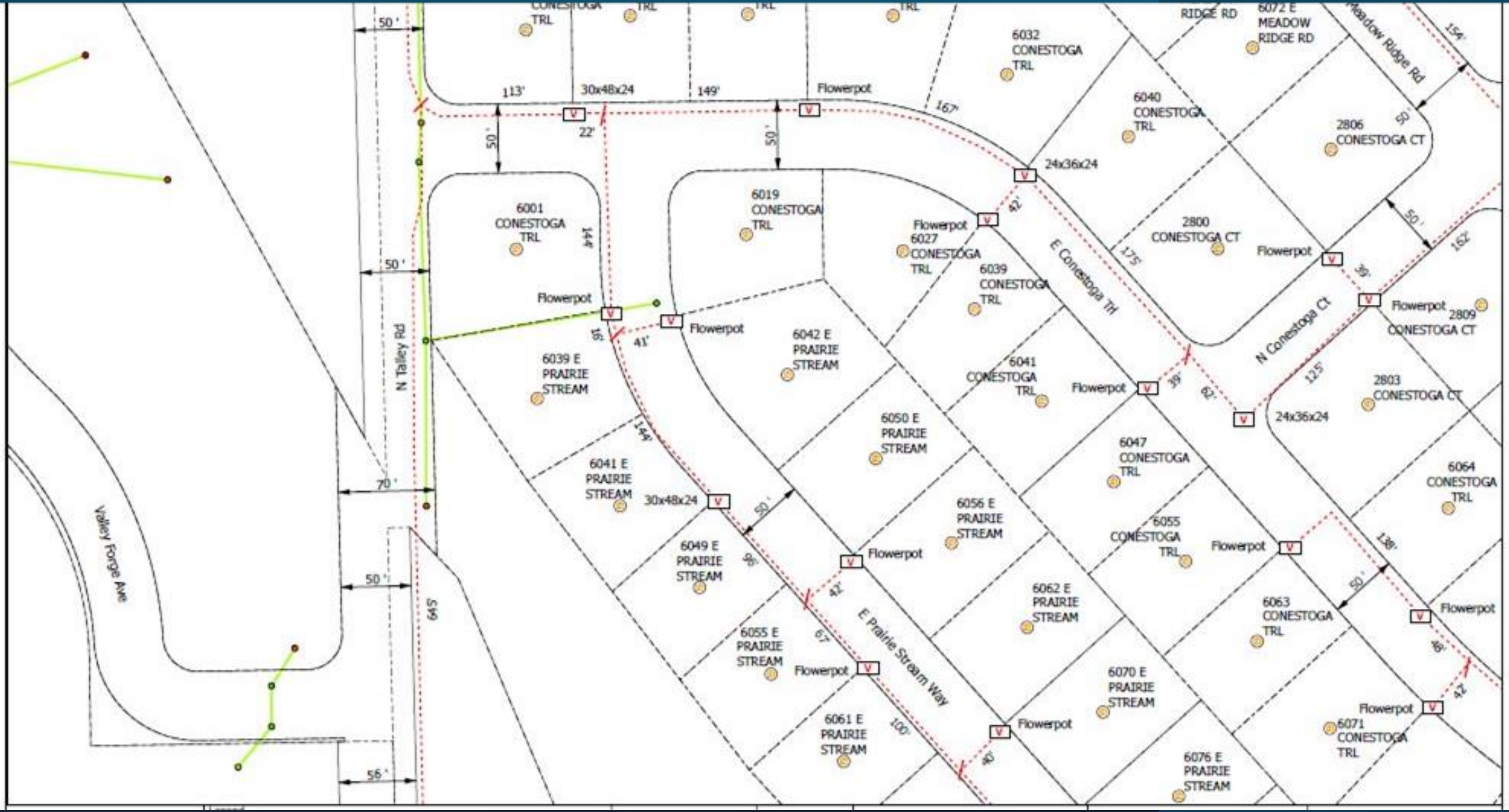


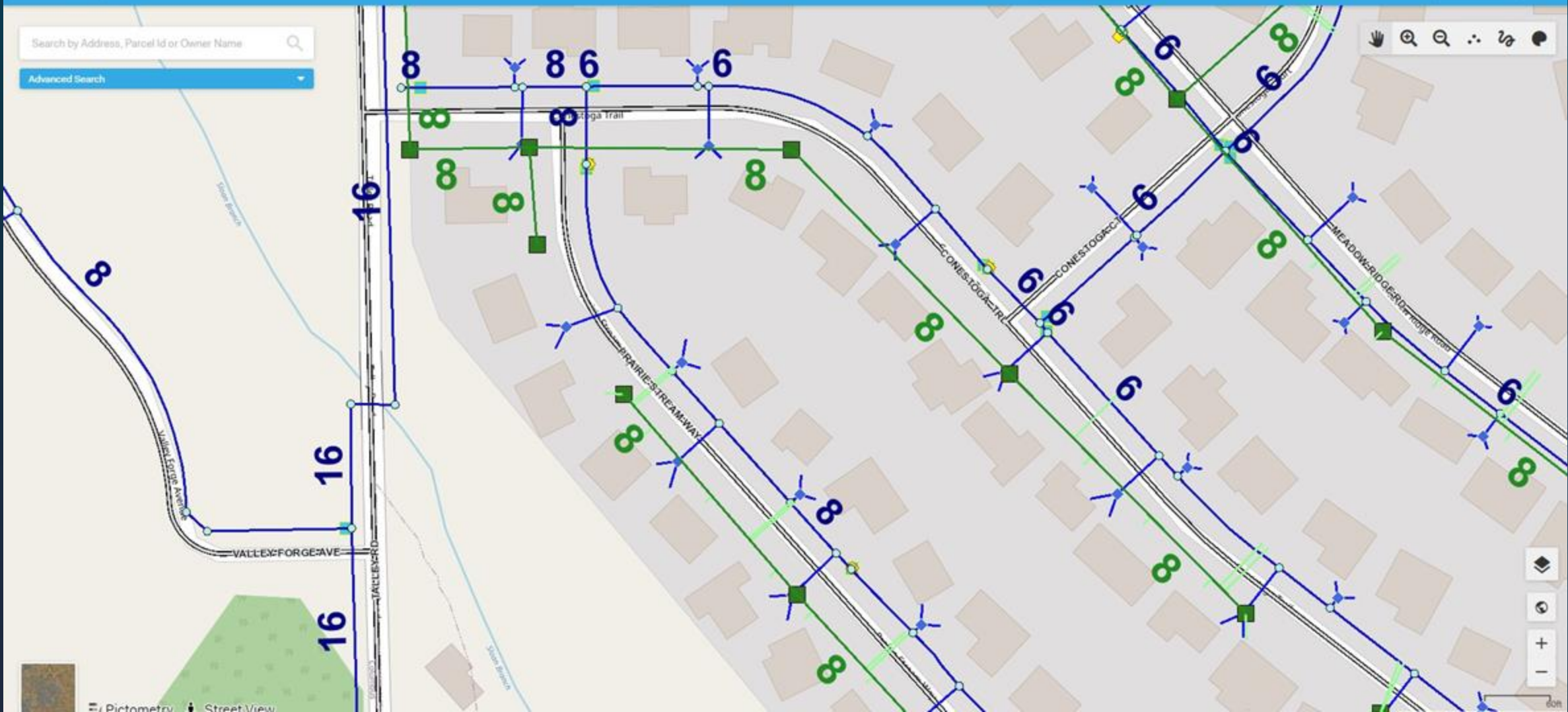
City of Columbus, IN Permit:  
Design View

DATE	BY	DESCRIPTION











**How 2-3 employees handled this for the most part**

## FTH with 3 of us working on the projects

- The first 3-4 hours of each day the three of us would be working on FTH project for approximately 4-5 hours working on regular dig tixs
  - (9-12 hours for FTH project)
- Days with us utilizing a 2-person project team and 1 person working all regular dig tixs
  - (14-16 hours for FTH project)
- *When using 2-person project team we would rotate each day the person doing regular dig tixs so they we would not suffer burnout being on the 2-person project team day after day*





**Group texts with boring crew leaders and other locators**



Lilac Ct

Whipporwill Dr

Hersweet Blvd

afra Ln

Jo

Camelot Ln

Williamsburg  
Way Apartments

Forsythia Dr

Yee Kee

Heritage Rd

Carriage Dr

Heritage Rd

Jordan Dr

E Sushi Japanese  
Top rated

25th St



Good morning all.  
This is the new  
group chat for L&A  
fiber locators

This is where I want  
to start with a new  
batch of tickets I  
called in last week

MMS  
7:26 AM

I just talked with  
Kevin he wants  
to start on 25th  
streetwest end going  
east all xings are  
marked on north  
side of the street

MMS  
8:27 AM

Friday, September 13

Mike Phillips



<  Mass text 3 ▾

2:15 [markup icons] 81% [location icon]

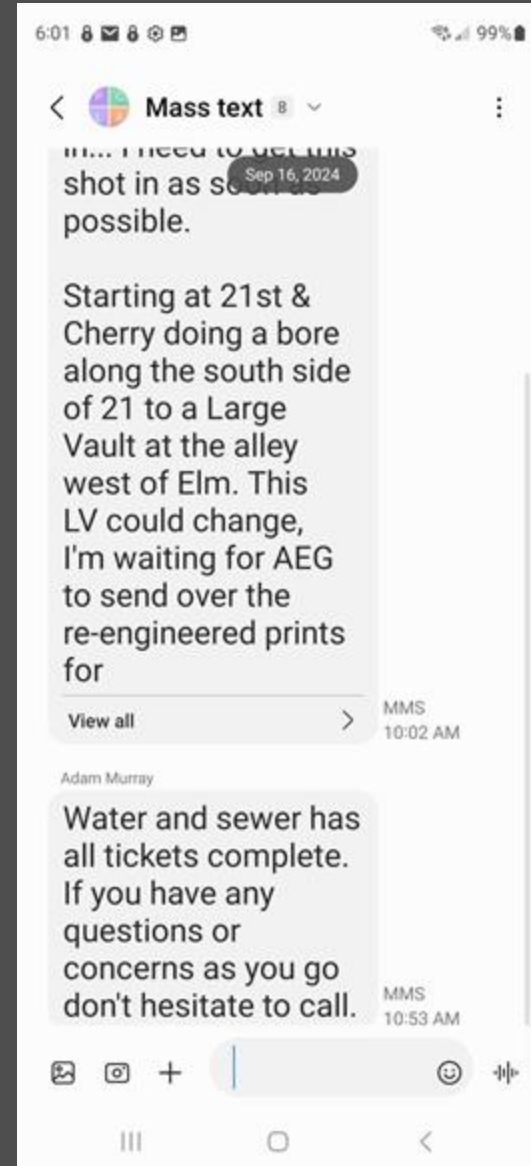
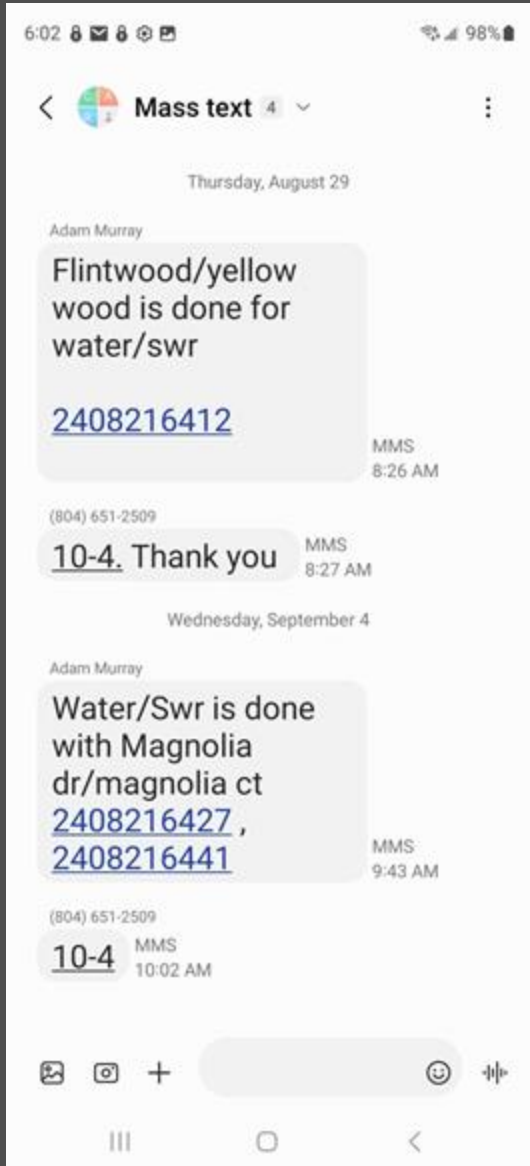
X Markup [share icon] [more icon]

GPS accuracy 3.3 m



Here is the area we need cleared to locate the sewer

MMS 2:30 PM



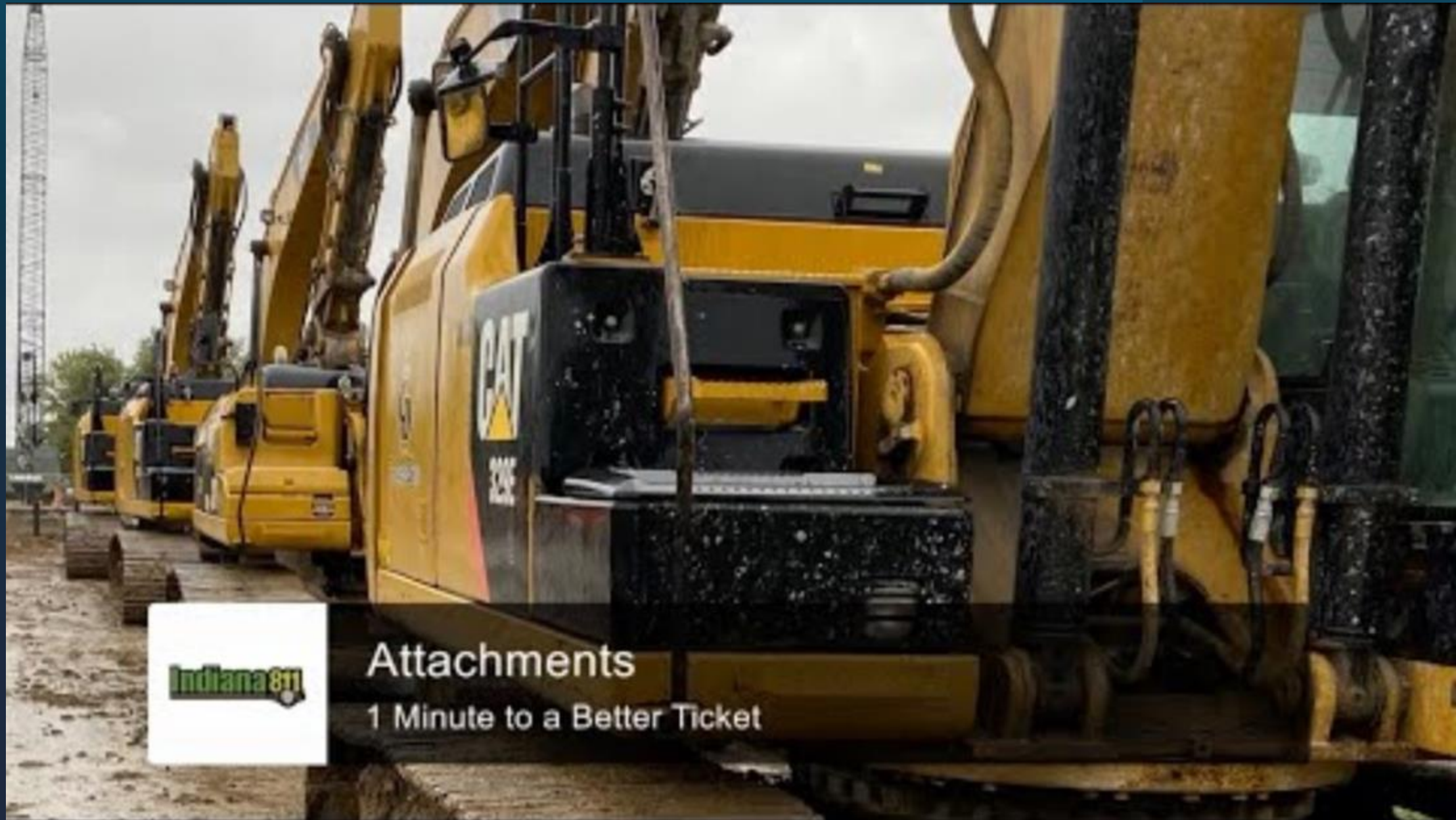




## Utilizing white lining

A clearly delineated proposed work area allows facility owners/operators and locators to avoid unnecessary work created by locating facilities that are not affected by the planned excavation, and ensure that underground facilities within the intended work area are well marked. Electronic white lining provides a method where excavators may indicate their defined dig area visually by electronic data entry (lines or polygons) without the need for a physical site visit. Premarking, on-site and/or electronically, allows excavators to accurately communicate to the 811 center, facility owners/operators, or their locator where excavation is to occur.





## Attachments

1 Minute to a Better Ticket

**WHITE  
LINING  
THE MARKS  
WITH YOU!**

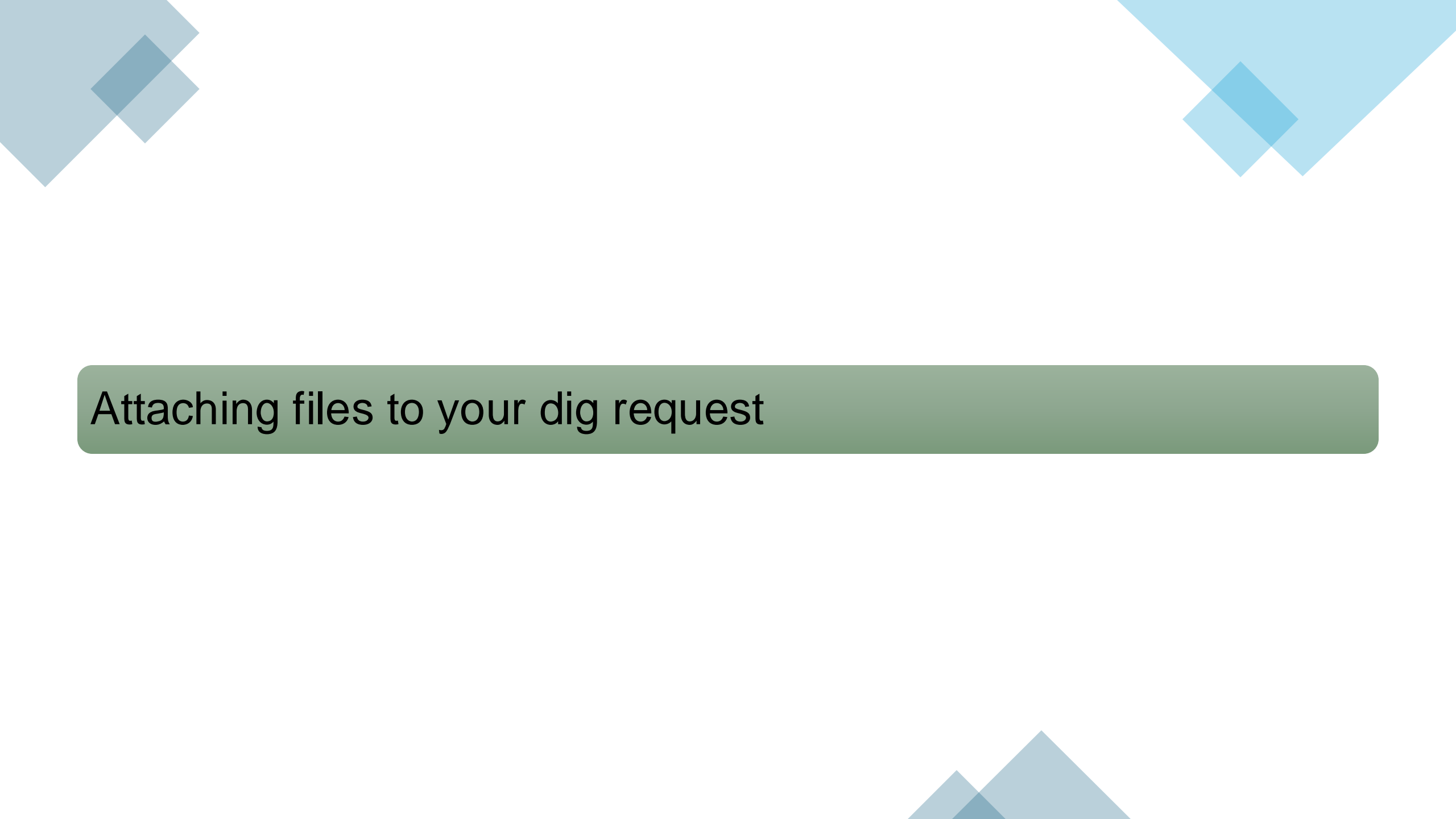


**START**









## Attaching files to your dig request

Home

Tickets

Service Areas

Reports

2409040840 v0 Status: Released
Agent: DANIEL BIRT Function: New
Taken: 09/04/2024 08:05 AM - 08:19 AM Notify By: Manual

Ticket Text Service Areas Responses Deliveries Revisions

Find by Ticket Number

Excavator has NOT indicated that Work is Complete.

Show Confirmation

Map Attachments (2) Help

Excavator Information

Excavator ID: 547384 Company ID: 353132
What is the best phone number to reach you? (765) 848-8345
Caller or person creating: DANIEL BIRT Caller Type: CONTRACTOR
Company digging: NORMAN EXCAVATING LLC Office: GREENCASTLE
Mailing address of the person or company digging: P.O. BOX 410, GREENCASTLE, IN, 46135
Email: D.BIRT@NORMANEXCAVATING.COM Fax:
Work being done for: AEG Job ID: CON02C-F11
Name of the Person Excavating: DANIEL BIRT Phone (Cell): (765) 848-8345

Attached Files:

Screenshot 2024-09-04 081732.jpg open download
Screenshot 2024-09-04 080950.pdf open download

Dates & Information

Ticket Type: Normal Notice
Requested Start Date and Time: 09/09/2024 07:00 AM
Expires on: 09/24/2024 11:59 PM Update by: 09/20/2024 06:59 AM
Notes/Remarks: PLEASE SEE THE ATTACHMENT - GOOGLE EARTH IMAGE OF THE EXISTING CITY OF COLUMBUS HAND HOLE---CONTACT DANIEL BIRT AT 765-848-8345 WITH ANY LOCATE QUESTIONS

Mandatory Questions

What type of work is being done? DIRECTIONAL DRILLING - CONDUIT
How long will it take to complete the job? 20 DAYS
At the deepest, how many feet will you be digging? 10 FT
Will there be any explosives or blasting? No
Will there be any boring? (A trenchless excavation method using mechanized boring equipment)? Yes
UNDER GRASS AND PAVEMENT
Will you be White lining the dig area? No



CENTRAL AVE

22ND STREET

EXISTING CITY  
HAND HOLE

NORTH





2409056242 v0      Status: **Released**

Agent: AARON WHITE      Function: **New**

Taken: 09/05/2024 05:45 PM - 06:06 PM      Notify By: **Manual**

Ticket    Text    Service Areas    Responses    Deliveries    Revisions

Find by Ticket Number

NORMAL NOTICE

Ticket : 2409056242 Date: 09/05/2024 Time: 18:06 Oper: INDIANA811 Chan:000

State: IN Cnty: BARTHLOMEW Twp: COLUMBUS  
Cityname: COLUMBUS Inside: Y Near: N  
Subdivision:

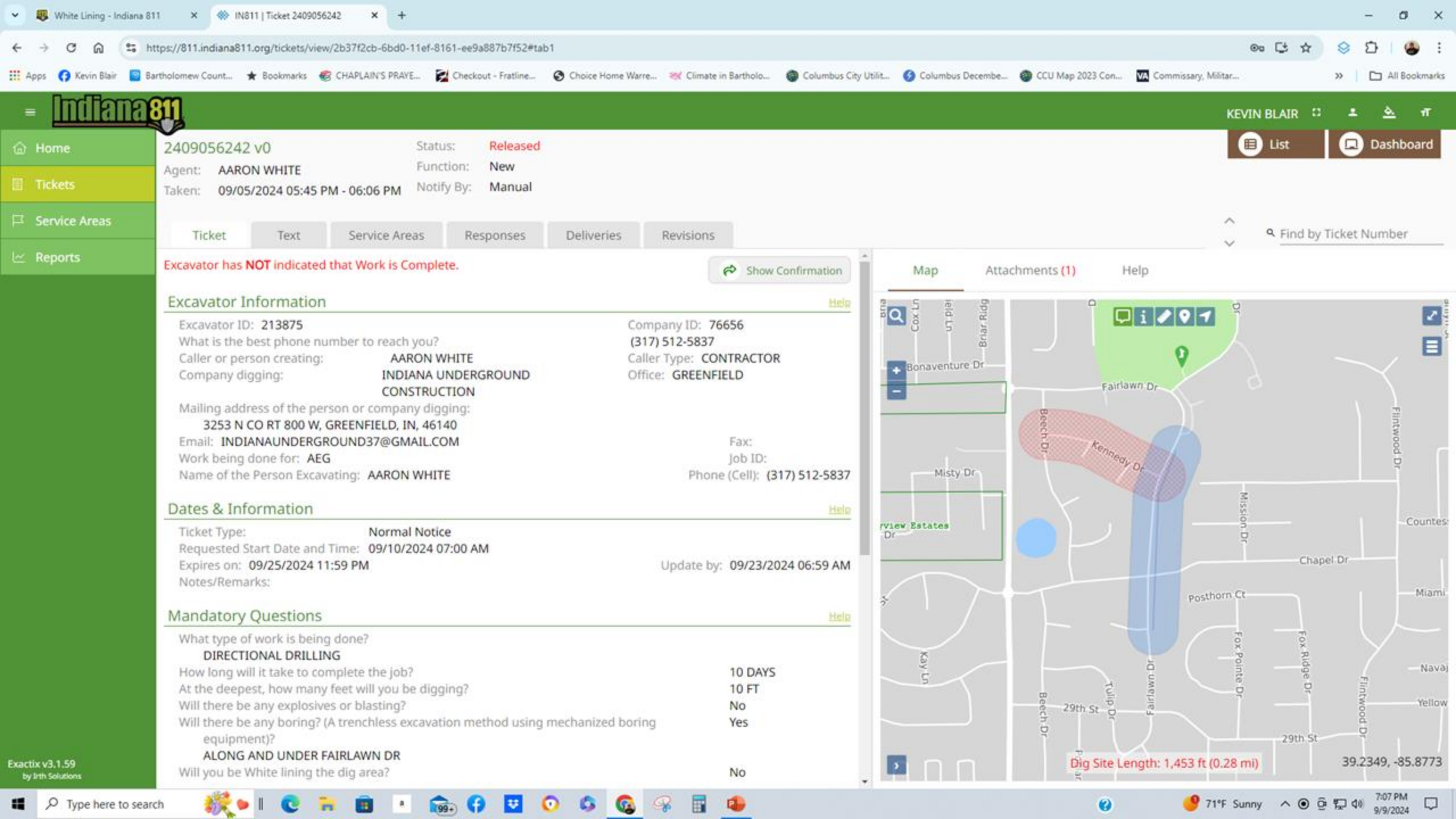
Address :  
Street : FAIRLAWN DR  
Cross 1 : KENNEDY DR Within 1/4 mile: Y  
Location: LOCATE STARTING AT THE CABINET THAT SITS NORTH OF PROPERTY 3261 FAIRLAWN DR. LOCATE HEADING SOUTH ALONG THE EAST SIDE OF FAIRLAWN DR. LOCATE THE EAST SIDE OF THE ROAD FROM EDGE OF PAVEMENT TO ROW UNTIL YOU REACH PROPERTY 3033 FAIRLAWN DR. LOCATE UNDER FAIRLAWN DR FROM ROW TO ROW IN THE FOLLOWING LOCATIONS: 1) SOUTH SIDE OF THE INTERSECTION WITH KENNEDY DR. 2) BETWEEN 4381&3242 FAIRLAWN DR 3) BETWEEN 3232&3222 FAIRLAWN DR 4) BETWEEN 3212&3202 FAIRLAWN DR 5) BETWEEN 3142&3112 FAIRLAWN DR 6) BETWEEN 3074&3054 FAIRLAWN DR PRINT IS ATTACHED. PAGES 4, 5, 6, 7, 8, 9  
\*\*\*Boring Where = ALONG AND UNDER FAIRLAWN DR

Grids : 3913A8552C 3913A8552D 3913B8552C 3914D8552C  
Boundary: n 39.233431 s 39.228419 w -85.872629 e -85.870573

Work type : DIRECTIONAL DRILLING  
Done for : AEG  
Start date: 09/10/2024 Time: 07:00 Hours notice: 109/048 Priority: NORM  
Ug/Oh/Both: U Blasting: N Boring: Y Railroad: N Emergency: N  
Duration : 10 DAYS Depth: 10 FT

Company : INDIANA UNDERGROUND CONSTRUCTION Type: CONT  
Co addr : 3253 N CO RT 800 W  
City : GREENFIELD State: IN Zip: 46140  
Caller : AARON WHITE Phone: (317)512-5837  
Contact : AARON WHITE - CELL Phone:  
BestTime:





2409056242 v0 Status: **Released**  
 Agent: AARON WHITE Function: **New**  
 Taken: 09/05/2024 05:45 PM - 06:06 PM Notify By: **Manual**

Ticket Text Service Areas Responses Deliveries Revisions

Excavator has **NOT** indicated that Work is Complete.

Show Confirmation

### Excavator Information

Excavator ID: <b>213875</b>	Company ID: <b>76656</b>
What is the best phone number to reach you?	<b>(317) 512-5837</b>
Caller or person creating:	<b>AARON WHITE</b>
Company digging:	<b>INDIANA UNDERGROUND CONSTRUCTION</b>
Company digging:	<b>INDIANA UNDERGROUND CONSTRUCTION</b>
Company digging:	<b>INDIANA UNDERGROUND CONSTRUCTION</b>
Mailing address of the person or company digging:	
<b>3253 N CO RT 800 W, GREENFIELD, IN, 46140</b>	
Email: <b>INDIANAUNDERGROUND37@GMAIL.COM</b>	Fax:
Work being done for: <b>AEG</b>	Job ID:
Name of the Person Excavating: <b>AARON WHITE</b>	Phone (Cell): <b>(317) 512-5837</b>

### Dates & Information

Ticket Type: **Normal Notice**

Requested Start Date and Time: **09/10/2024 07:00 AM**

Expires on: **09/25/2024 11:59 PM**

Update by: **09/23/2024 06:59 AM**

Notes/Remarks:

### Mandatory Questions

What type of work is being done?  
**DIRECTIONAL DRILLING**

How long will it take to complete the job? **10 DAYS**

At the deepest, how many feet will you be digging? **10 FT**

Will there be any explosives or blasting? **No**

Will there be any boring? (A trenchless excavation method using mechanized boring equipment)? **Yes**

**ALONG AND UNDER FAIRLAWN DR**

Will you be White lining the dig area? **No**

Map Attachments (1) Help

Dig Site Length: 1,453 ft (0.28 mi)

39.2349, -85.8773



- Home
- Tickets
- Service Areas
- Reports

2409056242 v0 Status: Released  
Agent: AARON WHITE Function: New  
Taken: 09/05/2024 05:45 PM - 06:06 PM Notify By: Manual

- Ticket
- Text
- Service Areas
- Responses
- Deliveries
- Revisions

Excavator has **NOT** indicated that Work is Complete. [Show Confirmation](#)

### Excavator Information [Help](#)

Excavator ID: 213875	Company ID: 76656
What is the best phone number to reach you?	(317) 512-5837
Caller or person creating: AARON WHITE	Caller Type: CONTRACTOR
Company digging: INDIANA UNDERGROUND CONSTRUCTION	Office: GREENFIELD
Mailing address of the person or company digging: 3253 N CO RT 800 W, GREENFIELD, IN, 46140	
Email: INDIANAUNDERGROUND37@GMAIL.COM	Fax:
Work being done for: AEG	Job ID:
Name of the Person Excavating: AARON WHITE	Phone (Cell): (317) 512-5837

### Dates & Information [Help](#)

Ticket Type: Normal Notice  
Requested Start Date and Time: 09/10/2024 07:00 AM  
Expires on: 09/25/2024 11:59 PM  
Update by: 09/23/2024 06:59 AM  
Notes/Remarks:

### Mandatory Questions [Help](#)

What type of work is being done?  
**DIRECTIONAL DRILLING**

How long will it take to complete the job? **10 DAYS**

At the deepest, how many feet will you be digging? **10 FT**

Will there be any explosives or blasting? **No**

Will there be any boring? (A trenchless excavation method using mechanized boring equipment)? **Yes**

**ALONG AND UNDER FAIRLAWN DR**

Will you be White lining the dig area? **No**

Find by Ticket Number

- Map
- Attachments (1)
- Help

Attached Files:


CON01a-F06\_11X17\_REV.2\_6-5-24 (3).pdf [open](#) [download](#)

## RE: White Lining Issues



Dan Heavner <[dan.heavner@aeg.cc](mailto:dan.heavner@aeg.cc)>

To: Blair, Kevin; Steve Apraham

 You forwarded this message on 9/10/2024 10:24 AM.

Kevin:

We go over this with all the crews when they are on-boarded, but I will make sure to cover it again this week with all the crews to make sure that they are doing it. Some of the newer crew but we will make sure to reiterate the point.

Thanks,

Dan

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**From:** Blair, Kevin <[kblair@columbusutilities.org](mailto:kblair@columbusutilities.org)>

**Sent:** Tuesday, September 10, 2024 9:31 AM

**To:** Steve Apraham <[steve.apraham@aeg.cc](mailto:steve.apraham@aeg.cc)>

**Cc:** Dan Heavner <[dan.heavner@aeg.cc](mailto:dan.heavner@aeg.cc)>

**Subject:** White Lining Issues

Morning Dan and Steve ,

Can I get you guys to do me a favor and make sure the newest bore crews are white lining their jobs so we can be more efficient so we can stay ahead of them by us not taking the e are not needed and slow us down. You all almost need Kevin with L and A teach them he does a wonderful job with it. Mainly Norman ,JGB and Indiana Underground needs to start Appreciate any help you can give us on this.



**Kevin Blair**

Engineering Supervisor

1111 McClure Road | P.O. Box 1987

Columbus, IN 47202-1987

Phone: 812-344-6070 (cell)

The slide features decorative geometric shapes in the corners. The top-left and bottom-right corners contain overlapping squares in shades of light blue and medium blue. The top-right and bottom-left corners contain overlapping triangles in shades of light blue and medium blue.

**Utilizing rescheduling of dig tixs (law started January 2024)**



**3C Unmarked – Marking Delay Requested with Excavator** – Do not excavate until resolved. Marking delay requested. Excavation site is unmarked. The locate technician cannot mark within two full working days. Per Indiana Law, the operator shall notify the excavator responsible of their determination and shall provide additional information.

1A: Do not excavate. A high-profile utility is in the area of the proposed excavation; the utility owner **WILL** attempt to contact you to schedule surveillance.

1B: A high-profile utility is in the area of the proposed excavation; the utility owner **MAY** attempt to contact you to schedule surveillance.

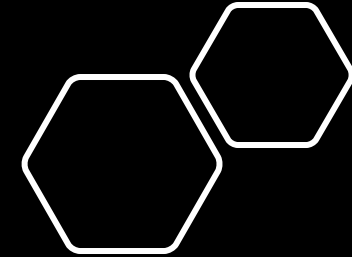
1C: The work is being done by the facility owner or the facility owners' master contractor is responsible for locating facilities.  
1: Underground facilities in the proposed excavation area have been marked.

2: No underground facilities are in the proposed excavation or design area.

3A: Do not excavate until resolved. The locate technician could not gain access to property; the excavator must provide access and submit a new ticket.

3B: Do not excavate until resolved. Incorrect address information. Contact Indiana 811.

3C: Do not excavate until resolved. Marking delay requested. Excavation site is unmarked. The locate technician cannot mark within two full working days. Per Indiana Law, the operator shall notify the excavator responsible of their determination and shall provide additional information.



3D: Do not excavate until resolved. The locate instructions are unclear. Contact Indiana 811.

3E: The excavator has performed the excavation prior to the locators' arrival.

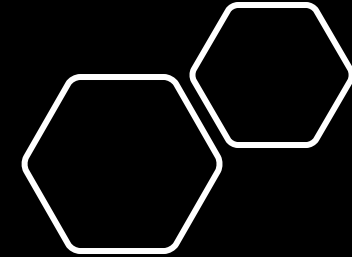
3F: Do not excavate until resolved. The line is untonable and the utility has been notified to resolve the issue. Per Indiana Law, the operator shall notify the excavator responsible of their determination and shall provide additional information.

3G: The locate technician has partially marked an area but cannot mark the entire proposed excavation area within two full working days. Per Indiana Law, the operator shall notify the excavator responsible of the operator's determination and shall provide additional information. Do not excavate the proposed excavation area that has not been located.

4: Private Line - This is a private line and it is not the responsibility of the members of Indiana 811 to locate private facilities. For more information, please visit <https://indiana811.org/myutilities/>.

5A: Design Notice - Installation records, maps, or other documents have been provided.

5B: Design Notice - Underground facilities have been marked.



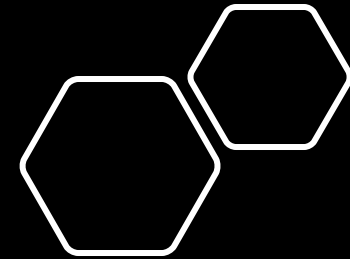
6A: Your proposed meeting is in conflict, and we are unable to meet on site. The utility owner may attempt to contact you.

6B: Request accepted at stated date and time.

6C: The meeting has taken place.

7: Damage notification acknowledged.

9Z: This is an 811 assigned code used for testing purposes. Please disregard.







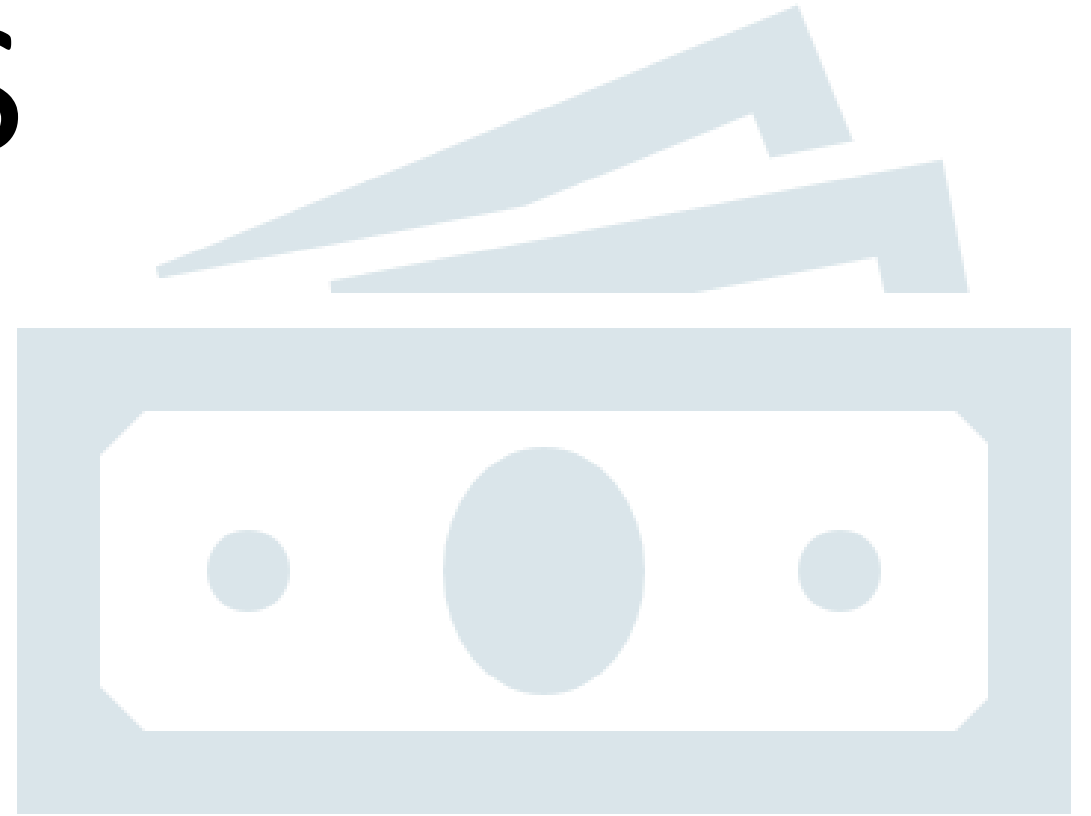
## DigTix On-Time Report (by Facility Owner)

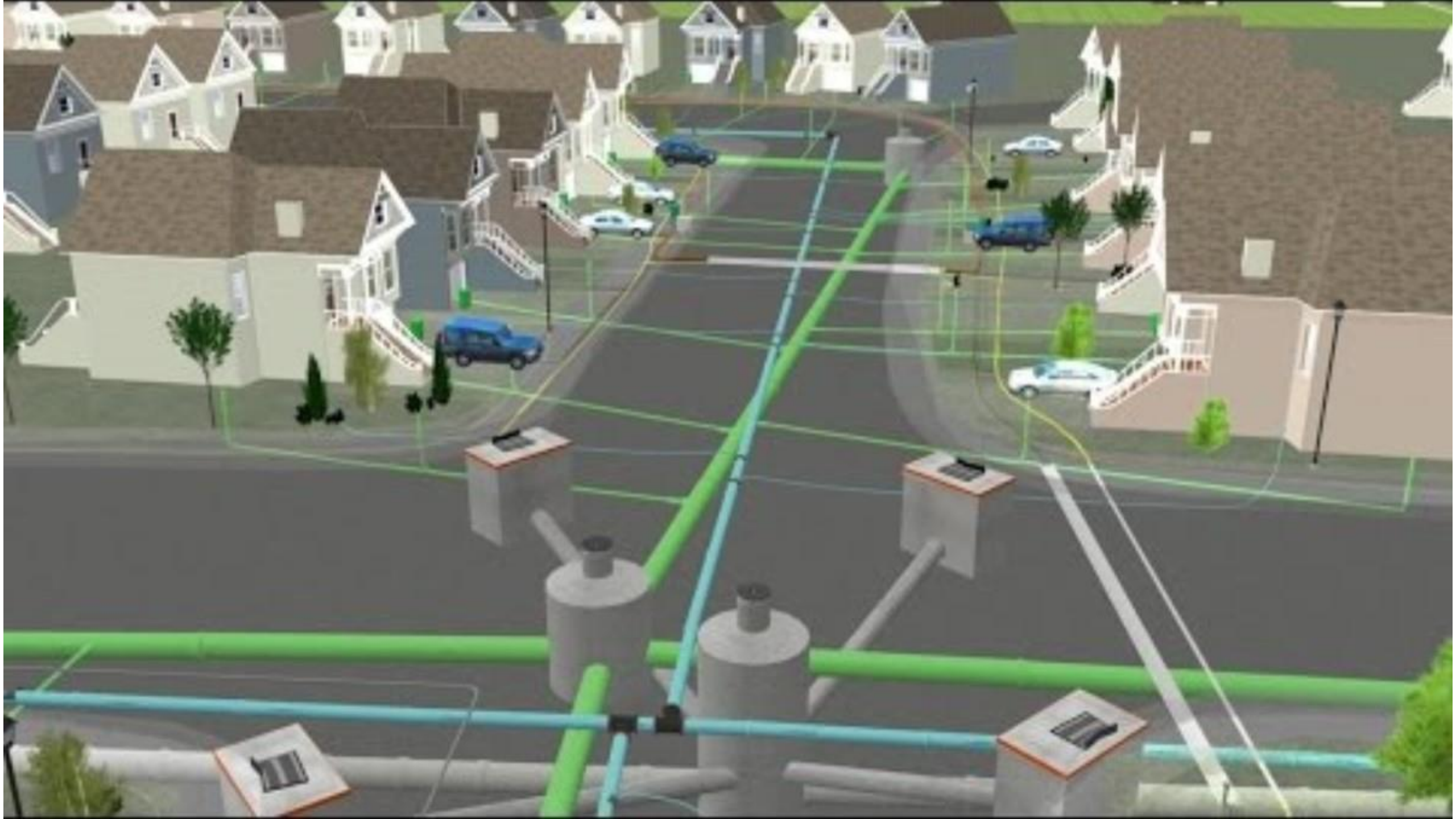
[\(CSV\)](#)

Responses Sent 09/01/2024 to 09/27/2024 (calculated using positive response due date)

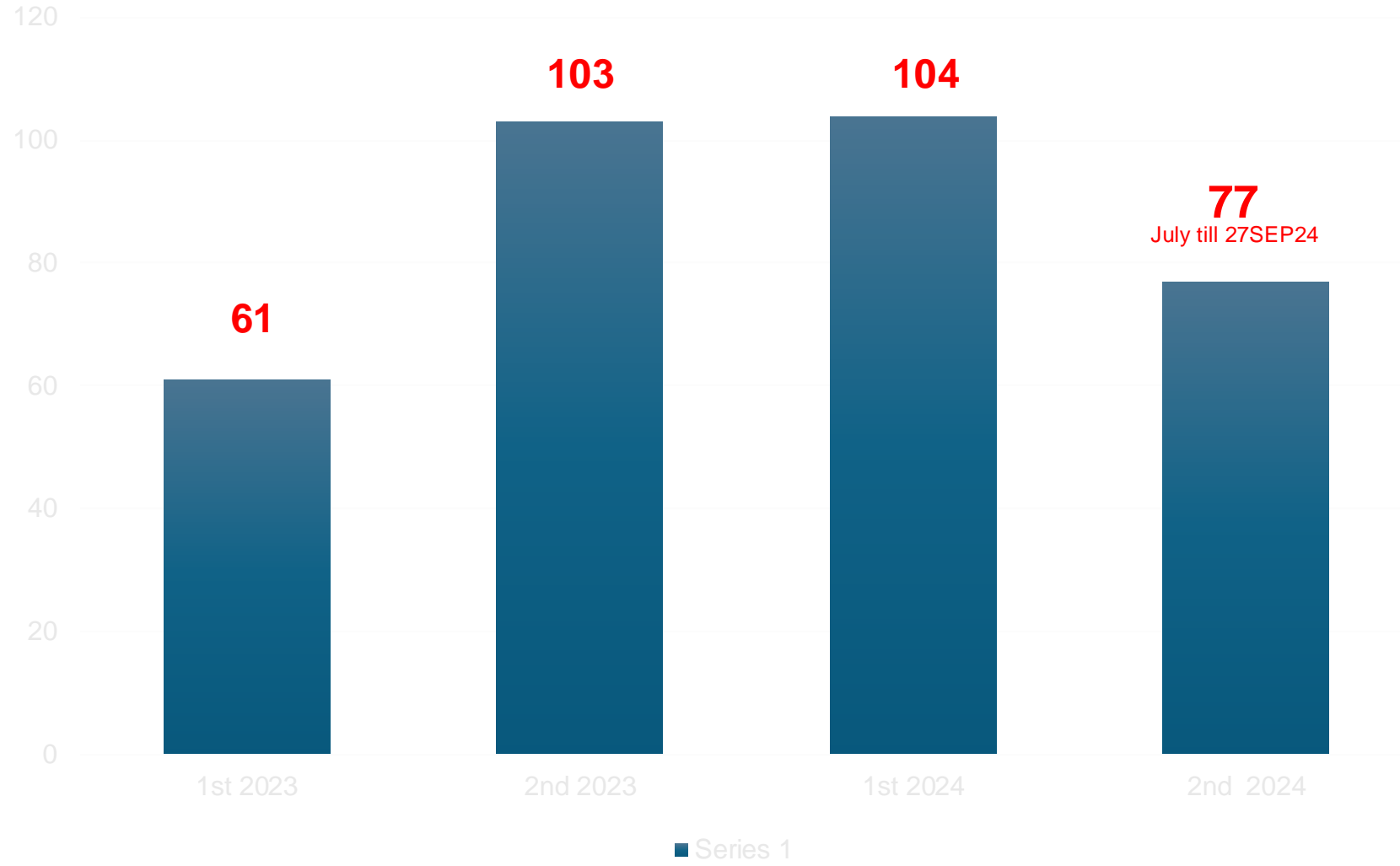
Facility Owner	Responses Due	Responses Due And Sent On-Time	Responses Due And Sent Late / Overdue	Responses Due And On-Time %	Responses Sent	Sent On-Time	Sent Late	Sent On-Time %
Columbus IN	1307	1170	137	89.52	1345	1175	<a href="#">170</a>	87.36

# DAMAGES





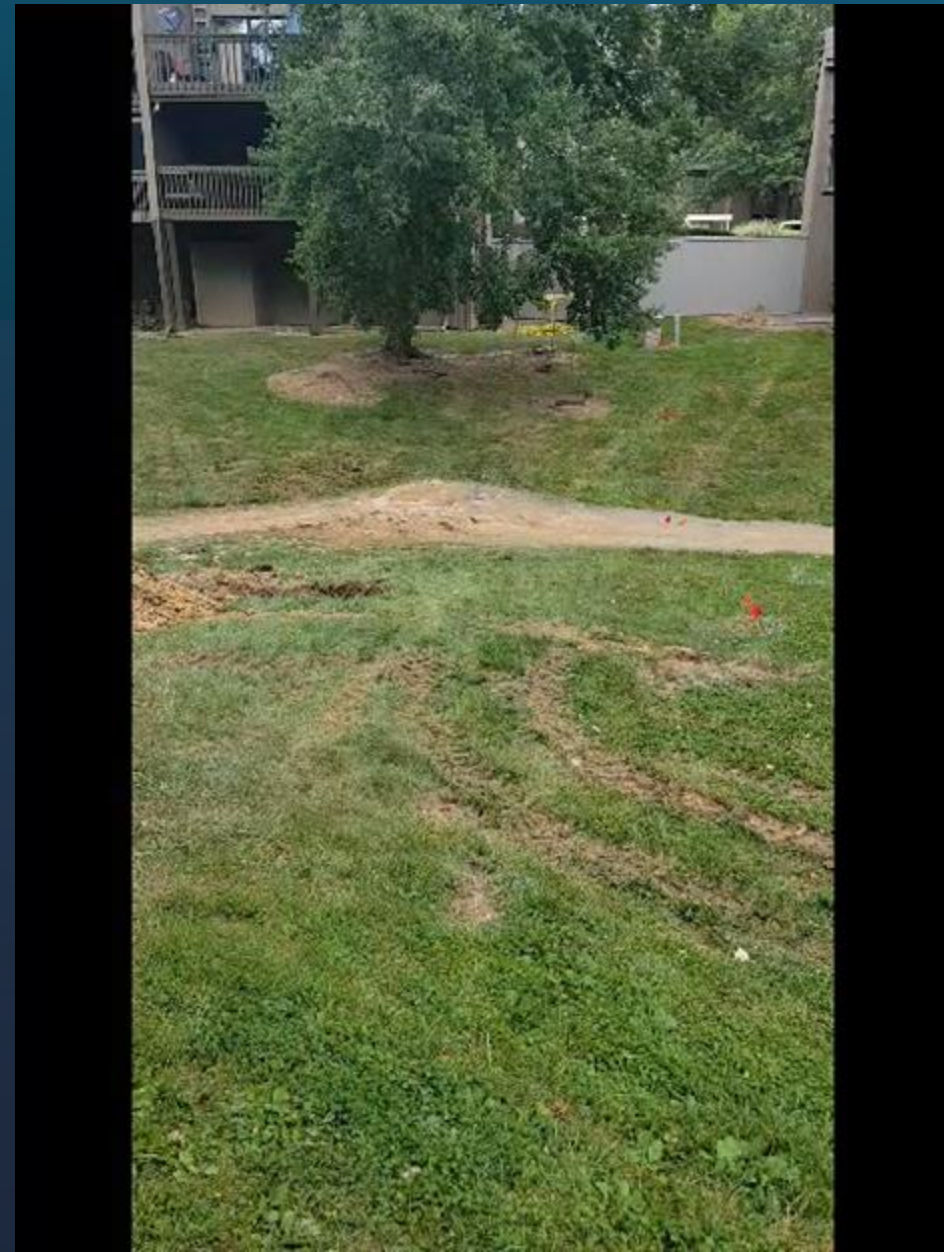
# Damages

















- Pictures and hit kits are great tools to have on any damage
- Pictures when the dig request is located is evidence that the utility was marked
- Pictures by contractor before starting job can show what was marked











# Underground Protection Formula

**Team Desire + Team Dedication +  
Hard Work = Successful  
Infrastructure Protection**





**QUESTION  
S**



**COMMENT  
S**





- **1 Final Question**

- How many of you in here are actual locators ?

- The real answer is none of you !



**A locator is what you use to find underground utilities , you purchase or use locators.**



**Remember this - you are an Underground Infrastructure Protection Specialist**