United City of Yorkville
651 Prairie Pointe Drive
Yorkville, Illinois 60560
Telephone: 630-553-4350
www.yorkville.il.us

AGENDA
PUBLIC WORKS COMMITTEE MEETING
Tuesday, July 18, 2023
6:00 p.m.
East Conference Room #337
651 Prairie Pointe Drive, Yorkville, IL

Citizen Comments:

Minutes for Correction/Approval: June 20, 2023

New Business:

1. PW 2023-57 Capital Improvement Projects Update
2. PW 2023-58 Quarterly Bond and Letter of Credit Reduction Summary
3. PW 2023-59 BrightFarms – Well Modifications
4. PW 2023-60 Grande Reserve Stop Sign Recommendations
5. PW 2023-61 Garden Street – No Parking Recommendation
6. PW 2023-62 Corneils Road Interceptor – Change Order No. 2 (Balancing)
7. PW 2023-63 2023 Water Main Improvements Contract A – Change Order No. 1
8. PW 2023-64 2023 Water Main Improvements Contract B – Change Order No. 1
9. PW 2023-65 Beaver Street Pump Station Improvements – Change Order No. 1 (Balancing)
10. PW 2023-66 South Central EWST Rehabilitation - Design Engineering Agreement

Old Business:

Additional Business:

UNITED CITY OF YORKVILLE
WORKSHEET
PUBLIC WORKS COMMITTEE
Tuesday, July 18, 2023
6:00 PM
CITY HALL CONFERENCE ROOM

CITIZEN COMMENTS:

MINUTES FOR CORRECTION/APPROVAL:

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1. June 20, 2023
   - ☐ Approved _____
     - ☐ As presented
     - ☐ With corrections

NEW BUSINESS:

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1. PW 2023-57 Capital Improvement Projects Update
   - ☐ Moved forward to CC _____
   - ☐ Approved by Committee _____
   - ☐ Bring back to Committee _____
   - ☐ Informational Item
   - ☐ Notes _____

     _____

     _____

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2. PW 2023-58 Quarterly Bond and Letter of Credit Reduction Summary
   - ☐ Moved forward to CC _____
   - ☐ Approved by Committee _____
   - ☐ Bring back to Committee _____
   - ☐ Informational Item
   - ☐ Notes _____

     _____

     _____

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3. PW 2023-59 BrightFarms – Well Modifications
   - ☐ Moved forward to CC _____
   - ☐ Approved by Committee _____
   - ☐ Bring back to Committee _____
   - ☐ Informational Item
   - ☐ Notes _____

     _____

     _____

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4. PW 2023-60 Grande Reserve Stop Sign Recommendations
   - ☐ Moved forward to CC _____
   - ☐ Approved by Committee _____
   - ☐ Bring back to Committee _____
   - ☐ Informational Item
   - ☐ Notes _____

     _____

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5. PW 2023-61 Garden Street – No Parking Recommendation
   - ☐ Moved forward to CC _____
   - ☐ Approved by Committee _____
   - ☐ Bring back to Committee _____
   - ☐ Informational Item
   - ☐ Notes _____

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6. PW 2023-62 Corneils Road Interceptor – Change Order No. 2 (Balancing)
   - ☐ Moved forward to CC _____
   - ☐ Approved by Committee _____
   - ☐ Bring back to Committee _____
   - ☐ Informational Item
   - ☐ Notes _____

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7. PW 2023-63 2023 Water Main Improvements Contract A – Change Order No. 1
   - ☐ Moved forward to CC _____
   - ☐ Approved by Committee _____
   - ☐ Bring back to Committee _____
   - ☐ Informational Item
   - ☐ Notes _____

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8. PW 2023-64 2023 Water Main Improvements Contract B – Change Order No. 1
   - ☐ Moved forward to CC _____
   - ☐ Approved by Committee _____
   - ☐ Bring back to Committee _____
   - ☐ Informational Item
   - ☐ Notes _____

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9. PW 2023-65 Beaver Street Pump Station Improvements – Change Order No. 1 (Balancing)
   - ☐ Moved forward to CC _____
   - ☐ Approved by Committee _____
   - ☐ Bring back to Committee _____
   - ☐ Informational Item
   - ☐ Notes _____

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10. PW 2023-66 South Central EWST Rehabilitation - Design Engineering Agreement
    - ☐ Moved forward to CC _____
    - ☐ Approved by Committee _____
    - ☐ Bring back to Committee _____
    - ☐ Informational Item
    - ☐ Notes _____

ADDITIONAL BUSINESS:

Reviewed By:	
Legal	☐
Finance	☐
Engineer	☐
City Administrator	☐
Community Development	☐
Purchasing	☐
Police	☐
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

Minutes

Tracking Number

Agenda Item Summary Memo

Title: Minutes of the Public Works Committee – June 20, 2023

Meeting and Date: Public Works Committee – July 18, 2023

Synopsis: _____

Council Action Previously Taken:

Date of Action: _____ Action Taken: _____

Item Number: _____

Type of Vote Required: Majority

Council Action Requested: Committee Approval

Submitted by: Minute Taker

Name Department

Agenda Item Notes:

Have a question or comment about this agenda item?
Call us Monday-Friday, 8:00am to 4:30pm at 630-553-4350, email us at agendas@yorkville.il.us, post at www.facebook.com/CityofYorkville, tweet us at @CityofYorkville, and/or contact any of your elected officials at http://www.yorkville.il.us/320/City-Council

UNITED CITY OF YORKVILLE
PUBLIC WORKS COMMITTEE
Tuesday, June 20, 2023, 6:00pm
Yorkville City Hall, East Conference Room #337
651 Prairie Pointe Drive, Yorkvile, IL

IN ATTENDANCE:
Committee Members
Chairman Ken Koch
Alderman Matt Marek
Alderman Rusty Corneils
Alderman Craig Soling

Other City Officials
City Administrator Bart Olson
Assistant City Administrator Erin Willrett
Alderman Chris Funkhouser (via Zoom)
Public Works Director Eric Dhuse
Engineer Brad Sanderson, EEI

Other Guests:
Mr. Chris Hansen, Kluber Architects
Dave Guss
Mike Krempski

The meeting was called to order at 6:00pm by Chairman Ken Koch.

Citizen Comments:

Minutes for Correction/Approval: May 16, 2023
The minutes were approved as presented.

New Business:
1. 2023-51 Resolution Approving an Agreement By and Between the United City of Yorkville, Kendall County, Illinois and Illinois Railway, LLC
Mr. Dhuse provided an update for the cost of the railroad repair at the Poplar Drive crossing. The railway needed to go out for bids because they could not do the repairs in stages as they originally thought. They would have needed to raise the tracks so much that they decided to repair the entire 80 feet at one time instead of stages. They will construct a gravel road for access for the 5-7 day project. Some cleanup and repaving will also be done bringing the total time of the project to 2-3 weeks and the crews will work nights as well. The increase was approximately $20,000. Director Dhuse said the railroad is waiting for city approval and will begin immediately. This moves forward to the Council consent agenda for approval.

2. PW 2023-52 Public Works Facility Discussion – Scope and Cost Comparisons
Mr. Olson discussed two options for the Public Works facility compared to other municipalities. In the agenda packet, Kluber Architects and Engineers provided square foot costs for some of the nearby projects. Kluber has built or designed more Public Works building than any other firm in Illinois. There was an article in the *Beacon News* that reported the cost of the Montgomery facility and that Yorkville was so much higher. Mr. Hansen did an analysis and found that Montgomery had bid out 2 years prior and also eliminated some items. He also found information on salt and material storage, fuel facility and if similar costs are included in the estimates. He provided those figures to the committee to try and compare "apples to apples".

Mr. Hansen has also bid part of Aurora's Public Works facility and compared the Yorkville and Aurora costs for

similar features. He has bid on 2/3 of that project since doing it in stages capitalizes on the market which has corrected itself downward about 2%. However, he noted that union workers recently received a 4.2% increase.

Mr. Olson said no action is needed at this meeting, however, a smaller version may need to be chosen. The next step is to choose a scope prior to selecting an architect.

Comments from Aldermen: Alderman Funkhouser suggested an L-shaped building for wall-sharing cost savings. Mr. Hansen added that a box-like footprint would also save considerable money. Alderman Corneils asked if Public Works has hired a fleet mechanic. The position will not be filled until the facility is done. Alderman Soling asked if there is enough space for employees. Mr. Dhuse replied that he has asked for employee input and Tim Evans also provided ideas. The Facilities staff will also join Public Works. Alderman Koch cautioned against comparing Aurora and Yorkville, since Aurora has a larger revenue stream. Alderman Funkhouser said he likes the idea of 100% coverage for vehicles and equipment and does not want to compromise on that. *(Zoom connection was lost for part of his opinion)*. He asked about a Morton-type building. Mr. Hansen said it could be explored but might be difficult since some pre-fab structures have trouble complying with the energy conservation code. He said tilt-up precast is generally the most cost-effective in this type of building. Chairman Koch asked about funds to repair more roads and if road repairs will be decided before the new facility. This will need to be determined by the Council, said Mr. Olson. However, he said the Lake Michigan project is the top priority.

3. PW 2023-53 2023 Water Main Replacement Contract B – Contract Award

Mr. Sanderson reported bids went out last week. This was the additional water main added at the urging of IDNR to reduce water losses below 10%. The low bidder was above both the estimate and budget since this is not the ideal bidding time. The Council decided earlier this year to authorize this work. There is much underground work being done in northern Illinois and thus a higher level of contractor need. To bring the project within budget, Mr. Sanderson recommended moving a block of Colton St. replacement to 2024, thereby saving $190,000. If approved, a Change Order would be issued. He said that 30% of that project is road work. The recommended bid is for Winninger Excavating and Alderman Corneils noted a correction needed in the amount shown in the memo. The correct bid is $1,983,518.

Mr. Sanderson said part of the IDNR permit requires the city to replace all water main prior to 1983. The city has 2 years to reduce water loss to below 10%. Mr. Dhuse said he is hoping to have all construction done by 2025 to reach that goal. Chairman Koch asked if the problem areas are known and Mr. Sanderson said they are and they will be targeted. Alderman Soling commented that it's easier for the residents if all the work is done at one time. This moves to the regular agenda for a vote.

4. PW 2023-54 2023 Water Main Replacement Contract B – Construction Engineering Agreement

Mr. Olson said this is the construction engineering agreement at a cost of $198,000 plus there is $10,700 direct expenses for sub-contractors, both which he recommends for approval. This moves to the regular agenda.

5. PW 2023-55 E. Main Street Improvements – Balancing Change Order

Mr. Sanderson said this was the large water replacement project last year and the work is now done. It is being closed out with a Change Order increase of about $24,000. He noted the Council had added sidewalk a year ago which added about $59,000. That work was never formally adopted in a Change Order and the Order will memorialize this increase. He said $53,000 of the balance is already included. He recommends approval and it moves to the consent agenda.

6. PW 2023-56 Water Connection Fee Analysis and Recommendations

Mr. Olson said this is a 2-part discussion of how water connection fees will be decided. First, the city must justify fees to buyers/builders which are based on permits issued for new housing starts and based on legal calculations and second, decide what's reasonable. He said the first component of the water system is well #10 to provide current capacity and later backup capacity. It will serve 8,400 people at a cost of $6.6 million. The second component is the Lake Michigan costs totaling $120 million. He provided an approximate estimate of

each person's share of the cost. For residential, some towns have a flat connection fee and charge the same for a condo or a house. Commercial and industrial fees are based on water meter size per code at this time. He does not know if Montgomery and Oswego will change their fees. Additionally, Yorkville will be more costly since it is farther away.

He also referred to a memo by Community Development Director Krysti Noble showing where existing platted units are located and possible fee locks. He noted that Grande Reserve built their own water system, water towers, treatment plant and the city canceled out the water connection fees. He also discussed other developments within the city as a justification of fee increases.

Committee members had a discussion of nearby towns' costs compared to Yorkville. Alderman Koch noted that builders and realtors will express displeasure when rates are raised. Alderman Funkhouser said impacts like these can be detrimental and if there are no fee locks, the building may not occur here. He's not against raising fees, but he cautioned about how it's done. Some developments have fee locks with varying time spans. This is for information.

Old Business: None

Additional Business:
Alderman Koch asked if the street light in Windett Ridge was fixed. Mr. Dhuse said it was fixed the same day they were notified. Mr. Koch also asked about the ownership of some bushes in Greenbriar and it was determined they belonged to the nearby resident who is free to cut them down. Mr. Dhuse said there is a conservation easement around the perimeter of the subdivision and she is not required to maintain the right-of-way in her yard. Mr. Koch also said there is an issue with motorized mini-bikes speeding down the trails of Windett Ridge. Mr. Olson said that must be reported when it occurs, though officers have had a difficult time catching them. They also discussed possible signage.

There was no additional business the meeting adjourned at 7:01pm.

Minutes respectfully transcribed by Marlys Young, Minute Taker

Reviewed By:	
Legal	☐
Finance	☐
Engineer	■
City Administrator	☐
Community Development	☐
Purchasing	☐
Police	☐
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

New Business #1

Tracking Number

PW 2023-57

Agenda Item Summary Memo

Title: Capital Project Update

Meeting and Date: Public Works Committee – July 18, 2023

Synopsis: A status update on projects will be given.

Council Action Previously Taken:

Date of Action: _____ Action Taken: _____

Item Number: _____

Type of Vote Required: None

Council Action Requested: Informational

Submitted by: Brad Sanderson (Name) Engineering (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
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Memorandum

To: Bart Olson, City Administrator
From: Brad Sanderson, EEI
CC: Eric Dhuse, Director of Public Works
Krysti Barksdale-Noble, Community Dev. Dir.
Jori Behland, City Clerk

Date: June 30, 2023
Subject: Capital Improvement Projects Update

The purpose of this memo is to update the Public Works Committee as to the status of the several projects. A summary on the status of the projects is provided below:

Construction Projects

Beaver Street BPS Generator
This project is complete.

E. Main Street Improvements
This project is complete.

Bristol Ridge Road LAFO
This project is complete.

Corneils Road Interceptor
This project is complete.

Well No. 7 Rehabilitation
This project is complete.

Baseline Road Improvements
This project is complete.

North Central EWST Rehabilitation
The contractor is planning to re-mobilize in mid-August to complete the work. The project was delayed due to timing of the completion of Well 7.

2023 Water Main Replacement Program – Contract A
The project is approximately 80% complete. The substantial completion date for the project is August 4th.

2023 Water Main Replacement Program – Contract B
The contract was awarded at the June 27th CC meeting. The completion date for the project is November 17th.

2023 RTBR Program
The contractor has begun work. The substantial completion date for the project is August 11th.

Planning/Design Projects

Kennedy / Freedom Place Intersection Improvements
Design engineering is complete. We are working on land acquisition with the City Attorney. The letting for the project has been pushed to the winter. Construction will occur in 2024.

Well 10 and Raw Water Main
Design engineering has commenced. We are anticipating a fall letting for the well and a spring 2024 letting for the raw water main.

2024 Water Main Improvements – Contract A
Design engineering has commenced.

2024 Water Main Improvements – Contract B
Design engineering has commenced.

2023 Sanitary Sewer Lining
Design engineering has commenced. We are anticipating an August/September letting.

Reviewed By:	
Legal	☐
Finance	☐
Engineer	■
City Administrator	☐
Community Development	☐
Purchasing	☐
Police	☐
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

New Business #2

Tracking Number

PW 2023-58

Agenda Item Summary Memo

Title: Bond/LOC Reduction Summary Through June 30, 2023

Meeting and Date: Public Works Committee – July 18, 2023

Synopsis:

Council Action Previously Taken:

Date of Action: _____ Action Taken: _____

Item Number: _____

Type of Vote Required: None

Council Action Requested: Informational

Submitted by: Brad Sanderson (Name) Engineering (Department)

Agenda Item Notes:

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Memorandum

To: Bart Olson, City Administrator
From: Brad Sanderson, EEI
CC: Eric Dhuse, Director of Public Works
Krysti Barksdale-Noble, Community Dev. Dir.
Jori Behland, City Clerk

Date: June 30, 2023
Subject: 2023 Bond/LOC Reduction Summary

Please see the attached reduction summary through June 30, 2023. If you have any questions, please let me know.

30-Jun-23

2023 Bond and Letter of Credit Reduction Report

Date	Development/Project	Engineer Concurrence	City Administrator Concurrence	Mayor Concurrence	Reduction	Final Release	Reduction Value	Remaining Balance
2/20/2023	Windett Ridge - Unit 2	X	X		X		$ 284,534.28	$ 862,655.46
3/14/2023	Rt 126/Ashley Road	X	X		X		$ 429,138.16	$ 161,733.72
3/14/2023	Ashley Road	X	X		X		$ 120,766.48	$ 48,401.17
5/30/2023	Grande Reserve - Unit 13	X	X			X	$ 87,600.00	$ -
5/30/2023	Grande Reserve - Unit 14	X	X			X	$ 125,600.00	$ -
5/30/2023	Grande Reserve - Unit 23	X	X			X	$ 520,410.95	$ -
5/30/2023	Heartland Meadows	X	X		X		$ 121,666.60	$ 133,399.30
6/12/2023	Timber Ridge Estates	X	X		X		$ 223,317.15	$ 2,002,181.85

Reviewed By:	
Legal	☐
Finance	☐
Engineer	■
City Administrator	☐
Community Development	☐
Purchasing	☐
Police	☐
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

New Business #3

Tracking Number

PW 2023-59

Agenda Item Summary Memo

Title: BrightFarms – Proposed Well Modification

Meeting and Date: Public Works Committee – July 18, 2023

Synopsis: Review of Findings

Council Action Previously Taken:

Date of Action: _____ Action Taken: _____

Item Number: _____

Type of Vote Required: Majority

Council Action Requested: Approval

Submitted by: Brad Sanderson (Name) Engineering (Department)

Agenda Item Notes:

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Memorandum

To: Bart Olson, City Administrator
From: Brad Sanderson, EEI
CC: Eric Dhuse, Director of Public Works
Jori Behland, City Clerk
Krysti Barksdale Noble, Community Development Director

Date: June 22, 2023
Subject: BrightFarms – Proposed Well Modification

Overview

BrightFarms received approval from the City Council on April 26, 2022 to construct a well to serve its development. EEI had reviewed materials provided by BrightFarms and concluded that it would not have any significant affect on any City Wells [attachment 1]. BrightFarms also satisfied our requests to investigate the possible well interference with local adjacent private wells [attachment 2].

Recently, BrightFarms has requested to modify its proposal [attachment 3]. The new request consists of relocating the proposed well to a location closer to the current building footprint. The old well will be capped in accordance with health department requirements.

The new well is proposed to have the same specifications (640 feet deep; 200 GPM) as the originally well.

Analysis

BrightFarms commissioned Resource Consulting, Inc. to update its survey of local wells and the results confirmed no additional impact to private wells [attachment 3].

EEI has concluded that the proposed relocation will not change our findings.

Recommendations

We recommend that the proposed relocation be approved by the City.

If you have any questions or require additional information, please let us know.

Memorandum

To: Bart Olson, City Administrator
From: Brad Sanderson, EEI
CC: Eric Dhuse, Director of Public Works
Jori Behland, City Clerk
Krysti Barksdale Noble, Community Development Director

Date: April 21, 2022
Subject: Bright Farms – Review of Impact of Proposed Well

Overview

We have reviewed the information provided by BrightFarms and Resource Consulting, Inc. concerning the potential impact of a new groundwater well (see attached well cross section and construction details) located on the BrightFarms site near the northeast corner of Eldamain Road and Corneils Road. This information was provided in a series of emails between March 22nd and April 6th.

Based on the information provided and detailed analysis conducted by EEI staff, we have concluded the following:

- We do not believe that the City's wells will be adversely affected by the proposed well. Only one City well (#4) is open to this formation and there is sufficient distance between them as to not have interference.
- We are concerned that this well will have adverse effects on neighboring individual wells within the Ancell formation, potentially within a mile of the proposed well. Our concerns are further detailed below.
- We have reviewed the long-term sustainability of the well against the study conducted by the Illinois State Water Survey in 2013. Based on our analysis of the study, we have concluded that the proposed well will not have a significant impact on the sustainability of the Ancell sandstone aquifer (see attached EEI Memo).

Analysis

EEI used the raw data provided by the consultant to complete our own independent analysis.

The water level data collected from the pumping test of the BrightFarms well can be used to estimate transmissivity of the water bearing formations using an empirical method documented by Driscoll (1986). The 24-hour pumping test conducted by BrightFarms resulted in 151 feet of drawdown at the pumping rate of 200 gallons per minute. Thus, the specific capacity (pumping rate divided by drawdown) of the well is 1.32 gallon per minute (gpm) / foot of drawdown. The method developed by Driscoll estimates transmissivity by multiplying the specific capacity in gpm / foot by 2000. Applying this method results in an estimate of transmissivity of 2,640 gallons per day / foot, which converts to 353 $feet^2$/day. Given that the sandstone in the BrightFarms well was encountered between 518 and 640 feet bgs, the aquifer thickness is taken as 122 feet. Dividing transmissivity by aquifer thickness yields hydraulic conductivity of 2.9 feet / day. This value for hydraulic conductivity is consistent with published studies for the region (Roadcap, 2013). A storativity value of 0.0001 is assumed based on specific storage values presented in Meyer, 2009.

The estimated hydraulic parameters described above were used to estimate the drawdown created by the BrightFarms well. The estimates are based on continuous pumping of the well at 200 gallons per minute

using the solution developed by Theis (1935). The table below summarizes the results of the analysis, showing the drawdown (in feet) as a function of time (days of continuous pumping) and distance from the well (feet).

		Distance from Pumping Well (feet)		
		5,000	**10,000**	**15,000**
Days of Continuous Pumping	**30**	19	10	4
	365	40	31	22
	1,825 (5 yrs.)	55	43	36
	3,650 (10 yrs.)	60	49	42

Based on the analysis presented above, it is reasonable to expect that the BrightFarms well will create 40 to 60 feet of additional drawdown in farm wells located within 15,000 feet of the BrightFarms well over the long-term. The additional drawdown may not affect the operation of individual wells around the BrightFarms well, depending on the pump setting of the well in question. However, if an individual well is operated in a manner that currently lowers the water level in the well to less than 40 feet above the pump intake, the BrightFarms well may impact the operation of the well. In that case, the pump in the affected individual well may need to be lowered for the well to be operated as it was prior to the pumping of the BrightFarms well.

Recommendations

It is our recommendation that BrightFarms conduct a detailed survey of the pump setting and operational characteristics of the individual wells within a mile of the proposed well. We would also recommend that the pumps be lowered in any wells that are operating with less than 40 feet of water above the pump. Based on our review of public records, there potentials are three to four individual wells within the suggested area. The cost to lower these wells is not expected to be exorbitant.

References

Driscoll, F.G., 1986. Groundwater and Wells (2nd ed.), Johnson Filtration Systems, Inc., St. Paul, Minnesota, 1089p.

Roadcap, G. C., Meyer, S., Kelly, W. R., Wehrmann, H. A., & Lin, Y-F. (2013). Groundwater Studies for Water Supply Planning in Kendall County, IL. (ISWS Contract Report 2013-05; No. CR-2013-05).

Meyer, Scott & Roadcap, George & Lin, Yu-Feng & Walker, Douglas. (2009). Kane County Water Resources Investigations: Simulation of Groundwater Flow in Kane County and Northeastern Illinois.

Theis, C.V., 1935. The relation between the lowering of the piezometric surface and the rate and duration of discharge of a well using groundwater storage, Am. Geophys. Union Trans., vol. 16, pp. 519-524.

If you have any questions or require additional information, please let us know.

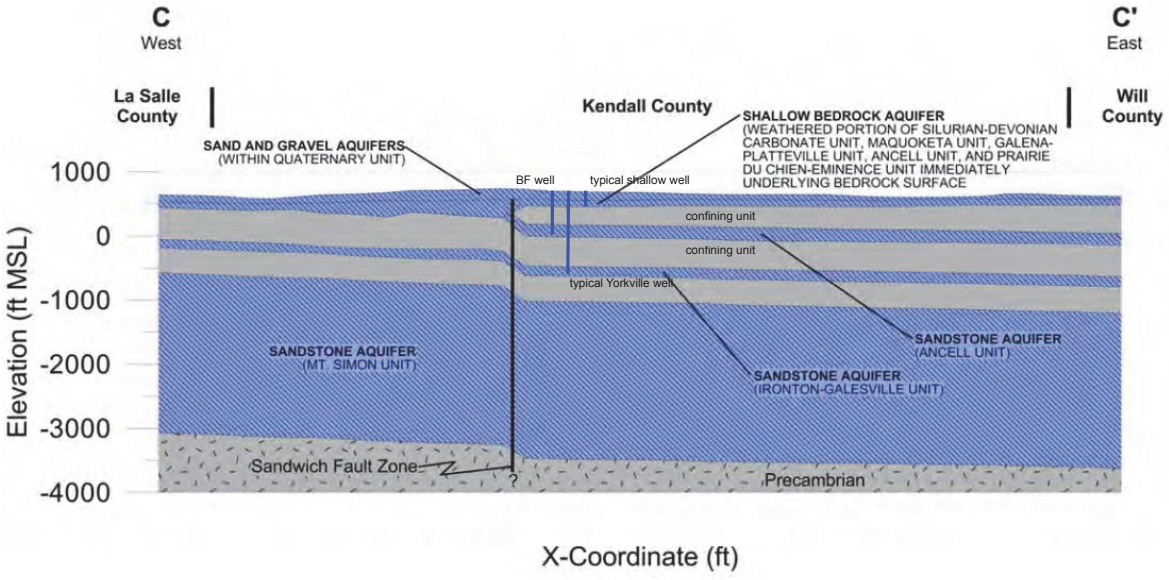
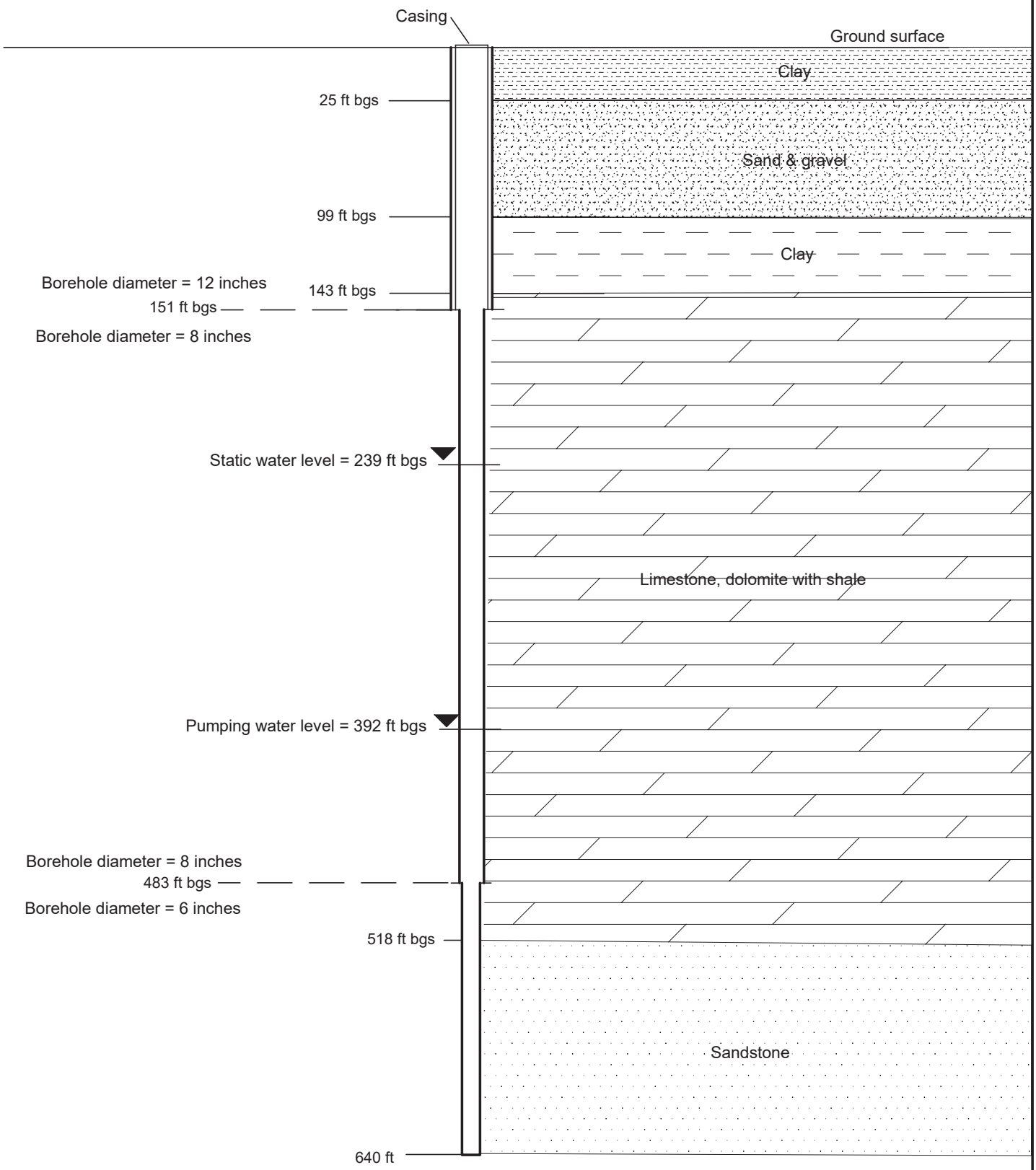


Figure 6. Detail from cross section C-C' (Figure 5) showing aquifers in Kendall County



WELL CONSTRUCTION

Subject Property
Northeast Corner of Corneils Road & Eldamain Road
Yorkville, Illinois

21-1032 01 01	3/30/22	DjH

RESOURCE

Engineering Enterprises, Inc.

Memo

To: Brad Sanderson, Chief Operating Officer / President

From: Tim Holdeman, Sr. Project Manager

Date: April 21, 2022

Re: Sustainability and the BrightFarms Proposed Water Supply Well

EEI Job #: YO2116-DR

Questions have been raised regarding the impact of the BrightFarms proposed water supply well on the sustainability of the Ancell Sandstone Aquifer. The following analysis is offered to address these questions. The primary conclusion of the analysis is that the water supply well proposed by Bright Farms will not have a significant impact on the sustainability of the Ancell Sandstone Aquifer.

The Illinois State Water Survey (ISWS) addresses the sustainability of the deep sandstone aquifers in Kendall County in Roadcap, 2013. The study uses a calibrated groundwater flow model to simulate groundwater conditions under various future groundwater pumping conditions to "gain insights on the hydraulic behavior of the aquifer system and the sustainability of increasing groundwater demands".

A key criterion for evaluating sustainability of the deep sandstone aquifers in Kendall County is the head in the Ancell sandstone. Specifically, sustainability is exceeded where groundwater withdrawals cause the head in the Ancell sandstone to drop below the top of the aquifer. This criterion is used to evaluate the impact of the BrightFarms well on sustainability of the aquifers.

The figure to the right is Figure 75 from Roadcap, 2013. The location of the BrightFarms well has been added to the figure. It shows the estimated available head (in feet) above the top of the Ancell Sandstone in 2005 based on the groundwater flow model. At the BrightFarms Well, the estimated available head above the top of the Ancell Sandstone is approximately 180 feet.

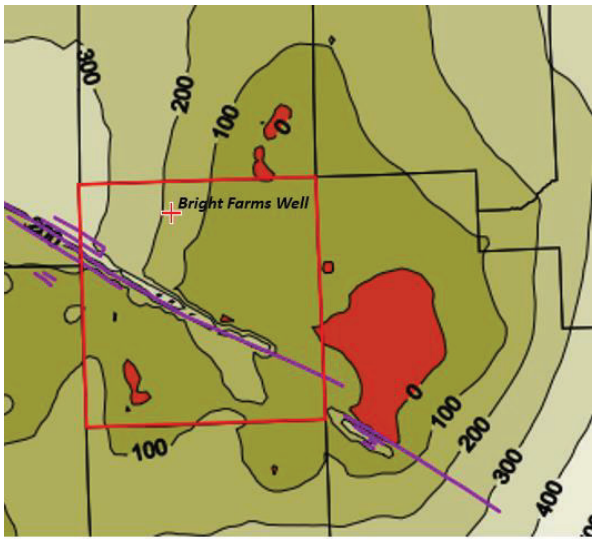
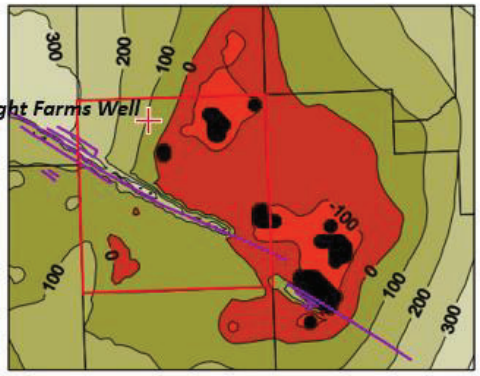


Figure 75. Available head (ft) above the top of the Ancell sandstone in 2005

52 Wheeler Road, Sugar Grove, IL 60554 ~ (630) 466-6700 tel ~ (630) 466-6701 fax ~ www.eeiweb.com

Results of drilling the BrightFarms Well indicate a static head of 239 feet below ground surface (bgs). The top of the Ancell sandstone is 518 feet bgs in the well. Thus, the available head above the top of the Ancell Sandstone prior to pumping is 279 feet (518 minus 239). This is nearly 100 feet greater than predicted by the groundwater model. The discrepancy between the predicted and actual available head above the top of the Ancell Sandstone suggests that the groundwater flow model results are conservative (i.e. predicts less available head above the top of the Ancell Sandstone) at the location of the BrightFarms Well.

The figures below are Figures 92-95 from Roadcap, 2013. They show the available head above the top of the Ancell Sandstone in 2050 as predicted using the calibrated groundwater flow model under four different groundwater withdrawal scenarios.



igure 92. Predicted available head (ft) above the top of the Ancell sandstone in 2050 for the Baseline scenario. Black areas indicate dewatering

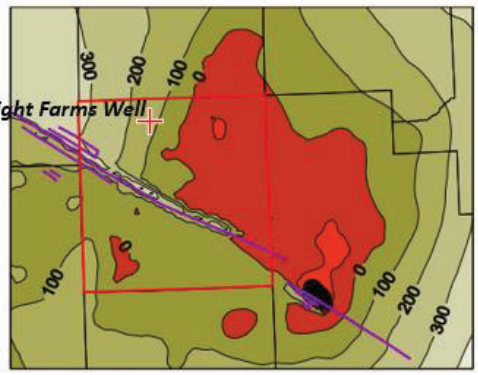


Figure 93. Predicted available head (ft) above the top of the Ancell sandstone in 2050 for the Least Resource Intensive scenario. Black areas indicate dewatering

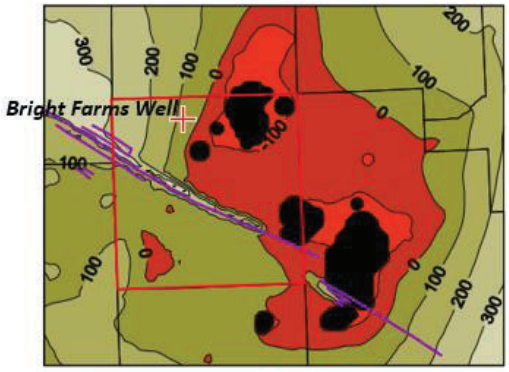


Figure 94. Predicted available head (ft) above the top of the Ancell sandstone in 2050 for the Most Resource Intensive scenario. Black areas indicate dewatering

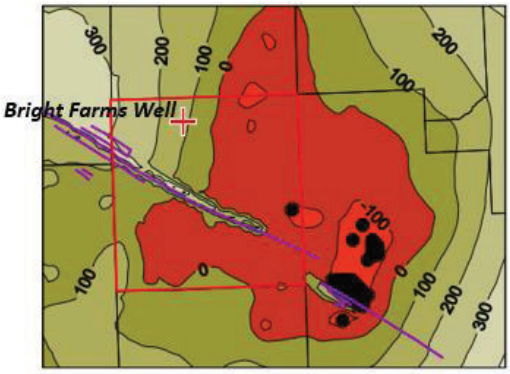


Figure 95. Predicted available head (ft) above the top of the Ancell sandstone in 2050 for the Modified Baseline scenario. Black areas indicate dewatering

The estimated available head above the top of the Ancell Sandstone at the BrightFarms Well (without the well pumping) in 2050 under each scenario is shown in the table below. In addition, the table shows the difference in available head (in feet) above the top of the Ancell Sandstone at the BrightFarms Well (without the well pumping) from 2005 (180 feet) to 2050.

Scenario	Figure	Estimated available head (in feet) above the top of the Ancell Sandstone at the BrightFarms Well (without the well pumping) in 2050	Difference in available head (in feet) above the top of the Ancell Sandstone at the BrightFarms Well (without the well pumping) from 2005 to 2050
Baseline	92	100	-80
Least Resource Intense	93	120	-60
Most Resource Intense	94	90	-90
Modified Baseline	95	110	-70

Several communities in Kendall County will be ceasing their use of the deep aquifer as the primary source of their water supply. Thus, it is reasonable to assume the Least Resource Intense scenario for predicting future head, which is a drop of 60 feet at the Bright Farms Well.

The pumping level in the BrightFarms Well after 24 hours of pumping at 200 gallons per minute was 392 feet bgs. This leaves 126 feet of available hear above the Ancell Sandstone (518 minus 392). If the head drops by 60 feet as predicted in the Least Resource Intense scenario, that still leaves 66 feet of head above the top of the Ancell Sandstone. It is recognized that long-term pumping at the BrightFarms Well will likely reduce the head below 392 feet. However, it is not likely to be greater than 66 feet using the solution developed by Theis (1935). Thus, the BrightFarms Well under expected future conditions will not likely create the unsustainable condition of reducing the available head to below the top of the Ancell Sandstone.

Reference

Roadcap, G. C., Meyer, S., Kelly, W. R., Wehrmann, H. A., & Lin, Y-F. (2013). Groundwater Studies for Water Supply Planning in Kendall County, IL. (ISWS Contract Report 2013-05; No. CR-2013-05).

Theis, C.V., 1935. The relation between the lowering of the piezometric surface and the rate and duration of discharge of a well using groundwater storage, Am. Geophys. Union Trans., vol. 16, pp. 519-524.

Attachment 2

January 30, 2023

Ms. Krysti Barksdale-Noble
Community Development Director
United City of Yorkville
800 Game Farm Road
Yorkville, IL 60560

Re: BrightFarms IL Greenhouse
Engineering Plan Review – Status Update
United City of Yorkville

Dear Krysti:

We have been reviewing several items as it relates to the above referenced project. At this point, the following items remain outstanding from an engineering perspective.

General Comments

1. Once all comments are addressed, an updated estimate should be provided for all site improvements. This will be used to calculate the building permit fees. **This is required prior to recommending a full building permit.**

2. Right-of-way and easement dedication documents have been submitted and found to be acceptable. Original documents should be executed and provided to the City for recording purposes. **Final recording of the documents will be required prior to granting occupancy.**

3. Final well design and the permit from the Kendall County Health Department shall be provided. **This is required prior to recommending a full building permit.**

4. We have received and reviewed the report from Resource Consulting, Inc. provided on January 23, 2023 and agree that no further action is required at this time with neighboring wells. BrightFarms has completed their due diligence concerning the impact of there well on existing wells. Based on the current information there is no indication that the BrightFarms well will cause harm to the known surrounding wells.

5. It is our understanding that the site improvements are to be phased. A detailed phasing plan needs to be submitted for review. **This is required prior to recommending a full building permit.**

Site Plan Comments

6. The plans shall be submitted to the Yorkville–Bristol Sanitary District (YBSD) for review. Their comments shall be provided to the City upon receipt. **This is required prior to recommending a full building permit.**

7. An IEPA Sanitary permit may be required for this project and the City potentially will need to sign off as well as YBSD. **This is required prior to recommending a full building permit.**

8. The minimum size for a sanitary service is 6". The final design of the sewer needs to be provided. **This is required prior to recommending a full building permit.**

Corneils Road Improvement Comments

9. The improvement plans for the intersection of Eldamain and Corneils and Corneils Road need to be provided. **Note that the plans need to be approved and the following needs to be constructed prior to granting final occupancy:**

    - **Intersection Improvements**
    - **Corneils Road Improvements up to site entrance at a minimum**

10. An updated Corneils Road Estimate should be provided to confirm the performance guarantee amount. **This is required prior to recommending a full building permit.**

The Engineering Plans and other supporting documents should be revised and resubmitted for further review. If you have any questions or require additional information, please contact our office.

Respectfully Submitted,

ENGINEERING ENTERPRISES, INC.

Bradley P. Sanderson, P.E.
Chief Operating Officer / President

BPS/pgw2

pc: Mr. Bart Olson, City Administrator (via email)
Ms. Erin Willrett, Assistant City Administrator (via email)
Mr. Jason Engberg, Senior Planner (via email)
Mr. Eric Dhuse, Director of Public Works (via email)
Mr. Pete Ratos, Building Department (via email)
Ms. Dee Weinert, Admin Assistant (via email)
Ms. Jori Behland, City Clerk (via email)
Mr. Cyrus McMains, YBSD (via email)
Mr. Ryan Leimbach, BrightFarms (via email)
Mr. Nick Long, Livicco (via email)
TNP, PGW2, TAW, EEI (Via e-mail)

RESOURCE CONSULTING, INC.
115 Campbell Street/Suite 108 P.O. Box 123 Geneva, Illinois 60134 Phone: (630)232-9820

January 19, 2023

Mr. Ryan Leimbach
BrightFarms, Inc.
50 South Buckhout Street, Suite 202
Irvington, New York 10533

RE: Summary of Identification and Evaluation of Neighboring Well Properties
BrightFarms, Inc.
Eldamain Road & Corneils Road
Yorkville, Illinois

Dear Mr. Leimbach:

As requested in the April 7, 2022, memo from the United City of Yorkville, Resource Consulting, Inc. completed the status survey of the wells within a one-mile radius of the BrightFarms well location. The work plan followed the guidance presented to BrightFarms in a memo from the United City of Yorkville to BrightFarms included with this correspondence as Attachment A.

Summary of Results of Work Plan

Resource Consulting staff reviewed the well records available for the region within a one-mile radius of the BrightFarms well. If wells were found that could be acquiring water from the same upper sandstone aquifer, the well completion methods – pump setting, operational characteristics – of the well would be determined. During the aquifer assessment phase of the project, it was estimated that 3 to 4 wells might fit the parameters requiring further evaluation in the field.

The research confirmed the presence of 3 potential wells to assess:

- A well owned by Ms. Lori Poss located approximately 1 mile east of the BrightFarms well.
- 2 wells operated by Menards at its facility approximately 1 mile southwest of the BrightFarms well.

The locations of these wells and the others investigated for this survey are shown in the information presented in Attachment B.

Details of the efforts to correspond with the well owners are included in Attachment C. The information includes confirmation that all of the other potential wells identified through well records research and outreach to owners are not completed in the same formation/aquifer.

Well Owner Contact

We discussed the situation with Ms. Poss, the well owner east of Beecher Road, approximately 1 mile east of the BrightFarms well. Ms. Poss agreed to allow the well to be inspected concurrently with any others found during the project. Since that conversation, multiple attempts to reconnect with Ms. Poss were unsuccessful.

In a conversation with Mr. Mike Isola, the Maintenance Manager at Menards, Mr. Isola indicated that he would have the appropriate internal party respond to an email that I would send him. Since that conversation, multiple attempts to contact anyone at Menards were unsuccessful.

Evaluation of Well Records Information

The available records for the 3 identified wells included the following information. These records are included with this correspondence as Attachment D.

The deeper Menards well record indicates the following:

- The well is completed in the same sandstone unit as the BrightFarms well at a depth of 506' to 700'.
- The static water level at the time of well constructions was 175' below the top of the casing.
- The water level after pumping the well at 65 gpm for 2 hours was 280 feet.
- The permanent pump was installed at a depth of 399 feet.

This results in a distance of 119 feet between the pump and the water level at a pumping rate of 65 gpm.

The other well at Menards and the Poss well are reported to be finished at depths of 518 and 520 feet, respectively. This is the approximate depth of the contact between the shallow limestone/dolomite aquifer and the upper sandstone aquifer that the BrightFarms well uses. Since these wells are not finished in the upper sandstone, the BrightFarms well use may not affect them to the degree estimated by the modeling.

Conclusions

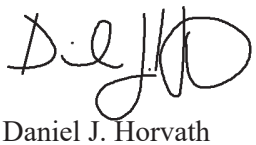
The well status survey completed by Resource Consulting, Inc. confirmed the presence of 3 supply wells that met the guidelines established by the United City of Yorkville for requiring further evaluation. The further review of available well information indicated that 2 of the wells are not completed in the same aquifer, and the third appears to have its pump set at a reasonable depth. Multiple attempts at

correspondence with the well owners that clearly identified the goal of the survey resulted in them discontinuing contact with Resource Consulting.

All of the information presented above is accurate at the time of this writing. New or additional relevant information or project developments may arise that could amend these findings.

Please contact our office with any questions or comments regarding the contents of this correspondence.

Regards,



Daniel J. Horvath
Hydrogeologist/Project Manager

Attachments: A – United City of Yorkville Memo
B – Project Locations
C – Outreach Summary
D – Well Records

Attachment A

United City of Yorkville Memo

Memorandum

To: Bart Olson, City Administrator
From: Brad Sanderson, EEI
CC: Eric Dhuse, Director of Public Works
Jori Behland, City Clerk
Krysti Barksdale Noble, Community Development Director

Date: April 7, 2022
Subject: Bright Farms – Review of Impact of Proposed Well

Overview

We have reviewed the information provided by BrightFarms and Resource Consulting, Inc. concerning the potential impact of a new groundwater well located on the BrightFarms site near the northeast corner of Eldamain Road and Corneils Road. This information was provided in a series of emails between March 22nd and April 6th.

Based on the information provided and detailed analysis conducted by EEI staff, we have concluded the following:

- We do not believe that the City's wells will be adversely affected by the proposed well. Only one City well (#4) is open to this formation and there is sufficient distance between them.
- We are concerned that this well will have adverse effects on neighboring individual wells, potentially within a mile of the proposed well. Our concerns are further detailed below.

Analysis

EEI used the raw data provided by the consultant to complete our own independent analysis.

The water level data collected from the pumping test of the BrightFarms well can be used to estimate transmissivity of the water bearing formations using an empirical method documented by Driscoll (1986). The 24-hour pumping test conducted by BrightFarms resulted in 151 feet of drawdown at the pumping rate of 200 gallons per minute. Thus, the specific capacity (pumping rate divided by drawdown) of the well is 1.32 gallon per minute (gpm) / foot of drawdown. The method developed by Driscoll estimates transmissivity by multiplying the specific capacity in gpm / foot by 2000. Applying this method results in an estimate of transmissivity of 2,640 gallons per day / foot, which converts to 353 $feet^2$/day. Given that the sandstone in the BrightFarms well was encountered between 518 and 640 feet bgs, the aquifer thickness is taken as 122 feet. Dividing transmissivity by aquifer thickness yields hydraulic conductivity of 2.9 feet / day. This value for hydraulic conductivity is consistent with published studies for the region (Roadcap, 2013). A storativity value of 0.0001 is assumed based on specific storage values presented in Meyer, 2009.

The estimated hydraulic parameters described above were used to estimate the drawdown created by the BrightFarms well. The estimates are based on continuous pumping of the well at 200 gallons per minute using the solution developed by Theis (1935). The table below summarizes the results of the analysis, showing the drawdown (in feet) as a function of time (days of continuous pumping) and distance from the well (feet).

		Distance from Pumping Well (feet)		
		5,000	**10,000**	**15,000**
Days of Continuous Pumping	**30**	19	10	4
	365	40	31	22
	1,825 (5 yrs.)	55	43	36
	3,650 (10 yrs.)	60	49	42

Based on the analysis presented above, it is reasonable to expect that the BrightFarms well will create 40 to 60 feet of additional drawdown in farm wells located within 15,000 feet of the BrightFarms well over the long-term. The additional drawdown may not affect the operation of individual wells around the BrightFarms well, depending on the pump setting of the well in question. However, if an individual well is operated in a manner that currently lowers the water level in the well to less than 40 feet above the pump intake, the BrightFarms well may impact the operation of the well. In that case, the pump in the affected individual well may need to be lowered for the well to be operated as it was prior to the pumping of the BrightFarms well.

Recommendations

It is our recommendation that BrightFarms conduct a detailed survey of the pump setting and operational characteristics of the individual wells within a mile of the proposed well. We would also recommend that the pumps be lowered in any wells that are operating with less than 40 feet of water above the pump. Based on our review of public records, there potentials are three to four individual wells within the suggested area. The cost to lower these wells is not expected to be exorbitant.

References

Driscoll, F.G., 1986. Groundwater and Wells (2nd ed.), Johnson Filtration Systems, Inc., St. Paul, Minnesota, 1089p.

Roadcap, G. C., Meyer, S., Kelly, W. R., Wehrmann, H. A., & Lin, Y-F. (2013). Groundwater Studies for Water Supply Planning in Kendall County, IL. (ISWS Contract Report 2013-05; No. CR-2013-05).

Meyer, Scott & Roadcap, George & Lin, Yu-Feng & Walker, Douglas. (2009). Kane County Water Resources Investigations: Simulation of Groundwater Flow in Kane County and Northeastern Illinois.

Theis, C.V., 1935. The relation between the lowering of the piezometric surface and the rate and duration of discharge of a well using groundwater storage, Am. Geophys. Union Trans., vol. 16, pp. 519-524.

If you have any questions or require additional information, please let us know.

Attachment B

Project Locations

Wells meeting location and potential depth parameters:

540’ depth – SE of Site

According to this well record, it was drilled in 1988, and its location would be in the fallow land southeast of a Commonwealth Edison substation. During a windshield survey, a ComEd employee present at the site confirmed that no water supply is present at the substation.

Resource was able to contact the landowner to the southeast of the substation. Mr. ----- indicated that his well was shallow,…

520’ depth – SSW of Site

The first Menard’s well is not completed in the sandstone aquifer. It was installed in 1996, and its pump is set at approximately 168 feet below the surface.

700’ depth – SSE of Site

The second Menard’s well was drilled in 2017. Its pump is set at a depth of approximately 399 feet.

518’ depth – ESE of Site

This is the well at the residence of Ms. Lori Poss. It is not completed in the sandstone aquifer. It was installed in 1974; no pump or water level information is available.

Attachment C

Outreach Summary

Correspondence Log

Windshield survey conducted by Resource staff on July 5, 2022. The status of the potential well to the southeast was determined through a conversation with ComEd staff at the substation, observation of the adjacent vacant land, and the determination of other possible locations of the well at nearby residences. One was identified – Mr. Robert Johnston on Beecher Road.

Letters (example included here) were sent via certified mail on July 14, 2022, to each of the potential locations of the wells meeting the minimum distance and depth parameters.

Phone calls were made to these owners as follows:

08-16-2022

Charles Robert Bennett ("Bob"?) - 630-624-4668
10907 Corneils Road
Mr. Bennett indicated his well was 25 feet in depth. No further contact was deemed necessary.

Lori Poss - 630-715-9802
10927 Corneils Road
Ms. Poss thought her pump was set at 350 feet – she would be contacted again to schedule an inspection.

08-23-2022

No response from Lori Poss to voicemail over the next 3 weeks
Well driller for Mr. Johnston called – Mr. Johnston gave him my info
Danny @ HD Well & Pump - called, emailed info, called back
Johnston well is not more than 50 feet depth.

09-28-2022

-Call to Mike Isola - left message
Call to Lori Poss - left message

No contact or response since initial conversations noted above.

Attachment D

Well Records

ILLINOIS STATE GEOLOGICAL SURVEY

Water Well for Commercial Operation	Top	Bottom
clay	0	20
sand & gravel	20	60
clay	60	105
hard gray shale w/ streaks of gray lime	105	150
brown limestone (Galena)	150	490
sandstone (St. Pete)	490	700
Total Depth		**700**

Casing: 10" A53 BLACK STEEL from -5' to 115'
6" A53 BLACK STEEL from -1' to 506'

Grout: BENTONITE from 0 to 115.

Grout: CLASS A NEAT CEMENT from 0 to 506.

Water from sandstone at 506' to 700'.
Static level 175' below casing top which is 2' above GL
Pumping level 280' when pumping at 65 gpm for 2 hours

Permanent pump installed at 399'
on October 30, 2017, with a capacity of 65 gpm

Remarks: Driller's Estimated Well Yield 150+ gpm

Owner Address: 5101 Menard Dr. Eau Claire, WI

Address of well: 2611 Eldamain Rd.
Plano, IL

Location source: Global Positioning System verified

Permit Date: October 6, 2017 **Permit #:** 093-124

COMPANY Knierim, Ken/K & K Well Drlg.

FARM Menards, Inc.

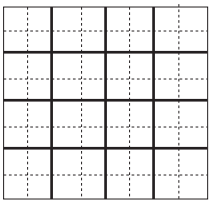
DATE DRILLED October 23, 2017 **NO.**

ELEVATION 651GL **COUNTY NO.** 25609

LOCATION NW NW SE

LATITUDE 41.666816 **LONGITUDE** -88.500055

COUNTY Kendall **API 120932560900** **13 - 37N - 6E**



ILLINOIS STATE GEOLOGICAL SURVEY

Non Potable Water Well	Top	Bottom
clay	0	15
sand	15	80
gravel	80	120
sand	120	150
limestone	150	520
Total Depth		**520**

Casing: 8" PVC SDH 40 #200 from -2' to 153'

Grout: BENTONITE from 0 to 153.

Size hole below casing: 7.75"

Water from limestone at 153' to 520'.
Static level 112' below casing top which is 2' above GL
Pumping level 140' when pumping at 150 gpm for 4 hours

Permanent pump installed at 168'
on July 12, 1996, with a capacity of 150 gpm

Remarks: concrete batch plant

Owner Address: 13769 Main Street Lemont, IL

Address of well: Eldamain Rd.

Location source: Location from permit

Permit Date: June 19, 1996 **Permit #:**

COMPANY Sharpe, Franklin N.

FARM K-Five Construction

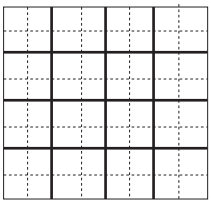
DATE DRILLED June 28, 1996 **NO.**

ELEVATION 0 **COUNTY NO.** 23166

LOCATION SE NW SE

LATITUDE 41.679896 **LONGITUDE** -88.494669

COUNTY Kendall **API 120932316600** **13 - 37N - 6E**



ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
Total Depth		518
Driller's Log filed		

Permit Date: **Permit #:**

COMPANY Neeley, Harry C.

FARM Krewde Wic Ern

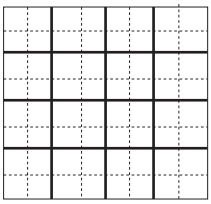
DATE DRILLED October 1, 1974 **NO.** 2

ELEVATION 590GL **COUNTY NO.** 21229

LOCATION SE SE SE

LATITUDE 41.691537 **LONGITUDE** -88.469106

COUNTY **Kendall** **API** **120932122900** **7 - 37N - 7E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
top soil	0	2
sand gravel	2	15
shale	15	150
rock	150	496
sandstone	496	540
Total Depth		**540**

Casing: 5" STEEL from 0' to 42'

Grout: CUTTINGS from 0 to 0.

Size hole below casing: 5"

Water from sandstone at 150' to 540'.
Static level 150' below casing top which is 1' above GL
Pumping level 441' when pumping at 0 gpm for 0 hours

Permanent pump installed at 441'

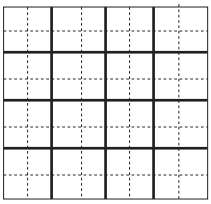
Remarks: owner to take sample

Owner Address: 5117 R.R.#34 P.O. Box #524 Oswego, IL
Add'l loc. info: Lot: #4 Subdivision: Pritcherts

Location source: Location from permit

Permit Date: June 16, 1988 **Permit #:** 002784

COMPANY Knierim, Phil
FARM Whitehurst, Walter
DATE DRILLED June 15, 1988 **NO.**
ELEVATION 0 **COUNTY NO.** 22312
LOCATION NW NW SE
LATITUDE 41.682209 **LONGITUDE** -88.476881
COUNTY Kendall **API 120932231200** **18 - 37N - 7E**



Attachment 3

Brad Sanderson
COO and President
Engineering Enterprises, Inc
52 Wheeler Rd.
Sugar Grove, IL 60554

June 13, 2023

To Brad Sanderson,

Due to changes in project scope and cost, BrightFarms has determined that the location of the temporary well drilled in early 2022 is inadequate for our new construction.

BrightFarms is proposing to cap the existing well and drill a new well closer to our current building footprint. By capping the existing well, BrightFarms intends not to utilize it in any capacity until future project phases are progressed. If BrightFarms deems it necessary to use this well, notice will be given to the City of Yorkville to begin a similar review process as previously established. Currently we do not anticipate needing this well until Phase 4 of construction.

The new proposed well will be approximately 1,500 ft to the south and east of the existing well. The new well will follow the same city guidelines and requirements as previously determined. It will be drilled down to approximately 640 ft below grade surface into the sandstone formation.

As a first step in this process, BrightFarms initiated Resource Consulting, Inc. to revise the well survey originally provided in January 2023. A survey of any new wells within the shifted 1-mile radius influence zone specified by the City of Yorkville was completed. No additional wells were found to be impacted. The June 2023 revised report is attached to this memo.

For next steps, BrightFarms anticipates attending the next applicable city council meeting to review the proposed well relocation and answer any questions.

Sincerely,
Ryan Leimbach
Project Manager
BrightFarms, Inc.

RESOURCE CONSULTING, INC.
115 Campbell Street/Suite 108 P.O. Box 123 Geneva, Illinois 60134 Phone: (630)232-9820

June 1, 2023

Mr. Ryan Leimbach
BrightFarms, Inc.
50 South Buckhout Street, Suite 202
Irvington, New York 10533

RE: Update to Regional Well Survey
BrightFarms, Inc.
1555 West Corneils Road
Yorkville, Illinois

Dear Mr. Leimbach:

As requested, Resource Consulting, Inc. has prepared this summary of the status survey of the wells within a one-mile radius of the proposed new well location for the facility. The method of research and evaluation followed the guidance provided by the United City of Yorkville to BrightFarms for the current well location. The results of that survey were provided to BrightFarms and the City in January of this year.

Summary of Process and Results

Using the Illinois State Geological Survey's (ISGS) Illinois Water Well (ILWATER) Interactive Map available at the following link:

https://isgs.illinois.edu/ilwater

As noted at the website, "Well points are displayed by default at the center of the ¼-¼-¼-section as described by the driller." Therefore, to ensure that no poorly located wells are overlooked, a region greater than a one-mile radius was reviewed.

Using the Select tool on the region surrounding the BrightFarms development, Resource Consulting staff obtained the well record information for wells located within the township sections that are within one mile of the Site. This region is shown on the drawing presented in Attachment A entitled, "Water Supply Wells in Region." As shown on the map, this region extends beyond a one-mile radius of the BrightFarms well.

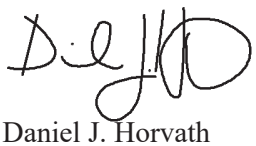
The well information for the highlighted wells on the map is presented in the summary table in Attachment B. The wells have been sorted in order of total depth. The deepest 3 wells – greater than 500 feet in depth - were discussed previously in the January 2023 well survey summary. The remaining wells are less than 500 feet in depth and so are not completed in the Ancell Unit from which the new well will obtain its water.

Conclusions

The well status survey completed by Resource Consulting, Inc. confirmed that no additional water supply wells are present within over 1 mile of the BrightFarms well. All of the information presented above is based on the available information from the ISGS and is accurate at the time of this writing. New or additional relevant information or project developments may arise that could amend these findings.

Please contact our office with any questions or comments regarding the contents of this correspondence.

Regards,



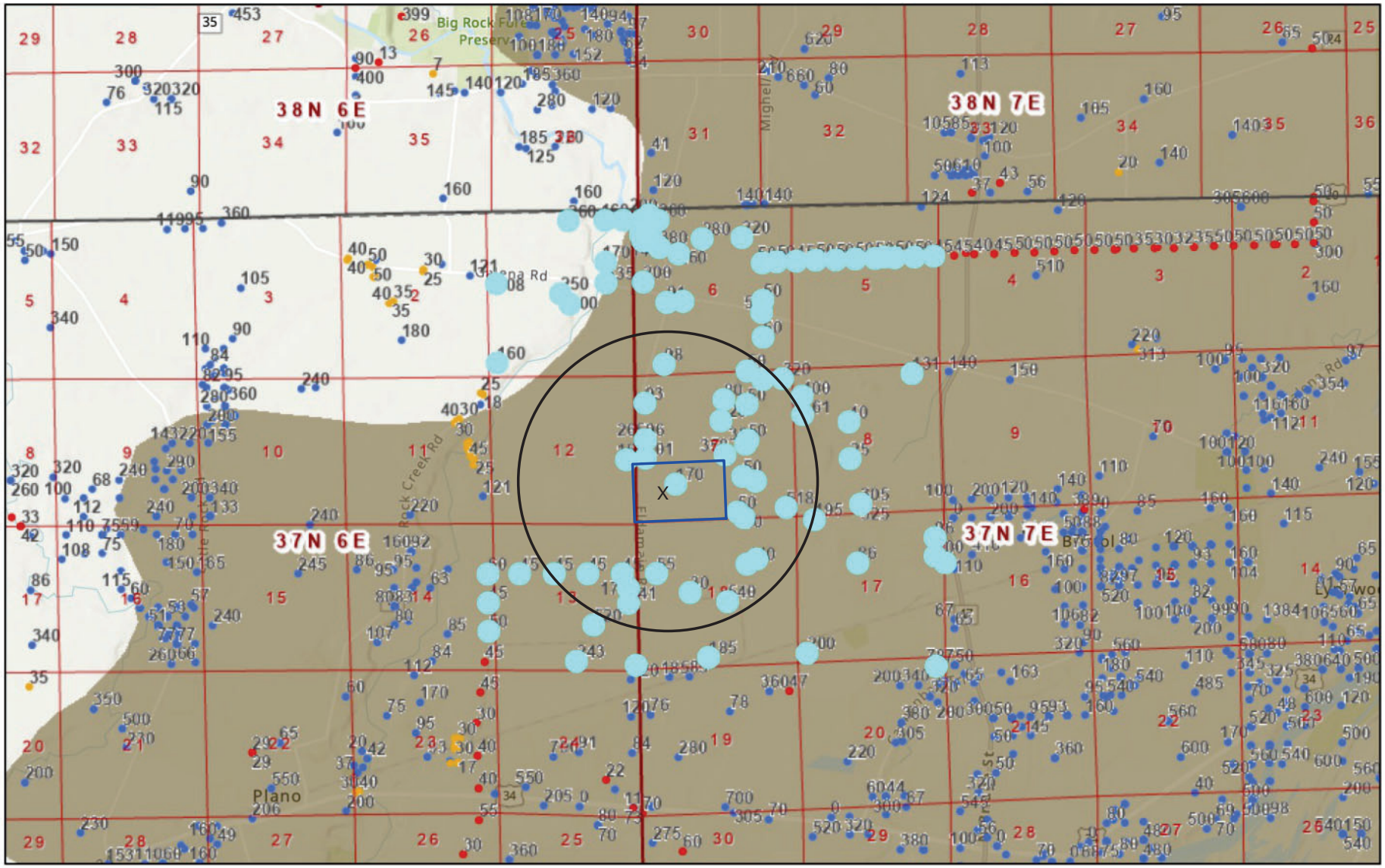
Daniel J. Horvath
Hydrogeologist/Project Manager

Attachments: A – Map - Water Supply Wells in Region
B – Water Well Information Summary Table

Attachment A

Map
Water Supply Wells in Region

Water Supply Wells in Region



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Sections
Townships
Counties

Water and Related Wells
Water
Engineering

Stratigraphic
Labels - Total Depth
Aquifer Present

X Proposed Well Location
Well location/Data in Table 1

1:80,000

0 2,500 5,000 10,000 ft

0 500 1,000 2,000 m

Esri, NASA, NGA, USGS, FEMA, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Illinois State Geological Survey

Illinois State Geological Survey

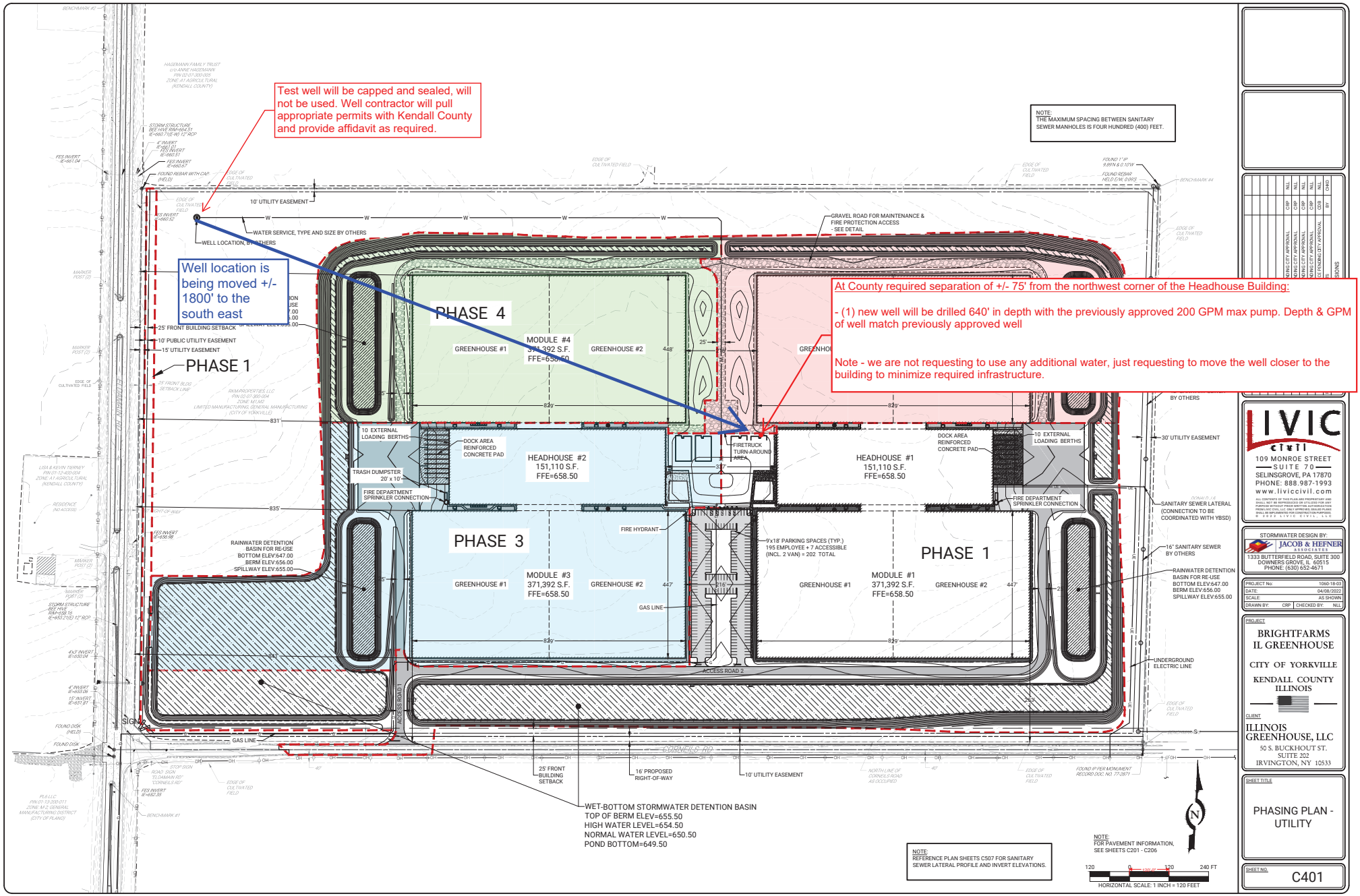
Attachment B

Water Well Information Summary Table

Water Well Information Summary

OBJECTID	Status	Status Description	Latitude	Longitude	Location	Owner	Well Name	Well	Driller	Date Drilled	Elevation (ft)	Elevation Reference	Elev Ref	Total Depth (ft)	Formation	Formation Top	Formation Bottom	Pumping Rate (gpm)
147832	WATER	Water Well	41.682209	-88.476881	18-37N-7E	Whitehurst, Walter			Knierim, Phil	6/15/88	0			540	sandstone	150	540	0
148671	WATER	Water Well	41.679896	-88.494669	13-37N-6E	K-Five Construction			Sharpe, Franklin N.	6/28/96	0			520	limestone	153	520	150
146880	WATER	Water Well	41.691537	-88.469106	7-37N-7E	Krewde Wic Ern	2	2	Neeley, Harry C.	10/1/74	590	GL	Ground level	518				
148835	WATER	Water Well	41.685925	-88.474307	18-37N-7E	Metrou, Pete			Wellendorf, Rodney	12/7/97	0			440	white limestone	260	440	12
147795	WATER	Water Well	41.702571	-88.466997	8-37N-7E	Richards, Terry Construction			Knierim, Phil	2/9/88	0			400	rock	160	400	0
148925	WATER	Water Well	41.711706	-88.497842	1-37N-6E	La Salle Manor	3	3	Neely, Harry C.	1/21/99	675			400	limestone & dolom	60	400	15
151199	WATER	Water Well	41.7173	-88.48595	6-37N-7E	Anderson, Ryan			Knierim, Ken/K & K Well Drlg.	2/4/20				380	limestone	350	380	20
146842	WATER	Water Well	41.696767	-88.477233	7-37N-7E	Pottinger Robert	1	1	Geltz, N. H.	3/1/74	0			358				
146676	WATER	Water Well	41.713795	-88.493047	1-37N-6E	Baumgartner John	3	3	Neeley, Harry C.	5/1/73	675	GL	Ground level	335	limestone	161	335	20
147530	WATER	Water Well	41.691864	-88.459208	8-37N-7E	McArthur, J.B.	1	1	Fykes, Charles N.	5/14/81	0			325	limestone	157	325	12
148351	WATER	Water Well	41.704319	-88.469601	7-37N-7E	Kendall County Concrete			Brown, Darwin	3/25/93	0			320	white lime	60	320	0
150378	WATER	Water Well	41.700133	-88.477783	7-37N-7E	United Septic			Dietzman, Gerald E.	10/16/07	667			320	rock	199	300	30
148518	WATER	Water Well	41.691864	-88.459208	8-37N-7E	McArthur, James			Fykes, Charles N.	2/10/95	0			305	limestone	153	305	0
147398	WATER	Water Well	41.675893	-88.489007	13-37N-6E	Brummel Fred			Neeley, Harry C.	10/1/79	650			300	dolomite	0	0	30
148613	WATER	Water Well	41.686728	-88.449324	17-37N-7E	Butts, Mike			Brown, Darwin	1/3/96	0			300	rock	276	300	0
150282	WATER	Water Well	41.7186	-88.48845	6-37N-7E	Watts, Derrick	1	1	Neely, Mark S.	6/2/06	680			300	shale & limestone	150	300	12
148230	WATER	Water Well	41.718173	-88.480267	6-37N-7E	Corredato, Tom	1	1	Neeley, Harry C.	4/21/92	650	GL	Ground level	280	dolomite	140	280	0
147414	WATER	Water Well	41.69825	-88.487815	7-37N-7E	Poppen Lavern	1	1	Fykes Charles & Pump	10/1/78	0			265				
146816	WATER	Water Well	41.704231	-88.472214	7-37N-7E	Schultz Tom			Knierim Company, Inc.	3/1/74	0			260				
148636	WATER	Water Well	41.720056	-88.488223	6-37N-7E	Joyner, Wade	1	1	Neely, Harry C.	2/29/96	0			260	limestone	200	260	12
149068	WATER	Water Well	41.719939	-88.49803	1-37N-6E	Appel, Brian	1	1	Neely, Mark S.	7/18/00	0			260	limestone	62	260	20
151038	WATER	Water Well	41.716682	-88.483396	6-37N-7E	Augustyniak, Paul & Alice	1	1	Neely, Mark S.	8/20/14	711	GL	Ground level	260	limestone & shale	140	260	15
151062	WATER	Water Well	41.72	-88.486111	6-37N-7E	LoDestro, Peter	1	1	Neely, Mark S.	2/6/16	732	GL	Ground level	260	limestone & shale	148	260	20
151011	WATER	Water Well	41.712729	-88.499075	1-37N-6E	Glavin, Tom			Stinnett, David	6/4/92				250	limestone	90	250	
145838	WATER	Water Well	41.676276	-88.49694	13-37N-6E	Ebrecht H F				1/1/48	651	GL	Ground level	243	lime	154	243	0
146374	WATER	Water Well	41.718288	-88.474993	6-37N-7E	Eaglesham Elaine			Knierim Company, Inc.	5/1/71	0			220				
150723	WATER	Water Well	41.718533	-88.487083	6-37N-7E	Bossong, Mark			Walters, Larry	3/25/11	516			205	rock	320	360	20
147114	WATER	Water Well	41.694155	-88.473182	7-37N-7E	McElroy Wm			Knierim Company, Inc.	10/31/76	0			200				
147186	WATER	Water Well	41.713872	-88.488098	6-37N-7E	Hydronic Supply			Knierim Company, Inc.	10/1/77	0			200				
147535	WATER	Water Well	41.686055	-88.447981	16-37N-7E	Fisher, Dean			Neeley, Harry C.	10/9/83	0			200	limestone	150	200	20
148145	WATER	Water Well	41.677074	-88.466336	17-37N-7E	Wallis, Larry	1	1	Neeley, Harry C.	6/26/91	645	GL	Ground level	200	limestone	139	200	0
150392	WATER	Water Well	41.720533	-88.487317	6-37N-7E	Havlicek Builders			Meadow Equipment	8/2/07				200	limestone	129	200	25
147664	WATER	Water Well	41.690331	-88.465348	17-37N-7E	Bennett, Leonard			Neeley, Harry C.	7/19/86	650	GL	Ground level	195	limestone	151	195	32
147195	WATER	Water Well	41.67667	-88.479402	18-37N-7E	Comm Edison			Knierim Company, Inc.	5/1/77	650			185	rock	80	185	3
150281	WATER	Water Well	41.718017	-88.487567	6-37N-7E	Oak Ridge Custom Homes			Brown, Darwin	6/2/06	645			180	rock gray	155		30
147809	WATER	Water Well	41.683504	-88.490016	13-37N-6E	Weis Home Builders			Knierim, Phil	6/14/88	0			174	sand gravel	140	174	0
146815	WATER	Water Well	41.693847	-88.483772	7-37N-7E	Leifheit Lynn			Knierim Company, Inc.	10/1/73	0			170				
147707	WATER	Water Well	41.71586	-88.49309	1-37N-6E	Halmagyi, Al			Knierim, Phil	4/10/87	0			170	shale	0	0	0
146904	WATER	Water Well	41.700745	-88.466922	8-37N-7E	Aurora Blacktop Inc			Knierim Company, Inc.	2/1/74	0			161				
146031	WATER	Water Well	41.705867	-88.507489	1-37N-6E	A T & T	1	1	Wehling Well Works Inc.	9/1/64	685			160		0	0	0
146615	WATER	Water Well	41.696262	-88.490301	12-37N-6E	Richards T Stanley			Knierim Company, Inc.	12/1/72	670			160	limestone	32	160	50
148985	WATER	Water Well	41.720014	-88.490755	1-37N-6E	Raine, Dennis			Brown, Darwin	5/28/99	0			160	shale	148	152	0
148986	WATER	Water Well	41.71999	-88.49318	1-37N-6E	Schag, Joseph & Gina	1	1	Wehling, Robert	7/28/99	0			160	limestone	150	160	0
147997	WATER	Water Well	41.682051	-88.490016	13-37N-6E	Sytar, Jeffrey			Knierim, Phil	5/10/89	0			141	clay	100	141	0
147785	WATER	Water Well	41.717997	-88.48818	6-37N-7E	Davidson, C. P.			Knierim, Phil	11/13/87	0			140		0	140	0
146301	WATER	Water Well	41.704817	-88.452407	8-37N-7E	Undesser Richard			Geltz, N. H.	5/1/70	655	GL	Ground level	131				
146366	WATER	Water Well	41.713699	-88.507577	1-37N-6E	Aurora City	May-71	May-71	Layne Western Co., Inc.	1/1/71	680	GL	Ground level	108		0	0	0
146365	WATER	Water Well	41.711959	-88.482807	6-37N-7E	Aurora City	Apr-71	Apr-71	Layne Western Co., Inc.	1/1/71	0			102		0	0	0
146423	STRAT	Stratigraphic	41.686427	-88.473016	18-37N-7E	State Geol Survey			Layne Western Co., Inc.	5/1/71	650	GL	Ground level	101		0	0	0
147413	WATER	Water Well	41.696436	-88.487787	7-37N-7E	Haggeman Clayton			Knierim, James Richard	3/1/80	0			101				
147538	WATER	Water Well	41.675802	-88.449176	20-37N-7E	Conover Builders			Knierim, Phil	9/21/83	0			100	rock	15	100	20
147529	WATER	Water Well	41.705717	-88.48532	6-37N-7E	Hagemann, Clayton			Knierim, Phil	7/27/84	0			98	rock	40	98	0
148013	WATER	Water Well	41.69825	-88.487815	7-37N-7E	Hagemann, Larry			Knierim, Phil	9/7/90	0			96	sand gravel	40	96	0
148237	WATER	Water Well	41.68855	-88.44934	17-37N-7E	Perkins Inc.			Knierim, Phil	8/28/92	0			96	sand & gravel	10	96	0
148419	WATER	Water Well	41.701879	-88.487871	7-37N-7E	Hageman, Tom & Anna			Brown, Darwin	5/31/94	0			93	sand gravel	83	93	0
145908	ENG	Engineering	41.711864	-88.484957	6-37N-7E	N E Ill Metro	B-44	B-44	Layne Western Co., Inc.	1/1/62	685	GL	Ground level	91				
146045	WATER	Water Well	41.686028	-88.459599	17-37N-7E	Frick L N			Palmer & Son, B. L.	1/1/66	650	GL	Ground level	86	shale	75	86	10
148012	WATER	Water Well	41.702229	-88.47739	7-37N-7E	A&R Trucking/Mike			Knierim, Phil	3/13/90	0			80	sand gravel	30	80	0
150921	ENG	Engineering	41.684928	-88.508709	14-37N-6E	Commonwealth Edison Co	284	284	Testing Service Corporation	5/19/72				60				
150926	ENG	Engineering	41.684987	-88.48633	18-37N-7E	Commonwealth Edison Co	289	289	Testing Service Corporation	4/20/73				55				
150919	ENG	Engineering	41.679253	-88.50859	14-37N-6E	Commonwealth Edison Co	282	282	Testing Service Corporation	4/21/73				50				

150939	ENG	Engineering `	41.690532	-88.474707	7-37N-7E	Commonwealth Edison Cc	1	1	Testing Service Corporation	6/12/72				50
150941	ENG	Engineering `	41.710886	-88.472363	6-37N-7E	Commonwealth Edison Cc	3	3	Testing Service Corporation	6/13/72				50
150945	ENG	Engineering `	41.716351	-88.456113	5-37N-7E	Commonwealth Edison Cc	12	12	Testing Service Corporation	11/24/72				50
150948	ENG	Engineering `	41.691078	-88.47555	7-37N-7E	Commonwealth Edison Cc	299	299	Testing Service Corporation					50
150949	ENG	Engineering `	41.694623	-88.474883	7-37N-7E	Commonwealth Edison Cc	300	300	Testing Service Corporation					50
150950	ENG	Engineering `	41.698216	-88.474193	7-37N-7E	Commonwealth Edison Cc	301	301	Testing Service Corporation					50
150951	ENG	Engineering `	41.701762	-88.474312	7-37N-7E	Commonwealth Edison Cc	302	302	Testing Service Corporation					50
150952	ENG	Engineering `	41.705069	-88.474288	7-37N-7E	Commonwealth Edison Cc	303	303	Testing Service Corporation					50
150953	ENG	Engineering `	41.708424	-88.472171	6-37N-7E	Commonwealth Edison Cc	304	304	Testing Service Corporation					50
150954	ENG	Engineering `	41.712065	-88.472218	6-37N-7E	Commonwealth Edison Cc	305	305	Testing Service Corporation					50
150955	ENG	Engineering `	41.715777	-88.472266	6-37N-7E	Commonwealth Edison Cc	306	306	Testing Service Corporation					50
150956	ENG	Engineering `	41.715896	-88.470386	6-37N-7E	Commonwealth Edison Cc	307	307	Testing Service Corporation					50
150958	ENG	Engineering `	41.716051	-88.465179	5-37N-7E	Commonwealth Edison Cc	309	309	Testing Service Corporation					50
150959	ENG	Engineering `	41.716073	-88.462537	5-37N-7E	Commonwealth Edison Cc	310	310	Testing Service Corporation					50
150960	ENG	Engineering `	41.716172	-88.45994	5-37N-7E	Commonwealth Edison Cc	311	311	Testing Service Corporation					50
150961	ENG	Engineering `	41.716227	-88.45731	5-37N-7E	Commonwealth Edison Cc	312	312	Testing Service Corporation					50
150962	ENG	Engineering `	41.716293	-88.454724	5-37N-7E	Commonwealth Edison Cc	313	313	Testing Service Corporation					50
150963	ENG	Engineering `	41.716359	-88.452082	5-37N-7E	Commonwealth Edison Cc	314	314	Testing Service Corporation					50
150920	ENG	Engineering `	41.682084	-88.508649	14-37N-6E	Commonwealth Edison Cc	283	283	Testing Service Corporation					45
150922	ENG	Engineering `	41.684963	-88.504497	13-37N-6E	Commonwealth Edison Cc	285	285	Testing Service Corporation					45
150923	ENG	Engineering `	41.684963	-88.499905	13-37N-6E	Commonwealth Edison Cc	286	286	Testing Service Corporation					45
150924	ENG	Engineering `	41.684963	-88.495443	13-37N-6E	Commonwealth Edison Cc	287	287	Testing Service Corporation					45
150925	ENG	Engineering `	41.684951	-88.490863	13-37N-6E	Commonwealth Edison Cc	288	288	Testing Service Corporation					45
150957	ENG	Engineering `	41.715952	-88.467787	5-37N-7E	Commonwealth Edison Cc	308	308	Testing Service Corporation					45
150964	ENG	Engineering `	41.716458	-88.449507	5-37N-7E	Commonwealth Edison Cc	315	315	Testing Service Corporation					45
149306	ENG	Engineering `	41.700018	-88.460772	8-37N-7E	Kendall Co. Sanitary Landf	B-1	B-1	Layne-Western Drlg		0	GL	Ground level	40
150927	ENG	Engineering `	41.683107	-88.481857	18-37N-7E	Commonwealth Edison Cc	290	290	Testing Service Corporation	8/27/73				30
150940	ENG	Engineering `	41.697818	-88.474513	7-37N-7E	Commonwealth Edison Cc	2	2	Testing Service Corporation	6/19/72				30
149307	ENG	Engineering `	41.696375	-88.460622	8-37N-7E	Kendall Co. Sanitary Landf	B-5	B-5	Layne-Western Drlg		0	GL	Ground level	25



LIVIC civil
109 MONROE STREET
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PHONE: 888.987-1993
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STORMWATER DESIGN BY:
JACOB & HEFNER ASSOCIATES
1333 BUTTERFIELD ROAD, SUITE 300
DOWNERS GROVE, IL 60515
PHONE: (630) 652-4671

PROJECT No:	1060-18-03
DATE:	04/08/2022
SCALE:	AS SHOWN
DRAWN BY: CRP	CHECKED BY: NLL

PROJECT
BRIGHTFARMS IL GREENHOUSE
CITY OF YORKVILLE
KENDALL COUNTY ILLINOIS

CLIENT
ILLINOIS GREENHOUSE, LLC
50 S. BUCKHOUT ST.
SUITE 202
IRVINGTON, NY 10533

SHEET TITLE
PHASING PLAN - UTILITY

SHEET NO.
C401

Reviewed By:	
Legal	☐
Finance	☐
Engineer	■
City Administrator	☐
Community Development	☐
Purchasing	☐
Police	☐
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

New Business #4

Tracking Number

PW 2023-60

Agenda Item Summary Memo

Title: Grande Reserve – Signage Recommendations

Meeting and Date: Public Works Committee – July 18, 2023

Synopsis: Review of Recommendations

Council Action Previously Taken:

Date of Action: _____ Action Taken: _____

Item Number: _____

Type of Vote Required: Majority

Council Action Requested: Approval

Submitted by: Brad Sanderson (Name) Engineering (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
Call us Monday-Friday, 8:00am to 4:30pm at 630-553-4350, email us at agendas@yorkville.il.us, post at www.facebook.com/CityofYorkville, tweet us at @CityofYorkville, and/or contact any of your elected officials at http://www.yorkville.il.us/320/City-Council

Memorandum

To: Bart Olson, City Administrator
From: Brad Sanderson, EEI
CC: Eric Dhuse, Director of Public Works
Jori Behland, City Clerk
Krysti Barksdale Noble, Community Development Director

Date: June 26, 2023
Subject: Grande Reserve – Signage Recommendations

With the continuous build-out of the Grande Reserve development, an updated review of the signage within the development was warranted. The intersections noted in the attached exhibit were each analyzed based on MUTCD standards for possible signage modifications. For reference, detailed reports for each intersection are attached.

A summary of the recommendations is noted below:

1. Grande Trail and American Way
    a. Add stop sign to American Way – south leg; currently a yield sign exists.

2. Grande Trail and Freedom Place
    a. Create three-way stop; currently a stop sign exists on the west leg.

3. Grande Trail and Justice Drive
    a. Create three-way stop; currently it is uncontrolled.

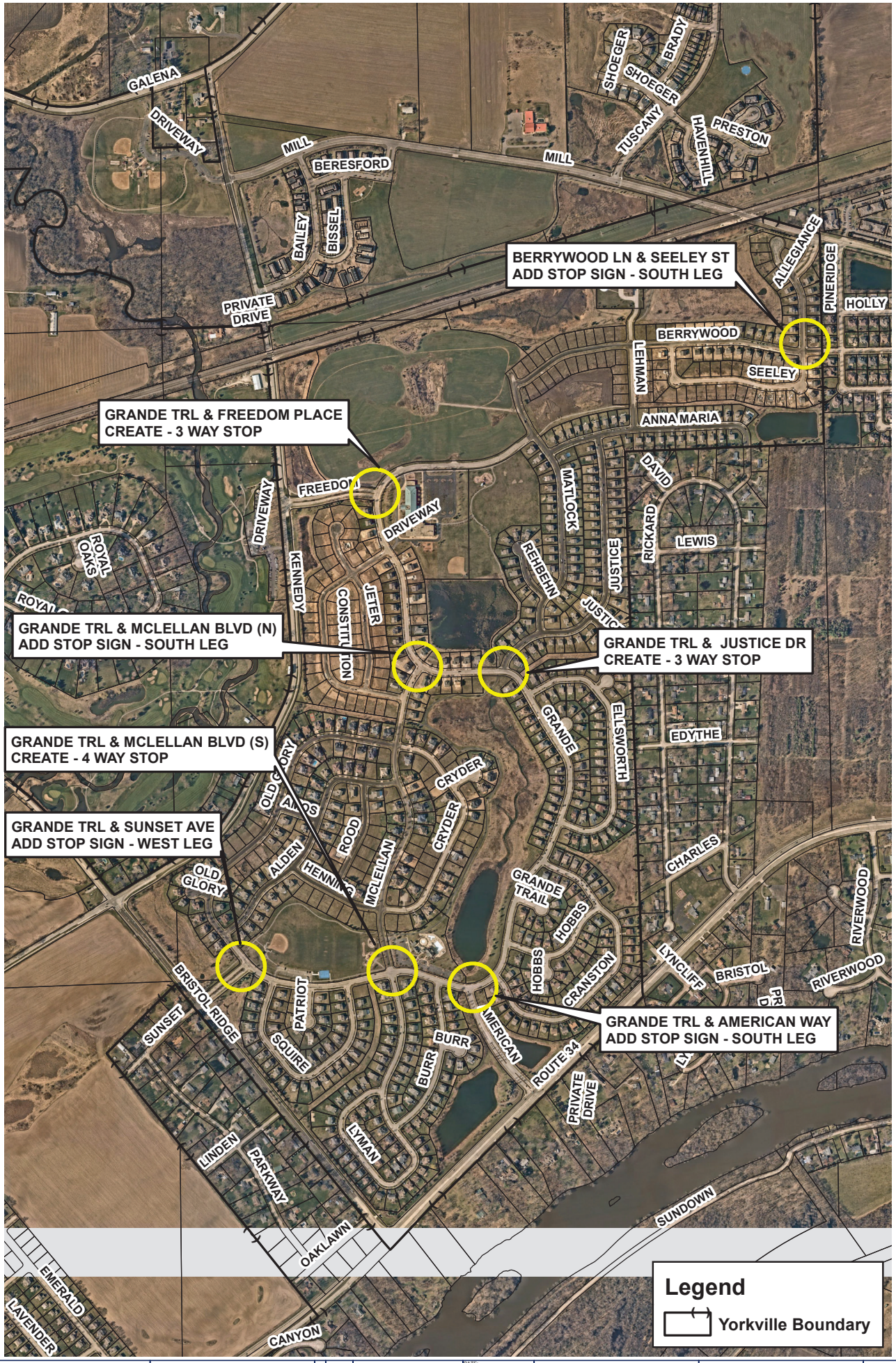
4. Grande Trail and McClellan Boulevard – North
    a. Add stop sign to McClellan – south leg; currently it is uncontrolled.

5. Grande Trail and McClellan Boulevard – South
    a. Create four-way stop; currently yields exist on the north and south legs.

6. Berrywood Lane and Seely Street
    a. Add stop sign to Seely – south leg; currently a stop sign exists on the north leg.

7. Grande Trail and Sunset Avenue
    a. Add stop sign to Sunset – west leg; currently a yield sign exists.

If you have any questions, please let us know.



Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
(630) 466-6700
www.eeiweb.com

United City of Yorkville
800 Game Farm Road
Yorkville, IL 60560
630-553-4350
www.yorkville.il.us

NO.	DATE	REVISIONS

DATE: MAY 2023
PROJECT NO.: YO1107
BY: MJT
PATH: H:\GIS\PUBLIC\YORKVILLE\2023
FILE:

UNITED CITY OF YORKVILLE
KENDALL COUNTY, ILLINOIS

STOP SIGN JUSTIFICATION
GRANDE RESERVE
LOCATION MAP

N

Memorandum

To: Bart Olson, City Administrator
From: Brad Sanderson, EEI
CC: Eric Dhuse, Director of Public Works
Krysti Barksdale-Noble, Community Dev. Dir.
Jori Behland, City Clerk

Date: 5/31/2023
Subject: Grande Trail and American Way

As requested, we investigated the possible installation of two way yield or stop signs at the intersection of Grande Trail and American Way. Our findings were as follows:

- Currently the intersection is controlled by a yield sign on American Way.
- The intersection at Grande Trail and American Way does not appear to have any sight distance constraints and appears to be "open".
- The governing entity on traffic control signage is the Manual on Uniform Traffic Control Devices (MUTCD). The manual states as follows in regards to yield or stop sign installation: *Guidance: Engineering judgment should be used to establish intersection control. The following factors should be considered:*

  A. Vehicular, bicycle, and pedestrian traffic volumes on all approaches;

  B. Number and angle of approaches;

  C. Approach speeds;

  D. Sight distance available on each approach; and

  E. Reported crash experience.

  YIELD or STOP signs should be used at an intersection if one or more of the following conditions exist:

  A. An intersection of a less important road with a main road where application of the normal right-of-way rule would not be expected to provide reasonable compliance with the law.

  B. A street entering a designed through highway or street; and/or

  C. An unsignalized intersection in a signalized area.

  In addition, the use of YIELD or STOP signs should be considered at the intersection of two minor streets or local roads where the intersection has more than three approaches and where one or more of the following conditions exist:

  A. The combined vehicular, bicycle, and pedestrian volume entering the intersection from all approaches averages more than 2,000 units per day;

  B. The ability to see conflicting traffic on an approach is not sufficient to allow a road user to stop or yield in compliance with the normal right-of-way rule if such stopping or yielding is necessary; and/or

  C. Crash records indicate that five or more crashes that involve the failure to yield the right-of-way at the intersection under the normal right-of-way rule have been reported within a 3-year period, or that three or more such crashes have been reported within a 2-year period.

  The manual also states as follows in regards to stop sign installation:
  Yield or Stop signs should not be used for speed control.

The application of normal right-of-way rule is expected to provide reasonable compliance for this intersection. This intersection is not in a signalized area. American Way and Grande Trail only has three approaches. American Way approaches Grande Trail which is a through street. This makes American Way a good candidate for a stop sign installation.

UNITED CITY OF YORKVILLE
TWO WAY STOP
PRELIMINARY ENGINEERING EVALUATION

Location: Grande Trail and American Way

Evaluation Criteria

Guidance: Engineering judgement should be used to establish intersection control. The following factors should be considered:

A. Vehicular, bicycle, and pedestrian traffic volumes on all approaches;
B. Number and angle of approaches;
C. Approach speeds;
D. Sight distance available on each approach; and
E. Reported crash experience.

Criteria Met			Criteria**
Yes	Additional Study Required	No	
			I. YIELD or STOP signs should be used at an intersection if one or more of the following conditions exist:
☐	☐	☒	A. An intersection of a less important road with a main road where application of the normal right-of-way rule would not be expected to provide reasonable compliance with the law.
☒	☐	☐	B. A street entering a designated through highway or street; and/or
☐	☐	☒	C. An unsignalized intersection in a signalized area.
			II. In addition, the use of YIELD or STOP signs should be considered at the intersection of two minor streets or local roads where the intersection has more than three approaches and where one or more of the following conditions exist:
☐	☐	☒	A. The combined vehicular, bicycle, and pedestrian volume entering the intersection from all approaches averages more than 2,000 units per day;
☐	☐	☒	B. The ability to see conflicting traffic on an approach is not sufficient to allow a road user to stop or yield in compliance with the normal right-of-way rule if such stopping or yielding is necessary; and/or
☐	☐	☒	C. Crash records indicate that five or more crashes that involve the failure to yield the right-of-way at the intersection under the normal right-of-way rule have been reported within a 3-year period, or that three or more such crashes have been reported within a 2-year period.

Based on a preliminary review of the criteria for a YIELD or STOP sign the following action is recommended:

A. ☒ Criteria are clearly met recommending installation of a YIELD or STOP sign (Circle designated sign type)
Designate Location: American Way

B. ☐ Criteria are not clearly met at this time - no further action recommended

C. ☐ Criteria may or may not be met - additional engineering study required

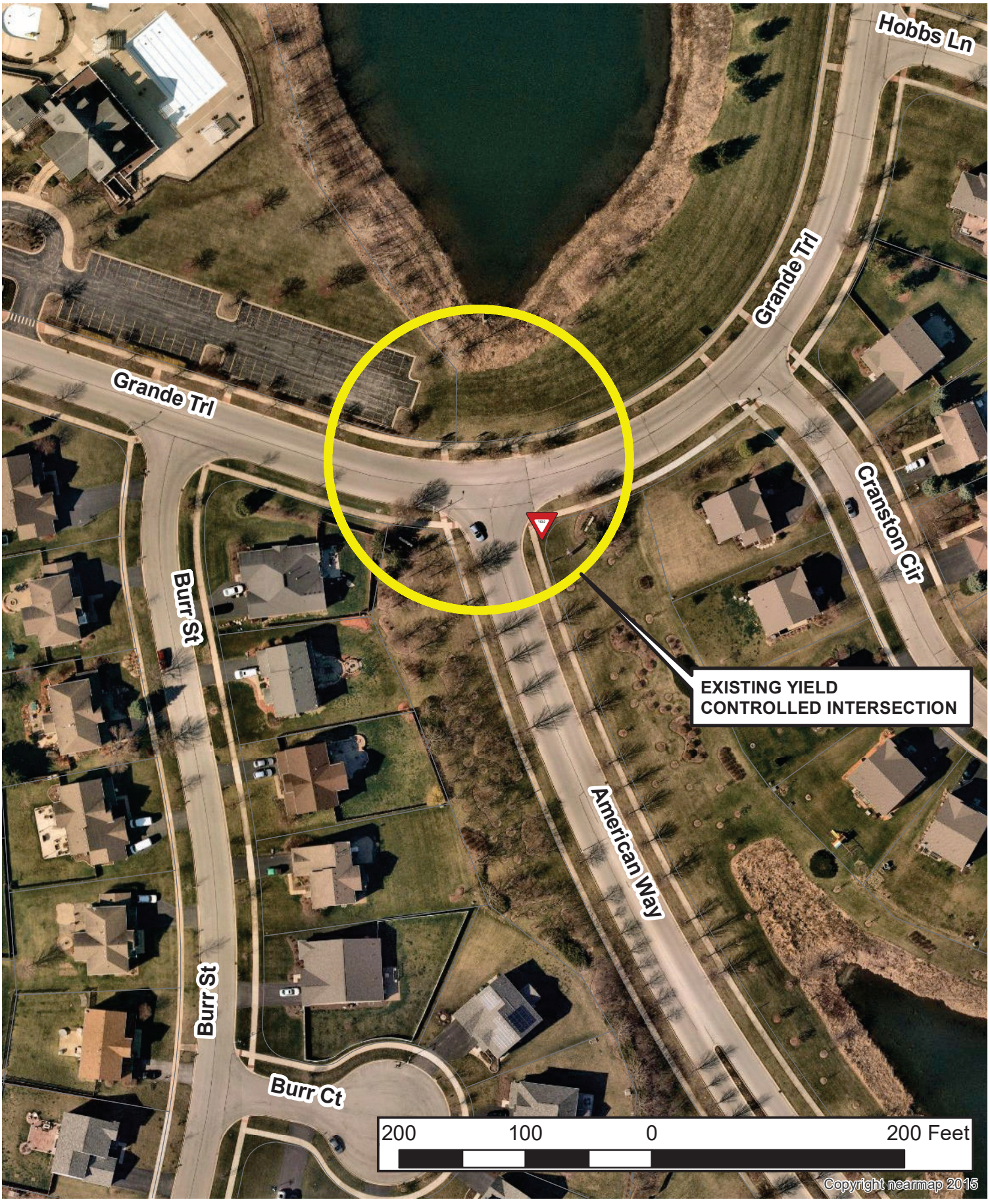
By: TODD WELLS Date: 5/31/2023

SENIOR PROJECT ENGINEER II
Title

By: BRAD SANDERSON Date: 5/31/2023

CHIEF OPERATING OFFICER / PRESIDENT
Title

* Based upon Professional Engineer's Review
** Manual on Uniform Traffic Control Devices (MUTCD)



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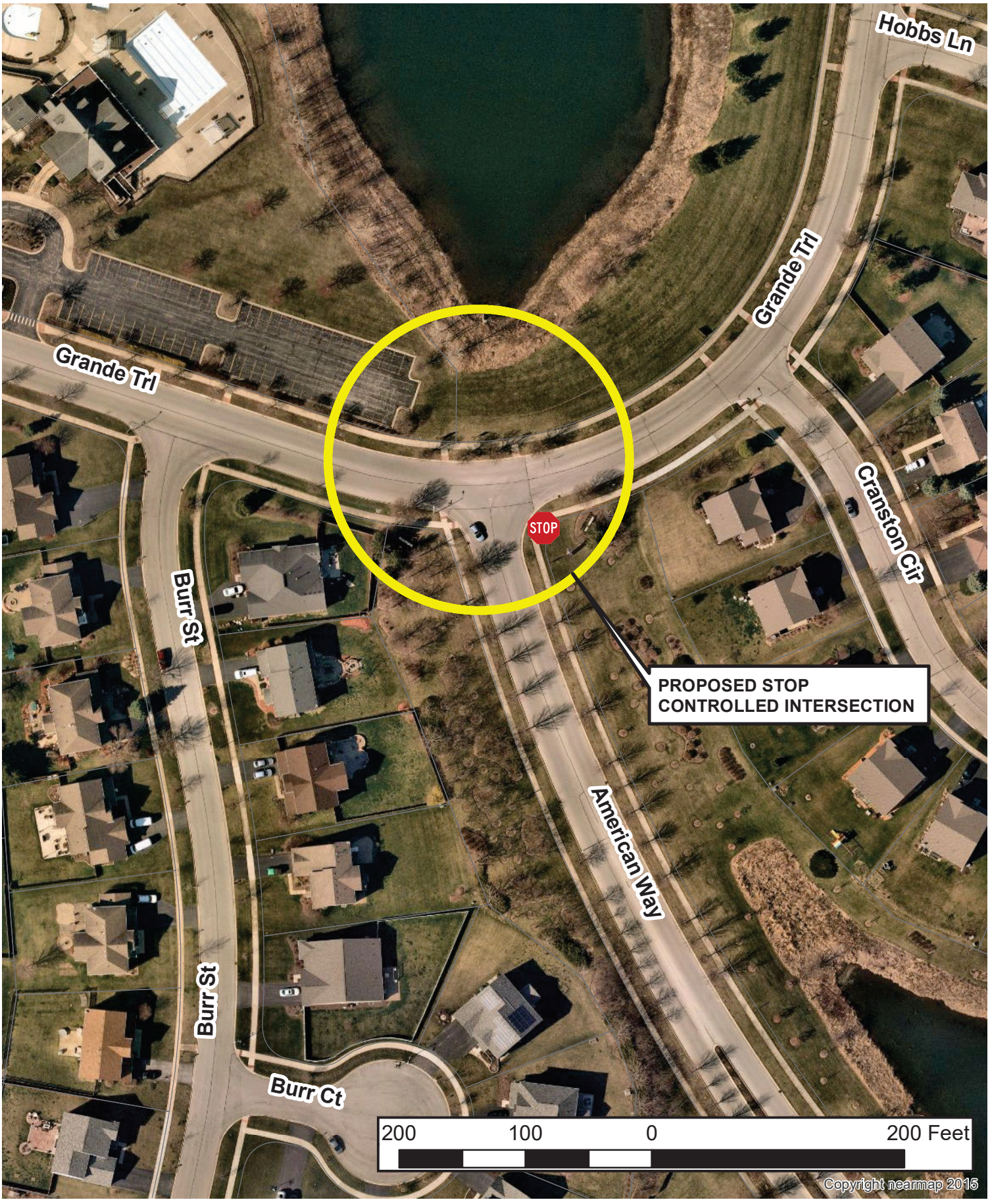
(630) 466-6700
www.eeiweb.com

United City of Yorkville
800 Game Farm Road
Yorkville, IL 60560
630-553-4350

DATE:	MAY 2023
PROJECT NO.:	YO1107
BY:	MJT
PATH:	H:\GIS\PUBLIC\YORKVILLE\2011\
FILE:	YO1107_Grande Trail & American Way Stop Analysis - Existing

GRANDE TRAIL & AMERICAN WAY
STOP SIGN ANALYSIS

N



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800 Game Farm Road
Yorkville, IL 60560
630-553-4350

DATE:	MAY 2023
PROJECT NO.:	YO1107
BY:	MJT
PATH:	H:\GIS\PUBLIC\YORKVILLE\2011\
FILE:	YO1107_Grande Trail & American Way Stop Analysis - Proposed

GRANDE TRAIL & AMERICAN WAY STOP SIGN ANALYSIS

N

Engineering Enterprises, Inc.
52 Wheeler Road • Sugar Grove, Illinois 60554
TEL: (630) 466-6700
FAX: (630) 466-6701

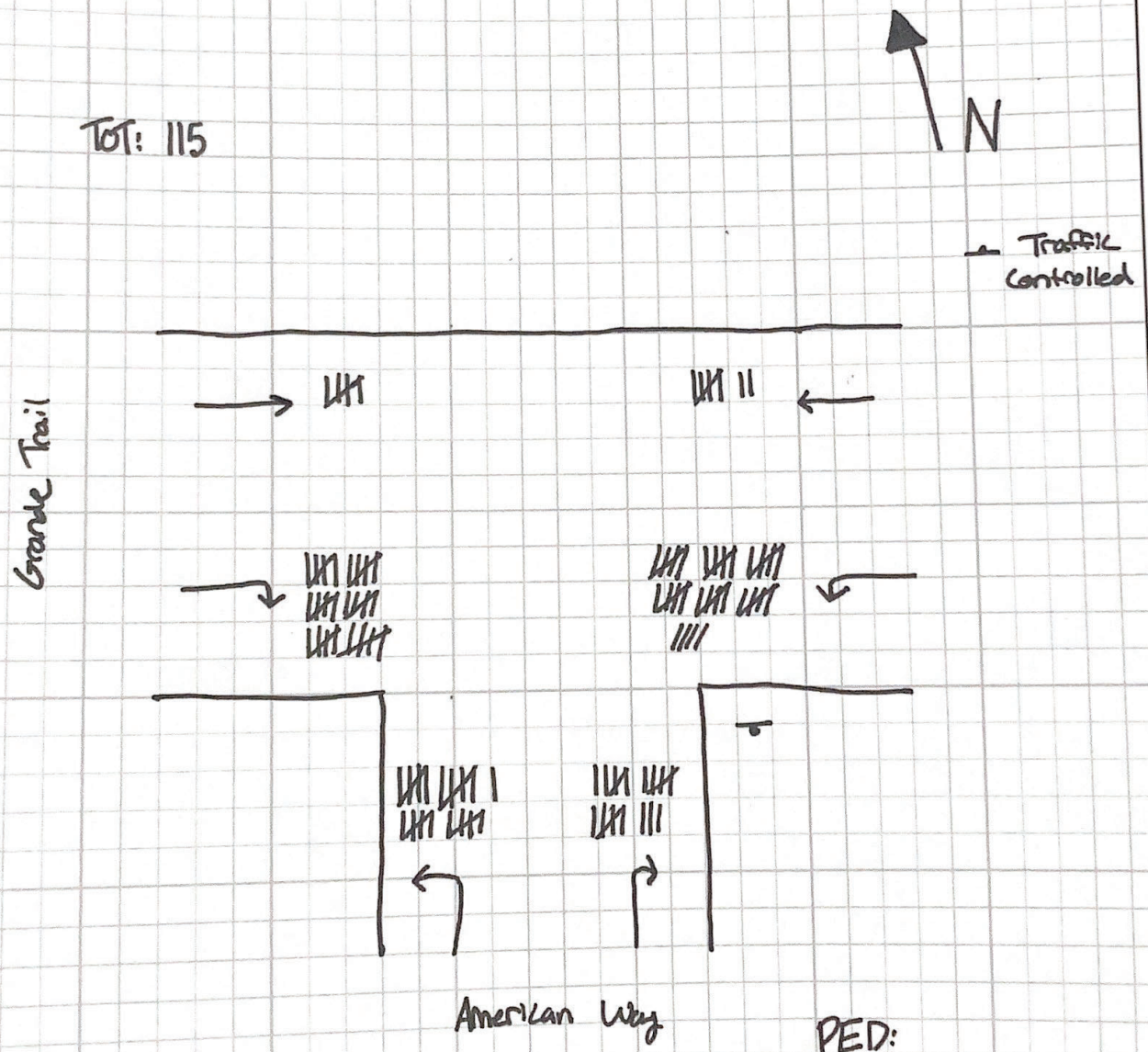
PROJECT _____ PROJECT NUMBER _____

SUBJECT Grande Trail and American Way BY HTI DATE 5/15/2023

PAGE 1 OF 2

10:35-11:35

TOT: 115



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52 Wheeler Road • Sugar Grove, Illinois 60554
TEL: (630) 466-6700
FAX: (630) 466-6701

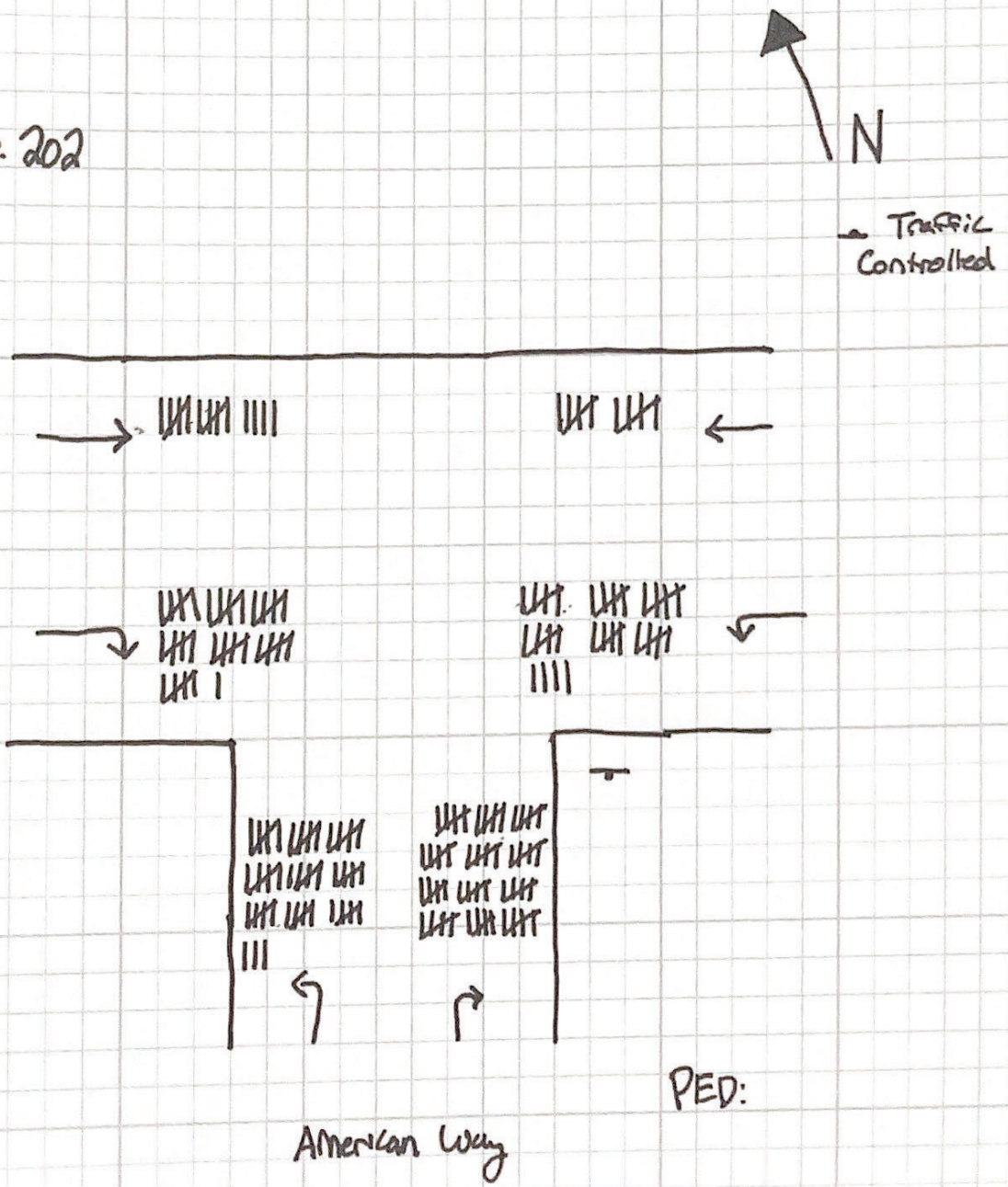
PROJECT _____ PROJECT NUMBER _____

SUBJECT Grande Trail and American Way BY HTI DATE 5/16/2023

PAGE 2 OF 2

2:15 - 3:15

TOT: 202



American Way and Grande Trail

Intersection Photos

Northbound approach, looking North

Northbound approach, looking West

American Way and Grande Trail

Intersection Photos

Northbound approach, looking East

Eastbound approach, looking East

American Way and Grande Trail

Intersection Photos

Eastbound approach, looking South

Westbound approach, looking West

American Way and Grande Trail

Intersection Photos

Westbound approach, looking South

Memorandum

To: Bart Olson, City Administrator
From: Brad Sanderson, EEI
CC: Eric Dhuse, Director of Public Works
Krysti Barksdale-Noble, Community Dev. Dir.
Jori Behland, City Clerk

Date: 5/18/2023
Subject: Grande Trail and Freedom Place

As requested, we investigated the possible installation of multi-way stop signs at the intersection of Grande Trail and Freedom Place. Our findings were as follows:

- Currently the intersection is controlled by stop sign on Freedom Place.
- The intersection at Grande Trail and Freedom Place has occasional sight constraints due to parked vehicles on Grande Trail.
- The governing entity on traffic control signage is the Manual on Uniform Traffic Control Devices (MUTCD). The manual states as follows in regards to multi-way stop sign installation: *Guidance:*
  The decision to install multi-way stop control should be based on an engineering study.
  The following criteria should be considered in the engineering study for a multi-way STOP sign installation:

  A. Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.
  B. Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.
  C. Minimum volumes:
    1. *The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and*
    2. *The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but*
    3. *If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.*

  D. Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.

  Option:
  Other criteria that may be considered in an engineering study include:
  A. The need to control left-turn conflicts;

B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
C. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and
D. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.

- The manual also states as follows in regards to stop sign installation:

  Yield or Stop signs should not be used for speed control.

The traffic volume on the major street approach would appear to be below the average of 300 vehicles per hour and the traffic volume on the minor street approach would appear to be below the average of 200 units per hour for any 8 hours of an average day. Parked vehicles along Grande Trail could be a sight constraint for this intersection. This is an area with high pedestrian volumes due to the vicinity to the school. Due to the high number of pedestrians and sight constraints, this intersection is a good candidate for a multi-way stop based on the above criteria. Stop signs should be implemented at all approaches to this intersection.

UNITED CITY OF YORKVILLE
MULTI-WAY STOP
PRELIMINARY ENGINEERING EVALUATION

Location: Grande Trail and Freedom Place

Primary Criteria to Consider*

Criteria Met			Criteria**
Yes	Additional Study Required	No	
☐	☐	☒	A. Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.
☐	☐	☒	B. Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.
			C. Minimum Volumes:
☐	☐	☒	1. The vehicular volume entering the intersections from the major street approaches (total of both approaches)averages at least 300 vehicles per hour for any 8 hours of an average day; and
☐	☐	☒	2. The combined vehicular, pedestrian, and bicycle volume entering the intersections from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but
☐	☐	☒	3. If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.
☐	☐	☒	D. Where no single criterion is satisfied, but where Criteria B, C.1 and C.2 are all satisfied to 80 percent of the minimum values, criterion C.3 is excluded from this condition.
☐	☐	☒	E. The need to control left-turn conflicts;
☒	☐	☐	F. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
☒	☐	☐	G. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and
☐	☐	☒	H. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.

Based on a preliminary review of the criteria for a multi-way stop sign the following action is recommended:

☒ Criteria are clearly met recommending installation of a multi-way stop

☐ Criteria are not clearly met at this time - no further action recommended

☐ Criteria may or may not be met - additional engineering study required

By: Todd Wells Date: 5/18/2023

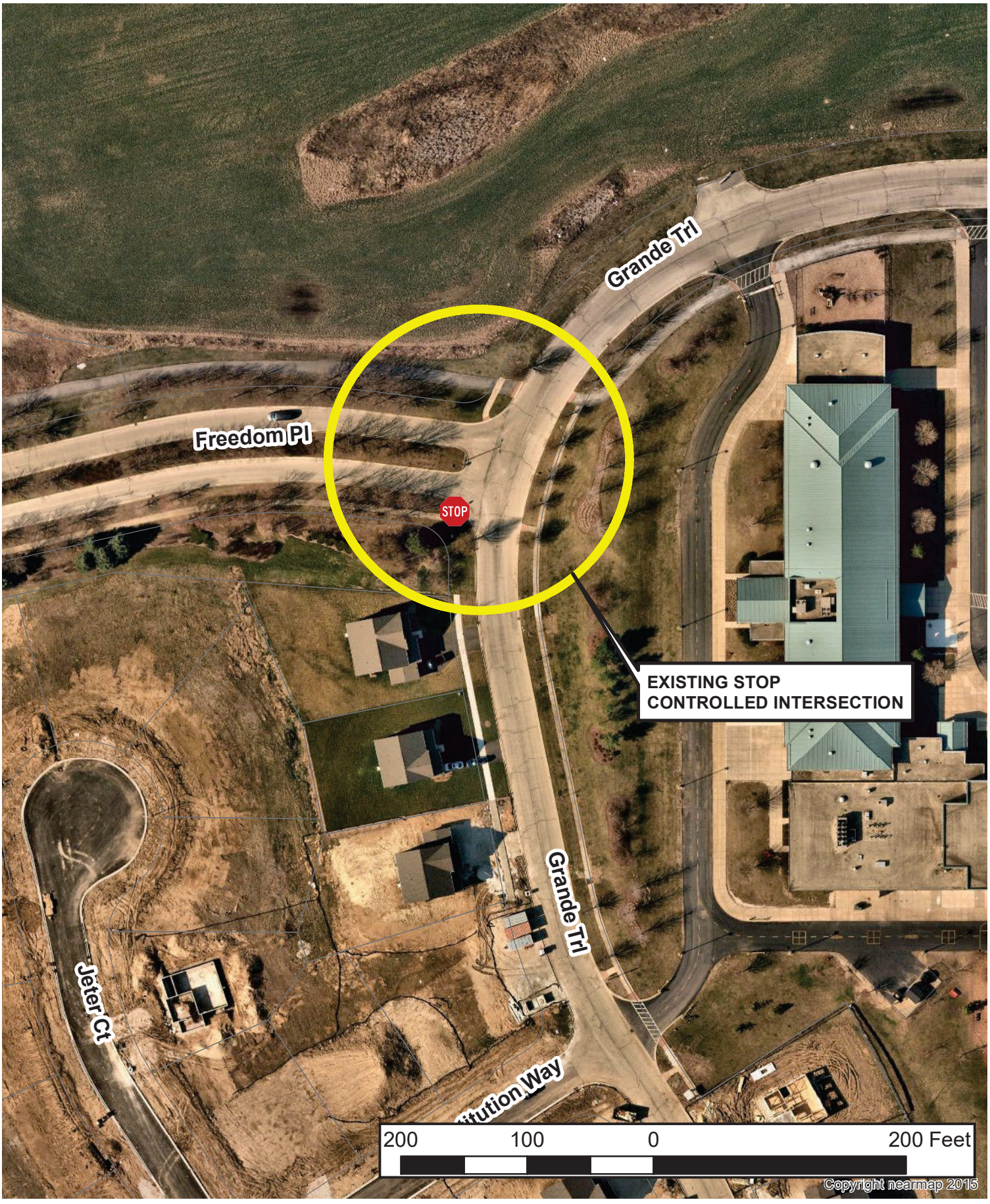
SENIOR PROJECT ENGINEER II
Title

By: Brad Sanderson Date: 5/18/2023

CHIEF OPERATING OFFICER/ PRESIDENT
Title

* Based upon Professional Engineer's Review
** Manual on Uniform Traffic Control Devices (MUTCD)

10/10/2013



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United City of Yorkville
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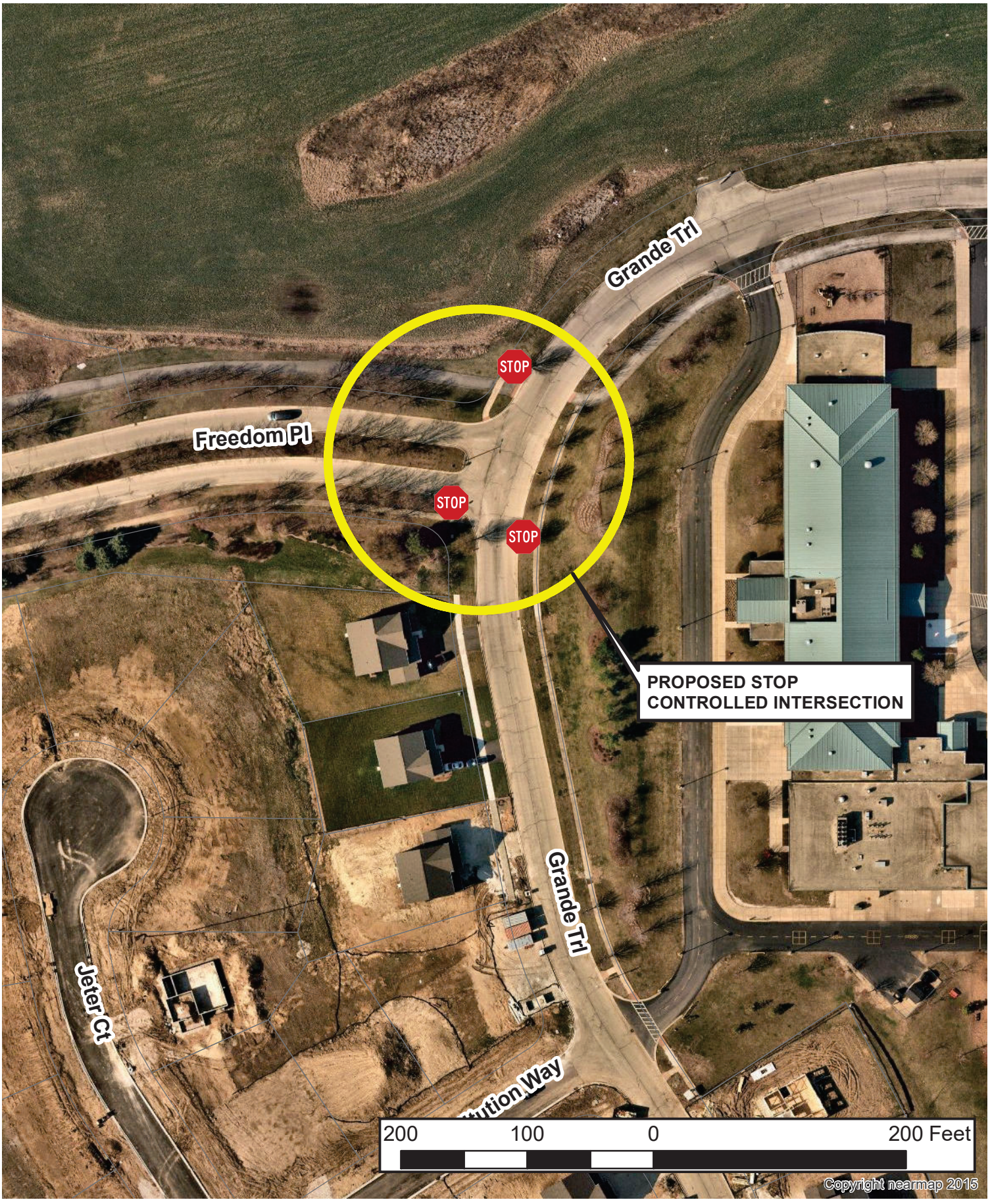
630-553-4350

DATE:	MAY 2023
PROJECT NO.:	YO1107
BY:	MJT
PATH:	H:\GIS\PUBLIC\YORKVILLE\2011\
FILE:	YO1107_Grande Trail & Freedom Pl. Stop Analysis

GRANDE TRAIL & FREEDOM PL.
STOP SIGN ANALYSIS

N



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PROJECT NO.:	YO1107
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FILE:	YO1107_Grande Trail & Freedom Pl. Stop Analysis - Proposed

GRANDE TRAIL & FREEDOM PL.
STOP SIGN ANALYSIS

N

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52 Wheeler Road • Sugar Grove, Illinois 60554
TEL: (630) 466-6700
FAX: (630) 466-6701

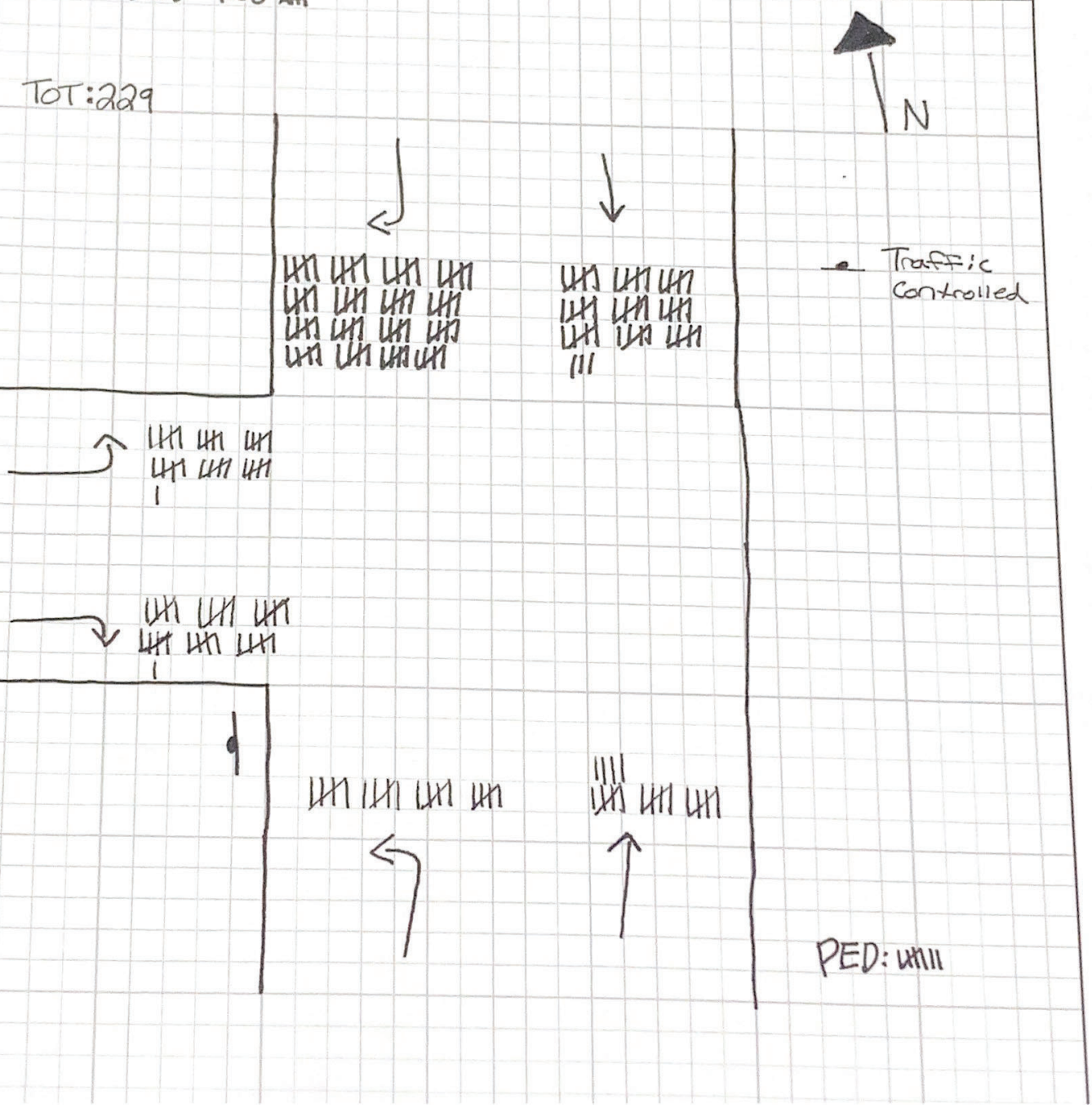
PROJECT _____ PROJECT NUMBER _____

SUBJECT Grande Trail and Freedom PL BY HTI DATE 5/12/2023

PAGE 1 OF 2

8:05 - 9:06 AM

TOT: 229



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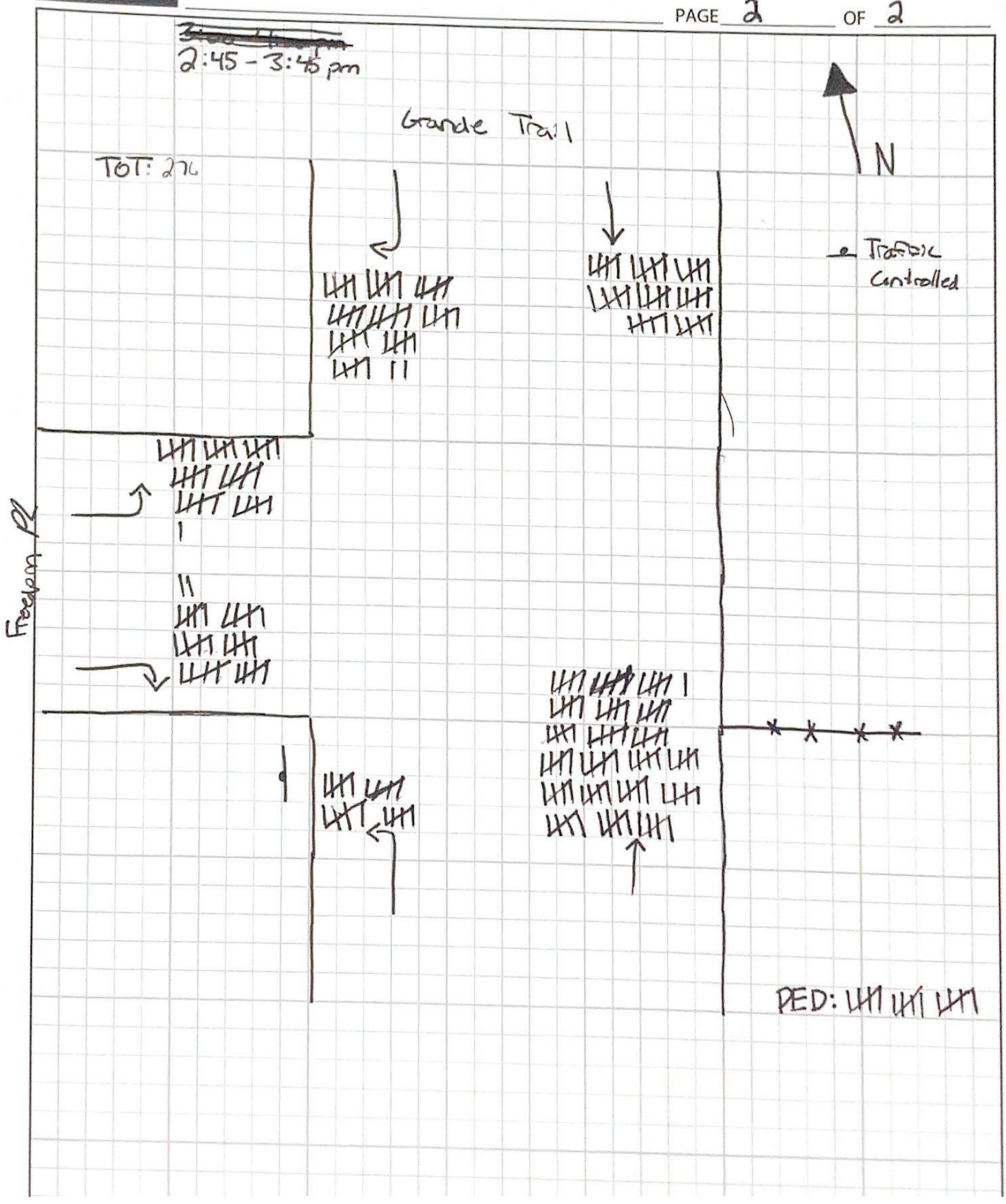
TEL: (630) 466-6700
FAX: (630) 466-6701

PROJECT _____ PROJECT NUMBER _____

SUBJECT Grande Trail and Freedom PL BY HTI DATE 5/12/2023

PAGE 2 OF 2

~~3:00 - 4:00 pm~~
2:45 - 3:45 pm



Freedom Pl and Grande Trail

Intersection photos

Southbound approach, looking South

Southbound approach, looking West

Freedom Pl and Grande Trail

Intersection photos

Northbound approach, looking North

Northbound approach, looking West

Freedom Pl and Grande Trail

Intersection photos

Eastbound approach, looking East

Eastbound approach, looking North

Freedom Pl and Grande Trail

Intersection photos

Eastbound approach, looking South

Memorandum

To: Bart Olson, City Administrator
From: Brad Sanderson, EEI
CC: Eric Dhuse, Director of Public Works
Krysti Barksdale-Noble, Community Dev. Dir.
Jori Behland, City Clerk

Date: 5/18/2023
Subject: Grande Trail and Justice Drive

As requested, we investigated the possible installation of multi-way stop signs at the intersection of Grande Trail and Justice Drive. Our findings were as follows:

- Currently the intersection is uncontrolled.
- The intersection at Grande Trail and Justice Drive does not appear to have any sight distance constraints and appears to be "open".
- The governing entity on traffic control signage is the Manual on Uniform Traffic Control Devices (MUTCD). The manual states as follows in regards to multi-way stop sign installation: *Guidance:*
  The decision to install multi-way stop control should be based on an engineering study.
  The following criteria should be considered in the engineering study for a multi-way STOP sign installation:

  A. Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.
  B. Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.
  C. Minimum volumes:
    1. *The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and*
    2. *The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but*
    3. *If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.*

  D. Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.

  Option:
  Other criteria that may be considered in an engineering study include:
  A. The need to control left-turn conflicts;

B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
C. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and
D. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.

- The manual also states as follows in regards to stop sign installation:

  Yield or Stop signs should not be used for speed control.

The traffic volume on the major street approach would appear to be below the average of 300 vehicles per hour and the traffic volume on the minor street approach would appear to be below the average of 200 units per hour for any 8 hours of an average day. There are no sight distance constraints. This is an area with high pedestrian volumes due to the bike path leading to the park and school. Due to the high number of pedestrians this intersection is a good candidate for a multi-way stop based on the above criteria. Stop signs should be implemented at all approaches to this intersection.

UNITED CITY OF YORKVILLE
MULTI-WAY STOP
PRELIMINARY ENGINEERING EVALUATION

Location: Grande Trail and Justice Drive

Primary Criteria to Consider*

Criteria Met			Criteria**
Yes	Additional Study Required	No	
☐	☐	☒	A. Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.
☐	☐	☒	B. Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.
			C. Minimum Volumes:
☐	☐	☒	1. The vehicular volume entering the intersections from the major street approaches (total of both approaches)averages at least 300 vehicles per hour for any 8 hours of an average day; and
☐	☐	☒	2. The combined vehicular, pedestrian, and bicycle volume entering the intersections from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but
☐	☐	☒	3. If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.
☐	☐	☒	D. Where no single criterion is satisfied, but where Criteria B, C.1 and C.2 are all satisfied to 80 percent of the minimum values, criterion C.3 is excluded from this condition.
☐	☐	☒	E. The need to control left-turn conflicts;
☒	☐	☐	F. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
☐	☐	☒	G. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and
☐	☐	☒	H. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.

Based on a preliminary review of the criteria for a multi-way stop sign the following action is recommended:

☒ Criteria are clearly met recommending installation of a multi-way stop

☐ Criteria are not clearly met at this time - no further action recommended

☐ Criteria may or may not be met - additional engineering study required

By: Todd Wells Date: 5/18/2023

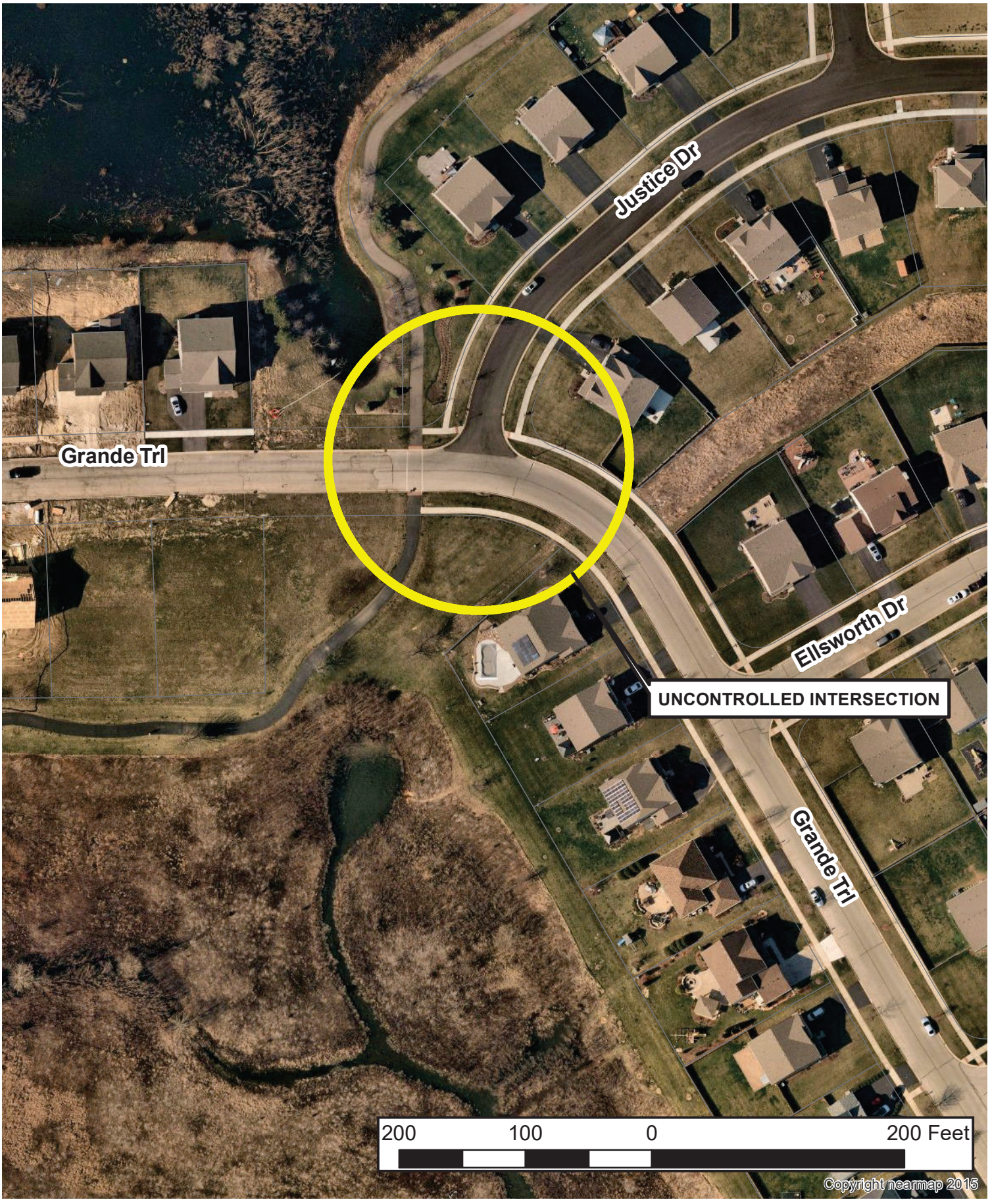
SENIOR PROJECT ENGINEER II
Title

By: Brad Sanderson Date: 5/18/2023

CHIEF OPERATING OFFICER/ PRESIDENT
Title

* Based upon Professional Engineer's Review
** Manual on Uniform Traffic Control Devices (MUTCD)

10/10/2013



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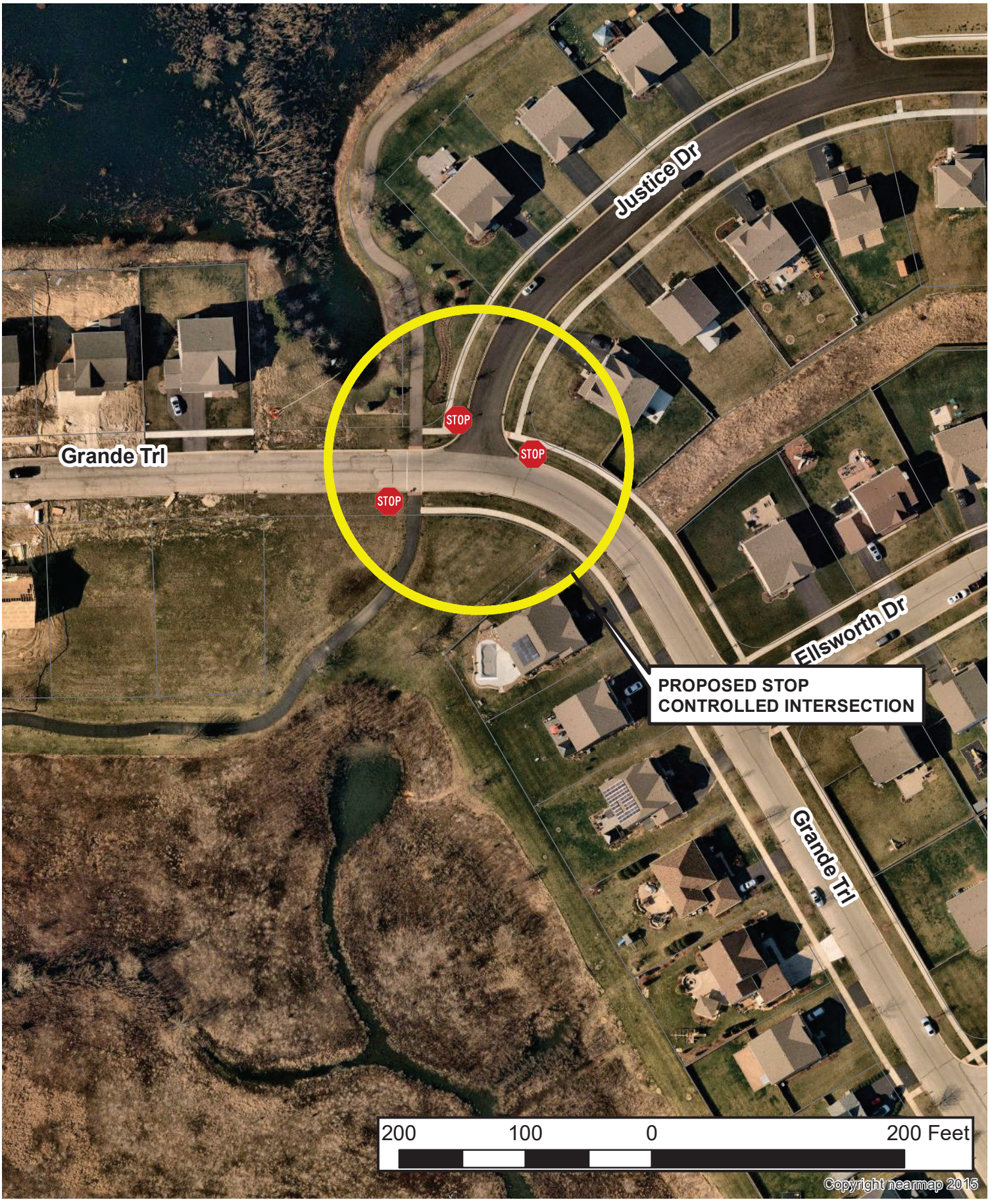
630-553-4350

DATE:	MAY 2023
PROJECT NO.:	YO1107
BY:	MJT
PATH:	H:\GIS\PUBLIC\YORKVILLE\2011\
FILE:	YO1107_Grande Trail & Justice Dr. Stop Analysis - Existing

GRANDE TRAIL & JUSTICE DR.
STOP SIGN ANALYSIS

N



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DATE:	MAY 2023
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FILE:	YO1107_Grande Trail & Justice Dr. Stop Analysis - Proposed

GRANDE TRAIL & JUSTICE DR.
STOP SIGN ANALYSIS

N

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52 Wheeler Road • Sugar Grove, Illinois 60554
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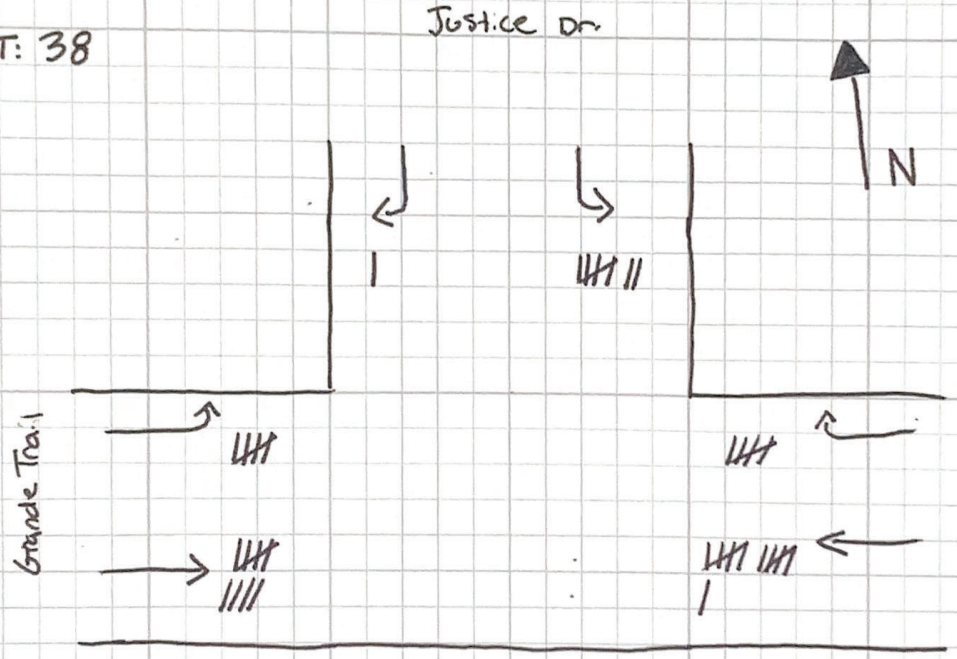
FAX: (630) 466-6701

PROJECT _____ PROJECT NUMBER _____
SUBJECT Grande Trail and Justice Dr. BY HTI DATE 5/15/2023
PAGE 1 OF 2

9:15 - 10:15

TOT: 38



PED: III

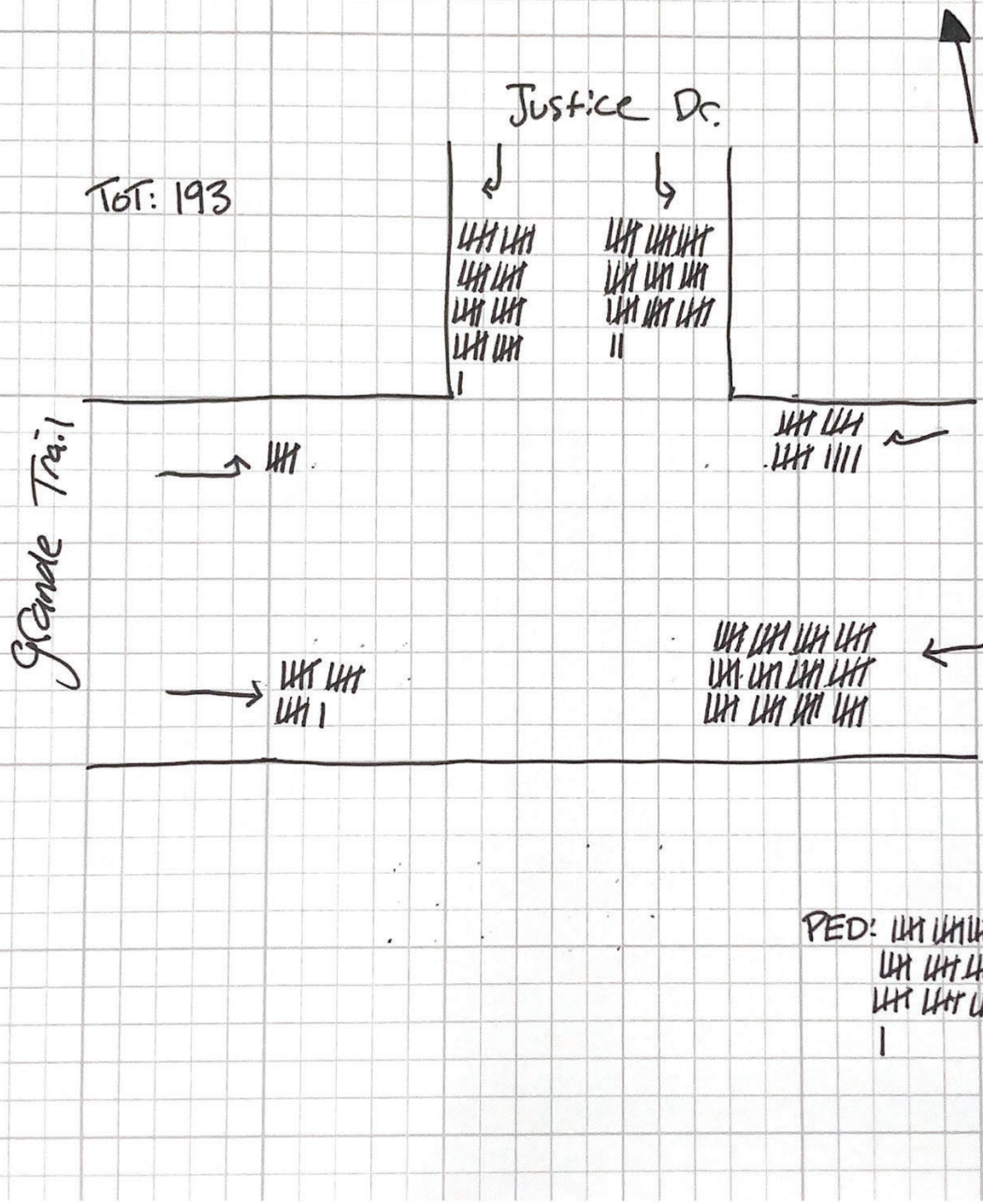
Engineering Enterprises, Inc.
52 Wheeler Road • Sugar Grove, Illinois 60554
TEL: (630) 466-6700
FAX: (630) 466-6701

PROJECT _____ PROJECT NUMBER _____

SUBJECT Justice Dr. and Grande Trail BY HTI DATE 5/18/2023

PAGE 2 OF 2

8:05 - 9:05



Justice Drive and Grande Trail
Intersection Photos

Westbound approach, looking West

Westbound approach, looking North

Justice Drive and Grande Trail
Intersection Photos

Eastbound approach, looking East

Eastbound approach, looking North

Justice Drive and Grande Trail
Intersection Photos

Southbound approach, looking South

Southbound approach, looking East

Justice Drive and Grande Trail
Intersection Photos

Southbound approach, looking West

Memorandum

To: Bart Olson, City Administrator
From: Brad Sanderson, EEI
CC: Eric Dhuse, Director of Public Works
Krysti Barksdale-Noble, Community Dev. Dir.
Jori Behland, City Clerk

Date: 5/31/2023
Subject: Grande Trail and McLellan Boulevard (North Intersection)

As requested, we investigated the possible installation of two way yield or stop signs at the intersection of Grande Trail and McLellan Blvd.. Our findings were as follows:

- Currently the intersection is uncontrolled.
- The intersection at Grande Trail and McLellan Blvd. does not appear to have any sight distance constraints and appears to be "open".
- The governing entity on traffic control signage is the Manual on Uniform Traffic Control Devices (MUTCD). The manual states as follows in regards to yield or stop sign installation: *Guidance: Engineering judgment should be used to establish intersection control. The following factors should be considered:*

  A. Vehicular, bicycle, and pedestrian traffic volumes on all approaches;

  B. Number and angle of approaches;

  C. Approach speeds;

  D. Sight distance available on each approach; and

  E. Reported crash experience

  YIELD or STOP signs should be used at an intersection if one or more of the following conditions exist:

  A. An intersection of a less important road with a main road where application of the normal right-of-way rule would not be expected to provide reasonable compliance with the law.

  B. A street entering a designed through highway or street; and/or

  C. An unsignalized intersection in a signalized area.

  In addition, the use of YIELD or STOP signs should be considered at the intersection of two minor streets or local roads where the intersection has more than three approaches and where one or more of the following conditions exist:

  A. The combined vehicular, bicycle, and pedestrian volume entering the intersection from all approaches averages more than 2,000 units per day;

  B. The ability to see conflicting traffic on an approach is not sufficient to allow a road user to stop or yield in compliance with the normal right-of-way rule if such stopping or yielding is necessary; and/or

  C. Crash records indicate that five or more crashes that involve the failure to yield the right-of-way at the intersection under the normal right-of-way rule have been reported within a 3-year period, or that three or more such crashes have been reported within a 2-year period.

  The manual also states the following in regards to stop or yield sign installation:
  Yield or Stop signs should not be used for speed control.

The application of normal right-of-way rule is expected to provide reasonable compliance for this intersection. This intersection is not in a signalized area. This intersection only has three approaches. McLellan Boulevard approaches Grande Trail which is a through street. This makes McLellan Boulevard a good candidate for a stop sign installation.

UNITED CITY OF YORKVILLE
TWO WAY STOP
PRELIMINARY ENGINEERING EVALUATION

Location: Grande Trail and McLellan Boulevard (North)

Evaluation Criteria

Guidance: Engineering judgement should be used to establish intersection control. The following factors should be considered:

A. Vehicular, bicycle, and pedestrian traffic volumes on all approaches;
B. Number and angle of approaches;
C. Approach speeds;
D. Sight distance available on each approach; and
E. Reported crash experience.

Criteria Met			Criteria**
Yes	Additional Study Required	No	
			I. YIELD or STOP signs should be used at an intersection if one or more of the following conditions exist:
☐	☐	☒	A. An intersection of a less important road with a main road where application of the normal right-of-way rule would not be expected to provide reasonable compliance with the law.
☒	☐	☐	B. A street entering a designated through highway or street; and/or
☐	☐	☒	C. An unsignalized intersection in a signalized area.
			II. In addition, the use of YIELD or STOP signs should be considered at the intersection of two minor streets or local roads where the intersection has more than three approaches and where one or more of the following conditions exist:
☐	☐	☒	A. The combined vehicular, bicycle, and pedestrian volume entering the intersection from all approaches averages more than 2,000 units per day;
☐	☐	☒	B. The ability to see conflicting traffic on an approach is not sufficient to allow a road user to stop or yield in compliance with the normal right-of-way rule if such stopping or yielding is necessary; and/or
☐	☐	☒	C. Crash records indicate that five or more crashes that involve the failure to yield the right-of-way at the intersection under the normal right-of-way rule have been reported within a 3-year period, or that three or more such crashes have been reported within a 2-year period.

Based on a preliminary review of the criteria for a YIELD or STOP sign the following action is recommended:

A. ☒ Criteria are clearly met recommending installation of a YIELD or STOP sign (Circle designated sign type)

Designate Location: McLellan Blvd.

B. ☐ Criteria are not clearly met at this time - no further action recommended

C. ☐ Criteria may or may not be met - additional engineering study required

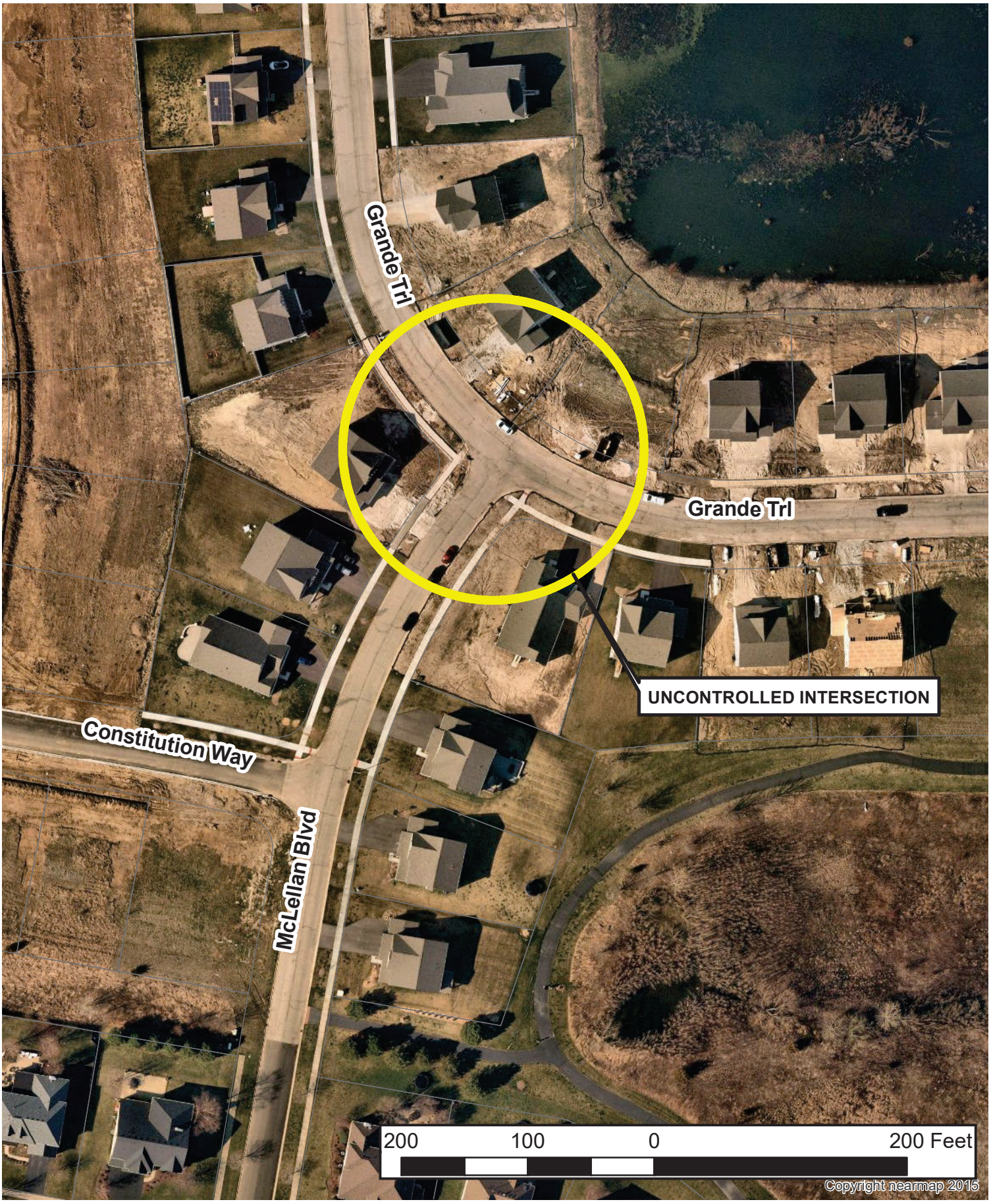
By: TODD WELLS Date: 6/1/2023

SENIOR PROJECT ENGINEER II
Title

By: BRAD SANDERSON Date: 6/1/2023

CHIEF OPERATING OFFICER/ PRESIDENT
Title

* Based upon Professional Engineer's Review
** Manual on Uniform Traffic Control Devices (MUTCD)



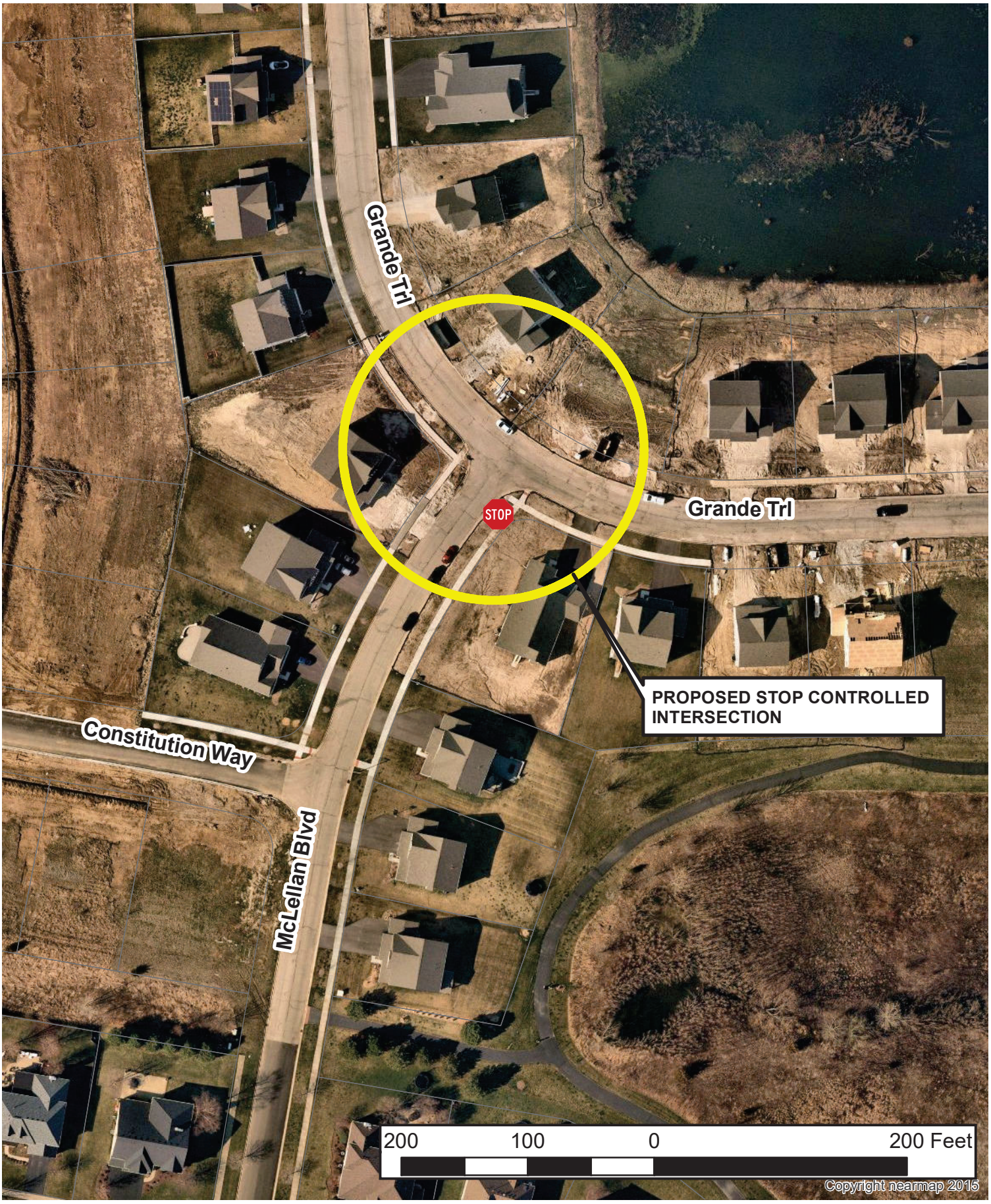
Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
(630) 466-6700
www.eeiweb.com

United City of Yorkville
800 Game Farm Road
Yorkville, IL 60560
630-553-4350

DATE:	MAY 2023
PROJECT NO.:	YO1107
BY:	MJT
PATH:	H:\GIS\PUBLIC\YORKVILLE\2011\
FILE:	YO1107_Grande Trail & McLellan Blvd North Stop Analysis Existing

GRANDE TRAIL & MCLELLAN BLVD NORTH STOP SIGN ANALYSIS

N



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DATE:	MAY 2023
PROJECT NO.:	YO1107
BY:	MJT
PATH:	H:\GIS\PUBLIC\YORKVILLE\2011\
FILE:	YO1107_Grande Trail & McLellan Blvd North Stop Analysis Proposed

GRANDE TRAIL & MCLELLAN BLVD NORTH STOP SIGN ANALYSIS

N

Engineering Enterprises, Inc.
52 Wheeler Road • Sugar Grove, Illinois 60554
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FAX: (630) 466-6701

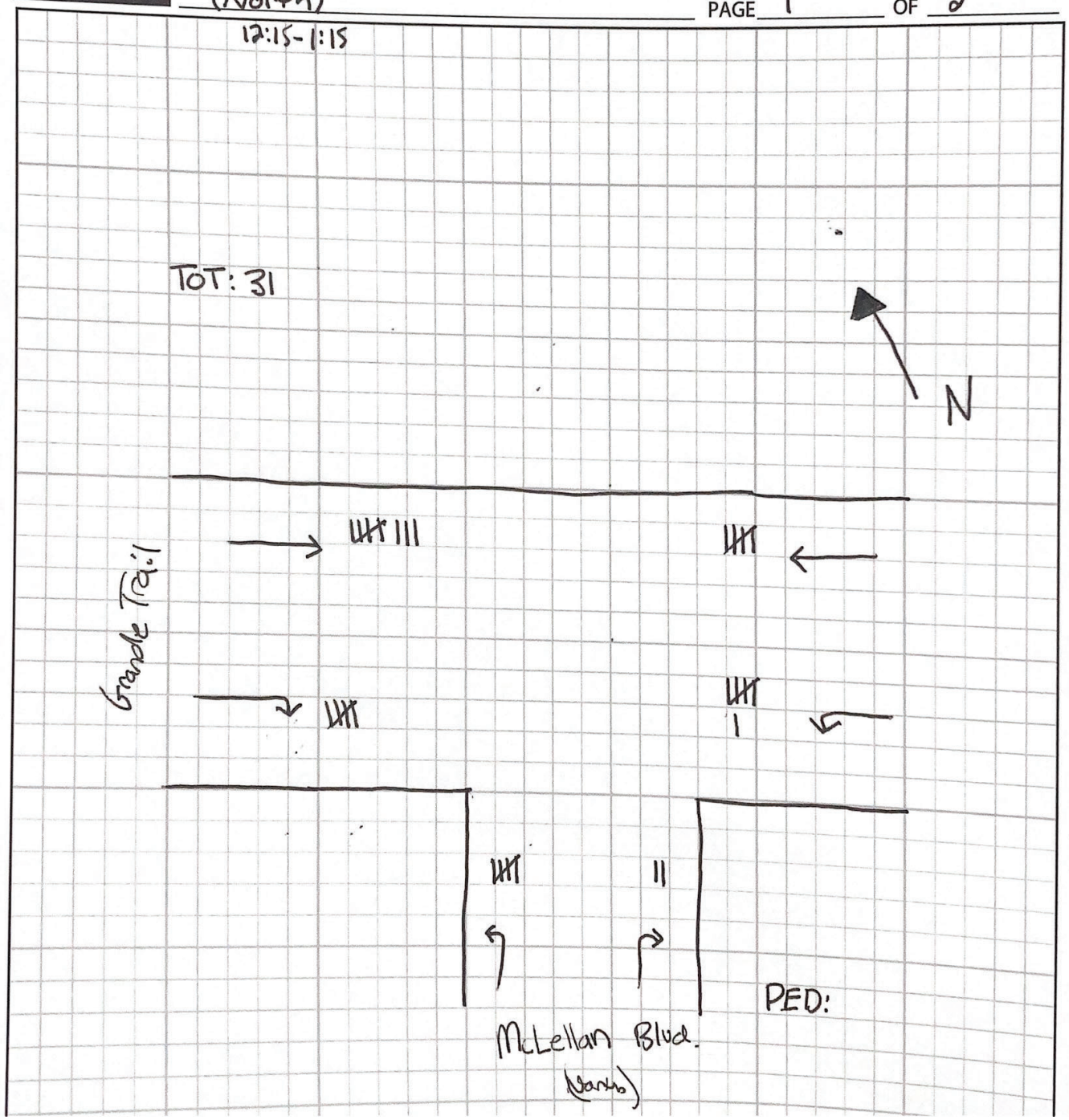
PROJECT _____ PROJECT NUMBER _____

SUBJECT Grande Trail and McLellan Blvd (North) BY HTI DATE 5/15/2023

PAGE 1 OF 2

12:15-1:15

TOT: 31



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52 Wheeler Road • Sugar Grove, Illinois 60554
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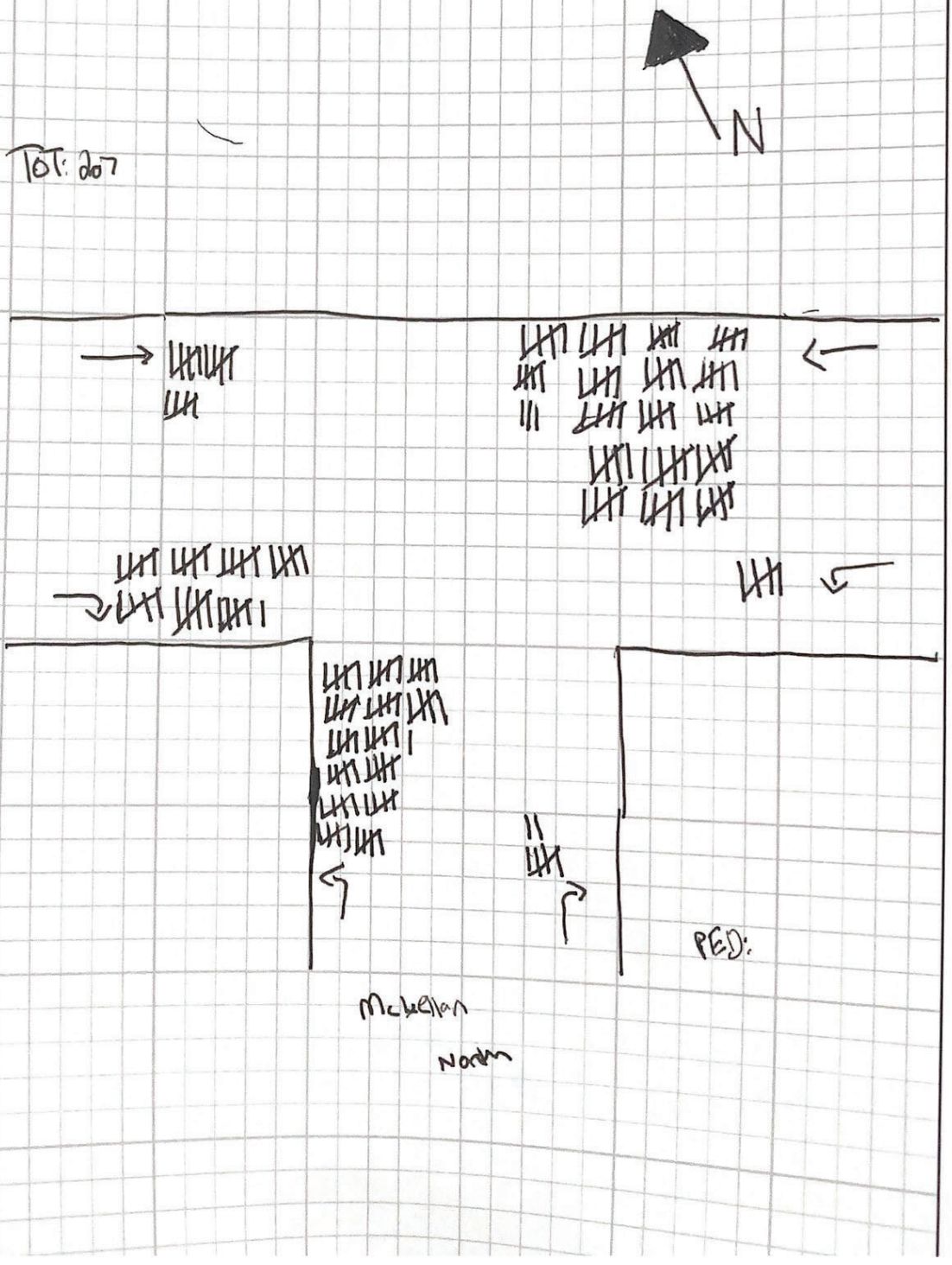
PROJECT _____ PROJECT NUMBER _____

SUBJECT Grande Trail and McLellan Blvd North BY HTI DATE 5/16/2023

PAGE 2 OF 2

8:00 - 9:00 Am



McLellan Blvd and Grande Trail
North Intersection Photos

Westbound approach, looking West

Westbound approach, looking South

McLellan Blvd and Grande Trail
North Intersection Photos

Eastbound approach, looking East

Eastbound approach, looking South

McLellan Blvd and Grande Trail
North Intersection Photos

Northbound approach, looking North

Northbound approach, looking West

McLellan Blvd and Grande Trail
North Intersection Photos

Northbound approach, looking East

Memorandum

To: Bart Olson, City Administrator
From: Brad Sanderson, EEI
CC: Eric Dhuse, Director of Public Works
Krysti Barksdale-Noble, Community Dev. Dir.
Jori Behland, City Clerk

Date: 5/18/2023
Subject: Grande Trail and McLellan Boulevard (South Intersection)

As requested, we investigated the possible installation of multi-way stop signs at the intersection of Grande Trail and McLellan Boulevard. Our findings were as follows:

- Currently the intersection is controlled by yield signs on McLellan Boulevard.
- The intersection at Grande Trail and McLellan Boulevard appears to have occasional sight constraints due to parked cars on the road.
- The governing entity on traffic control signage is the Manual on Uniform Traffic Control Devices (MUTCD). The manual states as follows in regards to multi-way stop sign installation: *Guidance:*
  The decision to install multi-way stop control should be based on an engineering study.
  The following criteria should be considered in the engineering study for a multi-way STOP sign installation:

  A. Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.
  B. Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.
  C. Minimum volumes:
    1. *The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and*
    2. *The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but*
    3. *If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.*

  D. Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.

  Option:
  Other criteria that may be considered in an engineering study include:
  A. The need to control left-turn conflicts;

B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
C. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and
D. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.

- The manual also states as follows in regards to stop sign installation:

  Yield or Stop signs should not be used for speed control.

The traffic volume on the major street approach would appear to be below the average of 300 vehicles per hour and the traffic volume on the minor street approach would appear to be below the average of 200 units per hour for any 8 hours of an average day. Parked vehicles on both Grande Trail and McLellan Boulevard create sight constraints. This is an area with high pedestrian volumes due to the vicinity of the park and public pool. Due to the high number of pedestrians and sight constraints, this intersection is a good candidate for a multi-way stop based on the above criteria. Stop signs should be implemented at all approaches to this intersection.

UNITED CITY OF YORKVILLE
MULTI-WAY STOP
PRELIMINARY ENGINEERING EVALUATION

Location: Grande Trail and McLellan Boulevard (South)

Primary Criteria to Consider*

Criteria Met			Criteria**
Yes	Additional Study Required	No	
☐	☐	☒	A. Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.
☐	☐	☒	B. Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.
			C. Minimum Volumes:
☐	☐	☒	1. The vehicular volume entering the intersections from the major street approaches (total of both approaches)averages at least 300 vehicles per hour for any 8 hours of an average day; and
☐	☐	☒	2. The combined vehicular, pedestrian, and bicycle volume entering the intersections from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but
☐	☐	☒	3. If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.
☐	☐	☒	D. Where no single criterion is satisfied, but where Criteria B, C.1 and C.2 are all satisfied to 80 percent of the minimum values, criterion C.3 is excluded from this condition.
☐	☐	☒	E. The need to control left-turn conflicts;
☒	☐	☐	F. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
☒	☐	☐	G. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and
☐	☐	☒	H. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.

Based on a preliminary review of the criteria for a multi-way stop sign the following action is recommended:

☒ Criteria are clearly met recommending installation of a multi-way stop

☐ Criteria are not clearly met at this time - no further action recommended

☐ Criteria may or may not be met - additional engineering study required

By: Todd Wells Date: 5/18/2023

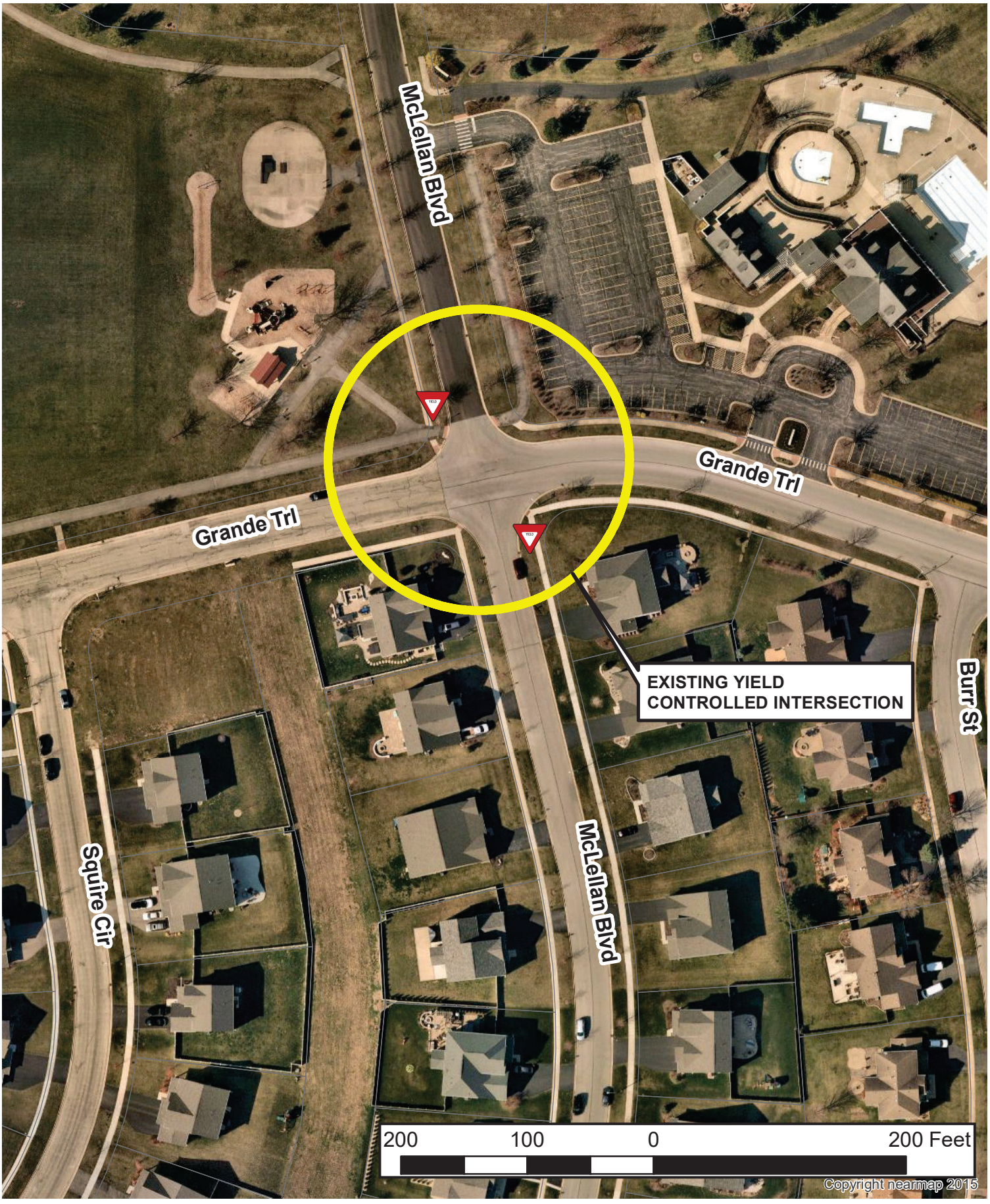
SENIOR PROJECT ENGINEER II
Title

By: Brad Sanderson Date: 5/18/2023

CHIEF OPERATING OFFICER/ PRESIDENT
Title

* Based upon Professional Engineer's Review
** Manual on Uniform Traffic Control Devices (MUTCD)

10/10/2013



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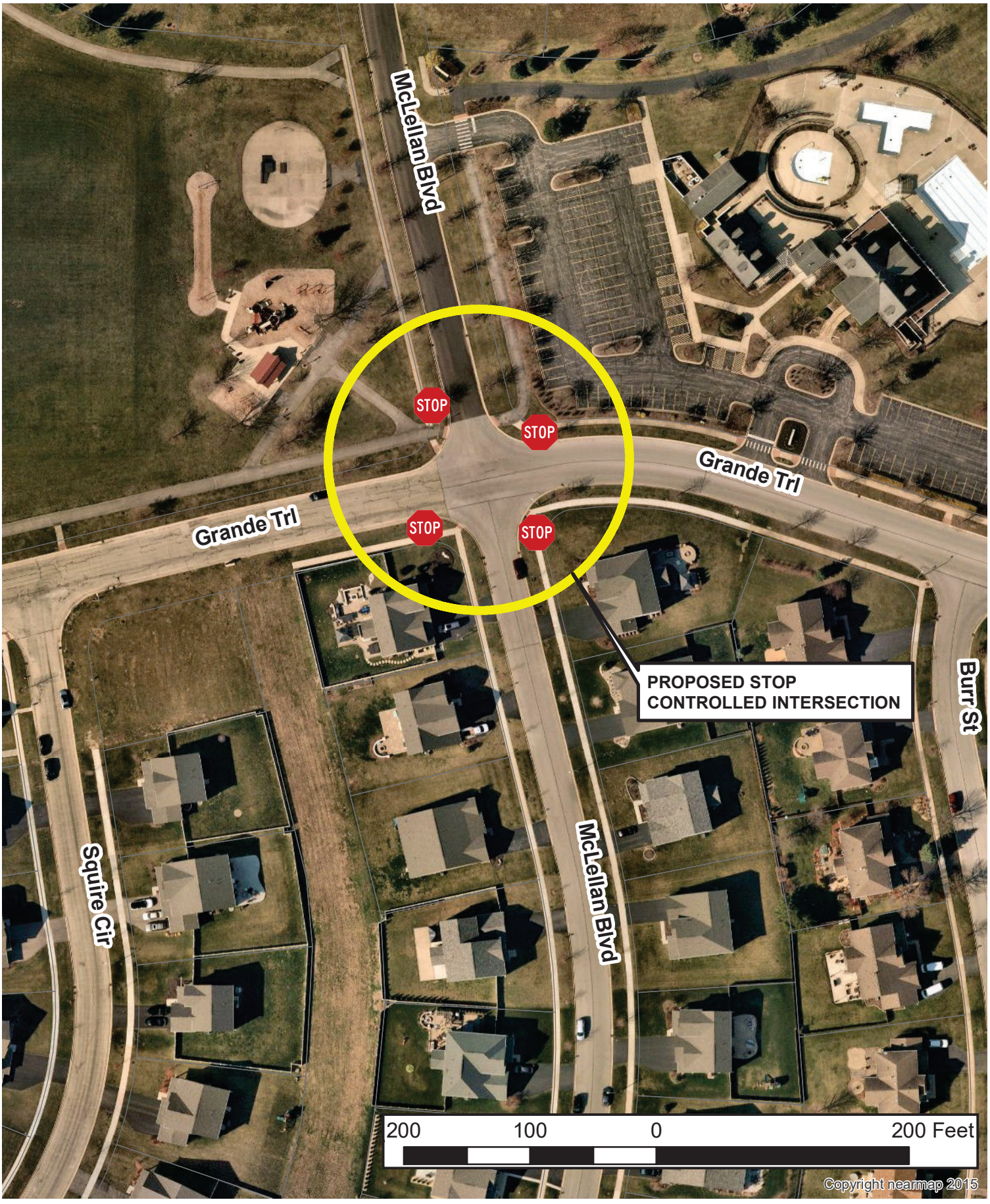
DATE:	MAY 2023
PROJECT NO.:	YO1107
BY:	MJT
PATH:	H:\GIS\PUBLIC\YORKVILLE\2011\
FILE:	YO1107_Grande Trail & McLellan Blvd South Stop Analysis_Existing

GRANDE TRAIL & MCLELLAN BLVD SOUTH
STOP SIGN ANALYSIS

N



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DATE:	MAY 2023
PROJECT NO.:	YO1107
BY:	MJT
PATH:	H:\GIS\PUBLIC\YORKVILLE\2011\
FILE:	YO1107_Grande Trail & McLellan Blvd South Stop Analysis_Proposed

GRANDE TRAIL & MCLELLAN BLVD SOUTH STOP SIGN ANALYSIS

N

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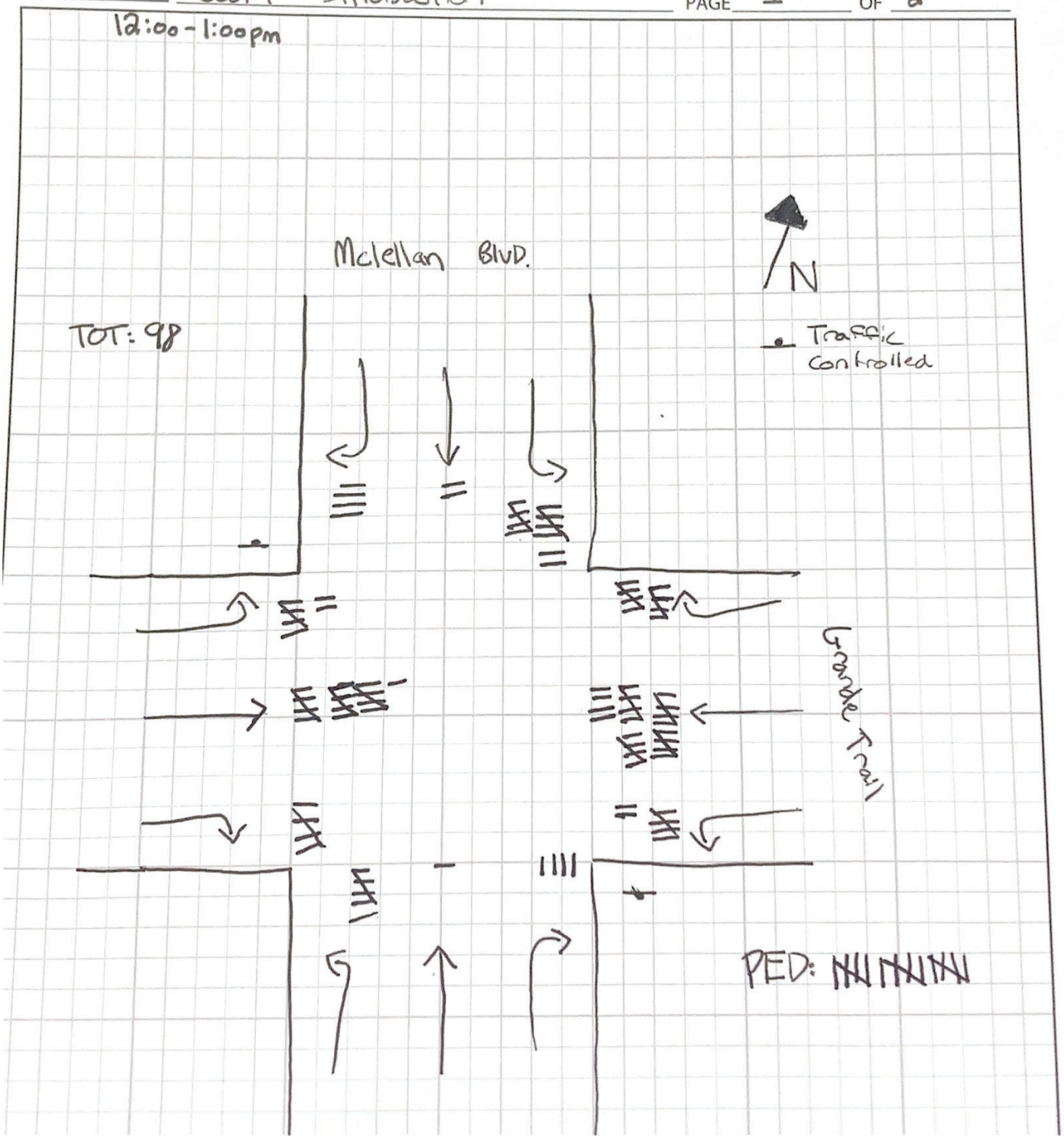
PROJECT _____ PROJECT NUMBER _____

SUBJECT McLellan Blvd. and Grande Trail South Intersection BY HTI DATE 5/11/2023

PAGE 1 OF 2

12:00 - 1:00pm



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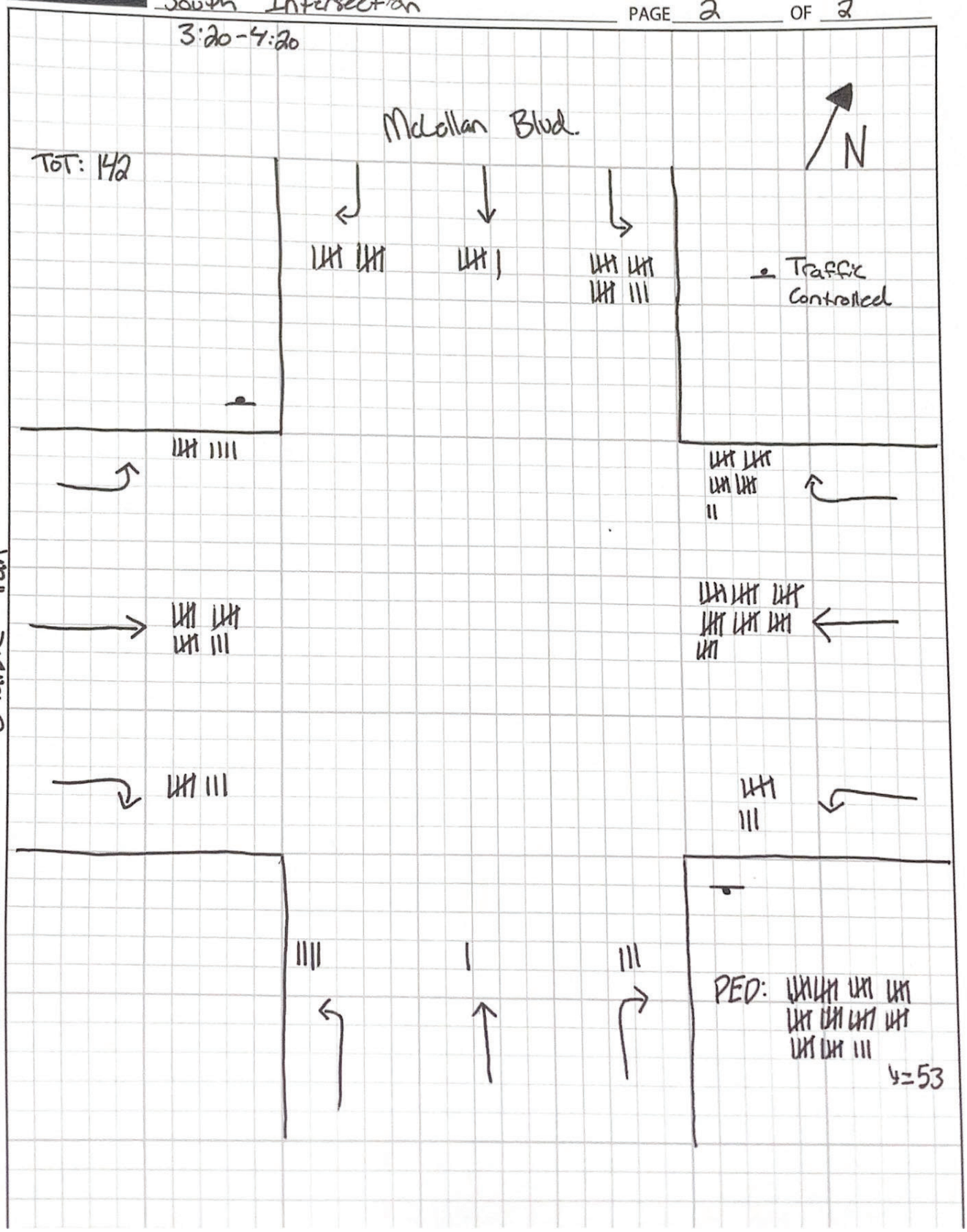
PROJECT _____ PROJECT NUMBER _____

SUBJECT McLellan Blvd. and Grande Trail South Intersection BY HTI DATE 5/16/2023

PAGE 2 OF 2

3:20-4:20



McLellan Blvd. and Grande Trail

Intersection Photos

Eastbound approach, looking East

Eastbound approach, looking North

McLellan Blvd. and Grande Trail

Intersection Photos

Eastbound approach, looking South

Southbound approach, looking South

McLellan Blvd. and Grande Trail

Intersection Photos

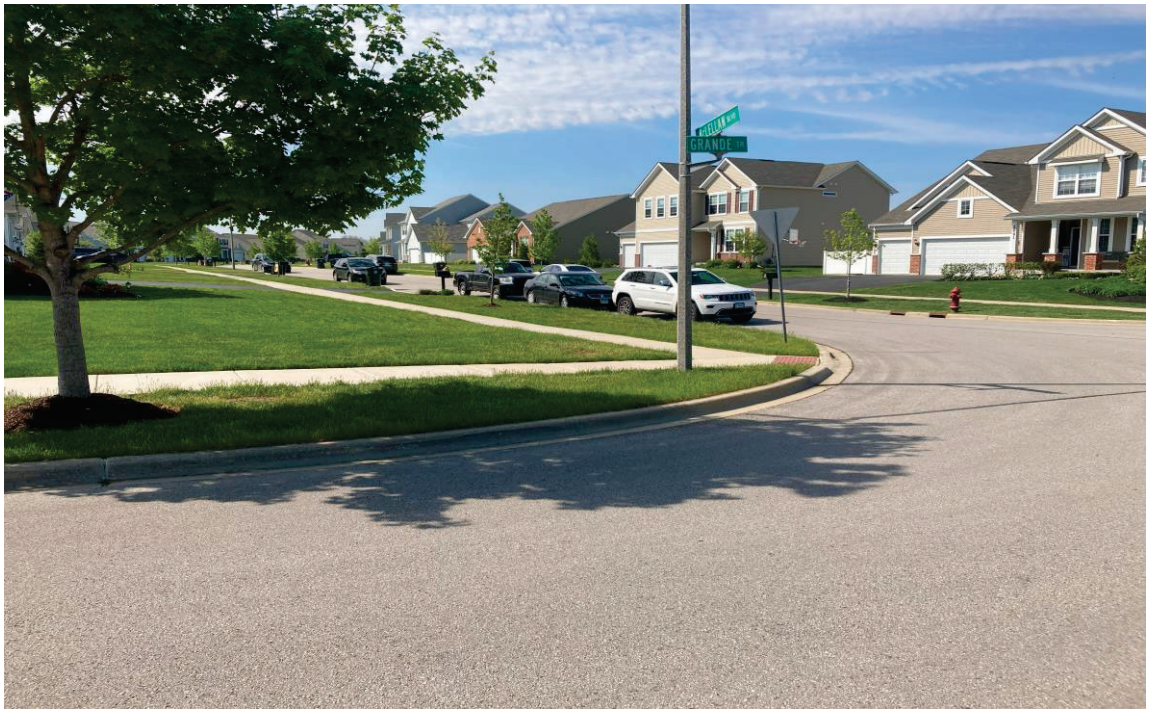
Southbound approach, looking East

Southbound approach, looking West

McLellan Blvd. and Grande Trail

Intersection Photos

Westbound approach, looking West



Westbound approach, looking South

McLellan Blvd. and Grande Trail

Intersection Photos

Westbound approach, looking North

Northbound approach, looking North

McLellan Blvd. and Grande Trail

Intersection Photos

Northbound approach, looking West

Northbound approach, looking East

Memorandum

To: Bart Olson, City Administrator
From: Brad Sanderson, EEI
CC: Eric Dhuse, Director of Public Works
Krysti Barksdale-Noble, Community Dev. Dir.
Jori Behland, City Clerk

Date: 5/31/2023
Subject: Berrywood Lane and Seeley Street

As requested, we investigated the possible installation of two way yield or stop signs at the intersection of Berrywood Lane and Seeley Street. Our findings were as follows:

- Currently the intersection is controlled by a stop sign on the southbound approach of Seeley Street.
- The intersection at Berrywood Lane and Seeley Street does not appear to have any sight distance constraints and appears to be "open".
- The governing entity on traffic control signage is the Manual on Uniform Traffic Control Devices (MUTCD). The manual states as follows in regards to yield or stop sign installation: *Guidance: Engineering judgment should be used to establish intersection control. The following factors should be considered:*

  A. Vehicular, bicycle, and pedestrian traffic volumes on all approaches;

  B. Number and angle of approaches;

  C. Approach speeds;

  D. Sight distance available on each approach; and

  E. Reported crash experience.

  YIELD or STOP signs should be used at an intersection if one or more of the following conditions exist:

  A. An intersection of a less important road with a main road where application of the normal right-of-way rule would not be expected to provide reasonable compliance with the law.

  B. A street entering a designed through highway or street; and/or

  C. An unsignalized intersection in a signalized area.

  In addition, the use of YIELD or STOP signs should be considered at the intersection of the two minor streets or local roads where the intersection has more than three approaches and where one or more of the following conditions exist:

  A. The combined vehicular, bicycle, and pedestrian volume entering the intersection from all approaches averages more than 2,000 units per day;

  B. The ability to see conflicting traffic on an approach is not sufficient to allow a road user to stop or yield in compliance with the normal right-of-way rule if such stopping or yielding is necessary; and/or

  C. Crash records indicate that five or more crashes that involve the failure to yield to the right-of-way at the intersection under the normal right-of-way rule have been reported within a 3-year period, or that three or more such crashes have been reported within a 2-year period.

  The manual also states as follows in regards to stop or yield sign installation:

  Yield or Stop signs should not be used for speed control.

The application of normal right-of-way rule is expected to provide reasonable compliance for this intersection. This intersection is not in a signalized area. This intersection averages over 2,000 units a day of all combined traffic and pedestrians. Seeley Street approaches Berrywood Lane which is a through street. This makes Seeley Street a good candidate for a stop sign installation for the Northbound approach.

UNITED CITY OF YORKVILLE
TWO WAY STOP
PRELIMINARY ENGINEERING EVALUATION

Location: Berrywood Lane and Seeley Street

Evaluation Criteria

Guidance: Engineering judgement should be used to establish intersection control. The following factors should be considered:

A. Vehicular, bicycle, and pedestrian traffic volumes on all approaches;
B. Number and angle of approaches;
C. Approach speeds;
D. Sight distance available on each approach; and
E. Reported crash experience.

Criteria Met			Criteria**
Yes	Additional Study Required	No	
			I. YIELD or STOP signs should be used at an intersection if one or more of the following conditions exist:
☐	☐	☒	A. An intersection of a less important road with a main road where application of the normal right-of-way rule would not be expected to provide reasonable compliance with the law.
☒	☐	☐	B. A street entering a designated through highway or street; and/or
☐	☐	☒	C. An unsignalized intersection in a signalized area.
			II. In addition, the use of YIELD or STOP signs should be considered at the intersection of two minor streets or local roads where the intersection has more than three approaches and where one or more of the following conditions exist:
☒	☐	☐	A. The combined vehicular, bicycle, and pedestrian volume entering the intersection from all approaches averages more than 2,000 units per day;
☐	☐	☒	B. The ability to see conflicting traffic on an approach is not sufficient to allow a road user to stop or yield in compliance with the normal right-of-way rule if such stopping or yielding is necessary; and/or
☐	☐	☒	C. Crash records indicate that five or more crashes that involve the failure to yield the right-of-way at the intersection under the normal right-of-way rule have been reported within a 3-year period, or that three or more such crashes have been reported within a 2-year period.

Based on a preliminary review of the criteria for a YIELD or STOP sign the following action is recommended:

A. ☒ Criteria are clearly met recommending installation of a YIELD or STOP sign (Circle designated sign type)
Designate Location: Seeley Street

B. ☐ Criteria are not clearly met at this time - no further action recommended

C. ☐ Criteria may or may not be met - additional engineering study required

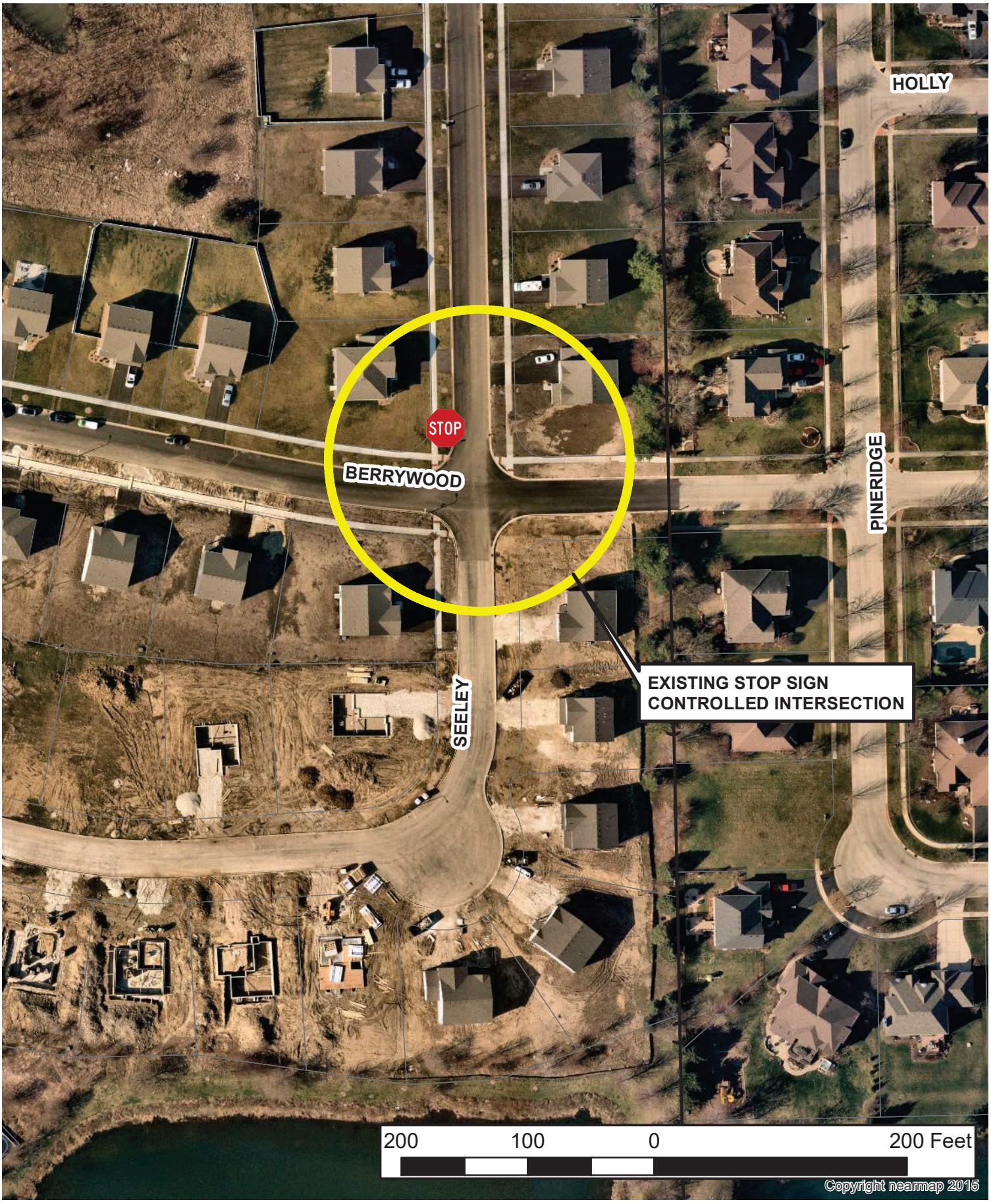
By: TODD WELLS Date: 6/1/2023

SENIOR PROJECT ENGINEER II
Title

By: BRAD SANDERSON Date: 6/1/2023

CHIEF OPERATING OFFICER/ PRESIDENT
Title

* Based upon Professional Engineer's Review
** Manual on Uniform Traffic Control Devices (MUTCD)



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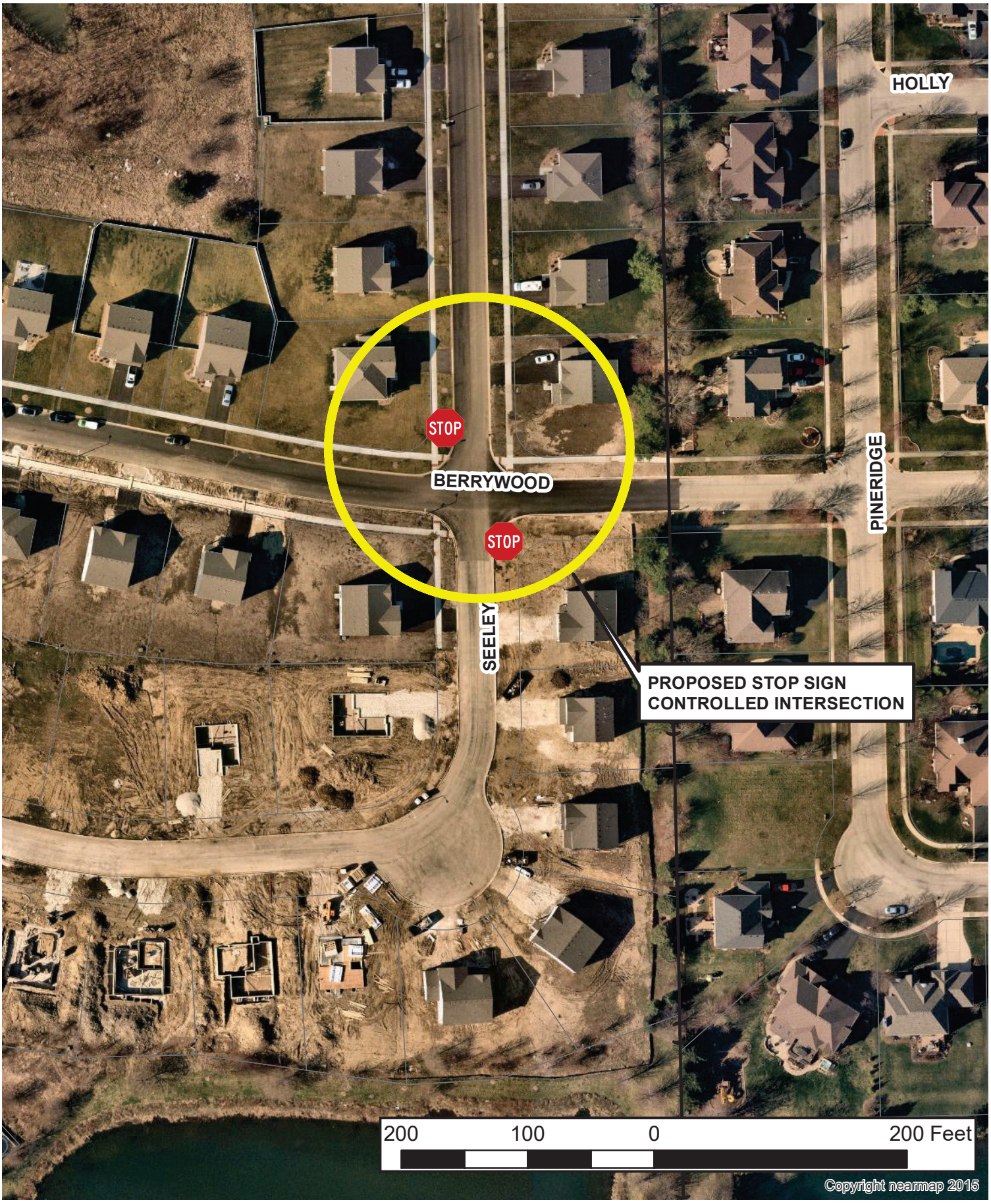
DATE:	MAY 2023
PROJECT NO.:	YO1107
BY:	MJT
PATH:	H:\GIS\PUBLIC\YORKVILLE\2011\
FILE:	YO1107_Berrywood Ln & Seeley St Stop Analysis - Existing

Seeley St and Berrywood Ln
STOP SIGN ANALYSIS

N



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DATE:	MAY 2023
PROJECT NO.:	YO1107
BY:	MJT
PATH:	H:\GIS\PUBLIC\YORKVILLE\2011\
FILE:	YO1107_Berrywood Ln & Seeley St Stop Analysis - Proposed

Seeley St and Berrywood Ln
STOP SIGN ANALYSIS

N

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52 Wheeler Road • Sugar Grove, Illinois 60554
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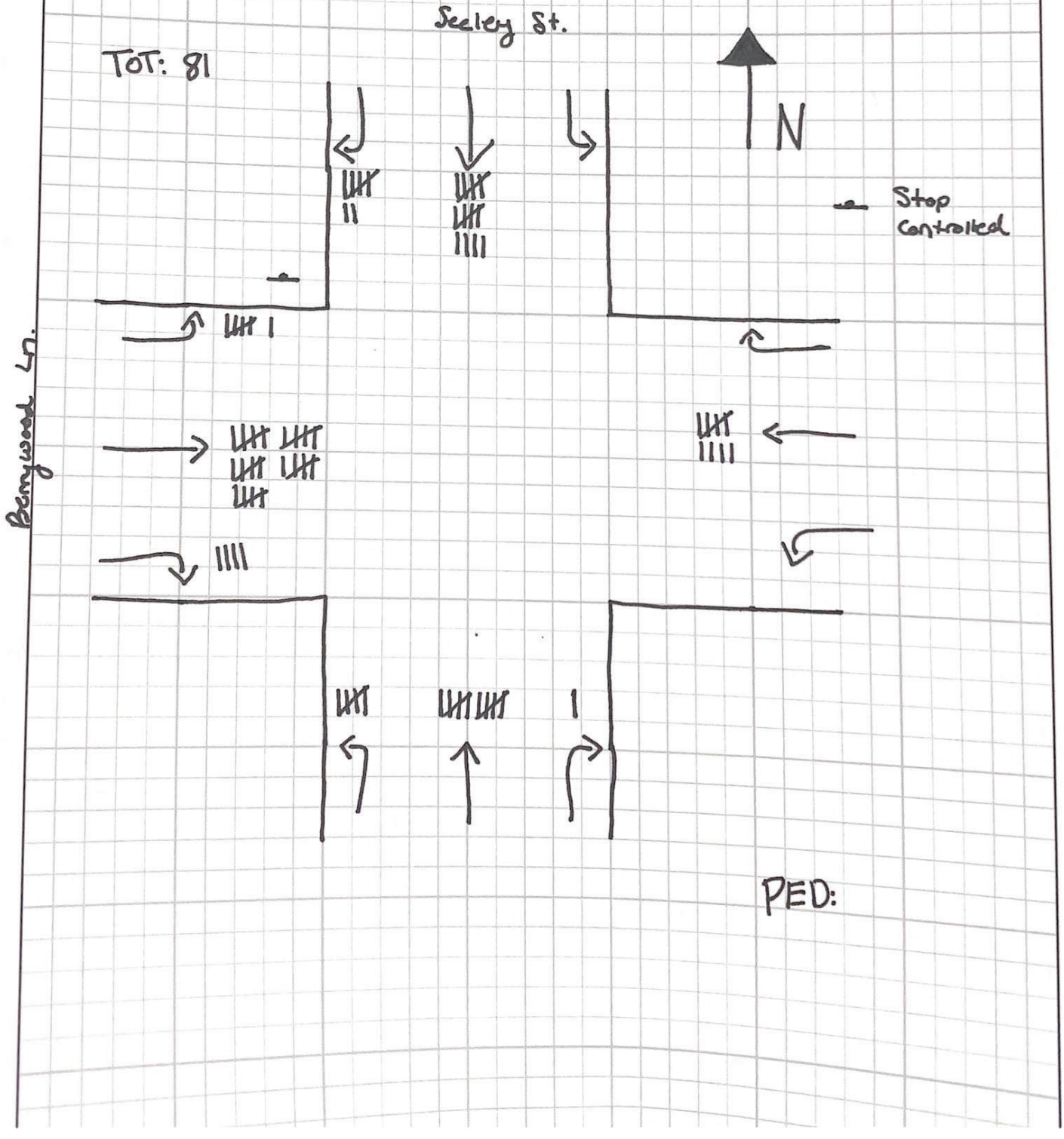
PROJECT _____ PROJECT NUMBER _____

SUBJECT Seeley St and Berrywood Ln (East) BY HTI DATE 5/12/2023

PAGE 1 OF 2



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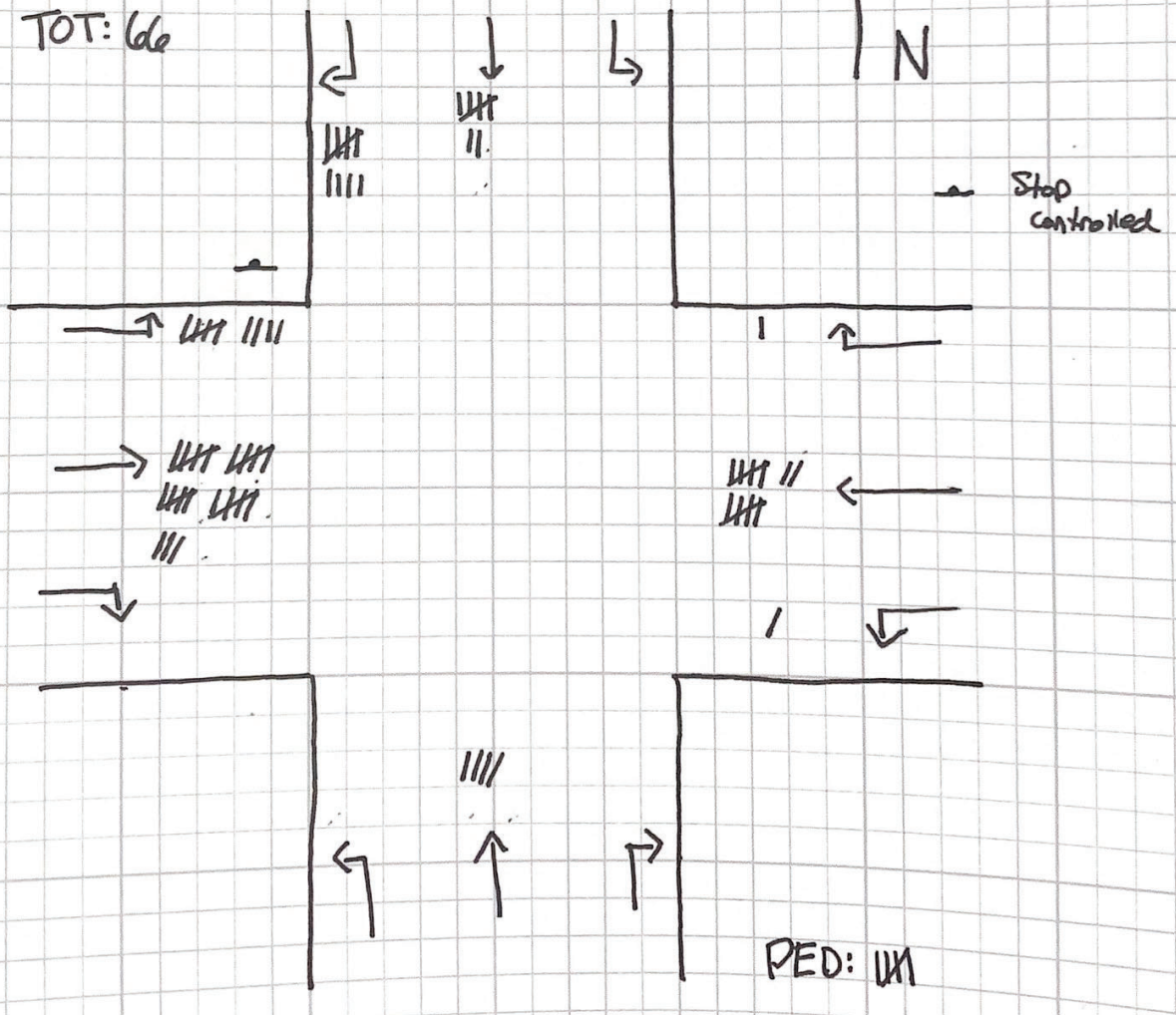
FAX: (630) 466-6701

PROJECT _____ PROJECT NUMBER _____

SUBJECT Seeley St and Berryweed Ln (East) BY HTI DATE 5/16/2023

PAGE 2 OF 2



Engineering Enterprises, Inc.
52 Wheeler Road • Sugar Grove, Illinois 60554
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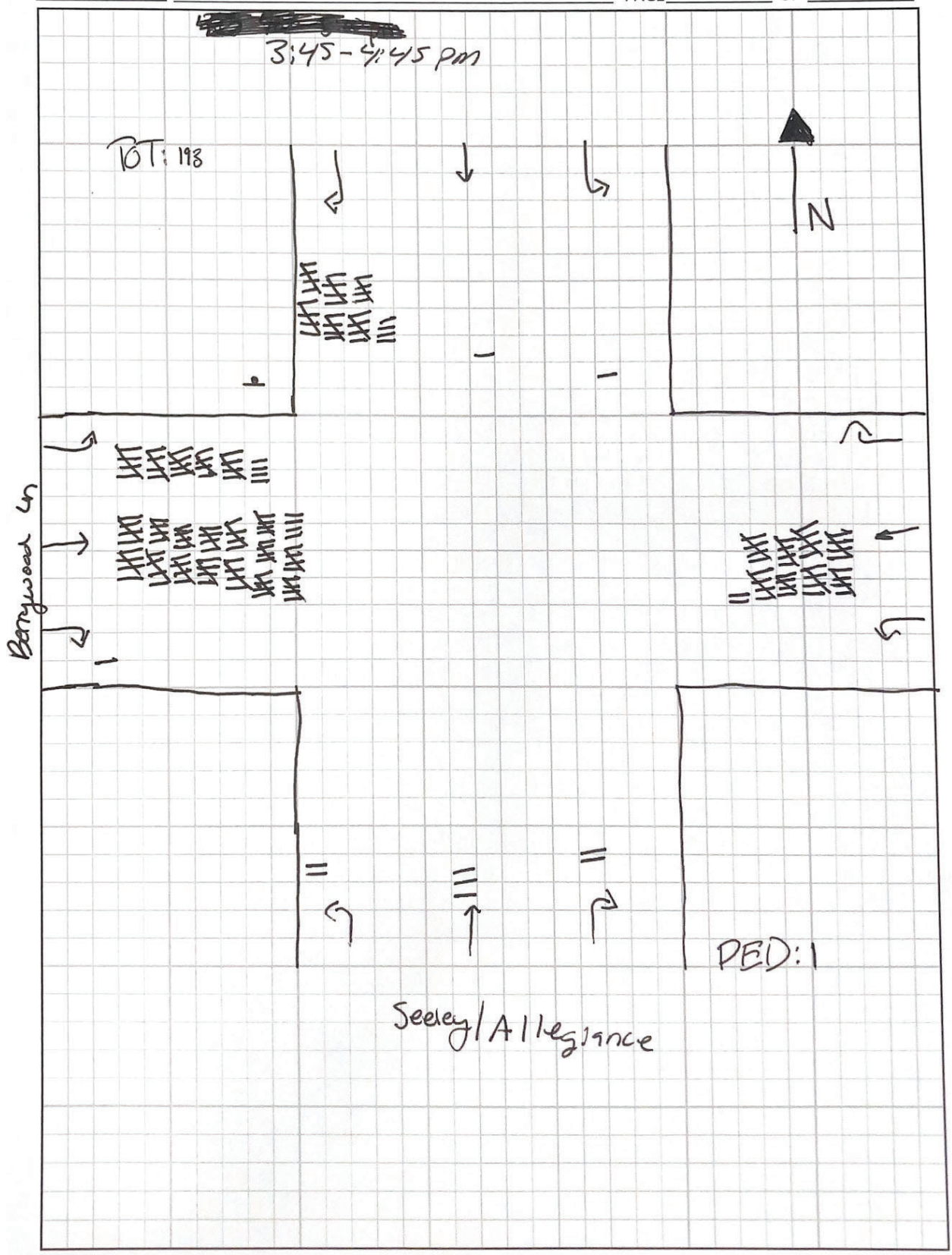
PROJECT _____ PROJECT NUMBER _____

SUBJECT Seeley St and Berrywood Ln BY HCD DATE 5/31/2023

PAGE _____ OF _____

[redacted] 3:45 - 4:45 pm



Engineering Enterprises, Inc.
52 Wheeler Road • Sugar Grove, Illinois 60554
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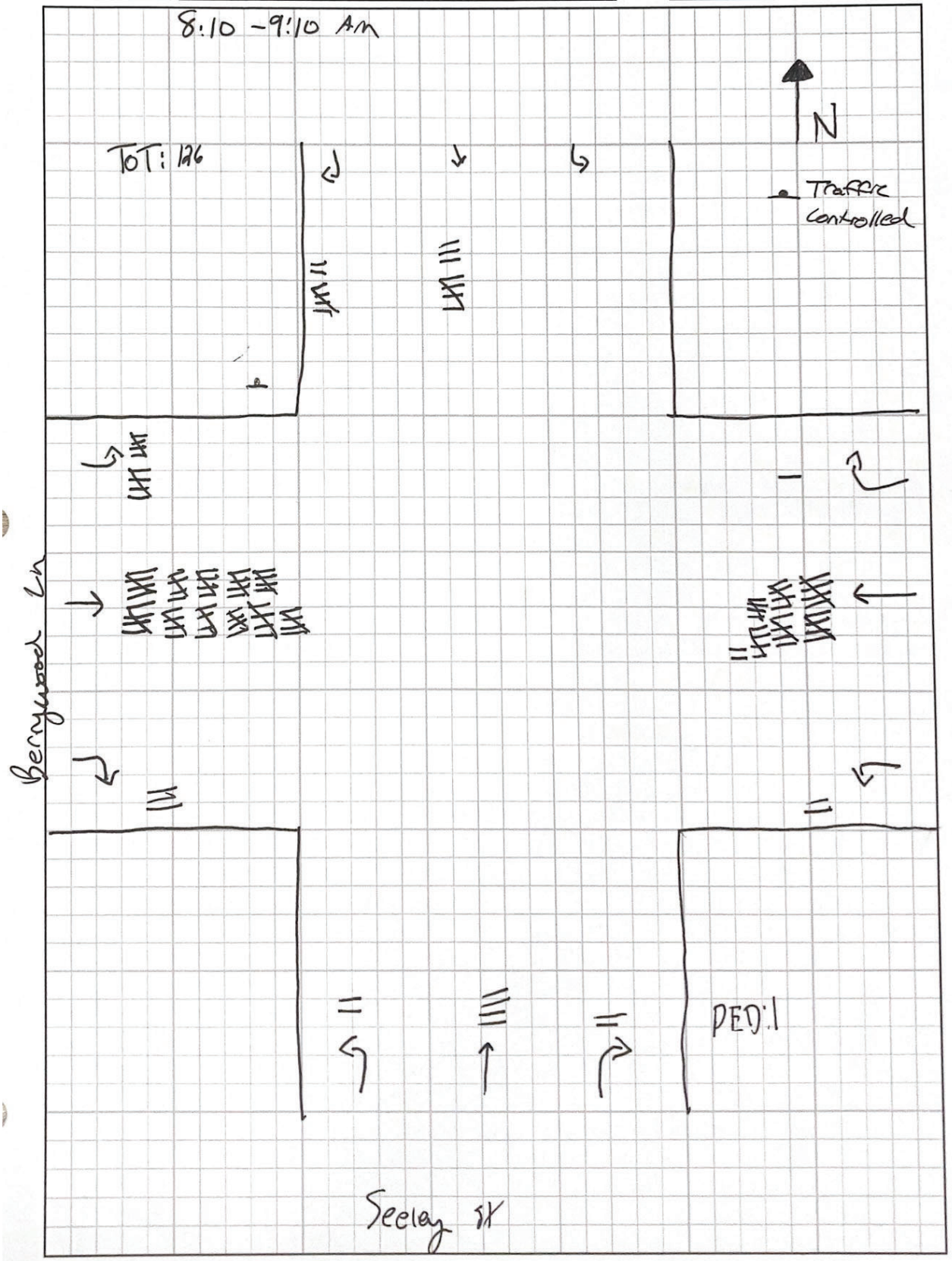
FAX: (630) 466-6701

PROJECT _____ PROJECT NUMBER _____
SUBJECT Seeley St. and Berrywood Ln. BY HTD DATE 6/1/2023
_____ PAGE _____ OF _____

8:10 - 9:10 AM



Seeley St and Berrywood Ln

Intersection Photos

Northbound approach, looking North

Northbound approach, looking West

Seeley St and Berrywood Ln

Intersection Photos

Northbound approach, looking East

Eastbound approach, looking East

Seeley St and Berrywood Ln

Intersection Photos

Eastbound approach, looking North

Eastbound approach, looking South

Seeley St and Berrywood Ln

Intersection Photos

Southbound approach, looking South

Southbound approach, looking East

Seeley St and Berrywood Ln

Intersection Photos

Southbound approach, looking West

Westbound approach, looking West

Seeley St and Berrywood Ln

Intersection Photos

Westbound approach, looking South

Westbound approach, looking North

Memorandum

To: Bart Olson, City Administrator
From: Brad Sanderson, EEI
CC: Eric Dhuse, Director of Public Works
Krysti Barksdale-Noble, Community Dev. Dir.
Jori Behland, City Clerk

Date: 5/31/2023
Subject: Grande Trail and Sunset Avenue

As requested, we investigated the possible installation of two way yield or stop signs at the intersection of Grande Trail and Sunset Avenue. Our findings were as follows:

- Currently the intersection is controlled by a yield sign on Sunset Avenue.
- The intersection at Grande Trail and Sunset Avenue does not appear to have any sight distance constraints and appears to be "open".
- The governing entity on traffic control signage is the Manual on Uniform Traffic Control Devices (MUTCD). The manual states as follows in regards to yield or stop sign installation: *Guidance: Engineering judgment should be used to establish intersection control. The following factors should be considered:*

  A. Vehicular, bicycle, and pedestrian traffic volumes on all approaches;

  B. Number and angle of approaches;

  C. Approach speeds;

  D. Sight distance available on each approach; and

  E. Reported crash experience.

  YIELD or STOP signs should be used at an intersection if one or more of the following conditions exist:

  A. An intersection of a less important road with a main road where application of the normal right-of-way rule would not be expected to provide reasonable compliance with the law.

  B. A street entering a designed through highway or street; and/or

  C. An unsignalized intersection in a signalized area.

  In addition, the use of YIELD or STOP signs should be considered at the intersection of two minor streets or local roads where the intersection has more than three approaches and where one or more of the following conditions exist:

  A. The combined vehicular, bicycle, and pedestrian volume entering the intersection from all approaches averages more than 2,000 units per day;

  B. The ability to see conflicting traffic on an approach is not sufficient to allow a road user to stop or yield in compliance with the normal right-of-way rule if such stopping or yielding is necessary; and/or

  C. Crash records indicate that five or more crashes that involve the failure to yield the right-of-way at the intersection under the normal right-of-way rule have been reported within a 3-year period, or that three or more such crashes have been reported within a 2-year period.

  The manual also states the following in regards to stop or yield sign installation:
  Yield or Stop signs should not be used for speed control

The application of normal right-of-way rule is expected to provide reasonable compliance for this intersection. This intersection is not in a signalized area. This intersection only has three approaches. Sunset Avenue approaches Grande Trail which is a through street. This makes Sunset Avenue a good candidate for a stop sign installation.

UNITED CITY OF YORKVILLE
TWO WAY STOP
PRELIMINARY ENGINEERING EVALUATION

Location: Sunset Avenue and Grande Trail

Evaluation Criteria

Guidance: Engineering judgement should be used to establish intersection control. The following factors should be considered:

A. Vehicular, bicycle, and pedestrian traffic volumes on all approaches;
B. Number and angle of approaches;
C. Approach speeds;
D. Sight distance available on each approach; and
E. Reported crash experience.

Criteria Met			Criteria**
Yes	Additional Study Required	No	
			I. YIELD or STOP signs should be used at an intersection if one or more of the following conditions exist:
☐	☐	☒	A. An intersection of a less important road with a main road where application of the normal right-of-way rule would not be expected to provide reasonable compliance with the law.
☒	☐	☐	B. A street entering a designated through highway or street; and/or
☐	☐	☒	C. An unsignalized intersection in a signalized area.
			II. In addition, the use of YIELD or STOP signs should be considered at the intersection of two minor streets or local roads where the intersection has more than three approaches and where one or more of the following conditions exist:
☐	☐	☒	A. The combined vehicular, bicycle, and pedestrian volume entering the intersection from all approaches averages more than 2,000 units per day;
☐	☐	☒	B. The ability to see conflicting traffic on an approach is not sufficient to allow a road user to stop or yield in compliance with the normal right-of-way rule if such stopping or yielding is necessary; and/or
☐	☐	☒	C. Crash records indicate that five or more crashes that involve the failure to yield the right-of-way at the intersection under the normal right-of-way rule have been reported within a 3-year period, or that three or more such crashes have been reported within a 2-year period.

Based on a preliminary review of the criteria for a YIELD or STOP sign the following action is recommended:

A. ☒ Criteria are clearly met recommending installation of a YIELD or STOP sign (Circle designated sign type)
Designate Location: Sunset Avenue

B. ☐ Criteria are not clearly met at this time - no further action recommended

C. ☐ Criteria may or may not be met - additional engineering study required

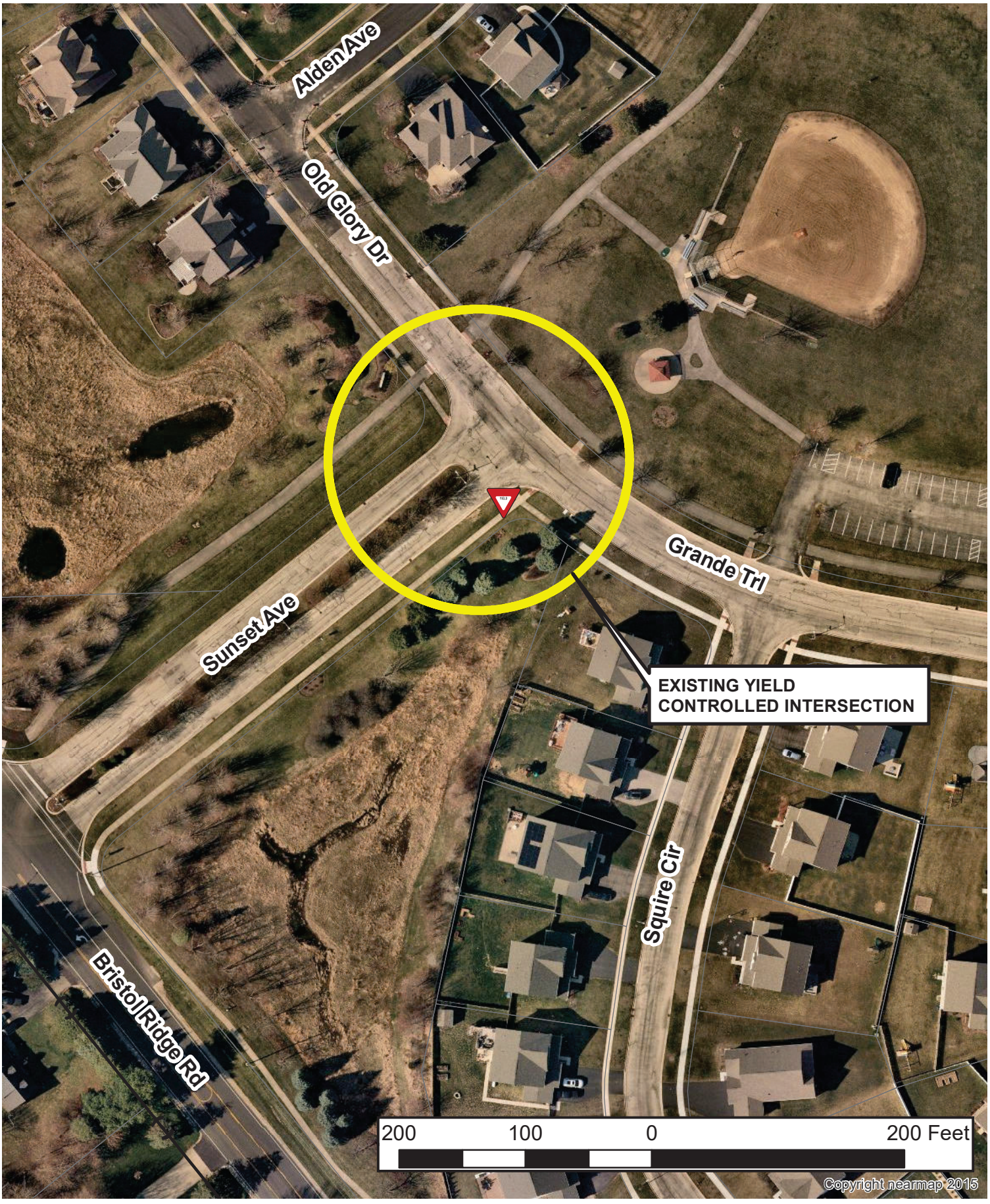
By: TODD WELLS Date: 6/1/2023

SENIOR PROJECT ENGINEER II
Title

By: BRAD SANDERSON Date: 6/1/2023

CHIEF OPERATING OFFICER/ PRESIDENT
Title

* Based upon Professional Engineer's Review
** Manual on Uniform Traffic Control Devices (MUTCD)



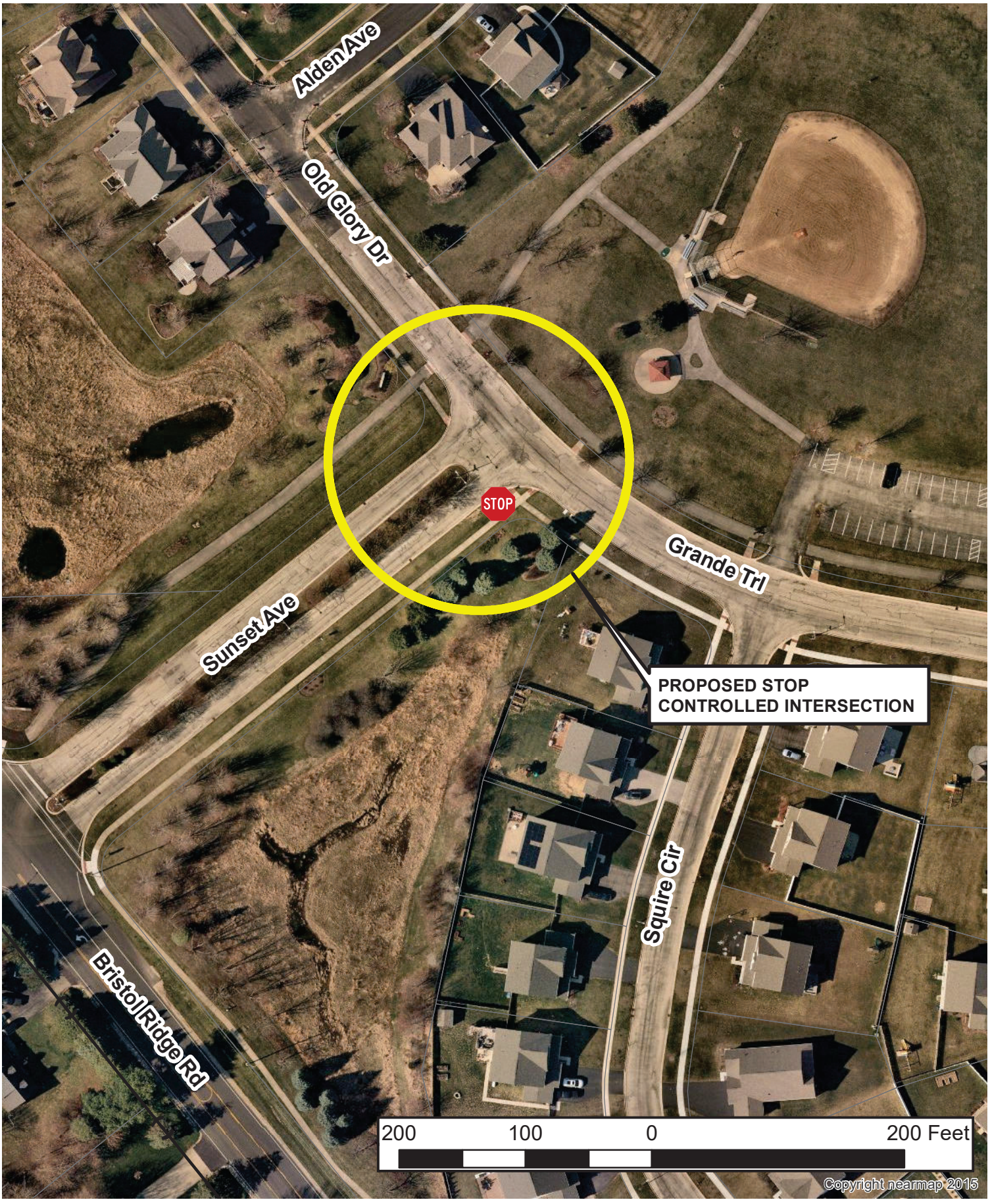
Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
(630) 466-6700
www.eeiweb.com

United City of Yorkville
800 Game Farm Road
Yorkville, IL 60560
630-553-4350

DATE:	MAY 2023
PROJECT NO.:	YO1107
BY:	MJT
PATH:	H:\GIS\PUBLIC\YORKVILLE\2011\
FILE:	YO1107_Grande Trail & Sunset Ave Stop Analysis - Existing

GRANDE TRAIL & SUNSET AVE STOP SIGN ANALYSIS

N



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DATE:	MAY 2023
PROJECT NO.:	YO1107
BY:	MJT
PATH:	H:\GIS\PUBLIC\YORKVILLE\2011\
FILE:	YO1107_Grande Trail & Sunset Ave Stop Analysis - Proposed

GRANDE TRAIL & SUNSET AVE STOP SIGN ANALYSIS

N

Engineering Enterprises, Inc.
52 Wheeler Road • Sugar Grove, Illinois 60554
TEL: (630) 466-6700
FAX: (630) 466-6701

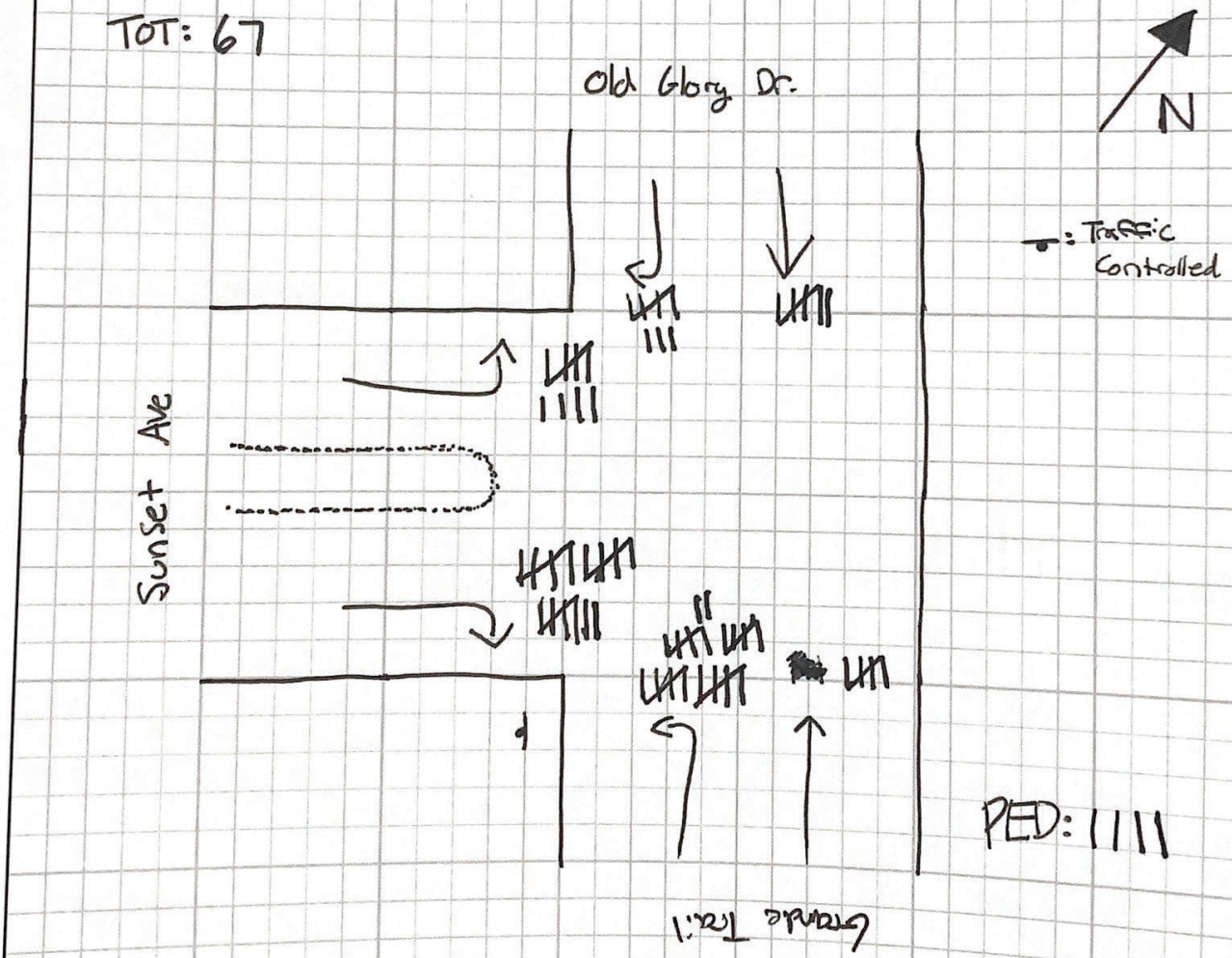
PROJECT _____ PROJECT NUMBER _____

SUBJECT Grande Trail and Sunset Ave BY HTI DATE 5/11/2023

PAGE 1 OF 2

8:15 – 9:15

TOT: 67

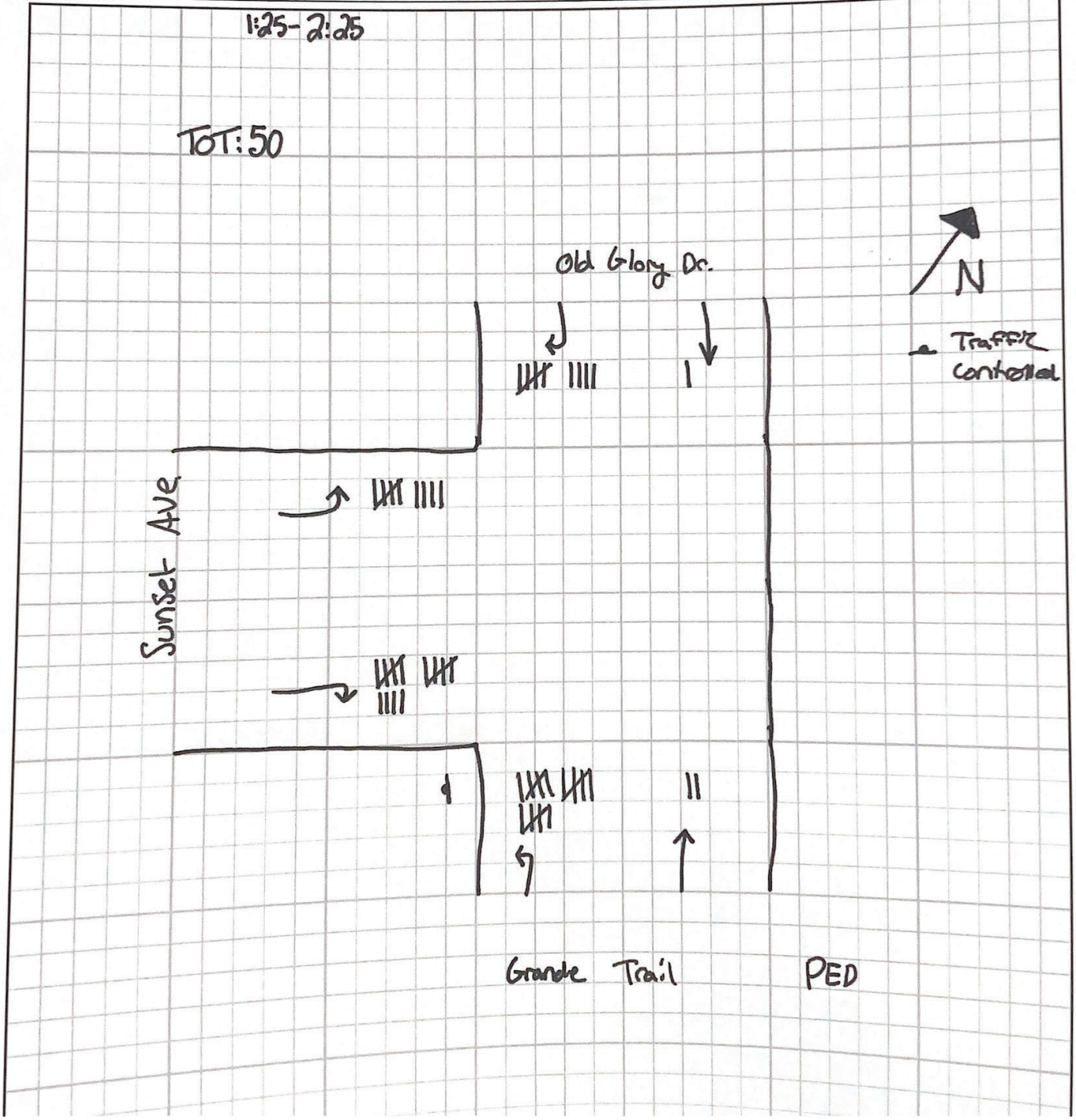


Engineering Enterprises, Inc.
52 Wheeler Road • Sugar Grove, Illinois 60554
TEL: (630) 466-6700
FAX: (630) 466-6701

PROJECT _____ PROJECT NUMBER _____
SUBJECT Grande Trail and Sunset Ave. BY HII DATE 5/15/2023
PAGE 2 OF 2

1:25-2:25

TOT: 50



Grande Trail and Sunset Ave

Intersection Photos

Northbound approach, looking North

Northbound approach, looking West

Grande Trail and Sunset Ave

Intersection Photos

Eastbound approach, looking East

Eastbound approach, looking North

Grande Trail and Sunset Ave

Intersection Photos

Eastbound approach, looking South

Southbound approach, looking South

Grande Trail and Sunset Ave

Intersection Photos

Southbound approach, looking West

Reviewed By:	
Legal	☐
Finance	☐
Engineer	■
City Administrator	☐
Community Development	☐
Purchasing	☐
Police	☐
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

New Business #5

Tracking Number

PW 2023-61

Agenda Item Summary Memo

Title: Garden Street – No Parking Recommendation

Meeting and Date: Public Works Committee – July 18, 2023

Synopsis: Review of Recommendation

Council Action Previously Taken:

Date of Action: _____ Action Taken: _____

Item Number: _____

Type of Vote Required: Majority

Council Action Requested: Approval

Submitted by: Brad Sanderson (Name) Engineering (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
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Memorandum

To: Bart Olson, City Administrator
From: Brad Sanderson, EEI
CC: Eric Dhuse, Director of Public Works
Jori Behland, City Clerk
Krysti Barksdale Noble, Community Development Director

Date: June 26, 2023
Subject: Garden Street – No Parking Recommendation

Background

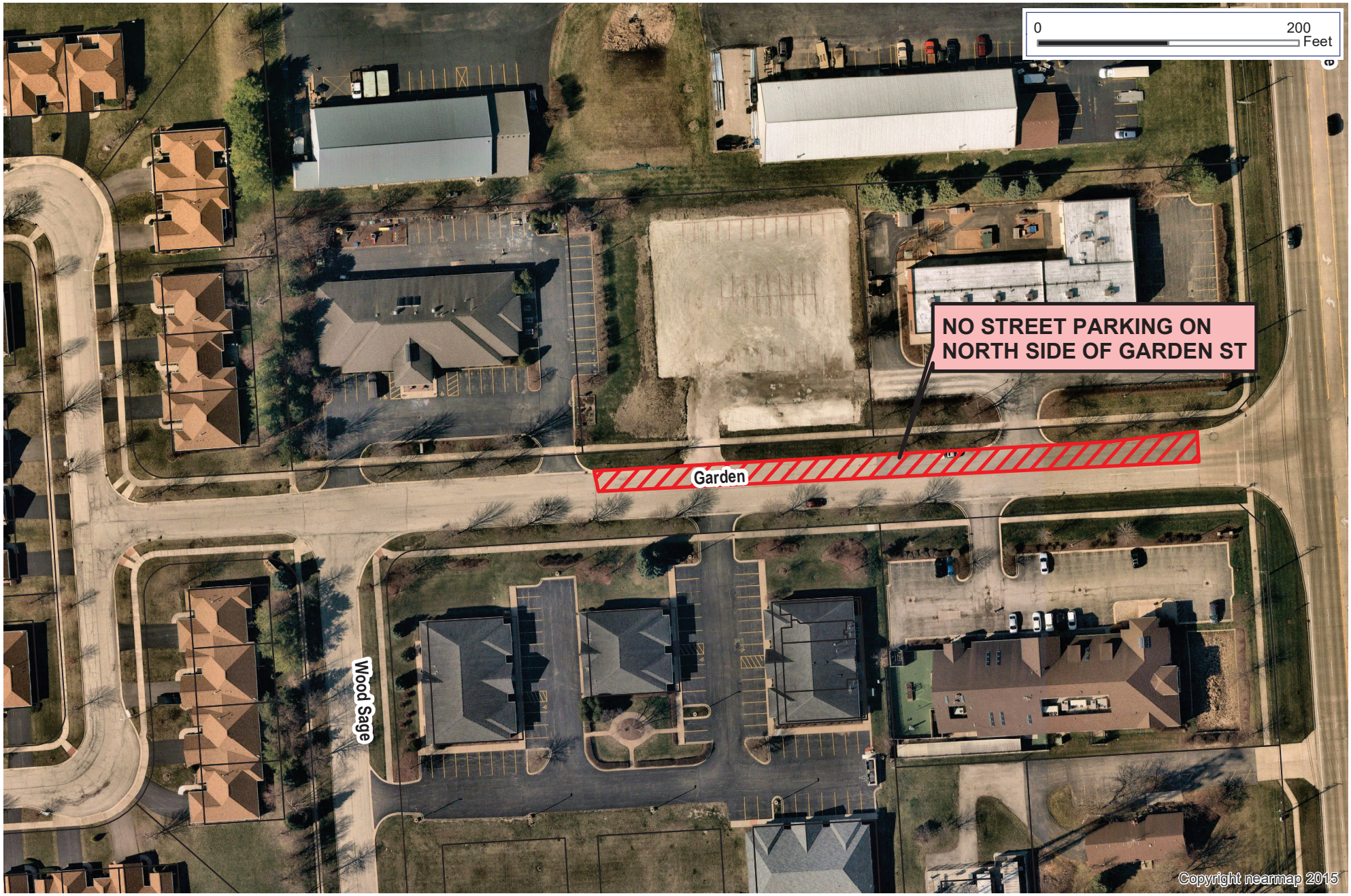
With the opening of the early childhood center on Garden and Rt. 47, the parking on Garden Street has created an issue with traffic.

Parking is occurring on both sides of the roadway and encroaching near Rt 47, which is creating issues for through traffic. It is also creating issues with the Rt 47 turn lanes. This has been observed by both the Police and Public Works Departments.

Recommendation

We are recommending eliminating parking on the north side of the street as indicated in the attached exhibit to solve the problem.

The surrounding properties that we be affected will be informed well in advance of sign installation.



Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
(630) 466-6700
www.eeiweb.com

United City of Yorkville
800 Game Farm Road
Yorkville, IL 60560
630-553-4350

DATE:	JUNE 2023
PROJECT NO.:	YO2300
BY:	MJT
PATH:	H:\GIS\PUBLIC\YORKVILLE\2023\YO2300
FILE:	YO2300- Garden Street Parking.MXD

GARDEN STREET PARKING

LOCATION MAP
UNITED CITY OF YORKVILLE
KENDALL COUNTY, ILLINOIS

N

Reviewed By:	
Legal	☐
Finance	☐
Engineer	■
City Administrator	☐
Community Development	☐
Purchasing	☐
Police	☐
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

New Business #6

Tracking Number

PW 2023-62

Agenda Item Summary Memo

Title: Corneils Road Interceptor Improvements – Change Order No. 2

Meeting and Date: Public Works Committee – July 18, 2023

Synopsis: Consideration of Change Order No. 2 - Balancing

Council Action Previously Taken:

Date of Action: _____ Action Taken: _____

Item Number: _____

Type of Vote Required: Majority

Council Action Requested: Approval

Submitted by: Brad Sanderson (Name) Engineering (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
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Memorandum

To: Bart Olson, City Administrator
From: Brad Sanderson, EEI
CC: Eric Dhuse, Director of Public Works
Erin Willrett, Assistant City Administrator
Rob Fredrickson, Finance Director
Jori Behland, City Clerk

Date: June 21, 2023
Subject: Corneils Road Interceptor Improvements

The purpose of this memo is to present Change Order No. 2 - Balancing for the above referenced project.

A Change Order, as defined by in the General Conditions of the Contract Documents, is a written order to the Contractor authorizing an addition, deletion or revision in the work within the general scope of the Contract Documents, or authorizing an adjustment in the Contract Price or Contract Time.

Background:

The United City of Yorkville and Fischer Excavating, Inc. entered into an agreement for a contract value of **$3,140,637.45** for the above referenced project.

Questions Presented:

Should the City approve Change Order No. 2 – Balancing, which would **decrease** the contract value by $156,065.00.

Discussion:

The change order would decrease the contract value to $2,984,572.45 based upon final measurement of quantities in the field.

We are recommending approval of the change order.

Action Required:

Consideration of approval of Change Order No. 2 - Balancing.

CHANGE ORDER

Order No. 2 - Balancing

Date: July 25, 2023

Agreement Date: January 13, 2023

NAME OF PROJECT: Corneils Road Interceptor Improvements

OWNER: United City of Yorkville

CONTRACTOR: Fischer Excavating, Inc.

The following changes are hereby made to the CONTRACT DOCUMENTS:

Change of CONTRACT PRICE:

Original CONTRACT PRICE:	$3,140,637.45
Current CONTRACT PRICE adjusted by previous CHANGE ORDER(S):	$3,140,637.45
The CONTRACT PRICE due to this CHANGE ORDER will be decreased) by:	$156,065.00
The new CONTRACT PRICE including this CHANGE ORDER will be:	$2,984,572.45

Change to CONTRACT TIME:

The CONTRACT TIME will be (increased) (decreased) by _____ calendar days.

The date for completion for all work will be: _____

Justification

This change order reduces the contract value based upon final measurements in the field.

Approvals Required

Requested by: United City of Yorkville

Recommended by: Engineering Enterprises, Inc.

Accepted by: Fischer Excavating, Inc

PAYABLE TO: FISCHER EXCAVATING, INC.
ADDRESS: 1567 HEINE ROAD
FREEPORT, IL 61032

ENGINEER'S PAYMENT ESTIMATE NO. 3
CORNEILS ROAD INTERCEPTOR SEWER
UNITED CITY OF YORKVILLE
KENDALL COUNTY, ILLINOIS

PAY PERIOD
FROM: 4/29/2023 **TO:** 6/19/2023

ITEM NO.	ITEMS	AWARDED QUANTITY	UNITS	UNIT PRICE	AWARDED VALUE	ADDED QUANTITY	DEDUCTED QUANTITY	COMPLETED QUANTITY THIS PAY PERIOD	COMPLETED VALUE THIS PAY PERIOD	TOTAL COMPLETED QUANTITY	TOTAL COMPLETED VALUE
1	TREE REMOVAL, ACRES	0.25	ACRE	$ 35,000.00	$ 8,750.00		0.25	0.0	$0.00	0.0	$0.00
2	FOUNDATION MATERIAL	100	CU YD	$ 95.00	$ 9,500.00	126.00		0.0	$0.00	226.0	$21,470.00
3	NON SPECIAL, NON HAZARDOUS SOIL WASTE DISPOSAL - TYPE 1	50	CU YD	$ 99.00	$ 4,950.00		50.00	0.0	$0.00	0.0	$0.00
4	NON SPECIAL, NON HAZARDOUS SOIL WASTE DISPOSAL - TYPE 2	50	CU YD	$ 37.00	$ 1,850.00		50.00	0.0	$0.00	0.0	$0.00
5	SELECTED GRANULAR BACKFILL	325	CU YD	$ 47.00	$ 15,275.00		9.00	40.0	$1,880.00	316.0	$14,852.00
6	RESTORATION	1	LSUM	$ 18,000.00	$ 18,000.00			1.0	$18,000.00	1.0	$18,000.00
7	EXPLORATORY EXCAVATION	3	EACH	$ 872.00	$ 2,616.00			0.0	$0.00	3.0	$2,616.00
8	PERIMETER EROSION BARRIER	14725	FOOT	$ 2.90	$ 42,702.50		1300.00	0.0	$0.00	13425.0	$38,932.50
9	INLET AND PIPE PROTECTION	5	EACH	$ 370.00	$ 1,850.00		2.00	0.0	$0.00	3.0	$1,110.00
10	FULL DEPTH PAVEMENT PATCHING	245	SQ YD	$ 140.00	$ 34,300.00		138.00	107.0	$14,980.00	107.0	$14,980.00
11	HMA PAVEMENT PATCH, 4-INCH	150	SQ YD	$ 118.00	$ 17,700.00		150.00	0.0	$0.00	0.0	$0.00
12	REMOVE AND RE-ERECT STEEL PLATE BEAM GUARDRAIL	15	FOOT	$ 95.00	$ 1,425.00		15.00	0.0	$0.00	0.0	$0.00
13	TRAFFIC BARRIER TERMINAL, TYPE 2	1	EACH	$ 4,465.00	$ 4,465.00		1.00	0.0	$0.00	0.0	$0.00
14	AGGREGATE DRIVEWAY REMOVAL AND REPLACEMENT	2200	SQ YD	$ 14.00	$ 30,800.00		2200.00	0.0	$0.00	0.0	$0.00
15	SANITARY SEWER, PVC C900, DR-18, 12-INCH	828	FOOT	$ 150.00	$ 124,200.00	89.00		0.0	$0.00	917.0	$137,550.00
16	SANITARY SEWER, PVC C900, DR-18, 16-INCH	6589	FOOT	$ 240.00	$ 1,581,360.00		89.00	0.0	$0.00	6500.0	$1,560,000.00
17	SANITARY SEWER, PVC C900, DR-18, 30-INCH	1190	FOOT	$ 687.00	$ 817,530.00			0.0	$0.00	1190.0	$817,530.00
18	TYPE A SANITARY MANHOLE, 5' DIA., TYPE 1 FRAME AND CLOSED LID	25	EACH	$ 7,735.00	$ 193,375.00		4.00	0.0	$0.00	21.0	$162,435.00
19	ADDITIONAL DEPTH OF MANHOLE	176	FOOT	$ 597.00	$ 105,072.00	13.00		189.0	$112,833.00	189.0	$112,833.00
20	PRESSURE TESTING SANITARY SEWER	8607	FOOT	$ 1.00	$ 8,607.00		2.00	0.0	$0.00	8605.0	$8,605.00
21	DEFLECTION TESTING SANITARY SEWER	8607	FOOT	$ 0.85	$ 7,315.95			2021.0	$1,717.85	8607.0	$7,315.95
22	SANITARY MANHOLE VACUUM TESTING	25	EACH	$ 112.00	$ 2,800.00		1.00	0.0	$0.00	24.0	$2,688.00
23	TELEVISING SANITARY SEWER	8598	FOOT	$ 2.00	$ 17,196.00		8598.00	0.0	$0.00	0.0	$0.00
24	CONNECTION TO EXISTING SANITARY MANHOLE	1	EACH	$ 3,050.00	$ 3,050.00			0.0	$0.00	1.0	$3,050.00
25	DRAIN TILE REPAIR	100	FOOT	$ 171.00	$ 17,100.00		13.00	0.0	$0.00	87.0	$14,877.00
26	PIPE CULVERT REMOVAL AND REPLACEMENT, 12"	30	FOOT	$ 94.00	$ 2,820.00		30.00	0.0	$0.00	0.0	$0.00
27	TRAFFIC CONTROL AND PROTECTION	1	LSUM	$ 9,403.00	$ 9,403.00			1.0	$9,403.00	1.0	$9,403.00
28	STABILIZED CONSTRUCTION ENTRANCE	5	EACH	$ 1,325.00	$ 6,625.00			0.0	$0.00	5.0	$6,625.00
29	ALLOWANCE - ITEMS ORDERED BY THE ENGINEER	50000	UNIT	$ 1.00	$ 50,000.00		50000.00	0.0	$0.00	0.0	$0.00

AWARDED VALUE = **$3,140,637.45** **THIS PERIOD =** **$158,813.85** **TO DATE =** **$2,954,872.45**

MISCELLANEOUS EXTRAS AND CREDITS		VALUE
1	TYPE A SANITARY MANHOLE, 6' DIA., TYPE 1 FRAME AND CLOSED LID	$ 29,700.00
2		
3		

MISCELLANEOUS DEBITS		VALUE
1	PAY ESTIMATE 1	$ 906,735.15
2	PAY ESTIMATE 2	$ 1,636,447.59
3		
4		
5		

SUMMARY

TOTAL MISCELLANEOUS EXTRAS AND CREDITS	$	29,700.00
TOTAL COMPLETED CONSTRUCTION COSTS	**$**	**2,984,572.45**
DEDUCT RETAINAGE (RESTORATION)	$	(10,000.00)
TOTAL AMOUNT DUE TO CONTRACTOR	$	2,974,572.45
TOTAL DEBITS	$	(2,543,182.74)
NET AMOUNT DUE - THIS PAYMENT	**$**	**431,389.71**

PREPARED BY : David Todd _____ DATE: 5/31/2023 _____

APPROVED BY : _____ DATE: _____

G:\Public\Yorkville\2021\YO2153-P Corneils Road Interceptor Sewer\Construction\Pay Estimates\[Pay Estimates.xls]Pay Estimate 3

Reviewed By:	
Legal	☐
Finance	☐
Engineer	■
City Administrator	☐
Community Development	☐
Purchasing	☐
Police	☐
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

New Business #7

Tracking Number

PW 2023-63

Agenda Item Summary Memo

Title: 2023 Water Main Improvements – Contract A

Meeting and Date: Public Works Committee – July 18, 2023

Synopsis: Consideration of Change Order No. 1

Council Action Previously Taken:

Date of Action: _____ Action Taken: _____

Item Number: _____

Type of Vote Required: Majority

Council Action Requested: Approval

Submitted by: Brad Sanderson (Name) Engineering (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
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Memorandum

To: Bart Olson, City Administrator
From: Brad Sanderson, EEI
CC: Eric Dhuse, Director of Public Works
Erin Willrett, Assistant City Administrator
Rob Fredrickson, Finance Director
Jori Behland, City Clerk

Date: July 11, 2023
Subject: 2023 Water Main Improvements – Contract A

The purpose of this memo is to present Change Order No. 1 for the above referenced project.

A Change Order, as defined by in the General Conditions of the Contract Documents, is a written order to the Contractor authorizing an addition, deletion or revision in the work within the general scope of the Contract Documents, or authorizing an adjustment in the Contract Price or Contract Time.

Background:

The United City of Yorkville and Performance Construction & Engineering, LLC. entered into an agreement for a contract value of **$1,799,287.00** for the above referenced project.

Questions Presented:

Should the City approve Change Order No. 1 which would **increase** the contract value by $27,906.00?

Discussion:

The change order would increase the contract value to $1,827,193.00.

During water main installation, two previously unknown 2" diameter galvanized steel water services were discovered that provide domestic water service to the Hillside Rehab & Care Center. These pipes were found to be in severely deteriorated condition. Within days of their discovery, the water services broke and needed repair four times. It was determined that due to the extremely poor condition of the pipe material, the risk of future breaks and potential water quality issues was very high. The services required to be drilled through the building foundation and connected inside by Hillside's contracted plumber. The services were temporarily connected to the existing main. The services will be transferred to the new main when it becomes operational.

We are recommending approval of the change order.

Action Required:

Consideration of approval of Change Order No. 1.

CHANGE ORDER

Order No. 1

Date: July 25, 2023

Agreement Date: March 28, 2023

NAME OF PROJECT: 2023 Water Main Improvements – Contract A

OWNER: United City of Yorkville

CONTRACTOR: Performance Construction & Engineering, LLC

The following changes are hereby made to the CONTRACT DOCUMENTS:

1) Addition of 2" Water Service, Complete
   2 Each @ $13,953/Each $27,906.00

Change of CONTRACT PRICE:

Original CONTRACT PRICE: $ 1,799,287.00

Current CONTRACT PRICE adjusted by previous CHANGE ORDER(S) $ 1,799,287.00

The CONTRACT PRICE due to this CHANGE ORDER will be (increased)(~~decreased~~) by: $ 27,906.00

The new CONTRACT PRICE including this CHANGE ORDER will be $ 1,827,193.00

Justification:

1) During water main installation, two previously unknown 2" diameter galvanized steel water services were discovered that provide domestic water service to the Hillside Rehab & Care Center. These pipes were found to be in severely deteriorated condition. Within days of their discovery, the water services broke and needed repair four times. It was determined that due to the extremely poor condition of the pipe material, the risk of future breaks and potential water quality issues was very high. The services required to be drilled through the building foundation and connected inside by Hillside's contracted plumber. The services were temporarily connected to the existing main. The services will be transferred to the new main when it becomes operational.

Change to CONTRACT TIME:

The contract time is increased/~~decreased~~ by 0 days.

Requested by: Performance Construction & Engineering, LLC

Recommended by: Engineering Enterprises, Inc.

Accepted by: United City of Yorkville

PERFORMANCE CONSTRUCTION & ENGINEERING, LLC
217 W. John Street
Plano, IL 60545

June 26 , 2023

RE: Change Order Request
AUP- 2" Water Services
2023 Water Main Improvements – Contract A
City of Yorkville

Todd,

Per the request of the City, we are submitting the following agreed unit prices to furnish and install the following:

2" PE Water Service, HDD	2 EA @ $13,953/EA	= $27,906

This price includes the cost to directionally drill into the basement of the nursing home and temporarily connect the service to the existing water main. Once the new main has been installed, PCE will transfer the services over to the new main. This price does not include any restoration or trench backfill. It is assumed those items will be paid for at the contract unit prices.

Please let me know if you have any questions or need any additional information.

Sincerely,

Lonnie Avery

Lonnie Avery, P.E., President
Performance Construction & Engineering, LLC

Reviewed By:	
Legal	☐
Finance	☐
Engineer	■
City Administrator	☐
Community Development	☐
Purchasing	☐
Police	☐
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

New Business #8

Tracking Number

PW 2023-64

Agenda Item Summary Memo

Title: 2023 Water Main Improvements – Contract B

Meeting and Date: Public Works Committee – July 18, 2023

Synopsis: Consideration of Change Order No. 1

Council Action Previously Taken:

Date of Action: _____ Action Taken: _____

Item Number: _____

Type of Vote Required: Majority

Council Action Requested: Approval

Submitted by: Brad Sanderson (Name) Engineering (Department)

Agenda Item Notes:

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Memorandum

To: Bart Olson, City Administrator
From: Brad Sanderson, EEI
CC: Eric Dhuse, Director of Public Works
Erin Willrett, Assistant City Administrator
Rob Fredrickson, Finance Director
Jori Behland, City Clerk

Date: July 11, 2023
Subject: 2023 Water Main Improvements – Contract B

The purpose of this memo is to present Change Order No. 1 for the above referenced project.

A Change Order, as defined by in the General Conditions of the Contract Documents, is a written order to the Contractor authorizing an addition, deletion or revision in the work within the general scope of the Contract Documents, or authorizing an adjustment in the Contract Price or Contract Time.

Background:

The City awarded the work for the above referenced contract to Winniger Excavating, Inc. in the amount of **$1,983,518.44.** The project is currently in contracting.

Questions Presented:

Should the City approve Change Order No. 1 which would **decrease** the contract value by $193,581.89?

Discussion:

The change order would decrease the contract value to $1,789,936.55.

The bid value of the contract exceeded the budgeted value for water main improvements. The portion of water main improvements on Colton Street will be removed from the contract and completed as part of the 2024 water main improvements. The anticipated value of the improvements eliminated is $193,581.89.

We are recommending approval of the change order.

Action Required:

Consideration of approval of Change Order No. 1.

CHANGE ORDER

Order No. 1

Date: July 25, 2023

Agreement Date: N/A

NAME OF PROJECT: 2023 Water Main Replacement – Contract B

OWNER: United City of Yorkville

CONTRACTOR: Winniger Excavating, Inc.

The following changes are hereby made to the CONTRACT DOCUMENTS:

1) Deduction of Colton Street Water Main Improvements ($193,581.89)

Change of CONTRACT PRICE:

Original CONTRACT PRICE:	$ 1,983,518.44
Current CONTRACT PRICE adjusted by previous CHANGE ORDER(S)	$ 1,983,518.44
The CONTRACT PRICE due to this CHANGE ORDER will be (~~increased~~)(decreased) by:	$ 193,581.89
The new CONTRACT PRICE including this CHANGE ORDER will be	$ 1,789,936.55

Justification:

1) The bid value of the contract exceeded the budgeted value for water main improvements. The portion of water main improvements on Colton Street will be removed from the contract and completed as part of the 2024 water main improvements. The anticipated value of the improvements eliminated is $193,581.89.

Change to CONTRACT TIME:

The contract time is increased/~~decreased~~ by 0 days.

Requested by: Winniger Excavating, Inc.

Recommended by: Engineering Enterprises, Inc.

Accepted by: United City of Yorkville

Reviewed By:	
Legal	☐
Finance	☐
Engineer	■
City Administrator	☐
Community Development	☐
Purchasing	☐
Police	☐
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

New Business #9

Tracking Number

PW 2023-65

Agenda Item Summary Memo

Title: Beaver Street Pump Station Improvements – Change Order No. 1

Meeting and Date: Public Works Committee – July 18, 2023

Synopsis: Consideration of Change Order No. 1 - Balancing

Council Action Previously Taken:

Date of Action: _____ Action Taken: _____

Item Number: _____

Type of Vote Required: Majority

Council Action Requested: Approval

Submitted by: Brad Sanderson (Name) Engineering (Department)

Agenda Item Notes:

Have a question or comment about this agenda item?
Call us Monday-Friday, 8:00am to 4:30pm at 630-553-4350, email us at agendas@yorkville.il.us, post at www.facebook.com/CityofYorkville, tweet us at @CityofYorkville, and/or contact any of your elected officials at http://www.yorkville.il.us/320/City-Council

Memorandum

To: Bart Olson, City Administrator
From: Brad Sanderson, EEI
CC: Eric Dhuse, Director of Public Works
Erin Willrett, Assistant City Administrator
Rob Fredrickson, Finance Director
Jori Behland, City Clerk

Date: July 12, 2023
Subject: Beaver Street Pump Station Improvements

The purpose of this memo is to present Change Order No. 1 - Balancing for the above-referenced project.

A Change Order, as defined by in the General Conditions of the Contract Documents, is a written order to the Contractor authorizing an addition, deletion, or revision in the work within the general scope of the Contract Documents, or authorizing an adjustment in the Contract Price or Contract Time.

Background:

The United City of Yorkville and Frank Marshall Electric entered into an agreement for a contract value of **$272,244.00** for the above-referenced project; with 180 consecutive calendar days to complete the project.

Questions Presented:

Should the City approve Change Order No. 1 – Balancing, which would **increase** the contract value by $8,358.00 and **increase** the contract time by 420 consecutive calendar days?

Discussion:

PVC Coated Chain Linked Fence
At the City's request, the Contractor erected a new chain-link fence around the pump station site to protect the new generator and aboveground electrical enclosure from intruders. The chain-linked fence will provide sufficient site security for the pump station; the City decided to eliminate the door contacts from the project.

Time Extension:
A shortage of materials delayed the delivery of the VFDs, and the Contractor required additional time to construct the chain link fence.

The change order would increase the contract value to $280,602.00 and the contract time to 600 calendar days.

The works is 100% complete on the project.

We are recommending approval of the change order.

Action Required:

Consideration of approval of Change Order No. 1 - Balancing.

CHANGE ORDER

Order No. 1 - Balancing

Date: April 24, 2023

Agreement Date: June 11, 2021

NAME OF PROJECT: BEAVER STREET PUMP STATION IMPROVEMENTS

OWNER: United City of Yorkville

CONTRACTOR: Frank Marshall Electric

The following changes are hereby made to the CONTRACT DOCUMENTS:

PVC-Coated Chain Link Fence:
Furnish and Install PVC-Coated Chain Link Fence: $18,945.00

Eliminated Door Contacts from the Generator and Electrical Enclosure: -$587.00

Engineering Allowance: -$10,000.00

Total Change Order Amount: $8,358.00

Time Extension:
The Contractor has requested a time extension for the construction contract.

Justification:

PVC-Coated Chain Link Fence:
At the City staff's request, the Contractor erected a new chain-link fence around the pump station site to protect the new generator and aboveground electrical enclosure from intruders. The chain-linked fence will provide sufficient site security for the pump station; the City elected to eliminate the door contacts from the project.

Time Extension:
A shortage of materials delayed the delivery of the VFDs, and the Contractor required additional time to construct the chain link fence.

Change of CONTRACT PRICE:

Original CONTRACT PRICE:	$ 272,244.00
Current CONTRACT PRICE adjusted by previous CHANGE ORDER(S)	$ 0.00
The CONTRACT PRICE due to this CHANGE ORDER will be increased by:	$ 8,358.00
The new CONTRACT PRICE including this CHANGE ORDER will be	$ 280,602.00

(continued)

Change to CONTRACT TIME:

The CONTRACT TIME will be increased by 420 calendar days.

The date for completion of all work will be March 27, 2023 (Date.)

Approvals Required:

To be effective this order must be approved by the agency if it changes the scope or objective of BEAVER STREET PUMP STATION IMPROVEMENTS, or as may otherwise be required by the SUPPLEMENTAL GENERAL CONDITIONS.

Requested by: ADAM MARSHALL CONTRACTOR

Recommended by: Keith Powell Engineering Enterprises, Inc.

Accepted by: United City of Yorkville

Change Order Request #1

Frank Marshall Electric
Electrical Contractors
1043 Oliver Avenue
Aurora, Illinois 60506
Phone: (630) 892-2942

Submitted to:
Engineering Enterprises 52 Wheeler Road Sugar Grove, IL 60554 Attn: Mr. Keith Powell
Architect(s): Engineering Enterprises 52 Wheeler Road Sugar Grove, IL 60554

Job Name and Location:	
Pump Station Improvements Beaver Street Pump Station 103 1/2 Beaver Street Yorkville, IL 60560	
Date Of Change	Plans
06/14/21	Verbal Keith Powell

This change order request is to provide a new chain link fence around the site. This fence will have a 16' wide gate on the west end. Also included is the deduction of the door contacts. The new fence will be black vinyl coated per the owners request.

	Labor	Material	Subcontractor
Layout & Coordination	$135.00	$0.00	$0.00
Kendall County Fence + 5%	$0.00	$0.00	$18,060.00
Deduction of Door Contacts	$0.00	$0.00	$0.00
9 - Door Contacts	-$306.00	-$76.00	$0.00
200' - #14 XHHW	-$135.00	-$36.00	$0.00
4 - Terminations @ SCADA	-$34.00	$0.00	$0.00
Surveying Cost (NO MARK UP)	$0.00	$0.00	$750.00
Allowance	-$10,000.00		

Total cost of change order…..... $8,358.00

Sincerely,

Signature_____
Adam Marshall
Date: 07/19/22
Title: Project Manager

CHANGE ORDER NO. 1
BEAVER STREET PUMP STATION IMPROVEMENTS
UNITED CITY OF YORKVILLE

ITEM NO.	ITEMS	UNIT	QUANTITY	UNIT PRICE	ADDITION COST	DEDUCTION COST
11	ELIMINATED DOORS CONTACTS FROM GENERATOR AND ELECTRICAL ENCLOSURE	LS	1	$ 587.00		$ (587.00)
21	ENGINEERING ALLOWANCE	LS	1	$ 10,000.00		$ (10,000.00)
CO	FURNISH AND INSTALL PVC-COATED CHAIN LINKED FENCE	LS	1	$ 18,945.00	$ 18,945.00	$ -
				TOTAL ADDITIONS =	$ 18,945.00	
				TOTAL DEDUCTIONS =		**$ (10,587.00)**
				ORIGINAL CONTRACT PRICE:	$ 272,244.00	
				CURRENT CONTRACT PRICE ADJUSTED BY PREVIOUS CHANGE ORDER(S):	$ 272,244.00	
				AMOUNT OF CURRENT CHANGE ORDER:	$ 8,358.00	
				NEW CONTRACT PRICE:	**$ 280,602.00**	

Reviewed By:	
Legal	☐
Finance	☐
Engineer	■
City Administrator	■
Community Development	☐
Purchasing	☐
Police	☐
Public Works	☐
Parks and Recreation	☐

Agenda Item Number

New Business #10

Tracking Number

PW 2023-66

Agenda Item Summary Memo

Title: South Central Elevated Water Storage Tank – Design Engineering Agreement

Meeting and Date: Public Works Committee – July 18, 2023

Synopsis: Please see the attached memo.

Council Action Previously Taken:

Date of Action: _____ Action Taken: _____

Item Number: _____

Type of Vote Required: Majority

Council Action Requested: Approval

Submitted by: Bart Olson (Name) Administration (Department)

Agenda Item Notes:

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Memorandum

To: City Council
From: Bart Olson, City Administrator
CC:
Date: July 13, 2023
Subject: South Central Elevated Water Storage Tank – Design Engineering

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Summary

Consideration of a design engineering agreement with EEI for the South Central Elevated Water Storage Tank Rehabilitation project.

Background

This item was last discussed during the FY 24 budget presentation, when the City Council reviewed a budget proposal that contains $45,000 in design engineering costs in FY 24 and $945,000 in FY 25 for construction engineering and project costs for repainting the south central water tower. Accordingly, EEI has submitted a design engineering contract for the project.

The agreement submitted by EEI covers design engineering services only. The total cost of the contract is a fixed fee amount of $34,926. This cost is included in the FY 24 budget. This work is expected to begin in 2024 after the design work is complete in late 2023 and the project is bid out in Winter 2023/2024.

Recommendation

Staff recommends approval of the design engineering agreement with EEI for the South Central Elevated Water Storage Tank Rehabilitation project.

South Central Elevated Water Storage Tank Rehabilitation
United City of Yorkville, IL
Professional Services Agreement - Design Engineering

THIS AGREEMENT, by and between the United City of Yorkville, hereinafter referred to as the "City" or “OWNER” and Engineering Enterprises, Inc. hereinafter referred to as the "Contractor" or “ENGINEER” agrees as follows:

A. Services:

ENGINEER agrees to furnish to the City the following services: The ENGINEER shall provide any and all necessary engineering services to the City as indicated on the Scope of Services (Attachment B). Design engineering will be provided for the rehabilitation of the South Central Elevated Water Storage Tank, which shall include repainting the interior and exterior of the tank. Engineering will be in accordance with all City, Standard Specifications for Water and Sewer Construction in Illinois, Illinois Department of Transportation, and Illinois Environmental Protection Agency requirements.

B. Term:

Services will be provided beginning on the date of execution of this agreement and continuing, until terminated by either party upon 7 days written notice to the non-terminating party or upon completion of the Services. Upon termination the ENGINEER shall be compensated for all work performed for the City prior to termination.

C. Compensation and maximum amounts due to ENGINEER:

ENGINEER shall receive as compensation for all work and services to be performed herein, an amount based on the Estimate of Level of Effort and Associated Cost included in Attachment C. Design Engineering will be paid for as a Fixed Fee (FF) in the amount of $34,926. The hourly rates for this project are shown in the attached 2023 Standard Schedule of Charges (Attachment F). All payments will be made according to the Illinois State Prompt Payment Act and not less than once every thirty days.

D. Changes in Rates of Compensation:

In the event that this contract is designated in Section B hereof as an Ongoing Contract, ENGINEER, on or before February 1st of any given year, shall provide written notice of any change in the rates specified in Section C hereof (or on any attachments hereto) and said changes shall only be effective on and after May 1st of that same year.

E. Ownership of Records and Documents:

ENGINEER agrees that all books and records and other recorded information developed specifically in connection with this agreement shall remain the property of the City. ENGINEER agrees to keep such information confidential and not to disclose or disseminate the information to third parties without the consent of the City. This confidentiality shall not apply to material or information, which would otherwise be subject to public disclosure through the freedom of information act or if already previously disclosed by a third party. Upon termination of this agreement, ENGINEER agrees to return all such materials to the City. The City agrees not to modify any original documents produced by ENGINEER without contractors consent. Modifications of any signed duplicate original document not authorized by ENGINEER will be at OWNER's sole risk and without legal liability to the ENGINEER. Use of any incomplete, unsigned document will, likewise, be at the OWNER's sole risk and without legal liability to the ENGINEER.

F. Governing Law:

This contract shall be governed and construed in accordance with the laws of the State of Illinois. Venue shall be in Kendall County, Illinois.

G. Independent Contractor:

ENGINEER shall have sole control over the manner and means of providing the work and services performed under this agreement. The City's relationship to the ENGINEER under this agreement shall be that of an independent contractor. ENGINEER will not be considered an employee to the City for any purpose.

H. Certifications:

Employment Status: The Contractor certifies that if any of its personnel are an employee of the State of Illinois, they have permission from their employer to perform the service.

Anti-Bribery: The Contractor certifies it is not barred under 30 Illinois Compiled Statutes 500/50-5(a) - (d) from contracting as a result of a conviction for or admission of bribery or attempted bribery of an officer or employee of the State of Illinois or any other state.

Loan Default: If the Contractor is an individual, the Contractor certifies that he/she is not in default for a period of six months or more in an amount of $600 or more on the repayment of any educational loan guaranteed by the Illinois State Scholarship Commission made by an Illinois institution of higher education or any other loan made from public funds for the purpose of financing higher education (5 ILCS 385/3).

Felony Certification: The Contractor certifies that it is not barred pursuant to 30 Illinois Compiled Statutes 500/50-10 from conducting business with the State of Illinois or any agency as a result of being convicted of a felony.

Barred from Contracting: The Contractor certifies that it has not been barred from contracting as a result of a conviction for bid-rigging or bid rotating under 720 Illinois Compiled Statutes 5/33E or similar law of another state.

Drug Free Workplace: The Contractor certifies that it is in compliance with the Drug Free Workplace Act (30 Illinois Compiled Statutes 580) as of the effective date of this contract. The Drug Free Workplace Act requires, in part, that Contractors, with 25 or more employees certify and agree to take steps to ensure a drug free workplace by informing employees of the dangers of drug abuse, of the availability of any treatment or assistance program, of prohibited activities and of sanctions that will be imposed for violations; and that individuals with contracts certify that they will not engage in the manufacture, distribution, dispensation, possession, or use of a controlled substance in the performance of the contract.

Non-Discrimination, Certification, and Equal Employment Opportunity: The Contractor agrees to comply with applicable provisions of the Illinois Human Rights Act (775 Illinois Compiled Statutes 5), the U.S. Civil Rights Act, the Americans with Disabilities Act, Section 504 of the U.S. Rehabilitation Act and the rules applicable to each. The equal opportunity clause of Section 750.10 of the Illinois Department of Human Rights Rules is specifically incorporated herein. The Contractor shall comply with Executive Order 11246, entitled Equal Employment Opportunity, as amended by Executive Order 11375, and as supplemented by U.S. Department of Labor regulations (41 C.F.R. Chapter 60). The Contractor agrees to incorporate this clause into all subcontracts under this Contract.

International Boycott: The Contractor certifies that neither it nor any substantially owned affiliated company is participating or shall participate in an international boycott in violation of the provisions of the U.S. Export Administration Act of 1979 or the regulations of the U.S. Department of Commerce promulgated under that Act (30 ILCS 582).

Record Retention and Audits: If 30 Illinois Compiled Statutes 500/20-65 requires the Contractor (and any subcontractors) to maintain, for a period of 3 years after the later of the date of completion of this Contract or the date of final payment under the Contract, all books and records relating to the performance of the Contract and necessary to support amounts charged to the City under the Contract. The Contract and all books and records related to the Contract shall be available for review and audit by the City and the Illinois Auditor General. If this Contract is funded from contract/grant funds provided by the U.S. Government, the Contract, books, and records shall be available for review and audit by the Comptroller General of the U.S. and/or the Inspector General of the federal

sponsoring agency. The Contractor agrees to cooperate fully with any audit and to provide full access to all relevant materials.

United States Resident Certification: (This certification must be included in all contracts involving personal services by non-resident aliens and foreign entities in accordance with requirements imposed by the Internal Revenue Services for withholding and reporting federal income taxes.) The Contractor certifies that he/she is a: _x_ United States Citizen ___ Resident Alien ___ Non-Resident Alien The Internal Revenue Service requires that taxes be withheld on payments made to non resident aliens for the performance of personal services at the rate of 30%.

Tax Payer Certification : Under penalties of perjury, the Contractor certifies that its Federal Tax Payer Identification Number or Social Security Number is (provided separately) and is doing business as a (check one): ___ Individual ___ Real Estate Agent ___ Sole Proprietorship ___ Government Entity ___ Partnership ___ Tax Exempt Organization (IRC 501(a) only) _x_ Corporation ___ Not for Profit Corporation ___ Trust or Estate ___ Medical and Health Care Services Provider Corp.

I. Indemnification:

ENGINEER shall indemnify and hold harmless the City and City's agents, servants, and employees against all loss, damage, and expense which it may sustain or for which it will become liable on account of injury to or death of persons, or on account of damage to or destruction of property resulting from the performance of work under this agreement by ENGINEER or its Subcontractors, or due to or arising in any manner from the wrongful act or negligence of ENGINEER or its Subcontractors of any employee of any of them. In the event that the either party shall bring any suit, cause of action or counterclaim against the other party, the non-prevailing party shall pay to the prevailing party the cost and expenses incurred to answer and/or defend such action, including reasonable attorney fees and court costs. In no event shall the either party indemnify any other party for the consequences of that party's negligence, including failure to follow the ENGINEER's recommendations.

J. Insurance:

The ENGINEER agrees that it has either attached a copy of all required insurance certificates or that said insurance is not required due to the nature and extent of the types of services rendered hereunder. (Not applicable as having been previously supplied)

K. Additional Terms or Modification:

The terms of this agreement shall be further modified as provided on the attachments. Except for those terms included on the attachments, no additional terms are included as a part of this agreement. All prior understandings and agreements between the parties are merged into this agreement, and this agreement may not be modified orally or in any

manner other than by an agreement in writing signed by both parties. In the event that any provisions of this agreement shall be held to be invalid or unenforceable, the remaining provisions shall be valid and binding on the parties. The list of exhibits is as follows:

Attachment A:	Standard Terms and Conditions
Attachment B:	Scope of Services
Attachment C:	Estimate of Level of Effort and Associated Cost
Attachment D:	Anticipated Project Schedule
Attachment E:	2023 Standard Schedule of Charges

L. Notices:

All notices required to be given under the terms of this agreement shall be given mail, addressed to the parties as follows:

For the City:

City Administrator and City Clerk
United City of Yorkville
800 Game Farm Road
Yorkville, IL 60560

For the ENGINEER:

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove Illinois 60554

Either of the parties may designate in writing from time to time substitute addresses or persons in connection with required notices.

Agreed to this _____day of _____, 2023.

United City of Yorkville:

_____
Mayor John Purcell

_____
Jori Behland
City Clerk

Engineering Enterprises, Inc.:

_____
Brad Sanderson, P.E.
Chief Operating Officer / President

Michele L. Piotrowski
_____
Michele L. Piotrowski, PE, LEED AP
Vice President

STANDARD TERMS AND CONDITIONS

Agreement: These Standard Terms and Conditions, together with the Professional Services Agreement, constitute the entire integrated agreement between the OWNER and Engineering Enterprises, Inc. (EEI) (hereinafter "Agreement"), and take precedence over any other provisions between the Parties. These terms may be amended, but only if both parties consent in writing.

Standard of Care: In providing services under this Agreement, the ENGINEER will endeavor to perform in a matter consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under same circumstances in the same locality. ENGINEER makes no other warranties, express or implied, written or oral under this Agreement or otherwise, in connection with ENGINEER'S service.

Construction Engineering and Inspection: The ENGINEER shall not supervise, direct, control, or have authority over any contractor work, nor have authority over or be responsible for the means, methods, techniques sequences, or procedures of construction selected or used by any contractor, or the safety precautions and programs incident thereto, for security or safety of the site, nor for any failure of a contractor to comply with laws and regulations applicable to such contractor's furnishing and performing of its work.

The ENGINEER neither guarantees the performance of any contractor nor assumes responsibility for contractor's failure to furnish and perform the work in accordance with the contract documents.

The ENGINEER is not responsible for the acts or omissions of any contractor, subcontractor, or supplies, or any of their agents or employees or any other person at the site or otherwise furnishing or performing any work.

Shop drawing and submittal review by the ENGINEER shall apply to only the items in the submissions and only for the purpose of assessing if upon installation or incorporation in the project work they are generally consistent with the construction documents. OWNER agrees that the contractor is solely responsible for the submissions and for compliance with the construction documents. OWNER further agrees that the ENGINEER'S review and action in relation to these submissions shall not constitute the provision of means, methods, techniques, sequencing or procedures of construction or extend or safety programs or precautions. The ENGINEER'S consideration of a component does not constitute acceptance of the assembled items.

The ENGINEER'S site observation during construction shall be at the times agreed upon in the Project Scope. Through standard, reasonable means the ENGINEER will become generally familiar with observable completed work. If the ENGINEER observes completed work that is inconsistent with the construction documents, that information shall be communicated to the contractor and OWNER for them to address.

Opinion of Probable Construction Costs: ENGINEER'S opinion of probable construction costs represents ENGINEER'S best and reasonable judgment as a professional engineer. OWNER acknowledges that ENGINEER has no control over construction costs of contractor's methods of determining pricing, or over competitive bidding by contractors, or of market conditions or changes thereto. ENGINEER cannot and does not guarantee that proposals, bids or actual construction costs will not vary from ENGINEER'S opinion of probable construction costs.

Copies of Documents & Electronic Compatibility: Copies of Documents that may be relied upon by OWNER are limited to the printed copies (also known as hard copies) that are signed or sealed by the ENGINEER. Files in electronic media format of text, data, graphics, or of other types that are furnished by ENGINEER to OWNER are only for convenience of OWNER. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. When transferring documents in electronic media format, ENGINEER makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by ENGINEER at the beginning of the project.

Changed Conditions: If, during the term of this Agreement, circumstances or conditions that were not originally contemplated by or known to the ENGINEER are revealed, to the extent that they affect the scope of services, compensation, schedule, allocation of risks, or other material terms of this Agreement, the ENGINEER may call for renegotiation of appropriate portions of this Agreement. The ENGINEER shall notify the OWNER of the changed conditions necessitating renegotiation, and the ENGINEER and the OWNER shall promptly and in good faith enter into renegotiation of this Agreement to address the changed conditions. If terms cannot be agreed to, the parties agree that either party has the absolute right to terminate this Agreement, in accordance with the termination provision hereof.

Hazardous Conditions: OWNER represents to ENGINEER that to the best of its knowledge no Hazardous Conditions (environmental or otherwise) exist on the project site. If a Hazardous Condition is encountered or alleged, ENGINEER shall have the obligation to notify OWNER and, to the extent of applicable Laws and Regulations, appropriate governmental officials. It is acknowledged by both parties that ENGINEER's scope of services does not include any services related to a Hazardous Condition. In the event ENGINEER or any other party encounters a Hazardous Condition, ENGINEER may, at its option and without liability for consequential or any other damages, suspend performance of services on the portion of the project affected thereby until OWNER: (i) retains appropriate specialist consultant(s) or contractor(s) to identify and, as appropriate, abate, remediate, or remove the Hazardous Condition; and (ii) warrants that the project site is in full compliance with applicable Laws and Regulations.

Consequential Damages: Notwithstanding any other provision of this Agreement, and to the fullest extent permitted by law, neither the OWNER nor the ENGINEER, their respective officers, directors, partners, employees, contractors, or subcontractors shall be liable to the other or shall make any claim for any incidental, indirect, or consequential damages arising out of or

connected in any way to the Project or to this Agreement. This mutual waiver of consequential damages shall include, but is not limited to, loss of use, loss of profit, loss of business, loss of income, loss of reputation, or any other consequential damages that either party may have incurred from any cause of action including negligence, strict liability, breach of contract, and breach of strict or implied warranty. Both the OWNER and the ENGINEER shall require similar waivers of consequential damages protecting all the entities or persons named herein in all contracts and subcontracts with others involved in this project.

Termination: This Agreement may be terminated for convenience, without cause, upon fourteen (14) days written notice of either party. In the event of termination, the ENGINEER shall prepare a final invoice and be due compensation as set forth in the Professional Services Agreement for all costs incurred through the date of termination.

Either party may terminate this Agreement for cause upon giving the other party not less than seven (7) calendar days' written notice for the following reasons:

(a) Substantial failure by the other party to comply with or perform in accordance with the terms of the Agreement and through no fault of the terminating party;

(b) Assignment of the Agreement or transfer of the project without the prior written consent of the other party;

(c) Suspension of the project or the ENGINEER'S services by the OWNER for a period of greater than ninety (90) calendar days, consecutive or in the aggregate.

(d) Material changes in the conditions under which this Agreement was entered into, the scope of services or the nature of the project, and the failure of the parties to reach agreement on the compensation and schedule adjustments necessitated by such changes.

Third Party Beneficiaries: Nothing contained in this Agreement shall create a contractual relationship with or a cause of action in favor of a third party against either the OWNER or the ENGINEER. The ENGINEER'S services under this Agreement are being performed solely and exclusively for the OWNER'S benefit, and no other party or entity shall have any claim against the ENGINEER because of this Agreement or the performance or nonperformance of services hereunder. The OWNER and ENGINEER agree to require a similar provision in all contracts with contractors, subcontractors, vendors and other entities involved in this Project to carry out the intent of this provision.

Force Majeure: Each Party shall be excused from the performance of its obligations under this Agreement to the extent that such performance is prevented by force majeure (defined below) and the nonperforming party promptly provides notice of such prevention to the other party. Such excuse shall be continued so long as the condition constituting force majeure continues. The party affected by such force majeure also shall notify the other party of the anticipated duration of such force majeure, any actions being taken to avoid or minimize its effect after such occurrence, and shall take reasonable efforts to remove the condition constituting such force majeure. For purposes of this Agreement, "force majeure" shall include

conditions beyond the control of the parties, including an act of God, acts of terrorism, voluntary or involuntary compliance with any regulation, law or order of any government, war, acts of war (whether war be declared or not), labor strike or lock-out, civil commotion, epidemic, failure or default of public utilities or common carriers, destruction of production facilities or materials by fire, earthquake, storm or like catastrophe. The payment of invoices due and owing hereunder shall in no event be delayed by the payer because of a force majeure affecting the payer.

Additional Terms or Modification: All prior understandings and agreements between the parties are merged into this Agreement, and this Agreement may not be modified orally or in any manner other than by an Agreement in writing signed by both parties. In the event that any provisions of this Agreement shall be held to be invalid or unenforceable, the remaining provisions shall be valid and binding on the parties.

Assignment: Neither party to this Agreement shall transfer or assign any rights or duties under or interest in this Agreement without the prior written consent of the other party. Subcontracting normally contemplated by the ENGINEER shall not be considered an assignment for purposes of this Agreement.

Waiver: A party's waiver of, or the failure or delay in enforcing any provision of this Agreement shall not constitute a waiver of the provision, nor shall it affect the enforceability of that provision or of the remainder of this Agreement.

Attorney's Fees: In the event of any action or proceeding brought by either party against the other under this Agreement, the prevailing party shall be entitled to recover from the other all costs and expenses including without limitation the reasonable fees of its attorneys in such action or proceeding, including costs of appeal, if any, in such amount as the Court may adjudge reasonable.

Headings: The headings used in this Agreement are inserted only as a matter of convenience only, and in no way define, limit, enlarge, modify, explain or define the text thereof nor affect the construction or interpretation of this Agreement.

South Central Elevated Water Storage Tank Rehabilitation

United City of Yorkville, IL
Professional Services Agreement - Design Engineering

Attachment B – Scope of Services

Deficiencies have been observed with the exterior and interior coating systems of the South Central Elevated Water Storage Tank (EWST). As part of the scope of this contract, a site visit will be performed to additionally observe field conditions and potential structural, sanitary, and safety items that may need to be addressed. In addition to the site visit, the scope of this work includes an electrical review, preparation of bidding documents, and coordination of bidding and letting.

The proposed work items for this project are as follows:

DESIGN ENGINEERING

2.1 Project Management and Administration

- Budget Tracking
- Management of Personnel and the Engineering Contract

2.2 Project Meetings

- Project Kick-Off Meeting Between the City and EEI
- One (1) Design Progress Meeting Between the City and EEI prior to Bidding

2.3 Final Plans, Specifications and Estimates

- Preparation of 60%, 90%, and 100% Project Manual and Engineer's Opinion of Probable Construction Cost.
- Project Manual Shall Include Bidding and Contract Documents, General Conditions, Special Provisions and Exhibits.

2.4 Bidding and Contracting

- Prepare Bidders List and Ad for Bid
- Submit Ad for Bid to the Local Paper and Post Bidding Documents on QuestCDN
- Address Bid Questions and Prepare Addenda
- Attend Bid Opening
- Prepare Bid Tab, Bid Summary, and Recommendation of Award
- Execute Contract Documents

Design includes an electrical review of the tank and associated specifications for any of the associated electrical improvements required. Furthermore, if required, a pre-bid meeting is included with the work items above. This scope does not include any coordination with telecommunication carriers if antennas or other equipment are on the tank.

The above scope summarizes the work items that will be completed for this contract. Additional work items, such as additional meetings beyond the project initiation meeting defined in the above scope, shall be considered outside the scope of the base contract and will be billed in accordance with the Standard Schedule of Charges.

ATTACHMENT C: ESTIMATE OF LEVEL OF EFFORT AND ASSOCIATED COST
PROFESSIONAL ENGINEERING SERVICES

CLIENT	PROJECT NUMBER	
United City of Yorkville	YO2008-P	
PROJECT TITLE	**DATE**	**PREPARED BY**
South Central Water Storage Tank Rehabilitation	7/12/23	MLP

TASK NO.	TASK DESCRIPTION	ROLE	PIC	SPM	PM	SPE II	PE	CAD	ADMIN	HOURS	COST
		PERSON	BPS	MLP		MWS		KKP			
		RATE	$239	$234	$212	$192	$162	$167	$70		
DESIGN ENGINEERING											
2.1	Project Management and Administration		1	8		-		-	-	9	$ 2,111
2.2	Project Meetings		2	6		8		-	-	16	$ 3,418
2.3	Contract Documents (Incl. Exhibits)		5	14		72		14	2	107	$ 20,773
2.4	Bidding and Contracting		-	2		23		-	7	32	$ 5,374
	Insert Task Subtotal:		**8**	**30**	**-**	**103**	**-**	**14**	**9**	164	$ 31,676
	PROJECT TOTAL:		**8**	**30**	**-**	**103**	**-**	**14**	**9**	**164**	**31,676**

EEI STAFF

BPS Brad P. Sanderson
MLP Michele L. Piotrowski
MWS Michael W. Schweisthal
KKP Kris K. Pung

DIRECT EXPENSES		
Printing/Scanning =	$	100
Paint Sampling =	$	150
Electrical =	$	3,000
DIRECT EXPENSES =	**$**	**3,250**

LABOR SUMMARY		
EEI Labor Expenses =	$	31,676
TOTAL LABOR EXPENSES	**$**	**31,676**

TOTAL COSTS	**$**	**34,926**

52 Wheeler Road, Sugar Grove, IL 60554 Tel: 630.466.6700 Fax: 630.466.6701 www.eeiweb.com

ATTACHMENT D: ESTIMATED SCHEDULE

CLIENT	PROJECT NUMBER	
United City of Yorkville	YO2008-P	
PROJECT TITLE	**DATE**	**PREPARED BY**
South Central Water Storage Tank Rehabilitation	7/12/23	MLP

TASK NO.	TASK DESCRIPTION										
							2024				
		AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
DESIGN ENGINEERING											
2.1	Project Management and Administration										
2.2	Project Meetings										
2.3	Contract Documents (Incl. Exhibits)										
2.4	Bidding and Contracting										

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Engineering Enterprises, Inc.

ATTACHMENT D - STANDARD SCHEDULE OF CHARGES ~ JANUARY 1, 2023

EMPLOYEE DESIGNATION	CLASSIFICATION	HOURLY RATE
Senior Principal	E-4	$239.00
Principal	E-3	$234.00
Senior Project Manager	E-2	$227.00
Project Manager	E-1	$204.00
Senior Project Engineer/Surveyor II	P-6	$192.00
Senior Project Engineer/Surveyor I	P-5	$179.00
Project Engineer/Surveyor	P-4	$162.00
Senior Engineer/Surveyor	P-3	$149.00
Engineer/Surveyor	P-2	$135.00
Associate Engineer/Surveyor	P-1	$122.00
Senior Project Technician II	T-6	$167.00
Senior Project Technician I	T-5	$156.00
Project Technician	T-4	$146.00
Senior Technician	T-3	$135.00
Technician	T-2	$122.00
Associate Technician	T-1	$107.00
GIS Technician II	G-2	$119.00
GIS Technician I	G-1	$110.00
Engineering/Land Surveying Intern	I-1	$ 79.00
Executive Administrative Assistant	A-4	$ 75.00
Administrative Assistant	A-3	$ 70.00

VEHICLES. REPROGRAPHICS, DIRECT COSTS, DRONE AND EXPERT TESTIMONY

Vehicle for Construction Observation		$ 15.00
In-House Scanning and Reproduction	$0.25/Sq. Ft. (Black & White) $1.00/Sq. Ft. (Color)	
Reimbursable Expenses (Direct Costs)	Cost	
Services by Others (Direct Costs)	Cost + 10%	
Unmanned Aircraft System / Unmanned Aerial Vehicle / Drone		$ 216.00
Expert Testimony		$ 271.00