



Louisville Metro Government

Old Jail Auditorium
514 W. Liberty Street
Louisville, KY 40202

Agenda - Final-revised Planning Commission

Thursday, July 16, 2026

1:00 PM

Old Jail Building

The Planning Commission meeting will be conducted in-person at the Old Jail Building Auditorium, 514 West Liberty Street, Louisville, KY 40202.

Anyone wishing to join the meeting virtually using a computer, laptop, or mobile device, as well as anyone wishing to sign up to speak in support, in opposition, or as other for any case, should visit the following link:

<https://louisvilleky.gov/government/upcoming-public-meetings>

You can access case materials (staff reports, proposed plans, etc.) by clicking on the link below and selecting this meeting in the Calendar tab:

<https://louisville.legistar.com/Calendar.aspx>

If you have any questions, please contact the case manager, or call the Office of Planning at 502-574-6230.

Call To Order

Approval Of Minutes

1. [06.18.2026 PC Minutes](#)

Attachments: [06.18.2026 PC Minutes.pdf](#)

Business Session

2. Subdivision Bond Forfeiture

Request: Forfeiture of Bonds
Project Name: Netherwood Subdivision Phases 1 and 2
Location:
Owner:
Applicant:
Representative:
Jurisdiction: Louisville Metro
Council District: 17 - Markus Winkler
Case Manager: Laura Ferguson, Assistant County Attorney

Attachments: Planning Commission Letter 06302026.pdf
Netherwood Inspections.pdf
Netherwood Surety Bond Documents.pdf
Public Works Request Letter.pdf

Public Hearing

3. [26-ZONE-0056](#)

Request: Change in Zoning from R-4 Single Family Residential, O-R Office/Residential, & PEC Planned Employment Center to M-2 Industrial with a Revised Detailed District Development plan with binding elements and associated Variance(s) and Waiver(s)

Project Name: Ford Expansion

Location: 3306 & 3308 Collins Lane; 3009 & 3011 N Winchester Acres Road; 2719 & 2721 Chamberlain Lane

Applicant: Sam Kandah, Ford Motor Company

Representative: Dinsmore & Shohl LLP

Jurisdiction: Louisville Metro

Council District: 17 - Markus Winkler

Case Manager: Zack Jones, Planner II

- Attachments:** [26-ZONE-0056_PC Staff Report_071626.pdf](#)
[26-ZONE-0056_Plan.pdf](#)
[26-VARIANCE-0059_Justification Statement.pdf](#)
[26-WAIVER-0059_Justification Statement.pdf](#)
[26-WAIVER-0060_Justification Statement.pdf](#)
[26-WAIVER-0061_Justification Statement.pdf](#)
[26-ZONE-0056_Bike Parking Justification.pdf](#)
[26-ZONE-0056_Elevations.pdf](#)
[26-ZONE-0056_Geotechnical Report.pdf](#)
[26-ZONE-0056_Justification Statement.pdf](#)
[26-ZONE-0056_TIS_Appendix.pdf](#)
[26-ZONE-0056_TIS_Summary.pdf](#)

4. [ENF-ZON-25-001616](#)

Request: Appeal of Binding Element Citation

Project Name: February 18, 2026 Binding Element Citation

Location: 4826 Preston Hwy

Applicant: Rawand Najm

Representative: Rawand Najm

Jurisdiction: Louisville Metro

Council District: 21

Case Manager: Laura Ferguson, Assistant County Attorney

- Attachments:** [Binding Element Citation 4826 Preston Highway.pdf](#)

5. [ENF-ZON-20-001511.](#)

Request: Appeal of Binding Element Citation
Project Name: April 6, 2026, Binding Element Citation
Location: 8020 National Tpk
Applicant: Hassan Ala Salman
Representative: Hassan Ala Salman
Jurisdiction: Louisville Metro
Council District: 13
Case Manager: Laura Ferguson, Assistant County Attorney

Attachments: [8020 Nat Tpk 9-68-88 Approved Plan \(3\).pdf](#)
[8020 Nat Tpk Minutes.pdf](#)
[ENF-ZON-20-001511_042426.pdf](#)
[ENF-ZON-20-001511_Basis of Appeal and Citation.pdf](#)

6. [25-STRCLOSURE-0012.](#)

Request: Closure of Public Right-of-Way
Project Name: Trinity High School Street Closure
Location: North Sherrin Ave
Applicant: Trinity High School Foundation
Representative: Land Design & Development Inc.
Jurisdiction: St Matthews
Council District: 9 - Andrew Owen
Case Manager: Tyler Pobiedzinski, Planner I

Attachments: [25-STRCLOSURE-0012_PCStaffReport_071626.doc.pdf](#)
[25-STRCLOSURE-0012_Plat_.pdf](#)
[25-STRCLOSURE-0012_Justification.pdf](#)

7. [26-DDP-0005](#)

Request: Revised Detailed District Development Plan with
Amendments to Binding Elements
Project Name: General Development Plan - Old Bardstown Road
Location: 8803, 8805, & 8807 Old Bardstown Road
Applicant: Goodwill Industries of Kentucky Inc.
Representative: Bardenwerper Talbott & Roberts, PLLC
Jurisdiction: Louisville Metro
Council District: 22 - Kevin Bratcher
Case Manager: Sydney Fawcett, AICP, Planner I

Attachments: [26-DDP-0005_PCStaffReport.pdf](#)
[26-DDP-0005_Plan_061026\(1\).pdf](#)
[26-DDP-0005_Elevations.pdf](#)
[26-DDP-0005_LetterOfExplanation.pdf](#)

8. [26-ZONE-0028](#)

Request: Change in Zoning from R-4 Residential to PEC Planned Employment Center with a Revised Detailed District Development plan with binding elements and associated Waiver(s)

Project Name: WSA Realty Properties LLC Old Henry Road Rezoning

Location: 13112 Old Henry Road

Applicant: WSA Realty Properties LLC

Representative: Bricker Graydon Wyatt LLP

Jurisdiction: Louisville Metro

Council District: 17 - Markus Winkler

Case Manager: Jude Mattingly, Planner II

- Attachments:** [26-ZONE-0028 Planning Commission Staff Report 071626.pdf](#)
- [26-ZONE-0028 Site Plan.pdf](#)
- [26-WAIVER-0079 & 26-WAIVER-0080 Applicant Justification Statement.pdf](#)
- [26-ZONE-0028 Applicant Comprehensive Plan Justification Statement.pdf](#)
- [26-ZONE-0028 Neighborhood Meeting Summary.pdf](#)
- [26-ZONE-0028 Public Comments Received Prior to Publishing.pdf](#)

9. [26-ZONE-0057](#)

Request: Change in Zoning from R-4 Single Family Residential to C-2 Commercial with a General District Development plan with binding elements

Project Name: E Indian Trail Commercial

Location: 4107 & 4111 E Indian Trail

Applicant: MHF&O LLC

Representative: Bricker Graydon Wyatt LLP

Jurisdiction: Louisville Metro

Council District: 10 - Josie Raymond

Case Manager: Zack Jones, Planner II

- Attachments:** [26-ZONE-0057 PC Staff Report 071626.pdf](#)
- [26-ZONE-0057 Plan.pdf](#)
- [26-ZONE-0057 Justification Statement.pdf](#)

10. [25-ZONE-0121](#)

Request: Change in Zoning from R-4 Single Family Residential to R5-A Multi-Family Residential with a Detailed District Development plan with binding elements with associated Waiver(s)

Project Name: Old Six Mile Multi-Family

Location: 9614 Old Six Mile Lane

Applicant: Goose Holdings LLC

Representative: Dinsmore & Shohl LLP

Jurisdiction: Jeffersontown

Council District: 11 - Kevin Kramer

Case Manager: Zack Jones, Planner II

- Attachments:** [25-ZONE-00121_PC Staff Report_071626.pdf](#)
- [25-ZONE-0121_Plan.pdf](#)
- [25-WAIVER-0176_Justification Statement_Waiver.pdf](#)
- [25-ZONE-0121_Elevations.pdf](#)
- [25-ZONE-0121_Justification.pdf](#)
- [25-ZONE-0121_Public Comment_Redacted.pdf](#)

11. [26-LDC-0008](#)

Request: Text Amendment to the Jeffersontown Land Development Code

Project Name: Town Center and Neighborhood Form Districts

Location: N/A

Owner: N/A

Applicant: City of Jeffersontown

Representative: N/A

Jurisdiction: Jeffersontown

Council District: 11 - Kevin Kramer, 18 - Marilyn Parker, 20 - Stuart Benson, and 26 - Brent Ackerson

Case Manager: Steve Rusie, City of Jeffersontown

- Attachments:** [26-LDC-0008 Staff Report.pdf](#)
- [26-LDC-0008_Resolution 855 Proposed Amendment to Ordinance 1415 adoptir](#)

12. [26-LDC-0004.](#)

Request: Text Amendment to the City of Shively Land Development Code
 Project Name: Fencing Materials
 Location:
 Owner:
 Applicant: City of Shively
 Representative:
 Jurisdiction: Shively
 Council District: 3 - Shameka Parrish-Wright
 Case Manager: Jude Mattingly, Planner II

Attachments: [26-LDC-0004_Shively_Staff_Report_Planning_Commission_071626.pdf](#)
[City of Shively Municipal Order No. 4, Series 2026.pdf](#)

13. [26-LDC-0003.](#)

Request: Text Amendment to the Land Development Code
 Project Name: Package Liquor Stores
 Location:
 Owner:
 Applicant: Louisville Metro
 Representative:
 Jurisdiction: Louisville Metro
 Council District: All Council Districts
 Case Manager: Joseph Haberman, AICP, Planning & Design Manager

Attachments: [26-LDC-0003_Package_Liquor_Stores_Commission_SR.pdf](#)
[Metro Council Resolution R-134-25.pdf](#)

Adjournment

This meeting will begin at 1:00 PM Eastern/12:00 PM Central



Louisville Metro Government

Text File

File Number: 06.18.2026 PC Minutes

Agenda Date: 7/16/2026

Version: 1

Status: Minutes to be Approved

In Control: Planning Commission

File Type: Planning Case

Agenda Number: 1.

**MINUTES OF THE MEETING
OF THE
LOUISVILLE METRO PLANNING COMMISSION
June 18, 2026**

A meeting of the Louisville Metro Planning Commission was held on Thursday, June 18, 2026, at 1:00 p.m. at the Old Jail Auditorium, 514 West Liberty Street Louisville, KY 40202.

Commissioners Present:

Te'Andre Sistrunk, Chair
Bill Fischer, Vice Chair
Mark Benitez
Steve Lannert
Russ Lohan
Jim Mims
David Steff
Beth Stuber

Commissioners Absent:

Sharon Bond
Suzanne Cheek

Staff Members Present:

Brian Davis, Planning Director
Julia Williams, Assistant Director
Joseph Haberman, Planning Manager
Jay Lockett, Planning Supervisor
Laura Ferguson, Assistant County Attorney
Mollie Share, Planner I
Clare Stuber, Management Assistant

The following matters were considered:

PLANNING COMMISSION MINUTES
June 18, 2026

APPROVAL OF MINUTES

JUNE 4, 2026, PLANNING COMMISSION MEETING MINUTES

00:03:50 On a motion by Commissioner Steff, seconded by Commissioner Mims, the following resolution was adopted:

RESOLVED, that the Louisville Metro Planning Commission does hereby **APPROVE** the Minutes of its meeting conducted on June 4, 2026.

The vote was as follows:

YES: Commissioners Mims, Lannert, Steff, Benitez, Lohan, Fischer, Stuber, and Sistrunk

ABSENT: Commissioners Bond and Cheek

PLANNING COMMISSION MINUTES
June 18, 2026

PUBLIC HEARING

CASE NO. 26-AMEND-0002

Request: Amendment to Binding Elements to add a specific use listed under Binding Element #15 for case number #24-ZONE-0014.
Project Name: Binding Element Amendment
Location: 908 S. English Station Rd
Applicant: Jeffrey Vessels
Representative: Bardenwerper, Talbott & Roberts, PLLC
Jurisdiction: Louisville Metro
Council District: 11 – Kevin Kramer
Case Manager: Mollie Share, Planner I

Notice of this public hearing was posted on the property and notices were sent by first class mail to those adjoining property owners whose names were supplied by the applicants.

The staff report prepared for this case was incorporated into the record. The Commissioners received this report in advance of the hearing, and this report was available to any interested party prior to the public hearing (staff report is part of the case file maintained in the Office of Planning, 444 South 5th Street.)

Agency Testimony:

00:04:45 Mollie Share provided an overview of the request and presented a PowerPoint presentation. (see recording for details)

The following spoke in favor of the request:

Nick Pregliasco, Bardenwerper, Talbott, & Roberts, PLLC, 1000 North Hurstbourne Parkway Louisville, KY 40223

Summary of those in favor:

00:07:25 Nick Pregliasco spoke in favor of the request. Pregliasco presented a PowerPoint presentation. Pregliasco responded to questions from Commissioners. (see recording for details)

The following spoke in opposition to the request:

None

Deliberation:

00:15:07 Planning Commission deliberation

PLANNING COMMISSION MINUTES
June 18, 2026

PUBLIC HEARING

CASE NO. 26-AMEND-0002

An audio/visual recording of the Planning Commission hearing related to this case is available on the Office of Planning website, or you may contact the Customer Service staff to view the recording or to obtain a copy.

Amendment to Binding Elements to add a specific use listed under Binding Element #15 for case number #24-ZONE-0014.

00:16:01 On a motion by Commissioner Mims, seconded by Commissioner Stuber, the following resolution, based on the staff report, the staff analysis, and the evidence and testimony heard today, was adopted:

WHEREAS, the Planning Commission finds, there do not appear to be any environmental constraints or historic resources on the subject site. Landscaping and tree canopy requirements of the Land Development Code have been approved on the subject site, and

WHEREAS, the Planning Commission finds, provisions for safe and efficient vehicular and pedestrian transportation within and around the development and the community is provided and will be maintained, and

WHEREAS, the Planning Commission finds, there are no open space requirements for the approved development plan. Any future development which proposes significant exterior site work shall meet the requirements of the Land Development Code, and

WHEREAS, the Planning Commission finds, the Metropolitan Sewer District approved the previous development plan and will continue to ensure the provision of adequate drainage facilities on the subject site in order to prevent drainage problems from occurring on the subject site or within the community, and

WHEREAS, the Planning Commission finds, the overall site design and land uses are compatible with the existing and future development of the area, and

WHEREAS, the Planning Commission finds, the proposal and request to amend the binding elements conforms to the applicable guidelines and policies of the Comprehensive Plan and to requirements of the Land Development Code. Short Term Rentals are permitted with special standards in the C-M zoning district. Community Form Goal 1 Policy 4 aims to ensure that new development and redevelopment are compatible with the scale and site design of nearby existing development and with the desire pattern of development within the Form District. Community Form Goal 1 Policy 9 ensures an appropriate transition between uses that are substantially different in scale and intensity or density of development. This transition may be achieved through methods such as landscaped buffer yards, vegetative berms, compatible building design and materials,

PLANNING COMMISSION MINUTES
June 18, 2026

PUBLIC HEARING

CASE NO. 26-AMEND-0002

height restrictions and setback requirements. The use of the existing north building as short-term rental until time of construction is compatible with the existing residential development around the site. When the site is constructed for the proposed use, a large building setback and landscape buffer have been approved to help mitigate the impacts of a more intense use next to residential, now, therefore be it;

RESOLVED, that the Louisville Metro Planning Commission does hereby **RECOMMEND** that the Louisville Metro Council **APPROVE** the requested Amendment to Binding Elements to add a specific use listed under Binding Element #15 for case number #24-ZONE-0014 **SUBJECT** to the following Binding Elements:

1. The development shall be in accordance with the approved district development plan, all applicable sections of the Land Development Code (LDC) and agreed upon binding elements unless amended pursuant to the Land Development Code. Any changes/additions/alterations of any binding element(s) shall be submitted to the Planning Commission with notice to be provided to the first and second tier adjoining property owners and any others required by the Land Development Code and/or KRS for review and approval; any changes/additions/alterations not so referred shall not be valid.
2. No outdoor advertising signs, small freestanding signs, pennants, balloons, or banners shall be permitted on the site
3. Construction fencing shall be erected when off-site trees or tree canopy exists within 3' of a common property line. Fencing shall be in place prior to any grading or construction to protect the existing root systems from compaction. The fencing shall enclose the entire area beneath the tree canopy and shall remain in place until all construction is completed. No parking, material storage, or construction activities are permitted within the protected area.
4. Before any permit (including but not limited to building, parking lot, change of use, site disturbance, alteration permit, or demolition permit) is requested:
 - a. The development plan must receive full construction approval from Construction Review, Louisville Metro Public Works, and the Metropolitan Sewer District
 - b. The property owner/developer must obtain approval of a detailed plan for screening (buffering/landscaping) as described in Chapter 10 prior to requesting a certificate of occupancy. Such plan shall be implemented prior to occupancy of the site and shall be maintained thereafter. The plan shall include, at a minimum, the enhanced landscaping shown at the June 6, 2024, Planning Commission hearing.

PLANNING COMMISSION MINUTES

June 18, 2026

PUBLIC HEARING

CASE NO. 26-AMEND-0002

- c. A Tree Preservation Plan in accordance with Chapter 10 of the LDC shall be reviewed and approved prior to obtaining approval for site disturbance
 - d. The materials and design of proposed structures shall be substantially the same as depicted in the rendering as presented at the June 6, 2024, Planning Commission meeting. A copy of the approved rendering is available in the case file on record in the offices of the Louisville Metro Planning Commission.
5. There shall be no outdoor music (live, piped, radio. Or amplified) or outdoor entertainment or outdoor PA system audible beyond the property line.
6. No idling of trucks shall take place within 200 feet of residential structures. No overnight idling of trucks shall be permitted on site.
7. A certificate of occupancy must be received from the appropriate code enforcement department prior to occupancy of the structure or land for the proposed use. All binding elements requiring action and approval must be implemented prior to requesting issuance of the certificate of occupancy, unless specifically waived by the Planning Commission
8. The applicant, developer, or property owner shall provide copies of those binding elements to tenants, purchasers, contractors, subcontractors, and other parties engaged in development of this site and shall advise them of the content of these binding elements. These binding elements shall run with the land, and the owner of the property and occupant of the property shall at all times be responsible for the compliance with these binding elements. At all times during development of the site, the applicant and developer, their heirs, successors; and assignees, contractors, subcontractors, and other parties engaged in development of this site, shall be responsible for compliance with these binding elements.
9. Developer/property owner shall ensure that measures are taken to prevent fugitive dust emissions from the gravel portions of the parking lot. Measures may include but are not limited to: utilization of asphalt milling, polyurethane binding agents, or liquid asphalt. Any measures taken shall be reapplied as recommended by the manufacturer, or as needed when new gravel is laid down. Developer/property owners shall maintain a written log of when measures have been applied and shall produce the log to any inspector on request. Developer/property owner shall additionally maintain copies of the manufacturers' material safety data sheet on-site.
10. All property owners within 500 feet of a proposed blasting location shall be notified 30 days before any blasting operations occur and be offered pre-blast surveys.

PLANNING COMMISSION MINUTES

June 18, 2026

PUBLIC HEARING

CASE NO. 26-AMEND-0002

Any homeowners who opt to have a pre-blast survey conducted shall be provided copies of all materials resulting from that survey, including any photos and/or videos. Any blast surveys shall be done in a manner consistent with Kentucky Blasting Regulations.

11. Only earth tone-colored tarps may be used on the premises, with no blue or other bright colored tarps allowed. Heavy truck and trailer parking on the site shall be limited to recreational vehicles and boat/landscape trailers
12. Applicant shall install enhanced landscaping along S. English Station Road and the north property line substantially the same as shown at the June 6, 2024, Planning Commission public hearing. The berm along the north property line shall be irrigated to maintain the health of the plantings.
13. The rear of the one-story mini-storage building facing I-64 shall be painted a color to blend in with the vegetation such as dark grey, dark brown, or dark green. The color of the façade of the front three-story building shall be substantially the same as the Lodges apartment community to the north
14. Signage shall be illuminated with backlit halo style lighting. All signage shall be in compliance with the Land Development Code Chapter 8
15. The only permitted C-1, C-2, M-1, or CM use allowed on the property shall be mini-storage and recreational vehicles and boat/landscape trailer parking and Short-Term Rental of the existing north building on site until such time as the mini-storage building is constructed.
16. All exterior lighting, whether freestanding or attached to any structure, shall be fully shielded, shall utilize flat or hidden lenses, and shall be pointed directly at the ground (excluding the signage per BE #14)
17. No inoperable vehicles shall be stored on the site
18. Any significant increases to the proposed structures (e.g. increases in building height, number of units, number of buildings), any increase in density on the property, any changes in use on the property which directly or indirectly require a public hearing before the Planning Commission or subcommittee thereof, and/or any amendments to the binding elements, other than (i) the addition of new binding elements, (ii) changes to binding elements that merely update the public hearing date, or (iii) updating a previous version of this binding element to reflect current language, shall be reviewed before the Planning Commission with final action to be determined by Metro Council

PLANNING COMMISSION MINUTES
June 18, 2026

PUBLIC HEARING

CASE NO. 26-AMEND-0002

The vote was as follows:

YES: Commissioners Mims, Lannert, Steff, Benitez, Lohan, Fischer, Stuber, and Sistrunk

ABSENT: Commissioners Cheek and Bond

PLANNING COMMISSION MINUTES
June 18, 2026

PUBLIC HEARING

CASE NO. ENF-ZON-22-000655

Request: Appeal of Binding Element Citation
Project Name: March 20, 2025, Citation
Location: 8300 Nash Rd
Applicant: Jamie Romeo deLeon Perez
Representative: Louisville Metro
Jurisdiction: Louisville Metro
Council District: 13- Dan Seum Jr.
Case Manager: Laura Ferguson, Assistant County Attorney

The documents prepared for this case were incorporated into the record. The Commissioners received these documents in advance of the hearing, and these documents were available to any interested party prior to the public hearing. (These documents were part of the case file maintained in the Office of Planning, 444 South 5th Street.)

Agency Testimony:

00:19:31 Laura Ferguson provided an overview of the request. Ferguson presented a PowerPoint presentation and responded to questions from Commissioners. (see recording for details)

The following spoke in favor of the appeal:

Jamie Romeo deLeon Perez, 8300 Nash Road Louisville, KY 40214

Marianna Perez, 8300 Nash Road Louisville, KY 40214

Summary of those in favor:

00:26:05 Jamie Romeo deLeon Perez spoke in favor of the appeal. Perez stated that he had paid the original fine and was here for clarification. Perez responded to questions from Commissioners. (see recording for details)

00:28:00 Marianna Perez spoke in favor of the appeal. Perez stated that she was present to act as a translator for her father. Perez responded to questions from Commissioners. (see recording for details)

The following spoke in opposition of the appeal:

None

Deliberation:

PLANNING COMMISSION MINUTES
June 18, 2026

PUBLIC HEARING

CASE NO. ENF-ZON-22-000655

00:35:00 Planning Commission deliberation

An audio/visual recording of the Planning Commission hearing related to this case is available on the Office of Planning website, or you may contact the Customer Service staff to view the recording or to obtain a copy.

00:41:54 On a motion by Commissioner Steff, seconded by Commissioner Lannert, the following resolution, based on the legal counsel's report and the evidence and testimony heard today, was adopted:

RESOLVED, that the Louisville Metro Planning Commission does hereby **CONTINUE** the case to the July 30, 2026, Planning Commission public hearing.

The vote was as follows:

YES: Commissioners Mims, Lannert, Steff, Benitez, Lohan, Fischer, Stuber, and Sistrunk

ABSENT: Commissioners Cheek and Bond

PLANNING COMMISSION MINUTES
June 18, 2026

BUSINESS SESSION

UPCOMING PUBLIC HEARING DISCUSSION

Agency Testimony:

00:46:09 Brian Davis informed the Commission of the need to hold several special hearings in the coming months and asked for input on the meeting dates, times, and procedures. Davis responded to questions from Commissioners. (see recording for details)

00:49:44 Chair Sistrunk stated that he would like a hybrid meeting allowing virtual testimony and that the in-person meetings be in accessible areas of the community outside of the downtown area. Sistrunk outlined the guidelines he hoped to implement for these special meetings. Sistrunk responded to questions from Commissioners. (see recording for details)

00:51:18 Commissioner Mims shared that these meetings are important, and that while we were ahead of the issue, we now have to catch up with everyone else. Mims believes that we need to stay focused on how data centers affect land use. (see recording for details)

00:55:00 Laura Ferguson clarified the draft that will be used and the expectations for public input. (see recording for details)

01:00:11 Joseph Haberman made a clarifying comment that the facilities that may be available for the upcoming meetings could potentially have limited hours of operation. (see recording for details)

01:01:21 Commissioner Lannert recalled a past meeting that was similar to the proposed one. Commissioner Lannert proposed that it would be necessary to let everyone in the public speak that wishes to. Commissioner Lannert suggested that each speaker gets two or three minutes each for their testimony. (see recording for details)

01:02:33 Vice Chair Fischer shared that ultimately the talking points from the public about data centers boil down to five main concerns. (see recording for details)

01:08:23 Commissioner Steff raised concerns that more than one officer will have to be present at the meetings. Commissioner Steff also suggested that special guidelines be created and established for the public. Commissioner Steff acknowledged that the draft legislation is needed. (see recording for details)

01:10:31 Vice Chair Fischer asked for clarification about the one proposed hybrid meeting. (see recording for details)

PLANNING COMMISSION MINUTES
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BUSINESS SESSION

UPCOMING PUBLIC HEARING DISCUSSION

01:11:18 Laura Ferguson suggested that the Commission allow any person to leave after giving their testimony, because no action will be taken. Ferguson clarified the order of the proposed meetings. (see recording for details)

01:13:09 Brian Davis asked the Commission about when they wanted the hybrid meeting and discussed available dates with the Commission. (see recording for details)

An audio/visual recording of the Planning Commission hearing related to this case is available on the Office of Planning website, or you may contact the Customer Service staff to view the recording or to obtain a copy.

PLANNING COMMISSION MINUTES
June 18, 2026

ADJOURNMENT

The meeting adjourned at approximately 2:30 p.m.

Chair

Planning Director



Louisville Metro Government

Text File

File Number: Subdivision Bond Forfeiture

Agenda Date: 7/16/2026

Version: 1

Status: Business Session

In Control: Planning Commission

File Type: Planning Case

Agenda Number: 2.



MIKE O'CONNELL
JEFFERSON COUNTY ATTORNEY

CIVIL DIVISION

200 S. FIFTH STREET, 300N
FIRST TRUST CENTRE
LOUISVILLE, KY 40202

(502) 574-6333

Jeff Derouen
First Assistant

Sarah J. Martin
Director

June 30, 2026

The Louisville/Jefferson County Metro Planning Commission
444 S. 5th Street, Suite 300
Louisville, KY 40202

RE: Netherwood Subdivision, Phases 1 and 2
Surety Bond No. S644367 (NGM Insurance \$51k)
Surety Bond No. S644374 (NGM Insurance \$47.65k)
Your Community Bank Savings Account No. 538037160 (\$3,000)

Public Works has requested a forfeiture of the above referenced bonds (copy attached) and savings account in order to remedy deficiencies in the sidewalks, curbs, roadways and ramps, and other items more particularly identified in the punch list. The developer has not responded to several notices of deficiency dating back to January, 2021, and none of the issues have been resolved. The Planning Commission is hereby requested to declare a default of the bond pursuant to LDC 7.2.85 to authorize Public Works and MSD to collect the entire bond proceeds from the surety and the savings account from the bank.

Respectfully,

Laura M. Ferguson
Assistant County Attorney – Civil Division
Office of Mike O'Connell - Jefferson County Attorney
First Trust Centre
200 S. Fifth Street, Suite 300N
Louisville, KY 40202

cc: Beth Stuber



OFFICE OF PLANNING & DESIGN SERVICES
DEVELOP LOUISVILLE
LOUISVILLE, KENTUCKY

CRAIG GREENBERG
MAYOR

YU "EMILY" LIU, FAICP
DIRECTOR

March 20, 2024

St Ventures, LLC
Amos Martin
2509 Plantside Dr
Louisville, KY 40299

RE: **NETHERWOOD PH 1SUBDIVISION INSPECTION BY KEVIN HARED 502-356-8032** (Please call me prior to making any repairs or if you have any questions regarding punch list items).

Dear Sir or Madam:

An inspection was held on the referenced project on 3/15/24. This inspection report addresses the sidewalk and roadway deficiencies only. You have **45 days** from the date of this punch list to complete the corrections and then, to request a re-inspection. **Inspection requests should not be made unless the work is ready for inspection. Failure to meet the deadline will result in a final notice letter.** It is the responsibility of the developer to contact MSD, the Health Dept., and the Fire Dept. to request a release inspection from them. An Engineer's Certificate is also required for release as well as a copy of the binding elements from Planning and the Decorative Street Name Sign Agreement "A" or "B". Please call Tyra Vick at (502) 574-6761 if you have questions regarding bond release requirements and/or to schedule a re-inspection when the corrections have been made. The roadway and sidewalk discrepancies are noted below:

1.	Replace the low, broken or damaged curbs at lots: Netherwood Ridge Dr 5016, 5014, 5012, 5010, 5003, 5005, 5009, 5013, 5015. Median has cracked curb and entrance.
2.	Replace low, cracked or damaged sidewalk at lots: across from 10918 one section of sidewalk
3.	Remove the spilled concrete from the roadway or curbs at lots: all through out
4.	The sidewalk and ramp at the following lots have an unacceptable slope. Correct this with a slope of 1/4" per foot maximum: All ramps need updated, marked with white paint
5.	Install 3 red diamond signs at the end of: Netherwood Ridge Dr

Additional: All drains marked in white paint needs adjustment
(Check all that apply) Mill key way as marked Mill only around manholes marked "Mill".
 Mill along curbs as marked. Mill along curbs & catch basins.
 Install all MUTCD standard signs: no outlet, speed limit, stop, street name.

Sincerely,

Brian Davis
Assistant Director

LS/cw
cc:

, Public Works
Bond File
METRO DEVELOPMENT CENTER 444 S. FIFTH STREET, STE 300, LOUISVILLE, KENTUCKY 40202 502.574.6230 FAX 502. 574.8129

LOUISVILLE FORWARD
www.louisvilleky.gov



OFFICE OF PLANNING & DESIGN SERVICES
DEVELOP LOUISVILLE
LOUISVILLE, KENTUCKY

GREG FISCHER
MAYOR

January 20, 2021

YU "EMILY" LIU, AICP
DIRECTOR

Mr. Amos Martin
Glen-Mar Development, Inc
209 Townpark Cir, Ste 100
Louisville, KY 40243

RE:

NETHERWOOD PH 1 / 2 SUBDIVISION INSPECTION BY BOBBY MONTGOMERY (502) 475-03080 (Please call me prior to making any repairs or if you have any questions regarding punch list items).


Dear Mr. Martin:

An inspection was held on the referenced project on 1/12/21. This inspection report addresses the sidewalk and roadway deficiencies only. You have **45** days from the date of this punch list to complete the corrections and then, to request a re-inspection. **Inspection requests should not be made unless the work is ready for inspection. Failure to meet the deadline will result in a final notice letter.** It is the responsibility of the developer to contact MSD, the Health Dept., and the Fire Dept. to request a release inspection from them. An Engineer's Certificate is also required for release as well as a copy of the binding elements from Planning and the Decorative Street Name Sign Agreement "A" or "B". Please call Tyra Vick at (502) 574-6761 if you have questions regarding bond release requirements and/or to schedule a re-inspection when the corrections have been made. The roadway and sidewalk discrepancies are noted below:

1.	Areas on Netherwood Ridge Dr: clean curb & gutter throughout, repair sidewalk @10918 Jonidan approx. 45ft
2.	Ramp across street, broken curb at entrance Island curb at 5110, also repair storm drain at this location at this location 5016, 5010, 5015 also curb at Netherwood and Verista all area is marked with white marking paint and final surface

- (Check all that apply)
- Mill key way as marked
 - Mill only around manholes marked "Mill".
 - Mill along curbs as marked.
 - Mill along curbs & catch basins.
 - Install all MUTCD standard signs: no outlet, speed limit, stop, street name.

Sincerely,


Leonard Sullivan
Inspector Supervisor

LS/cw

cc: Eng
, Public Works
Bond File

LOUISVILLE FORWARD
www.louisvilleky.gov

017

INITIAL / RE-INSPECTION / BOND RELEASE FORM

DATE: 12-16-20

PROJECT NAME: Netherwood Subdiv

SECTION/STREET: Phase 1 & 2

REQUESTED BY: Tyra Vick

COMMENTS: _____

UNDEVELOPED LOTS = 4

RELEASE OF BOND: YES _____ NO

INSPECTOR'S COMMENTS: areas on Netherwood Ridge Dr.
Clear curb & gutter through out, Repair sidewalk @ 10918
Jordian approx 45 FT, ramp @ cross street, Broken curb at entrance Island
Curb at 5110, also repair storm drain at this location, Curb at
5016 & 5010, 5015 also curb at Netherwood and Verista
all areas are marked with white marking paint and
Final surface

INSPECTOR'S SIGNATURE: Bobby Montgomery DATE: 1-12-21

cc: Bond File

Bobby Montgomery 475-0308



DATE 3-15-2024 SUBDIVISION Netherwood Homes SECTION Phase 1

INSPECTOR Kevin Hanned PHONE # (502) 356-8032

Replace the low, broken or damaged curbs at lots: Netherwood Ridge Dr - 5016, 5014, 5012, 5010, 5003, 5005, 5009, 5013, and 5015.
Median Has Cracked Curb and Entrance.

Replace the low, cracked or damaged sidewalk at lots: Across from 10918 One Section of Sidewalk.

The following lots were too muddy or obstructed from view, please advise when they have been cleared so we may re-inspect for repairs: N/A

Remove the spilled concrete from the roadway or curbs at lots: All throughout.

Adjust the manholes to surface grade at lots: N/A

Lots undeveloped or under construction at this time: N/A

Remove and replace the failed base at lots: N/A

Adjust the water meter to surface grade at lots: NIA

Backfill along the curb at lots: NIA

The sidewalk and ramp at the following lots have an unacceptable slope. Correct this with a slope of 1/4" per foot maximum: ALL Ramps need updated. Marked in white paint

Install the sidewalks per plans at lots: NIA

Install 3 red diamond signs at the end of AT: End of Netherwood Ridge Dr

(Check those that apply)

Mill key way as marked. Mill along curbs as marked. Mill along curbs & catch basins.

Mill only around manholes marked "mill"

Install all MUTCD standard signs: no outlet, speed limit, stop, street name.

Additional

ALL Drains Marked in white paint need Adjusted. ALL Areas marked in white paint needs repair.

LOUISVILLE-JEFFERSON COUNTY METRO
DEPARTMENT OF PUBLIC WORKS
444 South Fifth Street, Suite 400
Louisville, Kentucky 40202

ENCROACHMENT PERMIT BOND

BOND NO. 33BSBG8214

KNOW ALL BY THESE PRESENTS: That we ST Ventures, LLC in the City of Louisville, State of Kentucky as Principal, and Hartford Fire Insurance Company, in the City of Hartford State of Connecticut, as Surety, are held and firmly bound unto the Louisville-Jefferson County Metro Department of Public Works, for the use and benefit of the Louisville-Jefferson County Metro Department of Public Works, located at 444 South Fifth Street, Suite 400, Metro Development Center Building, Louisville, Kentucky 40202, State of Kentucky, Obligee, in the penal sum of Five Thousand Two Hundred (\$5,200) Dollars, lawful money of the United States for the payment of which well and truly be made, we bind ourselves, our heirs, executors, administrators and assigns, jointly and severally, firmly by these presents.

The condition of the foregoing obligation is such, that whereas the said Principal has been permitted to Netherwood Ridge Drive- Netherwood 2 authorizing encroachment upon the Louisville-Jefferson County Metro Government public right-of-way.

NOW, THEREFORE, if the above bounden Principal shall faithfully and honestly complete the encroachment in accordance with said permit, and if the encroachment of which the said permit is granted fails to meet all specification, or if the said permit is revoked by the Louisville-Jefferson County Metro Department of Public Works, the above bounden Principal shall properly restore the right-of-way in accordance with Metro Ordinance regulations, and if thereafter such restoration has been completed, then this obligation shall be null and void; otherwise to remain in full force and effect until completion of the encroachment has been duly accepted by an authorized agent of the Louisville-Jefferson County Metro Department of Public Works.

That this obligation shall remain in full force and effect until terminated in writing by the Louisville-Jefferson County Metro Department of Public Works.

In witness whereof, we, the parties, have set our hands and seals on this 11th day of July 2014.

Logan Lavelle Hunt Insurance
Ky. Bonding Agent Name
11420 Bluegrass Pkwy
Mailing Address
Louisville, KY 40299
City, State, Zip Code
502-499-6880
Phone Number

ST Ventures, LLC
Principal
[Signature]
BY
Hartford Fire Insurance Company
Surety
[Signature]
Attorney in Fact Nikki Rutledge

POWER OF ATTORNEY

Direct Inquiries/Claims to:

THE HARTFORD
 Bond T-4
 One Hartford Plaza
 Hartford, Connecticut 06155
 email: bond.claims@thehartford.com
 call: 888-266-3488 | fax: 860-757-5835

SHOW ALL PERSONS BY THESE PRESENTS THAT:

Agency Code: 33-750651

- Hartford Fire Insurance Company, a corporation duly organized under the laws of the State of Connecticut
- Hartford Casualty Insurance Company, a corporation duly organized under the laws of the State of Indiana
- Hartford Accident and Indemnity Company, a corporation duly organized under the laws of the State of Connecticut
- Hartford Underwriters Insurance Company, a corporation duly organized under the laws of the State of Connecticut
- Twin City Fire Insurance Company, a corporation duly organized under the laws of the State of Indiana
- Hartford Insurance Company of Illinois, a corporation duly organized under the laws of the State of Illinois
- Hartford Insurance Company of the Midwest, a corporation duly organized under the laws of the State of Indiana
- Hartford Insurance Company of the Southeast, a corporation duly organized under the laws of the State of Florida

having their home office in Hartford, Connecticut (hereinafter collectively referred to as the "Companies") do hereby make, constitute and appoint Nikki Rutledge of Louisville, Kentucky, its true and lawful Attorney-in-Fact, to sign its name as surety(ies) only as delineated above by , and to execute, seal and acknowledge the following bond, undertaking, contract or written instrument:

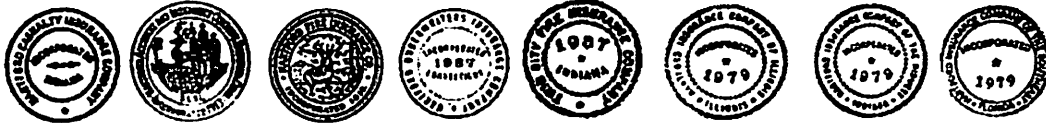
Bond No. 33BSBG78214

Naming ST Ventures, LLC as Principal,

and LOUISVILLE-JEFFERSON COUNTY METRO DPT OF PUBLIC WORKS as Obligee,

in the amount of See Bond Form(s) on behalf of Company in its business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

In Witness Whereof, and as authorized by a Resolution of the Board of Directors of the Company on August 1, 2009, the Company has caused these presents to be signed by its Vice President and its corporate seals to be hereto affixed, duly attested by its Assistant Secretary. Further, pursuant to Resolution of the Board of Directors of the Company the Company hereby unambiguously affirms that it is and will be bound by any mechanically applied signatures applied to this Power of Attorney.



John Gray

John Gray, Assistant Secretary

M. Ross Fisher

M. Ross Fisher, Vice President

STATE OF CONNECTICUT }
 COUNTY OF HARTFORD } ss. Hartford

On this 12th day of July, 2012, before me personally came M. Ross Fisher, to me known, who being by me duly sworn, did depose and say: that he resides in the County of Hartford, State of Connecticut; that he is the Vice President of the Companies, the corporations described in and which executed the above instrument; that he knows the seals of the said corporations; that the seals affixed to the said instrument are such corporate seals; that they were so affixed by authority of the Boards of Directors of said corporations and that he signed his name thereto by like authority.

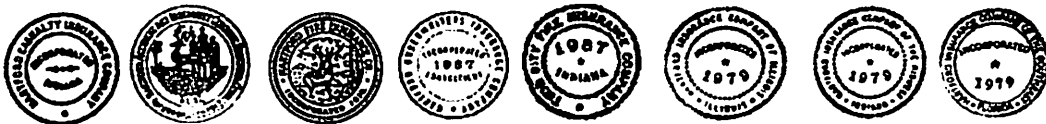


CERTIFICATE

Kathleen T. Maynard

Kathleen T. Maynard
 Notary Public
 My Commission Expires July 31, 2016

I, the undersigned, Vice President of the Companies, DO HEREBY CERTIFY that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which is still in full force effective as of July 11, 2014.
 Signed and sealed at the City of Hartford.



Gary W. Stumper

Gary W. Stumper, Vice President

PUBLIC WORKS DEPARTMENT
444 S. 5th St., Suite 200
LOUISVILLE, KENTUCKY 40202

(502) 574-6761

TO *Amos Martin*

DATE FILE NUMBER

7-15-14

- URGENT
- SOON AS POSSIBLE
- NO REPLY NEEDED

ATTENTION

Damage Bond

SUBJECT

*Netherwood Ridge Dr.
Netherwood 2*

MESSAGE

*PW+H received.
\$5,200 Hartford Fire Ins. Co. Bond No.
33BSBGT8214*

REPLY

SIGNED

Cheryl Browning

DATE OF REPLY

SIGNED

[Signature]

SENDER RETAIN FOR FILES

SUBDIVISION BOND

KNOW ALL MEN BY THESE PRESENTS, that we **ST Ventures, LLC**
of **13800 Lake Point Circle Louisville, KY 40223**, as Principal and **NGM Insurance Company**, having its principal office and place of business in the City of Jacksonville, FL, as Surety, are held and firmly bound unto Louisville Metro, as Obligee, in the sum of **Fifty-one thousand and 00/100 (\$51,000)** DOLLARS, for which payment well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, the above bounden Principal has been granted preliminary subdivision approval of a subdivision known as **Netherwood Subdivision Section 1**, said approval being conditioned upon the installation of physical improvements in said subdivision, in accordance with construction plans prepared by **Land Design & Development, Inc.**, and approved by Louisville Metro Public Works and the Metropolitan Sewer District, and for the installation of fire hydrants as required by the National Fire Protection Association; and

WHEREAS, the Principal has entered into a written agreement with Obligee relating to the above referenced physical improvements (the "Subdivider's Contract");

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION IS such, that if the above bounden Principal shall well and truly and in good, sufficient and workmanlike manner perform or cause to be performed the installation of said physical improvements in accordance with the terms and conditions of the Subdivider's Contract, then this obligation shall be null and void; otherwise to remain in full force and effect until said physical improvements have been completed and accepted by an authorized agent of the Louisville Metro Planning Commission or Louisville Metro Public Works.

The parties hereto further agree to the following terms and conditions:

1. This Subdivision Bond is effective for the annual period from **7/1/2014 to 7/1/2015**, and shall be deemed automatically renewed annually thereafter by this Surety, unless this Surety provides written notice of cancellation to the Obligee and the Principal at least seventy-five (75) calendar days prior to the annual renewal date of the bond. Should this Surety provide said notice of cancellation, then the Principal shall provide a Replacement Surety Bond to the Obligee on or before the date of said cancellation. Upon the Principal providing said Replacement Surety Bond, then this Surety shall be released and discharged from any liability, demand, or claim on this Subdivision Bond. Should this Subdivision Bond not be renewed as required herein, then the Obligee shall be entitled to forfeiture hereof, in the penal sum of this Subdivision Bond upon written notice to the Surety. The Surety shall pay said forfeiture demand within thirty (30) days after receipt of said written demand from the Obligee.

2. Any funds received by the Obligee from the Surety as a result of said forfeiture shall be held by the Obligee in an interest bearing account for the performance of the Principal's obligations herein in the event of default by the Principal of those obligations, and any unused funds shall be returned to the Surety upon satisfaction of the Principal's obligation herein. Surety shall be entitled to an accounting of all funds received and dispursed by the Obligee as a result of said forfeiture.

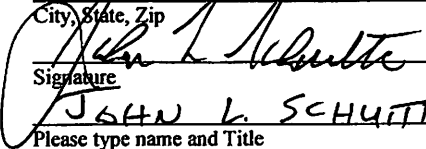
3. The Surety herein shall retain a rating with AM Best's Company of A-/VI or better. Should the Surety fail to maintain said rating by AM Best's Company, such failure shall be deemed a default hereunder by the Principal and Surety, and the Oblige shall be entitled to forfeiture of the penal sum of this Subdivision Bond. Said forfeiture being subject to the requirements set forth in Paragraphs No. 1 and 2 hereinabove.

4. Notice to the Oblige as required herein shall be made and delivered via Certified Mail to Metro Public Works, 444 South 5th Street, Suite 400, Louisville, KY 40202.

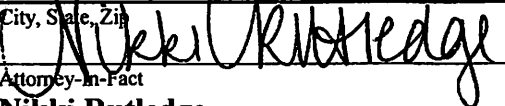
5. Notice to the Principal and the Surety as required herein shall be made and delivered via Certified Mail to the address listed below.

Signed and sealed this 5th day of June, 2014.

Principal: ST Ventures, LLC
Name
13800 Lake Point Circle
Address
Louisville, KY 40223
City, State, Zip

By: 
Signature
JOHN L. SCHUTTE MEMBER
Please type name and Title

Surety: NGM Insurance Company
Name
5101 Cox Road
Address
Glen Allen, VA 23060
City, State, Zip

By: 
Attorney-in-Fact
Nikki Rutledge
Please type name

For Claims: Logan Lavelle Hunt Insurance Agency
Name
11420 Bluegrass Pkwy
Address
Louisville, KY 40299
City, State, Zip
(502) 499-6880
Phone Number



KNOW ALL MEN BY THESE PRESENTS: That NGM Insurance Company, a Florida corporation having its principal office in the City of Jacksonville, State of Florida, pursuant to Article IV, Section 2 of the By-Laws of said Company, to wit:

"Article IV, Section 2. The board of directors, the president, any vice president, secretary, or the treasurer shall have the power and authority to appoint attorneys-in-fact and to authorize them to execute on behalf of the company and affix the seal of the company thereto, bonds, recognizances, contracts of indemnity or writings obligatory in the nature of a bond, recognizance or conditional undertaking and to remove any such attorneys-in-fact at any time and revoke the power and authority given to them."

does hereby make, constitute and appoint James R Lavelle Jr, John P Lavelle, Joyce Lavelle, Nikki Rutledge

its true and lawful Attorneys-in-fact, to make, execute, seal and deliver for and on its behalf, and as its act and deed, bonds, undertakings, recognizances, contracts of indemnity, or other writings obligatory in nature of a bond subject to the following limitation:

1. No one bond to exceed Five Million Dollars (\$5,000,000.00)

and to bind NGM Insurance Company thereby as fully and to the same extent as if such instruments were signed by the duly authorized officers of the NGM Insurance Company; the acts of said Attorney are hereby ratified and confirmed.

This power of attorney is signed and sealed by facsimile under and by the authority of the following resolution adopted by the Directors of NGM Insurance Company at a meeting duly called and held on the 2nd day of December 1977.

Voted: That the signature of any officer authorized by the By-Laws and the company seal may be affixed by facsimile to any power of attorney or special power of attorney or certification of either given for the execution of any bond, undertaking, recognizance or other written obligation in the nature thereof; such signature and seal, when so used being hereby adopted by the company as the original signature of such office and the original seal of the company, to be valid and binding upon the company with the same force and effect as though manually affixed.

IN WITNESS WHEREOF, NGM Insurance Company has caused these presents to be signed by its Vice President, General Counsel and Secretary and its corporate seal to be hereto affixed this 20th day of March, 2013.

NGM INSURANCE COMPANY By:

[Signature of Bruce R Fox]

Bruce R Fox
Vice President, General Counsel and Secretary

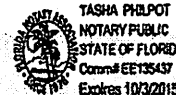


State of Florida,
County of Duval.

On this March 20th, 2013, before the subscriber a Notary Public of State of Florida in and for the County of Duval duly commissioned and qualified, came Bruce R Fox of the NGM Insurance Company, to me personally known to be the officer described herein, and who executed the preceding instrument, and he acknowledged the execution of same, and being by me fully sworn, deposed and said that he is an officer of said Company, aforesaid: that the seal affixed to the preceding instrument is the corporate seal of said Company, and the said corporate seal and her signature as officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Company; that Article IV, Section 2 of the By-Laws of said Company is now in force.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at Jacksonville, Florida this 20th day of March, 2013.

[Signature of Notary Public]



I, Brian J Beggs, Vice President of the NGM Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney executed by said Company which is still in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Company at Jacksonville, Florida this

1st day of July, 2014.

WARNING: Any unauthorized reproduction or alteration of this document is prohibited.
TO CONFIRM VALIDITY of the attached bond please call 1-800-225-5646.

TO SUBMIT A CLAIM: Send all correspondence to 55 West Street, Keene, NH 03431 Attn: Bond Claims.

DocuGard #04546 contains a security pantograph, blue background, heat-sensitive ink, coin-reactive watermark, and microtext printing on border.



ASSIGNMENT AND NOTICE

SAVINGS INSTITUTION

Date DECEMBER 15, 2009

Your Community Bank

Certificate or Savings Book Number
410964036

Owner(s) NETHERWOOD, LLC

(Address)

Face Amount or Balance \$3,000.00

The undersigned owner(s) do(es) hereby assign to the Louisville-Jefferson County Metro Planning Commission the above described obligation for the purpose of fulfilling the requirements of Section 2.45 of the Metropolitan subdivision Regulations relating to:

Docket No. _____

Subdivision NETHERWOOD CONDO
Owner(s) Christina A. Sawyer

Note: Owner(s) must sign above

NOTICE OF ASSIGNMENT BY SAVINGS INSTITUTION

Notice of the above assignment has been received, the balance shown is acknowledged, the person making the assignment is an authorized signer for the account and our records have been marked to reflect the assignment.

Date 12/17/09

SAVINGS INSTITUTION

By: Natly Lowrey per Phil Ryan
Name
Manager
Title

FOR RELEASE ONLY

To the above named Savings Institution: We have released the assignment in our favor down to \$ _____ and request that you mark your records accordingly.

LOUISVILLE- JEFFERSON COUNTY METRO PLANNING COMMISSION/LOUISVILLE-JEFFERSON COUNTY METRO PUBLIC WORKS

Date _____

By: _____
Name

Title



OFFICE OF PLANNING & DESIGN SERVICES – TRANSPORTATION REVIEW
DEVELOP LOUISVILLE
LOUISVILLE, KENTUCKY

GREG FISCHER
MAYOR

YU "EMILY" LIU, AICP
DIRECTOR

January 14, 2015

Mr. Bart A. Trindeitmar
The Bank of New York Mellon
Corporate Trust Services
614 W. Main Street, Ste. 2600
Louisville, Kentucky 40202

RE: **NETHERWOOD 2**

Dear Mr. Trindeitmar:

The following items have been received from Amos Martin for the required bond for the referenced subdivision pursuant to the requirements of the Metropolitan Subdivision Regulations and the Louisville-Jefferson County Metro Public Works Department:

1. \$50 Your Community Bank Check No. 1520 payable to Bank of New York
2. \$50 Your Community Bank Check No. 1521 payable to Bank of New York
3. \$3,000 Your Community Bank Savings No. 538037160
4. \$47,650 NGM Insurance Co. Bond No. S644374

Sincerely,

Cheryl Browning

Cheryl Browning
Administrative Specialist

BAT

The above listed items were this the 21 day of August, 2015 given to me by the Louisville-Jefferson County Metro Planning & Design Services, per the agreement dated December 12, 1989.

Bart Trindeitmar
The Bank of New York Mellon

/clb

LOUISVILLE FORWARD
www.louisvilleky.gov

PUBLIC WORKS DEPARTMENT
444 S. 5th St., Suite 200
LOUISVILLE, KENTUCKY 40202

(502) 574-6761

DATE

FILE NUMBER

URGENT
 SOON AS POSSIBLE
 NO REPLY NEEDED

12-16-14

ATTENTION

SUBJECT

TO Amos Martin

Netherwood 2

MESSAGE

PW + A received!

\$47,650 NEM Ins. Co. Bond No. 5644374
\$3,000 Your Community BK Savings No. 538037160
\$2,500 Your Community BK CK Nos. 1520 + 1521
Infrastructure Sheet
Signed subdivider's contract

REPLY

SIGNED

Cheryl Browning

DATE OF REPLY

SIGNED

[Handwritten signature]

SENDER RETAIN FOR FILES

ASSIGNMENT AND NOTICE

SAVINGS INSTITUTION

Your Community Bank
471 W. Main St
Louisville, Ky. 40202.

(Address)

Date 12/15/2014

Certificate or Savings Book Number
538037160

Owner(s) J.T. Ventures, LLC.

Face Amount or Balance \$3,000.00

The undersigned owner(s) do(es) hereby assign to the Louisville and Jefferson County Planning Commission the above described obligation for the purpose of fulfilling the requirements of Section 2.45 of the Metropolitan Subdivision Regulations relating to:

Docket No. _____

Subdivision _____

Owner(s) _____

Note: Owner(s) must sign above

NOTICE OF ASSIGNMENT BY SAVINGS INSTITUTION

Notice of the above assignment has been received, the balance shown is acknowledged, the person making the assignment is an authorized signer for the account and our records have been marked to reflect the assignment

Date 12/15/2014.

SAVINGS INSTITUTION

By: Andy Mayer
Name

Jr. Vice-President.
Title

FOR RELEASE ONLY

To the above named Savings Institution: We have released the assignment in our favor down to \$ _____ and request that you mark your records accordingly.

LOUISVILLE AND JEFFERSON COUNTY PLANNING COMMISSION/JEFFERSON COUNTY PUBLIC WORKS

Date _____

By: _____
Name

Title

Attachment D

PRINT FORM | PRINT ISERIES FORM | RETRIEVE MESSAGE

Deposit Inquiry For SAA8422
ST VENTURES LLC



PREVIOUS < | SUBMIT > | EXIT X

538037160
Maximum Money Market

SPECIAL MESSAGES. >

Hold on account New account

PAGE FUNCTIONS

Functions Expanded

- > ADDL FUNCTIONS
- > IMAGE
- > SWEEP INQUIRY
- > HISTORY
- > MESSAGES
- > MAINTENANCE
- > RELATIONSHIPS
- > STOPS/HOLDS
- > MEMO POST
- > MUTUAL SWP INQ
- > AFT INQUIRY
- > FEES
- > TRANSFER
- > OFFICER LIST
- > SPLIT/TIERED
- > MORE FUNCTIONS

Customer Profile Account Balances Bank Internal OD Notice Reporting Special Information

Date last active	12/15/14	Branch	023
Date last contact	12/15/14	Date opened	12/15/14
Date last deposit	12/15/14	3,000.00	
Date last overdrawn	0/00/00	Hold amount	3,000.00
Automatic NSF fee	Yes		

Service charge information	
Service charge	Yes
Service charge code	26
Service charge waive expiration	0/00/00

Overdraft protection	No	BP Pending	.00
Interest rate	.010000%	Accrued interest	.00

Statement information	
Date last statement	0/00/00
Statement/service charge/interest cycles	13
Statement/Passbook	Statement

PREVIOUS < | SUBMIT > | EXIT X

The following fields are displayed on this screen for inquiry purposes.

Available balance - The field will display the current available balance for this account.

Date last active - The date of last activity will be displayed in this field.

Collected balance - The current collected balance for the selected account will be displayed in this field.

[Learn more >](#)

export

SUBDIVISION BOND

KNOW ALL MEN BY THESE PRESENTS, that we **ST Ventures, LLC** of **13800 Lake Point Circle Louisville, KY 40223**, as Principal and **NGM Insurance Company**, having its principal office and place of business in the City of Jacksonville, FL, as Surety, are held and firmly bound unto Louisville Metro, as Obligee, in the sum of **Forty-seven thousand six hundred fifty and 00/100 (\$47,650) DOLLARS**, for which payment well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, the above bounden Principal has been granted preliminary subdivision approval of a subdivision known as **Netherwood Subdivision Section 2**, said approval being conditioned upon the installation of physical improvements in said subdivision, in accordance with construction plans prepared by **Land Design & Development, Inc.**, and approved by Louisville Metro Public Works and the Metropolitan Sewer District, and for the installation of fire hydrants as required by the National Fire Protection Association; and

WHEREAS, the Principal has entered into a written agreement with Obligee relating to the above referenced physical improvements (the "Subdivider's Contract");

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION IS such, that if the above bounden Principal shall well and truly and in good, sufficient and workmanlike manner perform or cause to be performed the installation of said physical improvements in accordance with the terms and conditions of the Subdivider's Contract, then this obligation shall be null and void; otherwise to remain in full force and effect until said physical improvements have been completed and accepted by an authorized agent of the Louisville Metro Planning Commission or Louisville Metro Public Works.

The parties hereto further agree to the following terms and conditions:

1. This Subdivision Bond is effective for the annual period from **12/4/2014 – 12/4/2015**, and shall be deemed automatically renewed annually thereafter by this Surety, unless this Surety provides written notice of cancellation to the Obligee and the Principal at least seventy-five (75) calendar days prior to the annual renewal date of the bond. Should this Surety provide said notice of cancellation, then the Principal shall provide a Replacement Surety Bond to the Obligee on or before the date of said cancellation. Upon the Principal providing said Replacement Surety Bond, then this Surety shall be released and discharged from any liability, demand, or claim on this Subdivision Bond. Should this Subdivision Bond not be renewed as required herein, then the Obligee shall be entitled to forfeiture hereof, in the penal sum of this Subdivision Bond upon written notice to the Surety. The Surety shall pay said forfeiture demand within thirty (30) days after receipt of said written demand from the Obligee.

2. Any funds received by the Obligee from the Surety as a result of said forfeiture shall be held by the Obligee in an interest bearing account for the performance of the Principal's obligations herein in the event of default by the Principal of those obligations, and any unused funds shall be returned to the Surety upon satisfaction of the Principal's obligation herein. Surety shall be entitled to an accounting of all funds received and dispersed by the Obligee as a result of said forfeiture.

3. The Surety herein shall retain a rating with AM Best's Company of A-/VI or better. Should the Surety fail to maintain said rating by AM Best's Company, such failure shall be deemed a default hereunder by the Principal and Surety, and the Obligee shall be entitled to forfeiture of the penal sum of this Subdivision Bond. Said forfeiture being subject to the requirements set forth in Paragraphs No. 1 and 2 hereinabove.

4. Notice to the Obligee as required herein shall be made and delivered via Certified Mail to Metro Public Works, 444 South 5th Street, Suite 400, Louisville, KY 40202.

5. Notice to the Principal and the Surety as required herein shall be made and delivered via Certified Mail to the address listed below.

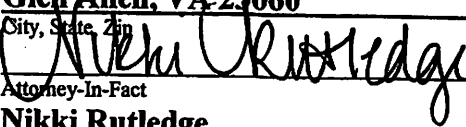
Signed and sealed this 4th day of December, 2014.

Principal: ST Ventures, LLC
Name
13800 Lake Point Circle
Address
Louisville, KY 40223
City, State, Zip

By: _____
Signature

Please type name and Title

Surety: NGM Insurance Company
Name
5101 Cox Road
Address
Glen Allen, VA 23060
City, State, Zip

By: 
Attorney-In-Fact
Nikki Rutledge
Please type name

For Claims: Logan Lavelle Hunt Insurance Agency
Name
11420 Bluegrass Pkwy
Address
Louisville, KY 40299
City, State, Zip
(502) 499-6880
Phone Number



NGM INSURANCE COMPANY
A member of The Main Street America Group

POWER OF ATTORNEY

06- 02950762

KNOW ALL MEN BY THESE PRESENTS: That NGM Insurance Company, a Florida corporation having its principal office in the City of Jacksonville, State of Florida, pursuant to Article IV, Section 2 of the By-Laws of said Company, to wit:

"Article IV, Section 2. The board of directors, the president, any vice president, secretary or the treasurer shall have the power and authority to appoint attorneys-in-fact and to authorize them to execute on behalf of the company and affix the seal of the company thereto, bonds, recognizances, contracts of indemnity or writings obligatory in the nature of a bond, recognizance or conditional undertaking and to remove any such attorneys-in-fact at any time and revoke the power and authority given to them."

does hereby make, constitute and appoint Nikki Rutledge, John P. Lavelle, Joyce Lavelle, James R. Lavelle Jr., Kelly Feher

its true and lawful Attorneys-in-fact to make, execute, seal and deliver for and on its behalf, and as its act and deed, bonds, undertakings, recognizances, contracts of indemnity, or other writings obligatory in nature of a bond subject to the following limitation:

- 1. No one bond to exceed Five Million Dollars (\$5,000,000.00).

and to bind NGM Insurance Company thereby as fully and to the same extent as if such instruments were signed by the duly authorized officers of the NGM Insurance Company; the acts of said Attorney are hereby ratified and confirmed.

This power of attorney is signed and sealed by facsimile under and by the authority of the following resolution adopted by the Directors of NGM Insurance Company at a meeting duly called and held on the 2nd day of December 1977:

Voted: That the signature of any officer authorized by the By-Laws and the company seal may be affixed by facsimile to any power of attorney or special power of attorney or certification of either given for the execution of any bond, undertaking, recognizance or other written obligation in the nature thereof, such signature and seal when so used being hereby adopted by the company as the original signature of such office and the original seal of the company, to be valid and binding upon the company with the same force and effect as though manually affixed.

IN WITNESS WHEREOF, NGM Insurance Company has caused these presents to be signed by its Vice President, General Counsel and Secretary and its corporate seal to be hereto affixed this 20th day of March, 2013.

NGM INSURANCE COMPANY By:

Bruce R. Fox

Bruce R. Fox
Vice President, General
Counsel and Secretary



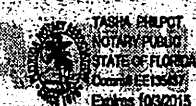
State of Florida,

County of Duval.

On this March 20th, 2013, before me the subscriber a Notary Public of State of Florida in and for the County of Duval duly commissioned and qualified, came Bruce R. Fox of the NGM Insurance Company, to me personally known to be the officer described herein, and who executed the preceding instrument, and he acknowledged the execution of same, and being by me fully sworn, deposed and said that he is an officer of said Company, aforesaid; that the seal affixed to the preceding instrument is the corporate seal of said Company, and the said corporate seal and her signature as officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Company; that Article IV, Section 2 of the By-Laws of said Company is now in force.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at Jacksonville, Florida this 20th day of March, 2013.

Tasha Hulpot



I, Brian J. Beggs, Vice President of the NGM Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney executed by said Company which is still in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Company at Jacksonville, Florida this 4th day of December 2014.

Brian J. Beggs

WARNING: Any unauthorized reproduction or alteration of this document is prohibited TO CONFIRM VALIDITY of the attached bond please call 1-800-225-5646 TO SUBMIT A CLAIM: Send all correspondence to 55 West Street, Keene, NH 03431 Attn: Bond Claims.

ST VENTURES LLC
13800 LAKE POINT CIRCLE
LOUISVILLE, KY 40223

YOUR COMMUNITY BANK
P.O. BOX 939, NEW ALBANY, IN 47151

71-7182-2830

12/15/2014

PAY TO THE ORDER OF The Bank of New York

\$ **50.00

Fifty and 00/100 ***** DOLLARS

The Bank of New York

MEMO

AUTHORIZED SIGNATURE

⑈001520⑈ ⑆283071827⑆ 597768567⑈

ST VENTURES LLC

The Bank of New York
Development Costs

Bond

12/15/2014

50.00

Operating Acct - YCB

50.00

Security features. Details on back.

ST VENTURES LLC
13800 LAKE POINT CIRCLE
LOUISVILLE, KY 40223

YOUR COMMUNITY BANK
P.O. BOX 939, NEW ALBANY, IN 47151

71-7182-2830

12/15/2014

PAY TO THE ORDER OF The Bank of New York

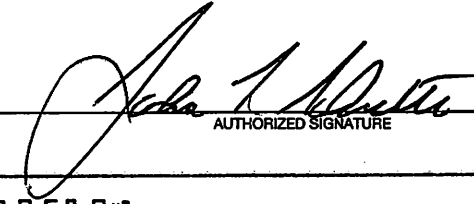
\$ **50.00

Fifty and 00/100*****

DOLLARS

The Bank of New York

MEMO


AUTHORIZED SIGNATURE

⑈001521⑈ ⑆283071827⑆ 597768567⑈

ST VENTURES LLC

The Bank of New York
Development Costs

Bond

12/15/2014

1521

50.00

Operating Acct - YCB

50.00

Security features. Details on back.

**LOUISVILLE-JEFFERSON COUNTY
METRO PUBLIC WORKS
INFRASTRUCTURE ASSET ADDITIONS**

Finance Use Only: Entered as ASSET Date: _____ Entry By: _____
--

Governmental accounting standards now require that state and local governments include and depreciate certain road and bridge assets in their financial reports, including infrastructure that is constructed by developers in dedicated public rights-of-way. Therefore, Louisville-Jefferson County Metro government requests that the respective developer provide estimated cost information as detailed below.

Subdivision/Development Name: NETHERWOOD PHASE 2 Donation Date: _____

List names of streets constructed and provide their approximate length in miles (nearest tenth of mile)

Street Name:	Length:
NETHERWOOD RIDGE DRIVE	0.1 MILE

Fair Market Values:	Value:
Public Right-of-Way provided	\$ <u>6,153</u>
Road Construction (Include bridges < 20 ft.)	\$ <u>18,511</u>
Sidewalks	\$ <u>2,350</u>
Drainage System Construction	\$ <u>6,684</u>
Bridges (over 20 ft. in length)	\$ <u>0</u>
Traffic Signals	\$ <u>0</u>
Other: (specify)	\$ <u>0</u>
TOTAL	\$ <u>33,698</u>

Developer Company Name: ST VENTURES

Information Provided By: (Print Name) AMOS MARTIN

DATE: 12/16/14 Phone Number: (502) 639-2758

Signature of Person Providing Information: *Amos Martin*

SUBDIVIDER'S CONTRACT

TO THE LOUISVILLE -JEFFERSON COUNTY METRO PLANNING COMMISSION

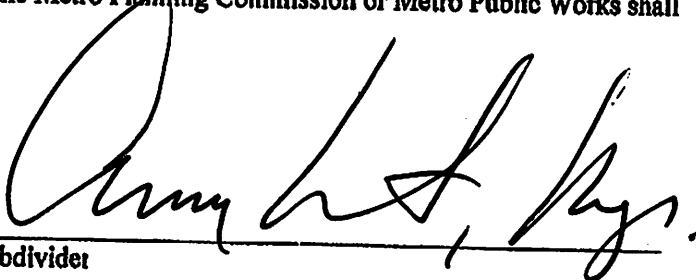
Subdivision: NETHERWOOD PHASE 2

Docket No.: 14 RECORD PLAT 1010

Date: _____

The undersigned subdivider(s) of the above named subdivision is (are) responsible for the installation, good repair and proper functioning of all improvements required by the construction plan approved JULY 25, 2014 (date) and any amendments thereto approved in writing and for the installation of all reference monuments required by the record plat. Installation shall begin within one year after approval of the record plat, or within any one year extension granted by the Director of Metro Public Works, and shall proceed in a manner which does not cause unreasonable harm, inconvenience or annoyance to any other property owner in or outside of the subdivision. This obligation shall continue until the Louisville-Jefferson County Metro Planning Commission has granted a release pursuant to Section 7.2.60 of the Metropolitan Subdivision Regulations of the Land Development Code, and within a reasonable time such release will have been obtained by the subdivider. The subdivider shall abide by any time limits which the Director of Metro Public Works may specify in writing.

All forms of surety on this bond shall be maintained in an active status until released by the Metro Planning Commission or the Director of Metro Public Works and evidence of such status shall be furnished to the Metro Planning Commission on demand. In the event any letter of credit securing this bond expires by its terms at a specified time, the subdivider shall substitute a new cash bond not less than 10 days prior to the expiration date; otherwise, the authorized staff of the Metro Planning Commission or Metro Public Works shall draw the full amount of the letter of credit.


Subdivider



PUBLIC WORKS
LOUISVILLE, KENTUCKY

CRAIG GREENBERG
MAYOR

WES SYDNOR
EXECUTIVE DIRECTOR

June 24, 2026

Laura Ferguson
Assistant County Attorney – Civil Division
Office of Mike O’Connell – Jefferson County Attorney
Fiscal Court Building
531 Court Place, Suite 900
Louisville, KY 40202

RE: NETHERWOOD SUBDIVISION, PHASES 1 AND 2
FAILURE TO COMPLETE

Dear Ms. Ferguson:

Netherwood, LLC (the developer) has failed to complete phases 1 and 2 of the Netherwood Subdivision as promised to the Planning Commission during the hearing of Docket No. 10-20-06. Public Works inspected the site on January 20, 2021 and sent the list of deficiencies to the developer. Public Works again inspected on 3-15-24 and even more deficiencies were found. These deficiencies continue to this day.

Public Works would like to petition the Planning Commission to ask the County Attorney’s office to contact the surety company or successors involved and obtain the funds in the posted bond listed below.

1. \$51,000 NGM Insurance Co. Bond No. S644367
2. \$47,650 NGM Insurance Co. Bond No. S644374
3. \$3,000 Your Community Bank Saving Account No. 538037160

Public Works will in turn use the funds to complete all public improvements that remain in phases 1 and 2 of the Netherwood Subdivision.

Sincerely,


Elizabeth W Stuber, PE
Engineering Manager

WWW.LOUISVILLEKY.GOV

METRO DEVELOPMENT CENTER • 444 SOUTH 5TH STREET, SUITE 400 • LOUISVILLE, KENTUCKY 40202



Louisville Metro Government

Text File

File Number: 26-ZONE-0056

Agenda Date: 7/16/2026

Version: 1

Status: Public Hearing

In Control: Planning Commission

File Type: Planning Case

Agenda Number: 3.



26-ZONING-0056

Planning Commission
Staff Report
July 16, 2026

Ford Expansion

Location: 3306 & 3308 Collins Lane; 3009 & 3011 N Winchester
Acres Road; 2719 & 2721 Chamberlain Lane

Applicant: Sam Kandah, Ford Motor Company

Representative: Dinsmore & Shohl LLP

Jurisdiction: Louisville Metro

Council District: 17 – Markus Winkler

Case Manager: Zack Jones, Planner II

REQUESTS & RECOMMENDED ACTIONS

1. Change in Zoning from R-4 Single Family Residential, O-R Office/Residential, & PEC Planned Employment Center to M-2 Industrial
 - Staff finds the request is in keeping with Plan 2040 and recommends the Planning Commission **RECOMMEND** that the Louisville Metro Council **APPROVE** the requested change in zoning.
2. **26-VARIANCE-0059:** Variance from Land Development Code Section 5.3.4.D.4 to allow the proposed building to exceed the maximum building height of 50 feet (Proposed Height of 80 feet, for a Variance of 30 feet)
 - Staff finds the justification for the requests are adequate and recommends the Planning Commission **APPROVE** the Variance
3. **26-WAIVER-0059:** Waiver from Land Development Code Section 4.4.3.A.4 to allow the proposed 6 foot tall perimeter fencing to have either barbed wire or razor wire.
 - Staff finds the justification for the requests are adequate and recommends the Planning Commission **APPROVE** the Waiver
4. **26-WAIVER-0060:** Waiver from Land Development Code Section 10.2.12 to waive 50% of the required vehicle use area interior landscape area square footage.
 - Staff finds the justification for the requests are adequate and recommends the Planning Commission **APPROVE** the Waiver
5. **26-WAIVER-0061:** Waiver from Land Development Code Section 5.5.2.A.1 & 5.6.1.B. to waive the required non-residential building location and orientation and building façade treatment requirements for buildings within the suburban form.

- Staff finds the justification for the requests are adequate and recommends the Planning Commission **APPROVE** the Waiver

6. Revised Detailed District Development Plan with Binding Elements

- Staff finds the justification for the request is adequate and recommends the Planning Commission **APPROVE** the Revised Detailed District Development Plan on condition that all technical considerations with MSD and Public Works are resolved prior to final plan approval.

CASE SUMMARY

The subject properties are located off Chamberlain Lane, a primary collector, and Collins Lane, a secondary collector. The properties are presently zoned R-4 Single Family, O-R Office/Residential, and PEC Planned Employment Center and located in the Suburban Workplace form district. The proposal is for the development of 6 properties on roughly 71 acres. The area north and west is predominantly PEC zoning, the area directly east is OR-1 & OR-3, and the area to the south is a mix of R-4, PEC, and C-M zoning, with some other commercial zones in the area. If this proposal were to be approved as proposed, it would be predominantly PEC, C-M and other commercially zoned land in the immediate vicinity. The Gene Snyder Freeway lies just south of this property across Chamberlain Lane. The proposal is for a roughly 1.6 million square foot industrial facility in conjunction with the existing facility west of the site.

The applicant has proposed to rezone the subject properties to M-2 Industrial. All previously existing structures on the larger site currently zoned PEC have already been demolished as part of the prior zoning approval applicable to the site (23-ZONE-0098). The property at 2719 Chamberlain Lane is presently Plan Certain under #09-006-04. The remainder of the subject properties are not Plan Certain.

TECHNICAL REVIEW

- Comprehensive Plan 2040
- Land Development Code (Louisville Metro 2025)
- MSD has not provided preliminary approval, but is currently working on final design approvals related to downstream sanitary capacity
- Transportation Planning has provided preliminary approval, conditional on final analysis and implementation of TIS recommendations and street closure of Mermaid Lane.

STANDARD OF REVIEW FOR REZONING AND FORM DISTRICT CHANGES

Criteria for granting the proposed form district change/rezoning: *KRS Chapter 100.213*

1. The proposed form district/rezoning change complies with the applicable guidelines and policies Plan 2040; **OR**
2. The existing form district/zoning classification is inappropriate and the proposed classification is appropriate; **OR**

3. There have been major changes of an economic, physical, or social nature within the area involved which were not anticipated in Plan 2040 which have substantially altered the basic character of the area.

STAFF ANALYSIS FOR CHANGE IN ZONING / FORM DISTRICT

The following is staff's analysis of the proposed rezoning against the Guidelines and Policies of Plan 2040.

The site is located in the Suburban Workplace Form District

A Suburban Workplace is a form characterized by predominately industrial and office uses where the buildings are set back from the street in a landscaped setting. Suburban Workplaces often contain a single large-scale use or a cluster of uses within a master planned development. New larger proposed industrial uses are encouraged to apply for a planned development district.

In order to provide adequate transportation access in suburban workplaces connected roads, public transportation and pedestrian facilities should be encouraged. Walkways to workplace serving uses are encouraged for workplace employees. Development within Suburban Workplace Form Districts may need significant buffering from abutting uses.

STAFF FINDING: The proposal does not represent an expansion of non-residential uses into residential areas but would rather eliminate some of the last remaining residential areas within the Suburban Workplace form in this area. The subject site is surrounded by PEC and other non-residential zoning districts within the Suburban Workplace form district. The proposal is in an established commercial and industrial activity area adjacent to a variety of commercial, office and industrial uses readily served by infrastructure and transportation facilities. All required buffers are being provided adjacent to remaining residential sites adjacent to the development area.

The proposed zoning would not permit residential development and would demolish the existing homes on the subject site, though the majority of the site is presently vacant. Historic preservation staff has not indicated any concerns related to demolition of any possible remaining structures on site.

The subject properties are located off Chamberlain Lane, a primary collector, and Collins Lane, a secondary collector. It is approximately 950 feet from La Grange Road, a minor arterial roadway, and is approximately 1500 feet from the Gene Snyder Freeway at La Grange Road.

All other agency comments should be addressed to demonstrate compliance with the remaining Guidelines and Policies of Plan 2040.

The Louisville Metro Planning Commission is charged with making a recommendation to the Louisville Metro Council regarding the appropriateness of this zoning map amendment. The Louisville Metro Council has zoning authority over the property in question.

STANDARD FOR REVIEW AND STAFF ANALYSIS FOR 26-VARIANCE-0059

1. *The requested variance will not adversely affect public health, safety, or welfare, and will not cause a hazard or nuisance to the public.*

STAFF FINDING: The requested variance will not adversely affect the public health, safety, or welfare, because the request to exceed the allowable maximum height does not cause adverse or unsafe impact to the public. Additionally, the structure will be required to comply with all applicable building code regulations.

2. *The requested variance will not alter the essential character of the general vicinity and will not allow an unreasonable circumvention of the requirements of the zoning regulations.*

STAFF FINDING: The requested variance will not alter the essential character of the general vicinity as the request is in general conformance to the character of existing structures in the general area.

3. *The requested variance arises from circumstances which do not generally apply to land in the general vicinity, or in the same zone.*

STAFF FINDING: The requested variance does not arise from circumstances which do not generally apply to land in the general vicinity, or in the same zone as the subject property is similar in size and width to most of the properties on in the general vicinity along Collins Lane or Chamberlain Lane.

4. *The strict application of the provision of the regulation would deprive the applicant of the reasonable use of the land or would create an unnecessary hardship on the applicant.*

STAFF FINDING: The strict application of the provision of the regulation would deprive the applicant of the reasonable use of the land as the use is maxing out the available land on the site and is bound by Chamberlain Lane and Collins Lane, and therefore vertical expansion is the only practical expansion available to the site.

5. *The circumstances are the result of action of the applicant taken subsequent to the adoption of the zoning regulation from which relief is sought.*

STAFF FINDING: The circumstances are not the result of action of the applicant taken subsequent to the adoption of the zoning regulation from which relief is sought as no action has been taken by the applicant prior to approval of this development plan.

STANDARD OF REVIEW AND STAFF ANALYSIS FOR 26-WAIVER-0059

(a) The waiver will not adversely affect adjacent property owners; and

STAFF FINDING: The requested waiver for fence material will not adversely affect adjacent property owners as the majority of the area is comprised of the same ownership. Further, the request is intended to provide safety mutually for the benefit of the public and property owners.

(b) The waiver will not violate specific guidelines of Plan 2040;

STAFF FINDING: Community Form Goal 1, Policy 4 calls for the proposal to ensure new development and redevelopment are compatible with the scale and site design of nearby existing development and with the desired pattern of development within the Form District. Quality design and building materials should be promoted to enhance compatibility of development and redevelopment projects. Economic Development Goal 1, Policy 2 calls for the proposal to encourage industries, to the extent possible, to locate in industrial subdivisions or adjacent to an existing industry to take advantage of special infrastructure needs. The proposed plan for the razor or barbed wire for the proposed 6 foot tall fence is in conformance with these standards as it will not be incompatible with the character of the existing area and will support the expansion of the industrial uses in an existing industrial area.

(c) The extent of the waiver of the regulation is the minimum necessary to afford relief to the applicant

STAFF FINDING: The extent of the waiver of the regulation is the minimum necessary to afford relief to the applicant as the proposed 6 foot fence height is an otherwise typical fence height and the materials requested are typical to provide safety features for this site or comparable sites.

(d) Either: (i) The applicant has incorporated other design measures that exceed the minimums of the district and compensate for non-compliance with the requirements to be waived (net beneficial effect); OR (ii) The strict application of the provisions of the regulation would deprive the applicant of the reasonable use of the land or would create an unnecessary hardship on the applicant.

STAFF FINDING: The applicant has incorporated other design measures that compensate for non-compliance with the requirements to be waived as they are providing substantial buffering of the site, proposing a dense yet compatible industrial footprint, in addition to providing substantial economic benefit as part of this proposal.

STANDARD OF REVIEW AND STAFF ANALYSIS FOR 26-WAIVER-0060

(a) The waiver will not adversely affect adjacent property owners; and

STAFF FINDING: The requested waiver for reduced interior landscape island will not adversely affect adjacent property owners as the majority of the area is comprised of the same ownership, and the orientation of the site still provides substantial buffering to the adjacent properties.

(b) The waiver will not violate specific guidelines of Plan 2040;

STAFF FINDING: Community Form Goal 1, Policy 4 calls for the proposal to ensure new development and redevelopment are compatible with the scale and site design of nearby existing development and with the desired pattern of development within the Form District. Quality design and building materials should be promoted to enhance compatibility of development and redevelopment projects. Economic Development Goal 1, Policy 2 calls for the proposal to encourage industries, to the extent possible, to locate in industrial subdivisions or adjacent to an existing industry to take advantage of special infrastructure needs. The proposed plan for the reduced interior landscape island is in conformance with these standards as it will not be incompatible with the character of the existing area and will support expansion of the industrial uses in an existing industrial area in a compact industrial footprint.

(c) The extent of the waiver of the regulation is the minimum necessary to afford relief to the applicant

STAFF FINDING: The extent of the waiver of the regulation is the minimum necessary to afford relief to the applicant as the proposed the applicants are proposing 50% of the required interior landscape island plantings in order to provide some plantings while still otherwise maximizing use of the site.

(d) Either: (i) The applicant has incorporated other design measures that exceed the minimums of the district and compensate for non-compliance with the requirements to be waived (net beneficial effect); OR (ii) The strict application of the provisions of the regulation would deprive the applicant of the reasonable use of the land or would create an unnecessary hardship on the applicant.

STAFF FINDING: The applicant has incorporated other design measures that compensate for non-compliance with the requirements to be waived as they are providing substantial buffering of the site, proposing a dense yet compatible industrial footprint, in addition to providing substantial economic benefit as part of this proposal.

STANDARD OF REVIEW AND STAFF ANALYSIS FOR 26-WAIVER-0061

non-residential building location and orientation and building façade treatment requirements

(a) The waiver will not adversely affect adjacent property owners; and

STAFF FINDING: The requested waiver for building location, orientation, and façade treatment will not adversely affect adjacent property owners as the majority of the area is comprised of the same or similar ownership. Further, the proposal is in general conformance with the other existing facilities in the general vicinity.

(b) The waiver will not violate specific guidelines of Plan 2040;

STAFF FINDING: Community Form Goal 1, Policy 4 calls for the proposal to ensure new development and redevelopment are compatible with the scale and site design of nearby existing development and with the desired pattern of development within the Form District. Quality design and building materials should be promoted to enhance compatibility of development and redevelopment projects. Economic Development Goal 1, Policy 2 calls for the proposal to encourage industries, to the extent possible, to locate in industrial subdivisions or adjacent to an existing industry to take advantage of special infrastructure needs. The proposed building design, location, and orientation is in conformance with these standards as it will not be incompatible with the character of the existing area, is in a form complementary to the adjacent facility to the west of this site under similar ownership, and will support the expansion of the industrial uses in an existing industrial area.

(c) The extent of the waiver of the regulation is the minimum necessary to afford relief to the applicant

STAFF FINDING: The extent of the waiver of the regulation is the minimum necessary to afford relief to the applicant as the proposed facility is an expansive industrial facility that is maximizing the site and providing great economic benefit to the community while requesting an achievable design.

(d) Either: (i) The applicant has incorporated other design measures that exceed the minimums of the district and compensate for non-compliance with the requirements to be waived (net beneficial effect); OR (ii) The strict application of the provisions of the regulation would deprive the applicant of the reasonable use of the land or would create an unnecessary hardship on the applicant.

STAFF FINDING: The applicant has incorporated other design measures that compensate for non-compliance with the requirements to be waived as they are providing substantial buffering of the site, proposing a dense yet compatible industrial footprint, complementary to the existing facility to the west and other uses in the area, in addition to providing substantial economic benefit as part of this proposal.

STANDARD OF REVIEW AND STAFF ANALYSIS FOR REVISED DETAILED DISTRICT DEVELOPMENT PLAN AND AMENDMENT TO BINDING ELEMENTS

- a. *The conservation of natural resources on the property proposed for development, including: trees and other living vegetation, steep slopes, water courses, flood plains, soils, air quality, scenic views, and historic sites;*

STAFF FINDING: There is a portion of the existing site that is within the local regulatory floodplain, though buildings are not proposed in that area. Compliance with MSD requirements will be required prior to development. There do not appear to be any other environmental constraints or historic resources on the subject site. Tree canopy requirements of the Land Development Code will not be provided on the subject site, but will be provided in a manner allowed by Land Development Code Section 10.1.3.c. in an off-site location.

- b. *The provisions for safe and efficient vehicular and pedestrian transportation both within the development and the community;*

STAFF FINDING: Provisions for safe and efficient vehicular and pedestrian transportation within and around the development and the community has been provided, and Metro Public Works and the Kentucky Transportation Cabinet have not provided concerns the preliminary development plan. A turn lane on Collins Lane is a binding element as part of this request, and other improvements may be coordinated with Public Works and KYTC.

- c. *The provision of sufficient open space (scenic and recreational) to meet the needs of the proposed development;*

STAFF FINDING: Substantial open space as part of this proposal is not necessary and would hinder the effective use of the site. However, the proposal is providing the required amenity space for employees as required in Chapter of the Land Development Code, and the property will provide substantial trees and buffering to the adjacent properties.

- d. *The provision of adequate drainage facilities on the subject site in order to prevent drainage problems from occurring on the subject site or within the community;*

STAFF FINDING: The Metropolitan Sewer District will be required to provide approval for the plan. While the proposal is generally served by municipal facilities to the site, coordination will be required with MSD to ensure those facilities are adequate and meet the minimum requirements to mitigate drainage issues or comparable issues on site.

- e. *The compatibility of the overall site design (location of buildings, parking lots, screening, landscaping) and land use or uses with the existing and projected future development of the area;*

STAFF FINDING: The overall site design and land uses are compatible with the existing and future development of the area, provided the Planning Commission finds the areas of proposed variance and waivers acceptable. Appropriate landscape buffering and screening will be provided to screen adjacent properties, including both residential and non-residential. The overall site design is generally compatible with the existing sites in the vicinity, including the complementary facility west of this site.

- f. *Conformance of the development plan with the Comprehensive Plan and Land Development Code. Revised plan certain development plans shall be evaluated for conformance with the non-residential and mixed-use intent of the form districts and comprehensive plan.*

STAFF FINDING: The development plan generally conforms to the applicable guidelines and policies of the Comprehensive Plan and to requirements of the Land Development Code. The proposal is complementary to the existing facilities surrounding the area, provides substantial economic development benefit to the community, and propose a compact yet compatible industrial footprint on the site.

REQUIRED ACTIONS

- **RECOMMEND** that the Louisville Metro Council **APPROVE** or **DENY** the **Change in Zoning** from R-4 Single Family Residential, O-R Office/Residential, & PEC Planned Employment Center to M-2 Industrial
- **APPROVE** or **DENY 26-VARIANCE-0059** from Land Development Code Section 5.3.4.D.4 to allow the proposed building to exceed the maximum building height of 50 feet (Proposed Height of 80 feet, for a Variance of 30 feet)
- **APPROVE** or **DENY 26-WAIVER-0059** from Land Development Code Section 4.4.3.A.4 to allow the proposed 6 foot tall perimeter fencing to have either barbed wire or razor wire.
- **APPROVE** or **DENY 26-WAIVER-0060** from Land Development Code Section 10.2.12 to waive 50% of the required vehicle use area interior landscape area square footage.
- **APPROVE** or **DENY 26-WAIVER-0061** from Land Development Code Section 5.5.2.A.1 & 5.6.1.B. to waive the required non-residential building location and orientation and building façade treatment requirements for buildings within the suburban form.
- **APPROVE** or **DENY** the **Detailed District Development Plan** subject to proposed binding elements

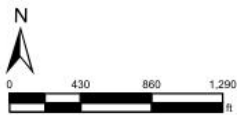
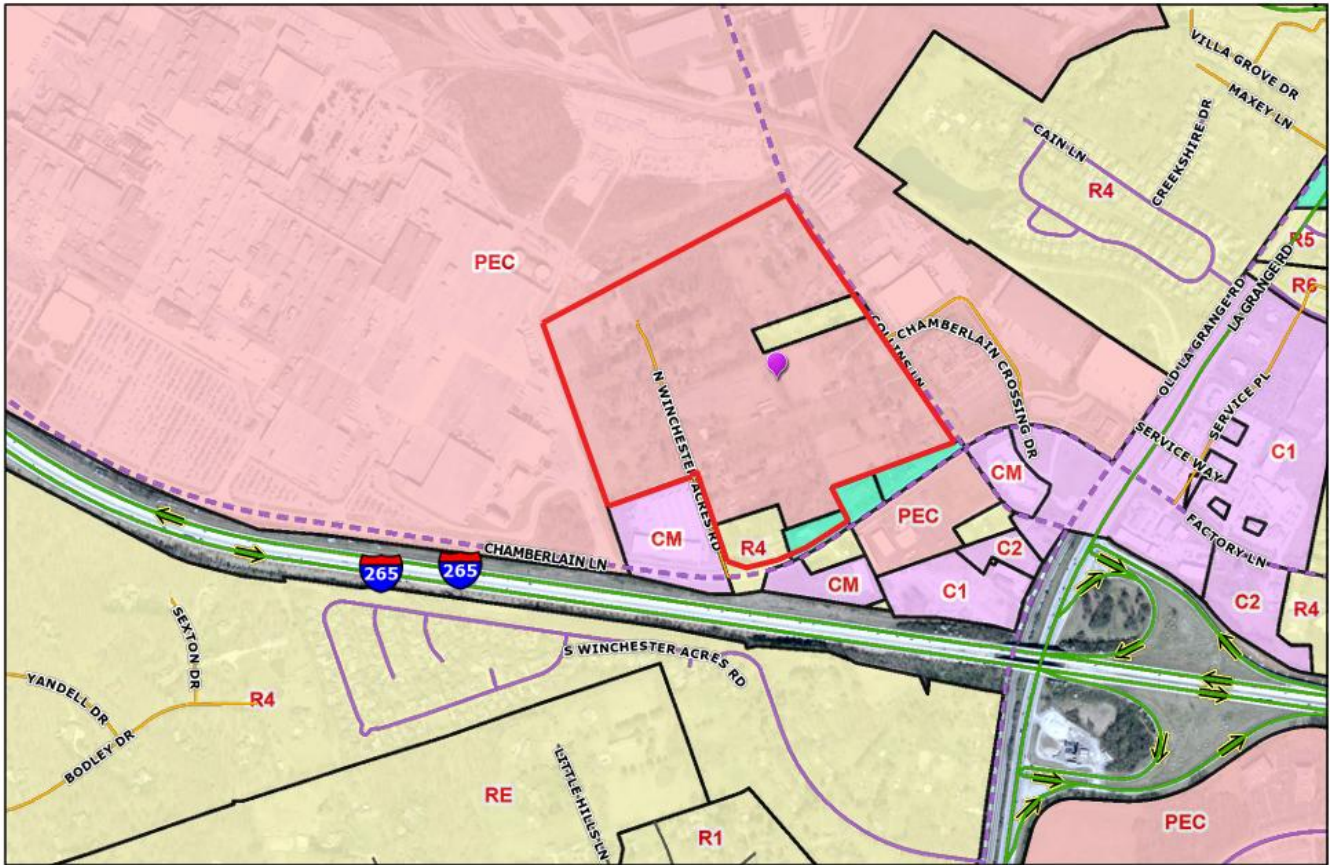
NOTIFICATION

DATE	PURPOSE OF NOTICE	RECIPIENTS
7/1/2026	Planning Commission Public Hearing	1st and 2nd tier adjoining property owners and current residents; Registered Neighborhood Groups in Council District 17
6/30/2026	Planning Commission Public Hearing	Sign Posting on Property
7/1/2026	Planning Commission Public Hearing	Legal Advertisement in the Courier-Journal

ATTACHMENTS

1. Zoning Map
2. Aerial Photograph
3. Plan 2040 Checklist
4. Existing Binding Elements
5. Proposed Binding Elements

1. ZONING MAP

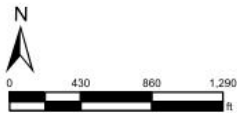


Wednesday, July 1, 2026 | 5:26 PM



This map is not a legal document and should only be used for general reference and identification.

2. AERIAL MAP



Wednesday, July 1, 2026 | 5:25 PM



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3. STAFF PLAN 2040 CHECKLIST

+	Exceeds Guideline
✓	Meets Guideline
-	Does Not Meet Guideline
+/-	More Information Needed
NA	Not Applicable

Suburban Workplace: Non-Residential

Plan 2040 Plan Elements/Staff Analysis	
1	<p><u>Community Form: Goal 1, Policy 6.</u> Discourage non-residential expansion into existing residential areas unless applicant can demonstrate that any adverse impact on residential uses will be mitigated. Evaluation of impacts may include, but not be limited to, displacement of residents, loss of affordable housing units, traffic, parking, signs, lighting, noise, odor, and stormwater. Appropriate transitions from non-residential to residential uses should depend on the pattern of development of the Form District and may include natural vegetative buffers, landscaping or the use of higher density residential between lower density residential and/or non-residential.</p> <p>✓ <u>Staff Analysis:</u> The proposal would generally not constitute an expansion into a residential area, and most residential properties previous to the site in the vicinity have been already been vacated and demolished. There should not be a significant displacement of residents or loss of affordable housing, if any. There may be concerns related to parking, traffic, lighting, noise, and stormwater related to the proposed zoning district, but such concerns could be mitigated when a specific proposal is identified. The proposed zoning district is compatible with the existing form district and area.</p>
2	<p><u>Community Form: Goal 1, Policy 7.</u> Locate higher density and intensity uses near major transportation facilities and transit corridors, employment centers, in or near activity centers and other areas where demand and adequate infrastructure exists or is planned.</p> <p>✓ <u>Staff Analysis:</u> The proposed zone change will locate industrial uses in an area with several other industrial zones and uses. The proposal, served by Chamberlain Lane, a primary collector at this location, and Collins Road, a secondary collector at this location, are generally adequate to serve the proposed use at this location.</p>
3	<p><u>Community Form: Goal 1, Policy 8.</u> Encourage industries to locate in workplace Form Districts or in areas readily served by infrastructure and transportation facilities, including transit, rather than isolated industrial sites.</p> <p>✓ <u>Staff Analysis:</u> The proposed rezoning will locate industrial uses within the Suburban Workplace form district in an area that is readily served by infrastructure or immediately adjacent to it. It will not be an isolated industrial site as there are other industrial uses and zones in the area.</p>
4	<p><u>Community Form: Goal 1, Policy 15.</u> When reviewing proposals for siting hazardous uses and uses with air, noise and light emissions, ensure disadvantaged populations are not disproportionately impacted.</p> <p>✓ <u>Staff Analysis:</u> While the proposed zone and use may allow emissions related to air, noise, and light, staff notes the site is not located in an area with a significant amount of adjacent or nearby residential uses.</p>

Plan 2040 Plan Elements/Staff Analysis	
5	<p>Community Form: Goal 1, Policy 16. Consider impacts on human health, quality of life and the environment including prevailing meteorological conditions and the potential to transport noxious odors, particulates and emissions when reviewing new developments and redevelopments. Special attention should be paid to air and water quality when residences, schools, parks or vulnerable populations will be impacted. Mitigate impacts to areas that are disproportionately affected.</p> <p>✓ Staff Analysis: While the proposed zone may allow uses that have externalities related to odors, particulate, and emissions, the proposal itself does not appear to propose such negative externalities and is generally compatible with the surrounding area and adjacent sites.</p>
6	<p>Community Form: Goal 1, Policy 17. Mitigate adverse impacts of traffic from proposed development on nearby existing communities.</p> <p>✓ Staff Analysis: Transportation and Public Works have preliminarily approved the proposal. Binding elements have been proposed that mitigate the effect the proposal and proposed zone may have on the existing facilities.</p>
7	<p>Community Form: Goal 1, Policy 18. Mitigate adverse impacts of noise from proposed development on existing communities.</p> <p>✓ Staff Analysis: While the proposed zone could allow uses that generate noise impacts, staff notes there are is not a significant number of residential uses in the nearby vicinity and the proposal does not appear to be for a use that will provide nuisance in the form of noise pollution.</p>
8	<p>Community Form: Goal 1, Policy 21. Require that industries which handle hazardous or flammable materials or are potentially offensive such as junkyards, landfills and quarries are sited to protect public health, safety and welfare and are located away from residential areas and population centers.</p> <p>✓ Staff Analysis: While the proposal does not specify whether hazardous or flammable materials are part of this proposal, they are allowed in the PEC zone. However, junkyards and landfills are not allowed in the PEC, M-2, or C-1 zones, and the proposal is not in an area generally characterized as residential.</p>
9	<p>Community Form: Goal 2, Policy 1. Locate activity centers in appropriate areas in all Form Districts. Design and density should be compatible with desired form, adjacent uses, and existing and planned infrastructure.</p> <p>✓ Staff Analysis: The proposed commercial/industrial zoning district will be located adjacent to other commercial/industrial uses. There is existing infrastructure in direct proximity to serve the development. The proposed use and zone are complementary with the existing/proposed form district.</p>
10	<p>Community Form: Goal 2, Policy 5. Locate retail commercial development in activity centers where it can be demonstrated that sufficient population exists or is anticipated to support it.</p> <p>✓ Staff Analysis: The proposed zoning could not allow for traditional commercial uses. However, the properties area located in the Suburban Workplace form district and commercial development in these areas may not be suitable. The affected area would not be at the center of an activity center.</p>
11	<p>Community Form: Goal 2, Policy 6. Encourage a more compact development pattern in activity centers that result in efficient land use and cost-effective infrastructure investment.</p> <p>✓ Staff Analysis: While the proposed zone and use do not require a more compact development pattern, the proposal is consistent with uses in the surrounding vicinity and the location of such zone and uses constitute an efficient land use and cost-effective infrastructure environment.</p>
12	<p>Community Form: Goal 2, Policy 7. Encourage activity centers to include a mixture of compatible land uses in order to reduce traffic congestion by requiring fewer trips, support and enhance alternative modes of travel, and encourage vitality and a sense of place.</p> <p>✓ Staff Analysis: The proposed rezoning will be compatible with industrial uses in the area. Public Works has preliminarily approved the proposal and binding elements are proposed to ensure transportation compatibility.</p>

Plan 2040 Plan Elements/Staff Analysis	
13	<p>Community Form: Goal 2, Policy 8. Encourage residential land uses in designated centers. Encourage residential and office uses above retail and other mixed-use multi-story retail buildings.</p>
N/A	<p>Staff Analysis: The proposed zoning district does not permit residential uses.</p>
14	<p>Community Form: Goal 2, Policy 9. Encourage new developments and rehabilitation of buildings that provide commercial, office and/or residential uses.</p>
✓	<p>Staff Analysis: Historic Preservation has preliminarily approved the proposal. Buildings are no longer present on the site.</p>
15	<p>Community Form: Goal 2, Policy 10. Encourage outlot development in underutilized parking lots of existing development to promote utilization of existing infrastructure provided specific criteria for elements such as location, scale, signs, parking, lighting, and landscaping are met. Outlot development shall encourage street-level retail with residential units above.</p>
N/A	<p>Staff Analysis: The proposed development does not include any outlots or underutilized parking lots.</p>
16	<p>Community Form: Goal 3, Policy 9. Encourage development that respects the natural features of the site through sensitive site design, avoids substantial changes to the topography, and minimizes property damage and environmental degradation resulting from disturbance of natural systems.</p>
✓	<p>Staff Analysis: Karst was examined and not found to have a significant presence on the site, and features will be mitigated throughout development. The local regulatory floodplain is on site, but buildings have not been proposed within it and MSD approval will be required prior to development.</p>
17	<p>Community Form: Goal 3, Policy 10. Encourage development to avoid wet or highly permeable soils, severe, steep or unstable slopes where the potential for severe erosion problems exists in order to prevent property damage and public costs associated with soil slippage and foundation failure and to minimize environmental degradation.</p>
✓	<p>Staff Analysis: Karst was examined and not found to have a significant presence on the site, and features will be mitigated throughout development. The local regulatory floodplain is on site, but buildings have not been proposed within it and MSD approval will be required prior to development.</p>
18	<p>Community Form: Goal 3, Policy 11. Encourage land uses within the Ohio River Corridor that are appropriate for and related to river corridor activities and that are consistent with the goals and objectives of the Ohio River Corridor Master Plan. Reserve appropriate riverfront sites such as the Upper River Road industrial area for river-related development. Allow development of commercial leisure businesses related to the river, such as boating services and restaurants in appropriate locations. Encourage new development in the Ohio River corridor and along key greenway and street connections to provide for public access in new riverfront development and to maintain views of the river from public rights-of-way.</p>
N/A	<p>Staff Analysis: The subject site is not located within the Ohio River Corridor.</p>
19	<p>Community Form: Goal 3, Policy 12. When reviewing proposed developments consider changes to flood-prone areas and other features vulnerable to natural disasters such as sinkholes and landslides. Ensure appropriate measures to protect health, safety and welfare of future users of the development.</p>
+/-	<p>Staff Analysis: The subject site is minimally located within the regulatory floodplain. This portion of the site should be considered appropriately in any potential development in accordance with MSD regulations.</p>
20	<p>Community Form: Goal 4, Policy 1. Preserve buildings, sites, districts and landscapes that are recognized as having historic or architectural value and ensure that new land uses are compatible in height, massing, scale, architecture style and placement when located within the impact area of such resources.</p>
✓	<p>Staff Analysis: Historic Preservation has preliminarily approved the proposal. Existing buffers will be preserved to the extent practical, and substantial buffering is proposed between adjacent sites.</p>

Plan 2040 Plan Elements/Staff Analysis	
21	<p>Community Form: Goal 4, Policy 2. Encourage preservation of distinctive cultural features including landscapes, natural elements and built features.</p> <p>✓ Staff Analysis: Historic Preservation has preliminarily approved the proposal.</p>
22	<p>Mobility: Goal 1, Policy 4. Encourage higher densities and intensities within or near existing marketplace corridors, existing and future activity centers, and employment centers to support transit-oriented development and an efficient public transportation system.</p> <p>✓ Staff Analysis: The proposed rezoning will locate higher intensity industrial next to other commercial/industrial uses. The subject site appears to be supported by adequate infrastructure at this location.</p>
23	<p>Mobility: Goal 3, Policy 2. To improve mobility, and reduce vehicle miles traveled and congestion, encourage a mixture of compatible land uses that are easily accessible by bicycle, car, transit, pedestrians and people with disabilities. Housing should be encouraged near employment centers.</p> <p>✓ Staff Analysis: The proposal shows sidewalks provided to the site.</p>
24	<p>Mobility: Goal 3, Policy 3. Evaluate developments for their ability to promote public transit and pedestrian use. Encourage higher density mixed-use developments that reduce the need for multiple automobile trips as a means of achieving air quality standards and providing transportation and housing choices.</p> <p>✓ Staff Analysis: Transportation Planning has preliminarily approved the proposal. The proposal shows sidewalks provided on site.</p>
25	<p>Mobility: Goal 3, Policy 4. Encourage development of walkable centers to connect different modes of travel. Siting of these multi-modal centers shall consider the effects of the following: 4.1. nodal connections identified by Move Louisville; 4.2. impact on freight routes; 4.3. time of operation of facilities; 4.4. safety; 4.5. appropriate linkages between neighborhoods and employment; and 4.6. the potential for reducing travel times and vehicle miles traveled.</p> <p>✓ Staff Analysis: Transportation Planning has preliminarily approved the proposal. The proposal shows sidewalks provided on site.</p>
26	<p>Mobility: Goal 3, Policy 5. Evaluate developments for their impact on the transportation network (including the street, pedestrian, transit, freight movement and bike facilities and services) and air quality.</p> <p>✓ Staff Analysis: Transportation Planning is reviewing the proposal. The proposal should demonstrate that sidewalks will be provided on site, or a fee-in-lieu provided.</p>
27	<p>Mobility: Goal 3, Policy 6. Ensure that those who propose new developments bear or share in rough proportionality the costs of transportation facilities and services made necessary by development.</p> <p>✓ Staff Analysis: Transportation Planning has preliminarily approved the proposal. Binding elements have been proposed to ensure the proposal bears proportionality of cost for transportation facility improvements. The proposal demonstrates that sidewalks will be provided on site.</p>
28	<p>Mobility: Goal 3, Policy 9. When existing transportation facilities and services are inadequate and public funds are not available to rectify the situation, the developer may be asked to make improvements, roughly proportional to the projected impact of the proposed development, to eliminate present inadequacies if such improvements would be the only means by which the development would be considered appropriate at the proposed location.</p> <p>✓ Staff Analysis: Transportation Planning has preliminarily approved the proposal. Binding elements have been proposed to ensure the proposal bears proportionality of cost for transportation facility improvements. The proposal demonstrates that sidewalks will be provided on site.</p>

Plan 2040 Plan Elements/Staff Analysis	
29	<p><u>Mobility: Goal 3, Policy 10.</u> Ensure that necessary improvements occur in accordance with long-range transportation plans and level of mobility criteria for all modes of travel.</p> <p>✓ Staff Analysis: Transportation Planning has preliminarily approved the proposal. Binding elements have been proposed to ensure the proposal bears proportionality of cost for transportation facility improvements.</p>
30	<p><u>Community Facilities: Goal 2, Policy 1.</u> Locate development in areas served by existing utilities or capable of being served by public or private utility extensions.</p> <p>+/- Staff Analysis: Compliance will be required with all utility providers and MSD prior to issuance of permits.</p>
31	<p><u>Community Facilities: Goal 2, Policy 2.</u> Ensure that all development has an adequate supply of potable water and water for fire-fighting purposes. Locate only very low-density land uses on sites that use on-lot sewage disposal systems or on a private supply of potable water.</p> <p>✓ Staff Analysis: Louisville Water has not provide any concerns regarding the proposal.</p>
32	<p><u>Community Facilities: Goal 2, Policy 3.</u> Ensure that all development has adequate means of sewage treatment and disposal to protect public health and to protect water quality in lakes and streams as determined by the Metropolitan Sewer District (MSD).</p> <p>+/- Staff Analysis: Compliance will be required with MSD prior to issuance of permits.</p>
33	<p><u>Economic Development: Goal 1, Policy 1.</u> Limit land uses in workplace Form Districts to compatible uses that meet the needs of the industrial subdivision or workplace district and their employees.</p> <p>✓ Staff Analysis: The proposed rezoning would be located within the Suburban Workplace form district and compatible with the proposed zoning and use(s).</p>
34	<p><u>Economic Development: Goal 1, Policy 2.</u> Encourage industries, to the extent possible, to locate in industrial subdivisions or adjacent to an existing industry to take advantage of special infrastructure needs.</p> <p>✓ Staff Analysis: The proposed rezoning will locate industrial uses adjacent to existing industry and will be adequately served by existing infrastructure.</p>
35	<p><u>Economic Development: Goal 1, Policy 3.</u> Locate commercial uses generating high volumes of traffic on a major arterial street, at the intersection of two minor arterials, or at a location with adequate access to a major arterial and at locations where nuisances and activities of the proposed use will not adversely affect adjacent areas.</p> <p>✓ Staff Analysis: The proposal is located along two collectors and adjacent to like development on this site, and the proposal does not indicate the proposed uses will be nuisances or adversely affect adjacent areas. The proposed zoning supports the proposed industrial development of the site. Binding elements have been proposed to ensure compatibility with transportation standards.</p>
36	<p><u>Economic Development: Goal 1, Policy 4.</u> Utilize industrial sites near the airport and the Ohio River to support the growth and development of uses whose infrastructure and production needs require such a location or for land uses that support airport-oriented or river-oriented industrial uses.</p> <p>N/A Staff Analysis: The subject site is not located along the Ohio River nor in proximity to the airport.</p>
37	<p><u>Economic Development: Goal 1, Policy 5.</u> Require industrial developments to locate with the appropriate transportation connectivity, near an arterial street or within existing industrial subdivisions.</p> <p>✓ Staff Analysis: Transportation Planning has preliminarily approved the proposal. The subject site is located in an area with other industrial uses and will not be an isolated industrial use. The proposal is located along Chamberlain Lane, a primary collector at this location, and Collins Road, a secondary collector at this location.</p>

Plan 2040 Plan Elements/Staff Analysis	
38	<p><u>Livability: Goal 1, Policy 17.</u> Determine site susceptibility to erosion; identify the presence of on-site carbonate conditions and features that are vulnerable to site disturbance; identify the extent of existing groundwater use and the impacts of the project on groundwater resources, flow patterns, and existing and proposed surface drainage. Then mitigate potential hazards to such systems resulting from the project.</p> <p>✓ <u>Staff Analysis:</u> There is an area of local jurisdictional floodplain on a minimal portion of the site, though buildings are not proposed in that area. Karst features, if any, will be mitigated properly on site. The proposal generally proposes sensitive design related to environmental features.</p>
39	<p><u>Livability: Goal 1, Policy 21.</u> Mitigate negative development impacts to the integrity of the regulatory floodplain by encouraging development patterns that minimize disturbance and consider the increased risk of more frequent flooding events.</p> <p>✓ <u>Staff Analysis:</u> There is an area of local jurisdictional floodplain on a minimal portion of the site, though buildings are not proposed in that area. Karst features, if any, will be mitigated properly on site. The proposal generally proposes sensitive design related to environmental features.</p>
40	<p><u>Livability: Goal 1, Policy 24.</u> Ensure, to the extent feasible, that critical facilities and those that store or use hazardous wastes are located outside the regulatory floodplain. Where essential community facilities must be located within a floodplain (e.g., pumping stations), ensure that these facilities are designed, located and operated in a manner that minimizes loss of services during flood events as well as limits, to the extent possible, floodplain disturbance.</p> <p>✓ <u>Staff Analysis:</u> There is an area of local jurisdictional floodplain on a minimal portion of the site, though buildings are not proposed in that area. Karst features, if any, will be mitigated properly on site. The proposal generally proposes sensitive design related to environmental features.</p>
41	<p><u>Housing: Goal 1, Policy 2.</u> Promote housing options and environments that support aging in place. Encourage housing for older adults and people with disabilities to be located close to shopping and transit routes and, when possible, medical and other supportive facilities.</p> <p>NA <u>Staff Analysis:</u> The proposed rezoning would not allow for residential uses.</p>
42	<p><u>Housing: Goal 2, Policy 1.</u> Encourage inter-generational, mixed-income and mixed-use development that is connected to the neighborhood and surrounding area.</p> <p>NA <u>Staff Analysis:</u> The proposed rezoning would not allow for residential uses.</p>
43	<p><u>Housing: Goal 2, Policy 2.</u> Locate housing within proximity to multi-modal transportation corridors providing safe and convenient access to employment opportunities, as well as within proximity to amenities providing neighborhood goods and services. Higher density, accessible residential uses should be located along transit corridors and in or near activity centers.</p> <p>NA <u>Staff Analysis:</u> The proposed rezoning would not allow for residential uses.</p>
44	<p><u>Housing: Goal 3, Policy 2.</u> As neighborhoods evolve, discourage displacement of existing residents from their community.</p> <p>✓ <u>Staff Analysis:</u> There will likely be minimal, if any, any displacement of existing residents from their community.</p>
45	<p><u>Housing: Goal 3, Policy 3.</u> Encourage the use of innovative methods such as clustering, mixed-use developments, co-housing, and accessory apartments to increase the production of fair and affordable housing.</p> <p>NA <u>Staff Analysis:</u> The proposed rezoning does not allow for residential uses.</p>

4. Existing Binding Elements

23-ZONE-0098

1. ~~The development shall be in accordance with the approved district development plan, all applicable sections of the Land Development Code (LDC) and agreed upon binding elements unless amended pursuant to the Land Development Code. Any changes/additions/alterations of any binding element(s) shall be submitted to the Planning Commission or the Planning Commission's designee for review and approval; any changes/additions/alterations not so referred shall not be valid.~~
2. ~~Construction fencing shall be erected when off-site trees or tree canopy exists within 3' of a common property line. Fencing shall be in place prior to any grading or construction to protect the existing root systems from compaction. The fencing shall enclose the entire area beneath the tree canopy and shall remain in place until all construction is completed. No parking, material storage or construction activities are permitted within the protected area.~~
3. ~~Before any permit (including but not limited to building, parking lot, change of use, site disturbance, alteration permit or demolition permit is requested:~~
 - a. ~~The development plan must receive full construction approval from Construction Review, Louisville Metro Public Works and the Metropolitan Sewer District.~~
 - b. ~~The property owner/developer must obtain approval of a detailed plan for screening (buffering/landscaping) as described in Chapter 10 prior to requesting a building permit. Such plan shall be implemented prior to occupancy of the site and shall be maintained thereafter.~~
 - c. ~~A minor plat or legal instrument shall be recorded consolidating the property into one lot. A copy of the recorded instrument shall be submitted to the Division of Planning and Design Services prior to obtaining a building permit.~~
 - d. ~~A road closure approval for N Winchester Acres Rd shall be approved and recorded prior to requesting a building permit. All easements required by affected utility agencies shall be recorded prior to requesting a building permit.~~
 - e. ~~A Tree Preservation Plan in accordance with Chapter 10 of the LDC shall be reviewed and approved prior to obtaining approval for site disturbance.~~
4. ~~A certificate of occupancy must be received from the appropriate code enforcement department prior to occupancy of the structure or land for the proposed use. All binding elements requiring action and approval must be implemented prior to requesting issuance of the certificate of occupancy, unless specifically waived by the Planning Commission.~~
5. ~~The applicant, developer, or property owner shall provide copies of these binding elements to tenants, purchasers, contractors, subcontractors and other parties engaged in development of this site and shall advise them of the content of these binding elements. These binding elements shall run with the land and the owner of the property and occupant of the property shall at all times be responsible for compliance with these binding elements. At all times during development of the site, the applicant and developer, their heirs, successors; and assignees, contractors, subcontractors, and other parties engaged in development of the site, shall be responsible for compliance with these binding elements.~~

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6. ~~No idling of trucks shall take place within 200 feet of single-family residences. No overnight idling of trucks shall be permitted on-site.~~
 7. ~~Prior to requesting a permit for demolition or ground disturbance on the subject site, an Individual Historic Resource Survey Form (available from the Kentucky Heritage Council, the State Preservation Office) shall be completed by a Secretary of the Interior-qualified professional for each building proposed for demolition. The form includes photographs of all elevations and significant architectural features. All forms shall be provided to Planning and Design Services' Urban Design/Historic Preservation staff.~~
 8. ~~All maneuvering and parking areas shall be paved with asphalt or asphalt millings.~~
 9. ~~Restroom facilities and trash receptacles shall be provided on-site.~~

#09-006-04

1. ~~The development shall be in accordance with the approved district development plan, all applicable sections of the Land Development Code (LDC) and agreed upon binding elements unless amended pursuant to the Land Development Code. Any changes/additions/alterations of any binding element(s) shall be submitted to the Planning Commission or the Planning Commission's designee for review and approval; any changes/additions/alterations not so referred shall not be valid.~~
2. ~~The residential character of the structure shall be maintained. Changes to the following items shall not be made without prior approval of the Planning Commission's designee:~~
 - a. ~~roof line~~
 - b. ~~building material~~
 - c. ~~windows~~
3. ~~Use of the subject site shall be limited to office. There shall be no other use of the property unless prior approval is obtained from the Planning Commission/LD&T Committee. Notice of a request to amend this binding element shall be given in accordance with the Planning Commission's policies and procedures. The Planning Commission/LD&T Committee may require a public hearing on the request to amend this binding element.~~
4. ~~The development shall not exceed 2,587 square feet of gross floor area of office space.~~
5. ~~Signs shall be in accordance with Chapter 8 of the Land Development Code. Signature entrance shall be removed from the right-of-way unless a license agreement is obtained from the Public Works department. There shall be no signage on the signature entrance wall.~~
6. ~~No outdoor advertising signs, small freestanding signs, pennants, balloons, or banners shall be permitted on the site.~~
7. ~~Construction fencing shall be erected when off-site trees or tree canopy exists within 3' of a common property line. Fencing shall be in place prior to any grading or construction to protect the existing root systems from compaction. The fencing shall enclose the entire area beneath~~

~~the tree canopy and shall remain in place until all construction is completed. No parking, material storage or construction activities are permitted within the protected area.~~

- ~~8. Before any permit, including but not limited to building, parking lot, change of use, site disturbance, alteration permit or demolition permit is requested:
 - ~~a) The development plan must receive full construction approval from Louisville Metro Department of Inspections, Permits and Licenses (617 W. Jefferson Street), Louisville Metro Public Works, and the Metropolitan Sewer District (700 West Liberty).~~
 - ~~b) The property owner/developer must obtain approval of a detailed plan for screening (buffering/landscaping) as described in Chapter 10 prior to requesting a site disturbance permit. Such plan shall be implemented prior to occupancy of the site and shall be maintained thereafter.~~
 - ~~c) A Tree Preservation Plan in accordance with Chapter 10 of the LDC shall be reviewed and approved prior to obtaining approval for site disturbance.~~~~
- ~~9. If a certificate of occupancy | parking construction permit is not issued within one year of the date of approval of the plan or rezoning, whichever is later, the property shall not be used in any manner unless a revised district development plan is approved or an extension is granted by the Planning Commission.~~
- ~~10. A certificate of occupancy must be received from the appropriate code enforcement department prior to occupancy of the structure or land for the proposed use. All binding elements requiring action and approval must be implemented prior to requesting issuance of the certificate of occupancy, unless specifically waived by the Planning Commission.~~
- ~~11. The applicant, developer, or property owner shall provide copies of these binding elements to tenants, purchasers, contractors, subcontractors and other parties engaged in development of this site and shall advise them of the content of these binding elements. These binding elements shall run with the land and the owner of the property and occupant of the property shall at all times be responsible for compliance with these binding elements. At all times during development of the site, the applicant and developer, their heirs, successors, and assignees, contractors, subcontractors, and other parties engaged in development of the site, shall be responsible for compliance with these binding elements.~~
- ~~12. The property owner shall provide a cross over access easement if the properties to the west are ever developed for a nonresidential use, in which event the cross over access, if then required by the Planning Commission or Metro Works, shall be constructed at the adjoining property owner's sole cost and expense on this property. A copy of the signed easement agreement shall be provided to Planning Commission staff upon request.~~
- ~~13. The applicant shall provide documentation showing that the development complies with all the regulations from Chapter 4, Part 7, Section 3, Lighting, prior to the issuance of a construction permit. These regulations include the following items: Mounting Height Limit, Luminaire Shielding Canopy Lighting Level and Light Trespass.~~

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14. ~~The site shall be developed in accordance with the tree preservation areas delineated on the site plan and related notes. Any modification of the tree preservation plan requested by the applicant may be approved by the designated DPDS staff if the changes are in keeping with the intent of the approved tree preservation plan. All plans setting out tree preservation areas must contain the following notes:~~
1. ~~Tree preservation areas (TPAs) identified on this plan represent portions of the site the developer has designated to be left undisturbed during the development of roadways, utilities and similar infrastructure. These are not permanent preservation areas. Tree in these areas may be removed during construction of homes or buildings on individual lots.~~
 2. ~~Dimension lines have been used on this plan to establish the general location of TPAs and represent minimum distances. The final boundary for each TPA shall be established in the field by the applicant, developer, or property owner to include canopy area of all trees at or within the dimension line.~~
 3. ~~Tree protection fencing shall be erected around all TPAs prior to site disturbance (except as provided in these notes) to protect the existing tree stands and their root systems. The fencing shall be located at least 3 feet beyond the edge of the tree canopy and shall remain in place until all construction is completed. When trees must be removed in a TPA, the fence shall be relocated to protect all remaining trees within that TPA. When a tree mass contains both WPAs and TPAs, fencing shall only be required at the outer most perimeter of that tree mass.~~
 4. ~~No parking, material storage, or construction activities are permitted within the TPAs beyond that allowed for preliminary site investigation work.~~
 5. ~~Clearing necessary to provide access for survey work, rock soundings or other usual and customary site investigations shall be permitted prior to Site Disturbance Approval. Preliminary site investigations shall be carefully planned to minimize the amount of clearing required. Clearing should follow proposed roadway centerlines and should not result in a clear access way of more than twenty (20) feet in width. Cleared access ways beyond proposed roadways to assess individual lots shall not exceed 12 feet in width or encroach into any proposed open space lots. No trees exceeding eight (8) inches in diameter measured at a height of four and one half feet above ground level shall be removed without prior approval by DPDS.~~

5. Proposed Binding Elements

1. The development shall be in accordance with the approved district development plan, all applicable sections of the Land Development Code (LDC) and agreed upon binding elements unless amended pursuant to the Land Development Code. Any changes/additions/alterations of any binding element(s) shall be submitted to the Planning Commission or the Planning Commission's designee (and to the City of Lyndon, St. Matthews, Hurstbourne, or Middletown etc) for review and approval; any changes/additions/alterations not so referred shall not be valid.
2. Construction fencing shall be erected when off-site trees or tree canopy exists within 3' of a common property line. Fencing shall be in place prior to any grading or construction to protect the existing root systems from compaction. The fencing shall enclose the entire area beneath the tree canopy and shall remain in place until all construction is completed. No parking, material storage or construction activities are permitted within the protected area.
3. Before any permit (including but not limited to building, parking lot, change of use, site disturbance, alteration permit or demolition permit is issued:
 - a. The development plan must receive full construction approval from Construction Review, Louisville Metro Public Works and the Metropolitan Sewer District.
 - b. The property owner/developer must obtain approval of a detailed plan for screening (buffering/landscaping) as described in Chapter 10 prior to requesting a building permit. Such plan shall be implemented prior to occupancy of the site and shall be maintained thereafter.
 - c. A minor plat or legal instrument shall be recorded consolidating the property into one lot. A copy of the recorded instrument shall be submitted to the Division of Planning and Design Services; transmittal of the approved plans to the office responsible for permit issuance will occur only after receipt of said instrument.
4. The applicant, developer, or property owner shall provide copies of these binding elements to tenants, purchasers, contractors, subcontractors and other parties engaged in development of this site and shall advise them of the content of these binding elements. These binding elements shall run with the land and the owner of the property and occupant of the property shall at all times be responsible for compliance with these binding elements. At all times during development of the site, the applicant and developer, their heirs, successors; and assignees, contractors, subcontractors, and other parties engaged in development of the site, shall be responsible for compliance with these binding elements.
5. A left-turn on Collins Lane into the facility as specified by the Traffic Impact Study will be required prior to issuance of permits, as well as any improvements otherwise required by and coordinated with Public Works and the Kentucky Transportation Cabinet.
6. Prior to the issuance of permits, the right-of-way for Mermaid Lane (26-STRCLOSURE-0017) must be closed in a manner approved by Plan Commission and Metro Council.
7. Tree canopy must be either provided on site or provided in a way that is satisfied in a way that satisfies the off-site planting requirements of Land Development Code Section 10.1.3.A.3.

- ### MSD NOTES
- MSD SITE DISTURBANCE PERMIT REQUIRED PRIOR TO ISSUE OF BUILDING PERMITS. MSD FLOODPLAIN PERMIT REQUIRED PRIOR TO ISSUE OF BUILDING PERMITS.
 - CONSTRUCTION PLANS AND DOCUMENTS SHALL COMPLY WITH LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICTS DESIGN MANUAL AND STANDARD SPECIFICATIONS AND OTHER LOCAL, STATE AND FEDERAL ORDINANCES.
 - MSD DOES NOT WARRANT THE DESIGN OR COMPUTATIONS CONTAINED IN THIS PLAN. THE CORRECTNESS OR OCCUPANCY OF ALL ENGINEERING COMPUTATIONS REMAINS THE SOLE RESPONSIBILITY OF THE APPLICANT'S DESIGN PROFESSIONAL. MSD'S APPROVAL TO PROCEED WITH CONSTRUCTION IS BASED SOLELY ON THAT DESIGN PROFESSIONAL'S SEAL AND SIGNATURE.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE METROPOLITAN SEWER DISTRICTS WASTEWATER COORDINATOR AT 1-502-540-4220, 48 HOURS PRIOR TO START OF CONSTRUCTION TO SCHEDULE AN INSPECTION.
 - THE FINAL DESIGN OF THIS PROJECT MUST MEET ALL MS4 WATER QUALITY REGULATIONS ESTABLISHED BY MSD. SITE LAYOUT MAY CHANGE AT THE DESIGN PHASE DUE TO PROPER SIZING OF GREEN BEST MANAGEMENT PRACTICES.
 - KSOW APPROVAL REQUIRED PRIOR TO MSD CONSTRUCTION PLAN APPROVAL.
 - ONSITE DETENTION WILL BE PROVIDED. POST-DEVELOPMENT PEAK FLOODS WILL BE LIMITED TO PREDEVELOPED PEAK FLOODS FOR THE 2, 10, 25 AND 100-YEAR STORMS OR TO THE CAPACITY OF THE DOWNSTREAM STREAM, WHICHEVER IS MORE RESTRICTIVE.
 - SANITARY SEWER SERVICE PROVIDED BY NEW PISC. SUBJECT TO FEES AND ANY APPLICABLE CHARGES.
 - ANY REQUIRED FILL IN THE LOCAL REGULATORY FLOODPLAIN SHALL BE PROVIDED ONSITE AT 1.5 TO 1.
 - MSD DRAINAGE BOND REQUIRED PRIOR TO CONSTRUCTION PLAN APPROVAL.
 - LOWEST FINISHED FLOOR TO BE AT OR ABOVE 72.3 AND LOWEST MACHINERY TO BE AT OR ABOVE 72.3.
 - AN EPSC PLAN SHALL BE DEVELOPED AND APPROVED IN ACCORDANCE WITH MSD DESIGN MANUAL AND STANDARD SPECIFICATIONS PRIOR TO CONSTRUCTION PLAN APPROVAL.
 - A COMPENSATION AREA SHALL BE PROVIDED, SEPARATE TO THE DETENTION AREA, TO OFFSET EXISTING FLOOD STORAGE VOLUME DISPLACED BY THIS PROJECT, AND MAY POSSIBLY BE LOCATED ON THE OTHER SIDE OF HITE CREEK.

- ### EROSION PREVENTION AND SEDIMENT CONTROL NOTES
- THE APPROVED EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) PLAN SHALL BE IMPLEMENTED PRIOR TO ANY LAND DISTURBANCE ACTIVITY ON THE CONSTRUCTION SITE. ANY MODIFICATION TO THE APPROVED EPSC PLAN MUST BE REVIEWED AND APPROVED BY MSDS PRIVATE DEVELOPMENT REVIEW OFFICE. EPSC BMP'S SHALL BE INSTALLED PER THE PLAN AND MSD STANDARDS.
 - DETENTION BASINS, IF APPLICABLE, SHALL BE CONSTRUCTED FIRST AND SHALL PERFORM AS SEDIMENT BASINS DURING CONSTRUCTION UNTIL THE CONTRIBUTING DRAINAGE AREAS ARE SEEDED AND STABILIZED.
 - ACTIONS MUST BE TAKEN TO MINIMIZE THE TRACKING OF MUD AND SOIL FROM THE CONSTRUCTION AREAS AND PUBLIC ROADWAYS. SOILS TRACKED ONTO THE ROADWAY SHALL BE REMOVED.
 - SILT STOCKPILES SHALL BE LOCATED AWAY FROM STREAMS, PONDS, SWALES, AND CATCH BASINS. STOCKPILES SHALL BE SEEDED, MULCHED AND ADEQUATELY CONTAINED THROUGHOUT WITH THE USE OF SILT FENCE.
 - ALL STREAM CROSSINGS MUST UTILIZE LOW-WATER CROSSING STRUCTURES PER MSD STANDARD DRAWING ER-02.
 - WHERE CONSTRUCTION OR LAND DISTURBANCE ACTIVITY WILL OR HAS TEMPORARILY CEASED ON ANY PORTION OF A SITE, TEMPORARY STABILIZATION MEASURES SHALL BE REQUIRED AS SOON AS PRACTICABLE, BUT NO LATER THAN 14 CALENDAR DAYS AFTER THE ACTIVITY HAS CEASED.
 - SEDIMENT LADEN GROUNDWATER ENCOUNTERED DURING TRENCHING, BORING OR OTHER EXCAVATION ACTIVITIES SHALL BE PUMPED TO A SEDIMENT TRAPPING DEVICE PRIOR TO BEING DISCHARGED INTO A STREAM, POND, SWALE OR CATCH BASIN.

- ### METRO PLANNING GENERAL NOTES
- ALL UTILITIES AND SERVICE STRUCTURES ARE TO BE SCREENED PER LOC CHAPTER 10.
 - ANY PROPOSED LIGHTING TO NOT SURPASS 5 FOOTCANDLES PAST THE PROPERTY LINE, PER CODE.
 - SITE LIGHTING SHOULD NOT SHINE IN THE EYES OF DRIVERS; IF IT DOES, IT SHOULD BE REARDED, SHIELDED, OR TURNED OFF.
 - THE DEVELOPER SHALL BE RESPONSIBLE FOR ANY UTILITY RELOCATION COMPLETED ON THIS PROPERTY.
 - THE LOUISVILLE WATER COMPANY WILL PROVIDE DOMESTIC WATER TO THE SITE. THE EXPENSES OF ANY IMPROVEMENTS REQUIRED TO PROVIDE SERVICE TO THE SITE WILL BE THE RESPONSIBILITY OF THE OWNER/DEVELOPER.
 - COMPATIBLE UTILITIES, IF NEEDED, SHALL BE PLACED IN A COMMON TRENCH UNLESS OTHERWISE REQUIRED BY APPLICABLE AGENCIES.
 - MITIGATION MEASURES FOR DUST CONTROL SHALL BE IN PLACE DURING CONSTRUCTION TO PREVENT FUGITIVE PARTICULATE EMISSIONS FROM REACHING EXISTING ROADS AND NEIGHBORING PROPERTIES.
 - ALL CONSTRUCTION AND TRAILERS MUST BE PERMITTED BY THE DEPARTMENT OF PUBLIC HEALTH AND WELFARE IN ACCORDANCE WITH CHAPTER 115 OF LOUISVILLE-JEFFERSON COUNTY METRO ORDINANCES.
 - MOUSQUITO CONTROL SHALL BE IN ACCORDANCE WITH CHAPTER 16 OF LOUISVILLE-JEFFERSON COUNTY METRO ORDINANCES.
 - CONSTRUCTION PLAN SUBMITTAL AND APPROVAL IS REQUIRED BY METRO PUBLIC WORKS PRIOR TO CONSTRUCTION.
 - A GEO-TECHNICAL REPORT HAS BEEN PROVIDED AS PART OF THIS SUBMITTAL TO PROVIDE GUIDELINES FOR UNSTABLE SOIL OR MARSH TOPOGRAPHY.
 - APPROPRIATE SCREENING, AS REQUIRED BY CODE, WILL BE PROVIDED TO OBTAIN OFF-STREET LOADING AREAS THAT ARE ADJACENT TO PUBLIC STREETS OR RESIDENTIAL USES.

- ### ADDITIONAL NOTES
- SANITARY SEWERS ARE BY EXISTING CONNECTION AND ARE SUBJECT TO ALL APPLICABLE FEES. WASTEWATER IS TO BE TREATED AT THE HITE CREEK WWTW.
 - ALL UTILITIES ON THIS PLAN ARE APPROXIMATE. INDIVIDUAL SERVICE LINES ARE NOT SHOWN. PRIOR TO ANY EXCAVATION IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE UTILITY PROTECTION CENTER (UTC) AT 1-800-787-9807 WHICH HAS BEEN ESTABLISHED TO PROVIDE ACCURATE LOCATIONS OF THE BELOW GROUND UTILITIES. THE CONTRACTOR OR SUBCONTRACTOR SHALL NOTIFY THE UTILITY PROTECTION CENTER 48 HOURS IN ADVANCE OF ANY CONSTRUCTION ON THIS PROJECT.
 - NO NEW SIGNAGE IS PROPOSED.
 - ANY DEVELOPMENT THAT SHOULD OCCUR WITHIN FEMA OR LOCAL REGULATORY FLOOD AREAS WITHIN THE SITE SHALL COMPLY WITH JEFFERSON COUNTY FLOODPLAIN ORDINANCE AND LOC 4.8 AS APPLICABLE.
 - THE LOTS SUBJECT TO THIS REZONING SHALL BE CONSOLIDATED PRIOR TO CONSTRUCTION PERMITTING.
 - STREET TREES SHALL BE PROVIDED ALONG PUBLIC RIGHTS-OF-WAY IN ACCORDANCE WITH SECTION 10.2.2 OF THE LAND DEVELOPMENT CODE.
 - SANITARY SEWER SERVICE TO BE PROVIDED BY MID, WITH EACH PROPOSED COTUBUILDING CONNECTING TO ITS OWN SANITARY SEWER PIG WITH A MINIMUM 30-INCH SANITARY SEWER, AND OWNERS MUST PROVIDE DOCUMENTATION OF THESE CONNECTIONS.
 - ALL CONSTRUCTION AND SALES TRAILERS MUST BE PERMITTED BY THE DEPARTMENT OF PUBLIC HEALTH AND WELFARE IN ACCORDANCE WITH CHAPTER 115 OF LOUISVILLE-JEFFERSON COUNTY METRO ORDINANCES.
 - DEVELOPMENT MUST COMPLY WITH ALL CURRENT METRO SMOKING ORDINANCES.
 - PLANS MUST BE SUBMITTED TO THE HEALTH DEPARTMENT PRIOR TO CONSTRUCTION AND/OR FACILITY OPERATION.
 - MERMAID LAKE IS CURRENTLY SUBJECT TO A STREET CLOSURE CASE (DS-STRCLOSURE-0017). ANY REQUIREMENTS SUCH AS ESTABLISHMENT OF UTILITY EASEMENTS, RESULTING FROM THIS ACTION SHALL BE IMPLEMENTED PRIOR TO BUILDING PERMITTING.

- ### FIRE & EMERGENCY SERVICES NOTES
- THE SUBJECT PROPERTY IS LOCATED WITHIN THE ANCHORAGE MIDDLETOWN FIRE DISTRICT.
 - LOCAL FIRE AUTHORITY HAVING JURISDICTION (A4) CONTACT INFORMATION: GARY MULLER (gmuller@anchorage.net)
 - HYDRANTS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AN ADEQUATE WATER SUPPLY INCLUDING ACCESSIBLE HYDRANTS FOR FIRE FIGHTING PURPOSES MUST BE MADE AVAILABLE, AND NO UTILITIES SHALL BE CONNECTED TO THE STRUCTURE UNTIL ADEQUATE SUPPLY IS PROVIDED (LOC 5.5.1).
 - GATES: NO GATES SHALL BE INSTALLED WHICH LIMIT OR RESTRICT ACCESS TO A RESIDENTIAL AREA, EXCEPT AS APPROVED BY THE A4 OF THE REFERENCED FIRE DISTRICT.
 - EMERGENCY RESPONDER RADIO COVERAGE: EMERGENCY RADIO SYSTEMS ARE REQUIRED TO MEET MINIMUM SIGNAL TESTING STRATEGY CRITERIA TO BE CONFIRMED VIA THIRD PARTY TESTING PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY IN SOME BUILDINGS.
 - REQUIREMENTS FOR SPECIFICATIONS OF FIRE DEPARTMENT CONNECTIONS (FDC), THREADS, SIZE, LOCATION, PLACEMENT OF THE ANCHOR BOX, OR FIRE FIGHTER SAFETY BUILDING MARKING SIGNALS MUST BE OBTAINED FROM THE A4 OF THE REFERENCED FIRE DISTRICT.
 - PERMITTED PROJECTS SHALL COMPLY WITH NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 241, STANDARD FOR BARRICADEING CONSTRUCTION, ALL DETENTION AND DETENTION OPERATIONS.
 - PRIOR TO CONSTRUCTION PERMITTING, COORDINATION WILL BE NEEDED WITH THE LOCAL FIRE DISTRICT AND EMERGENCY SERVICES FOR ASSIGNMENT OF ADDRESSES FOR THE SUBJECT PROPERTY.

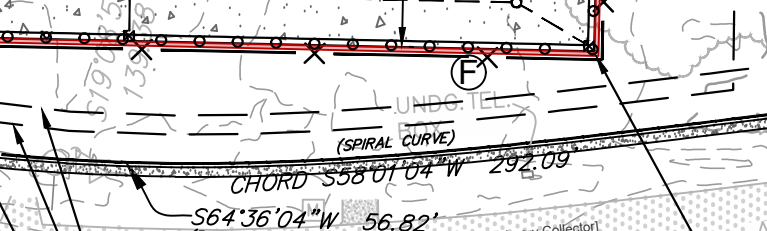
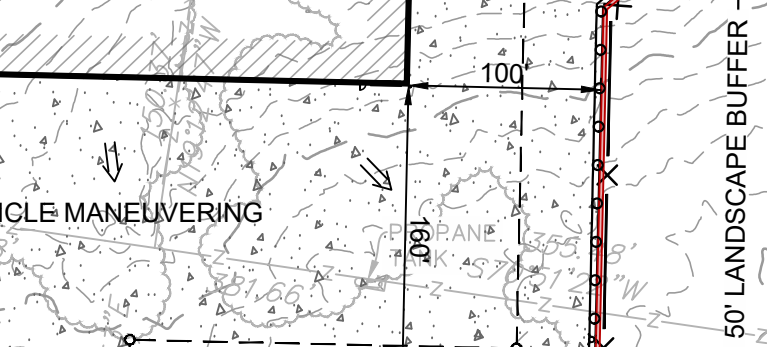
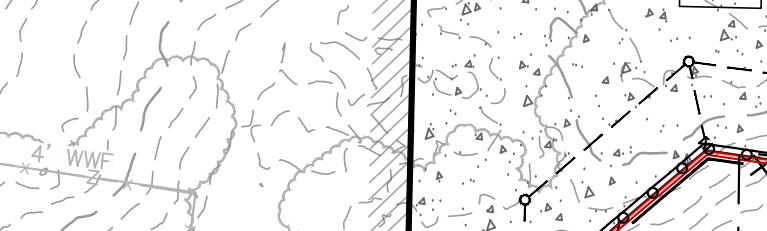
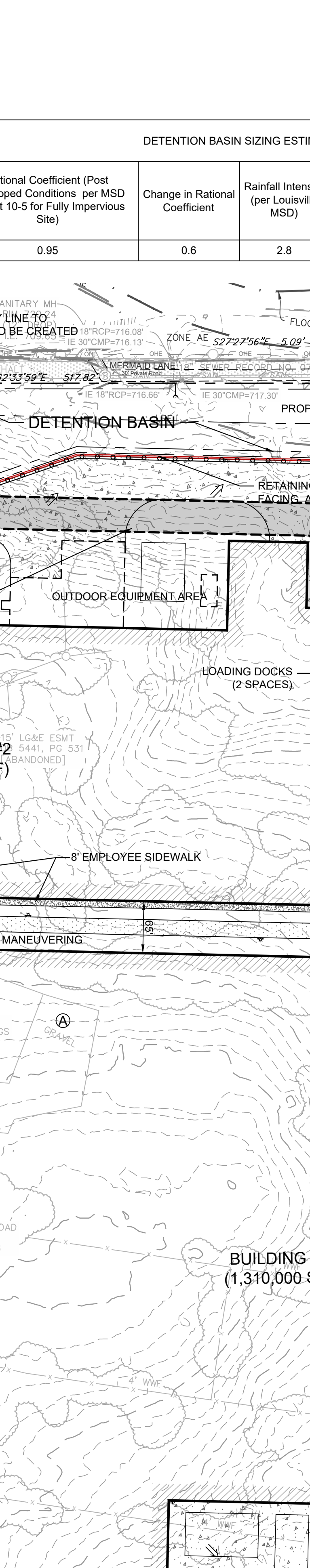
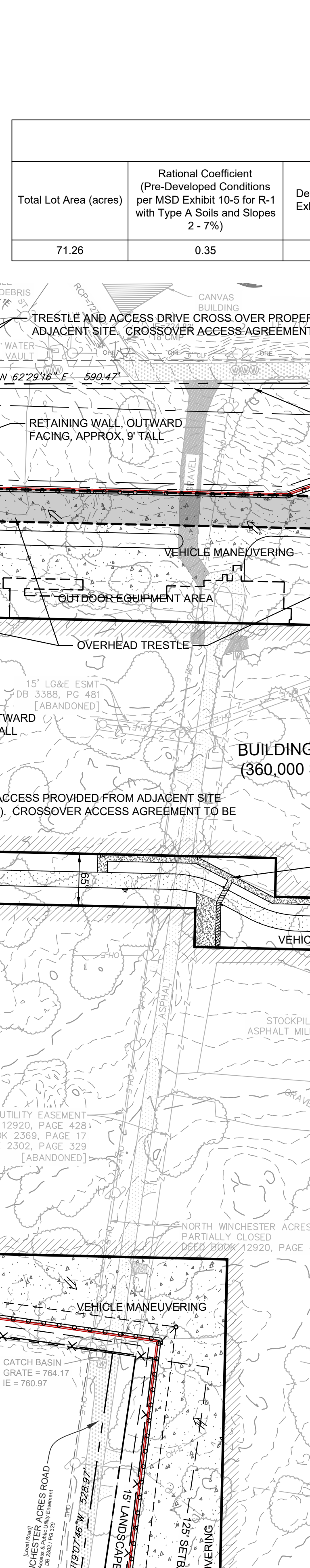
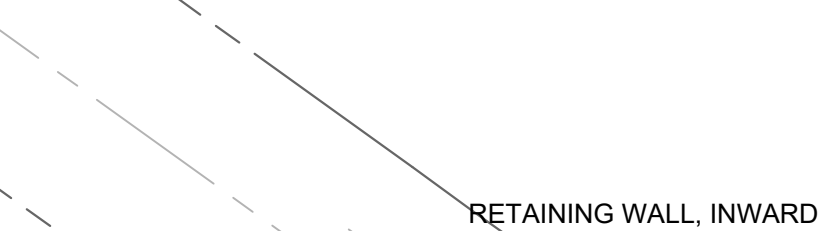
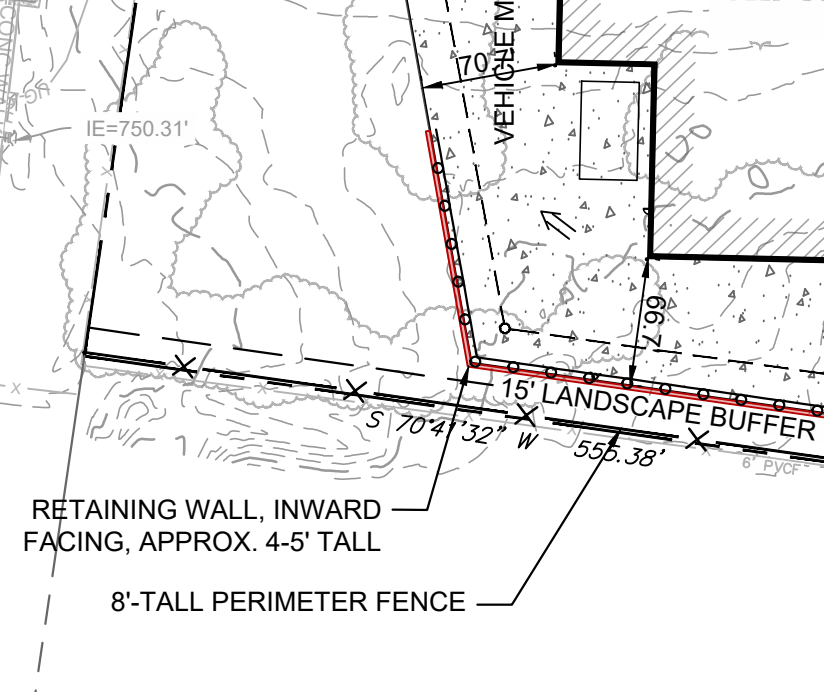
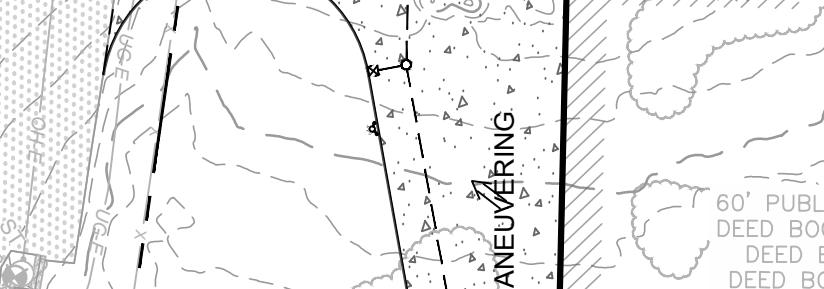
- ### CONSOLIDATED & ADJACENT PROPERTY OWNER INFORMATION
- CONSOLIDATED PROPERTIES ARE IDENTIFIED ALPHABETICALLY; APNs ARE IDENTIFIED NUMERICALLY
- | | | |
|---|---|--|
| (A) PARCEL: 0114200000
ADDRESS: 3308 COLLINS LANE
DB & P: 1117 X 839
ZONING: REC
FORM DISTRICT: SUBURBAN WORKPLACE | (1) PARCEL: 0114231000
ADDRESS: 1128 WESTVIEW ROAD
DB & P: 417 X 033 (NOT ON LINE)
ZONING: REC
FORM DISTRICT: SUBURBAN WORKPLACE | (7) PARCEL: 0114201000
ADDRESS: 3311 COLLINS LANE
DB & P: 1167 X 1
ZONING: REC
FORM DISTRICT: SUBURBAN WORKPLACE |
| (B) PARCEL: 0114100000
ADDRESS: 3308 COLLINS LANE
DB & P: 1114 X 489
ZONING: REC
FORM DISTRICT: SUBURBAN WORKPLACE | (2) PARCEL: 0114100000
ADDRESS: 3044 WINDCHESTER ACRES RD
DB & P: 1180 X 1495
ZONING: REC
FORM DISTRICT: SUBURBAN WORKPLACE | (8) PARCEL: 0110600000
ADDRESS: 2800 CHAMBERLAIN CROSSING DR
DB & P: 1041 X 1475
ZONING: REC
FORM DISTRICT: SUBURBAN WORKPLACE |
| (C) PARCEL: 0114100000
ADDRESS: 3011 W WINDCHESTER ACRES RD
DB & P: 1114 X 489
ZONING: REC
FORM DISTRICT: SUBURBAN WORKPLACE | (3) PARCEL: 0114200000
ADDRESS: 2710 CHAMBERLAIN LANE
DB & P: 1101 X 085
ZONING: REC
FORM DISTRICT: SUBURBAN WORKPLACE | (9) PARCEL: 0114200000
ADDRESS: 3309 COLLINS LANE
DB & P: 1121 X 038
ZONING: REC
FORM DISTRICT: SUBURBAN WORKPLACE |
| (D) PARCEL: 0114200000
ADDRESS: 3308 W WINDCHESTER ACRES RD
DB & P: 1117 X 839
ZONING: REC
FORM DISTRICT: SUBURBAN WORKPLACE | (4) PARCEL: 0114200000
ADDRESS: 2711 CHAMBERLAIN LANE
DB & P: 1104 X 079
ZONING: REC
FORM DISTRICT: SUBURBAN WORKPLACE | (10) PARCEL: 0114147000
ADDRESS: 3772 CHAMBERLAIN LANE
DB & P: 1104 X 018
ZONING: REC
FORM DISTRICT: SUBURBAN WORKPLACE |
| (E) PARCEL: 0114207000
ADDRESS: 3771 CHAMBERLAIN LANE
DB & P: 1114 X 489
ZONING: REC
FORM DISTRICT: SUBURBAN WORKPLACE | (5) PARCEL: 0114200000
ADDRESS: 3400 COLLINS LANE
DB & P: 1101 X 085
ZONING: REC
FORM DISTRICT: SUBURBAN WORKPLACE | (11) PARCEL: 0114340000
ADDRESS: 2719 CHAMBERLAIN LANE
DB & P: 1101 X 085 (NOT ON LINE)
ZONING: REC
FORM DISTRICT: SUBURBAN WORKPLACE |
| (F) PARCEL: 0114200000
ADDRESS: 2719 CHAMBERLAIN LANE
DB & P: 1114 X 489
ZONING: REC
FORM DISTRICT: SUBURBAN WORKPLACE | (6) PARCEL: 0114202000
ADDRESS: 1317 COLLINS LANE
DB & P: 1101 X 085 (NOT ON LINE)
ZONING: REC
FORM DISTRICT: SUBURBAN WORKPLACE | |

- ### DEMOLITION NOTES
- ALL TREE CANOPY WILL BE REMOVED ON SITE AND INCLUDES STAMPS AND ROOTS. A PREVIOUS TREE CLEARING PLAN HAS BEEN APPROVED BY PLANNING AND DESIGN SERVICES.
 - ALL EXISTING STRUCTURES AND BUILDINGS ON SITE WERE PREVIOUSLY REMOVED BY PREVIOUS OWNER.
 - ALL EXISTING UTILITIES ON SITE WILL BE REMOVED AND CAPPED AT PROPERTY LINE ACCORDING TO THE SERVICE PROVIDERS.
 - ANY CLEARING AND GRADING IN ENVIRONMENTALLY SENSITIVE AREAS WILL BE APPROVED BY THE CORPS OF ENGINEERS AND DEPARTMENT OF FISH AND WILDLIFE BEFORE WORK STARTS ON SITE.

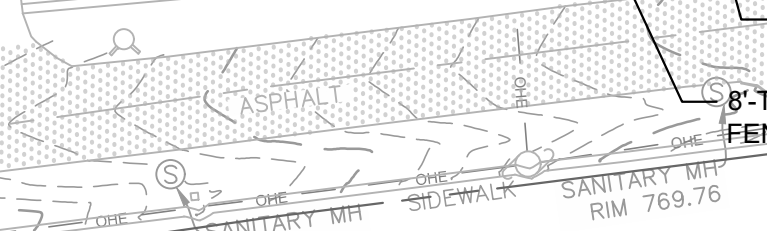
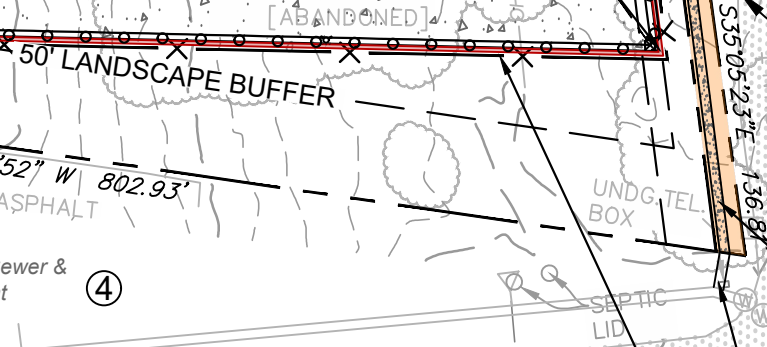
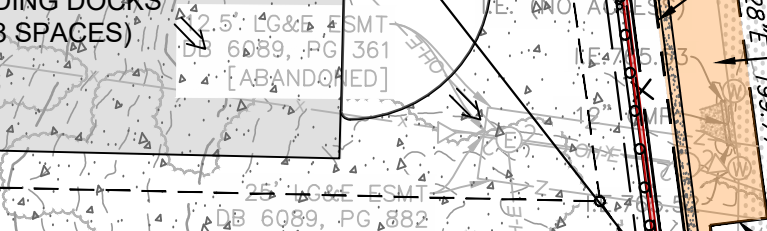
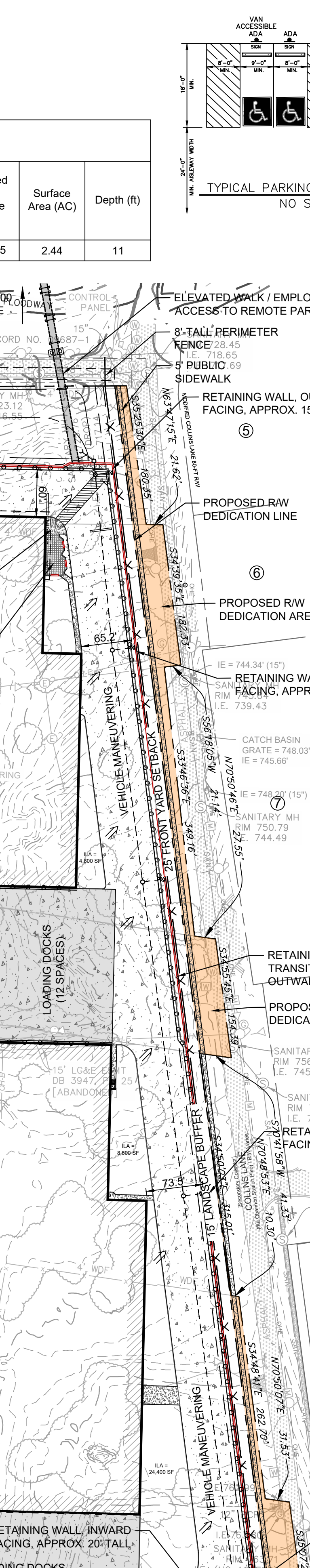
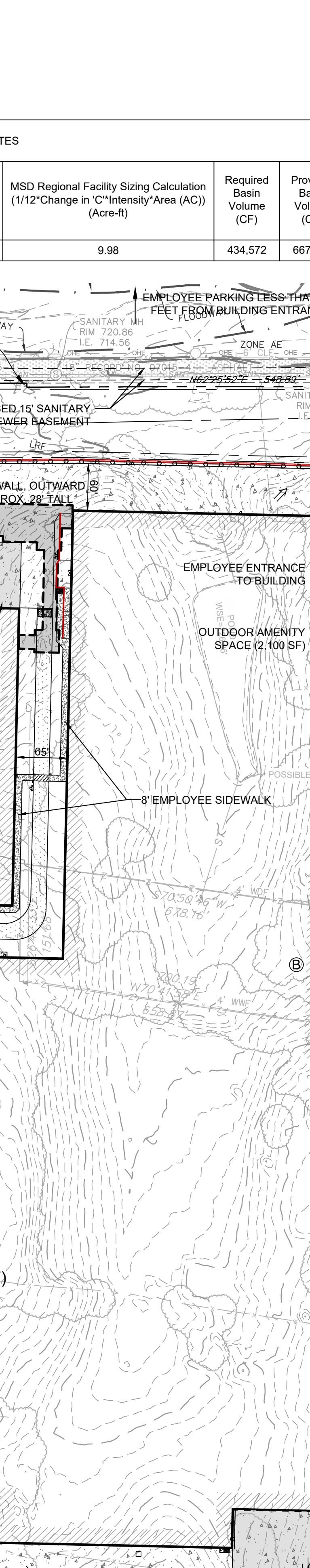
- ### MSD THROUGH-DRAINAGE NOTE
- EXISTING SITE THROUGH-DRAINAGE CURRENTLY CONVEYED THROUGH THE SUBJECT SITE SHALL BE COLLECTED AND ROUTED THROUGH THE PROPOSED ON-SITE STORMWATER DRAINAGE SYSTEM. THE DRAINAGE SYSTEM SHALL CONTINUE TO CONVEY OFF-SITE FLOWS THROUGH THE PROPOSED OFF-SITE STORMWATER BASIN, WHICH SHALL BE DESIGNED TO HANDLE ALL ON-SITE AND OFF-SITE STORMWATER FLOWS PRIOR TO DISCHARGING TO HITE CREEK.

DETENTION BASIN SIZING ESTIMATES

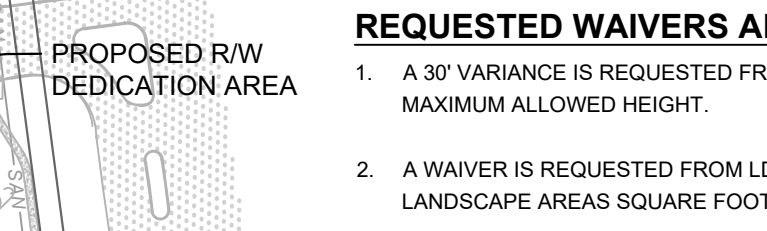
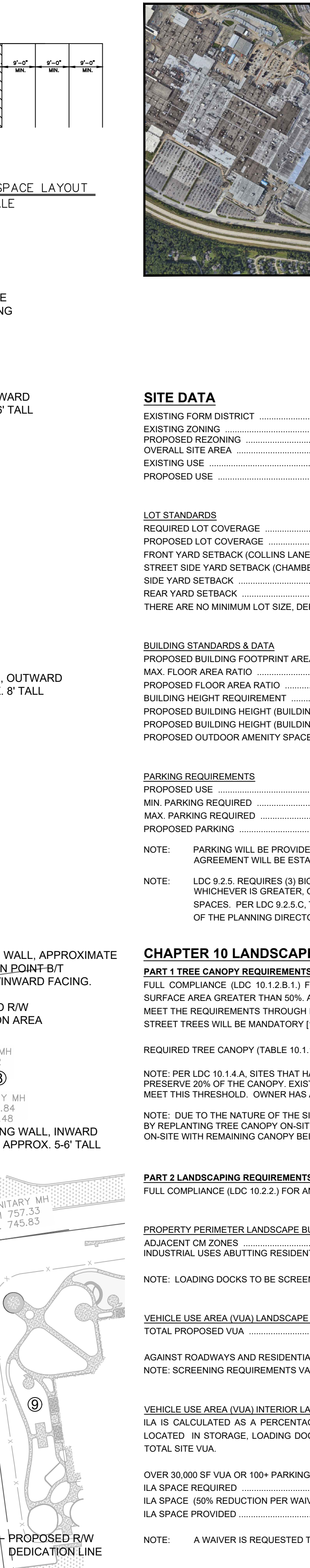
Total Lot Area (acres)	Rational Coefficient (Pre-Developed Conditions per MSD Exhibit 10-5 for R-1 with Type A Soils and Slopes 2 - 7%)	Rational Coefficient (Post Developed Conditions per MSD Exhibit 10-5 for Fully Impervious Site)	Change in Rational Coefficient	Rainfall Intensity (per Louisville MSD)	MSD Regional Facility Sizing Calculation (1/12 Change in "C" Intensity Area (AC)) (Acre-ft)	Required Basin Volume (CF)	Provided Basin Volume (CF)	Surface Area (AC)	Depth (ft)
71.26	0.35	0.95	0.6	2.8	9.98	434,572	667,575	2.44	11



- ### RELATED CASES:
- 26-LANDSCAPE-003
 - 23-ZONE-0098
 - B-96-01
 - 26-STRCLOSURE-0017
 - WM#3087 (Previously WM#12573)



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- 26-LANDSCAPE-003
 - 23-ZONE-0098
 - B-96-01
 - 26-STRCLOSURE-0017
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VARIANCE JUSTIFICATION STATEMENT

**3011 N. Winchester Acres Road, 2719 Chamberlain Lane, 2721 Chamberlain Lane, and
3306 Collins Lane, 3308 Collins Lane**

Ford Motor Company

The proposed variance, which requests a 30-foot variance from LDC 5.3.4.D.4 to allow a portion of the building to exceed the 50-foot maximum permitted height, will not adversely affect the public health, safety, or welfare.

The applicant proposes to develop vacant land into two industrial buildings to support the expansion of the Ford Kentucky Truck Plant on the properties located at 3009 N. Winchester Acres Road, 3011 N. Winchester Acres Road, 2719 Chamberlain Lane, 2721 Chamberlain Lane, and 3308 Collins Lane (collectively, the “Subject Property”). The Subject Property is adjacent to the Ford Kentucky Truck Plant and is surrounded by other industrial and commercial uses.

The requested variance will not alter the essential character of the general vicinity. Surrounding zoning classifications include CM, C-1, C-2, PEC, OR, OR-1, and OR-3, reflecting a mix of employment, industrial, commercial, and office uses consistent with the proposed development. The variance is sought to allow the building height necessary to provide the Applicant flexibility for the potential use of the proposed industrial buildings.

The variance will not create a hazard or nuisance to the public. The proposed structures are located adjacent to the existing Ford Kentucky Truck Plant and will be similar in height to portions of the existing facility, ensuring compatibility with the surrounding area. The development will include additional landscape buffering and retaining walls to further mitigate any potential impacts on adjoining properties. The variance will not materially adversely affect sightlines or neighboring properties compared to the building height allowed under the LDC.

The variance will not constitute an unreasonable circumvention of the zoning regulations. The applicant seeks to construct two industrial buildings with sufficient interior height to support industrial use of the proposed buildings.

The variance arises from special circumstances that do not generally apply to other properties in the vicinity. The Subject Property’s location along Chamberlain Lane, its adjacency to an existing large-scale manufacturing facility, and its proximity to I-265 create site-specific conditions that support the requested relief.

The strict application of the regulations would create an unnecessary hardship. Strict application of the regulations would force the applicant to redesign its building, limit the potential use of the proposed industrial buildings, and would prohibit the applicant of the reasonable use of the property.

The circumstances are not the result of the actions taken by the applicant subsequent to the adoption of the zoning ordinance as the applicant has not yet developed or taken any action with respect to the property.

WAIVER JUSTIFICATION STATEMENT

**3011 N. Winchester Acres Road, 2719 Chamberlain Lane, 2721 Chamberlain Lane, and
3306 Collins Lane, 3308 Collins Lane**

Ford Motor Company

The requested waiver of Section 4.4.3.A.4 of the Land Development Code, to allow a security fence matching the existing fence at the adjacent Ford Kentucky Truck Plant with a razor wire located six (6) feet above grade level, will not adversely affect the adjacent property owners. The use of the fence is intended solely for security purposes and is consistent with standard practices for industrial and manufacturing facilities requiring controlled access and asset protection. The proposed fence will be the same type, height, and style as the fencing used at the adjacent Ford Kentucky Truck Plant.

The requested waiver will not violate the Comprehensive Plan. The subject property is located in the Suburban Workplace Form District, which the Comprehensive Plan describes as an area intended primarily for industrial and office uses, often accommodating single large-scale uses or clusters of similar uses. The subject site is adjacent to the existing Ford Kentucky Truck Plant and I-265, where secured sites and limited pedestrian activity are common, and the proposed fence is compatible with the surrounding area.

The waiver of the regulations is the minimum necessary to afford relief to the applicant as it will allow the applicant to develop the property while maintaining the essential character of the general vicinity. The applicant has proposed substantial landscaping and screening along site perimeters to reduce impacts to adjoining property owners. Requiring strict application of Section 4.4.3.A.4 would impose unnecessary constraints on the proposed development.

Strict application of the regulation would impose an unnecessary hardship by limiting the applicant's ability to adequately secure a manufacturing facility. Granting the waiver allows the site to be developed in a manner consistent with established industrial and manufacturing security standards that match the adjoining Ford Kentucky Truck Plant, while protecting adjacent properties and maintaining compatibility with the surrounding area.

WAIVER JUSTIFICATION STATEMENT

**3011 N. Winchester Acres Road, 2719 Chamberlain Lane, 2721 Chamberlain Lane, and
3306 Collins Lane, 3308 Collins Lane**

Ford Motor Company

The requested waiver of Section 10.2.12 of the Land Development Code, to waive the required vehicle use area interior landscape areas entirely, will not adversely affect the adjacent property owners. The area triggering this requirement functions solely as a vehicle/truck maneuvering area rather than a parking area. The elimination of interior landscape islands within maneuvering areas is common for industrial and manufacturing developments, since these maneuvering areas are needed for large truck movements. The Applicant, Ford Motor Company, is proposing to provide greenspace where it will not interfere with movement of vehicles on the subject property, a change from the initial plan submitted with the pre-application review.

The requested waiver will not violate the Comprehensive Plan. The subject property is located in the Suburban Workplace Form District, which the Comprehensive Plan describes as an area intended primarily for industrial and office uses, often accommodating single large-scale uses or clusters of similar uses. The subject site is adjacent to the existing Ford Kentucky Truck Plant and I-265, within a predominantly industrial and commercial area, where maneuvering areas are common. Given these surroundings, providing the full amount of interior landscape areas within maneuvering area would not provide a meaningful benefit to adjoining properties and could interfere with truck movements.

The waiver of the regulations is the minimum necessary to afford relief to the applicant as it will allow the applicant to develop the property while maintaining the essential character of the general vicinity. The applicant has proposed substantial landscaping and screening along site perimeters to reduce impacts to adjoining property owners and has included a significant amount of ILA within the subject property. Requiring the full amount of ILA within maneuvering areas would impose unnecessary constraints on the proposed development.

Strict application of the regulation would impose an unnecessary hardship by requiring landscaping in areas meant for vehicle/truck movement, which would reduce efficiency and could create safety issues for large trucks. Granting the waiver allows the property to be developed in a manner consistent with industrial and manufacturing standards while maintaining the essential character of the surrounding area and protecting adjacent properties. The Applicant is still providing a significant proportion of the required ILA area but cannot provide the entire amount.

WAIVER JUSTIFICATION STATEMENT

**3011 N. Winchester Acres Road, 2719 Chamberlain Lane, 2721 Chamberlain Lane, and
3306 Collins Lane, 3308 Collins Lane**

Ford Motor Company

The requested waiver of Section 5.6.1.B of the Land Development Code, to waive the required building façade treatment for buildings within the Suburban Workplace form district entirely, will not adversely affect the adjacent property owners. The proposed buildings are located next to the existing Ford Kentucky Truck Plant and I-265. Most of the adjacent industrial space is designed with function in mind, and the proposed buildings share that design. The proposed development plan will include landscaping and other screening measures that will soften the appearance of the proposed buildings.

The requested waiver will not violate the Plan 2040 Comprehensive Plan. The subject property is located in the Suburban Workplace Form District, which the Comprehensive Plan describes as an area intended primarily for industrial and office uses, often accommodating single large-scale uses or clusters of similar uses. The subject site is adjacent to the existing Ford Kentucky Truck Plant and I-265, where industrial and commercial developments are the primary uses, including indoor and outdoor storage and other industrial uses.

The waiver of the regulations is the minimum necessary to afford relief to the applicant. The waiver will allow the applicant to fully and adaptively develop the property while maintaining the essential character of the general vicinity. In addition, the proposed site plan includes substantial landscaping and screening measures to further reduce any potential impacts on surrounding properties.

Strict application of the regulation would deprive the applicant of the reasonable use of the property and impose an unnecessary hardship by requiring the addition of façade design features that are unnecessary and would provide little benefit given the industrial and commercial character of the surrounding area.

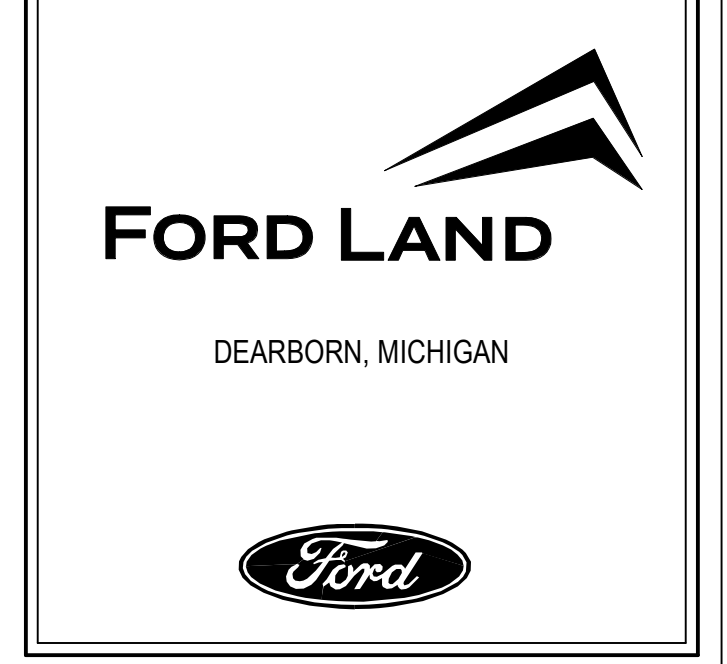
Justification Statement

Section 9.2.5.C Bicycle Parking

Ford Motor Company, Inc. (the “Applicant”) has filed an application to change the zoning on property on Chamberlain Lane and Collins Lane to construct an addition to the Kentucky Truck Plant (Case No. 26-ZONE-0056). The proposed use of the subject property is industrial and will include buildings and maneuvering area for large vehicles, including trucks and other equipment.

The proposed development includes the reconfiguration of a portion of the existing Kentucky Truck Plant to allow for expanded off-street parking of vehicles. This parking area is to the north of the subject property and is accessed from an entrance on Collins Lane. Collins Lane is a two lane road that carries a significant amount of large vehicle traffic and contains no bike paths and limited sidewalks. Collins Lane runs between Chamberlain Lane and Westport Road. Westport Road is also two lanes where it intersects with Collins Lane and, like Collins Lane, contains no bike paths and very limited sidewalks. Chamberlain Lane is much the same, with no bike paths, very few segments of sidewalk, and significant large vehicle traffic.

LDC Sec. 9.2.5.C states that the Planning Director and Director of Public Works can waive the bicycle parking requirement that would otherwise apply to a site if “there are extraordinary circumstances related to land use, adjacent road network and bicycle accessibility, availability of bicycle parking off the premises, or other mitigating circumstances.” The proposed development is a purely industrial use, and surrounding road conditions are not conducive to bicycle access to the site. Given these conditions, we request that the bicycle parking requirement for the subject property be waived in its entirety.

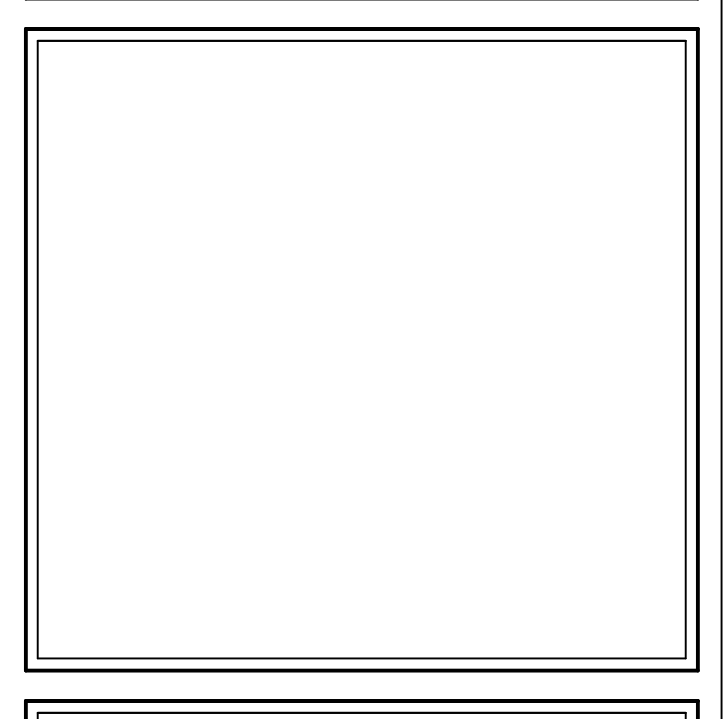


KENTUCKY TRUCK PLANT
 3001 CHAMBERLAIN LN,
 LOUISVILLE, KY 40241
 U-81X PROGRAM - BODY SHOP

LOUISVILLE JEFFERSON KY
 BUILDING SITE CODE: 0233A
 FORD PROJECT NUMBER: 31349

AE OF RECORD:
Luckett & Farley
 Architecture | Engineering | Interior Design
 737 South Third Street, Louisville, Kentucky 40202-2100
 502-585-4181 502-587-0488 Fax: www.luckett-farley.com

AE OF RECORD REGISTRATION SEAL:
NOT FOR CONSTRUCTION

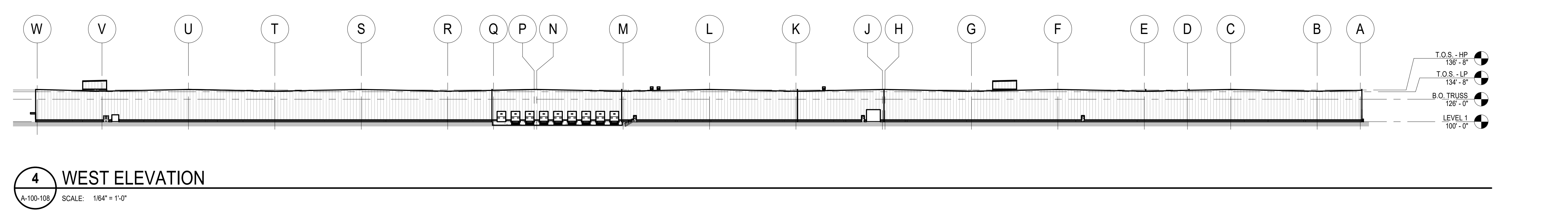
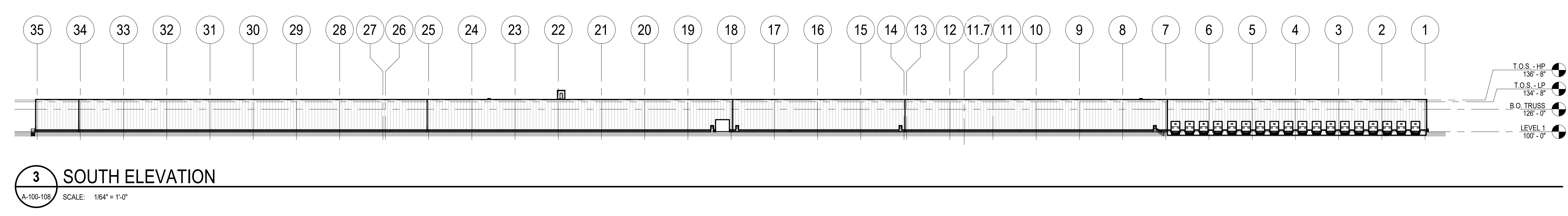
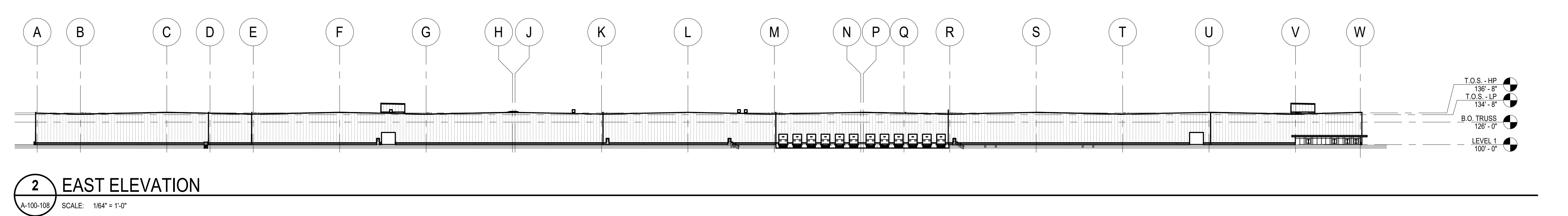
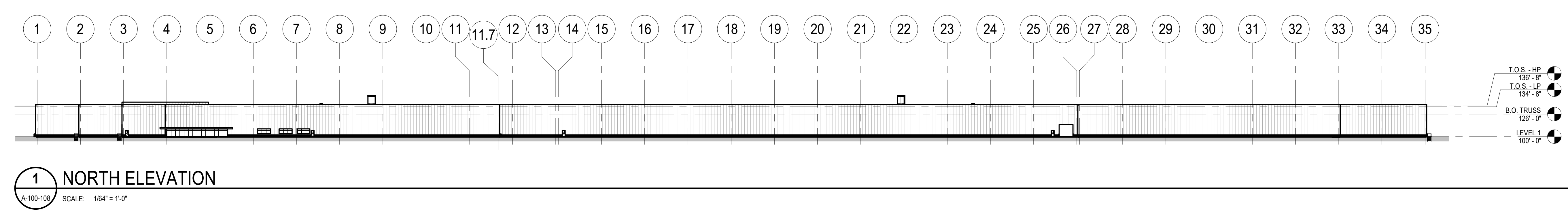


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REVISIONS

#	DESCRIPTION	DATE

AE TEAM INFORMATION:
 DRAWN BY: **NF, ST**
 DESIGNED BY: **BB**
 CHECKED BY: **JM**
 APPROVED BY: **KK**
 DATE: **05/28/2026**
 AE PROJECT NUMBER: **2025.108.00**
 SHEET TITLE:
BUILDING ELEVATIONS - COMPOSITE
 SHEET NUMBER:
A-201-108





GEOTECHNICAL EVALUATION REPORT

GREENFIELD SITE DEVELOPMENT
LOUISVILLE, KENTUCKY

SME Project Number: 102074.00
March 19, 2026





1200 Bell Lane, Suite B
New Albany, IN 47150-7275

T (812) 590-4600

www.sme-usa.com

March 19, 2026

Mr. Rob Candler, PE
Director, Industrial Design Studio
Luckett & Farley
737 South Third Street
Louisville, Kentucky 40202

Via E-Mail: rcandler@luckett-farley.com

RE: Geotechnical Evaluation and Karst Reconnaissance Survey Report
Greenfield Site Development
Collins Lane
Louisville, Kentucky 40245
SME Project No. 102074.00

Dear Mr. Candler:

We have completed our geotechnical evaluation and karst reconnaissance survey for the referenced project. This report presents the results of our observations and analyses, our geotechnical recommendations, our pavement design recommendations, and a discussion of potential construction considerations based on our karst reconnaissance survey and the information disclosed by the borings.

We appreciate this opportunity to be of service. If you have questions or require additional information, please contact me.

Sincerely,

SME

A blue ink signature of Wesley J. Hemp is displayed within a white rectangular box.

Wesley J. Hemp, PE, PG, BC.CE, LEED AP
Project Manager

Enclosure: SME Geotechnical Evaluation Report; Dated March 19, 2026

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APPENDIX A

- BORING LOCATION DIAGRAMS (FIGURE NOS. 1 AND 2)**
- BORING LOG TERMINOLOGY**
- BORING LOGS (B1 THROUGH B64)**
- HISTORIC TOPOGRAPHIC MAPS (FIGURE NOS. 3 THROUGH 8)**
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APPENDIX B

- LABORATORY TESTING RESULTS**
- INFILTRATION TEST RESULTS (2 PAGES)**
- FIELD TESTING PROCEDURES**
- LABORATORY TESTING PROCEDURES**
- LIMITATIONS PERTAINING TO SUBSURFACE CONDITIONS**

APPENDIX C

- IMPORTANT INFORMATION ABOUT THIS GEOTECHNICAL-ENGINEERING REPORT**
- GENERAL COMMENTS**

1. INTRODUCTION

This report presents the results of the geotechnical evaluation and karst reconnaissance survey performed by SME for the proposed Greenfield Site Development. This evaluation was conducted in general accordance with the scope of services outlined in SME Proposal No. P04542.25, dated November 13, 2025. Our services for this evaluation were authorized by Mr. Rob Candler with Luckett & Farley (L&F) on November 21, 2025.

SME received the following information which was used in the evaluation and preparation of this report:

- A site plan titled "Advanced Site Plan", (Exhibit A) prepared by L&F, dated September 10, 2025. The site plan also included the requested locations for 64 borings.
- A .dwg file titled "3607-TOPO BASE", which included a preliminary topographic survey of the site prepared by Sabak, Wilson & Lingo, Inc., dated December 24, 2025.
- A markup of the previously referenced preliminary topographic survey, prepared by L&F, which included the requested location and depth for two infiltration tests.

SME completed 64 borings (B1 through B64) at the project site between December 19, 2025 and January 23, 2026. SME also completed nine offset borings (B8A, B16A, B20A, B25A, B32A, B41A, B42A, B51A, and B63A) at the project site between January 21 and 23, 2026 for the collection of Shelby Tube, bulk bucket, and bulk bag samples. The offset borings were generally performed within 5 feet (lateral distance) of their respective counterpart boring. SME performed two infiltration tests (IT1 and IT2) at the project site on January 22, 2026. Refer to the boring logs included in Appendix A for the specific depth of each individual boring. The approximate boring locations are depicted on Image No. 1 and on the Boring Location Diagrams located in Appendix A (Figure Nos. 1 and 2). Soil descriptions and the field and laboratory test results are presented on the boring logs. Exploration and laboratory testing procedures are presented in Section 4.

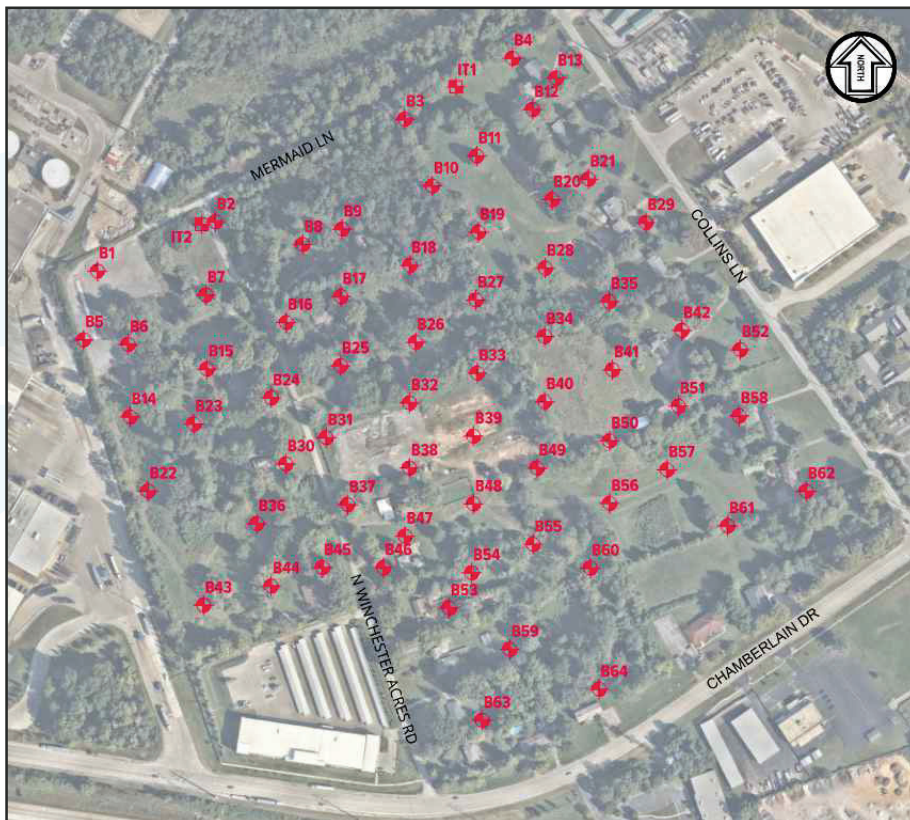


IMAGE NO. 1: Excerpt from Figure No. 1 in Appendix A – Boring Location Diagram

1.1 SITE CONDITIONS

The project site is located in Louisville, Kentucky. The site encompasses approximately 71 acres and is bordered to the north by Mermaid Lane, to the east by Collins Lane, to the south by Chamberlain Lane, and to the west by the Ford Kentucky Truck Plant (KTP) facility. The site is partially bisected by North Winchester Acres Road.

We understand the project site was primarily utilized as agricultural farmland from as early as 1949, until the early 1970's through the early 1980's, when single family residential developments were constructed throughout the project site. From then until the time of our field exploration, the site consisted primarily of single-family residential developments. The residential developments were demolished or were in the process of being demolished at the time of our field exploration. We understand that, at the time this report was prepared, all of the residential developments have been demolished. Excluding the previous residential home sites, the site is primarily grassy green space with sporadic partially to heavily wooded areas. The demolished home sites were observed to consist of exposed subgrade without grass cover, or exposed fill soils used to backfill the excavations where below grade features associated with the previous developments were presumably removed. A pond was observed on the northeastern portion of the site during our field exploration.

1.2 PROJECT DESCRIPTION

We understand the project consists of the design and construction of a new 1,600,000 square foot manufacturing building, site pavements, a stormwater retention basin, and associated infrastructure. We assume the building will be a single-story, high-bay, slab-on-grade structure, but we understand that the building will also include below-grade pits of varying sizes and depths. We understand the development may also include an overhead trestle used to transport materials from the new development to the adjoining KTP facility. Based on information provided to SME by L&F, we understand that maximum column loads for the facility will be on the order of about 300 kips.

Based on our review of the provided topographic survey, we estimate that existing ground surface elevations across the site range from about elevation 720 feet to 770 feet and generally increases from north to south. We understand the proposed finish floor elevation (FFE) of the facility will be elevation 752 feet. Based on the provided topographic survey and the approximate proposed building pad as indicated on the referenced site plan, we have assumed that earthwork of up to about 13 feet of cut and up to about 30 feet of grade-raise fill will be required to establish the proposed FFE, with deeper excavations required for the below-grade pits. No further information regarding proposed grading or below-grade pits was provided at the time this report was prepared.

Based on the referenced site plan, we anticipate the southernmost paved parking area and associated driving lanes will be subject to primarily passenger vehicle usage, with occasional delivery vehicle traffic. We understand the southernmost parking area will have two entry/exit drives, including one extending west from Collins Lane, and one extending east from North Winchester Acres Road. We have assumed the southernmost parking area will be hot-mix-asphalt (HMA) pavement. We have assumed the pavement surrounding the building will be Portland cement concrete (PCC) and will be primary trafficked by heavy truck traffic including fully-loaded semi-trucks (and forklifts).

The recommendations of this report are based on the information provided above and the results of the field and laboratory evaluation. Contact SME if the final design information is different than discussed herein.

2. KARST SURVEY

2.1 KARST DEVELOPMENT

Karst topography is characterized by pinnacled, fissured, and/or cavernous bedrock topography caused by dissolution of the rock by chemical weathering. Sinkholes, sinking streams, springs, and caves (among other features) are associated with karst terrain.

This phenomenon occurs in carbonate rocks (e.g., limestone and dolomite) or evaporites (e.g., gypsum) that are considered relatively dense, soluble, and located in geographic regions that receive abundant rainfall. The overlying soils typically consist of residual clay deposits weathered from the underlying rock but can be infilled with fine-grained soils via erosion or other transport mechanisms. Buried sinkhole features, which have been infilled (naturally or artificially), are difficult to characterize or identify visually from the surface, and can be better evaluated by excavation, drilling test borings, and/or geophysical ground imaging.

Abundant rainfall within a geographic region over time is required for karst features to develop. The weathering within the underlying bedrock occurs over thousands or tens of thousands of years. In fact, the mean rate of surface lowering on limestone ranges from less than 0.005 millimeters per year in arctic terrains with little soil to greater than 0.1 millimeters per year in wet equatorial regions. However, quicker rates of greater than 5 millimeters per year have been observed at some tropical islands (Waltham, Bell, and Culshaw, 2005). Conversely, an actual sinkhole dropout can occur in a short period of time (i.e., hours to days) due to washing/raveling of the overburden soils through the fissured bedrock. This raveling may occur due to fluctuations in surface and/or subsurface drainage patterns, or changes in groundwater elevation.

Sinkholes can also form where cave roofs are relatively thin, and collapse under the weight of soil and rock overburden (and/or additional loads resulting from new construction). Engineering works and site development can result in acceleration of incipient sinkhole development or encourage new sinkhole formation.

The subsidence referred to is the motion of the earth or ground surface as it shifts downward relative to a datum. There are several types of subsidence, which frequently occur in karst terrain. Locally, sinkholes typically form near the surface of the rock where dissolution of limestone by flowing water within the rock causes the creation of voids. If the roofs of these voids (made of either rock or soil) become weak enough, they can collapse either gradually or suddenly, and the overlying rock and/or soil will fall into the void, causing subsidence at the surface (i.e., dropout, caprock, and collapse sinkholes). Dissolution (dolines) sinkholes are also common but are typically less obvious due to the slower rate of subsidence. Subsidence of this type can vary from less than a few feet to a few hundred feet in diameter.

Swell and swale topography (e.g., undulating hills intermixed with shallow depressions) are also characteristic of karst, with localized depressions typically being the result of subsidence related to sinkhole activity. The figure below is characteristic of features associated with karst terrain.

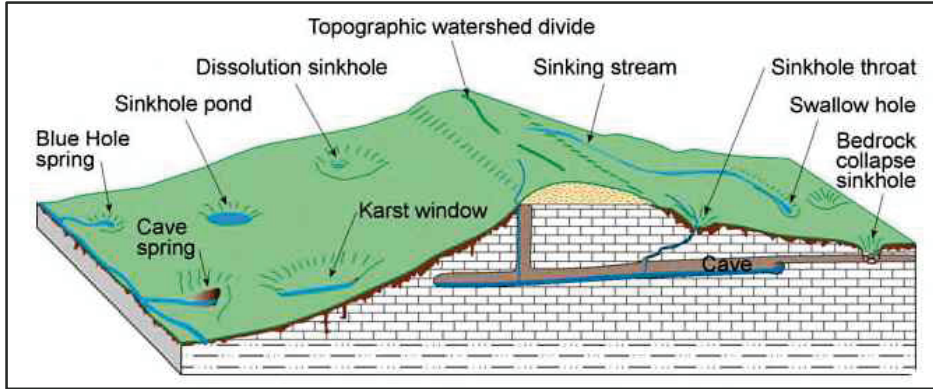


IMAGE NO 2: Karst Terrain Features ⁽¹⁾

(1) Kentucky Geological Survey. (2026). Retrieved from <https://www.uky.edu/KGS/karst/>

2.2 MAP AND LITERATURE REVIEW

Our research for the subject site included review of available geologic maps, geological literature, soils data, and historical and aerial topographic maps to develop a better understanding of native soil and rock conditions near the site, along with possible changes in ground surface topography related to development of sinkholes or other karst features. SME also contacted a local cave exploration group (“cavers”) regarding possible documentation of identified cave or cavern features within the project vicinity. Site research included a review of the following items:

- United States Department of Agriculture (USDA) National Resource Conservation Services (NRCS) web soil survey map.
- 7.5-minute series Geological Quadrangle Map (Anchorage, 1971) developed by the United States Geological Survey (USGS) in cooperation with the Kentucky Geological Survey (KGS).
- Online Kentucky Geologic Map Service (including detailed geologic unit map, karst potential map, and water well and springs map).
- Review of available data on the Louisville/Jefferson County Information Consortium (LOJIC) website.
- Submission inquiry to the Kentucky Speleological Survey (KSS) regarding documented cave systems and/or cave openings.
- Historical aerial photographs obtained between 1949 and 2025.
- Historical topographic maps obtained between 1905 and 2022.

2.2.1 SURFICIAL GEOLOGY

Information obtained from the USDA Web Soil Survey indicates the near-surface natural soils consist predominantly of urban land – Alfic Udarents – Crider complex (UmC) and Alfic Udarents – Nicholson complex (UmC), 0 to 12 percent slopes; and urban land – Udorthents complex (UahC), 0 to 12 percent slopes. Bedford silt loam (BrB), 2 to 6 percent slopes is mapped in the southwestern corner of the project site. The Alfic Udarents – Crider Complex consists of thin, fine-silty loess over clayey residuum weathered from limestone and dolomite. The Alfic Udarents – Nicholson Complex consists of thin, fine-silty loess over clayey residuum weathered from limestone. The Bedford silt loam consists of noncalcareous loess over loamy noncalcareous loess over clayey residuum weathered from limestone. Please refer to the excerpt of the USDA Soil Survey Map below for more information.



IMAGE NO. 3: USDA Web Soil Survey Map ⁽¹⁾

(1) USDA Web Soil Survey. (2026). United States Department of Agriculture – Natural Resource Conservation Service. Retrieved from <https://websoilsurvey.sc.egov.usda.gov/>

2.2.2 BEDROCK GEOLOGY

Our review of the referenced geological literature indicates the project site is in the Bluegrass Physiographic Region, in the Outer Bluegrass Area. The Bluegrass includes both the Outer Blue Grass and Inner Bluegrass and is located in the central part of the state and is known for gently rolling fields underlain by thick-bedded limestone that boasts sinkholes, sinking streams, springs, and caves along with massive gorges of limestone and dolomite. Refer to the image below depicting physiographic regions in Kentucky.

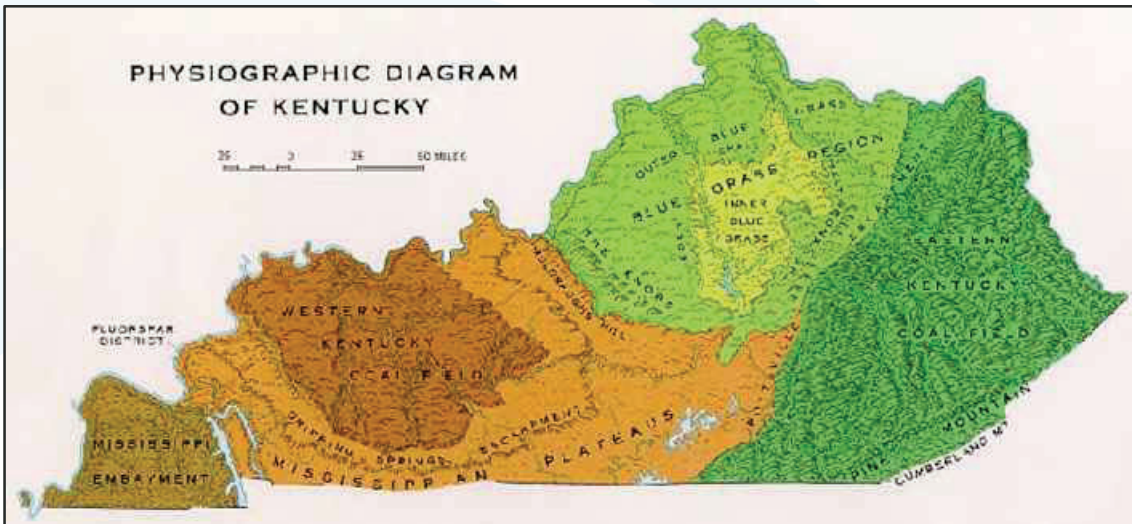


IMAGE NO. 4: Physiographic Map Of Kentucky ⁽¹⁾

(1) Kentucky Geological Survey. (2026). Retrieved from <https://www.uky.edu/KGS/geoky/physiographic.htm>

The referenced geologic mapping indicates the underlying rock is predominantly composed of middle Silurian-age dolomitic limestone and dolomite belonging to the Louisville Limestone Formation, and middle to upper Devonian-age limestone belonging to the Sellersburg Limestone Formation (of which the Beechwood Limestone and Silver Creek Limestones are members) and Jeffersonville Limestone Formation.

The Louisville Limestone is described as yellowish gray to light olive gray, finely crystalline, pyritic, and thin to very thin bedded in the upper part. The limestone bedding is defined by stylolites. Discontinuous chert layers are common in the uppermost few feet. Sinkholes are known to develop in the upland areas.

The Beechwood Limestone is described as light gray to greenish gray and weathers moderate yellowish brown to light olive gray. The formation consists of coarse to very coarse fossil fragments and whole fossils. The formation is also described as cherty. The Silver Creek Limestone is described as olive gray to light greenish gray and weathers light yellowish gray. The formation is crypto grained to micro grained and has scattered lenses of very fine to medium fossil fragments.

The Jeffersonville formation is described as olive-gray, brownish-gray, or medium to light gray and weathers pale yellowish brown to light yellowish gray. The formation consists of fine to very coarse fossil fragments.

The overlying soils generally consist of materials weathered from the underlying rock. Please refer to the site geology map obtained from KGS below for more information.

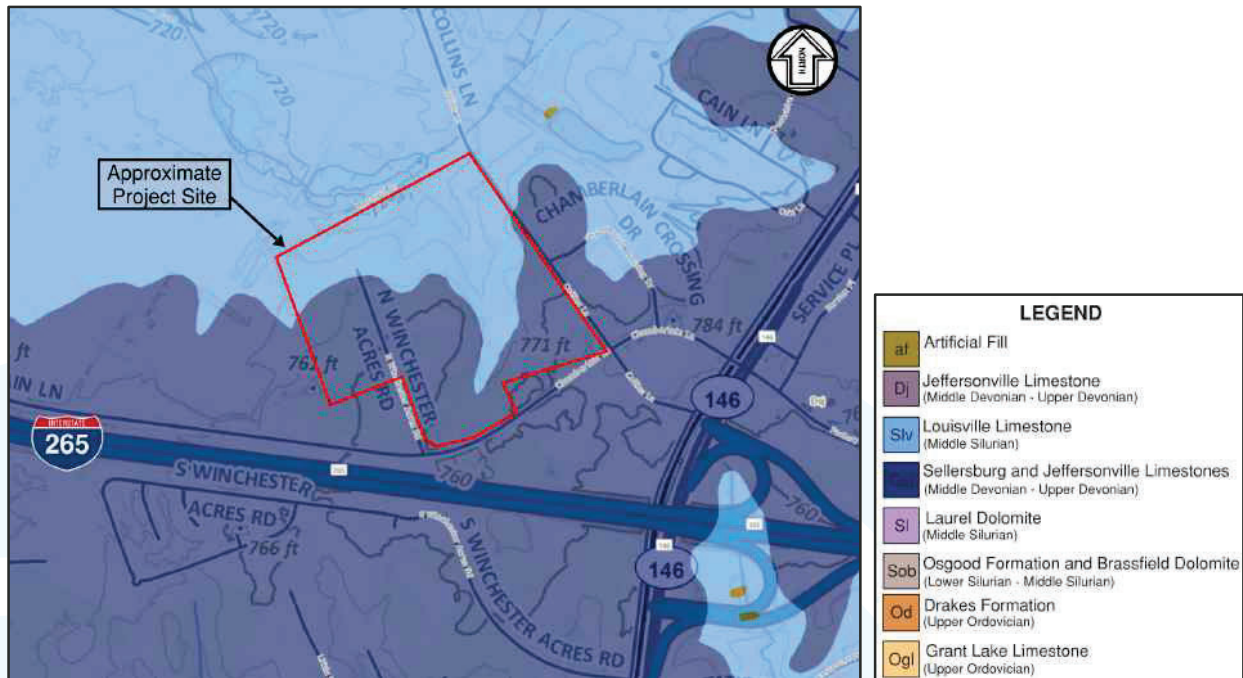


IMAGE NO. 5: Geologic Map ⁽¹⁾

(1) Kentucky Geological Survey. (2026). Kentucky Geologic Map Information Service. Retrieved from <https://www.kgs.uky.edu>.

2.2.3 DATA INQUIRY REQUEST

SME submitted an inquiry to KSS on January 14, 2026, regarding potential for cave-related activity within the project area. KSS is a non-profit organization of cavers that function as gathers, archivists, and curators of cave and karst data for the State of Kentucky. Please visit www.ksscaves.org for more information regarding KSS. Refer to Section 2.2.4.3 for additional information regarding caves and our data inquiry request.

2.2.4 KARST CONDITIONS

2.2.4.1 KARST POTENTIAL INDEX

The KGS has developed a generalized mapping tool to rate the general karst potential for the state of Kentucky. This tool, which is a feature of the online Kentucky Geologic Map Service, provides a color-coding scheme for relative karst potential. Purple indicates areas of “intense” karst potential, while light blue indicates an area “prone” to karst development. White represents areas considered non-karst. This tool can be utilized to rate the general karst potential for a project site for preliminary risk assessment or for use in development of subsurface evaluation programs. Further discussion and application of this tool is discussed below in Section 2.2.4.2.

2.2.4.2 SINKHOLE CONSIDERATIONS

There are six official classifications of sinkholes of which are determined by both the geological conditions and the mechanism of sinkhole development. These six general classifications are illustrated on the image below. Note that many sinkholes are formed by a combination of the mechanisms shown on the referenced image.

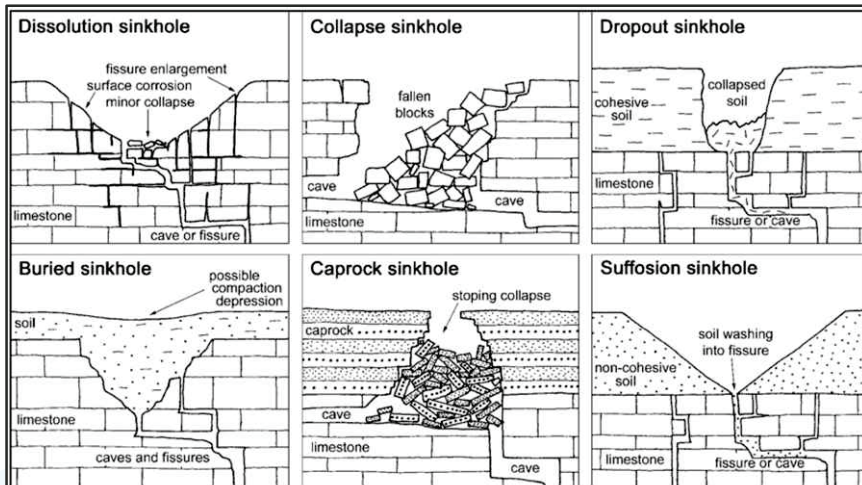


IMAGE NO. 6: Sinkhole Classifications And Formation ⁽¹⁾

(1) Adapted from “Engineering Classification of Karst Ground Conditions,” by A.C. Waltham & P.G. Fookes, 2003, Quarterly Journal of Engineering Geology and Hydrology, 36, P. 106. Copyright 2003 by the Geological Society of London.

Based on our understanding of the site geology and previous experience in the general area, sinkholes nearby the general project area are typically categorized as “dropout,” “doline/ dissolution,” or “collapse” sinkholes. Buried sinkholes may be encountered where significant undulation of the underlying limestone surface exists.

Our review of the current Karst Potential Map indicates that the project site is located in an area of “intense” karst potential. Refer to the KGS Karst Potential Map below for additional information.

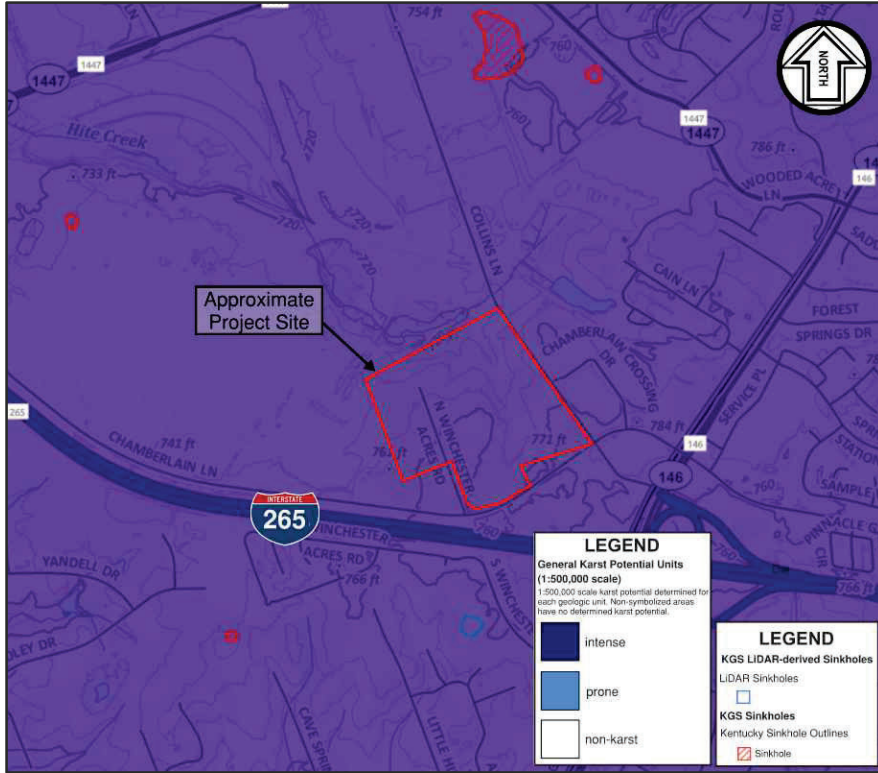


IMAGE NO. 7: Karst Potential Map ⁽¹⁾

⁽¹⁾ Kentucky Geological Survey. (2026). Kentucky Geologic Map Information Service. Retrieved from <https://www.kgs.uky.edu>.

KGS estimates the accuracy of LiDAR detected sinkholes (shown by a blue outline on the map) is greater than 85 percent based upon limited field verification. Statewide sinkholes are defined by a red-hashed zone. Note that the KGS map is a generalized tool for identifying sinkhole features and should not be considered as a suitable replacement for “boots on the ground” site evaluation, even when considering the estimated accuracy. KGS has recently upgraded their mapping tool which considers information obtained from other agencies (including local City and County Governments).

Site topography (represented by 2-foot contour intervals) on the LOJIC map suggests the presence of subsidence or depressions that are not identified by KGS. These features are outlined in blue in the image below. These mapped features are categorized as “Intermediate Depressions” and “Index Depressions” according to LOJIC mapping. Shallow nuanced karst features are difficult to identify in the field, especially across relatively large sites. However, the contour outlines at the locations of these presumed intermediate depressions are closed. This suggests that these features are likely doline sinkholes (i.e., subsidence sinkholes) since surface water runoff would be expected to accumulate in these areas and infiltrate through the ground. Further assessment of these features should be considered.

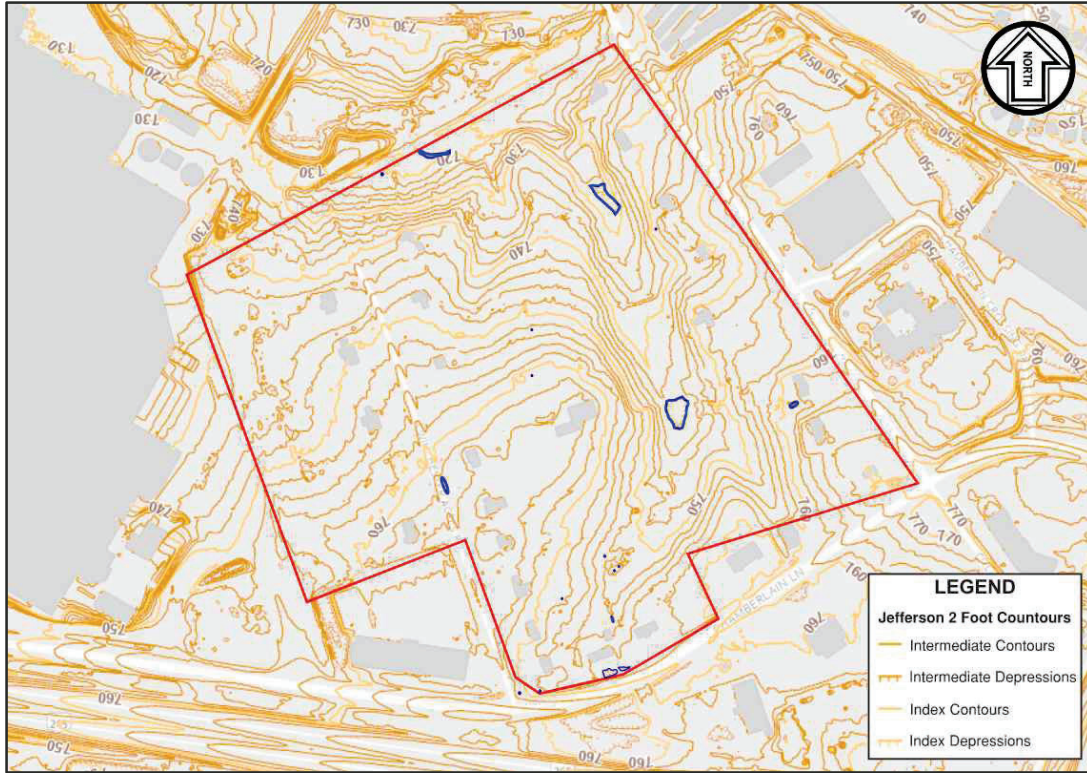


IMAGE NO. 8: Louisville Lojic Map Two-Foot Contours ⁽¹⁾

(1) LOJIC Online. (2026). Louisville/Jefferson County Information Consortium. Retrieved from <https://www.lojic.org>

The above-referenced maps reflect the generalized existing site topography and documented sinkholes. Changes in site topography, including development of new sinkholes or absence of old sinkholes, may be observed when comparing newer geologic maps to older maps. It is possible that previous site grading activities may have covered up surficial evidence of existing or incipient sinkholes within this site.

2.2.4.3 CAVE CONSIDERATIONS

Caves are defined as a natural void in the ground (e.g., in limestone rock) that is large enough for a person to enter. A cavern is a series of connected caves. In Kentucky, caves and caverns exist within the underlying rock mass in areas of karst terrain. There are over 5,100 known caves in Kentucky.

Cave entrances are not always obvious or may not be present at all. Many cave openings are formed by engineering works (e.g., excavation or mining), or in some cases, the result of sinkhole roof collapse.

Caves and caverns can exist within the underlying rock mass in areas of karst terrain and can vary in size, dimension, and orientation. Generally, more pronounced, or larger caves are prevalent where karst is more well developed or “mature.” This phenomenon can be observed in the image below, which provides a summary of engineering classification of karst topography classification based on presence of karst features. Based on published literature (Waltham & Fookes) which considers karst classification throughout the world, karst in Kentucky classifies as “Mature Karst kIII.”

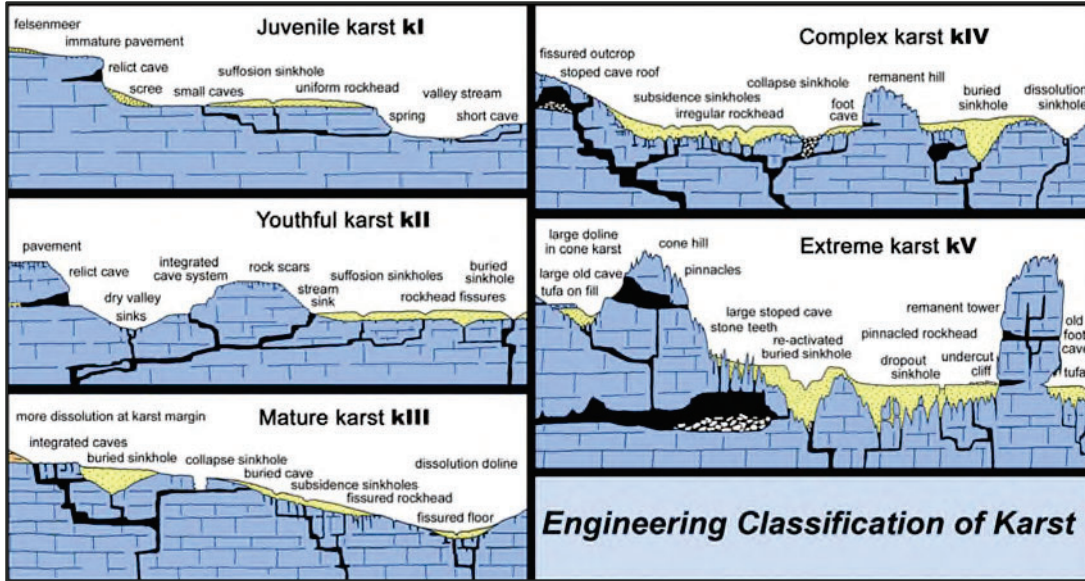


IMAGE NO. 9: Engineering Classification Of Karst (1)

(1) Adapted from "Engineering Classification of Karst Ground Conditions," by A.C. Waltham & P.G. Fookes, 2003, Quarterly Journal of Engineering Geology and Hydrology, 49, P. 110. Copyright 2003 by the Geological Society of London.

The database search performed by KSS indicated that there are no known caves on the project site at the time the request was fulfilled on January 21, 2026. According to the KSS database, the closest cave is located approximately 500 feet northwest of the northern boundary of the project site. The cave is referred to as Cave Spring Cave, according to the KSS database. KSS advised that LiDAR data indicates the presence of a spring approximately 300 feet northwest of the Cave Spring Cave location. No further information regarding the cave was available in the KSS database. Refer to the image below for the approximate location of Cave Spring Cave, which is shown in yellow.



IMAGE NO. 10: KSS Data Request Response – Cave Spring Cave

Generalized mapping tools from KSS depict the number of identified caves per county in Kentucky, as well as cave density/spatial cave distribution (i.e., number of identified caves within a certain defined area). Review of the available mapping indicates 69 cave openings have been documented within Jefferson County as of September 6, 2023. Note that KSS only considers karst voids having a length or depth of at least 30 feet as caves.

Please refer to the images below obtained from the KSS website. These figures have been modified from the original version, as the boundary for Jefferson County is outlined in red.

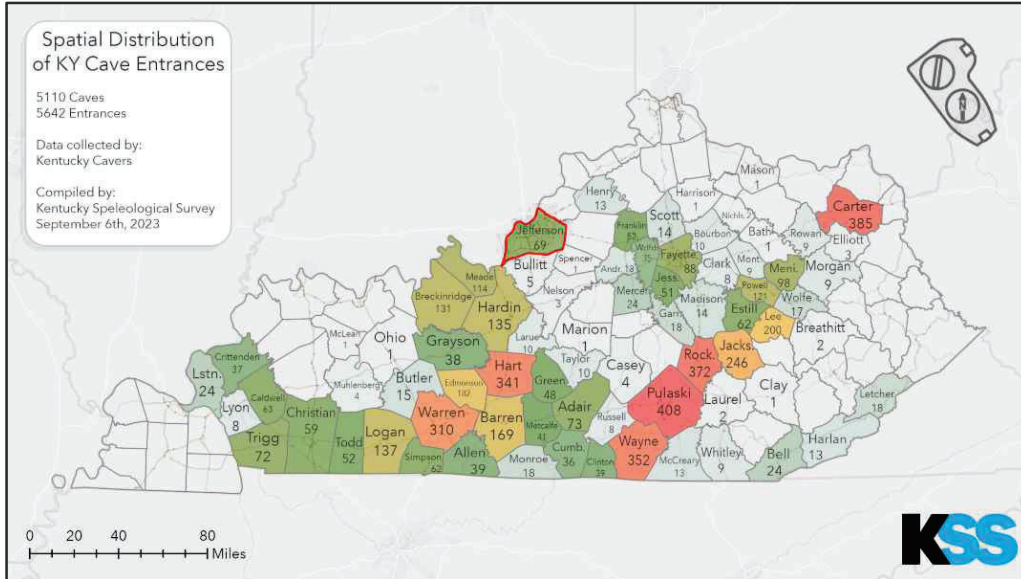


IMAGE NO. 11: Spatial Distribution Of KY Cave Entrances (1)

(1) Kentucky Speleological Survey. (2023). "Spatial Distribution of KY Cave Entrances." Retrieved from <http://kss.caves.org/kentucky-caves/>

The images below depict relative cave density as a function of color. Closer review of the images indicates the project site is located within an area identified as having relatively lower cave density (indicated by the cooler shaded colors). Note that "lower" cave density does not necessarily indicate low karst potential.

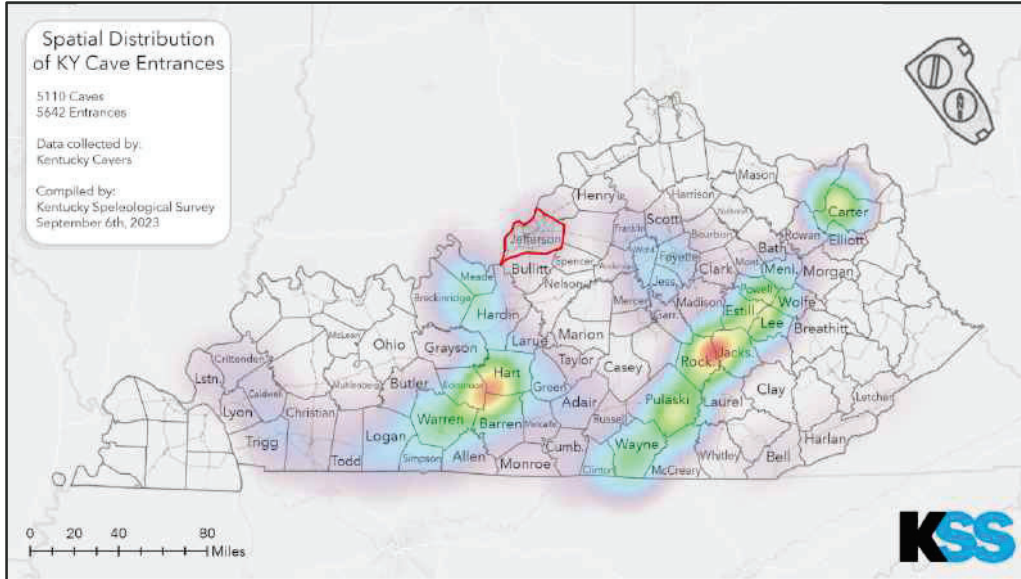


IMAGE NO. 12: Spatial Distribution Of KY Cave Entrances ⁽¹⁾

(1) Kentucky Speleological Survey. (2023). "Spatial Distribution of KY Cave Entrances." Retrieved from <http://kss.caves.org/kentucky-caves/>

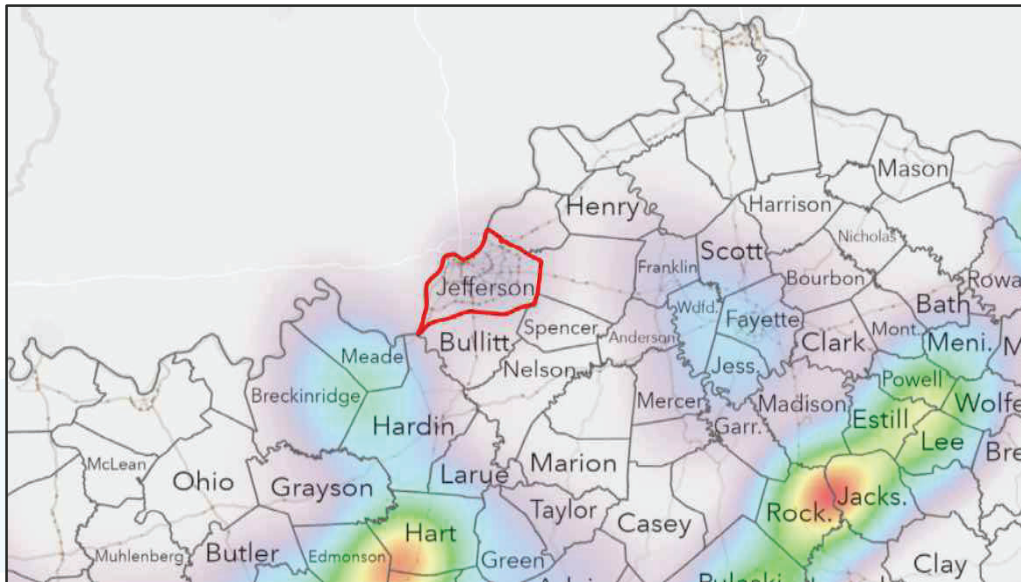


IMAGE NO. 13: Spatial Distribution Of KY Cave Entrances (Modified) ⁽¹⁾

(1) Kentucky Speleological Survey. (2023). "Spatial Distribution of KY Cave Entrances." Retrieved from <http://kss.caves.org/kentucky-caves/>

2.2.4.4 SPRINGS AND STREAMS

Springs, which result from groundwater under hydraulic pressure head (due to change in elevation) are commonly associated with karst topography. The fissured and fractured nature of karst-susceptible rock formations act as conduits for spring water flow. Our review of the Kentucky Groundwater Repository Water Wells and Springs Map indicated the presence of one identified spring feature on the project site. Please refer to the image below for more information. The approximate site boundary is shown in red, and the onsite mapped spring feature is circled in purple. The indicated spring feature is located in the general vicinity of the existing pond near the northeast corner of the project site.

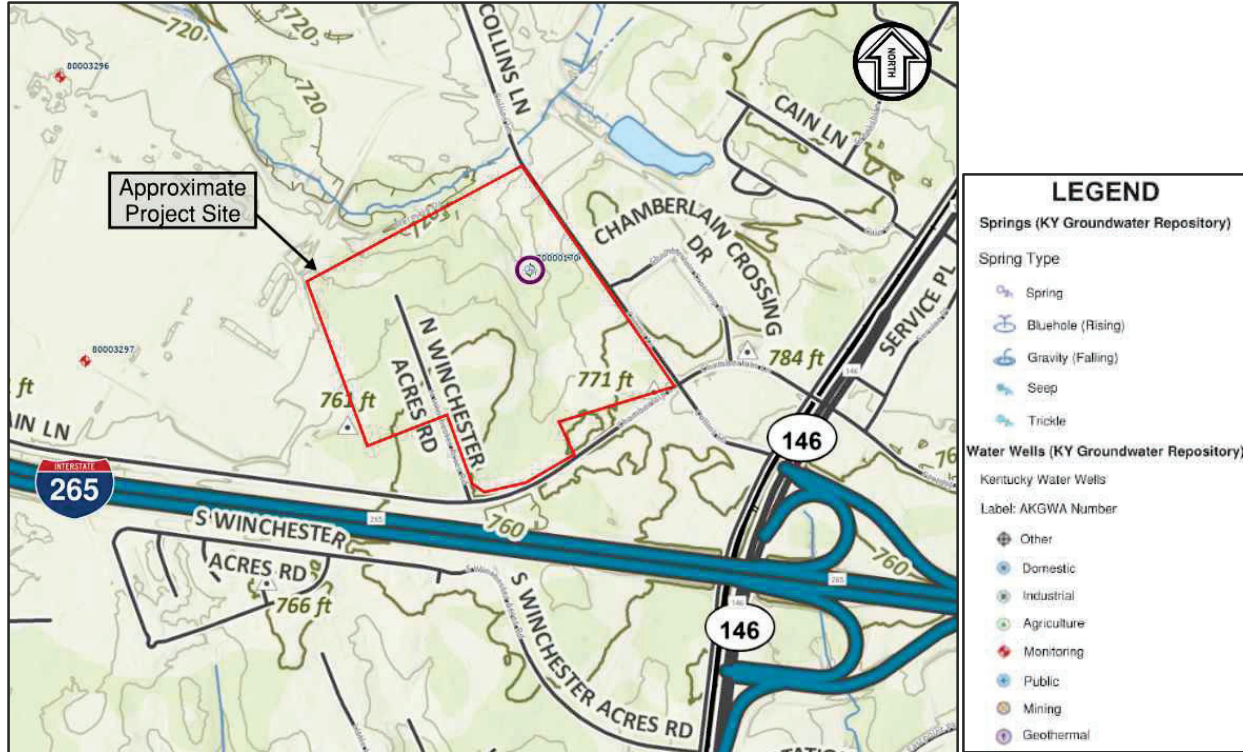


IMAGE NO. 14: Water Wells And Springs Map ⁽¹⁾

(1) Kentucky Geological Survey. (2026). Kentucky Geologic Map Information Service. Retrieved from <https://www.kgs.uky.edu>

Furthermore, a stream identified as “Hite Creek” is located north of Mermaid Lane, of which the southern edge of the roadway pavement was considered the northern boundary of the project site. Information obtained from LOJIC indicates Hite Creek is an intermittent stream as defined by the USGS.

2.2.4.5 KARST BASINS AND DYE TRACES

Additionally, our review of the Karst Basins and Dye Traces Map did not indicate the presence of identified karst groundwater basins or dye traces (dye injection, dye recovery, and or groundwater flow paths) on the project site.

2.2.5 TOPOGRAPHIC MAP AND HISTORICAL PHOTOGRAPH REVIEW

Available topographic maps from 1905 to 2022 and available historical aerial images between 1949 and 2025 were reviewed in preparation of this report. Topographic maps and historic aerial images for which no obvious changes in site topography or assumed karst activity were observed were excluded from this report. Please refer to Appendix A for topographic maps and historic aerial images referenced in this report. The approximate project site boundary is outlined in red on the figures included in Appendix A.

2.2.5.1 HISTORICAL TOPOGRAPHIC MAP REVIEW

The selected topographic maps were chosen based on distinct changes in site topography observed on the specific maps. However, the level of details varied between maps and the reviewed older maps are generally poorer quality.

Review of the historical topographic maps from the referenced time periods did not depict or indicate the presence of closed depressions or obvious site sinkhole related activity (as discussed in this report) on the project site. Additionally, sinkholes or other possible karst features that were identified and/or observed in the field (see Section 2.3.2) were not depicted on the historical topographic maps. Please refer to Appendix A for site topographic map images from various time periods.

2.2.5.2 HISTORICAL PHOTOGRAPH REVIEW

Changes in tree canopy, vegetation, agricultural activities, and surrounding development etc. were observed in the reviewed photographs, but discussion regarding changes in site features is limited to association with potential karst activity. Highlights of our review of historical photographs are as follows:

- An irregularly shaped area of lighter shading (when compared to the surrounding area) was observed in the area of the existing pond (i.e., on the northeast portion of the site) in the 1949 and 1955 images.
- On the 1960 aerial, the irregularly shaped area is evident, appearing lighter than the surrounding vegetation, and it appears to be larger when compared to the previous aerials.
- On the 1971 aerial, the irregularly shaped area is less visible, and generally appears consistent with the shape and orientation of the existing pond. Three additional oval shaped areas of lighter shading (when compared to the surrounding areas) are visible on the central and southeastern portions of the site. One is visible on the central portion and two are visible on the southeastern portion of the site. These oval shaped features are also visible on the 1986 and 1993 aerials and are assumed to be fenced areas for livestock.
- No obvious features associated with possible karst related activity were observed on the project site on the 2001, 2015, 2019, and 2025 aerials.

2.3 VISUAL RECONNAISSANCE EVALUATION

2.3.1 VISUAL RECONNAISSANCE PROCEDURE

The visual reconnaissance procedure consisted of two engineers specializing in geotechnical engineering traversing the project site. This visual evaluation was performed by Ms. Alex Dodson, EI on December 17, 2025. Ms. Dodson traversed the parcel to search for visual indicators of potential karst activity.

The visual survey was initiated at the northern boundary of the project site. Ms. Dodson traversed the property from north to south until the southern property boundary was reached. This procedure was repeated multiple times, with each line staggered from the previous.

2.3.2 VISUAL OBSERVATIONS

In general, the closed contour depressions identified from the LOJIC map were not readily observed in the field. The pond was observed during the site exploration. Please refer to the table and images (with the approximate feature location shown in yellow) below for more information regarding the location of a feature observed during this evaluation. Note that other subsidence areas not noted in this report may exist across the site and/or historical sinkholes may have been obscured over time due to farming operations, site grading, or in-filling. Further note that only limited visual observations could be made for this evaluation, due to the presence of fallen leaves, heavy brush/ vegetative growth, and the observed disturbance of portions of the site to facilitate the demolition of existing site features.

SINKHOLE/SUBSIDENCE/KARST FEATURE LOCATION

FEATURE NO.	DESCRIPTION	APPROXIMATE COORDINATES	
		LATITUDE (DEGREES NORTH)	LONGITUDE (DEGREES WEST)
1	Irregular subsidence area, 5-foot diameter x 2-foot deep. Observed to retain water.	38.29018	-85.52394

The figure below includes the approximate location of the observed depression, which is shown in yellow. The approximate project site boundary is outlined in red. Imagery obtained from Nearmap, dated September 13, 2025, was utilized as the base map. It is assumed that this depression is associated with rutting, due to the feature being located directly adjacent to observed tire rutting within a presumed pathway that is presumably utilized by vehicles or machinery.

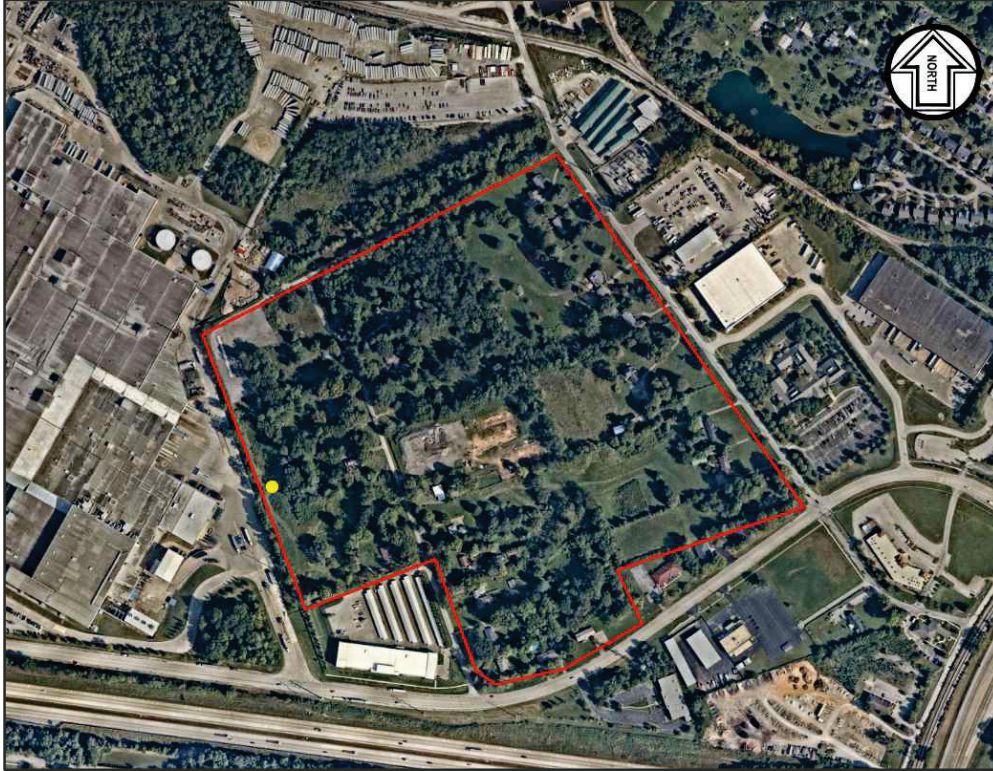


IMAGE NO. 15: Observed Feature Location Map

2.3.3 CONCLUSIONS AND PROPOSED SITE DEVELOPMENT

In general, the site has a comparable risk of sinkhole development prior to, during, or post-construction as other developments in the general surrounding area.

We did not observe evidence of drop out sinkhole activity, which is typically characterized by exposed vertical to subvertical soil walls within a depressed area. Dropout sinkholes, which are known to occur in karst dominated areas, are caused by washing or raveling of underlying soils through the fractured limestone rock. A soil arch of unraveled soil is left in place, eventually collapsing abruptly over some period. Doline or dissolution sinkholes subside much more slowly compared to dropout sinkholes and any collapse within the features is generally minor. Therefore, determining whether a doline is active (i.e., continuing to subside) is difficult to do as there is typically no evidence of collapse or ruptured ground.

The exhibit below provides a visual representation of the referenced sinkhole types, along with four other primary sinkhole types. Note that some identified sinkholes may share characteristics of more than one general sinkhole classification type. It is possible that any of the six possible sinkhole types shown below could exist or occur at the project site.

Do not construct over active or possible sinkholes without further exploration, analysis, and remediation. Sinkhole features identified within structural areas (i.e., building or pavements) will require remediation during construction or utilization of alternative foundation systems as directed by the Geotechnical Engineer of Record. We recommend identified and suspected sinkhole features be evaluated prior to construction to determine impacts on the proposed development.

Further characterization of identified anomalies can be performed by performing test borings, excavations, and/or and geophysical surveys.

In general, risk of catastrophic sinkhole collapse for three of the most common sinkhole types encountered locally (dissolution/doline, dropout, and buried sinkholes) can be reduced where structures are supported (typically by robust deep foundations) directly on/within the competent rock stratum, thereby reducing possible settlement movements attributed to soil raveling.

There is inherent risk associated with development on karst terrain as indicated by karst maps and the identified surface features. Other identified possible karst features that have not yet been identified may require additional characterization prior to construction. Furthermore, changes in the natural surface water drainage pattern (which often occurs during site grading) has been known to initiate sinkhole activity.

The findings, conclusions, and recommendations provided in this report are based on our review of the provided project documents, and our site visit. SME can provide general guidance regarding additional evaluation, sinkhole exploration, and general remedial methodologies if desired.

3. SUBSURFACE CONDITIONS

3.1 SOIL CONDITIONS

Refer to the boring logs for the soil and rock conditions at the specific boring locations. In summary, the soil conditions observed at the borings generally consisted of surficial materials (where encountered) over existing fill or natural clays, overlying limestone rock extending to the explored depths of the borings. A generalized soil profile is described below.

Stratum 1: Surficial Materials – Refer to the table below for a summary of the surficial material type and approximate thickness.

SUMMARY OF SURFICIAL MATERIAL TYPE AND APPROXIMATE THICKNESS

BORING NO.	SURFICIAL MATERIAL AND APPROXIMATE THICKNESS	BORING NO.	SURFICIAL MATERIAL AND APPROXIMATE THICKNESS
B1	7 Inches of Gravel and Asphalt Millings	B33	6 Inches of Topsoil
B2	12 Inches of Gravel and Asphalt Millings	B34	5 Inches of Topsoil
B3	4 Inches of Topsoil	B35	5.5 Inches of Topsoil
B4	7.5 Inches of Topsoil	B36	6.5 Inches of Topsoil
B5	6 Inches of Gravel and Asphalt Millings	B37	6 Inches of Topsoil
B6	7 Inches of Topsoil	B38	6 Inches of Topsoil
B7	7 Inches of Topsoil	B39	(7)
B8/B8A	4.5 Inches of Topsoil	B40	8 Inches of Topsoil
B9	5.5 Inches of Topsoil	B41/B41A	6 Inches of Topsoil
B10	8 Inches of Topsoil	B42/B42A	8 Inches of Topsoil
B11	11.5 Inches of Topsoil	B43	6 Inches of Topsoil

BORING NO.	SURFICIAL MATERIAL AND APPROXIMATE THICKNESS	BORING NO.	SURFICIAL MATERIAL AND APPROXIMATE THICKNESS
B12	10 Inches of Topsoil	B44	8 Inches of Topsoil
B13	8 Inches of Topsoil	B45	6 Inches of Topsoil
B14	10.5 Inches of Topsoil	B46	6 Inches of Topsoil
B15	7.5 Inches of Topsoil	B47	10 Inches of Topsoil
B16/B16A	8 Inches of Topsoil	B48	8.5 Inches of Topsoil
B17	12 Inches of Topsoil	B49	7 Inches of Topsoil
B18	12 Inches of Topsoil	B50	5.5 Inches of Topsoil
B19	12 Inches of Topsoil	B51/B51A	5 Inches of Gravel
B20/B20A	12 Inches of Topsoil	B52	8.5 Inches of Topsoil
B21	8 Inches of Topsoil	B53	(1)
B22	9.5 Inches of Topsoil	B54	6 Inches of Topsoil
B23	6 Inches of Topsoil	B55	8 Inches of Topsoil
B24	10 Inches of Topsoil	B56	6 Inches of Topsoil
B25/B25A	6 Inches of Topsoil	B57	6 Inches of Topsoil
B26	7.5 Inches of Topsoil	B58/B58A	10 Inches of Topsoil
B27	8 Inches of Topsoil	B59	6 Inches of Topsoil
B28	10.5 Inches of Topsoil	B60	2 Inches of Topsoil
B29	5 Inches of Topsoil	B61	8 Inches of Topsoil
B30	5 Inches of Topsoil	B62	(1)
B31	7 Inches of Topsoil	B63/B63A	8.5 Inches of Topsoil
B32/B32A	8 Inches of Topsoil	B64	(1)

NOTES:

1. Indicates that surficial materials were likely stripped during site demolition/ clearing prior to boring completion.

Stratum 2: Existing Fill – Existing clay fill or possible clay fill was encountered in borings B15, B24, B38, B42, B45, and B46. The existing fill materials generally consisted of lean clay (CL). Existing lean to fat clay (CL/CH) possible fill was encountered in boring B45. Occasional to frequent roots and trace asphalt or limestone fragments were encountered in some of the recovered samples. The clay fill was generally very soft to hard. The fill extended to depths ranging from approximately 2 to 8 feet deep, or between approximate elevations 741.5 to 763 feet. Refer to the table below for a summary of the vertical extent of existing fill.

EXISTING FILL APPROXIMATE VERTICAL EXTENT (DEPTH AND ELEVATION)

BORING NO.	APPROXIMATE VERTICAL DEPTH OF EXISTING FILL (FEET)	APPROXIMATE ELEVATION OF EXISTING FILL (FEET)
B15	5	741.5
B24	5	746.5
B38	2	760
B42	6	745
B45	8	753.5
B46	2	763

Stratum 3: Natural Clays – Natural lean clays (CL), silty clays (CL/ML), lean to fat clays (CL/CH), and/or fat clays (CH) were encountered underlying the surficial materials, existing fill, or beginning at the existing ground surface where surficial materials were not encountered. The natural clays were generally very soft to hard with varying amounts of limestone fragments, gravel, sand, and/or black oxide nodules.

Loss-on-ignition (LOI) testing performed on a sample obtained from boring B3 indicated an organic content of about 4 percent in the tested sample. The LOI results indicate the tested samples are slightly to moderately organic. In general, soils have organic contents exceeding about 4 percent are considered significant and are highly compressive under loading. The table below summarizes the results of the LOI tests.

LOI TEST SUMMARY

BORING NO.	DEPTH RANGE (FEET)	MOISTURE CONTENT (PERCENT)	LOI RESULT (PERCENT)
B3	2 – 4	31	4.0

Five particle size distribution and eight Atterberg limits tests were performed on select samples, the results are summarized in the table below.

SUMMARY OF PARTICLE SIZE AND ATTERBERG LIMITS TEST RESULTS

BORING NO.	SAMPLE DEPTH (FEET)	ATTERBERG LIMITS			PERCENT GRAVEL	PERCENT SAND	PERCENT SILT	PERCENT CLAY	USCS
		LL	PL	PI					
B9	2 – 7	55	22	33	0.5	8.3	45.2	46	CH
B14	2 – 7	34	21	13	0	7.5	64.5	28	CL
B18	8 – 10	47	23	24	Not Performed				CL
B29	2 – 7	50	22	28	0.8	7.4	50.4	41.4	CL/CH
B32	5 – 7	47	22	25	0	3.7	55.7	40.6	CL
B45	8 – 10	53	23	30	0.1	3.8	50.3	45.8	CH
B50	2 – 3	61	25	36	Not Performed				CH
B63	8 – 10	51	23	28	Not Performed				CH

Twelve natural density (unit weight) determination tests were run on select samples. The results are summarized in the table below. Note that some of the samples are either fictitiously high or low in regard to recorded moist and dry unit weight values. This discrepancy is likely attributed to remolding of the samples during split spoon sampling and/or poor sample quality.

SUMMARY OF UNIT WEIGHT DATA

BORING NO.	SAMPLE DEPTH (FEET)	MOISTURE CONTENT (PERCENT)	MOIST UNIT WEIGHT (PCF)	DRY UNIT WEIGHT (PCF)
B3	2 – 4	23	121.5	98.6
B6	2 – 4	21	115.6	95.5
B7	18.5 – 20	40	111.8	80.2
B12	2 – 4	25	134.3	107.5
B23	2 – 4	23	119.3	97.1
B27	5 – 7	26	122.3	97.2
B39	23.5 – 25	45	114.6	78.8
B41	5 – 7	20	102.3	85.3
B44	28.5 – 30	37	99.4	72.5
B46	28.5 – 30	27	105.3	82.9
B51	2 – 4	22	121.2	99.4
B63	13.5 – 15	26	113.8	90.3

Four Standard Proctor compaction tests were performed on recovered bulk samples. Two of the compaction test specimens were then selected for laboratory California Bearing Ratio (CBR) testing. Refer to the table below for more information.

CBR AND PROCTOR LABORATORY TESTING RESULTS

BORING NO.	SAMPLE DEPTH (FEET)	MAXIMUM DRY DENSITY (PCF)	OPTIMUM MOISTURE (PERCENT)	PERCENT COMPACTION	CBR AT 0.1 INCH PENETRATION	CBR AT 0.2 INCH PENETRATION
B16	8 – 11	100.5	22.5	90	1.5	1.5
				95	7.5	5.9
				100	11.7	9.2
B25	2 – 5	104.3	20.7	Not Performed		
				Not Performed		
				Not Performed		
B32	10 – 12	99.7	22.9	90	1.8	1.4
				95	5.9	4.6
				100	8.8	7.1
B63	5 – 10	107.4	19.2	Not Performed		
				Not Performed		
				Not Performed		

One-dimensional consolidation testing was performed on Shelby tube specimens obtained from borings B32 and B41. Refer to Appendix B for consolidation test curve data.

3.2 ROCK CONDITIONS

Stratum 4: Rock – Weathered limestone was encountered at the borings below the soil profile. Please refer to the table below for a summary of top of rock and refusal depth and elevation at the boring locations.

SUMMARY OF TOP OF ROCK DEPTH AND ELEVATION AND REFUSAL/TERMINATION DEPTH AND ELEVATION

BORING NO.	APPROXIMATE GROUND SURFACE ELEVATION ⁽¹⁾ (FEET)	APPROXIMATE TOP OF ROCK DEPTH ⁽²⁾ (FEET)	APPROXIMATE TOP OF ROCK ELEVATION ⁽¹⁾ (FEET)	APPROXIMATE REFUSAL DEPTH ⁽²⁾ (FEET)	APPROXIMATE REFUSAL ELEVATION ⁽¹⁾ (FEET)
B1	739	24.5	714.5	25 ⁽³⁾	714.0 ⁽³⁾
B2	729.5	12.5	717.0	12.5 ^{(3) (5) (6)}	717.0 ^{(3) (5) (6)}
B3	721	7.6	713.4	7.9 ⁽⁴⁾	713.1 ⁽⁴⁾
B4	722	1.5	720.5	1.6 ⁽⁴⁾	720.4 ⁽⁴⁾
B5	742.5	26	716.5	26.2 ⁽⁴⁾	716.3 ⁽⁴⁾
B6	745	24	721.0	24.4 ^{(3) (6)}	720.6 ^{(3) (6)}
B7	739.5	19.5	720.0	19.9 ⁽⁴⁾	719.6 ⁽⁴⁾
B8	741	16.1	724.9	16.3 ⁽⁴⁾	724.7 ⁽⁴⁾
B9	738.5	16	722.5	16.2 ⁽⁴⁾	722.3 ⁽⁴⁾
B10	733	13.5	719.5	14 ^{(3) (6)}	719.0 ^{(3) (6)}
B11	730	8	722.0	8.6 ⁽⁴⁾	721.4 ⁽⁴⁾
B12	732	9.2	722.8	9.2 ^{(3) (5) (6)}	722.8 ^{(3) (5) (6)}
B13	733	9.9	723.1	10.4 ⁽⁴⁾	722.6 ⁽⁴⁾
B14	743	20.7	722.3	20.9 ⁽⁴⁾	722.1 ⁽⁴⁾
B15	746.5	24.5	722.0	24.8 ⁽⁴⁾	721.7 ⁽⁴⁾
B16	747	23	724.0	24.5 ^{(3) (6)}	722.5 ^{(3) (6)}
B17	746	21.5	724.5	21.6 ⁽⁴⁾	724.4 ⁽⁴⁾
B18	735.5	12.5	723.0	12.8 ⁽⁴⁾	722.7 ⁽⁴⁾
B19	739	14	725.0	14.1 ⁽⁴⁾	724.9 ⁽⁴⁾
B20	730	4.3	725.7	4.5 ⁽⁴⁾	725.5 ⁽⁴⁾
B21	740	12.5	727.5	12.5 ^{(3) (5) (6)}	727.5 ^{(3) (5) (6)}
B22	747	24	723.0	24.4 ⁽⁴⁾	722.6 ⁽⁴⁾
B23	747.5	22.5	725.0	22.5 ^{(3) (5) (6)}	725.0 ^{(3) (5) (6)}
B24	751.5	26.2	725.3	26.6 ⁽⁴⁾	724.9 ⁽⁴⁾
B25	751	24	727.0	24.2 ⁽⁴⁾	726.8 ⁽⁴⁾
B26	748	19.5	728.5	19.9 ⁽⁴⁾	728.1 ⁽⁴⁾

BORING NO.	APPROXIMATE GROUND SURFACE ELEVATION ⁽¹⁾ (FEET)	APPROXIMATE TOP OF ROCK DEPTH ⁽²⁾ (FEET)	APPROXIMATE TOP OF ROCK ELEVATION ⁽¹⁾ (FEET)	APPROXIMATE REFUSAL DEPTH ⁽²⁾ (FEET)	APPROXIMATE REFUSAL ELEVATION ⁽¹⁾ (FEET)
B27	744.5	18	726.5	18 ^{(3) (5) (6)}	726.5 ^{(3) (5) (6)}
B28	732	3	729.0	3.3 ⁽⁴⁾	728.7 ⁽⁴⁾
B29	749	14.5	734.5	14.8 ⁽⁴⁾	734.2 ⁽⁴⁾
B30	754	27.5	726.5	27.7 ⁽⁴⁾	726.3 ⁽⁴⁾
B31	755.5	27.5	728.0	27.5 ^{(3) (5)}	728.0 ^{(3) (5)}
B32	755	26	729.0	26 ^{(3) (5) (6)}	729.0 ^{(3) (5) (6)}
B33	755.5	25.5	730.0	25.6 ⁽⁴⁾	729.9 ⁽⁴⁾
B34	742	10.4	731.6	10.6 ⁽⁴⁾	731.4 ⁽⁴⁾
B35	738	5.5	732.5	6.3 ⁽⁴⁾	731.7 ⁽⁴⁾
B36	754.5	26.5	728.0	26.7 ⁽⁴⁾	727.8 ⁽⁴⁾
B37	760.5	29	731.5	29.3 ⁽⁴⁾	731.2 ⁽⁴⁾
B38	762	30	732.0	30.2 ⁽⁴⁾	731.8 ⁽⁴⁾
B39	760.5	26	734.5	26 ^{(3) (5)}	734.5 ^{(3) (5)}
B40	753	16.8	736.2	17 ⁽⁴⁾	736.0 ⁽⁴⁾
B41	741.5	7.4	734.1	7.7 ⁽⁴⁾	733.8 ⁽⁴⁾
B42	751	13.6	737.4	13.7 ^{(3) (6)}	737.3 ^{(3) (6)}
B43	757.5	29	728.5	29.2 ⁽⁴⁾	728.3 ⁽⁴⁾
B44	759.5	30.7	728.8	30.8 ⁽⁴⁾	728.7 ⁽⁴⁾
B45	761.5	31.3 ⁽⁵⁾	730.2	31.3 ^{(3) (5) (6)}	730.2 ^{(3) (5) (6)}
B46	765	30	735.0	31.5 ⁽⁴⁾	733.5 ⁽⁴⁾
B47	765	29.8	735.2	30 ⁽⁴⁾	735.0 ⁽⁴⁾
B48	765	27.2 ⁽⁵⁾	737.8	27.2 ^{(4) (5)}	737.8 ^{(4) (5)}
B49	761	21.9 ⁽⁵⁾	739.1	21.9 ^{(3) (5) (6)}	739.1 ^{(3) (5) (6)}
B50	742	3.5	738.5	4 ⁽³⁾	738.0 ⁽³⁾
B51	751	11.3	739.7	11.4 ⁽⁴⁾	739.6 ⁽⁴⁾
B52	755	12.4	742.6	12.6 ⁽⁴⁾	742.4 ⁽⁴⁾
B53	764	28.7	735.3	28.9 ⁽⁴⁾	735.1 ⁽⁴⁾

BORING NO.	APPROXIMATE GROUND SURFACE ELEVATION ⁽¹⁾ (FEET)	APPROXIMATE TOP OF ROCK DEPTH ⁽²⁾ (FEET)	APPROXIMATE TOP OF ROCK ELEVATION ⁽¹⁾ (FEET)	APPROXIMATE REFUSAL DEPTH ⁽²⁾ (FEET)	APPROXIMATE REFUSAL ELEVATION ⁽¹⁾ (FEET)
B54	762	23.5	738.5	24 ⁽³⁾ ⁽⁶⁾	738.0 ⁽³⁾ ⁽⁶⁾
B55	758.5	18.5	740.0	18.6 ⁽⁴⁾	739.9 ⁽⁴⁾
B56	745	5.5	739.5	5.7 ⁽⁴⁾	739.3 ⁽⁴⁾
B57	746	6.5	739.5	6.9 ⁽⁴⁾	739.1 ⁽⁴⁾
B58/B58A	757	16.9 ⁽⁵⁾	740.1	16.9 ⁽³⁾ ⁽⁵⁾ ⁽⁶⁾	740.1 ⁽³⁾ ⁽⁵⁾ ⁽⁶⁾
B59	757.5	18 ⁽⁵⁾	739.5	18 ⁽³⁾ ⁽⁵⁾ ⁽⁶⁾	739.5 ⁽³⁾ ⁽⁵⁾ ⁽⁶⁾
B60	749.5	8.5	741.0	8.9 ⁽⁴⁾	740.6 ⁽⁴⁾
B61	752	8.5	743.5	9.1 ⁽³⁾ ⁽⁶⁾	742.9 ⁽³⁾ ⁽⁶⁾
B62	768	23.6	744.4	23.7 ⁽⁴⁾	744.3 ⁽⁴⁾
B63	756	15	741.0	15.4 ⁽⁴⁾	740.6 ⁽⁴⁾
B64	757	15.3	741.7	15.5 ⁽⁴⁾	741.5 ⁽⁴⁾

NOTES:

1. Corresponding elevation based on estimated ground surface elevation approximated from the provided topographic survey. Elevations are rounded to the nearest half foot.
2. Refers to depth below existing ground surface.
3. Indicates auger refusal and boring termination (unless rock coring was performed, where noted).
4. Indicates sampler refusal and boring termination.
5. Indicates that weathered rock may have been penetrated prior to reaching refusal depth/elevation.
6. Indicates that 10 feet of rock coring was performed upon encountering auger refusal.

The limestone recovered from the split-spoon sampler was generally described as completely weathered, gray and/or brown, and hard. While the split-spoon sampler penetration ranged from less than one inch to greater than one foot through and sampled completely weathered rock, the sampling technique implemented should only be used to provide a general assessment of the underlying rock conditions due to the samples being reduced to powder and small fragments (and the minimal quantity of rock recovered). Note that rock depths where limestone is encountered can be highly variable over short lateral distances. Thus, it is possible that refusal may have been encountered on limestone boulders or “floaters” (i.e., rock contained within a matrix of soil) or on limestone pinnacles or “cutters”.

Ten feet of rock coring was performed in borings B2, B6, B10, B12, B16, B21, B23, B27, B32, B42, B45, B49, B54, B58A, B59, and B61 after encountering auger refusal. The recovered rock cores were generally described as highly weathered to slightly weathered limestone and were highly fractured to slightly fractured, and light gray to medium gray and/or bluish gray. The limestone was occasionally fossiliferous, vuggy, pitted, and occasionally contained stylolites, calcite crystals, and oxide staining. Vertical fractures were also observed in some of the recovered rock cores.

Upon retrieving rock core specimens from the boreholes, the core recoveries (REC) and rock quality designation (RQD) were measured. RQD is a qualitative measurement of general rock quality that considers both core recovery and joint, fracture, and bedding plane spacing. RQD is determined by measuring the total length of core specimens that are at least twice the diameter of the core barrel utilized (e.g., a minimum of 4 inches since an NQ2 core barrel was utilized). The total length of the core specimens meeting the criteria are divided by the total core run, multiplied by 100, and expressed as a percentage. The relative rock quality based on RQD is shown in the table below.

RELATION OF RQD AND IN-SITU ROCK QUALITY ⁽¹⁾

RQD (PERCENT)	ROCK QUALITY
90-100	Excellent
75-90	Good
50-75	Fair
25-50	Poor
0-25	Very Poor

NOTES:

1. After Deere (1963)

The recovered rock core specimens were also evaluated utilizing the RMR (Rock Mass Rating) system developed by Z.T. Bieniawski to further evaluate the rock quality and estimate strength parameters. This method is considered more sophisticated than RQD alone in evaluating rock quality, and considers several variables including: strength of the intact rock, RQD, spacing of discontinuities, condition of discontinuities, and groundwater considerations. A certain rating (i.e., points) are allotted to each category, with more favorable conditions resulting in a higher rating, and a total value of 100 being the highest achievable rating. A deduction for the orientation of fractures based upon application (tunnels/mines, foundations, or slopes) can also be applied. The RMR is determined based upon the sum of the points for each category for a particular sample, which is then related to a relative qualitative description and can be correlated with soil strength parameters (i.e., cohesion and friction angle). Note selection of some ratings are based on individual judgement. Thus, it is conceivable that total ratings for a particular sample may vary from individual to individual.

RELATION OF RMR AND IN-SITU ROCK QUALITY ⁽¹⁾

RMR RATING	CLASS NO.	DESCRIPTION
81-100	I	Very Good
61-80	II	Good
41-60	III	Fair
21-40	IV	Poor
0-20	V	Very Poor

NOTES:

1. After Bieniawski (1979)

The GSI (Geological Strength Index) developed by E. Hoek and E.W. Brown is also used to evaluate overall quality and strengths of jointed rock masses. GSI is the correlation between the structure of the rock (intact rock to laminated or sheared rock) and the surface conditions of the rock (very good to very poor). The GSI along with several other parameters, including compressive strength, can be utilized to estimate shear strength parameters, such as cohesion and friction angle. Uniaxial unconfined compressive strength testing was performed on six rock core specimens to evaluate rock compressive strength.

Please refer to the table below for more information regarding our general assessment of rock quality based upon the referenced classification systems and for the uniaxial compressive strength test results.

SUMMARY OF ESTIMATED ROCK CORE CONDITIONS AND COMPRESSIVE STRENGTH

BORING NO.	SAMPLE DEPTH (FEET)	RECOVERY (PERCENT)	RQD EVALUATION ⁽¹⁾		GSI ⁽²⁾	RMR EVALUATION ⁽³⁾		COMPRESSIVE STRENGTH (PSI)
			RQD (PERCENT)	QUALITY		RATING	CLASS NO. AND DESCRIPTION	
B2	12.5 – 22.5	99	69	Fair	50 to 60	60	III Fair	Not Performed

BORING NO.	SAMPLE DEPTH (FEET)	RECOVERY (PERCENT)	RQD EVALUATION ⁽¹⁾		GSI ⁽²⁾	RMR EVALUATION ⁽³⁾		COMPRESSIVE STRENGTH (PSI)
			RQD (PERCENT)	QUALITY		RATING	CLASS NO. AND DESCRIPTION	
B6	24.4 – 34.4	100	48	Poor	45 to 55	56	III Fair	7,080 (25.9 to 26.2 feet) 7,570 (29.9 to 30.2 feet)
B10	14 – 19.7	97	15	Very Poor	35 to 45	47	III Fair	Not Performed
	19.7 – 24		83	Good	50 to 60	64	II Good	
B12	10 – 20	98	61	Fair	45 to 55	58	III Fair	7,280 (10.3 to 10.6 feet) 4,930 (16.9 to 17.2 feet)
B16	24.5 – 34.5	100	83	Good	45 to 55	62	II Good	Not Performed
B21	12.5 – 22.5	98	75	Fair to Good	50 to 60	63	II Good	Not Performed
B23	22.5 – 32.5	88	73	Fair	50 to 60	61	II Good	Not Performed
B27	18 – 28	97	66	Fair	40 to 50	56	III Fair	3,550 (18.4 to 18.7 feet) 3,930 (26.0 to 26.3 feet)
B32	27.5 – 37.5	100	67	Fair	45 to 55	50	III Fair	Not Performed
B42	13.6 – 23.6	100	73	Fair	40 to 50	51	III Fair	2,000 (16.6 to 16.9 feet) 1,790 (20.5 to 20.8 feet)
B45	33 – 43	98	76	Good	45 to 55	54	III Fair	3,660 (36.3 to 36.6 feet) 5,110 (40.1 to 40.4 feet)
B49	21.9 – 31.9	100	74	Fair	45 to 55	61	II Good	Not Performed
B54	24 – 34	98	75	Fair to Good	35 to 45	49	III Fair	Not Performed
B58A	16.9 – 26.9	98	47	Poor	35 to 45	50	III Fair	Not Performed

BORING NO.	SAMPLE DEPTH (FEET)	RECOVERY (PERCENT)	RQD EVALUATION ⁽¹⁾		GSI ⁽²⁾	RMR EVALUATION ⁽³⁾		COMPRESSIVE STRENGTH (PSI)
			RQD (PERCENT)	QUALITY		RATING	CLASS NO. AND DESCRIPTION	
B59	18 – 28	98	72	Fair	45 to 55	57	III Fair	Not Performed
B61	9.1 – 19.1	95	51	Fair	35 to 45	56	III Fair	Not Performed

NOTES:

2. After Deere (1963)
3. After Hoek and Brown (1997)
4. After Bieniawski (1979)

Please refer to the images below for the recovered rock core specimens. The top of each ten foot core run (RC) is located in the upper left hand corner of the rock core box in the images below. Note that breaks (either man made or presumably induced during the rock coring procedure) on the recovered rock cores are marked with continuous black lines. Please refer to the attached boring logs for additional information.



IMAGE NO. 16: Rock core collected from boring B2 (12.5 feet to 22.5 feet).



IMAGE NO. 17: Rock core collected from boring B6 (24.4 feet to 34.4 feet).



IMAGE NO. 18: Rock core collected from boring B10 (14 feet to 24 feet).



IMAGE NO. 19: Rock core collected from boring B12 (10 feet to 20 feet).



IMAGE NO. 20: Rock core collected from boring B16 (24.5 feet to 34.5 feet).



IMAGE NO. 21: Rock core collected from boring B21 (12.5 feet to 22.5 feet).



IMAGE NO. 22: Rock core collected from boring B23 (22.5 feet to 32.5 feet).



IMAGE NO. 23: Rock core collected from boring B27 (18 feet to 28 feet).



IMAGE NO. 24: Rock core collected from boring B32 (27.5 feet to 37.5 feet).



IMAGE NO. 25: Rock core collected from boring B42 (13.6 feet to 23.6 feet).



IMAGE NO. 26: Rock core collected from boring B45 (33 feet to 43 feet).



IMAGE NO. 27: Rock core collected from boring B49 (21.9 feet to 31.9 feet).



IMAGE NO. 28: Rock core collected from boring B54 (24 feet to 34 feet).



IMAGE NO. 29: Rock core collected from boring B58A (16.9 feet to 26.9 feet).



IMAGE NO. 30: Rock core collected from boring B59 (18 feet to 28 feet).



IMAGE NO. 31: Rock core collected from boring B61 (9.1 feet to 19.1 feet).

3.3 GROUNDWATER CONDITIONS

Groundwater was observed in the borings (where encountered) as summarized in the table below.

GROUNDWATER (G.W.) SUMMARY TABLE

BORING NO.	INITIAL DEPTH OF G.W. (feet)⁽¹⁾	G.W. DEPTH UPON COMPLETION OF DRILLING (feet)⁽¹⁾	INITIAL G.W. ELEVATION (feet)⁽²⁾	G.W. ELEVATION UPON COMPLETION OF DRILLING (feet)⁽²⁾
B5	25.5	(3)	717.0	(3)
B11	8.5	(3)	721.5	(3)
B13	10	(3)	723	(3)
B14	19	19.3	724	723.7
B24	26	24.8	725.5	726.7
B30	27	27	727	727
B32	23	(5)	732	(5)
B34	10	10.2	732	731.8
B35	5	4.3	733	733.7
B36	(4)	26.1	(4)	728.4
B42	13.5	(5)	737.5	(5)
B43	28	26.3	729.5	731.2
B44	-	24.1 (14 hours after drilling)	-	735.4 (14 hours after drilling)
B45	31	(3)	730.5	(3)
B46	30	29.8	735	735.2
B51	11	(3)	740	(3)
B53	28	26.3	736	737.7
B54	23	(5)	739	(5)
B56	5	4.8	740	740.2
B57	5.5	3.5	740.5	742.5
B60	8.5	(3)	741	(3)

NOTES:

1. Refers to depth below existing ground surface.
2. Corresponding elevation based on estimated ground surface elevation approximated from the provided topographic survey. Elevations are rounded to the nearest half foot.
3. Indicates that groundwater was not encountered above the borehole cave in depth.
4. Indicates that groundwater was not encountered.
5. Indicates that groundwater was not measured upon completion of drilling due to the performance of rock coring.

In cohesive soils (clays), a long time may be required for the groundwater level in the borehole to reach an equilibrium position. Therefore, the use of groundwater observation wells (piezometers) is necessary to accurately determine the hydrostatic groundwater level within cohesive soils as observed at this site.

Significant variance in groundwater depths/elevations and perched/trapped groundwater may be encountered at differing depths within the soil and/or rock profiles depending on soil stratigraphy at a particular location. Groundwater hydrogeology is further complicated by the presence of limestone rock below the soils. The underlying limestone rock is often characterized by open or clay-filled fracture zones which accommodate groundwater flow. In karstic limestone formations, the interconnection of fracture zones, voids, and solution conduits for which groundwater can flow is highly complex and unpredictable.

Refer to the Field Testing Procedures in Appendix B for additional information about groundwater level measurements. If more information regarding groundwater levels at this site is required, then we recommend performing additional subsurface assessment(s).

4. ANALYSIS AND RECOMMENDATIONS

The site has several important risks related to the geologic and geographic conditions. These risks include the underlying karst geology (i.e., fractured and possibly cavernous rock), and the presence of shrink swell soils.

Additionally, we are aware of the need for significant grade changes across the project site, based on our understanding that the proposed FFE of the building is elevation 752 feet, and that surrounding grades (including pavements) will be at or near elevation 752 feet. Based on the assumed grading, we estimate that up to about 30 feet of fill (with the greatest amount of fill required in the northeastern portion of the building pad) will be required within the proposed building footprint to achieve the proposed FFE. Note that this assumed fill depth is based on the approximate existing ground surface elevations estimated from the provided topographic survey within the approximate proposed building pad as indicated on the referenced site plan and the actual fill depth will depend on the final proposed building FFE, building location, and orientation. The weight of the new fill required to establish site grades will act as a load on the underlying soils which will result in both initial distortion settlement and longer-term consolidation settlement.

Each of these risks are discussed below along with general considerations to address or mitigate these risks during the preparation and development of the site.

4.1 SITE DEVELOPMENT CONSIDERATIONS

4.1.1 KARST AND SINKHOLES

The following sections provide a discussion of considerations for reducing risk associated with construction in karst terrain. Furthermore, we have provided discussion regarding possible implementation of a sinkhole monitoring system at strategic locations within the proposed building footprints. However, use of an early warning system is optional, and is discussed to provide the Owner with knowledge of available technologies. Note there are limitations associated with the technology (discussed below in Section 4.1.1.2) that should also be considered when determining if such a system is appropriate for this project.

4.1.1.1 PLANNING CONSIDERATIONS

As previously discussed, engineering works and site development can result in acceleration of incipient sinkhole development or encourage new sinkhole formation. These features may appear dormant in their existing state, but subsidence can be activated by changes in the natural surface drainage pattern due to construction works (e.g., changes in site grading and/or removal of vegetative surface cover), dewatering, and/or ground vibrations (such as those caused by construction activities). Subsidence caused by karst features can result in excessive and uneven settlement of structures and structural distress requiring underpinning or replacement of foundations, replacement of grade slabs and pavements, or other structural remedies.

The risks associated with constructing over karst terrain can be managed to a practical degree by implementing practices that minimize surface water intrusion into the subgrade. These include, but are not limited to:

- Direct surface water and water collected in downspouts away from structural areas.
- Construct quality joints for utilities to minimize water leakage. Seal joints outside the utilities with concrete or flowable fill. Consider encasing below-grade utilities in flowable fill to reduce the potential for sinkhole development should utility rupture occur.
- Do not install/use sprinkler systems next to foundation areas.

- Engage a local geotechnical engineer or engineering geologist to check the subgrade for indications of solution activity after cut areas are excavated to grade and before fill is placed in fill areas.
- Construct stormwater basins as far as practically possible away from structures and routinely monitor structures that impound water for possible leaks.

It should be noted that numerous developments of similar construction within the general project vicinity have been successfully constructed. Thus, in general, this site seems to be at no greater risk of karst development than the surrounding sites.

4.1.1.2 MONITORING CONSIDERATIONS

Instrumentation could be installed within the building footprint to provide continual, real-time monitoring for possible ground subsidence utilizing the SinkholeAlert system developed by G3 Group. A sinkhole monitoring system should be considered where foundations/slabs are designed as soil supported, particularly where the soil profile below the building is relatively deep and/or at locations supporting critical infrastructure or equipment.

This type of system consists of installing well casing with sensor probe implants attached to a cable at desired locations and depths. The sensor utilizes time-domain reflectometry technology to evaluate potential ground movements. The sensor is tripped in the event subsidence occurs below and at the sensor probe, which severs the wire connection and sends a signal to the monitoring device. The monitoring device connects to an alarm panel siren or other triggering device. Text messages and/or phone calls can be sent by the system in real-time to notify the Owner if ground subsidence is detected. A fee applies for monitoring services.

There are some limitations in utilization of this equipment. This technology performs optimally in sandy soils as opposed to clay soils (which generally dominate soil stratigraphy at this site) due to the differences in the way ground movements occur during dropout sinkhole formation. Additionally, the recommended horizontal probe sensor spacing is typically directly related to the depth to rock. Therefore, an impractical number of sensors would be required to cover the footprint of a facility with shallower rock conditions. Due to this, it is typically practical to install sensors in areas where the depth to rock is deep as previously discussed. Furthermore, this is a passive monitoring technique and does not provide protection from sinkhole related subsidence; it is merely an early detection system. Utilization of a sinkhole monitoring system is not considered a suitable replacement for remediation of identified sinkholes or other karst features.

We would be pleased to discuss options for monitoring subgrade conditions after construction as a proactive approach to the development's operations and maintenance program, if desired.

4.1.2 SHRINK/ SWELL SOILS

Eight Atterberg Limits test were performed on select samples. The results of the Atterberg Limits test indicated the tested soils had liquid limits (LL) ranging from 34 percent to 61 percent, plastic limits (PL) of 21 percent to 25 percent, and plasticity indices (PI) of 13 percent to 36 percent. Based on the results of the Atterberg Limits tests, highly plastic fat clays (CH) are expected to be present at and below the design bottom of the foundation, slab, and pavement levels, and may be encountered where on-site near-finished grade fill. It will be important to properly identify these during construction and then remediate these areas to minimize further soils movements that could be detrimental to the structures.

Shrink-swell soils (often referred to as "expansive" or "fat" clays) are common in the general project area. Construction over high plasticity soils is challenging, but not uncommon, particularly throughout Kentucky where such soils are common within the soil stratigraphy. Suspected borderline high-volume change potential soils classified as "lean to fat clay" (CL/CH) were encountered in the borings and may also be exposed depending on proposed site grading. With proper construction practices, we have observed numerous developments successfully constructed on these soils with years of favorable performance.

However, these soils can be problematic, typically only occurring after an extended period of time (e.g., years), since they can undergo significant volume changes with changes in moisture content due to natural conditions (i.e., seasonal fluctuations) or man-induced conditions (poor site grading/subgrade preparation, ruptured utility lines, etc.).

An increase in moisture content will lead to a volume increase (“swelling”) and a decrease in moisture content will lead to a volume decrease (“shrinkage”). In isolated cases, this shrink-swell behavior can be severe in “CH” soils if these soils experience excessive variations in moisture content causing movements below slabs, pavements, foundations, etc. supported by these soils. These movements can result in damage to the structure (e.g., brick/masonry, walls, and interior finish cracking), out of square doors and/or window openings, and premature loss of serviceability of slabs and pavements. This risk for distress can be reduced by properly preparing subgrade soils and minimizing changes in soil moisture content of the clay subgrade.

We recommend the foundations or other structural elements (such as floor slabs, pavements, etc.) not bear directly on high plasticity clays soil due concerns regarding the susceptibility for these soils to experience volume change due to seasonal variation in soil moisture content. Where this soil type is encountered, remove (undercut) the subgrade as necessary and replace with a minimum of 3 feet of a low to non-expansive engineered fill (i.e., KYTC dense-graded aggregate [DGA] or lean clay) below the structural elements compacted per the requirements in Section 4.2.5 of this report. Chemical subgrade modification (i.e., cement or lime treatment) may also be considered for expansive clay mitigation. **Note that chemical treatment in soils where weathered limestone fragments (which are usually an indicator of larger cobble-sized rock within the soil matrix) were encountered in the borings may not be feasible and can damage the chemical mixing equipment.** Additional considerations and recommendations are provided in the following sections of this report.

We recommend implementing moisture control and drainage details that can further reduce the potential for shrink-swell activity. Some examples include:

- Prepare subgrade soils during site earthwork operations as recommended in this report.
- Protect exposed subgrades from desiccation via placement of sacrificial gravel base layer or leave subgrade elevation cut high until just prior to floor slab or pavement construction.
- Isolate utility stickups through slabs to accommodate potential movements.
- Downspouts and overflow pipes must be properly discharged so that water does not accumulate near (within at least 10 feet of) the foundation areas. Where releasing water from downspouts and/or overflow pipes onto the ground, site grades need to be designed so that surface runoff is directed away from the foundation and structural areas.
- Planting of trees where shrink/swell soils are present is particularly problematic, as tree roots tend to grow in the direction of a water source and thereby reducing soil moisture content. This can lead to drying and shrinkage of the fat clay soils. Soil shrinkage adjacent to building foundations can manifest as settlement due to volume changes in the underlying soils. Therefore, we recommend trees not be planted directly adjacent to proposed structures.

4.1.2.1 POTENTIAL VERTICAL RISE

A subgrade volume change evaluation was performed to evaluate the possible expansion capability of the existing clay soils. This evaluation included performance of potential vertical rise (PVR) for the near-surface, fat clay subgrade in accordance with TxDOT Designation: Tex-124-E. Data obtained from Particle Size Analysis, Atterberg Limits, Unit Weight, and moisture content testing were used in the calculation to estimate predicted free swell and total swell under loading as part of the PVR study.

The soil subgrade strata were divided into a convenient number of layers (about 2 feet for the analyzed stratum) per the PVR procedure. Each layer was analyzed individually for swell. The results were summed to obtain the total PVR (heave). PVR was analyzed assuming the encountered subsurface conditions at boring B45 based on the assumption that fat clay soil would be exposed at the slab and

pavement bearing elevation (i.e., near elevation 752 feet) and based on the assumption that the thickest profile of fat clay soil would remain below the slab/ pavement at or near this location. Consequently, we estimate the greatest PVR would be expected at and near this location (assuming ample exposure to a water source is provided). The entire soil profile extending to bedrock was considered for the purposes of this evaluation.

We did not analyze PVR for foundations for this project due to our understanding that the proposed building will be supported on drilled piers bearing in rock. Although we understand some equipment and machinery structures may be supported on shallow foundations, we did not analyze PVR for this scenario due to the limited information available regarding these proposed equipment structures and foundations at the time this report was prepared. We recommend performance of a PVR analysis once these locations and anticipated loading are determined.

Our assessment of potential vertical rise in an unrestrained condition indicates a maximum vertical rise (swell) of approximately 1.8 inches may occur where highly plastic fat clay (CH) soils are exposed and subsequently wetted (due to inclement weather, poor drainage, ruptured utilities, etc.).

Furthermore, our analyses (which considered loading due to overburden pressure of the proposed floor slab/ heavy duty PCC pavement section and standard-duty HMA pavement section) estimated PVR values of about 0.75 inches. While these values are considered more tolerable in comparison to the unrestrained condition, we anticipate risk of distress, particularly in pavement areas (which would likely be more significantly impacted than interior building slabs due to less risk of exposure to moisture) due to expected drainage within the aggregate base course and lower overburden weight to resist swell.

Please note that the estimated PVR value for the slab and heavy-duty PCC pavement section assumed a concrete slab thickness of about 10 inches underlain by approximately 6 inches of aggregated base and the PVR value for the standard-duty pavement section assumed an HMA thickness of about 5 inches underlain by about 6 inches of aggregate. The recommended pavement sections have not been determined at the time this report was prepared and therefore, these PVR estimates should be considered preliminary. An increase in PVR would be expected if thinner slab/ pavement sections and lower pressures are expected. Please contact SME if this condition is expected so we can re-evaluate our analyses.

In addition to performance of the PVR study to evaluate soil expansion potential, we reviewed the Atterberg Limits test results for the purpose of providing a generalized assessment of likely clay mineralogy. Different clay minerals have varying capacity and potential for expansion. Based upon this cursory evaluation, the tested samples plot near the zone on the soil plasticity chart typically associated with soil mineralogy dominated by illite (indicated by red circles on the image below, based upon published data from Mitchell, 1976) a clay mineral that does not typically exhibit significant volume change compared to soils dominated by smectite mineralogy. While performance of additional testing would be required to characterize clay mineralogy (i.e., x-ray powder diffraction), this preliminary assessment of swell potential corroborates results for the PVR analyses.

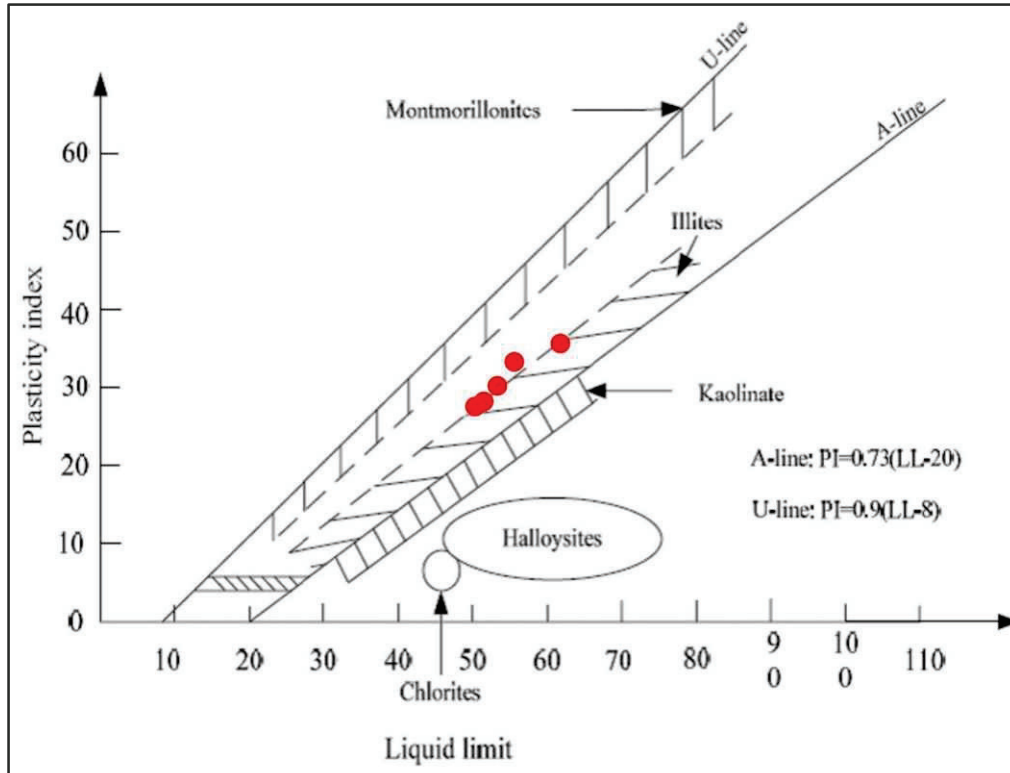


IMAGE NO. 32: Common Clay Mineral's on Casagrande's Plasticity Chart

4.1.3 GLOBAL SETTLEMENT CONSIDERATIONS

The weight of the new fill required to establish site grades will act as a load on the underlying soils. This load will result in both initial distortion settlement and longer-term consolidation settlement. The distortion settlement component occurs quickly after fill placement but is usually small compared to the consolidation settlement component. Consolidation settlement occurs when a load (such as the weight of the new fill and structure loads [if soil supported]) compresses the underlying cohesive soils by squeezing the water out of pore spaces. With clay soils, this type of settlement often continues over a period of years after the new load is applied.

As part of our global settlement analysis, we analyzed consolidation settlement for the following cases: where the anticipated maximum amount of fill within the building pad is anticipated, where the thickest profile of very soft and/or soft clay was encountered in the borings (with consideration given to where the most amount of fill would be required at these locations), and where the thickest overall soil profile (i.e., deepest depth to rock [based on the borings]) would be located after establishing a FFE of 752 feet.

Based on our analyses, we estimate that up to about 1 to 3.5 inches of settlement could result from the weight of fill placed over the soils. Note the amount of consolidation settlement will vary across the site as the thickness of new fill and the thickness of the soft soil profile varies. **Furthermore, our estimation of fill thicknesses used in our analysis assumes a constant final subgrade elevation of 752 feet, which is the approximate FFE for the proposed building based on our discussions with L&F. A grading plan was not available at the time of this report, which necessitated use of the building FFE in our settlement analyses. We understand that actual site grading will likely differ (especially outside of the building limits) and our settlement analyses will require revision once this information has been provided.**

The image below provides a preliminary visual representation of the anticipated earthwork (cut and/or fill) required to establish a FFE of 750 feet across the project site, which is outlined in red. The green shaded colors indicate general areas of the greatest anticipated fill, while the light pink to whitish colors indicate general areas of the greatest anticipated cut. Note that this figure utilized existing topography from the

provided topographic survey and should therefore be considered approximate. This figure is intended to provide a general understanding of earthwork in probable areas of focus for settlement monitoring.

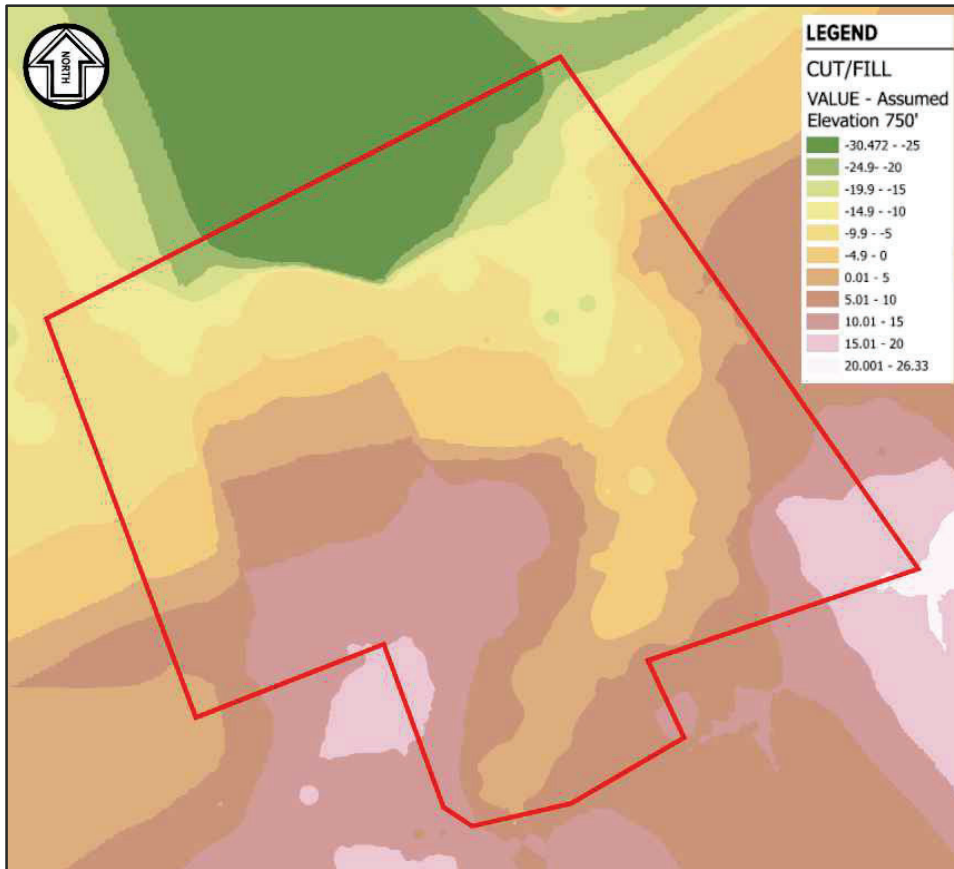


IMAGE NO. 33: Preliminary Visual Representation of Earthwork for Settlement Monitoring (Assumes FFE of 750 feet)

The time required for the consolidation component of settlement to occur is related to the consolidation characteristics of the clay and the length of the drainage path, which is the distance water must travel through the clay to encounter a drainage outlet such as granular fill overlying the clay or underlying weathered limestone. Our preliminary assessment of time rates for primary consolidation indicates that primary consolidation will be achieved in approximately 1 to 4 ½ months without utilization of preloading or wick drains (discussed further below.) Note that our estimation of settlement does not include the settlement of the grade-raise fill (which is expected to be minimum, provided the fill is placed in controlled lifts and monitored by SME). **Furthermore, our estimations for settlement do not include application of foundation loads (as we understand that rock supported deep foundations will be utilized) or floor slab loading, which was not provided at the time of this report but should be analyzed to further analyze and revise settlement and associated time rate estimations.** Additional settlement due to foundation loads is discussed in Section 4.3.

The results of the laboratory consolidation tests were utilized in our analyses. In the consolidation test, an undisturbed sample of clay is saturated and subjected to incrementally staged loading while the compression of the soil sample is measured. Each stage of loading initiates a period of primary compression where the rate of settlement is more rapid, which then transitions to secondary compression during which the rate of settlement is much slower. This behavior is similar to what will occur at the site after placement of the proposed fill. The test data is then reduced and can be used to calculate the estimated settlement and estimated time for the settlement to occur, based on the subsurface conditions at the site and the proposed loading.

Delaying construction after the placement of the fill to allow for consolidation settlement is not expected to be a realistic approach. However, there are several proactive measures that can be taken to address these settlements in a shorter time frame. Two options are discussed below which could be considered for the project.

- **Preloading** - Utilization of preloading (i.e., adding temporary additional fill above the elevations required to establish design final site grades) could be considered to increase the effective rate of consolidation settlement. However, the feasibility of implementing a cost-effective preloading program is contingent upon the amount of temporary fill material available that can be readily obtained on site. For this reason, we recommend using wick drains in concert with preloading to expedite consolidation of the clays.
- **Wick Drains** - Wick drains, which are also known as prefabricated vertical drains (PVDs), are prefabricated geotextile-wrapped plastic strips that facilitate drainage. These strips have molded plastic channels that act as a vertical drainage path to remove pore water from compressible soils, thereby increasing the rate of consolidation. The drains are installed using a hollow mandrel using a vibratory hammer or static weight to the design depth. Drains are installed in a pre-determined arrangement that considers the site geometry, soil characteristics, and project schedule. The wick drains would effectively aid in accelerating the time for water to travel to the drainage blanket and away from the fill area. Wick drains are most effective when utilized in combination with preloading.

Please refer to the images below which provide visual representation of wick drain installation and function in conjunction with a preloading program.

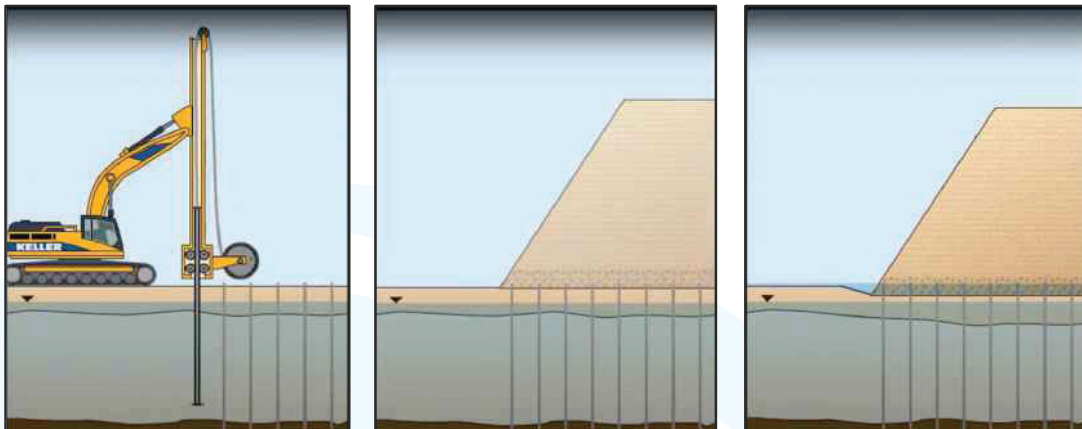


IMAGE NO. 34: Wick Drains and Preloading ⁽¹⁾

(1) Keller Group. (2026). Video clip images obtained from <https://www.keller-na.com/expertise/techniques/wick-drains>

Note that not all of the site may benefit from preloading. The surcharge materials can be placed in stages and reused to limit the total volume of additional materials required. Due to the many variables involved with the site conditions, the actual rate of settlement may be slower or faster than expected. Therefore, the amount and rate of settlement should be monitored at multiple points and the surcharge program adjusted (i.e., time and/or surcharge heights) as needed.

Prior to placement of grade raise fill in surcharge areas, we recommend the fill area be fine-graded and sloped in a manner to encourage positive drainage away from the fill area. A drainage blanket composed of open-graded crushed aggregate having a minimum thickness of 18 inches should be placed between the natural soils and new grade-raise fill. This crushed aggregate drainage blanket will facilitate drainage of water away from the fill area during the settlement monitoring period.

Implementation of settlement plates along with settlement stakes will be necessary for monitoring settlement (in addition to monitoring the lateral [x,y] movement of the settlement plate) during the preloading period. Settlement plates should be constructed in accordance with the Kentucky

Transportation Cabinet (KYTC) Standard Drawing No. RGX-015-03 titled "Settlement Platform" dated December 1, 2015. Refer to the image below excerpted from the KYTC 2025 Standard Drawings database.

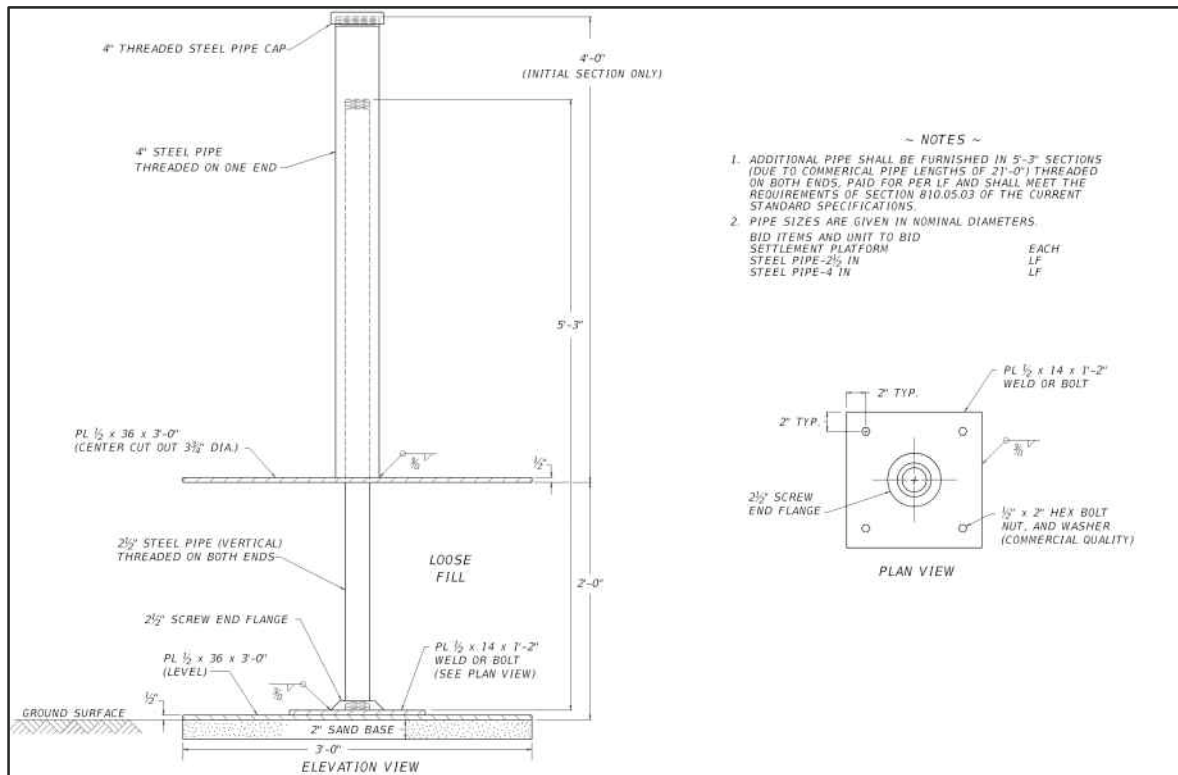


IMAGE NO. 35: Settlement Plate Detail (Modified From KYTC Standard Drawing No. Rgx-015-03)

Locate and erect settlement plates as directed by SME. The project surveyor shall monitor the settlement plates on a weekly basis and report the results to the Geotechnical Engineer. The Geotechnical Engineer will monitor the rate of settlement and provide guidance regarding initiation of construction operations in the monitored fill area. The contractor is responsible for installing, clearly marking, and protecting the settlement plates during the prescribed monitoring period. Construction operations can resume in an area of interest after at least four consecutive readings of 0.01 feet or less of settlement are achieved. Settlement stakes should be constructed at the subgrade surface near settlement plates in the event settlement plates become damaged during construction.

SME can provide more information regarding estimated settlement, time rates, and settlement placement monitoring criteria upon request.

4.2 SITE PREPARATION AND EARTHWORK

4.2.1 EXISTING FILL CONSIDERATIONS

The existing clay fill and possible fill soils encountered at the borings varied from lean clay to lean to fat clay with depths ranging from about 2 to 8 feet, or between approximate elevations 741.5 to 763. The relative density of the existing fill generally ranged from very soft to hard. Based on the condition and depths of the fill observed in the borings, the existing fill and possible fill soils are not considered suitable for support of the proposed foundations, slabs, or pavements.

There are inherent risks of greater than typical settlement and poor structural performance associated with constructing structures and pavements over undocumented fills. We believe the associated risks at this site could include visible cracking and differential movements of pavements and slabs on-grade and

differential movement of foundations, which could result in out of square framing, windows, doors, and cracking of veneer. These risks can be significantly reduced by removing the fill from beneath structures and replacing it with engineered fill.

Evaluation of the existing fill during construction must be conducted by SME and may include probing the existing fill areas with a hand-auger, testing several feet below the subgrade surface using a cone penetrometer, observing the condition of the fill in shallow test pits and in foundation excavations, and observing the response of the surface of the fill when subjected to a proofroll. It will be necessary to further evaluate suspect materials observed during the evaluation and testing processes. The contractor needs to be prepared to assist SME by excavating test pits, as needed.

The following report sections assume that the existing fill will be undercut from below foundations, slabs, and pavements and replaced with engineered fill.

4.2.2 CHEMICAL TREATMENT CONSIDERATIONS

Soil treatment using “chemical soil drying”, modification, or stabilization could be considered for the project site. Chemical treatment can utilize various chemical agents (e.g., quicklime, hydrated lime, lime kiln dust, fly ash, or cement) depending upon soil type and intended purpose. Chemical drying is utilized to reduce the effective soil moisture content within acceptable tolerances to meet stability, moisture, and density requirements. Chemical modification typically requires additional chemical agent and is utilized to reduce soil plasticity and may or may not result in a semi-permanent strengthened subgrade. Chemical stabilization is utilized for all situations previously described and when improved, long-term subgrade strength is achieved.

The effects of ground stabilization are considered semi-permanent and can last for decades. Performing chemical subgrade stabilization can reduce the amount of required undercutting, while reducing the moisture sensitivity of the subgrade. Chemical stabilization improves the subgrade stability and provides a stable working platform. Chemical stabilization also mitigates the risk of canceled workdays due to wet weather conditions, and will reduce unanticipated costs and delays associated with moisture conditioning wet soils or removing and replacing disturbed soils, as the stabilized subgrade is less susceptible to disturbance and softening due to rain events, even when trafficked by construction equipment. Furthermore, construction of chemically stabilized subgrade could result in a reduction in the proposed design floor slab thickness and/or pavement section thicknesses. The stabilization could also provide some additional benefit, such as providing additional slab support in the event of dropout sinkhole activity. Additional laboratory testing including evaluation for sulfates, pH, plasticity, and compressive strength (at minimum) is required if chemical stabilization/modification is considered.

The chemical stabilization is intended to modify the clay soils to reduce the frost susceptibility of the subgrade and mitigate premature pavement distress due to frost action. Chemical stabilization can also reduce the effective plasticity index of high or moderate plasticity soils (and, thus, reduce the ability for seasonal volume changes), and condition the soil structure to better absorb moisture and facilitate compaction. Underdrains should be installed after chemical stabilization to facilitate subsurface drainage. In the case of deeper site utilities, clay caps should be installed over the top of trench backfill prior to chemical stabilization, so the caps can be chemically treated at the same time the rest of the treatment area.

Chemical stabilization and modification are most effective when the ambient air and ground temperature is at least 40 degrees and rising. Thus, chemical stabilization and modification is less commonly performed during the winter months. Furthermore, we recommend that chemical stabilization and modification occur within each successive lift of fill placed above a stabilized lift. Our experience has shown that chemically altered soils are relatively impermeable, and soil fill placed above chemically altered soils can become oversaturated during periods of inclement weather due to lack of percolation through the treated soils.

Note that chemical treatment in soils where weathered limestone or chert fragments (which are usually an indicator of larger cobble-sized rock within the soil matrix) were encountered in the borings may not be feasible and can damage the chemical mixing equipment.

SME would be pleased to assist in developing a mix design to determine the type and amount of additive(s) required to achieve the desired results based on the soil conditions at the site, as well as assist in developing specifications to be incorporated in the project manual for bidding purposes.

4.2.3 GENERAL SITE SUBGRADE PREPARATION

Clear the proposed development area of existing vegetation, such as brush, grass, roots (including roots mats), topsoil, existing fill soils and other unsuitable materials. During site stripping, remove organic soils (e.g., soils with greater than four percent organics content or containing significant fibrous material/root mats) while leaving soils with negligible organic content in-place. Topsoil removal should not be based on soil color but rather based on organic content. It is possible that organic soils extend deeper within the plow zone due to the site being previously utilized for agricultural purposes. Clearing must extend a minimum of 5 feet beyond the proposed construction areas.

Reroute any existing utilities that are within the building footprint to outside of the building area. Remove abandoned utilities and backfill the resulting excavations with engineered fill. If it is necessary for existing utilities to be abandoned in-place, the utilities must not conflict with the proposed construction, they must be fully grouted, and the suitability of the existing backfill must be verified for structural support. Do not abandon utilities in-place within the zone of influence of proposed foundations, slabs, or pavements.

Based on the borings, we expect clays will be the primary soil type exposed after clearing and stripping the project site. The on-site subgrade clays soils are highly sensitive to disturbances during construction and the overall success of the subgrade preparation during mass earthwork operations will directly affect the suitability of foundation, slab, and pavement bearing soils. As such, take care during site earthwork operations to prepare the subgrade for support of the building slab-on-grade and site pavements.

After stripping surficial materials and removing deleterious materials, after cuts are made to design subgrade levels, but prior to filling, we recommend the subgrade be subjected to a comprehensive proof-rolling program in the presence of SME. The purpose of proof-rolling is to locate areas of unsuitably soft/loose or disturbed subgrade. We recommend proof-rolling be performed with a fully loaded, tandem-axle dump truck or other pneumatic-tire construction equipment. Areas of unsuitable subgrade (for placement of new fill) revealed during proof-rolling must be undercut and replaced with engineered fill. In areas not accessible to proof-rolling equipment we recommend the exposed subgrade be evaluated by SME with hand-operated equipment such as dynamic cone penetrometers and hand augers.

The exposed subgrade soils are highly sensitive to disturbances, particularly after periods of wet weather and during times of colder weather. To reduce the amount of potential subgrade improvements required at this site, we recommend the contractor establish positive site drainage as soon as possible and remove ponded water from exposed and prepared subgrades. Subgrade disturbance during construction will likely be a significant factor at this site and a significant amount of subgrade improvement could be required to achieve a stable working platform for construction. If the subgrade is exposed to water, it may be necessary to improve the disturbed subgrade or remove and replace the soils with engineered fill or crushed aggregate as discussed in Section 4.2.5 below. Placement of crushed aggregate (using a woven geotextile for separation) is a traditional treatment to protect easily disturbed subgrades. We recommend including a contingency in the construction budget for subgrade stabilization, particularly if the earthwork will occur during times of unfavorable weather (wet and/or cold conditions).

After the exposed subgrade is evaluated (as described above) and improved as necessary, engineered fill may be placed on the exposed subgrade to establish final design subgrade levels. See Section 4.2.5 of this report for materials and compaction requirements for engineered fill.

4.2.4 SUBGRADE PREPARATION FOR SLABS

Assuming a FFE of elevation 752 feet, we estimate that the floor slab will be supported on a combination of natural clays and engineered fill soils. SME was not provided with specific floor slab loads for the structure at the time this report was prepared.

Three options have been provided regarding support for floor slabs, each with their own associated level of risk. The Owner should consider the advantages of each option as well as risk tolerance. Note that recommendations provided in Section 4.2.4.4 apply regardless of the selected slab support methodology.

4.2.4.1 OPTION 1 – STRUCTURAL FLOOR SLAB

A conservative approach for floor slab support would consist of utilizing a thickened and heavily reinforced structural slab rigidly connected to the drilled pier foundations. The structural slab would carry the load directly and transfer to the drilled pier elements, thereby requiring less support from the underlying subgrade in the event of sinkhole dropout, or due to consolidation settlement of the underlying subgrade. This may include either a BRAB (Building Research and Advisory Board) Type III Post-Tensioned Slab (with or without thickened ribs) or a Type IV Mat Foundation designed for minimal flexure for areas with heavier localized loads. Similarly, a conventional slab supported on grade beams spanning between and rigidly connected to drilled piers could be considered, provided the slab can span between grade beams in the event of loss of support.

This type of floor slab system is considered more robust compared to the options discussed below, albeit at a higher price.

4.2.4.2 OPTION 2 – CONVENTIONAL SLAB ON RIGID INCLUSIONS (RIS)

Conventional floor slabs can be supported on a Rigid Inclusion (RI) ground improvement system to mitigate potential settlement of soft natural soils, grade-raise, fill, and/or potential sinkhole related activity. Rigid inclusions are further discussed in Section 4.3.4.2.

4.2.4.3 OPTION 3 – CONVENTIONAL SLAB ON GRADE

A less conservative approach (which carries higher relative risk for poor performance) for floor slab construction would consist of supporting the slabs on natural clay subgrade, or on engineered fill placed over the natural clay subgrade. This option is the most cost-effective of the options discussed but is considered the highest risk when considering the karst terrain and the possible global settlement.

Our analysis of consolidation settlement (as discussed in Section 4.1.3) indicates that up to about 1 ¼ to 3 inches of settlement could occur below the floor slab unless the slab is supported on RIs or a structural slab is utilized, assuming floor slabs areas are not exposed to preloading as previously discussed. At the time this report was prepared, SME was not provided with anticipated slab loads and therefore, settlement associated with slab loading was not analyzed. SME must revise our settlement analyses once this information has been provided.

4.2.4.4 GENERAL SLAB SUPPORT CONSIDERATIONS

We recommend the slab-on-grade subgrade soils be protected from frost action during winter construction. Frozen soils must be thawed and compacted, or removed and replaced prior to slab-on-grade construction. Prior to concrete placement for slabs, the subgrade needs to again be observed and tested to identify areas of subgrade that were disturbed during construction activities and to verify subgrade conditions are suitable for slab support. We recommend proof-rolling the final subgrade. If proof-rolling is not feasible because of access constraints, SME must observe and test the exposed subgrade using density in-place meters and/or other hand-operated equipment, such as hand augers and cone penetrometers. Unsuitable subgrade indicated by SME needs to be removed and replaced with engineered fill or chemical modification could also be considered.

Fat clays encountered during construction must be undercut a minimum of 3 feet below the bottom of the slab (i.e., a minimum of 3 feet of low to non-expansive soils must be present below the bottom of the slab). Similarly, we recommend that fat clay fill soils be placed no closer vertically than 3 feet below floor slabs. Consideration could be given to revising this criteria where interior building areas will be elevated in comparison to adjacent exterior grades and building pad areas are protected from near-surface water infiltration that could induce subgrade volume change.

Moderately plastic (CL/CH) soils may remain in-place below slabs provided (a.) some risk of premature loss of serviceability is acceptable and (b.) the in-situ moisture content for the exposed soils (minimum depth of 1-foot) is maintained within optimum and two percent above the optimum moisture content as determined by the Standard Proctor test (ASTM D 698). Delineation and remediation of near-surface highly plastic (CH) clay soil is critical for proper slab performance.

Where encountered, undercutting and replacement of soft soils will be required. Depending on weather conditions at the time of construction, chemical modification or stabilization of the subgrade could be considered to manage high moisture contents within the clays and reduce shrink/swell potential. Limitations of utilization of chemically treating soils was previously addressed in Section 4.2.2 of this report. Additionally, geogrid could be utilized to limit the amount of undercutting required to achieve a stable subgrade for floor slab support (but will not provide sufficient resistance to shrink/swell soils).

We recommend a subgrade modulus of 150 pci to design floor slabs supported on properly prepared subgrade and subbase course as described herein. This value of subgrade modulus is based on correlations with soil type from plate load tests and is the ratio of load in pounds per square-inch to a 0.05-inch deflection of a 30-inch-diameter bearing plate, and assumes fat clays are addressed as previously described. An increased subgrade modulus can be considered if the entire slab area is supported on a chemically stabilized subgrade.

We recommend a slab subbase consisting of a minimum of 6 inches of an approved KTYC DGA to provide a leveling surface for construction of slabs, and a moisture capillary break between the slabs and the underlying clays. The thickness of dense-graded aggregate may need to be increased based on the floor loads for the slabs (which was not provided to SME at the time this report was prepared) and to protect the subgrade from disturbance during construction. When determining the aggregate thickness, consider the time of year, the condition of subgrade soils during construction, and the type and volume of construction equipment to traffic the prepared subgrade. The aggregate must also be compacted per Section 4.2.5 of this report.

Place a vapor retarder below floor slabs to receive an impermeable floor finish/seal or a floor covering which would retard vapor transmission. The location of the vapor retarder (relative to the subbase) needs to be determined by the design Architect/Engineer based on the intended floor usage, planned finishes, and ACI recommendations.

Separate floor slabs by isolation joints from structural walls and columns to permit relative movement. Allow a minimum of 6 inches of engineered fill between the bottom of the slab and the top of shallow foundations below.

4.2.5 ENGINEERED FILL REQUIREMENTS

Fill placed within the construction area must be free of frozen soil, organics, construction debris, particle sizes that will hinder compaction, or other deleterious materials. Materials utilized as engineered grade-raise fill or structural backfill should generally have a liquid limit of no greater than 45 percent, a plastic limit of no greater than 20 percent, a plasticity index of no greater than 25, a maximum dry density of no less than 100 pounds per cubic foot (pcf), and an organic content of less than 4 percent. To meet these requirements, we recommend any imported or on-site borrow material consist of lean clay (CL) per the Unified Soils Classification System, KTYC DGA, or chemically modified soils. Utilization of alternative fill materials may be considered but should be reviewed and accepted by the project geotechnical engineer. Do not reuse existing fill or possible existing fill soils as engineered fill. On-site highly plastic soils can be chemically modified to meet plasticity requirements and lean to fat clay (CL/CH) soils can be utilized as previously discussed in this report.

Portions of the on-site lean clays are suitable for use as fill but will likely require moisture conditioning (drying) based upon the test borings. The need for, and extent of, moisture conditioning will be affected by seasonal weather conditions at the time the earthwork is performed, and the condition of the site soils.

The project specifications should include provisions for moisture conditioning of soils to be placed and compacted on-site as engineered fill. Contractors should anticipate the need for moisture conditioning and structure their bids accordingly.

Compact engineered fill placed below foundations, floor slabs, and pavements to a minimum of 100 percent of the maximum dry density as determined in accordance with the Standard Proctor test (ASTM D 698). Fill adjacent to and over foundations should be compacted to 98 percent of the standard Proctor maximum dry density. Fill 1 foot or greater below the floor slabs and pavements must be compacted to at least 98 percent of the standard Proctor. This requirement should be further reduced to 95 percent of the Standard Proctor for fat clays placed below exterior pavement areas.

The fill must be spread in level layers not exceeding 9 inches in loose thickness. For areas where smaller walk-behind or hand compactors are required or utilized, the loose lift thickness should be reduced to a lift thickness appropriate for the type of equipment utilized. Granular fill should be compacted with a smooth drum vibratory roller or vibratory plate compactors including either walk-behind types, or plate compactors mounted on a backhoe or excavator (hoe-pac). Compact granular fill at a moisture content ranging from the optimum moisture content to about three percent below optimum. Clay fill should be compacted using a sheepfoot roller, or a pneumatic type compactor, at a moisture content ranging from two percent below to two percent above the optimum moisture content. Highly expansive clay soils can be used as grade-raise structural fill provided that the fill is placed no closer than 3 feet (vertically or horizontally) of foundations or floors slabs, and/or concrete pavements, and provided the fill is placed between the optimum and 2 percent above the optimum moisture content. This requirement for a buffer zone between highly plastic clay and flexible asphalt pavements (i.e., HMA) can be reduced to 12 inches. Compaction requirements for clay must be modified as previously discussed for moderately to highly plastic (CL/CH) fill placed within 2 feet of the finished subgrade.

If necessary, coarse crushed aggregate used to backfill undercuts or to stabilize subgrades should consist of a well-graded crushed natural aggregate consistent of KYTC DGA or crushed stone base (CSB). Mechanical stabilization (geogrid) can also be considered in conjunction with crushed aggregate to reduce undercuts. In cases where granular engineered fill will be placed over the coarse crushed aggregate, the surface of the coarse crushed material must be covered with a suitable non-woven geotextile (e.g., Mirafi® 160N or 180N) to prevent migration of the granular materials into the coarser crushed aggregate.

4.3 FOUNDATIONS

Based on limited information initially provided by L&F, we understand that the FFE for the proposed building was planned to be within the range of elevation 730 feet to 750 feet and that column loads are not expected to exceed 300 kips and wall loads will not exceed 8 kips per lineal foot.

Subsequent to receiving this information and release of SME Geotechnical Memorandum No. 4 dated February 20, 2026, SME was advised that the FFE of the structure would likely be elevation 752 feet. However, SME has not been provided with a site grading plan or anticipated structural loads at the time this report was prepared. Due to the possibility that the anticipated FFE may change, our recommendations provided below are consistent with those previously provided in Geotechnical Memorandum No. 4.

4.3.1 GENERAL FOUNDATION SELECTION CONSIDERATIONS

The proposed building can be supported on shallow foundations, although it should be noted that inherent risk exists with constructing shallow foundations in karst terrain. Note the risk of karst related subsidence is directly proportional to the rock depth below a structure at the location of a karst feature. Thus, areas with a deeper soil profile (either naturally occurring or related to grade-raise fill placement) pose greater relative risk to proposed structures and other infrastructure.

A quantitative risk of potential for future sinkhole and karst-related activity is difficult to provide without additional characterization (i.e., additional borings, additional rock cores, and geophysical surveys).

However, the relative risk of supporting the structure on shallow foundations is likely no greater than that of adjacent developments constructed on terrain of similar geology. The risk of further sinkhole development and karst activity cannot be eliminated but can be reduced by implementing measure and mitigation techniques outlined in this report. At a minimum, remediation of identified (in this report or encountered during construction) sinkholes or other karst features and thorough inspection of the subgrade must be completed prior to placement of engineered fill and construction of foundations.

While shallow foundations are more cost effective than deep foundations, there are some advantages to utilizing a deep foundation system considering the site conditions. These advantages include reduction in risk associated with constructing on karst terrain, elimination of soil shrink/swell concerns below foundations, and reduced settlement potential due to the anticipated amount of fill required to establish a FFE greater than elevation 730 feet. **Foundation selection should be made based on the Owner's risk tolerance for supporting the structure over karst terrain, shrink/swell soils, and the possible increased risk of excess settlement due to fill placement.**

Furthermore, it should be noted that there is risk associated with poor foundation performance when supporting structures on only shallow foundations where stringent settlement criteria applies or where vibratory and/or impact loading is anticipated. At the time this report was prepared, SME was not made aware of any equipment or structures where stringent settlement criteria applies or where vibratory and/or impact loading is anticipated.

The recommendations in the following sections are based on the limited project information provided to SME, information obtained from the borings, and assumptions made by SME. Please contact SME if assumptions stated in the following sections are inaccurate so that we can adjust our recommendations, as necessary.

4.3.2 SUBGRADE VERIFICATION

Geotechnical foundation design recommendations are provided based on widely spaced, small diameter borings covering a relatively small area of the site. On-site observations and testing of the foundation subgrades are critical to verify the subgrade exposed at the foundation bearing surface is consistent with the borings and is suitable for the design bearing pressure. By preparing this geotechnical evaluation report, SME is best suited to observe and test foundation subgrades during construction and to verify the geotechnical recommendations of this report and the geotechnical related design requirements of this project are incorporated into the construction. **The recommendations of this report assume SME will further evaluate the bearing soils during construction.**

4.3.3 SHALLOW FOUNDATIONS – MAIN BUILDING STRUCTURE

4.3.3.1 SPREAD FOOTINGS

Shallow spread foundations are generally considered suitable for the proposed structure, provided the recommendations provided in this report are adhered to and the risks discussed previously are acceptable to the owner. Since the proposed FFE has not been finalized at the time this report was prepared, we have presented alternatives for several possible FFEs and foundation bearing scenarios as outlined below. Please note that the earthwork cut/fill depths discussed below are based on the approximate existing ground surface elevations estimated from the provided topographic survey within the approximate proposed building pad as indicated on the referenced site plan. Therefore, these estimates may be inaccurate, and will depend on the actual proposed building FFE, building location, and orientation.

- **FFE Below 752 and above 740 Feet** – We understand that earthwork of up to about 13 feet of cut and up to about 30 feet of grade-raise fill will be required to establish a proposed FFE of 752 feet. Assuming a FFE of 752 feet (and a typical foundation bearing elevation of about 750 feet), we anticipate shallow spread footings will bear on natural medium to very stiff clays or engineered fill. We preliminarily recommend soil-supported foundations bearing at about elevation 750 feet

(based on an FFE of 752 feet) be designed utilizing a maximum net allowable soil bearing pressure of **1,500** pounds per square foot (psf) for foundations bearing on natural stiff lean clay or engineered fill overlying the same. Some localized undercutting of near-surface soft clays should be expected.

- **FFE Below 740 Feet and above 730 Feet** – We understand that earthwork of up to about 25 feet of cut and up to about 18 feet of grade-raise fill will be required to establish a proposed FFE of 740 feet. Assuming a FFE of 740 feet (and a typical foundation bearing elevation of about 738 feet), we anticipate shallow spread footings will generally bear on natural clays or engineered fill but do anticipate that weathered (and possibly sound) limestone will be exposed in some foundation excavations. We preliminarily recommend soil-supported foundations bearing at about elevation 738 feet be designed utilizing a maximum net allowable soil bearing pressure of **2,500** psf for foundations bearing on medium to natural stiff lean clay or engineered fill overlying the same. Some localized undercutting of near-surface soft clays should be expected, although we estimate less undercutting to remove soft soils will be required in comparison to foundations bearing above elevation 740 feet.
- **FFE 730 Feet** – We understand that earthwork of up to about 35 feet of cut and up to about 8 feet of grade-raise fill will be required to establish a proposed FFE of 730 feet. Significant rock removal of up to about 14.5 feet may be required at some locations to establish a FFE of 730 feet. Assuming a FFE of 730 feet, we anticipate shallow spread footings will generally bear on limestone. We preliminarily recommend foundations be designed utilizing a maximum net allowable bearing pressure of **10,000** psf for foundations bearing on sound limestone (or lean concrete after undercutting to weathered to sound limestone as described below) as verified during foundation construction.

The recommended design bearing pressures will achieve a global safety factor of 3 or more for general shear failure.

We preliminarily estimate that maximum settlement for soil-supported shallow spread footings is not expected to exceed 1 inch and differential settlements are estimated to be less than one-half of the total settlement, provided that foundations are constructed and observed in accordance with this report. The ability of the structure to withstand differential settlement will partially be controlled by the column bay spacing and distance between spread footing elements. More stringent differential settlement requirements may apply to relatively closely spaced columns.

Due to the anticipated amount of fill placement required in some areas to achieve a FFE of 752 feet, we estimate that excessive settlement (i.e., up to about 5 inches) may be observed at some locations due to compression of the exposed soil subgrade (and possibly within the grade-raise fill) in deeper fill areas if adequate time is not provided for the consolidation settlement to occur prior to foundation construction, or if near-surface soft soils are not properly remediated prior to fill placement.

We preliminarily estimate that maximum settlement for footings supported on sound limestone is not expected to exceed 0.5 inch and differential settlements are estimated to be less than one-half of the total settlement. The preliminary settlement estimates included in this memorandum are based on the boring information, the design maximum net allowable bearing pressures, the anticipated design structural loads, our experience with similar structures and soil conditions, and field verification of suitable bearing soils by SME.

4.3.3.2 GENERAL SOIL BEARING SHALLOW FOUNDATION CONSIDERATIONS

Note that very soft or soft clays were encountered in most of the borings performed. The near-surface soft soils generally extended to depths of approximately 2 to 5 feet deep, but soft clays were also frequently encountered above the weathered rock surface. Subgrade improvement consisting of undercutting and replacement with suitable engineered fill will be required to remediate soft soils exposed in foundation excavations, and to provide suitable support for foundations.

Existing fill must be undercut entirely from below foundations. We anticipate that additional undercuts to remove existing fill from below foundations will be required if a FFE of 752 feet is proposed. We anticipate that existing fill will generally be removed during mass-site grading if a FFE of 740 feet or lower is proposed. However, based on our understanding of the previous usage of the site, there is potential for encountering existing fill with varying depths between and away from the borings locations.

Due to the variability of the subsurface conditions across the site, we anticipate that highly plastic fat clays will be exposed at the foundation bearing elevation regardless of the proposed FFE. Any encountered fat clay (CH) soils must be undercut to a minimum depth of three feet below the bottom of the foundation bearing elevation and backfilled with engineered fill.

Based on our borings and our understanding of the varying nature of the underlying limestone rock surface, we expect that rock will be encountered in some foundation excavations for foundations bearing between Elevation 752 feet and above elevation 730 feet depending on the proposed site grading. We do not recommend supporting foundations on a combination of rock and on soil. For soil-supported foundations, rock encountered at the footing level should be undercut a minimum of 2 feet below the footing subgrade level and backfilled with engineered fill to minimize hard spots (and development of excessive bending stresses) where foundations transition between footings supported on rock/soil. Guidance for foundations designed as rock bearing is described below.

Once each foundation area is exposed, SME must observe and test foundation subgrade conditions to verify suitable conditions are encountered or improvements are performed, as needed, prior to foundation construction. SME will utilize a test method capable of testing the soils several feet below the design bearing level. Unsuitable soils must be mechanically improved (i.e., compacted) in-place. Where unsuitable soils cannot be mechanically improved in-place, deepen the foundation excavations (undercut unsuitable soils) to encounter suitable bearing material below. Foundations can then be constructed to bear directly at this lower level where suitable subgrade is encountered, or the design bearing level can be reestablished with engineered fill.

4.3.3.3 GENERAL ROCK BEARING SHALLOW FOUNDATION CONSIDERATIONS

Assuming a proposed FFE of 730 feet, we anticipate that some undercutting of natural clays will be required to expose the weathered limestone rock surface. Additionally, some over-excavation and removal of material within the rock disintegration zone (RDZ) may be necessary to remove highly fractured rock near the soil/rock interface.

The exposed rock at the bearing elevation may be rough and difficulty may be encountered during placement of reinforcement steel. If this condition occurs, the excavation should continue to a depth just below the design bearing elevation. A leveling pad/mud mat consisting of high strength lean concrete having a minimum 28-day compressive strength of 2,500 psi (pounds per square inch) can be placed up to the bearing elevation to provide a uniform bearing surface and accommodate reinforcement steel placement prior to foundation construction. Compacted crushed stone aggregate, soils, or excavated rock are not suitable for use below spread footing foundations.

Once each foundation area is exposed, SME must observe and test foundation subgrade conditions to verify suitable conditions are encountered or improvements are performed, as needed, prior to foundation construction. Upon excavating the foundations and prior to placement of a concrete leveling mat/mud mat (if required), we recommend a minimum of one test hole be performed every 25 feet along the alignment of wall footings, and in each individual column location, using an air-rotary drill to probe for clay seams, voids, or other discontinuities within the underlying rock mass. Test holes should extend to a minimum depth of 5 feet or one-half footing width (B/2), whichever is greater, below the bearing elevation. If vertical joints or other rock defects are observed at the exposed bearing surface, the material may be excavated until sound rock is encountered or work may be temporarily halted until the geotechnical engineer has reviewed the rock condition. Placement of "dental" concrete may be considered at the discretion of the geotechnical engineer in-lieu of over-excavation and replacement. The presence of horizontal joints can lead to excessive settlement; therefore, removal of rock containing appreciable horizontal joints (clay filled or open) will be necessary.

4.3.3.4 GENERAL SHALLOW FOUNDATION CONSIDERATIONS

Expansive clays should not be placed within 3 feet of foundations or foundation stem walls (even when foundations are rock supported) due to potential for vertical and/or lateral expansion/movements.

Oversize undercuts that are backfilled with engineered fill to the design bearing level laterally by extending excavations outward on a two vertical to one horizontal slope from the edge of the foundation as shown on the image below. However, excavations through rock may be vertical provided the rock is sound and no inclined bedding planes (or other features that would indicate instability) are observed in the exposed rock faces.

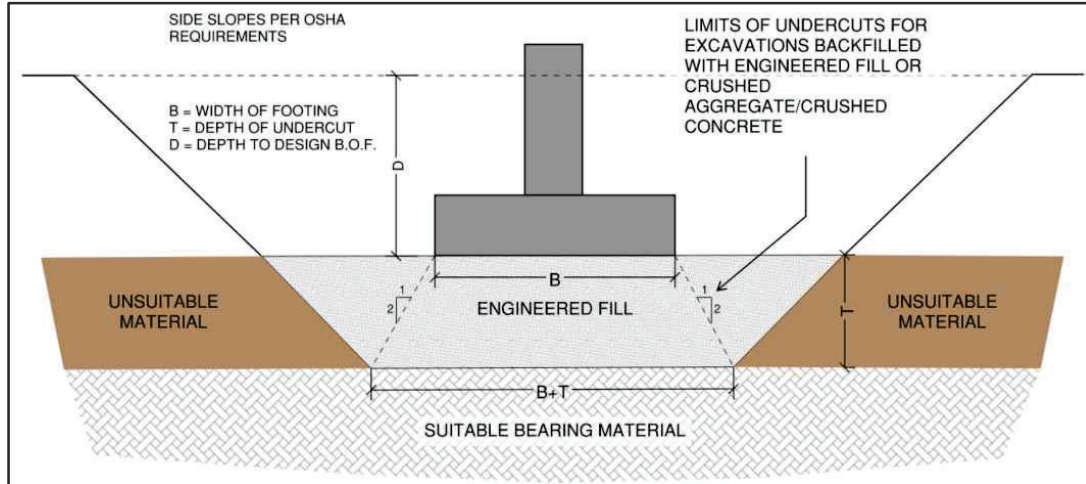


IMAGE NO. 36: Foundation Undercutting Diagram

Exterior foundations must have a minimum embedment of 24 inches below the lowest adjacent exterior grade in unheated areas for protection against frost movement during normal winters. Interior foundations in heated areas can be constructed at shallower levels on suitable soils. Footing trenches need to be excavated to a level bearing surface, cleaned of mud and loose cuttings, and protected against water accumulation from rainfall, surface drainage, or excavation sidewall seepage prior to placing concrete.

Place foundation concrete as soon as foundation excavations have been completed, and the design bearing pressure is verified to reduce the potential for disturbance of the foundation subgrade. In cases where the excavation will remain exposed for a longer time period, protect the subgrade soils with a concrete mud mat and protect the bearing soils from freezing if the work is performed during seasonally cold weather.

For frost heave considerations, vertical excavation sidewalls must be maintained during foundation concrete placement and the side walls must not be allowed to “mushroom out” near the top. If vertical earthen sidewalls cannot be maintained, it will be necessary to slope back the foundation excavations and form foundation sidewalls to maintain vertical faces for foundations and reduce the potentially adverse effects resulting from frost heave.

Use a minimum width of 18 inches to design continuous (wall) foundations and a minimum dimension of 30 inches to design isolated (column) foundations for bearing capacity and settlement considerations. In some cases, the minimum recommended foundation sizes, and not the design bearing pressure, may govern the sizes of the foundations.

4.3.4 DEEP AND INTERMEDIATE FOUNDATIONS – MAIN BUILDING STRUCTURE

4.3.4.1 OPTION 1 - DRILLED PIER FOUNDATIONS

The building and equipment structures could be supported on a deep foundation system consisting of drilled piers (caissons). Drilled piers are commonly utilized to transfer loads to a more substantial bearing stratum (rock) and mitigate risk associated with potential karst activity and problematic soils (i.e., shrink/swell soils). This is due to the piers being relatively large diameter, heavily reinforced, socketed into rock, and directly tied into structure columns or pile caps. Drilled piers are also often utilized where structural loads are exceptionally heavy (e.g., greater than 250 kips), where site soils are of relatively lower strength, where a strong bearing media (such as rock) is encountered at depth, and/or where stringent foundation settlement criteria is required. Drilled piers can also be considered for critical structures that will induce significant impact or vibratory loads on their foundations. **Due to these reasons, we recommend that drilled piers be utilized to support equipment/structures that are subject to impact loads and/or that have stringent settlement criteria, at minimum, and/or where risks associated with karst related subsidence are not tolerable.**

Structure floor slabs could also be rigidly connected to the foundations, thereby transferring structural loading to the underlying rock and reducing risk associated with poor slab performance related to potential karst activity and/or shrink/swell soils.

We recommend extending the drilled piers to bear in competent limestone bedrock, by socketing the piers a minimum of 2 feet into competent rock. Since measuring the depth to competent bedrock is complicated by the likely presence of cobbles, floaters, boulders, clay seams/stratums, and possible voids from karst activity, we recommend probing each drilled pier location to verify competent rock is directly below the drilled piers and to better estimate the tip elevation of each pier. We recommend extending the probes a minimum of two shaft diameters or a continuous 10 feet into competent rock, whichever is greater. It may be beneficial to predrill the probes in advance of the drilled pier construction, when access to the proposed pier locations is readily available. Review the probe results to check the formation for karst features (i.e., open voids in the rock) and/or clay seams and verify the drilled piers are not constructed on boulders located above the competent bedrock surface. Note that interpretation of air-track rotary drilling results is highly dependent on the skill of the rig operator. Regardless, air-track rotary drilling provides rapid and cost-effective assessment on general bearing conditions. If the probing is not performed, we recommend increasing the rock socket depth to a minimum of 5 feet into competent rock, and SME must verify that no boulders, voids, or soil layers are present at the bottom of the drilled pier excavation.

Based on the borings and the assumed FFEs, we anticipate the length of the drilled piers could vary from about 5 to 30 feet depending on the final socket depth. Specific pier lengths will vary based on variations in the subsurface profile. We recommend the contractor be prepared to extend the drilled piers at least 5 feet deeper than the design tip elevations to account for unknown conditions, such as encountering voids in the limestone. For end bearing, side friction, and lateral resistance of drilled piers, we recommend using the soil design parameters as indicated in the table below.

RECOMMENDED DRILLED PIER DESIGN PARAMETERS

SOIL TYPE	TOTAL UNIT WEIGHT (PCF) ⁽¹⁾	FRICTION ANGLE (DEGREES)	ULTIMATE UNDRAINED SHEAR STRENGTH, S _u (PSF)	ADHESION ALONG SHAFT (PSF) ^{(2) (3)}	ε ₅₀	MODULUS OF SUBGRADE REACTION (K) (PCI)	ALLOWABLE TIP BEARING CAPACITY (PSF) ⁽⁵⁾
Grade Raise Fill (on-site stiff lean clay borrow) ⁽⁴⁾	125	N/A	2,500	950	0.005	1,000	N/A
Medium to Stiff Lean Clay and Lean to Fat Clay (CL) and (CL/CH)	125	N/A	1,500	750	0.007	100	N/A
Stiff to Very Stiff Fat Clay (CH) ⁽⁴⁾	125	N/A	3,000	1,000	0.005	500	N/A
Competent Limestone	150	N/A	N/A	20,000	0.001	1,800	50,000

NOTES:

1. Use buoyant unit weights below the design groundwater level by subtracting the unit weight of water (62.4 pcf) from the unit weight listed above.
2. Neglect side friction beginning from the top of the drilled pier (assuming the top of pier is at the existing ground surface) and extending to a depth of 5 feet below the top of the drilled pier. If the top of the drilled pier is within five feet of design final grades, then neglect side friction to a depth of 10 feet below design final grades.
3. Does not include factor of safety. Use a minimum factor of safety of 2.0 for side friction when calculating uplift.
4. Calculated skin friction for CH soils in active zone should be deducted from total calculated skin friction for uplift.
5. Utilizes factor of safety of 3.0.

Due to the likelihood of pinnacles and an uneven rock surface, we recommend straight-shaft piers (no bells) for the project. While bells can provide additional uplift resistance to expansive clay forces, it may not be practical to install bells on a variable and potentially uneven bedrock surface. A minimum two-foot-deep rock socket is recommended to achieve fixity. Deeper embedment into rock may be required to develop uplift resistance. We recommend the drilling equipment be sufficiently sized and capable of readily advancing through the upper portion of the limestone rock. Furthermore, given the variable ground conditions and uncertainty with karst terrain, we recommend that pier structures be designed utilizing end bearing capacity while neglecting skin friction for compressive loading. Skin friction may be utilized for determining uplift resistance.

The contractor may encounter obstructions and/or refusal to auger penetration above the target tip elevation during drilled pier installation due to encountering naturally occurring fractured rock, cobbles, boulders, and/or clay layers/strata within the rock. The type, size, and frequency of these anomalies will have varying effects on the installation. When possible, the contractor needs to penetrate the obstruction, maneuver around the obstruction (provided pier plumbness/alignment requirements are not exceeded) or remove the obstruction by augering or excavation from the surface, and then backfill the resulting excavation and resume pier installation. Excavations to remove obstructions must not undermine existing structures/improvements.

We anticipate that the installation of the drilled shafts can be completed using “open hole” methods in some cases as the soil profile is predominantly clayey above the rock. Where heavy perched groundwater seepages are encountered, the excavations may require temporary steel casings to support the walls of the excavations until the concrete is placed. The length of the casings will depend upon subsurface conditions encountered.

We recommend the drilled shafts be observed and tested by an SME representative to verify the contractor has reached proper bearing soil and that the bearing surface is properly cleaned. The current practice of drilled pier contractors is that no persons are to enter drilled pier excavations for this verification testing. As a result, the field engineer will observe and test the soil and rock cuttings off the drilled pier auger and core barrel as a means of verifying the contractor has reached competent bearing material. Utilization of a down-hole camera (which could include using a conventional camera, such as a GoPro, or a more sophisticated optical or acoustic borehole televiewer, depending on borehole conditions) is recommended to observe excavation sidewalls, bearing surface, and rock socket.

The bottom of the drilled pier must be free of loose or disturbed soil/rock prior to placement of the concrete. Clean the bearing surface mechanically with the auger, or using a one-eye bucket, to remove loose/disturbed soils and rock, and expose the undisturbed subgrade.

If the drilled piers are constructed in the “dry” (less than 2 inches of water at the base of the excavation), the concrete may be placed by the free-fall method. The free-fall method consists of using a short hopper or chute to direct the concrete flow out of the concrete truck into a vertical stream of flowing concrete with a relatively small diameter. Direct the stream to avoid hitting the sides of the drilled piers or reinforcing cages. For the free-fall method of concrete placement, we recommend designing the concrete mix with a slump of 5 inches to 7 inches. If water in the drilled pier shaft cannot be removed or controlled, then place concrete using tremie methods. For tremie placed concrete, we recommend designing the concrete mix with a slump of 7 inches to 9 inches.

Concrete mixes for drilled piers are regularly changing to optimize performance and economy. We recommend using only concrete contractor(s) with substantial experience in concrete mixing, placement, finishing, and curing methods (e.g., to prevent undesirable shrinkage, segregation, bleeding, degradation, etc.). We do not recommend using a super plasticizer in the drilled pier concrete mix. The contractor may need to retain a concrete mix designer to develop the appropriate mix(es) for the project. We recommend using only specific type(s) of well-established concrete mixes that have been “tried and tested” to deliver successful long-term performance for the specific type/length/diameter of the proposed drilled piers.

When extracting temporary casings from the excavations, take care to maintain a head of concrete within the temporary casing during removal to prevent “hanging up” in the casing shell and infiltration of water and soil into the shaft area. The head of concrete should always be higher than the head of water trapped outside the drilled pier, considering the differences in unit weights of concrete and water.

To reduce lateral movement of the drilled shafts, it is necessary to place the concrete for the drilled shafts in intimate contact with the surrounding soil/rock. Fill any voids or enlargements in the shafts due to over-excavation, naturally occurring voids in the rock or temporary casing installation with concrete at the time the shaft concrete is placed. In association with the construction of drilled piers, consider the time of construction. We recommend the construction methods assure the drilled shaft excavation is not left open overnight prior to placing of concrete.

We estimate total settlement for drilled pier foundations using the recommended design soil bearing pressure and side friction values, as described above, will be about one-half-inch. The settlement will be from a small component of elastic compression of the drilled pier (less than one-quarter-inch) and settlement of the pier to mobilize side friction and end bearing. We estimate differential settlements between piers to be about one-half the total settlement. We base the settlement estimates on the available boring information, the estimated structural loads, our experience with similar structures and soil/rock conditions, and field verification of suitable bearing material by SME.

We recommend using a minimum design spacing of at least three pier diameters between adjacent piers (center-to-center) within a group. A minimum of three drilled piers per foundation are recommended for lateral stability. The use of closer pier spacing would require additional evaluation of the group effect. We recommend the bottom of any exterior pier caps (if pier caps are used) and grade beams be situated a minimum of 24 inches below final site grades (for frost protection). The use of a single drilled pier embedded into rock is acceptable so long as the single pier meets necessary uplift resistance, lateral stability, fixity, and axial bearing pressure requirements.

SME can provide lateral analyses for a select number of drilled piers upon request. Provision of structural loading conditions, pier diameters, and anticipated pier lengths will be required to perform these additional analyses.

4.3.4.2 OPTION 2 – SPREAD FOOTINGS ON RIGID INCLUSIONS (RIS)

Grouted column elements known as rigid inclusions (RIs) can be used to improve soil bearing conditions and reduce concerns associated with shallow spread footing foundation and/or slab support in karst terrain. RIs provide a significant risk reduction of loss of support when used below foundations or slabs while also increasing the load-carrying capability of the foundations or slabs. We recommend RIs be considered at least in areas of critical processes, where heavier slab supported equipment is proposed, and in areas with low tolerance for poor slab performance or cracking, and/or where risk associated with karst related subsidence cannot be tolerated.

The grouted columns are installed with specially designed augers, powered by equipment with large torque capacity and high static down thrust, which displaces the soil laterally, with virtually no spoil or vibration, which is also beneficial from a special handling and disposal standpoint. The augers are extended through the natural soils and until rock is encountered, creating a cylindrical space in the ground. During the auger extraction process, the column is filled with a cement-based grout under pressure. The diameter, spacing, and pressure-grouting procedures for the grouted column elements are designed to achieve a predetermined stiffness ratio with the surrounding soil. The result is a composite soil/cement ground improvement system. A load transfer platform as described is required for floor slabs supported on rigid inclusions. This load transfer platform may consist of a compacted aggregate (possibly geogrid reinforced) mat, a chemically stabilized subgrade, or a bulb of compacted stone placed above each RI location. Note that RI designs are proprietary and design methodologies vary.

Natural obstructions (e.g., cobbles) can affect penetration of the augers resulting in the potential need for additional columns or possibly redesign of foundations. Planning for rigid inclusions should include a method of measurement and payment for grouted column elements that encounter obstructions and for direct excavation of obstructions, where feasible, and backfilling these excavations to permit ground improvement. In some cases, installation of additional rigid inclusions could be necessary to improve soils around obstructed rigid inclusions, where excavation of the obstruction is not feasible. Such conditions should be evaluated and resolved on a case-by-case basis, during construction.

Additional analysis and design will be required to achieve the optimum combination of the rigid inclusion elements and design bearing pressure and estimation of foundation and/or slab settlement. SME can provide in-house design services for RI's upon request. In general, we expect settlements will generally be elastic in nature and related to axial compression of the pile elements where pile elements are designed to bear on rock. The testing criteria should be performed as outlined in the RI contractor's work plan. Again, SME can assist in the development of the work plan and/or recommend an appropriate testing and verification program. SME can also prepare a performance specification and assist with selection of a qualified specialty contractor, if desired.

4.3.5 INTERIOR EQUIPMENT FOUNDATIONS

We understand that the development may include additional structures or stamping equipment that will be supported on reinforced concrete mat foundations, although no further information regarding possible structures or equipment was provided at the time this report was prepared. We understand that these structures, equipment, and associated foundations may be supported at grade, or within below-grade pits.

It is assumed that these foundations will be isolated from the adjacent floor slab, main building structure foundation system, and below grade wall foundations. We have provided two options below for equipment foundations based upon our understanding of project details, each with varying levels of risk associated with construction on karst terrain.

4.3.5.1 OPTION 1 – MAT FOUNDATIONS ON DRILLED PIERS OR RIGID INCLUSIONS

The equipment foundations could be supported on drilled piers or on a rigid inclusion system per our previous recommendation for foundations. Again, this option would incur a higher initial cost than a mat foundation supported on an improved subgrade, but the drilled piers or RIs would be expected to mitigate much of the risk associated with potential sinkhole dropouts, and possible global settlement associated with the grade-raise fill. However, it should be noted that RIs are typically only minimally reinforced (or not reinforced). If the design requires resisting lateral forces, then it may be necessary to use reinforced auger cast piles, or drilled piers, for structural support.

A closer RI spacing may be required for areas where heavier equipment will be supported or where minimal settlement is tolerable. Settlement for mat foundations supported on an RI improved subgrade is expected to be minimal and general would be related to elastic compression of the grouted pile elements. The actual estimated settlement would be determined by the RI design/installer. Information and recommendations for deep foundations are provided in Section 4.3.4.

4.3.5.2 OPTION 2 – MAT FOUNDATIONS ON NATURAL SUBGRADE

As an alternative to supporting equipment foundations on piers or RIs, the mats could be supported on exposed suitable clay subgrade as discussed in Section 4.4.4.3 of this report. **Note that mats supported on improved subgrade are expected to exhibit improved uniform load carrying capacity (compared to an unimproved subgrade) but will incur the same risk of premature loss of serviceability for structure foundations and floor slabs supported in the same manner.**

We estimate that maximum settlement below mat foundations supported on natural suitable clays will be approximate 0.5 inch (as was referenced for floor slab areas) based upon the same considerations previously discussed for floor slabs. Note that our analysis of mat foundations assumes a maximum average contact pressure of 500 psf and assumes that mats will either be constructed in areas not impacted by grade-raise fill placement or where construction will not occur until after the settlement monitoring period has concluded as determined by the geotechnical engineer. Therefore, if mat foundations are proposed in areas where grade-raise fill is required, they must be supported by piers or RIs.

Contact SME should any of the design information be changed (including distributed loads for mat foundations and/or anticipated site grading/ building FFE) so that our recommendations can be revised accordingly.

4.3.5.3 GENERAL MAT FOUNDATION CONSIDERATIONS

A net allowable soil bearing pressure not exceeding 500 psf is suitable for mat foundations placed on improved subgrade as previously described overlying native stiff soils. The design bearing pressure provided above is based on a minimum factor-of-safety (FS) of 3, which is typical for mats bearing on natural lean clay soils. The actual bearing pressure even with additional dynamic loads are not expected to exceed the allowable bearing pressure. Note that an increased design bearing pressure could be considered, if necessary, provided that additional design details (including foundation contact pressure and plan dimensions) are provided.

Design of the mat foundations are typically not controlled by allowable soil pressure because the allowable bearing pressure is usually much larger than the net static contact pressure below the foundation. Thus, subgrade reaction theory is often utilized to design semi-rigid mat foundations, as observed settlements are generally elastic in nature. A vertical modulus of subgrade reaction (k_v) of 100 pounds per cubic-inch (pci) may be utilized in the analysis based on correlations with soil type developed from plate load tests conducted using a 1-foot square plate. Depending on how the mat foundation is analyzed, the vertical subgrade modulus may need to be modified based upon the loads and anticipated mat geometry.

A minimum factor of safety equal to 1.5 is used for sliding resistance. A friction coefficient of 0.30 can be utilized for calculating sliding resistance. Consider casting foundations directly against the soil (i.e., earth formed) for improved sliding and passive resistance.

The recommended allowable bearing pressure can be increased to 10,000 psf for mat foundations that are fully rock supported. Any pockets of soil or rock pinnacles or cutters are effectively removed down to rock and lean concrete having a minimum compressive strength of 3,000 psi is utilized to provide a level, uniform bearing surface. Remove any loose rock encountered at the bearing elevation and effectively clean out any soil filled or open crevices/grikes with slush grout. A friction factor of 0.60 can be used for mat foundations supported directly on limestone or lean concrete overlying limestone.

Since the mat foundation is expected to be comparatively rigid (i.e., designed for minimal flexure), we anticipate differential settlement across the mat foundation will be also relatively small and generally less than about one-quarter the total settlement (assuming uniform subsurface support). Deflections across the mat due to loads implied by structural elements are a function of the stiffness of the mat, the stiffness of the supporting subgrade soils, and the magnitude and locations of the applied loads. An analysis of the deflections across the mat due to the applied loads is typically performed by the structural engineer using an analytical computer program using the subgrade modulus to determine the reaction of the bearing soils.

4.3.5.4 FOUNDATION VIBRATION CONSIDERATIONS

We understand that stamping presses may be incorporated into the proposed plant operation. However, the anticipated location, bearing elevations, dimensions, and/or mat structural loading were not provided at the time of this report. SME can provide additional information, additional design parameters, including dynamic shear modulus, spring and damping constants, and Poisson's Ratio once this information has been provided.

A detailed soil-structure interaction analysis that considers impedances and dynamic response of the foundation was not performed as part of this evaluation. We assume that equipment foundations will be structurally isolated from the floor slab and other foundations.

Impedances (stiffness and damping) for vibration analysis are typically obtained using modeling software. Calculated amplitudes should not exceed the allowable vibration for the foundation system. An improperly designed foundation system may experience premature cracking and loss of serviceability if equipment induced vibrations are not considered in the structural design. The horizontal boundary for vibrating soils should be evaluated to minimize effects on adjacent machinery, racking systems, or other features that could be negatively impacted.

4.4 BELOW-GRADE STRUCTURE CONSIDERATIONS

At the time this report was prepared, SME was not provided with locations, depths, or any other specifics of pits and associated below grade walls, or other walls retaining soils (such as for below grade truck docks) pertaining to the project. Therefore, the following sections are intended to provide general considerations for design and construction of below grade structures only.

We understand the development may include below grade pits and associated walls inside of the main building, and (depressed) truck loading docks.

4.4.1 TEMPORARY EARTH RETENTION SYSTEMS

Depending on the depth, location, and lateral extent of proposed pits, utilization of open cut, sloped, and/or benched excavations may not be feasible at all proposed pit structure locations. At locations where adequate excavation slopes cannot be maintained during construction, a temporary earth retention system (TERS) will be necessary to support the excavation. Possible TERS may include steel sheeting, excavation bracing, soldier piles with lagging, and/ or soil nails.

The design of TERS depends upon several design-focused variables (e.g., minimum setback/space requirements, design load combinations, etc.) that need to be considered in selecting an appropriate system. The design must also consider construction sequencing to achieve a completed (built) product that is implemented in harmony with the overall progress of construction.

Steel sheet piles or other approved earth retention methods should be used where excavations are close to critical or sensitive structures or utilities. Drilling, rather than driving, may also be necessary to minimize construction vibrations. The design of the earth retention system and any required bracing is typically performed by the contractor's engineer and will be based on economy as well as geometric and ground conditions. Temporary earth retention must be designed by a licensed professional engineer in the State of Kentucky and must be installed by a qualified contractor. In some cases, additional geotechnical information could be required.

The performance of the TERS must also consider limiting the movements of nearby structures and site improvements. Consideration should be given to how installation and extraction of sheeting will affect nearby structures and underground utilities. Strict settlement/movement criteria will need to be assigned for underpinning and TERS supporting structures (especially those sensitive to movements), whereas less-stringent criteria may be adequate for a TERS that is only supporting non-structural subgrade. The limits on settlement/movement, as well as the specific type of system and sequencing required, will need to be determined by the design engineer on a case-by-case basis.

Pre-existing and post-construction condition surveys could be considered to document conditions of adjacent structures and utilities prior to and after performing the work, particularly if there are nearby structures that are more susceptible to damage from vibrations. Vibration monitoring should also be considered if the work will be performed near sensitive structures or if large magnitude vibrations are noted during construction.

Please contact SME for more information regarding TERS design services, condition surveys, or vibration monitoring during construction.

4.4.1.1 TEMPORARY GROUNDWATER CONTROL

SME has not been provided with specific below grade structure locations or depths at the time this report was prepared. Based on the borings, groundwater may be encountered, depending on the anticipated excavation depth. Groundwater control is necessary to reduce the potential for disturbance to the subgrade and to permit construction in dry conditions. The specific dewatering operations will depend on the rate and volume of groundwater flow as estimated and determined in the field by the dewatering contractor. Note that groundwater flow in limestone dominated geology is complicated by the presence of fracture zones and solution conduits within the rock. Thus, locations of sporadic or intense spring discharge (or interception of substantial groundwater flow paths) may be encountered during excavations extending into rock.

While seasonal fluctuations in the groundwater levels have not been evaluated at the time this report was prepared, the contractor needs to be prepared to dewater as necessary to provide stable and dry conditions for construction of below grade structures. Installation of TERS may reduce groundwater seepage but will not eliminate it and therefore should not be considered a primary solution for control of groundwater seepage. The dewatering technique utilized needs to be established based on the actual observed groundwater conditions.

We anticipate standard sump pit and pump methods should generally be adequate to control groundwater on a localized and temporary basis for excavations above the groundwater level. For excavations extending below the groundwater level, expect to encounter heavier flows that will require higher capacity (and continuous) dewatering techniques such as wellpoints or submersible pumps in slotted casings (wells). If higher capacity dewatering methods are used, an evaluation of the potential effect of the anticipated groundwater drawdown on adjacent structures should be performed. The contractor should be required to employ and demonstrate methods to resist "sanding" or loss of fine soil from around the wells, and to provide monitoring of sanding.

The dewatering system(s) will need to remain in operation until construction is sufficiently above the site groundwater levels and provisions to combat buoyancy effects are in-place.

Even after dewatering, the exposed soil subgrade can remain in a wet condition and can be sensitive to disturbances. In such cases, it may be necessary to undercut soft or disturbed subgrade to encounter suitable, undisturbed subgrade, and then backfill the undercut excavation with a layer of crushed aggregate or crushed concrete as discussed in Section 4.2.3. We recommend an SME representative be on-site during construction to identify unsuitable subgrade conditions requiring remediation, document subgrade improvement activities performed by the contractor, and verify subgrade for support.

The final design of the dewatering system is typically the responsibility of the contractor and their geotechnical engineer. We would be pleased to assist in the development of a performance-based specification or design for this portion of the project, if requested.

4.4.2 BELOW-GRADE WALLS

4.4.2.1 WALL FOUNDATIONS

The below-grade pit and recessed truck docks walls will be subjected to lateral loads from retained soil behind the walls. We have assumed these walls will bear on shallow continuous (wall) foundations over suitable bearing media (i.e., completely on suitable soils, completely on rock, or on lean concrete backfill after undercutting to rock) suitable for the recommended design soil or rock bearing pressures (which will depend on the proposed depth of the below grade features, and subsequently, the proposed wall foundation bearing elevation) as provided in Section 4.3.3 of this report.

Additionally, the walls need to be designed to effectively support the overburden weight of soil backfill, and additional lateral pressures due to surcharge loading; such as, anticipated equipment foundation loads, floor or column loads, and transient loads adjacent to the walls. With pavements sloping toward depressed truck docks, drainage will be especially important for suitable performance of the walls.

4.4.2.2 WALL BACKFILL

For the proposed below grade walls associated with pits, we recommend the wall backfill immediately behind or against the wall consist of an open-graded well-draining granular material (e.g., KYTC No. 57 crushed limestone aggregate) compacted as engineered fill within a zone extending 2 vertical to 1 horizontal from the base of the excavation (refer to the image below). Properly prepared and compacted clays can be used as excavation backfill (provided it is prepared and placed in accordance with the engineered fill section of this report) outside the 2 vertical to 1 horizontal zone.

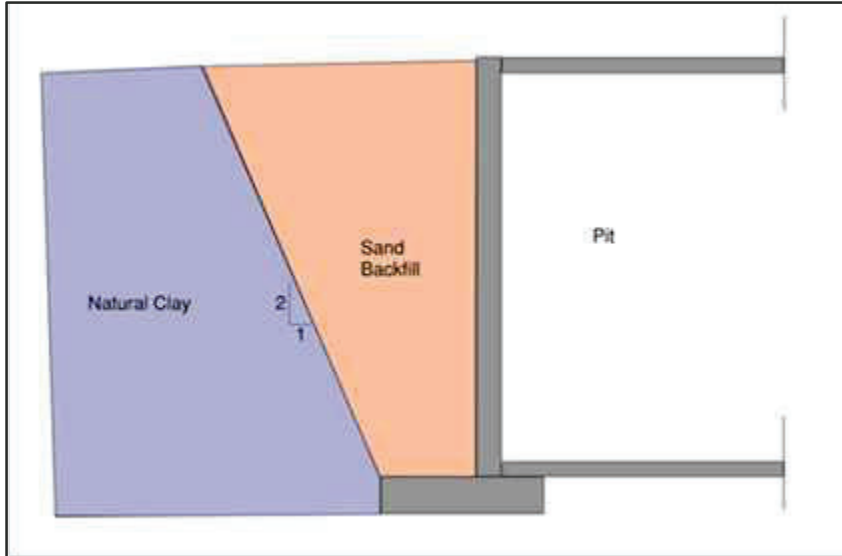


IMAGE NO. 37: Zone Of Granular Backfill For Pit Excavations

For below-grade truck dock walls, we recommend the wall backfill immediately behind or against the wall (recommended to extend a minimum of 12 inches behind the wall) consist of an open-graded well-draining granular material (e.g. KYTC graded structural backfill with a maximum nominal diameter of 1-inch and containing no more than 8 percent passing the No. 200 sieve) compacted as engineered fill. To limit water infiltration into the granular backfill behind the walls, the upper 1 to 2 feet of the backfill should consist of a compacted clay cap, covered with topsoil or an impermeable surface such as concrete or pavement as appropriate. A properly weighted woven filter fabric should be used to provide separation of the crushed limestone aggregate from the soil adjacent soil subgrade.

Exercise care during compaction of the wall backfill to avoid overstressing the walls. If required, walls must be designed to accommodate the additional stresses associated with operating compaction equipment adjacent to the wall.

4.4.2.3 LATERAL EARTH PRESSURES AND SLIDING RESISTANCE

Provided an open-graded granular material is used as backfill, a unit weight of 120 pounds per cubic foot (pcf) and a friction angle of 33 degrees can be considered for design purposes.

Where walls are designed to be rigid walls or restrained so they do not rotate sufficiently to permit the lower condition to be reached, an at-rest lateral earth pressure coefficient (K_0) of 0.45, a passive lateral earth pressure coefficient (K_p) of 3.4, and an equivalent fluid at-rest pressure of 57 psf per foot of wall height is recommend for calculating the lateral earth pressures. This equivalent fluid pressure would increase linearly from zero psf at the ground surface, to a maximum at the base of the wall.

When considering utilizing active earth pressures for design, the wall must move laterally about $0.004H$ (where H equals the wall height) for active earth pressures to be fully developed. If adequate rotation is expected to permit the lower active earth pressure (K_a) condition to be reached, an active lateral earth pressure coefficient (K_a) of 0.30 and an equivalent fluid at-rest pressure of 45 psf per foot of wall height is recommend for calculating the lateral earth pressures. This equivalent fluid pressure would increase linearly from zero psf at the ground surface, to a maximum at the base of the wall. If active earth pressures are not fully mobilized, use the at-rest lateral earth pressure coefficient.

When considering utilizing passive earth pressures for design, the wall must move laterally about $0.04H$ (where H equals the wall height) for passive earth pressures to be fully developed.

Additional lateral pressures due to surcharge loading must be added to the above lateral earth pressures for design. Surcharge loads need to be modeled as a uniform pressure distribution applied to the entire wall height. We recommend using a horizontal coefficient for at-rest conditions, anticipating the below-grade walls will be held rigid, to calculate loads on walls due to surcharges.

Sliding or shear resistance along the base of wall foundations may also be used to resist horizontal loads. A friction coefficient of 0.30 can be used to calculate sliding resistance for footings bearing on natural clays or lean clay fill. This coefficient can be increased to 0.45 for foundations bearing on compacted DGA, and to 0.60 for foundations supported directly on limestone. A minimum factor of safety equal to 1.5 is recommended to determine sliding resistance.

4.4.2.4 DRAINAGE

Based on the borings performed for this evaluation, the subgrade consists primarily of clays. Groundwater could accumulate over time within the relatively permeable granular wall backfill, which would be confined by the surrounding relatively impermeable clays. Groundwater accumulations within the backfill could potentially result in hydrostatic pressures acting on the below-grade walls and hydrostatic uplift pressures acting on the recessed structures.

The earth pressures presented above are for a drained wall backfill. To reduce the potential for the build-up of hydrostatic pressure behind the below-grade walls, we recommend foundation drains be installed along the sides of the walls retaining soil. We recommend the foundation drains consist of a minimum 6-inch diameter perforated plastic drainpipe, wrapped with a filter fabric (e.g. Mirafi® 140N or 160N) and surrounded by 6 inches of a filter material, such as KYTC No. 57 crushed stone wrapped with a filter fabric.

The drains must be connected to a sump pump system or discharged into an appropriate gravity drainage outlet, where feasible. We recommend the design include provisions for access to the drains for cleaning and maintenance (i.e., clean-outs). Properly designed waterproofing membranes should also be considered to reduce the potential for water infiltration into machine pits. The installation and maintenance of a long-term drainage system is critical for the facility and must be included behind any below-grade walls. Roof downspouts must not be discharged onto the ground surface above the walls.

4.5 SEISMIC SITE CLASS

Based on the subsurface information obtained from the borings which were advanced to refusal and our experience in the general area, we estimate that seismic site Class C applies to the building in accordance with the 2018 Kentucky Building Code (3rd Edition) referencing Table 20.3-1 in ASCE Standard ASCE/SEI 7. Our estimation of Seismic Site Class C is based on an average soil/rock shear wave velocity of at least 1,200 feet per second (fps) to a depth of 100 feet with a soil profile of less than about 25 feet in thickness.

We understand that the development may include structures/ equipment located in below grade pits. We estimate that a seismic Site Class B may apply to some of the proposed structures, depending on the location and depth of these structures and pits. The seismic classification will be structure dependent and will depend upon the existing soil and rock conditions at the proposed structure locations, as well the proposed grading.

4.6 PRELIMINARY ROCK EXCAVATION CONSIDERATIONS

Ability to excavate the rock (i.e., rippability or excavatability) will be dependent on the type, condition, and quality of the rock. Our preliminary assessment of ability to excavate the rock is based upon information obtained from the borings, the limited rock coring, the laboratory testing, and our experience with similar site conditions in the project vicinity.

It is our opinion that the near-surface weathered limestone would likely be categorized as Rippability Class 4 or 5. Thus, it is expected that the underlying limestone cannot be easily excavated without use of blasting or hoe-ramming. Blasting is likely not feasible due to the proximity to developments, roadways, and existing underground infrastructure. Therefore, very heavy-duty ripping equipment fitted with a ripping tool will likely be required to remove limestone slabs broken during excavation. It is possible that excavators may penetrate through the rock disintegration zone (RDZ) to the refusal depths noted on the boring logs with some difficulty, but the penetration is expected to be minimal at best.

Non-explosive rock breaking methods using hydraulic splitting or expansive chemical agents could also be considered as an alternative. These methods are typically not cost effective compared to conventional blasting on large scale projects, but do offer the advantage of less noise, ground disturbance, and potential for property damage compared to conventional blasting or hoe-ramming.

A more comprehensive and thorough assessment of rippability/excavatability would require performance of additional rock coring at specific locations where rock excavation is anticipated and/or seismic shear-wave velocity evaluation, which was beyond the scope of this limited evaluation.

4.7 STORMWATER MANAGEMENT BASIN DESIGN

4.7.1 INFILTRATION CONSIDERATIONS

SME performed two infiltration tests (IT1 and IT2) as part of this evaluation. The table below summarizes the locations, depths, and elevations of the infiltration tests. Refer to the Infiltrometer Test Data Sheets included in Appendix B. The approximate infiltration test locations are depicted on the attached Boring Location Diagrams (Figure Nos. 1 and 2). The table below also includes the USCS Group Symbol based on our visual classification of the soil present at the infiltration test depth based on a collected sample of auger cuttings. Refer to Appendix B for field testing procedures.

DOUBLE-RING INFILTRMETER FIELD TEST DATA

INFILTRATION TEST LOCATION	TEST DEPTH (FEET)	TEST ELEVATION ⁽¹⁾ (FEET +/-)	USCS GROUP SYMBOL	MEASURED INFILTRATION RATE (INCH/HR) ⁽²⁾	RECOMMENDED INFILTRATION RATE (INCH/HR)
IT1	2.3	719.7	CL	0	0
IT2	9.3	719.2	CH	0	0

NOTES

1. Corresponding elevation based on estimated ground surface elevation approximated from the provided topographic survey. Elevations are rounded to the nearest half foot.
2. Infiltration rate is based on the final interval after a stabilized rate was obtained.

No information regarding the proposed stormwater management basin was provided but based on the infiltration testing elevations requested by L&F, we assume the basin bottom will range from about elevation 719 feet to 721 feet. The soil conditions near the assumed base of the proposed basin consisted predominantly of lean clay, lean to fat clay, or fat clay soils. The infiltration tests indicate an infiltration rate of 0 inches per hour. Further considerations regarding proposed stormwater management are discussed in the following section.

4.7.2 STORMWATER RETENTION DESIGN CONSIDERATIONS

Some of the borings performed for this evaluation encountered groundwater during or upon completion of drilling. Site planning and the proposed grading plan should consider the possibility of encountering groundwater during excavation for the stormwater basin.

Based on the infiltration tests, the site clays are estimated to have relatively low permeability characteristics. Therefore, we generally consider this site to not be suitable for infiltration due to the relatively impermeable nature of the clayey subgrade.

For basins that provide stormwater storage and do not rely on percolation and instead on retention or temporary detention, we recommend a minimum 2-foot-thick compacted clay layer at the bottom of the basin to minimize water infiltration and soil loss into fractures within the rock. Utilization of clay is especially important where shallow rock is encountered and retention/detention is required. Undercutting of rock and replacement with the compacted clay liner may be necessary based on the actual soil/rock conditions and the planned basin bottom. Increase the clay cap thickness by at least 2 inches per foot of impounded water depth where the impounded water depth exceeds 10 feet. The native clay soils can be mixed with bentonite to increase soil plasticity and further reduce water infiltration. If the basin is not designed to maintain a normal pool, the clay liner should be capped with a minimum of 12 inches of topsoil and vegetated or covered with gravel to further discourage infiltration and reduce the potential for desiccation cracking (which can contribute to sinkhole dropouts) during the dry season. A synthetic liner can be utilized in-lieu of a clay liner and can provide additional resistance to formation of sinkhole dropouts or leaks, which can occur in karst areas despite implementation of best management practices.

Depending on the depth of the basin and the proposed grading, we recommend a slope stability analysis be performed prior to construction of the basin.

4.8 SOIL CORROSIVITY

SME performed corrosion analyses on five bulk soil samples. Soluble sulfate, chloride, and pH tests were performed by mixing the soil with distilled water and a mixture of two parts of distilled water to one-part soil. Electrical resistivity testing was performed using a Miller multi-combination meter with a Miller soil box. The resistivity of the soil was tested at the in-situ moisture content and at a saturated condition. The laboratory test results from our corrosion analysis are summarized below with full reports found in Appendix B.

LABORATORY CORROSION TEST RESULTS SUMMARY

BORING NO., DEPTH, AND SOIL TYPE (USCS)	IN-SITU MOISTURE CONTENT (PERCENT)	SOLUBLE CHLORIDE S (ppm)	SOLUBLE SULFATES (ppm)	CONDUCTIVITY (uS/CM)	PH	RESISTIVITY (OHM-CM)	
						NATURAL MOISTURE CONTENT	SATURATED
B16 5 – 7 Lean Clay (CL)	22	16.3	17	75.25	4.99	11,000	10,000
B25 8 – 10 Fat Clay (CH)	27	20.0	22.6	244.20	7.08	1,600	1,200
B32 5 – 7 Lean Clay (CL)	24	15.4	6.8	60.21	5.08	12,000	11,000
B51 2 – 4 Lean Clay (CL)	22	20.0	7.4	180.30	7.31	3,200	2,000
B63 2 – 4 Silty Clay (CL/ML)	20	24.5	5.6	99.70	5.85	7,100	6,400

Refer to the tables below regarding suggested corrosion ratings.

SOIL RESISTIVITY CORROSIVITY RATING

SOIL RESISTIVITY (OHM-CM)	CORROSIVITY RATING
>10,000	Mildly corrosive
2,001 – 10,000	Moderately corrosive
1,001 – 2,000	Corrosive
0 to 1,000	Severely corrosive

NOTES: Underground Corrosion: NBS Circular 579. Reprinted by NACE. Houston, TX, 1989 pp. 166-167.

Based on the resistivity laboratory test results, we consider the tested onsite native soils to be mildly corrosive to corrosive to ferrous metals.

Per ACI 318-14, Table 19.3.1.1, (presented below) the sulfate level in the tested sample categorizes as S0 for corrosion of metals and cement. Based on the table, the corrosion protection of reinforcement exposed to the tested sample categorizes as C2 based on the high likelihood the concrete will be exposed to moisture and external sources of chlorides (i.e., deicing chemicals, salt, etc.). The chloride levels are considered corrosive to metals. The pH concentrations of the tested samples are judged to be acidic to neutral. Appropriate pipe SAE grades for underground steel should be selected based on the test results (e.g., pH, resistivity, and chlorides) provided above. The toleration of any buried steel pipes or other buried steel elements is dependent on the steel alloy utilized.

ACI 318 (Table 19.3.1.1) EXPOSURE CATEGORIES AND CLASSES

CATEGORY	CLASS	CONDITION	
Sulfate (S)		Water-soluble sulfate (SO ₄ ²⁻) in soil, percent by mass ⁽¹⁾	Dissolved sulfate (SO ₄ ²⁻) in water, ppm ⁽²⁾
	S0	SO ₄ ²⁻ < 0.10	SO ₄ ²⁻ < 150
	S1	0.10 ≤ SO ₄ ²⁻ < 0.20	150 ≤ SO ₄ ²⁻ < 1500 or seawater
	S2	0.20 ≤ SO ₄ ²⁻ ≤ 2.00	1500 ≤ SO ₄ ²⁻ ≤ 10,000
	S3	SO ₄ ²⁻ > 2.00	SO ₄ ²⁻ > 10,000
Corrosion Protection of Reinforcement (C)	C0	Concrete dry or protected from moisture	
	C1	Concrete exposed to moisture but not to an external source of chlorides	
	C2	Concrete exposed to moisture and an external source of chlorides from deicing chemicals, salt, brackish water, seawater, or spray from these sources	

NOTES: Table 19.3.1.1 from ACI 318R-14 Chapter 9.

(1) Percent sulfate by mass in soil shall be determined by ASTM C1580.

(2) Concentration of dissolved sulfates in water, in ppm, shall be determined by ASTM D512 or ASTM D4130.

Metallic conduits, pipelines, and other below-grade structures in contact with the clayey subgrade can potentially experience aggressive corrosion. Where practical, we recommend locating metallic conduits/structures away from areas exposed to or impacted by road salts as they can increase the chloride concentrations in the soil over time. Metallic conduits, pipelines, and other below-grade structures in contact with the clay subgrade and/or poorly draining granular soils (if used as site fills) or shallow groundwater can potentially experience aggressive corrosion. Balance the risk of failure due to corrosion against the type of corrosion protection used. For critical utilities or structures (i.e., underground storage tanks, natural gas lines, fire protection lines, etc.) in contact with onsite clays, a high level of corrosion protection (such as cathodic protection) may be warranted. In general, cover buried metallic structures using a suitable coating material and surround the structures with a well-draining granular backfill and underdrain(s) (where applicable) to promote drainage in the area. Do not place the following materials adjacent to buried metallic utilities: topsoil, organic soils, undocumented fill, clay, silt, mixtures of sand and clay, and/or other deleterious materials.

Electrically isolate buried utilities of different metallic construction from each other to minimize galvanic corrosion problems. In addition, isolate new piping and conduits electrically from existing ones so the older metallic structure will not increase the rate of corrosion of the new structures.

We recommend normal Type I/II cement be used for foundation and floor slab construction. Additional soil corrosivity testing is recommended on any imported soils to be used as engineered fill to verify the corrosivity potential of those soils is acceptable.

4.9 PAVEMENT DESIGN RECOMMENDATIONS

SME was not provided with anticipated traffic conditions, including the types of vehicles utilizing the site pavements, the average daily traffic (ADT), and axle loading configurations at the time this report was prepared. Therefore, the pavement design recommendations of this report are limited to general recommendations for subgrade preparation, with the assumption that SME will provide recommendations for pavement sections, asphalt and concrete materials, and drainage once we have been provided with additional information.

4.9.1 SUBGRADE PREPARATION FOR PAVEMENTS

Based on the borings, we expect the exposed subgrade soils at the design subgrade level in the pavement areas (which we assume will be near elevation 752 feet) will consist mostly of lean clay, lean to fat clay, and fat clay. Subgrades need to be prepared in accordance with Section 4.2.3 of this report and as follows. Subgrade preparation and the aggregate base layers need to extend out to at least 18 inches beyond the edge of pavement or beyond the back of curbs to provide support for the outer edges of pavement.

After stripping surficial materials, cutting to design subgrade levels, removing/replacing any organics or deleterious materials, but prior to raising grades, compact the upper 12 inches of the exposed subgrade to a minimum of 100 percent of the maximum dry density determined by the Standard Proctor test. Proofroll the resulting subgrade using a fully loaded tandem axle dump truck. Improve areas exhibiting deflection greater than 1/2 inch as described in Section 4.2.3. Place and compact engineered fill as presented in Section 4.2.5.

The subgrade must be uniformly graded and sloped similar to the proposed pavement surface to provide proper drainage of the pavement system into an appropriate drainage outlet. Fine-grading of the underlying subgrade will be critical to minimize low-spots below the aggregate base where water can pond, likely resulting in moisture fluctuations of the subgrade and undesirable early pavement distress. Fine grading the subgrade is important for drainage of perched groundwater, and to achieve a uniform thickness of base course to be placed throughout the pavement section. Surrounding areas of greenspace need to be graded to provide drainage away from the pavement system. Also, we recommend installing underdrains at/through low spots in the prepared subgrade to facilitate drainage of perched groundwater. Additional recommendations for pavement drainage are provided in Section 4.9.2.

Prior to placement of the aggregate base, proofroll the subgrade again and repair any areas of disturbed or unstable subgrade identified by proofrolling. Once the subgrade passes the final proofroll test, we recommend fine grading the subgrade again and then placing the pavement layers soon thereafter to avoid further subgrade disturbance. Place and compact aggregate base to a minimum of 100 percent of the maximum dry density determined by the Standard Proctor test. Just prior to placing the pavement layers, proofroll the aggregate base and recompact areas exhibiting deflection greater than 1/4 inch as described in Section 4.2.3. Place and compact engineered fill as presented in Section 4.2.5.

Limit construction traffic on the prepared subgrade once the aggregate base layer is placed. Use designated haul roads and staging areas for heavy construction vehicles and equipment/materials storage. Haul roads should be constructed using a layer of crushed stone, possibly in combination with a high-strength woven geotextile fabric or geogrid, if necessary to stabilize and protect the subgrade. Contact SME for assistance with the type and quantity of stabilization required based on field conditions during construction.

4.9.2 PAVEMENT DRAINAGE CONSIDERATIONS

The pavement system must be properly drained to reduce the potential of frost heaving and softening of the subgrade due to water infiltrating through cracks. In general, we recommend constructing a pavement with a minimum of 1.5 percent surface slope to promote positive drainage. Additionally, we recommend sloping the surrounding ground surface away from pavements to improve surface drainage.

For subsurface drainage, we recommend installing underdrains. The installation of underdrains underlying pavement sections founded over low permeability soils (as observed at this site) will generally aid in improving long-term performance of the pavement sections, as well as helping reduce pavement maintenance costs. Therefore, we recommend that at each catch basin, a series of underdrains be installed that consist of a minimum 25 feet long section of underdrain installed in four directions.

Curb inlets (if provided) should have 25 feet long sections of underdrains installed in a minimum of two directions to provide subsurface drainage. Furthermore, cut-off drains should be installed along the

perimeter of the pavement where adjacent ground surface elevations slope towards the pavement. Other areas of strategically placed additional underdrains might also be beneficial at this site.

We recommend the drain trenches be excavated to a minimum depth of 18 inches below the bottom of the aggregate base be at least 12-inches wide. The trench should be wrapped in a non-woven geotextile fabric (e.g., Mirafi® 180N, or approved equal) and backfilled with KYTC No. 57 crushed limestone. The underdrains should consist of a minimum 6 inch corrugated perforated PVC pipe bedded on a minimum 3 inches of KYTC No. 57 crushed limestone, and the fabric should be overlapped on top of the trench. The trench should be backfilled to the proposed bottom elevation of the aggregate base course and the fabric should be suitably overlapped on top of the trench in the prepared subgrade. Though not in the scope of our services, SME can be retained to provide layout recommendations for underdrain placement upon request.

5. EXCAVATION AND GROUNDWATER MANAGEMENT

Typical site excavations are not anticipated to extend below the depth of groundwater; however, water seepage into shallow foundation and utility excavations should be anticipated during construction. We anticipate standard sump pit and pump methods should generally be adequate to control groundwater on a localized and temporary basis for excavations, as needed.

The near-surface soils present at the site are moisture sensitive and susceptible to disturbance if they become wet and are trafficked by construction equipment. It will likely be more difficult and costly to attempt construction at this site during periods of seasonally cooler and/or wet weather. The warmer summer months will be the optimal time period to perform earthwork activities at this site in order to reduce disturbance of the existing soils, and the need for undercutting of disturbed materials and subgrade remediation. Subgrade stabilization using coarse crushed aggregates and geo-fabrics, and construction of dedicated construction roads, may be necessary to facilitate construction at this site. If subgrade preparation occurs during periods of adverse weather, chemical subgrade modification or stabilization could help reduce subgrade disturbance.

The contractor must protect adjacent existing buildings, utilities, and roadways during construction of the proposed building and site improvements. During the excavating and compacting operations, excessive vibrations should not cause settlement of the existing buildings, utilities, and roadways, and the contractor should avoid undermining existing buildings, utilities, and roadways. Excavations should not extend below existing foundations without first properly underpinning or shoring the existing foundations. In areas where there is insufficient space to temporarily slope back excavations in accordance with applicable regulations, TERS will be required during construction. Underpinning, shoring and earth retention systems should be designed by a qualified professional engineer, and installed by a contractor experienced with construction of these systems.

The contractor must provide safely sloped excavations or an adequately constructed and braced shoring system in accordance with federal, state, and local safety regulations for individuals working in an excavation that may expose them to the danger of moving ground. If material is stored or heavy equipment is operated near an excavation, use appropriate shoring to resist the extra pressure due to the superimposed loads.

Handling, transportation, and disposal of excavated materials and groundwater should be performed in accordance with applicable environmental regulations.

6. EVALUATION PROCEDURES

6.1 GEOTECHNICAL FIELD EXPLORATION

6.1.1 BORINGS

The proposed number and locations of the borings was determined by L&F, and the proposed depth of the borings was determined by SME. SME located the borings in field using our hand-held GPS. The elevations referenced in this report and included on the boring logs are rounded to the nearest 1/2-foot and were approximated using the provided topographic survey.

The borings were advanced using a rotary drill rig equipped with continuous flight augers. The borings included soil sampling based on Split-Barrel Sampling procedures. Shelby Tube samples and bulk samples consisting of 5-gallon buckets and 1-gallon bags were also obtained where noted. Rock cores were obtained from select borings using a double-tube NQ2 core barrel with a diamond-tipped bit via the wireline method.

Groundwater level measurements were recorded during and immediately after completion of each boring. After completion of drilling and obtaining groundwater level measurements, the boreholes were backfilled with auger cuttings.

The Field Testing Procedures in Appendix B provides more detailed descriptions of field tests typically performed by SME and referenced in this report.

Soil and rock samples recovered from the field exploration were taken to our laboratory for further observations and testing.

Upon completion of the laboratory testing, boring logs were prepared and include the soil and rock descriptions, penetration resistances, pertinent field observations, and the results of the laboratory testing. Each log also includes the estimated existing ground surface elevation. Explanations of symbols and terms used on the boring logs are provided on the Boring Log Terminology sheet included in Appendix A. Additionally, the logs include our qualitative assessment of recovered rock core specimens including sample recovery, RQD, RMR, and GSI.

Soil and rock samples are normally retained in our laboratory for 60 days and are then disposed, unless instructed otherwise.

6.1.2 INFILTRATION TESTING

The boreholes to perform the infiltration tests were advanced using a rotary drill rig. The infiltration test generally followed the double-ring infiltrometer field test procedures outlined in ASTM D3385-09 titled "Standard Test Method for Infiltration Rate of Soils in Field Using Double Ring Infiltrometer", with some modifications.

After the boreholes were performed to achieve the infiltration test depths, a 6-inch-diameter PVC outer casing (standpipe) and a 4-inch-diameter inner casing (standpipe) were inserted into the boreholes and used to perform the infiltration test. The casings were seated about two inches into the subgrade at the bottom of the prepared boreholes. About two inches of gravel was added inside the casings to prevent subgrade disturbance when adding water to the standpipes. To conduct the infiltration tests, the test soil was pre-soaked by filling both standpipes with about 12-inches of water. The water was observed to drain (i.e., drop) within the inner standpipe at a rate less than 2 inches per 30 minutes during the presoaking period. After pre-soaking, about 12-inches of water was maintained in both standpipes, and the water level drop in the standpipes was recorded after 30-minute time intervals. This procedure was repeated for eight test intervals. The water level drop within the center standpipe that was recorded during the final time interval was used to calculate the infiltration rate.

After completion of the infiltration test, the standpipes were removed and the boreholes used to conduct the infiltration tests were backfilled with auger cuttings mixed with bentonite chips.

6.2 LABORATORY TESTING

The laboratory testing program consisted of visually classifying the recovered samples in accordance with ASTM D-2488. Based on the laboratory testing, we prepared soil descriptions and assigned a group symbol for the various soil strata observed based on the Unified Soil Classification System (USCS). In addition, moisture content and hand penetrometer tests were performed on portions of cohesive samples obtained. Additional laboratory tests included:

- Two three-point California Bearing Ratio (CBR) tests.
- Two one-dimensional consolidation tests.
- Four Standard Proctor compaction tests.
- Five Grain Size Analyses.
- Eight Atterberg Limits tests.
- Soil corrosivity on five bulk samples, which included:
 - pH Analysis.
 - Conductivity.
 - Sulfate content.
 - Chloride content.
 - Soil box resistivity.
- Twelve unit weight (natural density) tests.
- One organic content test.
- Ten unconfined compressive strength tests on recovered rock core specimens.

The Laboratory Testing Procedures in Appendix B provides descriptions of the laboratory tests. The results of the laboratory tests are presented on the boring logs and included in Appendix A.

7. SIGNATURES

PREPARED BY:

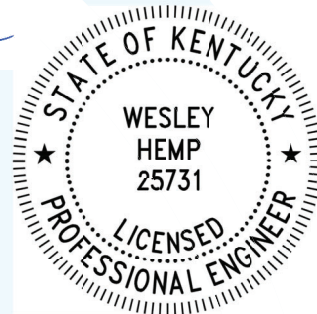


Alex M. Dodson, EI
Senior Staff Engineer

REVIEWED BY:



Wesley J. Hemp, PE, PG, BC.CE, LEED AP
Regional Leader/ Senior Consultant



APPENDIX A

BORING LOCATION DIAGRAMS (FIGURE NOS. 1 AND 2)

BORING LOG TERMINOLOGY

BORING LOGS (B1 THROUGH B64)

HISTORIC TOPOGRAPHIC MAPS (FIGURE NOS. 3 THROUGH 8)

HISTORIC AERIAL IMAGERY (FIGURE NOS. 9 THROUGH 18)



Project
GREENFIELD SITE DEVELOPMENT

Project Location
LOUISVILLE, KENTUCKY

Sheet Name
BORING LOCATION DIAGRAM

No.	Revision Date

Date
1-23-2026

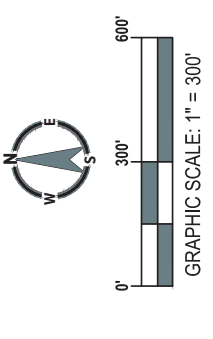
CADD
M. NOWAK-ROCHFORD

Designer
A. DODSON

Project
102074.00

Figure No.
1

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LEGEND

- APPROXIMATE BORING LOCATION
- APPROXIMATE INFILTRATION TEST LOCATION



LOCATION MAP
NOT TO SCALE

NOTE:
1. AERIAL IMAGE TAKEN FROM NEARMAP WITH AN IMAGE DATE OF 9-13-2025.





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Project
GREENFIELD SITE DEVELOPMENT

Project Location
LOUISVILLE, KENTUCKY

Sheet Name
BORING LOCATION DIAGRAM

No. **Revision Date**

Date **1-23-2026**

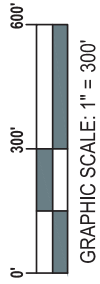
CADD **M. NOWAK-ROCHFORD**

Designer **A. DODSON**

Project **102074.00**

Figure No. **2**

DRAWINGS ARE SCALE-DERIVED (SHEET SIZE 60B 11" X 17")
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NO REPRODUCTION SHALL BE MADE WITHOUT THE PRIOR
CONSENT OF SME.



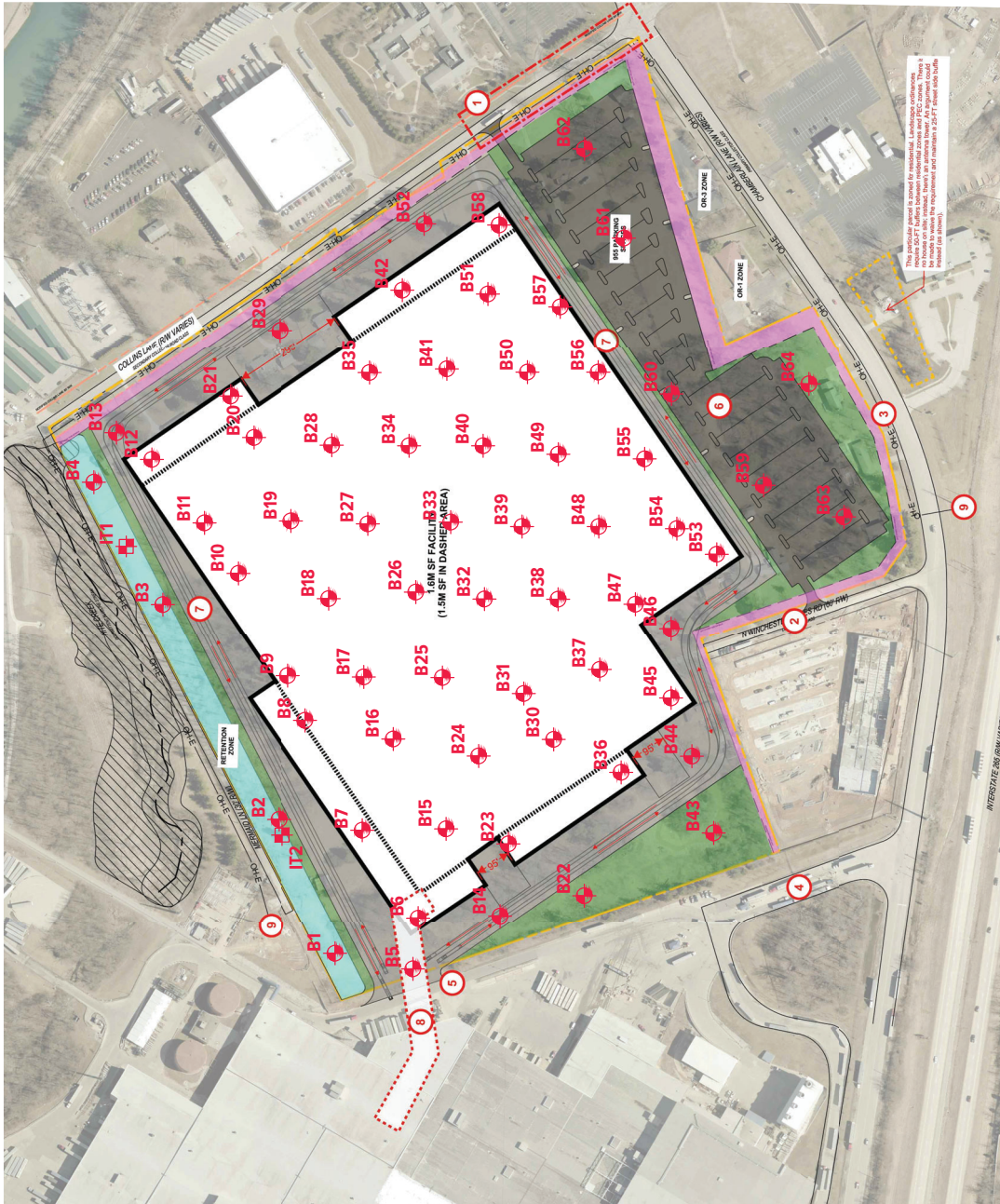
LEGEND

- APPROXIMATE BORING LOCATION
- APPROXIMATE INFILTRATION TEST LOCATION



LOCATION MAP
NOT TO SCALE

- NOTES:**
- BASE DRAWING INFORMATION TAKEN FROM A DRAWING TITLED "ADVANCED SITE DEVELOPMENT PLAN" (EXHIBIT A) WITH A LATEST REVISION DATE OF 9-10-2025. PREPARED BY LUCKETT & FARLEY.
 - AERIAL IMAGE TAKEN FROM NEARMAP WITH AN IMAGE DATE OF 9-13-2025.





BORING LOG TERMINOLOGY

UNIFIED SOIL CLASSIFICATION AND SYMBOL CHART		
COARSE-GRAINED SOIL (more than 50% of material is larger than No. 200 sieve size.)		
Clean Gravel (Less than 5% fines)		
GRAVEL More than 50% of coarse fraction larger than No. 4 sieve size		GW Well-graded gravel; gravel-sand mixtures, little or no fines
		GP Poorly-graded gravel; gravel-sand mixtures, little or no fines
	Gravel with fines (More than 12% fines)	
		GM Silty gravel; gravel-sand-silt mixtures
		GC Clayey gravel; gravel-sand-clay mixtures
Clean Sand (Less than 5% fines)		
SAND 50% or more of coarse fraction smaller than No. 4 sieve size		SW Well-graded sand; sand-gravel mixtures, little or no fines
		SP Poorly graded sand; sand-gravel mixtures, little or no fines
	Sand with fines (More than 12% fines)	
		SM Silty sand; sand-silt-gravel mixtures
		SC Clayey sand; sand-clay-gravel mixtures
FINE-GRAINED SOIL (50% or more of material is smaller than No. 200 sieve size)		
SILT AND CLAY Liquid limit less than 50%		ML Inorganic silt; sandy silt or gravelly silt with slight plasticity
		CL Inorganic clay of low plasticity; lean clay, sandy clay, gravelly clay
		OL Organic silt and organic clay of low plasticity
SILT AND CLAY Liquid limit 50% or greater		MH Inorganic silt of high plasticity, elastic silt
		CH Inorganic clay of high plasticity, fat clay
		OH Organic silt and organic clay of high plasticity
HIGHLY ORGANIC SOIL		PT Peat and other highly organic soil

OTHER MATERIAL SYMBOLS		

LABORATORY CLASSIFICATION CRITERIA	
GW	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_c = \frac{D_{30}^2}{D_{10} \times D_{60}}$ between 1 and 3
GP	Not meeting all gradation requirements for GW
GM	Atterberg limits below "A" line or PI less than 4
GC	Atterberg limits above "A" line with PI greater than 7
SW	$C_u = \frac{D_{60}}{D_{10}}$ greater than 6; $C_c = \frac{D_{30}^2}{D_{10} \times D_{60}}$ between 1 and 3
SP	Not meeting all gradation requirements for SW
SM	Atterberg limits below "A" line or PI less than 4
SC	Atterberg limits above "A" line with PI greater than 7

Determine percentages of sand and gravel from grain-size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows:

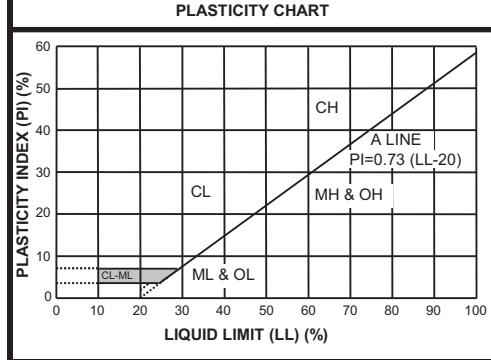
Less than 5 percent.....GW, GP, SW, SP
 More than 12 percent.....GM, GC, SM, SC
 5 to 12 percent.....Cases requiring dual symbols

- SP-SM or SW-SM (SAND with Silt or SAND with Silt and Gravel)
- SP-SC or SW-SC (SAND with Clay or SAND with Clay and Gravel)
- GP-GM or GW-GM (GRAVEL with Silt or GRAVEL with Silt and Sand)
- GP-GC or GW-GC (GRAVEL with Clay or GRAVEL with Clay and Sand)

If the fines are CL-ML:

- SC-SM (SILTY CLAYEY SAND or SILTY CLAYEY SAND with Gravel)
- SM-SC (CLAYEY SILTY SAND or CLAYEY SILTY SAND with Gravel)
- GC-GM (SILTY CLAYEY GRAVEL or SILTY CLAYEY GRAVEL with Sand)

PARTICLE SIZES	
Boulders	- Greater than 12 inches
Cobbles	- 3 inches to 12 inches
Gravel- Coarse	- 3/4 inches to 3 inches
Fine	- No. 4 to 3/4 inches
Sand- Coarse	- No. 10 to No. 4
Medium	- No. 40 to No. 10
Fine	- No. 200 to No. 40
Silt and Clay	- Less than (0.074 mm)



VISUAL MANUAL PROCEDURE
When laboratory tests are not performed to confirm the classification of soils exhibiting borderline classifications, the two possible classifications would be separated with a slash, as follows:
For soils where it is difficult to distinguish if it is a coarse or fine-grained soil:
<ul style="list-style-type: none"> • SC/CL (CLAYEY SAND to Sandy LEAN CLAY) • SM/ML (SILTY SAND to Sandy SILT) • GC/CL (CLAYEY GRAVEL to Gravelly LEAN CLAY) • GM/ML (SILTY GRAVEL to Gravelly SILT)
For soils where it is difficult to distinguish if it is sand or gravel, poorly or well-graded sand or gravel; silt or clay; or plastic or non-plastic silt or clay:
<ul style="list-style-type: none"> • SP/GP or SW/GW (SAND with Gravel to GRAVEL with Sand) • SC/GC (CLAYEY SAND with Gravel to CLAYEY GRAVEL with Sand) • SM/GM (SILTY SAND with Gravel to SILTY GRAVEL with Sand) • SW/SP (SAND or SAND with Gravel) • GP/GW (GRAVEL or GRAVEL with Sand) • SC/SM (CLAYEY to SILTY SAND) • GM/GC (SILTY to CLAYEY GRAVEL) • CL/ML (SILTY CLAY) • ML/CL (CLAYEY SILT) • CH/MH (FAT CLAY to ELASTIC SILT) • CL/CH (LEAN to FAT CLAY) • MH/ML (ELASTIC SILT to SILT)

DRILLING AND SAMPLING ABBREVIATIONS	
2ST	- Shelby Tube - 2" O.D.
3ST	- Shelby Tube - 3" O.D.
AS	- Auger Sample
GS	- Grab Sample
LS	- Liner Sample
NR	- No Recovery
PM	- Pressuremeter
RC	- Rock Core diamond bit. NX size, except where noted
SB	- Split Barrel Sample 1-3/8" I.D., 2" O.D., except where noted
VS	- Vane Shear
WS	- Wash Sample

OTHER ABBREVIATIONS	
WOH	- Weight of Hammer
WOR	- Weight of Rods
SP	- Soil Probe
PID	- Photo Ionization Device
FID	- Flame Ionization Device

DEPOSITIONAL FEATURES	
Parting	- as much as 1/16 inch thick
Seam	- 1/16 inch to 1/2 inch thick
Layer	- 1/2 inch to 12 inches thick
Stratum	- greater than 12 inches thick
Pocket	- deposit of limited lateral extent
Lens	- lenticular deposit
Hardpan/Till	- an unstratified, consolidated or cemented mixture of clay, silt, sand and/or gravel, the size/shape of the constituents vary widely
Lacustrine	- soil deposited by lake water
Mottled	- soil irregularly marked with spots of different colors that vary in number and size
Varved	- alternating partings or seams of silt and/or clay
Occasional	- one or less per foot of thickness
Frequent	- more than one per foot of thickness
Interbedded	- strata of soil or beds of rock lying between or alternating with other strata of a different nature

DESCRIPTION OF RELATIVE QUANTITIES	
The visual-manual procedure uses the following terms to describe the relative quantities of notable foreign materials, gravel, sand or fines:	
Trace	- particles are present but estimated to be less than 5%
Few	- 5 to 10%
Little	- 15 to 25%
Some	- 30 to 45%
Mostly	- 50 to 100%

CLASSIFICATION TERMINOLOGY AND CORRELATIONS			
Cohesionless Soils		Cohesive Soils	
Relative Density	N₆₀ (N-Value) (Blows per foot)	Consistency	N₆₀ (N-Value) (Blows per foot)
Very Loose	0 to 4	Very Soft	<2
Loose	5 to 10	Soft	2 - 4
Medium Dense	11 to 30	Medium	5 - 8
Dense	31 to 50	Stiff	9 - 15
Very Dense	51 to 80	Very Stiff	16 - 30
Extremely Dense	Over 81	Hard	> 30
		Undrained Shear Strength (kips/ft²)	
		< 0.25 or less	
		> 0.25 to 0.50	
		> 0.50 to 1.0	
		> 1.0 to 2.0	
		> 2.0 to 4.0	
		> 4.0 or greater	

Standard Penetration 'N-Value' = Blows per foot of a 140-pound hammer falling 30 inches on a 2-inch O.D. split barrel sampler, except where noted. N60 values as reported on boring logs represent raw N-values corrected for hammer efficiency only.

3/19/26 8:49:34 AM



BORING B 1

PAGE 1 OF 1

BORING DEPTH: 25 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/13/26

COMPLETED: 1/13/26

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)	▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ⊕ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
								90	100			
738.4	0.6		7 inches of AGGREGATE and Asphalt Millings	SB1	15	7	10		17		4.5+	
737.0	2.0		LEAN CLAY- Brown- Stiff to Hard (CL)	SB2	24	5	10		25			
735	5		LEAN CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff to Very Stiff (CL)	SB3	13	4	9		25			
731.0	8.0		FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff to Very Stiff (CH)	SB4	24	6	14		26			
725	15		FAT CLAY- Frequent Black Oxide Nodules- Orangish Brown and Black Mottled- Very Stiff to Hard (CH)	SB5	18	5	16		27			
720.5	18.5		FAT CLAY- Frequent Black Oxide Nodules- Orangish Brown and Black Mottled- Very Stiff to Hard (CH)	SB6	18	10	21		27		4.5+	
715.5	23.5		Sandy LEAN CLAY with Completely Weathered Limestone Fragments- Brown- Very Soft (CL)	SB7	18	0	50+		48			Sample SB7 too disturbed for shear strength testing.
714.0	24.5		Completely Weathered LIMESTONE- Brown- Hard			0						Auger refusal at 25 feet.
710	25.0		END OF BORING AT 25.0 FEET.			50/5"						

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	Not Encountered	
▽ AT END OF BORING:	Note 3	
CAVE-IN OF BOREHOLE AT:	5.0	734.0
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater not encountered above cave in depth.

3/19/26 8:49:35 AM



BORING B 2

PAGE 1 OF 1

BORING DEPTH: 22.5 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/20/26

COMPLETED: 1/20/26

BORING METHOD: Hollow Stem Augers/NQ2 Core

DRILLER: RM (Mathes Drilling)

RIG NO.: B-53 (ATV)

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■			MOISTURE & ATTERBERG LIMITS (%)			REMARKS
								90	100	110	120	PL	MC	
	0		LATITUDE: 38.29234 LONGITUDE: -85.52319 ELEVATION: 729.5± FT											
	1.0		12 inches of AGGREGATE and Asphalt Millings	SB1		7	6							
	2.0		LEAN CLAY- Occasional Roots- Brown- Medium (CL)	SB2		2	7							
	5.0		LEAN CLAY- Occasional Black Oxide Nodules- Brown- Medium to Stiff (CL)	SB3		5	15							
	10.0		FAT CLAY- Frequent Black Oxide Nodules- Brown, Tan, and Black Mottled- Stiff to Very Stiff (CH)	SB4		5	18							
	12.5		END OF BORING AT 22.5 FEET.											
	15.0		Slightly Weathered LIMESTONE- Fossiliferous- Occasional Stylolites- Fractured to Moderately Fractured- Light Gray to Medium Gray	RC1	119									Auger refusal at 12.5 feet. RC1: (12.5'-22.5') REC = 99% RQD = 69% GSI = 50 to 60 RMR = 60
	22.5													

GROUNDWATER & BACKFILL INFORMATION
GROUNDWATER WAS NOT ENCOUNTERED
BACKFILL METHOD: Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B 3

PAGE 1 OF 1

BORING DEPTH: 7.9 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/16/26

COMPLETED: 1/16/26

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
								90	100	110	120		
720	0.3		4 inches of TOPSOIL										
719.0	2.0		LEAN CLAY- Occasional Roots- Brown and Gray Mottled- Very Soft to Medium (CL)	SB1	24	1				28		0.5	Loss-on-ignition (LOI) test performed on sample SB2 indicates an organics content of about 4.0 percent.
716.0	5.0		LEAN CLAY- Trace Organics- Brown and Gray Mottled- Soft to Medium (CL)	SB2	24	1			99	23		0.7	
715	7.6		LEAN to FAT CLAY- Trace Limestone Fragments- Brown and Gray Mottled- Medium to Stiff (CL/CH)	SB3	24	2				24			
713.1	7.9		Completely Weathered LIMESTONE- Gray- Hard	SB4	3	50/3"							Sample SB4 was too disturbed to perform a shear strength test. Sampler refusal at 7.9 feet.
END OF BORING AT 7.9 FEET.													

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	Not Encountered	
▽ AT END OF BORING:	Note 3	
CAVE-IN OF BOREHOLE AT:	4.0	717.0
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater not encountered above cave in depth.

3/19/26 8:49:38 AM



BORING B 4

PAGE 1 OF 1

BORING DEPTH: 1.6 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/22/25

COMPLETED: 12/22/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29369 LONGITUDE: -85.52016 ELEVATION: 722± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■				MOISTURE & ATTERBERG LIMITS (%)				REMARKS	
									90	100	110	120	PL	MC	LL	SH		
721.4	0.6			7.5 inches of TOPSOIL	SB1	16	1											
720.5	1.5			LEAN CLAY- Trace Completely			2											
720.4	1.6			Weathered Limestone Rock Flour- Occasional Roots- Brown- Soft (CL)			11											
720.4	1.6			Completely Weathered LIMESTONE- Brown- Hard			50/1"											
				END OF BORING AT 1.6 FEET.														

Blow count values increased due to limestone fragments. Sampler refusal at 1.6 feet.

GROUNDWATER & BACKFILL INFORMATION	
DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	Not Encountered
▽ AT END OF BORING:	Note 3
CAVE-IN OF BOREHOLE AT:	1.6 720.4
BACKFILL METHOD:	Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

3/19/26 8:49:40 AM



BORING B 5

PAGE 1 OF 1

BORING DEPTH: 26.2 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/18/26

COMPLETED: 1/18/26

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■				MOISTURE & ATTERBERG LIMITS (%)				REMARKS
								90	100	110	120	PL	MC	LL	SH	
742.0	0.5		6 inches of AGGREGATE and Asphalt Millings	SB1	10	6										
740.5	2.0		LEAN CLAY- Occasional Roots- Brown- Soft to Medium (CL)	SB2	15	1										
737.5	5.0		LEAN CLAY- Brown- Medium to Very Stiff (CL)	SB3	14	3										
735						5										
730						6										
729.0	13.5		LEAN to FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff to Very Stiff (CL/CH)	SB4	14	3										
725						4										
723.5	19.0		FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown and Tan Mottled- Very Stiff to Hard (CH)	SB5	18	7										
720						10										
719.0	23.5		FAT CLAY- Occasional Black Oxide Nodules- Orangish Brown and Tan Mottled- Very Stiff (CH)	SB6	18	6										
716.5	26.0		LEAN CLAY with Weathered Limestone Fragments- Dark Brown to Brown- Soft to Very Soft (CL)	SB7	2	3										
716.3	26.2		Completely Weathered LIMESTONE- Gray- Hard	SB8	12	0										
715			END OF BORING AT 26.2 FEET.			50/2"									Sample SB8 was too disturbed to perform a shear strength test. Sampler refusal at 26.2 feet.	

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	25.5	717.0
▽ AT END OF BORING:	Note 3	
CAVE-IN OF BOREHOLE AT:	4.0	738.5
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater not encountered above cave in depth.

RECEIVED May 22, 2026

Planning and Design

26-ZONE-0056

159

3/19/26 8:49:42 AM



BORING B 6

PAGE 1 OF 2

BORING DEPTH: 34.4 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/13/26

COMPLETED: 1/13/26

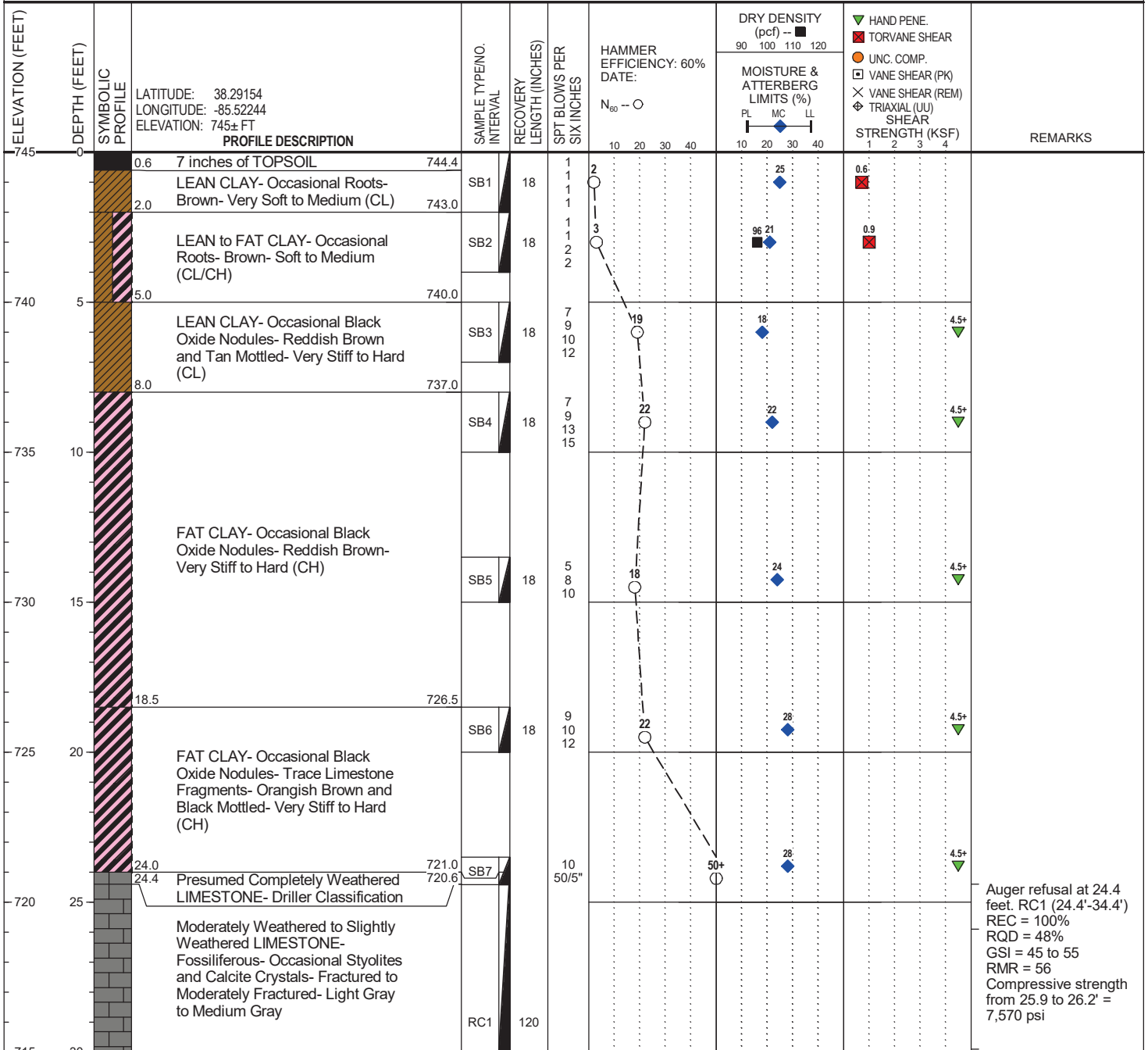
BORING METHOD: Hollow Stem Augers/NQ2 Core

DRILLER: RM (Mathes Drilling)

RIG NO.: B-53 (ATV)

LOGGED BY: A. Dodson

CHECKED BY: WH



Auger refusal at 24.4 feet. RC1 (24.4'-34.4')
 REC = 100%
 RQD = 48%
 GSI = 45 to 55
 RMR = 56
 Compressive strength from 25.9 to 26.2' = 7,570 psi

GROUNDWATER & BACKFILL INFORMATION

GROUNDWATER WAS NOT ENCOUNTERED

BACKFILL METHOD: Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

3/19/26 8:49:42 AM



BORING B 6

PAGE 2 OF 2

BORING DEPTH: 34.4 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29154 LONGITUDE: -85.52244 ELEVATION: 745± FT PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ - O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		<input type="checkbox"/> HAND PENE. <input checked="" type="checkbox"/> TORVANE SHEAR <input type="checkbox"/> UNC. COMP. <input type="checkbox"/> VANE SHEAR (PK) <input type="checkbox"/> VANE SHEAR (REM) <input type="checkbox"/> TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS	
								90	100	110	120			PL
715	30		Moderately Weathered to Slightly Weathered LIMESTONE- Fossiliferous- Occasional Styolites and Calcite Crystals- Fractured to Moderately Fractured- Light Gray to Medium Gray (continued)											Compressive strength from 29.9 to 30.2' = 7,570 psi
710	35	END OF BORING AT 34.4 FEET.												
705	40													
700	45													
695	50													
690	55													
685	60													
680	65													
675	70													

3/19/26 8:49:44 AM



BORING B 7

PAGE 1 OF 1

BORING DEPTH: 19.9 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/17/26

COMPLETED: 1/17/26

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29175 LONGITUDE: -85.52327 ELEVATION: 739.5± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
									90	100	110	120		
	0.6			7 inches of TOPSOIL										
	3.0			LEAN CLAY- Occasional Roots- Brown- Soft to Medium (CL)	SB1	20	2	4		26			0.8	
	5.0			LEAN CLAY- Occasional Black Oxide Nodules- Reddish Brown- Medium to Stiff (CL)	SB2	24	3	6		26			0.6	
735	8.0			FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff to Very Stiff (CH)	SB3	24	3	9		27				
	13.5			FAT CLAY- Trace Limestone Fragments- Orangish Brown and Black Mottled to Reddish Brown- Very Stiff to Hard (CH)	SB4	24	4	15		26				
730	18.7			LEAN CLAY- Brown- Very Soft (CL)	SB5	18	9	23		27			4.5+	
725	19.5			LEAN CLAY- Brown- Very Soft (CL)	SB6	12	2	52+		40				
720	19.9			Completely Weathered LIMESTONE- Brown and Gray- Hard			2	50/5"						N60=52+ Dry density=80pcf Sampler refusal at 19.9 feet.
				END OF BORING AT 19.9 FEET.										

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	Not Encountered	
▽ AT END OF BORING:	Note 3	
CAVE-IN OF BOREHOLE AT:	4.0	735.5
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater not encountered above cave in depth.

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BORING B 8

PAGE 1 OF 1

BORING DEPTH: 16.3 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/27/25

COMPLETED: 12/27/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
								90	100	110	120		
	0.4		4.5 inches of TOPSOIL										
740	2.0		LEAN CLAY- Occasional Roots- Brown- Very Soft to Soft (CL)	SB1	15	2				23		0.3	
				SB2	24	7				28			
735			LEAN CLAY- Occasional Black Oxide Nodules- Reddish Brown- Medium to Very Stiff (CL)	SB3	24	9				26			
				SB4	24	16				22			
730			FAT CLAY- Frequent Black Oxide Nodules- Reddish Brown and Black Mottled- Very Stiff (CH)										
				SB5	18	20				30			
725	16.1		FAT CLAY- Little Limestone Fragments- Brown- Stiff to Very Stiff (CH)										
	16.3		Completely Weathered LIMESTONE- Gray- Hard	SB6	2	50+ "							Sampler refusal at 16.3 feet.
			END OF BORING AT 16.3 FEET.										

GROUNDWATER & BACKFILL INFORMATION	
DEPTH (FT)	ELEV (FT)
▼ DURING BORING:	Not Encountered
▼ AT END OF BORING:	Note 3
CAVE-IN OF BOREHOLE AT:	2.0 739.0
BACKFILL METHOD:	Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

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BORING B 8A

PAGE 1 OF 1

BORING DEPTH: 15.5 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/23/26

COMPLETED: 1/23/26

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29216 LONGITUDE: -85.52256 ELEVATION: 741± FT PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■			MOISTURE & ATTERBERG LIMITS (%)			▼ HAND PENE. ■ TORVANE SHEAR ● UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS	
							90	100	110	120	PL	MC			LL
740	0														
735	5														Boring B8A offset approximately 5 feet from boring B8.
730	10														
725	15			3ST1	25										Shelby tube obtained from 13-15 feet.
720	20														
715	25														
710	30														

GROUNDWATER & BACKFILL INFORMATION

GROUNDWATER WAS NOT ENCOUNTERED

BACKFILL METHOD: Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B 9

PAGE 1 OF 1

BORING DEPTH: 16.2 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/27/25

COMPLETED: 12/27/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
								90	100	110	120		
	0.5		5.5 inches of TOPSOIL										
	2.0		LEAN CLAY- Occasional Roots- Brown- Soft to Medium (CL)	SB1	17.5	1	3			27			
735			FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Soft to Very Stiff (CH)	SB2	15	1	4			27			
							2						
							4						
	5			SB3	24	3	9			26			Samples SB2 and SB3: percent gravel = 0.5; percent sand = 8.3; percent silt = 45.2; percent clay = 46.0
						4							
						5							
730			LEAN CLAY- Frequent Black Oxide Nodules- Trace Limestone Fragments- Brown, Tan and Black Mottled- Stiff to Very Stiff (CL)	SB4	24	3	12			19			
							4						
						8							
						9							
725			FAT CLAY- Occasional Black Oxide Nodules- Little Limestone Fragments- Reddish Brown- Medium to Stiff (CL)	SB5	18	5	12			36			
							5						
						5							
						7							
	15		Completely Weathered LIMESTONE- Gray- Hard	SB6	2	5	50+						Sampler refusal at 16.2 feet.
							7						
	16.2		END OF BORING AT 16.2 FEET.										

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	Not Encountered	
▽ AT END OF BORING:	Note 3	
CAVE-IN OF BOREHOLE AT:	3.0	735.5
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

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Planning and Design

26-ZONE-0056

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BORING B10

PAGE 1 OF 1

BORING DEPTH: 24 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/17/26

COMPLETED: 1/17/26

BORING METHOD: Hollow Stem Augers/NQ2 Core

DRILLER: RM (Mathes Drilling)

RIG NO.: B-53 (ATV)

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29266 LONGITUDE: -85.52097 ELEVATION: 733± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ - O	DRY DENSITY (pcf) -- ■				MOISTURE & ATTERBERG LIMITS (%)				REMARKS	
									90	100	110	120	PL	MC	LL	LL		
730	0.7			8 inches of TOPSOIL														
730	2.0			LEAN CLAY- Occasional Roots- Brown- Soft to Medium (CL)	SB1													
730	5.0			LEAN CLAY- Frequent Black Oxide Nodules- Brown and Black Mottled- Stiff to Very Stiff (CL)	SB2													
725	8.0			FAT CLAY- Frequent Black Oxide Nodules- Brown and Black Mottled- Stiff to Very Stiff (CH)	SB3													
720	13.5			FAT CLAY- Occasional Black Oxide Nodules- Trace Limestone Fragments- Brown- Stiff to Very Stiff (CH)	SB4													
715	14.0			Completely Weathered LIMESTONE- Brown and Gray- Hard	SB5													
715	19.7			Highly to Moderately Weathered LIMESTONE- Pitted- Occasional Stylolites and Vertical Fractures- Highly Fractured to Fractured- Light Gray	RC1	116	50/5"											Auger refusal at 14 feet. RC1 (14'-24') REC = 97% From 14 to 19.7 feet RQD = 15% GSI = 35 to 45 RMR = 47
710	24.0			Slightly Weathered LIMESTONE- Pitted- Occasional Stylolites- Moderately Fractured to Slightly Fractured- Medium Gray														From 19.7 to 24 feet RQD = 83% GSI = 50 to 60 RMR = 64
705	25.0			END OF BORING AT 24.0 FEET.														

GROUNDWATER & BACKFILL INFORMATION	
GROUNDWATER WAS NOT ENCOUNTERED	
BACKFILL METHOD:	Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B11

PAGE 1 OF 1

BORING DEPTH: 8.6 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/22/25

COMPLETED: 12/22/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29290 LONGITUDE: -85.52052 ELEVATION: 730± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■			MOISTURE & ATTERBERG LIMITS (%)			REMARKS
									90	100	110	120	PL	MC	
730	0			11.5 inches of TOPSOIL											
	1.0			LEAN CLAY- Occasional Roots- Brown- Soft to Medium (CL)	SB1	22	2	2							
	2.0			LEAN CLAY- Occasional Black Oxide Nodules- Brown- Stiff to Very Stiff (CL)	SB2	21	1	18							
	5.0			LEAN CLAY- Frequent Black Oxide Nodules- Little Limestone Fragments- Brown, Gray and Black Mottled- Very Stiff to Hard (CL)	SB3	14	2	23							
	8.0			Completely Weathered LIMESTONE- Brown and Gray- Hard	SB4	1	6	50+							
	8.6			END OF BORING AT 8.6 FEET.											
	10			Sampler refusal at 8.6 feet.											

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	8.5	721.5
▽ AT END OF BORING:	Note 3	
CAVE-IN OF BOREHOLE AT:	4.0	726.0
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

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BORING B12

PAGE 1 OF 1

BORING DEPTH: 20 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/29/25

COMPLETED: 12/29/25

BORING METHOD: Hollow Stem Augers/NQ2 Core

DRILLER: RM (Mathes Drilling)

RIG NO.: B-53 (ATV)

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29328 LONGITUDE: -85.51995 ELEVATION: 732± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
									90	100	110	120		
730	0.8			10 inches of TOPSOIL	SB1	20	1	3						
730	5.0			LEAN CLAY- Occasional Roots- Brown- Soft to Medium (CL)	SB2	24	2	6	25			0.7		
725	6.0			LEAN CLAY- Occasional Black Oxide Nodules- Brown- Stiff to Very Stiff (CL)	SB3	24	4	12	18					
725	8.0			FAT CLAY- Occasional Black Oxide Nodules- Brown to Black Mottled- Stiff to Very Stiff (CH)	SB4	2	8	50+	26	47				
720	10.0			FAT CLAY- Occasional Black Oxide Nodules- Trace Limestone Fragments- Brown- Stiff (CH)										
720	20.0			Moderately to Slightly Weathered LIMESTONE- Pitted- Fossiliferous- Occasional Styolites and Calcite Crystals- Fractured to Slightly Fractured- Medium Gray to Light Gray	RC1	118							Blow count values increased due to presence of rock fragments. Auger refusal at 10 feet. RC1 (10'-20') REC = 98% RQD = 61% GSI = 45 to 55 RMR = 58 Compressive strength from 10.3 to 10.6' = 7,280 psi Compressive strength from 16.9 to 17.2' = 4,930 psi	
710	20.0			END OF BORING AT 20.0 FEET.										

GROUNDWATER & BACKFILL INFORMATION	
GROUNDWATER WAS NOT ENCOUNTERED	
BACKFILL METHOD:	Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B13

PAGE 1 OF 1

BORING DEPTH: 10.4 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/22/25

COMPLETED: 12/22/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29354 LONGITUDE: -85.51971 ELEVATION: 733± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF) 1 2 3 4	REMARKS
									90	100	110	120		
	0.7			8 inches of TOPSOIL										
	2.0			LEAN CLAY- Occasional Roots- Brown- Very Soft to Medium (CL)	SB1	21	2	2			25			
730				LEAN CLAY- Frequent Black Oxide Nodules- Brown and Black Mottled- Stiff to Very Stiff (CL)	SB2	21	1	19			20			
	5.0			LEAN to FAT CLAY- Frequent Black Oxide Nodules- Brown and Black Mottled- Very Stiff (CL/CH)	SB3	22	2	19			22			
725				LEAN CLAY- Brown- Medium to Stiff (CL)	SB4	24	3	5			33			
	9.9			Completely Weathered LIMESTONE- Brown and Gray- Hard	SB5	3	14	50+						
	10.4			END OF BORING AT 10.4 FEET.										Sampler refusal at 10.4 feet.

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	10.0	723.0
▽ AT END OF BORING:	Note 3	
CAVE-IN OF BOREHOLE AT:	3.7	729.3
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

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BORING B14

PAGE 1 OF 1

BORING DEPTH: 20.9 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/13/26

COMPLETED: 1/13/26

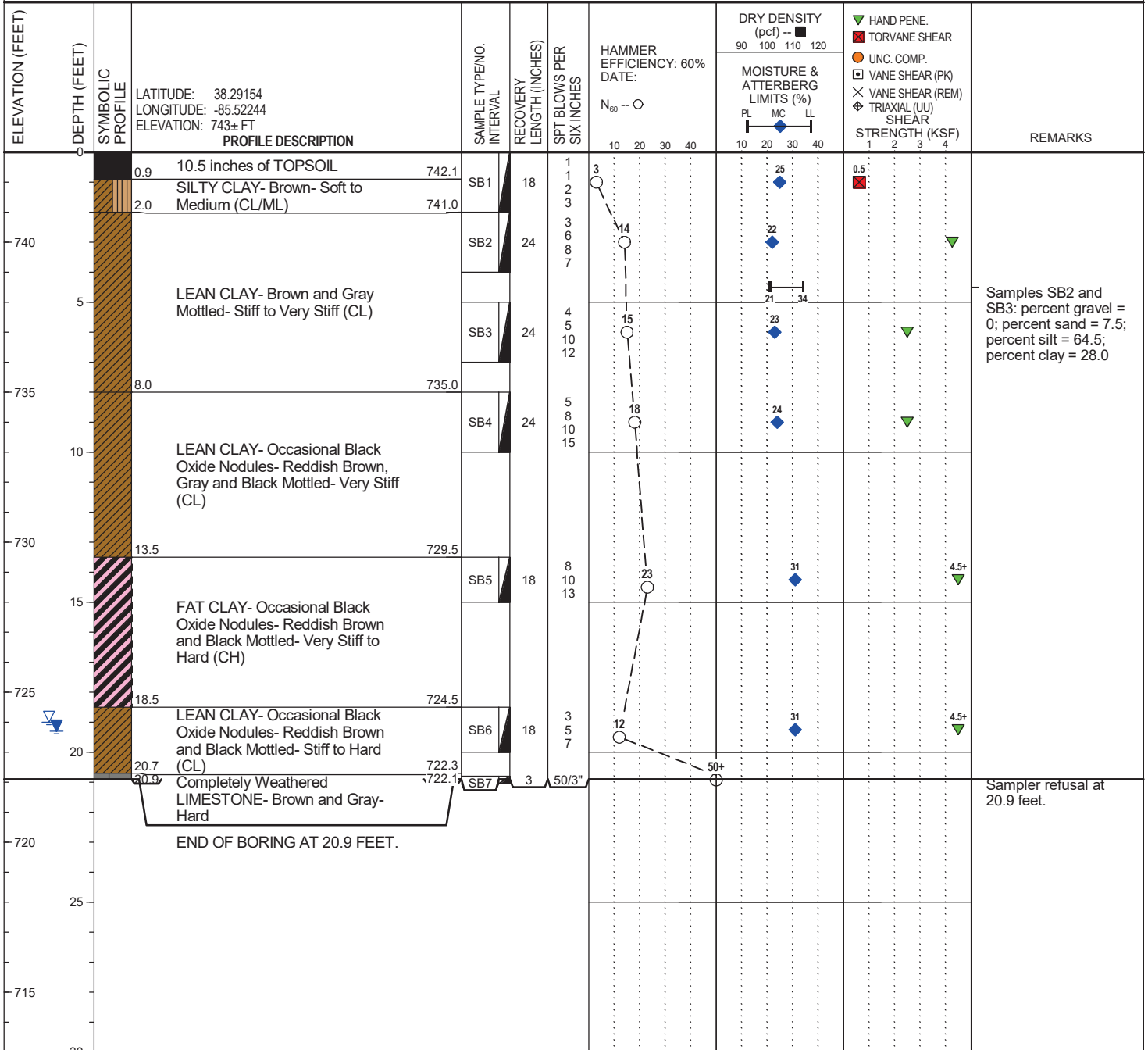
BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH



GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	19.0	724.0
▽ AT END OF BORING:	19.3	723.7
CAVE-IN OF BOREHOLE AT:	4.0	739.0
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B15

PAGE 1 OF 1

BORING DEPTH: 24.8 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/17/26

COMPLETED: 1/17/26

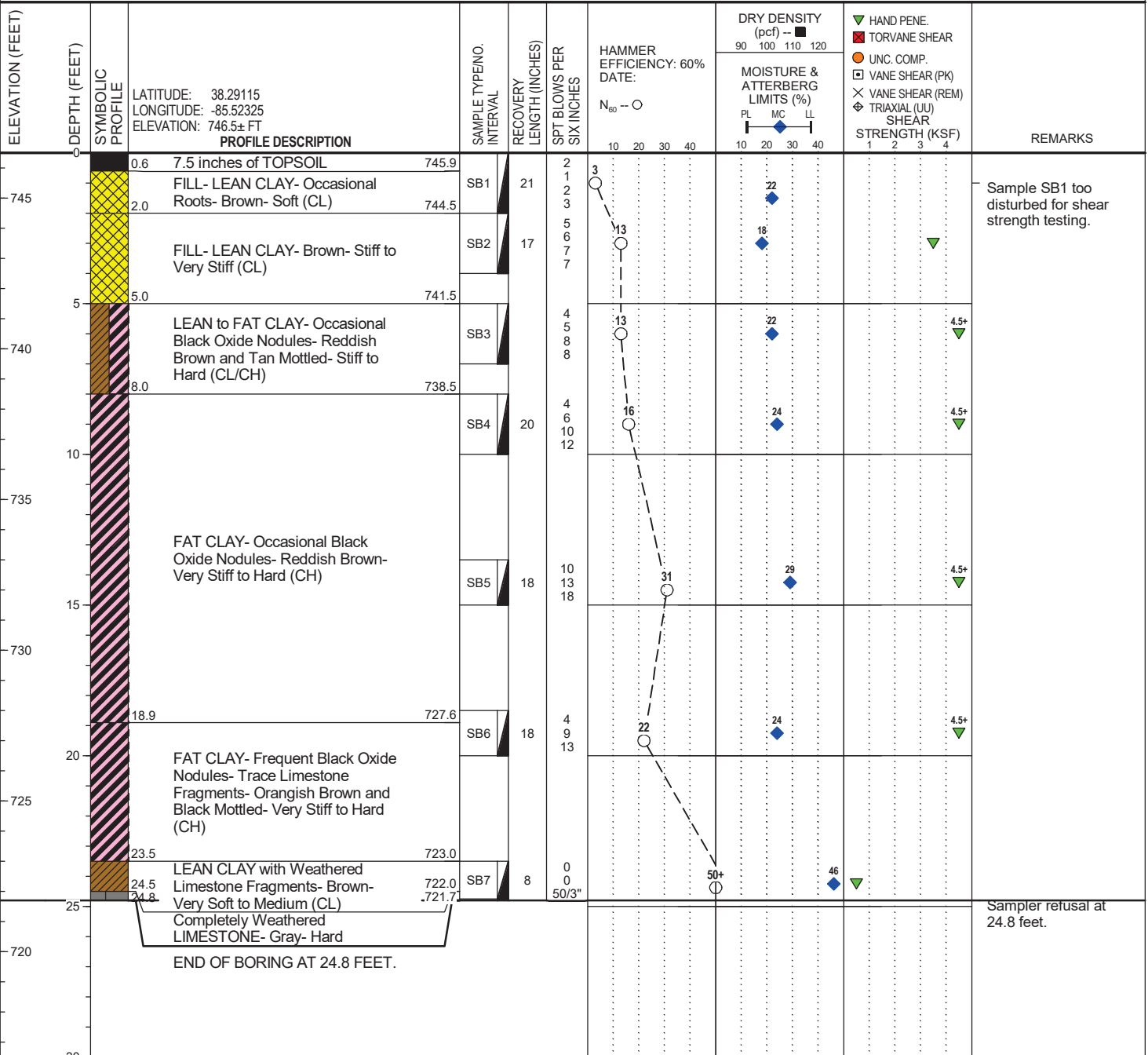
BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH



GROUNDWATER & BACKFILL INFORMATION DEPTH (FT) ELEV (FT) ▽ DURING BORING: Not Encountered ▽ AT END OF BORING: Note 3 CAVE-IN OF BOREHOLE AT: 5.0 741.5 BACKFILL METHOD: Auger Cuttings		NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual. 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered. 3. Groundwater was not encountered above the borehole cave in depth.
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3/19/26 8:50:02 AM



BORING B16

PAGE 1 OF 2

BORING DEPTH: 34.5 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/29/25

COMPLETED: 12/29/25

BORING METHOD: Hollow Stem Augers/NQ2 Core

DRILLER: RM (Mathes Drilling)

RIG NO.: B-53 (ATV)

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29150 LONGITUDE: -85.52239 ELEVATION: 747± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■			MOISTURE & ATTERBERG LIMITS (%)				REMARKS
									90	100	110	120	PL	MC	LL	
746.3	0.7	8 inches of TOPSOIL			SB1	24	1	5								
742.0	5.0	LEAN CLAY- Occasional Roots- Brown- Medium to Very Stiff (CL)			SB2	24	2, 3, 4	9								
739.0	8.0	LEAN CLAY- Occasional Black Oxide Nodules- Brown to Reddish Brown Mottled- Stiff to Hard (CL)			SB3	24	4, 5, 8	13							4.5+	
739.0	8.0	LEAN CLAY- Occasional Black Oxide Nodules- Brown to Reddish Brown Mottled- Stiff to Hard (CL)			SB4	24	4, 8, 8, 11	16							4.5+	
728.5	18.5	FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Very Stiff to Hard (CH)			SB5	18	5, 7, 13	20							4.5+	
724.0	23.0	FAT CLAY- Frequent Black Oxide Nodules- Orangish Brown and Black Mottled- Stiff to Very Stiff (CH)			SB6	18	4, 7, 7	14								
722.5	24.5	Weathered LIMESTONE - Drillers Classification			SB7	0										No recovery for sample SB7.
720		Moderately to Slightly Weathered LIMESTONE- Fossiliferous- Pitted- Occasional Styolites and Calcite Crystals- Fractured to Slightly Fractured- Medium Gray to Bluish Gray			RC1	120										Auger refusal at 24.5 feet. RC1 (24.5'-34.5') REC = 100% RQD = 83% GSI = 45 to 55 RMR = 62

GROUNDWATER & BACKFILL INFORMATION
GROUNDWATER WAS NOT ENCOUNTERED
BACKFILL METHOD: Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B16

PAGE 2 OF 2

BORING DEPTH: 34.5 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29150 LONGITUDE: -85.52239 ELEVATION: 747± FT PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)				STRENGTH (KSF)	REMARKS	
								90	100	PL	MC	LL	1			2
715	30		Moderately to Slightly Weathered LIMESTONE- Fossiliferous- Pitted- Occasional Styolites and Calcite Crystals- Fractured to Slightly Fractured- Medium Gray to Bluish Gray (continued)													
	34.5		END OF BORING AT 34.5 FEET.													
710																
705																
700																
695																
690																
685																
680																

3/19/26 8:50:04 AM



BORING B16A

PAGE 1 OF 1

BORING DEPTH: 15.5 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/21/26

COMPLETED: 1/22/26

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29150 LONGITUDE: -85.52239 ELEVATION: 747± FT PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■	MOISTURE & ATTERBERG LIMITS (%)	▼ HAND PENE. ■ TORVANE SHEAR ● UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF) 1 2 3 4	REMARKS
							90 100 110 120			
745	0									Boring B16A offset approximately 5 feet from boring B16.
740	5			GS1						Bulk sample obtained from 5-7 feet.
735	10			GS2						Bulk sample obtained from 8-13 feet.
730	15			3ST1	14					Shelby tube obtained from 13-15 feet.
725	20									
720	25									
715	30									

GROUNDWATER & BACKFILL INFORMATION

GROUNDWATER WAS NOT ENCOUNTERED

BACKFILL METHOD: Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

3/19/26 8:50:06 AM



BORING B17

PAGE 1 OF 1

BORING DEPTH: 21.6 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/19/25

COMPLETED: 12/19/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29175 LONGITUDE: -85.52189 ELEVATION: 746± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS	
									90	100	110	120			PL
745.0	0.0			12 inches of TOPSOIL											
744.0	2.0			LEAN CLAY- Brown- Very Soft to Medium (CL)	SB1	14	1	13			27		0.5	Odor noted in sample SB1.	
				LEAN to FAT CLAY- Occasional Roots and Black Oxide Nodules- Reddish Brown- Stiff to Hard (CL/CH)	SB2	24	2	18					4.5+		
740.0	5.0				SB3	18	3	17			22				4.5+
				FAT CLAY- Occasional Black Oxide Nodules- Little Limestone Fragments- Reddish Brown- Stiff to Very Stiff (CH)	SB4	22	4	14			23				
738.0	8.0				SB5	15	5	11			20				4.5+
				FAT CLAY- Frequent Black Oxide Nodules- Brown and Black Mottled- Very Stiff to Hard (CH)	SB6	14	6	11			28				
732.5	13.5				SB7	1	15	15	26						4.5+
727.5	18.5			FAT CLAY- Brown- Stiff to Very Stiff (CH)			4	11							
724.5	21.5			Completely Weathered LIMESTONE- Gray- Hard			5	6							
724.4	21.6			END OF BORING AT 21.6 FEET.			50/1"	50+						Sampler refusal at 21.6 feet.	

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	Not Encountered	
▽ AT END OF BORING:	Note 3	
CAVE-IN OF BOREHOLE AT:	4.0	742.0
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

3/19/26 8:50:08 AM



BORING B18

PAGE 1 OF 1

BORING DEPTH: 12.8 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/21/25

COMPLETED: 12/21/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29201 LONGITUDE: -85.52118 ELEVATION: 735.5± FT PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■				MOISTURE & ATTERBERG LIMITS (%) PL MC LL	▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS	
								90	100	110	120				
735	0.0		12 inches of TOPSOIL												
	2.0		LEAN CLAY- Brown to Reddish Brown- Very Soft to Medium (CL)	SB1	14		2			26		0.7			
	5.0		LEAN CLAY- Brown to Reddish Brown- Medium to Stiff (CL)	SB2	23		6			25					
730	8.0		LEAN CLAY- Trace Gravel- Brown- Medium to Stiff (CL)	SB3	20		8			23					
	10.0		LEAN CLAY- Frequent Black Oxide Nodules- Trace Limestone Fragments- Orangish Brown and Black Mottled- Stiff to Hard (CL)	SB4	21		12			21 23			4.5+		
725	12.5		Completely Weathered LIMESTONE- Gray- Hard	SB5	1	50/3"	50+								
	12.8		END OF BORING AT 12.8 FEET.											Sampler refusal at 12.8 feet.	

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	Not Encountered	
▽ AT END OF BORING:	Note 3	
CAVE-IN OF BOREHOLE AT:	4.0	731.5
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

3/19/26 8:50:09 AM



BORING B19

PAGE 1 OF 1

BORING DEPTH: 14.1 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/21/25

COMPLETED: 12/21/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29229 LONGITUDE: -85.52049 ELEVATION: 739± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
									90	100	110	120		
	0			12 inches of TOPSOIL										
	1.0			LEAN CLAY- Occasional Roots- Brown- Medium to Stiff (CL)	SB1	18	2	5						
	2.0			LEAN CLAY- Occasional Black Oxide Nodules- Brown and Gray Mottled- Stiff to Very Stiff (CL)	SB2	24	3	15						
735	5.0			FAT CLAY- Brown and Gray Mottled- Very Stiff (CH)	SB3	20	4	16						
	8.0			FAT CLAY- Frequent Black Oxide Nodules- Brown, Gray and Black Mottled- Very Stiff (CH)	SB4	21	7	19						
730	13.5			LEAN CLAY- Brown- Medium to Stiff (CL)	SB5	6	8	50+						
725	14.0			Completely Weathered LIMESTONE- Gray- Hard			11							Sampler refusal at 14.1 feet.
	14.1			END OF BORING AT 14.1 FEET.			15							

GROUNDWATER & BACKFILL INFORMATION	
DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	Not Encountered
▽ AT END OF BORING:	Note 3
CAVE-IN OF BOREHOLE AT:	3.0 736.0
BACKFILL METHOD:	Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

3/19/26 8:50:11 AM



BORING B20

PAGE 1 OF 1

BORING DEPTH: 4.5 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/22/25

COMPLETED: 12/22/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29256 LONGITUDE: -85.51974 ELEVATION: 730± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■			MOISTURE & ATTERBERG LIMITS (%)				REMARKS
									90	100	110	120	PL	MC	LL	
730	0			12 inches of TOPSOIL												
729.0	1.0				SB1	6	0	1								
726.5	3.5			LEAN CLAY- Brown- Very Soft to Soft (CL)	SB2	19	0	1								
725.7	4.3			LEAN CLAY- Occasional Black Oxide Nodules- Trace Limestone			2	1								
725.5	4.5			Gravel- Brown- Very Stiff (CL)	SB3	2	50/2"	14								
725	5			Completely Weathered LIMESTONE- Brown- Hard												Sampler refusal at 4.5 feet.
				END OF BORING AT 4.5 FEET.												

GROUNDWATER & BACKFILL INFORMATION	
DEPTH (FT)	ELEV (FT)
▽ DURING BORING: Not Encountered	
▽ AT END OF BORING: Note 3	
CAVE-IN OF BOREHOLE AT: 4.0	726.0
BACKFILL METHOD: Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

3/19/26 8:50:12 AM



BORING B20A

PAGE 1 OF 1

BORING DEPTH: 3.5 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/22/26

COMPLETED: 1/22/26

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29256 LONGITUDE: -85.51974 ELEVATION: 730± FT PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■	MOISTURE & ATTERBERG LIMITS (%)	▼ HAND PENE. ■ TORVANE SHEAR ● UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF) 1 2 3 4	REMARKS
							90 100 110 120			
730	0									
				3ST1	23					Boring B20A offset approximately 5 feet from boring B20. Shelby tube obtained from 1-3 feet.
725	5									
720	10									
715	15									
710	20									
705	25									
700	30									

GROUNDWATER & BACKFILL INFORMATION

GROUNDWATER WAS NOT ENCOUNTERED

BACKFILL METHOD: Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B21

PAGE 1 OF 1

BORING DEPTH: 22.5 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/29/25

COMPLETED: 12/29/25

BORING METHOD: Hollow Stem Augers/NQ2 Core

DRILLER: RM (Mathes Drilling)

RIG NO.: B-53 (ATV)

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29273 LONGITUDE: -85.51937 ELEVATION: 740± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■				MOISTURE & ATTERBERG LIMITS (%)				REMARKS
									90	100	110	120	PL	MC	LL	SH	
740	0			8 inches of TOPSOIL													
	0.7			LEAN CLAY- Occasional Roots- Brown- Soft to Medium (CL)	SB1	18	1	3		26		0.6					
	2.0			LEAN CLAY- Occasional Roots- Brown- Medium to Stiff (CL)	SB2	24	2	8		25							
	5.0			LEAN to FAT CLAY- Occasional Black Oxide Nodules- Brown and Reddish Brown- Stiff to Very Stiff (CL/CH)	SB3	24	3	12		23							
	8.0			FAT CLAY- Occasional Black Oxide Nodules- Trace Limestone Fragments- Orangish Brown and Black Mottled- Stiff to Hard (CH)	SB4	24	4	15		27							
	12.5			Slightly Weathered LIMESTONE- Pitted- Occasional Stylolites- Fractured to Slightly Fractured- Medium Gray	RC1	118	5										Auger refusal at 12.5 feet. RC1 (12.5'-22.5') REC = 98% RQD = 75% GSI = 50 to 60 RMR = 63
	22.5			END OF BORING AT 22.5 FEET.			6										

GROUNDWATER & BACKFILL INFORMATION
GROUNDWATER WAS NOT ENCOUNTERED
BACKFILL METHOD: Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B22

PAGE 1 OF 1

BORING DEPTH: 24.4 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/13/26

COMPLETED: 1/13/26

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29154 LONGITUDE: -85.52244 ELEVATION: 747± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) S SHEAR STRENGTH (KSF)	REMARKS
									90	100	110	120		
746.2	0.8	9.5 inches of TOPSOIL												
745.0	2.0	LEAN CLAY- Occasional Roots- Yellowish Brown- Very Soft to Medium (CL)			SB1	20	1							
743.9	3.1	Sandy SILTY CLAY- Gray and Brown Mottled- Very Stiff (CL/ML)			SB2	24	2							
739.0	8.0	LEAN CLAY- Occasional Black Oxide Nodules- Brown, Gray and Black Mottled- Very Stiff to Stiff (CL)			SB3	24	3							
733.5	13.5	LEAN to FAT CLAY- Occasional Black Oxide Nodules- Red- Stiff to Very Stiff (CL/CH)			SB4	24	3							
723.0	24.0	FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown and Black Mottled- Stiff to Very Stiff (CH)			SB5	18	8							
722.6	24.4	Completely Weathered LIMESTONE- Brown and Gray- Hard			SB6	18	10							
723.0	24.4	Completely Weathered LIMESTONE- Brown and Gray- Hard			SB7	2	11							
720	25	END OF BORING AT 24.4 FEET.					50+ 50/5"							Sampler refusal at 24.4 feet.

GROUNDWATER & BACKFILL INFORMATION	
DEPTH (FT)	ELEV (FT)
▼ DURING BORING:	Not Encountered
▼ AT END OF BORING:	Note 3
BACKFILL METHOD: Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

3/19/26 8:50:18 AM



BORING B23

PAGE 1 OF 2

BORING DEPTH: 32.5 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/13/26

COMPLETED: 1/13/26

BORING METHOD: Hollow Stem Augers/NQ2 Core

DRILLER: RM (Mathes Drilling)

RIG NO.: B-53 (ATV)

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29154 LONGITUDE: -85.52244 ELEVATION: 747.5± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ⊕ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
									90	100	110	120		
747.0	0.5			6 inches of TOPSOIL										
745				LEAN CLAY- Occasional Roots- Brown- Soft to Medium (CL)	SB1	18	1	3					0.6	
					SB2	18	1	4					0.6	
742.5	5.0			LEAN CLAY- Occasional Black Oxide Nodules- Reddish Brown- Medium to Very Stiff (CL)	SB3	18	3	8						
740					SB4	18	4	14						
739.5	8.0			FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff to Very Stiff (CH)			6							
735							7							
734.0	13.5			FAT CLAY- Frequent Black Oxide Nodules- Tan and Black Mottled- Very Stiff to Hard (CH)	SB5	18	8	21					4.5+	
730							9							
729.0	18.5			FAT CLAY- Occasional Black Oxide Nodules- Tan, Reddish Brown and Black Mottled- Stiff to Very Stiff (CH)	SB6	18	4	11						
725	22.5			Rock Core Not Recovered			5							
724.3	23.2						6							
720				Slightly Weathered LIMESTONE- Pitted- Fossiliferous- Occasional Stylolites- Fractured to Slightly Fractured- Light Gray to Medium Gray	RC1	106								

Auger refusal at 22.5 feet. RC1 (22.5'-32.5')
 REC = 88%
 RQD = 73%
 GSI = 50 to 60
 RMR = 61

GROUNDWATER & BACKFILL INFORMATION	
GROUNDWATER WAS NOT ENCOUNTERED	
BACKFILL METHOD: Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B23

PAGE 2 OF 2

BORING DEPTH: 32.5 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29154 LONGITUDE: -85.52244 ELEVATION: 747.5± FT PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)				REMARKS
								90	100	110	120	PL	MC	
30														
715	32.5		END OF BORING AT 32.5 FEET.											
35														
710														
40														
705														
45														
700														
50														
695														
55														
690														
60														
685														
65														
680														
70														

3/19/26 8:50:21 AM



BORING B24

PAGE 1 OF 1

BORING DEPTH: 26.6 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/17/26

COMPLETED: 1/17/26

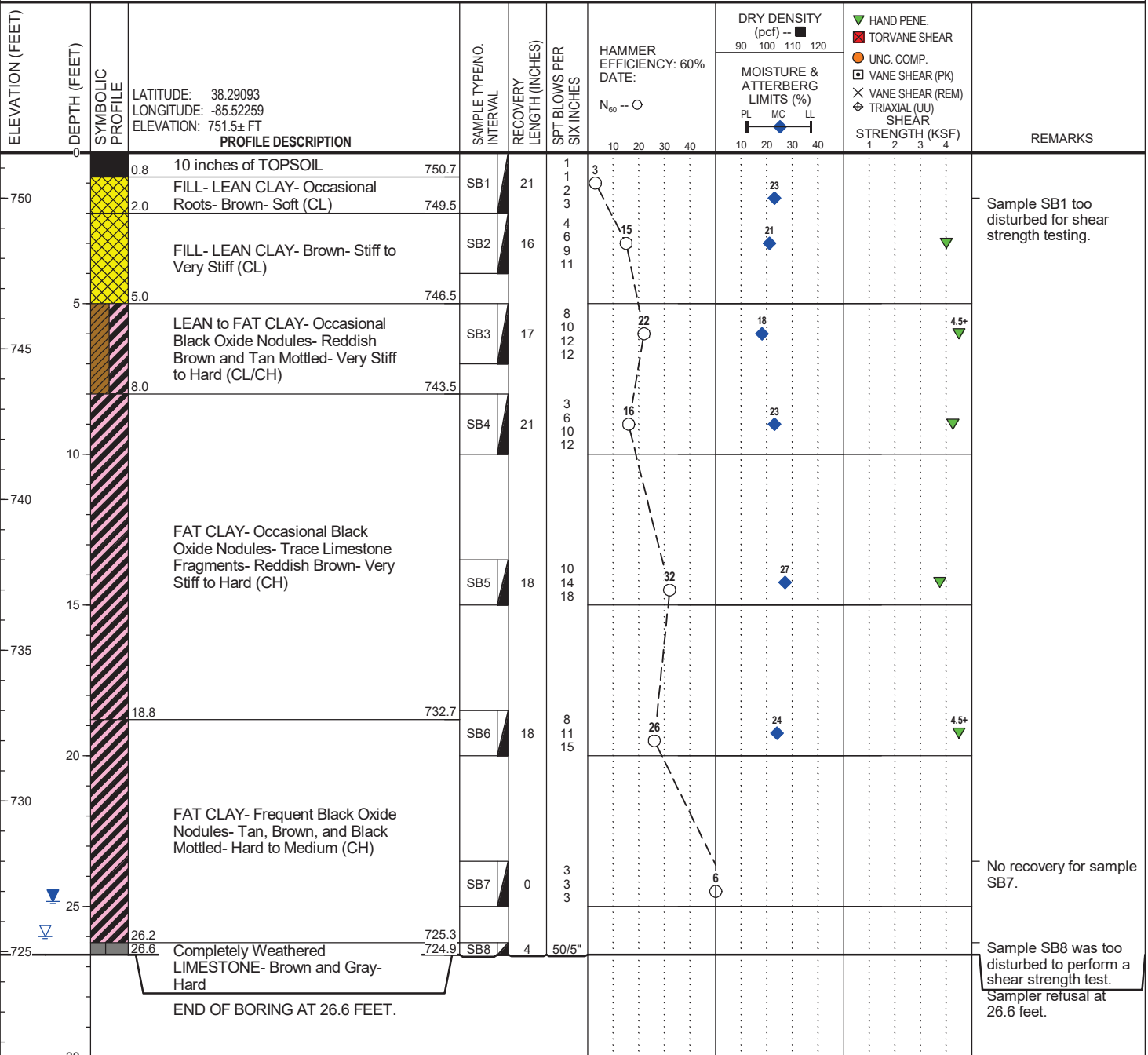
BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH



GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	26.0	725.5
▽ AT END OF BORING:	24.8	726.7
CAVE-IN OF BOREHOLE AT:	6.0	745.5
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

3/19/26 8:50:22 AM



BORING B25

PAGE 1 OF 1

BORING DEPTH: 24.2 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/27/25

COMPLETED: 12/27/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29119 LONGITUDE: -85.52188 ELEVATION: 751± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
									90	100	110	120		
	0.5			6 inches of TOPSOIL										
750	2.0			LEAN CLAY- Occasional Roots- Brown- Very Soft to Medium (CL)	SB1	20	1	2		25		0.7		
					SB2	24	1	5		25				
				LEAN CLAY- Occasional Black Oxide Nodules- Reddish Brown- Medium to Stiff (CL)	SB3	24	2	6		26				
745							3	9						
	8.0			FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff to Very Stiff (CH)	SB4	24	3	16		27				
740							4							
							5							
	13.5			FAT CLAY- Trace Limestone Fragments- Reddish Brown and Tan Mottled- Very Stiff (CH)	SB5	18	5	16		29				
735							6							
							10							
	18.5			FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown, Tan and Black Mottled- Very Stiff (CH)	SB6	18	6	19		31				
730							8							
							11							
	23.5			FAT CLAY with Medium to Coarse Sand Rock Flour and Fine Gravel- Brown- Stiff (CH)	SB7	8	6	50+		27				
	24.0			Completely Weathered LIMESTONE- Gray and Brown- Hard										
	24.2			END OF BORING AT 24.2 FEET.										Sampler refusal at 24.2 feet.

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	Not Encountered	
▽ AT END OF BORING:	Note 3	
CAVE-IN OF BOREHOLE AT:	3.0	748.0
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

3/19/26 8:50:24 AM



BORING B25A

PAGE 1 OF 1

BORING DEPTH: 21.5 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/23/26

COMPLETED: 1/23/26

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29119 LONGITUDE: -85.52188 ELEVATION: 751± FT PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■	MOISTURE & ATTERBERG LIMITS (%)	▼ HAND PENE. ■ TORVANE SHEAR ● UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF) 1 2 3 4	REMARKS
							90 100 110 120			
750	0									
				GS1						Boring B25A offset approximately 5 feet from boring B25. Bulk sample obtained from 2-5 feet.
745	5									
				GS2						Bulk sample obtained from 8-10 feet.
740	10									
735	15									
730	20			3ST	20					Shelby tube obtained from 19-21 feet.
725	25									
	30									

GROUNDWATER & BACKFILL INFORMATION

GROUNDWATER WAS NOT ENCOUNTERED

BACKFILL METHOD: Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

3/19/26 8:50:25 AM



BORING B26

PAGE 1 OF 1

BORING DEPTH: 19.9 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/27/25

COMPLETED: 12/27/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29142 LONGITUDE: -85.52112 ELEVATION: 748± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◇ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
									90	100	110	120		
	0.6			7.5 inches of TOPSOIL										
	2.0			LEAN CLAY- Occasional Roots- Brown- Soft to Medium (CL)	SB1	17	1	4			24		0.8	
745	5.0			LEAN CLAY- Occasional Black Oxide Nodules- Reddish Brown- Medium to Stiff (CL)	SB2	19	2	6			24		▼	
740	10.0			FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff to Very Stiff (CH)	SB3	20	2	9			25		▼	
	13.5			FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff to Very Stiff (CH)	SB4	24	4	12			25		▼	
735	15.0			FAT CLAY- Trace Limestone Fragments- Tan and Black Mottled- Very Stiff (CH)	SB5	18	6	16			28		▼	
730	18.5			FAT CLAY with Fine to Medium Sand- Trace Limestone Fragments- Brown- Medium (CH)	SB6	17	6	7			57*		▼	
	19.9			Completely Weathered LIMESTONE- Gray and Brown- Hard			7	50/5"			36		▼	Sampler refusal at 19.9 feet.
				END OF BORING AT 19.9 FEET.										

GROUNDWATER & BACKFILL INFORMATION		NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual. 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered. 3. Groundwater was not encountered above the borehole cave in depth.
DEPTH (FT)	ELEV (FT)	
▼ DURING BORING:	Not Encountered	
▼ AT END OF BORING:	Note 3	
CAVE-IN OF BOREHOLE AT:	3.0	745.0
BACKFILL METHOD:	Auger Cuttings	

3/19/26 8:50:27 AM



BORING B27

PAGE 1 OF 1

BORING DEPTH: 28 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/30/25

COMPLETED: 12/30/25

BORING METHOD: Hollow Stem Augers/NQ2 Core

DRILLER: RM (Mathes Drilling)

RIG NO.: B-53 (ATV)

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29174 LONGITUDE: -85.52050 ELEVATION: 744.5± FT PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◇ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
								90	100	110	120		
	0.7		8 inches of TOPSOIL										
				SB1	24	1	2					0.5	
			LEAN CLAY- Occasional Roots- Brown- Very Soft to Medium (CL)	SB2	24	2	4					0.9	
740	5.0												
			LEAN CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff (CL)	SB3	24	2	9	97	26				
	8.0												
			LEAN CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff (CL)	SB4	24	4	18		25				
735	10												
			FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Very Stiff to Hard (CH)	SB5	18	4	16		25			4.5+	
730	15												
	18.0												
			Moderately Weathered LIMESTONE- Pitted- Fossiliferous- Occasional Stylolites and Calcite Crystals- Moderately Fractured- Light Gray	RC1	116								Auger refusal at 18 feet. RC1 (18'-28') REC = 97% RQD = 66% GSI = 40 to 50 RMR = 56 Compressive strength from 18.4 to 18.7' = 3,550 psi
725	20												
	28.0		END OF BORING AT 28.0 FEET.										Compressive strength from 26.0 to 26.3' = 3,930 psi
720	25												
715	30												

GROUNDWATER & BACKFILL INFORMATION
GROUNDWATER WAS NOT ENCOUNTERED
BACKFILL METHOD: Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B28

PAGE 1 OF 1

BORING DEPTH: 3.3 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/22/25

COMPLETED: 12/22/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29200 LONGITUDE: -85.51980 ELEVATION: 732± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■				MOISTURE & ATTERBERG LIMITS (%)				REMARKS
									90	100	110	120	PL	MC	LL	SH	
	0.9	10.5 inches of TOPSOIL			731.1	SB1	21	0									
	2.0	LEAN CLAY- Occasional Black Oxide Nodules- Brown- Soft (CL)			730.0			1									
	3.0	LEAN CLAY- Occasional Black Oxide Nodules- Brown- Stiff to Very Stiff (CL)			729.0	SB2	15	2									
	3.3	Completely Weathered LIMESTONE- Brown- Hard			728.7			2									
		END OF BORING AT 3.3 FEET.															
5																	
725																	
10																	
720																	
15																	
715																	
20																	
710																	
25																	
705																	
30																	

GROUNDWATER & BACKFILL INFORMATION	
DEPTH (FT)	ELEV (FT)
▽ DURING BORING: Not Encountered	
▽ AT END OF BORING: Note 3	
CAVE-IN OF BOREHOLE AT:	3.0 729.0
BACKFILL METHOD:	Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

3/19/26 8:50:30 AM



BORING B29

PAGE 1 OF 1

BORING DEPTH: 14.8 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/22/25

COMPLETED: 12/22/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29238 LONGITUDE: -85.51877 ELEVATION: 749± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS	
									90	100	110	120			PL
748.6	0.4			5 inches of TOPSOIL											
747.0	2.0			LEAN CLAY- Occasional Roots- Brown- Soft to Medium (CL)	SB1	23	1	3		25					
745				LEAN to FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff to Hard (CL/CH)	SB2	24	2	15		21					
								4	15		20				
								6	20		19				
741.0	8.0			FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown and Black Mottled- Very Stiff (CH)	SB3	19	9	15					4.5+	Samples SB2 and SB3: percent gravel = 0.8; percent sand = 7.4; percent silt = 50.4; percent clay = 41.4	
740					SB4	20	11	20							
735	13.5			FAT CLAY- Occasional Black Oxide Nodules- Very Stiff (CH)			6	20		25					
734.5	14.5			Completely Weathered LIMESTONE- Brown and Gray- Hard	SB5	15	9	59+						Sampler refusal at 14.8 feet.	
734.2	14.8			END OF BORING AT 14.8 FEET.			15	50/3"							

GROUNDWATER & BACKFILL INFORMATION	
DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	Not Encountered
▽ AT END OF BORING:	Note 3
CAVE-IN OF BOREHOLE AT:	4.0 745.0
BACKFILL METHOD:	Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

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BORING B30

PAGE 1 OF 1

BORING DEPTH: 27.7 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/14/26

COMPLETED: 1/14/26

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)	▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◇ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
								90	100			
753.6	0.4		5 inches of TOPSOIL									
752.0	2.0		LEAN CLAY- Occasional Roots- Brown- Soft to Medium (CL)	SB1	15	4			26		0.6	
749.0	5.0		LEAN CLAY- Occasional Roots- Brown- Medium to Very Stiff (CL)	SB2	18	6			21			
746.0	8.0		LEAN to FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown and Tan- Stiff to Very Stiff (CL/CH)	SB3	17	14			20			
746.0	8.0			SB4	18	17			23			4.5+
740.0	15.0		FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Very Stiff to Hard (CH)	SB5	18	18			25			
735.5	18.5		FAT CLAY- Occasional Black Oxide Nodules- Orangish Brown and Black- Very Stiff to Hard (CH)	SB6	18	22			27			4.5+
730.5	23.5		FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff (CH)	SB7	18	10			29			
726.5	27.5		Completely Weathered LIMESTONE- Gray- Hard	SB8	2	50+						
726.3	27.7		END OF BORING AT 27.7 FEET.									Sampler refusal at 27.7 feet.

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	27.0	727.0
▽ AT END OF BORING:	27.0	727.0
CAVE-IN OF BOREHOLE AT:	4.0	750.0
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B31

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BORING DEPTH: 27.5 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/19/26

COMPLETED: 1/19/26

BORING METHOD: Hollow Stem Augers

DRILLER: RM (Mathes Drilling)

RIG NO.: B-53 (ATV)

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29061 LONGITUDE: -85.52202 ELEVATION: 755.5± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■				MOISTURE & ATTERBERG LIMITS (%)	▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS	
									90	100	110	120				
755	0.6			7 inches of TOPSOIL												
	2.0			LEAN CLAY- Occasional Roots- Brown- Soft to Medium (CL)	SB1		1	3								
	5.0			LEAN CLAY- Occasional Roots- Brown- Medium to Stiff (CL)	SB2		2	6								
	8.0			LEAN CLAY- Occasional Black Oxide Nodules- Reddish Brown & Tan Mottled- Stiff to Very Stiff (CL)	SB3		3	9								
	18.5			FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff to Very Stiff (CH)	SB4		4	11								
	27.5			FAT CLAY- Occasional Black Oxide Nodules- Trace Limestone Fragments- Orangish Brown and Black Mottled- Stiff to Hard (CH)	SB5		6	16								
	27.5			END OF BORING AT 27.5 FEET.	SB6		7	24								
	27.5			END OF BORING AT 27.5 FEET.	SB7		11	15								
	27.5			END OF BORING AT 27.5 FEET.			13									
	27.5			END OF BORING AT 27.5 FEET.			10									
	27.5			END OF BORING AT 27.5 FEET.												

GROUNDWATER & BACKFILL INFORMATION

GROUNDWATER WAS NOT ENCOUNTERED

BACKFILL METHOD: Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B32

PAGE 1 OF 2

BORING DEPTH: 37.5 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/30/25

COMPLETED: 12/30/25

BORING METHOD: Hollow Stem Augers/NQ2 Core

DRILLER: RM (Mathes Drilling)

RIG NO.: B-53 (ATV)

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◇ TRIAXIAL (UU) SHEAR STRENGTH (KSF) 1 2 3 4	REMARKS
								90	100	110	120		
755	0		8 inches of TOPSOIL										
	0.7			SB1	24	1	3						Samples SB1 and SB2 too disturbed for shear strength testing.
			LEAN CLAY- Occasional Roots- Brown- Soft to Medium (CL)	SB2	24	2	5						
	5.0			SB3	24	5	14	24		47			Sample SB3: percent gravel = 0; percent sand = 3.7; percent silt = 55.7; percent clay = 40.6
			LEAN CLAY- Occasional Black Oxide Nodules- Reddish Brown and Brown Mottled- Stiff to Very Stiff (CL)	SB4	24	7	12	24					
	9.0			SB5	18	3	14	25					Sample SB7 too disturbed for shear strength testing.
			FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff to Very Stiff (CH)	SB6	18	5	7	28					
	18.5			SB7	1	2	7	37					Auger refusal at 27.5 feet. RC1 (27.5'-37.5') REC = 100% RQD = 67% GSI = 45 to 55
			FAT CLAY- Frequent Black Oxide Nodules- Orangish Brown and Black Mottled- Medium to Very Stiff (CH)			3	1						
	23.5					4	2						
			LEAN CLAY- Brown- Very Soft (CL)			1	1						
	26.0		Presumed Completely Weathered LIMESTONE- Drillers Classification			1	1						
	27.5					1	1						

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	23.0	732.0
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B32

PAGE 2 OF 2

BORING DEPTH: 37.5 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29090 LONGITUDE: -85.52117 ELEVATION: 755± FT PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)				REMARKS
								90	100	PL	MC	LL	1	
725	30		Moderately to Slightly Weathered LIMESTONE- Fossiliferous- Pitted- Occasional Styolites and Vertical Fractures- Highly Fractured to Moderately Fractured- Light Gray to Medium Gray (continued)	RC1	120									RMIR = 50
720	35													
	37.5		END OF BORING AT 37.5 FEET.											
715	40													
710	45													
705	50													
700	55													
695	60													
690	65													
685	70													

3/19/26 8:50:37 AM



BORING B32A

PAGE 1 OF 1

BORING DEPTH: 25.5 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/23/26

COMPLETED: 1/23/26

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29090 LONGITUDE: -85.52117 ELEVATION: 755± FT PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■	MOISTURE & ATTERBERG LIMITS (%) PL MC LL	▼ HAND PENE. ■ TORVANE SHEAR ● UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF) 1 2 3 4	REMARKS
							90 100 110 120			
755	0									
750	5			GS1						Boring B32A offset approximately 5 feet from boring B32.
745	10			GS2						Bulk sample obtained from 5-7 feet.
740	15									Bulk sample obtained from 10-12 feet.
735	20									
730	25			3ST1	22					Shelby tube obtained from 23-25 feet.
725	30									

GROUNDWATER & BACKFILL INFORMATION

GROUNDWATER WAS NOT ENCOUNTERED

BACKFILL METHOD: Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

3/19/26 8:50:38 AM



BORING B33

PAGE 1 OF 1

BORING DEPTH: 25.6 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/27/25

COMPLETED: 12/27/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■				MOISTURE & ATTERBERG LIMITS (%)				REMARKS
								90	100	110	120	PL	MC	LL	SH	
755	0.5		6 inches of TOPSOIL													
753.5	2.0		LEAN CLAY- Occasional Roots- Brown- Soft to Medium (CL)	SB1	19	2	4			25			0.8			
750.5	5.0		LEAN CLAY- Occasional Black Oxide Nodules- Reddish Brown- Medium to Stiff (CL)	SB2	17	1	7			25						
745	10.0		FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Very Stiff to Hard (CH)	SB3	19	3	17			23						
742.0	13.5		FAT CLAY with Fine Sand- Reddish Brown- Very Stiff (CH)	SB4	24	5	19			23				4.5+		
740	18.5		FAT CLAY- Frequent Black Oxide Nodules- Trace Limestone Fragments- Tan and Black Mottled- Very Stiff (CH)	SB5	18	10	23			24						
737.0	23.5		LEAN CLAY with Fine to Coarse Sand and Fine Gravel- Trace Limestone Fragments- Brown- Soft to Medium (CL)	SB6	18	8	30			26						
732.0	25.5		Completely Weathered LIMESTONE- Brown and Gray- Hard	SB7	18	4	9			36			0.3		Blow count values increased due to presence of rock fragments.	
729.9	25.6		END OF BORING AT 25.6 FEET.	SB8	2	50/2"	50+								Sampler refusal at 25.6 feet.	

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	Not Encountered	
▽ AT END OF BORING:	Note 3	
CAVE-IN OF BOREHOLE AT:	3.0	752.5
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

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BORING B34

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BORING DEPTH: 10.6 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/23/25

COMPLETED: 12/23/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)	▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF) 1 2 3 4	REMARKS
								90	100 110 120			
	0		5 inches of TOPSOIL									
740	0.4		LEAN CLAY- Reddish Brown- Medium to Very Stiff (CL)	SB1	24	1	5		27			
	2.0					2						
	5.0		LEAN to FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff to Very Stiff (CL/CH)	SB2	18	3	10		25			
						4						
						5						
735			FAT CLAY- Occasional Black Oxide Nodules- Trace Limestone Fragments- Reddish Brown- Stiff to Very Stiff (CH)	SB3	22	6	9		23			
						3						
						4						
						5						
						10						
						8						
						9						
						9						
						7						
	10.4		Completely Weathered LIMESTONE- Brown- Hard	SB5	1	50/2"	18		27			
	10.6		END OF BORING AT 10.6 FEET.									Sampler refusal at 10.6 feet.

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	10.0	732.0
▽ AT END OF BORING:	10.2	731.8
CAVE-IN OF BOREHOLE AT:	1.8	740.3
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B35

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BORING DEPTH: 6.3 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/22/25

COMPLETED: 12/22/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29174 LONGITUDE: -85.51914 ELEVATION: 738± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
									90	100	110	120		
737.5	0.5			5.5 inches of TOPSOIL										
736.0	2.0			LEAN CLAY- Occasional Roots- Brown- Soft to Medium (CL)	SB1	24	0	3						
735.0				LEAN CLAY- Frequent Black Oxide Nodules- Trace Limestone Gravel- Brown and Black Mottled- Stiff to Very Stiff (CL)	SB2	24	1	11						
733.0	5.0			Completely Weathered LIMESTONE- Brown and Gray- Hard	SB3	10	5	32						
731.7	6.3			END OF BORING AT 6.3 FEET.			50/3"	82+						Sampler refusal at 6.3 feet.

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	5.0	733.0
▽ AT END OF BORING:	4.3	733.7
CAVE-IN OF BOREHOLE AT:	4.0	734.0
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B36

PAGE 1 OF 1

BORING DEPTH: 26.7 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/15/26

COMPLETED: 1/15/26

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)	▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◇ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
								90	100			
	0.5		6.5 inches of TOPSOIL									
	2.0		LEAN CLAY- Occasional Roots- Brown- Very Soft (CL)	SB1	16	1			27			Sample SB1 too disturbed for shear strength testing.
	5.0		LEAN CLAY- Occasional Roots- Brown- Medium to Very Stiff (CL)	SB2	24	3			24			
750	8.0		LEAN CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff (CL)	SB3	24	4			26			
	10.0		FAT CLAY- Occasional Black Oxide Nodules- Stiff to Very Stiff (CH)	SB4	24	6			28			
745	15.0		FAT CLAY- Frequent Black Oxide Nodules- Orangish Brown and Black Mottled- Very Stiff to Stiff (CH)	SB5	18	11			25			
740	20.0		Completely Weathered LIMESTONE- Gray and Brown- Hard	SB6	18	13			26			
735	25.0		Completely Weathered LIMESTONE- Gray and Brown- Hard	SB7	18	7			40			
730	26.5		Completely Weathered LIMESTONE- Gray and Brown- Hard	SB8	2	50+						
	26.7		END OF BORING AT 26.7 FEET.									Sampler refusal at 26.7 feet.

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	Not Encountered	
▽ AT END OF BORING:	26.1	728.4
CAVE-IN OF BOREHOLE AT:	5.0	749.5
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B37

PAGE 1 OF 2

BORING DEPTH: 29.3 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/28/25

COMPLETED: 12/28/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)	▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
								90	100			
760	0.5		6 inches of TOPSOIL									
758.5	2.0		LEAN CLAY- Occasional Roots- Brown- Very Soft to Medium (CL)	SB1	21	1			24			
755.5	5.0		LEAN CLAY- Brown and Tan- Stiff to Very Stiff (CL)	SB2	21	2	14		19			
755				SB3	23	4	16		22			
750				SB4	24	2	13		26			
745			FAT CLAY- Occasional Black Oxide Nodules- Trace Limestone Fragments- Reddish Brown- Very Stiff to Stiff (CH)	SB5	22	5	23		27			
740				SB6	18	5	22		30			
735			FAT CLAY- Occasional Black Oxide Nodules- Trace Limestone Fragments- Tan and Black Mottled- Very Stiff (CH)	SB7	18	5	18		25			
732.0	28.5		FAT CLAY- Trace Limestone Fragments- Reddish Brown to	SB8	5	15	50+		25	31	0.2	Blow count values increased due to presence of rock
731.5	29.0					50/3"						
731.2	29.3											

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	Not Encountered	
▽ AT END OF BORING:	Note 3	
CAVE-IN OF BOREHOLE AT:	3.0	757.5
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

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BORING B37

PAGE 2 OF 2

BORING DEPTH: 29.3 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29007 LONGITUDE: -85.52179 ELEVATION: 760.5± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)				STRENGTH (KSF)				REMARKS
									90	100	110	120	PL	MC	LL	1	2	3	
730	30			Brown- Very Soft (CH) Completely Weathered LIMESTONE- Brown and Gray-Hard END OF BORING AT 29.3 FEET.															fragments. Sampler refusal at 29.3 feet.
725	35																		
720	40																		
715	45																		
710	50																		
705	55																		
700	60																		
695	65																		
70	70																		

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BORING B38

PAGE 1 OF 2

BORING DEPTH: 30.2 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/27/25

COMPLETED: 12/27/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%) PL MC LL	▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ⊕ TRIAXIAL (UU) S SHEAR STRENGTH (KSF)	REMARKS
								90	100			
761.5	0.5	6 inches of TOPSOIL		SB1	16	3						
760.0	2.0	FILL- LEAN CLAY- Occasional Roots- Trace Asphalt Fragments- Brown- Soft to Medium (CL)		SB2	24	7						
754.0	8.0	LEAN CLAY- Brown- Medium to Stiff (CL)		SB3	24	8						
748.5	13.5	LEAN to FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff to Very Stiff (CL/CH)		SB4	22	9						
748.5	13.5			SB5	21	18						
743.5	18.5	FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Very Stiff to Stiff (CH)		SB6	22	19						
738.5	23.5			SB7	18	13						
733.5	28.5	FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown and Black Mottled- Stiff to Very Stiff (CH)										
732.0	30.0	FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown		SB8	0	0						No recovery for sample SB8.

GROUNDWATER & BACKFILL INFORMATION	
DEPTH (FT)	ELEV (FT)
▼ DURING BORING: Not Encountered ▼ AT END OF BORING: Note 3	
CAVE-IN OF BOREHOLE AT:	4.0 758.0
BACKFILL METHOD:	Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

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BORING B38

PAGE 2 OF 2

BORING DEPTH: 30.2 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29038 LONGITUDE: -85.52116 ELEVATION: 762± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		STRENGTH (KSF)				REMARKS	
									90	100	110	120	PL	MC	LL	1		2
730	30.2			and Black Mottled- Very Soft (CH) Completely Weathered Limestone- Gray and Brown-Hard	SB9	2	50/2											Sampler refusal at 30.2 feet.
725																		
720																		
715																		
710																		
705																		
700																		
695																		
70																		

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BORING B39

PAGE 1 OF 1

BORING DEPTH: 26 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/19/26

COMPLETED: 1/19/26

BORING METHOD: Hollow Stem Augers

DRILLER: RM (Mathes Drilling)

RIG NO.: B-53 (ATV)

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29064 LONGITUDE: -85.52051 ELEVATION: 760.5± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%) PL MC LL	▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ⊕ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS			
									90	100				110	120	
760	0		LATITUDE: 38.29064 LONGITUDE: -85.52051 ELEVATION: 760.5± FT	LEAN CLAY- Occasional Roots- Brown to Reddish Brown- Medium to Very Stiff (CL)	SB1	24	2	6								
	5.0				755.5	SB2	24	2	7							
	8.0				752.5	SB3	24	1	7							
755							LEAN CLAY- Occasional Black Oxide Nodules- Reddish Brown and Tan Mottled- Medium to Stiff (CL)	SB4	24	3	11					
	10						FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff to Very Stiff (CH)	SB5	18	5	16					
	15						FAT CLAY- Frequent Black Oxide Nodules- Orangish Brown and Black Mottled- Very Stiff to Hard (CH)	SB6	18	4	16					
	18.5				742.0					8	16					
745																
	20															
	23.5	737.0														
740																
	25															
	26.0	734.5														
				END OF BORING AT 26.0 FEET.												
													Auger refusal at 26 feet.			

GROUNDWATER & BACKFILL INFORMATION	NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual. 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
GROUNDWATER WAS NOT ENCOUNTERED	
BACKFILL METHOD: Auger Cuttings	

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BORING B40

PAGE 1 OF 1

BORING DEPTH: 17 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/23/25

COMPLETED: 12/23/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29093 LONGITUDE: -85.51978 ELEVATION: 753± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- ○	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
									90	100	110	120		
752.3	0.7			8 inches of TOPSOIL										
750				LEAN CLAY- Brown to Reddish Brown- Medium to Stiff (CL)	SB1	20	2	5		25				
748.0	5.0				SB2	21	3	6		29				
745				FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown and Gray Mottled- Medium to Very Stiff (CH)	SB3	20	2	8		24				
740					SB4	24	3	15		25				
739.5	13.5			FAT CLAY- Frequent Black Oxide Nodules- Trace Limestone Fragments- Orangish Brown and Black Mottled- Very Stiff to Hard (CH)	SB5	15	9	22		28			4.5+	
736.2	16.8			Completely Weathered LIMESTONE- Brown and Gray- Hard	SB6	2	10	50+						Sampler refusal at 17 feet.
736.0	17.0			END OF BORING AT 17.0 FEET.										

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	Not Encountered	
▽ AT END OF BORING:	Note 3	
CAVE-IN OF BOREHOLE AT:	2.5	750.5
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

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BORING B41

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BORING DEPTH: 7.7 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/22/25

COMPLETED: 12/22/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
								90	100	110	120		
	0		6 inches of TOPSOIL										
740	0.5		LEAN CLAY- Occasional Roots and Black Oxide Nodules- Brown and Reddish Brown- Soft to Medium (CL)	SB1	14	1 2 2 2	4			23		0.8	
	2.0		LEAN CLAY- Occasional Roots and Black Oxide Nodules- Reddish Brown- Very Soft to Medium (CL)	SB2	8	2 1 1 1	2			31			
735	5.0		LEAN CLAY- Trace Gravel- Gray- Very Soft to Medium (CL)	SB3	24	1 1 1 1	2		85	20			
	6.0		FAT CLAY- Frequent Black Oxide Nodules- Brown and Black Mottled- Very Soft to Medium (CH)	SB4	3	1 1 4	2			22		0.8	
	7.4		Completely Weathered LIMESTONE- Brown- Hard			50/3"	50+						
	7.7		END OF BORING AT 7.7 FEET.										Sampler refusal at 7.7 feet.

GROUNDWATER & BACKFILL INFORMATION	
DEPTH (FT)	ELEV (FT)
▽ DURING BORING: Not Encountered	
▽ AT END OF BORING: Note 3	
CAVE-IN OF BOREHOLE AT: 1.8	739.7
BACKFILL METHOD: Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

3/19/26 8:50:55 AM



BORING B41A

PAGE 1 OF 1

BORING DEPTH: 7.5 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/23/26

COMPLETED: 1/23/26

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29119 LONGITUDE: -85.51909 ELEVATION: 741.5± FT PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■	MOISTURE & ATTERBERG LIMITS (%)	▼ HAND PENE. ■ TORVANE SHEAR ● UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF) 1 2 3 4	REMARKS
							90 100 110 120			
740	0									
	5			3ST1	11					Boring B41A offset approximately 5 feet from boring B41. Shelby tube obtained from 3-5 feet.
735				3ST2	17					Shelby tube obtained from 5-7 feet.
730	10									
725	15									
720	20									
715	25									
	30									

GROUNDWATER & BACKFILL INFORMATION

GROUNDWATER WAS NOT ENCOUNTERED

BACKFILL METHOD: Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B42

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BORING DEPTH: 23.6 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/26/25

COMPLETED: 12/26/25

BORING METHOD: Hollow Stem Augers/NQ2 Core

DRILLER: RM (Mathes Drilling)

RIG NO.: B-53 (ATV)

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29152 LONGITUDE: -85.51839 ELEVATION: 751± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
									90	100	110	120		
750	0.7	8 inches of TOPSOIL												
	2.0	FILL- LEAN CLAY- Occasional Roots- Brown- Soft to Medium (CL)			SB1	18					26			
	3.0	FILL- LEAN CLAY- Frequent Roots- Dark Brown- Very Soft to Medium (CL)			SB2	24					24			
	5.0	FILL- LEAN CLAY- Occasional Roots- Brown- Very Soft to Soft (CL)												
	6.0	FILL- LEAN CLAY- Frequent Roots- Dark Brown and Brown Mottled- Stiff to Very Stiff (CL)			SB3	24					20			
	8.0	LEAN CLAY- Frequent Black Oxide Nodules- Reddish Brown- Stiff to Very Stiff (CL)												
	9.0	LEAN CLAY- Occasional Roots and Black Oxide Nodules- Little Limestone Fragments- Brown- Stiff to Very Stiff (CL)			SB4	24					26			
	13.5	FAT CLAY- Frequent Black Oxide Nodules- Orangish Brown and Black Mottled- Stiff (CH)												
	13.6	LEAN CLAY with Completely Weathered Limestone- Brown- Soft (CL)			SB5	2	50/2"				50+		560.3	Sample SB5 moisture content = 56 percent, torvane = 0.3 KSF. Auger refusal at 13.6 feet. RC1 (13.6'-23.6') REC = 100% RQD = 73% GSI = 40 to 50 RMR = 51 Compressive strength from 16.6 to 16.9' = 2,000 psi
	23.6	Moderately Weathered LIMESTONE- Pitted- Fossiliferous- Occasional Styolites- Fractured to Moderately Fractured- Light Gray to Medium Gray			RC1	120								Compressive strength from 20.5 to 20.8' = 1,790 psi
END OF BORING AT 23.6 FEET.														

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	13.5	737.5
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B42A

PAGE 1 OF 1

BORING DEPTH: 12.5 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/22/26

COMPLETED: 1/22/26

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29152 LONGITUDE: -85.51839 ELEVATION: 751± FT PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■	MOISTURE & ATTERBERG LIMITS (%) PL MC LL	▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◇ TRIAXIAL (UU) SHEAR STRENGTH (KSF) 1 2 3 4	REMARKS
							90 100 110 120			
750	0									
				3ST1	22					Shelby tube obtained from 2-4 feet.
	5			3ST2	23					Shelby tube obtained from 4-6 feet.
745										
	10			3ST3	19					Shelby tube obtained from 10-12 feet.
740										
	15									
735										
	20									
730										
	25									
725										
	30									

GROUNDWATER & BACKFILL INFORMATION

GROUNDWATER WAS NOT ENCOUNTERED

BACKFILL METHOD: Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B43

PAGE 1 OF 2

BORING DEPTH: 29.2 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/14/26

COMPLETED: 1/14/26

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29038 LONGITUDE: -85.52116 ELEVATION: 757.5± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
									90	100	110	120		
757.0	0.5			6 inches of TOPSOIL										
755.5	2.0			LEAN CLAY- Occasional Roots- Brown- Soft to Stiff (CL)	SB1	19	1	4		26		1		
750				LEAN CLAY- Occasional Black Oxide Nodules- Brown- Medium to Stiff (CL)	SB2	24	3	7		24				
750					SB3	20	4	9		26				
749.5	8.0			FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Medium to Very Stiff (CH)	SB4	24	5	8		28				
745					SB5	18	3	13		26				
740				FAT CLAY- Occasional Black Oxide Nodules- Orangish Brown and Black Mottled- Very Stiff (CH)	SB6	18	5	26		27				
735					SB7	18	11	12		26				
730				FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff to Very Stiff (CH)	SB8	6	4	50+						
728.5	29.0						10	50/2"						
728.3	29.2			Completely Weathered										Sampler refusal at

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	28.0	729.5
▽ AT END OF BORING:	26.3	731.2
CAVE-IN OF BOREHOLE AT:	5.0	752.5
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

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BORING B43

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BORING DEPTH: 29.2 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29038 LONGITUDE: -85.52116 ELEVATION: 757.5± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)				STRENGTH (KSF)				REMARKS		
									90	100	110	120	PL	MC	LL	1	2	3		4	
30				LIMESTONE- Brown and Gray-Hard																	29.2 feet.
725				END OF BORING AT 29.2 FEET.																	
35																					
720																					
40																					
715																					
45																					
710																					
50																					
705																					
55																					
700																					
60																					
695																					
65																					
690																					
70																					

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BORING B44

PAGE 1 OF 2

BORING DEPTH: 30.8 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/30/25

COMPLETED: 12/30/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.28941 LONGITUDE: -85.52256 ELEVATION: 759.5± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF) 1 2 3 4	REMARKS
									90	100	110	120		
	0.7			8 inches of TOPSOIL										
	2.0			LEAN CLAY- Brown- Very Soft to Medium (CL)	SB1	24								
	5.0			LEAN CLAY- Brown- Medium to Stiff (CL)	SB2	17								
755					SB3	22								
	10			FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff to Very Stiff (CH)	SB4	23								
750					SB5	18								
	18.5			FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown, Tan and Black Mottled- Very Stiff to Hard (CH)	SB6	18								
745					SB7	18								
	23.5			FAT CLAY- Occasional Black Oxide Nodules- Trace Limestone Fragments- Tan- Very stiff (CH)										
740					SB8	8								
	28.5			FAT CLAY with Fine to Coarse Sand- Little Limestone Fragments-										
735														
730														

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▼ 14 HRS AFTER BORING:	24.1	735.4
CAVE-IN OF BOREHOLE AT:	4.0	755.5
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B44

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BORING DEPTH: 30.8 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.28941 LONGITUDE: -85.52256 ELEVATION: 759.5± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)				STRENGTH (KSF)				REMARKS	
									90	100	PL	MC	LL	1	2	3	4			
30.7	30.8			Brown- Very Soft (CH)	728.8	4	50/4"	50+												
				Completely Weathered LIMESTONE- Brown and Gray-Hard	728.7															Sampler refusal at 30.8 feet.
725	35			END OF BORING AT 30.8 FEET.																
720	40																			
715	45																			
710	50																			
705	55																			
700	60																			
695	65																			
690	70																			

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BORING B45

PAGE 1 OF 2

BORING DEPTH: 43 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/13/26

COMPLETED: 1/13/26

BORING METHOD: Hollow Stem Augers/NQ2 Core

DRILLER: RM (Mathes Drilling)

RIG NO.: B-53 (ATV)

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29039 LONGITUDE: -85.51985 ELEVATION: 761.5± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		STRENGTH (KSF)	REMARKS
									90	100	110	120		
761.0	0.5			6 inches of TOPSOIL										
759.5	2.0			FILL- LEAN CLAY- Occasional Roots- Brown- Soft (CL)	SB1	18	1	3						Sample SB1 too disturbed for shear strength testing.
756.5	5.0			FILL- LEAN CLAY- Occasional Roots- Brown- Stiff to Hard (CL)	SB2	18	2	12				4.5+		
753.5	8.0			Possible FILL- LEAN to FAT CLAY- Occasional Black Oxide Nodules- Red, Brown and Tan Mottled- Very Stiff to Hard (CL/CH)	SB3	18	3	17				4.5+		
748.0	13.5			FAT CLAY- Occasional Black Oxide Nodules- Trace Limestone Fragments- Reddish Brown and Tan Mottled- Very Stiff to Hard (CH)	SB4	18	4	19				4.5+	Sample SB4: percent gravel = 0.1; percent sand = 3.8; percent silt = 50.3; percent clay = 45.8	
745.0	15.0			FAT CLAY- Occasional Black Oxide Nodules- Trace Limestone Fragments- Reddish Brown- Stiff to Very Stiff (CH)	SB5	18	5	23				53		
738.0	23.5			FAT CLAY- Dark Brown, Reddish Brown and Black Mottled- Stiff to Very Stiff (CH)	SB6	18	6	11						
733.0	28.5			FAT CLAY- Dark Brown, Reddish Brown and Black Mottled- Stiff to Very Stiff (CH)	SB7	18	7	15						
730.5	30.0				SB8	18	8	15						

GROUNDWATER & BACKFILL INFORMATION		
DEPTH (FT)	ELEV (FT)	
▽ DURING BORING:	31.0	730.5
BACKFILL METHOD: Auger Cuttings		

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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Planning and Design

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BORING B45

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BORING DEPTH: 43 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29039 LONGITUDE: -85.51985 ELEVATION: 761.5± FT PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)				STRENGTH (KSF)				REMARKS		
								90	100	PL	MC	LL	1	2	3	4				
730	33.0		FAT CLAY- Occasional Black Oxide Nodules- Trace Limestone Fragments- Reddish Brown- Medium to Stiff (CH) (continued)																	
725	37.3		Moderately to Slightly Weathered LIMESTONE- Pitted- Occasional Stylolites and Vertical Fractures- Fractured to Moderately Fractured- Light Gray																	Auger refusal at 33 feet. RC1 (33'-43') REC = 98% RQD = 76% GSI = 45 to 55 RMR = 54
720	40.0		Slightly Weathered LIMESTONE- Fractured to Slightly Fractured- Medium Gray	RC1	117															Compressive strength from 36.3 to 36.6' = 3,660 psi
715	43.0		END OF BORING AT 43.0 FEET.																	Compressive strength from 40.1 to 40.4' = 5,110 psi
710																				
705																				
700																				
695																				

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BORING B46

PAGE 1 OF 2

BORING DEPTH: 31.5 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/28/25

COMPLETED: 12/28/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)	▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
								90	100 110 120			
765.0	0.5	6 inches of TOPSOIL										
763.0	2.0	FILL- LEAN CLAY- Trace Limestone Fragments- Brown- Very Soft to Medium (CL)		SB1	21	2			24			
760.0	5.0	LEAN CLAY- Brown- Medium to Stiff (CL)		SB2	22	6			25			
757.0	8.0	LEAN CLAY- Occasional Black Oxide Nodules- Reddish Brown- Medium to Stiff (CL)		SB3	24	6			27			
755.0	10.0	FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff to Very Stiff (CH)		SB4	21	10			25			
750.0	15.0		SB5	18	6				26			
745.0	20.0		SB6	18	5				30			
741.5	23.5	FAT CLAY- Frequent Black Oxide Nodules- Tan and Black Mottled- Very Stiff (CH)		SB7	18	7			31			
736.5	28.5		SB8	12	2				27			
735.0	30.0	FAT CLAY- Frequent Black Oxide Nodules- Trace Limestone							83			Sample SB8 too disturbed for shear strength testing.

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	30.0	735.0
▽ AT END OF BORING:	29.8	735.2
CAVE-IN OF BOREHOLE AT:	3.0	762.0
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B46

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BORING DEPTH: 31.5 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.28957 LONGITUDE: -85.52141 ELEVATION: 765± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ✖ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
									90	100	110	120		
735	30			Fragments- Tan and Black Mottled- Very Soft (CH)	SB9	15	14							
	31.5			Completely Weathered LIMESTONE- Gray and Brown-Hard			50/0"							
				END OF BORING AT 31.5 FEET.										Sampler refusal at 31.5 feet.
730	35													
725	40													
720	45													
715	50													
710	55													
705	60													
700	65													
695	70													

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BORING B47

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BORING DEPTH: 30 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/28/25

COMPLETED: 12/28/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.28983 LONGITUDE: -85.52120 ELEVATION: 765± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%) PL MC LL	▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◇ TRIAXIAL (UU) SHEAR STRENGTH (KSF) 1 2 3 4	REMARKS
									90	100 110 120			
765	0			10 inches of TOPSOIL									
	0.8				SB1	24	0	1		26		0.6	
	5.0			LEAN CLAY- Occasional Roots- Brown- Very Soft to Medium (CL)	SB2	19	1	7		24		0.6	
760							2	9		27			
	8.0			LEAN CLAY- Occasional Black Oxide Nodules- Reddish Brown- Medium to Stiff (CL)	SB3	20	4	10		26			
							3	10					
755					SB4	20	4	10					
							6	17		27			
750				FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff to Very Stiff (CH)	SB5	24	8	9					
							5	20		24			
745					SB6	18	6	14					
							5	16		30			
740				FAT CLAY- Frequent Black Oxide Nodules- Tan, Reddish Brown and Black Mottled- Very Stiff (CH)	SB7	17	7	9					
							1	1					
	23.5				SB7	17	5	7					
							1	1					
	28.5			FAT CLAY with Fine Sand- Little Limestone Fragments- Brown-	SB8	17	1	1		52		0.6	
735	29.8				SB8	17	1	1					

GROUNDWATER & BACKFILL INFORMATION	
DEPTH (FT)	ELEV (FT)
▼ DURING BORING: Not Encountered	
▼ AT END OF BORING: Note 3	
CAVE-IN OF BOREHOLE AT: 5.0	760.0
BACKFILL METHOD: Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

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BORING B47

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BORING DEPTH: 30 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.28983 LONGITUDE: -85.52120 ELEVATION: 765± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)				STRENGTH (KSF)				REMARKS	
									90	100	110	120	PL	MC	LL	1	2	3		4
735	30	30.0		Very Soft to Medium (CH) Completely Weathered Limestone- Brown and Gray-Hard END OF BORING AT 30.0 FEET.			50.0													Sampler refusal at 30 feet.
730	35																			
725	40																			
720	45																			
715	50																			
710	55																			
705	60																			
700	65																			
695	70																			

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BORING B48

PAGE 1 OF 2

BORING DEPTH: 27.2 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/28/25

COMPLETED: 12/28/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29009 LONGITUDE: -85.52050 ELEVATION: 765± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ⊕ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
									90	100	110	120		
765.0	0.7			8.5 inches of TOPSOIL										
763.0	2.0			LEAN CLAY- Brown- Soft to Medium (CL)	SB1	20	3			25				
760.0	5.0			LEAN to FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Medium to Stiff (CL/CH)	SB2	24	6			26				
757.0	8.0			LEAN CLAY- Occasional Black Oxide Nodules- Reddish Brown- Medium to Stiff (CL)	SB3	21	8			27				
755.0	10.0			FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff to Very Stiff (CH)	SB4	23	11			27				
750.0	15.0						19			27				
746.5	18.5			FAT CLAY- Frequent Black Oxide Nodules- Brown, Tan and Black Mottled- Very Stiff to Hard (CH)	SB6	18	20			25				4.5+
741.5	23.5						10			31				
737.8	27.2			END OF BORING AT 27.2 FEET.	SB8	0	50/0"							No recovery for sample SB8. Driller reported encountering limestone at 27.2 feet. Sampler refusal at

GROUNDWATER & BACKFILL INFORMATION	
DEPTH (FT)	ELEV (FT)
▼ DURING BORING:	Not Encountered
▼ AT END OF BORING:	Note 3
CAVE-IN OF BOREHOLE AT:	5.0 760.0
BACKFILL METHOD:	Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

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BORING B48

PAGE 2 OF 2

BORING DEPTH: 27.2 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29009 LONGITUDE: -85.52050 ELEVATION: 765± FT PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)				STRENGTH (KSF)				REMARKS
								90	100	PL	MC	LL	1	2	3	4		
735	30																	27.2 feet.
730	35																	
725	40																	
720	45																	
715	50																	
710	55																	
705	60																	
700	65																	
695	70																	

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BORING B49

PAGE 1 OF 2

BORING DEPTH: 31.9 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/29/25

COMPLETED: 12/29/25

BORING METHOD: Hollow Stem Augers/NQ2 Core

DRILLER: RM (Mathes Drilling)

RIG NO.: B-53 (ATV)

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29039 LONGITUDE: -85.51985 ELEVATION: 761± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ - O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
									90	100	110	120		
760.0	0.6	7 inches of TOPSOIL		760.4			1	4						
758.0	3.0	LEAN CLAY- Occasional Roots- Brown- Soft to Medium (CL)		758.0	SB1	20	2		25					
756.0	5.0	LEAN CLAY- Occasional Black Oxide Nodules- Medium to Stiff (CL)		756.0	SB2	24	2	6	27					
755.0	5.0	FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff to Hard (CH)		756.0	SB3	24	6	17	26					
750.0	13.5	FAT CLAY- Frequent Black Oxide Nodules- Trace Limestone Fragments- Orangish Brown and Black Mottled- Stiff to Hard (CH)		747.5	SB4	24	4	14	26				4.5+	
745.0	18.5	FAT CLAY with Fine to Medium Sand- Occasional Black Oxide Nodules- Trace Limestone Fragments- Brown, Reddish Brown, and Black Mottled- Stiff to Very Stiff (CH)		742.5	SB5	18	4	12	30				4.5+	
740.0	21.9	Moderately to Slightly Weathered LIMESTONE- Pitted- Occasional Stylolites- Fractured to Slightly Fractured- Medium Gray		739.1	SB6	18	4	11	30					
735.0	25.0				RC1	120								Auger refusal at 21.9 feet. RC1 (21.9'-31.9') REC = 100% RQD = 74% GSI = 45 to 55 RMR = 61

GROUNDWATER & BACKFILL INFORMATION	
GROUNDWATER WAS NOT ENCOUNTERED	
BACKFILL METHOD:	Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B49

PAGE 2 OF 2

BORING DEPTH: 31.9 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29039 LONGITUDE: -85.51985 ELEVATION: 761± FT PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ✖ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS	
								90	100	110	120			PL
730	31.9		729.1											
END OF BORING AT 31.9 FEET.														
725														
720														
715														
710														
705														
700														
695														
70														

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BORING B50

PAGE 1 OF 1
BORING DEPTH: 4 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/23/25

COMPLETED: 12/23/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■ 90 100 110 120	MOISTURE & ATTERBERG LIMITS (%) PL MC LL	▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF) 1 2 3 4	REMARKS
741.5	0.5		5.5 inches of TOPSOIL								
740.0	2.0		LEAN CLAY- Occasional Black Oxide Nodules- Medium to Stiff (CL)	SB1	18	2					
738.5	3.5		FAT CLAY- Trace Limestone Gravel- Brown- Medium to Stiff (CH)	SB2	22	3					
738.0	4.0		Completely Weathered LIMESTONE- Brown and Gray-Hard			50					
END OF BORING AT 4.0 FEET.											
735											
730											
725											
720											
715											
30											

Bottom of sample SB2 was too disturbed to perform a shear strength test.
Auger refusal at 4 feet.

GROUNDWATER & BACKFILL INFORMATION	
DEPTH (FT)	ELEV (FT)
▼ DURING BORING: Not Encountered ▼ AT END OF BORING: Note 3	
CAVE-IN OF BOREHOLE AT:	1.6 740.4
BACKFILL METHOD:	Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
3. Groundwater was not encountered above the borehole cave in depth.

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BORING B51

PAGE 1 OF 1

BORING DEPTH: 11.4 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/23/25

COMPLETED: 12/23/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%) PL MC LL	▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF) 1 2 3 4	REMARKS
								90	100			
	0.4		5 inches of GRAVEL									
750			LEAN CLAY- Occasional Roots- Brown- Soft to Medium (CL)	SB1	12	3	4			21	0.9	
				SB2	20	3	7			22		
				SB3	24	2	9			21		4.5+
745	5.0			746.0								
743	8.0		FAT CLAY- Occasional Black Oxide Nodules- Little Limestone Fragments- Orangish Brown and Black Mottled- Stiff to Very Stiff (CH)	SB4	24	4	13			26		
740	11.3		743.0									
	11.4		739.7	SB5	1	1	50+					Sampler refusal at 11.4 feet.
			739.6									END OF BORING AT 11.4 FEET.

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	11.0	740.0
▽ AT END OF BORING:	Note 3	
CAVE-IN OF BOREHOLE AT:	4.0	747.0
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

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BORING B51A

PAGE 1 OF 1

BORING DEPTH: 10.5 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/22/26

COMPLETED: 1/22/26

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29091 LONGITUDE: -85.51841 ELEVATION: 751± FT PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■	MOISTURE & ATTERBERG LIMITS (%)	<input type="checkbox"/> HAND PENE. <input type="checkbox"/> TORVANE SHEAR <input type="checkbox"/> UNC. COMP. <input type="checkbox"/> VANE SHEAR (PK) <input type="checkbox"/> VANE SHEAR (REM) <input type="checkbox"/> TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS	
							90 100 110 120				PL MC LL
750	0										Boring B51A offset approximately 5 feet from boring B51. Bulk sample obtained from 2-4 feet.
				GS1							
745	5										Shelby tube obtained from 8-10 feet.
				3ST1	22						
740	10										
	15										
735	20										
	25										
730	30										

GROUNDWATER & BACKFILL INFORMATION

GROUNDWATER WAS NOT ENCOUNTERED

BACKFILL METHOD: Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B52

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BORING DEPTH: 12.6 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/23/25

COMPLETED: 12/23/25

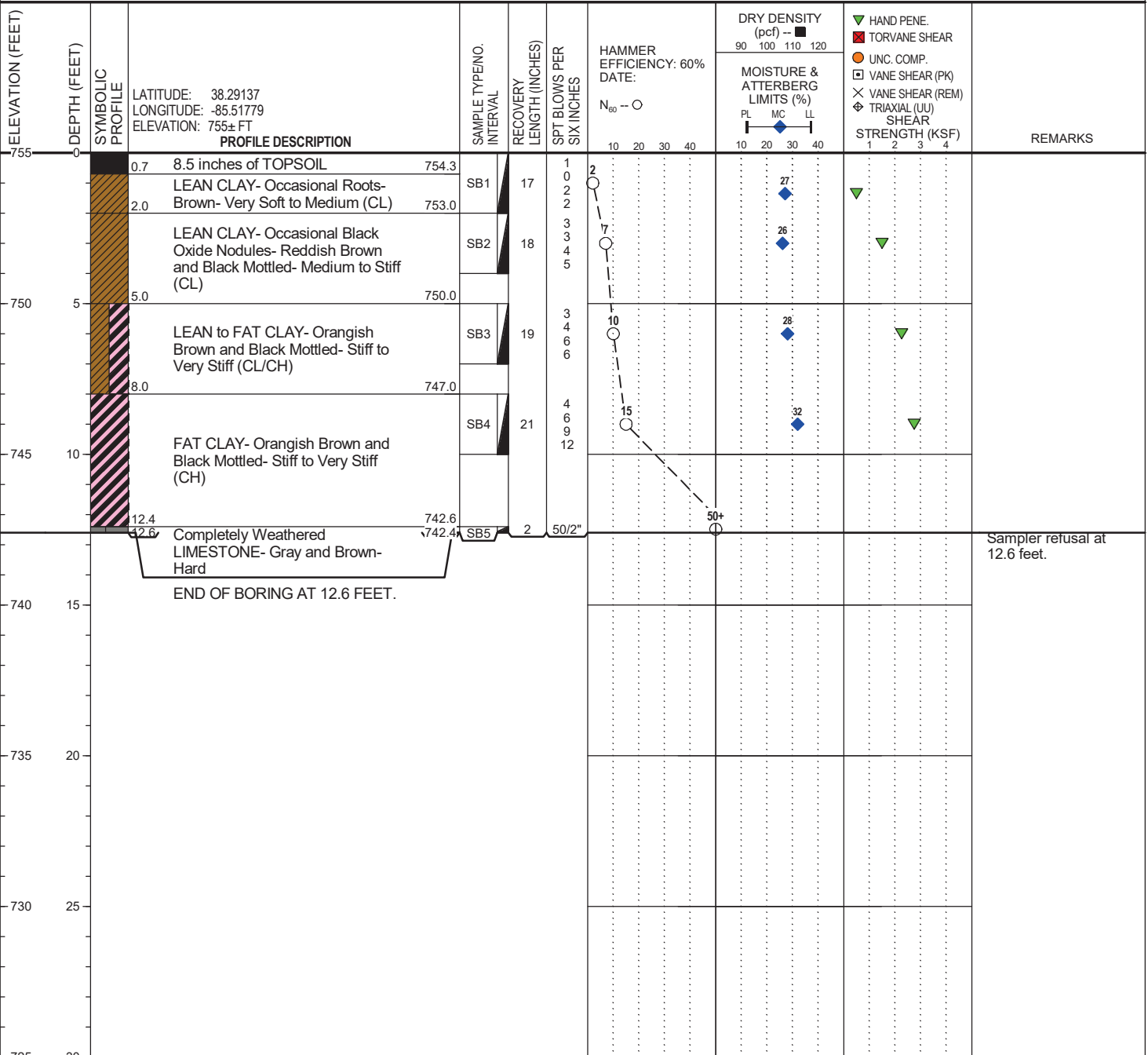
BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH



GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	Not Encountered	
▽ AT END OF BORING:	Note 3	
CAVE-IN OF BOREHOLE AT:	3.0	752.0
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

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BORING B53

PAGE 1 OF 2

BORING DEPTH: 28.9 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/30/25

COMPLETED: 12/30/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.28924 LONGITUDE: -85.52072 ELEVATION: 764± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%) PL MC LL	▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◇ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS	
									90	100				110
762.0	2.0			LEAN CLAY- Occasional Roots- Brown- Medium to Stiff (CL)	SB1	20	4	7		24				
760	5			LEAN CLAY- Occasional Black Oxide Nodules- Reddish Brown- Medium to Stiff (CL)	SB2	20	3	6		24				
756.0	8.0			FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff to Very Stiff (CH)	SB3	24	4	8		26				
755	10			FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff to Very Stiff (CH)	SB4	24	3	9		26				
750	15			FAT CLAY- Frequent Black Oxide Nodules- Tan, Brown and Black Mottled- Very Stiff (CH)	SB5	22	8	12	29	26				
745	20			FAT CLAY- Frequent Black Oxide Nodules- Tan, Brown and Black Mottled- Very Stiff (CH)	SB6	18	8	12	26	28				
740	25			FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown to Brown- Stiff to Very Stiff (CH)	SB7	18	2	5	11	21				
735	28.5			FAT CLAY- Occasional Black Oxide Nodules- Trace Limestone	SB8	5	50+ ¹			36				Sampler refusal at 28.9 feet.

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	28.0	736.0
▽ AT END OF BORING:	26.3	737.7
CAVE-IN OF BOREHOLE AT:	2.0	762.0
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B53

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BORING DEPTH: 28.9 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.28924 LONGITUDE: -85.52072 ELEVATION: 764± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)				STRENGTH (KSF)				REMARKS		
									90	100	110	120	PL	MC	LL	1	2	3		4	
30				Fragments- Reddish Brown-Medium (CH) Completely Weathered LIMESTONE- Brown- Hard END OF BORING AT 28.9 FEET.																	
730	35																				
725	40																				
720	45																				
715	50																				
710	55																				
705	60																				
700	65																				
695	70																				

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BORING B54

PAGE 1 OF 2

BORING DEPTH: 34 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/29/25

COMPLETED: 12/29/25

BORING METHOD: Hollow Stem Augers/NQ2 Core

DRILLER: RM (Mathes Drilling)

RIG NO.: B-53 (ATV)

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.28954 LONGITUDE: -85.52051 ELEVATION: 762± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◇ TRIAXIAL (UU) S S S S SHEAR STRENGTH (KSF)	REMARKS
									90	100	110	120		
760	0.5			6 inches of TOPSOIL										
760	2.0			LEAN CLAY- Occasional Roots- Brown- Soft to Medium (CL)	SB1	24	1	3						
759	3.0			LEAN CLAY- Brown- Stiff to Hard (CL)	SB2	24	2	19						
756	6.0			LEAN CLAY- Occasional Roots and Black Oxide Nodules- Brown and Tan Mottled- Stiff to Very Stiff (CL)	SB3	24	2	16					4.5+	
753	9.0			FAT CLAY- Occasional Black Oxide Nodules- Trace Limestone Fragments- Reddish Brown, Tan, and Black Mottled- Very Stiff to Stiff (CH)	SB4	24	5	14						
748.5	13.5			FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff to Very Stiff (CH)			6	14						
748.5	15.0			FAT CLAY with Fine Sand- Occasional Black Oxide Nodules- Trace Limestone Fragments- Orangish Brown and Black Mottled- Stiff to Hard (CH)	SB5	18	5	14					4.5+	
748.5	18.0						6							
748.5	20.0				SB6	18	4	14						
748.5	23.5			Completely Weathered LIMESTONE- Brown and Gray- Hard	SB7	2	50/2"	50+						
738.0	24.0			Highly to Moderately Weathered LIMESTONE- Vuggy, Pitted, Occasional Styolites, Calcite Crystals and Oxide Staining- Fractured to Moderately Fractured- Light Gray to Medium Gray										
738.0					RC1	117								

Auger refusal at 24 feet. RC1: (24'-34')
REC = 98%
RQD = 75%
GSI = 34 to 45
RMR = 49

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	23.0	739.0
BACKFILL METHOD: Auger Cuttings		

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

RECEIVED May 22, 2026

Planning and Design

26-ZONE-0056

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BORING B54

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BORING DEPTH: 34 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.28954 LONGITUDE: -85.52051 ELEVATION: 762± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)				STRENGTH (KSF)				REMARKS	
									90	100	110	120	PL	MC	LL	1	2	3		4
30				Highly to Moderately Weathered LIMESTONE- Vuggy, Pitted, Occasional Styolites, Calcite Crystals and Oxide Staining- Fractured to Moderately Fractured- Light Gray to Medium Gray <i>(continued)</i>																
730																				
	34.0			728.0																
				END OF BORING AT 34.0 FEET.																
35																				
725																				
40																				
720																				
45																				
715																				
50																				
710																				
55																				
705																				
60																				
700																				
65																				
695																				
70																				

3/19/26 8:51:26 AM



BORING B55

PAGE 1 OF 1

BORING DEPTH: 18.6 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/30/25

COMPLETED: 12/30/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.28977 LONGITUDE: -85.51988 ELEVATION: 758.5± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■				MOISTURE & ATTERBERG LIMITS (%)				REMARKS
									90	100	110	120	PL	MC	LL	SH	
757.8	0.7	8 inches of TOPSOIL															
756.5	2.0	LEAN CLAY- Occasional Roots- Brown- Soft (CL)			SB1	19	2										Sample SB1 too disturbed to perform a shear strength test.
753.5	5.0	LEAN CLAY- Occasional Black Oxide Nodules- Reddish Brown- Medium to Stiff (CL)			SB2	20	3										
753.5	5.0				SB3	22	4										
750	10				SB4	23	5										
745	15	FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown- Stiff to Hard (CH)			SB5	18	8										
740	18.6	Completely Weathered LIMESTONE- Gray- Hard			SB6	1	50/1"										Sampler refusal at 18.6 feet.
		END OF BORING AT 18.6 FEET.															

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	Not Encountered	
▽ AT END OF BORING:	Note 3	
CAVE-IN OF BOREHOLE AT:	3.0	755.5
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

3/19/26 8:51:27 AM



BORING B56

PAGE 1 OF 1

BORING DEPTH: 5.7 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/23/25

COMPLETED: 12/23/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)	▼ HAND PENE. ■ TORVANE SHEAR ● UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF) 1 2 3 4	REMARKS
								90	100 110 120			
745	0		LATITUDE: 38.29011 LONGITUDE: -85.51910 ELEVATION: 745± FT									
	0.5		6 inches of TOPSOIL									
	2.0		LEAN CLAY- Occasional Roots- Brown- Soft (CL)	SB1	17	0	3			29		Sample SB1 too disturbed for shear strength testing.
						1						
			LEAN CLAY- Occasional Black Oxide Nodules- Brown- Medium to Stiff (CL)	SB2	24	2	6			27		Sample SB3 too disturbed for shear strength testing. Sampler refusal at 5.7 feet.
						3						
740	5.0		LEAN CLAY- Frequent Roots- Reddish Brown- Soft (CL)	SB3	8	2	50+			43		
	5.5		Completely Weathered LIMESTONE- Brown and Gray- Hard			50/2"						
	5.7		END OF BORING AT 5.7 FEET.									
735	10											
730	15											
725	20											
720	25											
715	30											

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	5.0	740.0
▽ AT END OF BORING:	4.8	740.2
BACKFILL METHOD: Auger Cuttings		

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B57

PAGE 1 OF 1

BORING DEPTH: 6.9 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/23/25

COMPLETED: 12/23/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■			MOISTURE & ATTERBERG LIMITS (%)	▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ⊕ TRIAXIAL (UU) SHEAR STRENGTH (KSF) 1 2 3 4	REMARKS
								90	100	110 120			
	0		LATITUDE: 38.29039 LONGITUDE: -85.51852 ELEVATION: 746± FT										
	0.5		6 inches of TOPSOIL										
	2.0		LEAN CLAY- Occasional Roots- Brown- Very Soft to Soft (CL)	SB1	18	1			23		0.4		
	5.0		LEAN CLAY- Frequent Black Oxide Nodules- Brown and Black Mottled- Medium to Very Stiff (CL)	SB2	15	1 0 1 0 2 4 4	6		29				
	6.5		FAT CLAY- Frequent Black Oxide Nodules- Brown- Stiff to Very Stiff (CH)	SB3	16	4 5 5	10		28				
	6.9		Completely Weathered LIMESTONE- Brown and Gray-Hard			50/5"							Sampler refusal at 6.9 feet.
			END OF BORING AT 6.9 FEET.										
745													
740													
735													
730													
725													
720													
30													

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	5.5	740.5
▽ AT END OF BORING:	3.5	742.5
CAVE-IN OF BOREHOLE AT:	1.0	745.0
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B58

PAGE 1 OF 1

BORING DEPTH: 16.9 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/26/25

COMPLETED: 12/26/25

BORING METHOD: Hollow Stem Augers

DRILLER: RM (Mathes Drilling)

RIG NO.: B-53 (ATV)

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29083 LONGITUDE: -85.51779 ELEVATION: 757± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
									90	100	110	120		
	0.8			10 inches of TOPSOIL										
755	3.0			LEAN CLAY- Occasional Roots- Brown- Medium to Very Stiff (CL)	SB1	24	2 4 6	8						
750	5.0			LEAN CLAY- Occasional Black Oxide Nodules- Reddish Brown and Tan Mottled- Very Stiff to Hard (CL)	SB2	24	3 7 9 11	16						4.5+
750	8.0			FAT CLAY- Occasional Black Oxide Nodules- Reddish Brown and Tan Mottled- Very Stiff to Hard (CH)	SB3	24	5 7 9 12	16						4.5+
745	9.0			LEAN CLAY with Fine Sand- Occasional Black Oxide Nodules- Dark Brown- Very Stiff to Hard (CL)	SB4	24	9 11 12 14	23						4.5+
745	13.5			FAT CLAY- Frequent Black Oxide Nodules- Orangish Brown and Black Mottled- Very Stiff to Hard (CH)										
740	16.9			FAT CLAY- Occasional Roots and Black Oxide Nodules- Trace Limestone Fragments- Reddish Brown, Brown, and Black Mottled- Medium to Very Stiff (CH)	SB5	18	2 4 4	8						
	16.9			END OF BORING AT 16.9 FEET.										Auger refusal at 16.9 feet.

GROUNDWATER & BACKFILL INFORMATION	NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual. 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
GROUNDWATER WAS NOT ENCOUNTERED	
BACKFILL METHOD: Auger Cuttings	

3/19/26 8:51:31 AM



BORING B58A

PAGE 1 OF 1

BORING DEPTH: 26.9 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/26/25

COMPLETED: 12/26/25

BORING METHOD: Hollow Stem Augers/NQ2 Core

DRILLER: RM (Mathes Drilling)

RIG NO.: B-53 (ATV)

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29083 LONGITUDE: -85.51779 ELEVATION: 757± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■	MOISTURE & ATTERBERG LIMITS (%)	▼ HAND PENE. ■ TORVANE SHEAR ● UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF) 1 2 3 4	REMARKS
								90 100 110 120			
0	0										
755	5			Blank Drilled - No Sampling							B58A offset approximately 4' southwest from B58.
750	10										
745	15										
740	16.9										Auger refusal at 16.9 feet. RC1: (16.9'-26.9') REC = 98% RQD = 47% GI = 35 to 45 RMR = 50
735	20			Highly to Moderately Weathered LIMESTONE- Vuggy, Pitted, Occasional Stylolites- Fractured to Moderately Fractured- Medium Gray to Light Gray	RC1	117					
730	23.5			Highly Weathered LIMESTONE- Vuggy, Pitted, Occasional Calcite Crystals and Oxide Staining- Highly Fractured to Fractured- Medium Gray to Light Gray							
730	26.9			END OF BORING AT 26.9 FEET.							

GROUNDWATER & BACKFILL INFORMATION
GROUNDWATER WAS NOT ENCOUNTERED
BACKFILL METHOD: Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B59

PAGE 1 OF 1

BORING DEPTH: 28 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/13/26

COMPLETED: 1/13/26

BORING METHOD: Hollow Stem Augers/NQ2 Core

DRILLER: RM (Mathes Drilling)

RIG NO.: B-53 (ATV)

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■ 90 100 110 120	MOISTURE & ATTERBERG LIMITS (%) PL MC LL	▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◇ TRIAXIAL (UU) SHEAR STRENGTH (KSF) 1 2 3 4	REMARKS
	0.5		6 inches of TOPSOIL		757.0						
	2.0		LEAN CLAY- Occasional Roots- Brown- Soft to Medium (CL)	SB1	18	2			26	0.9	
				SB2	18	2			24		
			LEAN CLAY- Occasional Black Oxide Nodules- Brown to Brown and Gray Mottled- Medium to Stiff (CL)	SB3	18	3			23		
	8.0				749.5						
			LEAN CLAY- Frequent Black Oxide Nodules- Brown, Tan, and Black Mottled- Very Stiff (CL)	SB4	18	7			26		
						8					
						9					
	13.5				744.0						
			FAT CLAY- Brown and Tan Mottled- Very Stiff (CH)	SB5	18	4			29		
						6					
						18					
	18.0				739.5						
			Moderately to Slightly Weathered LIMESTONE- Pitted- Fossiliferous- Occasional Styolites- Fractured to Slightly Fractured- Light Gray to Medium Gray	RC1	118						Auger refusal at 18 feet. RC1 (18'-28') REC = 98% RQD = 72% GSI = 45 to 55 RMR = 57
	28.0		END OF BORING AT 28.0 FEET.		729.5						

GROUNDWATER & BACKFILL INFORMATION	NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual. 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
GROUNDWATER WAS NOT ENCOUNTERED	
BACKFILL METHOD: Auger Cuttings	

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BORING B60

PAGE 1 OF 1

BORING DEPTH: 8.9 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/16/26

COMPLETED: 1/16/26

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.28959 LONGITUDE: -85.51929 ELEVATION: 749.5± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF) 1 2 3 4	REMARKS
									90	100	110	120		
749.3	0.2			2 inches of TOPSOIL										
747.5	2.0			LEAN CLAY- Occasional Roots- Dark Brown- Very Soft to Medium (CL)	SB1	24	2	2						
744.5	5.0			LEAN CLAY- Occasional Black Oxide Nodules- Reddish Brown- Medium to Very Stiff (CL)	SB2	24	3	6						
741.0	8.5			Sandy LEAN CLAY with Completely Limestone Fragments- Brown and Gray- Stiff (CL)	SB3		6	13						
740.6	8.9			Completely Weathered LIMESTONE- Brown and Gray- Hard	SB4		8	26						
				END OF BORING AT 8.9 FEET.				50+						Driller collected auger cuttings from 6 to 8 feet for classification purposes. Sample SB4 was too disturbed to perform a shear strength test. Sampler refusal at 8.9 feet.

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	8.5	741.0
▽ AT END OF BORING:	Note 3	
CAVE-IN OF BOREHOLE AT:	4.0	745.5
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater not encountered above cave in depth.

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BORING B61

PAGE 1 OF 1

BORING DEPTH: 19.1 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/23/25

COMPLETED: 12/23/25

BORING METHOD: Hollow Stem Augers/NQ2 Core

DRILLER: RM (Mathes Drilling)

RIG NO.: B-53 (ATV)

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF)	REMARKS
								90	100	110	120		
	0.7		8 inches of TOPSOIL										
750	2.0		LEAN CLAY- Occasional Roots and Black Oxide Nodules- Brown-Soft (CL)	SB1	20	1	3						Sample SB1 too disturbed for shear strength testing.
						2	19						
						4	19						
5	5.0		LEAN CLAY- Occasional Roots and Black Oxide Nodules- Brown-Stiff to Hard (CL)	SB2	24	5						4.5+	
						8							
745			FAT CLAY- Few Limestone Fragments- Brown and Tan Mottled- Stiff to Hard (CH)	SB3	24	2							
						4							
						5							
743.5	8.5		Completely Weathered LIMESTONE- Brown and Gray-Hard	SB4	8	16							Auger refusal at 9.1 feet. RC1 (9.1'-19.1') REC = 95% RQD = 51% GSI = 35 to 45 RMR = 56
742.9	9.1					50/1"	50+						
740			Highly to Moderately Weathered LIMESTONE- Vuggy, Pitted, Occasional Stylolites, Calcite Crystals and Oxide Staining- Highly Fractured to Moderately Fractured- Medium Gray to Light Gray	RC1	114								
735													
	19.1		END OF BORING AT 19.1 FEET.										

GROUNDWATER & BACKFILL INFORMATION	
GROUNDWATER WAS NOT ENCOUNTERED	
BACKFILL METHOD: Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

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BORING B62

PAGE 1 OF 1

BORING DEPTH: 23.7 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/23/25

COMPLETED: 12/23/25

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.29023 LONGITUDE: -85.51709 ELEVATION: 768± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ⊕ TRIAXIAL (UU) SHERAR STRENGTH (KSF)	REMARKS
									90	100	110	120		
766.0	2.0			SILTY CLAY- Occasional Roots- Brown- Medium to Stiff (CL/ML)	SB1	19	6		23					
763.0	5.0			LEAN CLAY- Occasional Roots- Brown- Stiff to Very Stiff (CL)	SB2	20	10		20					
760				LEAN to FAT CLAY- Occasional Roots and Black Oxide Nodules- Reddish Brown- Stiff to Very Stiff (CL/CH)	SB3	21	15		21					
755					SB4	24	15		25					
750	13.5			LEAN CLAY- Frequent Black Oxide Nodules- Brown, Gray and Black Mottled- Very Stiff (CL)	SB5	21	23		22					
749.5	18.5			FAT CLAY- Trace Gravel- Brown- Stiff to Very Stiff (CH)	SB6	24	15		27					
744.5	23.5			LEAN CLAY- Brown- Very Soft (CL)	SB7	2	50/2"		50+					Sample SB7 was too disturbed to perform a shear strength test. Sampler refusal at 23.7 feet.
744.4	23.6			Completely Weathered LIMESTONE- Brown- Hard										
744.3	23.7			END OF BORING AT 23.7 FEET.										

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	Not Encountered	
▽ AT END OF BORING:	Note 3	
CAVE-IN OF BOREHOLE AT:	3.0	765.0
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

3/19/26 8:51:38 AM



BORING B63

PAGE 1 OF 1

BORING DEPTH: 15.4 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 12/30/25

COMPLETED: 12/30/25

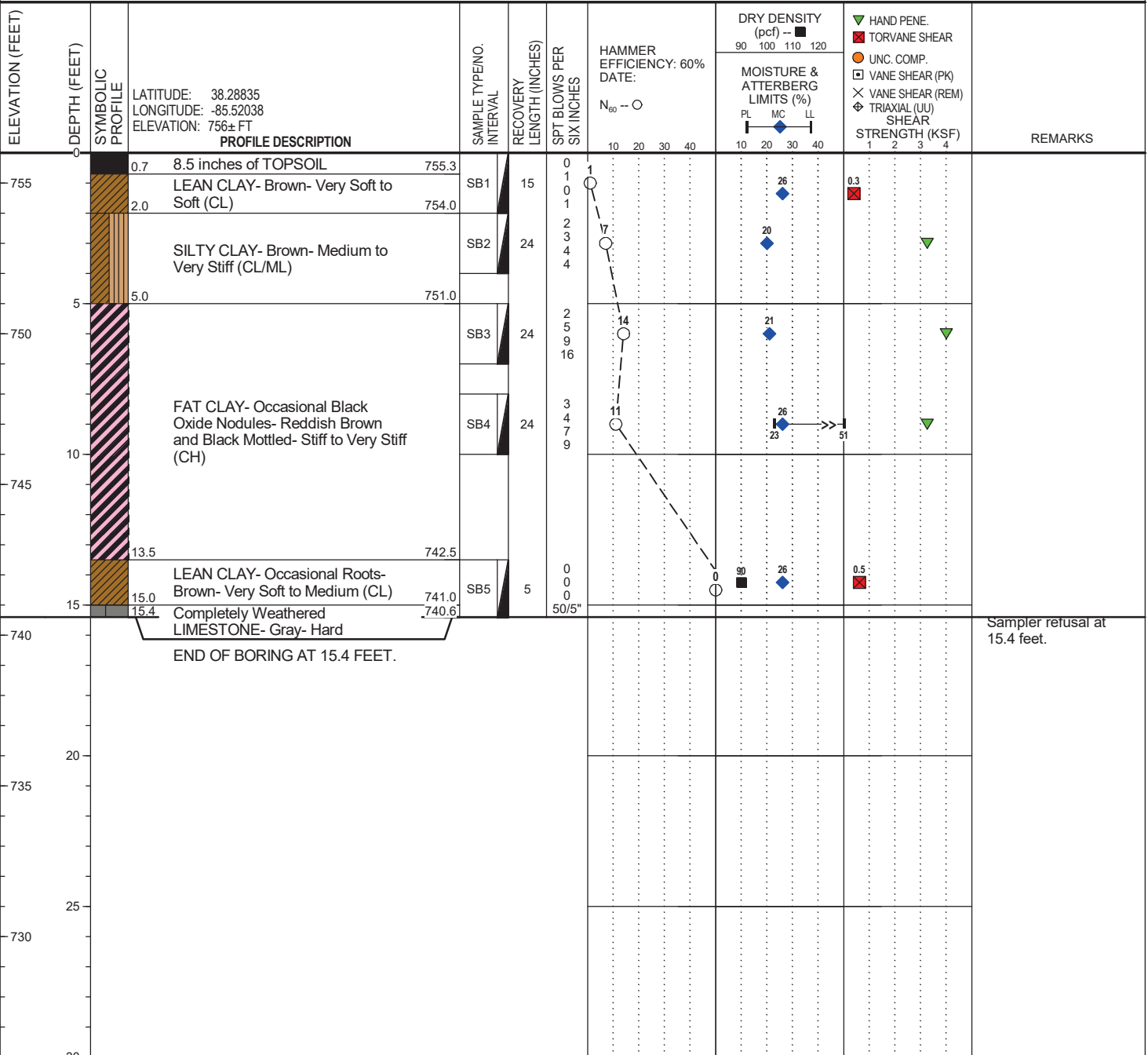
BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH



GROUNDWATER & BACKFILL INFORMATION	
DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	Not Encountered
▽ AT END OF BORING:	Note 3
CAVE-IN OF BOREHOLE AT:	4.0 752.0
BACKFILL METHOD:	Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater was not encountered above the borehole cave in depth.

3/19/26 8:51:39 AM



BORING B63A

PAGE 1 OF 1

BORING DEPTH: 15.5 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Lockett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/23/26

COMPLETED: 1/23/26

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.28835 LONGITUDE: -85.52038 ELEVATION: 756± FT PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■	MOISTURE & ATTERBERG LIMITS (%) PL MC LL	▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ⊕ TRIAXIAL (UU) SHEAR STRENGTH (KSF) 1 2 3 4	REMARKS
							90 100 110 120			
755	0			GS1						Boring B63A offset approximately 5 feet from boring B63. Bulk sample obtained from 2-4 feet.
750	5			GS2						Bulk sample obtained from 5-10 feet.
745	10									
740	15			3ST1	10					Shelby tube obtained from 13-15 feet.
735	20									
730	25									
	30									

GROUNDWATER & BACKFILL INFORMATION

GROUNDWATER WAS NOT ENCOUNTERED

BACKFILL METHOD: Auger Cuttings

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.

3/19/26 8:51:41 AM



BORING B64

PAGE 1 OF 1

BORING DEPTH: 15.5 FEET

PROJECT NAME: Greenfield Site Development

PROJECT NUMBER: 102074.00

CLIENT: Luckett & Farley

PROJECT LOCATION: Louisville, Kentucky

DATE STARTED: 1/18/26

COMPLETED: 1/18/26

BORING METHOD: Hollow Stem Augers

DRILLER: CD (Black Sheep)

RIG NO.: Geoprobe 7822DT ATV

LOGGED BY: A. Dodson

CHECKED BY: WH

ELEVATION (FEET)	DEPTH (FEET)	SYMBOLIC PROFILE	LATITUDE: 38.28862 LONGITUDE: -85.51918 ELEVATION: 757± FT	PROFILE DESCRIPTION	SAMPLE TYPE/NO. INTERVAL	RECOVERY LENGTH (INCHES)	SPT BLOWS PER SIX INCHES	HAMMER EFFICIENCY: 60% DATE: N ₆₀ -- O	DRY DENSITY (pcf) -- ■		MOISTURE & ATTERBERG LIMITS (%)		▼ HAND PENE. ■ TORVANE SHEAR ○ UNC. COMP. □ VANE SHEAR (PK) × VANE SHEAR (REM) ◆ TRIAXIAL (UU) SHEAR STRENGTH (KSF) 1 2 3 4	REMARKS
									90	100	110	120		
755.0	2.0			LEAN CLAY- Occasional Roots- Brown- Soft to Medium (CL)	SB1	4	1	3			26		0.7	
750.0	5.0			LEAN CLAY- Brown and Reddish Brown- Stiff to Very Stiff (CL)	SB2	24	3	19			24			
749.0	8.0				SB3	18	3	9			23			
745.0	10.0			FAT CLAY- Occasional Black Oxide Nodules- Trace Limestone Fragments- Reddish Brown, Orangish Brown, Tan, and Black Mottled- Stiff to Very Stiff (CH)	SB4	20	3	14			21			
741.7	15.3				SB5	18	6	15			24			
741.5	15.5			Completely Weathered LIMESTONE- Brown and Gray- Hard	SB6	2	50/2"	50+						Sampler refusal at 15.5 feet.
END OF BORING AT 15.5 FEET.														

GROUNDWATER & BACKFILL INFORMATION		
	DEPTH (FT)	ELEV (FT)
▽ DURING BORING:	Not Encountered	
▽ AT END OF BORING:	Note 3	
CAVE-IN OF BOREHOLE AT:	4.0	753.0
BACKFILL METHOD:	Auger Cuttings	

NOTES: 1. The indicated stratification lines are approximate. The in-situ transitions between materials may be gradual.
 2. The colors depicted on the symbolic profile are solely for visualization purposes and do not necessarily represent the in-situ colors encountered.
 3. Groundwater not encountered above cave in depth.



LEGEND

 APPROXIMATE PROJECT SITE BOUNDARY



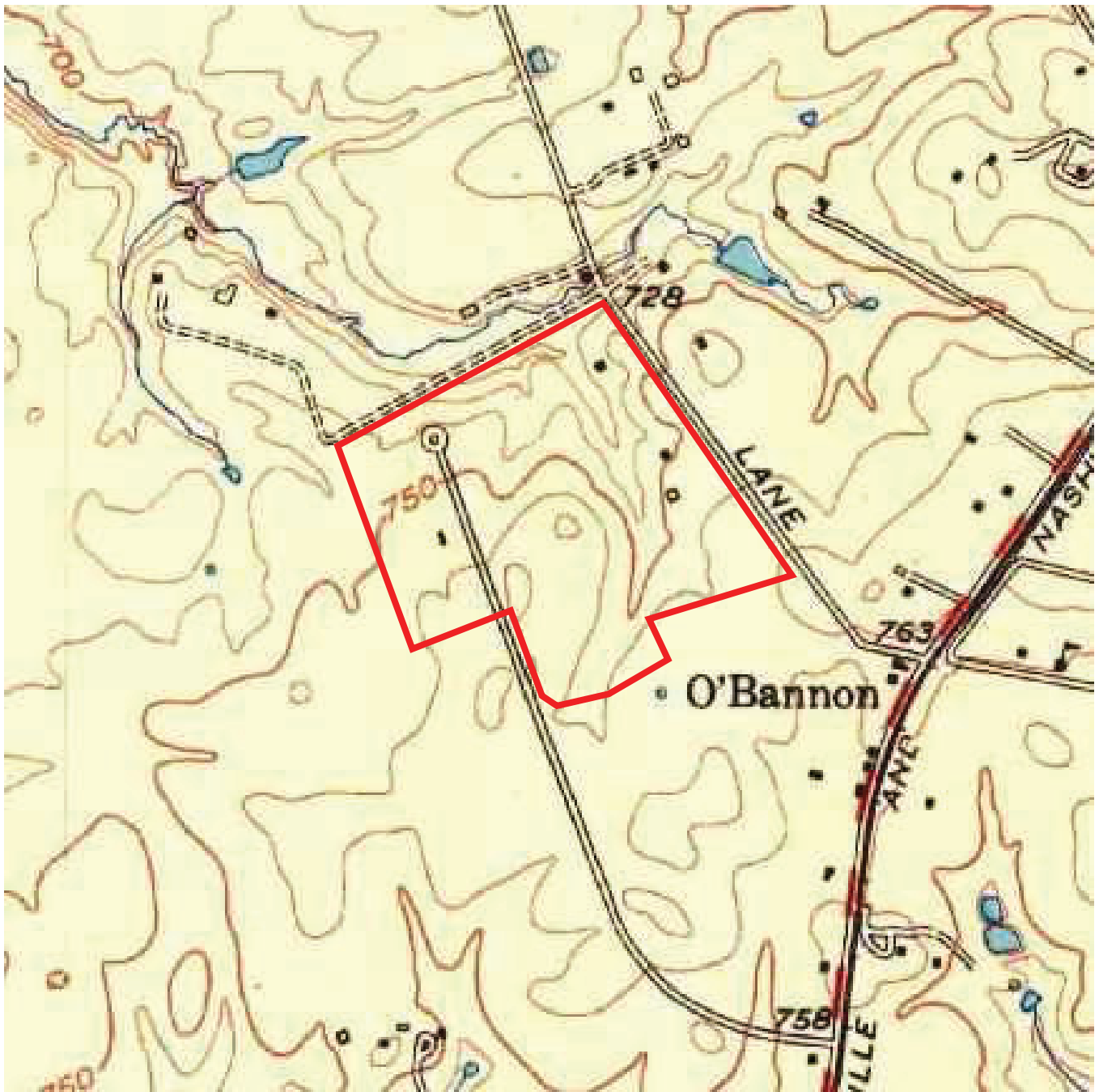
NOTE:
 IMAGE OBTAINED FROM NGMDB.USGS.GOV
 SITE BOUNDARY INFORMATION APPROXIMATED FROM
 DRAWING TITLED "ADVANCED SITE PLAN" (EXHIBIT A)
 DATED SEPTEMBER 10, 2025.

No.	Revision Date	Date	01-13-2026
		Drawn By	AMD
		Designed By	AMD
		Scale	NTS
		Project	102074.00

**1905 TOPOGRAPHIC MAP
 GREENFIELD SITE DEVELOPMENT
 LOUISVILLE, KENTUCKY**



Figure No. 3



LEGEND

 APPROXIMATE PROJECT SITE BOUNDARY

NOTE:
 IMAGE OBTAINED FROM NGMDB.USGS.GOV
 SITE BOUNDARY INFORMATION APPROXIMATED FROM
 DRAWING TITLED "ADVANCED SITE PLAN" (EXHIBIT A)
 DATED SEPTEMBER 10, 2025.

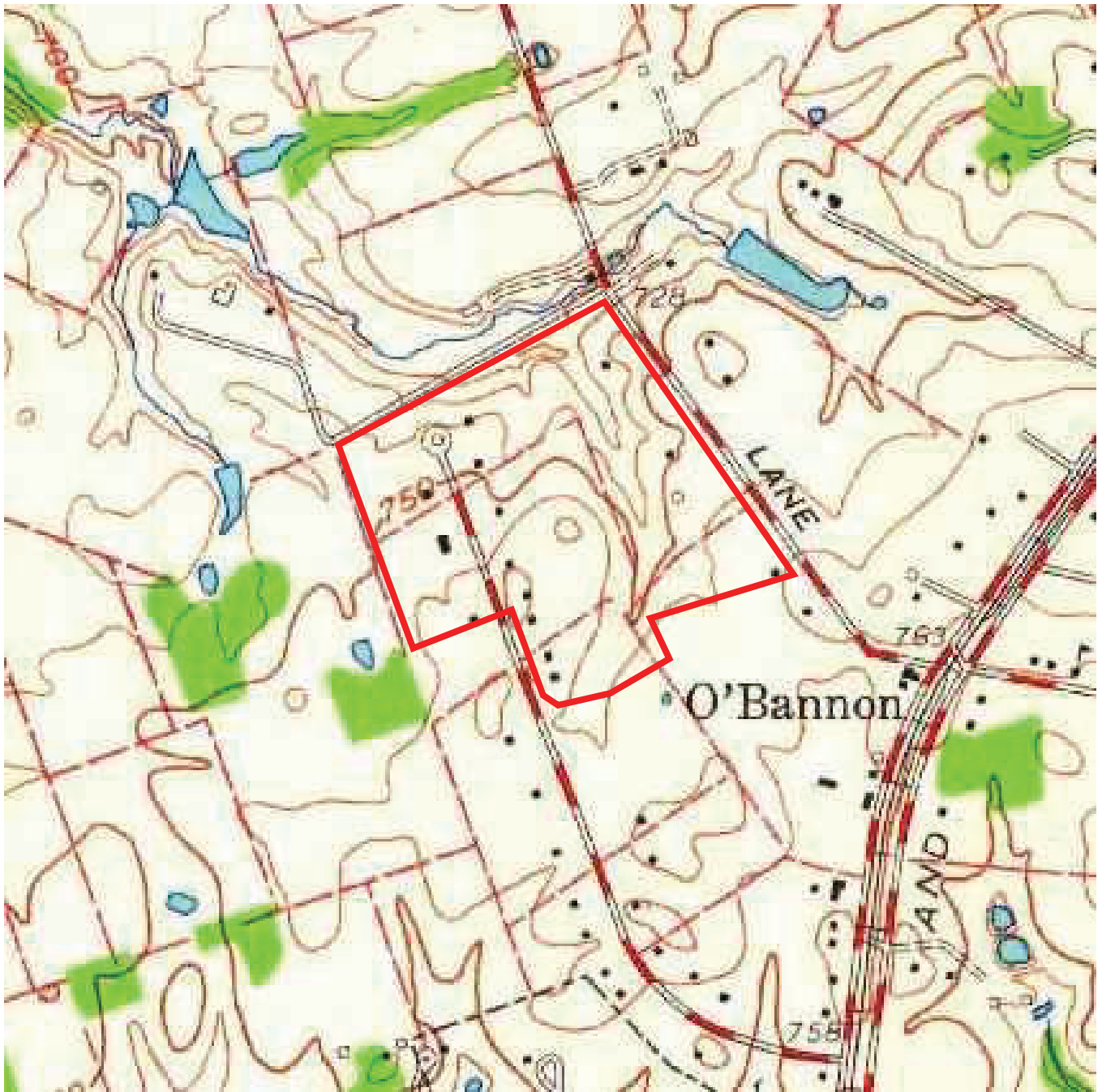


No.	Revision Date	Date	01-13-2026
		Drawn By	AMD
		Designed By	AMD
		Scale	NTS
		Project	102074.00

**1951 TOPOGRAPHIC MAP
 GREENFIELD SITE DEVELOPMENT
 LOUISVILLE, KENTUCKY**



Figure No. 4



LEGEND

APPROXIMATE PROJECT SITE BOUNDARY



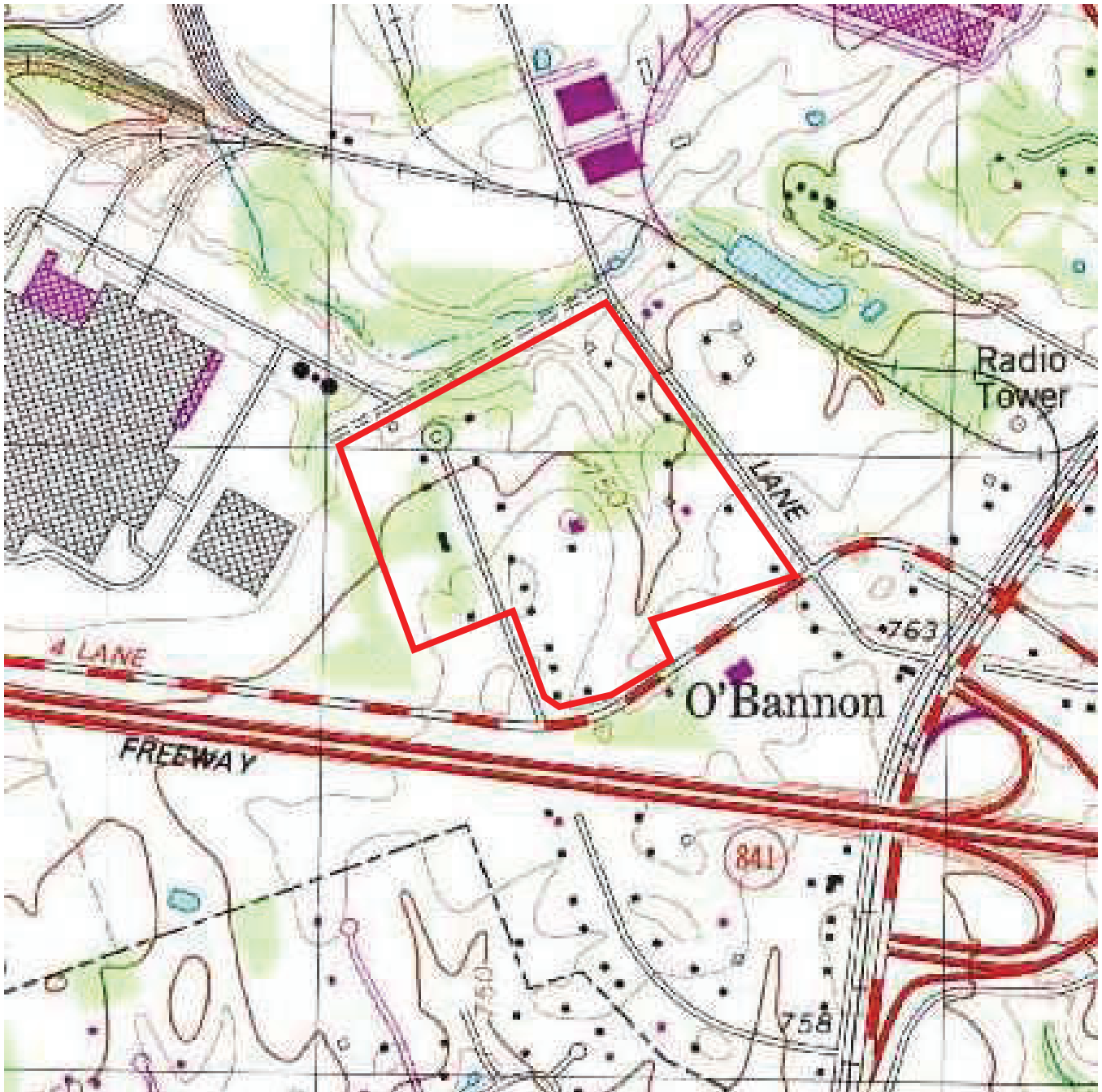
NOTE:
 IMAGE OBTAINED FROM NGMDB.USGS.GOV
 SITE BOUNDARY INFORMATION APPROXIMATED FROM
 DRAWING TITLED "ADVANCED SITE PLAN" (EXHIBIT A)
 DATED SEPTEMBER 10, 2025.

No.	Revision Date	Date	01-13-2026
		Drawn By	AMD
		Designed By	AMD
		Scale	NTS
		Project	102074.00

**1960 TOPOGRAPHIC MAP
 GREENFIELD SITE DEVELOPMENT
 LOUISVILLE, KENTUCKY**



Figure No. 5



LEGEND

 APPROXIMATE PROJECT SITE BOUNDARY



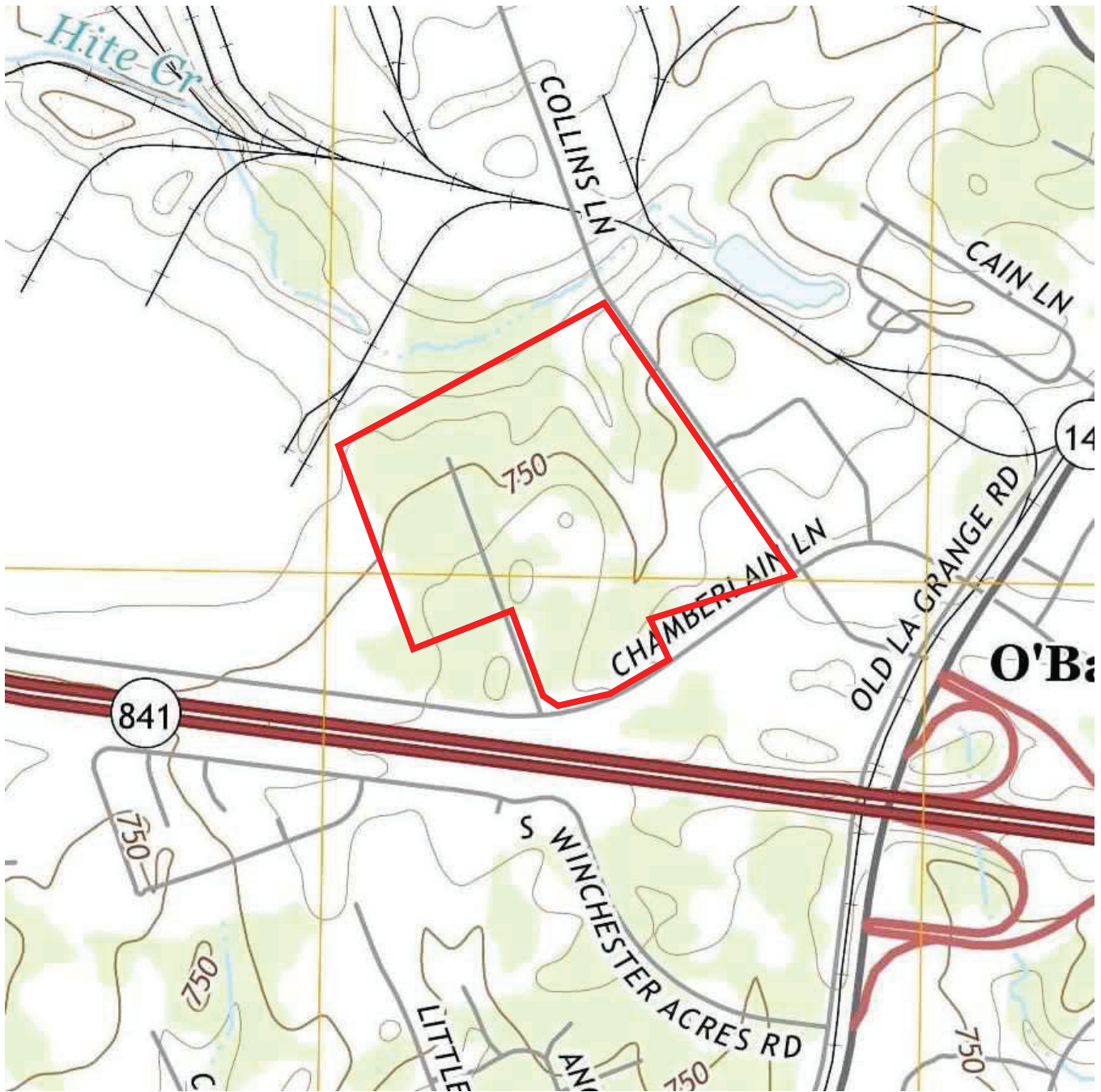
NOTE:
 IMAGE OBTAINED FROM NGMDB.USGS.GOV
 SITE BOUNDARY INFORMATION APPROXIMATED FROM
 DRAWING TITLED "ADVANCED SITE PLAN" (EXHIBIT A)
 DATED SEPTEMBER 10, 2025.

No.	Revision Date	Date	01-13-2026
		Drawn By	AMD
		Designed By	AMD
		Scale	NTS
		Project	102074.00

**1981 TOPOGRAPHIC MAP
 GREENFIELD SITE DEVELOPMENT
 LOUISVILLE, KENTUCKY**



Figure No. 6



LEGEND

 APPROXIMATE PROJECT SITE BOUNDARY



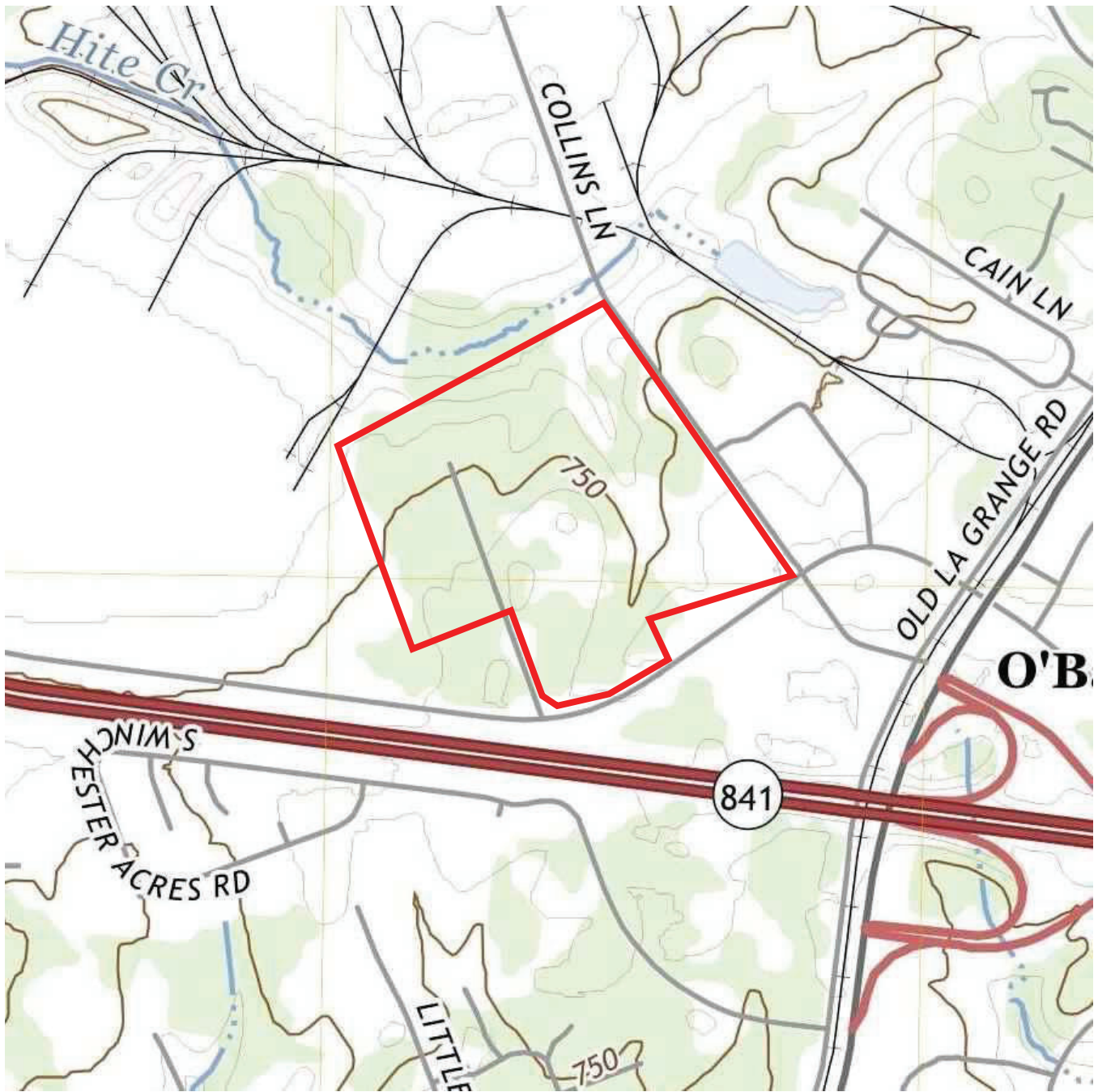
NOTE:
 IMAGE OBTAINED FROM NGMDB.USGS.GOV
 SITE BOUNDARY INFORMATION APPROXIMATED FROM
 DRAWING TITLED "ADVANCED SITE PLAN" (EXHIBIT A)
 DATED SEPTEMBER 10, 2025.

No.	Revision Date	Date	01-13-2026
		Drawn By	AMD
		Designed By	AMD
		Scale	NTS
		Project	102074.00

**2013 TOPOGRAPHIC MAP
 GREENFIELD SITE DEVELOPMENT
 LOUISVILLE, KENTUCKY**



Figure No. 7



LEGEND

— APPROXIMATE PROJECT SITE BOUNDARY

NOTE:
 IMAGE OBTAINED FROM NGMDB.USGS.GOV
 SITE BOUNDARY INFORMATION APPROXIMATED FROM
 DRAWING TITLED "ADVANCED SITE PLAN" (EXHIBIT A)
 DATED SEPTEMBER 10, 2025.



No.	Revision Date	Date	01-13-2026
		Drawn By	AMD
		Designed By	AMD
		Scale	NTS
		Project	102074.00

**2022 TOPOGRAPHIC MAP
 GREENFIELD SITE DEVELOPMENT
 LOUISVILLE, KENTUCKY**



Figure No. 8



LEGEND

APPROXIMATE PROJECT SITE BOUNDARY

NOTE:
 IMAGE (DATED 1949) OBTAINED FROM
 WWW.HISTORICAERIALS.COM
 SITE BOUNDARY INFORMATION APPROXIMATED FROM
 DRAWING TITLED "ADVANCED SITE PLAN" (EXHIBIT A)
 DATED SEPTEMBER 10, 2025.



No.	Revision Date	Date	01-14-2026
		Drawn By	AMD
		Designed By	AMD
		Scale	NTS
		Project	102074.00

**1949 AERIAL IMAGE
 GREENFIELD SITE DEVELOPMENT
 LOUISVILLE, KENTUCKY**



Figure No. 9



LEGEND

— APPROXIMATE PROJECT SITE BOUNDARY



NOTE:
 IMAGE (DATED 1955) OBTAINED FROM
 WWW.HISTORICAERIALS.COM
 SITE BOUNDARY INFORMATION APPROXIMATED FROM
 DRAWING TITLED "ADVANCED SITE PLAN" (EXHIBIT A)
 DATED SEPTEMBER 10, 2025.

No.	Revision Date	Date	01-14-2026
		Drawn By	AMD
		Designed By	AMD
		Scale	NTS
		Project	102074.00

**1955 AERIAL IMAGE
 GREENFIELD SITE DEVELOPMENT
 LOUISVILLE, KENTUCKY**



Figure No. 10



LEGEND

APPROXIMATE PROJECT SITE BOUNDARY

NOTE:
 IMAGE (DATED 1960) OBTAINED FROM
 WWW.HISTORICAERIALS.COM
 SITE BOUNDARY INFORMATION APPROXIMATED FROM
 DRAWING TITLED "ADVANCED SITE PLAN" (EXHIBIT A)
 DATED SEPTEMBER 10, 2025.



No.	Revision Date	Date	01-14-2026
		Drawn By	AMD
		Designed By	AMD
		Scale	NTS
		Project	102074.00

**1960 AERIAL IMAGE
 GREENFIELD SITE DEVELOPMENT
 LOUISVILLE, KENTUCKY**



Figure No. 11



LEGEND

APPROXIMATE PROJECT SITE BOUNDARY

NOTE:
 IMAGE (DATED 1971) OBTAINED FROM
 WWW.HISTORICAERIALS.COM
 SITE BOUNDARY INFORMATION APPROXIMATED FROM
 DRAWING TITLED "ADVANCED SITE PLAN" (EXHIBIT A)
 DATED SEPTEMBER 10, 2025.



No.	Revision Date	Date	01-14-2026
		Drawn By	AMD
		Designed By	AMD
		Scale	NTS
		Project	102074.00

**1971 AERIAL IMAGE
 GREENFIELD SITE DEVELOPMENT
 LOUISVILLE, KENTUCKY**



Figure No. 12



LEGEND

 APPROXIMATE PROJECT SITE BOUNDARY

NOTE:
 IMAGE (DATED 1986) OBTAINED FROM
 WWW.HISTORICAERIALS.COM
 SITE BOUNDARY INFORMATION APPROXIMATED FROM
 DRAWING TITLED "ADVANCED SITE PLAN" (EXHIBIT A)
 DATED SEPTEMBER 10, 2025.

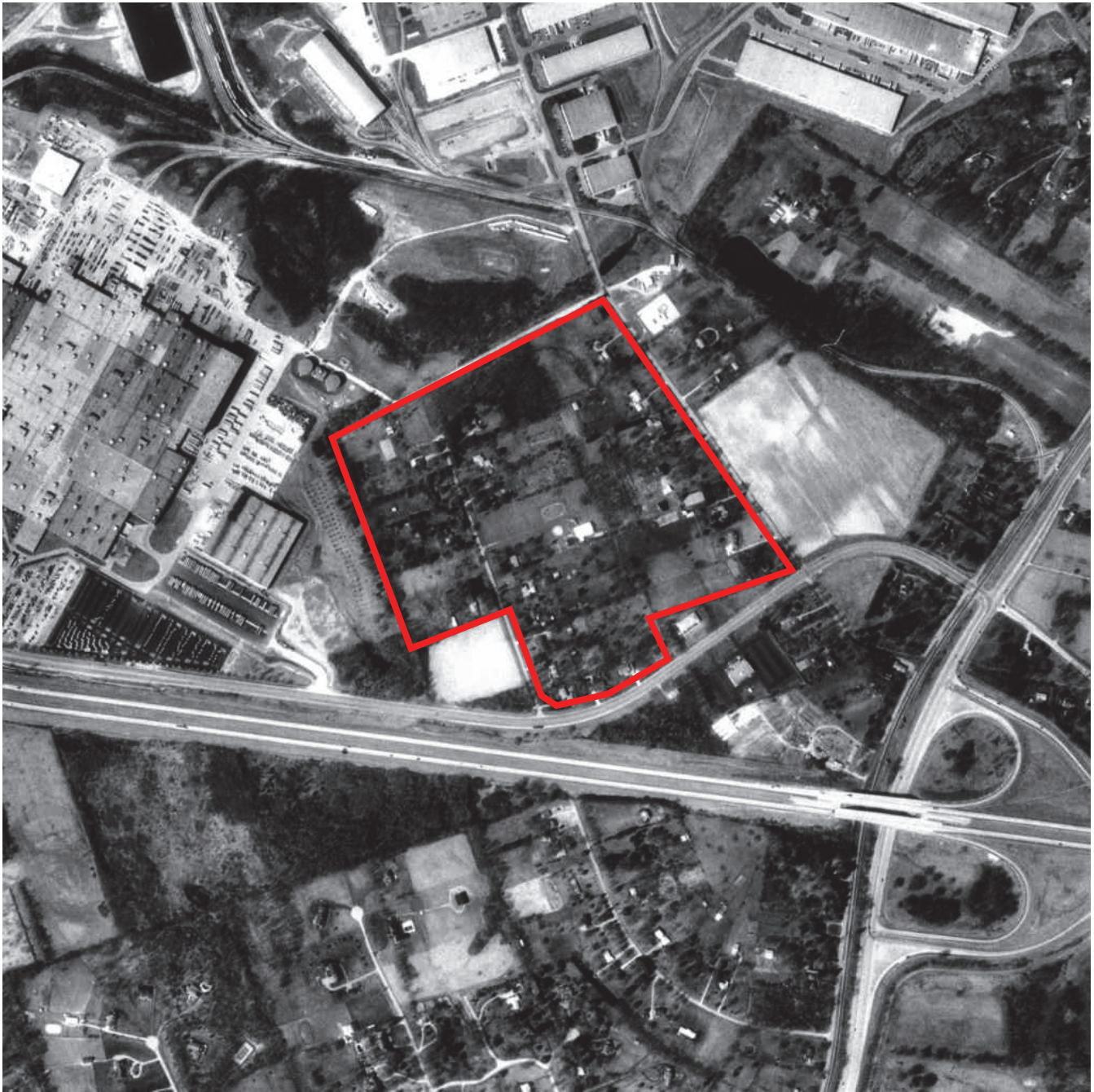


No.	Revision Date	Date	01-14-2026
		Drawn By	AMD
		Designed By	AMD
		Scale	NTS
		Project	102074.00

**1986 AERIAL IMAGE
 GREENFIELD SITE DEVELOPMENT
 LOUISVILLE, KENTUCKY**



Figure No. 13



LEGEND

APPROXIMATE PROJECT SITE BOUNDARY

NOTE:
 IMAGE (DATED MARCH 28, 1993) OBTAINED FROM
 WWW.EARTH.GOOGLE.COM
 SITE BOUNDARY INFORMATION APPROXIMATED FROM
 DRAWING TITLED "ADVANCED SITE PLAN" (EXHIBIT A)
 DATED SEPTEMBER 10, 2025.



No.	Revision Date	Date	01-14-2026
		Drawn By	AMD
		Designed By	AMD
		Scale	NTS
		Project	102074.00

**1993 AERIAL IMAGE
 GREENFIELD SITE DEVELOPMENT
 LOUISVILLE, KENTUCKY**



Figure No. 14



LEGEND

APPROXIMATE PROJECT SITE BOUNDARY

NOTE:
 IMAGE (DATED DECEMBER 31, 2001) OBTAINED FROM
 WWW.EARTH.GOOGLE.COM
 SITE BOUNDARY INFORMATION APPROXIMATED FROM
 DRAWING TITLED "ADVANCED SITE PLAN" (EXHIBIT A)
 DATED SEPTEMBER 10, 2025.



No.	Revision Date	Date	01-14-2026
		Drawn By	AMD
		Designed By	AMD
		Scale	NTS
		Project	102074.00

**2001 AERIAL IMAGE
 GREENFIELD SITE DEVELOPMENT
 LOUISVILLE, KENTUCKY**



Figure No. 15



LEGEND

— APPROXIMATE PROJECT SITE BOUNDARY



NOTE:
 IMAGE (DATED MARCH 18, 2015) OBTAINED FROM
 WWW.NEARMAP.COM
 SITE BOUNDARY INFORMATION APPROXIMATED FROM
 DRAWING TITLED "ADVANCED SITE PLAN" (EXHIBIT A)
 DATED SEPTEMBER 10, 2025.

No.	Revision Date	Date	01-14-2026
		Drawn By	AMD
		Designed By	AMD
		Scale	NTS
		Project	102074.00

**2015 AERIAL IMAGE
 GREENFIELD SITE DEVELOPMENT
 LOUISVILLE, KENTUCKY**



Figure No. 16



LEGEND

APPROXIMATE PROJECT SITE BOUNDARY

NOTE:
 IMAGE (DATED SEPTEMBER 10, 2019) OBTAINED FROM
 WWW.NEARMAP.COM
 SITE BOUNDARY INFORMATION APPROXIMATED FROM
 DRAWING TITLED "ADVANCED SITE PLAN" (EXHIBIT A)
 DATED SEPTEMBER 10, 2025.

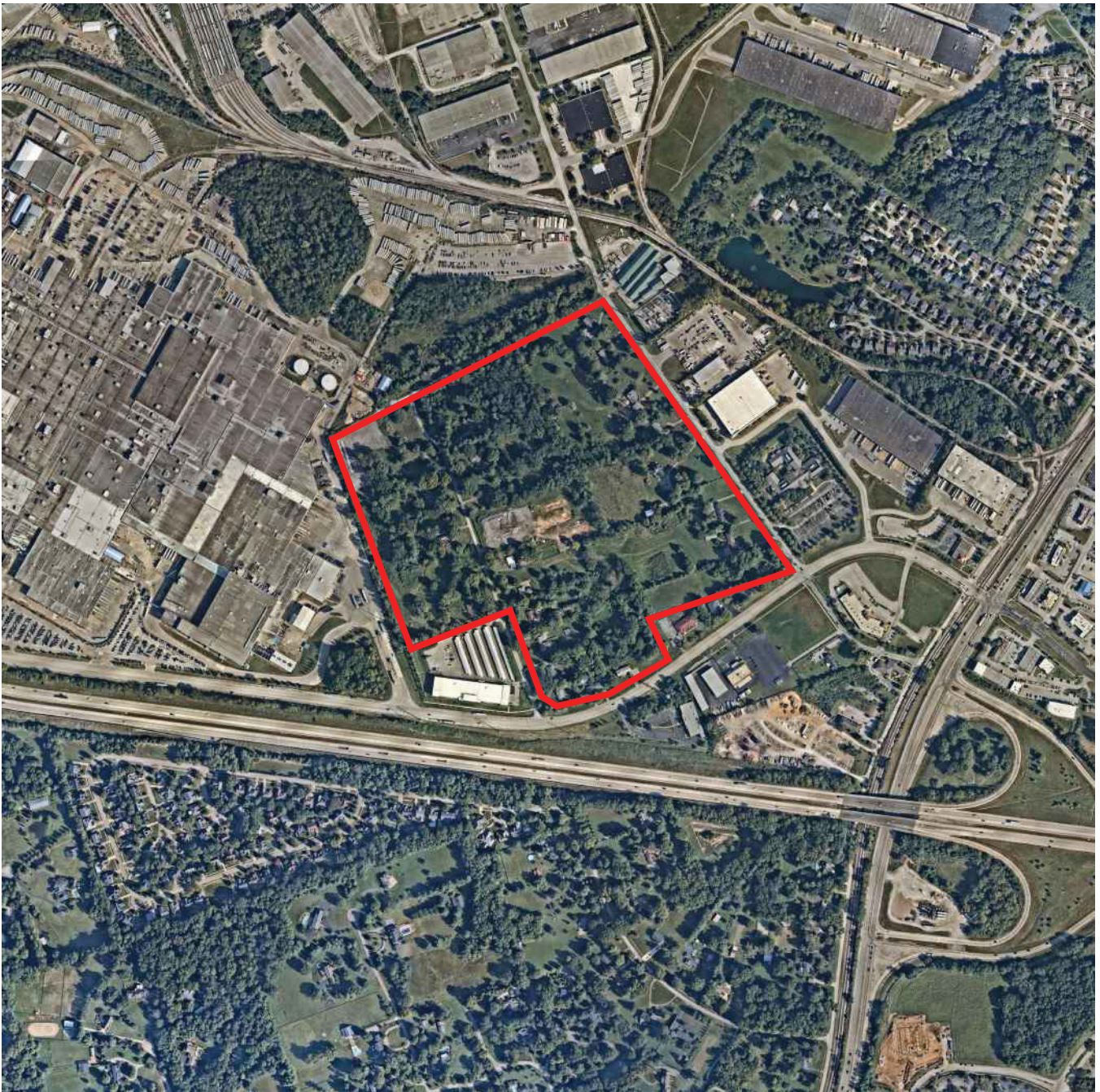


No.	Revision Date	Date	01-14-2026
		Drawn By	AMD
		Designed By	AMD
		Scale	NTS
		Project	102074.00

**2019 AERIAL IMAGE
 GREENFIELD SITE DEVELOPMENT
 LOUISVILLE, KENTUCKY**



Figure No. 17



LEGEND

— APPROXIMATE PROJECT SITE BOUNDARY



NOTE:
 IMAGE (DATED SEPTEMBER 13, 2025) OBTAINED FROM
 WWW.NEARMAP.COM
 SITE BOUNDARY INFORMATION APPROXIMATED FROM
 DRAWING TITLED "ADVANCED SITE PLAN" (EXHIBIT A)
 DATED SEPTEMBER 10, 2025.

No.	Revision Date	Date	01-14-2026
		Drawn By	AMD
		Designed By	AMD
		Scale	NTS
		Project	102074.00

2025 AERIAL IMAGE GREENFIELD SITE DEVELOPMENT LOUISVILLE, KENTUCKY



Figure No. 18

APPENDIX B

LABORATORY TESTING RESULTS

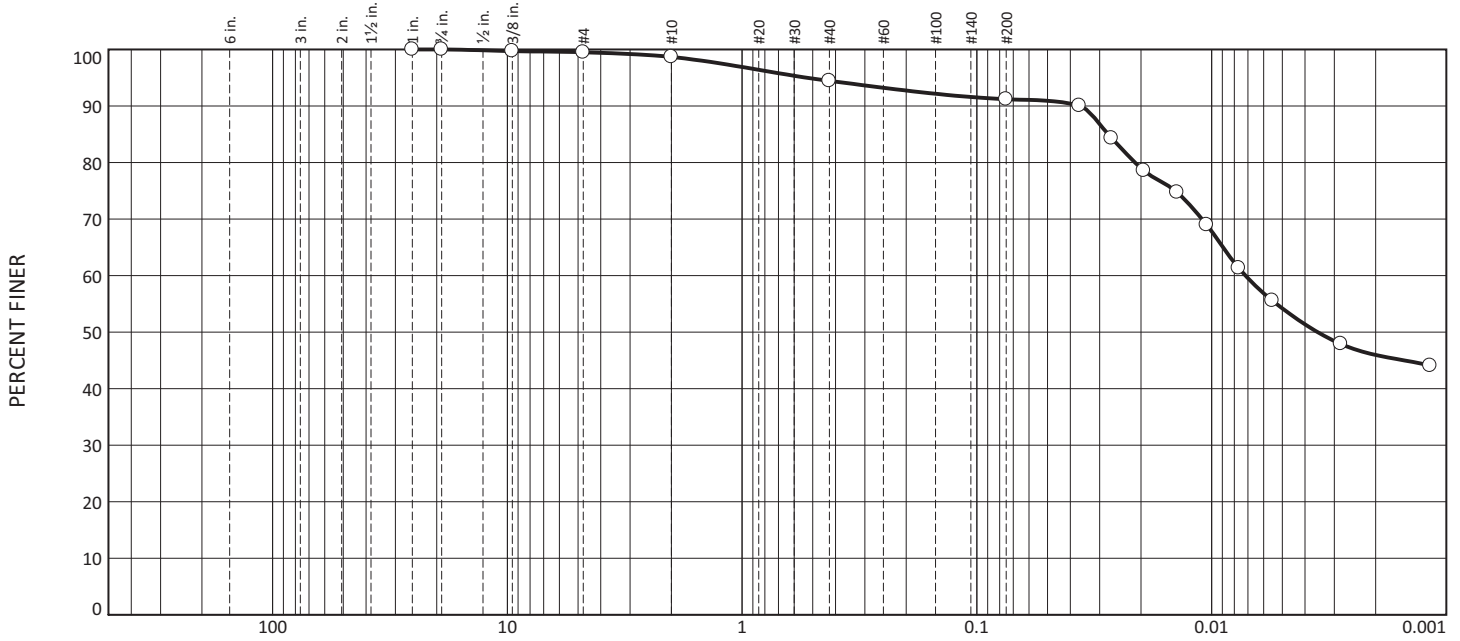
INFILTRATION TEST RESULTS (2 PAGES)

FIELD TESTING PROCEDURES

LABORATORY TESTING PROCEDURES

LIMITATIONS PERTAINING TO SUBSURFACE CONDITIONS

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.5	0.8	4.2	3.3	45.2	46.0

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)
1	100.0		
.75	100.0		
.375	99.7		
#4	99.5		
#10	98.7		
#40	94.5		
#200	91.2		
0.0366 mm.	90.1		
0.0267 mm.	84.3		
0.0194 mm.	78.6		
0.0140 mm.	74.7		
0.0105 mm.	69.0		
0.0077 mm.	61.3		
0.0055 mm.	55.6		
0.0028 mm.	47.9		
0.0012 mm.	44.1		

* (no specification provided)

Material Description

Fat Clay (CH)

Atterberg (ASTM D4318)

PL= 22 LL= 55 PI= 33

Sieve Test (ASTM D422)

Test Date: 1/28/2026 Technician: ADodson

Test Notes

Sample air dried prior to testing.

Hydrometer Test (ASTM D422)

Test Date: 1/29/2026 Technician: ADodson

Test Notes

Sample air dried prior to testing.

Coefficients

D₉₀= 0.0362 D₈₅= 0.0276
 D₆₀= 0.0072 D₅₀= 0.0035
 D₃₀= D₁₅=
 D₁₀=
 C_u= C_c=

USCS (ASTM D2487)

CH

Date Sampled: 12/27/2025

Date Received: 1/5/2026

Checked By: _____

Title: _____

Source of Sample: B9 Depth: 2-7'
 Sample Number: SB2 and SB3

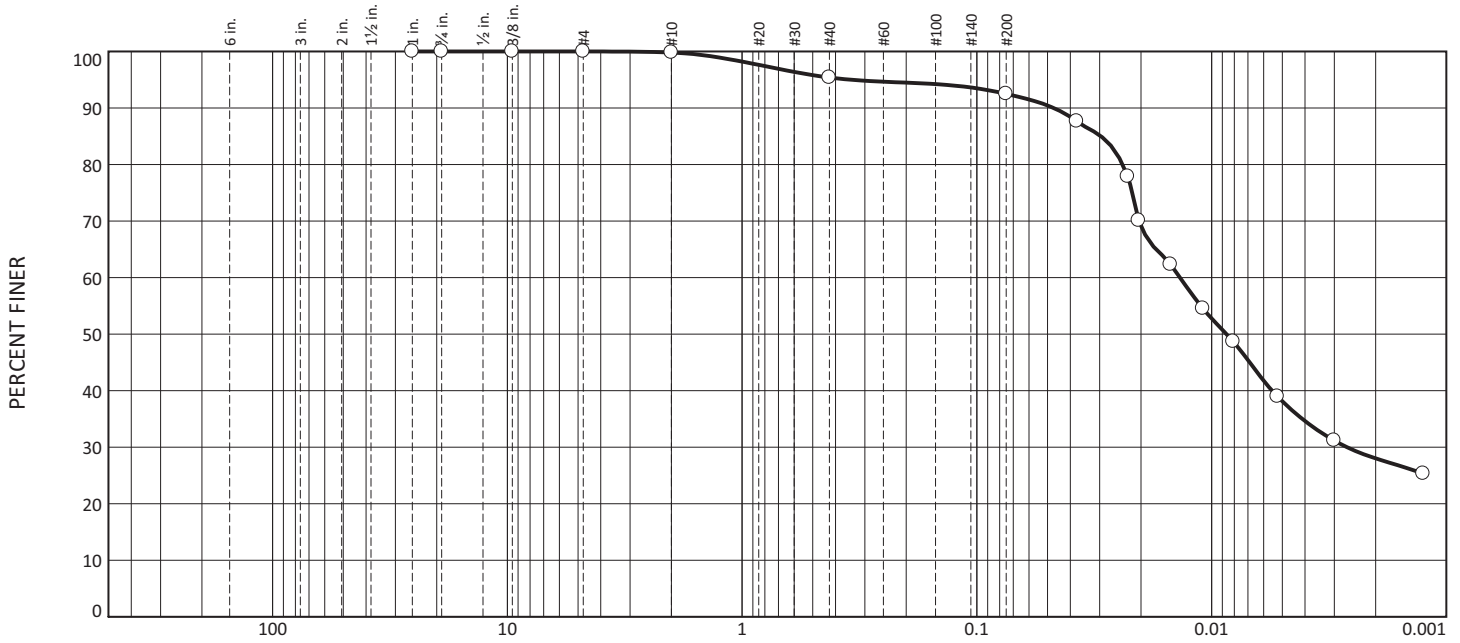


Client: Luckett & Farley
 Project: Greenfield Site Development

Project No: 102074.00

Figure

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.2	4.4	2.9	64.5	28.0

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)
1	100.0		
.75	100.0		
.375	100.0		
#4	100.0		
#10	99.8		
#40	95.4		
#200	92.5		
0.0375 mm.	87.6		
0.0227 mm.	77.9		
0.0204 mm.	70.1		
0.0150 mm.	62.3		
0.0109 mm.	54.5		
0.0081 mm.	48.7		
0.0052 mm.	38.9		
0.0030 mm.	31.2		
0.0013 mm.	25.3		

* (no specification provided)

Material Description
Lean Clay (CL)

Atterberg (ASTM D4318)
PL= 21 LL= 34 PI= 13

Sieve Test (ASTM D422)

Test Date: 1/28/2026 Technician: ADodson

Coefficients
D₉₀= 0.0470 D₈₅= 0.0296
D₆₀= 0.0136 D₅₀= 0.0086
D₃₀= 0.0027 D₁₅=
D₁₀=
C_u= C_c=

Test Notes
Sample air dried prior to testing.

Hydrometer Test (ASTM D422)

Test Date: 1/29/2026 Technician: ADodson

USCS (ASTM D2487)
CL

Test Notes
Sample air dried prior to testing.

Date Sampled: 1/13/2026

Date Received: 1/14/2026

Checked By: _____

Title: _____

Source of Sample: B14 Depth: 2-7'
Sample Number: SB2 and SB3

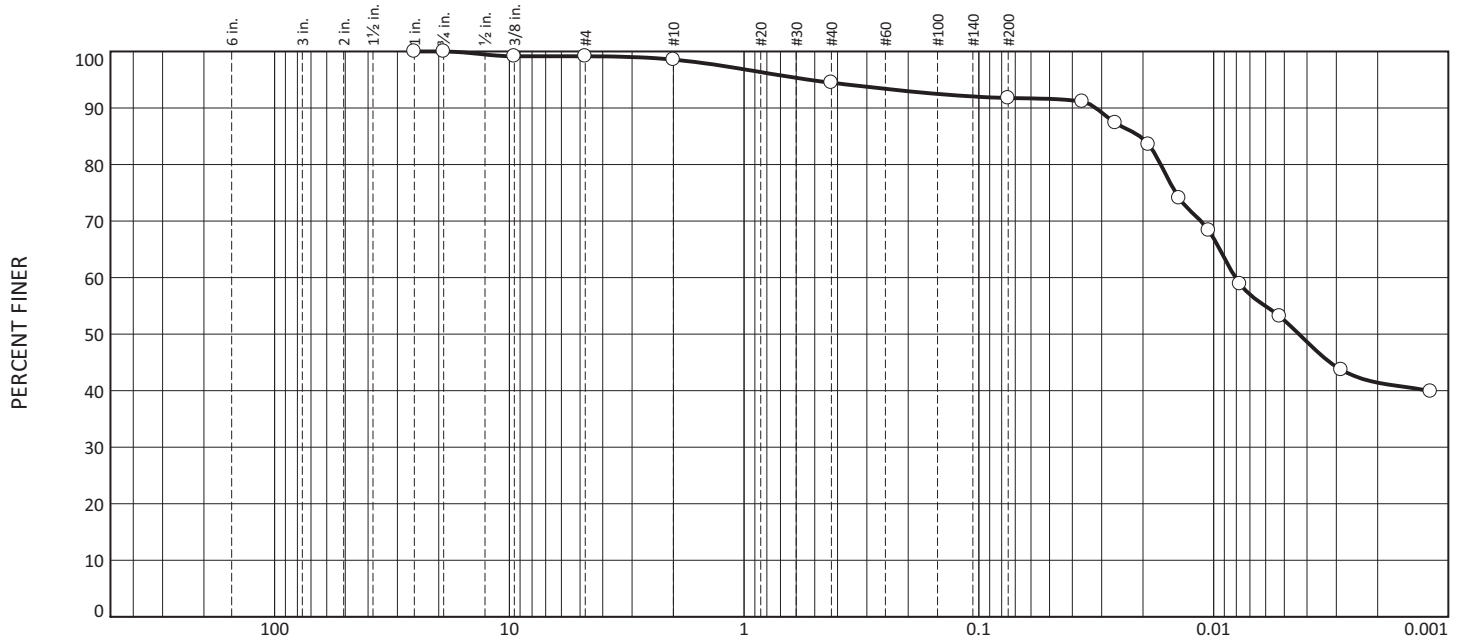


Client: Luckett & Farley
Project: Greenfield Site Development

Project No: 102074.00

Figure

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.8	0.6	4.1	2.7	50.4	41.4

Test Results (ASTM D422)			
Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)
1	100.0		
.75	100.0		
.375	99.2		
#4	99.2		
#10	98.6		
#40	94.5		
#200	91.8		
0.0363 mm.	91.2		
0.0262 mm.	87.4		
0.0189 mm.	83.6		
0.0140 mm.	74.1		
0.0105 mm.	68.4		
0.0077 mm.	58.9		
0.0052 mm.	53.2		
0.0029 mm.	43.7		
0.0012 mm.	39.7		

* (no specification provided)

Source of Sample: B29 Depth: 2-7'
 Sample Number: SB2 and SB3

Material Description

Lean to Fat Clay (CL/CH)

Atterberg (ASTM D4318)

PL= 22 LL= 50 PI= 28

Sieve Test (ASTM D422)

Test Date: 1/28/2026 Technician: ADodson

Test Notes

Sample air dried prior to testing.

Hydrometer Test (ASTM D422)

Test Date: 1/29/2026 Technician: ADodson

Test Notes

Sample air dried prior to testing.

Coefficients

D₉₀= 0.0317 D₈₅= 0.0206
 D₆₀= 0.0081 D₅₀= 0.0043
 D₃₀= D₁₅=
 D₁₀=
 C_u= C_c=

USCS (ASTM D2487)

CH/CL

Date Sampled: 12/22/2025

Date Received: 1/5/2026

Checked By: _____

Title: _____

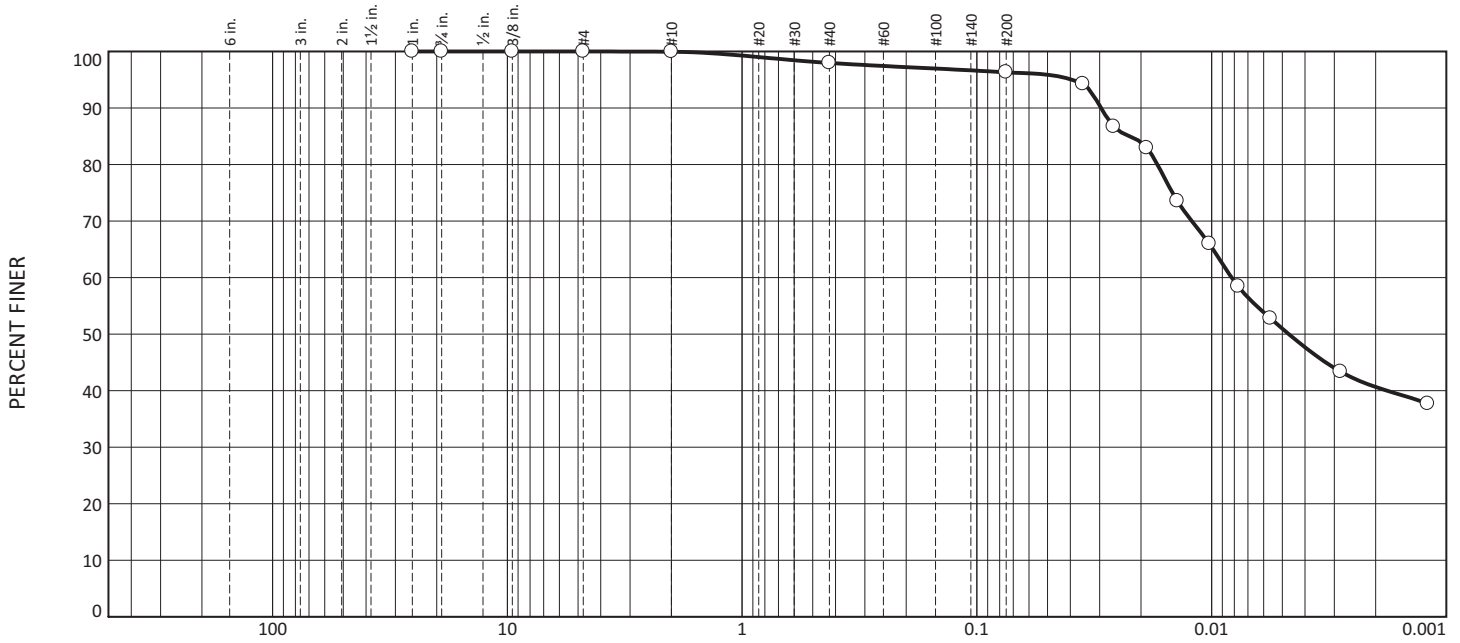


Client: Luckett & Farley
 Project: Greenfield Site Development

Project No: 102074.00

Figure

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	2.0	1.7	55.7	40.6

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)
1	100.0		
.75	100.0		
.375	100.0		
#4	100.0		
#10	100.0		
#40	98.0		
#200	96.3		
0.0353 mm.	94.3		
0.0261 mm.	86.8		
0.0189 mm.	83.0		
0.0140 mm.	73.6		
0.0102 mm.	66.0		
0.0077 mm.	58.5		
0.0056 mm.	52.8		
0.0028 mm.	43.4		
0.0012 mm.	37.7		

* (no specification provided)

Material Description
Lean Clay (CL)

Atterberg (ASTM D4318)
PL= 22 LL= 47 PI= 25

Sieve Test (ASTM D422)

Test Date: 1/28/2026 Technician: ADodson

Coefficients
D₉₀= 0.0296 D₈₅= 0.0223
D₆₀= 0.0082 D₅₀= 0.0047
D₃₀= D₁₅=
D₁₀=
C_u= C_c=

Test Notes
Sample air dried prior to testing.

Hydrometer Test (ASTM D422)

Test Date: 1/29/2026 Technician: ADodson

USCS (ASTM D2487)
CL

Test Notes
Sample air dried prior to testing.

Date Sampled: 12/30/2025

Date Received: 1/5/2026

Checked By: _____
Title: _____

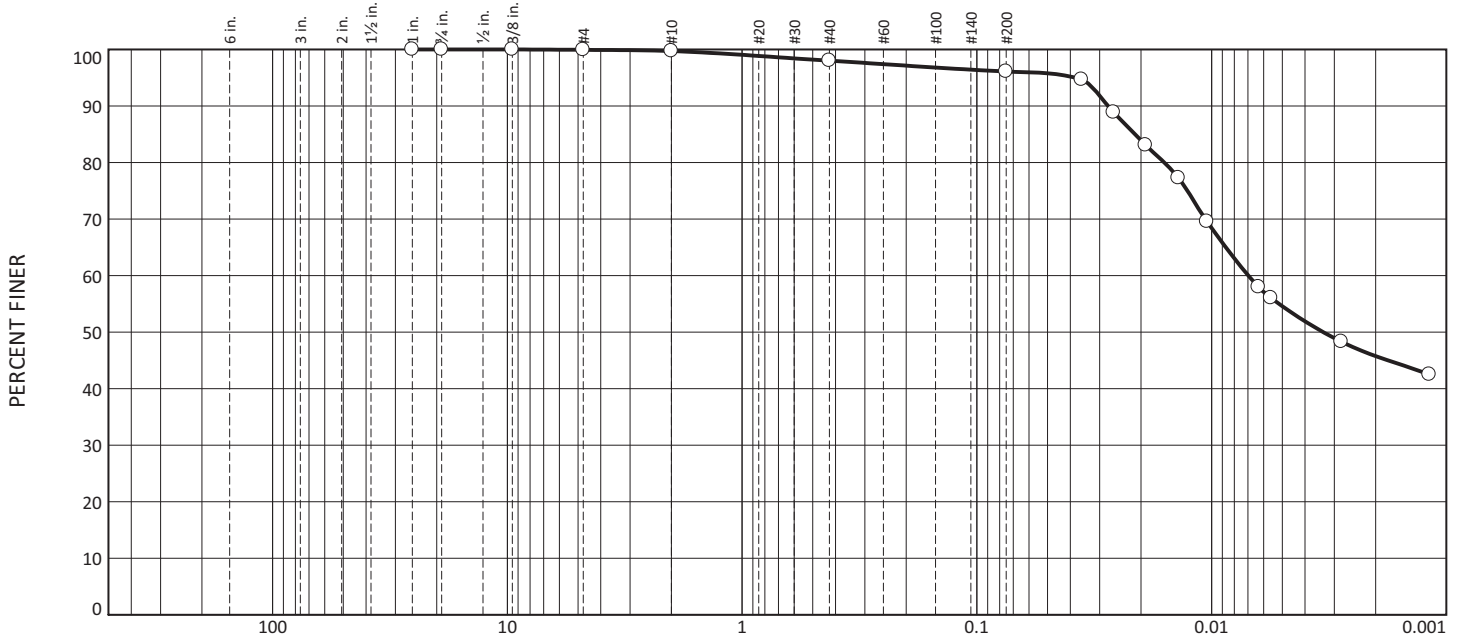
Source of Sample: B32 Depth: 5-7'
Sample Number: SB3



Client: Luckett & Farley
Project: Greenfield Site Development
Project No: 102074.00

Figure

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.1	0.2	1.7	1.9	50.3	45.8

Test Results (ASTM D422)			
Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)
1	100.0		
.75	100.0		
.375	100.0		
#4	99.9		
#10	99.7		
#40	98.0		
#200	96.1		
0.0358 mm.	94.6		
0.0261 mm.	88.8		
0.0191 mm.	83.1		
0.0138 mm.	77.3		
0.0105 mm.	69.5		
0.0063 mm.	57.9		
0.0056 mm.	56.0		
0.0028 mm.	48.3		
0.0012 mm.	42.5		

* (no specification provided)

Material Description
Fat Clay (CH)

Atterberg (ASTM D4318)
PL= 23 LL= 53 PI= 30

Sieve Test (ASTM D422)

Test Date: 1/28/2026 Technician: ADodson

Coefficients
D₉₀= 0.0276 D₈₅= 0.0212
D₆₀= 0.0070 D₅₀= 0.0033
D₃₀= D₁₅=
D₁₀=
C_u= C_c=

Test Notes
Sample air dried prior to testing.

Hydrometer Test (ASTM D422)

Test Date: 1/29/2026 Technician: ADodson

USCS (ASTM D2487)
CH

Test Notes
Sample air dried prior to testing.

Date Sampled: 1/13/2026

Date Received: 1/14/2026

Checked By: _____
Title: _____

Source of Sample: B45 Depth: 8-10'
Sample Number: SB4

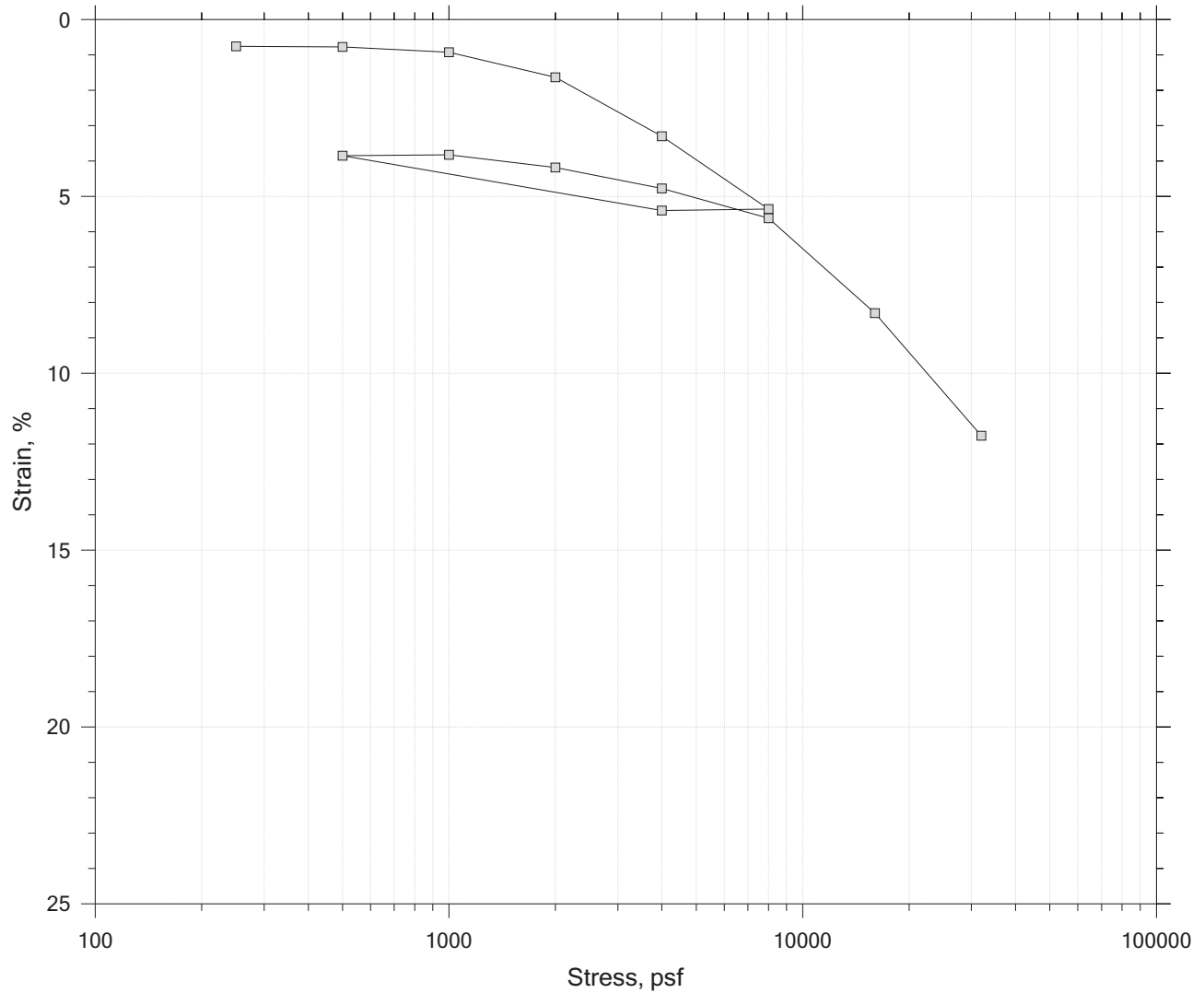


Client: Luckett & Farley
Project: Greenfield Site Development
Project No: 102074.00


Figure

One-Dimensional Consolidation by ASTM D2435 - Method A

Summary Report



				Before Test	After Test	
Current Vertical Effective Stress, psf: 0		Specimen Diameter, in: 2.5		Water Content, %	29.22	25.13
Preconsolidation Stress, psf: 4918		Specimen Height, in: 1		Dry Unit Weight, pcf	92.366	105.18
Compression Ratio: 0		LL: Unknown		Saturation, %	87.57	100.00
Specimen Diameter, in: 2.5		PL: Unknown		Void Ratio	0.98	0.73
Specimen Height, in: 1		PI: Unknown				
LL: Unknown		GS: 2.92				

	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B32	Tester: EY	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 23-25 Feet
	Test Number: 1	Preparation: Moist	Elevation: 730-732 Feet
	Description: LEAN CLAY- Brown		
	Remarks:		

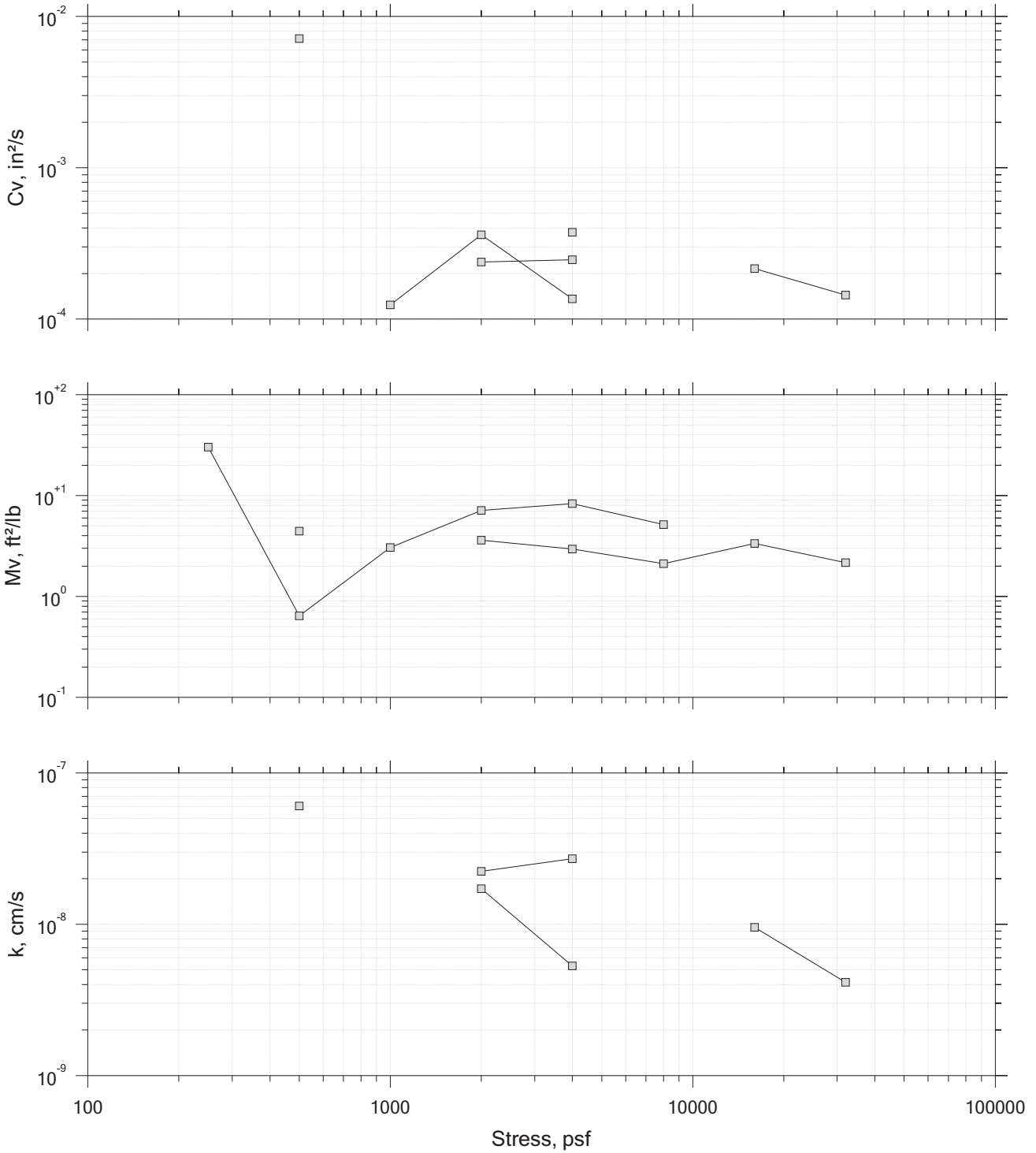
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One-Dimensional Consolidation by ASTM D2435 - Method A

Log of Time Coefficients



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-32	Tester: EY	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 23-25
	Test Number: 1	Preparation: Moist	Elevation:
	Description: Brown LEAN to FAT CLAY with sand		
	Remarks:		

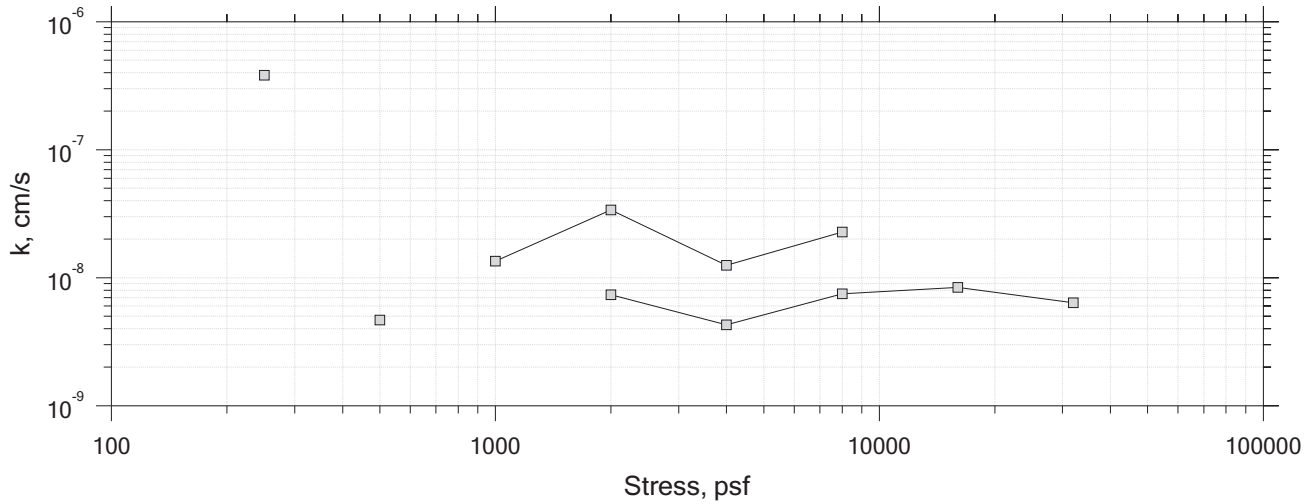
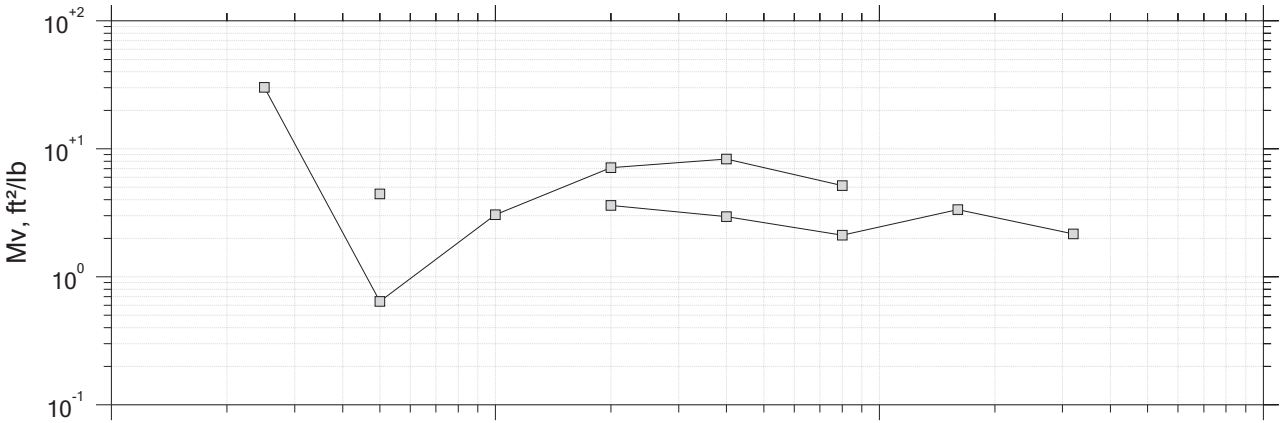
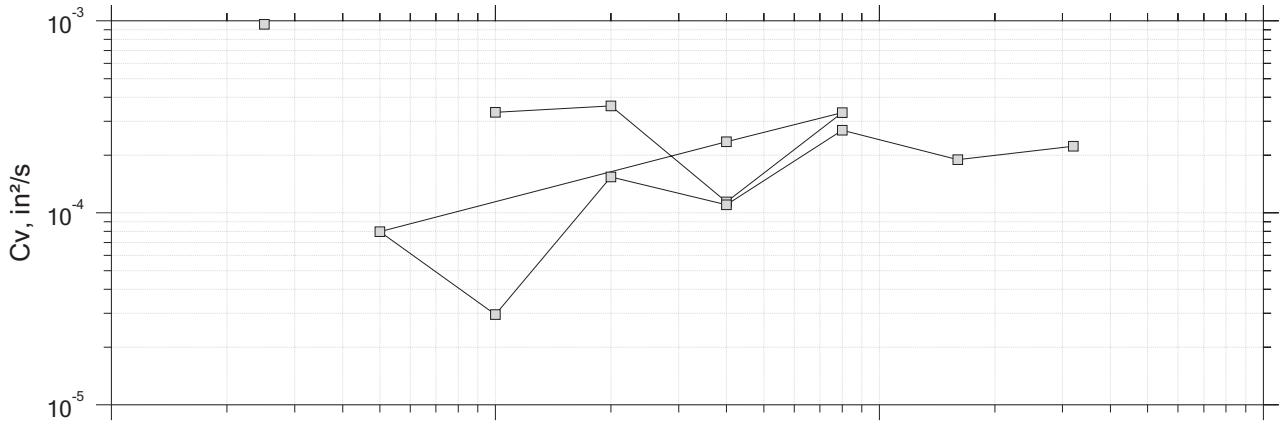
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One-Dimensional Consolidation by ASTM D2435 - Method A

Sqrt of Time Coefficients



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-32	Tester: EY	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 23-25
	Test Number: 1	Preparation: Moist	Elevation:
	Description: Brown LEAN to FAT CLAY with sand		
	Remarks:		

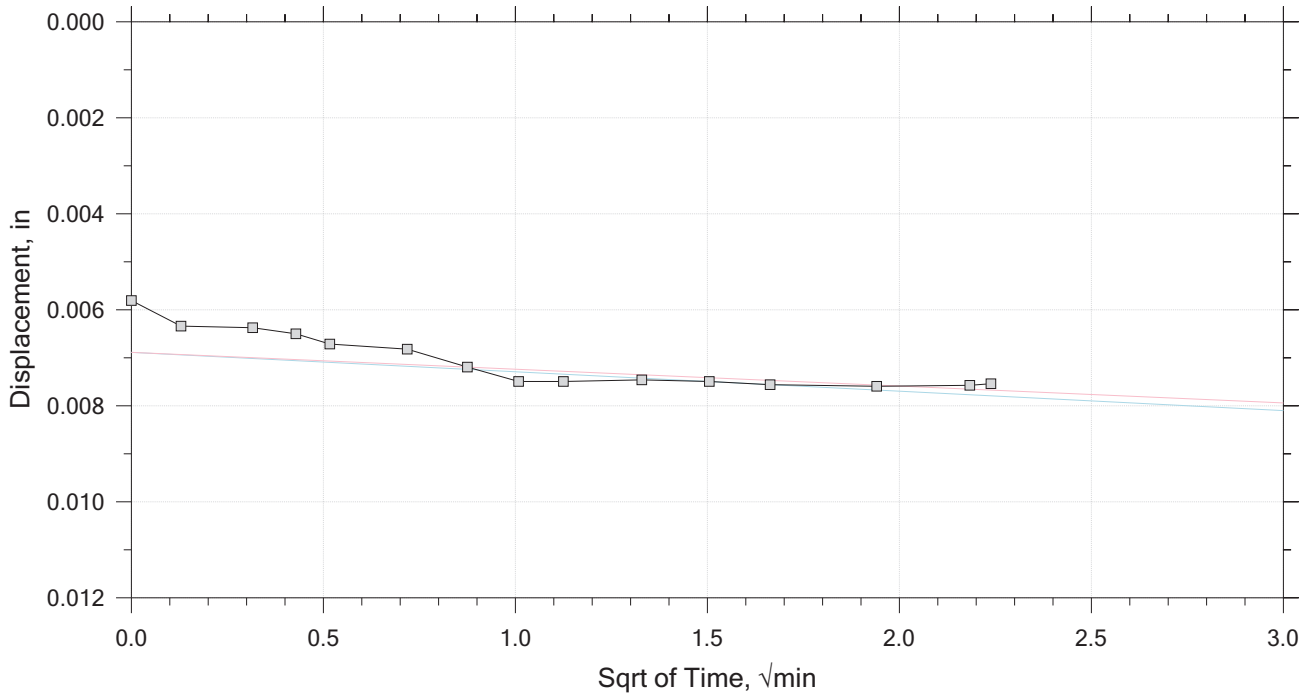
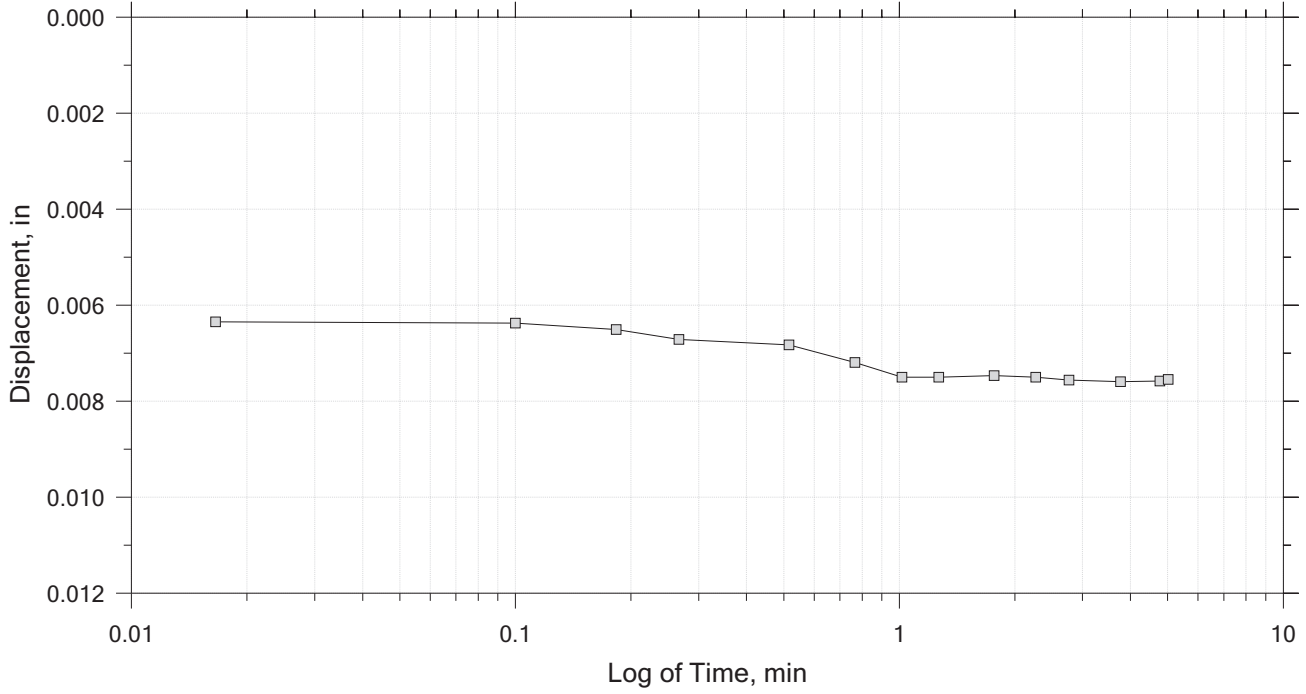
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 1 of 14
 Constant Load Step
 Stress: 250 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-32	Tester: EY	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 23-25
	Test Number: 1	Preparation: Moist	Elevation:
	Description: Brown LEAN to FAT CLAY with sand		
	Remarks:		

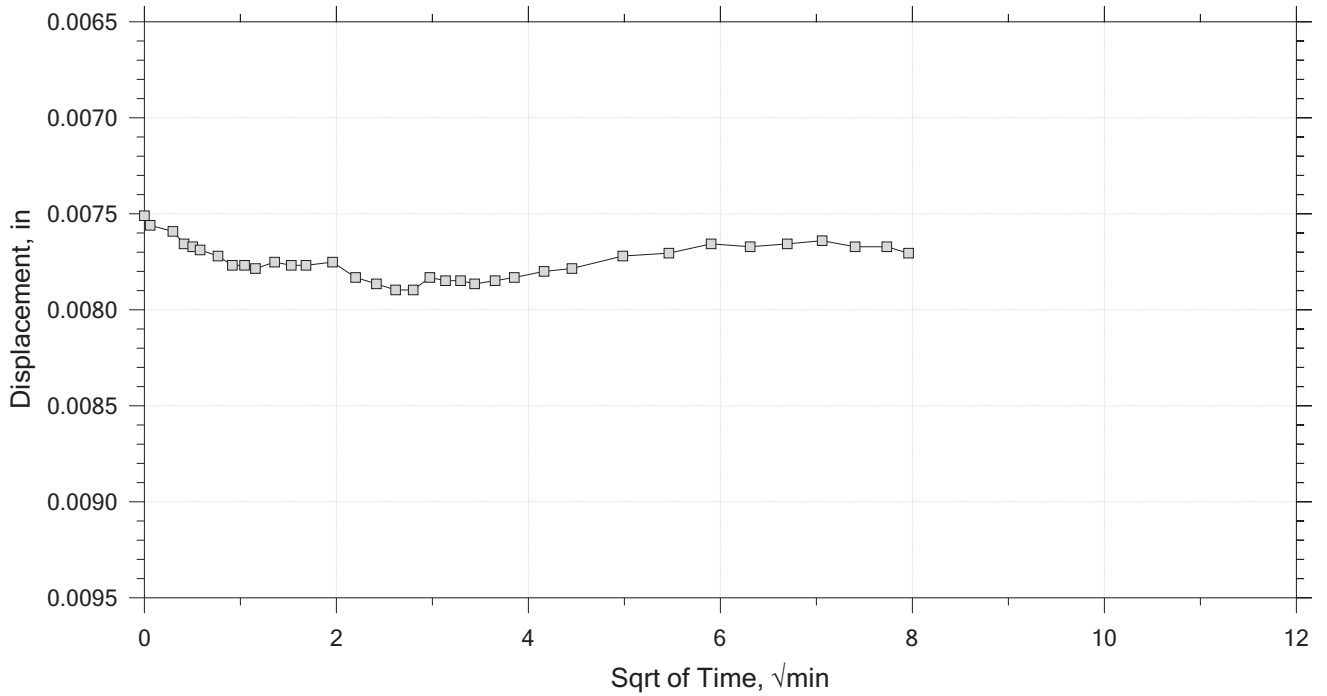
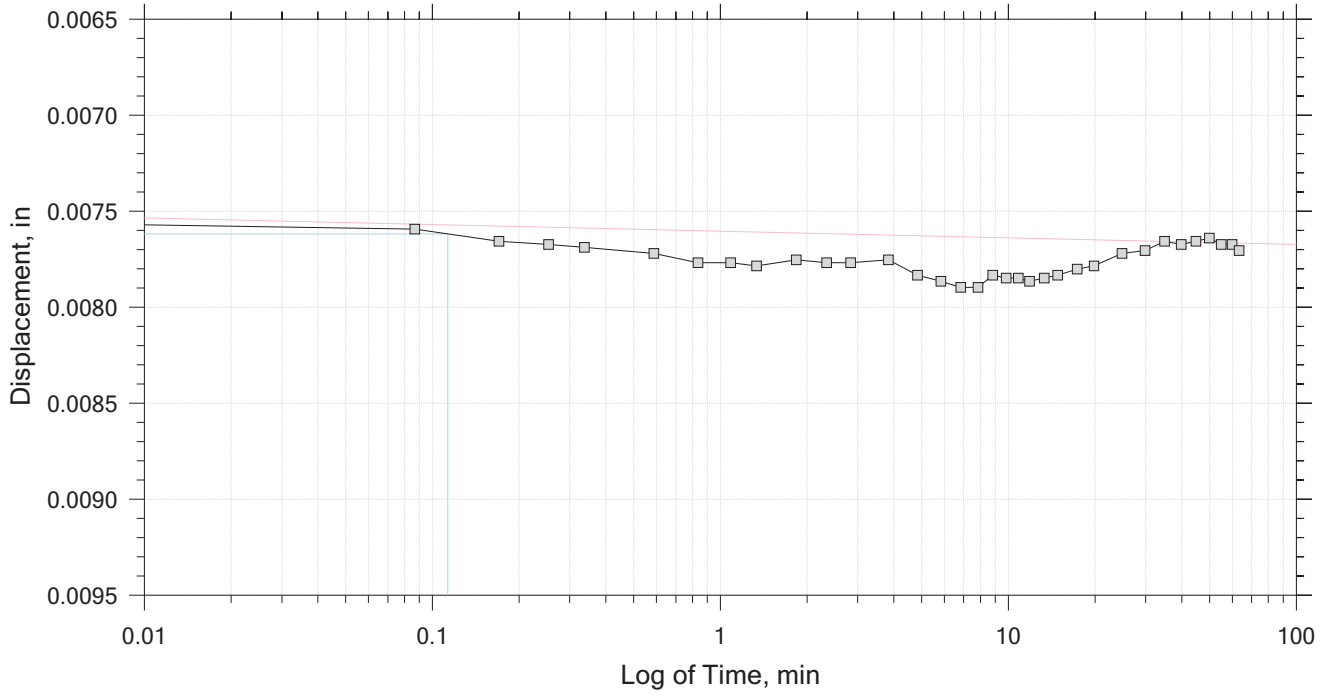
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 2 of 14
 Constant Load Step
 Stress: 500 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-32	Tester: EY	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 23-25
	Test Number: 1	Preparation: Moist	Elevation:
	Description: Brown LEAN to FAT CLAY with sand		
	Remarks:		

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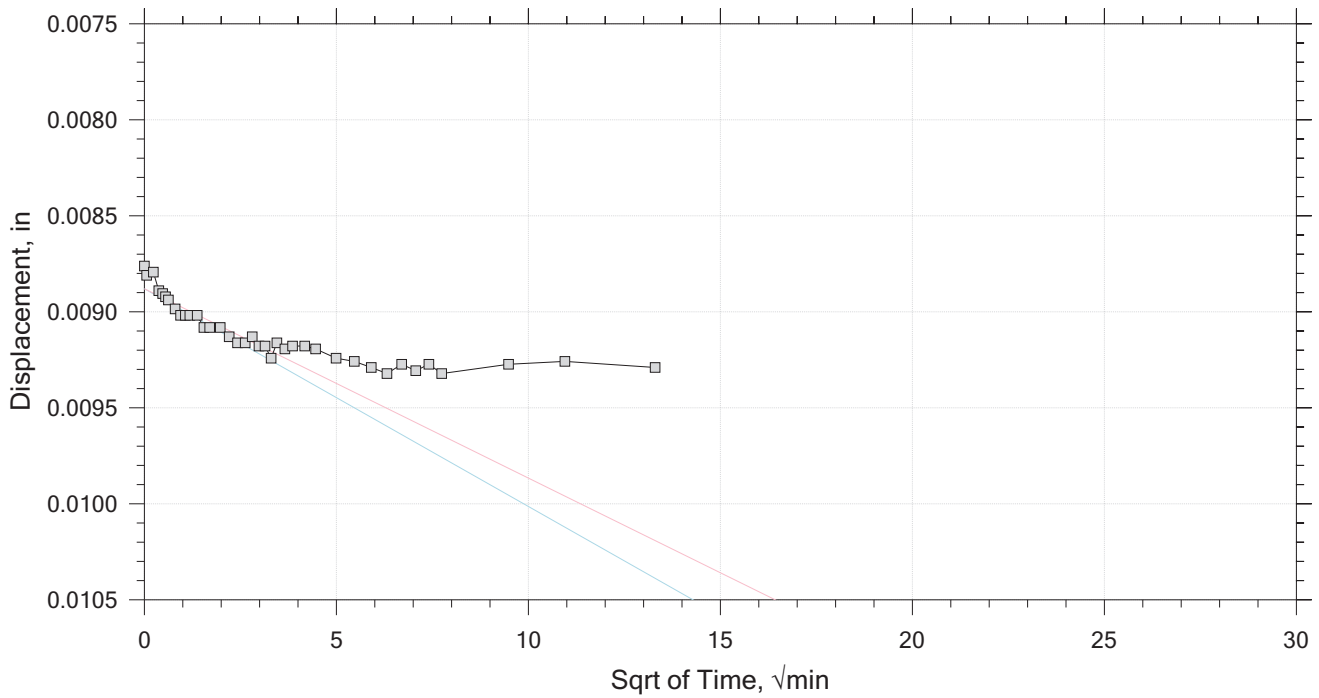
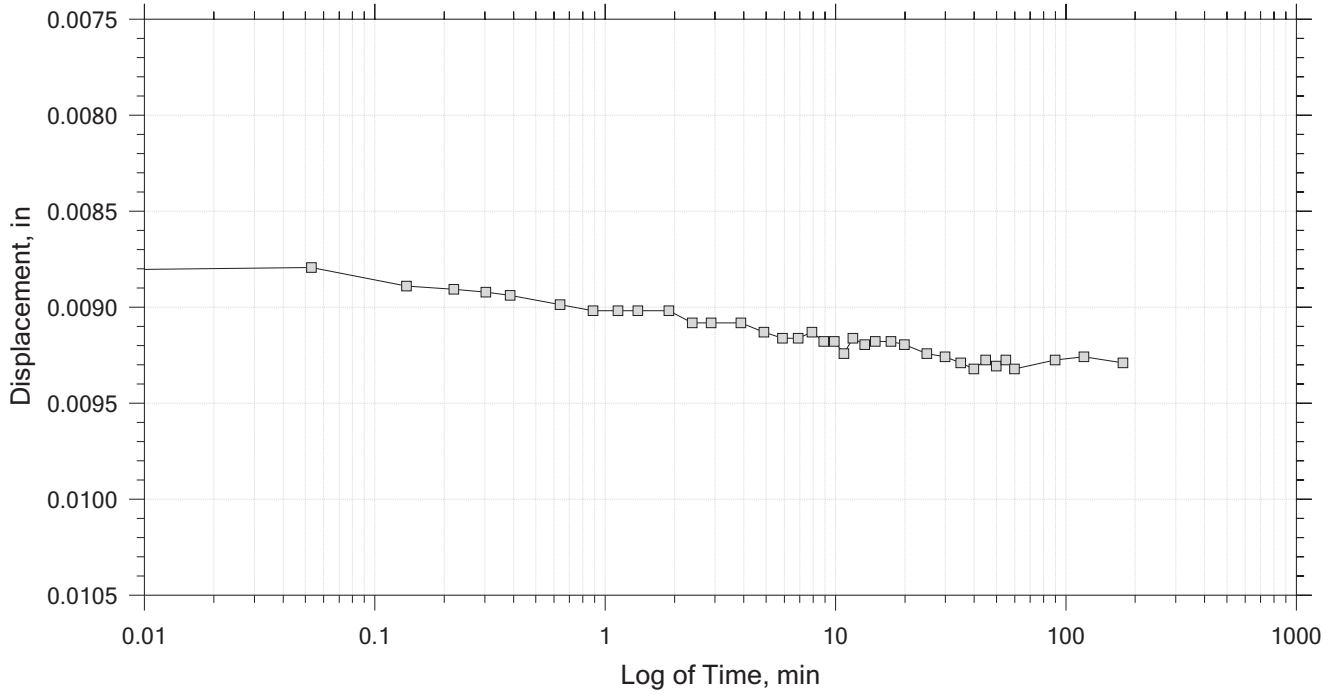
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 3 of 14
 Constant Load Step
 Stress: 1e+03 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-32	Tester: EY	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 23-25
	Test Number: 1	Preparation: Moist	Elevation:
	Description: Brown LEAN to FAT CLAY with sand		
	Remarks:		

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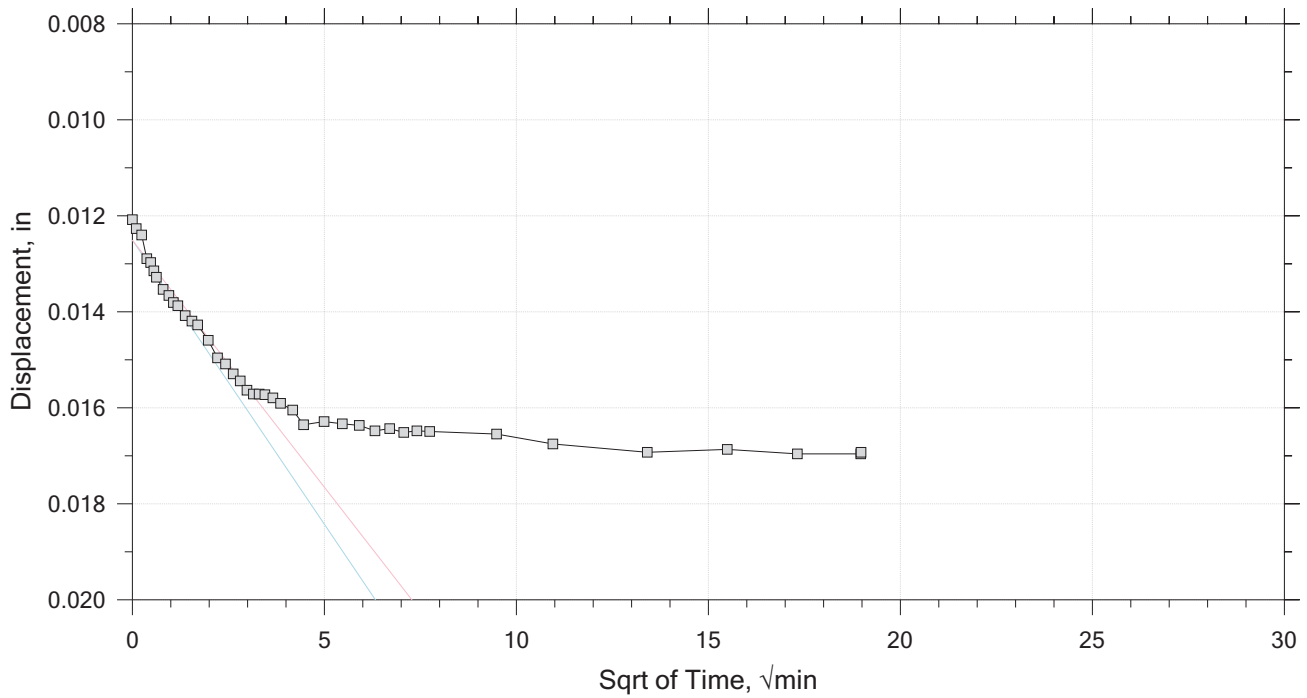
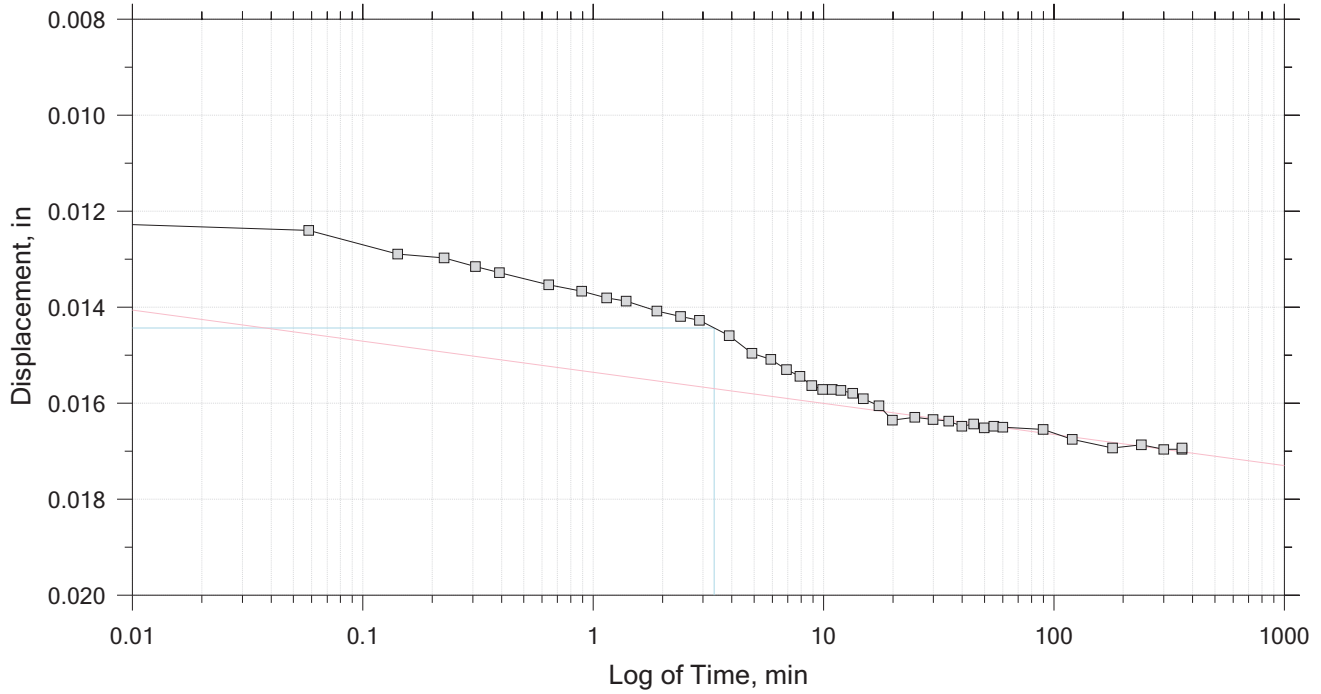
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 4 of 14
 Constant Load Step
 Stress: 2e+03 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-32	Tester: EY	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 23-25
	Test Number: 1	Preparation: Moist	Elevation:
	Description: Brown LEAN to FAT CLAY with sand		
	Remarks:		

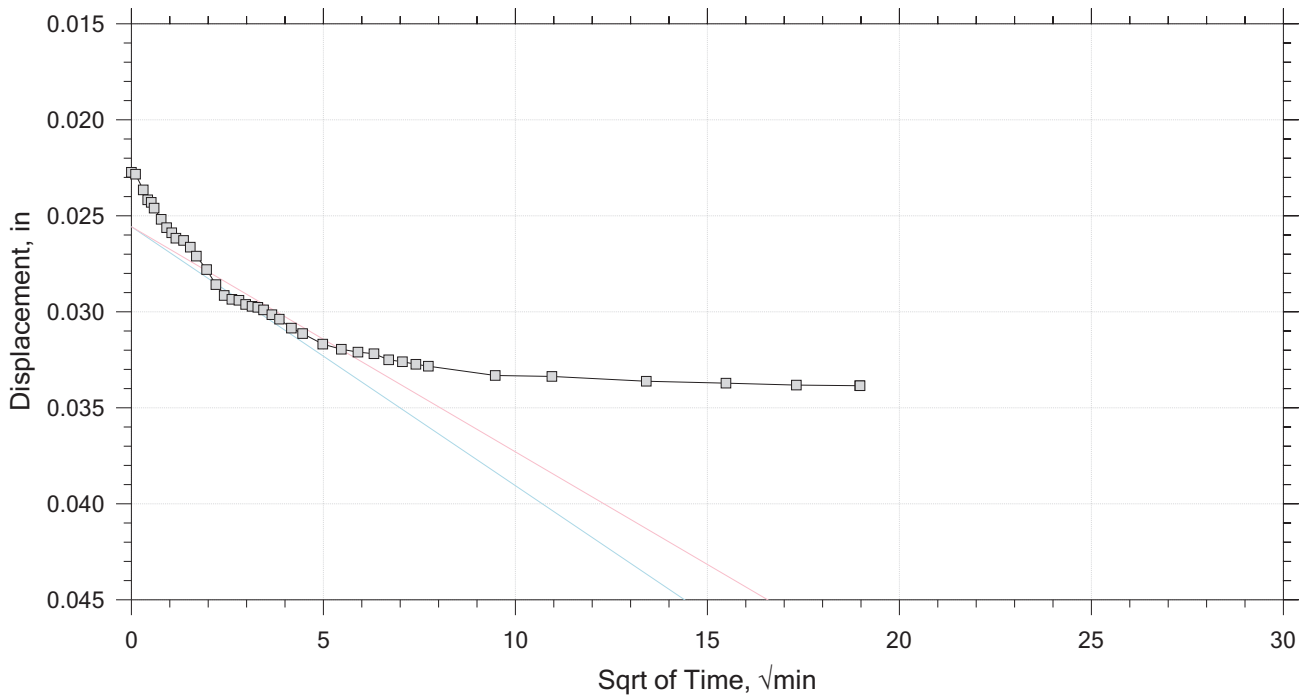
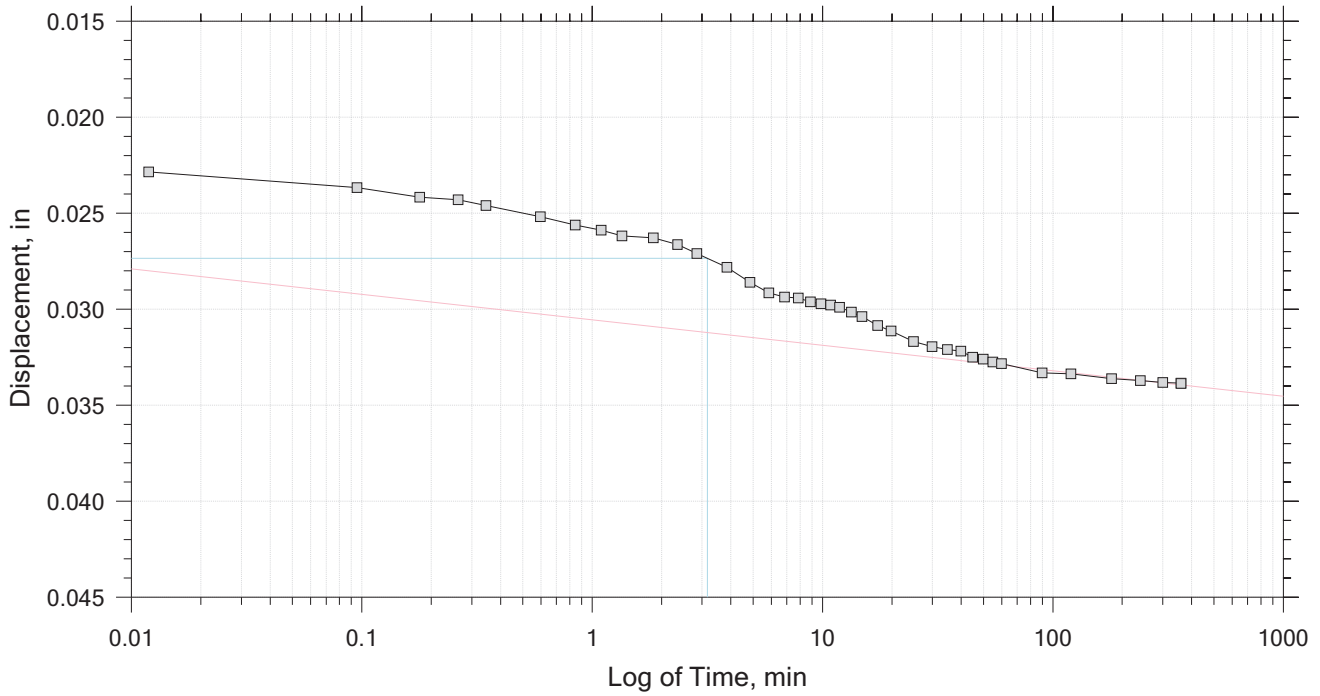
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 5 of 14
 Constant Load Step
 Stress: 4e+03 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-32	Tester: EY	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 23-25
	Test Number: 1	Preparation: Moist	Elevation:
	Description: Brown LEAN to FAT CLAY with sand		
	Remarks:		

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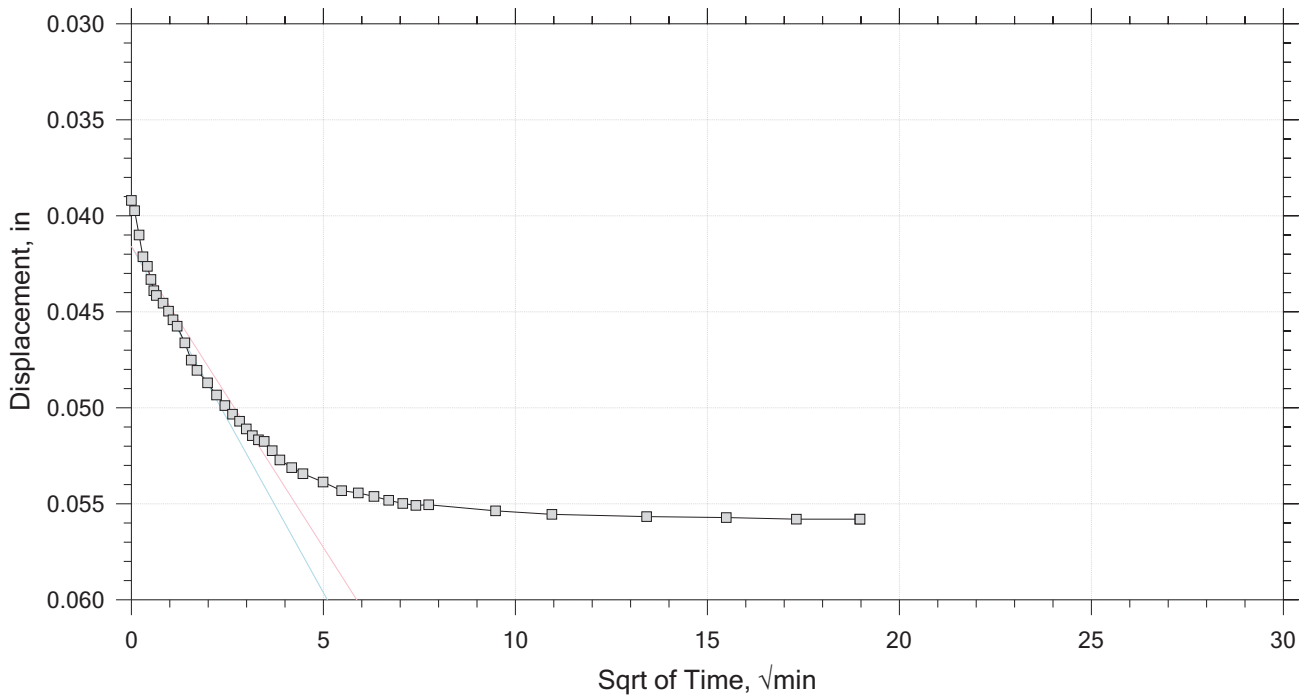
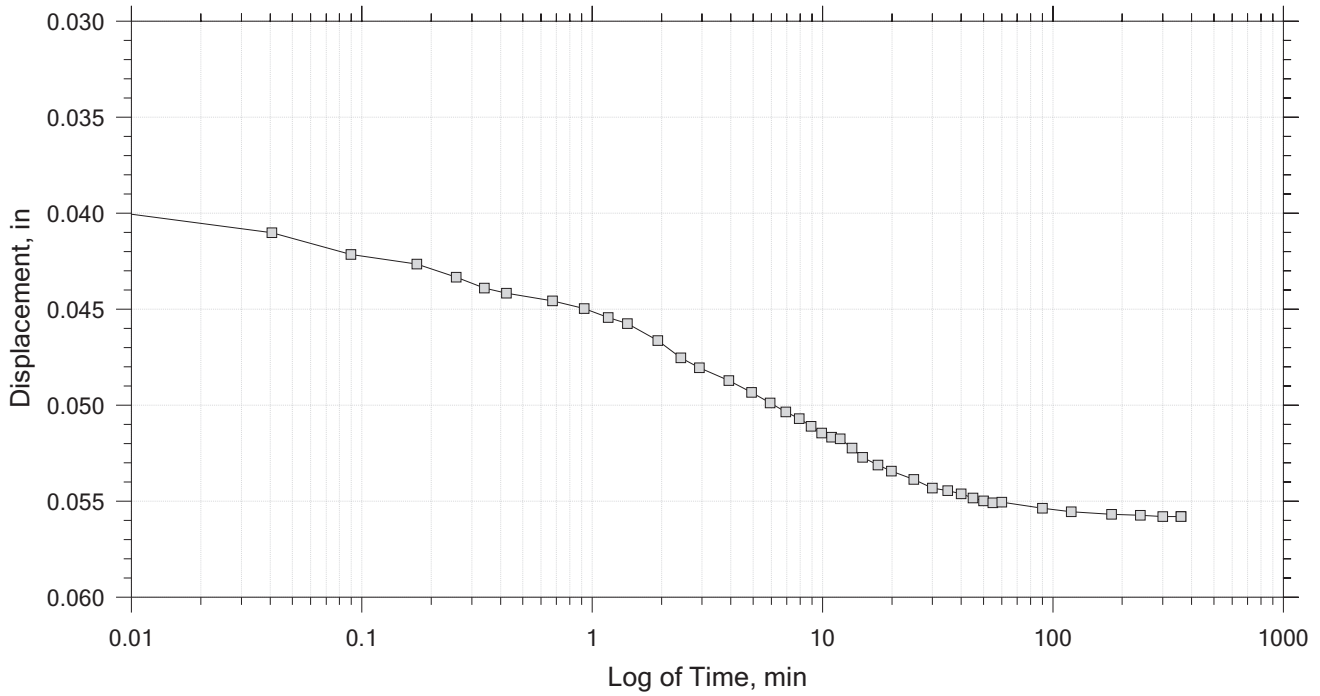
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 6 of 14
 Constant Load Step
 Stress: 8e+03 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-32	Tester: EY	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 23-25
	Test Number: 1	Preparation: Moist	Elevation:
	Description: Brown LEAN to FAT CLAY with sand		
	Remarks:		

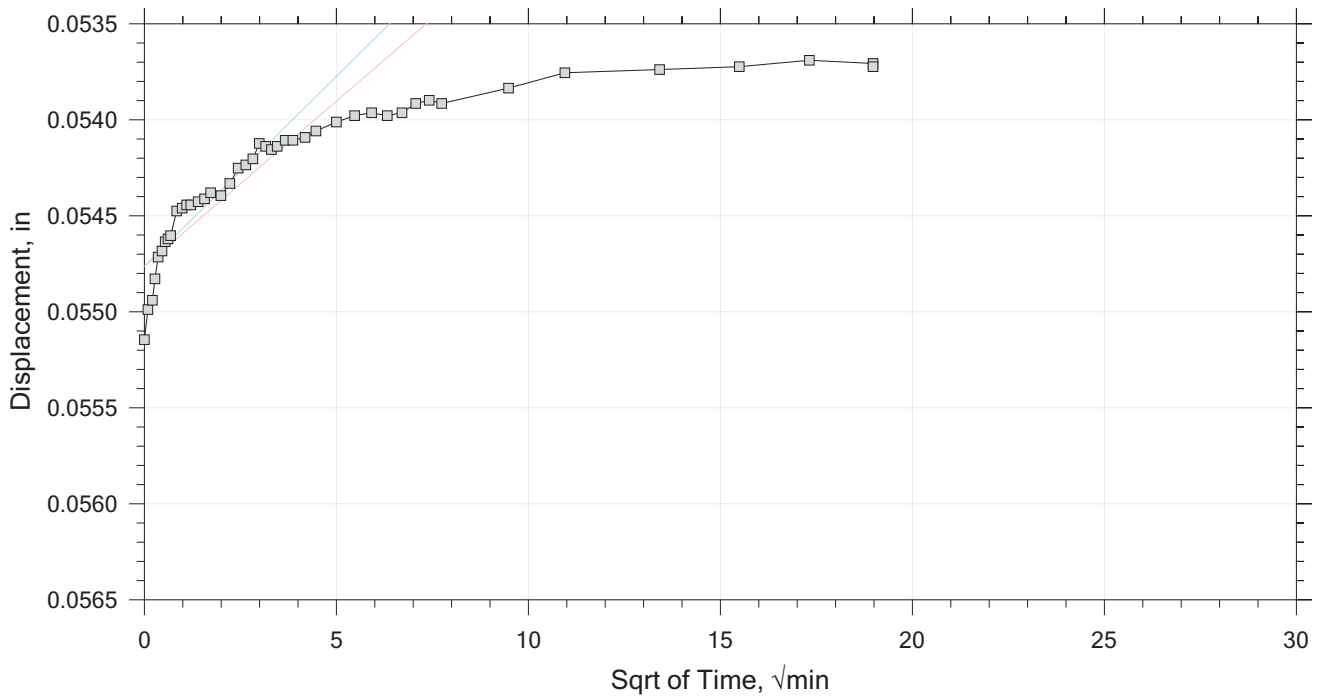
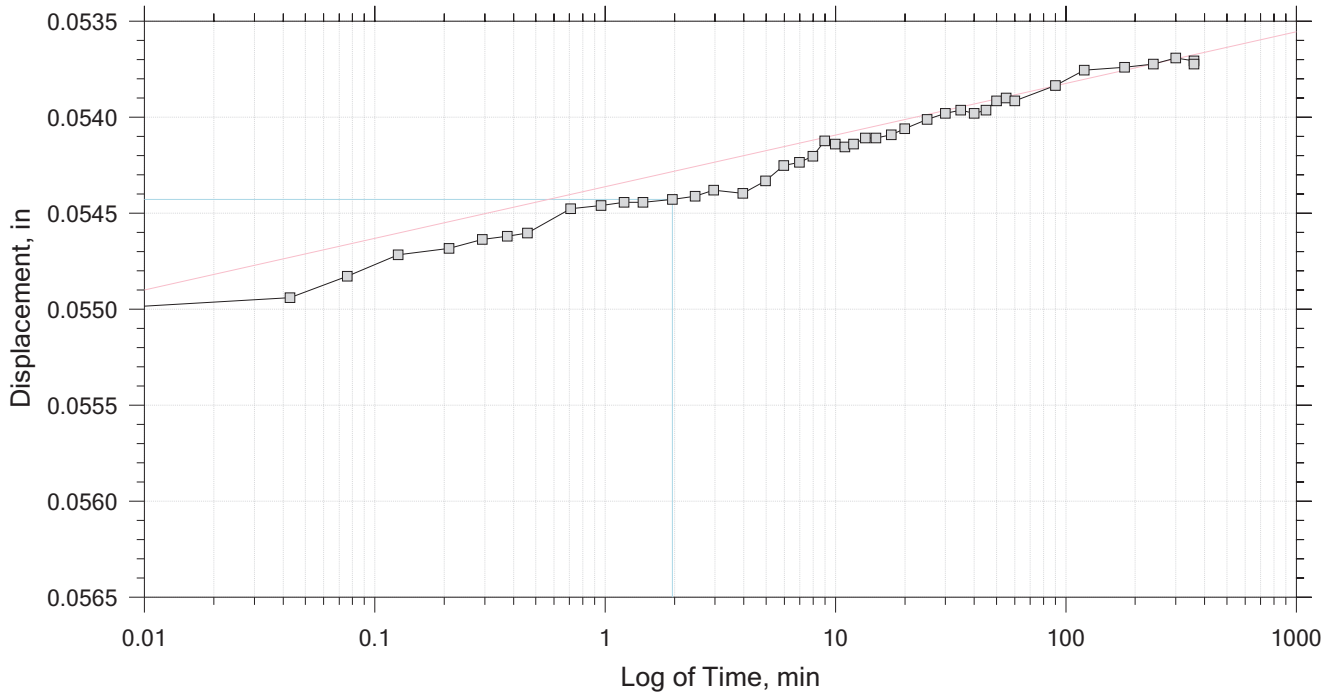
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 7 of 14
 Constant Load Step
 Stress: 4e+03 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-32	Tester: EY	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 23-25
	Test Number: 1	Preparation: Moist	Elevation:
	Description: Brown LEAN to FAT CLAY with sand		
	Remarks:		

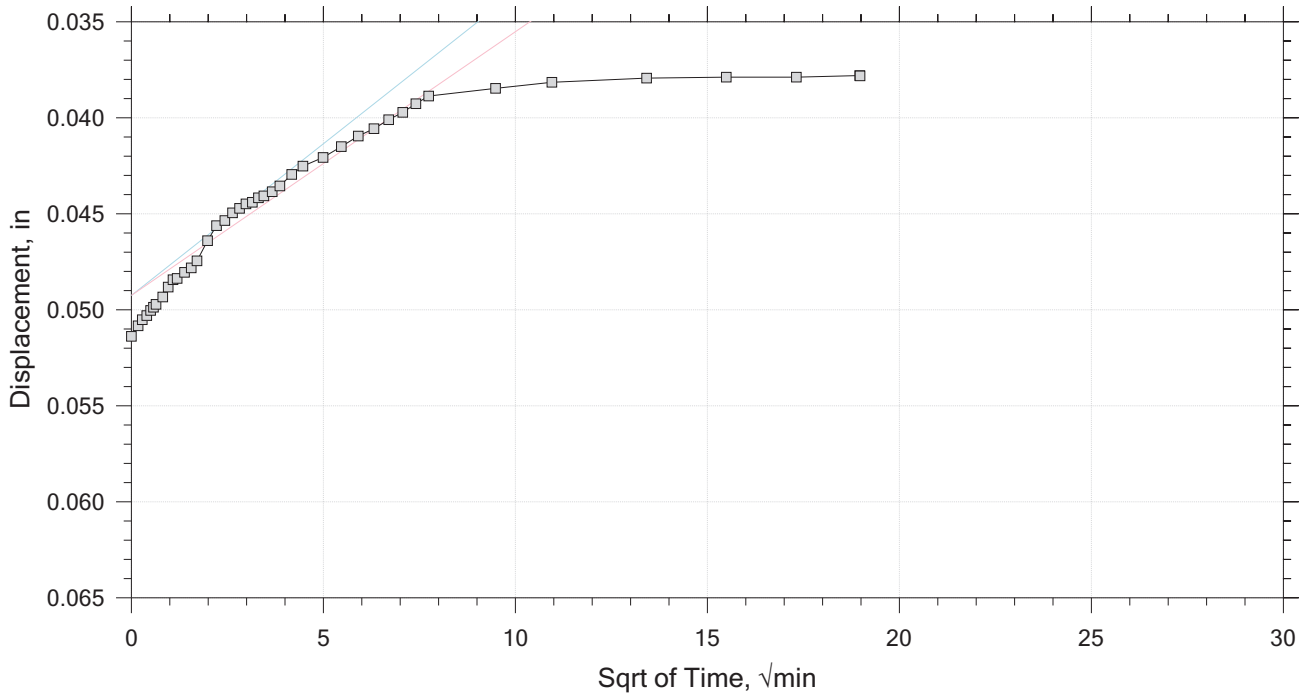
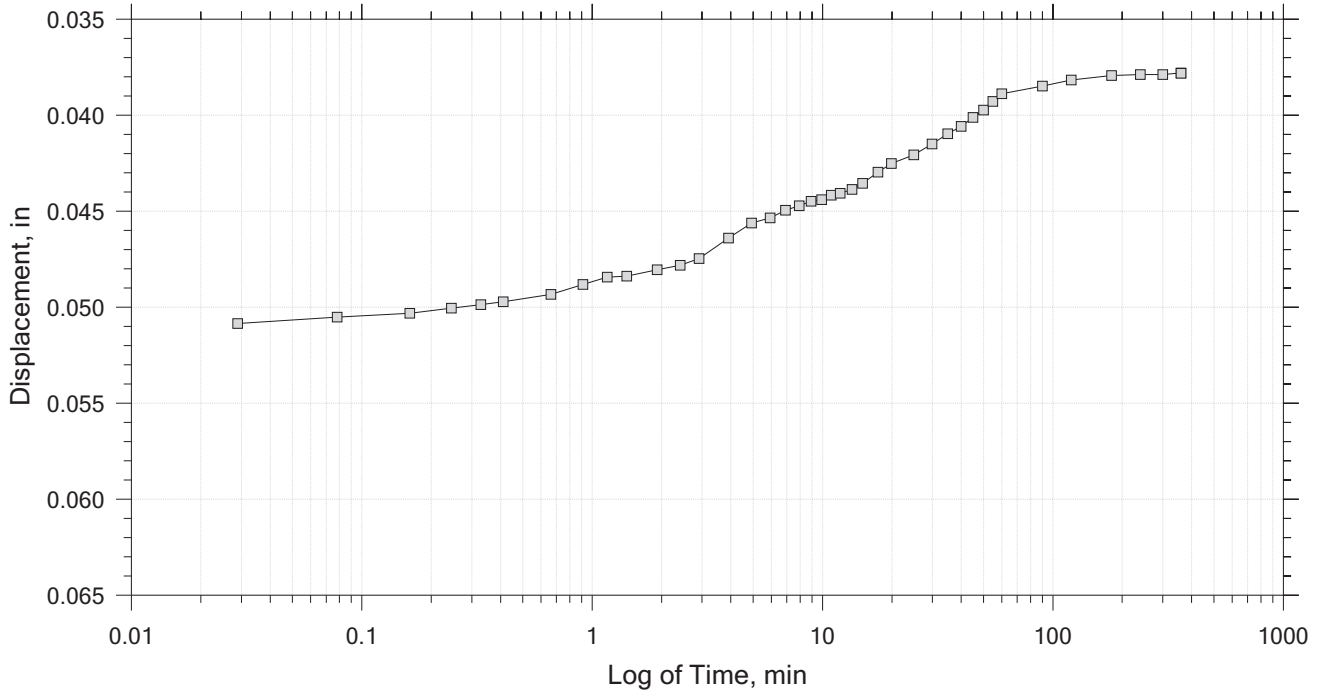
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 8 of 14
 Constant Load Step
 Stress: 500 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-32	Tester: EY	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 23-25
	Test Number: 1	Preparation: Moist	Elevation:
	Description: Brown LEAN to FAT CLAY with sand		
	Remarks:		

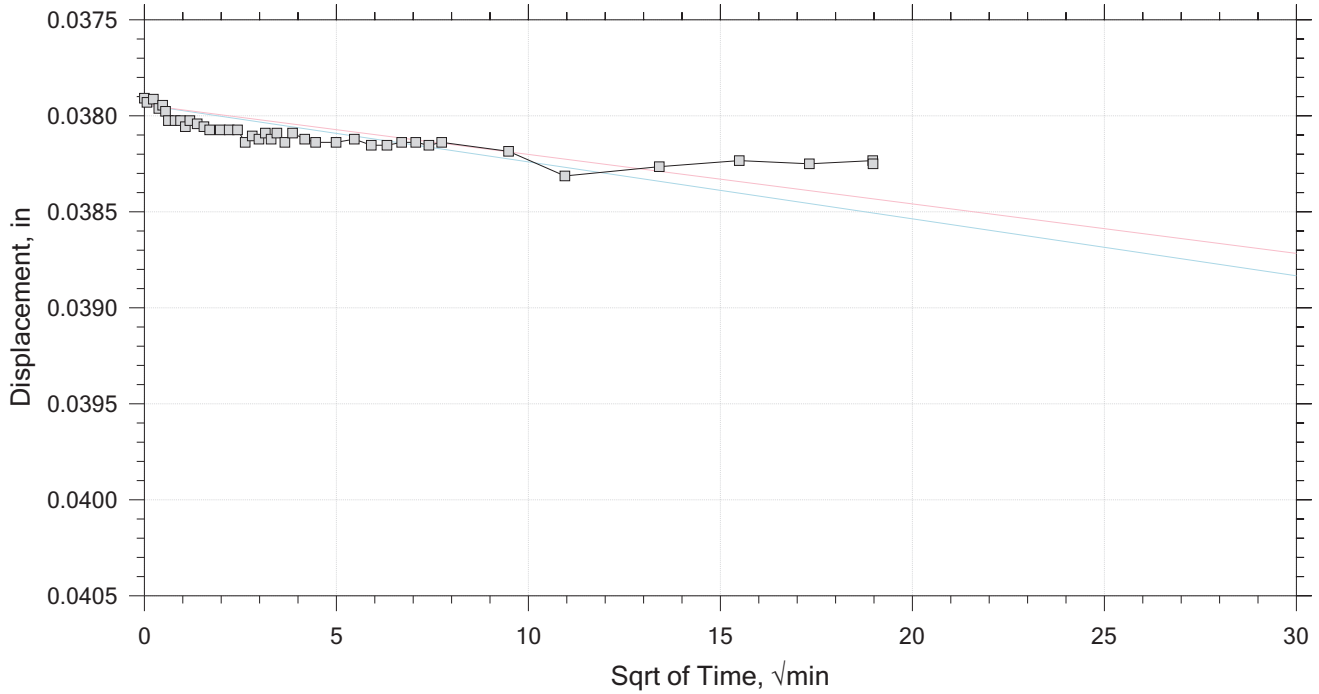
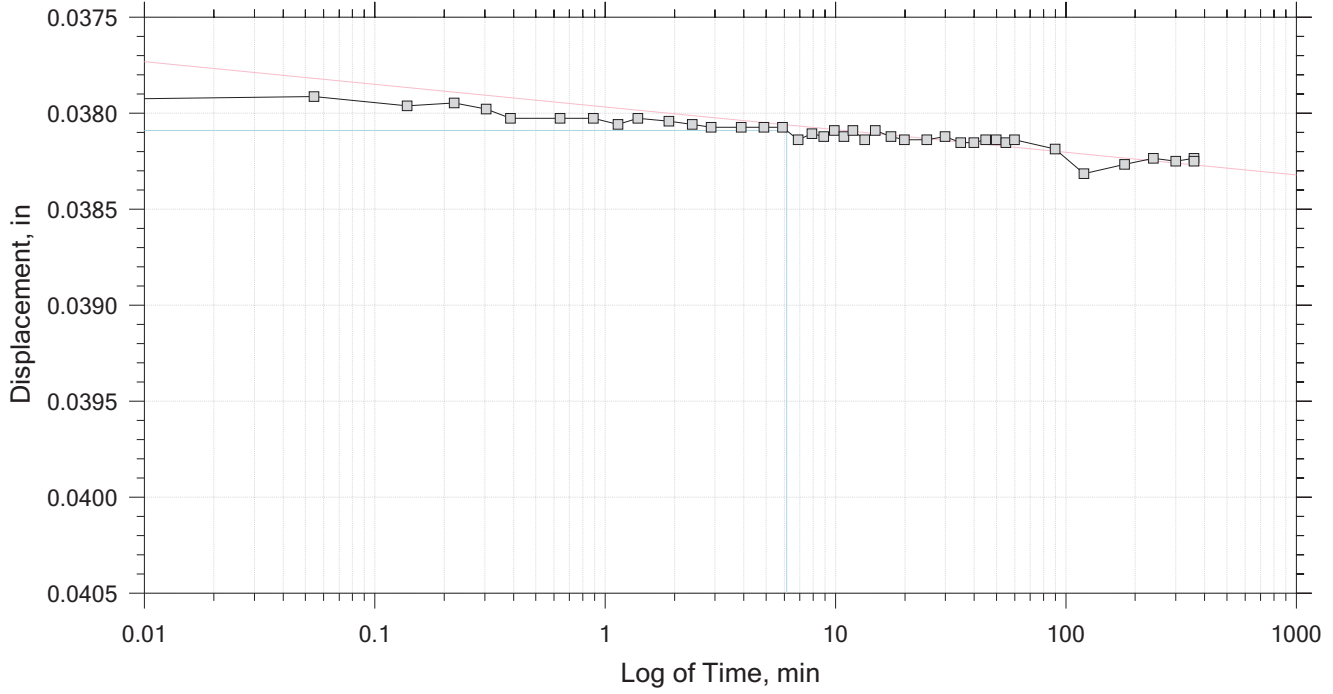
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 9 of 14
 Constant Load Step
 Stress: 1e+03 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-32	Tester: EY	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 23-25
	Test Number: 1	Preparation: Moist	Elevation:
	Description: Brown LEAN to FAT CLAY with sand		
	Remarks:		

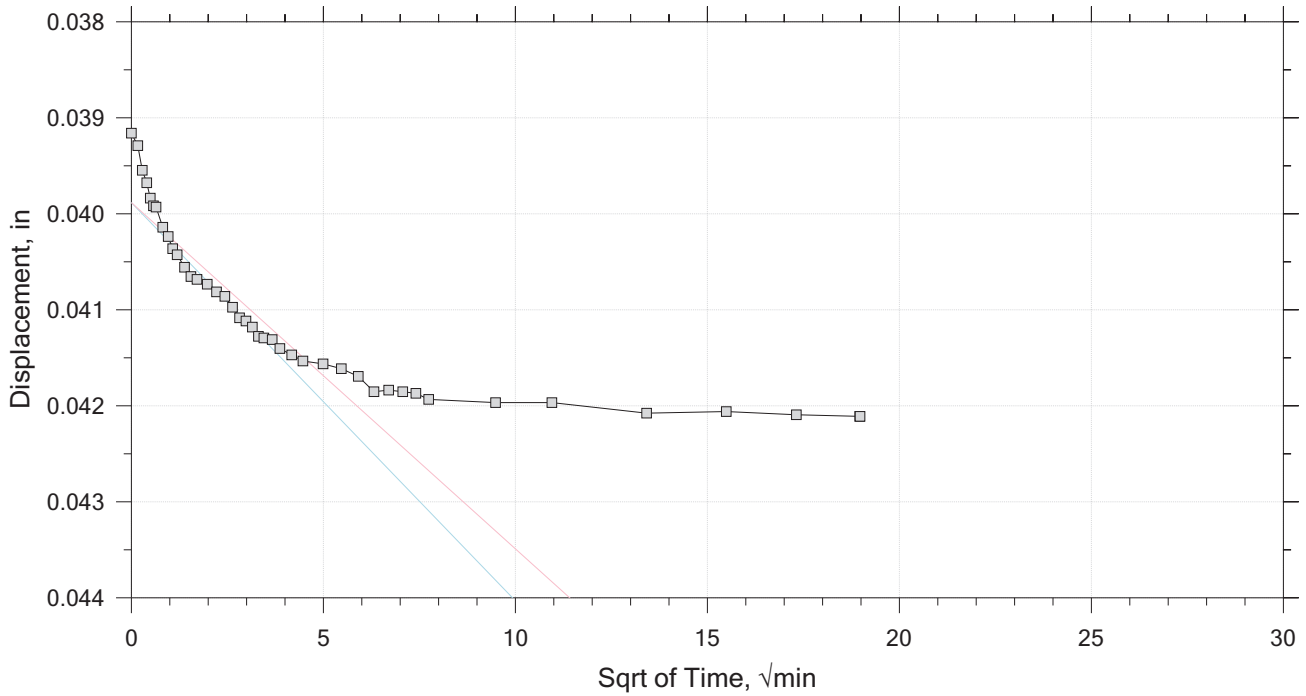
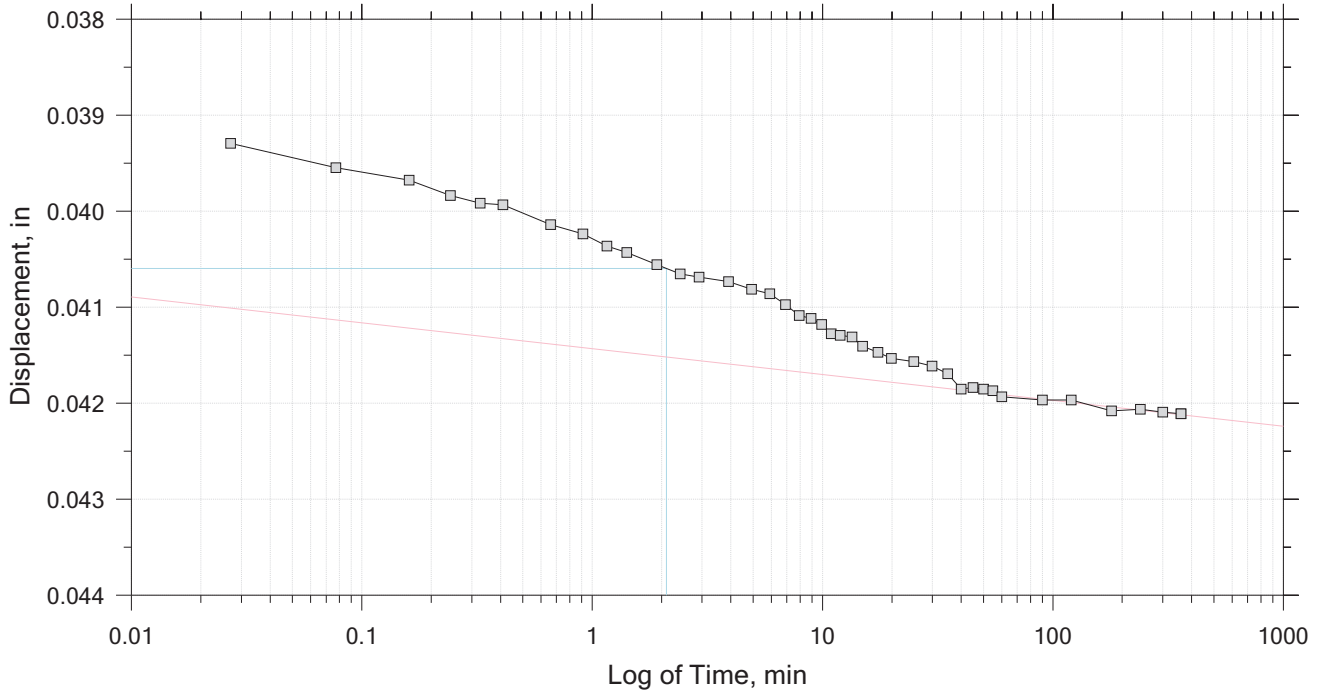
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 10 of 14
 Constant Load Step
 Stress: 2e+03 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-32	Tester: EY	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 23-25
	Test Number: 1	Preparation: Moist	Elevation:
	Description: Brown LEAN to FAT CLAY with sand		
	Remarks:		

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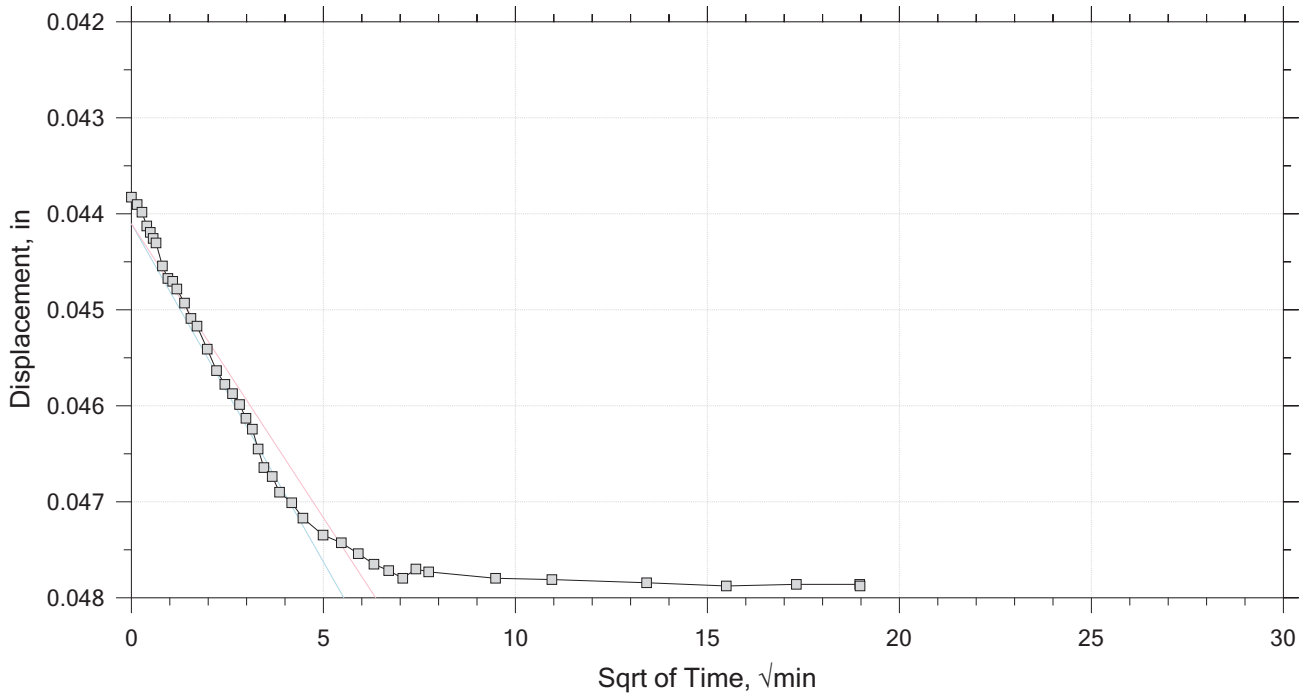
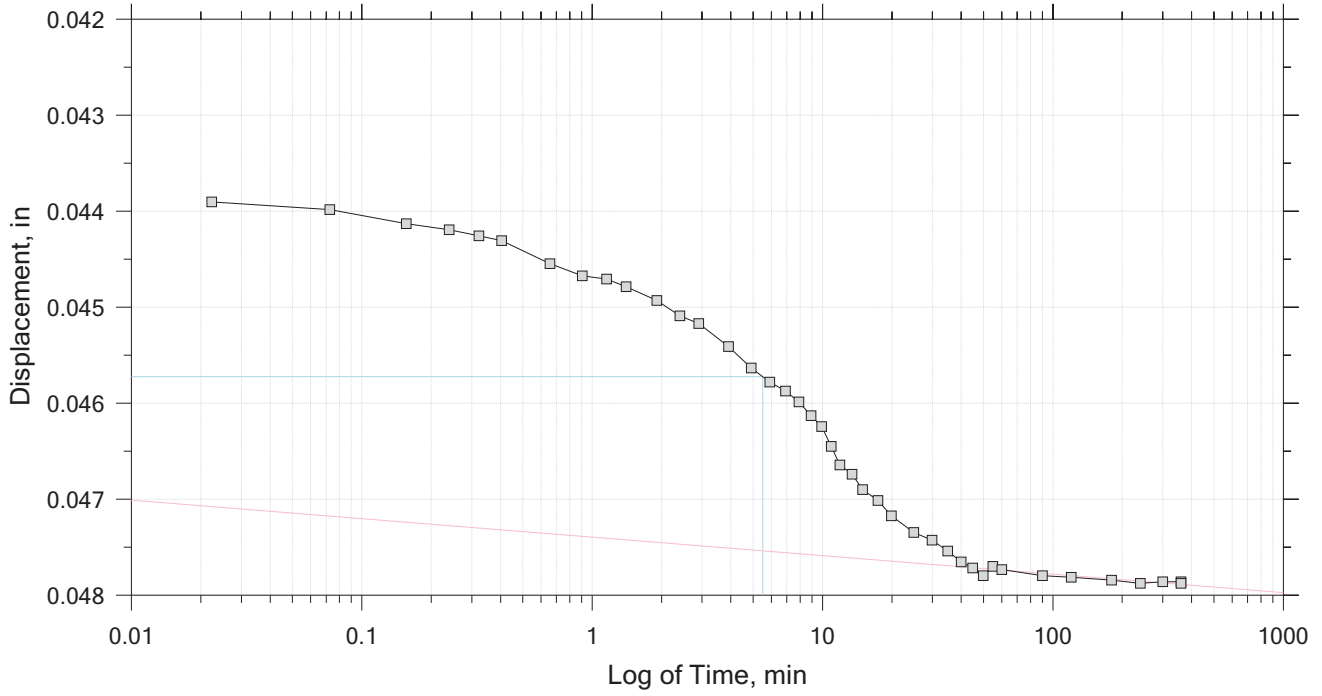
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 11 of 14

Constant Load Step

Stress: 4e+03 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-32	Tester: EY	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 23-25
	Test Number: 1	Preparation: Moist	Elevation:
	Description: Brown LEAN to FAT CLAY with sand		
	Remarks:		

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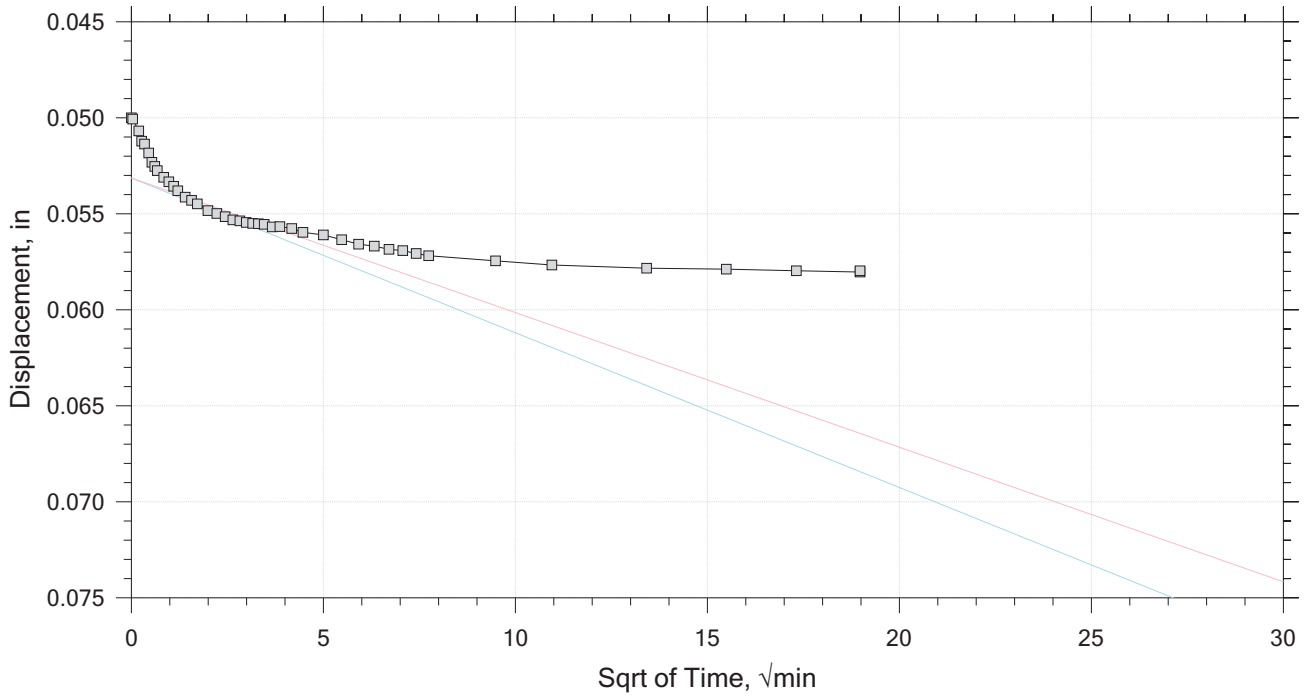
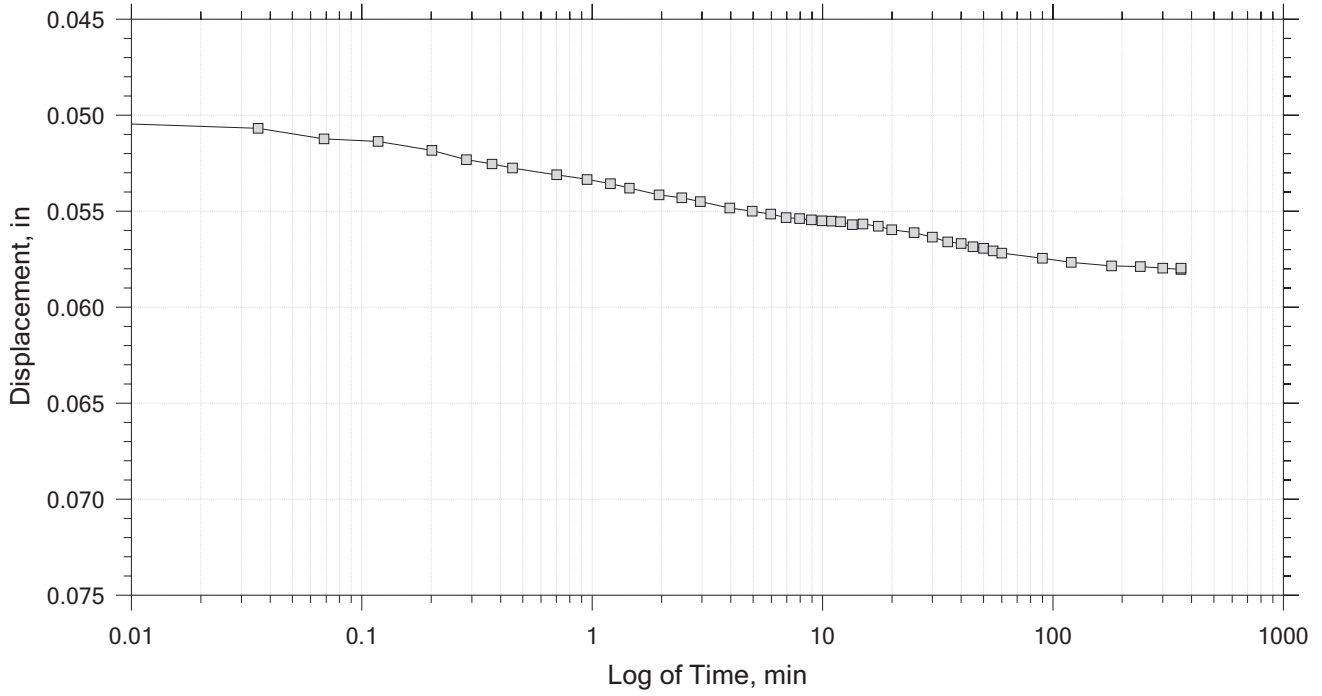
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 12 of 14

Constant Load Step

Stress: 8e+03 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-32	Tester: EY	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 23-25
	Test Number: 1	Preparation: Moist	Elevation:
	Description: Brown LEAN to FAT CLAY with sand		
	Remarks:		

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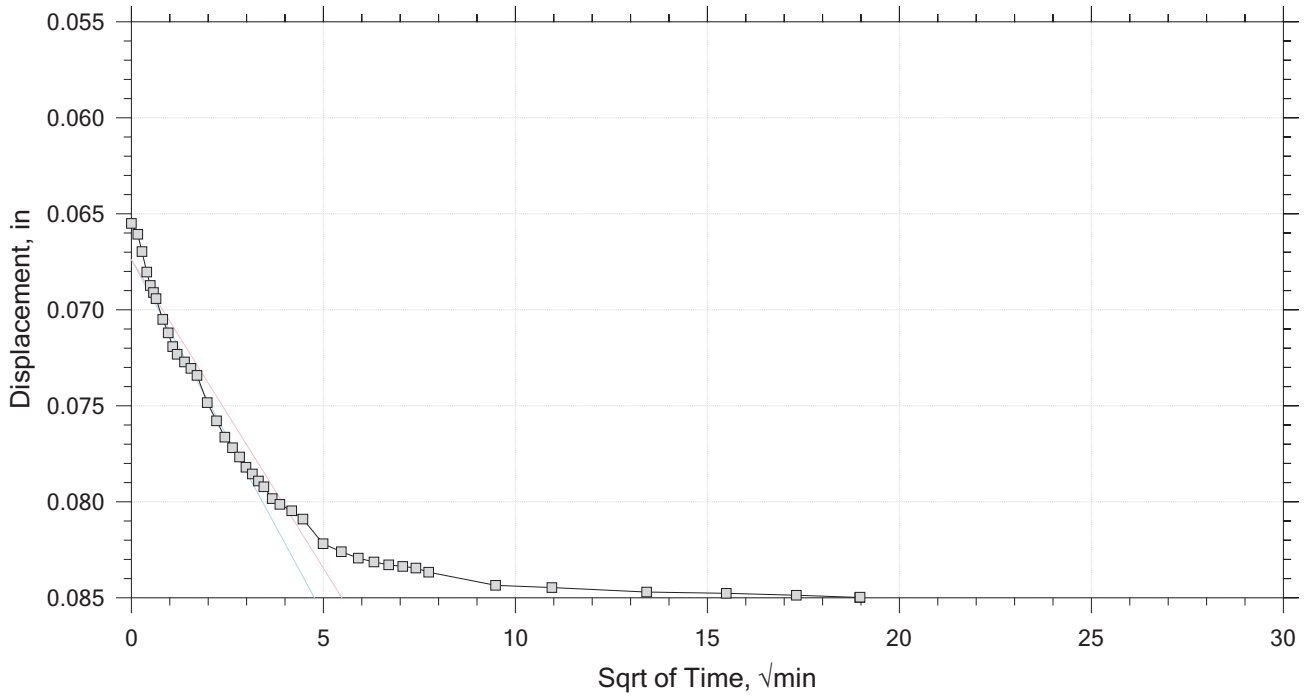
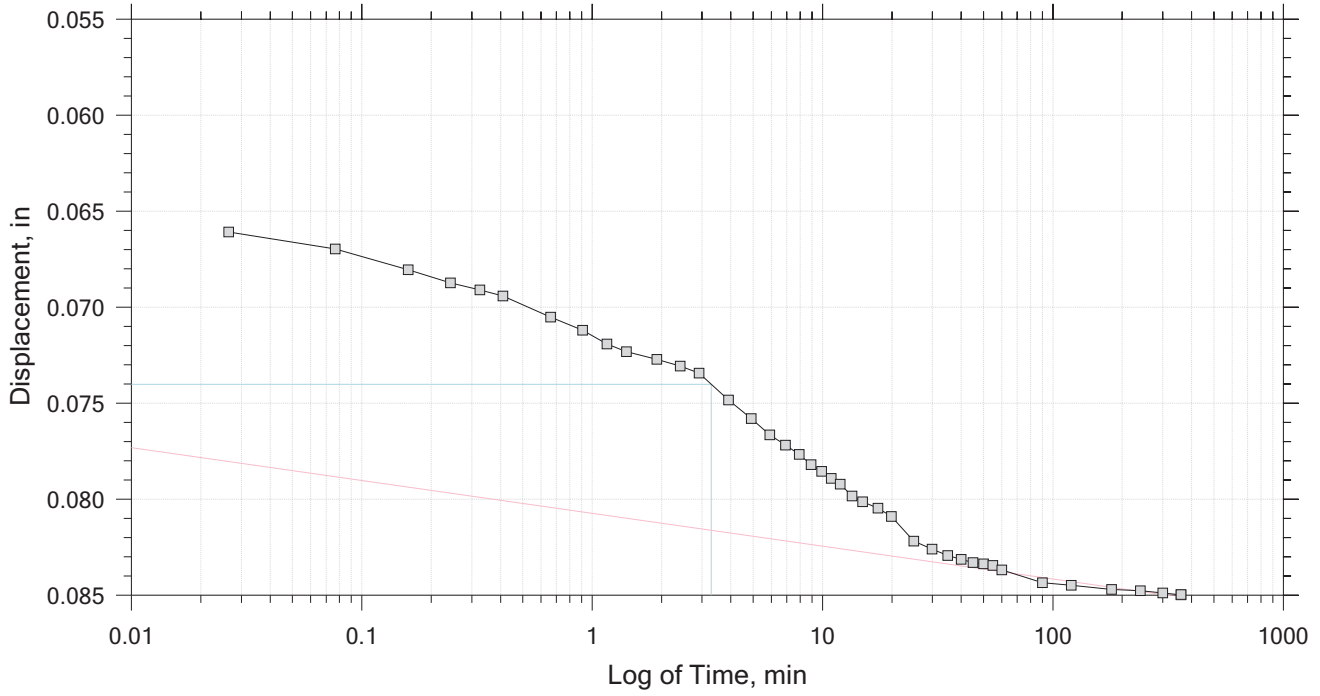
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 13 of 14

Constant Load Step

Stress: 1.6e+04 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-32	Tester: EY	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 23-25
	Test Number: 1	Preparation: Moist	Elevation:
	Description: Brown LEAN to FAT CLAY with sand		
	Remarks:		

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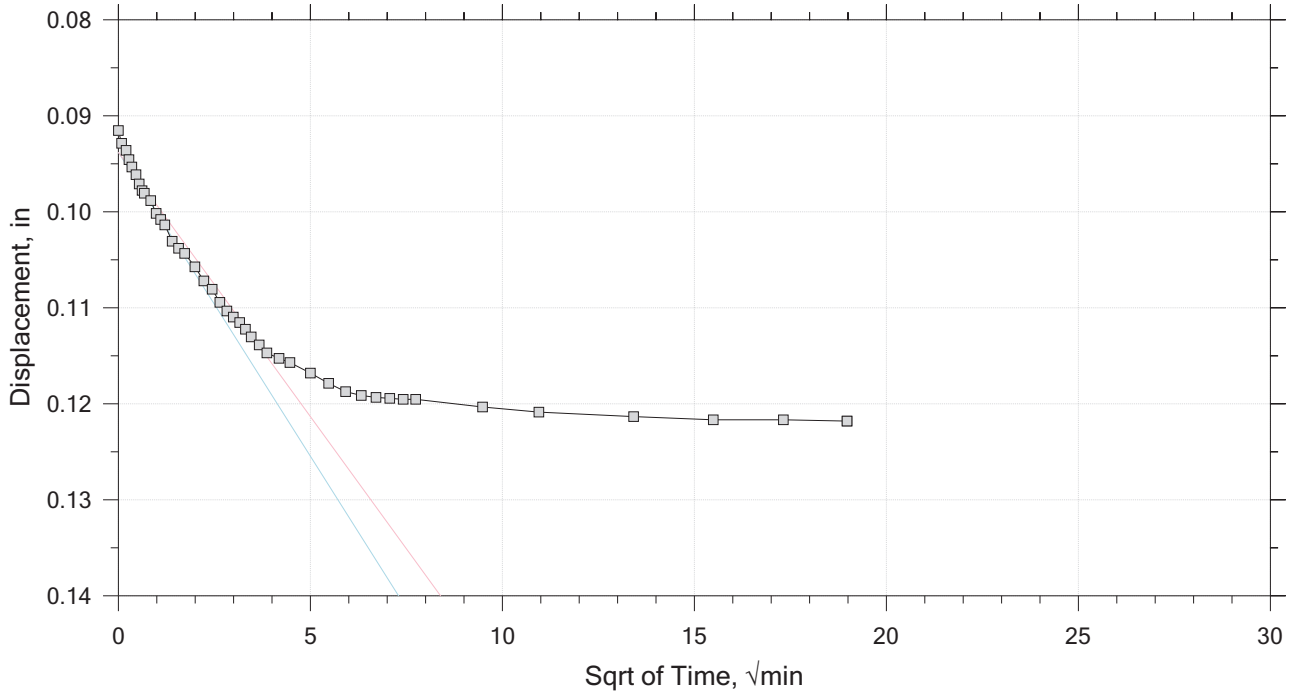
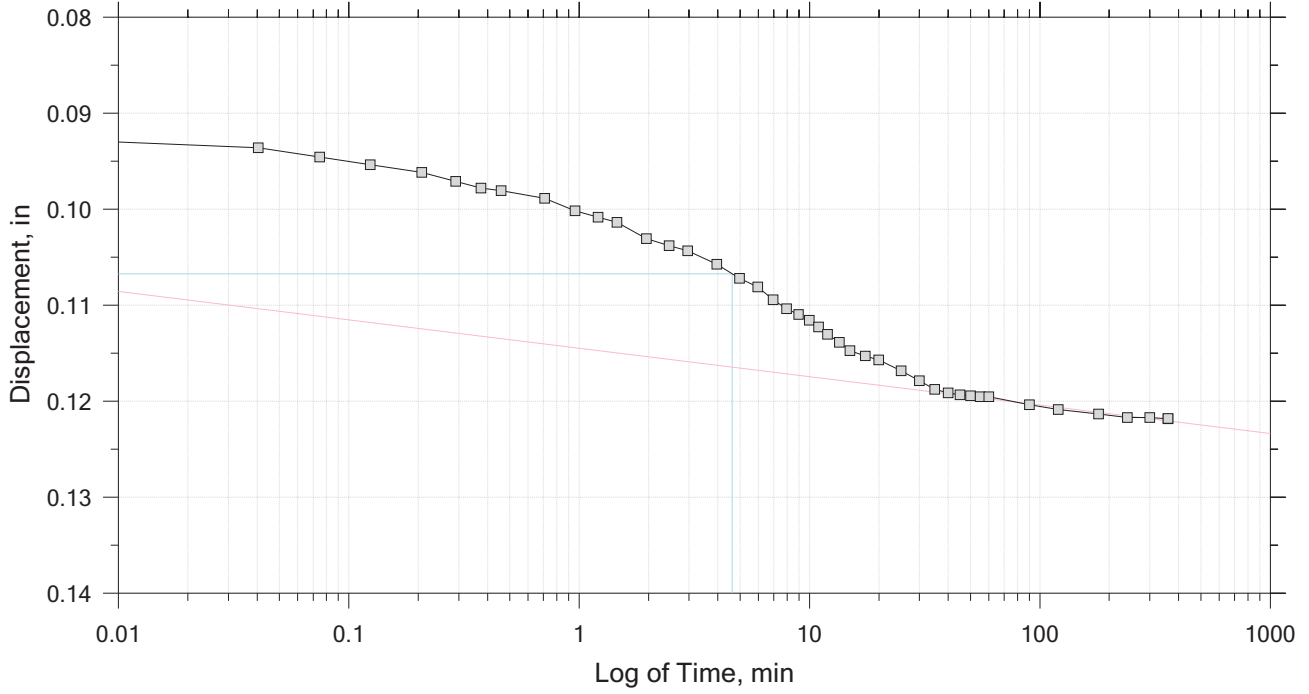
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 14 of 14
 Constant Load Step
 Stress: 3.2e+04 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-32	Tester: EY	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 23-25
	Test Number: 1	Preparation: Moist	Elevation:
	Description: Brown LEAN to FAT CLAY with sand		
	Remarks:		

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One-Dimensional Consolidation by ASTM D2435 - Method A

Specimen Diameter, in: 2.50	Specific Gravity: 2.92 (Estimated)	Liquid Limit: Unknown
Specimen Height, in: 1.00	Initial Void Ratio: 0.975	Plastic Limit: Unknown
Final Height, in: 0.88	Final Void Ratio: 0.734	Plasticity Index: Unknown

	Before Test Trimmings	Before Test Specimen	After Test Specimen	After Test Trimmings
Container ID		---		
Mass Container, gm	49.76	0	0	50.18
Mass Container + Wet Soil, gm	190.28	153.79	148.93	198.74
Mass Container + Dry Soil, gm	159.19	119.02	119.02	168.9
Mass Dry Soil, gm	109.43	119.02	119.02	118.72
Water Content, %	28.41	29.22	25.13	25.13
Void Ratio	---	0.98	0.73	---
Degree of Saturation, %	---	87.57	100.00	---
Dry Unit Weight, pcf	---	92.366	105.18	---

Note: Specific Gravity and Void Ratios are calculated assuming the degree of saturation equals 100% at the end of the test. Therefore, values may not represent actual values for the specimen.

	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-32	Tester: EY	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 23-25
	Test Number: 1	Preparation: Moist	Elevation:
	Description: Brown LEAN to FAT CLAY with sand		
	Remarks:		

One-Dimensional Consolidation by ASTM D2435 - Method A

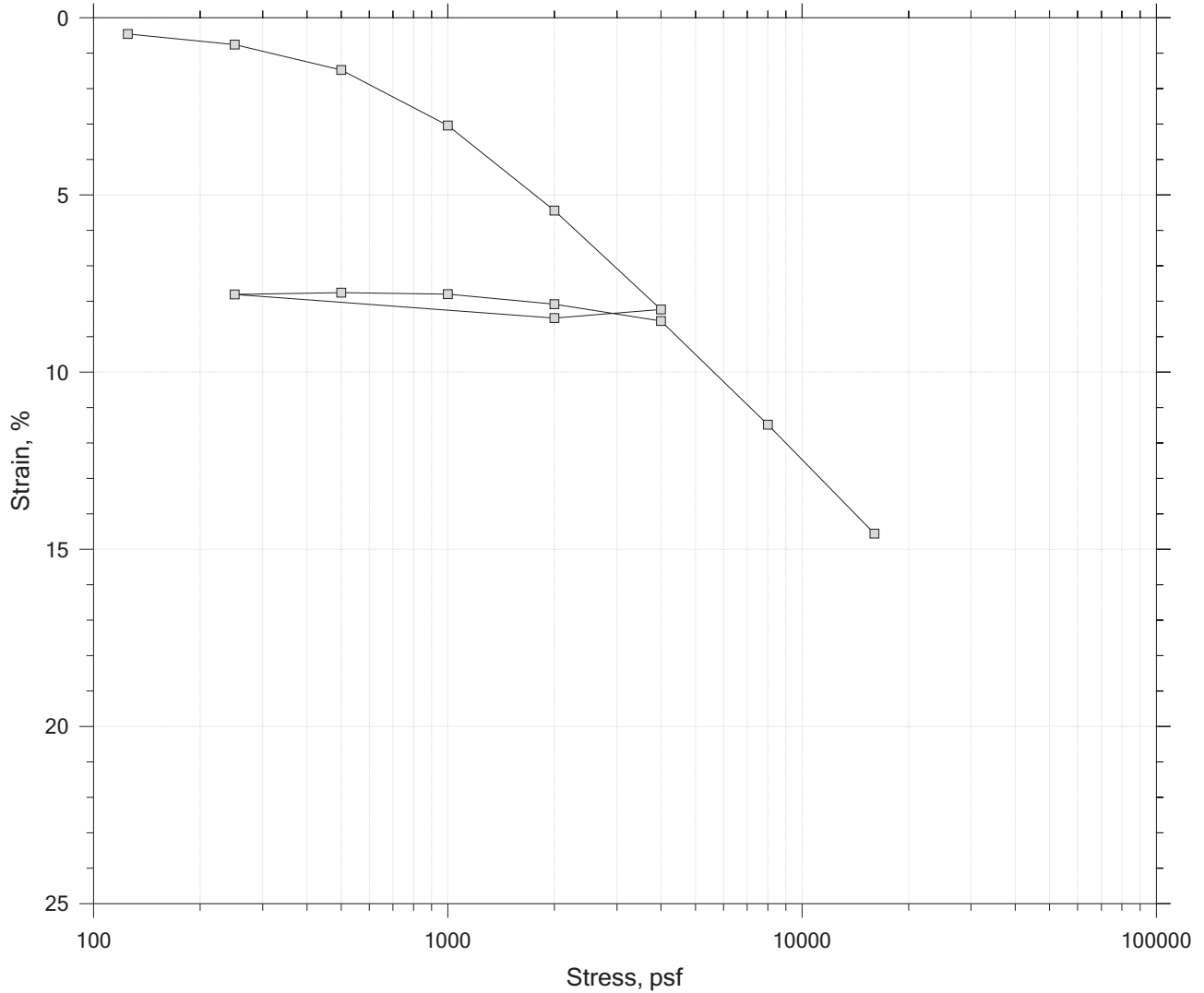
Log of Time Coefficients

Step	Applied Stress psf	Final Displacement in	Void Ratio	Strain at End %	Log T50 min	Cv in ² /s	Mv ft ² /lb	k cm/s	Ca %
1	250.	0.007544	0.960	0.754	0.000	0.00e+00	3.02e+01	0.00e+00	0.00e+00
2	500.	0.007704	0.960	0.770	0.113	7.14e-03	6.41e-01	6.05e-08	0.00e+00
3	1.00e+03	0.009228	0.957	0.923	0.000	0.00e+00	3.05e+00	0.00e+00	0.00e+00
4	2.00e+03	0.01633	0.943	1.63	3.355	2.38e-04	7.11e+00	2.24e-08	0.00e+00
5	4.00e+03	0.03294	0.910	3.29	3.162	2.47e-04	8.30e+00	2.71e-08	0.00e+00
6	8.00e+03	0.05360	0.869	5.36	0.000	0.00e+00	5.17e+00	0.00e+00	0.00e+00
7	4.00e+03	0.05398	0.868	5.40	1.959	3.75e-04	-9.36e-02	-4.64e-10	0.00e+00
8	500.	0.03847	0.899	3.85	0.000	0.00e+00	4.43e+00	0.00e+00	0.00e+00
9	1.00e+03	0.03824	0.900	3.82	6.123	1.24e-04	-4.61e-01	-7.55e-10	0.00e+00
10	2.00e+03	0.04185	0.892	4.18	2.098	3.60e-04	3.61e+00	1.72e-08	0.00e+00
11	4.00e+03	0.04774	0.881	4.77	5.503	1.36e-04	2.95e+00	5.30e-09	0.00e+00
12	8.00e+03	0.05619	0.864	5.62	0.000	0.00e+00	2.11e+00	0.00e+00	0.00e+00
13	1.60e+04	0.08299	0.811	8.30	3.291	2.16e-04	3.35e+00	9.56e-09	0.00e+00
14	3.20e+04	0.1176	0.743	11.8	4.607	1.44e-04	2.17e+00	4.13e-09	0.00e+00

	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-32	Tester: EY	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 23-25
	Test Number: 1	Preparation: Moist	Elevation:
	Description: Brown LEAN to FAT CLAY with sand		
	Remarks:		
Displacement at End of Primary			

One-Dimensional Consolidation by ASTM D2435 - Method A

Summary Report



				Before Test	After Test
Current Vertical Effective Stress, psf: 0		Water Content, %		26.55	21.99
Preconsolidation Stress, psf: 1085		Dry Unit Weight, pcf		92.225	108.28
Compression Ratio: 0		Saturation, %		82.87	100.00
Specimen Diameter, in: 2.5	Specimen Height, in: 1	Void Ratio		0.90	0.62
LL: Unknown	PL: Unknown	PI: Unknown	GS: 2.80		

	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B41	Tester: SM	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 3-5 Feet
	Test Number:	Preparation: Moist	Elevation: 736.5-738.5 Feet
	Description: LEAN CLAY- Reddish Brown		
	Remarks:		

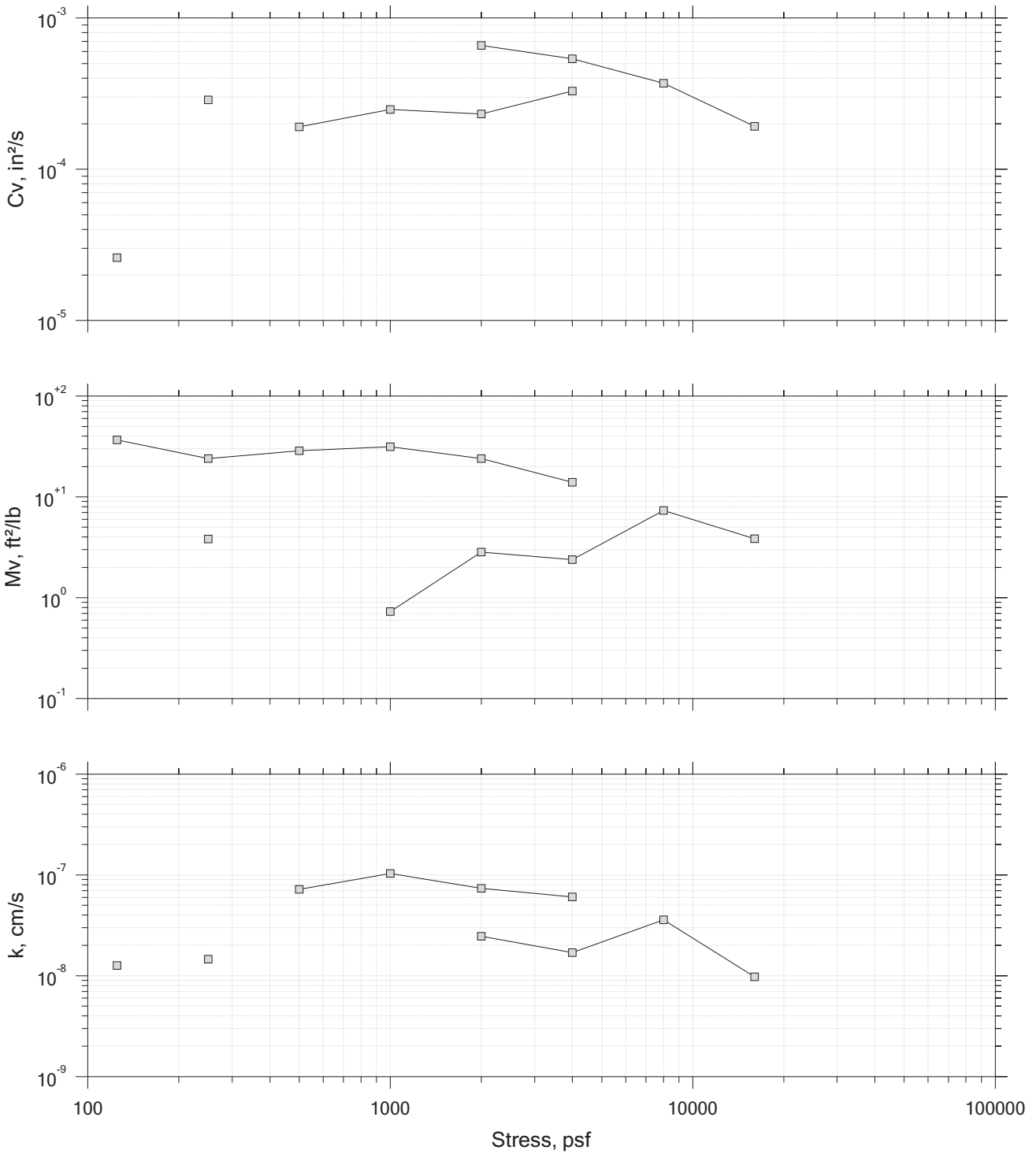
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One-Dimensional Consolidation by ASTM D2435 - Method A

Log of Time Coefficients



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-41	Tester: SM	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 3-5
	Test Number:	Preparation: Moist	Elevation:
	Description: Red CLAY		
	Remarks:		

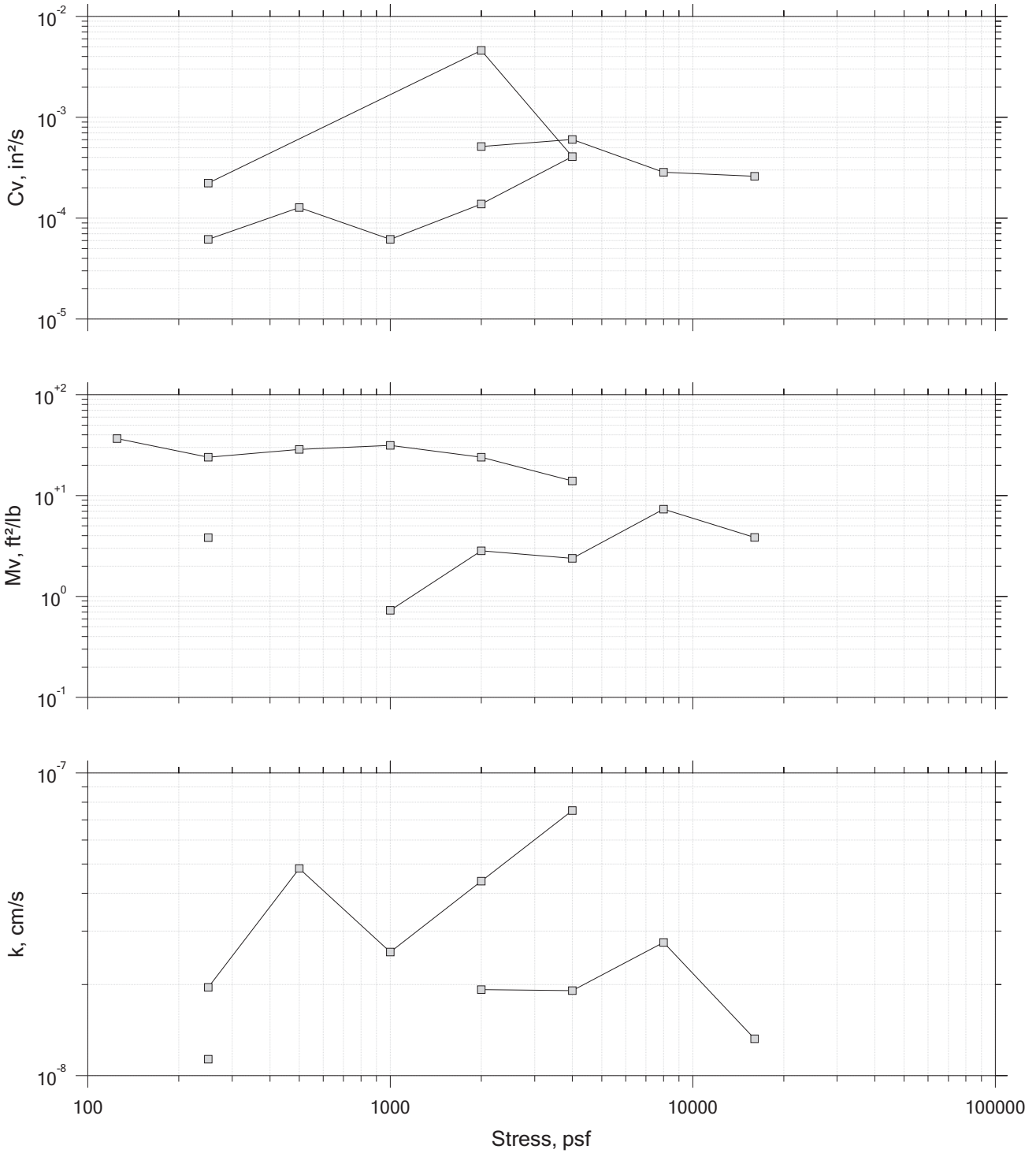
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One-Dimensional Consolidation by ASTM D2435 - Method A

Sqrt of Time Coefficients



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-41	Tester: SM	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 3-5
	Test Number:	Preparation: Moist	Elevation:
	Description: Red CLAY		
	Remarks:		

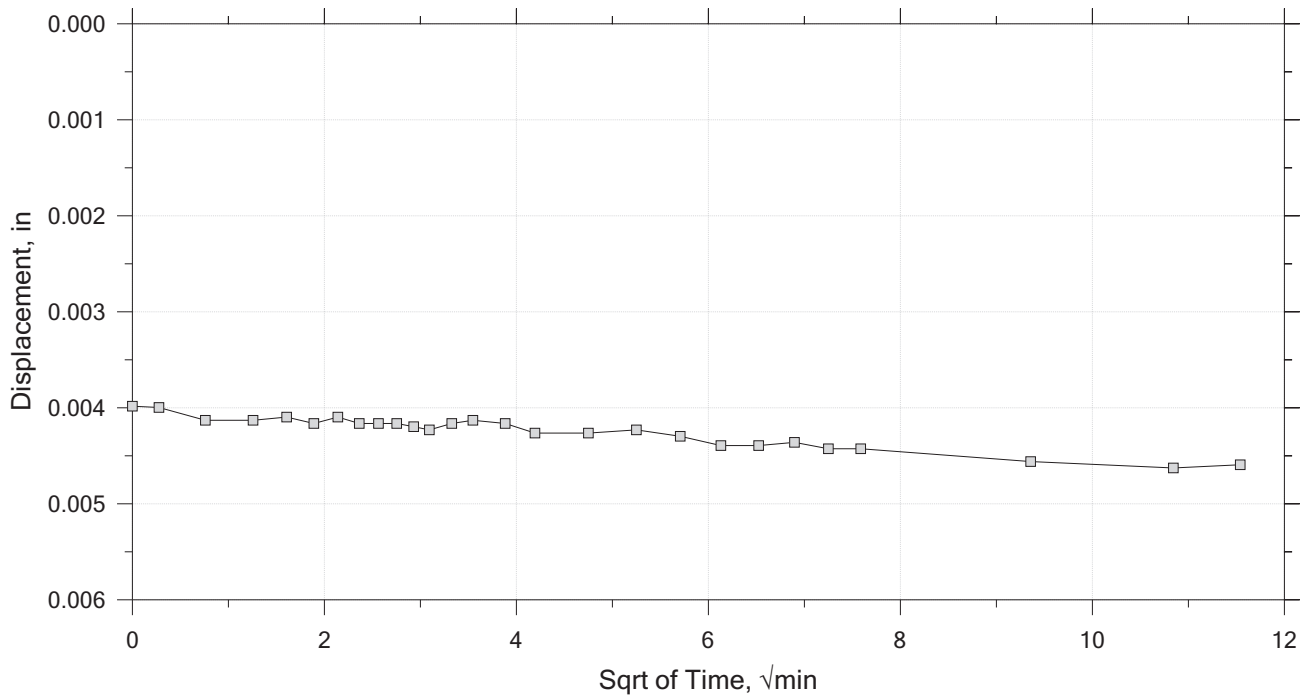
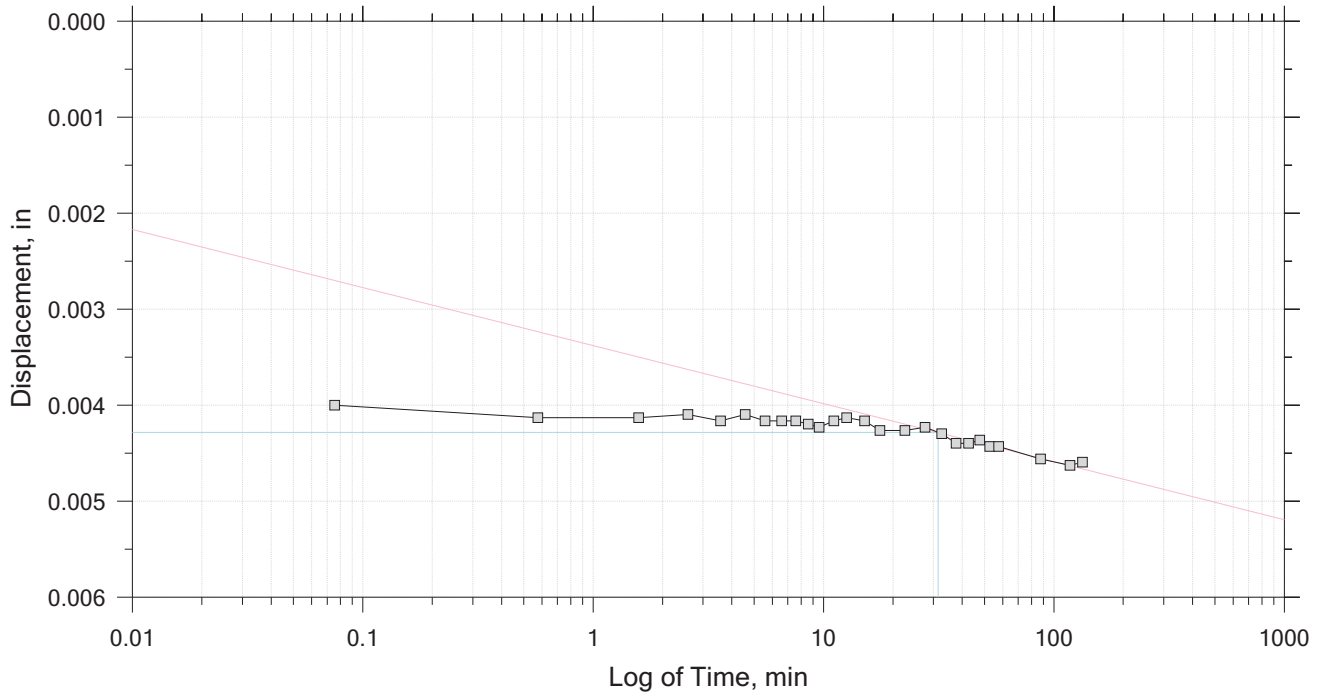
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 1 of 14
 Constant Load Step
 Stress: 125 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-41	Tester: SM	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 3-5
	Test Number:	Preparation: Moist	Elevation:
	Description: Red CLAY		
	Remarks:		

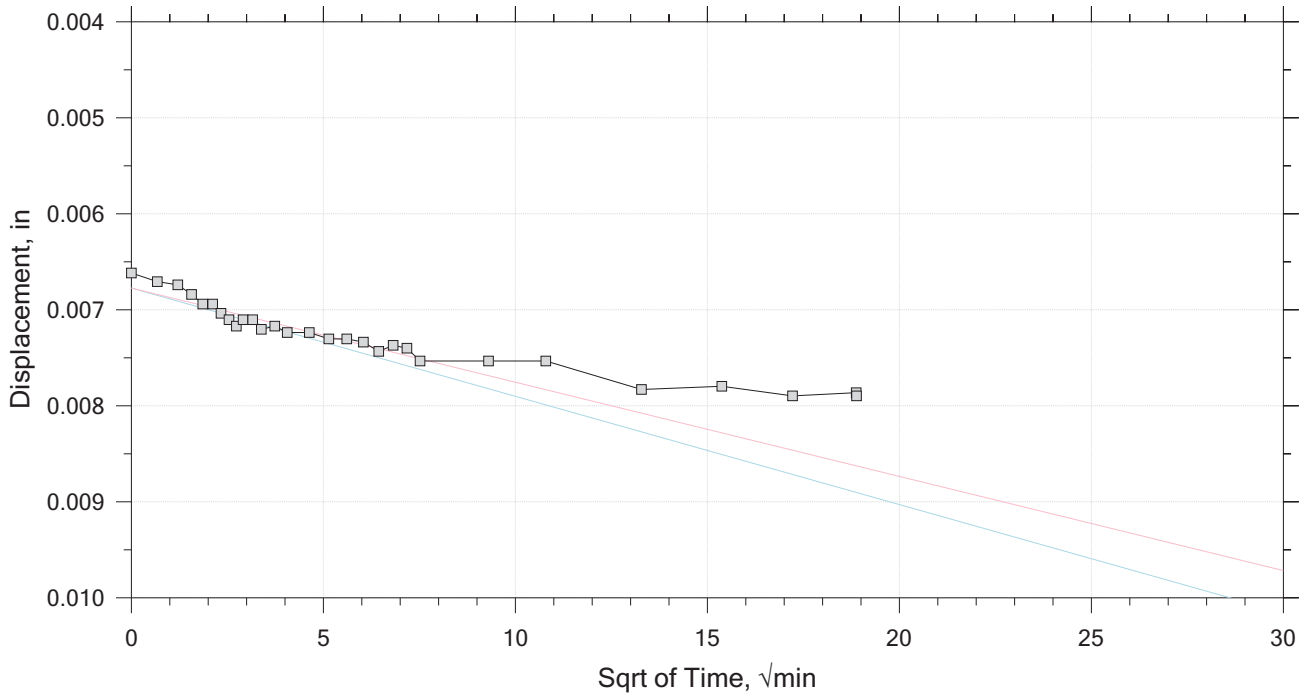
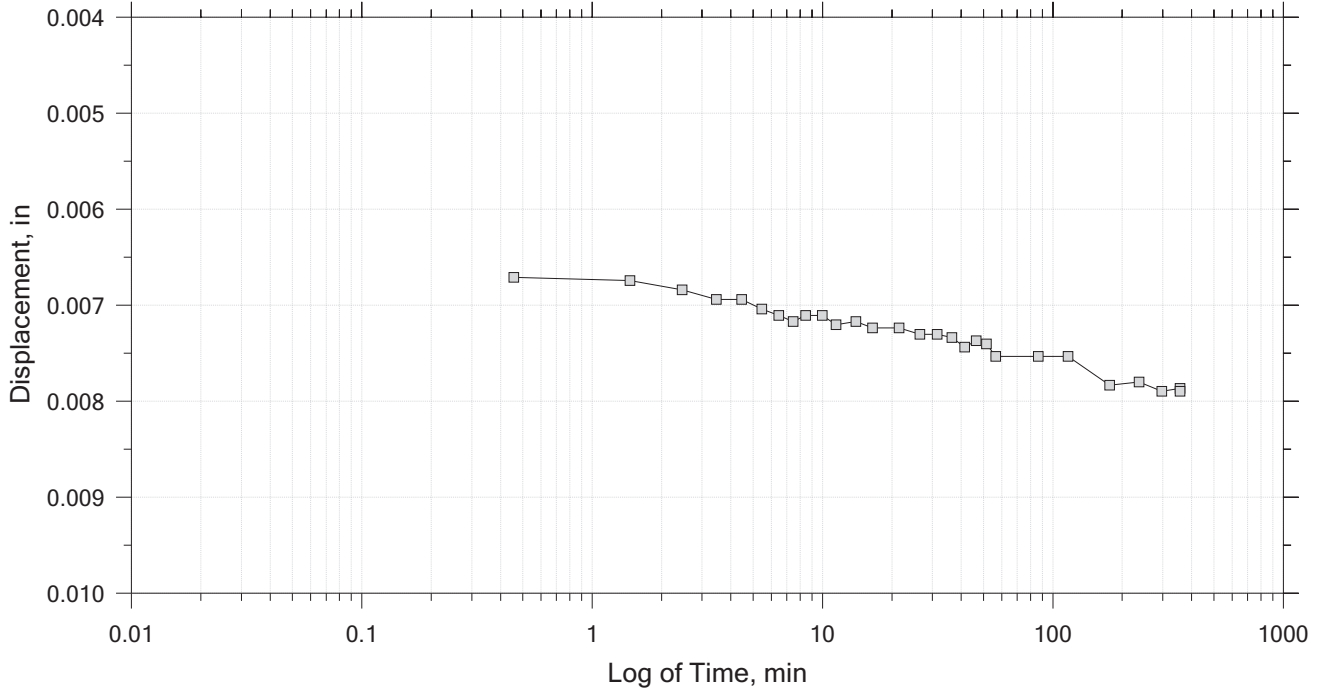
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26-ZONE-0056

One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 2 of 14
 Constant Load Step
 Stress: 250 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-41	Tester: SM	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 3-5
	Test Number:	Preparation: Moist	Elevation:
	Description: Red CLAY		
	Remarks:		

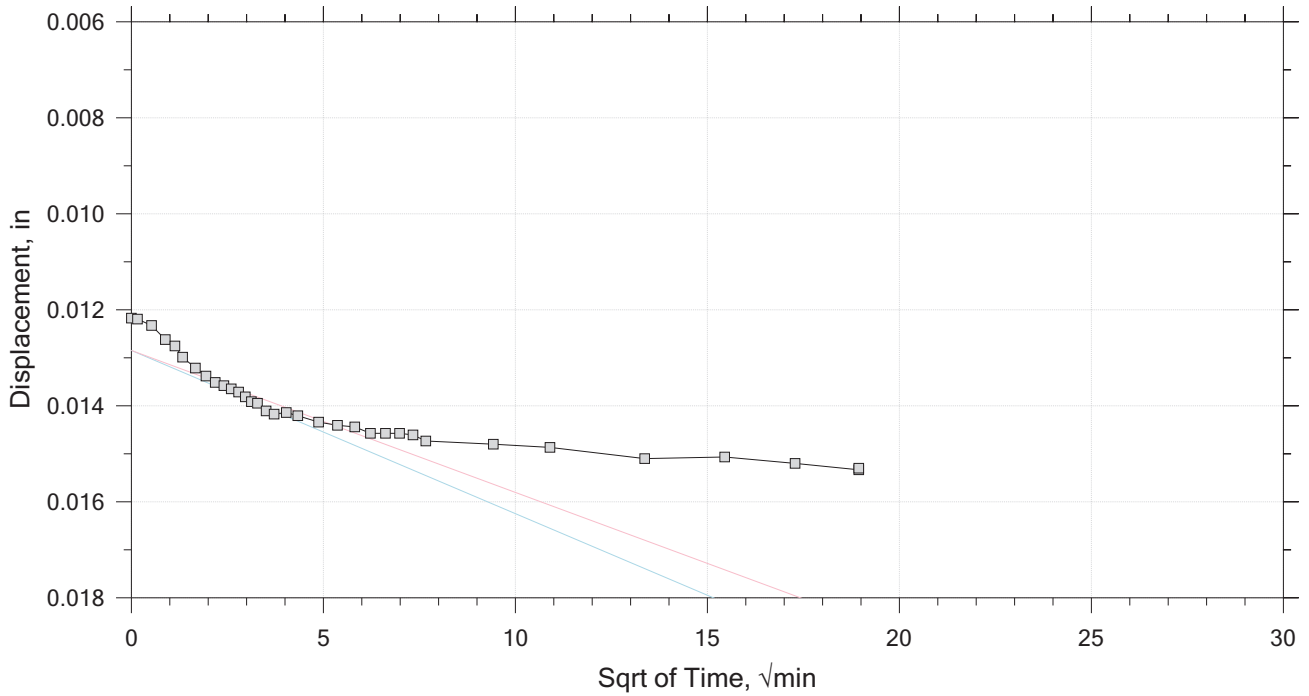
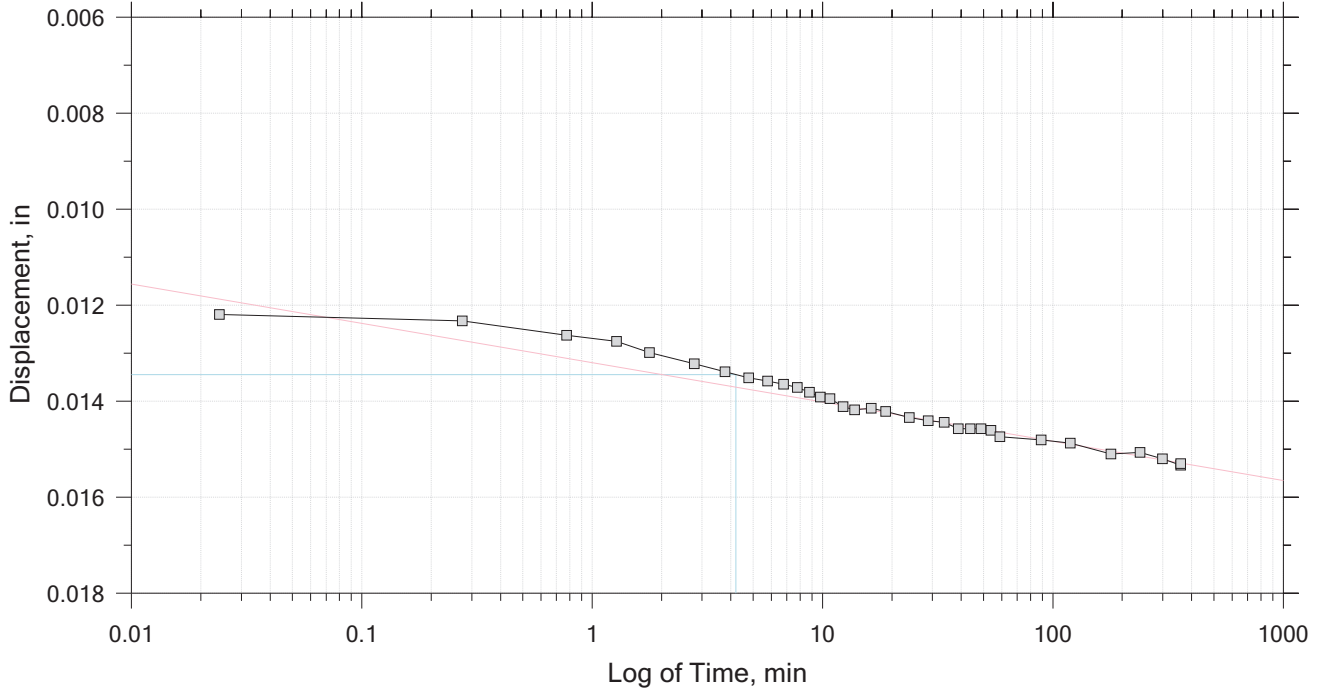
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 3 of 14
 Constant Load Step
 Stress: 500 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-41	Tester: SM	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 3-5
	Test Number:	Preparation: Moist	Elevation:
	Description: Red CLAY		
	Remarks:		

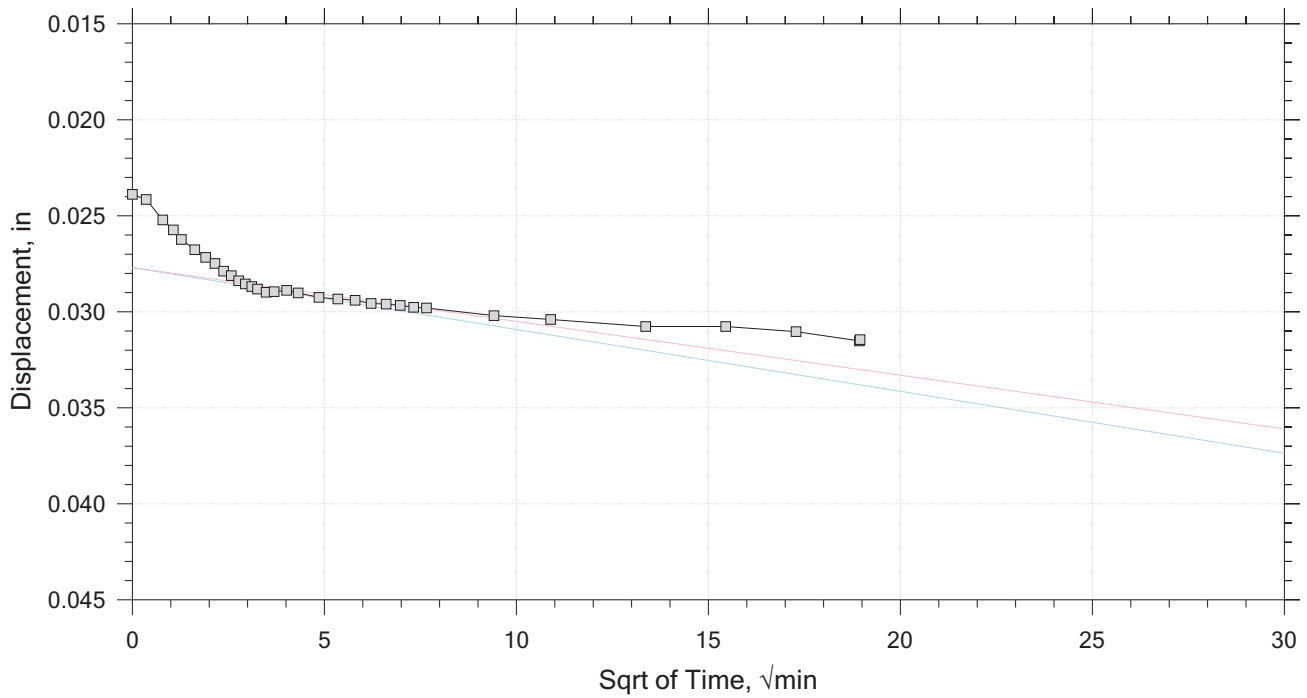
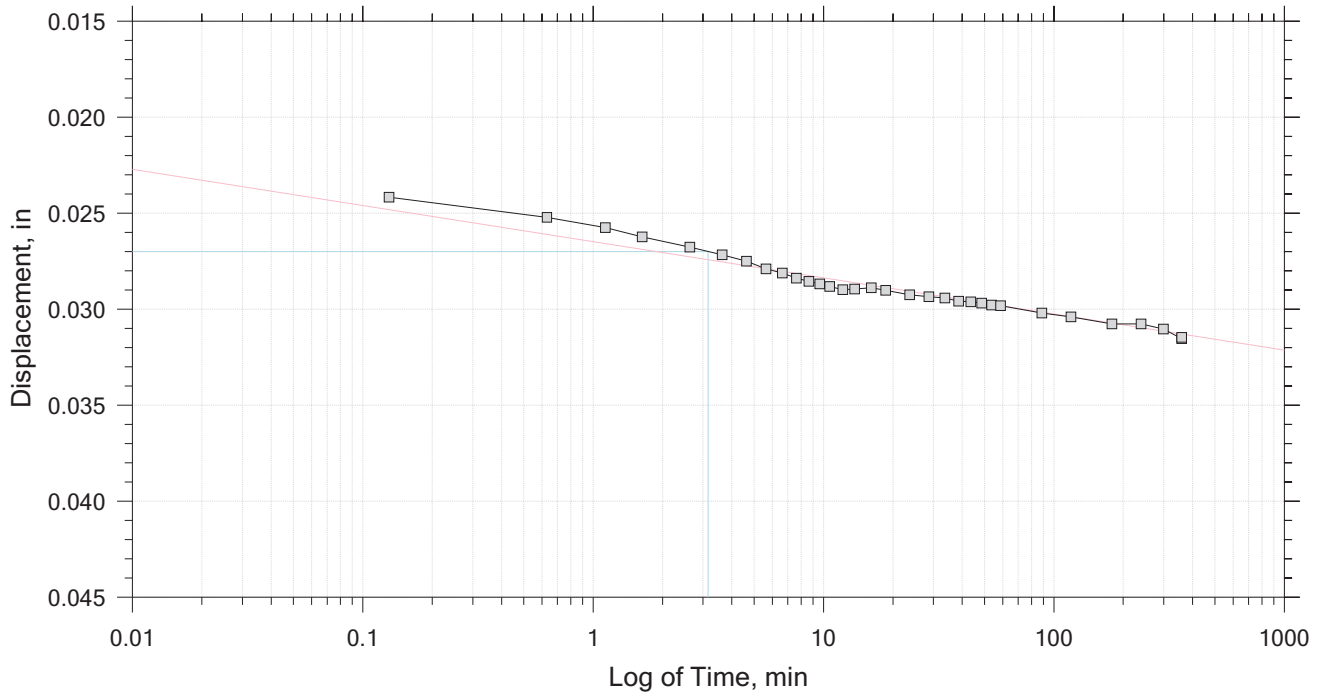
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 4 of 14
 Constant Load Step
 Stress: 1e+03 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-41	Tester: SM	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 3-5
	Test Number:	Preparation: Moist	Elevation:
	Description: Red CLAY		
	Remarks:		

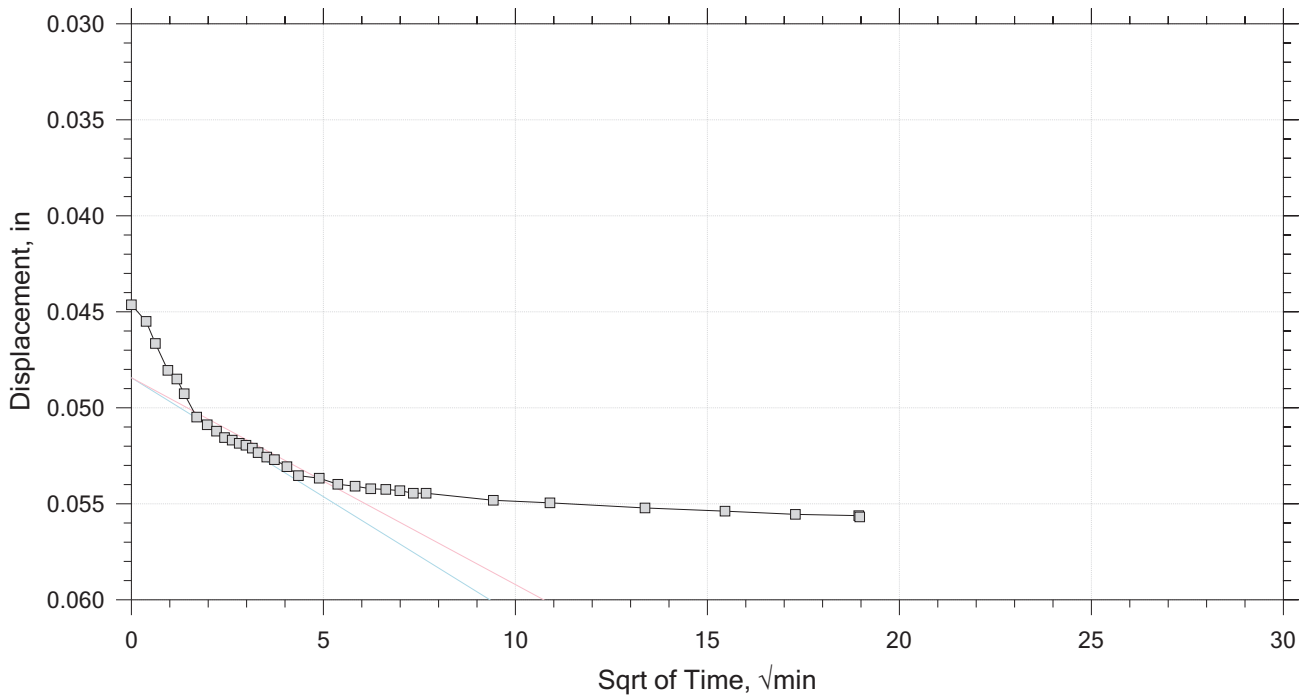
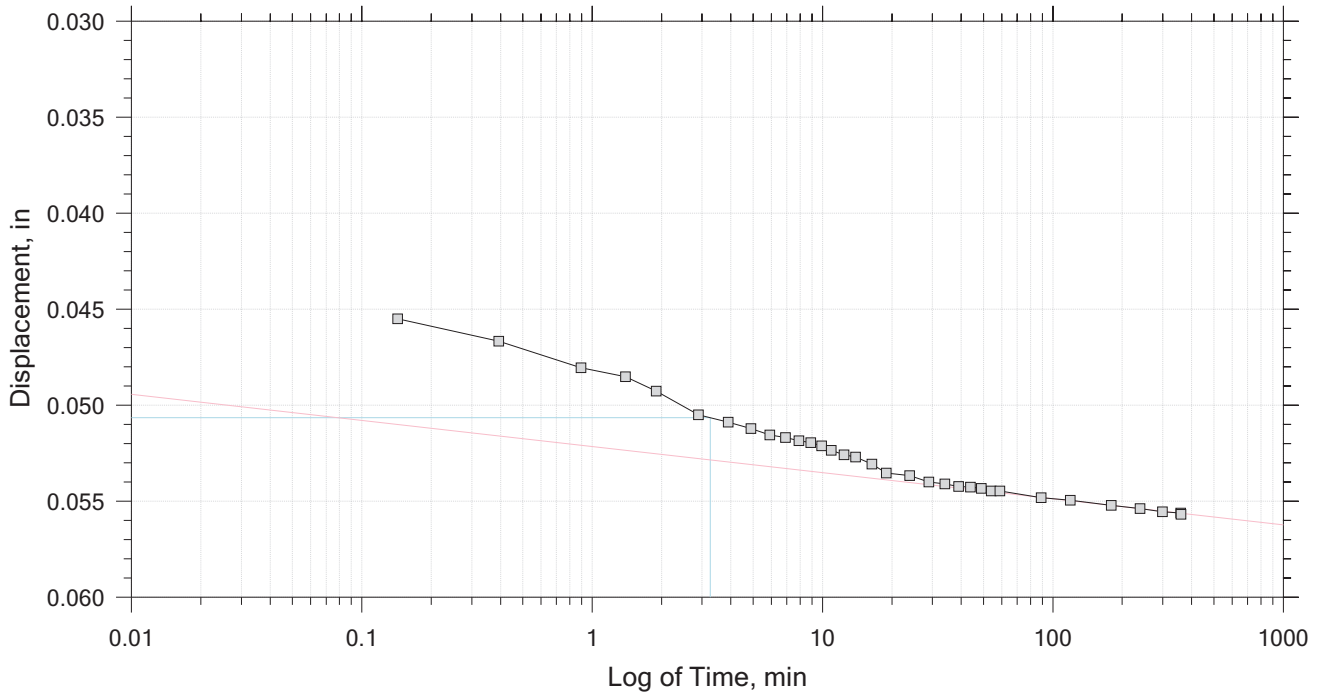
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 5 of 14
 Constant Load Step
 Stress: 2e+03 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-41	Tester: SM	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 3-5
	Test Number:	Preparation: Moist	Elevation:
	Description: Red CLAY		
	Remarks:		

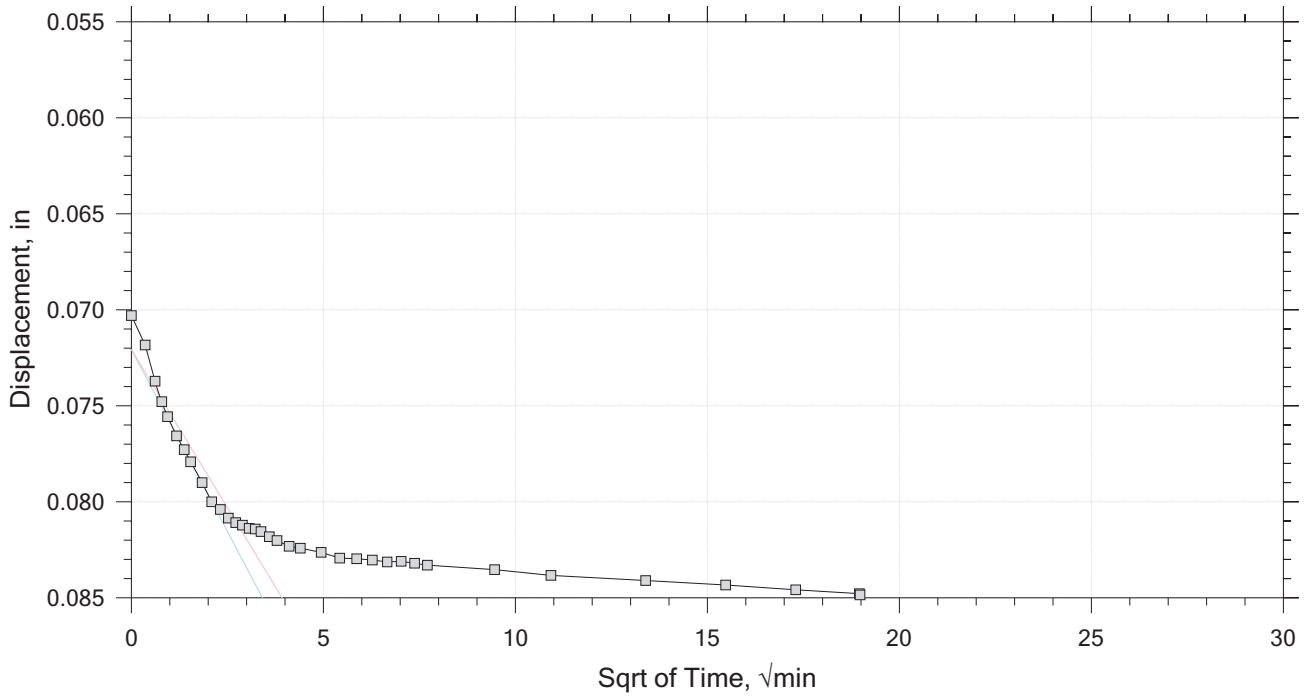
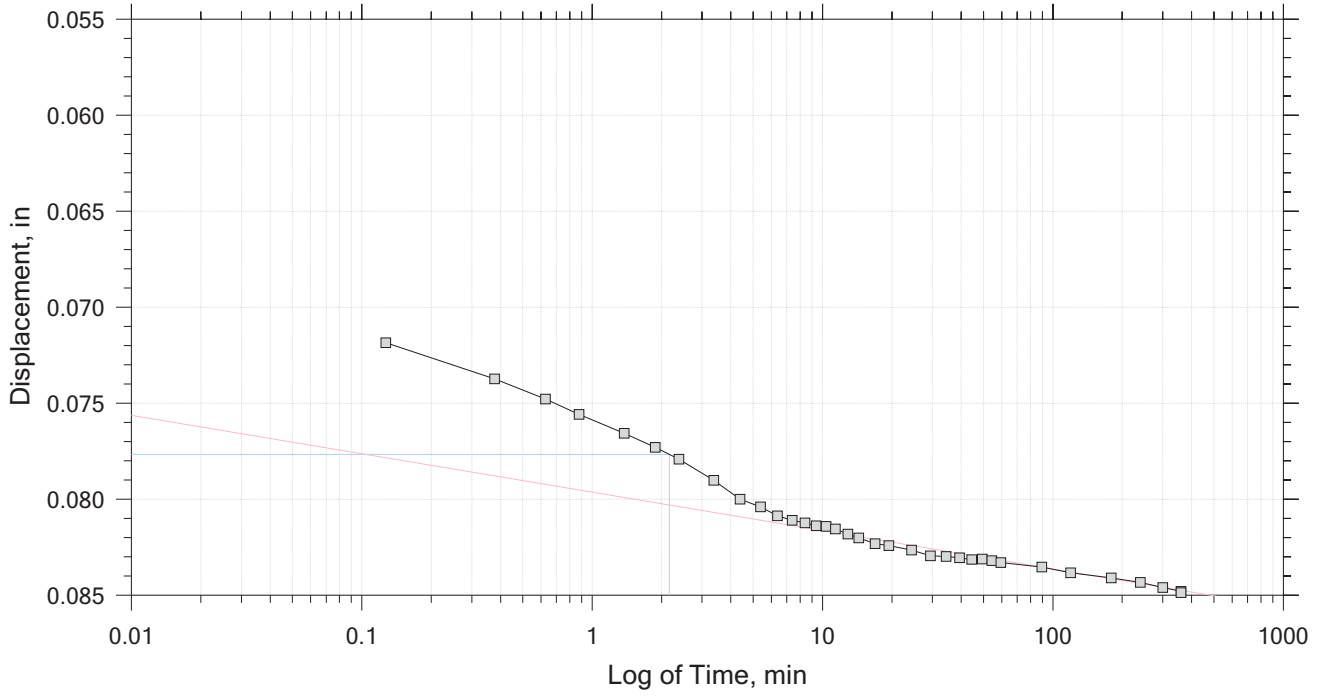
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 6 of 14
 Constant Load Step
 Stress: 4e+03 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-41	Tester: SM	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 3-5
	Test Number:	Preparation: Moist	Elevation:
	Description: Red CLAY		
	Remarks:		

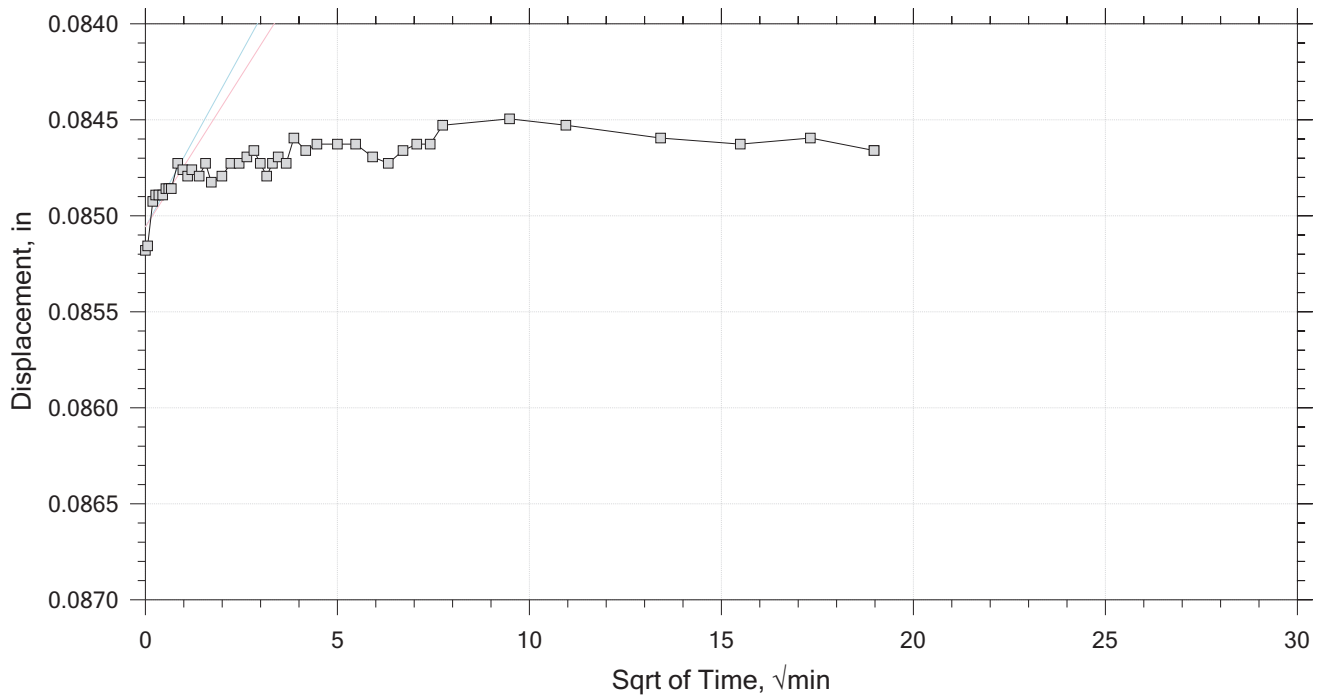
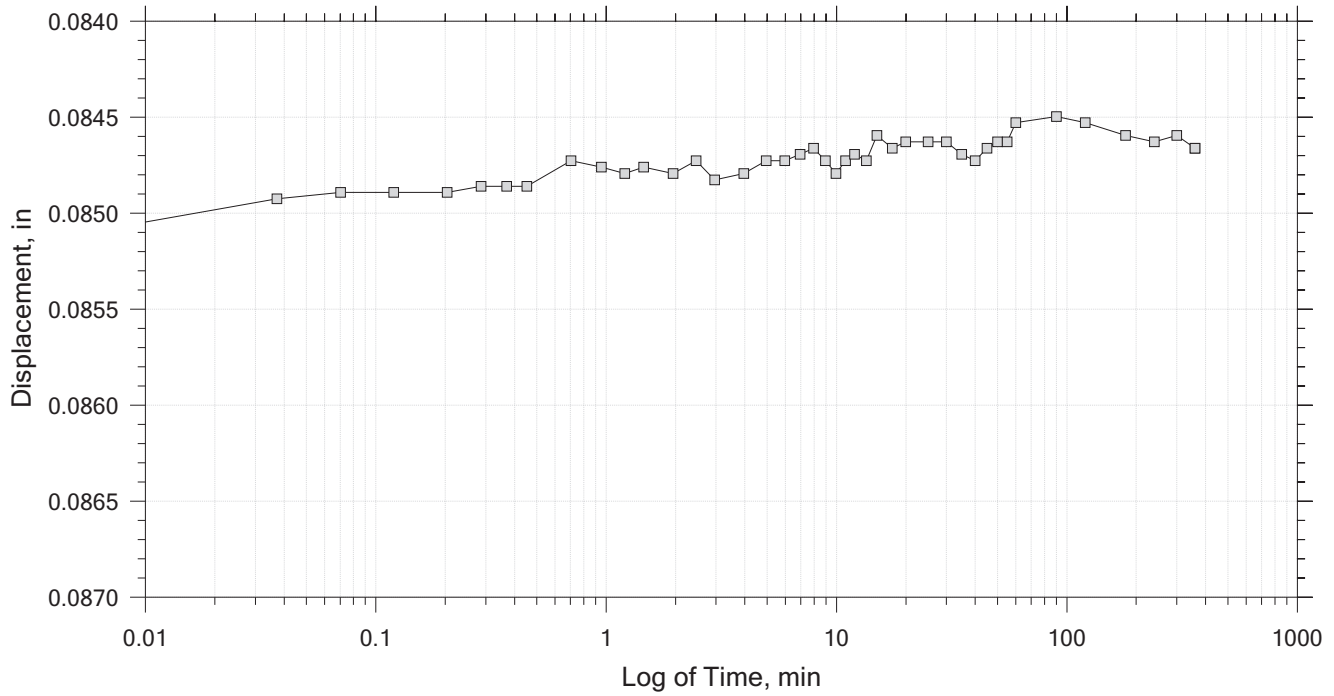
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 7 of 14
 Constant Load Step
 Stress: 2e+03 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-41	Tester: SM	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 3-5
	Test Number:	Preparation: Moist	Elevation:
	Description: Red CLAY		
	Remarks:		

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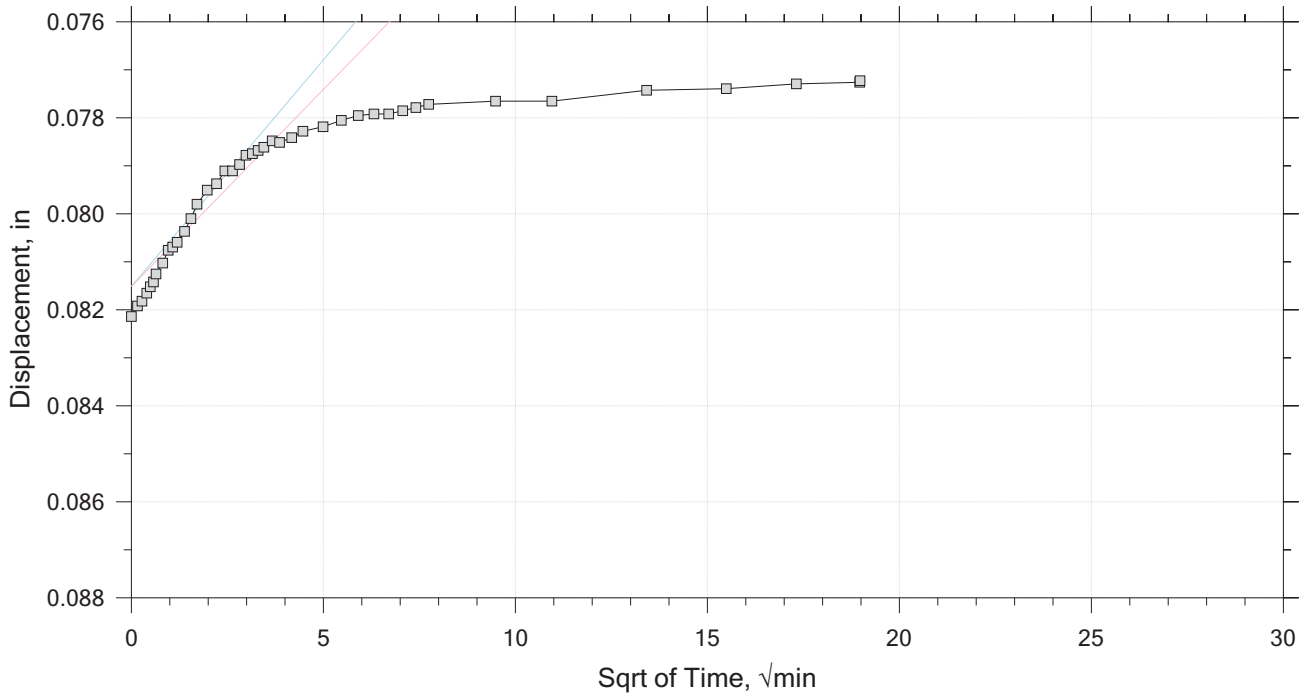
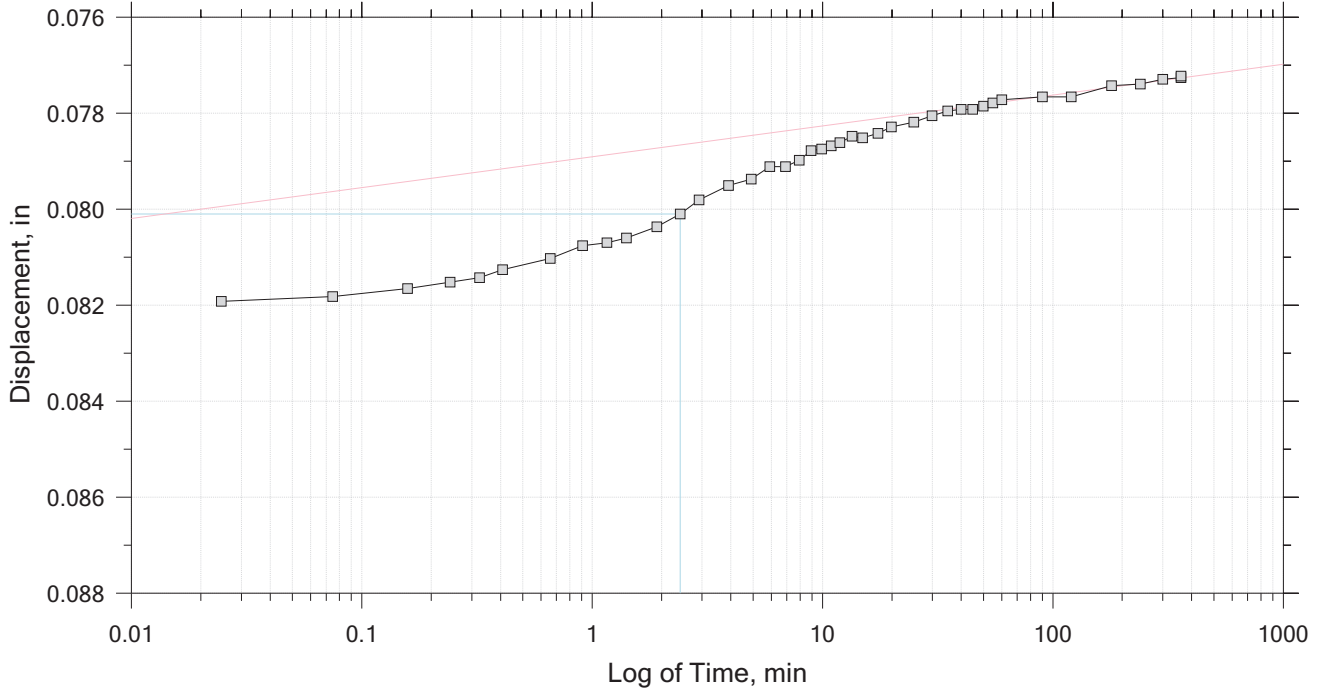
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 8 of 14
 Constant Load Step
 Stress: 250 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-41	Tester: SM	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 3-5
	Test Number:	Preparation: Moist	Elevation:
	Description: Red CLAY		
	Remarks:		

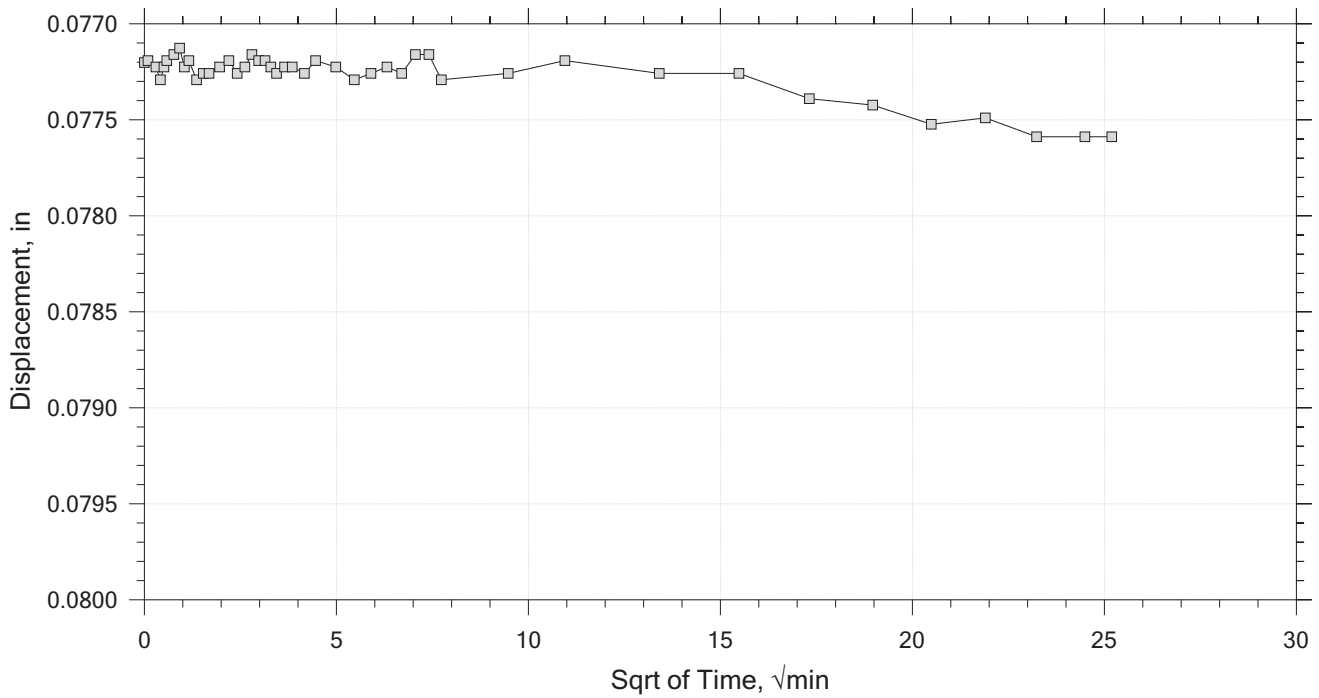
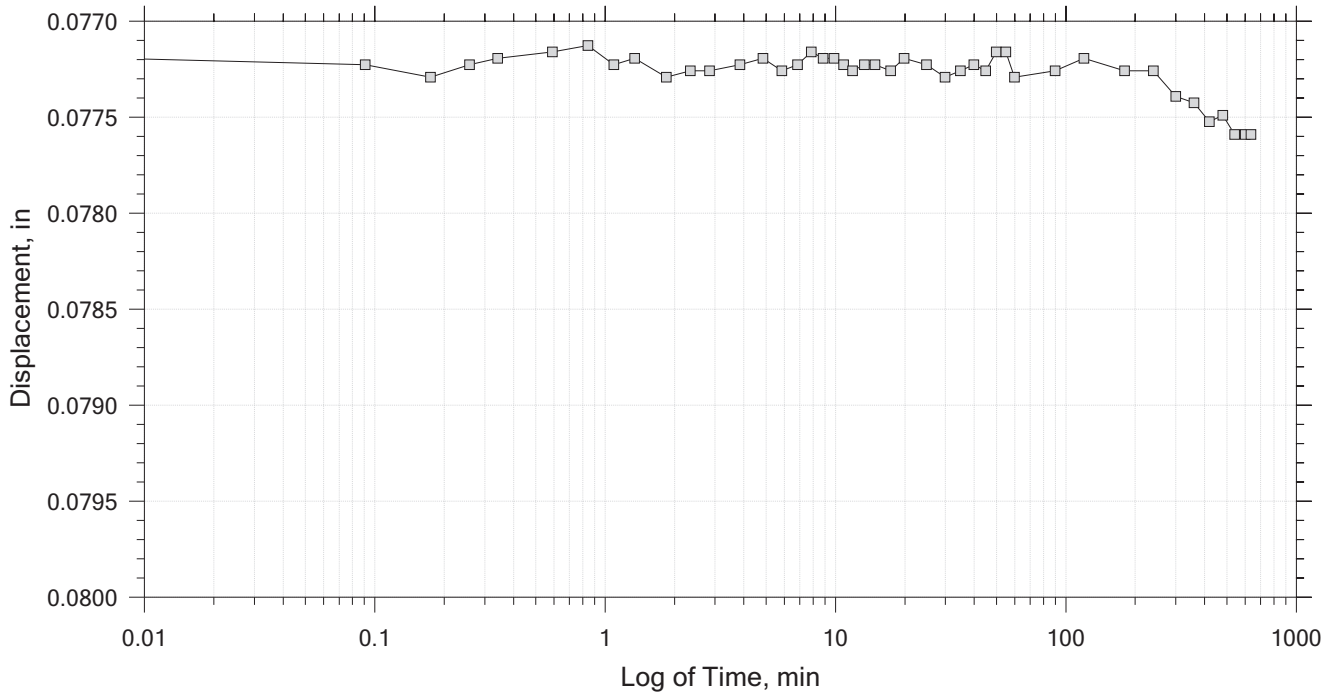
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 9 of 14
 Constant Load Step
 Stress: 500 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-41	Tester: SM	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 3-5
	Test Number:	Preparation: Moist	Elevation:
	Description: Red CLAY		
	Remarks:		

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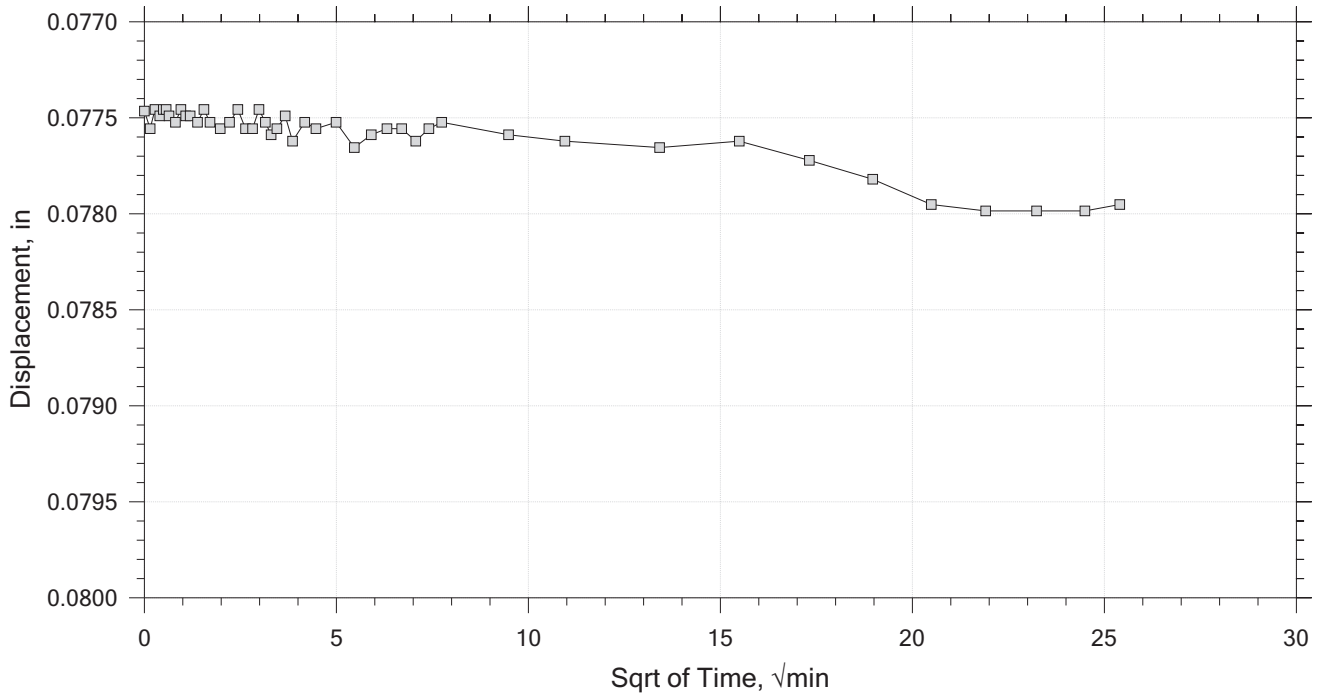
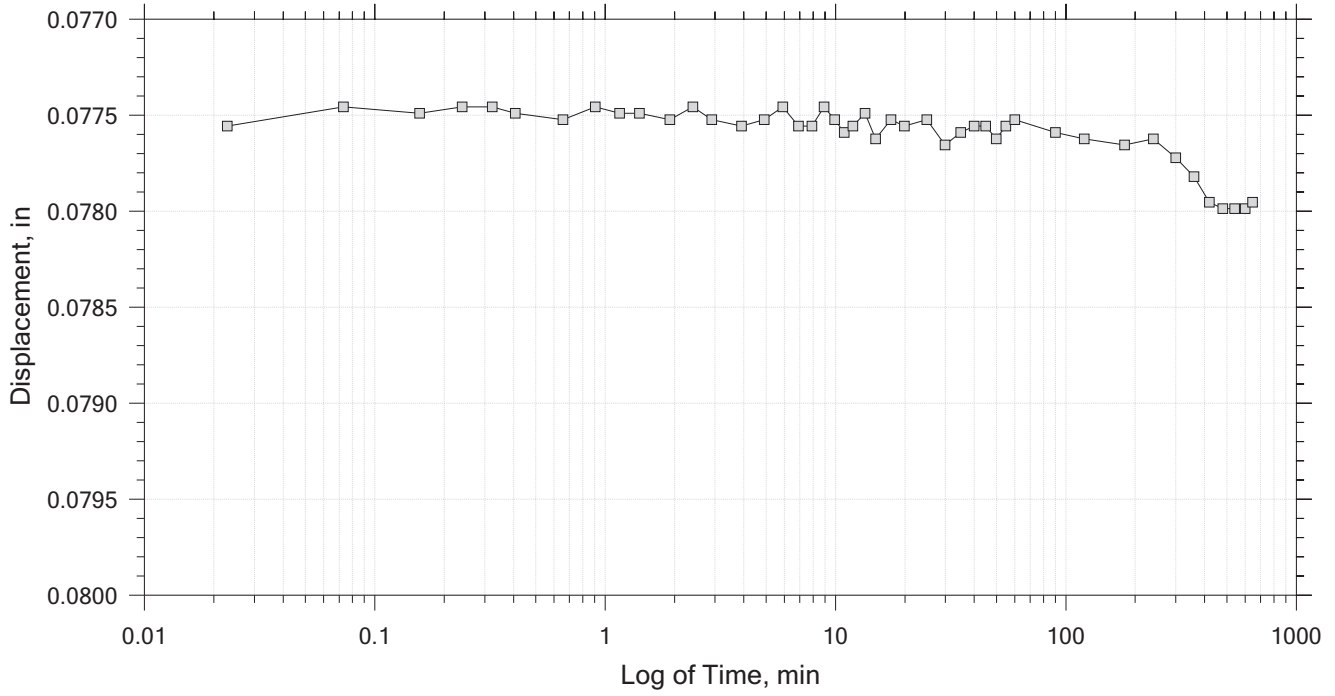
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 10 of 14

Constant Load Step

Stress: 1e+03 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-41	Tester: SM	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 3-5
	Test Number:	Preparation: Moist	Elevation:
	Description: Red CLAY		
	Remarks:		

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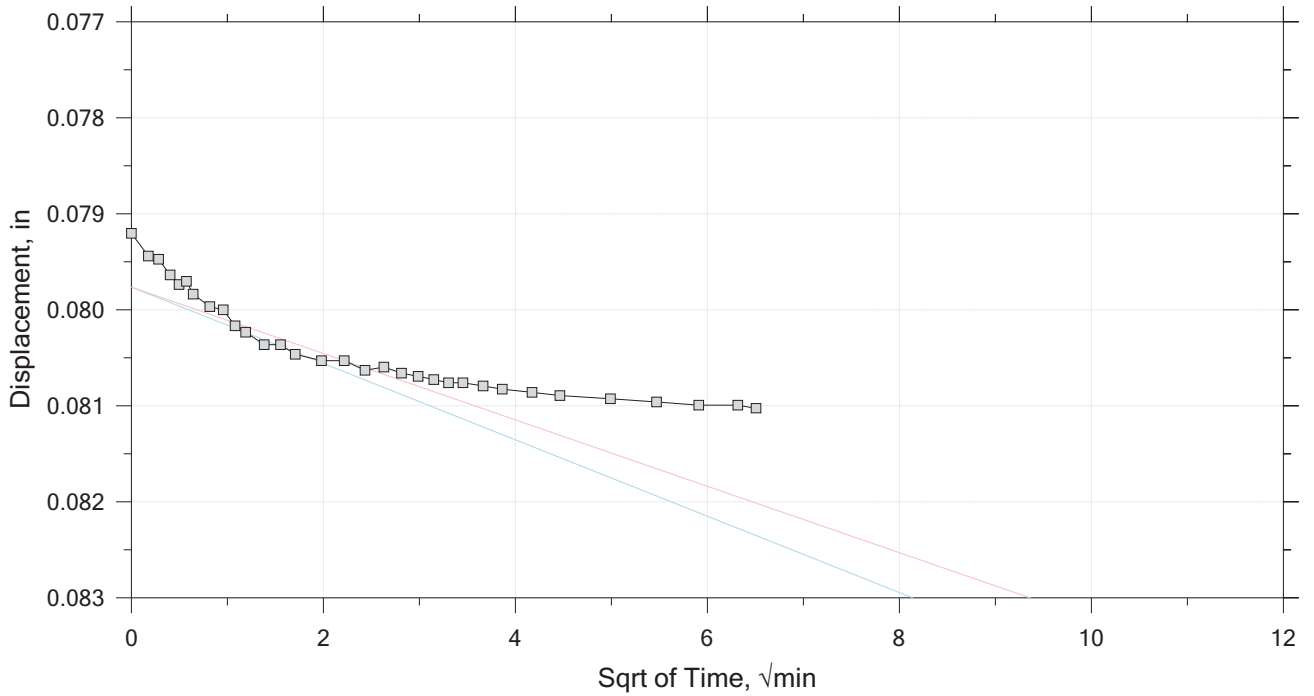
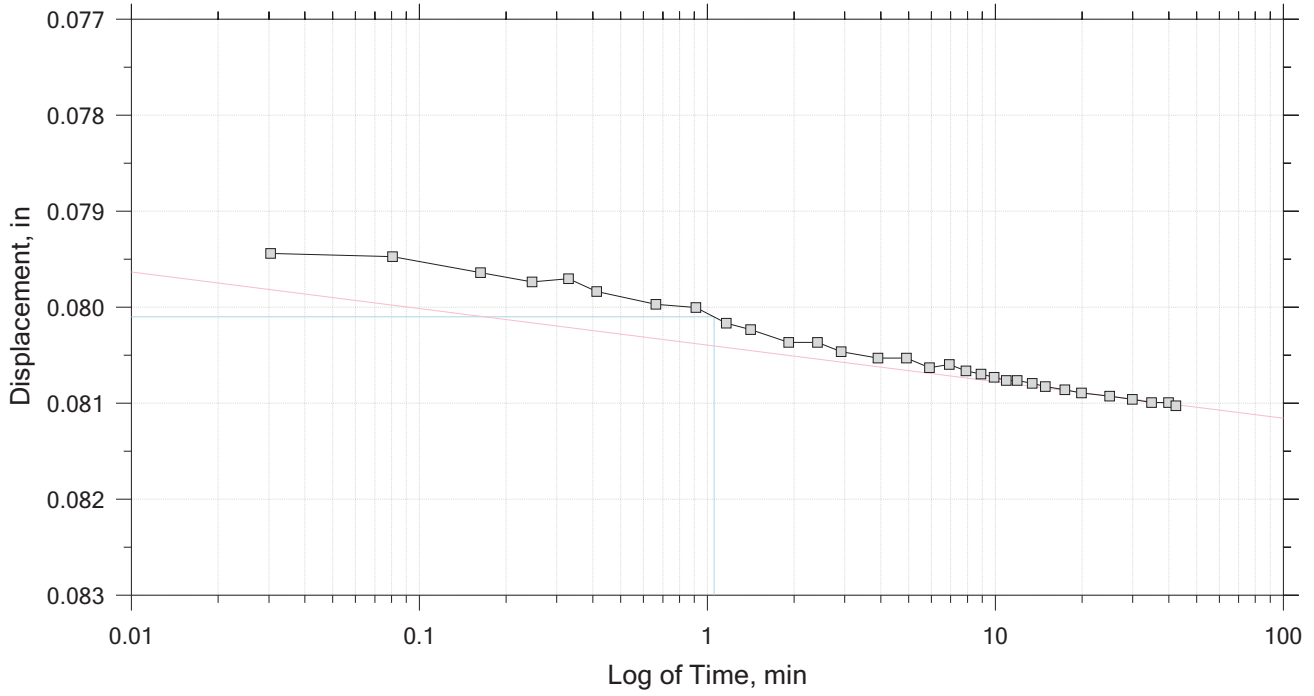
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 11 of 14

Constant Load Step

Stress: 2e+03 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-41	Tester: SM	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 3-5
	Test Number:	Preparation: Moist	Elevation:
	Description: Red CLAY		
	Remarks:		

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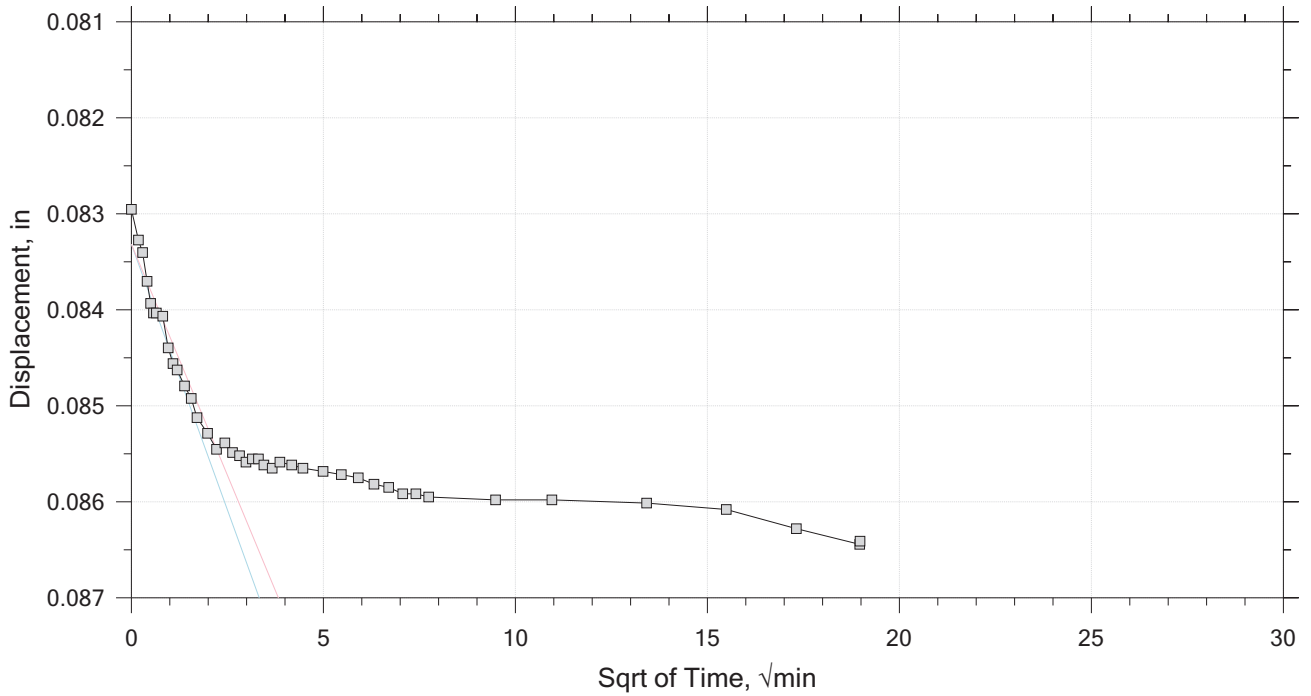
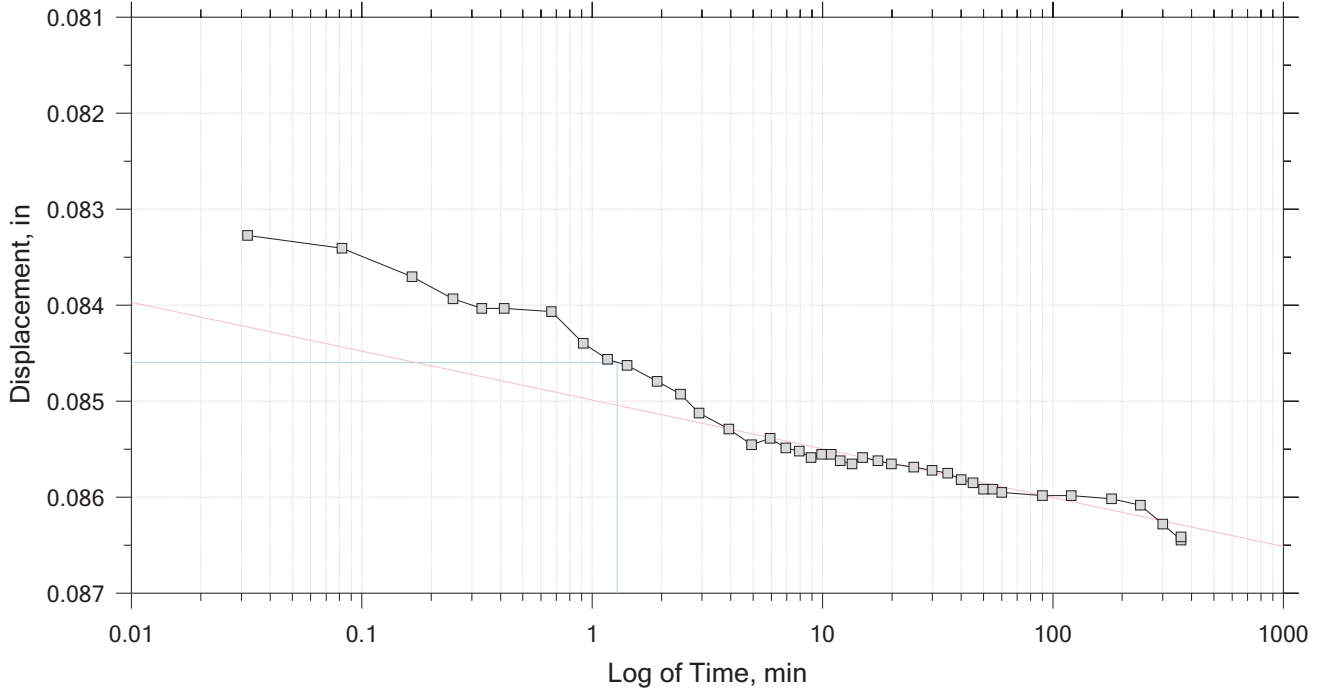
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299

One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 12 of 14
 Constant Load Step
 Stress: 4e+03 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-41	Tester: SM	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 3-5
	Test Number:	Preparation: Moist	Elevation:
	Description: Red CLAY		
	Remarks:		

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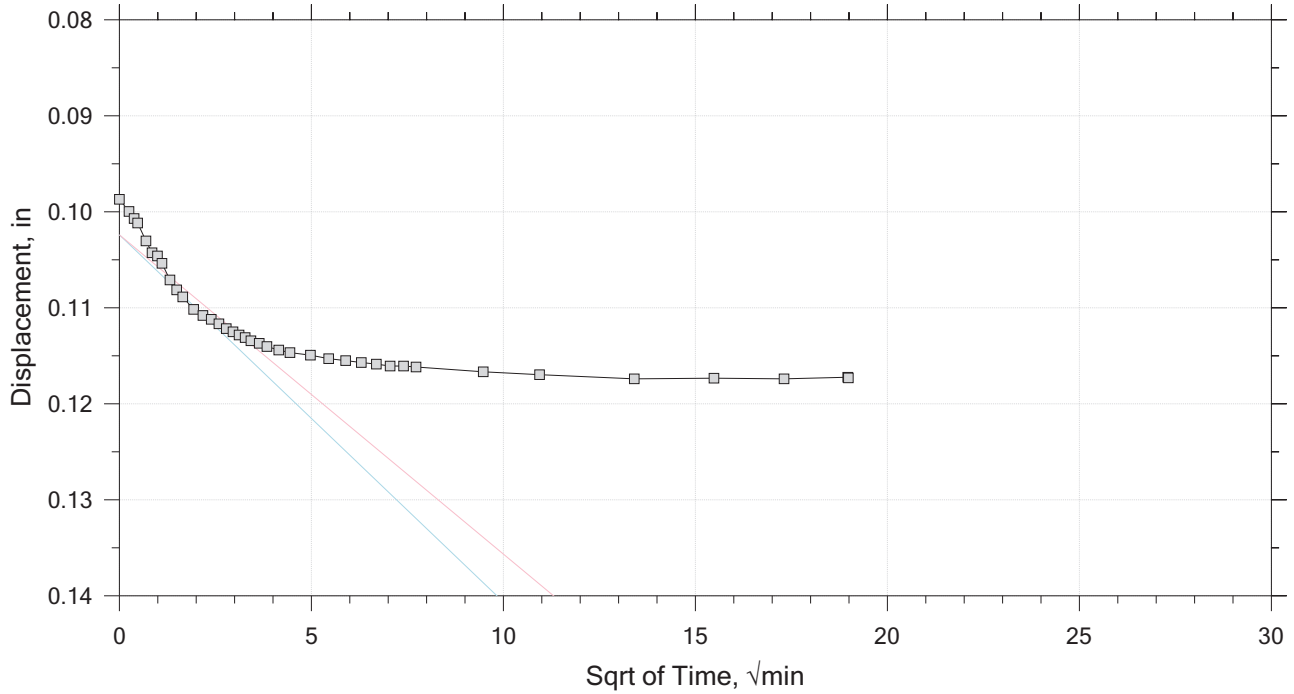
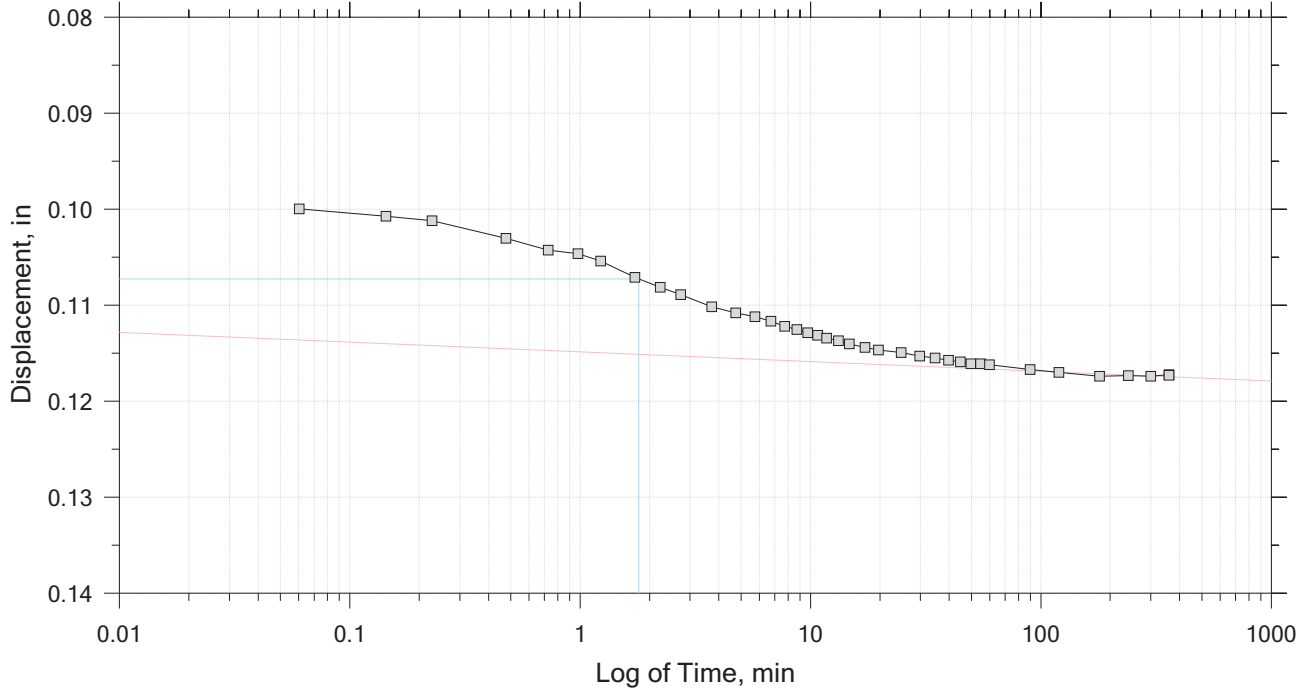
26-ZONE-0056


One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 13 of 14

Constant Load Step

Stress: 8e+03 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-41	Tester: SM	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 3-5
	Test Number:	Preparation: Moist	Elevation:
	Description: Red CLAY		
	Remarks:		

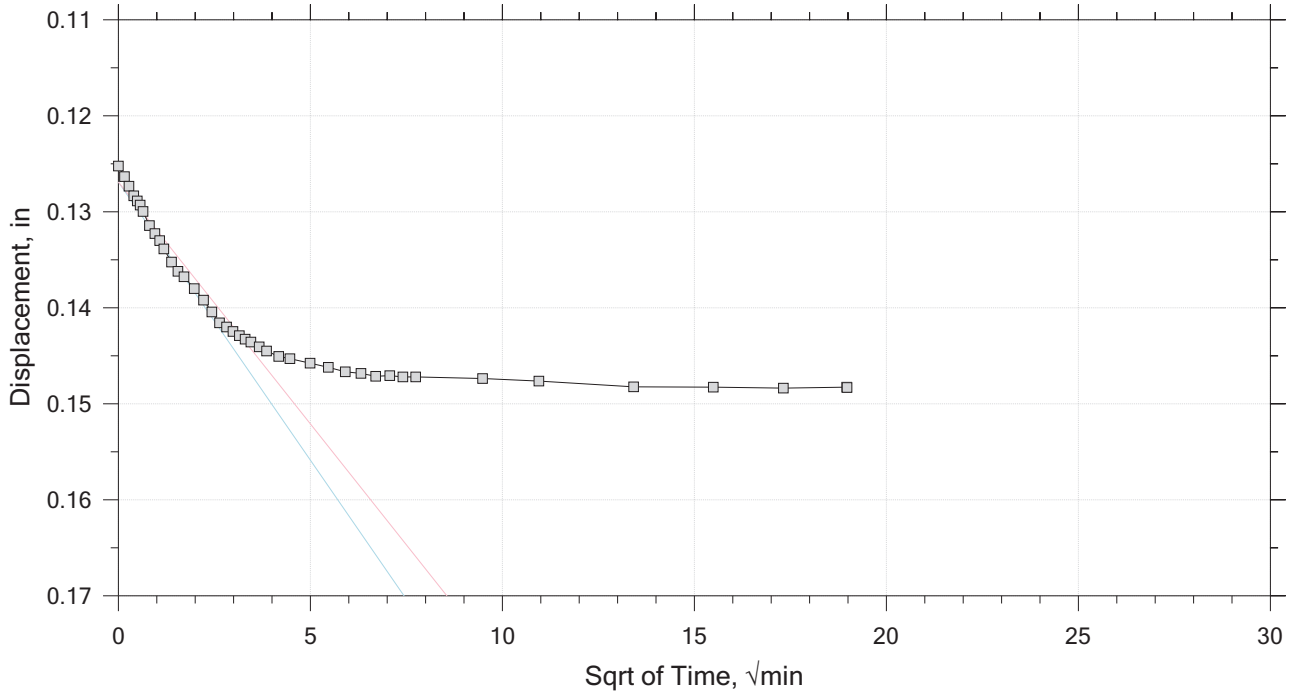
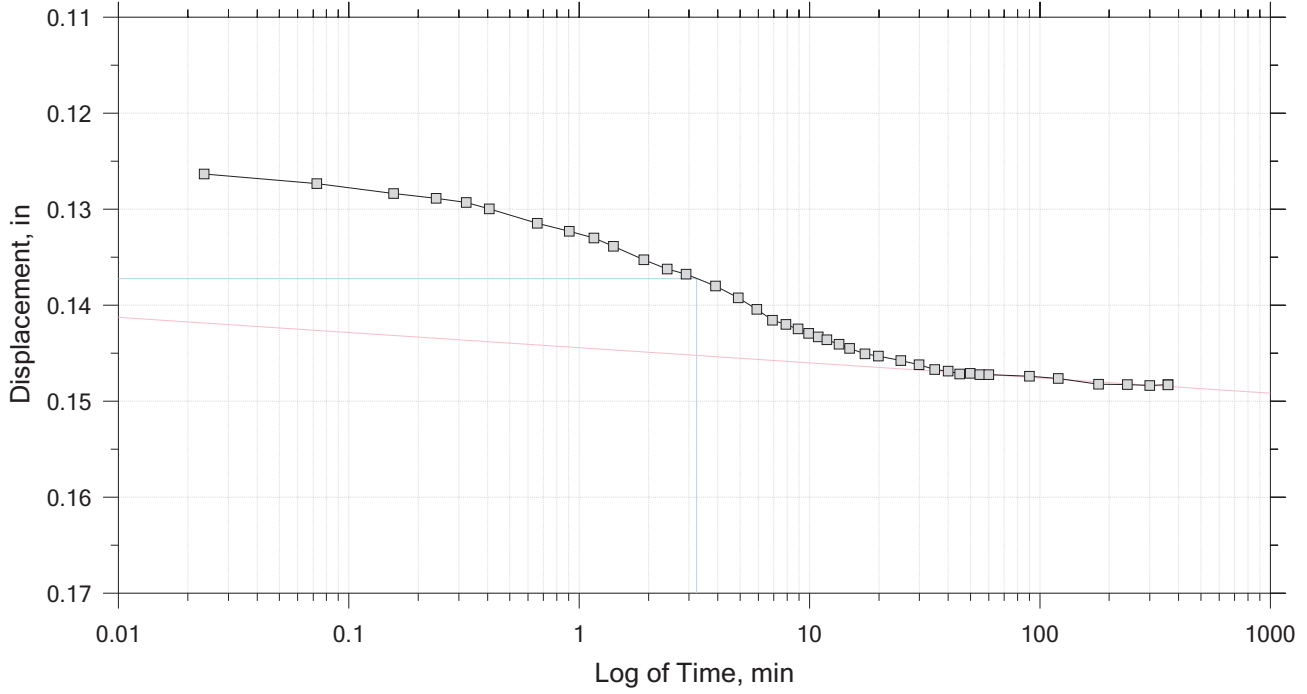
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One-Dimensional Consolidation by ASTM D2435 - Method A

Time Curve 14 of 14
 Constant Load Step
 Stress: 1.6e+04 psf



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-41	Tester: SM	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 3-5
	Test Number:	Preparation: Moist	Elevation:
	Description: Red CLAY		
	Remarks:		

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One-Dimensional Consolidation by ASTM D2435 - Method A

Specimen Diameter, in: 2.50	Specific Gravity: 2.80 (Estimated)	Liquid Limit: Unknown
Specimen Height, in: 1.00	Initial Void Ratio: 0.898	Plastic Limit: Unknown
Final Height, in: 0.85	Final Void Ratio: 0.617	Plasticity Index: Unknown

	Before Test Trimmings	Before Test Specimen	After Test Specimen	After Test Trimmings
Container ID		---		49.03
Mass Container, gm	50.24	0	0	49.03
Mass Container + Wet Soil, gm	235.47	150.38	144.97	193.52
Mass Container + Dry Soil, gm	195.89	118.83	118.83	167.47
Mass Dry Soil, gm	145.65	118.83	118.83	118.44
Water Content, %	27.17	26.55	21.99	21.99
Void Ratio	---	0.90	0.62	---
Degree of Saturation, %	---	82.87	100.00	---
Dry Unit Weight, pcf	---	92.225	108.28	---


Note: Specific Gravity and Void Ratios are calculated assuming the degree of saturation equals 100% at the end of the test. Therefore, values may not represent actual values for the specimen.

	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-41	Tester: SM	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 3-5
	Test Number:	Preparation: Moist	Elevation:
	Description: Red CLAY		
	Remarks:		

One-Dimensional Consolidation by ASTM D2435 - Method A





Log of Time Coefficients





Step	Applied Stress psf	Final Displacement in	Void Ratio	Strain at End %	Log T50 min	Cv in ² /s	Mv ft ² /lb	k cm/s	Ca %
1	125.	0.004593	0.890	0.459	31.433	2.60e-05	3.67e+01	1.26e-08	0.00e+00
2	250.	0.007587	0.884	0.759	0.000	0.00e+00	2.39e+01	0.00e+00	0.00e+00
3	500.	0.01474	0.870	1.47	4.209	1.91e-04	2.86e+01	7.21e-08	0.00e+00
4	1.00e+03	0.03043	0.841	3.04	3.149	2.49e-04	3.14e+01	1.03e-07	0.00e+00
5	2.00e+03	0.05442	0.795	5.44	3.250	2.32e-04	2.40e+01	7.34e-08	0.00e+00
6	4.00e+03	0.08232	0.742	8.23	2.164	3.29e-04	1.39e+01	6.07e-08	0.00e+00
7	2.00e+03	0.08476	0.737	8.48	0.000	0.00e+00	-1.22e+00	-0.00e+00	0.00e+00
8	250.	0.07805	0.750	7.80	2.407	2.88e-04	3.84e+00	1.46e-08	0.00e+00
9	500.	0.07759	0.751	7.76	0.000	0.00e+00	-1.84e+00	-0.00e+00	0.00e+00
10	1.00e+03	0.07795	0.750	7.80	0.000	0.00e+00	7.27e-01	0.00e+00	0.00e+00
11	2.00e+03	0.08079	0.745	8.08	1.056	6.59e-04	2.84e+00	2.47e-08	0.00e+00
12	4.00e+03	0.08556	0.736	8.56	1.284	5.37e-04	2.39e+00	1.69e-08	0.00e+00
13	8.00e+03	0.1148	0.680	11.5	1.795	3.70e-04	7.31e+00	3.58e-08	0.00e+00
14	1.60e+04	0.1456	0.622	14.6	3.232	1.92e-04	3.85e+00	9.77e-09	0.00e+00



	Project Name: Greenfield Site Development	Location: Louisville, KY	Project Number: 102074.00
	Boring Number: B-41	Tester: SM	Checker: AD
	Sample Number: 3ST	Test Date: 2/13/26	Depth: 3-5
	Test Number:	Preparation: Moist	Elevation:
	Description: Red CLAY		
	Remarks:		



PROJECT	Greenfield Site Development
LOCATION	Louisville, Kentucky
DATE	December 13, 2026
PROJECT #	102074.00
CLIENT	Luckett & Farley

SAMPLE	1	2	3	4
				
SAMPLE LOCATION	B6 25.9' - 26.2'	B6 29.9' - 30.2'	B12 10.3' - 10.6'	B12 16.9' - 17.2'
DATE TESTED	February 12, 2026	February 12, 2026	February 12, 2026	February 12, 2026
SAMPLE DESCRIPTION	Limestone	Limestone	Limestone	Limestone
LENGTH BEFORE CAPPING, in	3.91	4.07	4.04	4.09
CAPPED LENGTH, in	3.91	4.07	4.04	4.09
DIAMETER, in	1.83	1.84	1.83	1.83
AREA, sq. in.	2.63	2.64	2.64	2.63
WEIGHT, gr	441.80	485.34	469.01	452.67
WET DENSITY, pcf	163.4	171.9	167.3	160.1
LOAD AT FAILURE, lbs.	18,640	20,030	19,210	13,000
GROSS UNIT STRESS, psi	7,075	7,574	7,276	4,934
LENGTH/DIAMETER RATIO	2.1	2.2	2.2	2.2
UNIT STRESS CORRECTED, psi	7,080	7,570	7,280	4,930
MOISTURE CONDITION WHEN TESTED	MOIST	MOIST	MOIST	MOIST

SAMPLE	5	6	7	8
				
SAMPLE LOCATION	B27 18.4' - 18.7'	B27 26.0' - 26.3'	B42 16.6' - 16.9'	B42 20.5' - 20.8'
DATE TESTED	February 12, 2026	February 12, 2026	February 12, 2026	February 12, 2026
SAMPLE DESCRIPTION	Limestone	Limestone	Limestone	Limestone
LENGTH BEFORE CAPPING, in	4.02	3.99	4.04	4.06
CAPPED LENGTH, in	4.02	3.99	7.04	4.06
DIAMETER, in	1.83	1.83	1.83	1.84
AREA, sq. in.	2.64	2.64	2.64	2.65
WEIGHT, gr	437.26	446.33	437.26	437.26
WET DENSITY, pcf	156.8	161.4	156.4	155.1
LOAD AT FAILURE, lbs.	9,390	10,370	5,280	4,740
GROSS UNIT STRESS, psi	3,553	3,928	2,002	1,791
LENGTH/DIAMETER RATIO	2.2	2.2	3.8	2.2
UNIT STRESS CORRECTED, psi	3,550	3,930	2,000	1,790
MOISTURE CONDITION WHEN TESTED	MOIST	MOIST	MOIST	MOIST

SAMPLE	9	10		
				
SAMPLE LOCATION	B45 36.3' - 36.6'	B45 40.1' - 40.4'		
DATE TESTED	February 12, 2026	February 12, 2026		
SAMPLE DESCRIPTION	Limestone	Limestone		
LENGTH BEFORE CAPPING, in	4.09	4.09		
CAPPED LENGTH, in	4.09	4.09		
DIAMETER, in	1.83	1.83		
AREA, sq. in.	2.64	2.63		
WEIGHT, gr	460.85	476.27		
WET DENSITY, pcf	162.8	168.4		
LOAD AT FAILURE, lbs.	9,660	13,450		
GROSS UNIT STRESS, psi	3,663	5,105		
LENGTH/DIAMETER RATIO	2.2	2.2		
UNIT STRESS CORRECTED, psi	3,660	5,110		
MOISTURE CONDITION WHEN TESTED	MOIST	MOIST		

REMARKS:

LAB-47 (12)



4 & 6 Inch Double Ring Infiltrometer Test

Project Name:		Greenfield Site Development											
Project Number:		102074.00											
Test Location:		IT1		Tested By:		A. Dodson							
Surface Elev., ft:		722		G.W. Elev, ft:		Not Encountered							
Test Elev., ft:		719.7		Test Depth, ft:		2.3							
Trial #	Start / End	Date	Time	Inner Ring			Annular Space			Infiltration Rate			Remarks
				Reading, ft	Infiltrated Water, ft	Annular Space Reading, ft	Infiltrated Water, ft	Inner Infiltration, inches/hour	Annular Infiltration, inches/hour	Pipe Lengths (ft)	Pipe Length at Start Test (ft)	Penetration Depth of Rings (ft)	
1	Start Test	1/22/2026	3:30	1.35	0.00	1.35	0.00	0.00	0.00	0.0	0.0		
	End Test	1/22/2026	4:00	1.35	0.00	1.35	0.00	0.00	0.00	0.0	0.0		
2	Start Test	1/22/2026	4:00	1.35	0.00	1.35	0.00	0.00	0.00	0.0	0.0		
	End Test	1/22/2026	4:30	1.35	0.00	1.35	0.00	0.00	0.00	0.0	0.0		
3	Start Test	1/22/2026	4:30	1.35	0.00	1.35	0.00	0.00	0.00	0.0	0.0		
	End Test	1/22/2026	5:00	1.35	0.00	1.35	0.00	0.00	0.00	0.0	0.0		
4	Start Test	1/22/2026	5:00	1.35	0.00	1.35	0.00	0.00	0.00	0.0	0.0		
	End Test	1/22/2026	5:30	1.35	0.00	1.35	0.00	0.00	0.00	0.0	0.0		
5	Start Test	1/22/2026	5:30	1.35	0.00	1.35	0.00	0.00	0.00	0.0	0.0		
	End Test	1/22/2026	6:00	1.35	0.00	1.35	0.00	0.00	0.00	0.0	0.0		
6	Start Test	1/22/2026	6:00	1.35	0.00	1.35	0.00	0.00	0.00	0.0	0.0		
	End Test	1/22/2026	6:30	1.35	0.00	1.35	0.00	0.00	0.00	0.0	0.0		
7	Start Test	1/22/2026	6:30	1.35	0.00	1.35	0.00	0.00	0.00	0.0	0.0		
	End Test	1/22/2026	7:00	1.35	0.00	1.35	0.00	0.00	0.00	0.0	0.0		
8	Start Test	1/22/2026	7:00	1.35	0.00	1.35	0.00	0.00	0.00	0.0	0.0		
	End Test	1/22/2026	7:30	1.35	0.00	1.35	0.00	0.00	0.00	0.0	0.0		
9	Start Test												
	End Test												
10	Start Test												
	End Test												
11	Start Test												
	End Test												
12	Start Test												
	End Test												

PRE-SOAK

Time	2:30	3:00	3:30
Inner Ring Level	1.3	1.35	1.35
Annular Space Level	1.3	1.35	1.35



4 & 6 Inch Double Ring Infiltrometer Test

Project Name:		Greenfield Site Development									
Project Number:		102074.00									
Test Location:		IT2		A. Dodson		Tested By:		Inner Ring		Annular Space	
Surface Elev., ft:		728.5		Not Encountered		G.W. Elev, ft:		Inner Ring		Annular Space	
Test Elev., ft:		719.2		9.3		Test Depth, ft:		Inner Ring		Annular Space	
		Water level maintained by: Buckets									
Trial #	Start / End	Date	Time	Inner Ring		Annular Space		Infiltration Rate		Penetration Depth of Rings (ft)	
				Reading, ft	Infiltrated Water, ft	Reading, ft	Infiltrated Water, ft	Inner Infiltration, inches/hour	Annular Infiltration, inches/hour		Remarks
1	Start Test	1/22/2026	2:23	8.65	0.00	8.65	0.00	0.00	0.00	0.17	
	End Test	1/22/2026	2:53	8.65	0.00	8.65	0.00	0.00	0.00		
2	Start Test	1/22/2026	2:53	8.65	0.00	8.65	0.00	0.00	0.00	0.17	
	End Test	1/22/2026	3:23	8.65	0.00	8.65	0.00	0.00	0.00		
3	Start Test	1/22/2026	3:23	8.65	0.00	8.65	0.00	0.00	0.00		
	End Test	1/22/2026	3:53	8.65	0.00	8.65	0.00	0.00	0.00		
4	Start Test	1/22/2026	3:53	8.65	0.00	8.65	0.00	0.00	0.00		
	End Test	1/22/2026	4:23	8.65	0.00	8.65	0.00	0.00	0.00		
5	Start Test	1/22/2026	4:23	8.65	0.00	8.65	0.00	0.00	0.00		
	End Test	1/22/2026	4:53	8.65	0.00	8.65	0.00	0.00	0.00		
6	Start Test	1/22/2026	4:53	8.65	0.00	8.65	0.00	0.00	0.00		
	End Test	1/22/2026	5:23	8.65	0.00	8.65	0.00	0.00	0.00		
7	Start Test	1/22/2026	5:23	8.65	0.00	8.65	0.00	0.00	0.00		
	End Test	1/22/2026	5:53	8.65	0.00	8.65	0.00	0.00	0.00		
8	Start Test	1/22/2026	5:53	8.65	0.00	8.65	0.00	0.00	0.00		
	End Test	1/22/2026	6:23	8.65	0.00	8.65	0.00	0.00	0.00		
9	Start Test										
	End Test										
10	Start Test										
	End Test										
11	Start Test										
	End Test										
12	Start Test										
	End Test										

PRE-SOAK

Time	1:23	1:53	2:23			
Inner Ring Level	8.65	8.65	8.65			
Annular Space Level	8.65	8.65	8.65			

FIELD TESTING PROCEDURES

STANDARD PENETRATION TESTS

The Standard Penetration Tests (SPT) generally follow the American Standard Test Method (ASTM) D-1586 “Standard Test Method for SPT and Split-Barrel Sampling of Soils”. It is typically performed using a 2-inch O.D. split-spoon sampler, which is driven to obtain samples at selected intervals. The number of blows of a 140-pound hammer dropping 30 inches is recorded for each of three or four, 6-inch penetration intervals for an 18 or 24-inch drive at each sample location. The sum of blow counts for the second and third 6-inch penetration intervals equals the raw (uncorrected) N-value for a given sample interval (i.e. 5-4-2, N = 6). We periodically calibrate SME’s drill rig auto-hammers. The hammer efficiency determined from this calibration is used to calculate the corrected N-values (N_{60}), as reported on the logs. When sampling in rock or hard soil, where a penetration of 6 inches or less was obtained for 50 hammer blows, the actual blow count and depth of penetration in inches for that interval is recorded (i.e. 50/2”). When sampling in very loose or very soft soil, where a penetration of more than 6 inches is obtained for a single hammer blow, the actual depth of penetration for that hammer blow is recorded (i.e. 1-0-0). Where the sampling equipment advanced under its own weight, “WOH” (weight of hammer) and the corresponding penetration depth are shown on the boring logs.

INFILTRATION TESTS

In-situ infiltration tests generally follow the double-ring infiltrometer field test procedures outlined in Appendix E in the Low Impact Development (LID) Manual for Michigan (dated 2008) prepared by the Southeast Michigan Council of Governments (SEMCOG). This procedure is also referenced in the States of Indiana, Ohio, and Kentucky applicable local manuals. The double-ring infiltrometer field test set-up consists of performing a boring or test pit to the test depth, installing an outer 6-inch-diameter standpipe and an inner 4-inch-diameter standpipe, and then driving the standpipes a suitable distance, per the referenced manual, below the bottom of the test depth. Soil is pre-soaked with approximately 12 inches of water for approximately one hour. The water drop rate per the last 30 minutes of the soaking period determines the subsequent interval for infiltration readings (i.e., 10- or 30-minute intervals). After completing the soaking period, standpipes are filled with water to a height of approximately 12 inches above the test depth, and water level changes in the standpipes are measured with a water level measuring tape with markings every 0.01 feet and recorded after the time intervals. This procedure is repeated until a minimum of four consecutive height changes within 1/4-inch of one another are measured. The height drop that occurred during the final time interval or the average stabilized rate is used to calculate the infiltration rate. After completion of the double-ring infiltrometer field test, the standpipes are removed, and the test hole is backfilled.

DYNAMIC CONE PENETROMETER (DCP)

USACE TESTS

Dynamic Cone Penetrometer (DCP) testing designed by the U.S. Army Corps of Engineers (USACE) is conducted to estimate the California Bearing Ratio (CBR) of the subgrade materials and existing pavement sub-layers. The USACE DCP consists of a 5/8-inch-diameter steel rod with a steel cone attached to one end driven by a sliding dual mass hammer. The rate of penetration per blow is measured at selected penetration, or hammer drop, intervals. CBR is an index commonly used in pavement design that provides an indication of subgrade support characteristics. The Corps of Engineers developed relationships to estimate the CBR value from the results of the USACE DCP test.

SME DCP TESTS

SME Dynamic Cone Penetrometer (DCP) test consists of dropping a 10-pound slide hammer that falls 24 inches and drives a rod with a 1-1/8-inch conical tip into the subgrade. The number of hammer drops required to drive the cone penetrometer are recorded for each six-inch increment and are used to estimate the relative density of the granular soils. The DCP blow counts were used to estimate Standard Penetration Test resistances (N-values) commonly used in geotechnical evaluations, based on empirical correlations developed by SME.

PRESSUREMETER TESTING

Pressuremeter testing in the field models the static loading characteristics of the soil and the resulting analyses based on pressuremeter test results are considered to be a more accurate indicator of the ultimate foundation bearing pressure, and associated settlement, than analyses using empirical correlations based on dynamic test methods, such as the Standard Penetration Test (SPT) and/or dynamic cone penetrometer (DCP) tests. Results of the SPT and/or DCP were recorded, at the pressuremeter test locations and depths to provide additional information on the relative density of the in-place subgrade, and to correlate the pressuremeter test results with data obtained at other site locations. The pressuremeter test depths were selected to provide representative information corresponding to the bearing soils anticipated within the stress influence zone of the proposed footings at the design bearing levels.

In the pressuremeter test, a radial expandable cylindrical probe is inserted into a prepared borehole at the selected testing depth. After obtaining N-values from driving a standard 2-inch O.D. diameter split-spoon sampler, borehole preparation consisted of then driving a 3-inch O.D. split-spoon sampler (or using a roller bit with wash rotary methods) to develop the appropriately sized borehole diameter for the pressuremeter probe. The cylindrical probe was inserted into the borehole to the sampling depth and then expanded against the sides of the borehole by pressurizing fluid within the system using a hydraulic screw-jack console positioned at the ground surface.

Simultaneous measurements of pressure and volume change within the probe were observed at the pressuremeter console and recorded. The pressure was incrementally increased until the maximum probe volume was reached, or until significant creep deformation (soil failure) was observed.

MUCK PROBE

The muck probe consists of a smooth rod about 1/2-inch in diameter manually pushed into the subgrade until encountering significant resistance (determined “by feel”), presumably indicating the bottom of organic soil stratum.

VANE SHEAR TESTING

In-situ vane shear testing generally follows the American Standard Test Method (ASTM) D-2573 “Standard Test Method for Field Vane Shear Test in Cohesive Soil”. Per the ASTM, the field vane shear test consists of placing a four-bladed vane (sized based on the expected cohesive soil strength) in the undisturbed soil and rotating it from the surface at a constant rate to determine the torque required to shear a cylindrical surface with the vane. This torque, or moment, is then converted to the unit shearing resistance of the failure surface by limit equilibrium analysis. Friction of the vane rod and instrument is either minimized during readings by an open hole, casing, or accounted for and subtracted from the total torque to determine the torque applied to the vane. After initially shearing the soil to determine the peak “undisturbed” ultimate shear strength, the test can be repeated to determine the remolded “residual” ultimate shear strength. The ratio of the peak shear strength divided by the remolded shear strength equals the degree of sensitivity.

DEGREE OF SENSITIVITY

DEGREE OF SENSITIVITY	DESCRIPTION
2	Insensitive
4	Moderately Sensitive
8	Extra Sensitive

ELECTRICAL RESISTIVITY TESTING

Field or laboratory resistivity testing generally follows the American Standard Test Method (ASTM) G-57 “Standard Test Method for Measurement of Soil Resistivity Using the Four-Electrode Method”.

FIELD TESTING

Per the ASTM, the field Wenner four-electrode method requires four metal electrode probes placed with equal separation at various distances in a straight line. The probes are inserted in the surface of the soil to a depth not exceeding 5 percent of the minimum separation of the electrodes (or 12 inches maximum, whichever is less). The electrode separation is selected with consideration of the soil strata location and depth of interest. A voltage is impressed between the outer electrodes and the voltage drop between the inner electrodes is measured. The resulting resistivity measurement represents the average resistivity of a hemisphere of soil of a radius equal to the electrode separation.

LABORATORY TESTING

Soil is tamped into a soil box to resemble the compaction where the soil sample was taken until the soil is level with the top of the box. Two brass pins are inserted at the premanufactured distances into the soil sample with two endpins connected to the box. The four test leads are connected to the soil box. A voltage is impressed between the two endpins to measure the resistance, and soil resistivity is calculated based on the product-specified conversion.

CONE PENETRATION TESTING

Cone Penetration Tests (CPT) measures the soil resistance to the penetration of a standard 10 square centimeter (cm) projected area. The cone is hydraulically pushed into the soil at approximately a 2 cm per second rate. Soil resistance is recorded in kilograms per square cm at 20 cm depth intervals. Soil friction values are measured by a friction sleeve at each test interval.

LABORATORY TESTING PROCEDURES

VISUAL ENGINEERING CLASSIFICATION

Visual classification was performed on recovered samples. The appended General Notes and Unified Soil Classification System (USCS) sheets include a brief summary of the general method used visually classify the soil and assign an appropriate USCS group symbol. The estimated group symbol, according to the USCS, is shown in parentheses following the textural description of the various strata on the boring logs appended to this report. The soil descriptions developed from visual classifications are sometimes modified to reflect the results of laboratory testing.

MOISTURE CONTENT

Moisture content tests were performed by weighing samples from the field at their in-situ moisture condition. These samples were then dried at a constant temperature (approximately 110° C) overnight in an oven. After drying, the samples were weighed to determine the dry weight of the sample and the weight of the water that was expelled during drying. The moisture content of the specimen is expressed as a percent and is the weight of the water compared to the dry weight of the specimen.

HAND PENETROMETER TESTS

In the hand penetrometer test, the unconfined compressive strength of a cohesive soil sample is estimated by measuring the resistance of the sample to the penetration of a small calibrated, spring-loaded cylinder. The maximum capacity of the penetrometer is 4.5 tons per square-foot (tsf). Theoretically, the undrained shear strength of the cohesive sample is one-half the unconfined compressive strength. The undrained shear strength (based on the hand penetrometer test) presented on the boring logs is reported in units of kips per square-foot (ksf).

TORVANE SHEAR TESTS

In the Torvane test, the shear strength of a low strength, cohesive soil sample is estimated by measuring the resistance of the sample to a torque applied through vanes inserted into the sample. The undrained shear strength of the samples is measured from the maximum torque required to shear the sample and is reported in units of kips per square-foot (ksf).

LOSS-ON-IGNITION (ORGANIC CONTENT) TESTS

Loss-on-ignition (LOI) tests are conducted by first weighing the sample and then heating the sample to dry the moisture from the sample (in the same manner as determining the moisture content of the soil). The sample is then re-weighed to determine the dry weight and then heated for four hours in a muffle furnace at a high temperature (approximately 440° C). After cooling, the sample is re-weighed to calculate the amount of ash remaining, which in turn is used to determine the amount of organic matter burned from the original dry sample. The organic matter content of the specimen is expressed as a percent compared to the dry weight of the sample.

ATTERBERG LIMITS TESTS

Atterberg limits tests consist of two components. The plastic limit of a cohesive sample is determined by rolling the sample into a thread and the plastic limit is the moisture content where a 1/8-inch thread begins to crumble. The liquid limit is determined by placing a 1/2-inch-thick soil pat into the liquid limits cup and using a grooving tool to divide the soil pat in half. The cup is then tapped on the base of the liquid limits device using a crank handle. The number of drops of the cup to close the gap formed by the grooving tool 1/2 inch is recorded along with the corresponding moisture content of the sample. This procedure is repeated several times at different moisture contents and a graph of moisture content, and the corresponding number of blows is plotted. The liquid limit is defined as the moisture content at a nominal 25 drops of the cup. From this test, the plasticity index can be determined by subtracting the plastic limit from the liquid limit.

GRAIN SIZE DISTRIBUTION ANALYSIS

COARSE-GRAINED (GRANULAR) SAMPLES WITH LOW FINES CONTENT

Grain size distribution tests performed on granular samples involves oven-drying a representative sample of soil and washing out the fines (passing the No. 200 sieve) with tap water. The sample retained on the No. 200 sieve is then oven-dried, cooled and sieved on a series of stacked sieves beginning with the largest sieve on top and progressing to the smallest on the bottom. The portions of the sample retained on each sieve are then weighed and used to develop the grain size distribution curve in the report for each sample tested.

FINE-GRAINED (SILT OR CLAY) SAMPLES OR COARSE-GRAINED SAMPLES WITH HIGH FINES CONTENT

Particle size distribution tests performed on fine-grained or coarse-grained samples with a high fines content involves oven-drying a representative sample and mixing the sample with a liquid deflocculant to disperse the soil particles. The slurry is placed in a graduated cylinder and shaken to suspend the soil particles in the slurry. The graduated cylinder is then placed on a tabletop; a calibrated hydrometer is floated in the slurry to determine its density. The hydrometer measurements are made at selected time intervals as the soil in the cylinder settles and slurry density decreases. When the hydrometer measurements are completed, the slurry is poured onto a No. 200 sieve and the fines are washed out with tap water. The sample retained on the No. 200 sieve is then oven-dried, cooled and sieved on a series of stacked sieves beginning with the largest sieve on top and progressing to the smallest on the bottom. The portions of the sample retained on each sieve are then weighed and used with the hydrometer data to develop the grain size distribution curve in the report for each sample tested.

WET/DRY DENSITY TESTS

Wet/dry density tests involve extracting a representative soil sample from either a Shelby tube or sample liner, trimming the ends perpendicular to the length of the sample and measuring the length and diameter. The sample is then weighed, oven-dried and weighed again after drying. The wet density is equal to the wet weight of the sample (prior to drying) divided by the volume, while the dry density is the dry weight of the sample divided by the volume.

UNCONFINED COMPRESSIVE STRENGTH TESTS

In addition to the hand penetrometer and Torvane tests, unconfined compression tests were performed to better estimate the undrained shear strength of selected cohesive samples recovered from either Shelby tubes or liners taken in conjunction with the Standard Penetration Test. In the unconfined compression test, the unconfined compressive strength of a soil sample is determined by axially loading the soil sample at a slow, constant rate of strain. The unconfined compressive strength is the maximum compressive stress in the soil sample, up to 15 percent strain. Theoretically, the undrained shear strength of the cohesive sample is one-half the unconfined compressive strength. The undrained shear strength presented on the boring logs is reported in units of kips per square-foot (ksf).

CORROSION TESTS

The soil corrosion tests may include measuring the electrical resistivity, pH and concentrations of soluble chlorides and sulfates. Soil samples tested are generally taken from a composite of two or more selected soil samples with generally similar visual characteristics. The electrical resistivity of the selected soil samples was performed on natural-state and saturated samples using a Miller multi-combination meter with a soil box configured in a four-pin arrangement. pH tests are typically conducted using litmus test paper. The soil samples for the soluble sulfates and chlorides were prepared as a water-soil solution, typically at a water-to-soil ratio of 20:1, and tested in general accordance with local laboratory methods for measuring sulfate and chloride concentrations.

MOISTURE-DRY DENSITY RELATIONSHIPS (COMPACTION) TESTS

Moisture-dry density tests involve the preparation of a bulk soil sample by compacting the sample at a given energy into a calibrated mold with a known volume of 0.0333 cubic feet at various moisture contents. A graph of the moisture content vs. dry density is developed, which results in an inverted U-shaped curve. The maximum dry density is the peak of the curve, and the corresponding moisture content is the optimum moisture. Two methods can be performed, namely:

STANDARD PROCTOR METHOD

This method involves a standard energy of 12,400 ft-lbs. per cubic foot of soil volume to compact the sample. The sample is compacted in three layers of equal thickness using a 5.5-pound hammer dropped 12 inches using 25 blows per layer.

MODIFIED PROCTOR METHOD

This method involves a modified energy of 56,000 ft-lbs. per cubic foot of soil volume to compact the sample. The sample is compacted in five layers of equal thickness using a 10-pound hammer dropped 18 inches using 25 blows per layer.

SPECIFIC GRAVITY TESTS

This test involves the determination of the ratio of the weight of a known volume of soil particles in air to weight of the same volume of water in air. The test is performed by oven drying a soil sample and placing the sample with water into a calibrated pycnometer, boiling the soil/water mixture, filling the pycnometer with distilled water to its calibration mark, weighing the pycnometer and soil/water mixture and measuring the temperature of the mixture. The specific gravity is equal to the weight of the dry soil particles multiplied by the specific gravity of distilled water at the temperature measured for the soil/water mixture divided by the sum of the weight of the dry soil particles plus the weight of the pycnometer, soil/water mixture plus the weight of the pycnometer plus water from the calibration curve developed for the pycnometer.

DIRECT SHEAR TESTS

A bulk sample is compacted in a direct shear mold at a specified density and moisture content. Shear tests are then performed using the direct shear procedure. The direct shear test is performed at several overburden pressures or normal stresses that represent approximate potential stresses in the proposed construction. Values of both peak friction angle and residual friction angle are determined from the tests for each overburden pressure.

CONSOLIDATION TESTS

Consolidation tests are used to evaluate the magnitude and rate of consolidation of soil when it is restrained laterally and drained on the top and bottom while subjected to vertical load applied in controlled increments. The range of test loads applied is generally selected to represent the anticipated vertical stress conditions resulting from existing conditions and the proposed construction. Plots of the percent strain vs. log pressure are constructed from the data to assess consolidation characteristics, while the rate of consolidation is evaluated from plots of deformation vs. time for each vertical load increment.

PERMEABILITY TESTS

The permeability of either relatively undisturbed or compacted soils can be determined by various laboratory test equipment including a triaxial cell, permeameter mold or from a liner sample. The type of permeability equipment used and test performed will be based on the soil type being evaluated.

CLAY, SILT AND OTHER LOW PERMEABLE SOIL SAMPLES

For samples with relatively low permeability characteristics, an undisturbed or compacted soil sample is placed in a triaxial cell. Prior to performing the permeability test, the sample must be fully saturated by forcing water into the sample using a backpressure (water under pressure from an air supply) which is slightly less than the cell pressure. Once the sample is saturated, water is forced through the top of the sample with pressure from an air supply (which is slightly less than the cell pressure) and water forced out of the bottom of the sample is measured in a burette. The volume of water displaced from the sample is recorded with time and from that information, the coefficient of permeability is calculated. This method is a constant head permeability test.

SAND SAMPLES

Due to the nature of relatively clean granular soils, the use of a triaxial cell is generally not practical and the permeability of these types of soils is typically determined from either a liner sample (either recovered directly from a split-spoon in the field or a sample compacted in the liner) or a bulk sample compacted in a 6-inch diameter permeameter mold. A falling head permeability test can be performed on most granular samples by filling a standpipe with water and measuring the head drop with time. For highly permeable soils, the rate of drop in a falling head test may be too rapid to obtain reliable volume and time measurements. Thus, a constant head test will be required where a constant head of water is maintained, and the volume of water discharged from the sample is measured with time.

TRIAXIAL TESTS

Triaxial tests were conducted on samples trimmed from Shelby tubes or liners. There are several types of triaxial tests which can be performed, and each are described below:

UNCONSOLIDATED-UNDRAINED TRIAXIAL TEST METHOD

The strength and stress-strain relationships of a cylindrical soil sample are determined for a sample subjected to a selected confining fluid pressure in a triaxial chamber. No drainage of the sample is permitted during the test, and the sample is sheared in compression at a constant rate of axial deformation. The peak stress measured for the sample is recorded, up to a maximum 15 percent strain. At least three triaxial tests are performed at various confining fluid pressures to model in-situ stress conditions for loading.

CONSOLIDATED-DRAINED TRIAXIAL TEST METHOD

The strength and stress-strain relationships of a cylindrical soil sample are determined for a sample subjected to a selected confining fluid pressure in a triaxial chamber. The sample is isotropically consolidated prior to applying axial loads and sheared in compression at a slow constant rate of axial deformation while allowing the sample to drain. The peak stress measured for the sample is recorded, up to a maximum 15 percent strain. At least three triaxial tests are performed at various confining fluid pressures to model in-situ stress conditions for loading.

CONSOLIDATED-UNDRAINED TRIAXIAL TEST METHOD

The strength and stress-strain relationships of a cylindrical soil sample are determined for a sample subjected to a selected confining fluid pressure in a triaxial chamber. The sample is isotropically consolidated prior to applying axial loads and sheared undrained in compression at a constant rate of axial deformation. Pore water pressure measurements can also be measured during the shearing of the sample. The peak stress measured for the sample is recorded, up to a maximum 15 percent strain. At least three triaxial tests are performed at various confining fluid pressures to model in-situ stress conditions for loading.

DENSITY TESTS ON ROCK CORES

Density tests involve trimming the ends of an intact rock core sample perpendicular to the length of the sample and measuring the length and diameter. The sample is then weighed, and the weight is divided by the volume to calculate the density.

UNCONFINED COMPRESSIVE STRENGTH TESTS ON ROCK CORES

Unconfined compression tests were performed to estimate the compressive strength of selected rock core samples. Representative rock cores were selected and cut perpendicular to the length of the sample on both ends to a specified length with a wet saw. In the unconfined compression test, the unconfined compressive strength of a rock core sample is determined by axially loading the rock core sample at a slow, constant rate of strain. The unconfined compressive strength is the maximum compressive stress in the rock core sample, or the load applied when a predetermined amount of strain is achieved.

LIMITATIONS PERTAINING TO SUBSURFACE CONDITIONS

EXISTING FILL

It is sometimes difficult to distinguish between existing fill present at a site and natural soils based on samples and cuttings from small-diameter boreholes, especially if portions of the fill do not contain man-made materials, debris, topsoil, or organic layers, and when the fill appears similar in composition to the local natural soils. Therefore, consider the delineation of fill described on the logs, if encountered, to be approximate.

The composition of existing site fill, if encountered, may change abruptly over short distances and will vary from what is reported on the logs. The descriptions of debris within fill may not accurately indicate the quantity, composition, or size of the debris, and may not fully include the types of debris existing within the site fills. Perform test pits if existing fill is encountered to further evaluate the condition of the fill, particularly if the fill will be utilized for support of overlying structures and/or other improvements.

GROUNDWATER

Hydrostatic groundwater levels, and perched groundwater conditions, will fluctuate throughout the year, based on variations in precipitation, evaporation, run-off, and other factors. The groundwater information reported on the logs represent conditions at the time the readings were taken and may vary from the groundwater conditions encountered at other times.

SUBSURFACE PROFILE

The profile described in this report and included on the logs is a generalized description of the conditions observed. The stratification depths described in this report and shown on the logs indicate a zone of transition from one soil type to another. They are not meant to delineate exact depths of change between soil types. Soil conditions may vary between or away from the exploration locations. Refer to the logs for the soil descriptions, rock descriptions (when applicable), and results of the field and laboratory tests at the specific exploration locations.

If only borings with hollow-stem or solid-stem augers are performed, consider thickness measurements of surficial materials reported on the logs (e.g., gravel, asphalt, concrete, aggregate base) to be approximate since mixing of the surface materials with the underlying subgrade can occur while advancing the augers, and it is difficult to measure the thickness of surface materials in small-diameter boreholes. Perform additional evaluations for more accurate measurements of surface materials, such as test pits for topsoil and gravel thicknesses, coring for pavement thicknesses, and hand sampling for aggregate thickness.

RADON

The need for radon control systems for this project was not evaluated as part of our current scope of services. Contact the local building authority to verify whether radon control systems are necessary to meet the applicable local building codes or other requirements. If radon control methods are required, incorporate the recommendations regarding the below-slab leveling course materials and vapor retarders presented in this report with the specific materials and measures necessary to meet the applicable radon control methods. Contact SME for further recommendations.

APPENDIX C
IMPORTANT INFORMATION ABOUT THIS GEOTECHNICAL-ENGINEERING REPORT
GENERAL COMMENTS

Important Information about This Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, clients can benefit from a lowered exposure to the subsurface problems that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed below, contact your GBA-member geotechnical engineer. Active involvement in the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Geotechnical-Engineering Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. *Those who rely on a geotechnical-engineering report prepared for a different client can be seriously misled.* No one except authorized client representatives should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one – not even you – should apply this report for any purpose or project except the one originally contemplated.*

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read it *in its entirety*. Do not rely on an executive summary. Do not read selected elements only. *Read this report in full.*

You Need to Inform Your Geotechnical Engineer about Change

Your geotechnical engineer considered unique, project-specific factors when designing the study behind this report and developing the confirmation-dependent recommendations the report conveys. A few typical factors include:

- the client's goals, objectives, budget, schedule, and risk-management preferences;
- the general nature of the structure involved, its size, configuration, and performance criteria;
- the structure's location and orientation on the site; and
- other planned or existing site improvements, such as retaining walls, access roads, parking lots, and underground utilities.

Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.*

This Report May Not Be Reliable

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, that it could be unwise to rely on a geotechnical-engineering report whose reliability may have been affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If your geotechnical engineer has not indicated an "apply-by" date on the report, ask what it should be, and, in general, if you are the least bit uncertain about the continued reliability of this report, contact your geotechnical engineer before applying it. A minor amount of additional testing or analysis – if any is required at all – could prevent major problems.*

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface through various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing were performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgment to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team from project start to project finish, so the individual can provide informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, *they are not final*, because the geotechnical engineer who developed them relied heavily on judgment and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* revealed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a full-time member of the design team, to:

- confer with other design-team members,
- help develop specifications,
- review pertinent elements of other design professionals' plans and specifications, and
- be on hand quickly whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction observation.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for informational purposes only*. To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report, but they may rely on the factual data relative to the specific times, locations, and depths/elevations referenced. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may

perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely*. Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures*. If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. As a general rule, *do not rely on an environmental report prepared for a different client, site, or project, or that is more than six months old*.

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, none of the engineer's services were designed, conducted, or intended to prevent uncontrolled migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, *proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration*. Confront the risk of moisture infiltration by including building-envelope or mold specialists on the design team. *Geotechnical engineers are not building-envelope or mold specialists*.



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GENERAL COMMENTS

BASIS OF GEOTECHNICAL REPORT

This report has been prepared in accordance with generally accepted geotechnical engineering practices to assist in the design and/or evaluation of this project. If the project plans, design criteria, and/or other project information referenced in this report and utilized by SME to prepare our recommendations are changed, the conclusions and recommendations contained in this report are not considered valid unless the changes are reviewed, and the conclusions and recommendations of this report are modified or approved in writing.

The discussions and recommendations contained in this report are based on the available project information, described in this report, and the geotechnical data obtained from the field exploration at the locations indicated in the report. Variations in soil and groundwater conditions commonly occur between or away from sampling locations. The nature and extent of the variations may not become evident until the time of construction. If significant variations are observed during construction, SME must be contacted to reevaluate the recommendations of this report.

In the process of obtaining and testing samples and preparing this report, procedures are followed that represent reasonable and accepted practice in the field of geotechnical engineering. Specifically, field logs are prepared during the field exploration that describe field occurrences, sampling locations, and other information. Samples obtained in the field are frequently subjected to additional testing and reclassification in the laboratory and differences may exist between the field logs and the report logs.

The engineer preparing the report reviews the field logs, laboratory classifications, and test data and then prepares the report logs. Our recommendations are based on the contents of the report logs and the information contained therein.

REVIEW OF DESIGN DETAILS, PLANS, AND SPECIFICATIONS

Retain SME to review the design details, project plans, and specifications to verify those documents are consistent with the recommendations contained in this report.

REVIEW OF REPORT INFORMATION WITH PROJECT TEAM

Implementation of our recommendations may affect the design, construction, and performance of the proposed improvements, along with the potential inherent risks involved with the proposed construction. The client and key members of the design team, including SME, should discuss the issues covered in this report so the issues are understood and applied in a manner consistent with the owner's budget, tolerance of risk, and expectations for performance and maintenance.

FIELD VERIFICATION OF GEOTECHNICAL CONDITIONS

SME needs to be retained to continue our services through construction so we may observe and evaluate the actual subsurface conditions relative to the recommendations made in this report, and so we can verify the recommendations of this report are properly implemented during construction. This may avoid misinterpretation of our recommendations by other parties and will allow us to review and modify our recommendations if variations in the site subsurface conditions are encountered.

PROJECT INFORMATION FOR CONTRACTOR

This report and any future addenda or other reports regarding this site needs to be made available to prospective contractors prior to submitting their proposals for their information only and to supply them with facts relative to the subsurface evaluation and laboratory test results. If the selected contractor encounters subsurface conditions during construction, which differ from those presented in this report, the contractor needs to promptly describe the nature and extent of the differing conditions in writing and SME needs to be notified so we can verify those conditions. The construction contract needs to include provisions for dealing with differing conditions, and contingency funds for potential problems during earthwork and foundation construction. We would be pleased to assist with the development of contract provisions based on our experience.

The contractor needs to be prepared to handle environmental conditions encountered at this site, which may affect the excavation, removal, or disposal of soil; dewatering of excavations; and health and safety of workers. Any Environmental Assessment reports prepared for this site need to be made available for review by bidders and the successful contractor.

THIRD PARTY RELIANCE/REUSE OF THIS REPORT

This report has been prepared solely for the use of our Client for the project specifically described in this report. This report cannot be relied upon by other parties not involved in the project, unless specifically allowed by SME in writing. SME also is not responsible for the interpretation by other parties of the geotechnical data and the recommendations provided herein.



*Passionate People Building
and Revitalizing our World*



JUSTIFICATION STATEMENT

Ford Motor Company

**3011 N. Winchester Acres Road, 2719 Chamberlain Lane, 2721 Chamberlain Lane, and
3306 Collins Lane, 3308 Collins Lane**

Case No. 26-ZONEPA-0032

INTRODUCTION

Ford Motor Company (the "Applicant") proposes to re-zone the properties located at 3009 N. Winchester Acres Road, 3011 N. Winchester Acres Road, 2719 Chamberlain Lane, 2721 Chamberlain Lane, and 3308 Collins Lane (collectively, the "Subject Property") to allow for the expansion of the Ford Kentucky Truck Plant. The Subject Property will be accessed internally from the existing Ford Kentucky Truck Plant at Gate 10 on Chamberlain Lane. The Applicant seeks a change in zoning from R-4 Single-family, O-R Office Residential, and PEC-Planned Employment Center, to M-2 Industrial to allow for the construction of two industrial buildings in an area adjacent to existing commercial and industrial uses. For the reasons set out below, the proposed rezoning complies with the applicable Plan Elements of the Plan 2040 Comprehensive Plan.

COMMUNITY FORM

The proposal complies with the intent and applicable policies of the Community Form Plan Element. The Plan 2040 Comprehensive Plan characterizes the Suburban Workplace Form District form by "predominately industrial and office uses where the buildings are set back from the street in a landscaped setting. Suburban Workplaces often contain a single large-scale use or a cluster of uses within a master planned development." Here, the proposal is consistent with the Suburban Workplace Form District, as the proposed development is an expansion of the existing Ford Kentucky Truck Plant and includes the development of two industrial buildings to serve the existing operation. The proposed development is located along Chamberlain Lane near I-265.

The proposal is compatible with the scale, site design, and character of surrounding properties. The Subject Property is located near similarly zoned properties, including CM, C-1, C-2, PEC, OR, OR-1, and OR-3, reflecting a mix of employment, industrial, commercial, and office uses consistent with the proposed development. In addition, the property is adjacent to an existing manufacturing facility and other established industrial and commercial uses. The proposed development will provide screening and landscaping along Collins Lane and Chamberlain Lane. Overall, the proposal seeks to develop the property in a manner consistent with similar industrial and commercial uses along Chamberlain Lane and Collins Lane.

MOBILITY

The proposed development complies with the intent and applicable policies of the Mobility Plan Element. The proposed development fronts Chamberlain Lane, a primary collector that provides access to LaGrange Road and Westport Road (both minor arterial roads) and from those two roads to I-265. The proposed development plan also includes public sidewalks along the Chamberlain Lane and Collins Lane frontage of the subject property, improving pedestrian mobility for those in the area.

COMMUNITY FACILITIES

The proposed development complies with the intent and applicable policies of the Community Facilities Plan Element. The subject properties are adequately served by all utilities, including water and sewer. The Applicant will work with the Metropolitan Sewer District to ensure that sewer and stormwater connections are handled in a way that will not adversely affect adjacent properties.

ECONOMIC DEVELOPMENT

The proposed development complies with the intent and applicable policies of the Economic Development Plan Element. The proposed development will allow the improvement of primarily vacant land to support the expansion of the Ford Kentucky Truck Plant, reinforcing the area's role as a major employment and manufacturing center. This approach is consistent with Plan 2040 policies that encourage industrial development "in [an] industrial subdivision...adjacent to an existing industry to take advantage of special infrastructure needs." The Subject Property's location near I-265 and other major transportation corridors further promotes the efficient movement of employees, materials, goods, and services, consistent with the Economic Development Plan Element's goals.

LIVABILITY

The proposed development complies with the intent and applicable policies of the Livability Plan Element. The proposed use of the property develops primarily vacant land to support the expansion of the Ford Kentucky Truck Plant. The proposed development is designed at a scale and intensity that is consistent with uses in the area. The development will incorporate appropriate landscape design and screening measures to further reduce any potential impacts on surrounding properties.

Appendix A

Project Location Map



LEGEND

(X) - Study Intersection

■ - Project Location Area



8440 Allison Pointe Boulevard, Suite 200
 Indianapolis, IN 46250
 Phone 317-895-2585
 www.ucindy.com

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: KMW	DRAWN: AEA	
CHECKED: TF	CHECKED: TF	

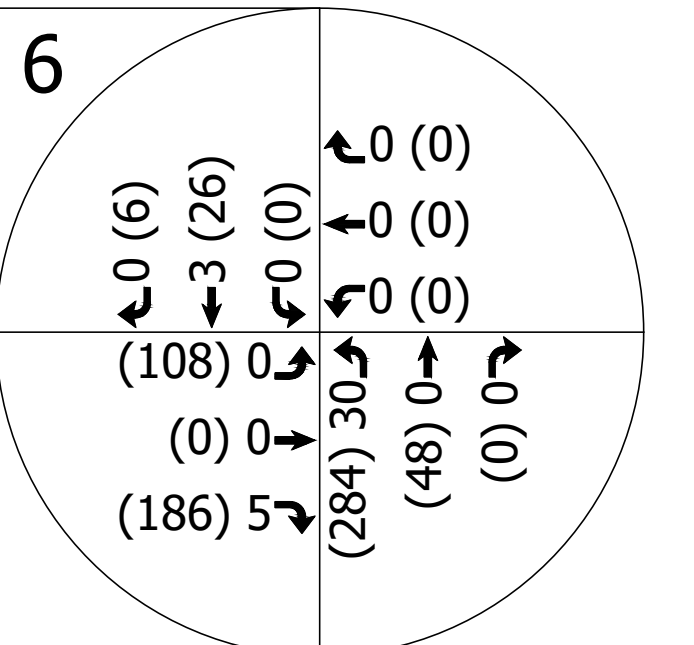
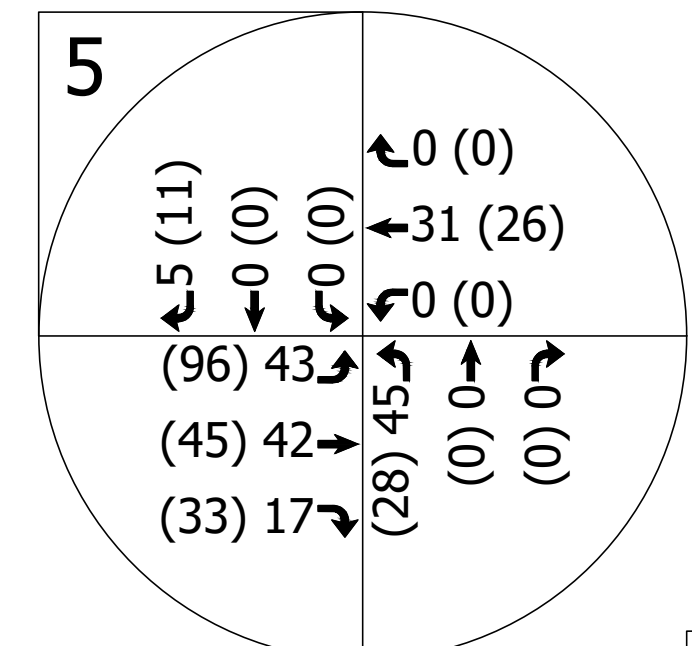
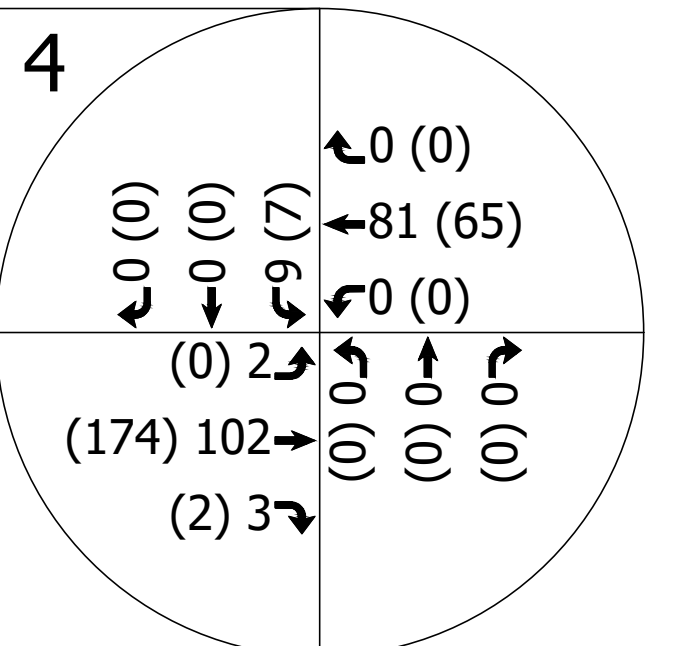
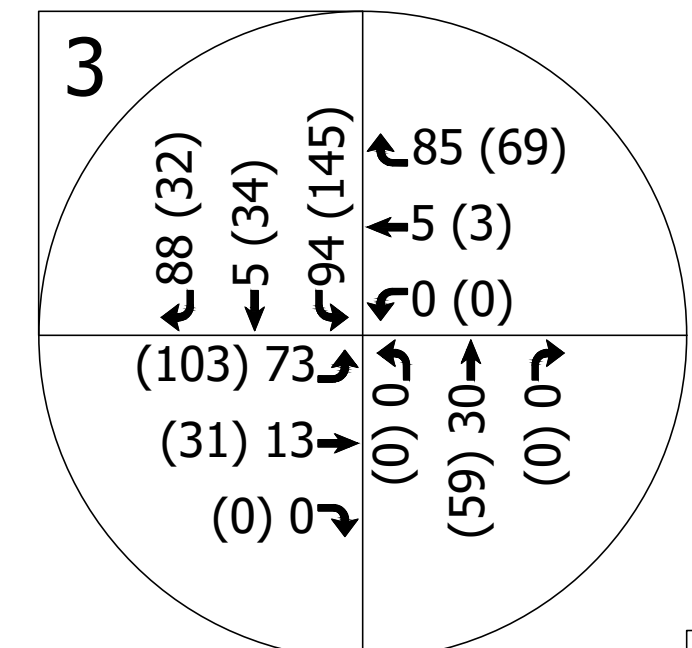
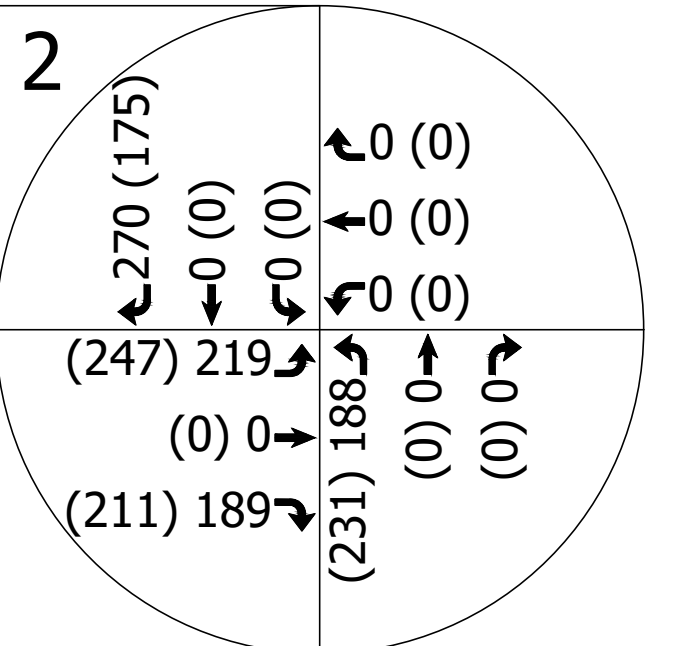
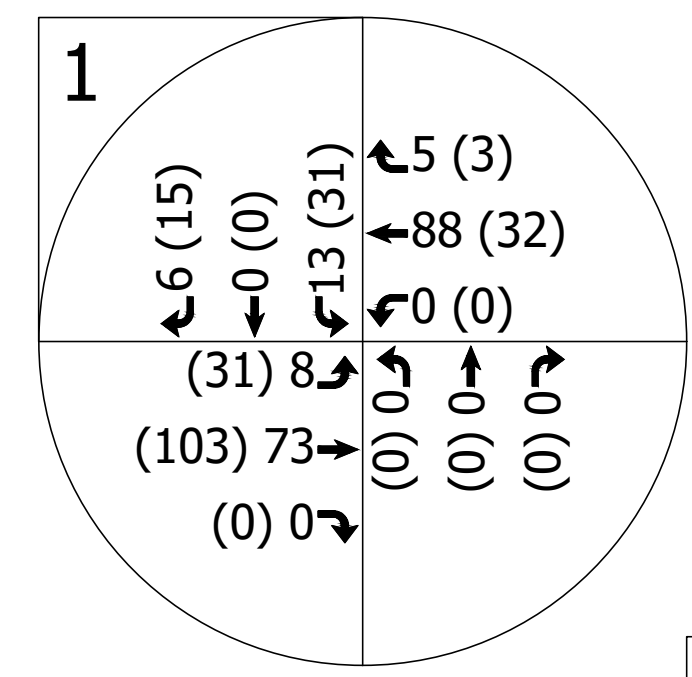
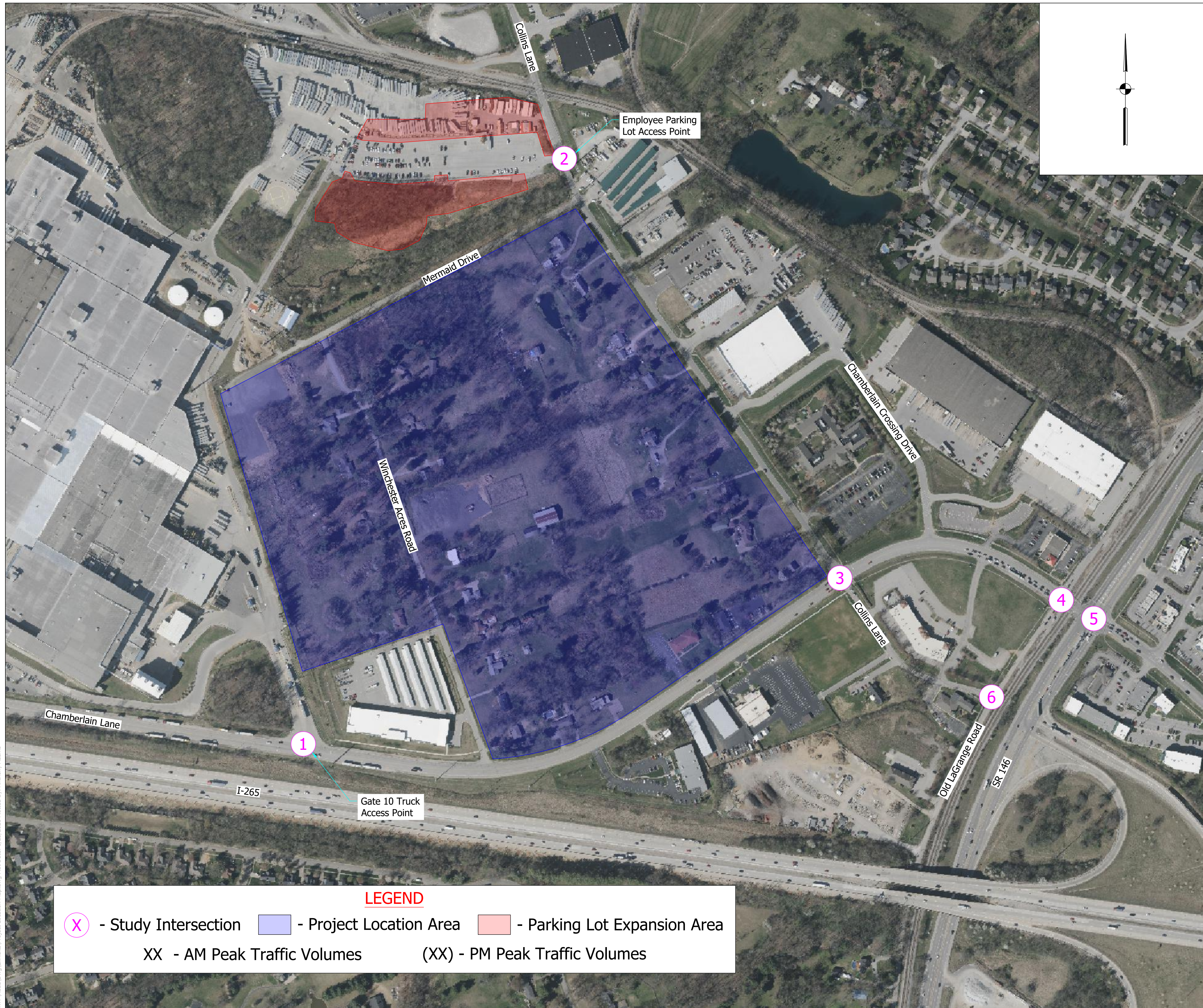
FORD MOTOR COMPANY
 KENTUCKY TRUCK PLANT

TRAFFIC IMPACT STUDY
 PROJECT LOCATION MAP

HORIZONTAL SCALE	BRIDGE FILE
1" = 200'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	1 of 6
CONTRACT	PROJECT
N/A	26-412

Appendix B

Trip Assignment and Distribution



LEGEND

(X) - Study Intersection [Blue Box] - Project Location Area [Red Box] - Parking Lot Expansion Area

XX - AM Peak Traffic Volumes (XX) - PM Peak Traffic Volumes



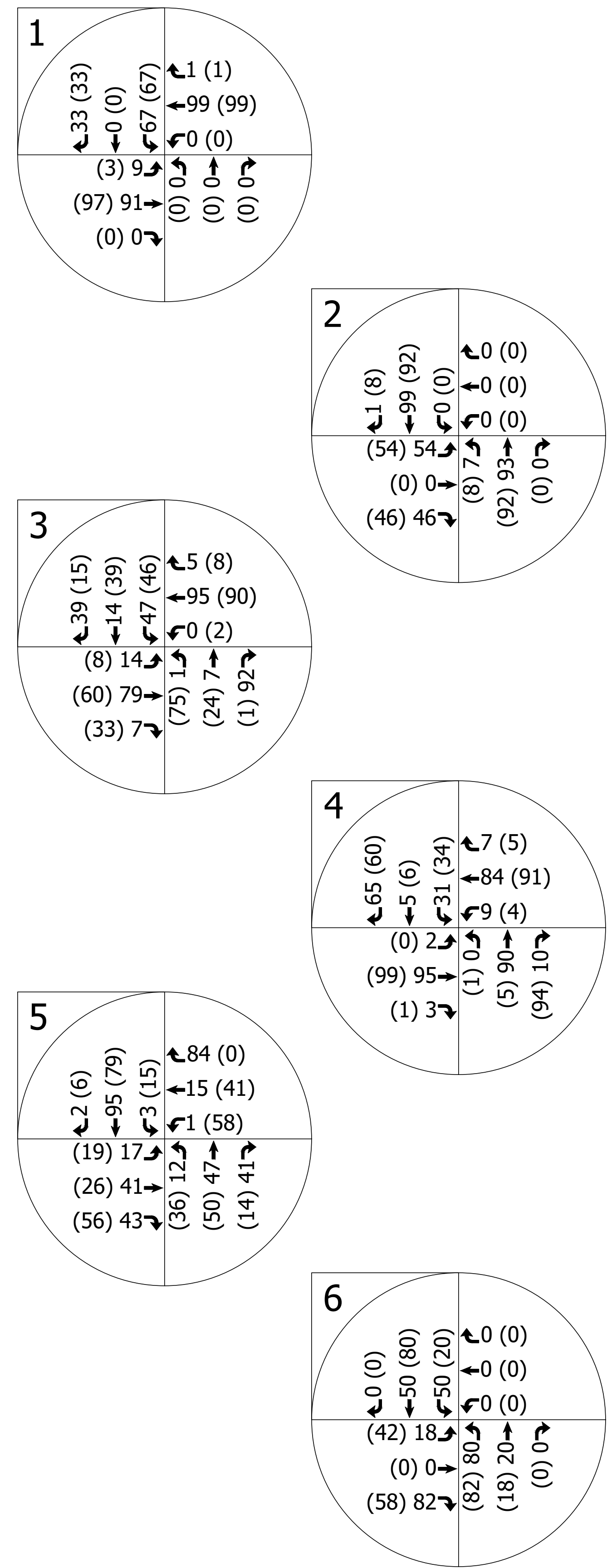
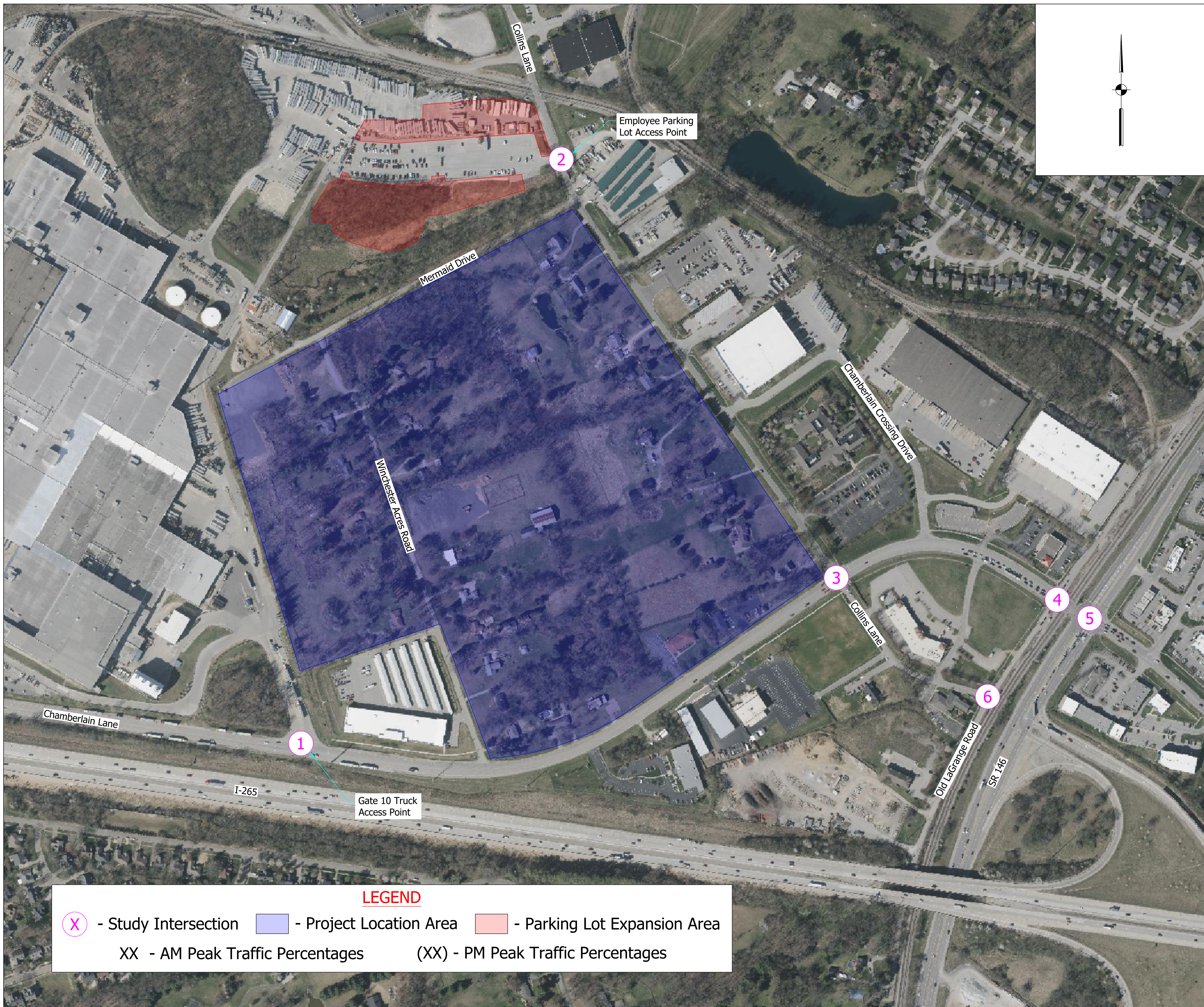
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RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: KMW	DRAWN: AEA	
CHECKED: TF	CHECKED: TF	

FORD MOTOR COMPANY
 KENTUCKY TRUCK PLANT

TRAFFIC VOLUMES
 AM/PM TRIP GENERATION

HORIZONTAL SCALE	BRIDGE FILE
1" = 200'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	7 of 8
CONTRACT	PROJECT
N/A	26-412



LEGEND

(X) - Study Intersection [Blue Box] - Project Location Area [Red Box] - Parking Lot Expansion Area

XX - AM Peak Traffic Percentages (XX) - PM Peak Traffic Percentages



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RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: KMW	DRAWN: AEA	
CHECKED: TF	CHECKED: TF	

FORD MOTOR COMPANY
 KENTUCKY TRUCK PLANT

TRAFFIC VOLUMES
 AM/PM PEAK TRAFFIC PERCENTAGES

HORIZONTAL SCALE	BRIDGE FILE
1" = 200'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	8 of 8
CONTRACT	PROJECT
N/A	26-412

Appendix C

Traffic Data

Existing Volume Counts

Gate 10 & Chamberlain Lane

Ford Truck Plant Expansion - TMC

Wed Apr 29, 2026

Full Length (1 PM-1 PM (+1))

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1399353, Location: 38.287983, -85.523347

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US

Leg Direction	Gate 10 Entrance Southbound				Chamberlain Lane Westbound				Chamberlain Lane Eastbound				Int
	R	L	U	App	R	T	U	App	T	L	U	App	
2026-04-29 1:00PM	28	22	0	50	20	183	0	203	182	26	0	208	461
2:00PM	23	26	0	49	25	164	0	189	246	23	0	269	507
3:00PM	18	24	0	42	7	188	0	195	361	14	0	375	612
4:00PM	7	10	0	17	8	342	0	350	526	16	0	542	909
5:00PM	21	5	0	26	5	624	0	629	641	33	0	674	1329
6:00PM	22	9	1	32	20	213	0	233	259	20	0	279	544
7:00PM	29	12	0	41	13	134	0	147	142	31	0	173	361
8:00PM	29	10	0	39	11	121	0	132	147	22	0	169	340
9:00PM	28	9	0	37	11	110	0	121	121	37	0	158	316
10:00PM	37	10	0	47	14	52	0	66	65	23	0	88	201
11:00PM	23	11	0	34	14	96	0	110	117	19	0	136	280
2026-04-30 12:00AM	21	5	0	26	7	31	0	38	26	23	0	49	113
1:00AM	28	5	0	33	15	20	0	35	14	17	0	31	99
2:00AM	21	6	0	27	5	47	0	52	66	22	0	88	167
3:00AM	23	10	0	33	12	22	0	34	70	8	0	78	145
4:00AM	11	7	0	18	7	175	0	182	316	10	0	326	526
5:00AM	10	5	0	15	12	816	0	828	211	21	0	232	1075
6:00AM	22	13	0	35	26	195	0	221	160	23	0	183	439
7:00AM	24	20	0	44	22	156	0	178	126	26	1	153	375
8:00AM	37	20	0	57	23	152	0	175	187	30	0	217	449
9:00AM	20	21	0	41	27	178	0	205	180	20	0	200	446
10:00AM	27	25	0	52	26	138	0	164	154	31	0	185	401
11:00AM	27	16	0	43	20	168	0	188	179	35	0	214	445
12:00PM	31	24	0	55	20	220	0	240	220	25	0	245	540
Total	567	325	1	893	370	4545	0	4915	4716	555	1	5272	11080
% Approach	63.5%	36.4%	0.1%	-	7.5%	92.5%	0%	-	89.5%	10.5%	0%	-	-
% Total	5.1%	2.9%	0%	8.1%	3.3%	41.0%	0%	44.4%	42.6%	5.0%	0%	47.6%	-
Motorcycles	0	0	0	0	0	12	0	12	5	0	0	5	17
% Motorcycles	0%	0%	0%	0%	0%	0.3%	0%	0.2%	0.1%	0%	0%	0.1%	0.2%
Lights	38	21	0	59	26	4389	0	4415	4579	37	1	4617	9091
% Lights	6.7%	6.5%	0%	6.6%	7.0%	96.6%	0%	89.8%	97.1%	6.7%	100%	87.6%	82.0%
Single-Unit Trucks	23	33	0	56	43	69	0	112	70	32	0	102	270
% Single-Unit Trucks	4.1%	10.2%	0%	6.3%	11.6%	1.5%	0%	2.3%	1.5%	5.8%	0%	1.9%	2.4%
Articulated Trucks	506	271	1	778	301	71	0	372	59	486	0	545	1695
% Articulated Trucks	89.2%	83.4%	100%	87.1%	81.4%	1.6%	0%	7.6%	1.3%	87.6%	0%	10.3%	15.3%
Buses	0	0	0	0	0	4	0	4	3	0	0	3	7
% Buses	0%	0%	0%	0%	0%	0.1%	0%	0.1%	0.1%	0%	0%	0.1%	0.1%

* L: Left, R: Right, T: Thru, U: U-Turn

Ford Truck Plant Expansion - TMC

Wed Apr 29, 2026

Full Length (1 PM-1 PM (+1))

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1399353, Location: 38.287983, -85.523347

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US

[N] Gate 10 Entrance

Total: 1819

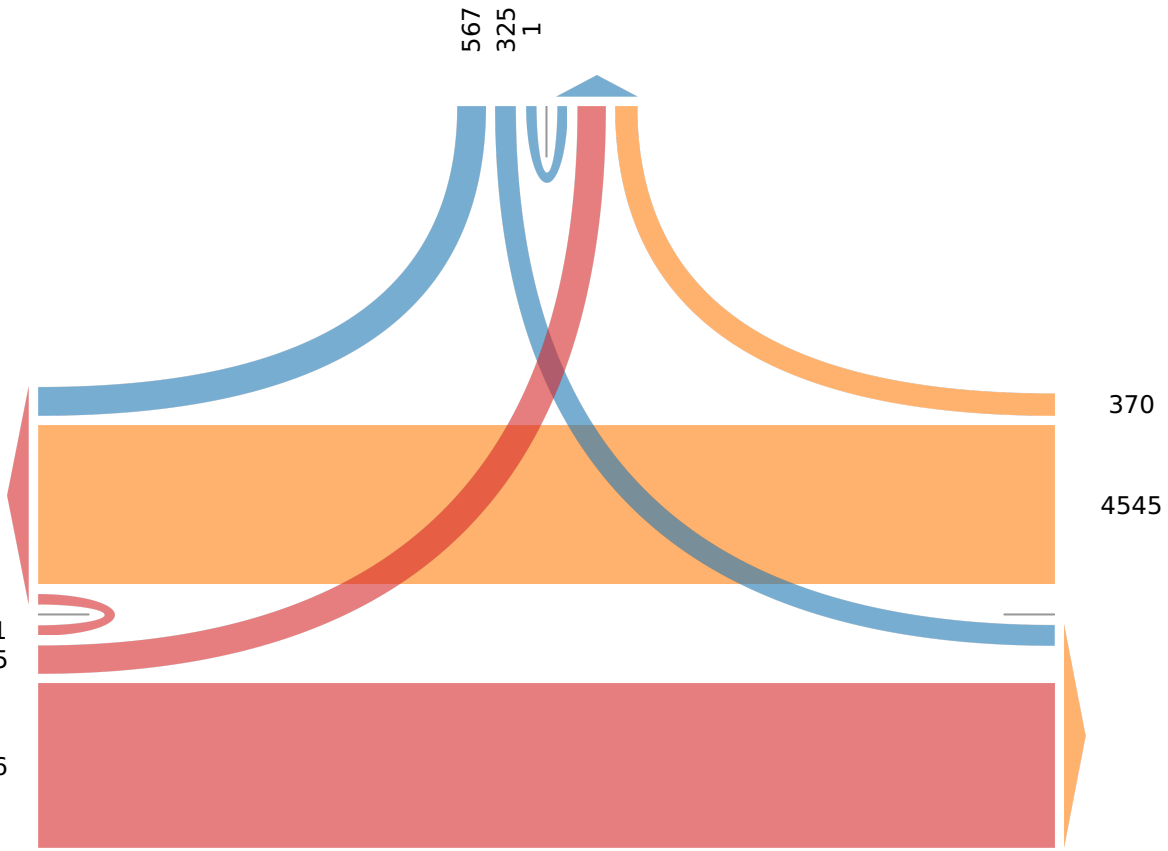
In: 893 Out: 926

567
325
1

[W] Chamberlain Lane

Total: 10385
In: 5272 Out: 5113

1
555
4716



Out: 5041 In: 4915
Total: 9956
[E] Chamberlain Lane

Ford Truck Plant Expansion - TMC

Wed Apr 29, 2026

PM Peak (Apr 29 2026 4:45PM - 5:45 PM) - Overall Peak Hour

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1399353, Location: 38.287983, -85.523347

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US

Leg Direction	Gate 10 Entrance Southbound				Chamberlain Lane Westbound				Chamberlain Lane Eastbound				Int
	R	L	U	App	R	T	U	App	T	L	U	App	
2026-04-29 4:45PM	3	5	0	8	0	101	0	101	182	4	0	186	295
5:00PM	4	1	0	5	0	159	0	159	149	6	0	155	319
5:15PM	6	2	0	8	0	116	0	116	305	6	0	311	435
5:30PM	7	2	0	9	3	214	0	217	109	11	0	120	346
Total	20	10	0	30	3	590	0	593	745	27	0	772	1395
% Approach	66.7%	33.3%	0%	-	0.5%	99.5%	0%	-	96.5%	3.5%	0%	-	-
% Total	1.4%	0.7%	0%	2.2%	0.2%	42.3%	0%	42.5%	53.4%	1.9%	0%	55.3%	-
PHF	0.714	0.500	-	0.833	0.250	0.689	-	0.683	0.611	0.614	-	0.621	0.802
Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0
% Motorcycles	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Lights	4	1	0	5	0	585	0	585	737	3	0	740	1330
% Lights	20.0%	10.0%	0%	16.7%	0%	99.2%	0%	98.7%	98.9%	11.1%	0%	95.9%	95.3%
Single-Unit Trucks	1	2	0	3	2	2	0	4	8	1	0	9	16
% Single-Unit Trucks	5.0%	20.0%	0%	10.0%	66.7%	0.3%	0%	0.7%	1.1%	3.7%	0%	1.2%	1.1%
Articulated Trucks	15	7	0	22	1	3	0	4	0	23	0	23	49
% Articulated Trucks	75.0%	70.0%	0%	73.3%	33.3%	0.5%	0%	0.7%	0%	85.2%	0%	3.0%	3.5%
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

*L: Left, R: Right, T: Thru, U: U-Turn

Ford Truck Plant Expansion - TMC

Wed Apr 29, 2026

PM Peak (Apr 29 2026 4:45PM - 5:45 PM) - Overall Peak Hour

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1399353, Location: 38.287983, -85.523347

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US

[N] Gate 10 Entrance

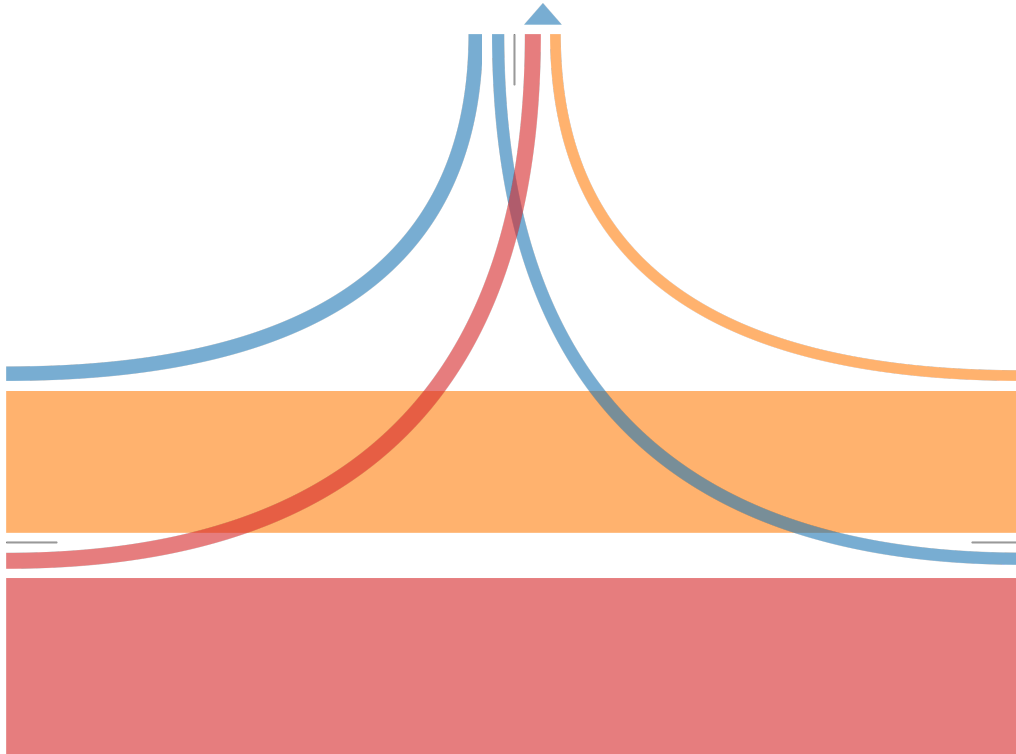
Total: 60

In: 30 Out: 30

20
10

[W] Chamberlain Lane
Total: 1382
In: 772 Out: 610

27
745



3
590
Out: 755 In: 593
Total: 1348
[E] Chamberlain Lane

Ford Truck Plant Expansion - TMC

Thu Apr 30, 2026

AM Peak (Apr 30 2026 5AM - 6 AM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1399353, Location: 38.287983, -85.523347

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US

Leg Direction	Gate 10 Entrance Southbound				Chamberlain Lane Westbound				Chamberlain Lane Eastbound				
Time	R	L	U	App	R	T	U	App	T	L	U	App	Int
2026-04-30 5:00AM	3	2	0	5	2	101	0	103	55	2	0	57	165
5:15AM	5	2	0	7	2	191	0	193	80	3	0	83	283
5:30AM	1	0	0	1	2	307	0	309	41	9	0	50	360
5:45AM	1	1	0	2	6	217	0	223	35	7	0	42	267
Total	10	5	0	15	12	816	0	828	211	21	0	232	1075
% Approach	66.7%	33.3%	0%	-	1.4%	98.6%	0%	-	90.9%	9.1%	0%	-	-
% Total	0.9%	0.5%	0%	1.4%	1.1%	75.9%	0%	77.0%	19.6%	2.0%	0%	21.6%	-
PHF	0.500	0.625	-	0.536	0.500	0.664	-	0.670	0.659	0.583	-	0.699	0.747
Motorcycles	0	0	0	0	0	2	0	2	0	0	0	0	2
% Motorcycles	0%	0%	0%	0%	0%	0.2%	0%	0.2%	0%	0%	0%	0%	0.2%
Lights	1	1	0	2	3	808	0	811	209	0	0	209	1022
% Lights	10.0%	20.0%	0%	13.3%	25.0%	99.0%	0%	97.9%	99.1%	0%	0%	90.1%	95.1%
Single-Unit Trucks	2	1	0	3	3	2	0	5	0	2	0	2	10
% Single-Unit Trucks	20.0%	20.0%	0%	20.0%	25.0%	0.2%	0%	0.6%	0%	9.5%	0%	0.9%	0.9%
Articulated Trucks	7	3	0	10	6	4	0	10	2	19	0	21	41
% Articulated Trucks	70.0%	60.0%	0%	66.7%	50.0%	0.5%	0%	1.2%	0.9%	90.5%	0%	9.1%	3.8%
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

*L: Left, R: Right, T: Thru, U: U-Turn

Ford Truck Plant Expansion - TMC

Thu Apr 30, 2026

AM Peak (Apr 30 2026 5AM - 6 AM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1399353, Location: 38.287983, -85.523347

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US

[N] Gate 10 Entrance

Total: 48

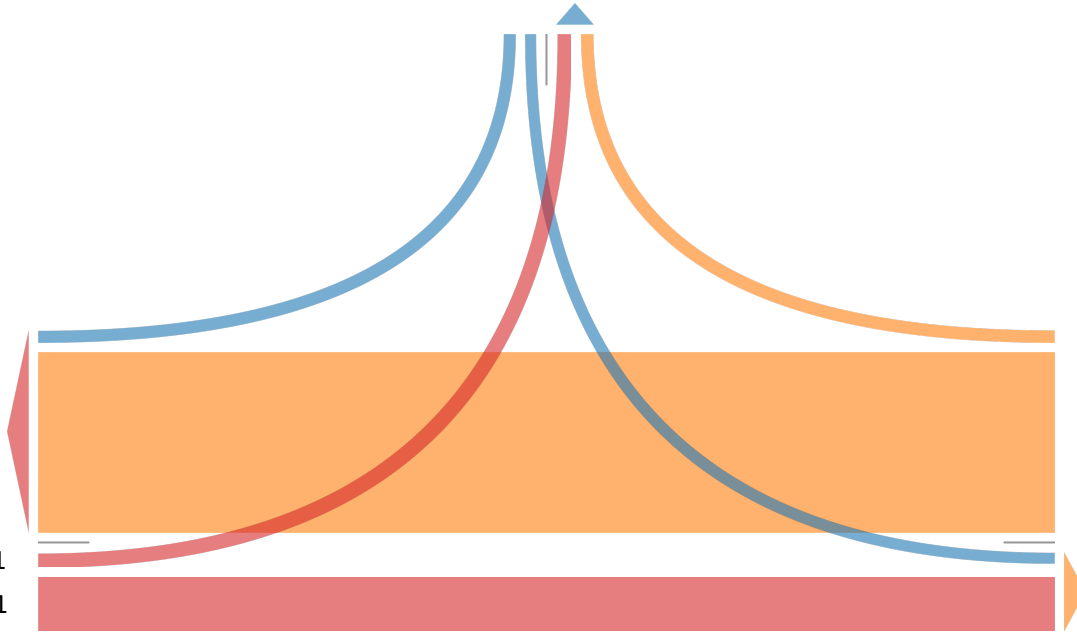
In: 15 Out: 33

10
15

[W] Chamberlain Lane

Total: 1058
In: 232 Out: 826

21
211



12
816

Out: 216 In: 828
Total: 1044
[E] Chamberlain Lane

Ford Truck Plant Expansion - TMC

Thu Apr 30, 2026

Midday Peak (Apr 30 2026 11:45AM - 12:45 PM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1399353, Location: 38.287983, -85.523347

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US

Leg Direction	Gate 10 Entrance Southbound				Chamberlain Lane Westbound				Chamberlain Lane Eastbound				Int
	R	L	U	App	R	T	U	App	T	L	U	App	
Time													
2026-04-30 11:45AM	7	4	0	11	6	45	0	51	53	10	0	63	125
12:00PM	7	6	0	13	8	57	0	65	63	9	0	72	150
12:15PM	8	7	0	15	4	76	0	80	54	5	0	59	154
12:30PM	9	6	0	15	3	39	0	42	55	7	0	62	119
Total	31	23	0	54	21	217	0	238	225	31	0	256	548
% Approach	57.4%	42.6%	0%	-	8.8%	91.2%	0%	-	87.9%	12.1%	0%	-	-
% Total	5.7%	4.2%	0%	9.9%	3.8%	39.6%	0%	43.4%	41.1%	5.7%	0%	46.7%	-
PHF	0.861	0.821	-	0.900	0.656	0.714	-	0.744	0.893	0.775	-	0.889	0.890
Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0
% Motorcycles	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Lights	2	3	0	5	1	211	0	212	212	2	0	214	431
% Lights	6.5%	13.0%	0%	9.3%	4.8%	97.2%	0%	89.1%	94.2%	6.5%	0%	83.6%	78.6%
Single-Unit Trucks	1	1	0	2	1	2	0	3	7	3	0	10	15
% Single-Unit Trucks	3.2%	4.3%	0%	3.7%	4.8%	0.9%	0%	1.3%	3.1%	9.7%	0%	3.9%	2.7%
Articulated Trucks	28	19	0	47	19	4	0	23	6	26	0	32	102
% Articulated Trucks	90.3%	82.6%	0%	87.0%	90.5%	1.8%	0%	9.7%	2.7%	83.9%	0%	12.5%	18.6%
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

*L: Left, R: Right, T: Thru, U: U-Turn

Ford Truck Plant Expansion - TMC

Thu Apr 30, 2026

Midday Peak (Apr 30 2026 11:45AM - 12:45 PM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1399353, Location: 38.287983, -85.523347

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US

[N] Gate 10 Entrance

Total: 106
In: 54 Out: 52

31 23



Existing Volume Counts

Collins Lane & Ford Employee Parking Lot

Ford Truck Plant Expansion - TMC

Wed Apr 29, 2026

Full Length (1 PM-1 PM (+1))

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1399364, Location: 38.294555, -85.519954

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US

Leg Direction	Collins Lane Southbound				Collins Lane Northbound				Ford Employee Lot Entrance Eastbound				
Time	R	T	U	App	T	L	U	App	R	L	U	App	Int
2026-04-29 1:00PM	0	55	0	55	70	5	1	76	6	1	0	7	138
2:00PM	0	89	0	89	70	1	0	71	10	2	0	12	172
3:00PM	0	124	0	124	50	7	0	57	16	5	0	21	202
4:00PM	2	81	0	83	45	24	0	69	26	15	0	41	193
5:00PM	8	89	0	97	88	47	0	135	16	19	0	35	267
6:00PM	0	44	0	44	32	22	0	54	9	2	0	11	109
7:00PM	0	29	0	29	18	3	4	25	7	0	0	7	61
8:00PM	0	27	0	27	34	0	0	34	1	0	0	1	62
9:00PM	0	24	0	24	14	2	0	16	2	0	0	2	42
10:00PM	0	4	0	4	13	4	1	18	4	0	0	4	26
11:00PM	0	33	0	33	15	2	0	17	4	1	0	5	55
2026-04-30 12:00AM	0	10	0	10	11	3	0	14	2	1	0	3	27
1:00AM	0	14	0	14	6	3	0	9	2	1	0	3	26
2:00AM	0	8	0	8	3	2	0	5	9	2	0	11	24
3:00AM	0	11	0	11	4	3	0	7	15	3	0	18	36
4:00AM	0	10	0	10	9	26	0	35	17	10	0	27	72
5:00AM	9	27	0	36	19	56	0	75	13	9	0	22	133
6:00AM	0	34	0	34	55	23	0	78	15	11	0	26	138
7:00AM	0	74	0	74	61	4	0	65	4	1	0	5	144
8:00AM	0	70	0	70	58	1	0	59	1	0	0	1	130
9:00AM	1	64	0	65	51	4	0	55	3	0	0	3	123
10:00AM	2	76	0	78	60	1	0	61	4	1	0	5	144
11:00AM	0	78	0	78	69	3	0	72	3	4	0	7	157
12:00PM	2	77	0	79	82	6	0	88	5	2	0	7	174
Total	24	1152	0	1176	937	252	6	1195	194	90	0	284	2655
% Approach	2.0%	98.0%	0%	-	78.4%	21.1%	0.5%	-	68.3%	31.7%	0%	-	-
% Total	0.9%	43.4%	0%	44.3%	35.3%	9.5%	0.2%	45.0%	7.3%	3.4%	0%	10.7%	-
Motorcycles	0	1	0	1	3	0	0	3	0	0	0	0	4
% Motorcycles	0%	0.1%	0%	0.1%	0.3%	0%	0%	0.3%	0%	0%	0%	0%	0.2%
Lights	24	884	0	908	744	245	6	995	186	90	0	276	2179
% Lights	100%	76.7%	0%	77.2%	79.4%	97.2%	100%	83.3%	95.9%	100%	0%	97.2%	82.1%
Single-Unit Trucks	0	88	0	88	63	2	0	65	3	0	0	3	156
% Single-Unit Trucks	0%	7.6%	0%	7.5%	6.7%	0.8%	0%	5.4%	1.5%	0%	0%	1.1%	5.9%
Articulated Trucks	0	175	0	175	125	5	0	130	5	0	0	5	310
% Articulated Trucks	0%	15.2%	0%	14.9%	13.3%	2.0%	0%	10.9%	2.6%	0%	0%	1.8%	11.7%
Buses	0	4	0	4	2	0	0	2	0	0	0	0	6
% Buses	0%	0.3%	0%	0.3%	0.2%	0%	0%	0.2%	0%	0%	0%	0%	0.2%

* L: Left, R: Right, T: Thru, U: U-Turn

Ford Truck Plant Expansion - TMC

Wed Apr 29, 2026

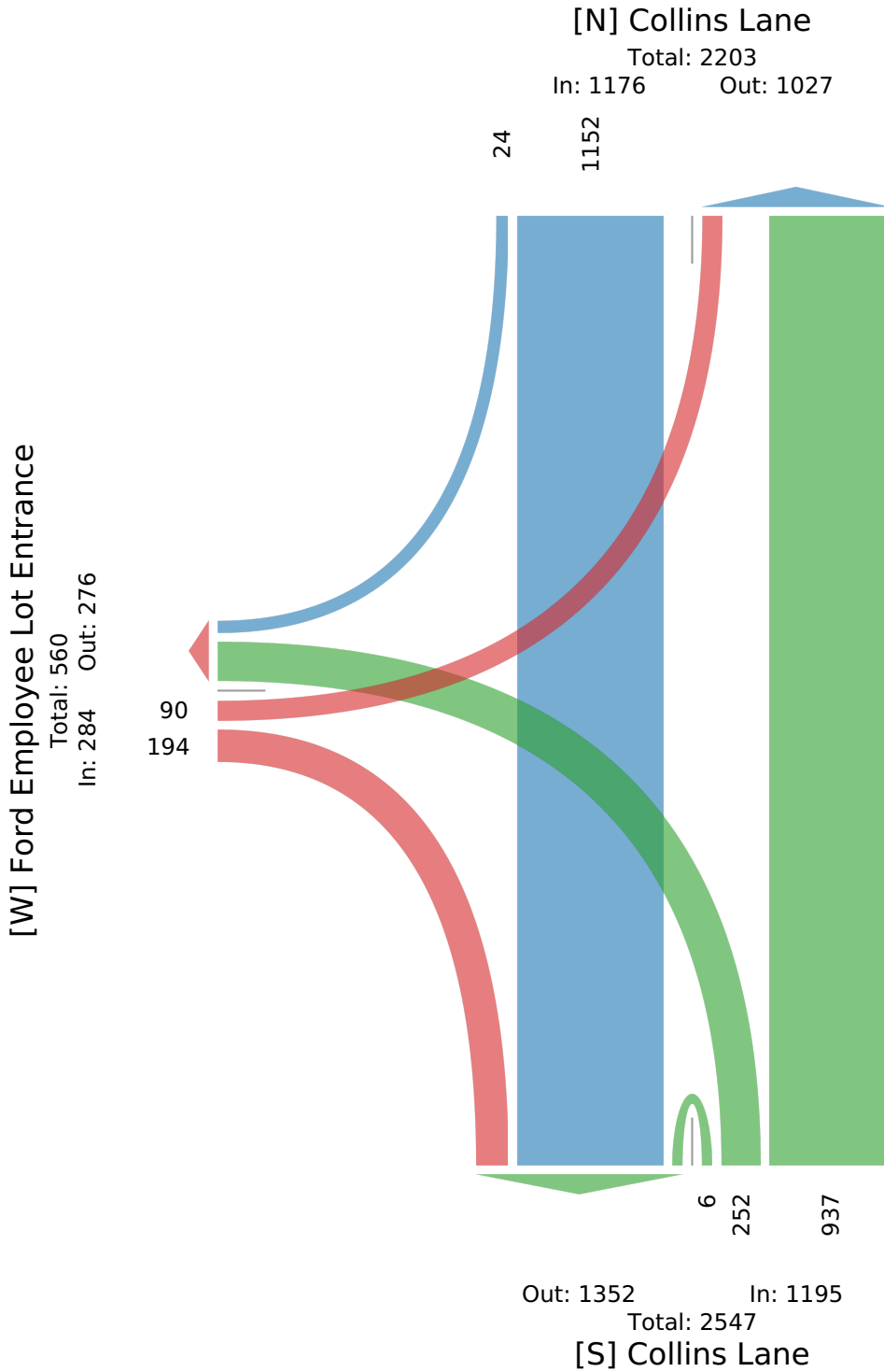
Full Length (1 PM-1 PM (+1))

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1399364, Location: 38.294555, -85.519954

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US



Ford Truck Plant Expansion - TMC

Wed Apr 29, 2026

PM Peak (Apr 29 2026 5PM - 6 PM) - Overall Peak Hour

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1399364, Location: 38.294555, -85.519954

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US

Leg Direction	Collins Lane Southbound				Collins Lane Northbound				Ford Employee Lot Entrance Eastbound				
Time	R	T	U	App	T	L	U	App	R	L	U	App	Int
2026-04-29 5:00PM	2	30	0	32	17	5	0	22	6	8	0	14	68
5:15PM	2	25	0	27	27	9	0	36	7	11	0	18	81
5:30PM	4	18	0	22	25	23	0	48	2	0	0	2	72
5:45PM	0	16	0	16	19	10	0	29	1	0	0	1	46
Total	8	89	0	97	88	47	0	135	16	19	0	35	267
% Approach	8.2%	91.8%	0%	-	65.2%	34.8%	0%	-	45.7%	54.3%	0%	-	-
% Total	3.0%	33.3%	0%	36.3%	33.0%	17.6%	0%	50.6%	6.0%	7.1%	0%	13.1%	-
PHF	0.500	0.742	-	0.758	0.815	0.511	-	0.703	0.571	0.432	-	0.486	0.824
Motorcycles	0	0	0	0	2	0	0	2	0	0	0	0	2
% Motorcycles	0%	0%	0%	0%	2.3%	0%	0%	1.5%	0%	0%	0%	0%	0.7%
Lights	8	79	0	87	81	47	0	128	16	19	0	35	250
% Lights	100%	88.8%	0%	89.7%	92.0%	100%	0%	94.8%	100%	100%	0%	100%	93.6%
Single-Unit Trucks	0	7	0	7	5	0	0	5	0	0	0	0	12
% Single-Unit Trucks	0%	7.9%	0%	7.2%	5.7%	0%	0%	3.7%	0%	0%	0%	0%	4.5%
Articulated Trucks	0	3	0	3	0	0	0	0	0	0	0	0	3
% Articulated Trucks	0%	3.4%	0%	3.1%	0%	0%	0%	0%	0%	0%	0%	0%	1.1%
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

*L: Left, R: Right, T: Thru, U: U-Turn

Ford Truck Plant Expansion - TMC

Wed Apr 29, 2026

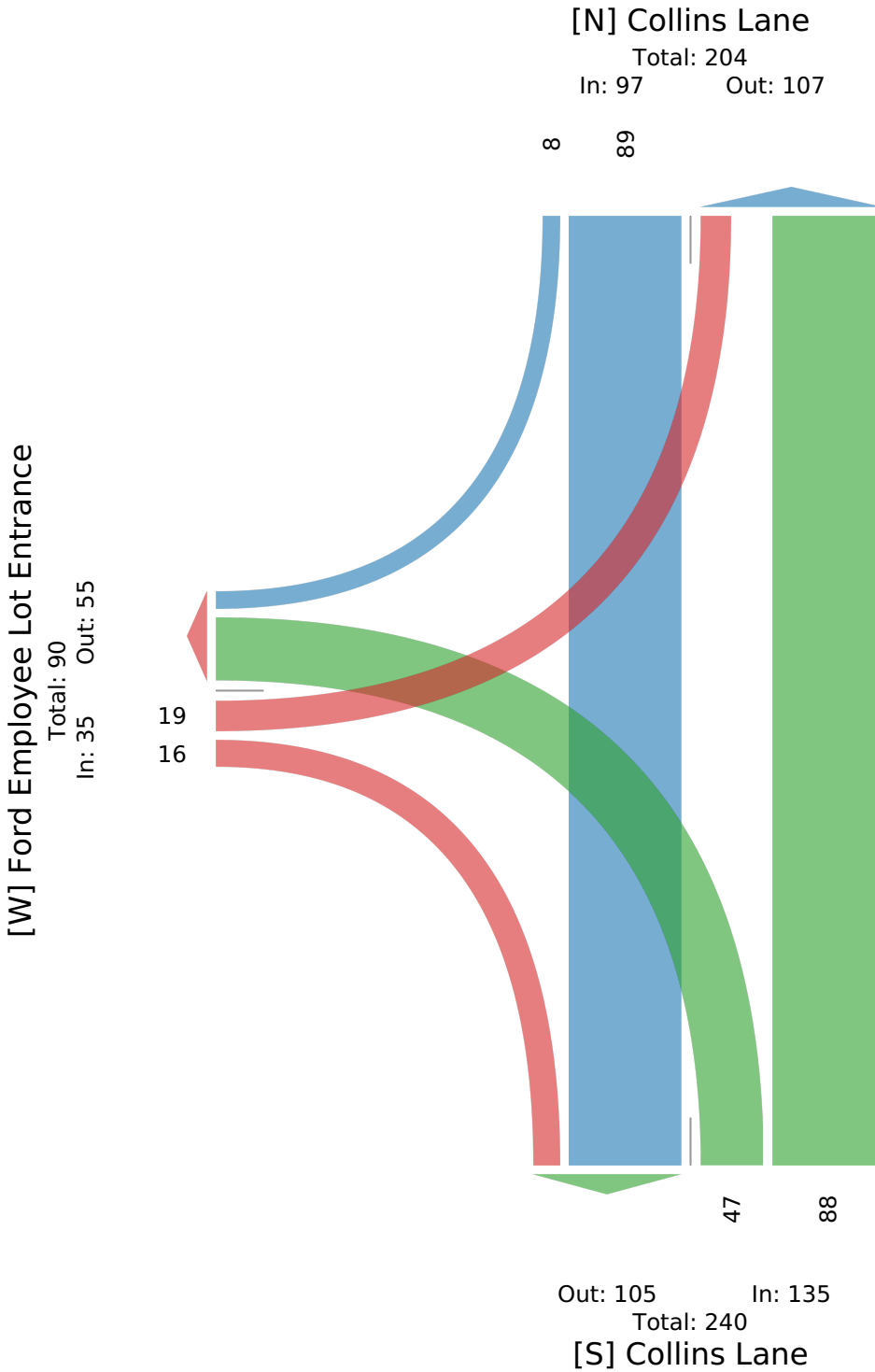
PM Peak (Apr 29 2026 5PM - 6 PM) - Overall Peak Hour

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1399364, Location: 38.294555, -85.519954

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US



Ford Truck Plant Expansion - TMC

Thu Apr 30, 2026

AM Peak (Apr 30 2026 8:45AM - 9:45 AM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1399364, Location: 38.294555, -85.519954

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US

Leg Direction	Collins Lane Southbound				Collins Lane Northbound				Ford Employee Lot Entrance Eastbound				
Time	R	T	U	App	T	L	U	App	R	L	U	App	Int
2026-04-30 8:45AM	0	26	0	26	17	0	0	17	0	0	0	0	43
9:00AM	0	14	0	14	9	2	0	11	1	0	0	1	26
9:15AM	1	25	0	26	15	0	0	15	1	0	0	1	42
9:30AM	0	22	0	22	16	2	0	18	0	0	0	0	40
Total	1	87	0	88	57	4	0	61	2	0	0	2	151
% Approach	1.1%	98.9%	0%	-	93.4%	6.6%	0%	-	100%	0%	0%	-	-
% Total	0.7%	57.6%	0%	58.3%	37.7%	2.6%	0%	40.4%	1.3%	0%	0%	1.3%	-
PHF	0.250	0.837	-	0.846	0.838	0.500	-	0.847	0.500	-	-	0.500	0.878
Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0
% Motorcycles	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Lights	1	63	0	64	41	1	0	42	1	0	0	1	107
% Lights	100%	72.4%	0%	72.7%	71.9%	25.0%	0%	68.9%	50.0%	0%	0%	50.0%	70.9%
Single-Unit Trucks	0	5	0	5	7	2	0	9	1	0	0	1	15
% Single-Unit Trucks	0%	5.7%	0%	5.7%	12.3%	50.0%	0%	14.8%	50.0%	0%	0%	50.0%	9.9%
Articulated Trucks	0	19	0	19	9	1	0	10	0	0	0	0	29
% Articulated Trucks	0%	21.8%	0%	21.6%	15.8%	25.0%	0%	16.4%	0%	0%	0%	0%	19.2%
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

* L: Left, R: Right, T: Thru, U: U-Turn

Ford Truck Plant Expansion - TMC

Thu Apr 30, 2026

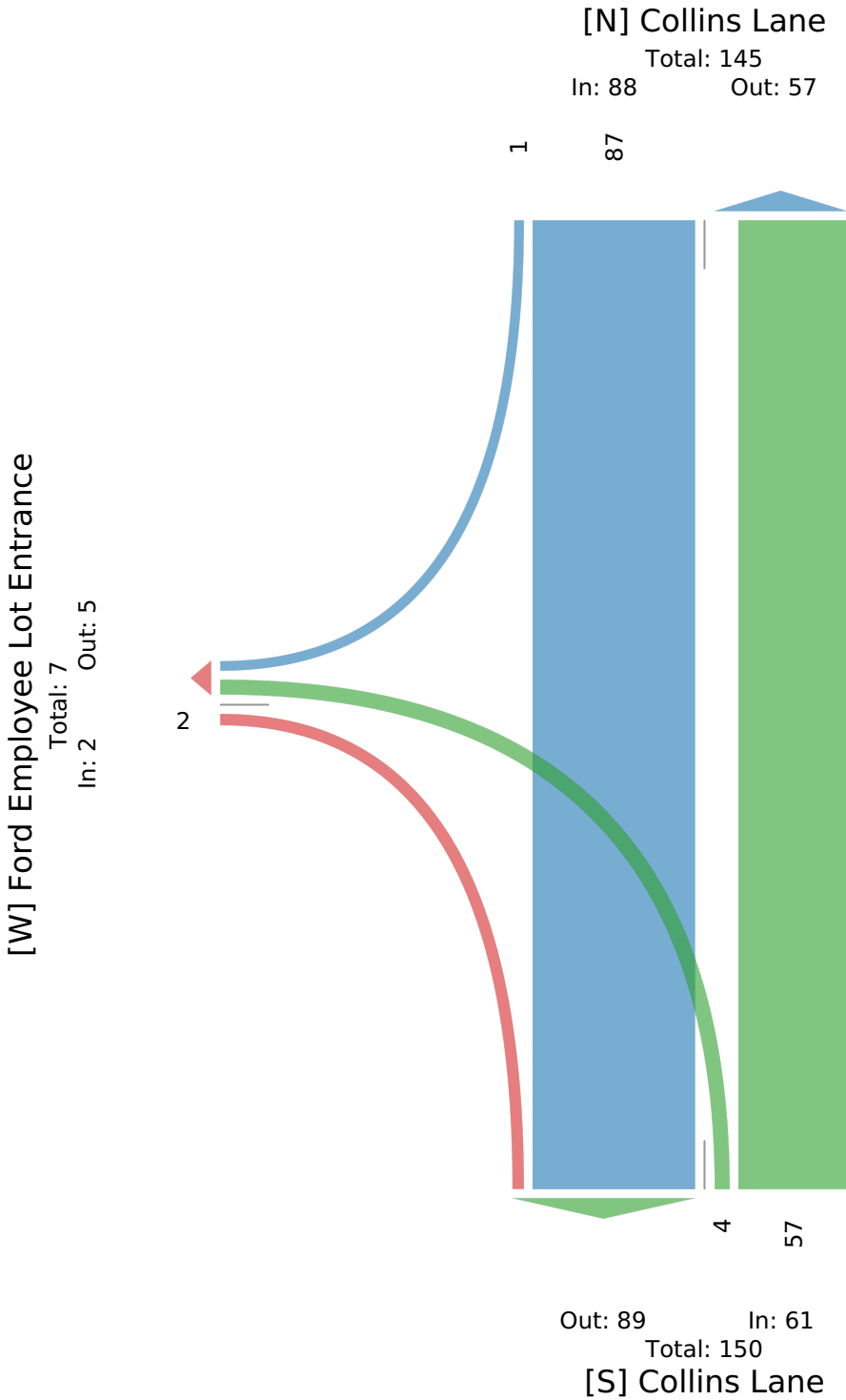
AM Peak (Apr 30 2026 8:45AM - 9:45 AM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1399364, Location: 38.294555, -85.519954

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US



Ford Truck Plant Expansion - TMC

Thu Apr 30, 2026

Midday Peak (Apr 30 2026 12PM - 1 PM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1399364, Location: 38.294555, -85.519954

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US

Leg Direction	Collins Lane Southbound				Collins Lane Northbound				Ford Employee Lot Entrance Eastbound				Int
	R	T	U	App	T	L	U	App	R	L	U	App	
2026-04-30 12:00PM	1	21	0	22	21	0	0	21	1	0	0	1	44
12:15PM	0	20	0	20	15	4	0	19	1	1	0	2	41
12:30PM	0	17	0	17	19	2	0	21	1	1	0	2	40
12:45PM	1	19	0	20	27	0	0	27	2	0	0	2	49
Total	2	77	0	79	82	6	0	88	5	2	0	7	174
% Approach	2.5%	97.5%	0%	-	93.2%	6.8%	0%	-	71.4%	28.6%	0%	-	-
% Total	1.1%	44.3%	0%	45.4%	47.1%	3.4%	0%	50.6%	2.9%	1.1%	0%	4.0%	-
PHF	0.500	0.917	-	0.898	0.759	0.375	-	0.815	0.625	0.500	-	0.875	0.888
Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0
% Motorcycles	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Lights	2	62	0	64	64	6	0	70	5	2	0	7	141
% Lights	100%	80.5%	0%	81.0%	78.0%	100%	0%	79.5%	100%	100%	0%	100%	81.0%
Single-Unit Trucks	0	6	0	6	4	0	0	4	0	0	0	0	10
% Single-Unit Trucks	0%	7.8%	0%	7.6%	4.9%	0%	0%	4.5%	0%	0%	0%	0%	5.7%
Articulated Trucks	0	9	0	9	14	0	0	14	0	0	0	0	23
% Articulated Trucks	0%	11.7%	0%	11.4%	17.1%	0%	0%	15.9%	0%	0%	0%	0%	13.2%
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

* L: Left, R: Right, T: Thru, U: U-Turn

Ford Truck Plant Expansion - TMC

Thu Apr 30, 2026

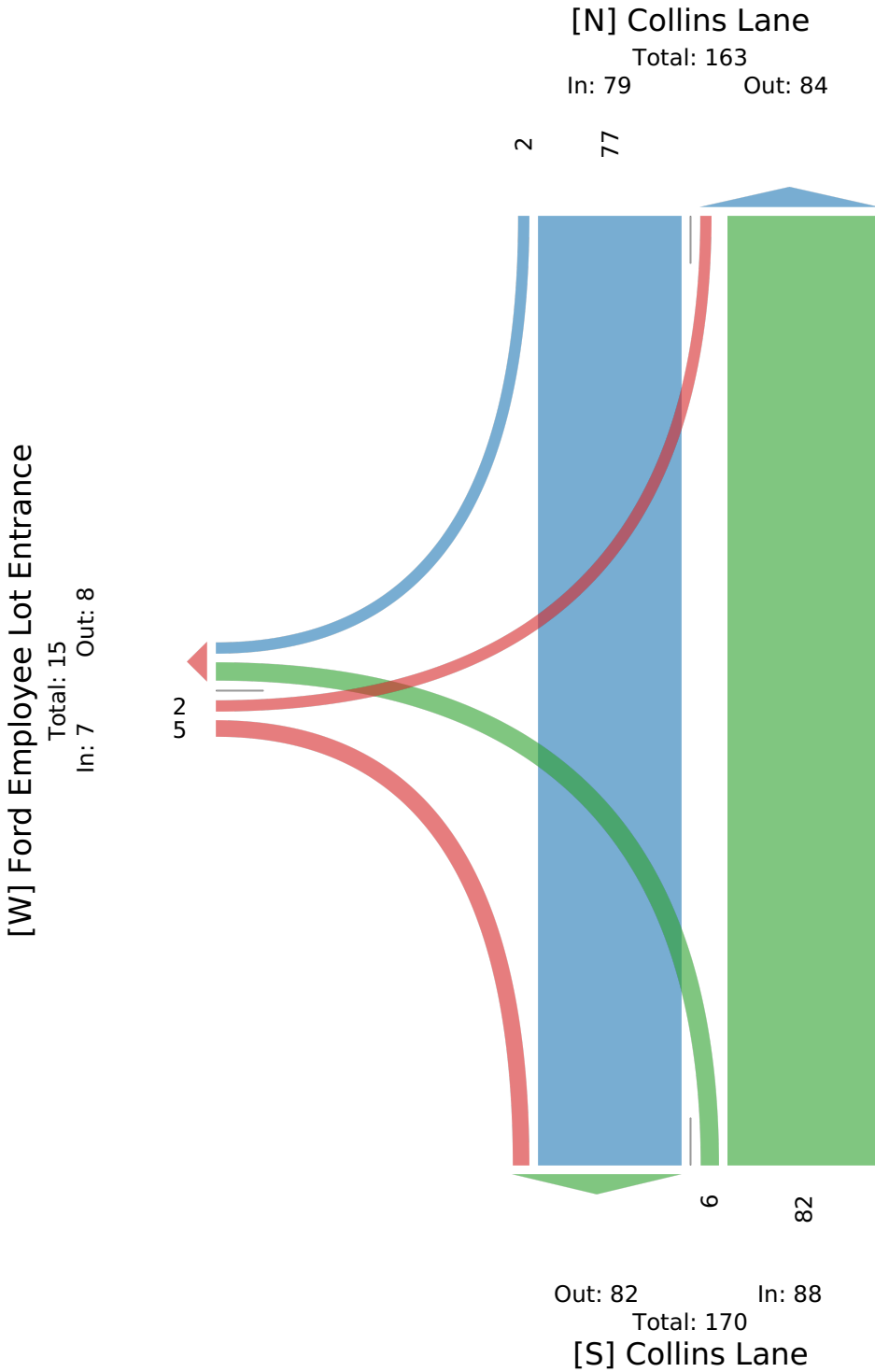
Midday Peak (Apr 30 2026 12PM - 1 PM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1399364, Location: 38.294555, -85.519954

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US



Existing Volume Counts

Collins Lane & Chamberlain Lane

Ford Truck Plant Expansion - TMC

Wed Apr 29, 2026

Full Length (1 PM-1 PM (+1))

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1399342, Location: 38.289801, -85.51574

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US

Leg Direction	Collins Lane Southbound					Chamberlain Lane Westbound					Collins Lane Northbound					Chamberlain Lane Eastbound					Int
Time	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	Int
2026-04-29 1:00PM	21	20	39	0	80	43	166	3	0	212	4	17	15	0	36	37	143	22	0	202	530
2:00PM	20	40	56	0	116	50	142	2	0	194	2	17	25	0	44	53	201	16	0	270	624
3:00PM	19	63	72	0	154	33	148	1	0	182	1	12	22	0	35	89	269	12	0	370	741
4:00PM	16	43	62	0	121	28	279	9	0	316	2	18	49	0	69	160	356	14	0	530	1036
5:00PM	19	51	46	0	116	48	450	12	0	510	2	36	135	0	173	202	371	54	0	627	1426
6:00PM	11	25	28	0	64	27	178	3	0	208	1	12	28	0	41	50	214	13	0	277	590
7:00PM	18	9	19	0	46	15	82	6	0	103	9	12	23	0	44	34	119	4	0	157	350
8:00PM	8	4	20	0	32	14	94	2	0	110	2	11	18	0	31	23	121	9	0	153	326
9:00PM	8	8	21	0	37	13	76	1	0	90	3	6	27	0	36	36	82	4	0	122	285
10:00PM	8	0	7	0	15	13	51	1	0	65	3	3	7	0	13	10	54	6	0	70	163
11:00PM	16	5	17	0	38	5	57	2	0	64	0	7	33	0	40	50	69	6	0	125	267
2026-04-30 12:00AM	3	1	9	0	13	10	19	0	0	29	0	2	14	0	16	1	26	3	0	30	88
1:00AM	10	1	6	0	17	4	20	0	0	24	0	0	3	0	3	1	19	4	0	24	68
2:00AM	11	2	7	1	21	1	23	1	1	26	0	0	13	0	13	12	52	4	0	68	128
3:00AM	10	4	15	0	29	6	26	1	0	33	1	4	2	0	7	4	64	2	0	70	139
4:00AM	11	2	10	0	23	17	161	2	0	180	2	2	14	0	18	39	275	11	0	325	546
5:00AM	17	5	14	0	36	34	638	1	0	673	1	12	163	0	176	16	169	29	0	214	1099
6:00AM	16	13	20	0	49	54	196	0	0	250	2	6	9	0	17	11	137	24	0	172	488
7:00AM	13	21	42	0	76	41	152	5	0	198	1	9	8	0	18	23	97	20	0	140	432
8:00AM	15	25	33	0	73	40	149	2	0	191	0	17	16	0	33	32	155	19	0	206	503
9:00AM	30	10	35	0	75	39	160	1	0	200	3	7	21	0	31	43	136	23	0	202	508
10:00AM	18	24	43	0	85	35	135	0	0	170	1	5	14	0	20	29	138	16	0	183	458
11:00AM	19	19	50	0	88	44	145	0	0	189	2	6	23	0	31	34	154	18	0	206	514
12:00PM	25	19	45	0	89	50	185	3	0	238	4	14	29	0	47	52	176	31	0	259	633
Total	362	414	716	1	1493	664	3732	58	1	4455	46	235	711	0	992	1041	3597	364	0	5002	11942
% Approach	24.2%	27.7%	48.0%	0.1%	-	14.9%	83.8%	1.3%	0%	-	4.6%	23.7%	71.7%	0%	-	20.8%	71.9%	7.3%	0%	-	-
% Total	3.0%	3.5%	6.0%	0%	12.5%	5.6%	31.3%	0.5%	0%	37.3%	0.4%	2.0%	6.0%	0%	8.3%	8.7%	30.1%	3.0%	0%	41.9%	-
Motorcycles	1	0	1	1	3	0	6	1	0	7	1	2	2	0	5	0	6	0	0	6	21
% Motorcycles	0.3%	0%	0.1%	100%	0.2%	0%	0.2%	1.7%	0%	0.2%	2.2%	0.9%	0.3%	0%	0.5%	0%	0.2%	0%	0%	0.1%	0.2%
Lights	200	389	601	0	1190	566	3416	57	1	4040	44	213	701	0	958	1026	3260	277	0	4563	10751
% Lights	55.2%	94.0%	83.9%	0%	79.7%	85.2%	91.5%	98.3%	100%	90.7%	95.7%	90.6%	98.6%	0%	96.6%	98.6%	90.6%	76.1%	0%	91.2%	90.0%
Single-Unit Trucks	29	13	42	0	84	37	64	0	0	101	1	15	6	0	22	10	64	18	0	92	299
% Single-Unit Trucks	8.0%	3.1%	5.9%	0%	5.6%	5.6%	1.7%	0%	0%	2.3%	2.2%	6.4%	0.8%	0%	2.2%	1.0%	1.8%	4.9%	0%	1.8%	2.5%
Articulated Trucks	131	9	71	0	211	61	244	0	0	305	0	4	1	0	5	4	265	68	0	337	858
% Articulated Trucks	36.2%	2.2%	9.9%	0%	14.1%	9.2%	6.5%	0%	0%	6.8%	0%	1.7%	0.1%	0%	0.5%	0.4%	7.4%	18.7%	0%	6.7%	7.2%
Buses	1	3	1	0	5	0	2	0	0	2	0	1	1	0	2	1	2	1	0	4	13
% Buses	0.3%	0.7%	0.1%	0%	0.3%	0%	0.1%	0%	0%	0%	0%	0.4%	0.1%	0%	0.2%	0.1%	0.1%	0.3%	0%	0.1%	0.1%

* L: Left, R: Right, T: Thru, U: U-Turn

Ford Truck Plant Expansion - TMC

Wed Apr 29, 2026

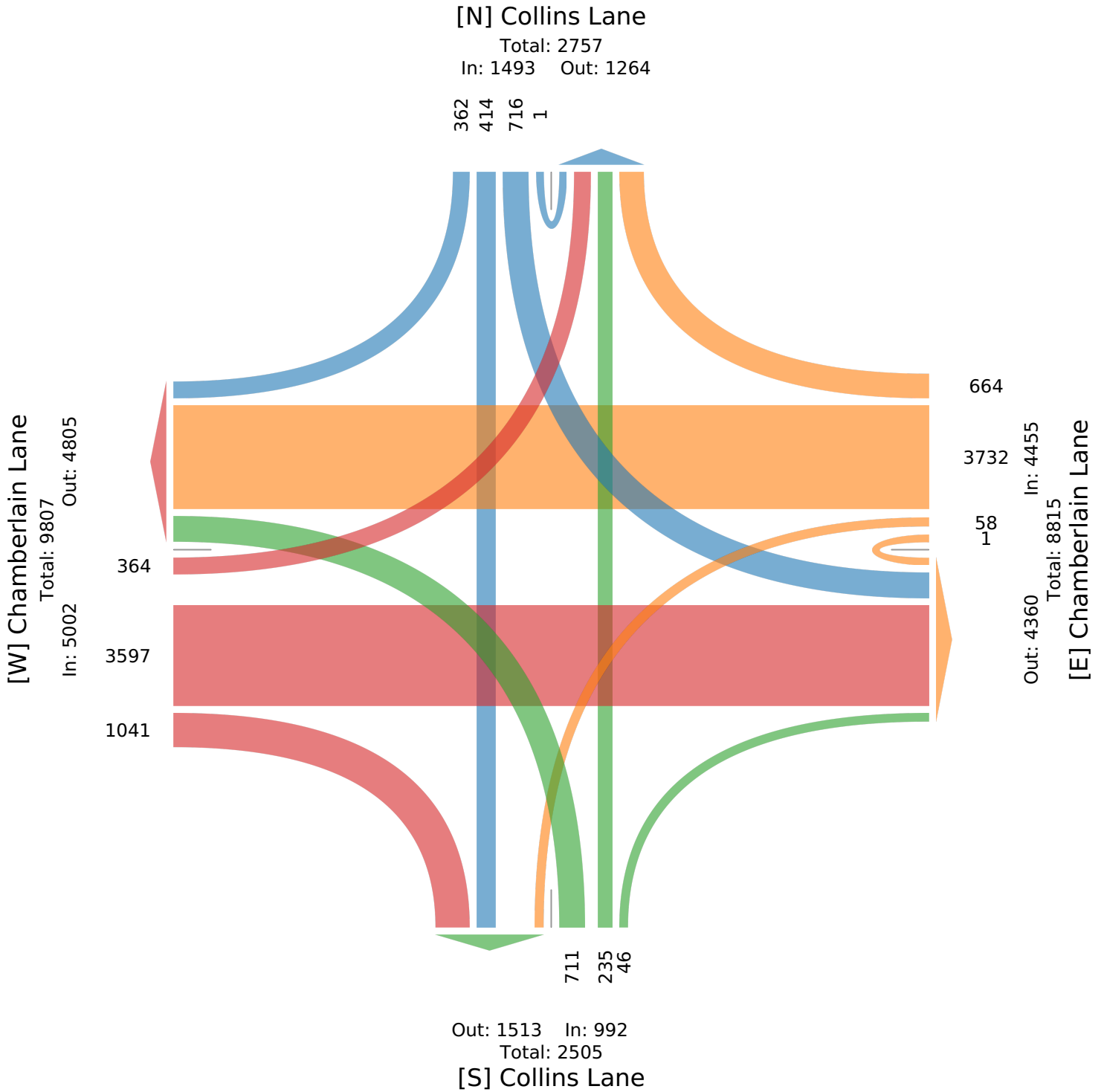
Full Length (1 PM-1 PM (+1))

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1399342, Location: 38.289801, -85.51574

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US



Ford Truck Plant Expansion - TMC

Wed Apr 29, 2026

PM Peak (Apr 29 2026 4:45PM - 5:45 PM) - Overall Peak Hour

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1399342, Location: 38.289801, -85.51574

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US

Leg Direction	Collins Lane Southbound					Chamberlain Lane Westbound					Collins Lane Northbound					Chamberlain Lane Eastbound					Int	
	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App		
2026-04-29 4:45PM	3	7	13	0	23	6	84	2	0	92	0	6	17	0	23	55	120	6	0	181	319	
5:00PM	2	14	23	0	39	8	128	2	0	138	0	7	21	0	28	39	100	8	0	147	352	
5:15PM	6	11	17	0	34	5	76	1	0	82	1	13	32	0	46	78	106	20	0	204	366	
5:30PM	7	16	3	0	26	18	156	5	0	179	0	8	37	0	45	68	114	23	0	205	455	
Total	18	48	56	0	122	37	444	10	0	491	1	34	107	0	142	240	440	57	0	737	1492	
% Approach	14.8%	39.3%	45.9%	0%	-	7.5%	90.4%	2.0%	0%	-	0.7%	23.9%	75.4%	0%	-	32.6%	59.7%	7.7%	0%	-	-	
% Total	1.2%	3.2%	3.8%	0%	8.2%	2.5%	29.8%	0.7%	0%	32.9%	0.1%	2.3%	7.2%	0%	9.5%	16.1%	29.5%	3.8%	0%	49.4%	-	
PHF	0.643	0.750	0.609	-	0.782	0.514	0.712	0.500	-	0.686	0.250	0.654	0.723	-	0.772	0.769	0.917	0.620	-	0.899	0.820	
Motorcycles	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
% Motorcycles	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2.9%	0%	0%	0.7%	0%	0%	0%	0%	0%	0%	0.1%
Lights	13	44	52	0	109	34	440	10	0	484	1	33	106	0	140	239	429	57	0	725	1458	
% Lights	72.2%	91.7%	92.9%	0%	89.3%	91.9%	99.1%	100%	0%	98.6%	100%	97.1%	99.1%	0%	98.6%	99.6%	97.5%	100%	0%	98.4%	97.7%	
Single-Unit Trucks	3	3	3	0	9	3	0	0	0	3	0	0	1	0	1	1	2	0	0	3	16	
% Single-Unit Trucks	16.7%	6.3%	5.4%	0%	7.4%	8.1%	0%	0%	0%	0.6%	0%	0%	0.9%	0%	0.7%	0.4%	0.5%	0%	0%	0.4%	1.1%	
Articulated Trucks	2	1	1	0	4	0	4	0	0	4	0	0	0	0	0	0	9	0	0	9	17	
% Articulated Trucks	11.1%	2.1%	1.8%	0%	3.3%	0%	0.9%	0%	0%	0.8%	0%	0%	0%	0%	0%	0%	2.0%	0%	0%	1.2%	1.1%	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Buses	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	

*L: Left, R: Right, T: Thru, U: U-Turn

Ford Truck Plant Expansion - TMC

Wed Apr 29, 2026

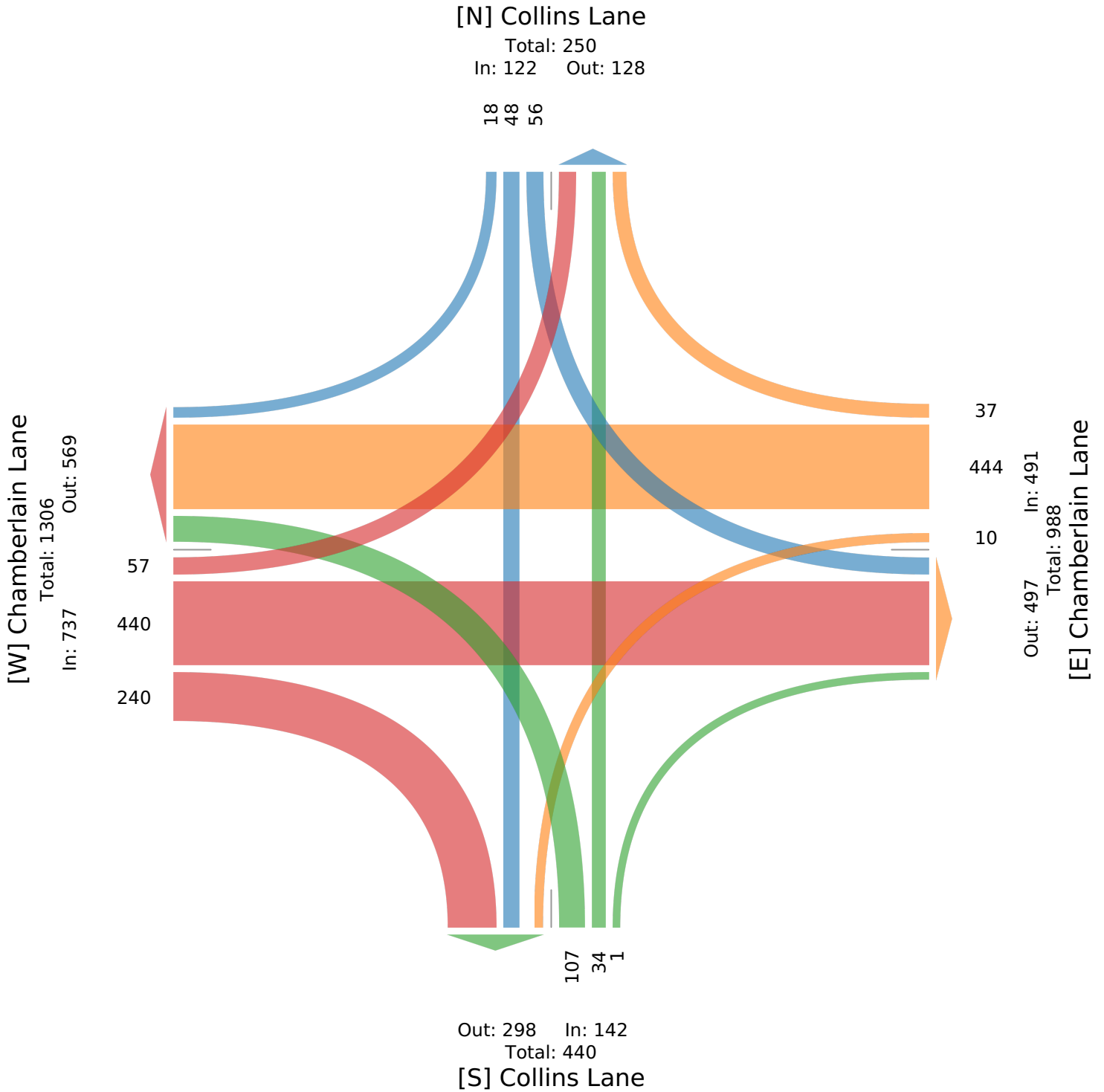
PM Peak (Apr 29 2026 4:45PM - 5:45 PM) - Overall Peak Hour

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1399342, Location: 38.289801, -85.51574

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US



Ford Truck Plant Expansion - TMC

Thu Apr 30, 2026

AM Peak (Apr 30 2026 5AM - 6 AM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1399342, Location: 38.289801, -85.51574

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US

Leg Direction	Collins Lane Southbound					Chamberlain Lane Westbound					Collins Lane Northbound					Chamberlain Lane Eastbound						
Time	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	Int	
2026-04-30 5:00AM	1	3	1	0	5	11	84	1	0	96	1	3	13	0	17	4	47	2	0	53	171	
5:15AM	3	1	7	0	11	6	157	0	0	163	0	2	45	0	47	8	67	8	0	83	304	
5:30AM	3	1	2	0	6	9	235	0	0	244	0	5	66	0	71	2	29	12	0	43	364	
5:45AM	10	0	4	0	14	8	162	0	0	170	0	2	39	0	41	2	26	7	0	35	260	
Total	17	5	14	0	36	34	638	1	0	673	1	12	163	0	176	16	169	29	0	214	1099	
% Approach	47.2%	13.9%	38.9%	0%	-	5.1%	94.8%	0.1%	0%	-	0.6%	6.8%	92.6%	0%	-	7.5%	79.0%	13.6%	0%	-	-	
% Total	1.5%	0.5%	1.3%	0%	3.3%	3.1%	58.1%	0.1%	0%	61.2%	0.1%	1.1%	14.8%	0%	16.0%	1.5%	15.4%	2.6%	0%	19.5%	-	
PHF	0.425	0.417	0.500	-	0.643	0.773	0.679	0.250	-	0.690	0.250	0.600	0.617	-	0.620	0.500	0.631	0.604	-	0.645	0.755	
Motorcycles	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
% Motorcycles	0%	0%	0%	0%	0%	0%	0.2%	0%	0%	0.1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.1%
Lights	7	4	14	0	25	32	631	1	0	664	1	12	163	0	176	16	165	28	0	209	1074	
% Lights	41.2%	80.0%	100%	0%	69.4%	94.1%	98.9%	100%	0%	98.7%	100%	100%	100%	0%	100%	100%	97.6%	96.6%	0%	97.7%	97.7%	
Single-Unit Trucks	6	0	0	0	6	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	7	
% Single-Unit Trucks	35.3%	0%	0%	0%	16.7%	2.9%	0%	0%	0%	0.1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.6%	
Articulated Trucks	4	1	0	0	5	1	6	0	0	7	0	0	0	0	0	0	4	1	0	5	17	
% Articulated Trucks	23.5%	20.0%	0%	0%	13.9%	2.9%	0.9%	0%	0%	1.0%	0%	0%	0%	0%	0%	0%	2.4%	3.4%	0%	2.3%	1.5%	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Buses	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	

*L: Left, R: Right, T: Thru, U: U-Turn

Ford Truck Plant Expansion - TMC

Thu Apr 30, 2026

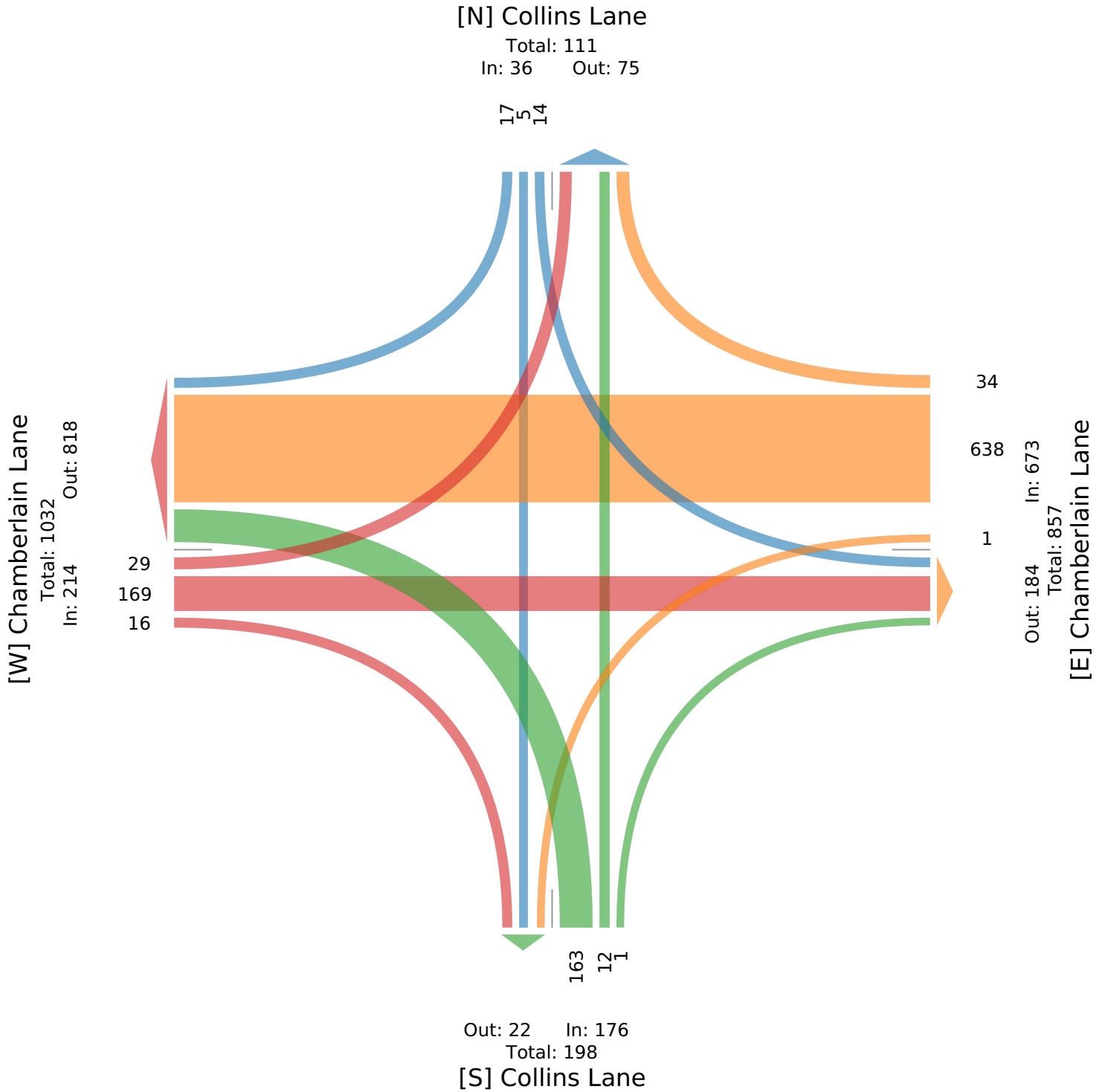
AM Peak (Apr 30 2026 5AM - 6 AM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1399342, Location: 38.289801, -85.51574

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US



Ford Truck Plant Expansion - TMC

Thu Apr 30, 2026

Midday Peak (Apr 30 2026 12PM - 1 PM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1399342, Location: 38.289801, -85.51574

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US

Leg Direction	Collins Lane Southbound					Chamberlain Lane Westbound					Collins Lane Northbound					Chamberlain Lane Eastbound					
Time	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	Int
2026-04-30 12:00PM	5	5	15	0	25	8	54	1	0	63	0	2	8	0	10	17	51	11	0	79	177
12:15PM	7	3	9	0	19	12	52	1	0	65	1	2	14	0	17	7	52	6	0	65	166
12:30PM	6	6	13	0	25	10	33	0	0	43	3	5	3	0	11	18	34	6	0	58	137
12:45PM	7	5	8	0	20	20	46	1	0	67	0	5	4	0	9	10	39	8	0	57	153
Total	25	19	45	0	89	50	185	3	0	238	4	14	29	0	47	52	176	31	0	259	633
% Approach	28.1%	21.3%	50.6%	0%	-	21.0%	77.7%	1.3%	0%	-	8.5%	29.8%	61.7%	0%	-	20.1%	68.0%	12.0%	0%	-	-
% Total	3.9%	3.0%	7.1%	0%	14.1%	7.9%	29.2%	0.5%	0%	37.6%	0.6%	2.2%	4.6%	0%	7.4%	8.2%	27.8%	4.9%	0%	40.9%	-
PHF	0.893	0.792	0.750	-	0.890	0.625	0.856	0.750	-	0.888	0.333	0.700	0.518	-	0.691	0.722	0.846	0.705	-	0.820	0.894
Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Motorcycles	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Lights	19	17	38	0	74	44	165	3	0	212	4	10	29	0	43	52	148	20	0	220	549
% Lights	76.0%	89.5%	84.4%	0%	83.1%	88.0%	89.2%	100%	0%	89.1%	100%	71.4%	100%	0%	91.5%	100%	84.1%	64.5%	0%	84.9%	86.7%
Single-Unit Trucks	1	2	3	0	6	1	2	0	0	3	0	2	0	0	2	0	8	1	0	9	20
% Single-Unit Trucks	4.0%	10.5%	6.7%	0%	6.7%	2.0%	1.1%	0%	0%	1.3%	0%	14.3%	0%	0%	4.3%	0%	4.5%	3.2%	0%	3.5%	3.2%
Articulated Trucks	5	0	4	0	9	5	18	0	0	23	0	2	0	0	2	0	20	10	0	30	64
% Articulated Trucks	20.0%	0%	8.9%	0%	10.1%	10.0%	9.7%	0%	0%	9.7%	0%	14.3%	0%	0%	4.3%	0%	11.4%	32.3%	0%	11.6%	10.1%
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

*L: Left, R: Right, T: Thru, U: U-Turn

Ford Truck Plant Expansion - TMC

Thu Apr 30, 2026

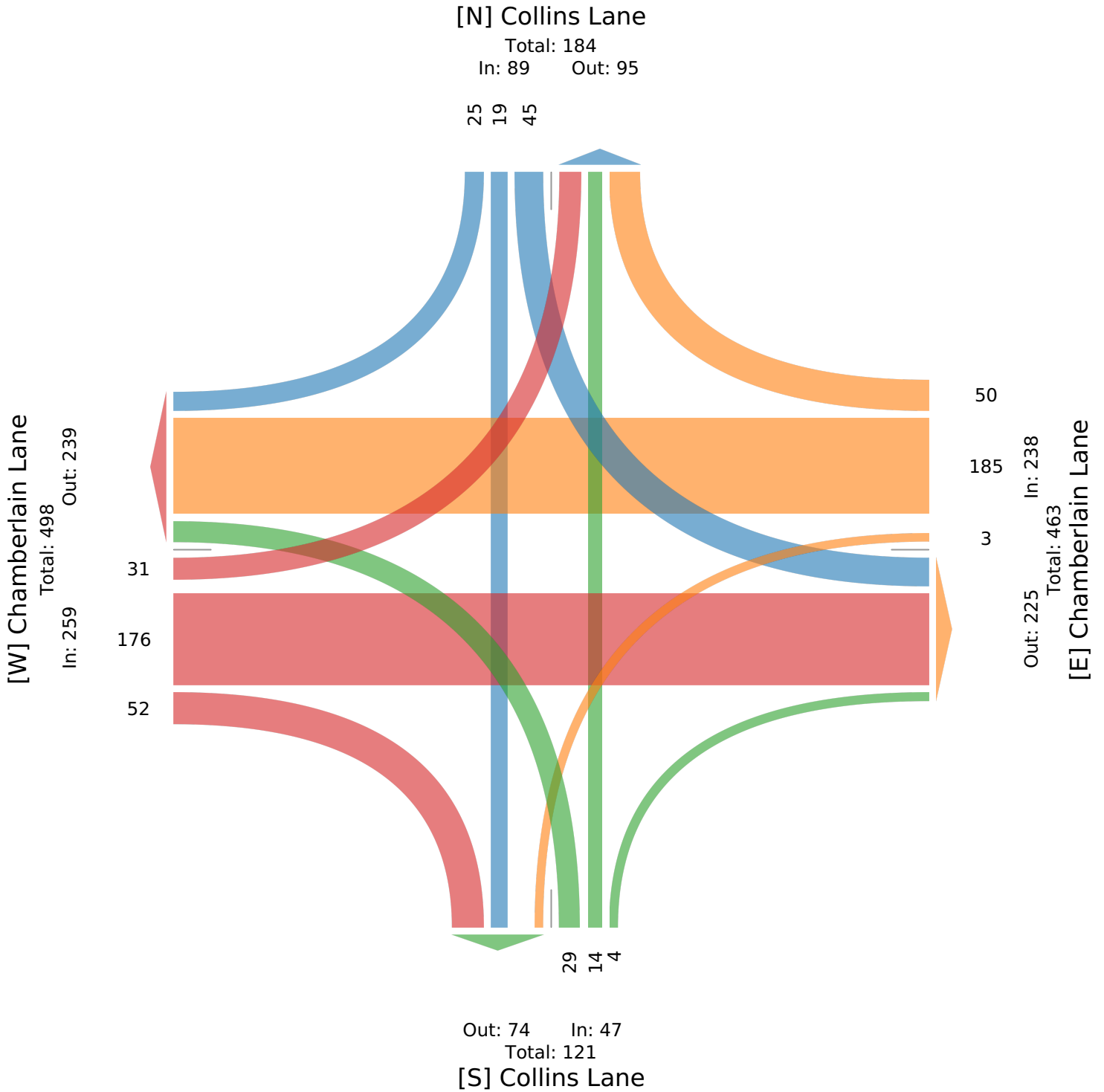
Midday Peak (Apr 30 2026 12PM - 1 PM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1399342, Location: 38.289801, -85.51574

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US



Existing Volume Counts
Chamberlain Lane & Old LaGrange Road

Ford Truck Plant Expansion - TMC

Tue Apr 28, 2026

Full Length (6 AM-6 AM (+1))

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1400570, Location: 38.289696, -85.512746

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US

Leg Direction	Old LaGrange Road Southbound					Chamberlain Lane Westbound					Old LaGrange Road Northbound					Chamberlain Lane Eastbound					Int
Time	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	Int
2026-04-28 6:00AM	19	3	26	0	48	11	240	7	0	258	14	0	2	0	16	3	92	1	0	96	418
7:00AM	19	3	39	0	61	16	188	19	0	223	26	3	0	0	29	3	133	4	0	140	453
8:00AM	17	3	27	0	47	17	161	24	0	202	27	1	1	0	29	1	153	6	0	160	438
9:00AM	9	3	24	0	36	15	183	21	0	219	22	1	1	0	24	0	170	2	0	172	451
10:00AM	8	4	18	0	30	6	181	23	0	210	20	1	0	0	21	2	147	4	0	153	414
11:00AM	2	2	12	0	16	12	190	20	0	222	20	2	0	0	22	3	203	5	0	211	471
12:00PM	9	3	20	0	32	17	208	26	0	251	30	2	1	0	33	1	206	3	0	210	526
1:00PM	5	2	16	0	23	18	188	23	0	229	22	0	3	0	25	1	179	3	0	183	460
2:00PM	3	3	26	0	32	22	182	29	0	233	34	3	3	0	40	0	237	3	0	240	545
3:00PM	4	2	19	0	25	15	191	32	0	238	48	1	1	0	50	2	300	6	0	308	621
4:00PM	5	3	23	0	31	27	324	29	0	380	88	11	5	0	104	0	383	3	0	386	901
5:00PM	40	4	23	0	67	27	459	21	0	507	129	7	2	0	138	0	419	6	0	425	1137
6:00PM	21	9	25	0	55	14	174	16	0	204	16	0	2	1	19	7	176	7	1	191	469
7:00PM	5	4	7	0	16	14	82	27	0	123	22	2	2	2	28	2	105	1	0	108	275
8:00PM	2	2	7	0	11	18	114	13	0	145	5	1	0	0	6	2	120	5	0	127	289
9:00PM	7	0	5	0	12	11	82	8	0	101	0	0	0	0	0	2	103	3	0	108	221
10:00PM	3	2	2	0	7	4	41	3	0	48	1	0	4	0	5	4	50	2	0	56	116
11:00PM	2	0	2	0	4	2	48	4	0	54	1	0	0	0	1	0	65	2	0	67	126
2026-04-29 12:00AM	3	0	0	0	3	1	50	3	0	54	1	0	0	0	1	0	69	3	0	72	130
1:00AM	0	0	0	0	0	1	22	0	0	23	1	0	0	0	1	0	29	1	0	30	54
2:00AM	3	5	0	0	8	0	18	1	0	19	1	2	0	0	3	7	14	6	1	28	58
3:00AM	0	5	1	0	6	2	16	0	0	18	1	0	1	0	2	5	44	1	0	50	76
4:00AM	10	0	1	0	11	1	169	2	2	174	5	1	0	0	6	0	219	3	0	222	413
5:00AM	31	1	8	0	40	0	640	0	0	640	8	1	3	0	12	0	226	0	0	226	918
Total	227	63	331	0	621	271	4151	351	2	4775	542	39	31	3	615	45	3842	80	2	3969	9980
% Approach	36.6%	10.1%	53.3%	0%	-	5.7%	86.9%	7.4%	0%	-	88.1%	6.3%	5.0%	0.5%	-	1.1%	96.8%	2.0%	0.1%	-	-
% Total	2.3%	0.6%	3.3%	0%	6.2%	2.7%	41.6%	3.5%	0%	47.8%	5.4%	0.4%	0.3%	0%	6.2%	0.5%	38.5%	0.8%	0%	39.8%	-
Motorcycles	0	0	1	0	1	0	6	1	0	7	0	1	1	0	2	0	5	0	0	5	15
% Motorcycles	0%	0%	0.3%	0%	0.2%	0%	0.1%	0.3%	0%	0.1%	0%	2.6%	3.2%	0%	0.3%	0%	0.1%	0%	0%	0.1%	0.2%
Lights	223	59	319	0	601	251	3742	335	2	4330	522	30	27	3	582	44	3419	75	1	3539	9052
% Lights	98.2%	93.7%	96.4%	0%	96.8%	92.6%	90.1%	95.4%	100%	90.7%	96.3%	76.9%	87.1%	100%	94.6%	97.8%	89.0%	93.8%	50.0%	89.2%	90.7%
Single-Unit Trucks	1	1	6	0	8	4	113	9	0	126	13	0	0	0	13	1	120	2	0	123	270
% Single-Unit Trucks	0.4%	1.6%	1.8%	0%	1.3%	1.5%	2.7%	2.6%	0%	2.6%	2.4%	0%	0%	0%	2.1%	2.2%	3.1%	2.5%	0%	3.1%	2.7%
Articulated Trucks	3	0	2	0	5	12	288	6	0	306	5	5	2	0	12	0	294	3	1	298	621
% Articulated Trucks	1.3%	0%	0.6%	0%	0.8%	4.4%	6.9%	1.7%	0%	6.4%	0.9%	12.8%	6.5%	0%	2.0%	0%	7.7%	3.8%	50.0%	7.5%	6.2%
Buses	0	3	3	0	6	4	2	0	0	6	2	3	1	0	6	0	4	0	0	4	22
% Buses	0%	4.8%	0.9%	0%	1.0%	1.5%	0%	0%	0%	0.1%	0.4%	7.7%	3.2%	0%	1.0%	0%	0.1%	0%	0%	0.1%	0.2%

* L: Left, R: Right, T: Thru, U: U-Turn

Ford Truck Plant Expansion - TMC

Tue Apr 28, 2026

Full Length (6 AM-6 AM (+1))

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1400570, Location: 38.289696, -85.512746

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US

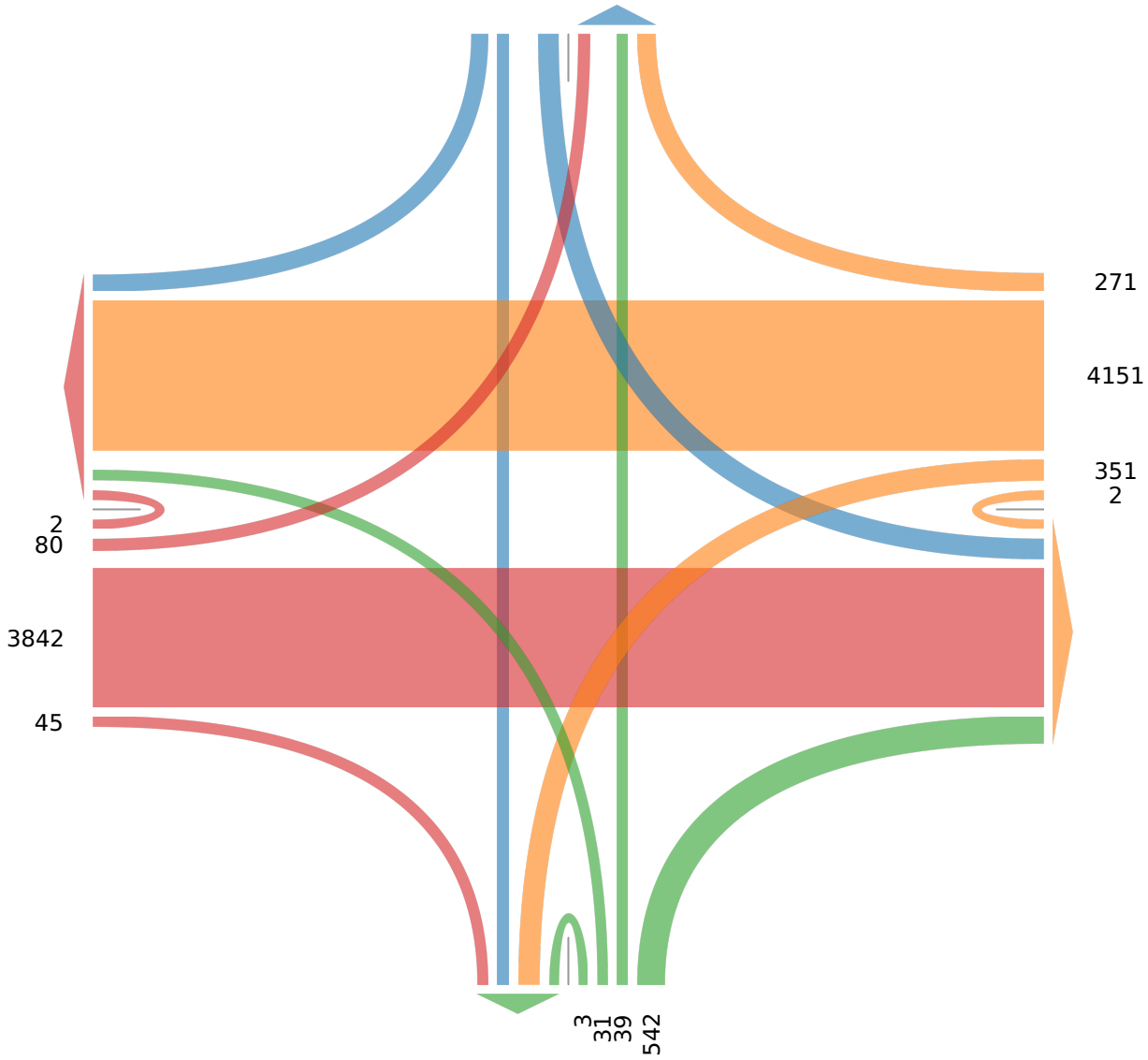
[N] Old LaGrange Road

Total: 1011

In: 621 Out: 390

227
63
331

[W] Chamberlain Lane
Total: 8380
In: 3969 Out: 4411



271
4151
351
2
In: 4775
Total: 9492
Out: 4717
[E] Chamberlain Lane

Out: 462 In: 615
Total: 1077
[S] Old LaGrange Road

Ford Truck Plant Expansion - TMC

Tue Apr 28, 2026

Midday Peak (Apr 28 2026 11:30AM - 12:30 PM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1400570, Location: 38.289696, -85.512746

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US

Leg Direction	Old LaGrange Road Southbound					Chamberlain Lane Westbound					Old LaGrange Road Northbound					Chamberlain Lane Eastbound						
Time	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	Int	
2026-04-28 11:30AM	1	0	4	0	5	3	56	5	0	64	5	0	0	0	5	1	47	1	0	49	123	
11:45AM	0	1	2	0	3	2	54	6	0	62	8	1	0	0	9	0	45	1	0	46	120	
12:00PM	1	2	3	0	6	7	64	8	0	79	11	0	0	0	11	1	59	0	0	60	156	
12:15PM	3	0	4	0	7	3	59	5	0	67	7	0	0	0	7	0	50	3	0	53	134	
Total	5	3	13	0	21	15	233	24	0	272	31	1	0	0	32	2	201	5	0	208	533	
% Approach	23.8%	14.3%	61.9%	0%	-	5.5%	85.7%	8.8%	0%	-	96.9%	3.1%	0%	0%	-	1.0%	96.6%	2.4%	0%	-	-	
% Total	0.9%	0.6%	2.4%	0%	3.9%	2.8%	43.7%	4.5%	0%	51.0%	5.8%	0.2%	0%	0%	6.0%	0.4%	37.7%	0.9%	0%	39.0%	-	
PHF	0.417	0.375	0.813	-	0.750	0.536	0.910	0.750	-	0.861	0.705	0.250	-	-	0.727	0.500	0.852	0.417	-	0.867	0.854	
Motorcycles	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
% Motorcycles	0%	0%	0%	0%	0%	0%	0.4%	0%	0%	0.4%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.2%
Lights	5	3	11	0	19	15	201	24	0	240	27	0	0	0	27	2	170	5	0	177	463	
% Lights	100%	100%	84.6%	0%	90.5%	100%	86.3%	100%	0%	88.2%	87.1%	0%	0%	0%	84.4%	100%	84.6%	100%	0%	85.1%	86.9%	
Single-Unit Trucks	0	0	1	0	1	0	6	0	0	6	2	0	0	0	2	0	8	0	0	8	17	
% Single-Unit Trucks	0%	0%	7.7%	0%	4.8%	0%	2.6%	0%	0%	2.2%	6.5%	0%	0%	0%	6.3%	0%	4.0%	0%	0%	3.8%	3.2%	
Articulated Trucks	0	0	0	0	0	0	25	0	0	25	2	1	0	0	3	0	22	0	0	22	50	
% Articulated Trucks	0%	0%	0%	0%	0%	0%	10.7%	0%	0%	9.2%	6.5%	100%	0%	0%	9.4%	0%	10.9%	0%	0%	10.6%	9.4%	
Buses	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	
% Buses	0%	0%	7.7%	0%	4.8%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.5%	0%	0%	0.5%	0.4%	

*L: Left, R: Right, T: Thru, U: U-Turn

Ford Truck Plant Expansion - TMC

Tue Apr 28, 2026

Midday Peak (Apr 28 2026 11:30AM - 12:30 PM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1400570, Location: 38.289696, -85.512746

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US

[N] Old LaGrange Road

Total: 42

In: 21 Out: 21

53 13

[W] Chamberlain Lane

Total: 446
In: 208 Out: 238

5
201
2

15
233
24

In: 272
Total: 517
Out: 245
[E] Chamberlain Lane

Out: 29 In: 32
Total: 61

[S] Old LaGrange Road

1
31

Ford Truck Plant Expansion - TMC

Tue Apr 28, 2026

PM Peak (Apr 28 2026 4:30PM - 5:30 PM) - Overall Peak Hour

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1400570, Location: 38.289696, -85.512746

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US

Leg Direction	Old LaGrange Road Southbound					Chamberlain Lane Westbound					Old LaGrange Road Northbound					Chamberlain Lane Eastbound					Int
	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	
2026-04-28 4:30PM	4	1	6	0	11	6	92	5	0	103	39	0	0	0	39	0	111	1	0	112	265
4:45PM	0	1	10	0	11	7	112	5	0	124	17	3	1	0	21	0	99	0	0	99	255
5:00PM	14	0	6	0	20	5	138	7	0	150	37	2	1	0	40	0	149	2	0	151	361
5:15PM	7	1	8	0	16	6	131	3	0	140	55	2	0	0	57	0	127	3	0	130	343
Total	25	3	30	0	58	24	473	20	0	517	148	7	2	0	157	0	486	6	0	492	1224
% Approach	43.1%	5.2%	51.7%	0%	-	4.6%	91.5%	3.9%	0%	-	94.3%	4.5%	1.3%	0%	-	0%	98.8%	1.2%	0%	-	-
% Total	2.0%	0.2%	2.5%	0%	4.7%	2.0%	38.6%	1.6%	0%	42.2%	12.1%	0.6%	0.2%	0%	12.8%	0%	39.7%	0.5%	0%	40.2%	-
PHF	0.446	0.750	0.750	-	0.725	0.857	0.857	0.714	-	0.862	0.673	0.583	0.500	-	0.689	-	0.815	0.500	-	0.815	0.848
Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	2
% Motorcycles	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50.0%	0%	0.6%	0%	0.2%	0%	0%	0.2%	0.2%
Lights	25	3	30	0	58	24	457	20	0	501	147	7	1	0	155	0	469	6	0	475	1189
% Lights	100%	100%	100%	0%	100%	100%	96.6%	100%	0%	96.9%	99.3%	100%	50.0%	0%	98.7%	0%	96.5%	100%	0%	96.5%	97.1%
Single-Unit Trucks	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	11	0	0	11	15
% Single-Unit Trucks	0%	0%	0%	0%	0%	0%	0.8%	0%	0%	0.8%	0%	0%	0%	0%	0%	0%	2.3%	0%	0%	2.2%	1.2%
Articulated Trucks	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	4	0	0	4	16
% Articulated Trucks	0%	0%	0%	0%	0%	0%	2.5%	0%	0%	2.3%	0%	0%	0%	0%	0%	0%	0.8%	0%	0%	0.8%	1.3%
Buses	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	2
% Buses	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.7%	0%	0%	0%	0.6%	0%	0.2%	0%	0%	0.2%	0.2%

*L: Left, R: Right, T: Thru, U: U-Turn

Ford Truck Plant Expansion - TMC

Tue Apr 28, 2026

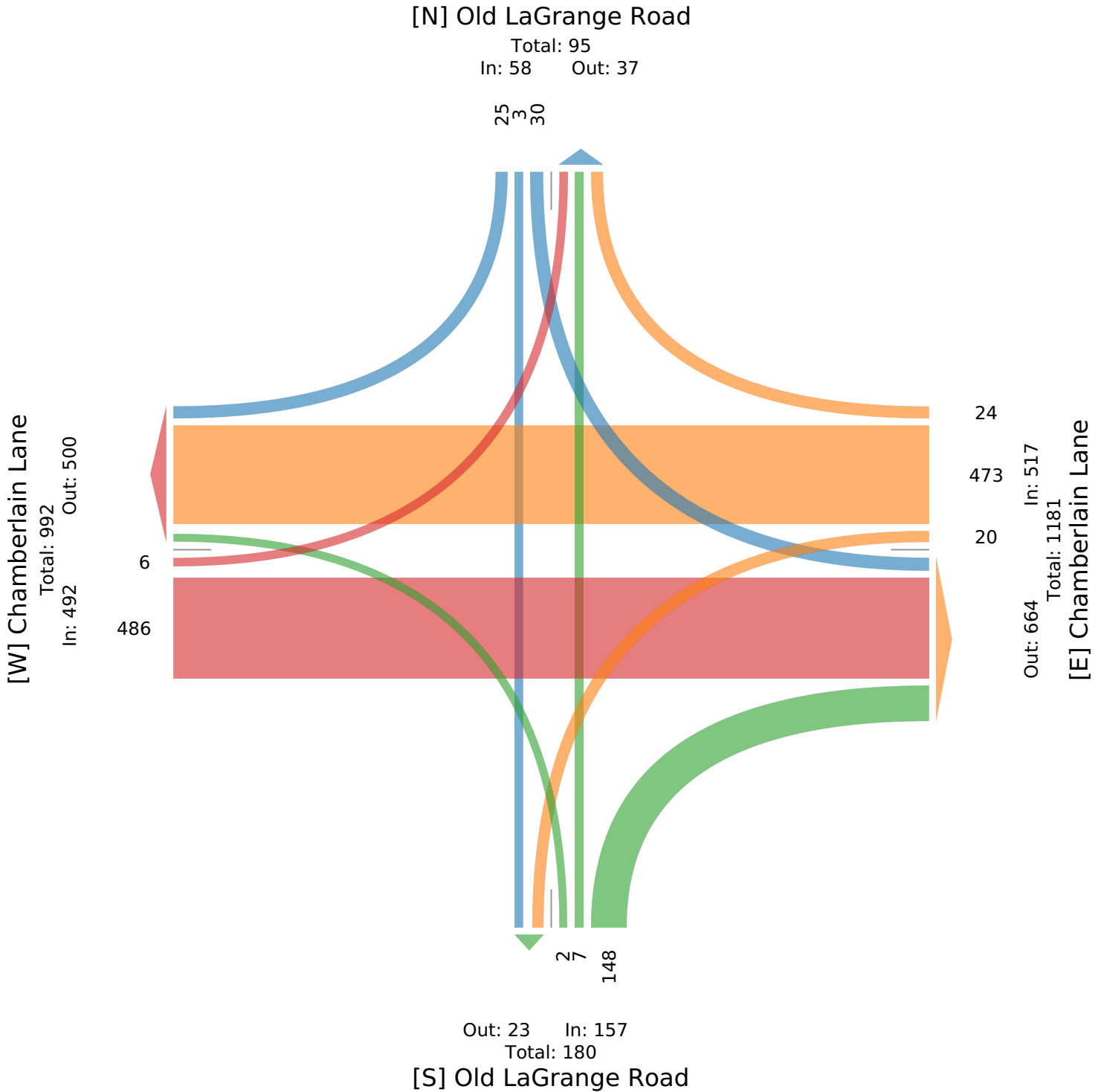
PM Peak (Apr 28 2026 4:30PM - 5:30 PM) - Overall Peak Hour

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1400570, Location: 38.289696, -85.512746

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US



Ford Truck Plant Expansion - TMC

Wed Apr 29, 2026

AM Peak (Apr 29 2026 4:45AM - 5:45 AM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1400570, Location: 38.289696, -85.512746

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US

Leg Direction	Old LaGrange Road Southbound					Chamberlain Lane Westbound					Old LaGrange Road Northbound					Chamberlain Lane Eastbound					Int	
	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App		
2026-04-29 4:45AM	2	0	0	0	2	1	96	0	0	97	1	1	0	0	2	0	84	0	0	84	185	
5:00AM	4	0	3	0	7	0	112	0	0	112	2	0	0	0	2	0	82	0	0	82	203	
5:15AM	5	1	2	0	8	0	153	0	0	153	3	0	0	0	3	0	116	0	0	116	280	
5:30AM	14	0	2	0	16	0	218	0	0	218	2	0	2	0	4	0	19	0	0	19	257	
Total	25	1	7	0	33	1	579	0	0	580	8	1	2	0	11	0	301	0	0	301	925	
% Approach	75.8%	3.0%	21.2%	0%	-	0.2%	99.8%	0%	0%	-	72.7%	9.1%	18.2%	0%	-	0%	100%	0%	0%	-	-	
% Total	2.7%	0.1%	0.8%	0%	3.6%	0.1%	62.6%	0%	0%	62.7%	0.9%	0.1%	0.2%	0%	1.2%	0%	32.5%	0%	0%	32.5%	-	
PHF	0.446	0.250	0.583	-	0.516	0.250	0.664	-	-	0.665	0.667	0.250	0.250	-	0.688	-	0.649	-	-	0.649	0.826	
Motorcycles	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
% Motorcycles	0%	0%	0%	0%	0%	0%	0.2%	0%	0%	0.2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.1%	
Lights	25	1	7	0	33	1	570	0	0	571	8	1	2	0	11	0	296	0	0	296	911	
% Lights	100%	100%	100%	0%	100%	100%	98.4%	0%	0%	98.4%	100%	100%	100%	0%	100%	0%	98.3%	0%	0%	98.3%	98.5%	
Single-Unit Trucks	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	4	
% Single-Unit Trucks	0%	0%	0%	0%	0%	0%	0.2%	0%	0%	0.2%	0%	0%	0%	0%	0%	0%	1.0%	0%	0%	1.0%	0.4%	
Articulated Trucks	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	2	0	0	2	9	
% Articulated Trucks	0%	0%	0%	0%	0%	0%	1.2%	0%	0%	1.2%	0%	0%	0%	0%	0%	0%	0.7%	0%	0%	0.7%	1.0%	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Buses	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	

*L: Left, R: Right, T: Thru, U: U-Turn

Ford Truck Plant Expansion - TMC

Wed Apr 29, 2026

AM Peak (Apr 29 2026 4:45AM - 5:45 AM)

All Classes (Motorcycles, Lights, Single-Unit Trucks, Articulated Trucks, Buses)

All Movements

ID: 1400570, Location: 38.289696, -85.512746

Provided by: United Consulting Engineers Inc.
1625 North Post Road, Indianapolis, IN, 12345, US

[N] Old LaGrange Road

Total: 35

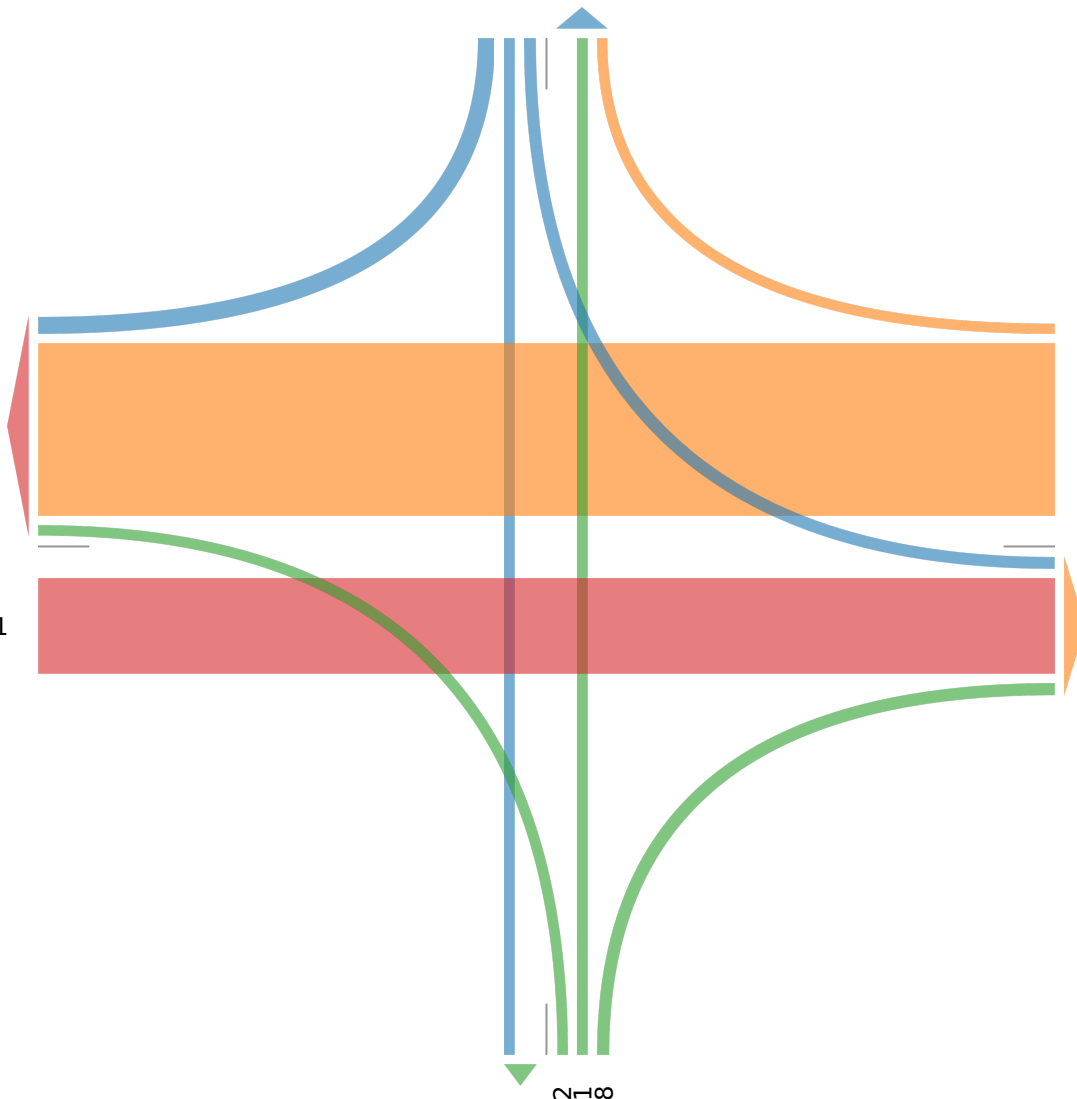
In: 33 Out: 2

25
1

[W] Chamberlain Lane

Total: 907
In: 301 Out: 606

301



1
579

Out: 316 In: 580
Total: 896
[E] Chamberlain Lane

Out: 1 In: 11
Total: 12
[S] Old LaGrange Road

Existing Volume Counts

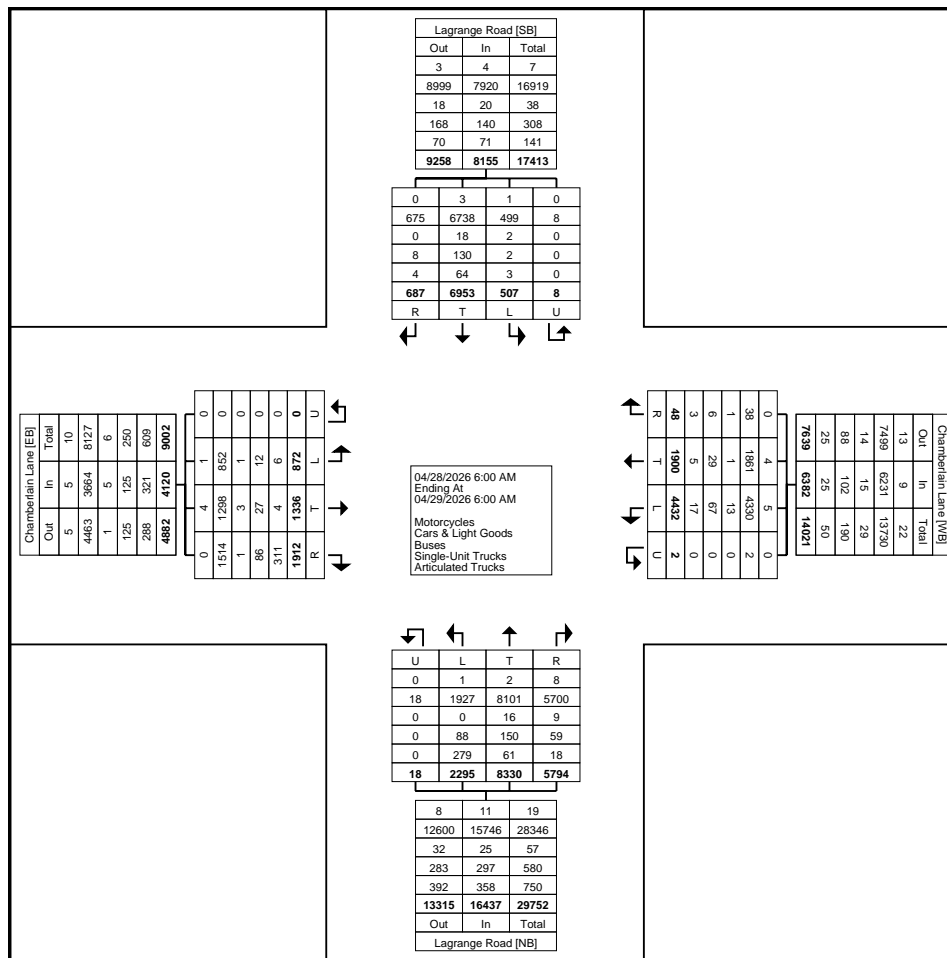
Chamberlain Lane & LaGrange Road

Turning Movement Data

Start Time	Chamberlain Lane Eastbound					Chamberlain Lane Westbound					Lagrange Road Northbound					Lagrange Road Southbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
6:00 AM	4	6	26	0	36	40	7	0	0	47	30	24	15	0	69	2	74	5	0	81	233
6:15 AM	3	7	8	0	18	45	8	1	0	54	39	44	17	0	100	1	84	3	0	88	260
6:30 AM	11	10	22	0	43	57	21	0	0	78	52	51	23	0	126	1	90	17	0	108	355
6:45 AM	5	3	22	0	30	56	21	1	0	78	52	84	31	0	167	3	126	4	0	133	408
Hourly Total	23	26	78	0	127	198	57	2	0	257	173	203	86	0	462	7	374	29	0	410	1256
7:00 AM	7	10	28	0	45	88	22	0	0	110	28	80	42	0	150	4	130	7	0	141	446
7:15 AM	3	10	17	0	30	85	14	0	0	99	32	115	70	1	218	1	183	7	0	191	538
7:30 AM	6	18	16	0	40	122	13	0	0	135	34	127	80	0	241	4	181	3	0	188	604
7:45 AM	9	17	30	0	56	112	32	0	0	144	35	106	113	0	254	3	194	3	0	200	654
Hourly Total	25	55	91	0	171	407	81	0	0	488	129	428	305	1	863	12	688	20	0	720	2242
8:00 AM	12	22	23	0	57	122	18	0	0	140	29	125	104	2	260	11	161	3	0	175	632
8:15 AM	7	24	16	0	47	102	19	3	0	124	22	105	102	0	229	6	153	3	0	162	562
8:30 AM	11	26	12	0	49	89	19	1	0	109	29	101	87	0	217	4	148	4	0	156	531
8:45 AM	7	14	14	0	35	95	14	0	0	109	30	115	101	0	246	4	138	6	1	149	539
Hourly Total	37	86	65	0	188	408	70	4	0	482	110	446	394	2	952	25	600	16	1	642	2264
9:00 AM	22	26	16	0	64	85	32	1	0	118	21	104	83	2	210	6	129	10	1	146	538
9:15 AM	7	10	17	0	34	72	33	1	0	106	32	83	52	0	167	8	102	8	0	118	425
9:30 AM	12	14	18	0	44	69	18	1	0	88	23	99	78	0	200	6	98	10	0	114	446
9:45 AM	6	18	17	0	41	71	16	0	0	87	19	103	77	0	199	4	98	6	0	108	435
Hourly Total	47	68	68	0	183	297	99	3	0	399	95	389	290	2	776	24	427	34	1	486	1844
10:00 AM	9	20	11	0	40	66	23	1	0	90	19	94	45	0	158	2	91	7	0	100	388
10:15 AM	11	16	8	0	35	41	21	1	0	63	20	87	66	1	174	5	93	8	0	106	378
10:30 AM	8	12	20	0	40	61	24	0	0	85	24	96	65	0	185	8	113	6	0	127	437
10:45 AM	5	18	10	0	33	65	25	0	0	90	21	99	72	0	192	3	85	10	0	98	413
Hourly Total	33	66	49	0	148	233	93	2	0	328	84	376	248	1	709	18	382	31	0	431	1616
11:00 AM	19	14	16	0	49	64	23	2	0	89	26	83	79	0	188	10	115	7	0	132	458
11:15 AM	16	33	21	0	70	62	29	0	0	91	17	81	61	0	159	12	103	10	0	125	445
11:30 AM	13	22	18	0	53	69	55	2	0	126	22	124	90	0	236	5	115	9	0	129	544
11:45 AM	12	18	20	0	50	101	40	0	0	141	21	157	85	0	263	10	116	7	0	133	587
Hourly Total	60	87	75	0	222	296	147	4	0	447	86	445	315	0	846	37	449	33	0	519	2034
12:00 PM	31	15	27	0	73	76	29	1	0	106	29	145	106	0	280	7	127	21	0	155	614
12:15 PM	16	20	22	0	58	95	33	0	0	128	21	114	84	0	219	10	111	14	0	135	540
12:30 PM	16	16	25	0	57	86	13	0	0	99	26	108	85	1	220	7	108	8	0	123	499
12:45 PM	9	26	28	0	63	100	29	0	0	129	18	123	80	0	221	7	89	12	0	108	521
Hourly Total	72	77	102	0	251	357	104	1	0	462	94	490	355	1	940	31	435	55	0	521	2174
1:00 PM	13	21	11	0	45	48	39	1	0	88	29	106	70	0	205	5	98	5	0	108	446
1:15 PM	17	21	13	0	51	87	19	0	0	106	26	115	98	0	239	8	105	7	0	120	516
1:30 PM	8	12	18	0	38	70	25	0	0	95	33	131	91	0	255	10	75	10	0	95	483
1:45 PM	17	13	25	0	55	58	16	1	0	75	17	130	83	1	231	3	89	10	0	102	463

Hourly Total	55	67	67	0	189	263	99	2	0	364	105	482	342	1	930	26	367	32	0	425	1908
2:00 PM	15	19	20	0	54	48	19	1	1	69	32	120	58	0	210	6	111	8	2	127	460
2:15 PM	15	22	38	0	75	60	28	0	0	88	25	103	88	0	216	6	76	5	0	87	466
2:30 PM	13	22	26	0	61	68	23	1	0	92	29	155	77	0	261	4	118	7	0	129	543
2:45 PM	14	32	27	0	73	57	32	0	0	89	16	135	85	1	237	6	91	9	1	107	506
Hourly Total	57	95	111	0	263	233	102	2	1	338	102	513	308	1	924	22	396	29	3	450	1975
3:00 PM	12	25	46	0	83	65	18	0	0	83	23	139	103	0	265	3	101	10	0	114	545
3:15 PM	12	33	39	0	84	56	30	0	0	86	31	150	82	0	263	8	140	8	0	156	589
3:30 PM	19	28	56	0	103	59	28	0	0	87	19	185	135	0	339	3	85	10	0	98	627
3:45 PM	16	32	31	0	79	52	47	0	0	99	32	168	149	1	350	11	93	5	0	109	637
Hourly Total	59	118	172	0	349	232	123	0	0	355	105	642	469	1	1217	25	419	33	0	477	2398
4:00 PM	14	22	14	0	50	74	41	0	0	115	29	167	112	0	308	5	100	12	0	117	590
4:15 PM	17	23	33	0	73	61	25	1	0	87	44	157	124	0	325	9	111	11	1	132	617
4:30 PM	23	35	53	0	111	71	48	2	0	121	46	188	159	0	393	9	113	15	0	137	762
4:45 PM	27	24	51	0	102	83	48	0	0	131	53	208	144	0	405	8	104	26	0	138	776
Hourly Total	81	104	151	0	336	289	162	3	0	454	172	720	539	0	1431	31	428	64	1	524	2745
5:00 PM	27	50	94	0	171	71	62	0	0	133	65	190	123	1	379	7	118	27	0	152	835
5:15 PM	31	40	126	0	197	81	58	0	0	139	61	209	148	0	418	12	140	22	0	174	928
5:30 PM	12	22	39	0	73	77	31	0	0	108	30	218	127	0	375	8	121	24	0	153	709
5:45 PM	18	38	59	0	115	54	45	0	0	99	67	177	103	0	347	6	134	18	0	158	719
Hourly Total	88	150	318	0	556	283	196	0	0	479	223	794	501	1	1519	33	513	91	0	637	3191
6:00 PM	10	24	26	0	60	62	30	0	0	92	30	170	119	0	319	11	113	10	0	134	605
6:15 PM	11	21	20	0	52	60	24	0	0	84	39	143	111	0	293	20	111	11	0	142	571
6:30 PM	11	23	12	0	46	66	24	0	0	90	27	156	93	1	277	4	84	4	0	92	505
6:45 PM	2	3	2	0	7	59	3	0	0	62	6	117	122	1	246	23	129	0	0	152	467
Hourly Total	34	71	60	0	165	247	81	0	0	328	102	586	445	2	1135	58	437	25	0	520	2148
7:00 PM	0	0	0	0	0	66	0	4	0	70	0	130	103	0	233	7	95	0	0	102	405
7:15 PM	6	18	9	0	33	48	23	5	0	76	26	134	98	0	258	8	55	8	0	71	438
7:30 PM	16	16	7	0	39	39	17	2	0	58	16	110	69	0	195	15	52	11	0	78	370
7:45 PM	7	13	8	0	28	26	11	1	0	38	9	117	61	1	188	7	34	5	0	46	300
Hourly Total	29	47	24	0	100	179	51	12	0	242	51	491	331	1	874	37	236	24	0	297	1513
8:00 PM	8	18	11	0	37	32	26	0	0	58	24	111	72	0	207	13	52	2	0	67	369
8:15 PM	6	19	7	0	32	30	12	1	0	43	13	110	82	1	206	6	55	4	0	65	346
8:30 PM	0	19	5	0	24	35	22	0	0	57	12	104	60	1	177	6	55	3	0	64	322
8:45 PM	10	14	11	0	35	21	11	1	0	33	9	98	62	0	169	4	50	6	1	61	298
Hourly Total	24	70	34	0	128	118	71	2	0	191	58	423	276	2	759	29	212	15	1	257	1335
9:00 PM	18	10	7	0	35	31	19	0	0	50	11	83	81	0	175	9	56	7	0	72	332
9:15 PM	1	9	3	0	13	36	15	2	0	53	10	70	50	0	130	11	40	3	0	54	250
9:30 PM	2	11	7	0	20	19	6	1	0	26	7	69	38	0	114	3	31	2	0	36	196
9:45 PM	6	8	4	0	18	19	8	1	0	28	10	55	31	0	96	5	20	2	0	27	169
Hourly Total	27	38	21	0	86	105	48	4	0	157	38	277	200	0	515	28	147	14	0	189	947
10:00 PM	3	6	8	0	17	21	4	1	0	26	6	39	33	0	78	4	37	2	0	43	164
10:15 PM	2	1	2	0	5	19	5	0	0	24	1	39	19	0	59	9	37	0	0	46	134
10:30 PM	0	3	4	0	7	12	4	0	0	16	2	42	14	0	58	0	22	1	0	23	104
10:45 PM	3	5	4	0	12	9	4	1	0	14	13	32	24	0	69	10	14	2	0	26	121
Hourly Total	8	15	18	0	41	61	17	2	0	80	22	152	90	0	264	23	110	5	0	138	523
11:00 PM	4	5	8	0	17	9	5	0	0	14	5	29	13	0	47	0	14	1	0	15	93
11:15 PM	6	7	8	0	21	14	3	0	0	17	3	24	15	0	42	3	12	2	0	17	97
11:30 PM	3	6	4	0	13	12	6	0	0	18	7	24	18	0	49	0	10	2	0	12	92
11:45 PM	4	1	1	0	6	5	12	1	0	18	5	18	10	0	33	0	3	0	0	3	60
Hourly Total	17	19	21	0	57	40	26	1	0	67	20	95	56	0	171	3	39	5	0	47	342
12:00 AM	13	6	3	0	22	5	7	0	0	12	4	14	11	0	29	1	3	4	0	8	71

12:15 AM	8	5	2	0	15	6	13	0	0	19	4	9	7	0	20	11	7	4	0	22	76
12:30 AM	3	2	1	0	6	9	3	1	0	13	5	14	5	0	24	1	3	2	0	6	49
12:45 AM	2	1	4	0	7	6	3	0	0	9	3	8	9	0	20	1	3	2	0	6	42
Hourly Total	26	14	10	0	50	26	26	1	0	53	16	45	32	0	93	14	16	12	0	42	238
1:00 AM	0	0	3	0	3	3	1	0	0	4	4	8	5	0	17	5	0	1	0	6	30
1:15 AM	3	0	6	0	9	3	0	2	0	5	4	11	3	0	18	1	5	0	0	6	38
1:30 AM	2	1	7	0	10	4	2	0	0	6	5	10	3	0	18	3	3	0	0	6	40
1:45 AM	1	2	9	0	12	3	2	0	1	6	6	10	4	0	20	0	3	0	0	3	41
Hourly Total	6	3	25	0	34	13	5	2	1	21	19	39	15	0	73	9	11	1	0	21	149
2:00 AM	2	1	6	0	9	6	0	0	0	6	4	9	2	0	15	2	10	0	0	12	42
2:15 AM	0	0	0	0	0	4	0	1	0	5	0	4	4	0	8	2	3	0	0	5	18
2:30 AM	0	0	0	0	0	6	0	0	0	6	0	5	5	1	11	2	7	0	0	9	26
2:45 AM	0	0	6	0	6	2	3	0	0	5	9	3	4	0	16	0	6	2	0	8	35
Hourly Total	2	1	12	0	15	18	3	1	0	22	13	21	15	1	50	6	26	2	0	34	121
3:00 AM	1	4	14	0	19	1	2	0	0	3	2	6	1	0	9	1	4	0	0	5	36
3:15 AM	0	0	8	0	8	2	1	0	0	3	4	5	2	0	11	2	5	0	0	7	29
3:30 AM	0	1	8	0	9	2	1	0	0	3	5	4	2	0	11	1	5	1	0	7	30
3:45 AM	0	0	0	0	0	6	0	0	0	6	0	5	12	1	18	2	10	1	0	13	37
Hourly Total	1	5	30	0	36	11	4	0	0	15	11	20	17	1	49	6	24	2	0	32	132
4:00 AM	6	4	10	0	20	2	14	0	0	16	10	10	8	0	28	0	9	4	0	13	77
4:15 AM	5	3	22	0	30	4	2	0	0	6	20	13	6	0	39	0	12	3	1	16	91
4:30 AM	7	9	50	0	66	12	3	0	0	15	18	20	11	0	49	1	30	2	0	33	163
4:45 AM	10	10	62	0	82	15	21	0	0	36	51	25	20	0	96	0	21	19	0	40	254
Hourly Total	28	26	144	0	198	33	40	0	0	73	99	68	45	0	212	1	72	28	1	102	585
5:00 AM	12	11	53	0	76	16	18	0	0	34	86	18	17	0	121	0	26	8	0	34	265
5:15 AM	15	14	87	0	116	21	68	0	0	89	78	45	40	0	163	1	37	23	0	61	429
5:30 AM	6	1	16	0	23	27	71	0	0	98	105	60	40	0	205	1	41	34	0	76	402
5:45 AM	0	2	10	0	12	21	38	0	0	59	99	62	23	0	184	0	41	22	0	63	318
Hourly Total	33	28	166	0	227	85	195	0	0	280	368	185	120	0	673	2	145	87	0	234	1414
Grand Total	872	1336	1912	0	4120	4432	1900	48	2	6382	2295	8330	5794	18	16437	507	6953	687	8	8155	35094
Approach %	21.2	32.4	46.4	0.0	-	69.4	29.8	0.8	0.0	-	14.0	50.7	35.2	0.1	-	6.2	85.3	8.4	0.1	-	-
Total %	2.5	3.8	5.4	0.0	11.7	12.6	5.4	0.1	0.0	18.2	6.5	23.7	16.5	0.1	46.8	1.4	19.8	2.0	0.0	23.2	-
Motorcycles	1	4	0	0	5	5	4	0	0	9	1	2	8	0	11	1	3	0	0	4	29
% Motorcycles	0.1	0.3	0.0	-	0.1	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.1
Cars & Light Goods	852	1298	1514	0	3664	4330	1861	38	2	6231	1927	8101	5700	18	15746	499	6738	675	8	7920	33561
% Cars & Light Goods	97.7	97.2	79.2	-	88.9	97.7	97.9	79.2	100.0	97.6	84.0	97.3	98.4	100.0	95.8	98.4	96.9	98.3	100.0	97.1	95.6
Buses	1	3	1	0	5	13	1	1	0	15	0	16	9	0	25	2	18	0	0	20	65
% Buses	0.1	0.2	0.1	-	0.1	0.3	0.1	2.1	0.0	0.2	0.0	0.2	0.2	0.0	0.2	0.4	0.3	0.0	0.0	0.2	0.2
Single-Unit Trucks	12	27	86	0	125	67	29	6	0	102	88	150	59	0	297	2	130	8	0	140	664
% Single-Unit Trucks	1.4	2.0	4.5	-	3.0	1.5	1.5	12.5	0.0	1.6	3.8	1.8	1.0	0.0	1.8	0.4	1.9	1.2	0.0	1.7	1.9
Articulated Trucks	6	4	311	0	321	17	5	3	0	25	279	61	18	0	358	3	64	4	0	71	775
% Articulated Trucks	0.7	0.3	16.3	-	7.8	0.4	0.3	6.3	0.0	0.4	12.2	0.7	0.3	0.0	2.2	0.6	0.9	0.6	0.0	0.9	2.2



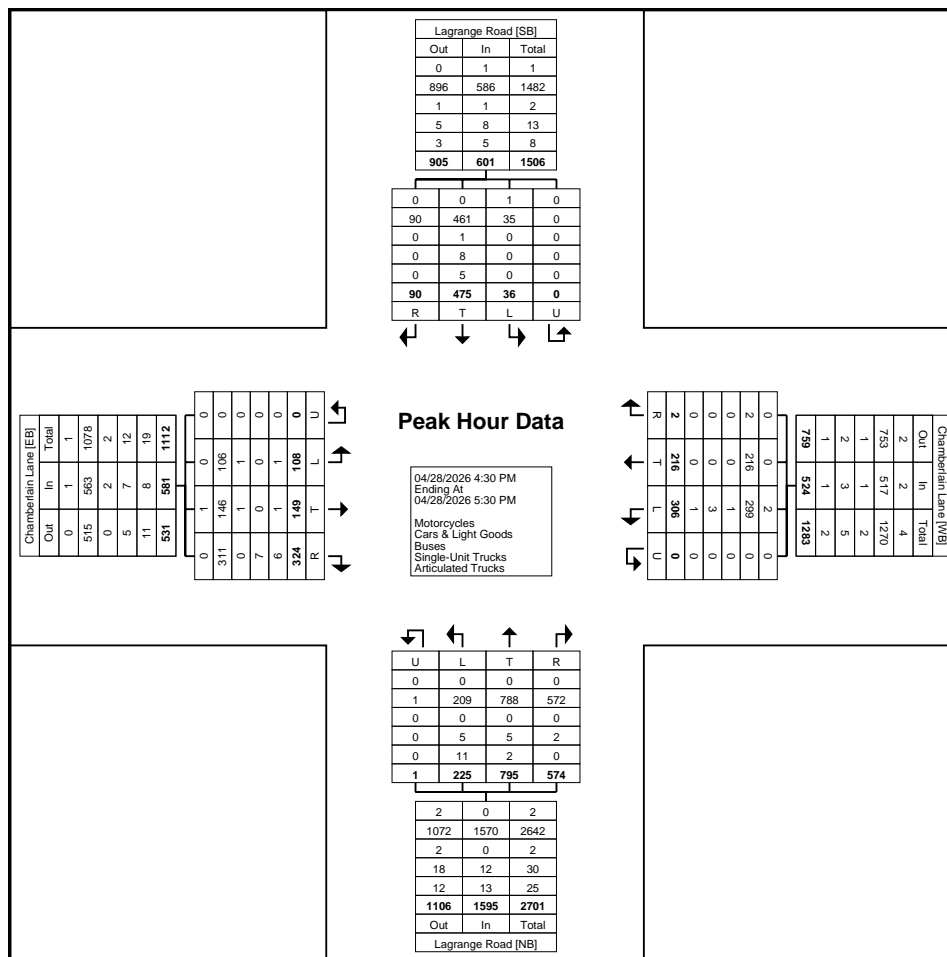
Turning Movement Data Plot

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Chamberlain Lane Eastbound					Chamberlain Lane Westbound					Lagrange Road Northbound					Lagrange Road Southbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
7:30 AM	6	18	16	0	40	122	13	0	0	135	34	127	80	0	241	4	181	3	0	188	604
7:45 AM	9	17	30	0	56	112	32	0	0	144	35	106	113	0	254	3	194	3	0	200	654
8:00 AM	12	22	23	0	57	122	18	0	0	140	29	125	104	2	260	11	161	3	0	175	632
8:15 AM	7	24	16	0	47	102	19	3	0	124	22	105	102	0	229	6	153	3	0	162	562
Total	34	81	85	0	200	458	82	3	0	543	120	463	399	2	984	24	689	12	0	725	2452
Approach %	17.0	40.5	42.5	0.0	-	84.3	15.1	0.6	0.0	-	12.2	47.1	40.5	0.2	-	3.3	95.0	1.7	0.0	-	-
Total %	1.4	3.3	3.5	0.0	8.2	18.7	3.3	0.1	0.0	22.1	4.9	18.9	16.3	0.1	40.1	1.0	28.1	0.5	0.0	29.6	-
PHF	0.708	0.844	0.708	0.000	0.877	0.939	0.641	0.250	0.000	0.943	0.857	0.911	0.883	0.250	0.946	0.545	0.888	1.000	0.000	0.906	0.937
Motorcycles	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
% Motorcycles	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	-	0.0	0.0
Cars & Light Goods	30	75	55	0	160	448	77	2	0	527	103	448	389	2	942	24	677	12	0	713	2342
% Cars & Light Goods	88.2	92.6	64.7	-	80.0	97.8	93.9	66.7	-	97.1	85.8	96.8	97.5	100.0	95.7	100.0	98.3	100.0	-	98.3	95.5
Buses	0	0	1	0	1	1	0	0	0	1	0	1	2	3	0	2	2	0	0	2	7
% Buses	0.0	0.0	1.2	-	0.5	0.2	0.0	0.0	-	0.2	0.0	0.2	0.5	0.3	0.0	0.3	0.3	0.0	-	0.3	0.3
Single-Unit Trucks	4	4	5	0	13	9	4	0	0	13	3	11	5	19	0	7	0	0	0	7	52
% Single-Unit Trucks	11.8	4.9	5.9	-	6.5	2.0	4.9	0.0	-	2.4	2.5	2.4	1.3	1.9	0.0	1.0	0.0	-	-	1.0	2.1
Articulated Trucks	0	2	24	0	26	0	1	1	0	2	14	2	3	19	0	3	0	0	0	3	50
% Articulated Trucks	0.0	2.5	28.2	-	13.0	0.0	1.2	33.3	-	0.4	11.7	0.4	0.8	1.9	0.0	0.4	0.0	-	-	0.4	2.0

Turning Movement Peak Hour Data (4:30 PM)

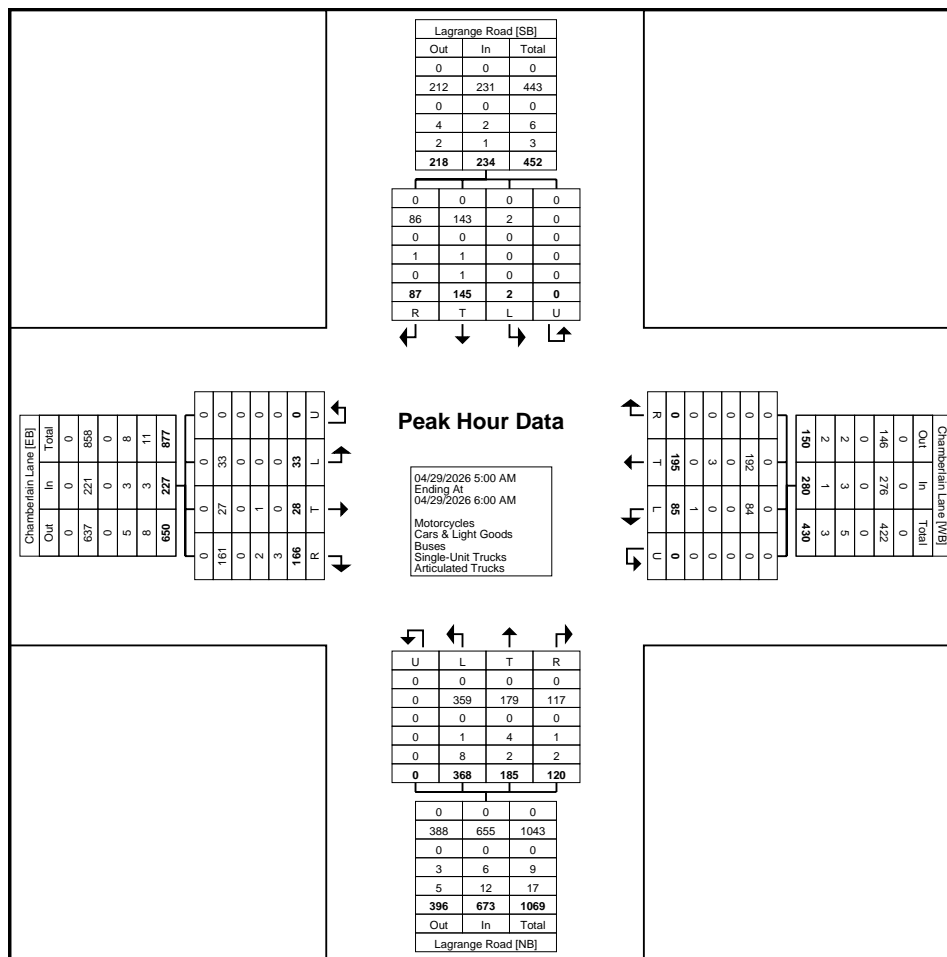
Start Time	Chamberlain Lane Eastbound					Chamberlain Lane Westbound					Lagrange Road Northbound					Lagrange Road Southbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
4:30 PM	23	35	53	0	111	71	48	2	0	121	46	188	159	0	393	9	113	15	0	137	762
4:45 PM	27	24	51	0	102	83	48	0	0	131	53	208	144	0	405	8	104	26	0	138	776
5:00 PM	27	50	94	0	171	71	62	0	0	133	65	190	123	1	379	7	118	27	0	152	835
5:15 PM	31	40	126	0	197	81	58	0	0	139	61	209	148	0	418	12	140	22	0	174	928
Total	108	149	324	0	581	306	216	2	0	524	225	795	574	1	1595	36	475	90	0	601	3301
Approach %	18.6	25.6	55.8	0.0	-	58.4	41.2	0.4	0.0	-	14.1	49.8	36.0	0.1	-	6.0	79.0	15.0	0.0	-	-
Total %	3.3	4.5	9.8	0.0	17.6	9.3	6.5	0.1	0.0	15.9	6.8	24.1	17.4	0.0	48.3	1.1	14.4	2.7	0.0	18.2	-
PHF	0.871	0.745	0.643	0.000	0.737	0.922	0.871	0.250	0.000	0.942	0.865	0.951	0.903	0.250	0.954	0.750	0.848	0.833	0.000	0.864	0.889
Motorcycles	0	1	0	0	1	2	0	0	0	2	0	0	0	0	0	1	0	0	0	1	4
% Motorcycles	0.0	0.7	0.0	-	0.2	0.7	0.0	0.0	-	0.4	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	-	0.2	0.1
Cars & Light Goods	106	146	311	0	563	299	216	2	0	517	209	788	572	1	1570	35	461	90	0	586	3236
% Cars & Light Goods	98.1	98.0	96.0	-	96.9	97.7	100.0	100.0	-	98.7	92.9	99.1	99.7	100.0	98.4	97.2	97.1	100.0	-	97.5	98.0
Buses	1	1	0	0	2	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	4
% Buses	0.9	0.7	0.0	-	0.3	0.3	0.0	0.0	-	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	-	0.2	0.1
Single-Unit Trucks	0	0	7	0	7	3	0	0	0	3	5	5	2	0	12	0	8	0	0	8	30
% Single-Unit Trucks	0.0	0.0	2.2	-	1.2	1.0	0.0	0.0	-	0.6	2.2	0.6	0.3	0.0	0.8	0.0	1.7	0.0	-	1.3	0.9
Articulated Trucks	1	1	6	0	8	1	0	0	0	1	11	2	0	0	13	0	5	0	0	5	27
% Articulated Trucks	0.9	0.7	1.9	-	1.4	0.3	0.0	0.0	-	0.2	4.9	0.3	0.0	0.0	0.8	0.0	1.1	0.0	-	0.8	0.8



Turning Movement Peak Hour Data Plot (4:30 PM)

Turning Movement Peak Hour Data (5:00 AM)

Start Time	Chamberlain Lane Eastbound					Chamberlain Lane Westbound					Lagrange Road Northbound					Lagrange Road Southbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
5:00 AM	12	11	53	0	76	16	18	0	0	34	86	18	17	0	121	0	26	8	0	34	265
5:15 AM	15	14	87	0	116	21	68	0	0	89	78	45	40	0	163	1	37	23	0	61	429
5:30 AM	6	1	16	0	23	27	71	0	0	98	105	60	40	0	205	1	41	34	0	76	402
5:45 AM	0	2	10	0	12	21	38	0	0	59	99	62	23	0	184	0	41	22	0	63	318
Total	33	28	166	0	227	85	195	0	0	280	368	185	120	0	673	2	145	87	0	234	1414
Approach %	14.5	12.3	73.1	0.0	-	30.4	69.6	0.0	0.0	-	54.7	27.5	17.8	0.0	-	0.9	62.0	37.2	0.0	-	-
Total %	2.3	2.0	11.7	0.0	16.1	6.0	13.8	0.0	0.0	19.8	26.0	13.1	8.5	0.0	47.6	0.1	10.3	6.2	0.0	16.5	-
PHF	0.550	0.500	0.477	0.000	0.489	0.787	0.687	0.000	0.000	0.714	0.876	0.746	0.750	0.000	0.821	0.500	0.884	0.640	0.000	0.770	0.824
Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Motorcycles	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
Cars & Light Goods	33	27	161	0	221	84	192	0	0	276	359	179	117	0	655	2	143	86	0	231	1383
% Cars & Light Goods	100.0	96.4	97.0	-	97.4	98.8	98.5	-	-	98.6	97.6	96.8	97.5	-	97.3	100.0	98.6	98.9	-	98.7	97.8
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	1	2	0	3	0	3	0	0	3	1	4	1	0	6	0	1	1	0	2	14
% Single-Unit Trucks	0.0	3.6	1.2	-	1.3	0.0	1.5	-	-	1.1	0.3	2.2	0.8	-	0.9	0.0	0.7	1.1	-	0.9	1.0
Articulated Trucks	0	0	3	0	3	1	0	0	0	1	8	2	2	0	12	0	1	0	0	1	17
% Articulated Trucks	0.0	0.0	1.8	-	1.3	1.2	0.0	-	-	0.4	2.2	1.1	1.7	-	1.8	0.0	0.7	0.0	-	0.4	1.2



Turning Movement Peak Hour Data Plot (5:00 AM)

Existing Volume Counts

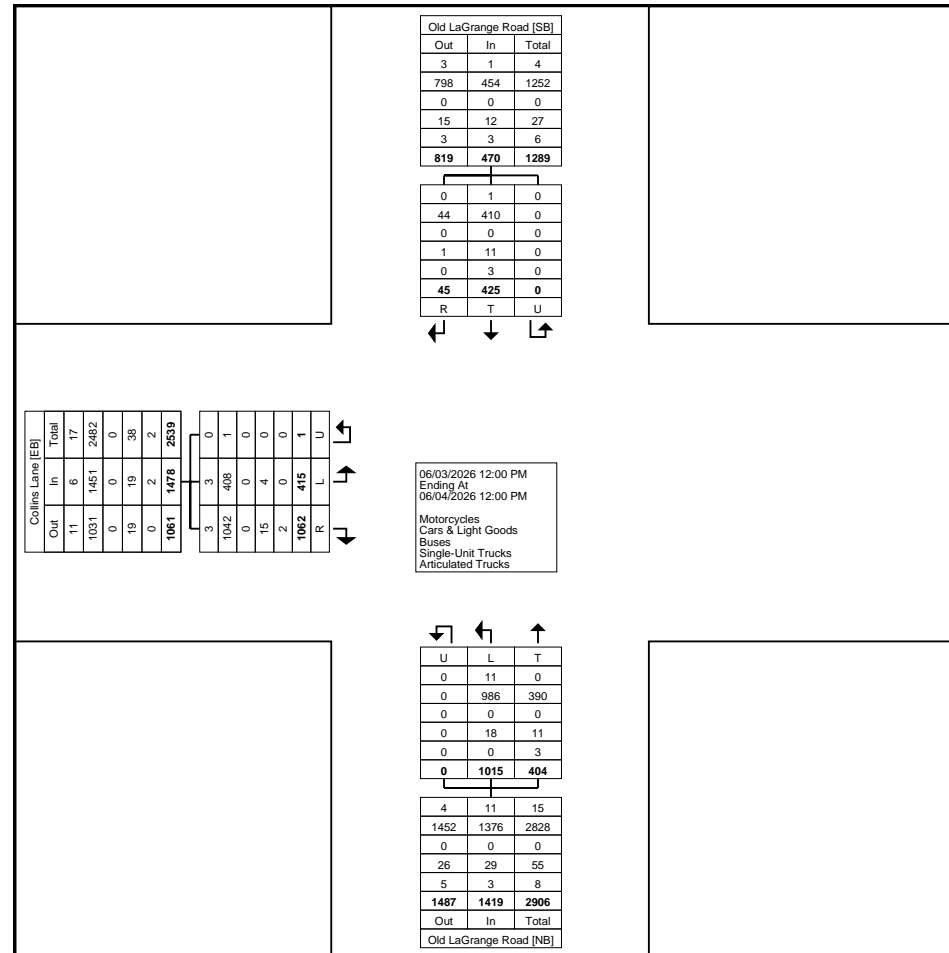
Collins Lane & Old LaGrange Road

Turning Movement Data

Start Time	Collins Lane Eastbound				Old LaGrange Road Northbound				Old LaGrange Road Southbound				Int. Total
	Left	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	
12:00 PM	2	7	0	9	12	7	0	19	5	3	0	8	36
12:15 PM	1	14	0	15	3	4	0	7	3	0	0	3	25
12:30 PM	2	13	0	15	8	8	0	16	9	0	0	9	40
12:45 PM	1	7	0	8	6	8	0	14	10	1	0	11	33
Hourly Total	6	41	0	47	29	27	0	56	27	4	0	31	134
1:00 PM	2	11	0	13	7	5	0	12	8	0	0	8	33
1:15 PM	0	16	0	16	7	4	0	11	8	0	0	8	35
1:30 PM	6	13	0	19	8	11	0	19	4	1	0	5	43
1:45 PM	3	14	0	17	13	6	0	19	10	0	0	10	46
Hourly Total	11	54	0	65	35	26	0	61	30	1	0	31	157
2:00 PM	4	27	0	31	5	4	0	9	6	0	0	6	46
2:15 PM	2	11	0	13	9	6	0	15	9	2	0	11	39
2:30 PM	1	20	0	21	11	7	0	18	5	0	0	5	44
2:45 PM	14	19	0	33	7	5	0	12	12	0	0	12	57
Hourly Total	21	77	0	98	32	22	0	54	32	2	0	34	186
3:00 PM	13	23	0	36	4	8	0	12	7	0	0	7	55
3:15 PM	8	30	0	38	8	9	0	17	7	0	0	7	62
3:30 PM	18	31	0	49	11	13	0	24	10	0	0	10	83
3:45 PM	12	25	0	37	11	8	0	19	9	1	0	10	66
Hourly Total	51	109	0	160	34	38	0	72	33	1	0	34	266
4:00 PM	11	38	0	49	11	5	0	16	5	2	0	7	72
4:15 PM	10	15	0	25	7	7	0	14	7	2	0	9	48
4:30 PM	42	36	0	78	17	4	0	21	9	2	0	11	110
4:45 PM	16	36	0	52	37	9	0	46	9	2	0	11	109
Hourly Total	79	125	0	204	72	25	0	97	30	8	0	38	339
5:00 PM	42	38	0	80	49	10	0	59	5	2	0	7	146
5:15 PM	29	45	0	74	65	15	0	80	7	1	0	8	162
5:30 PM	21	33	0	54	74	14	0	88	3	1	0	4	146
5:45 PM	8	25	0	33	56	15	0	71	3	0	0	3	107
Hourly Total	100	141	0	241	244	54	0	298	18	4	0	22	561
6:00 PM	13	14	0	27	33	8	0	41	8	1	0	9	77
6:15 PM	10	16	0	26	24	7	0	31	7	0	0	7	64
6:30 PM	3	12	0	15	18	3	0	21	4	0	0	4	40
6:45 PM	3	10	0	13	9	2	0	11	9	0	0	9	33
Hourly Total	29	52	0	81	84	20	0	104	28	1	0	29	214
7:00 PM	0	12	0	12	10	3	0	13	4	1	0	5	30
7:15 PM	0	7	0	7	10	2	0	12	15	0	0	15	34
7:30 PM	0	13	0	13	10	0	0	10	8	0	0	8	31
7:45 PM	0	13	0	13	8	1	0	9	10	0	0	10	32

Hourly Total	0	45	0	45	38	6	0	44	37	1	0	38	127
8:00 PM	1	16	0	17	12	1	0	13	7	0	0	7	37
8:15 PM	2	5	0	7	3	8	0	11	4	4	0	8	26
8:30 PM	0	6	0	6	4	1	0	5	4	0	0	4	15
8:45 PM	1	7	0	8	8	3	0	11	5	1	0	6	25
Hourly Total	4	34	0	38	27	13	0	40	20	5	0	25	103
9:00 PM	0	4	0	4	9	2	0	11	3	1	0	4	19
9:15 PM	1	2	0	3	4	1	0	5	3	0	0	3	11
9:30 PM	1	4	0	5	3	2	0	5	1	0	0	1	11
9:45 PM	0	3	0	3	0	0	0	0	2	0	0	2	5
Hourly Total	2	13	0	15	16	5	0	21	9	1	0	10	46
10:00 PM	0	2	0	2	1	1	0	2	1	0	0	1	5
10:15 PM	1	0	0	1	3	0	0	3	2	0	0	2	6
10:30 PM	0	0	0	0	5	1	0	6	8	0	0	8	14
10:45 PM	1	6	0	7	3	1	0	4	4	0	0	4	15
Hourly Total	2	8	0	10	12	3	0	15	15	0	0	15	40
11:00 PM	1	2	0	3	0	0	0	0	1	0	0	1	4
11:15 PM	0	3	0	3	0	5	0	5	0	0	0	0	8
11:30 PM	0	0	0	0	0	1	0	1	2	1	0	3	4
11:45 PM	0	1	0	1	1	1	0	2	1	2	0	3	6
Hourly Total	1	6	0	7	1	7	0	8	4	3	0	7	22
12:00 AM	3	1	1	5	2	1	0	3	1	1	0	2	10
12:15 AM	0	2	0	2	4	0	0	4	1	0	0	1	7
12:30 AM	0	1	0	1	0	0	0	0	1	0	0	1	2
12:45 AM	0	0	0	0	1	0	0	1	0	0	0	0	1
Hourly Total	3	4	1	8	7	1	0	8	3	1	0	4	20
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 AM	0	2	0	2	0	0	0	0	2	0	0	2	4
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 AM	0	1	0	1	0	0	0	0	1	0	0	1	2
Hourly Total	0	3	0	3	0	0	0	0	3	0	0	3	6
2:00 AM	0	3	0	3	1	0	0	1	0	1	0	1	5
2:15 AM	0	2	0	2	0	0	0	0	0	0	0	0	2
2:30 AM	0	2	0	2	2	0	0	2	0	0	0	0	4
2:45 AM	0	0	0	0	1	0	0	1	0	0	0	0	1
Hourly Total	0	7	0	7	4	0	0	4	0	1	0	1	12
3:00 AM	1	1	0	2	0	0	0	0	0	0	0	0	2
3:15 AM	0	1	0	1	1	0	0	1	6	0	0	6	8
3:30 AM	0	3	0	3	0	0	0	0	2	0	0	2	5
3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	1	5	0	6	1	0	0	1	8	0	0	8	15
4:00 AM	3	5	0	8	3	0	0	3	1	0	0	1	12
4:15 AM	1	6	0	7	1	0	0	1	0	0	0	0	8
4:30 AM	2	2	0	4	7	0	0	7	0	0	0	0	11
4:45 AM	2	10	0	12	2	0	0	2	0	0	0	0	14
Hourly Total	8	23	0	31	13	0	0	13	1	0	0	1	45
5:00 AM	2	6	0	8	23	0	0	23	0	1	0	1	32
5:15 AM	0	7	0	7	27	2	0	29	1	0	0	1	37
5:30 AM	4	2	0	6	48	16	0	64	0	1	0	1	71
5:45 AM	0	12	0	12	76	25	0	101	1	0	0	1	114
Hourly Total	6	27	0	33	174	43	0	217	2	2	0	4	254
6:00 AM	1	4	0	5	11	4	0	15	2	0	0	2	22

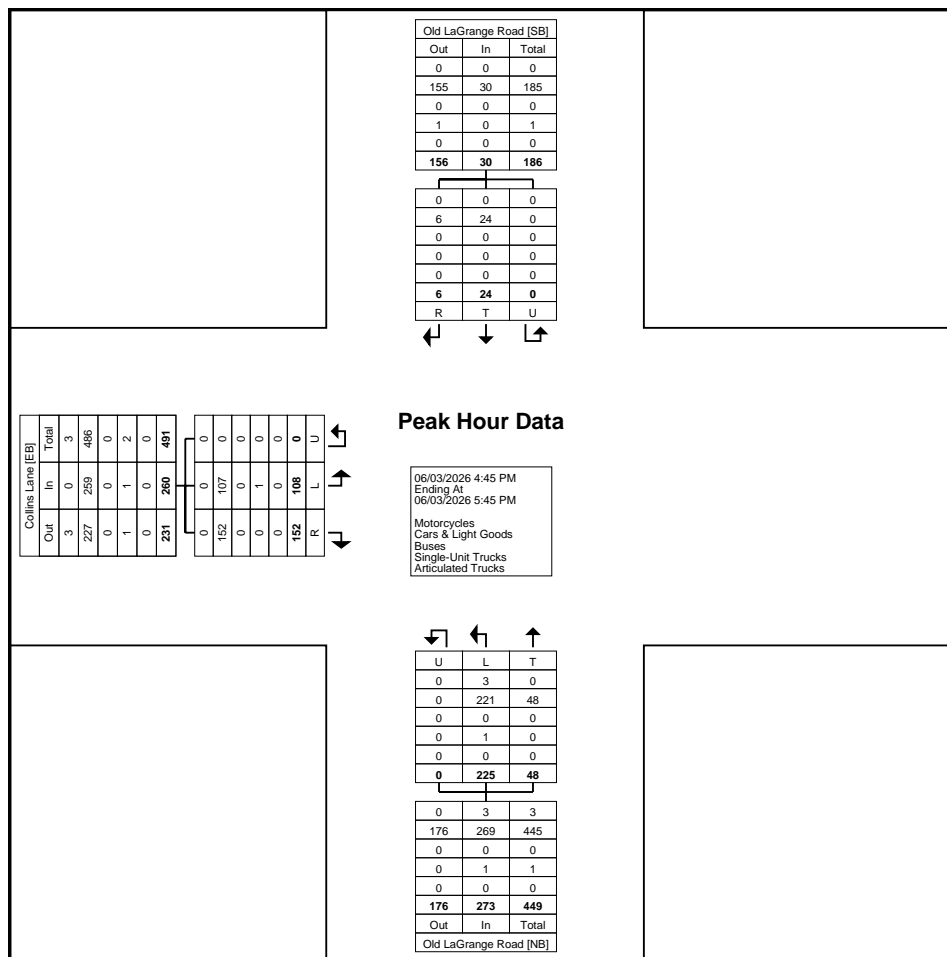
6:15 AM	4	1	0	5	8	0	0	8	0	0	0	0	13
6:30 AM	3	3	0	6	10	1	0	11	0	0	0	0	17
6:45 AM	1	1	0	2	7	2	0	9	5	0	0	5	16
Hourly Total	9	9	0	18	36	7	0	43	7	0	0	7	68
7:00 AM	0	3	0	3	1	4	0	5	1	0	0	1	9
7:15 AM	1	6	0	7	3	6	0	9	2	1	0	3	19
7:30 AM	3	10	0	13	10	5	0	15	5	0	0	5	33
7:45 AM	2	19	0	21	11	5	0	16	5	1	0	6	43
Hourly Total	6	38	0	44	25	20	0	45	13	2	0	15	104
8:00 AM	3	10	0	13	8	8	0	16	12	0	0	12	41
8:15 AM	5	18	0	23	7	7	0	14	5	1	0	6	43
8:30 AM	4	14	0	18	5	8	0	13	6	0	0	6	37
8:45 AM	3	11	0	14	5	9	0	14	2	1	0	3	31
Hourly Total	15	53	0	68	25	32	0	57	25	2	0	27	152
9:00 AM	28	39	0	67	10	1	0	11	7	0	0	7	85
9:15 AM	5	10	0	15	6	5	0	11	4	0	0	4	30
9:30 AM	3	11	0	14	12	4	0	16	5	0	0	5	35
9:45 AM	3	13	0	16	9	3	0	12	8	0	0	8	36
Hourly Total	39	73	0	112	37	13	0	50	24	0	0	24	186
10:00 AM	1	8	0	9	8	4	0	12	8	1	0	9	30
10:15 AM	4	7	0	11	7	2	0	9	6	2	0	8	28
10:30 AM	5	10	0	15	6	12	0	18	3	0	0	3	36
10:45 AM	3	19	0	22	10	4	0	14	6	2	0	8	44
Hourly Total	13	44	0	57	31	22	0	53	23	5	0	28	138
11:00 AM	1	16	0	17	11	3	0	14	6	0	0	6	37
11:15 AM	5	15	0	20	7	7	0	14	9	0	0	9	43
11:30 AM	2	15	0	17	12	4	0	16	8	1	0	9	42
11:45 AM	1	25	0	26	8	6	0	14	10	0	0	10	50
Hourly Total	9	71	0	80	38	20	0	58	33	1	0	34	172
Grand Total	415	1062	1	1478	1015	404	0	1419	425	45	0	470	3367
Approach %	28.1	71.9	0.1	-	71.5	28.5	0.0	-	90.4	9.6	0.0	-	-
Total %	12.3	31.5	0.0	43.9	30.1	12.0	0.0	42.1	12.6	1.3	0.0	14.0	-
Motorcycles	3	3	0	6	11	0	0	11	1	0	0	1	18
% Motorcycles	0.7	0.3	0.0	0.4	1.1	0.0	-	0.8	0.2	0.0	-	0.2	0.5
Cars & Light Goods	408	1042	1	1451	986	390	0	1376	410	44	0	454	3281
% Cars & Light Goods	98.3	98.1	100.0	98.2	97.1	96.5	-	97.0	96.5	97.8	-	96.6	97.4
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	4	15	0	19	18	11	0	29	11	1	0	12	60
% Single-Unit Trucks	1.0	1.4	0.0	1.3	1.8	2.7	-	2.0	2.6	2.2	-	2.6	1.8
Articulated Trucks	0	2	0	2	0	3	0	3	3	0	0	3	8
% Articulated Trucks	0.0	0.2	0.0	0.1	0.0	0.7	-	0.2	0.7	0.0	-	0.6	0.2



Turning Movement Data Plot

Turning Movement Peak Hour Data (4:45 PM)

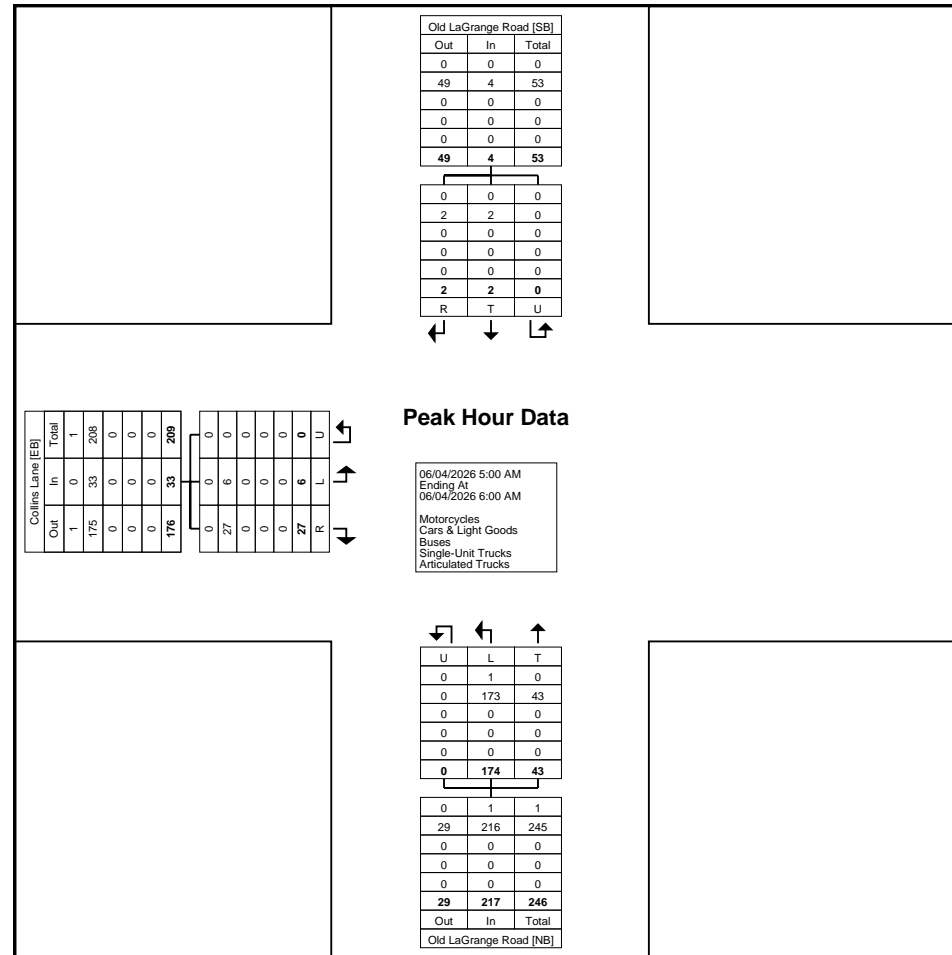
Start Time	Collins Lane Eastbound				Old LaGrange Road Northbound				Old LaGrange Road Southbound				Int. Total
	Left	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	
4:45 PM	16	36	0	52	37	9	0	46	9	2	0	11	109
5:00 PM	42	38	0	80	49	10	0	59	5	2	0	7	146
5:15 PM	29	45	0	74	65	15	0	80	7	1	0	8	162
5:30 PM	21	33	0	54	74	14	0	88	3	1	0	4	146
Total	108	152	0	260	225	48	0	273	24	6	0	30	563
Approach %	41.5	58.5	0.0	-	82.4	17.6	0.0	-	80.0	20.0	0.0	-	-
Total %	19.2	27.0	0.0	46.2	40.0	8.5	0.0	48.5	4.3	1.1	0.0	5.3	-
PHF	0.643	0.844	0.000	0.813	0.760	0.800	0.000	0.776	0.667	0.750	0.000	0.682	0.869
Motorcycles	0	0	0	0	3	0	0	3	0	0	0	0	3
% Motorcycles	0.0	0.0	-	0.0	1.3	0.0	-	1.1	0.0	0.0	-	0.0	0.5
Cars & Light Goods	107	152	0	259	221	48	0	269	24	6	0	30	558
% Cars & Light Goods	99.1	100.0	-	99.6	98.2	100.0	-	98.5	100.0	100.0	-	100.0	99.1
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	1	0	0	1	1	0	0	1	0	0	0	0	2
% Single-Unit Trucks	0.9	0.0	-	0.4	0.4	0.0	-	0.4	0.0	0.0	-	0.0	0.4
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0



Turning Movement Peak Hour Data Plot (4:45 PM)

Turning Movement Peak Hour Data (5:00 AM)

Start Time	Collins Lane Eastbound				Old LaGrange Road Northbound				Old LaGrange Road Southbound				Int. Total
	Left	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	
5:00 AM	2	6	0	8	23	0	0	23	0	1	0	1	32
5:15 AM	0	7	0	7	27	2	0	29	1	0	0	1	37
5:30 AM	4	2	0	6	48	16	0	64	0	1	0	1	71
5:45 AM	0	12	0	12	76	25	0	101	1	0	0	1	114
Total	6	27	0	33	174	43	0	217	2	2	0	4	254
Approach %	18.2	81.8	0.0	-	80.2	19.8	0.0	-	50.0	50.0	0.0	-	-
Total %	2.4	10.6	0.0	13.0	68.5	16.9	0.0	85.4	0.8	0.8	0.0	1.6	-
PHF	0.375	0.563	0.000	0.688	0.572	0.430	0.000	0.537	0.500	0.500	0.000	1.000	0.557
Motorcycles	0	0	0	0	1	0	0	1	0	0	0	0	1
% Motorcycles	0.0	0.0	-	0.0	0.6	0.0	-	0.5	0.0	0.0	-	0.0	0.4
Cars & Light Goods	6	27	0	33	173	43	0	216	2	2	0	4	253
% Cars & Light Goods	100.0	100.0	-	100.0	99.4	100.0	-	99.5	100.0	100.0	-	100.0	99.6
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Single-Unit Trucks	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0



Turning Movement Peak Hour Data Plot (5:00 AM)

Appendix D

Trip Generation

Ford Employee Headcounts

KTP Current Employee Count Body and Paint Shop

	Count (Total)	Count (Shift)	Comment
Body Shop			(2 shift pattern with current state 5x8's).
Salary Staff	37	19	
Operators	327	164	262 * 25% absenteeism Coverage = 65 (327 Total)
Maintenance	106	53	
MP&L	32	16	
Sub-Total	502	251	
Paint Shop			(3 crew pattern with current state).
Salary Staff	30	15	
Operators	274	137	219 * 25% absenteeism coverage = 55 (274 Total)
Maintenance	67	34	
MP&L	3	2	
Sub-Total	374	187	
Total	876	438	

Existing Lot 384
 Parking Lot 150
 Avaiavblity New 234

 514
 280

Parking Capacity

Existing Total Parking Stalls	384
Proposed Parking Lot Expansion	280
<hr/>	
Total Available Parking	664

Peak Parking Demand

Current Parking	150
New Development Parking	458
<hr/>	
Total Required Parking	608

B / (W) 56

Time	Body Shop				Paint Shop				Total
	Salary Staff	Operators	Maintenance	MP&L	Salary Staff	Operators	Maintenance	MP&L	Count
5:00 AM									
6:00 AM	37	164	53	16	15	137	34	2	458
7:00 AM	37	164	53	16	15	137	34	2	458
8:00 AM	37	164	53	16	15	137	34	2	458
9:00 AM	37	164	53	16	15	137	34	2	458
10:00 AM	37	164	53	16	15	137	34	2	458
11:00 AM	37	164	53	16	15	137	34	2	458
12:00 PM	37	164	53	16	15	137	34	2	458
1:00 PM	37	164	53	16	15	137	34	2	458
2:00 PM	37	164	53	16	15	137	34	2	458
3:00 PM	37	164	53	16	15	137	34	2	458
4:00 PM	37	164	53	16	15	137	34	2	458
5:00 PM									
6:00 PM	0	164	53	16	0	137	34	2	406
7:00 PM	0	164	53	16	0	137	34	2	406
8:00 PM	0	164	53	16	0	137	34	2	406
9:00 PM	0	164	53	16	0	137	34	2	406
10:00 PM	0	164	53	16	0	137	34	2	406
11:00 PM	0	164	53	16	0	137	34	2	406
12:00 AM	0	164	53	16	0	137	34	2	406
1:00 AM	0	164	53	16	0	137	34	2	406
2:00 AM	0	164	53	16	0	137	34	2	406
3:00 AM	0	164	53	16	0	137	34	2	406
4:00 AM	0	164	53	16	0	137	34	2	406

Area	Count	Count (Total)	Count (Shift)
Body Shop			
Salary Staff	66	37	19
Operators	275	327	164
Maintenance	40	106	53
MP&L	30	32	16
Sub-Total	411	502	251
Paint Shop	Count		
Salary Staff	40	30	15
Operators	231	274	137
Maintenance	39	67	34
MP&L	6	3	2
Sub-Total	316	374	187
Total	727	876	438

ITE Trip Generation

Trucks AM Peak

Manufacturing (140)

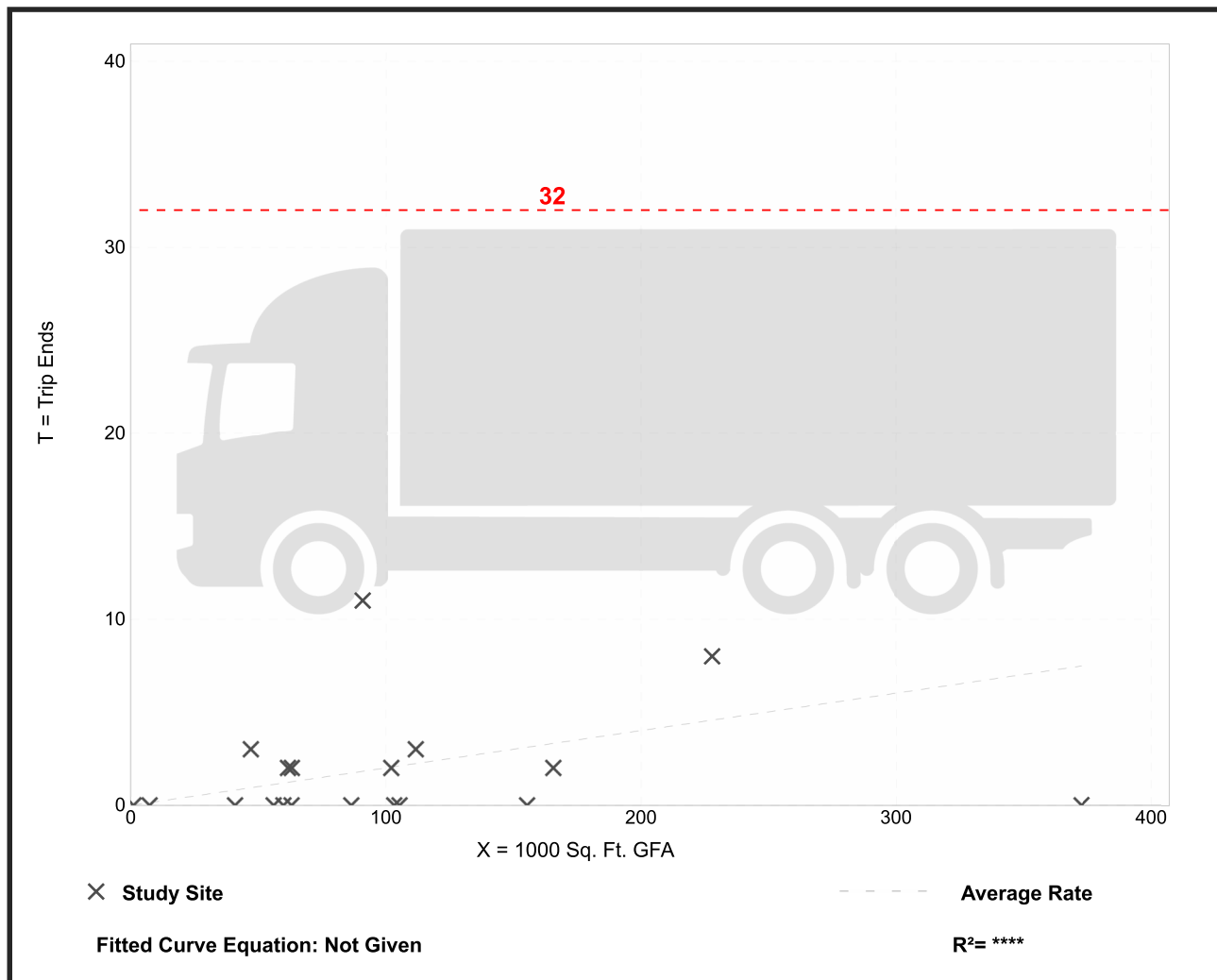
Truck Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: General Urban/Suburban
 Number of Studies: 19
 Avg. 1000 Sq. Ft. GFA: 101
 Directional Distribution: 42% entering, 58% exiting

Truck Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.02	0.00 - 0.12	0.03

Data Plot and Equation



ITE Trip Generation

Trucks PM Peak

Manufacturing (140)

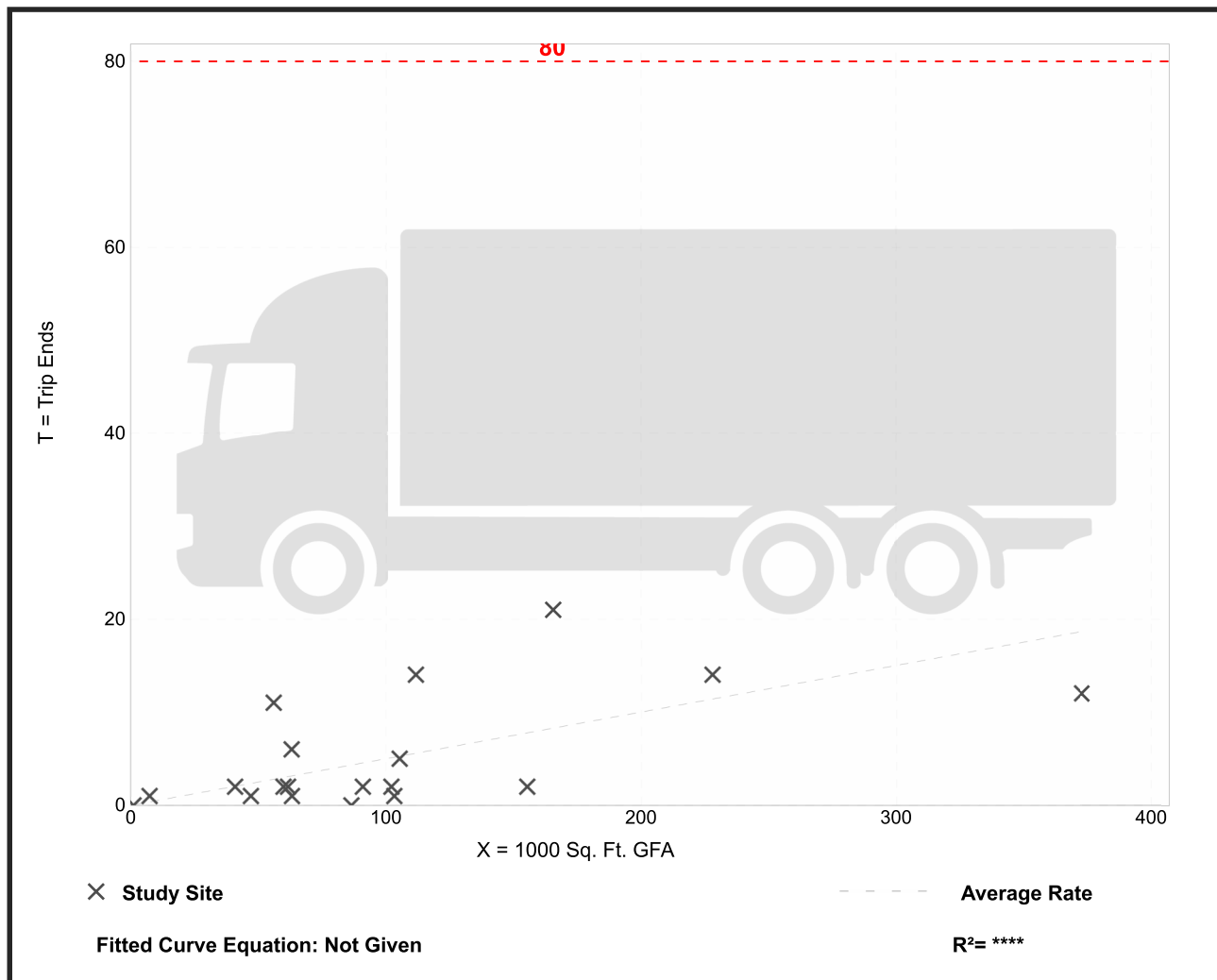
Truck Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban
 Number of Studies: 19
 Avg. 1000 Sq. Ft. GFA: 101
 Directional Distribution: 43% entering, 57% exiting

Truck Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.05	0.00 - 0.20	0.05

Data Plot and Equation



Appendix E

Growth Rate Calculation



TIS Simplified Traffic Forecast

Count Year	2025
Opening Year	2026
Design Year	2036
Years Back	15

Number of Counts 16

Growth Rate -0.68%

KYTC Traffic Count Station #1

STA ID 056A04

Year	AADT
2026	
2025	
2024	2822
2023	
2022	
2021	
2020	
2019	
2018	2665
2017	
Year	AADT
2016	3054
2015	3534
2014	2597
2013	
2012	
2011	
2010	
2009	
2008	
2007	
Year	AADT
2006	
2005	
2004	
2003	
2002	
2001	
2000	
1999	
1998	
1997	

KYTC Traffic Count Station #2

STA ID 56065

Year	AADT
2026	
2025	9838
2024	12244
2023	
2022	
2021	
2020	14564
2019	
2018	
2017	
Year	AADT
2016	10276
2015	12477
2014	11637
2013	
2012	
2011	
2010	
2009	
2008	
2007	
Year	AADT
2006	
2005	
2004	
2003	
2002	
2001	
2000	
1999	
1998	
1997	

KYTC Traffic Count Station #3

STA ID 56069

Year	AADT
2026	
2025	16489
2024	
2023	16266
2022	
2021	
2020	17070
2019	
2018	
2017	
Year	AADT
2016	18656
2015	
2014	
2013	17627
2012	
2011	
2010	18100
2009	
2008	
2007	18800
Year	AADT
2006	
2005	
2004	18800
2003	
2002	17500
2001	
2000	
1999	
1998	14900
1997	

Appendix F

Turn Lane Analysis

Left Turn Lane Warrant

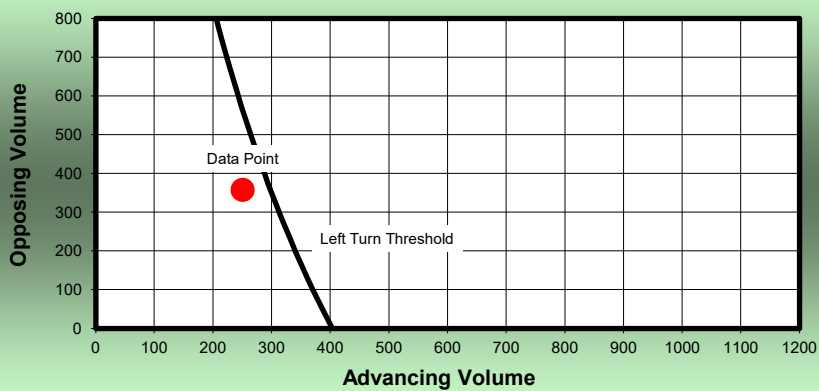
2026 Build AM Peak

Left Turn Lane Warrants

Input Fields

Left Turn Volume (vph)	192	Speed Limit (mph)	35
Advancing Volume (vph)	249	No. of through lanes	2
Opposing Volume (vph)	358	Percent Heavy Vehicles (decimal percent)	0.05

Left Turn Lane Warrants



Left Turn Lane NOT Warranted

Note: This spreadsheet is intended to supplement the guidance provided in the Auxiliary Turn Lane policy outlined in the KYTC Highway Design Manual. This policy should be fully reviewed and understood prior to using this application.

Left Turn Lane Warrant

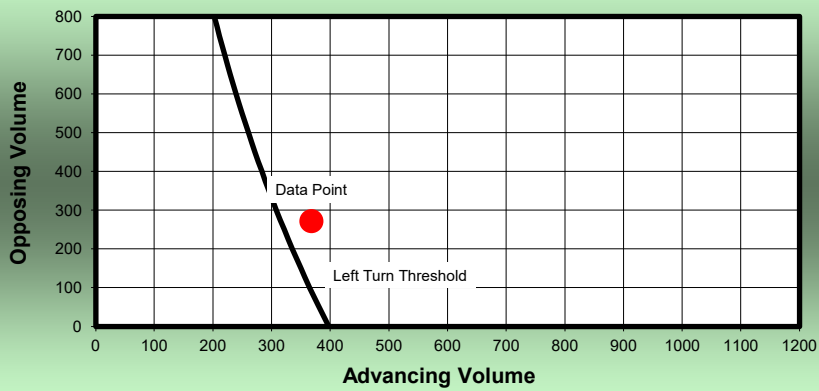
2026 Build PM Peak

Left Turn Lane Warrants

Input Fields

Left Turn Volume (vph)	278	Speed Limit (mph)	35
Advancing Volume (vph)	366	No. of through lanes	2
Opposing Volume (vph)	272	Percent Heavy Vehicles (decimal percent)	0.05

Left Turn Lane Warrants



Left Turn Lane WARRANTED

Note: This spreadsheet is intended to supplement the guidance provided in the Auxiliary Turn Lane policy outlined in the KYTC Highway Design Manual. This policy should be fully reviewed and understood prior to using this application.

Right Turn Lane Warrant

2026 Build AM Peak

Right Turn Lane Warrants

Input Fields

Right Turn Volume (vph)

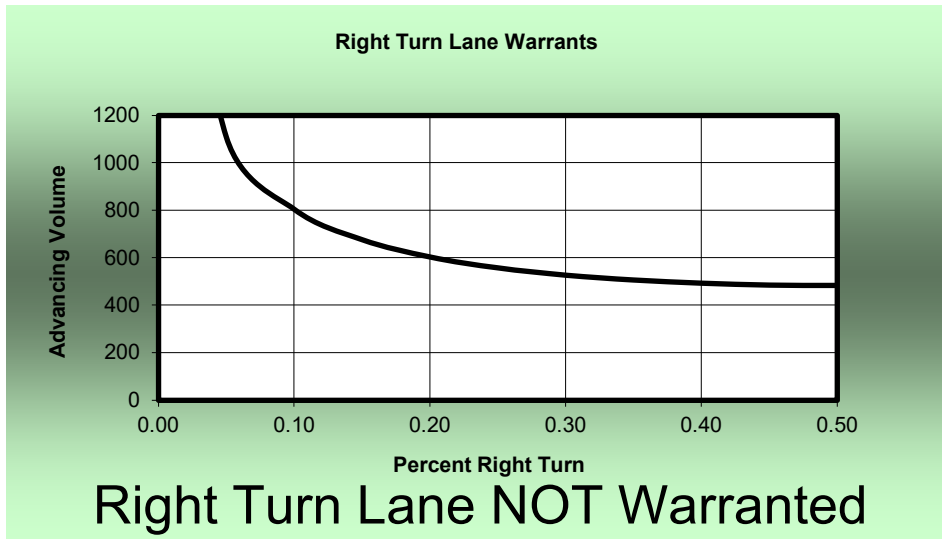
271

Speed Limit (mph)

35

Advancing Volume (vph)

358



Note: This spreadsheet is intended to supplement the guidance provided in the Auxiliary Turn Lane policy outlined in the KYTC Highway Design Manual. This policy should be fully reviewed and understood prior to using this application.

Right Turn Lane Warrant

2026 Build PM Peak

Right Turn Lane Warrants

Input Fields

Right Turn Volume (vph)

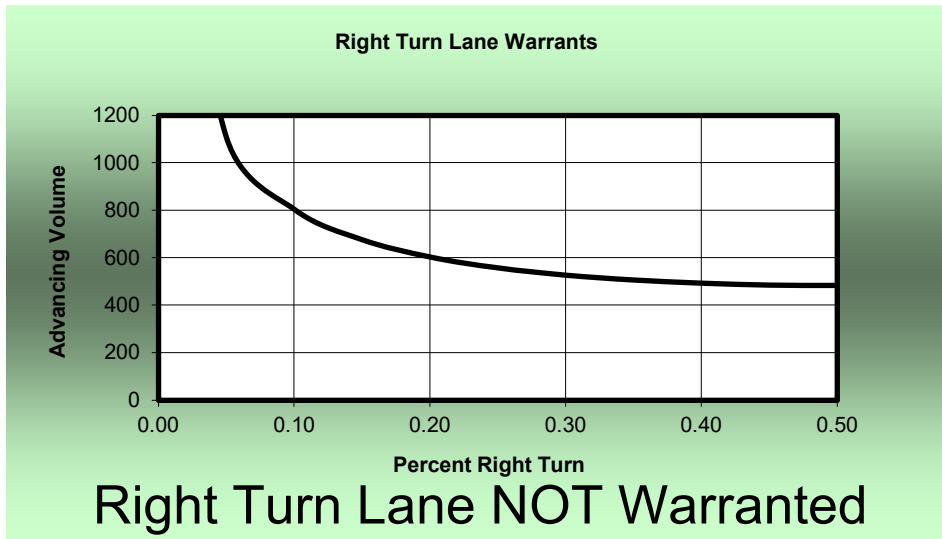
183

Speed Limit (mph)

35

Advancing Volume (vph)

272



Note: This spreadsheet is intended to supplement the guidance provided in the Auxiliary Turn Lane policy outlined in the KYTC Highway Design Manual. This policy should be fully reviewed and understood prior to using this application.

Left Turn Lane Length Calculation

2026 Build

Turn Lane Length

Input Fields

Turn Volume	192	Calculated Turn Lane Length (ft)	
Speed Limit	35	Desirable	125
Cycle Length	0	Minimum	125
<i>(Enter 0 for Uncontrolled, 60 for Stop Controlled)</i>			
Approach Percent Grade (G)	3		
Is this a Rural Arterial (Y or N)	N		

Note: This spreadsheet is intended to supplement the guidance provided in the Auxiliary Turn Lane policy outlined in the KYTC Highway Design Manual. This policy should be fully reviewed and understood prior to using this application.

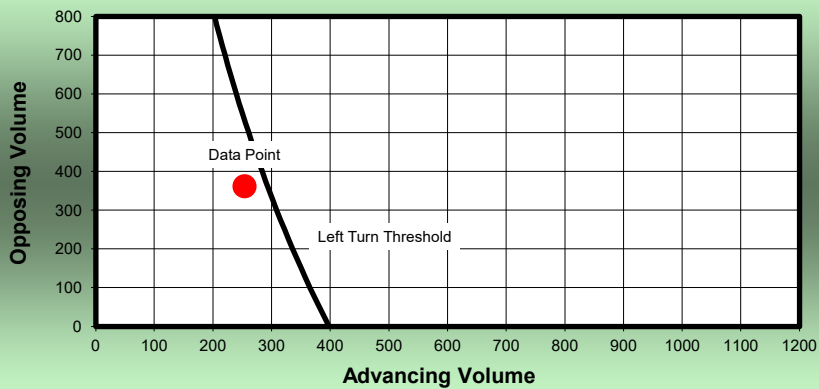
Left Turn Lane Warrant
2036 Build AM Peak

Left Turn Lane Warrants

Input Fields

Left Turn Volume (vph)	192	Speed Limit (mph)	35
Advancing Volume (vph)	252	No. of through lanes	2
Opposing Volume (vph)	362	Percent Heavy Vehicles (decimal percent)	0.05

Left Turn Lane Warrants



Left Turn Lane NOT Warranted

Note: This spreadsheet is intended to supplement the guidance provided in the Auxiliary Turn Lane policy outlined in the KYTC Highway Design Manual. This policy should be fully reviewed and understood prior to using this application.

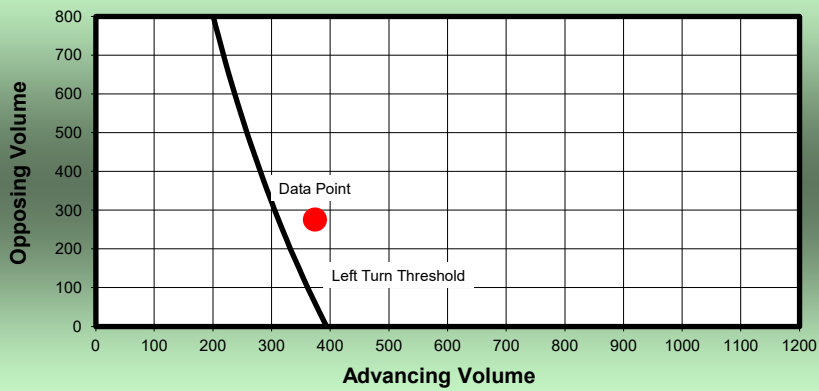
Left Turn Lane Warrant
2036 Build PM Peak

Left Turn Lane Warrants

Input Fields

Left Turn Volume (vph)	280	Speed Limit (mph)	35
Advancing Volume (vph)	372	No. of through lanes	2
Opposing Volume (vph)	276	Percent Heavy Vehicles (decimal percent)	0.05

Left Turn Lane Warrants



Left Turn Lane WARRANTED

Note: This spreadsheet is intended to supplement the guidance provided in the Auxiliary Turn Lane policy outlined in the KYTC Highway Design Manual. This policy should be fully reviewed and understood prior to using this application.

Right Turn Lane Warrant

2036 Build AM Peak

Right Turn Lane Warrants

Input Fields

Right Turn Volume (vph)	271	Speed Limit (mph)	35
Advancing Volume (vph)	362		



Note: This spreadsheet is intended to supplement the guidance provided in the Auxiliary Turn Lane policy outlined in the KYTC Highway Design Manual. This policy should be fully reviewed and understood prior to using this application.

Right Turn Lane Warrant

2036 Build PM Peak

Right Turn Lane Warrants

Input Fields

Right Turn Volume (vph)

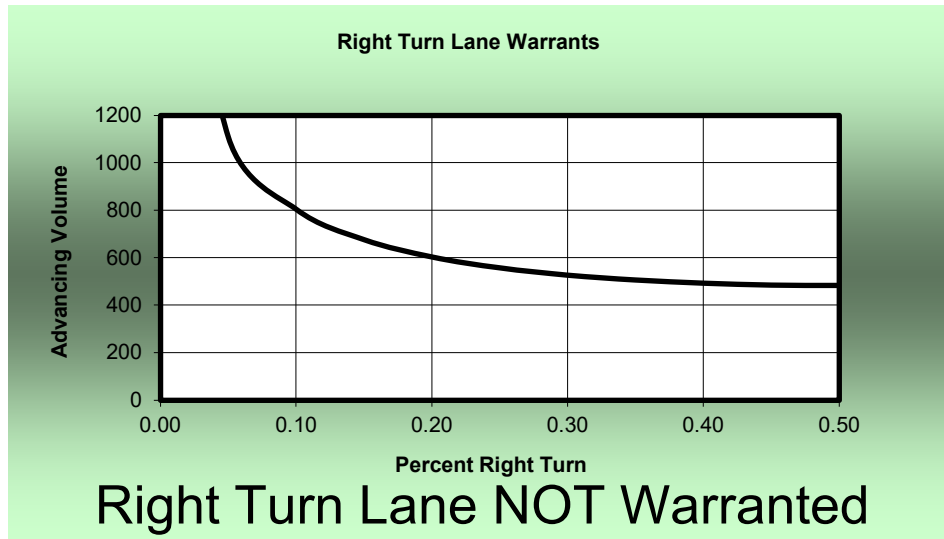
183

Speed Limit (mph)

35

Advancing Volume (vph)

276



Note: This spreadsheet is intended to supplement the guidance provided in the Auxiliary Turn Lane policy outlined in the KYTC Highway Design Manual. This policy should be fully reviewed and understood prior to using this application.

Left Turn Lane Length Calculation

2036 Build

Turn Lane Length

Input Fields

Turn Volume	406	Calculated Turn Lane Length (ft)	
Speed Limit	35	Desirable	125
Cycle Length	0	Minimum	125
<i>(Enter 0 for Uncontrolled, 60 for Stop Controlled)</i>			
Approach Percent Grade (G)	3		
Is this a Rural Arterial (Y or N)	N		

Note: This spreadsheet is intended to supplement the guidance provided in the Auxiliary Turn Lane policy outlined in the KYTC Highway Design Manual. This policy should be fully reviewed and understood prior to using this application.

Appendix G

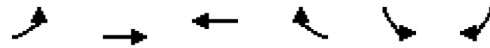
Capacity Analysis

Synchro Reports

2026 No-Build AM Peak

HCM 7th Signalized Intersection Summary
 1: Chamberlain Ln & Gate 10

2026 No-Build AM Peak
 06/24/2026



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕↕	↕↕		↕	↕
Traffic Volume (veh/h)	21	211	816	12	5	10
Future Volume (veh/h)	21	211	816	12	5	10
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	418	1826	1826	418	418	418
Adj Flow Rate, veh/h	28	281	1088	16	7	13
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	100	5	5	100	100	100
Cap, veh/h	154	1303	1632	24	116	103
Arrive On Green	0.47	0.47	0.47	0.47	0.29	0.29
Sat Flow, veh/h	108	2877	3591	51	398	354
Grp Volume(v), veh/h	154	155	539	565	7	13
Grp Sat Flow(s),veh/h/ln	1324	1578	1735	1817	398	354
Q Serve(g_s), s	0.3	2.4	9.9	9.9	0.5	1.1
Cycle Q Clear(g_c), s	10.2	2.4	9.9	9.9	0.5	1.1
Prop In Lane	0.18			0.03	1.00	1.00
Lane Grp Cap(c), veh/h	720	736	809	847	116	103
V/C Ratio(X)	0.21	0.21	0.67	0.67	0.06	0.13
Avail Cap(c_a), veh/h	1281	1455	1599	1675	116	103
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.5	6.5	8.5	8.5	10.5	10.7
Incr Delay (d2), s/veh	0.1	0.1	1.0	0.9	1.0	2.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.5	2.2	2.3	0.1	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	6.6	6.7	9.5	9.4	11.5	13.3
LnGrp LOS	A	A	A	A	B	B
Approach Vol, veh/h		309	1104		20	
Approach Delay, s/veh		6.6	9.5		12.7	
Approach LOS		A	A		B	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				24.2	17.0	24.2
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				38.0	12.0	38.0
Max Q Clear Time (g_c+I1), s				12.2	3.1	11.9
Green Ext Time (p_c), s				1.8	0.0	7.3
Intersection Summary						
HCM 7th Control Delay, s/veh			8.9			
HCM 7th LOS			A			

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	2	4	57	87	1
Future Vol, veh/h	0	2	4	57	87	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	29	29	0
Mvmt Flow	0	2	5	65	99	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	173	99	100	0	-
Stage 1	99	-	-	-	-
Stage 2	74	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	821	962	1505	-	-
Stage 1	930	-	-	-	-
Stage 2	954	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	819	962	1505	-	-
Mov Cap-2 Maneuver	819	-	-	-	-
Stage 1	927	-	-	-	-
Stage 2	954	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	8.75	0.49	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	118	-	962	-	-
HCM Lane V/C Ratio	0.003	-	0.002	-	-
HCM Ctrl Dly (s/v)	7.4	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 7th Signalized Intersection Summary
 3: Chamberlain Ln & Collins Ln

2026 No-Build AM Peak
 06/24/2026



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕	↗		↔			↕			↕	
Traffic Volume (veh/h)	14	5	17	163	12	1	29	169	16	1	638	34
Future Volume (veh/h)	14	5	17	163	12	1	29	169	16	1	638	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	7	22	214	16	1	38	222	21	1	839	45
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	621	223	724	724	50	3	138	762	77	72	1157	62
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1091	487	1585	1283	109	6	130	2210	224	1	3359	180
Grp Volume(v), veh/h	25	0	22	231	0	0	125	0	156	468	0	417
Grp Sat Flow(s),veh/h/ln	1578	0	1585	1397	0	0	902	0	1662	1870	0	1670
Q Serve(g_s), s	0.0	0.0	0.4	5.2	0.0	0.0	0.8	0.0	3.4	0.0	0.0	11.0
Cycle Q Clear(g_c), s	0.4	0.0	0.4	5.6	0.0	0.0	11.8	0.0	3.4	11.0	0.0	11.0
Prop In Lane	0.72		1.00	0.93		0.00	0.30		0.13	0.00		0.11
Lane Grp Cap(c), veh/h	844	0	724	776	0	0	404	0	573	716	0	575
V/C Ratio(X)	0.03	0.00	0.03	0.30	0.00	0.00	0.31	0.00	0.27	0.65	0.00	0.73
Avail Cap(c_a), veh/h	844	0	724	776	0	0	628	0	891	1074	0	895
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.5	0.0	7.5	9.0	0.0	0.0	12.1	0.0	11.9	14.4	0.0	14.4
Incr Delay (d2), s/veh	0.1	0.0	0.1	1.0	0.0	0.0	0.4	0.0	0.3	1.0	0.0	1.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.1	1.5	0.0	0.0	0.8	0.0	1.0	3.7	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	7.6	0.0	7.6	10.0	0.0	0.0	12.5	0.0	12.2	15.4	0.0	16.2
LnGrp LOS	A		A	A			B		B	B		B
Approach Vol, veh/h		47			231			281				885
Approach Delay, s/veh		7.6			10.0			12.3				15.8
Approach LOS		A			A			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		28.0		22.4		28.0		22.4				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		23.0		27.0		23.0		27.0				
Max Q Clear Time (g_c+I1), s		7.6		13.8		2.4		13.0				
Green Ext Time (p_c), s		1.1		1.3		0.1		4.3				
Intersection Summary												
HCM 7th Control Delay, s/veh			13.9									
HCM 7th LOS			B									

Timings
4: Old LaGrange Rd & Chamberlain Ln

2026 No-Build AM Peak
06/24/2026

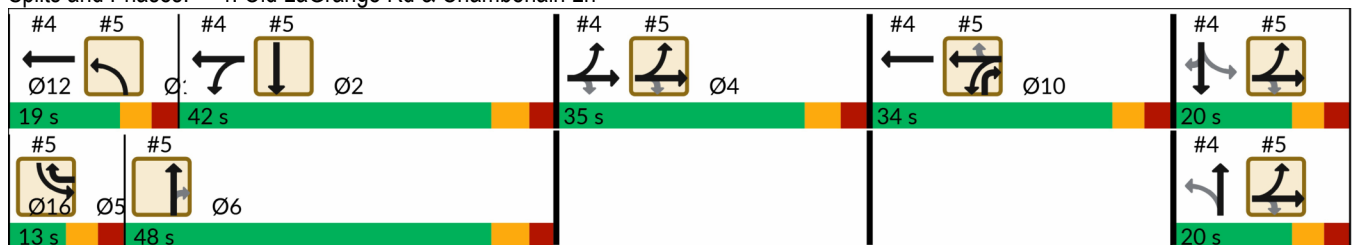


Lane Group	EBT	EBR	WBT	NBT	SBL	SBT	SBR	Ø1	Ø2	Ø5	Ø6	Ø10
Lane Configurations	↕	↗	↔	↕		↕	↗					
Traffic Volume (vph)	134	3	180	3	40	3	19					
Future Volume (vph)	134	3	180	3	40	3	19					
Turn Type	NA	Perm	NA	NA	Perm	NA	Perm					
Protected Phases	4		10 1 2	16		12		1	2	5	6	10
Permitted Phases		4			12		12					
Detector Phase	4	4	10 1 2	16	12	12	12					
Switch Phase												
Minimum Initial (s)	8.0	8.0		5.0	5.0	5.0	5.0	5.0	8.0	5.0	15.0	8.0
Minimum Split (s)	35.0	35.0		20.0	20.0	20.0	20.0	14.5	32.0	11.5	28.5	26.0
Total Split (s)	35.0	35.0		20.0	20.0	20.0	20.0	19.0	42.0	13.0	48.0	34.0
Total Split (%)	23.3%	23.3%		13.3%	13.3%	13.3%	13.3%	13%	28%	9%	32%	23%
Yellow Time (s)	4.0	4.0		3.5	3.5	3.5	3.5	3.5	4.3	3.5	4.3	3.5
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	2.7	3.0	2.7	3.0
Lost Time Adjust (s)	0.0	0.0		0.0		0.0	0.0					
Total Lost Time (s)	7.0	7.0		6.5		6.5	6.5					
Lead/Lag								Lead	Lag	Lead	Lag	
Lead-Lag Optimize?								Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	None	Max	None	Max	None
Act Effct Green (s)	18.7	18.7	75.5	10.6		10.6	10.6					
Actuated g/C Ratio	0.14	0.14	0.55	0.08		0.08	0.08					
v/c Ratio	0.65	0.01	0.21	0.28		0.50	0.08					
Control Delay (s/veh)	69.2	0.0	4.1	67.2		79.6	0.6					
Queue Delay	0.0	0.0	1.9	0.0		0.0	0.0					
Total Delay (s/veh)	69.2	0.0	6.0	67.2		79.6	0.6					
LOS	E	A	A	E		E	A					
Approach Delay (s/veh)	67.6		6.0	67.2		55.4						
Approach LOS	E		A	E		E						

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 137.9
 Natural Cycle: 140
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay (s/veh): 36.3
 Intersection LOS: D
 Intersection Capacity Utilization 39.6%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 4: Old LaGrange Rd & Chamberlain Ln



Timings
5: LaGrange Rd & Chamberlain Ln/Factory Ln

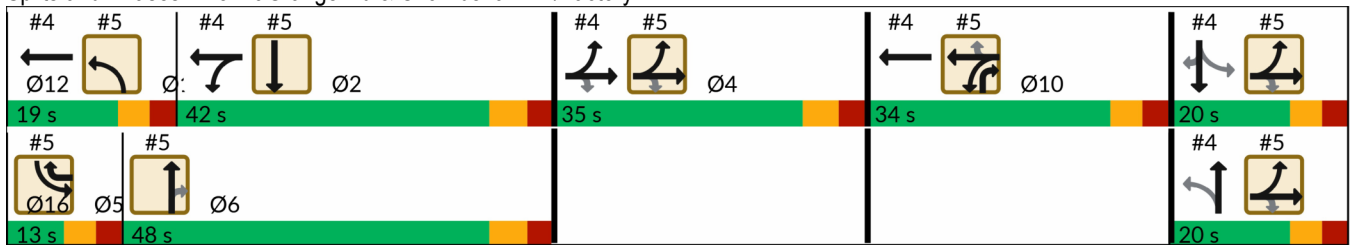
2026 No-Build AM Peak
06/24/2026

	→	↘	↙	←	↖	↗	↑	↘	↙	↓	Ø4	Ø12
Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	Ø4	Ø12
Lane Configurations	↕	↕	↘	↕	↕	↘	↕	↕	↘	↕		
Traffic Volume (vph)	81	85	458	82	3	120	463	399	24	689		
Future Volume (vph)	81	85	458	82	3	120	463	399	24	689		
Turn Type	NA	Perm	Split	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		
Protected Phases	4 12 16		10	10	5	1	6	10	5	2	4	12
Permitted Phases		4 12 16			10			6				
Detector Phase	4 12 16	4 12 16	10	10	5	1	6	10	5	2		
Switch Phase												
Minimum Initial (s)			8.0	8.0	5.0	5.0	15.0	8.0	5.0	8.0	8.0	5.0
Minimum Split (s)			26.0	26.0	11.5	14.5	28.5	26.0	11.5	32.0	35.0	20.0
Total Split (s)			34.0	34.0	13.0	19.0	48.0	34.0	13.0	42.0	35.0	20.0
Total Split (%)			22.7%	22.7%	8.7%	12.7%	32.0%	22.7%	8.7%	28.0%	23%	13%
Yellow Time (s)			3.5	3.5	3.5	3.5	4.3	3.5	3.5	4.3	4.0	3.5
All-Red Time (s)			3.0	3.0	3.0	3.0	2.7	3.0	3.0	2.7	3.0	3.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)			6.5	6.5	6.5	6.5	7.0	6.5	6.5	7.0		
Lead/Lag					Lead	Lead	Lag		Lead	Lag		
Lead-Lag Optimize?					Yes	Yes	Yes		Yes	Yes		
Recall Mode			None	None	None	None	Max	None	None	Max	None	None
Act Effect Green (s)	28.8	28.8	27.6	27.6	34.0	12.4	46.5	74.5	6.4	35.1		
Actuated g/C Ratio	0.21	0.21	0.20	0.20	0.25	0.09	0.34	0.54	0.05	0.25		
v/c Ratio	0.33	0.21	0.87	0.86	0.01	0.83	0.42	0.41	0.33	0.85		
Control Delay (s/veh)	3.2	1.1	80.2	77.9	0.0	99.5	39.1	2.2	77.4	59.8		
Queue Delay	0.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2		
Total Delay (s/veh)	3.5	1.5	80.2	77.9	0.0	99.5	39.1	2.2	77.4	60.0		
LOS	A	A	F	E	A	F	D	A	E	E		
Approach Delay (s/veh)	2.7			78.6			31.5			60.6		
Approach LOS	A			E			C			E		

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 137.9
 Natural Cycle: 140
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay (s/veh): 48.2
 Intersection LOS: D
 Intersection Capacity Utilization 64.2%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 5: LaGrange Rd & Chamberlain Ln/Factory Ln



Lane Group	Ø16
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Turn Type	
Protected Phases	16
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	20.0
Total Split (s)	20.0
Total Split (%)	13%
Yellow Time (s)	3.5
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Intersection Summary	

Intersection						
Int Delay, s/veh	6.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	6	27	174	43	2	2
Future Vol, veh/h	6	27	174	43	2	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	56	56	56	56	56	56
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	48	311	77	4	4

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	704	5	7	0	0
Stage 1	5	-	-	-	-
Stage 2	698	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	407	1084	1627	-	-
Stage 1	1023	-	-	-	-
Stage 2	497	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	325	1084	1627	-	-
Mov Cap-2 Maneuver	325	-	-	-	-
Stage 1	819	-	-	-	-
Stage 2	497	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	10.13	6.2	0
HCM LOS	B		

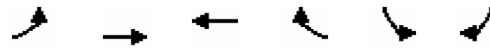
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1443	-	761	-	-
HCM Lane V/C Ratio	0.191	-	0.077	-	-
HCM Ctrl Dly (s/v)	7.7	0	10.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.7	-	0.3	-	-

Synchro Reports

2026 No-Build PM Peak

HCM 7th Signalized Intersection Summary
 1: Chamberlain Ln & Gate 10

2026 No-Build PM Peak
 06/24/2026



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↘	↘
Traffic Volume (veh/h)	27	745	590	3	10	20
Future Volume (veh/h)	27	745	590	3	10	20
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	418	1826	1826	418	418	418
Adj Flow Rate, veh/h	34	931	738	4	12	25
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	100	5	5	100	100	100
Cap, veh/h	120	1440	1558	8	122	108
Arrive On Green	0.44	0.44	0.44	0.44	0.31	0.31
Sat Flow, veh/h	52	3353	3629	19	398	354
Grp Volume(v), veh/h	508	457	362	380	12	25
Grp Sat Flow(s),veh/h/ln	1743	1578	1735	1822	398	354
Q Serve(g_s), s	0.0	9.0	5.8	5.8	0.8	2.1
Cycle Q Clear(g_c), s	8.5	9.0	5.8	5.8	0.8	2.1
Prop In Lane	0.07			0.01	1.00	1.00
Lane Grp Cap(c), veh/h	865	695	764	802	122	108
V/C Ratio(X)	0.59	0.66	0.47	0.47	0.10	0.23
Avail Cap(c_a), veh/h	1733	1526	1677	1762	122	108
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.5	8.7	7.8	7.8	9.8	10.2
Incr Delay (d2), s/veh	0.6	1.1	0.5	0.4	1.6	4.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	1.8	1.3	1.3	0.1	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	9.2	9.7	8.2	8.2	11.4	15.1
LnGrp LOS	A	A	A	A	B	B
Approach Vol, veh/h		965	742		37	
Approach Delay, s/veh		9.4	8.2		13.9	
Approach LOS		A	A		B	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				22.3	17.0	22.3
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				38.0	12.0	38.0
Max Q Clear Time (g_c+I1), s				11.0	4.1	7.8
Green Ext Time (p_c), s				6.4	0.0	4.4
Intersection Summary						
HCM 7th Control Delay, s/veh			9.0			
HCM 7th LOS			A			

Intersection						
Int Delay, s/veh	2.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	19	16	47	88	89	8
Future Vol, veh/h	19	16	47	88	89	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	6	6	0
Mvmt Flow	23	20	57	107	109	10




















Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	335	113	118	0	0
Stage 1	113	-	-	-	-
Stage 2	222	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	664	945	1482	-	-
Stage 1	916	-	-	-	-
Stage 2	820	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	637	945	1482	-	-
Mov Cap-2 Maneuver	637	-	-	-	-
Stage 1	879	-	-	-	-
Stage 2	820	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	10.1	2.62	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	627	-	748	-	-
HCM Lane V/C Ratio	0.039	-	0.057	-	-
HCM Ctrl Dly (s/v)	7.5	0	10.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

HCM 7th Signalized Intersection Summary
 3: Chamberlain Ln & Collins Ln

2026 No-Build PM Peak
 06/24/2026

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	56	48	18	107	34	1	57	440	240	10	444	37
Future Volume (veh/h)	56	48	18	107	34	1	57	440	240	10	444	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	59	22	130	41	1	70	537	293	12	541	45
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	436	347	649	522	148	3	145	760	404	85	1235	101
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	789	847	1585	959	363	8	156	1970	1048	21	3202	263
Grp Volume(v), veh/h	127	0	22	172	0	0	477	0	423	315	0	283
Grp Sat Flow(s),veh/h/ln	1636	0	1585	1329	0	0	1660	0	1513	1831	0	1655
Q Serve(g_s), s	0.0	0.0	0.4	3.3	0.0	0.0	5.4	0.0	11.6	0.0	0.0	6.2
Cycle Q Clear(g_c), s	2.1	0.0	0.4	5.4	0.0	0.0	11.6	0.0	11.6	6.1	0.0	6.2
Prop In Lane	0.54		1.00	0.76		0.01	0.15		0.69	0.04		0.16
Lane Grp Cap(c), veh/h	783	0	649	674	0	0	725	0	584	783	0	638
V/C Ratio(X)	0.16	0.00	0.03	0.26	0.00	0.00	0.66	0.00	0.73	0.40	0.00	0.44
Avail Cap(c_a), veh/h	783	0	649	674	0	0	1086	0	930	1183	0	1017
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.1	0.0	8.6	10.4	0.0	0.0	12.6	0.0	12.8	11.1	0.0	11.1
Incr Delay (d2), s/veh	0.4	0.0	0.1	0.9	0.0	0.0	1.0	0.0	1.7	0.3	0.0	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.1	1.2	0.0	0.0	3.3	0.0	3.1	1.9	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	9.6	0.0	8.7	11.3	0.0	0.0	13.6	0.0	14.5	11.4	0.0	11.6
LnGrp LOS	A		A	B			B		B	B		B
Approach Vol, veh/h		149			172			900				598
Approach Delay, s/veh		9.5			11.3			14.0				11.5
Approach LOS		A			B			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.0		23.8		25.0		23.8				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		20.0		30.0		20.0		30.0				
Max Q Clear Time (g_c+I1), s		7.4		13.6		4.1		8.2				
Green Ext Time (p_c), s		0.7		5.2		0.6		3.3				
Intersection Summary												
HCM 7th Control Delay, s/veh			12.6									
HCM 7th LOS			B									

Timings
4: Old LaGrange Rd & Chamberlain Ln

2026 No-Build PM Peak
06/24/2026

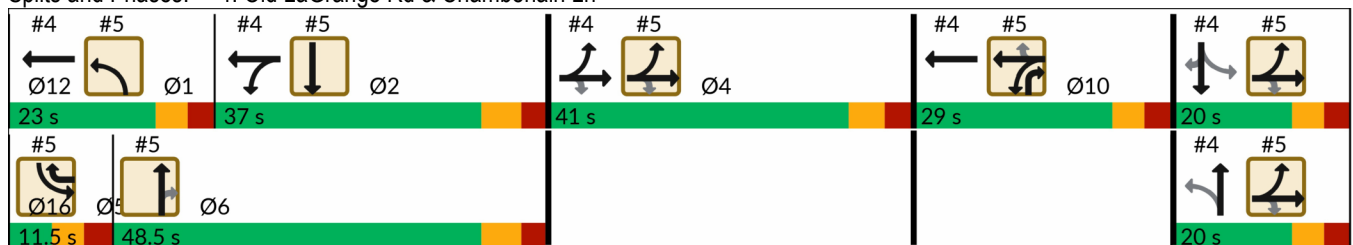


Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	SBR	Ø1	Ø2	Ø5	Ø6	Ø10
Lane Configurations	↔	↔↔		↔		↔	↔					
Traffic Volume (vph)	424	483	2	7	23	4	40					
Future Volume (vph)	424	483	2	7	23	4	40					
Turn Type	NA	NA	Perm	NA	Perm	NA	Perm					
Protected Phases	4	10 12		16		12		1	2	5	6	10
Permitted Phases			16		12		12					
Detector Phase	4	10 12	16	16	12	12	12					
Switch Phase												
Minimum Initial (s)	8.0		5.0	5.0	5.0	5.0	5.0	5.0	8.0	5.0	15.0	8.0
Minimum Split (s)	35.0		20.0	20.0	20.0	20.0	20.0	14.5	32.0	11.5	28.5	26.0
Total Split (s)	41.0		20.0	20.0	20.0	20.0	20.0	23.0	37.0	11.5	48.5	29.0
Total Split (%)	27.3%		13.3%	13.3%	13.3%	13.3%	13.3%	15%	25%	8%	32%	19%
Yellow Time (s)	4.0		3.5	3.5	3.5	3.5	3.5	3.5	4.3	3.5	4.3	3.5
All-Red Time (s)	3.0		3.0	3.0	3.0	3.0	3.0	3.0	2.7	3.0	2.7	3.0
Lost Time Adjust (s)	0.0			0.0		0.0	0.0					
Total Lost Time (s)	7.0			6.5		6.5	6.5					
Lead/Lag								Lead	Lag	Lead	Lag	
Lead-Lag Optimize?								Yes	Yes	Yes	Yes	
Recall Mode	None		None	None	None	None	None	None	Max	None	Max	None
Act Effect Green (s)	34.0	69.5		13.5		13.5	13.5					
Actuated g/C Ratio	0.23	0.46		0.09		0.09	0.09					
v/c Ratio	1.21	0.69		1.17		0.71	0.14					
Control Delay (s/veh)	164.2	23.1		183.4		131.6	0.8					
Queue Delay	0.0	55.6		0.0		0.0	0.0					
Total Delay (s/veh)	164.2	78.7		183.4		131.6	0.8					
LOS	F	E		F		F	A					
Approach Delay (s/veh)	164.2	78.7		183.4		53.8						
Approach LOS	F	E		F		D						

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.37
 Intersection Signal Delay (s/veh): 121.4
 Intersection LOS: F
 Intersection Capacity Utilization 56.9%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 4: Old LaGrange Rd & Chamberlain Ln



Timings
5: LaGrange Rd & Chamberlain Ln/Factory Ln

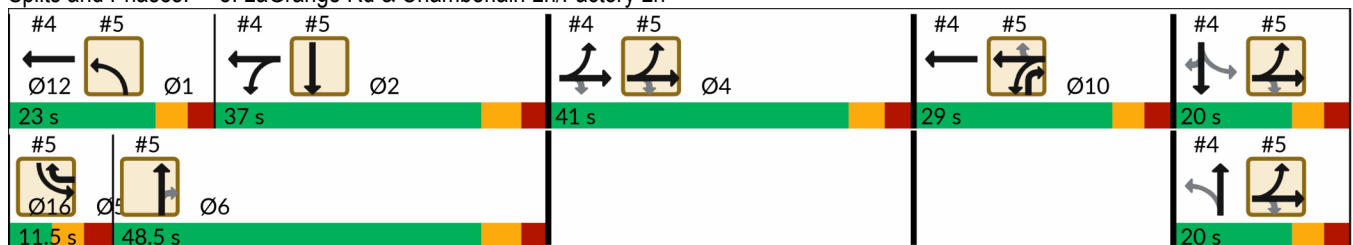
2026 No-Build PM Peak
06/24/2026

	→	↘	↙	←	↖	↗	↑	↘	↙	↓	Ø4	Ø12
Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	Ø4	Ø12
Lane Configurations	↕↕	↕	↙	↕↕	↕	↙	↕↕	↕	↙	↕↕		
Traffic Volume (vph)	149	324	306	216	2	225	795	574	36	475		
Future Volume (vph)	149	324	306	216	2	225	795	574	36	475		
Turn Type	NA	Perm	Split	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		
Protected Phases	4 12 16		10	10	5	1	6	10	5	2	4	12
Permitted Phases		4 12 16			10			6				
Detector Phase	4 12 16	4 12 16	10	10	5	1	6	10	5	2		
Switch Phase												
Minimum Initial (s)			8.0	8.0	5.0	5.0	15.0	8.0	5.0	8.0	8.0	5.0
Minimum Split (s)			26.0	26.0	11.5	14.5	28.5	26.0	11.5	32.0	35.0	20.0
Total Split (s)			29.0	29.0	11.5	23.0	48.5	29.0	11.5	37.0	41.0	20.0
Total Split (%)			19.3%	19.3%	7.7%	15.3%	32.3%	19.3%	7.7%	24.7%	27%	13%
Yellow Time (s)			3.5	3.5	3.5	3.5	4.3	3.5	3.5	4.3	4.0	3.5
All-Red Time (s)			3.0	3.0	3.0	3.0	2.7	3.0	3.0	2.7	3.0	3.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)			6.5	6.5	6.5	6.5	7.0	6.5	6.5	7.0		
Lead/Lag					Lead	Lead	Lag		Lead	Lag		
Lead-Lag Optimize?					Yes	Yes	Yes		Yes	Yes		
Recall Mode			None	None	None	None	Max	None	None	Max	None	None
Act Effct Green (s)	47.0	47.0	22.5	22.5	27.5	16.5	43.8	66.8	5.0	30.0		
Actuated g/C Ratio	0.31	0.31	0.15	0.15	0.18	0.11	0.29	0.45	0.03	0.20		
v/c Ratio	0.53	0.60	1.20	1.19	0.00	1.37	0.91	0.69	0.71	0.96		
Control Delay (s/veh)	4.6	1.0	173.4	168.3	0.0	241.4	64.3	8.0	124.1	85.4		
Queue Delay	18.4	38.6	0.0	3.9	0.0	16.4	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	23.0	39.7	173.4	172.2	0.0	257.8	64.3	8.0	124.1	85.4		
LOS	C	D	F	F	A	F	E	A	F	F		
Approach Delay (s/veh)	32.3			172.2			71.4			87.7		
Approach LOS	C			F			E			F		

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.37
 Intersection Signal Delay (s/veh): 83.5
 Intersection LOS: F
 Intersection Capacity Utilization 78.9%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 5: LaGrange Rd & Chamberlain Ln/Factory Ln



Lane Group	Ø16
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Turn Type	
Protected Phases	16
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	20.0
Total Split (s)	20.0
Total Split (%)	13%
Yellow Time (s)	3.5
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Intersection Summary	

Intersection						
Int Delay, s/veh	10.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	108	152	225	48	24	6
Future Vol, veh/h	108	152	225	48	24	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	120	169	250	53	27	7

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	583	30	33	0	0
Stage 1	30	-	-	-	-
Stage 2	553	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	478	1050	1592	-	-
Stage 1	998	-	-	-	-
Stage 2	580	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	400	1050	1592	-	-
Mov Cap-2 Maneuver	400	-	-	-	-
Stage 1	836	-	-	-	-
Stage 2	580	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	15.54	6.33	0
HCM LOS	C		

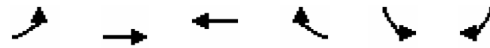
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1484	-	627	-	-
HCM Lane V/C Ratio	0.157	-	0.46	-	-
HCM Ctrl Dly (s/v)	7.7	0	15.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.6	-	2.4	-	-

Synchro Reports

2036 No-Build AM Peak

HCM 7th Signalized Intersection Summary
 1: Chamberlain Ln & Gate 10

2036 No-Build AM Peak
 06/24/2026



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕↕	↕↕		↕	↕
Traffic Volume (veh/h)	22	222	857	13	5	11
Future Volume (veh/h)	22	222	857	13	5	11
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	418	1826	1826	418	418	418
Adj Flow Rate, veh/h	29	296	1143	17	7	15
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	100	5	5	100	100	100
Cap, veh/h	150	1323	1684	25	113	100
Arrive On Green	0.48	0.48	0.48	0.48	0.28	0.28
Sat Flow, veh/h	104	2833	3590	52	398	354
Grp Volume(v), veh/h	160	165	567	593	7	15
Grp Sat Flow(s),veh/h/ln	1275	1578	1735	1817	398	354
Q Serve(g_s), s	0.4	2.6	10.7	10.7	0.5	1.3
Cycle Q Clear(g_c), s	11.1	2.6	10.7	10.7	0.5	1.3
Prop In Lane	0.18			0.03	1.00	1.00
Lane Grp Cap(c), veh/h	714	760	835	874	113	100
V/C Ratio(X)	0.22	0.22	0.68	0.68	0.06	0.15
Avail Cap(c_a), veh/h	1212	1414	1554	1627	113	100
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.4	6.4	8.5	8.5	11.1	11.4
Incr Delay (d2), s/veh	0.2	0.1	1.0	0.9	1.1	3.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.5	2.4	2.5	0.1	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	6.5	6.5	9.4	9.4	12.2	14.5
LnGrp LOS	A	A	A	A	B	B
Approach Vol, veh/h		325	1160		22	
Approach Delay, s/veh		6.5	9.4		13.8	
Approach LOS		A	A		B	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				25.4	17.0	25.4
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				38.0	12.0	38.0
Max Q Clear Time (g_c+I1), s				13.1	3.3	12.7
Green Ext Time (p_c), s				2.0	0.0	7.7
Intersection Summary						
HCM 7th Control Delay, s/veh			8.9			
HCM 7th LOS			A			

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	2	4	60	91	1
Future Vol, veh/h	0	2	4	60	91	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	29	29	0
Mvmt Flow	0	2	5	68	103	1




















Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	181	104	105	0	-	0
Stage 1	104	-	-	-	-	-
Stage 2	77	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	813	956	1500	-	-	-
Stage 1	925	-	-	-	-	-
Stage 2	951	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	810	956	1500	-	-	-
Mov Cap-2 Maneuver	810	-	-	-	-	-
Stage 1	922	-	-	-	-	-
Stage 2	951	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	8.77	0.46	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	113	-	956	-	-
HCM Lane V/C Ratio	0.003	-	0.002	-	-
HCM Ctrl Dly (s/v)	7.4	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 7th Signalized Intersection Summary
 3: Chamberlain Ln & Collins Ln

2036 No-Build AM Peak
 06/24/2026

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	15	5	18	171	13	1	30	177	17	1	670	36
Future Volume (veh/h)	15	5	18	171	13	1	30	177	17	1	670	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	20	7	24	225	17	1	39	233	22	1	882	47
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	627	202	711	709	49	3	135	777	79	71	1196	64
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1125	451	1585	1278	109	6	122	2183	223	1	3360	179
Grp Volume(v), veh/h	27	0	24	243	0	0	130	0	164	491	0	439
Grp Sat Flow(s),veh/h/ln	1575	0	1585	1393	0	0	866	0	1662	1870	0	1670
Q Serve(g_s), s	0.0	0.0	0.4	5.7	0.0	0.0	0.9	0.0	3.6	0.0	0.0	11.8
Cycle Q Clear(g_c), s	0.4	0.0	0.4	6.1	0.0	0.0	12.7	0.0	3.6	11.8	0.0	11.8
Prop In Lane	0.74		1.00	0.93		0.00	0.30		0.13	0.00		0.11
Lane Grp Cap(c), veh/h	829	0	711	760	0	0	399	0	592	736	0	594
V/C Ratio(X)	0.03	0.00	0.03	0.32	0.00	0.00	0.32	0.00	0.28	0.67	0.00	0.74
Avail Cap(c_a), veh/h	829	0	711	760	0	0	595	0	876	1055	0	880
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.9	0.0	7.9	9.5	0.0	0.0	12.0	0.0	11.8	14.4	0.0	14.4
Incr Delay (d2), s/veh	0.1	0.0	0.1	1.1	0.0	0.0	0.5	0.0	0.3	1.1	0.0	1.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.1	1.6	0.0	0.0	0.8	0.0	1.1	3.9	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	8.0	0.0	8.0	10.6	0.0	0.0	12.5	0.0	12.0	15.5	0.0	16.2
LnGrp LOS	A		A	B			B		B	B		B
Approach Vol, veh/h		51			243			294				930
Approach Delay, s/veh		8.0			10.6			12.2				15.8
Approach LOS		A			B			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		28.0		23.2		28.0		23.2				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		23.0		27.0		23.0		27.0				
Max Q Clear Time (g_c+I1), s		8.1		14.7		2.4		13.8				
Green Ext Time (p_c), s		1.1		1.3		0.1		4.5				
Intersection Summary												
HCM 7th Control Delay, s/veh			14.0									
HCM 7th LOS			B									

Timings
4: Old LaGrange Rd & Chamberlain Ln

2036 No-Build AM Peak
06/24/2026

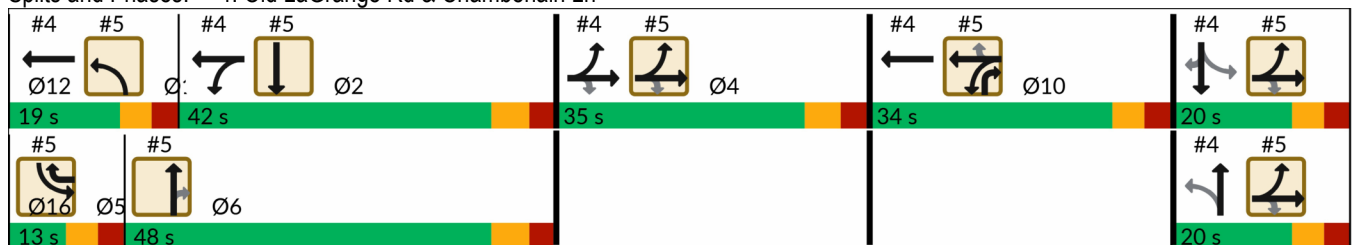


Lane Group	EBT	EBR	WBT	NBT	SBL	SBT	SBR	Ø1	Ø2	Ø5	Ø6	Ø10
Lane Configurations	↔	↔	↔↔	↔		↔	↔					
Traffic Volume (vph)	141	3	189	3	42	3	20					
Future Volume (vph)	141	3	189	3	42	3	20					
Turn Type	NA	Perm	NA	NA	Perm	NA	Perm					
Protected Phases	4		10 1 2	16		12		1	2	5	6	10
Permitted Phases		4			12		12					
Detector Phase	4	4	10 1 2	16	12	12	12					
Switch Phase												
Minimum Initial (s)	8.0	8.0		5.0	5.0	5.0	5.0	5.0	8.0	5.0	15.0	8.0
Minimum Split (s)	35.0	35.0		20.0	20.0	20.0	20.0	14.5	32.0	11.5	28.5	26.0
Total Split (s)	35.0	35.0		20.0	20.0	20.0	20.0	19.0	42.0	13.0	48.0	34.0
Total Split (%)	23.3%	23.3%		13.3%	13.3%	13.3%	13.3%	13%	28%	9%	32%	23%
Yellow Time (s)	4.0	4.0		3.5	3.5	3.5	3.5	3.5	4.3	3.5	4.3	3.5
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	2.7	3.0	2.7	3.0
Lost Time Adjust (s)	0.0	0.0		0.0		0.0	0.0					
Total Lost Time (s)	7.0	7.0		6.5		6.5	6.5					
Lead/Lag								Lead	Lag	Lead	Lag	
Lead-Lag Optimize?								Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	None	Max	None	Max	None
Act Effct Green (s)	19.5	19.5	75.7	10.8		10.8	10.8					
Actuated g/C Ratio	0.14	0.14	0.54	0.08		0.08	0.08					
v/c Ratio	0.67	0.01	0.23	0.29		0.53	0.08					
Control Delay (s/veh)	69.5	0.0	4.5	68.0		81.5	0.6					
Queue Delay	0.0	0.0	2.4	0.0		0.0	0.0					
Total Delay (s/veh)	69.5	0.0	6.9	68.0		81.5	0.6					
LOS	E	A	A	E		F	A					
Approach Delay (s/veh)	67.9		6.9	68.0		57.0						
Approach LOS	E		A	E		E						

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 139.2
 Natural Cycle: 140
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay (s/veh): 37.2
 Intersection LOS: D
 Intersection Capacity Utilization 40.1%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 4: Old LaGrange Rd & Chamberlain Ln



Timings
5: LaGrange Rd & Chamberlain Ln/Factory Ln

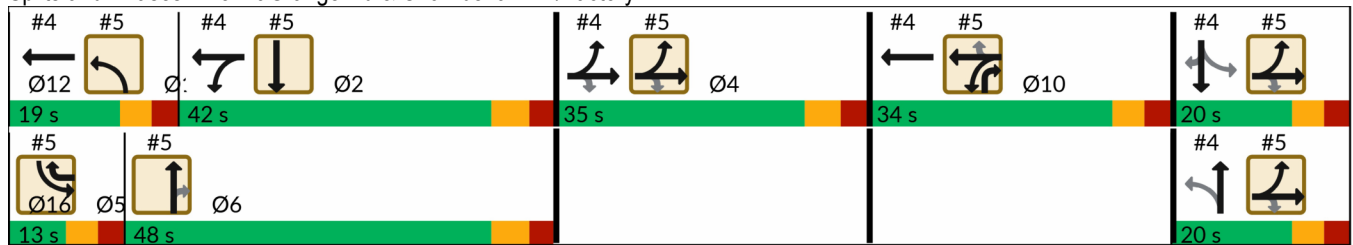
2036 No-Build AM Peak
06/24/2026

	→	↘	↙	←	↖	↗	↑	↘	↙	↓	Ø4	Ø12
Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	Ø4	Ø12
Lane Configurations	↕	↕	↙	↕	↕	↙	↕	↕	↙	↕		
Traffic Volume (vph)	85	89	481	86	3	126	486	419	25	723		
Future Volume (vph)	85	89	481	86	3	126	486	419	25	723		
Turn Type	NA	Perm	Split	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		
Protected Phases	4 12 16		10	10	5	1	6	10	5	2	4	12
Permitted Phases		4 12 16			10			6				
Detector Phase	4 12 16	4 12 16	10	10	5	1	6	10	5	2		
Switch Phase												
Minimum Initial (s)			8.0	8.0	5.0	5.0	15.0	8.0	5.0	8.0	8.0	5.0
Minimum Split (s)			26.0	26.0	11.5	14.5	28.5	26.0	11.5	32.0	35.0	20.0
Total Split (s)			34.0	34.0	13.0	19.0	48.0	34.0	13.0	42.0	35.0	20.0
Total Split (%)			22.7%	22.7%	8.7%	12.7%	32.0%	22.7%	8.7%	28.0%	23%	13%
Yellow Time (s)			3.5	3.5	3.5	3.5	4.3	3.5	3.5	4.3	4.0	3.5
All-Red Time (s)			3.0	3.0	3.0	3.0	2.7	3.0	3.0	2.7	3.0	3.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)			6.5	6.5	6.5	6.5	7.0	6.5	6.5	7.0		
Lead/Lag					Lead	Lead	Lag		Lead	Lag		
Lead-Lag Optimize?					Yes	Yes	Yes		Yes	Yes		
Recall Mode			None	None	None	None	Max	None	None	Max	None	None
Act Effect Green (s)	29.8	29.8	27.6	27.6	34.0	12.5	46.7	74.7	6.4	35.1		
Actuated g/C Ratio	0.21	0.21	0.20	0.20	0.24	0.09	0.34	0.54	0.05	0.25		
v/c Ratio	0.33	0.22	0.91	0.92	0.01	0.86	0.44	0.43	0.34	0.90		
Control Delay (s/veh)	3.3	1.1	86.5	88.3	0.0	105.4	40.1	2.3	79.0	64.8		
Queue Delay	0.4	0.5	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.5		
Total Delay (s/veh)	3.7	1.6	86.5	88.3	0.0	108.1	40.1	2.3	79.0	65.3		
LOS	A	A	F	F	A	F	D	A	E	E		
Approach Delay (s/veh)	2.8			87.0			33.0			65.7		
Approach LOS	A			F			C			E		

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 139.2
 Natural Cycle: 140
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay (s/veh): 52.2
 Intersection LOS: D
 Intersection Capacity Utilization 66.3%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 5: LaGrange Rd & Chamberlain Ln/Factory Ln



Lane Group	Ø16
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Turn Type	
Protected Phases	16
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	20.0
Total Split (s)	20.0
Total Split (%)	13%
Yellow Time (s)	3.5
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Intersection Summary	

Intersection						
Int Delay, s/veh	6.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	6	28	183	45	2	2
Future Vol, veh/h	6	28	183	45	2	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	56	56	56	56	56	56
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	50	327	80	4	4

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	739	5	7	0	0
Stage 1	5	-	-	-	-
Stage 2	734	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	387	1084	1627	-	-
Stage 1	1023	-	-	-	-
Stage 2	479	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	306	1084	1627	-	-
Mov Cap-2 Maneuver	306	-	-	-	-
Stage 1	808	-	-	-	-
Stage 2	479	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	10.24	6.24	0
HCM LOS	B		

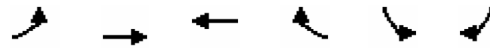
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1445	-	748	-	-
HCM Lane V/C Ratio	0.201	-	0.081	-	-
HCM Ctrl Dly (s/v)	7.8	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.8	-	0.3	-	-

Synchro Reports

2036 No-Build PM Peak

HCM 7th Signalized Intersection Summary
 1: Chamberlain Ln & Gate 10

2036 No-Build PM Peak
 06/24/2026



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↘	↘
Traffic Volume (veh/h)	28	782	620	3	11	21
Future Volume (veh/h)	28	782	620	3	11	21
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	418	1826	1826	418	418	418
Adj Flow Rate, veh/h	35	978	775	4	14	26
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	100	5	5	100	100	100
Cap, veh/h	118	1486	1610	8	118	105
Arrive On Green	0.45	0.45	0.45	0.45	0.30	0.30
Sat Flow, veh/h	51	3350	3630	18	398	354
Grp Volume(v), veh/h	533	480	380	399	14	26
Grp Sat Flow(s),veh/h/ln	1739	1578	1735	1823	398	354
Q Serve(g_s), s	0.0	9.6	6.2	6.2	1.0	2.2
Cycle Q Clear(g_c), s	9.1	9.6	6.2	6.2	1.0	2.2
Prop In Lane	0.07			0.01	1.00	1.00
Lane Grp Cap(c), veh/h	886	718	789	829	118	105
V/C Ratio(X)	0.60	0.67	0.48	0.48	0.12	0.25
Avail Cap(c_a), veh/h	1685	1486	1633	1716	118	105
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.5	8.6	7.7	7.7	10.3	10.8
Incr Delay (d2), s/veh	0.7	1.1	0.5	0.4	2.0	5.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	2.0	1.3	1.4	0.1	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	9.1	9.7	8.1	8.1	12.4	16.3
LnGrp LOS	A	A	A	A	B	B
Approach Vol, veh/h		1013	779		40	
Approach Delay, s/veh		9.4	8.1		14.9	
Approach LOS		A	A		B	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				23.4	17.0	23.4
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				38.0	12.0	38.0
Max Q Clear Time (g_c+I1), s				11.6	4.2	8.2
Green Ext Time (p_c), s				6.8	0.0	4.7
Intersection Summary						
HCM 7th Control Delay, s/veh			9.0			
HCM 7th LOS			A			

Intersection						
Int Delay, s/veh	2.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	20	17	49	92	93	8
Future Vol, veh/h	20	17	49	92	93	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	6	6	0
Mvmt Flow	24	21	60	112	113	10




















Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	350	118	123	0	0
Stage 1	118	-	-	-	-
Stage 2	232	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	651	939	1476	-	-
Stage 1	912	-	-	-	-
Stage 2	812	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	623	939	1476	-	-
Mov Cap-2 Maneuver	623	-	-	-	-
Stage 1	872	-	-	-	-
Stage 2	812	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	10.2	2.62	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	626	-	737	-	-
HCM Lane V/C Ratio	0.04	-	0.061	-	-
HCM Ctrl Dly (s/v)	7.5	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

HCM 7th Signalized Intersection Summary
 3: Chamberlain Ln & Collins Ln

2036 No-Build PM Peak
 06/24/2026

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	59	50	19	112	36	1	60	462	252	11	466	39
Future Volume (veh/h)	59	50	19	112	36	1	60	462	252	11	466	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	61	23	137	44	1	73	563	307	13	568	48
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	430	333	633	503	145	3	144	781	418	84	1279	107
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	798	834	1585	942	364	7	154	1948	1044	22	3193	266
Grp Volume(v), veh/h	133	0	23	182	0	0	498	0	445	331	0	298
Grp Sat Flow(s),veh/h/ln	1633	0	1585	1313	0	0	1632	0	1514	1827	0	1654
Q Serve(g_s), s	0.0	0.0	0.4	3.8	0.0	0.0	6.1	0.0	12.5	0.0	0.0	6.6
Cycle Q Clear(g_c), s	2.3	0.0	0.4	6.1	0.0	0.0	12.7	0.0	12.5	6.4	0.0	6.6
Prop In Lane	0.54		1.00	0.75		0.01	0.15		0.69	0.04		0.16
Lane Grp Cap(c), veh/h	763	0	633	651	0	0	736	0	607	807	0	663
V/C Ratio(X)	0.17	0.00	0.04	0.28	0.00	0.00	0.68	0.00	0.73	0.41	0.00	0.45
Avail Cap(c_a), veh/h	763	0	633	651	0	0	1048	0	907	1152	0	991
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.7	0.0	9.2	11.2	0.0	0.0	12.6	0.0	12.7	10.9	0.0	11.0
Incr Delay (d2), s/veh	0.5	0.0	0.1	1.1	0.0	0.0	1.1	0.0	1.7	0.3	0.0	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.1	1.4	0.0	0.0	3.4	0.0	3.3	2.0	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	10.2	0.0	9.3	12.2	0.0	0.0	13.7	0.0	14.5	11.3	0.0	11.4
LnGrp LOS	B		A	B			B		B	B		B
Approach Vol, veh/h		156			182			943				629
Approach Delay, s/veh		10.1			12.2			14.0				11.3
Approach LOS		B			B			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.0		25.1		25.0		25.1				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		20.0		30.0		20.0		30.0				
Max Q Clear Time (g_c+I1), s		8.1		14.7		4.3		8.6				
Green Ext Time (p_c), s		0.7		5.3		0.6		3.5				
Intersection Summary												
HCM 7th Control Delay, s/veh			12.7									
HCM 7th LOS			B									

Timings
4: Old LaGrange Rd & Chamberlain Ln

2036 No-Build PM Peak
06/24/2026

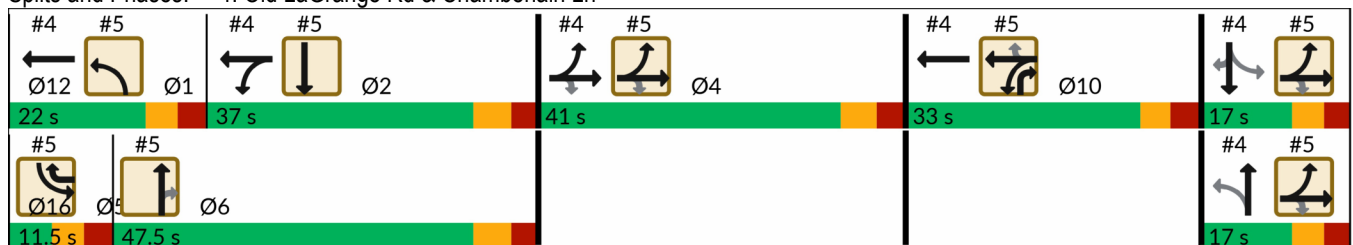


Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	SBR	Ø1	Ø2	Ø5	Ø6	Ø10
Lane Configurations	↔	↔↔		↔		↔	↔					
Traffic Volume (vph)	445	507	2	7	24	4	42					
Future Volume (vph)	445	507	2	7	24	4	42					
Turn Type	NA	NA	Perm	NA	Perm	NA	Perm					
Protected Phases	4	10 12		16		12		1	2	5	6	10
Permitted Phases			16		12		12					
Detector Phase	4	10 12	16	16	12	12	12					
Switch Phase												
Minimum Initial (s)	8.0		5.0	5.0	5.0	5.0	5.0	5.0	8.0	5.0	15.0	8.0
Minimum Split (s)	35.0		12.0	12.0	12.0	12.0	12.0	14.5	32.0	11.5	28.5	26.0
Total Split (s)	41.0		17.0	17.0	17.0	17.0	17.0	22.0	37.0	11.5	47.5	33.0
Total Split (%)	27.3%		11.3%	11.3%	11.3%	11.3%	11.3%	15%	25%	8%	32%	22%
Yellow Time (s)	4.0		3.5	3.5	3.5	3.5	3.5	3.5	4.3	3.5	4.3	3.5
All-Red Time (s)	3.0		3.0	3.0	3.0	3.0	3.0	3.0	2.7	3.0	2.7	3.0
Lost Time Adjust (s)	0.0			0.0		0.0	0.0					
Total Lost Time (s)	7.0			6.5		6.5	6.5					
Lead/Lag								Lead	Lag	Lead	Lag	
Lead-Lag Optimize?								Yes	Yes	Yes	Yes	
Recall Mode	None		None	None	None	None	None	None	Max	None	Max	None
Act Effct Green (s)	34.0	72.5		10.5		10.5	10.5					
Actuated g/C Ratio	0.23	0.48		0.07		0.07	0.07					
v/c Ratio	1.27	0.72		1.57		0.73	0.16					
Control Delay (s/veh)	186.4	27.3		337.5		137.1	1.0					
Queue Delay	0.0	55.7		0.0		0.0	0.0					
Total Delay (s/veh)	186.4	82.9		337.5		137.1	1.0					
LOS	F	F		F		F	A					
Approach Delay (s/veh)	186.4	82.9		337.5		55.8						
Approach LOS	F	F		F		E						

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.57
 Intersection Signal Delay (s/veh): 150.4
 Intersection LOS: F
 Intersection Capacity Utilization 59.1%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 4: Old LaGrange Rd & Chamberlain Ln



Timings
5: LaGrange Rd & Chamberlain Ln/Factory Ln

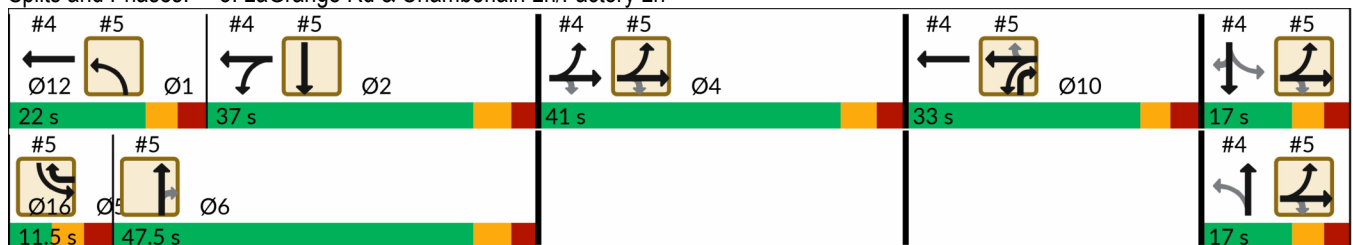
2036 No-Build PM Peak
06/24/2026

	→	↘	↙	←	↖	↗	↑	↘	↙	↓	Ø4	Ø12
Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	Ø4	Ø12
Lane Configurations	↕	↕	↙	↕	↕	↙	↕	↕	↙	↕		
Traffic Volume (vph)	156	340	321	327	2	236	835	603	38	499		
Future Volume (vph)	156	340	321	327	2	236	835	603	38	499		
Turn Type	NA	Perm	Split	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		
Protected Phases	4 12 16		10	10	5	1	6	10	5	2	4	12
Permitted Phases		4 12 16			10			6				
Detector Phase	4 12 16	4 12 16	10	10	5	1	6	10	5	2		
Switch Phase												
Minimum Initial (s)			8.0	8.0	5.0	5.0	15.0	8.0	5.0	8.0	8.0	5.0
Minimum Split (s)			26.0	26.0	11.5	14.5	28.5	26.0	11.5	32.0	35.0	12.0
Total Split (s)			33.0	33.0	11.5	22.0	47.5	33.0	11.5	37.0	41.0	17.0
Total Split (%)			22.0%	22.0%	7.7%	14.7%	31.7%	22.0%	7.7%	24.7%	27%	11%
Yellow Time (s)			3.5	3.5	3.5	3.5	4.3	3.5	3.5	4.3	4.0	3.5
All-Red Time (s)			3.0	3.0	3.0	3.0	2.7	3.0	3.0	2.7	3.0	3.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)			6.5	6.5	6.5	6.5	7.0	6.5	6.5	7.0		
Lead/Lag					Lead	Lead	Lag		Lead	Lag		
Lead-Lag Optimize?					Yes	Yes	Yes		Yes	Yes		
Recall Mode			None	None	None	None	Max	None	None	Max	None	None
Act Effect Green (s)	44.0	44.0	26.5	26.5	31.5	15.5	42.8	69.8	5.0	30.0		
Actuated g/C Ratio	0.29	0.29	0.18	0.18	0.21	0.10	0.29	0.47	0.03	0.20		
v/c Ratio	0.59	0.67	1.15	1.36	0.00	1.53	0.97	0.72	0.76	1.01		
Control Delay (s/veh)	5.8	2.6	151.8	226.5	0.0	305.5	75.3	10.4	132.5	96.0		
Queue Delay	42.0	56.4	0.0	6.4	0.0	18.6	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	47.8	59.1	151.8	232.9	0.0	324.1	75.3	10.4	132.5	96.0		
LOS	D	E	F	F	A	F	E	B	F	F		
Approach Delay (s/veh)	54.1			196.2			87.0			98.2		
Approach LOS	D			F			F			F		

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.57
 Intersection Signal Delay (s/veh): 103.3
 Intersection LOS: F
 Intersection Capacity Utilization 84.3%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 5: LaGrange Rd & Chamberlain Ln/Factory Ln



Lane Group	Ø16
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Turn Type	
Protected Phases	16
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	12.0
Total Split (s)	17.0
Total Split (%)	11%
Yellow Time (s)	3.5
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Intersection Summary	

Intersection						
Int Delay, s/veh	10.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	113	160	236	50	25	6
Future Vol, veh/h	113	160	236	50	25	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	126	178	262	56	28	7

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	611	31	34	0	0
Stage 1	31	-	-	-	-
Stage 2	580	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	460	1049	1590	-	-
Stage 1	997	-	-	-	-
Stage 2	564	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	382	1049	1590	-	-
Mov Cap-2 Maneuver	382	-	-	-	-
Stage 1	827	-	-	-	-
Stage 2	564	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	16.64	6.36	0
HCM LOS	C		

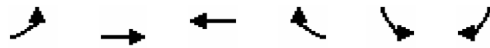
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1485	-	609	-	-
HCM Lane V/C Ratio	0.165	-	0.498	-	-
HCM Ctrl Dly (s/v)	7.7	0	16.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.6	-	2.8	-	-

Synchro Reports

2026 Build AM Peak

HCM 7th Signalized Intersection Summary
 1: Chamberlain Ln & Gate 10

2026 Build AM Peak
 06/24/2026



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕↕	↕↕		↗	↖
Traffic Volume (veh/h)	29	284	904	17	18	16
Future Volume (veh/h)	29	284	904	17	18	16
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	418	1826	1826	418	418	418
Adj Flow Rate, veh/h	39	379	1205	23	24	21
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	100	5	5	100	100	100
Cap, veh/h	150	1311	1738	33	109	97
Arrive On Green	0.50	0.50	0.50	0.50	0.27	0.27
Sat Flow, veh/h	104	2709	3573	66	398	354
Grp Volume(v), veh/h	199	219	600	628	24	21
Grp Sat Flow(s),veh/h/ln	1151	1578	1735	1814	398	354
Q Serve(g_s), s	0.9	3.5	11.6	11.6	2.0	2.0
Cycle Q Clear(g_c), s	12.5	3.5	11.6	11.6	2.0	2.0
Prop In Lane	0.20			0.04	1.00	1.00
Lane Grp Cap(c), veh/h	673	788	866	905	109	97
V/C Ratio(X)	0.30	0.28	0.69	0.69	0.22	0.22
Avail Cap(c_a), veh/h	1087	1366	1501	1569	109	97
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.4	6.4	8.4	8.4	12.3	12.3
Incr Delay (d2), s/veh	0.2	0.2	1.0	1.0	4.6	5.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.7	2.6	2.7	0.3	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	6.7	6.6	9.4	9.4	17.0	17.4
LnGrp LOS	A	A	A	A	B	B
Approach Vol, veh/h		418	1228		45	
Approach Delay, s/veh		6.6	9.4		17.2	
Approach LOS		A	A		B	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				26.9	17.0	26.9
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				38.0	12.0	38.0
Max Q Clear Time (g_c+I1), s				14.5	4.0	13.6
Green Ext Time (p_c), s				2.6	0.0	8.3
Intersection Summary						
HCM 7th Control Delay, s/veh			8.9			
HCM 7th LOS			A			

Intersection						
Int Delay, s/veh	14.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↶	↷	↶	↶	↷	↷
Traffic Vol, veh/h	219	189	192	57	87	271
Future Vol, veh/h	219	189	192	57	87	271
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	29	29	0
Mvmt Flow	249	215	218	65	99	308

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	754	253	407	0	-	0
Stage 1	253	-	-	-	-	-
Stage 2	501	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	380	791	1163	-	-	-
Stage 1	794	-	-	-	-	-
Stage 2	613	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	309	791	1163	-	-	-
Mov Cap-2 Maneuver	309	-	-	-	-	-
Stage 1	645	-	-	-	-	-
Stage 2	613	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	32.81	6.79	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1163	-	309	791	-	-
HCM Lane V/C Ratio	0.188	-	0.806	0.272	-	-
HCM Ctrl Dly (s/v)	8.8	-	51.4	11.2	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	0.7	-	6.6	1.1	-	-

HCM 7th Signalized Intersection Summary
 3: Chamberlain Ln & Collins Ln

2026 Build AM Peak
 06/24/2026



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕	↗		↔			↔			↔	
Traffic Volume (veh/h)	108	10	105	163	42	1	102	182	16	1	643	119
Future Volume (veh/h)	108	10	105	163	42	1	102	182	16	1	643	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	142	13	138	214	55	1	134	239	21	1	846	157
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	644	54	634	458	106	2	233	670	59	60	1270	235
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	1321	135	1585	875	266	4	262	1546	136	0	2931	543
Grp Volume(v), veh/h	155	0	138	270	0	0	136	0	258	540	0	464
Grp Sat Flow(s),veh/h/ln	1457	0	1585	1145	0	0	267	0	1677	1870	0	1604
Q Serve(g_s), s	0.0	0.0	3.4	9.3	0.0	0.0	12.2	0.0	6.2	0.0	0.0	13.8
Cycle Q Clear(g_c), s	4.1	0.0	3.4	13.3	0.0	0.0	26.0	0.0	6.2	13.8	0.0	13.8
Prop In Lane	0.92		1.00	0.79		0.00	0.99		0.08	0.00		0.34
Lane Grp Cap(c), veh/h	698	0	634	566	0	0	235	0	727	870	0	695
V/C Ratio(X)	0.22	0.00	0.22	0.48	0.00	0.00	0.58	0.00	0.36	0.62	0.00	0.67
Avail Cap(c_a), veh/h	698	0	634	566	0	0	235	0	727	870	0	695
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.0	0.0	11.8	16.0	0.0	0.0	24.7	0.0	11.4	13.5	0.0	13.5
Incr Delay (d2), s/veh	0.7	0.0	0.8	2.9	0.0	0.0	3.4	0.0	0.3	1.4	0.0	2.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	1.2	3.1	0.0	0.0	1.9	0.0	1.8	4.8	0.0	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	12.7	0.0	12.6	18.8	0.0	0.0	28.1	0.0	11.7	14.9	0.0	16.0
LnGrp LOS	B		B	B			C		B	B		B
Approach Vol, veh/h		293			270			394				1004
Approach Delay, s/veh		12.7			18.8			17.3				15.4
Approach LOS		B			B			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		29.0		31.0		29.0		31.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		24.0		26.0		24.0		26.0				
Max Q Clear Time (g_c+I1), s		15.3		28.0		6.1		15.8				
Green Ext Time (p_c), s		1.0		0.0		1.2		4.3				
Intersection Summary												
HCM 7th Control Delay, s/veh			15.9									
HCM 7th LOS			B									

Timings
4: Old LaGrange Rd & Chamberlain Ln

2026 Build AM Peak
06/24/2026

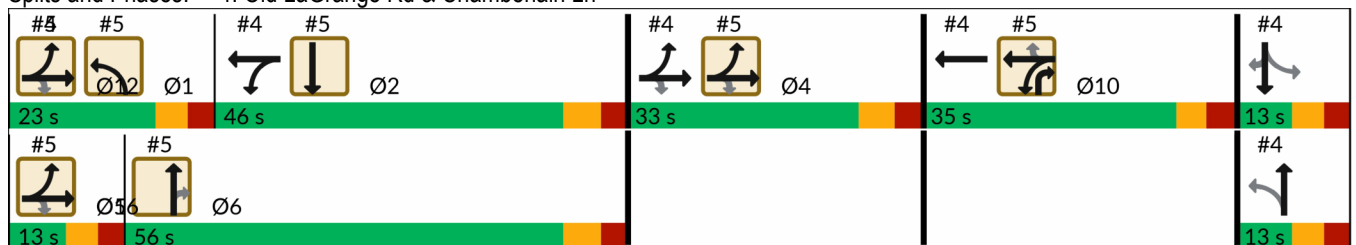


Lane Group	EBT	EBR	WBT	NBT	SBL	SBT	SBR	Ø1	Ø2	Ø5	Ø6	Ø10
Lane Configurations	↕	↕	↕↔	↕		↕	↕					
Traffic Volume (vph)	236	6	261	3	49	3	19					
Future Volume (vph)	236	6	261	3	49	3	19					
Turn Type	NA	Perm	NA	NA	Perm	NA	Perm					
Protected Phases	4		10 1 2	16		12		1	2	5	6	10
Permitted Phases		4			12		12					
Detector Phase	4	4	10 1 2	16	12	12	12					
Switch Phase												
Minimum Initial (s)	8.0	8.0		5.0	5.0	5.0	5.0	5.0	8.0	5.0	15.0	8.0
Minimum Split (s)	33.0	33.0		12.0	12.0	12.0	12.0	14.5	32.0	11.5	28.5	26.0
Total Split (s)	33.0	33.0		13.0	13.0	13.0	13.0	23.0	46.0	13.0	56.0	35.0
Total Split (%)	22.0%	22.0%		8.7%	8.7%	8.7%	8.7%	15%	31%	9%	37%	23%
Yellow Time (s)	4.0	4.0		3.5	3.5	3.5	3.5	3.5	4.3	3.5	4.3	3.5
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	2.7	3.0	2.7	3.0
Lost Time Adjust (s)	0.0	0.0		0.0		0.0	0.0					
Total Lost Time (s)	7.0	7.0		6.5		6.5	6.5					
Lead/Lag								Lead	Lag	Lead	Lag	
Lead-Lag Optimize?								Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	None	Max	None	Max	None
Act Effct Green (s)	25.3	25.3	84.5	6.5		6.5	6.5					
Actuated g/C Ratio	0.17	0.17	0.57	0.04		0.04	0.04					
v/c Ratio	0.92	0.02	0.29	0.49		1.09	0.08					
Control Delay (s/veh)	93.5	0.0	5.2	92.9		205.8	0.6					
Queue Delay	0.0	0.0	6.3	0.0		0.0	0.0					
Total Delay (s/veh)	93.5	0.0	11.5	92.9		205.8	0.6					
LOS	F	A	B	F		F	A					
Approach Delay (s/veh)	91.3		11.5	92.9		150.9						
Approach LOS	F		B	F		F						

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 149.3
 Natural Cycle: 130
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.09
 Intersection Signal Delay (s/veh): 61.4
 Intersection LOS: E
 Intersection Capacity Utilization 42.5%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 4: Old LaGrange Rd & Chamberlain Ln



Timings
5: LaGrange Rd & Chamberlain Ln/Factory Ln

2026 Build AM Peak
06/24/2026

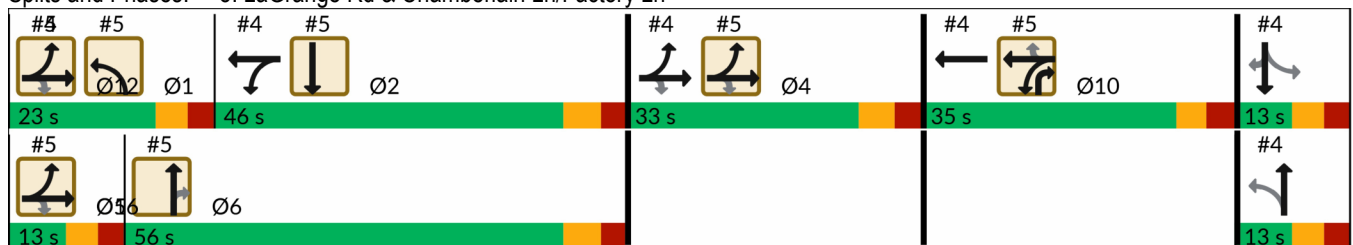


Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	Ø4	Ø12
Lane Configurations	↗	↗	↖	↖	↗	↖	↕	↗	↖	↕		
Traffic Volume (vph)	123	102	458	113	3	165	463	399	24	689		
Future Volume (vph)	123	102	458	113	3	165	463	399	24	689		
Turn Type	NA	Perm	Split	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		
Protected Phases	4 12 16		10	10	5	1	6	10	5	2	4	12
Permitted Phases		4 12 16			10			6				
Detector Phase	4 12 16	4 12 16	10	10	5	1	6	10	5	2		
Switch Phase												
Minimum Initial (s)			8.0	8.0	5.0	5.0	15.0	8.0	5.0	8.0	8.0	5.0
Minimum Split (s)			26.0	26.0	11.5	14.5	28.5	26.0	11.5	32.0	33.0	12.0
Total Split (s)			35.0	35.0	13.0	23.0	56.0	35.0	13.0	46.0	33.0	13.0
Total Split (%)			23.3%	23.3%	8.7%	15.3%	37.3%	23.3%	8.7%	30.7%	22%	9%
Yellow Time (s)			3.5	3.5	3.5	3.5	4.3	3.5	3.5	4.3	4.0	3.5
All-Red Time (s)			3.0	3.0	3.0	3.0	2.7	3.0	3.0	2.7	3.0	3.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)			6.5	6.5	6.5	6.5	7.0	6.5	6.5	7.0		
Lead/Lag					Lead	Lead	Lag		Lead	Lag		
Lead-Lag Optimize?					Yes	Yes	Yes		Yes	Yes		
Recall Mode			None	None	None	None	Max	None	None	Max	None	None
Act Effct Green (s)	31.3	31.3	28.5	28.5	34.9	16.5	54.2	83.2	6.4	39.0		
Actuated g/C Ratio	0.21	0.21	0.19	0.19	0.23	0.11	0.36	0.56	0.04	0.26		
v/c Ratio	0.57	0.24	0.96	0.95	0.01	0.92	0.39	0.40	0.35	0.83		
Control Delay (s/veh)	9.2	0.9	100.9	97.9	0.0	112.5	37.6	2.0	82.9	61.4		
Queue Delay	4.7	3.2	0.0	0.0	0.0	10.8	0.0	0.0	0.0	0.2		
Total Delay (s/veh)	14.0	4.1	100.9	97.9	0.0	123.3	37.6	2.0	82.9	61.6		
LOS	B	A	F	F	A	F	D	A	F	E		
Approach Delay (s/veh)	10.6			98.9			37.6			62.3		
Approach LOS	B			F			D			E		

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 149.3
 Natural Cycle: 130
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.09
 Intersection Signal Delay (s/veh): 54.7
 Intersection LOS: D
 Intersection Capacity Utilization 77.6%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 5: LaGrange Rd & Chamberlain Ln/Factory Ln



Lane Group	Ø16
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Turn Type	
Protected Phases	16
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	12.0
Total Split (s)	13.0
Total Split (%)	9%
Yellow Time (s)	3.5
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Intersection Summary	

Intersection						
Int Delay, s/veh	6.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	6	32	204	43	5	2
Future Vol, veh/h	6	32	204	43	5	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	56	56	56	56	56	56
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	57	364	77	9	4

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	816	11	12	0	0
Stage 1	11	-	-	-	-
Stage 2	805	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	349	1076	1619	-	-
Stage 1	1017	-	-	-	-
Stage 2	443	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	267	1076	1619	-	-
Mov Cap-2 Maneuver	267	-	-	-	-
Stage 1	778	-	-	-	-
Stage 2	443	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	10.45	6.5	0
HCM LOS	B		

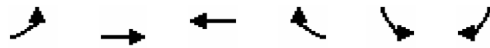
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1487	-	728	-	-
HCM Lane V/C Ratio	0.225	-	0.093	-	-
HCM Ctrl Dly (s/v)	7.9	0	10.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.9	-	0.3	-	-

Synchro Reports

2026 Build PM Peak

HCM 7th Signalized Intersection Summary
 1: Chamberlain Ln & Gate 10

2026 Build PM Peak
 06/24/2026



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕↕	↕↕		↙	↘
Traffic Volume (veh/h)	58	848	622	6	41	35
Future Volume (veh/h)	58	848	622	6	41	35
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	418	1826	1826	418	418	418
Adj Flow Rate, veh/h	72	1060	778	8	51	44
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	100	5	5	100	100	100
Cap, veh/h	152	1531	1750	18	109	97
Arrive On Green	0.50	0.50	0.50	0.50	0.27	0.27
Sat Flow, veh/h	121	3160	3609	36	398	354
Grp Volume(v), veh/h	578	554	384	402	51	44
Grp Sat Flow(s),veh/h/ln	1619	1578	1735	1819	398	354
Q Serve(g_s), s	3.3	11.9	6.2	6.2	4.7	4.5
Cycle Q Clear(g_c), s	11.0	11.9	6.2	6.2	4.7	4.5
Prop In Lane	0.12			0.02	1.00	1.00
Lane Grp Cap(c), veh/h	898	785	863	905	109	97
V/C Ratio(X)	0.64	0.71	0.44	0.44	0.47	0.45
Avail Cap(c_a), veh/h	1455	1370	1506	1579	109	97
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.1	8.5	7.1	7.1	13.2	13.2
Incr Delay (d2), s/veh	0.8	1.2	0.4	0.3	13.7	14.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.4	1.3	1.4	0.8	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	8.9	9.7	7.5	7.4	26.9	27.7
LnGrp LOS	A	A	A	A	C	C
Approach Vol, veh/h		1132	786		95	
Approach Delay, s/veh		9.3	7.4		27.3	
Approach LOS		A	A		C	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				26.8	17.0	26.8
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				38.0	12.0	38.0
Max Q Clear Time (g_c+I1), s				13.9	6.7	8.2
Green Ext Time (p_c), s				7.9	0.1	4.8
Intersection Summary						
HCM 7th Control Delay, s/veh			9.4			
HCM 7th LOS			A			

Intersection						
Int Delay, s/veh	89					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↙	↗	↙	↑	↗	
Traffic Vol, veh/h	266	227	278	88	89	183
Future Vol, veh/h	266	227	278	88	89	183
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	6	6	0
Mvmt Flow	324	277	339	107	109	223

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1005	220	332	0	-	0
Stage 1	220	-	-	-	-	-
Stage 2	785	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	~ 270	825	1239	-	-	-
Stage 1	821	-	-	-	-	-
Stage 2	453	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 196	825	1239	-	-	-
Mov Cap-2 Maneuver	~ 196	-	-	-	-	-
Stage 1	597	-	-	-	-	-
Stage 2	453	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	199.02	6.83	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1239	-	196	825	-	-
HCM Lane V/C Ratio	0.274	-	1.655	0.336	-	-
HCM Ctrl Dly (s/v)	9	-	\$ 359	11.6	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	1.1	-	21.7	1.5	-	-

Notes	
~: Volume exceeds capacity	\$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

HCM 7th Signalized Intersection Summary
 3: Chamberlain Ln & Collins Ln

2026 Build PM Peak
 06/24/2026



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕	↗		↖			↕			↕	↗
Traffic Volume (veh/h)	201	82	50	107	93	1	160	471	240	10	447	106
Future Volume (veh/h)	201	82	50	107	93	1	160	471	240	10	447	106
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	245	100	61	130	113	1	195	574	293	12	545	129
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	392	118	555	151	106	1	253	675	380	71	1335	311
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	827	337	1585	169	302	2	350	1397	787	18	2761	643
Grp Volume(v), veh/h	345	0	61	244	0	0	481	0	581	368	0	318
Grp Sat Flow(s),veh/h/ln	1164	0	1585	474	0	0	973	0	1560	1836	0	1586
Q Serve(g_s), s	0.0	0.0	1.6	4.6	0.0	0.0	21.2	0.0	18.4	0.0	0.0	7.8
Cycle Q Clear(g_c), s	16.4	0.0	1.6	21.0	0.0	0.0	29.0	0.0	18.4	7.6	0.0	7.8
Prop In Lane	0.71		1.00	0.53		0.00	0.41		0.50	0.03		0.41
Lane Grp Cap(c), veh/h	510	0	555	258	0	0	555	0	754	949	0	767
V/C Ratio(X)	0.68	0.00	0.11	0.95	0.00	0.00	0.87	0.00	0.77	0.39	0.00	0.42
Avail Cap(c_a), veh/h	510	0	555	258	0	0	555	0	754	949	0	767
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.0	0.0	13.2	24.5	0.0	0.0	17.7	0.0	12.8	10.0	0.0	10.0
Incr Delay (d2), s/veh	7.0	0.0	0.4	43.9	0.0	0.0	13.6	0.0	4.9	0.3	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	0.0	0.6	6.4	0.0	0.0	7.3	0.0	5.7	2.4	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.1	0.0	13.6	68.3	0.0	0.0	31.3	0.0	17.7	10.2	0.0	10.4
LnGrp LOS	C		B	E			C		B	B		B
Approach Vol, veh/h		406			244			1062				686
Approach Delay, s/veh		23.3			68.3			23.8				10.3
Approach LOS		C			E			C				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		26.0		34.0		26.0		34.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		21.0		29.0		21.0		29.0				
Max Q Clear Time (g_c+I1), s		23.0		31.0		18.4		9.8				
Green Ext Time (p_c), s		0.0		0.0		0.6		3.8				
Intersection Summary												
HCM 7th Control Delay, s/veh			24.4									
HCM 7th LOS			C									

Timings
4: Old LaGrange Rd & Chamberlain Ln

2026 Build PM Peak
06/24/2026

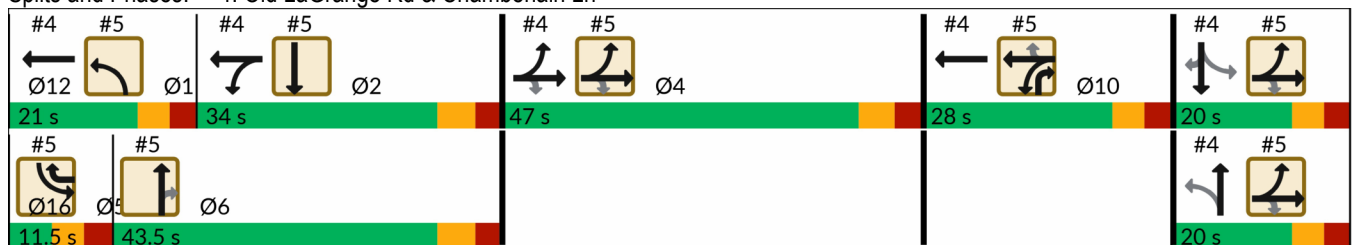


Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR	Ø1	Ø2	Ø5	Ø6
Lane Configurations	↕	↗	↔		↔		↕	↗				
Traffic Volume (vph)	598	2	548	2	7	23	4	47				
Future Volume (vph)	598	2	548	2	7	23	4	47				
Turn Type	NA	Perm	NA	Perm	NA	Perm	NA	Perm				
Protected Phases	4		10 1 2		16		12		1	2	5	6
Permitted Phases		4		16		12		12				
Detector Phase	4	4	10 1 2	16	16	12	12	12				
Switch Phase												
Minimum Initial (s)	8.0	8.0		5.0	5.0	5.0	5.0	5.0	5.0	8.0	5.0	15.0
Minimum Split (s)	35.0	35.0		20.0	20.0	20.0	20.0	20.0	14.5	32.0	11.5	28.5
Total Split (s)	47.0	47.0		20.0	20.0	20.0	20.0	20.0	21.0	34.0	11.5	43.5
Total Split (%)	31.3%	31.3%		13.3%	13.3%	13.3%	13.3%	13.3%	14%	23%	8%	29%
Yellow Time (s)	4.0	4.0		3.5	3.5	3.5	3.5	3.5	3.5	4.3	3.5	4.3
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	2.7	3.0	2.7
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0				
Total Lost Time (s)	7.0	7.0			6.5		6.5	6.5				
Lead/Lag									Lead	Lag	Lead	Lag
Lead-Lag Optimize?									Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	None	None	Max	None	Max
Act Effct Green (s)	40.0	40.0	63.5		13.5		13.5	13.5				
Actuated g/C Ratio	0.27	0.27	0.42		0.09		0.09	0.09				
v/c Ratio	1.45	0.00	0.87		1.17		0.71	0.16				
Control Delay (s/veh)	250.7	0.0	27.8		183.4		131.6	1.0				
Queue Delay	0.0	0.0	53.4		0.0		0.0	0.0				
Total Delay (s/veh)	250.7	0.0	81.2		183.4		131.6	1.0				
LOS	F	A	F		F		F	A				
Approach Delay (s/veh)	250.0		81.2		183.4		49.0					
Approach LOS	F		F		F		D					

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.66
 Intersection Signal Delay (s/veh): 161.8
 Intersection LOS: F
 Intersection Capacity Utilization 63.8%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 4: Old LaGrange Rd & Chamberlain Ln



Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	8.0
Minimum Split (s)	26.0
Total Split (s)	28.0
Total Split (%)	19%
Yellow Time (s)	3.5
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Intersection Summary	

Timings
5: LaGrange Rd & Chamberlain Ln/Factory Ln

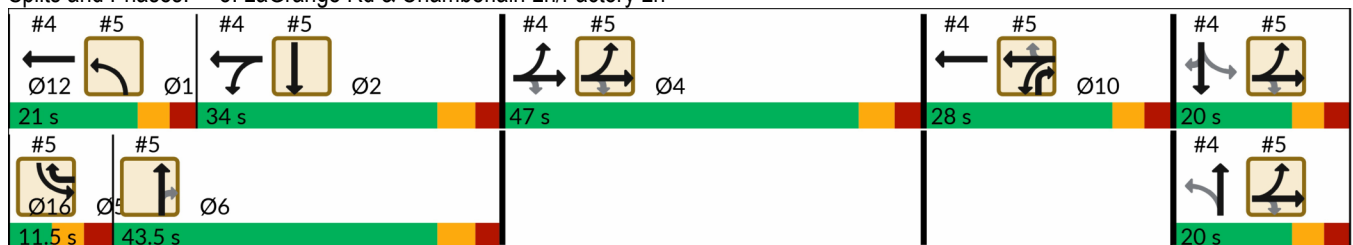
2026 Build PM Peak
06/24/2026

	→	↘	↙	←	↖	↗	↑	↘	↙	↓	Ø4	Ø12
Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	Ø4	Ø12
Lane Configurations	↕	↕	↙	↕	↕	↙	↕	↕	↙	↕		
Traffic Volume (vph)	194	357	306	242	2	253	795	574	36	475		
Future Volume (vph)	194	357	306	242	2	253	795	574	36	475		
Turn Type	NA	Perm	Split	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		
Protected Phases	4 12 16		10	10	5	1	6	10	5	2	4	12
Permitted Phases		4 12 16			10			6				
Detector Phase	4 12 16	4 12 16	10	10	5	1	6	10	5	2		
Switch Phase												
Minimum Initial (s)			8.0	8.0	5.0	5.0	15.0	8.0	5.0	8.0	8.0	5.0
Minimum Split (s)			26.0	26.0	11.5	14.5	28.5	26.0	11.5	32.0	35.0	20.0
Total Split (s)			28.0	28.0	11.5	21.0	43.5	28.0	11.5	34.0	47.0	20.0
Total Split (%)			18.7%	18.7%	7.7%	14.0%	29.0%	18.7%	7.7%	22.7%	31%	13%
Yellow Time (s)			3.5	3.5	3.5	3.5	4.3	3.5	3.5	4.3	4.0	3.5
All-Red Time (s)			3.0	3.0	3.0	3.0	2.7	3.0	3.0	2.7	3.0	3.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)			6.5	6.5	6.5	6.5	7.0	6.5	6.5	7.0		
Lead/Lag					Lead	Lead	Lag		Lead	Lag		
Lead-Lag Optimize?					Yes	Yes	Yes		Yes	Yes		
Recall Mode			None	None	None	None	Max	None	None	Max	None	None
Act Effct Green (s)	53.0	53.0	21.5	21.5	26.5	14.5	38.8	60.8	5.0	27.0		
Actuated g/C Ratio	0.35	0.35	0.14	0.14	0.18	0.10	0.26	0.41	0.03	0.18		
v/c Ratio	0.70	0.59	1.26	1.25	0.00	1.66	0.98	0.70	0.68	1.04		
Control Delay (s/veh)	4.0	0.8	197.0	190.4	0.0	360.7	79.1	9.6	119.0	106.2		
Queue Delay	55.4	56.9	0.0	6.6	0.0	3.2	0.0	0.0	0.0	11.3		
Total Delay (s/veh)	59.4	57.7	197.0	197.0	0.0	364.0	79.1	9.6	119.0	117.5		
LOS	E	E	F	F	A	F	E	A	F	F		
Approach Delay (s/veh)	58.6			196.3			98.9			117.6		
Approach LOS	E			F			F			F		

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.66
 Intersection Signal Delay (s/veh): 108.7
 Intersection LOS: F
 Intersection Capacity Utilization 89.2%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 5: LaGrange Rd & Chamberlain Ln/Factory Ln



Lane Group	Ø16
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Turn Type	
Protected Phases	16
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	20.0
Total Split (s)	20.0
Total Split (%)	13%
Yellow Time (s)	3.5
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Intersection Summary	

Intersection						
Int Delay, s/veh	12.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	108	186	284	48	26	6
Future Vol, veh/h	108	186	284	48	26	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	120	207	316	53	29	7

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	717	32	36	0	0
Stage 1	32	-	-	-	-
Stage 2	684	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	399	1047	1589	-	-
Stage 1	995	-	-	-	-
Stage 2	505	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	318	1047	1589	-	-
Mov Cap-2 Maneuver	318	-	-	-	-
Stage 1	792	-	-	-	-
Stage 2	505	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	19.56	6.7	0
HCM LOS	C		

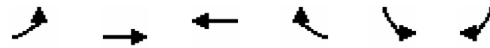
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1540	-	568	-	-
HCM Lane V/C Ratio	0.199	-	0.575	-	-
HCM Ctrl Dly (s/v)	7.8	0	19.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.7	-	3.6	-	-

Synchro Reports

2036 Build AM Peak

HCM 7th Signalized Intersection Summary
 1: Chamberlain Ln & Gate 10

2036 Build AM Peak
 06/24/2026



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↘	↗
Traffic Volume (veh/h)	30	295	904	17	18	17
Future Volume (veh/h)	30	295	904	17	18	17
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	418	1826	1826	418	418	418
Adj Flow Rate, veh/h	40	393	1205	23	24	23
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	100	5	5	100	100	100
Cap, veh/h	149	1316	1738	33	109	97
Arrive On Green	0.50	0.50	0.50	0.50	0.27	0.27
Sat Flow, veh/h	103	2719	3573	66	398	354
Grp Volume(v), veh/h	206	227	600	628	24	23
Grp Sat Flow(s),veh/h/ln	1160	1578	1735	1814	398	354
Q Serve(g_s), s	0.9	3.7	11.6	11.6	2.0	2.2
Cycle Q Clear(g_c), s	12.6	3.7	11.6	11.6	2.0	2.2
Prop In Lane	0.19			0.04	1.00	1.00
Lane Grp Cap(c), veh/h	677	788	866	905	109	97
V/C Ratio(X)	0.30	0.29	0.69	0.69	0.22	0.24
Avail Cap(c_a), veh/h	1093	1366	1501	1569	109	97
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.4	6.4	8.4	8.4	12.3	12.4
Incr Delay (d2), s/veh	0.3	0.2	1.0	1.0	4.6	5.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.7	2.6	2.7	0.3	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	6.7	6.6	9.4	9.4	17.0	18.1
LnGrp LOS	A	A	A	A	B	B
Approach Vol, veh/h		433	1228		47	
Approach Delay, s/veh		6.7	9.4		17.5	
Approach LOS		A	A		B	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				26.9	17.0	26.9
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				38.0	12.0	38.0
Max Q Clear Time (g_c+I1), s				14.6	4.2	13.6
Green Ext Time (p_c), s				2.7	0.0	8.3
Intersection Summary						
HCM 7th Control Delay, s/veh			8.9			
HCM 7th LOS			A			

Intersection						
Int Delay, s/veh	15.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↙	↗	↙	↑	↗	
Traffic Vol, veh/h	219	189	192	60	91	271
Future Vol, veh/h	219	189	192	60	91	271
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	29	29	0
Mvmt Flow	249	215	218	68	103	308




















Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	762	257	411	0	-	0
Stage 1	257	-	-	-	-	-
Stage 2	505	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	376	786	1158	-	-	-
Stage 1	790	-	-	-	-	-
Stage 2	611	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	305	786	1158	-	-	-
Mov Cap-2 Maneuver	305	-	-	-	-	-
Stage 1	641	-	-	-	-	-
Stage 2	611	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	33.77	6.73	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1158	-	305	786	-	-
HCM Lane V/C Ratio	0.188	-	0.816	0.273	-	-
HCM Ctrl Dly (s/v)	8.8	-	53.2	11.3	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	0.7	-	6.8	1.1	-	-

HCM 7th Signalized Intersection Summary
 3: Chamberlain Ln & Collins Ln

2036 Build AM Peak
 06/24/2026

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	109	10	106	171	43	1	103	190	17	1	675	121
Future Volume (veh/h)	109	10	106	171	43	1	103	190	17	1	675	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	143	13	139	225	57	1	136	250	22	1	888	159
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	646	54	634	458	105	2	221	669	59	60	1278	229
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	1326	135	1585	876	262	4	234	1544	136	0	2949	527
Grp Volume(v), veh/h	156	0	139	283	0	0	137	0	271	564	0	484
Grp Sat Flow(s),veh/h/ln	1461	0	1585	1141	0	0	237	0	1678	1870	0	1607
Q Serve(g_s), s	0.0	0.0	3.5	9.9	0.0	0.0	11.3	0.0	6.6	0.0	0.0	14.7
Cycle Q Clear(g_c), s	4.1	0.0	3.5	14.0	0.0	0.0	26.0	0.0	6.6	14.7	0.0	14.7
Prop In Lane	0.92		1.00	0.80		0.00	0.99		0.08	0.00		0.33
Lane Grp Cap(c), veh/h	699	0	634	564	0	0	222	0	727	870	0	696
V/C Ratio(X)	0.22	0.00	0.22	0.50	0.00	0.00	0.62	0.00	0.37	0.65	0.00	0.70
Avail Cap(c_a), veh/h	699	0	634	564	0	0	222	0	727	870	0	696
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.0	0.0	11.8	16.2	0.0	0.0	25.7	0.0	11.5	13.8	0.0	13.8
Incr Delay (d2), s/veh	0.7	0.0	0.8	3.2	0.0	0.0	5.0	0.0	0.3	1.7	0.0	3.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	1.2	3.3	0.0	0.0	2.1	0.0	2.0	5.1	0.0	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	12.7	0.0	12.6	19.4	0.0	0.0	30.7	0.0	11.8	15.5	0.0	16.8
LnGrp LOS	B		B	B			C		B	B		B
Approach Vol, veh/h		295			283			408				1048
Approach Delay, s/veh		12.7			19.4			18.2				16.1
Approach LOS		B			B			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		29.0		31.0		29.0		31.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		24.0		26.0		24.0		26.0				
Max Q Clear Time (g_c+I1), s		16.0		28.0		6.1		16.7				
Green Ext Time (p_c), s		1.0		0.0		1.2		4.2				
Intersection Summary												
HCM 7th Control Delay, s/veh			16.5									
HCM 7th LOS			B									

Timings
4: Old LaGrange Rd & Chamberlain Ln

2036 Build AM Peak
06/24/2026

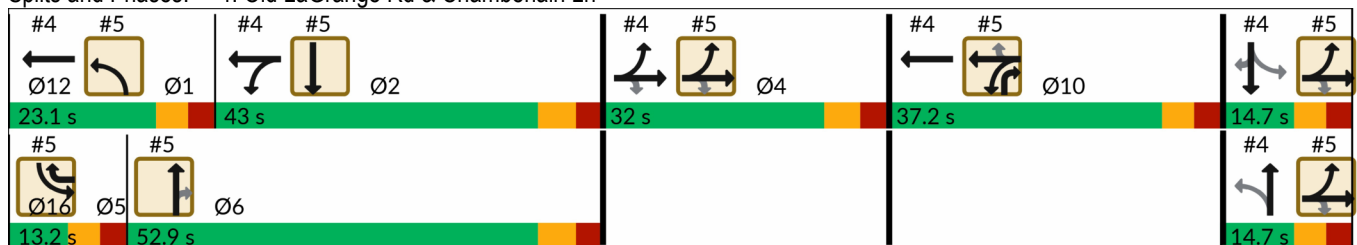


Lane Group	EBT	EBR	WBT	NBT	SBL	SBT	SBR	Ø1	Ø2	Ø5	Ø6	Ø10
Lane Configurations	↕	↗	↔	↕		↕	↗					
Traffic Volume (vph)	243	6	270	3	51	3	20					
Future Volume (vph)	243	6	270	3	51	3	20					
Turn Type	NA	Perm	NA	NA	Perm	NA	Perm					
Protected Phases	4		10 1 2	16		12		1	2	5	6	10
Permitted Phases		4			12		12					
Detector Phase	4	4	10 1 2	16	12	12	12					
Switch Phase												
Minimum Initial (s)	8.0	8.0		5.0	5.0	5.0	5.0	5.0	8.0	5.0	15.0	8.0
Minimum Split (s)	31.0	31.0		11.5	11.5	11.5	11.5	11.5	15.0	11.5	28.5	14.5
Total Split (s)	32.0	32.0		14.7	14.7	14.7	14.7	23.1	43.0	13.2	52.9	37.2
Total Split (%)	21.3%	21.3%		9.8%	9.8%	9.8%	9.8%	15%	29%	9%	35%	25%
Yellow Time (s)	4.0	4.0		3.5	3.5	3.5	3.5	3.5	4.3	3.5	4.3	3.5
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	2.7	3.0	2.7	3.0
Lost Time Adjust (s)	0.0	0.0		0.0		0.0	0.0					
Total Lost Time (s)	7.0	7.0		6.5		6.5	6.5					
Lead/Lag								Lead	Lag	Lead	Lag	
Lead-Lag Optimize?								Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	None	Max	None	Max	None
Act Effect Green (s)	25.0	25.0	83.8	8.2		8.2	8.2					
Actuated g/C Ratio	0.17	0.17	0.56	0.05		0.05	0.05					
v/c Ratio	0.96	0.02	0.32	0.41		0.89	0.08					
Control Delay (s/veh)	102.5	0.0	6.1	82.6		146.3	0.6					
Queue Delay	0.0	0.0	11.2	0.0		0.0	0.0					
Total Delay (s/veh)	102.5	0.0	17.3	82.6		146.3	0.6					
LOS	F	A	B	F		F	A					
Approach Delay (s/veh)	100.2		17.3	82.6		107.0						
Approach LOS	F		B	F		F						

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 140
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.96
 Intersection Signal Delay (s/veh): 62.1
 Intersection LOS: E
 Intersection Capacity Utilization 43.7%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 4: Old LaGrange Rd & Chamberlain Ln



Timings
5: LaGrange Rd & Chamberlain Ln/Factory Ln

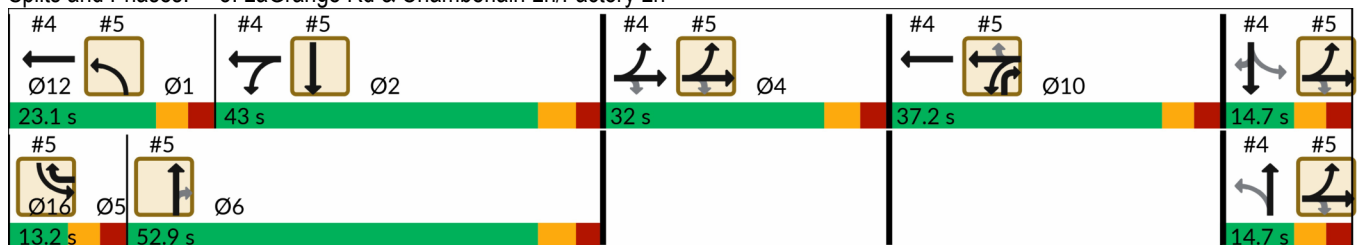
2036 Build AM Peak
06/24/2026

	→	↘	↙	←	↖	↗	↑	↘	↙	↓	Ø4	Ø12
Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	Ø4	Ø12
Lane Configurations	↕↕	↕↕	↕↕	↕↕	↕↕	↕↕	↕↕	↕↕	↕↕	↕↕		
Traffic Volume (vph)	127	106	481	117	3	171	486	419	25	723		
Future Volume (vph)	127	106	481	117	3	171	486	419	25	723		
Turn Type	NA	Perm	Split	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		
Protected Phases	4 12 16		10	10	5	1	6	10	5	2	4	12
Permitted Phases		4 12 16			10			6				
Detector Phase	4 12 16	4 12 16	10	10	5	1	6	10	5	2		
Switch Phase												
Minimum Initial (s)			8.0	8.0	5.0	5.0	15.0	8.0	5.0	8.0	8.0	5.0
Minimum Split (s)			14.5	14.5	11.5	11.5	28.5	14.5	11.5	15.0	31.0	11.5
Total Split (s)			37.2	37.2	13.2	23.1	52.9	37.2	13.2	43.0	32.0	14.7
Total Split (%)			24.8%	24.8%	8.8%	15.4%	35.3%	24.8%	8.8%	28.7%	21%	10%
Yellow Time (s)			3.5	3.5	3.5	3.5	4.3	3.5	3.5	4.3	4.0	3.5
All-Red Time (s)			3.0	3.0	3.0	3.0	2.7	3.0	3.0	2.7	3.0	3.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)			6.5	6.5	6.5	6.5	7.0	6.5	6.5	7.0		
Lead/Lag					Lead	Lead	Lag		Lead	Lag		
Lead-Lag Optimize?					Yes	Yes	Yes		Yes	Yes		
Recall Mode			None	None	None	None	Max	None	None	Max	None	None
Act Effct Green (s)	32.7	32.7	30.7	30.7	37.3	16.6	51.2	82.4	6.6	36.0		
Actuated g/C Ratio	0.22	0.22	0.20	0.20	0.25	0.11	0.34	0.55	0.04	0.24		
v/c Ratio	0.56	0.24	0.94	0.93	0.01	0.95	0.44	0.42	0.36	0.95		
Control Delay (s/veh)	7.3	0.7	94.3	91.3	0.0	117.7	40.8	2.1	83.0	77.1		
Queue Delay	5.0	3.3	0.0	0.0	0.0	19.6	0.0	0.0	0.0	1.3		
Total Delay (s/veh)	12.2	4.0	94.3	91.3	0.0	137.3	40.8	2.1	83.0	78.4		
LOS	B	A	F	F	A	F	D	A	F	E		
Approach Delay (s/veh)	9.4			92.4			41.0			78.6		
Approach LOS	A			F			D			E		

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 140
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.96
 Intersection Signal Delay (s/veh): 59.1
 Intersection LOS: E
 Intersection Capacity Utilization 80.0%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 5: LaGrange Rd & Chamberlain Ln/Factory Ln



Lane Group	Ø16
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Turn Type	
Protected Phases	16
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	11.5
Total Split (s)	14.7
Total Split (%)	10%
Yellow Time (s)	3.5
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Intersection Summary	

Intersection						
Int Delay, s/veh	6.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	6	33	213	45	5	2
Future Vol, veh/h	6	33	213	45	5	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	56	56	56	56	56	56
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	59	380	80	9	4

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	852	11	12	0	0
Stage 1	11	-	-	-	-
Stage 2	841	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	333	1076	1619	-	-
Stage 1	1017	-	-	-	-
Stage 2	426	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	251	1076	1619	-	-
Mov Cap-2 Maneuver	251	-	-	-	-
Stage 1	767	-	-	-	-
Stage 2	426	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	10.58	6.53	0
HCM LOS	B		

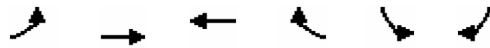
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1486	-	715	-	-
HCM Lane V/C Ratio	0.235	-	0.097	-	-
HCM Ctrl Dly (s/v)	7.9	0	10.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.9	-	0.3	-	-

Synchro Reports

2036 Build PM Peak

HCM 7th Signalized Intersection Summary
 1: Chamberlain Ln & Gate 10

2036 Build PM Peak
 06/24/2026



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↘	↗
Traffic Volume (veh/h)	59	885	652	6	42	36
Future Volume (veh/h)	59	885	652	6	42	36
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	418	1826	1826	418	418	418
Adj Flow Rate, veh/h	74	1106	815	8	52	45
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	100	5	5	100	100	100
Cap, veh/h	151	1568	1799	18	106	94
Arrive On Green	0.51	0.51	0.51	0.51	0.27	0.27
Sat Flow, veh/h	120	3150	3611	35	398	354
Grp Volume(v), veh/h	601	579	402	421	52	45
Grp Sat Flow(s),veh/h/ln	1609	1578	1735	1820	398	354
Q Serve(g_s), s	3.9	12.7	6.6	6.6	5.0	4.8
Cycle Q Clear(g_c), s	11.8	12.7	6.6	6.6	5.0	4.8
Prop In Lane	0.12			0.02	1.00	1.00
Lane Grp Cap(c), veh/h	912	807	887	930	106	94
V/C Ratio(X)	0.66	0.72	0.45	0.45	0.49	0.48
Avail Cap(c_a), veh/h	1410	1333	1465	1537	106	94
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.1	8.5	7.0	7.0	13.9	13.9
Incr Delay (d2), s/veh	0.8	1.2	0.4	0.3	15.3	16.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	2.6	1.4	1.5	0.8	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	8.9	9.7	7.4	7.3	29.2	30.1
LnGrp LOS	A	A	A	A	C	C
Approach Vol, veh/h		1180	823		97	
Approach Delay, s/veh		9.3	7.4		29.6	
Approach LOS		A	A		C	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				28.0	17.0	28.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				38.0	12.0	38.0
Max Q Clear Time (g_c+I1), s				14.7	7.0	8.6
Green Ext Time (p_c), s				8.3	0.1	5.0
Intersection Summary						
HCM 7th Control Delay, s/veh			9.5			
HCM 7th LOS			A			

Intersection						
Int Delay, s/veh	93.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↙	↗	↙	↑	↗	
Traffic Vol, veh/h	267	228	280	92	93	183
Future Vol, veh/h	267	228	280	92	93	183
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	6	6	0
Mvmt Flow	326	278	341	112	113	223

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1020	225	337	0	-	0
Stage 1	225	-	-	-	-	-
Stage 2	795	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	~ 264	819	1234	-	-	-
Stage 1	817	-	-	-	-	-
Stage 2	448	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 191	819	1234	-	-	-
Mov Cap-2 Maneuver	~ 191	-	-	-	-	-
Stage 1	591	-	-	-	-	-
Stage 2	448	-	-	-	-	-




















Approach	EB	NB	SB
HCM Ctrl Dly, s/v	210.52	6.8	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1234	-	191	819	-	-
HCM Lane V/C Ratio	0.277	-	1.702	0.339	-	-
HCM Ctrl Dly (s/v)	9	-	\$ 380.4	11.6	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	1.1	-	22.3	1.5	-	-

Notes	
~: Volume exceeds capacity	\$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

HCM 7th Signalized Intersection Summary
 3: Chamberlain Ln & Collins Ln

2036 Build PM Peak
 06/24/2026

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	204	84	51	112	95	1	163	493	252	11	469	108
Future Volume (veh/h)	204	84	51	112	95	1	163	493	252	11	469	108
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	249	102	62	137	116	1	199	601	307	13	572	132
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	394	120	555	150	102	1	245	666	380	71	1332	304
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	834	342	1585	164	290	2	334	1379	786	19	2756	629
Grp Volume(v), veh/h	351	0	62	254	0	0	498	0	609	384	0	333
Grp Sat Flow(s),veh/h/ln	1175	0	1585	456	0	0	938	0	1561	1815	0	1589
Q Serve(g_s), s	0.0	0.0	1.6	4.4	0.0	0.0	20.8	0.0	19.9	0.1	0.0	8.2
Cycle Q Clear(g_c), s	16.6	0.0	1.6	21.0	0.0	0.0	29.0	0.0	19.9	19.9	0.0	8.2
Prop In Lane	0.71		1.00	0.54		0.00	0.40		0.50	0.03		0.40
Lane Grp Cap(c), veh/h	514	0	555	252	0	0	537	0	754	939	0	768
V/C Ratio(X)	0.68	0.00	0.11	1.01	0.00	0.00	0.93	0.00	0.81	0.41	0.00	0.43
Avail Cap(c_a), veh/h	514	0	555	252	0	0	537	0	754	939	0	768
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.1	0.0	13.2	24.8	0.0	0.0	18.7	0.0	13.1	10.1	0.0	10.1
Incr Delay (d2), s/veh	7.2	0.0	0.4	58.8	0.0	0.0	22.3	0.0	6.5	0.3	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	0.6	7.5	0.0	0.0	9.0	0.0	6.4	2.5	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.3	0.0	13.6	83.7	0.0	0.0	41.0	0.0	19.7	10.4	0.0	10.5
LnGrp LOS	C		B	F			D		B	B		B
Approach Vol, veh/h		413			254			1107				717
Approach Delay, s/veh		23.5			83.7			29.3				10.4
Approach LOS		C			F			C				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		26.0		34.0		26.0		34.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		21.0		29.0		21.0		29.0				
Max Q Clear Time (g_c+I1), s		23.0		31.0		18.6		21.9				
Green Ext Time (p_c), s		0.0		0.0		0.6		2.4				
Intersection Summary												
HCM 7th Control Delay, s/veh			28.4									
HCM 7th LOS			C									

Timings
4: Old LaGrange Rd & Chamberlain Ln

2036 Build PM Peak
06/24/2026

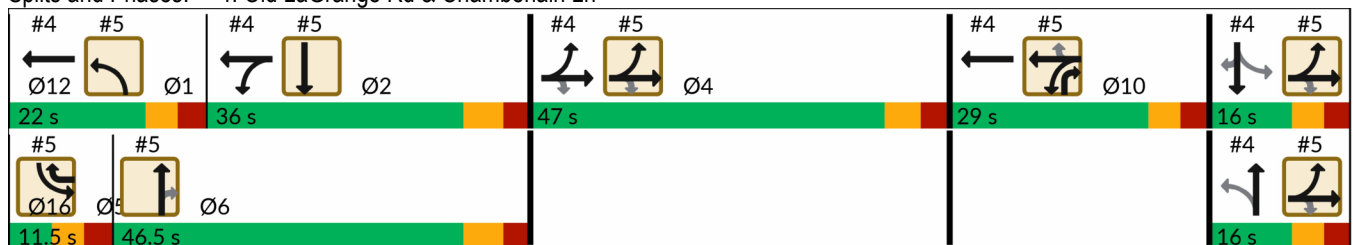


Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR	Ø1	Ø2	Ø5	Ø6
Lane Configurations	↕	↗	↔		↕		↕	↗				
Traffic Volume (vph)	619	2	572	2	7	24	4	49				
Future Volume (vph)	619	2	572	2	7	24	4	49				
Turn Type	NA	Perm	NA	Perm	NA	Perm	NA	Perm				
Protected Phases	4		10 1 2		16		12		1	2	5	6
Permitted Phases		4		16		12		12				
Detector Phase	4	4	10 1 2	16	16	12	12	12				
Switch Phase												
Minimum Initial (s)	8.0	8.0		5.0	5.0	5.0	5.0	5.0	5.0	8.0	5.0	15.0
Minimum Split (s)	35.0	35.0		12.0	12.0	12.0	12.0	12.0	14.5	32.0	11.5	28.5
Total Split (s)	47.0	47.0		16.0	16.0	16.0	16.0	16.0	22.0	36.0	11.5	46.5
Total Split (%)	31.3%	31.3%		10.7%	10.7%	10.7%	10.7%	10.7%	15%	24%	8%	31%
Yellow Time (s)	4.0	4.0		3.5	3.5	3.5	3.5	3.5	3.5	4.3	3.5	4.3
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	2.7	3.0	2.7
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0				
Total Lost Time (s)	7.0	7.0			6.5		6.5	6.5				
Lead/Lag									Lead	Lag	Lead	Lag
Lead-Lag Optimize?									Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	None	None	Max	None	Max
Act Effct Green (s)	40.0	40.0	67.5		9.5		9.5	9.5				
Actuated g/C Ratio	0.27	0.27	0.45		0.06		0.06	0.06				
v/c Ratio	1.49	0.00	0.85		1.74		0.73	0.19				
Control Delay (s/veh)	270.7	0.0	27.1		409.5		137.6	1.4				
Queue Delay	0.0	0.0	53.7		0.0		0.0	0.0				
Total Delay (s/veh)	270.8	0.0	80.7		409.5		137.6	1.4				
LOS	F	A	F		F		F	A				
Approach Delay (s/veh)	270.0		80.7		409.5		50.8					
Approach LOS	F		F		F		D					

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.74
 Intersection Signal Delay (s/veh): 192.9
 Intersection LOS: F
 Intersection Capacity Utilization 65.8%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 4: Old LaGrange Rd & Chamberlain Ln



Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	8.0
Minimum Split (s)	26.0
Total Split (s)	29.0
Total Split (%)	19%
Yellow Time (s)	3.5
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Intersection Summary	

Timings
5: LaGrange Rd & Chamberlain Ln/Factory Ln

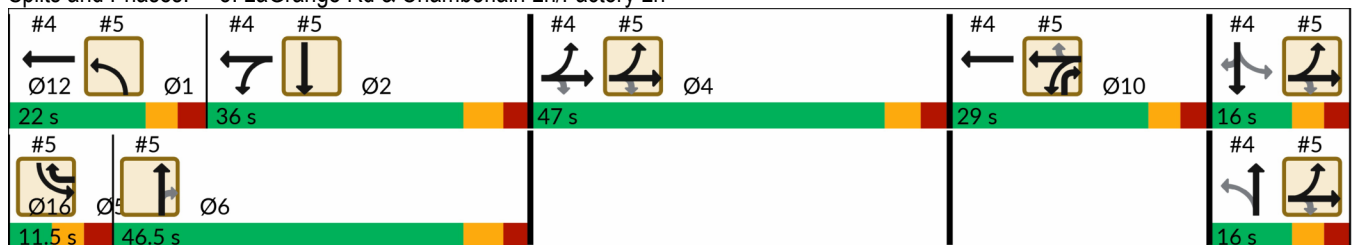
2036 Build PM Peak
06/24/2026

	→	↘	↙	←	↖	↗	↑	↘	↙	↓	Ø4	Ø12
Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	Ø4	Ø12
Lane Configurations	↕↕	↕↕	↕↕	↕↕	↕↕	↕↕	↕↕	↕↕	↕↕	↕↕		
Traffic Volume (vph)	201	373	321	253	2	264	835	603	38	499		
Future Volume (vph)	201	373	321	253	2	264	835	603	38	499		
Turn Type	NA	Perm	Split	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		
Protected Phases	4 12 16		10	10	5	1	6	10	5	2	4	12
Permitted Phases		4 12 16			10			6				
Detector Phase	4 12 16	4 12 16	10	10	5	1	6	10	5	2		
Switch Phase												
Minimum Initial (s)			8.0	8.0	5.0	5.0	15.0	8.0	5.0	8.0	8.0	5.0
Minimum Split (s)			26.0	26.0	11.5	14.5	28.5	26.0	11.5	32.0	35.0	12.0
Total Split (s)			29.0	29.0	11.5	22.0	46.5	29.0	11.5	36.0	47.0	16.0
Total Split (%)			19.3%	19.3%	7.7%	14.7%	31.0%	19.3%	7.7%	24.0%	31%	11%
Yellow Time (s)			3.5	3.5	3.5	3.5	4.3	3.5	3.5	4.3	4.0	3.5
All-Red Time (s)			3.0	3.0	3.0	3.0	2.7	3.0	3.0	2.7	3.0	3.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)			6.5	6.5	6.5	6.5	7.0	6.5	6.5	7.0		
Lead/Lag					Lead	Lead	Lag		Lead	Lag		
Lead-Lag Optimize?					Yes	Yes	Yes		Yes	Yes		
Recall Mode			None	None	None	None	Max	None	None	Max	None	None
Act Effect Green (s)	49.0	49.0	22.5	22.5	27.5	15.5	41.8	64.8	5.0	29.0		
Actuated g/C Ratio	0.33	0.33	0.15	0.15	0.18	0.10	0.28	0.43	0.03	0.19		
v/c Ratio	0.78	0.65	1.25	1.26	0.00	1.63	0.95	0.73	0.73	1.02		
Control Delay (s/veh)	6.4	1.5	189.7	193.1	0.0	347.4	72.2	12.5	126.8	98.8		
Queue Delay	54.8	57.1	0.0	6.7	0.0	2.9	0.0	0.0	0.0	9.2		
Total Delay (s/veh)	61.2	58.7	189.7	199.8	0.0	350.3	72.2	12.5	126.8	108.1		
LOS	E	E	F	F	A	F	E	B	F	F		
Approach Delay (s/veh)	60.0			194.3			94.2			109.2		
Approach LOS	E			F			F			F		

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.74
 Intersection Signal Delay (s/veh): 105.1
 Intersection LOS: F
 Intersection Capacity Utilization 92.0%
 ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 5: LaGrange Rd & Chamberlain Ln/Factory Ln



Lane Group	Ø16
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Turn Type	
Protected Phases	16
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	12.0
Total Split (s)	16.0
Total Split (%)	11%
Yellow Time (s)	3.5
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Intersection Summary	

Intersection						
Int Delay, s/veh	13.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	113	194	295	50	27	6
Future Vol, veh/h	113	194	295	50	27	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	126	216	328	56	30	7

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	744	33	37	0	0
Stage 1	33	-	-	-	-
Stage 2	711	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	385	1046	1587	-	-
Stage 1	994	-	-	-	-
Stage 2	490	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	303	1046	1587	-	-
Mov Cap-2 Maneuver	303	-	-	-	-
Stage 1	782	-	-	-	-
Stage 2	490	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	21.68	6.72	0
HCM LOS	C		

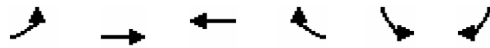
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1538	-	549	-	-
HCM Lane V/C Ratio	0.207	-	0.621	-	-
HCM Ctrl Dly (s/v)	7.9	0	21.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.8	-	4.2	-	-

Synchro Reports

2036 Build w/ Closure AM Peak

HCM 7th Signalized Intersection Summary
 1: Chamberlain Ln & Gate 10

2036 Build w Closure AM Peak
 06/24/2026



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↓	↓
Traffic Volume (veh/h)	30	295	944	18	18	17
Future Volume (veh/h)	30	295	944	18	18	17
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	418	1826	1826	418	418	418
Adj Flow Rate, veh/h	40	393	1259	24	24	23
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	100	5	5	100	100	100
Cap, veh/h	147	1322	1786	34	106	94
Arrive On Green	0.51	0.51	0.51	0.51	0.27	0.27
Sat Flow, veh/h	100	2662	3573	66	398	354
Grp Volume(v), veh/h	203	230	627	656	24	23
Grp Sat Flow(s),veh/h/ln	1100	1578	1735	1814	398	354
Q Serve(g_s), s	1.1	3.8	12.5	12.5	2.1	2.3
Cycle Q Clear(g_c), s	13.6	3.8	12.5	12.5	2.1	2.3
Prop In Lane	0.20			0.04	1.00	1.00
Lane Grp Cap(c), veh/h	660	809	890	930	106	94
V/C Ratio(X)	0.31	0.28	0.70	0.71	0.23	0.24
Avail Cap(c_a), veh/h	1022	1328	1460	1526	106	94
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.4	6.3	8.4	8.4	13.0	13.0
Incr Delay (d2), s/veh	0.3	0.2	1.0	1.0	4.9	6.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.7	2.7	2.9	0.3	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	6.6	6.5	9.4	9.4	17.9	19.1
LnGrp LOS	A	A	A	A	B	B
Approach Vol, veh/h		433	1283		47	
Approach Delay, s/veh		6.5	9.4		18.5	
Approach LOS		A	A		B	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				28.2	17.0	28.2
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				38.0	12.0	38.0
Max Q Clear Time (g_c+I1), s				15.6	4.3	14.5
Green Ext Time (p_c), s				2.7	0.0	8.7
Intersection Summary						
HCM 7th Control Delay, s/veh			8.9			
HCM 7th LOS			A			

Intersection						
Int Delay, s/veh	15.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↙	↗	↙	↑	↗	
Traffic Vol, veh/h	219	189	192	60	91	271
Future Vol, veh/h	219	189	192	60	91	271
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	29	29	0
Mvmt Flow	249	215	218	68	103	308

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	762	257	411	0	-	0
Stage 1	257	-	-	-	-	-
Stage 2	505	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	376	786	1158	-	-	-
Stage 1	790	-	-	-	-	-
Stage 2	611	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	305	786	1158	-	-	-
Mov Cap-2 Maneuver	305	-	-	-	-	-
Stage 1	641	-	-	-	-	-
Stage 2	611	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	33.77	6.73	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1158	-	305	786	-	-
HCM Lane V/C Ratio	0.188	-	0.816	0.273	-	-
HCM Ctrl Dly (s/v)	8.8	-	53.2	11.3	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	0.7	-	6.8	1.1	-	-

HCM 7th Signalized Intersection Summary
 3: Chamberlain Ln & Collins Ln

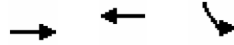
2036 Build w Closure AM Peak
 06/24/2026



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕	↗		↕			↕			↕	
Traffic Volume (veh/h)	95	4	105	171	43	46	103	196	12	27	675	121
Future Volume (veh/h)	95	4	105	171	43	46	103	196	12	27	675	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	125	5	138	225	57	61	136	258	16	36	888	159
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	604	22	634	398	102	87	213	688	43	90	1245	219
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	1215	55	1585	747	254	217	216	1587	99	60	2874	506
Grp Volume(v), veh/h	130	0	138	343	0	0	136	0	274	577	0	506
Grp Sat Flow(s),veh/h/ln	1270	0	1585	1218	0	0	217	0	1684	1829	0	1611
Q Serve(g_s), s	0.0	0.0	3.4	11.5	0.0	0.0	10.4	0.0	6.6	3.3	0.0	15.6
Cycle Q Clear(g_c), s	4.1	0.0	3.4	15.6	0.0	0.0	26.0	0.0	6.6	15.4	0.0	15.6
Prop In Lane	0.96		1.00	0.66		0.18	1.00		0.06	0.06		0.31
Lane Grp Cap(c), veh/h	626	0	634	586	0	0	214	0	730	856	0	698
V/C Ratio(X)	0.21	0.00	0.22	0.58	0.00	0.00	0.64	0.00	0.37	0.67	0.00	0.72
Avail Cap(c_a), veh/h	626	0	634	586	0	0	214	0	730	856	0	698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.0	0.0	11.8	16.4	0.0	0.0	26.4	0.0	11.5	13.9	0.0	14.0
Incr Delay (d2), s/veh	0.8	0.0	0.8	4.2	0.0	0.0	6.2	0.0	0.3	2.1	0.0	3.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	1.2	4.2	0.0	0.0	2.2	0.0	2.0	5.4	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	12.8	0.0	12.6	20.6	0.0	0.0	32.5	0.0	11.8	16.0	0.0	17.8
LnGrp LOS	B		B	C			C		B	B		B
Approach Vol, veh/h		268			343			410				1083
Approach Delay, s/veh		12.7			20.6			18.7				16.9
Approach LOS		B			C			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		29.0		31.0		29.0		31.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		24.0		26.0		24.0		26.0				
Max Q Clear Time (g_c+I1), s		17.6		28.0		6.1		17.6				
Green Ext Time (p_c), s		1.1		0.0		1.1		4.1				
Intersection Summary												
HCM 7th Control Delay, s/veh			17.3									
HCM 7th LOS			B									

Timings
4: Chamberlain Ln & Old LaGrange Rd

2036 Build w Closure AM Peak
06/24/2026

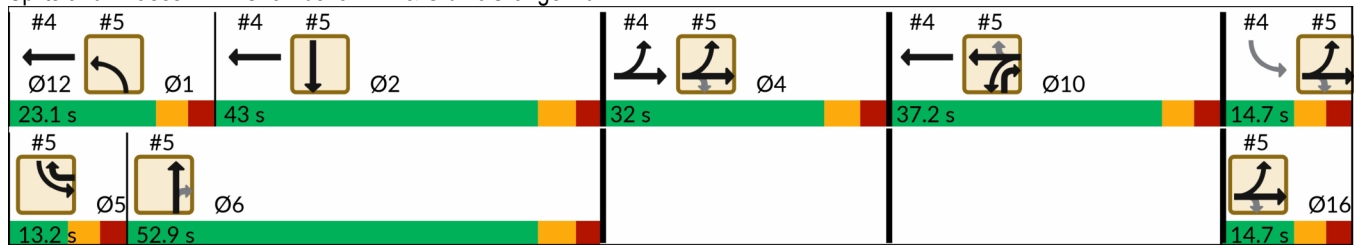


Lane Group	EBT	WBT	SBL	Ø1	Ø2	Ø5	Ø6	Ø10	Ø16
Lane Configurations	↕	↕↔	↔↕						
Traffic Volume (vph)	281	290	42						
Future Volume (vph)	281	290	42						
Turn Type	NA	NA	Perm						
Protected Phases	4	10 12		1	2	5	6	10	16
Permitted Phases									
Detector Phase	4	10 12	12						
Switch Phase									
Minimum Initial (s)	8.0		5.0	5.0	8.0	5.0	15.0	8.0	5.0
Minimum Split (s)	31.0		11.5	11.5	15.0	11.5	28.5	14.5	11.5
Total Split (s)	32.0		14.7	23.1	43.0	13.2	52.9	37.2	14.7
Total Split (%)	21.3%		9.8%	15%	29%	9%	35%	25%	10%
Yellow Time (s)	4.0		3.5	3.5	4.3	3.5	4.3	3.5	3.5
All-Red Time (s)	3.0		3.0	3.0	2.7	3.0	2.7	3.0	3.0
Lost Time Adjust (s)	0.0		0.0						
Total Lost Time (s)	7.0		6.5						
Lead/Lag				Lead	Lag	Lead	Lag		
Lead-Lag Optimize?				Yes	Yes	Yes	Yes		
Recall Mode	None		None	None	Max	None	Max	None	None
Act Effect Green (s)	25.0	90.3	8.2						
Actuated g/C Ratio	0.17	0.60	0.05						
v/c Ratio	1.11	0.17	0.80						
Control Delay (s/veh)	137.9	1.1	98.4						
Queue Delay	0.0	2.2	0.0						
Total Delay (s/veh)	137.9	3.2	98.4						
LOS	F	A	F						
Approach Delay (s/veh)	137.9	3.2	98.4						
Approach LOS	F	A	F						

Intersection Summary

Cycle Length: 150	
Actuated Cycle Length: 150	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay (s/veh): 71.8	Intersection LOS: E
Intersection Capacity Utilization 35.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: Chamberlain Ln & Old LaGrange Rd



Timings
5: LaGrange Rd & Chamberlain Ln/Factory Ln

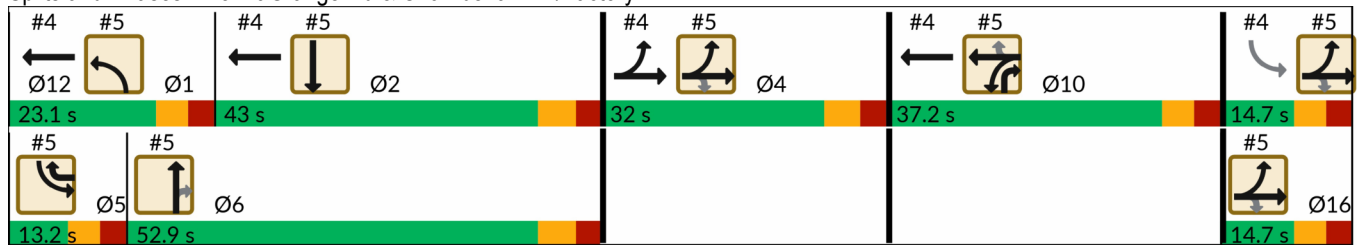
2036 Build w Closure AM Peak
06/24/2026

	→	↘	↙	←	↖	↗	↑	↘	↙	↓	Ø4	Ø12
Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	Ø4	Ø12
Lane Configurations	↕	↕	↘	↕	↕	↘	↕	↕	↘	↕		
Traffic Volume (vph)	133	115	481	117	3	171	486	419	25	723		
Future Volume (vph)	133	115	481	117	3	171	486	419	25	723		
Turn Type	NA	Perm	Split	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		
Protected Phases	4 12 16		10	10	5	1	6	10	5	2	4	12
Permitted Phases		4 12 16			10			6				
Detector Phase	4 12 16	4 12 16	10	10	5	1	6	10	5	2		
Switch Phase												
Minimum Initial (s)			8.0	8.0	5.0	5.0	15.0	8.0	5.0	8.0	8.0	5.0
Minimum Split (s)			14.5	14.5	11.5	11.5	28.5	14.5	11.5	15.0	31.0	11.5
Total Split (s)			37.2	37.2	13.2	23.1	52.9	37.2	13.2	43.0	32.0	14.7
Total Split (%)			24.8%	24.8%	8.8%	15.4%	35.3%	24.8%	8.8%	28.7%	21%	10%
Yellow Time (s)			3.5	3.5	3.5	3.5	4.3	3.5	3.5	4.3	4.0	3.5
All-Red Time (s)			3.0	3.0	3.0	3.0	2.7	3.0	3.0	2.7	3.0	3.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)			6.5	6.5	6.5	6.5	7.0	6.5	6.5	7.0		
Lead/Lag					Lead	Lead	Lag		Lead	Lag		
Lead-Lag Optimize?					Yes	Yes	Yes		Yes	Yes		
Recall Mode			None	None	None	None	Max	None	None	Max	None	None
Act Effct Green (s)	32.7	32.7	30.7	30.7	37.3	16.6	51.2	82.4	6.6	36.0		
Actuated g/C Ratio	0.22	0.22	0.20	0.20	0.25	0.11	0.34	0.55	0.04	0.24		
v/c Ratio	0.57	0.26	0.94	0.93	0.01	0.95	0.44	0.42	0.36	0.95		
Control Delay (s/veh)	5.3	0.4	94.3	91.3	0.0	117.7	40.8	2.1	83.0	77.1		
Queue Delay	7.5	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	12.9	4.2	94.3	91.3	0.0	117.7	40.8	2.1	83.0	77.1		
LOS	B	A	F	F	A	F	D	A	F	E		
Approach Delay (s/veh)	9.8			92.4			37.9			77.3		
Approach LOS	A			F			D			E		

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.11
 Intersection Signal Delay (s/veh): 57.4
 Intersection LOS: E
 Intersection Capacity Utilization 80.1%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 5: LaGrange Rd & Chamberlain Ln/Factory Ln



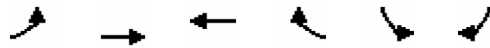
Lane Group	Ø16
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Turn Type	
Protected Phases	16
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	11.5
Total Split (s)	14.7
Total Split (%)	10%
Yellow Time (s)	3.5
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Intersection Summary	

Synchro Reports

2036 Build w/ Closure PM Peak

HCM 7th Signalized Intersection Summary
 1: Chamberlain Ln & Gate 10

2036 Build w Closure PM Peak
 06/24/2026



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↓	↓
Traffic Volume (veh/h)	59	887	649	6	42	36
Future Volume (veh/h)	59	887	649	6	42	36
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	418	1826	1826	418	418	418
Adj Flow Rate, veh/h	74	1109	811	8	52	45
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	100	5	5	100	100	100
Cap, veh/h	151	1570	1801	18	106	94
Arrive On Green	0.51	0.51	0.51	0.51	0.27	0.27
Sat Flow, veh/h	120	3152	3611	35	398	354
Grp Volume(v), veh/h	603	580	400	419	52	45
Grp Sat Flow(s),veh/h/ln	1610	1578	1735	1820	398	354
Q Serve(g_s), s	3.9	12.8	6.6	6.6	5.0	4.8
Cycle Q Clear(g_c), s	11.9	12.8	6.6	6.6	5.0	4.8
Prop In Lane	0.12			0.02	1.00	1.00
Lane Grp Cap(c), veh/h	914	808	888	931	106	94
V/C Ratio(X)	0.66	0.72	0.45	0.45	0.49	0.48
Avail Cap(c_a), veh/h	1409	1331	1463	1535	106	94
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.1	8.5	7.0	7.0	13.9	13.9
Incr Delay (d2), s/veh	0.8	1.2	0.4	0.3	15.3	16.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	2.6	1.4	1.5	0.8	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	8.9	9.7	7.3	7.3	29.3	30.2
LnGrp LOS	A	A	A	A	C	C
Approach Vol, veh/h		1183	819		97	
Approach Delay, s/veh		9.3	7.3		29.7	
Approach LOS		A	A		C	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				28.1	17.0	28.1
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				38.0	12.0	38.0
Max Q Clear Time (g_c+I1), s				14.8	7.0	8.6
Green Ext Time (p_c), s				8.3	0.1	5.0
Intersection Summary						
HCM 7th Control Delay, s/veh			9.5			
HCM 7th LOS			A			

Intersection						
Int Delay, s/veh	96.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↙	↗	↙	↑	↗	
Traffic Vol, veh/h	267	228	284	92	93	183
Future Vol, veh/h	267	228	284	92	93	183
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	6	6	0
Mvmt Flow	326	278	346	112	113	223

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	1030	225	337	0	0
Stage 1	225	-	-	-	-
Stage 2	805	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	~ 261	819	1234	-	-
Stage 1	817	-	-	-	-
Stage 2	443	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	~ 188	819	1234	-	-
Mov Cap-2 Maneuver	~ 188	-	-	-	-
Stage 1	588	-	-	-	-
Stage 2	443	-	-	-	-




















Approach	EB	NB	SB
HCM Ctrl Dly, s/v	218.53	6.84	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1234	-	188	819	-	-
HCM Lane V/C Ratio	0.281	-	1.735	0.339	-	-
HCM Ctrl Dly (s/v)	9.1	-	\$ 395.2	11.6	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	1.2	-	22.6	1.5	-	-

Notes	
~: Volume exceeds capacity	\$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

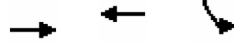
HCM 7th Signalized Intersection Summary
 3: Chamberlain Ln & Collins Ln

2036 Build w Closure PM Peak
 06/24/2026

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	207	32	48	112	96	51	165	588	158	37	469	109
Future Volume (veh/h)	207	32	48	112	96	51	165	588	158	37	469	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	252	39	59	137	117	62	201	717	193	45	572	133
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	387	43	555	115	88	28	241	809	241	95	1082	279
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	787	122	1585	82	251	81	322	1673	499	58	2238	578
Grp Volume(v), veh/h	291	0	59	316	0	0	488	0	623	382	0	368
Grp Sat Flow(s),veh/h/ln	908	0	1585	414	0	0	883	0	1612	1276	0	1598
Q Serve(g_s), s	0.0	0.0	1.5	2.6	0.0	0.0	19.7	0.0	19.5	2.5	0.0	9.3
Cycle Q Clear(g_c), s	18.4	0.0	1.5	21.0	0.0	0.0	29.0	0.0	19.5	22.0	0.0	9.3
Prop In Lane	0.87		1.00	0.43		0.20	0.41		0.31	0.12		0.36
Lane Grp Cap(c), veh/h	430	0	555	231	0	0	511	0	779	684	0	772
V/C Ratio(X)	0.68	0.00	0.11	1.37	0.00	0.00	0.95	0.00	0.80	0.56	0.00	0.48
Avail Cap(c_a), veh/h	430	0	555	231	0	0	511	0	779	684	0	772
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.6	0.0	13.2	22.9	0.0	0.0	19.5	0.0	13.1	10.7	0.0	10.4
Incr Delay (d2), s/veh	8.3	0.0	0.4	190.7	0.0	0.0	28.5	0.0	5.9	1.0	0.0	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	0.0	0.5	15.4	0.0	0.0	9.9	0.0	6.4	2.6	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.9	0.0	13.6	213.6	0.0	0.0	48.0	0.0	19.0	11.7	0.0	10.9
LnGrp LOS	C		B	F			D		B	B		B
Approach Vol, veh/h		350			316			1111				750
Approach Delay, s/veh		24.7			213.6			31.7				11.3
Approach LOS		C			F			C				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		26.0		34.0		26.0		34.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		21.0		29.0		21.0		29.0				
Max Q Clear Time (g_c+I1), s		23.0		31.0		20.4		24.0				
Green Ext Time (p_c), s		0.0		0.0		0.1		2.0				
Intersection Summary												
HCM 7th Control Delay, s/veh			47.4									
HCM 7th LOS			D									

Timings
4: Chamberlain Ln & Old LaGrange Rd

2036 Build w Closure PM Peak
06/24/2026

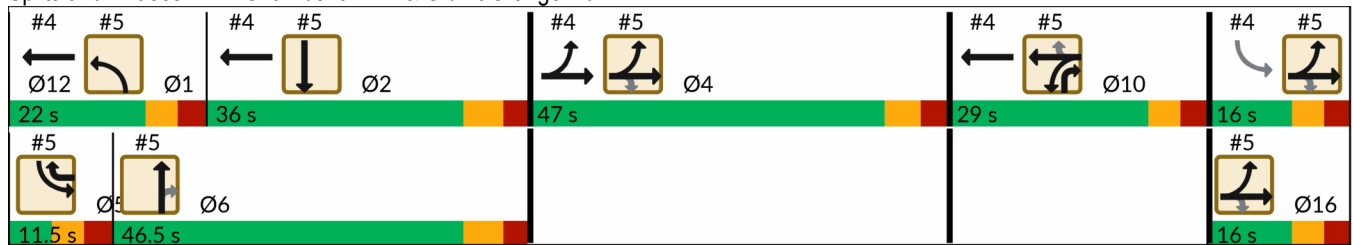


Lane Group	EBT	WBT	SBL	Ø1	Ø2	Ø5	Ø6	Ø10	Ø16
Lane Configurations	↕	↕↔	↔↕						
Traffic Volume (vph)	765	594	24						
Future Volume (vph)	765	594	24						
Turn Type	NA	NA	Perm						
Protected Phases	4	10 12		1	2	5	6	10	16
Permitted Phases									
Detector Phase	4	10 12	12						
Switch Phase									
Minimum Initial (s)	8.0		5.0	5.0	8.0	5.0	15.0	8.0	5.0
Minimum Split (s)	35.0		12.0	14.5	32.0	11.5	28.5	26.0	12.0
Total Split (s)	47.0		16.0	22.0	36.0	11.5	46.5	29.0	16.0
Total Split (%)	31.3%		10.7%	15%	24%	8%	31%	19%	11%
Yellow Time (s)	4.0		3.5	3.5	4.3	3.5	4.3	3.5	3.5
All-Red Time (s)	3.0		3.0	3.0	2.7	3.0	2.7	3.0	3.0
Lost Time Adjust (s)	0.0		0.0						
Total Lost Time (s)	7.0		6.5						
Lead/Lag				Lead	Lag	Lead	Lag		
Lead-Lag Optimize?				Yes	Yes	Yes	Yes		
Recall Mode	None		None	None	Max	None	Max	None	None
Act Effect Green (s)	40.0	74.0	9.5						
Actuated g/C Ratio	0.27	0.49	0.06						
v/c Ratio	1.85	0.43	0.58						
Control Delay (s/veh)	420.2	1.6	43.1						
Queue Delay	0.2	52.5	0.6						
Total Delay (s/veh)	420.5	54.0	43.8						
LOS	F	D	D						
Approach Delay (s/veh)	420.5	54.0	43.8						
Approach LOS	F	D	D						

Intersection Summary

Cycle Length: 150	
Actuated Cycle Length: 150	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.85	
Intersection Signal Delay (s/veh): 245.7	Intersection LOS: F
Intersection Capacity Utilization 62.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 4: Chamberlain Ln & Old LaGrange Rd



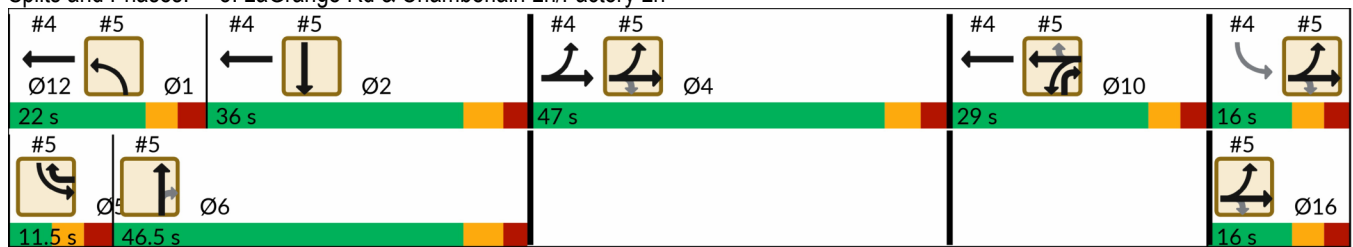
Timings
5: LaGrange Rd & Chamberlain Ln/Factory Ln

2036 Build w Closure PM Peak
06/24/2026

	→	↘	↙	←	↖	↗	↑	↘	↙	↓	Ø4	Ø12
Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	Ø4	Ø12
Lane Configurations	↕	↕	↘	↕	↕	↘	↕	↕	↘	↕		
Traffic Volume (vph)	205	384	321	253	2	264	835	603	38	499		
Future Volume (vph)	205	384	321	253	2	264	835	603	38	499		
Turn Type	NA	Perm	Split	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		
Protected Phases	4 12 16		10	10	5	1	6	10	5	2	4	12
Permitted Phases		4 12 16			10			6				
Detector Phase	4 12 16	4 12 16	10	10	5	1	6	10	5	2		
Switch Phase												
Minimum Initial (s)			8.0	8.0	5.0	5.0	15.0	8.0	5.0	8.0	8.0	5.0
Minimum Split (s)			26.0	26.0	11.5	14.5	28.5	26.0	11.5	32.0	35.0	12.0
Total Split (s)			29.0	29.0	11.5	22.0	46.5	29.0	11.5	36.0	47.0	16.0
Total Split (%)			19.3%	19.3%	7.7%	14.7%	31.0%	19.3%	7.7%	24.0%	31%	11%
Yellow Time (s)			3.5	3.5	3.5	3.5	4.3	3.5	3.5	4.3	4.0	3.5
All-Red Time (s)			3.0	3.0	3.0	3.0	2.7	3.0	3.0	2.7	3.0	3.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)			6.5	6.5	6.5	6.5	7.0	6.5	6.5	7.0		
Lead/Lag					Lead	Lead	Lag		Lead	Lag		
Lead-Lag Optimize?					Yes	Yes	Yes		Yes	Yes		
Recall Mode			None	None	None	None	Max	None	None	Max	None	None
Act Effect Green (s)	49.0	49.0	22.5	22.5	27.5	15.5	41.8	64.8	5.0	29.0		
Actuated g/C Ratio	0.33	0.33	0.15	0.15	0.18	0.10	0.28	0.43	0.03	0.19		
v/c Ratio	0.74	0.67	1.25	1.26	0.00	1.63	0.95	0.74	0.73	1.02		
Control Delay (s/veh)	4.9	5.3	189.7	193.1	0.0	347.4	72.2	12.9	126.8	98.8		
Queue Delay	56.3	57.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	61.3	62.6	189.7	193.1	0.0	347.4	72.2	12.9	126.8	98.8		
LOS	E	E	F	F	A	F	E	B	F	F		
Approach Delay (s/veh)	61.9			190.8			93.9			100.5		
Approach LOS	E			F			F			F		

Intersection Summary
 Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.85
 Intersection Signal Delay (s/veh): 103.4 Intersection LOS: F
 Intersection Capacity Utilization 91.0% ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 5: LaGrange Rd & Chamberlain Ln/Factory Ln



Lane Group	Ø16
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Turn Type	
Protected Phases	16
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	12.0
Total Split (s)	16.0
Total Split (%)	11%
Yellow Time (s)	3.5
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	
Approach Delay (s/veh)	
Approach LOS	
Intersection Summary	

Traffic Impact Study Report

Ford Kentucky Truck Plant Louisville, KY

Prepared For:

Luckett & Farley

Architecture | Engineering | Interior Design

Luckett & Farley

Prepared By:
United Consulting



June 2026

Traffic Impact Study Certification

I Heather Kilgour certify that this Traffic Impact Study has been prepared under my direct supervision and that I am a Professional Engineer registered in the State of Kentucky and have successfully completed the Traffic Impact Study Requirements training course required by KYTC. Furthermore, I certify that this study has been completed in accordance with the KYTC Traffic Impact Study Requirements and in accordance with engineering standards of practice. The results presented have been determined to be accurate representations of existing and anticipated conditions based on the assumptions and methodologies presented in this report.

Heather Kilgour
KY PE No. 10001062



Contents

1.0 Introduction	2
2.0 Study Area.....	2
3.0 Analysis Scenarios.....	2
3.1 Data Collection	3
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3.4 Design Year Forecast	6
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Appendix

Appendix A – Project Location Map
Appendix B – Trip Assignment and Distribution
Appendix C – Traffic Data
Appendix D – Trip Generation
Appendix E – Growth Rate Calculation
Appendix F – Turn Lane Analysis
Appendix G – Capacity Analysis

1.0 Introduction

A 1.6 million square foot expansion to the Ford Kentucky Truck Plant is planned in Louisville, Kentucky located west of Collins Lane and north of Chamberlain Lane. The current employee parking lot is being expanded as a part of the project. Gate 10 has been identified as the truck access point for the expansion. A Traffic Impact Study (TIS) is required as a part of the development planning to determine impacts to the adjacent roadway network and intersections. The TIS will identify appropriate improvements to be made to mitigate impacts from the expansion.

The objectives of the TIS are to determine the appropriate improvements to the roadway system and intersections to mitigate the traffic and operational impacts from the Ford Kentucky Truck Plant manufacturing expansion for Lockett & Farley.

2.0 Study Area

This traffic study analyzes the impact the proposed developments will have on traffic operations for five existing intersections. The following are included in the study area:

1. Gate 10 Main Truck Access & Chamberlain Ln
2. Employee Parking Access & Collins Ln
3. Chamberlain Ln & Collins Ln
4. Chamberlain Ln & Old LaGrange Rd/LaGrange Rd (two intersections separated by an at-grade railroad crossing)
5. Collins Ln & Old LaGrange Rd

See **Appendix A** for location map.

3.0 Analysis Scenarios

The study will examine the following Traffic analysis scenarios:

1. 2026 No-Build (Ex. Traffic Only)
2. 2036 No-Build (Background Traffic Only)
3. 2026 Build (Background + Site Traffic)
4. 2036 Build (Background + Site Traffic)

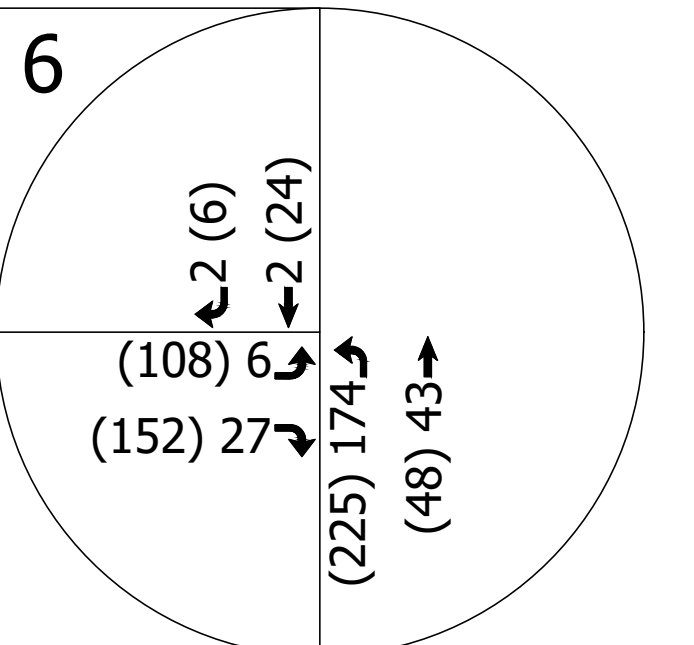
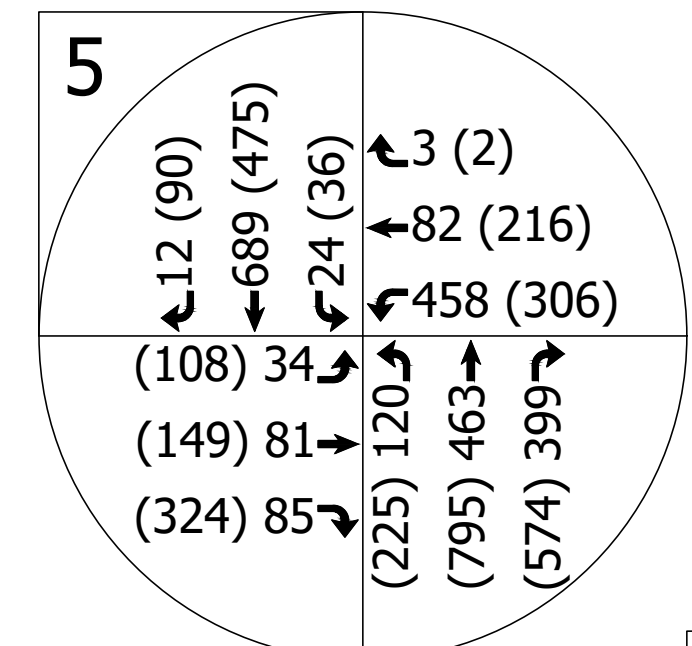
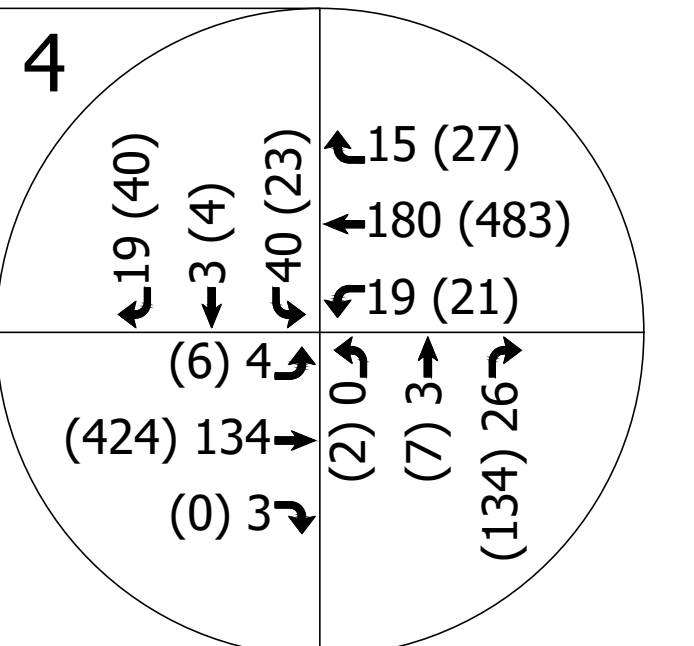
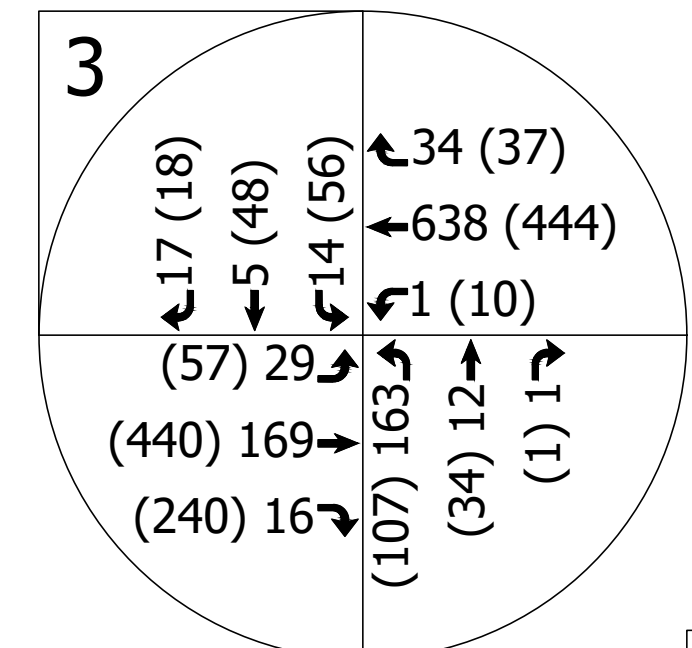
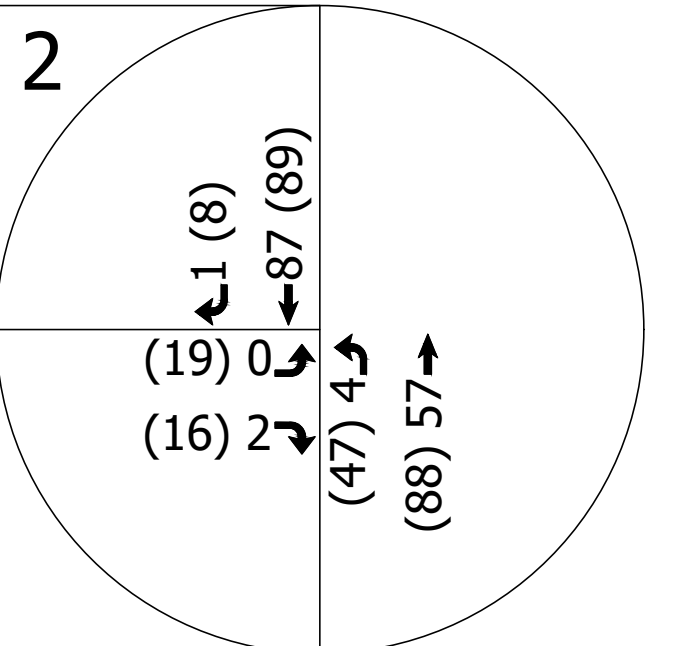
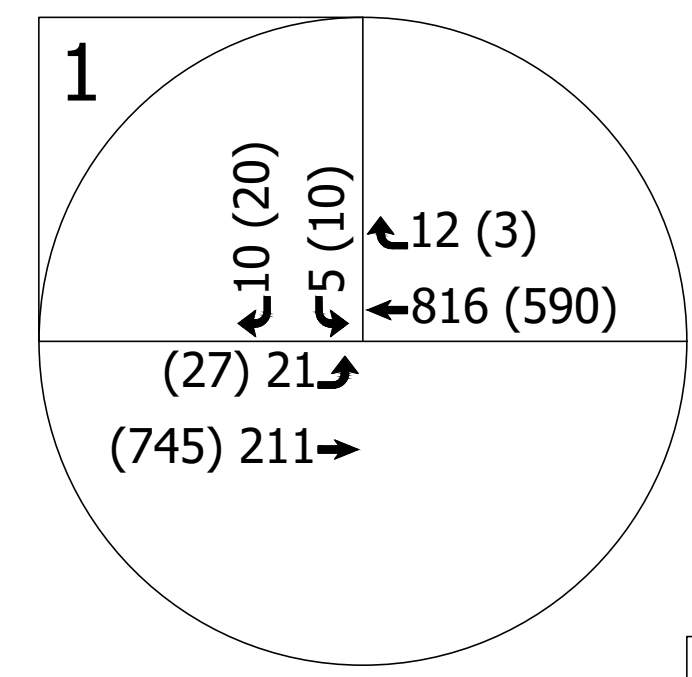
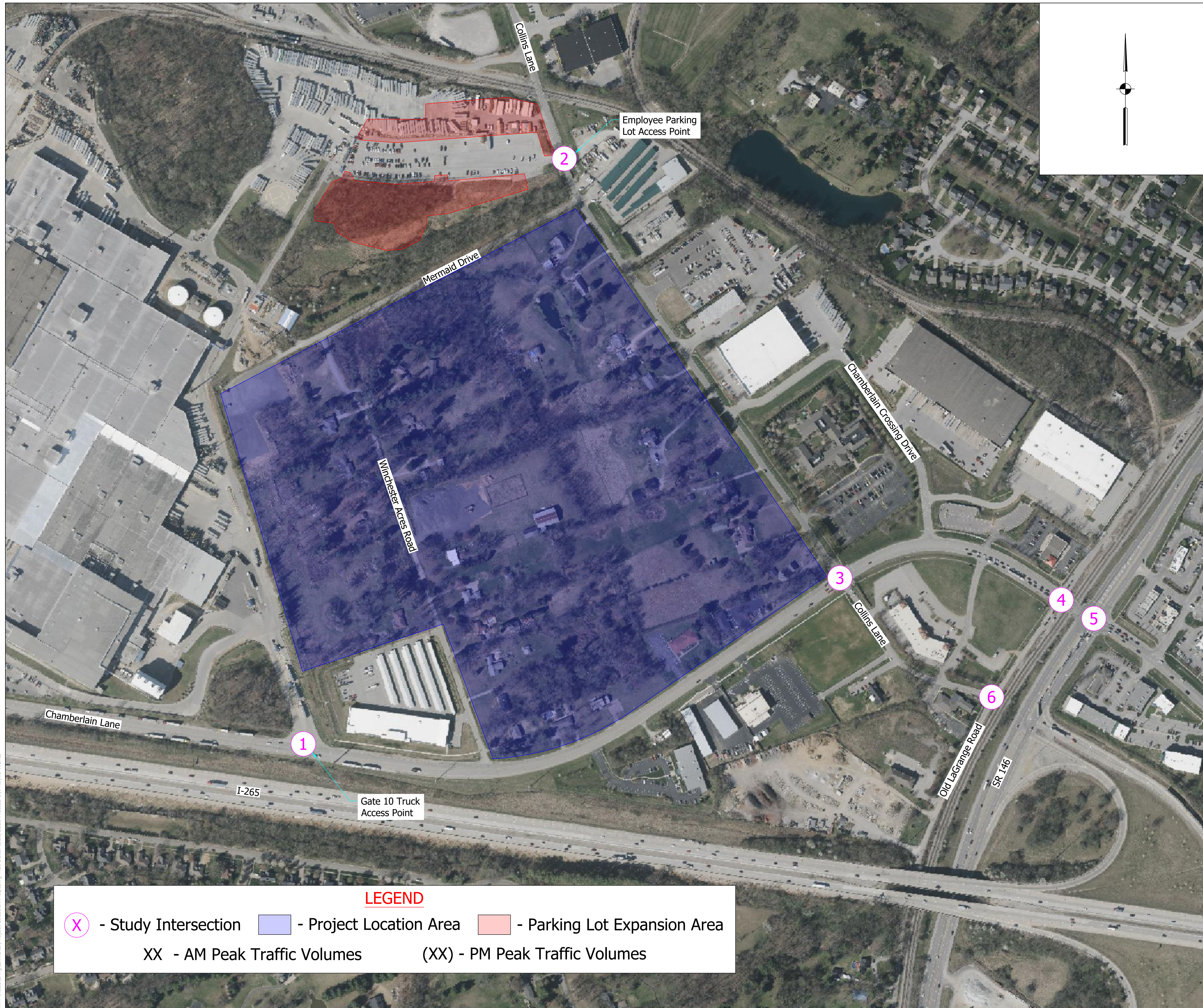
The study will additionally analyze the roadway network with the following proposed conditions at the request of the City of Louisville:

- 2036 Build Traffic Volumes with the closure along Old LaGrange Road at Collins Lane. This closure will eliminate the south leg at the intersection of Old LaGrange Road & Chamberlain Lane.

The requirements of this impact study were coordinated with Louisville Metro Planning.

3.1 Data Collection

The study utilized existing AM and PM peak hour turning movement counts for the intersection analysis. Existing traffic data for the study was collected using MioVision Cameras. The 24-hour turning movement traffic counts were collected in April 2026 during clear weather conditions. The 15-minute traffic count reports generated by Miovision can be found in **Appendix C**. Existing traffic volumes at each study intersection are illustrated in **Figure 1** on the following page.



LEGEND

(X) - Study Intersection [Blue Area] - Project Location Area [Red Area] - Parking Lot Expansion Area

XX - AM Peak Traffic Volumes (XX) - PM Peak Traffic Volumes



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CHECKED: TF	CHECKED: TF	

FORD MOTOR COMPANY
 KENTUCKY TRUCK PLANT

TRAFFIC VOLUMES
 2026 NO-BUILD

HORIZONTAL SCALE	BRIDGE FILE
1" = 200'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	2 of 8
CONTRACT	PROJECT
N/A	26-412

3.2 Trip Generation

The proposed expansion consists of a manufacturing land use. Employee projections for the Ford Expansion were provided to United by Lockett & Farley and were used to develop a site-specific trip generation estimate. Utilizing the anticipated employee count allowed for a more accurate representation of traffic generated by the facility than would be achieved using generalized rates from the Institute of Transportation Engineers (ITE) Trip Generation Manual. The resulting trip estimates represent employee vehicle trips entering and exiting the employee parking areas.

Truck traffic associated with the expansion was estimated using the ITE Trip Generation Manual, 11th Edition, and was assigned to Gate 10 based on the anticipated site operations and access configuration.

The trip generation methodology applied in this analysis is consistent with the procedures and guidance outlined in the ITE Trip Generation Manual, 11th Edition.

The results of the trip generation can be found in **Table 3.2.1**. The number of vehicles entering and exiting in the AM and PM Peak at the employee parking lot provided by Ford and the ITE Trip Generation reports can be found in **Appendix D**.

Table 3.2.1: Trip Generation Summary

ITE Land Use Code	Land Use Description	Ind. Var. (X)	Ind. Var. Units	Entering/Exiting	Truck Trips	Vehicle Trips
140	Manufacturing	1600	1000 Sq. Ft. GFA	Entering (AM Peak)	13	458
				Exiting (AM Peak)	19	406
				Entering (PM Peak)	34	406
				Exiting (PM Peak)	46	458

Note: Truck Trips were generated using ITE Trip Generation Manual while the vehicle trips were provided by L&F

3.3 Trip Assignment and Distribution

Existing traffic data shows a high percentage of vehicles traveling in the NB/SB direction, toward I-265, in both the AM and PM peak hours. Generated trips from the proposed site were distributed along the roadway network utilizing a similar directional distribution. The same distribution was utilized and is documented in **Appendix B**.

The methodology used to evaluate the traffic volumes generated by the proposed development and their impact on the street system is outlined below:

Traffic Volume Assignment: Traffic entering and exiting was assigned to available access points based on traffic patterns noted in collected data.

Traffic Volume Distribution: Traffic volumes from each access point were distributed to the local roadway network based on existing directional distributions, traffic patterns, and relative attractiveness or proximity of destinations.

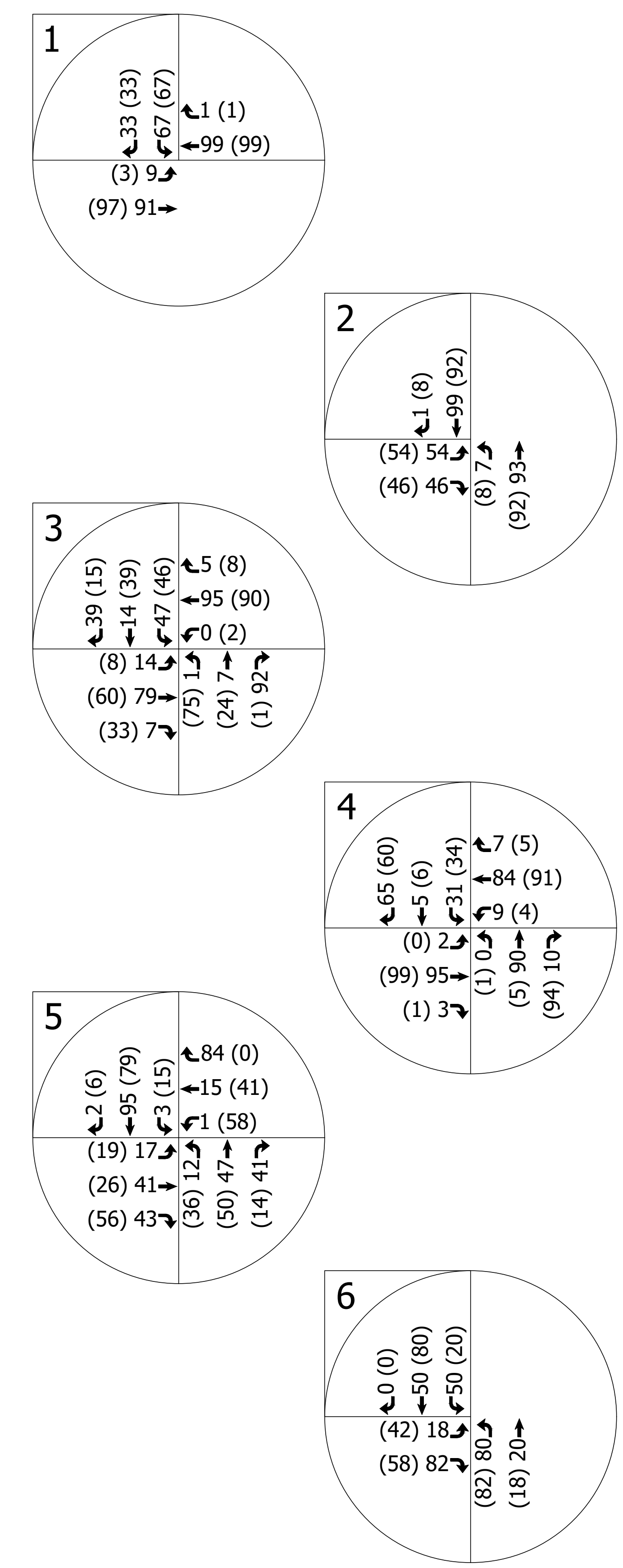
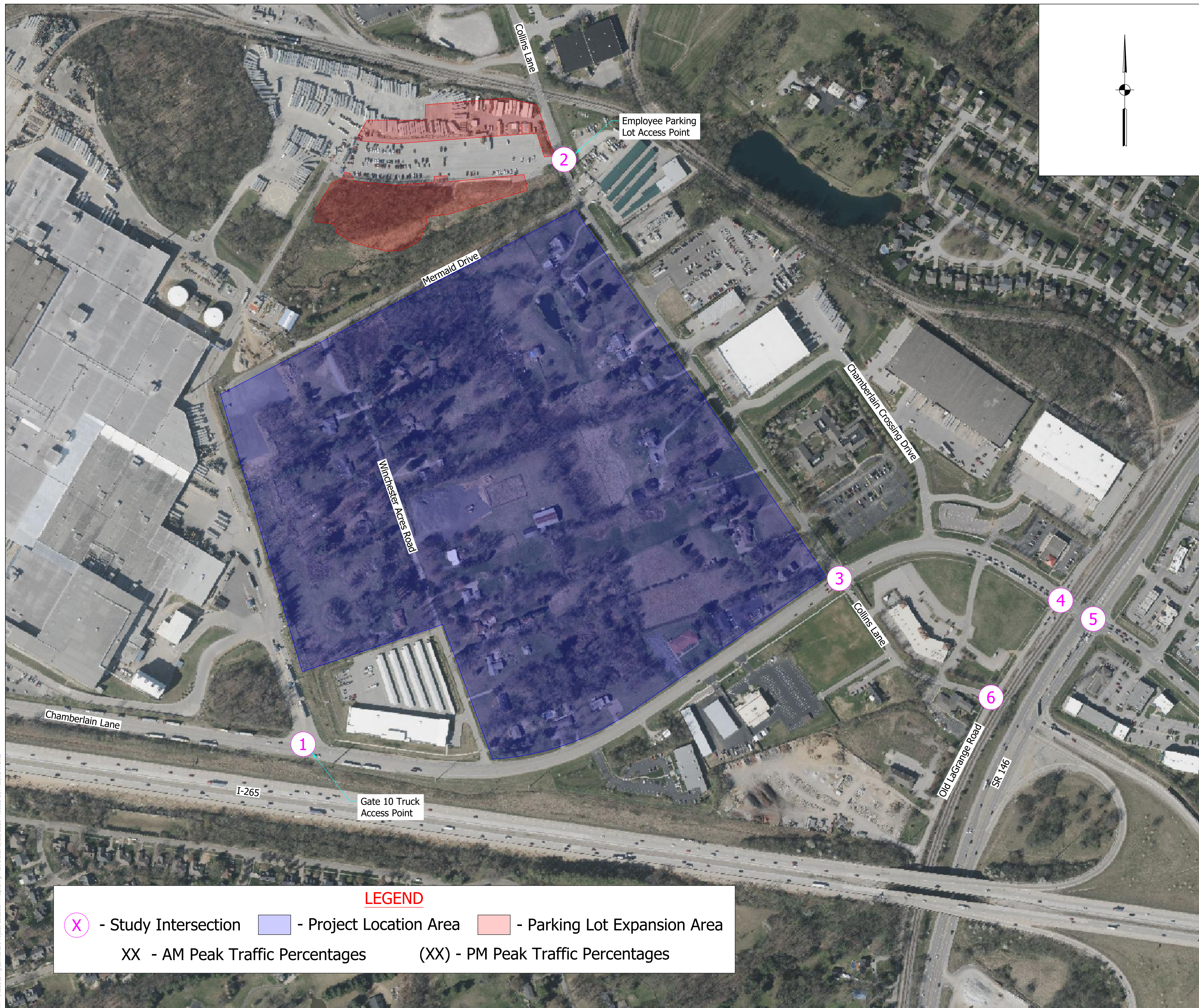
Figure 2 illustrates the proposed trip distribution and assignment percentages for the development, while **Figure 3** depicts the resulting site-generated traffic volumes assigned throughout the surrounding roadway network.

3.4 Design Year Forecast

The design year analysis forecasted background traffic volumes based on historical growth patterns. The design year assumed a 10-year horizon. The future year forecast was determined through the use of the forecast spreadsheet provided on the KYTC division of planning website (see **Appendix E**). This spreadsheet calculated the estimated growth rate for the design year 2036. Traffic count data from Chamberlain Lane, Collins Lane, and LaGrange Road were input into the spreadsheet and the growth rate was found to be -0.68%. A worse-case growth rate of 0.5% was assumed for the purpose of this study. The 2036 no-build traffic volumes are illustrated in **Figure 4** below.

2026 and 2036 build traffic volumes are illustrated in **Figures 5** and **6**, respectively.

Figure 7 shows the 2036 build traffic volumes with the closure along Old LaGrange Road at Collins Lane.



LEGEND

(X) - Study Intersection [Blue Box] - Project Location Area [Red Box] - Parking Lot Expansion Area

XX - AM Peak Traffic Percentages (XX) - PM Peak Traffic Percentages



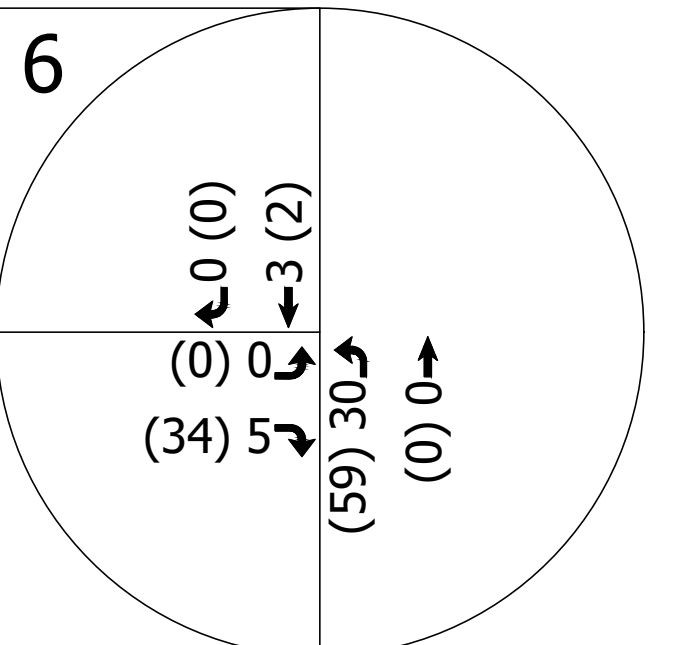
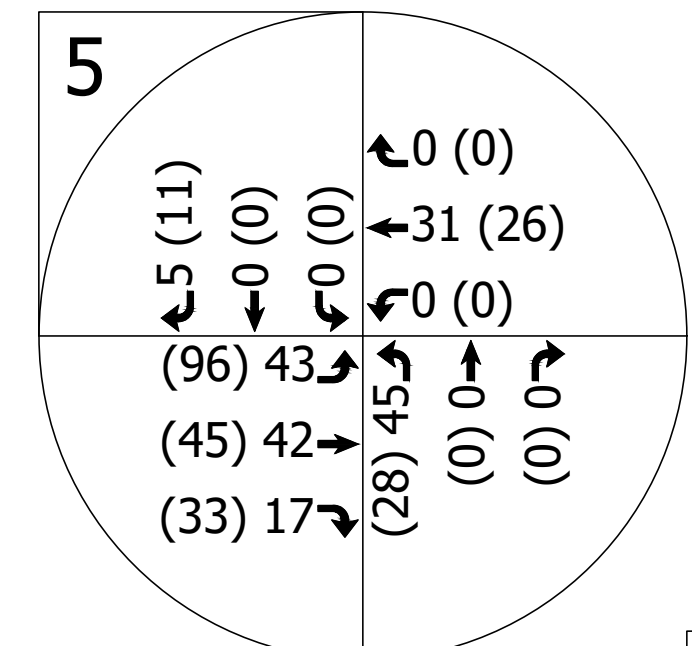
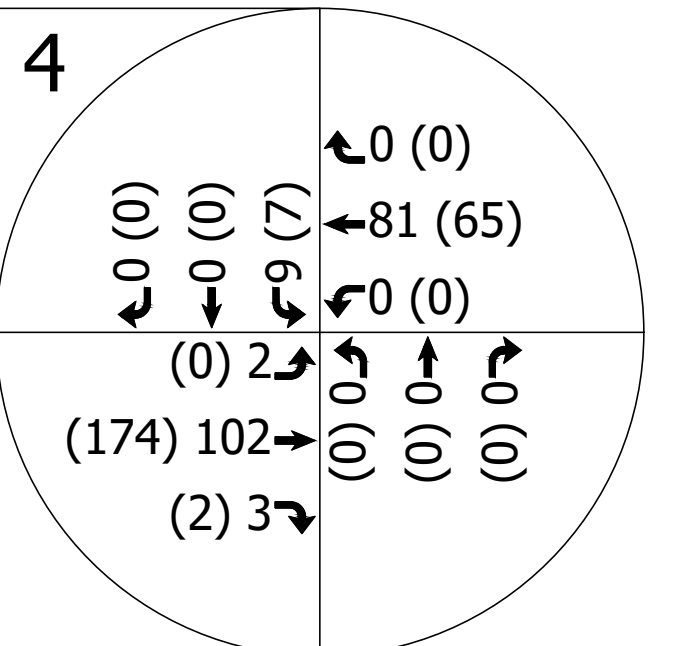
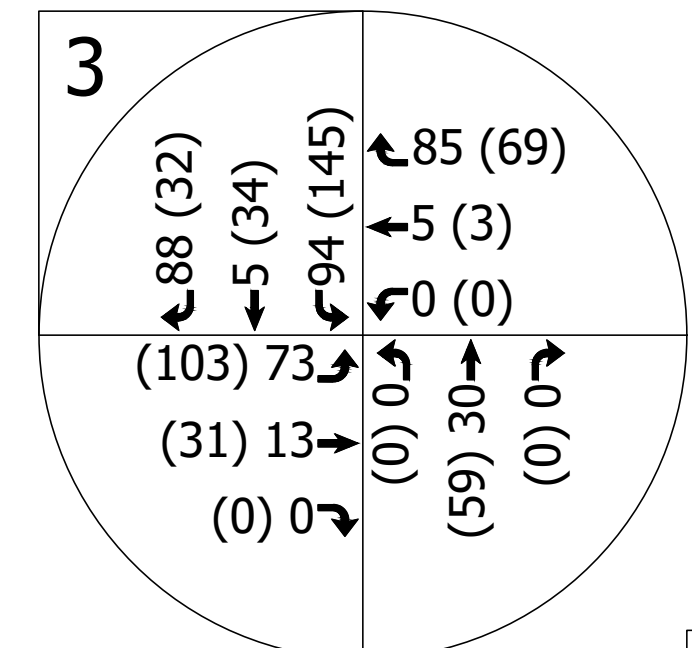
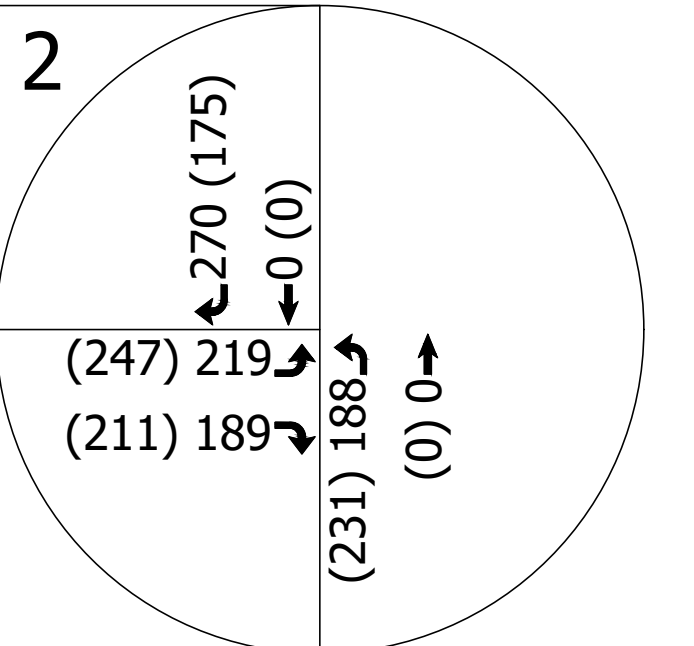
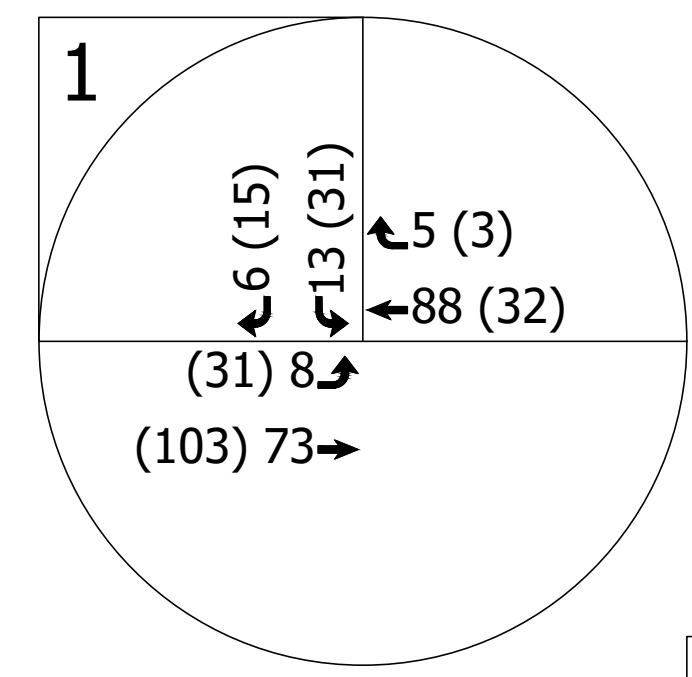
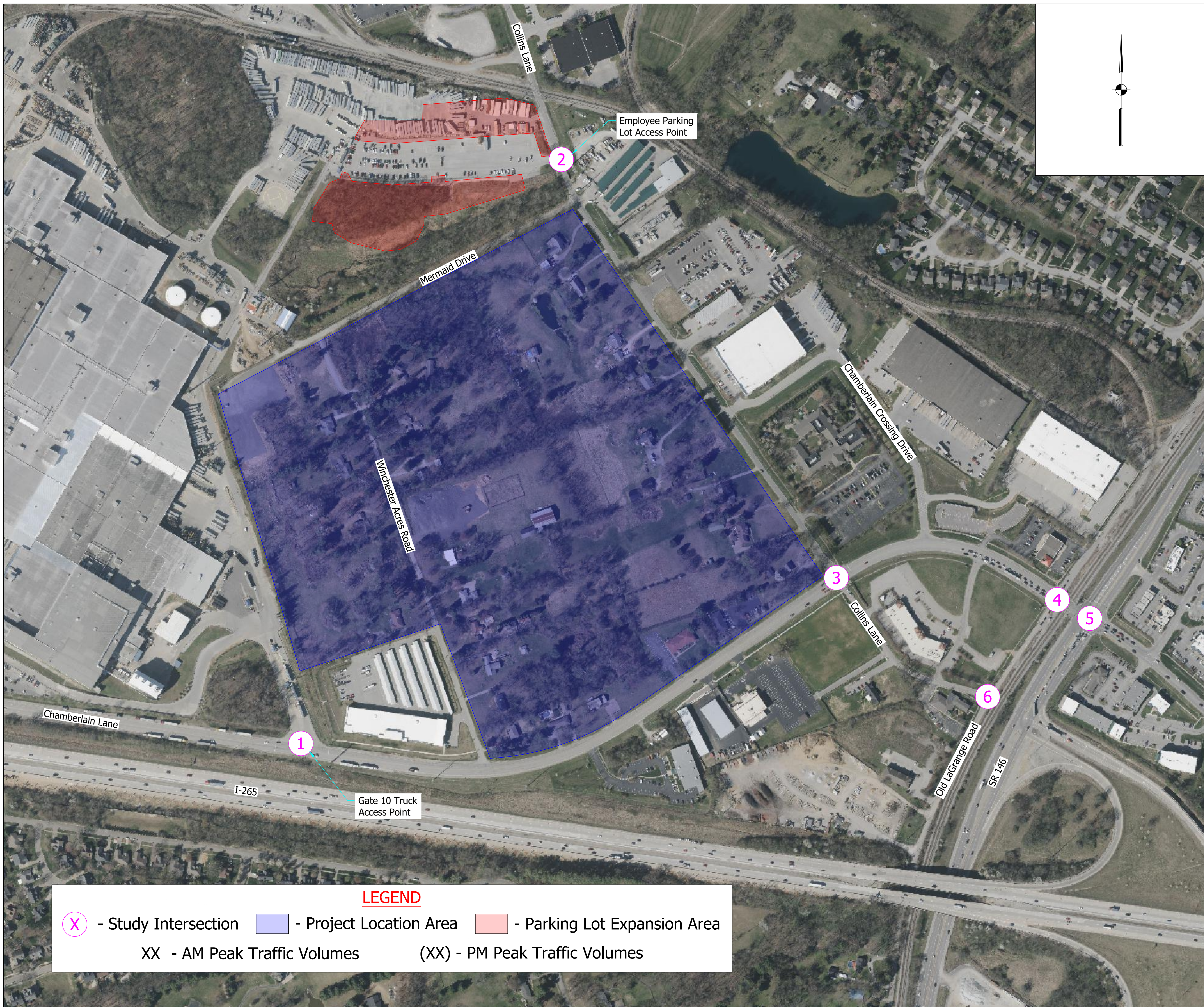
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FORD MOTOR COMPANY
 KENTUCKY TRUCK PLANT

TRAFFIC VOLUMES
 AM/PM PEAK TRAFFIC PERCENTAGES

HORIZONTAL SCALE	BRIDGE FILE
1" = 200'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	8 of 8
CONTRACT	PROJECT
N/A	26-412



LEGEND

(X) - Study Intersection [Blue Box] - Project Location Area [Red Box] - Parking Lot Expansion Area

XX - AM Peak Traffic Volumes (XX) - PM Peak Traffic Volumes



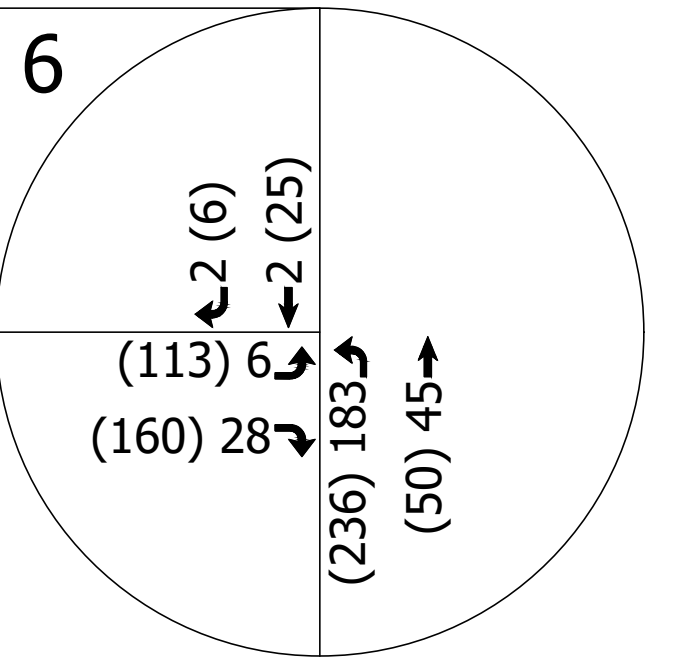
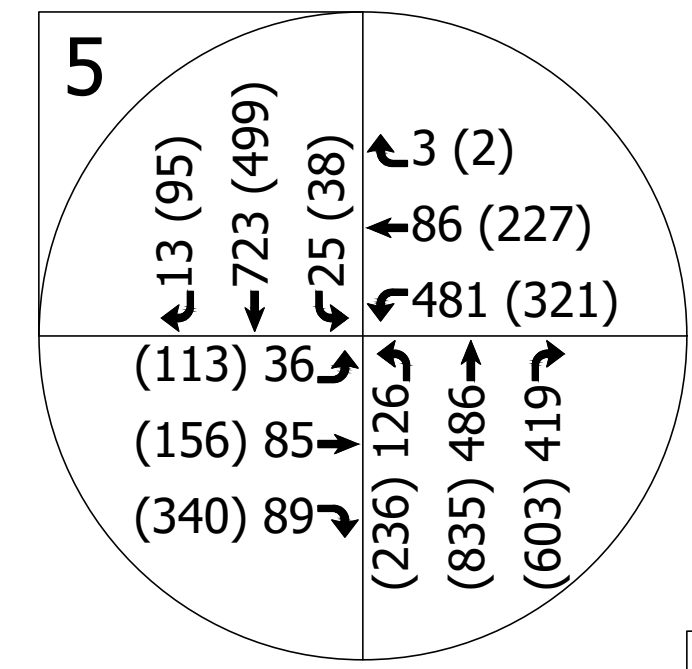
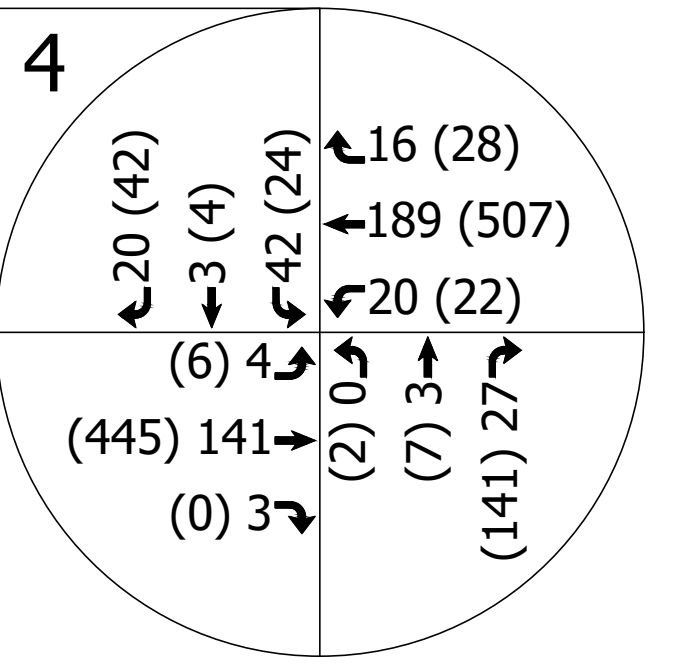
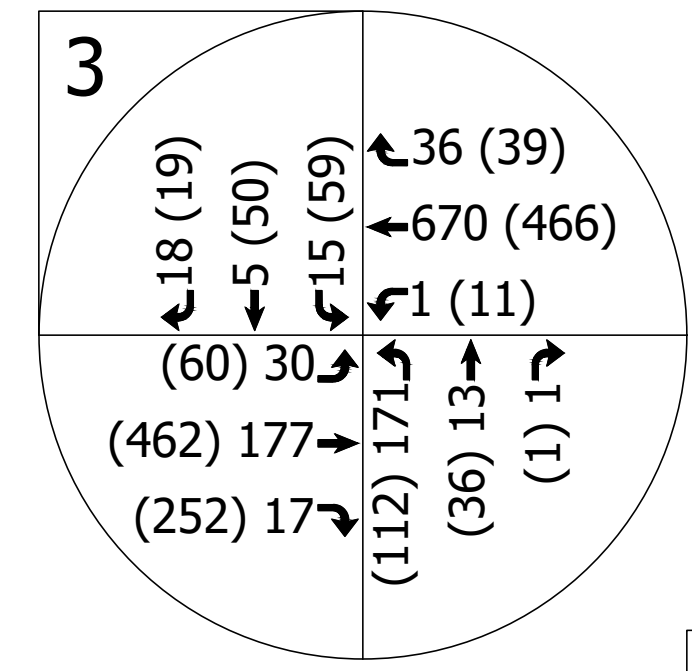
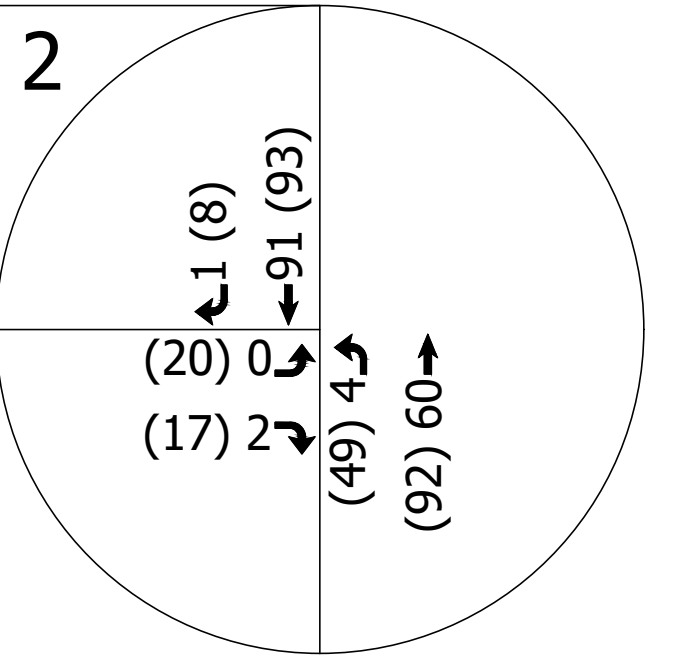
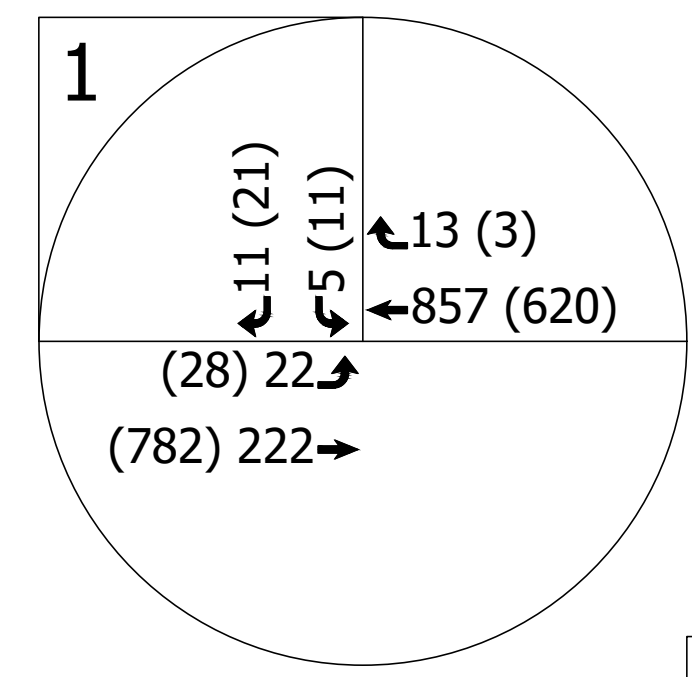
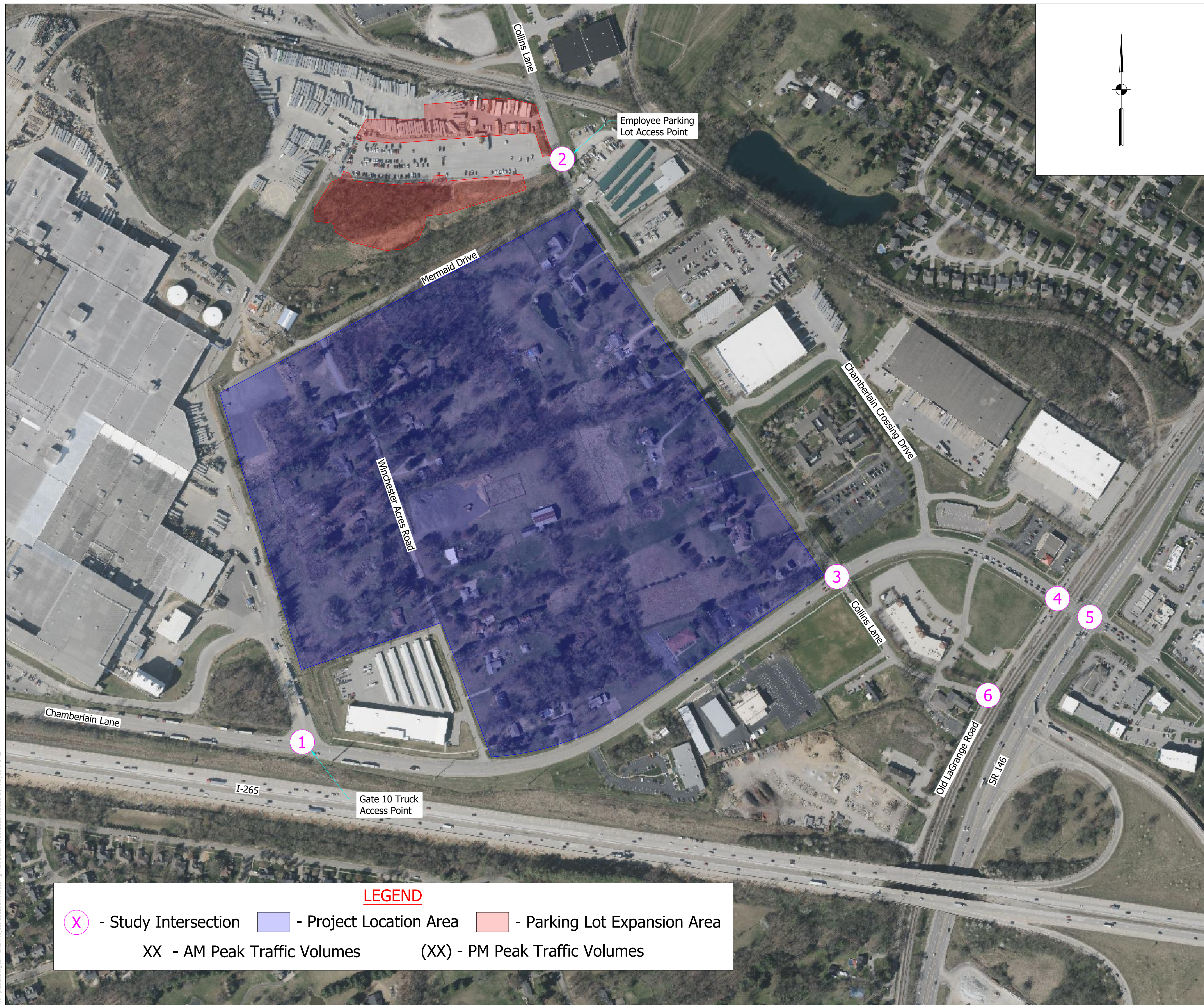
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 KENTUCKY TRUCK PLANT

TRAFFIC VOLUMES
 AM/PM TRIP GENERATION

HORIZONTAL SCALE	BRIDGE FILE
1" = 200'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	7 of 8
CONTRACT	PROJECT
N/A	26-412



LEGEND

(X) - Study Intersection [Blue Box] - Project Location Area [Red Box] - Parking Lot Expansion Area

XX - AM Peak Traffic Volumes (XX) - PM Peak Traffic Volumes



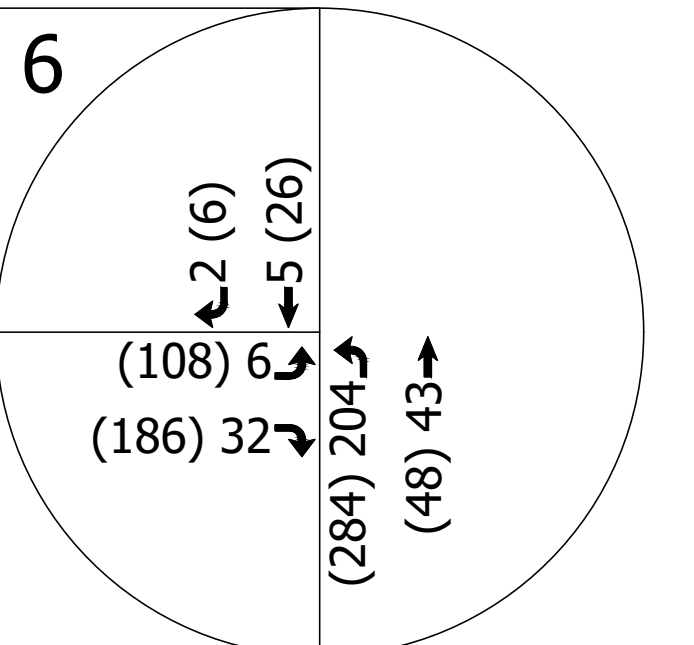
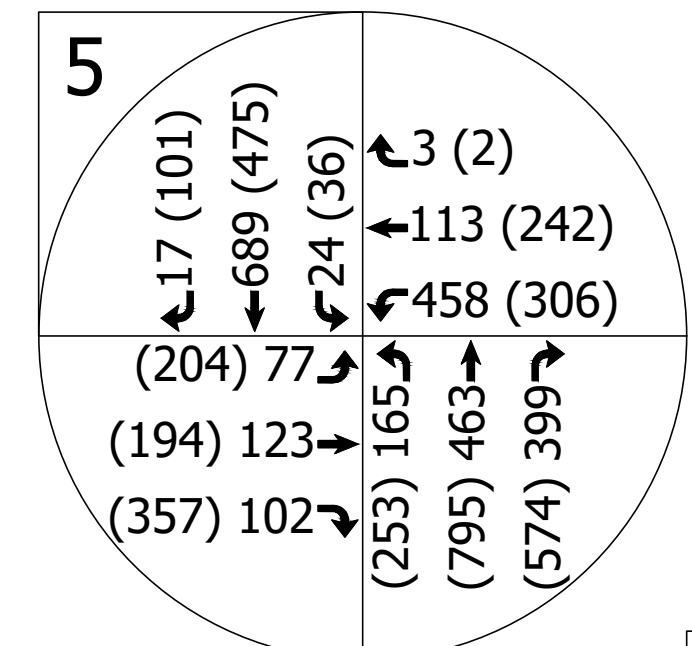
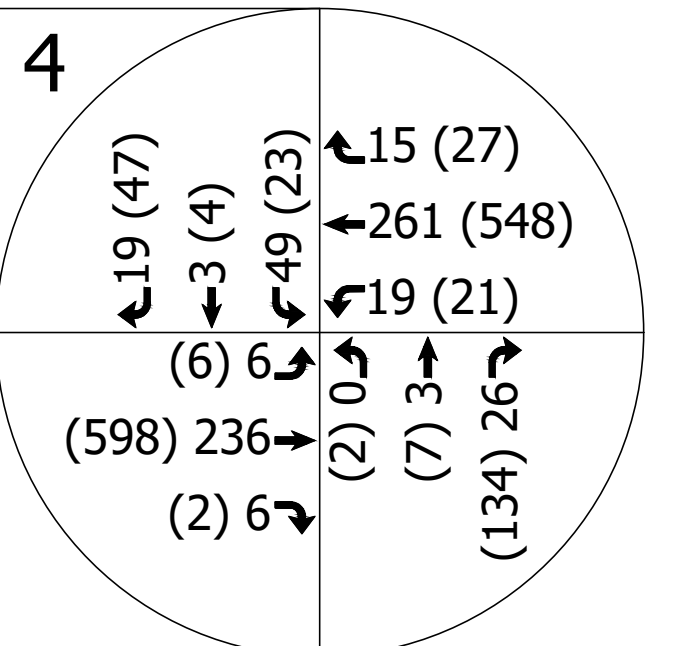
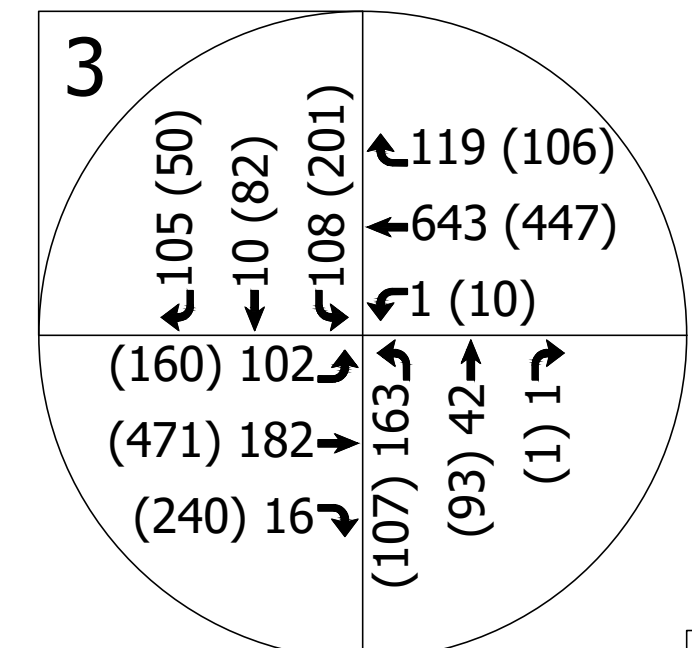
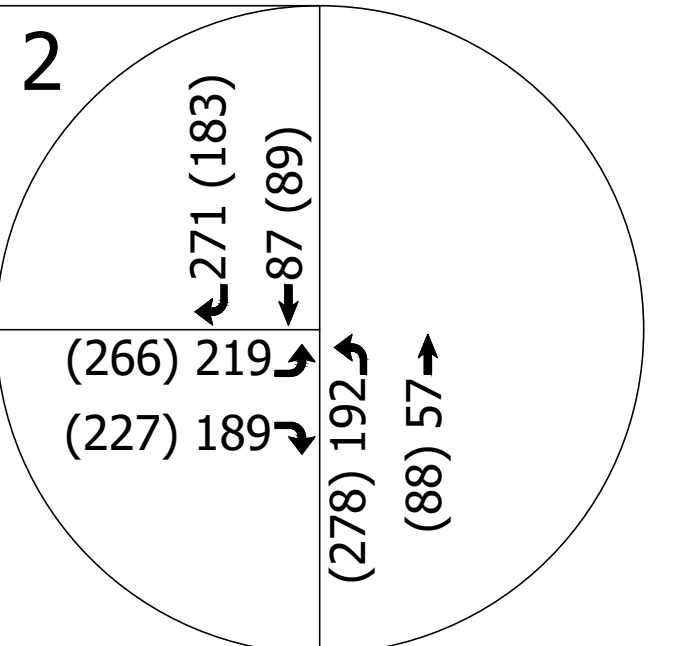
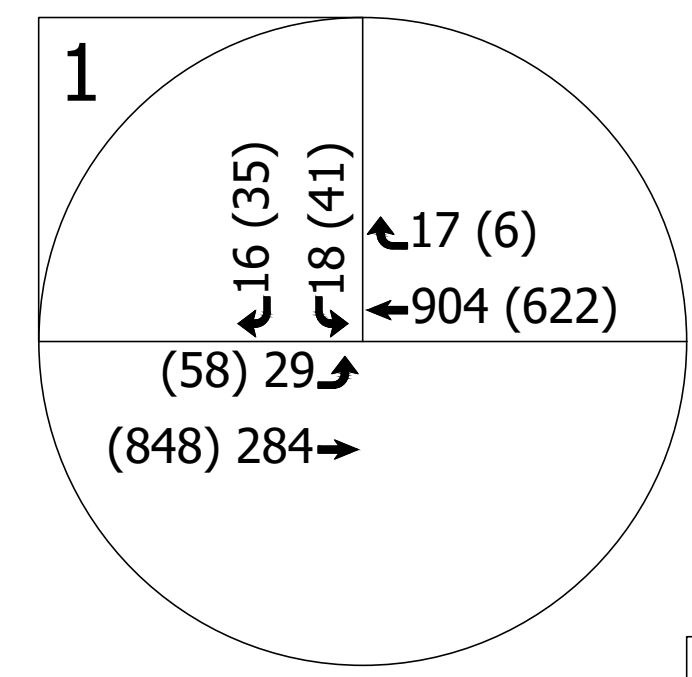
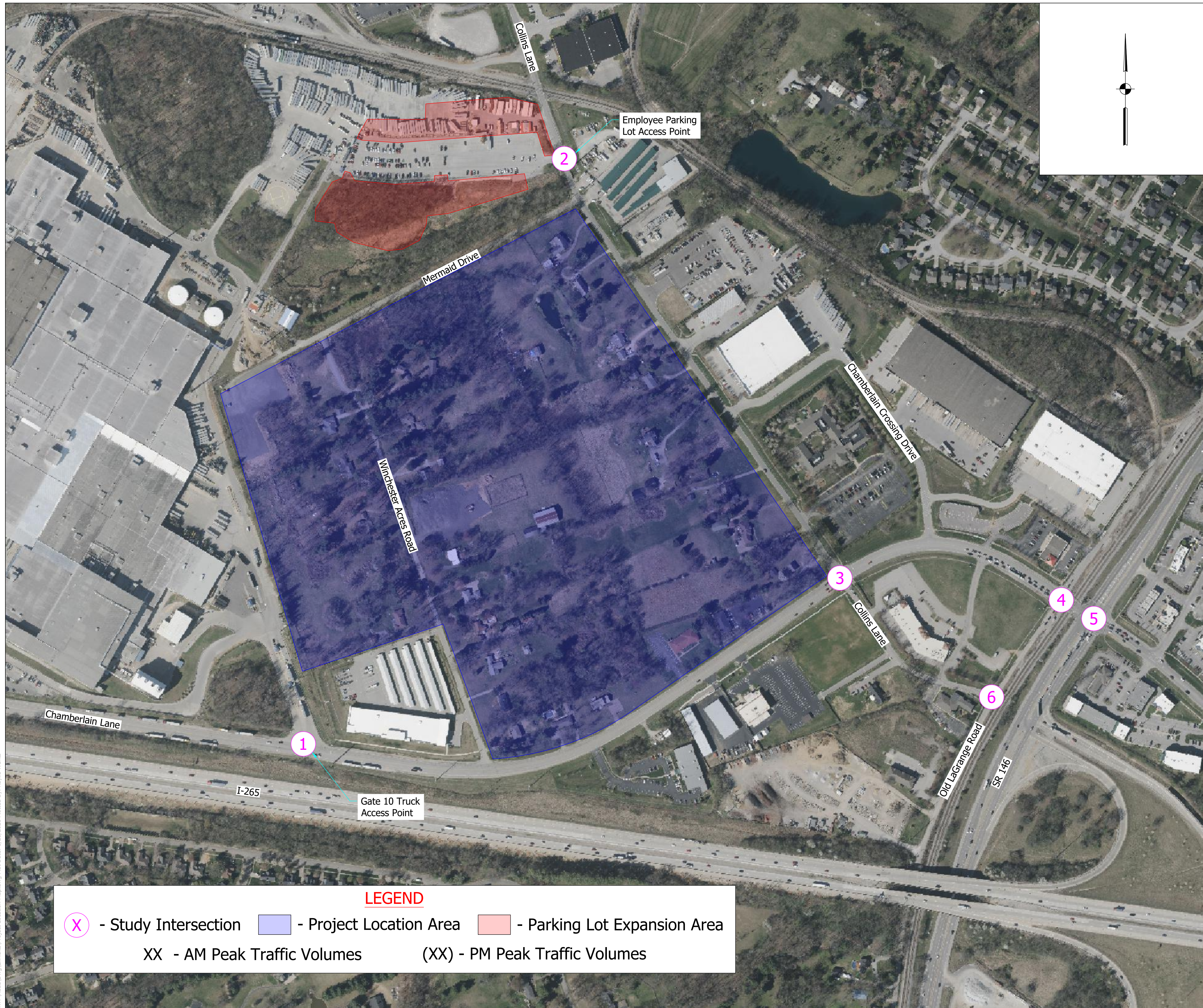
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CHECKED: TF	CHECKED: TF	

FORD MOTOR COMPANY
 KENTUCKY TRUCK PLANT

TRAFFIC VOLUMES
 2036 NO-BUILD

HORIZONTAL SCALE	BRIDGE FILE
1" = 200'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	3 of 8
CONTRACT	PROJECT
N/A	26-412



LEGEND

(X) - Study Intersection [Blue Box] - Project Location Area [Red Box] - Parking Lot Expansion Area

XX - AM Peak Traffic Volumes (XX) - PM Peak Traffic Volumes



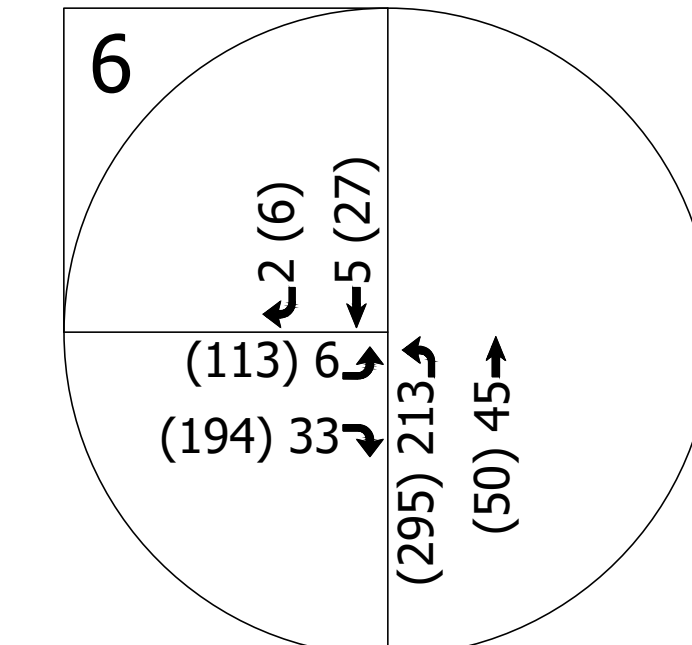
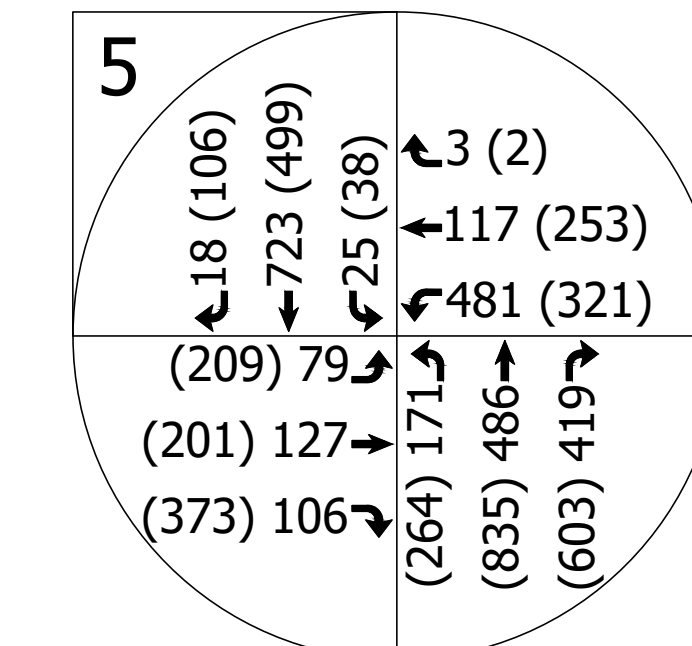
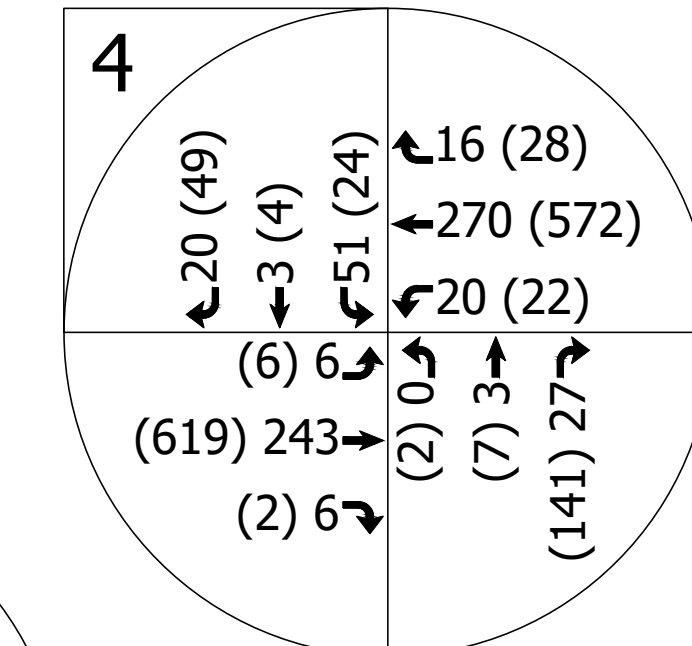
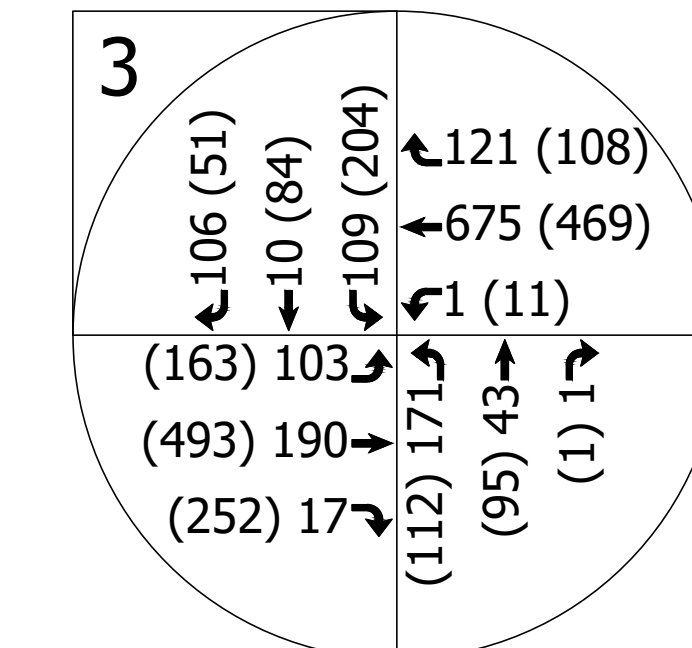
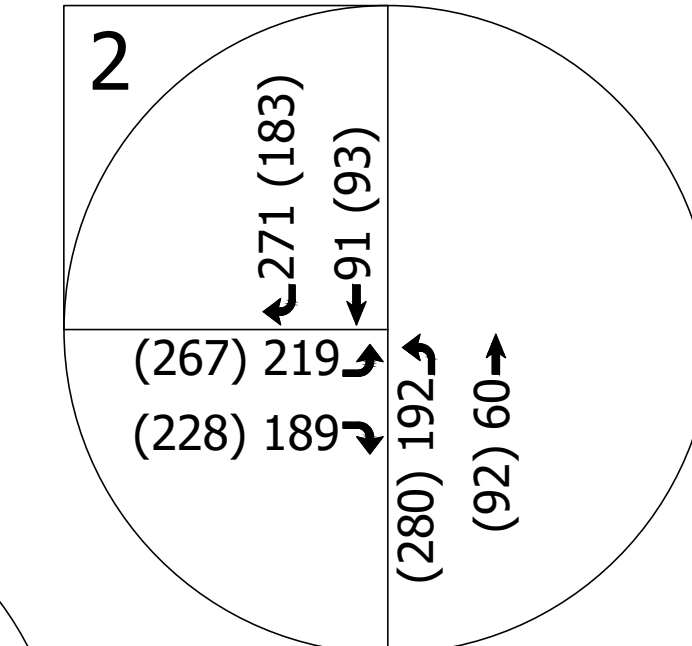
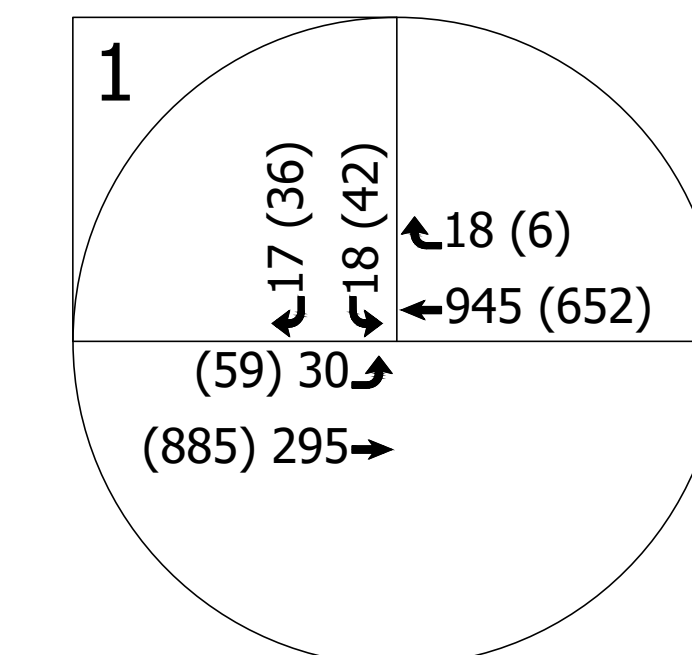
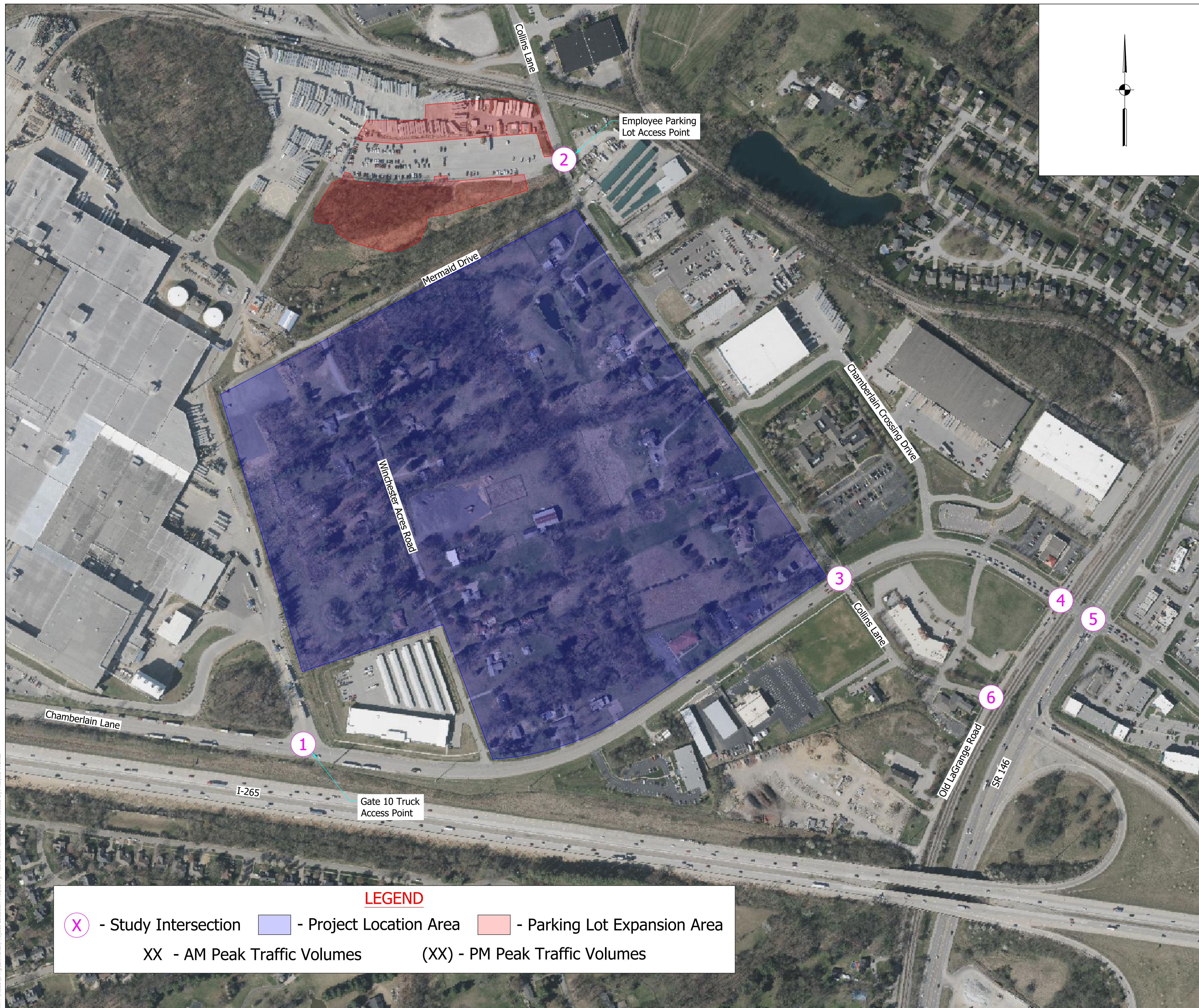
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RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: KMW	DRAWN: AEA	
CHECKED: TF	CHECKED: TF	

FORD MOTOR COMPANY
 KENTUCKY TRUCK PLANT

TRAFFIC VOLUMES
 2026 BUILD

HORIZONTAL SCALE	BRIDGE FILE
1" = 200'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	4 of 8
CONTRACT	PROJECT
N/A	26-412



LEGEND

(X) - Study Intersection [Blue Box] - Project Location Area [Red Box] - Parking Lot Expansion Area

XX - AM Peak Traffic Volumes (XX) - PM Peak Traffic Volumes



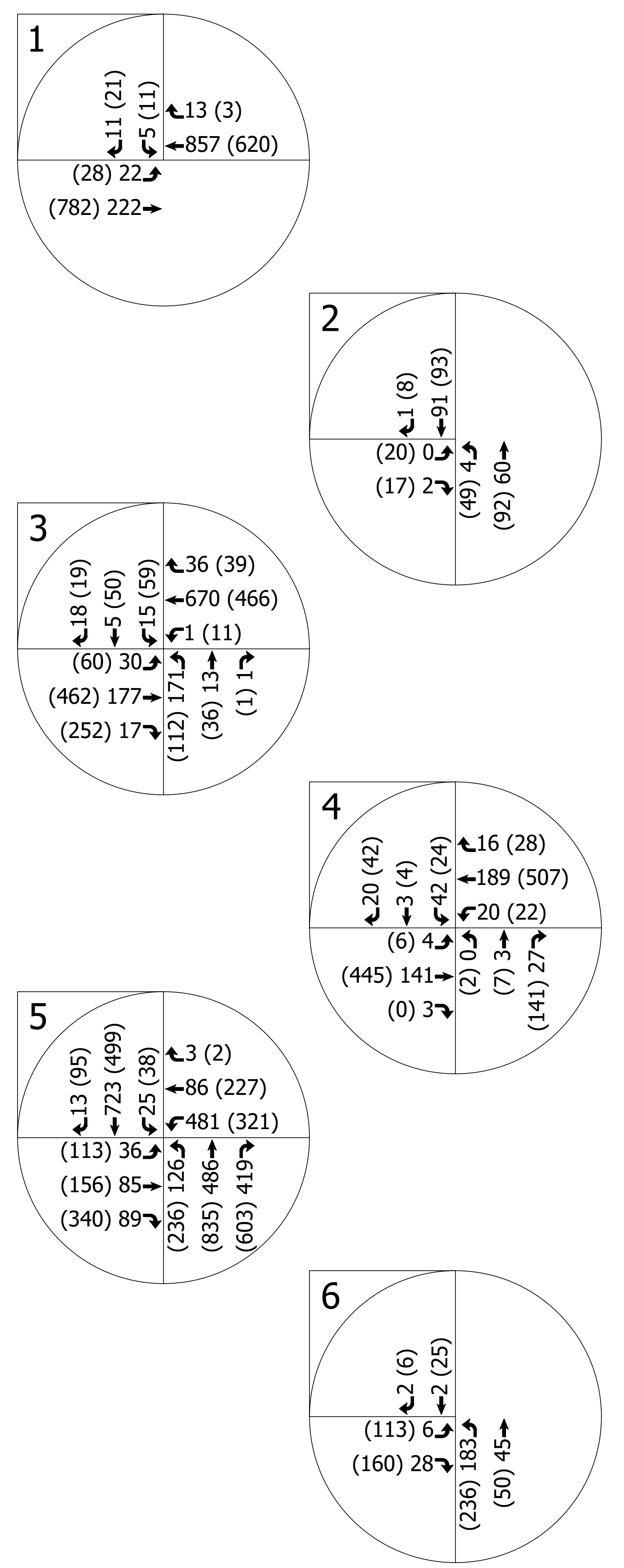
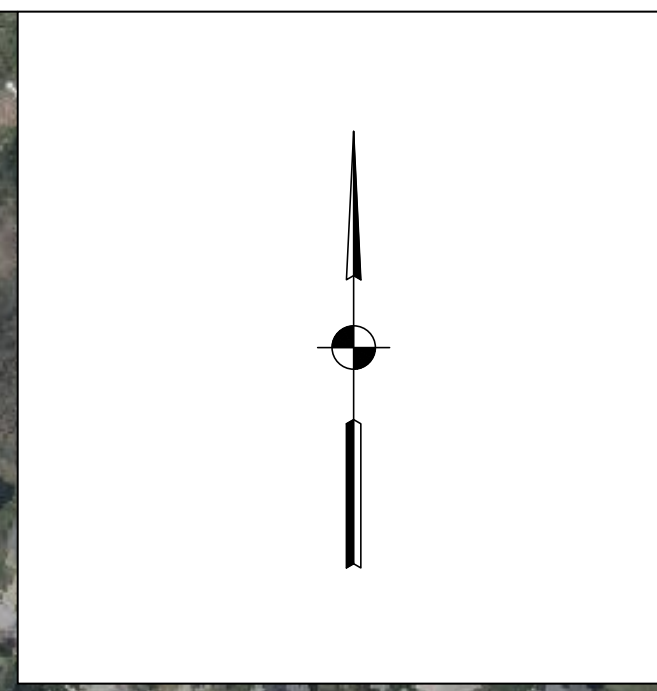
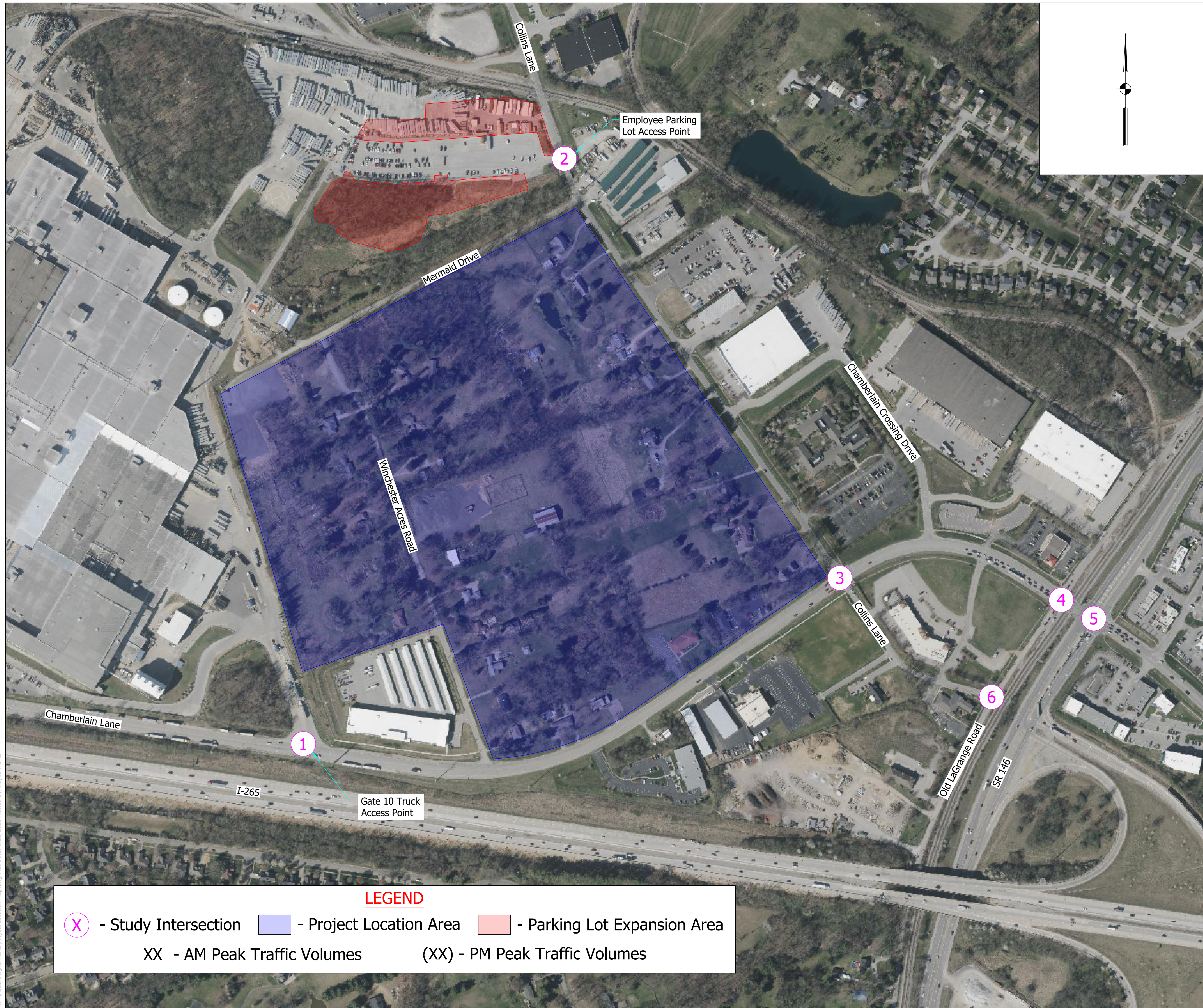
8440 Allison Pointe Boulevard, Suite 200
 Indianapolis, IN 46250
 Phone 317-895-2585
 www.ucindy.com

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: KMW	DRAWN: AEA	
CHECKED: TF	CHECKED: TF	

FORD MOTOR COMPANY
 KENTUCKY TRUCK PLANT

TRAFFIC VOLUMES
 2036 BUILD

HORIZONTAL SCALE	BRIDGE FILE
1" = 200'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	5 of 8
CONTRACT	PROJECT
N/A	26-412



LEGEND

(X) - Study Intersection [Blue Box] - Project Location Area [Red Box] - Parking Lot Expansion Area

XX - AM Peak Traffic Volumes (XX) - PM Peak Traffic Volumes



8440 Allison Pointe Boulevard, Suite 200
 Indianapolis, IN 46250
 Phone 317-895-2585
 www.ucindy.com

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: KMW	DRAWN: AEA	
CHECKED: TF	CHECKED: TF	

FORD MOTOR COMPANY
 KENTUCKY TRUCK PLANT

TRAFFIC VOLUMES
 2036 NO-BUILD

HORIZONTAL SCALE	BRIDGE FILE
1" = 200'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	3 of 8
CONTRACT	PROJECT
N/A	26-412

3.5 Coordination

The final study requirements and methodologies have been established with Louisville Metro Planning.

3.6 Turn Lane Analysis

A turn lane warrant analysis was conducted for the proposed employee parking entrance on Collins Lane in accordance with KYTC guidelines. Based on the projected Build traffic volumes, the analysis determined that a northbound left-turn lane is warranted to improve traffic operations and enhance safety for vehicles entering the site. The analysis also determined that a southbound right-turn lane is not warranted under the projected Build conditions. The complete turn lane warrant analysis is provided in **Appendix F**.

3.7 Capacity Analysis

Intersection capacity analyses were performed for the weekday AM and PM peak hour at each of the study intersections using Synchro version 12. Synchro 12, a traffic analysis software, was used to determine the Level of Service (LOS) at each study intersection. The software is based on methodology outlined in the Highway Capacity Manual. **Tables 3.7.1** and **3.7.2** from the Highway Capacity Manual 7th Edition show the level of service thresholds for signalized and unsignalized intersections.

Table 3.7.1: LOS for Signalized Intersection

Level of Service	Control Delay (s/veh)
A	10 or less
B	>10-20
C	>20-35
D	>35-55
E	>55-80
F	>80

*Exhibit 19-8 HCM Version 7.

Table 3.7.2: LOS for Unsignalized Intersection

Level of Service	Control Delay (s/veh)
A	10 or less
B	>10-15
C	>15-25
D	>25-35
E	>35-50
F	>50

*Exhibit 19-8 HCM Version 7.

The LOS is affected by factors such as the volume to capacity ratio, control delay, and queue delay. LOS is measured by letters from A to F. LOS A is the best operating condition while LOS F is the worst operating condition. Based on KYTC guidelines, it is desirable for intersection delay to not exceed 30% of the No Build condition for existing intersections.

The intersection capacity analysis was used to identify operational deficiencies at each study intersection. Deficiencies were based on the LOS and intersection delay. Traffic analysis results for the analysis scenarios described above are provided in the tables below. Additional information from the Synchro analysis reports can be found in **Appendix G**.

2026 No-Build Analysis:

The 2026 no-build analysis reflects the current intersection lane configurations and forms of stop control using existing traffic data. The existing traffic analysis establishes a baseline LOS for the study intersections before the addition of site traffic. The LOS and delay results for this scenario are summarized in **Table 3.7.3** below.

Table 4.6.3: Level of Service Results – AM & PM Peak Hours for Year 2026 (No-Build)

#	Intersection	Control Type	Intersection LOS & Delay		Approach	Approach LOS	
			AM Peak	PM Peak		AM Peak	PM Peak
1	Gate 10 Main Truck Access at Chamberlain Ln	Signal	A (9.5)	A (9.8)	NB	-	-
					SB	B	B
					EB	A	B
					WB	B	A
2	Employee Parking Approach at Collins Ln	TWSC	-	-	NB	A	A
					SB	-	-
					EB	A	B
					WB	-	-
3	Chamberlain Ln & Collins Ln	Signal	B (15.0)	B (12.7)	NB	B	B
					SB	A	B
					EB	B	B
					WB	B	B
4	Chamberlain Ln & LaGrange Rd	Signal	D (47.8)	F (83.5)	NB	C	E
					SB	E	F
					EB	A	C
					WB	E	F
5	Collins Ln & Old LaGrange Rd	TWSC	-	-	NB	A	A
					SB	-	-
					EB	B	C
					WB	-	-

2036 No-Build Analysis:

The 2036 no-build analysis includes an analysis of the study intersections with only background traffic included. The no-build analysis establishes levels of service for the study intersections with background growth to 2036. The level of service and delay results for this scenario are summarized in **Table 3.7.4** below.

Table 3.7.4: Level of Service Results – AM & PM Peak Hours for Year 2036 (No-Build)

#	Intersection	Control Type	Intersection LOS & Delay		Approach	Approach LOS	
			AM Peak	PM Peak		AM Peak	PM Peak
1	Gate 10 Main Truck Access at Chamberlain Ln	Signal	A (9.6)	A (9.9)	NB	-	-
					SB	B	B
					EB	A	B
					WB	B	A
2	Employee Parking Approach at Collins Ln	TWSC	-	-	NB	A	A
					SB	-	-
					EB	A	B
					WB	-	-
3	Chamberlain Ln & Collins Ln	Signal	B (15.2)	B (12.9)	NB	B	B
					SB	A	B
					EB	B	B
					WB	B	B
4	Chamberlain Ln & LaGrange Rd	Signal	D (52.2)	F (103.3)	NB	C	F
					SB	E	F
					EB	A	D
					WB	F	F
5	Collins Ln & Old LaGrange Rd	TWSC	-	-	NB	A	A
					SB	-	-
					EB	B	C
					WB	-	-

2026 Build Analysis:

The 2026 build analysis reviews the impacts of site traffic with the addition of the Ford Kentucky Truck Plant manufacturing expansion. The LOS and delay results and for this scenario are summarized in **Table 3.7.5** below.

Table 3.7.5: Level of Service Results – AM & PM Peak Hours for Year 2026 (Build)

#	Intersection	Control Type	Intersection LOS & Delay		Approach	Approach LOS	
			AM Peak	PM Peak		AM Peak	PM Peak
1	Gate 10 Main Truck Access at Chamberlain Ln	Signal	A (9.5)	B (10.2)	NB	-	-
					SB	B	B
					EB	A	B
					WB	B	A
2	Employee Parking Approach at Collins Ln	TWSC	-	-	NB	A	A
					SB	-	-
					EB	F	F
					WB	-	-
3	Chamberlain Ln & Collins Ln	Signal	B (16.2)	C (23.5)	NB	B	C
					SB	B	C
					EB	B	C
					WB	B	B
4	Chamberlain Ln & LaGrange Rd	Signal	D (61.6)	F (108.7)	NB	D	F
					SB	E	F
					EB	B	E
					WB	F	F
5	Collins Ln & Old LaGrange Rd	TWSC	-	-	NB	A	A
					SB	-	-
					EB	B	C
					WB	-	-

2036 Build Analysis:

The 2036 build analysis reviews the impacts of site traffic and background traffic with the addition of the Ford Kentucky Truck Plant manufacturing expansion in the year 2036. The LOS and delay results for this scenario are summarized in **Table 3.7.6** below.

Table 4.6.6: Level of Service Results – AM & PM Peak Hours for Year 2036 (Build)

#	Intersection	Control Type	Intersection LOS & Delay		Approach	Approach LOS	
			AM Peak	PM Peak		AM Peak	PM Peak
1	Gate 10 Main Truck Access at Chamberlain Ln	Signal	A (9.5)	B (10.5)	NB	-	-
					SB	B	B
					EB	A	B
					WB	B	A
2	Employee Parking Approach at Collins Ln	TWSC	-	-	NB	A	A
					SB	-	-
					EB	F	F
					WB	-	-
3	Chamberlain Ln & Collins Ln	Signal	B (16.9)	C (27.1)	NB	B	D
					SB	B	C
					EB	B	C
					WB	B	B
4	Chamberlain Ln & LaGrange Rd	Signal	E (59.1)	F (105.1)	NB	D	F
					SB	E	F
					EB	A	E
					WB	F	F
5	Collins Ln & Old LaGrange Rd	TWSC	-	-	NB	A	A
					SB	-	-
					EB	B	C
					WB	-	-

2036 Build with Closure Analysis:

The 2036 build analysis with closure reviews the same impacts as the 2036 build analysis with the addition of a closure of the north approach of Old LaGrange Road closed at Collins Lane. The LOS and delay results for this scenario are summarized in **Table 4.6.7** below.

Table 3.7.7: Level of Service Results – AM & PM Peak Hours for Year 2036 (Build with Closure)

#	Intersection	Control Type	Intersection LOS & Delay		Approach	Approach LOS	
			AM Peak	PM Peak		AM Peak	PM Peak
1	Gate 10 Main Truck Access at Chamberlain Ln	Signal	A (9.5)	B (10.5)	NB	-	-
					SB	B	B
					EB	A	B
					WB	B	A
2	Employee Parking Approach at Collins Ln	TWSC	-	-	NB	A	A
					SB	-	-
					EB	F	F
					WB	-	-
3	Chamberlain Ln & Collins Ln	Signal	B (17.6)	C (30.9)	NB	B	C
					SB	B	C
					EB	B	C
					WB	B	C
4	Chamberlain Ln & LaGrange Rd	Signal	E (71.8)	F (245.7)	NB	D	F
					SB	E	E
					EB	A	E
					WB	F	F
5	Collins Ln & Old LaGrange Rd	TWSC	-	-	NB	-	-
					SB	-	-
					EB	-	-
					WB	-	-

4.0 Conclusions and Recommendations

Gate 10 Main Truck Access & Chamberlain Lane

Capacity analysis has shown that the intersection currently operates at acceptable levels of service and will continue to operate at acceptable levels of service under future traffic volume scenarios.

Employee Parking Access & Collins Lane

Capacity analysis has shown that the northbound and southbound approaches currently operate at acceptable levels of service and will continue to operate at acceptable levels of service under future traffic volume scenarios. However, the employee parking within the development will experience increased delay and will not impact traffic operations along Collins Lane. Based on the turn-lane warrant analysis, a northbound left-turn lane along Collins Lane is recommended at this intersection.

Chamberlain Lane & Collins Lane

Capacity analysis has shown that the intersection currently operates at acceptable levels of service and will continue to operate at acceptable levels of service under future traffic volume scenarios.

Chamberlain Lane & Old LaGrange Road/LaGrange Road

The existing intersection operates below acceptable levels of service during the PM peak hours. Therefore, adding generated traffic will add more delay. However, the impact at the intersection is minimal and within the allowable 30% increase in delay. Therefore, no mitigations were made to this intersection as it is constrained by several factors such as the railroad crossing, number of approaches, geometric layout, and phasing. The following table summarizes the delays and delays for all traffic volume scenarios.

Collins Lane & Old LaGrange Road

Capacity analysis has shown that the intersection currently operates at acceptable levels of service and will continue to operate at acceptable levels of service under future traffic volume scenarios.

Table 4.1: 2026 Intersection Delay Increase

Intersection #	Intersection	Control Type	2026 No-Build Delay (s)		2026 Build Delay (s)		% Increase AM	% Increase PM
			AM Peak	PM Peak	AM Peak	PM Peak		
4	Chamberlain Ln & LaGrange Rd	Signal	47.8	83.5	61.6	108.7	29	30

Table 4.2: 2036 Intersection Delay Increase

Intersection #	Intersection	Control Type	2036 No-Build Delay (s)		2036 Build Delay (s)		% Increase AM	% Increase PM
			AM Peak	PM Peak	AM Peak	PM Peak		
4	Chamberlain Ln & LaGrange Rd	Signal	52.2	103.3	59.1	105.1	13	2

2036 Build with Closure Scenario

Capacity analysis has shown that the study intersections will operate at similar levels of service as the 2036 build scenario. However, the Chamberlain Lane & Old LaGrange Road/LaGrange Road intersection will experience increased delays that exceed the 30% threshold set by KYTC. Additionally, no mitigations were made at this intersection as it is constrained by several factors such as the railroad crossing, number of approaches, geometric layout, and phasing.



Louisville Metro Government

Text File

File Number: ENF-ZON-25-001616,

Agenda Date: 7/16/2026

Version: 1

Status: Public Hearing

In Control: Planning Commission

File Type: Planning Case

Agenda Number: 4.



Louisville Metro Government
Department of Codes & Regulations
Zoning Enforcement Division
444 South 5th Street, Suite 200, Louisville KY 40202
(502) 574-2508

02/18/2026
6:00PM

Najm Rawand
307 Gablewood Circle
Louisville KY 40245-4163

Current Occupant
4826 Preston Highway
Louisville KY 40213

CITATION – BINDING ELEMENT

Case Number: ENF-ZON-25-001616-1
Civil Fine: \$1,000.00

Subject Property: 4826 Preston Highway
Inspection Date: 02/17/2026
Inspection Time: 4:30 PM

Following receipt of a complaint, your property was inspected by a Louisville Metro Zoning Enforcement Officer. As observed during the inspection and/or discovered through subsequent investigation, a violation(s) exists that requires your immediate attention.

You must immediately stop using this property in violation of the Binding Elements that have been approved as part of a rezoning/development plan associated with the subject property. A binding element is a binding requirement, provision, restriction, or condition imposed by the Planning Commission or its designee, or a promise or agreement made by an applicant in writing, in connection with the approval of a land use development plan or subdivision plan. You may contact the Office of Planning to determine what steps must be taken to remedy the violation(s) noted below. Failure to comply with this Citation may result in additional Citations and/or referral to the Planning Commission. In addition, any person or entity that violates any provision related to Binding Elements shall be fined not less than \$500 nor more than \$4,000 for each violation. Each day of violation constitutes a separate offense.

KRS Section 100.409: When a citation is issued, the person to whom the citation is issued shall respond to the citation within 14 days of the date the citation is issued by either paying the civil fine set forth in the citation or requesting, in writing, a hearing before the Planning Commission to contest the citation. If the person fails to respond to the citation within 14 days, the person shall be deemed to have waived the right to a hearing to contest the citation and the determination that a violation was committed shall be considered final. In this event, the Planning Commission shall enter a final order determining that the violation was committed and imposing the civil fine set forth in the citation.

Your property will be re-inspected at a later date to determine compliance.

Cindy Calvelo
Zoning Enforcement Officer

(502)548-0900
Cindy.Calvelo@louisvilleky.gov

Enclosures:

- (1) Approved Minutes and Binding Elements for case # 9-30-04
- (2) Approved Development Plan for Case #9-30-04
- (3) Approved Landscape Plan exhibit for case #9-30-04

Violations:

BE_001 Noncompliance with a Binding Element or Condition of Approval

The terms of an approved development plan and Binding Elements or Conditions of Approval are not being met on the subject property. All construction must be conducted in accordance with the approved plan and Binding Elements or Conditions of Approval.

Subject violation(s) needs to be brought into compliance to avoid additional fines and enforcement action.

Inspector Comments:

Inspected and found this property in violation.

This property is a Plan Certain site case # 9-30-04.

This property is out of compliance with the Development Plan, Landscape Plan and Binding Element #1 for case # 9-30-04.

This property must have a revised development plan and revised Landscape Plan approved before making any changes or improvements to the property.

Contact the Office of Planning at (502)574-6230, for assistance with the required submittals and application for a Revised Detailed District Development Plan review.

1st Citation for BE_001 issued.

Responsible Party: Property Owner

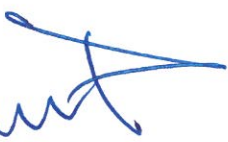
To pay the fine:

- To pay the fine by phone with a credit or debit card: Call (502)574-3430.
- To pay the fine by mail with a check or money order: Send a check or money order, payable to "Louisville Metro Government", to Accounts Receivable, 611 W Jefferson St, 1st Floor, Louisville, KY 40202. Please attach a copy of this Citation and note the case number on the check/money order.
- To pay the fine in person: Go to the Office of Management and Budget at 611 W Jefferson St, Louisville, KY 40202. Please bring a copy of this Citation.

To appeal this Citation and/or fine amount:

If you want to contest any decision in this Citation, you may file an appeal to the Planning Commission. An appeal must be filed in writing with the Office of Planning within 14 days of the date of this Citation. The Office of Planning is located on the third floor of the Metro Development Center at 444 South 5th Street, Suite 300, Louisville, KY 40202. Phone: (502)574-6230.

• Louisville Metro Government sent me a letter regarding a citation For some reason post office returned the letter I didn't received on time I do hope you guys accept my appeal


Rawand Najm

3-11-2026

case number: ENF-Zon-25-CG-1616-1

current occupant: 4826 Preston Hwy Louisville Ky
40213

PERMITS SHALL BE ISSUED ONLY IN CONFORMANCE WITH THE BINDING ELEMENTS OF THIS DISTRICT DEVELOPMENT PLAN.

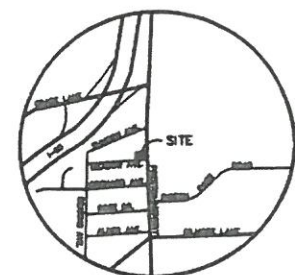
APPROVED DISTRICT DEVELOPMENT PLAN
 DOCKET NO. 9-30-04W
 APPROVAL DATE: Aug 19, 2004
 EXPIRATION DATE: Sep 23, 2005
 SIGNATURE OF PLANNING COMMISSION: [Signature]

REGIONAL AIRPORT AUTHORITY OF LOUISVILLE & JEFFERSON CO.
 P.O. BOX 9129
 LOUISVILLE, KENTUCKY 40209
 D.B. 7560 PG. 382

TREE LEGEND
 PRESERVED TREE CANOPY
 TYPE A TREE (1 3/4" - 3" CAL.) 720 SQ.FT.
 TYPE C TREE (1" - 1 3/4" CAL.) 108 SQ.FT.
 TREE PROTECTION FENCE

SITE TREE CANOPY REQUIREMENTS
 TREE CANOPY CATEGORY CLASS C
 EX. TREE CANOPY ON SITE 814 S.F.
 EX. TREE CANOPY TO BE PRESERVED 814 S.F.
 TREE CANOPY REQ. 18% or 2,847 SQ.FT.
 18% or 2,248 SQ.FT. ADDITIONAL TREE CANOPY AREA IS NEEDED TO MEET THE TOTAL TREE CANOPY REQUIREMENT.
 3 TYPE "A" INTERIOR TREES PROV. 2,160 SQ.FT.
 2 TYPE "C" INTERIOR TREES PROV. 212 SQ.FT.
 TOTAL ADDITIONAL TREE CANOPY PROVIDED: 2,372 SQ.FT.

OLZE & ETHEL JENKINS
 5310 BANK ROAD
 LOUISVILLE, KENTUCKY 40213
 D.B. 4778 PG. 716



LOCATION MAP
NO SCALE

DATA

SITE AREA 0.344 ACRES
 EXISTING ZONING C-1
 EXISTING FORM DIST. SMC
 PROPOSED ZONING C-2
 EX. USE VACANT
 PROP. USE AUTO SALES
 EX. BUILDING AREA
 OFFICE 750 SQ.FT.
 DISPLAY 6,070 SQ.FT.
 ACCESSORY BUILDING 360 SQ.FT.
PARKING REQUIREMENT
 MINIMUM REQUIRED 3 SP.
 1SP/7,000 S.F. OUTDOOR DISPLAY 1 SP.
 1SP/350 S.F. OFFICE 2 SP.
 MAXIMUM REQUIRED 5 SP.
 1SP/5,000 S.F. OUTDOOR DISPLAY 1 SP.
 1SP/200 S.F. OFFICE 4 SP.
 PARKING PROVIDED 3 SP.

LANDSCAPE REQUIREMENTS
 V.U.A. 8,959 SQ.FT.
 5% REQUIREMENT 448 SQ.FT.
 I.L.A. PROVIDED 585 SQ.FT.

WAIVERS

1. WAIVER OF CHAPTER 10, PART 2, TABLE 10.2.3 AND TABLE 10.2.4 TO ALLOW BUFFER NEXT TO OR-1 PROPERTY TO BE LESS THAN 35'.

GENERAL NOTES:

1. EXISTING DRAINAGE PATTERN DEPICTED BY ARROWS (→).
2. KENTUCKY DEPARTMENT OF TRANSPORTATION APPROVAL REQUIRED.
3. THERE SHALL BE NO ADDITIONAL RUNOFF TO THE RIGHT-OF-WAY. CALCULATIONS WILL BE SUBMITTED TO THE STATE DEPARTMENT OF TRANSPORTATION.
4. THERE SHALL BE NO ADDITIONAL DIRECT ACCESS TO PRESTON HIGHWAY.
5. THERE SHALL BE NO COMMERCIAL SIGNS ON THE RIGHT-OF-WAY.
6. THERE SHALL BE NO LANDSCAPING IN THE RIGHT-OF-WAY WITHOUT AN ENCROACHMENT PERMIT.
7. SIGHT LIGHTING SHOULD NOT SHINE IN THE EYES OF DRIVERS. IF IT DOES, IT SHOULD BE RE-AIMED, SHIELDED OR TURNED OFF.
8. AN ENCROACHMENT PERMIT AND BOND WILL BE REQUIRED FOR ALL WORK DONE IN THE RIGHT-OF-WAY.
9. ACCESSORY BUILDING WILL NOT REQUIRE ADDITIONAL EMPLOYEES.
10. SIDEWALK WILL BE CONSTRUCTED AT THE TIME OF MEADOW AVENUE IMPROVEMENTS.

DETAILED DISTRICT DEVELOPMENT PLAN
 4826 PRESTON HIGHWAY

RECEIVED
 SEP 03 2004
 D.B. 7971 PG. 141
 TAX BLOCK 790 LOT 69
 OWNER/DEVELOPER
 FRANK & VICTORIA SERAPIGLIA
 8312 CROYDON CIRCLE
 LOUISVILLE, KENTUCKY 40222
 MSD WM# 8387

NO.	DATE	DESCRIPTION
1	5/17/2004	REVISIONS FOR MEASUREMENT COMMENTS
2	8/23/2004	REVISIONS FOR P/C STAMP COMMENTS

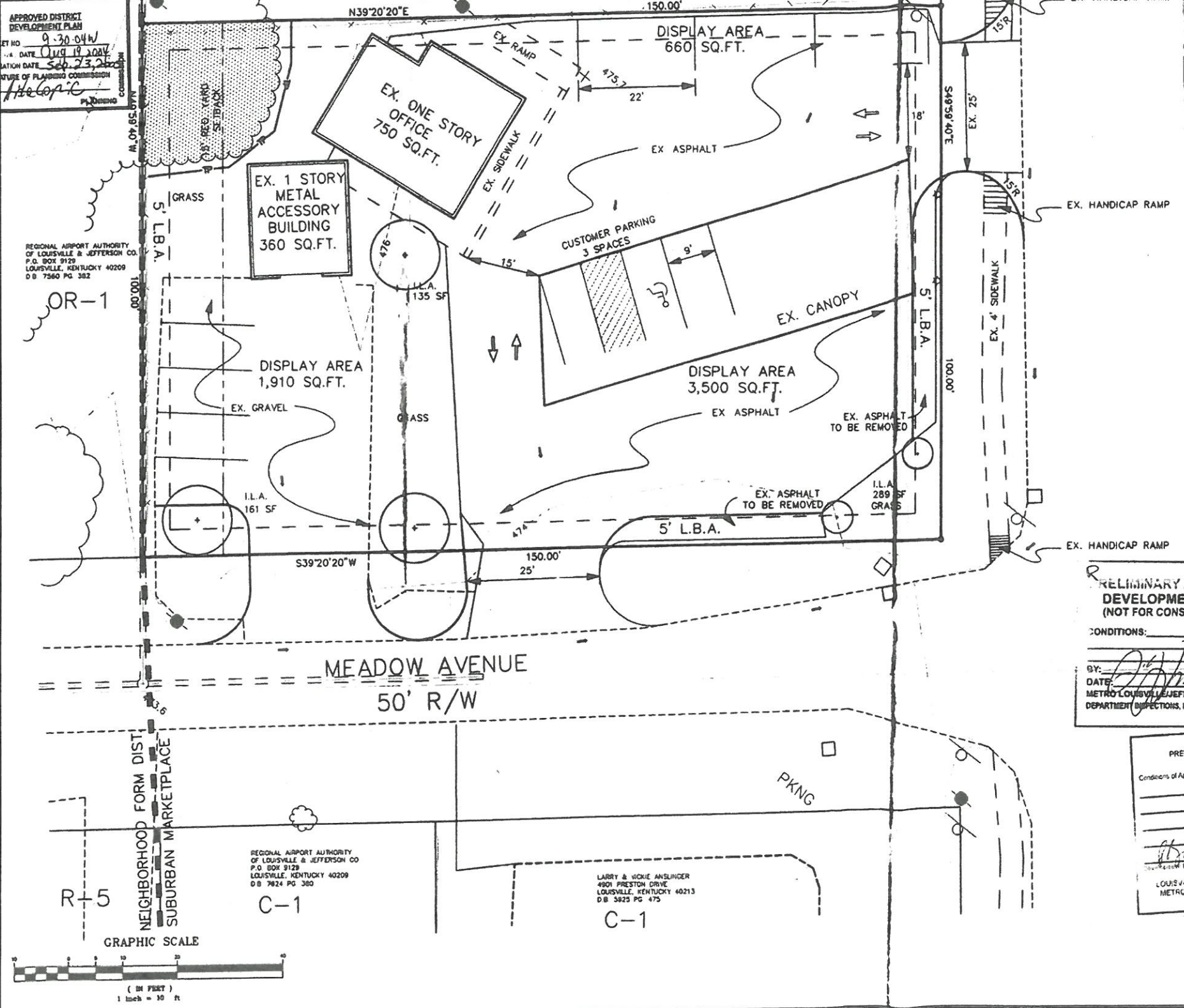
BIRCH, TRAUTWEN & MIMS, INCORPORATED
 Consulting Engineers Landscape Architects Planners
 3000 Taylor Springs Drive
 Louisville, Kentucky 40220
 (502)-456-8402 Phone
 (502)-456-8427 Fax

DATE

DATE

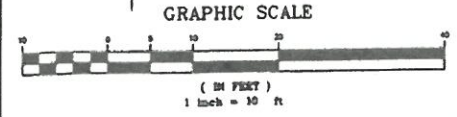
DATE	CHKD BY

DATE: JULY 2003
 DRAWING: 030159-DDP2
 SCALE: 1" = 10'
 SHEET 1 of 1



PRELIMINARY APPROVAL
 DEVELOPMENT PLAN
 (NOT FOR CONSTRUCTION)
 CONDITIONS:
 BY: [Signature] 9/2/04
 DATE: 9/2/04
 METRO LOUISVILLE/JEFFERSON COUNTY DEPARTMENT OF INSPECTIONS, PERMITS & LICENSES

PRELIMINARY APPROVAL
 Conditions of Approval:
 [Signature] 9/2/04
 LOUISVILLE/JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT



REGIONAL AIRPORT AUTHORITY OF LOUISVILLE & JEFFERSON CO.
 P.O. BOX 9129
 LOUISVILLE, KENTUCKY 40209
 D.B. 7824 PG. 380

LARRY & ISCKE ANSLINGER
 4901 PRESTON DRIVE
 LOUISVILLE, KENTUCKY 40213
 D.B. 5825 PG. 475



Louisville Metro Government

Text File

File Number: ENF-ZON-20-001511,

Agenda Date: 7/16/2026

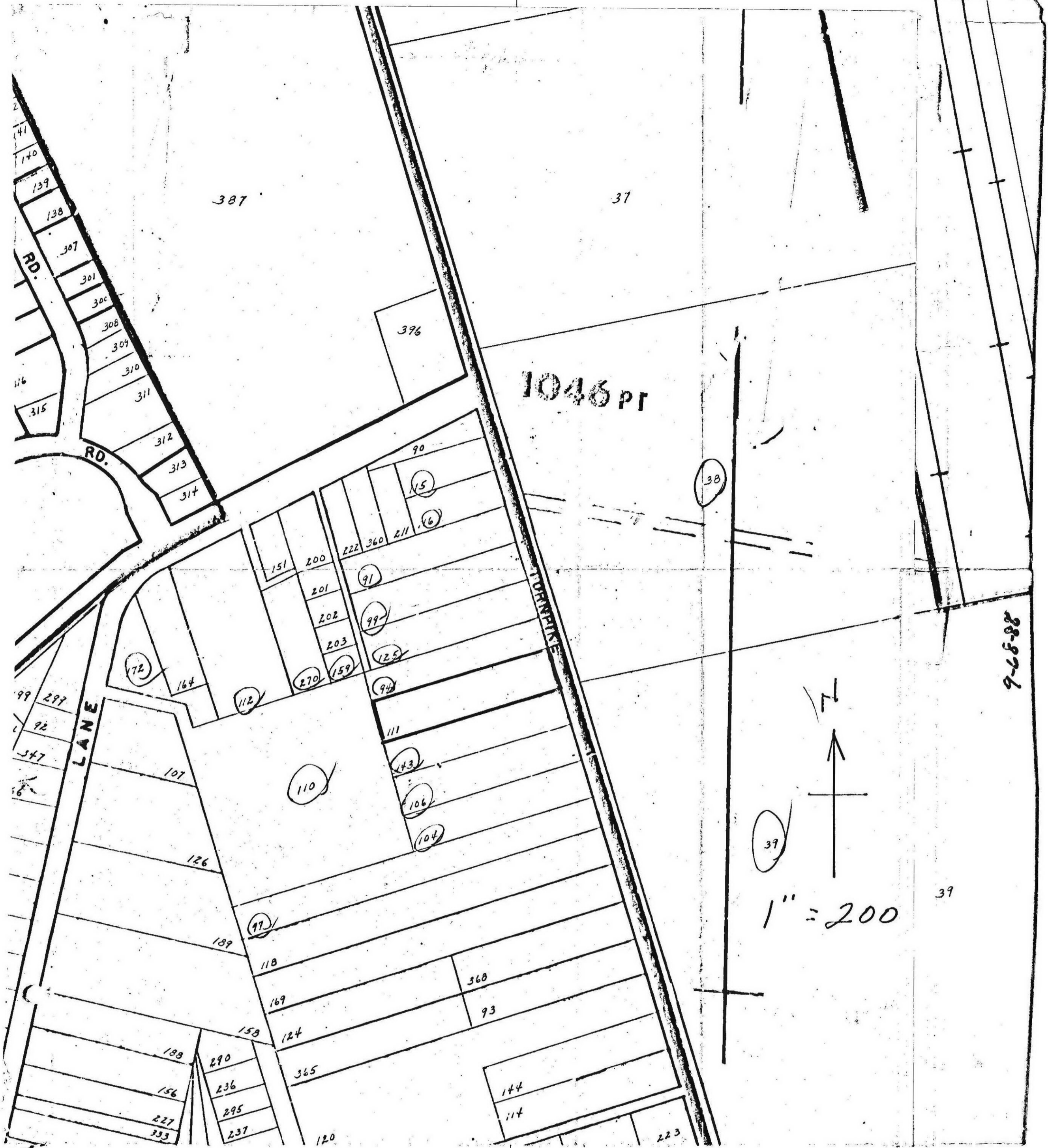
Version: 1

Status: Public Hearing

In Control: Planning Commission

File Type: Planning Case

Agenda Number: 5.



PLANNING COMMISSION MINUTES

SEPTEMBER 7, 1989

CONSIDERATION OF CASES:

Postponed Cases:

DOCKET NO. 9-68-88

Change in zoning from R-4 Residential Single Family to C-2 Commercial at 8020 National Turnpike in the unincorporated area of Jefferson County.

Owner/Developer: Catherine Foster
8020 National Turnpike 40214

Existing Use: Residential

Proposed Use: Auto repair, used car sales

The public hearing on this request was held on November 17, 1989, at which time the Commission deferred action in order for the applicant to address concerns regarding landscaping, drainage, and air pollution.

On August 17, 1989, the Commission was informed and given a copy of the applicant's addendum to the change in zoning application which addressed the concerns during the public hearing. The Commission again deferred action in order to seek the applicant's agreement for an additional binding element regarding a plan for disposal of automotive fluids and to reaffirm agreement at the public hearing with the binding element stating the hours of operation shall cease at 6:00 P. M.

The Commissioners were given a copy of the applicant's second addendum addressing the hours of operation and agreement to an additional binding element regarding a written plan for disposal of automotive fluids.

After a discussion, on a motion by Commissioner Hettinger, the following resolution was unanimously adopted:

WHEREAS, The Commission finds the Board of Health has no objection to the proposed rezoning; and an on-site sewage disposal system must be provided and must meet the standards of the Board of Health and the Kentucky Cabinet for Human Resources, therefore, the proposal is in conformance with Guidelines U-1, U-3, and U-4;

PLANNING COMMISSION MINUTES

SEPTEMBER 7, 1989

DOCKET NO. 9-68-88 (continued)

WHEREAS, The Commission finds that screening/buffering must be provided in accordance with Article 12 of the Development Code, the applicant has agreed to a binding element stating the hours of operation shall cease at 6:00 P. M., no new construction is permitted on the site, the only permitted freestanding sign shall not exceed 20 square feet and 6 feet in height, all of which will mitigate any potential adverse impacts on the surrounding residential area; and the development plan has received preliminary approval from the Jefferson County Department of Public Works and Transportation, the Jefferson County Fire Safety Office and the Louisville and Jefferson County Metropolitan Sewer District, therefore, the proposal is in conformance with Guidelines R-1, C-2 and C-3;

WHEREAS, The Commission finds the site is located in a mixed use area where residential, commercial and industrial uses coexist, therefore, the proposal is in conformance with Guideline C-6;

WHEREAS, The Commission finds from evidence and testimony presented at the public hearing the proposal is located centerally in the intended service area where sufficient support population exists; excessive curb cuts will not be created; the proposal will not create traffic problems, congestion or adversely affect the capacity of the street; the proposed use will not extend the linear development of commercial uses to the extent that such a pattern creates substantial nuisances, hazards or disruptions to the area; the proposal will be compatible with adjacent buildings and uses, which include a used car lot in addition to general commercial use and the Louisville Industrial Center and Midland Commerce Park; and the applicant has agreed to a binding element to allow a shared entrance and exit in the event that 8024 National Turnpike is developed for non-residential use which will promote sharing vehicular access points and circulation patterns to provide compact groupings of commercial uses; therefore, the proposal is in conformance with Guidelines C-1, C-4 and C-5;

WHEREAS, The Commission finds the proposal to be in conformance with all other applicable guidelines of the Comprehensive Plan; now, therefore, be it

RESOLVED, That the Louisville and Jefferson County Planning Commission does hereby recommend to the Fiscal Court of Jefferson County that the change in zoning from R-4 Residential to C-2 Commercial on property as described in the attached legal description be APPROVED.

PLANNING COMMISSION MINUTES

SEPTEMBER 7, 1989

DOCKET NO. 9-68-88 (continued)

RESOLVED, That the Louisville and Jefferson County Planning Commission does hereby APPROVE the district development plan for Docket No. 9-68-88 subject to the following binding elements:

1. The development will be in accordance with the approved district development plan. No further development will occur unless approved by the Planning Commission.
2. The development shall not exceed 1,520 square feet of gross floor area.
3. Before a certificate of occupancy is requested:
 - a) The development plan must be reapproved by the Jefferson County Department of Public Works and Transportation and the Metropolitan Sewer District.
 - b) The property owner must obtain approval of a landscape plan for screening (buffering/landscaping) as described in Article 12. Such plan shall be implemented prior to occupancy and maintained thereafter.
 - c) Encroachment permits must be obtained from the Kentucky Department of Transportation, Bureau of Highways.
 - d) A written plan for disposal of motor oil and other automotive fluids must be submitted.
 - e) All necessary recording fees shall be paid.
4. Any renovation over 50% of the market value of the existing structure must adhere to the floodplain regulations.
5. No new construction permitted on the site.
6. The site is subject to regional facility fee.
7. In the event that 8024 National Turnpike is developed for non-residential use and access is required over 8020 National Turnpike to allow a shared entrance and exit, a joint access easement agreement shall be secured with the adjoining property owners. A copy of the recorded instrument shall be submitted to the Planning Commission.
8. The hours of operation shall be restricted to daytime and extend no later than 6:00 P. M.
9. The repair of automobiles shall be limited to the vehicles held for sale or resale.

PLANNING COMMISSION MINUTES

SEPTEMBER 7, 1989

DOCKET NO. 9-68-88 (continued)

10. The only permitted freestanding sign shall be constructed as shown on the approved district development plan. The sign shall not exceed 20 square feet in area and 6 feet in height.
11. Outdoor advertising signs (billboards), small freestanding (temporary) signs, pennants and banners are prohibited on the site.
12. If a certificate of occupancy is not issued within one year of the date of approval of the plan or rezoning, whichever is later, the property shall not be used in any manner unless a revised district development plan is approved or an extension is granted by the Planning Commission.
13. A certificate of occupancy must be received from the appropriate code enforcement office prior to occupancy of the structure or land for the proposed use. All binding elements must be implemented prior to requesting issuance of the certificate.
14. The above binding elements may be amended as provided for in the Zoning District Regulations.

The vote was as follows:

YES: Commissioners McDonald, Fischer, Herron, Hettinger, Seraphine and Taylor.

NO: None.

NOT VOTING: No one.

Beginning at a point in the west line of National Turnpike 706 feet, more or less, South of Toll Lane; running thence with said line of National Turnpike South $17^{\circ}22'35''$ East, 100 feet and extending back South $72^{\circ}45'$ West, of the same width throughout between parallel lines, 300 feet.

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CLERK OF SUPERIOR COURT

9-68-58

PLANNING COMMISSION MINUTES

AUGUST 17, 1989

Other Cases:

DOCKET NO. 9-68-88

Change in zoning from R-4 Residential Single Family to C-2 Commercial at 8020 National Turnpike in the unincorporated area of Jefferson County.

Owner/Developer: Catherine Foster
8020 National Turnpike 40214

Existing Use: Residential

Proposed Use: Auto repair, used car sales

The public hearing on this request was held on November 17, 1989, at which time the Commission deferred action in order for the applicant to address concerns regarding landscaping, drainage, and air pollution.

Staff informed the Commission that the applicant has deleted the fence along the south border as required by Article 12 which will be replaced with trees at the request of the adjacent resident. The plan has been reapproved by the Metropolitan Sewer District. An addendum submitted by the applicant's representative states that the disposal of tires will be made at the Okolona Sanitation Company, and the Air Pollution Board has advised that there are no existing regulations concerning auto body shops. Regulations concerning the emission of volatile organic compounds would apply only if the facility operates approximately 8,760 hours per year, which the applicant feels is unlikely for the operation which is proposed. Copies of the addendum and Air Pollution Control District Regulation 7.25, Standard of performance for new sources using volatile organic compounds, were given to each Commissioner present.

Commissioner Herron requested a binding element be added regarding a the submission of a written plan for disposal of automobile fluids.

Commissioner Auerbach noted that the addendum submitted states that the hours of operation may be restricted to daytime extending to 6:00 or 7:00 P. M., however, the applicant had agreed to a binding element restricting the hours of operation to 6:00 P.M.

After a further discussion, on a motion by Commissioner Herron, the following resolution was unanimously adopted:

PLANNING COMMISSION MINUTES

AUGUST 17, 1989

DOCKET NO. 9-68-88 (continued)

RESOLVED, That the Louisville and Jefferson County Planning Commission does hereby DEFER Docket No. 9-68-88 in order to seek the applicant's agreement for an additional binding regarding a plan for disposal of automotive fluids and to reaffirm agreement at the public hearing with the binding element stating the hours of operation shall cease at 6:00 P. M.

The additional binding element shall state:

"A written plan for disposal of motor oil and other automotive fluids must be submitted."

The vote was as follows:

YES: Commissioners Auerbach, Fischer, Herron, Hutchinson, McDonald, Seraphine and Taylor.

NO: None.

NOT VOTING: No one.

The meeting adjourned at 3:00 P. M.

Chairman

Commission Director

PLANNING COMMISSION MINUTES

NOVEMBER 17, 1988

DOCKET NO. 9-68-88

Change in zoning from R-4 Residential Single Family to C-2 Commercial at 8020 National Turnpike in the unincorporated area of Jefferson County.

Owner/Developer: Catherine Foster
8020 National Turnpike 40214

Existing Use: Residential

Proposed Use: Auto repair, used car sales

Notice of this public hearing appeared in The Courier-Journal on October 18, 1988, a notice was posted on the property, and notices were sent by first class mail to those adjoining property owners whose names were supplied by the applicant.

A summary analysis of the staff report was given by a staff member (See Staff Report Appendix for staff report in full).

The following spoke in favor of this request:

Elaine Duncan, 5607 So. Third, 40214, who submitted the amended signed binding elements.

The following spoke in opposition:

Charles Warren, 8024 National Turnpike, 40214.

Mr. Duncan spoke in rebuttal.

A transcript of the public hearing is on file in this docket.

In a business session conducted subsequent to the public hearing, the Commission took the following action.

On a motion by Commissioner Herron, the following resolution was unanimously adopted:

RESOLVED, That the Louisville and Jefferson County Planning Commission does hereby DEFER Docket No. 9-68-88 in order for the applicant to address the concerns regarding landscaping, drainage, and air pollution.

PLANNING COMMISSION MINUTES

NOVEMBER 17, 1988

DOCKET NO. 9-68-88 (continued)

The vote was as follows:

YES: Commissioners Auerbach, Fischer, Herron, Hettinger, Hutchinson,
McDonald, Seraphine and Taylor.

NO: None.

NOT VOTING: No one.



Staff Use Only in This Box

Zoning Enforcement Case No. (See Citation): ENF-ZON-ZO-001511-27

Today's Date: 4/24/26 Date of Citation: 4/6/26 Intake Staff: DL

Please bring the application and supporting documentation to: Office of Planning, 444 S. Fifth Street #300. For more information, call (502) 574-6230 or visit <https://louisvilleky.gov/government/office-planning>.

PROJECT INFORMATION

Primary Project Address / Parcel ID: 8020 National Turnpike

Additional Address(es) / Parcel ID(s): _____


Deed Book(s) / Page Number(s): 12728 x 165

Current Zoning District: C-2 Current Form District: SW

Current Use: Auto

Please provide the Docket / Case Number(s) in which the binding element is related: 9-68-88

Much of the property information above can be found on the Land Development Report via the LOJIC Online Map Tool:

<https://www.lojic.org/lojic-online>. After searching the address in LOJIC, click the Parcel Report button  or

Land Development Report button  to view the respective report.

CHECKLIST

Please submit the completed application along with the following documents. Applications **WILL NOT** be accepted without the following items:

- Letter of Explanation:** Provide a written description explaining the grounds for appeal.
- Copy of Action:** Provide a copy of the Citation.
- Supplemental Documents:** If necessary, provide notarized affidavits, photographs, or other supporting documents.

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APR 24 2026

OFFICE OF PLANNING

CONTACT INFORMATION

(Print and use a second copy of this page if additional contacts are needed)

Owner/Appellant Information:

Name: Hassan Salman

Company: _____

Address: 8020 National Trke

City: Louisville

State: Ky ZIP: 40214

Primary Phone: 502 210 9247

Email: pregamehassan@gmail.com

Appellant Representative Information:

Name: _____

Company: _____

Address: _____

City: _____

State: _____ ZIP: _____

Primary Phone: _____

Email: _____

Owner Signature (REQUIRED): 

CERTIFICATION STATEMENT

A certification statement must be submitted with any application in which the owner(s) of the subject property is (are) a limited liability company, corporation, partnership, association, trustee, etc., or if someone other than the owner(s) of record sign(s) the application.

I, _____, in my capacity of _____, hereby certify that _____ is (are) the owner(s) of the property which is the subject of this application and that I am authorized to sign this application on behalf of the owner(s).

I further understand that knowingly providing false information on this application may result in any action taken hereon being declared null and void.

I further understand that pursuant to KRS 523.010, et seq, knowingly making a materially false statement, or otherwise, providing false information with the intent to mislead a public servant in the performance of his/her duty is punishable as a Class B misdemeanor.

Signature: _____ Date: _____

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OFFICE OF PLANNING



Louisville Metro Government
Department of Codes & Regulations
Zoning Enforcement Division
444 South 5th Street, Suite 200, Louisville KY 40202
(502) 574-2508

04/06/2026
6:00PM

Hassan Ala Salman
8020 National Turnpike
Louisville KY 40214-5202

CITATION – BINDING ELEMENT

Case Number: ENF-ZON-20-001511-27
Civil Fine: \$4,000.00

Subject Property: 8020 National Turnpike
Inspection Date: 04/06/2026
Inspection Time: 10:05 AM

Following receipt of a complaint, your property was inspected by a Louisville Metro Zoning Enforcement Officer. As observed during the inspection and/or discovered through subsequent investigation, a violation(s) exists that requires your immediate attention.

You must immediately stop using this property in violation of the Binding Elements that have been approved as part of a rezoning/development plan associated with the subject property. A binding element is a binding requirement, provision, restriction, or condition imposed by the Planning Commission or its designee, or a promise or agreement made by an applicant in writing, in connection with the approval of a land use development plan or subdivision plan. You may contact the Office of Planning to determine what steps must be taken to remedy the violation(s) noted below. Failure to comply with this Citation may result in additional Citations and/or referral to the Planning Commission. In addition, any person or entity that violates any provision related to Binding Elements shall be fined not less than \$500 nor more than \$4,000 for each violation. Each day of violation constitutes a separate offense.

KRS Section 100.409: When a citation is issued, the person to whom the citation is issued shall respond to the citation within 14 days of the date the citation is issued by either paying the civil fine set forth in the citation or requesting, in writing, a hearing before the Planning Commission to contest the citation. If the person fails to respond to the citation within 14 days, the person shall be deemed to have waived the right to a hearing to contest the citation and the determination that a violation was committed shall be considered final. In this event, the Planning Commission shall enter a final order determining that the violation was committed and imposing the civil fine set forth in the citation.

Your property will be re-inspected at a later date to determine compliance.

James Mullarkey
Zoning Enforcement Officer
(502)773-2069

Page 1 of 3

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APR 24 2026

**OFFICE OF
PLANNING**

Enclosures:

- (1) Approved minutes for case # 9-68-88
- (2) Approved Plan for case # 9-68-88
- (3) Approved Binding Elements for case # 9-68-88

Violations:

BE_001 Noncompliance with a Binding Element or Condition of Approval

The terms of an approved development plan and Binding Elements or Conditions of Approval are not being met on the subject property. All construction must be conducted in accordance with the approved plan and Binding Elements or Conditions of Approval.

Subject violation(s) needs to be brought into compliance to avoid additional fines and enforcement action.

Inspector Comments:

Inspected, property is still in violation of Binding Element #1 for approved plan case #9-68-88.

There is a used car lot in operation from the front of the property and auto salvage in the rear of the property. There are more than five wrecked cars and several others with flat tires.

There are also what appears to be wrecked vehicles in the rear or the property.

Property owner is still operating a junk yard in violation of approved plan.

A revised development plan is required. To operate a junkyard the property is required to be zoned M3 and granted a Conditional Use Permit (CUP).

Contact the Office of Planning at (502)574-6230 for assistance with the applications and plan review process.

4th Citation for BE_001 issued.

Responsible Party: Property Owner

To pay the fine:

- To pay the fine by phone with a credit or debit card: Call (502)574-3430.
- To pay the fine by mail with a check or money order: Send a check or money order, payable to "Louisville Metro Government", to Accounts Receivable, 611 W Jefferson St, 1st Floor, Louisville, KY 40202. Please attach a copy of this Citation and note the case number on the check/money order.
- To pay the fine in person: Go to the Office of Management and Budget at 611 W Jefferson St, Louisville, KY 40202. Please bring a copy of this Citation.

Louisville Metro Government
Department of Codes & Regulations
Zoning Enforcement Division
444 South 5th Street, Suite 200
Louisville, KY 40202

RE: Request for Hearing – Citation ENF-ZON-20-001511-27

To Whom It May Concern,

I am writing to formally request a hearing to contest the zoning citation issued to me regarding the property located at 8020 National Turnpike, Louisville, KY 40214.

I respectfully dispute the alleged violation referenced in Citation Number ENF-ZON-20-001511-27 and request the opportunity to present my case before the appropriate authority. I believe that the citation may have been issued based on incomplete or inaccurate information, and I would like the chance to provide clarification and any supporting documentation.

Please consider this letter as my official request for a hearing within the required 14-day response period. I am prepared to cooperate fully and comply with all procedures necessary to resolve this matter.

Kindly inform me of the next steps, including the scheduled hearing date, time, and any additional documentation required.

Thank you for your time and consideration.

Sincerely,

Hassan Ala Salman
8020 National Turnpike
Louisville, KY 40214
502-210-9247
pregamehassan@gmail.com

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PLANNING



Louisville Metro Government
Department of Codes & Regulations
Zoning Enforcement Division
444 South 5th Street, Suite 200, Louisville KY 40202
(502) 574-2508

04/06/2026
6:00PM

Hassan Ala Salman
8020 National Turnpike
Louisville KY 40214-5202

CITATION – BINDING ELEMENT

Case Number: ENF-ZON-20-001511-27
Civil Fine: \$4,000.00

Subject Property: 8020 National Turnpike
Inspection Date: 04/06/2026
Inspection Time: 10:05 AM

Following receipt of a complaint, your property was inspected by a Louisville Metro Zoning Enforcement Officer. As observed during the inspection and/or discovered through subsequent investigation, a violation(s) exists that requires your immediate attention.

You must immediately stop using this property in violation of the Binding Elements that have been approved as part of a rezoning/development plan associated with the subject property. A binding element is a binding requirement, provision, restriction, or condition imposed by the Planning Commission or its designee, or a promise or agreement made by an applicant in writing, in connection with the approval of a land use development plan or subdivision plan. You may contact the Office of Planning to determine what steps must be taken to remedy the violation(s) noted below. Failure to comply with this Citation may result in additional Citations and/or referral to the Planning Commission. In addition, any person or entity that violates any provision related to Binding Elements shall be fined not less than \$500 nor more than \$4,000 for each violation. Each day of violation constitutes a separate offense.

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Your property will be re-inspected at a later date to determine compliance.

James Mullarkey
Zoning Enforcement Officer
(502)773-2069

Page 1 of 3

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APR 24 2026

**OFFICE OF
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Enclosures:

- (1) Approved minutes for case # 9-68-88
- (2) Approved Plan for case # 9-68-88
- (3) Approved Binding Elements for case # 9-68-88

Violations:

BE_001 Noncompliance with a Binding Element or Condition of Approval

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Subject violation(s) needs to be brought into compliance to avoid additional fines and enforcement action.

Inspector Comments:

Inspected, property is still in violation of Binding Element #1 for approved plan case #9-68-88.

There is a used car lot in operation from the front of the property and auto salvage in the rear of the property. There are more than five wrecked cars and several others with flat tires.

There are also what appears to be wrecked vehicles in the rear or the property.

Property owner is still operating a junk yard in violation of approved plan.

A revised development plan is required. To operate a junkyard the property is required to be zoned M3 and granted a Conditional Use Permit (CUP).

Contact the Office of Planning at (502)574-6230 for assistance with the applications and plan review process.

4th Citation for BE_001 issued.

Responsible Party: Property Owner

To pay the fine:

- To pay the fine by phone with a credit or debit card: Call (502)574-3430.
- To pay the fine by mail with a check or money order: Send a check or money order, payable to "Louisville Metro Government", to Accounts Receivable, 611 W Jefferson St, 1st Floor, Louisville, KY 40202. Please attach a copy of this Citation and note the case number on the check/money order.
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To appeal this Citation and/or fine amount:

If you want to contest any decision in this Citation, you may file an appeal to the Planning Commission. An appeal must be filed in writing with the Office of Planning within 14 days of the date of this Citation. The Office of Planning is located on the third floor of the Metro Development Center at 444 South 5th Street, Suite 300, Louisville, KY 40202. Phone: (502)574-6230.

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Hassan Salman
8014 National TPKE
Louisville, Ky 40214

Charles Warren
8024 National TPKE
Louisville, Ky 40214

Mark Anthony & Teresa
Stinnett
8009 Tolls Ln
Louisville, Ky 40214

Mark Stinnett
8100 R National TPKE
Louisville, Ky 40214

LIT, Industrial LTD Partner
7905 National TPKE
Louisville, Ky 40214

Big, Box Property owner BL
National TPKE
Louisville, Ky, 40214

STRS, OHIO Industrial Invest
8161 National TPKE
Louisville, Ky 40214

JJJ Enterprises LLC
8012 National TPKE
Louisville, Ky 40214

Athraa Alabudy
8100 National TPKE
Louisville, Ky 40214

LIT, Industrial LTD Partner
7807 National TPKE
Louisville, Ky 40214

Roth, Addie J & John L
710 James Robinson RD
Louisville, Ky 40214

Dao Nguyen
708 James Robinson RD
Louisville, Ky 40214

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Printing Tips

- 1 | Go to avery.com/templates
- 2 | Design using the template number for this product.
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- 4 | Change printer settings to "Labels" and print.

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- 3 | Prueba la impresión en un papel normal.
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Escanea para acceder a sugerencias de impresión, información de productos, ayuda y mucho más utilizando tu teléfono móvil o tableta.



GENUINE / AUTHENTIQUE / GENUINO

Louisville Metro Government
Department of Codes & Regulations
Zoning Enforcement Division
444 South 5th Street, Suite 200
Louisville, KY 40202

RE: Request for Hearing – Citation ENF-ZON-20-001511-27

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I respectfully dispute the alleged violation referenced in Citation Number ENF-ZON-20-001511-27 and request the opportunity to present my case before the appropriate authority. I believe that the citation may have been issued based on incomplete or inaccurate information, and I would like the chance to provide clarification and any supporting documentation.

Please consider this letter as my official request for a hearing within the required 14-day response period. I am prepared to cooperate fully and comply with all procedures necessary to resolve this matter.

Kindly inform me of the next steps, including the scheduled hearing date, time, and any additional documentation required.

Thank you for your time and consideration.

Sincerely,

Hassan Ala Salman
8020 National Turnpike
Louisville, KY 40214



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OFFICE OF
PLANNING



Louisville Metro Government
Department of Codes & Regulations
Zoning Enforcement Division
444 South 5th Street, Suite 200, Louisville KY 40202
(502) 574-2508

04/06/2026
6:00PM

Hassan Ala Salman
8020 National Turnpike
Louisville KY 40214-5202

CITATION – BINDING ELEMENT

Case Number: ENF-ZON-20-001511-27
Civil Fine: \$4,000.00

Subject Property: 8020 National Turnpike
Inspection Date: 04/06/2026
Inspection Time: 10:05 AM

Following receipt of a complaint, your property was inspected by a Louisville Metro Zoning Enforcement Officer. As observed during the inspection and/or discovered through subsequent investigation, a violation(s) exists that requires your immediate attention.

You must immediately stop using this property in violation of the Binding Elements that have been approved as part of a rezoning/development plan associated with the subject property. A binding element is a binding requirement, provision, restriction, or condition imposed by the Planning Commission or its designee, or a promise or agreement made by an applicant in writing, in connection with the approval of a land use development plan or subdivision plan. You may contact the Office of Planning to determine what steps must be taken to remedy the violation(s) noted below. Failure to comply with this Citation may result in additional Citations and/or referral to the Planning Commission. In addition, any person or entity that violates any provision related to Binding Elements shall be fined not less than \$500 nor more than \$4,000 for each violation. Each day of violation constitutes a separate offense.

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Your property will be re-inspected at a later date to determine compliance.

James Mullarkey
Zoning Enforcement Officer
(502)773-2069

Page 1 of 3

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APR 24 2026

**OFFICE OF
PLANNING**

Enclosures:

- (1) Approved minutes for case # 9-68-88
- (2) Approved Plan for case # 9-68-88
- (3) Approved Binding Elements for case # 9-68-88

Violations:

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Subject violation(s) needs to be brought into compliance to avoid additional fines and enforcement action.

Inspector Comments:

Inspected, property is still in violation of Binding Element #1 for approved plan case #9-68-88.

There is a used car lot in operation from the front of the property and auto salvage in the rear of the property. There are more than five wrecked cars and several others with flat tires.

There are also what appears to be wrecked vehicles in the rear or the property.

Property owner is still operating a junk yard in violation of approved plan.

A revised development plan is required. To operate a junkyard the property is required to be zoned M3 and granted a Conditional Use Permit (CUP).

Contact the Office of Planning at (502)574-6230 for assistance with the applications and plan review process.

4th Citation for BE_001 issued.

Responsible Party: Property Owner

To pay the fine:

- To pay the fine by phone with a credit or debit card: Call (502)574-3430.
- To pay the fine by mail with a check or money order: Send a check or money order, payable to "Louisville Metro Government", to Accounts Receivable, 611 W Jefferson St, 1st Floor, Louisville, KY 40202. Please attach a copy of this Citation and note the case number on the check/money order.
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APR 24 2026

OFFICE OF
PLANNING

To appeal this Citation and/or fine amount:

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PLANNING**



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APR 24 2016

R. [unclear]



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APR 24 2026

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Louisville Metro Government

Text File

File Number: 25-STRCLOSURE-0012.

Agenda Date: 7/16/2026

Version: 1

Status: Public Hearing

In Control: Planning Commission

File Type: Planning Case

Agenda Number: 6.



25-STRCLOSURE-0012

Planning Commission
Staff Report
July 16, 2026

Trinity High School Street Closure

Location: North Sherrin Ave
Applicant: Trinity High School Foundation
Representative: Land Design & Development Inc.
Jurisdiction: St Matthews
Council District: 9 – Andrew Owen
Case Manager: Tyler Pobiedzinski, Planner I

REQUESTS & RECOMMENDED ACTIONS

1. Closure of Public Right-of-Way
 - Staff finds the request is in keeping with Plan 2040 and recommends the Planning Commission **RECOMMEND** that the City of St Matthews **APPROVE** the requested closure of Public Right-of-Way

CASE SUMMARY

The applicant is requesting the closure of 1,227.32 linear feet of public right-of-way known as North Sherrin Avenue. The properties adjacent to the entire length of North Sherrin Avenue are owned by the Trinity High School Foundation and the Roman Catholic Bishop of Louisville. The proposed closure is intended to enhance student safety by eliminating vehicular access along the corridor during the school year.

This request was previously reviewed by the Development Review Committee on June 17, 2026. During that review, the Committee elected to schedule the application for a public hearing rather than place it on the consent agenda due to concerns regarding the potential impact of the closure on connectivity within the surrounding area.

TECHNICAL REVIEW

- The applicant received a Consent to Street Closure from more than 51% of adjacent property owners.
- The proposed closure will maintain public facilities. All agencies have been addressed and approvals received from relevant utilities.

STANDARD OF REVIEW AND STAFF ANALYSIS FOR STREET CLOSURES

1. *Adequate Public Facilities – Whether and the extent to which the request would result in demand on public facilities and services (both on-site and off-site), exceeding the capacity or interfering with the function of such facilities and services, existing or programmed, including transportation, utilities, drainage, recreation, education, emergency services, and similar necessary facilities and services. No closure of any public right-of-way shall be approved where an identified current or future need for the facility exists. Where existing or proposed utilities are located within the right-of-way to be closed, it shall be retained as an easement or alternative locations shall be provided for the utilities; and*

STAFF FINDING: Adequate public facilities are available to serve existing and future needs of the community. The proposed closure does not result in an increase in demand on public facilities or services as utility agencies have coordinated with the applicant and Office of Planning staff to ensure that facilities are maintained or relocated through agreement with the developer. No property adjacent or abutting the rights-of-way to be closed will be left absent of public facilities or services or be dispossessed of public access to their property. The applicant will provide necessary easements or relocation of equipment per utility agency requirements.

2. *Cost for Improvement – The cost for a street or alley closing, or abandonment of any easement or land dedicated to the use of the public shall be paid by the applicant or developer of a proposed project, including cost of improvements to adjacent rights-of-way or relocation of utilities within an existing easement; and*

STAFF FINDING: Any cost associated with the rights-of-way to be closed will be the responsibility of the applicant or developer, including the cost of improvements to those rights-of-way and adjacent rights-of-way, or the relocation of utilities and any additional agreement reached between the utility provider and the developer.

3. *Other Matters – Any other matters which the Planning Commission may deem relevant and appropriate.*

STAFF FINDING: The proposal is consistent with the Connected CHASE Principle and Mobility Goal 3, Policy 12 of Plan 2040, which encourages transportation facilities to support surrounding land uses while maintaining appropriate access and circulation. The proposed closure enhances student safety by reducing vehicular traffic adjacent to the school campus while preserving overall connectivity within the surrounding area. Alternative routes remain available for vehicular circulation, including St. Matthews Avenue, which continues to provide a connection between Shelbyville Road and Westport Road. Therefore, staff finds that the proposed closure appropriately balances transportation connectivity and public safety.

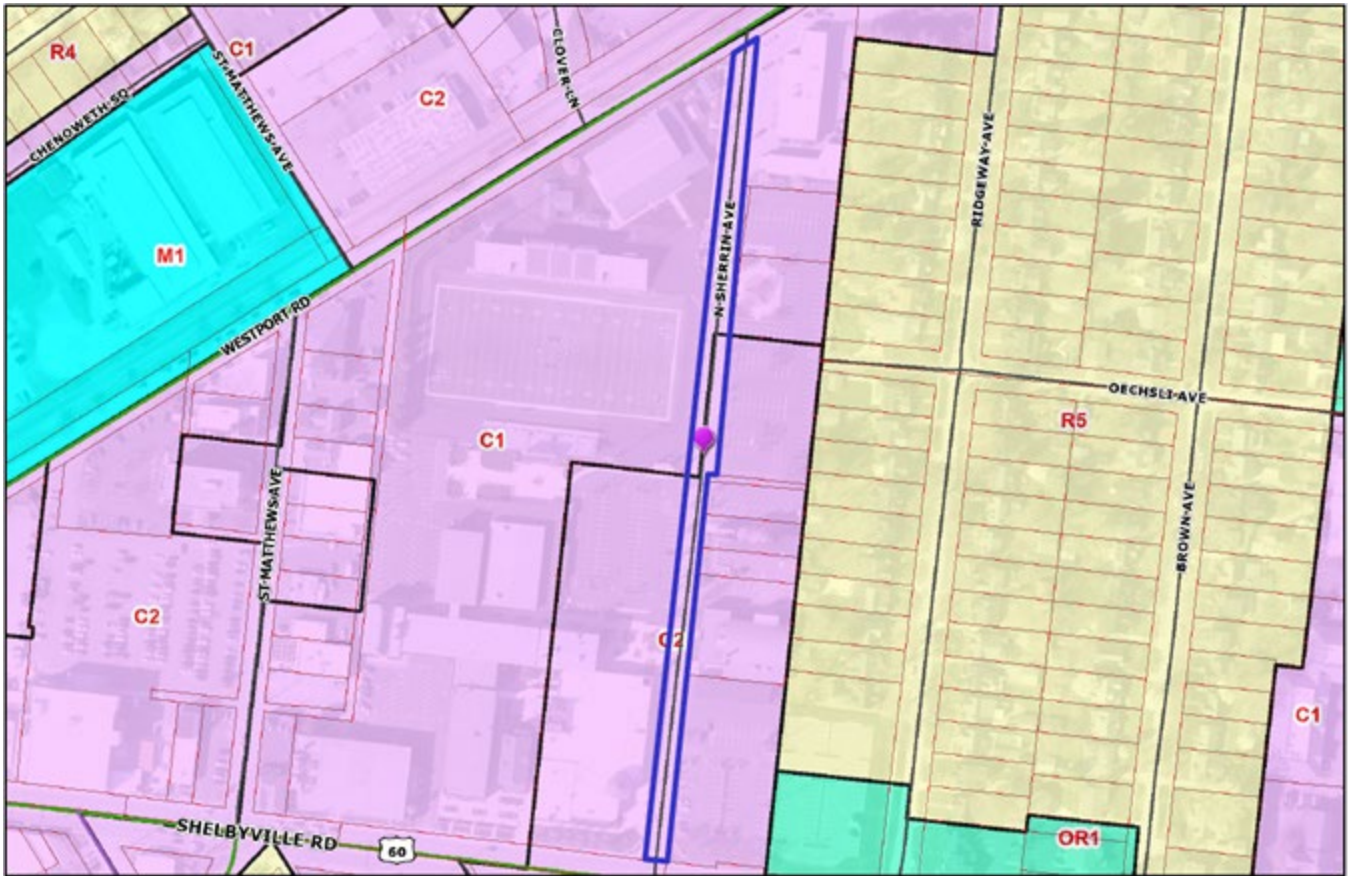
NOTIFICATION

DATE	PURPOSE OF NOTICE	RECIPIENTS
6/23/2026	Planning Commission Public Hearing	1st tier adjoining property owners and current residents; Registered Neighborhood Groups in Council District 9
7/9/2026	Planning Commission Public Hearing	Sign Posting on Property
7/7/2026	Planning Commission Public Hearing	Legal Advertisement in the Courier-Journal

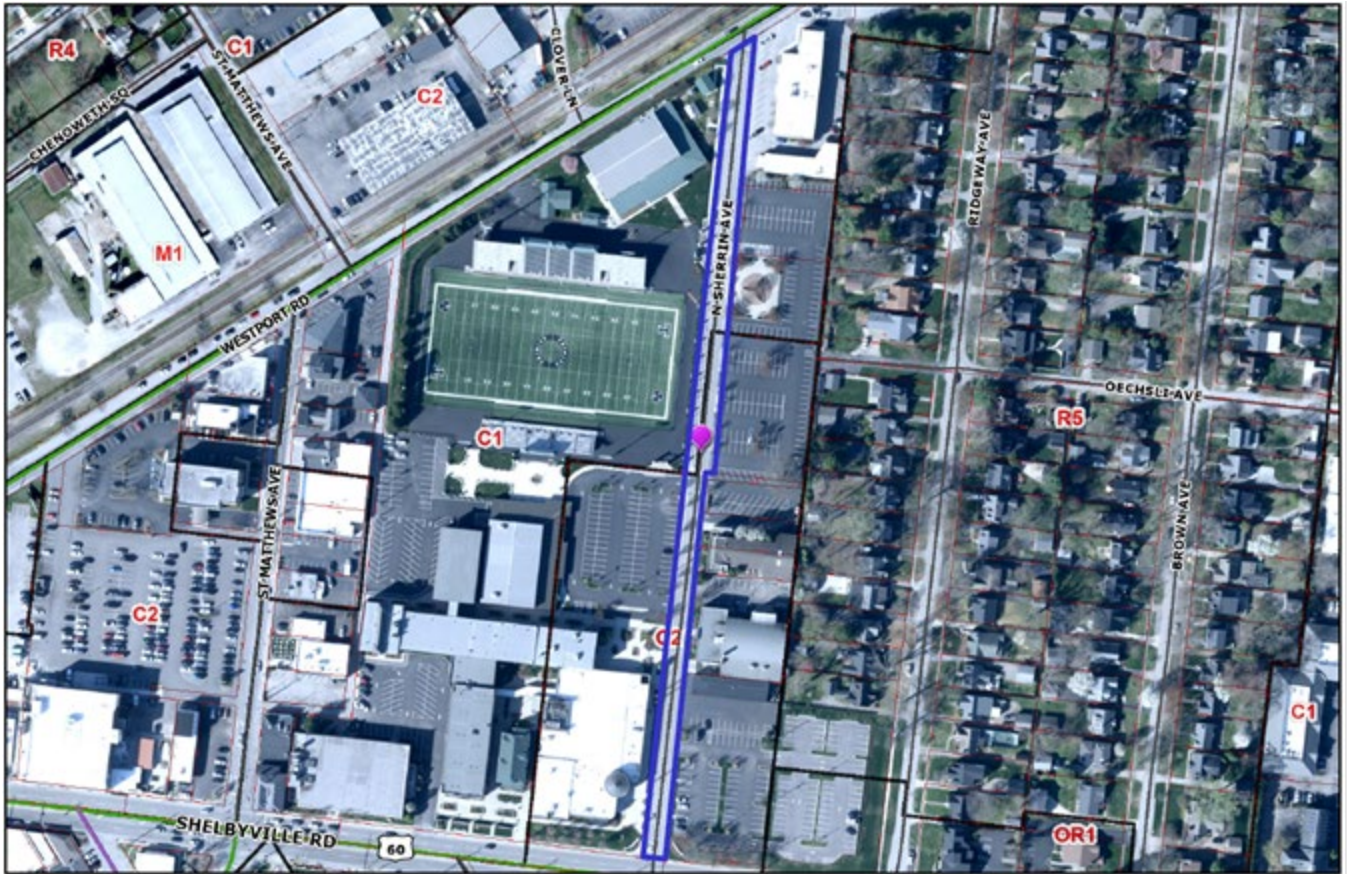
ATTACHMENTS

1. Zoning Map
2. Aerial Photograph


1. ZONING MAP

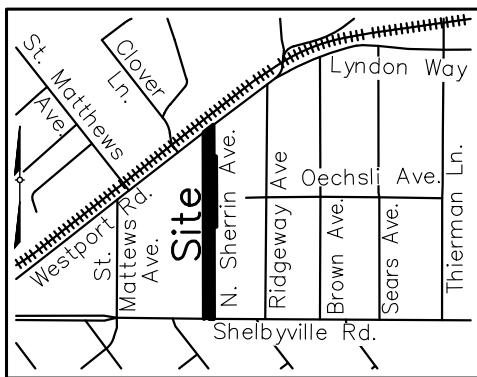
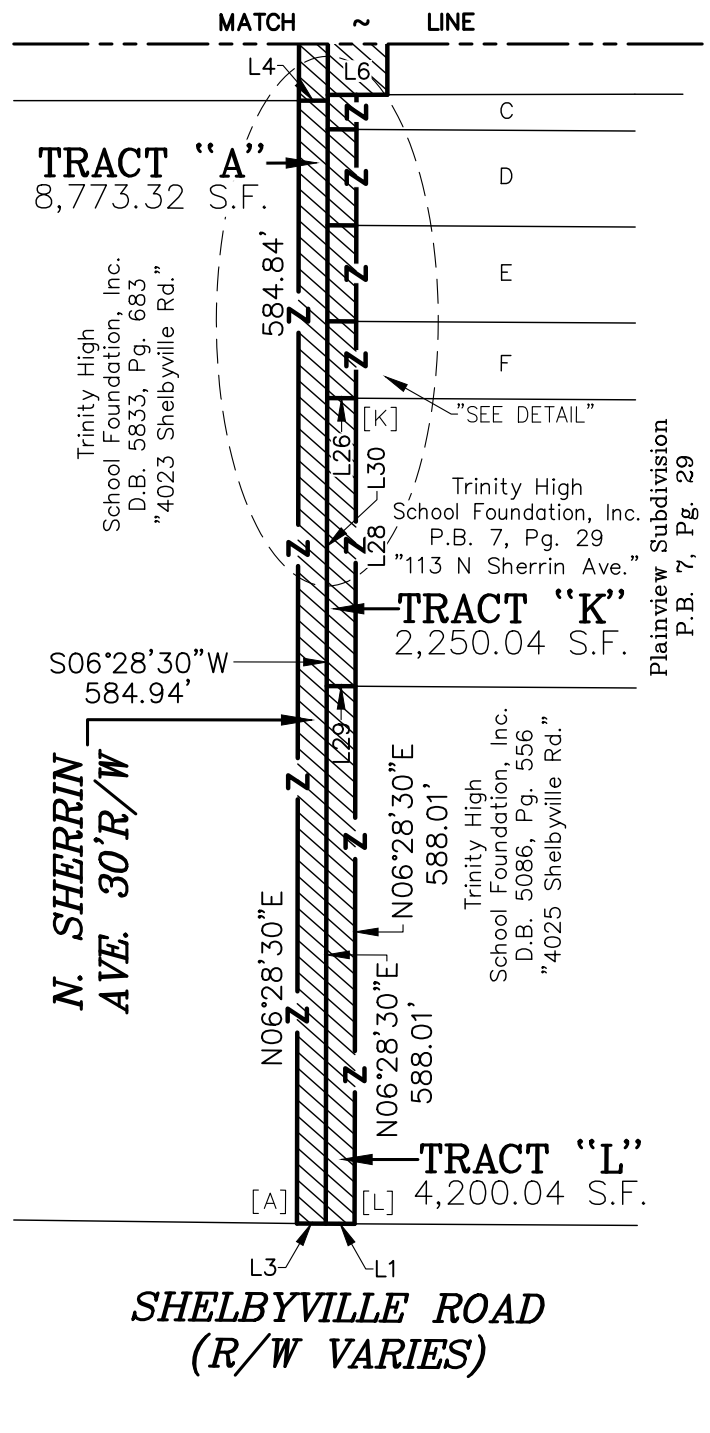
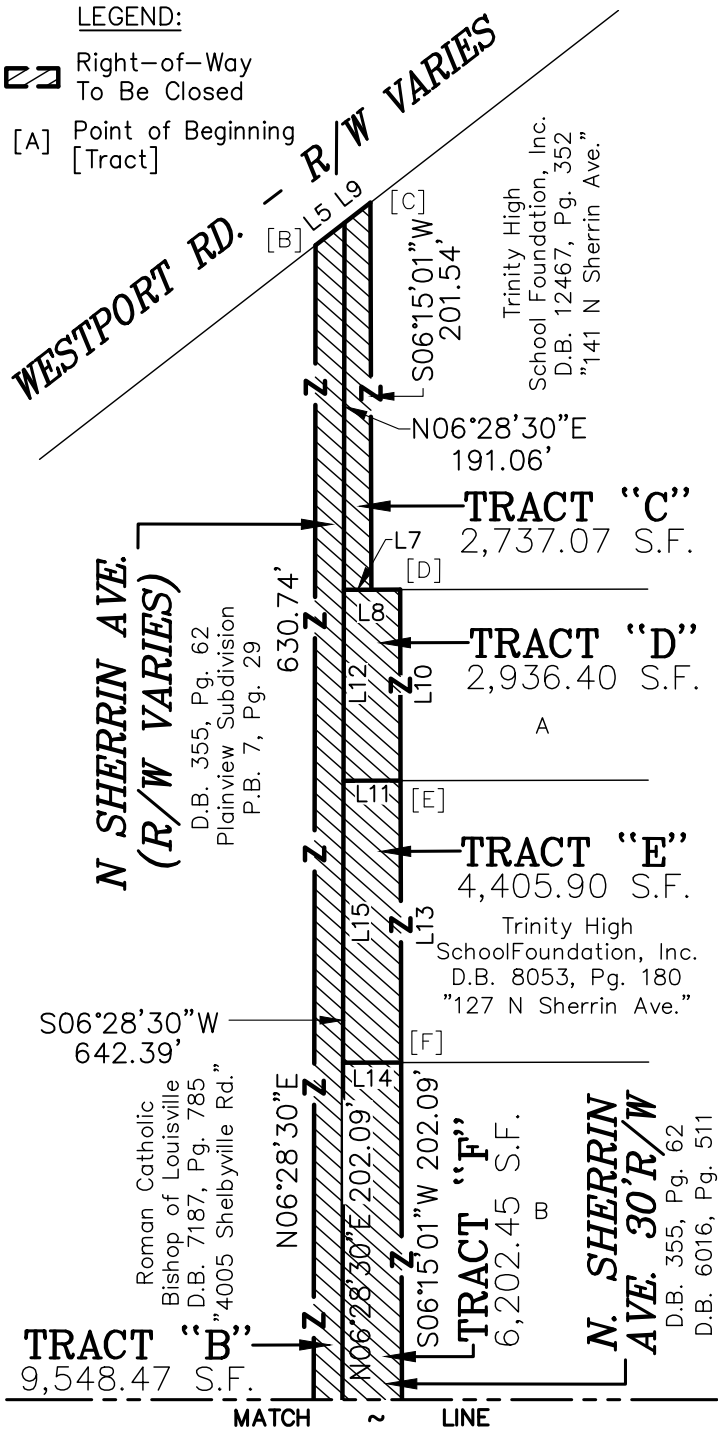


2. AERIAL PHOTOGRAPH

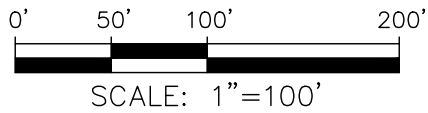


LEGEND:

-  Right-of-Way To Be Closed
- [A] Point of Beginning [Tract]



LOCATION MAP
Not To Scale



LAND DESIGN & DEVELOPMENT, INC.
ENGINEERING • LAND SURVEYING • LANDSCAPE ARCHITECTURE
503 WASHBURN AVENUE, SUITE 101
LOUISVILLE, KENTUCKY 40222
PHONE: 502.426.9974

RIGHT-OF-WAY CLOSURE PLAT

For:
TRINITY HIGH SCHOOL FOUNDATION INC
4023 & 4025 SHELBYVILLE ROAD
113, 115, 117, 121, 127, 139,
& 141 N. SHERRIN AVENUE
LOUISVILLE, KY 40207
and
ROMAN CATHOLIC BISHOP OF LOUISVILLE
4005 SHELBYVILLE RD., LOU., KY 40207

LAND SURVEYOR'S CERTIFICATE

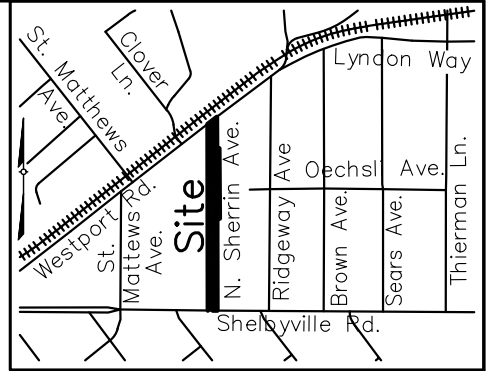
I hereby certify that this plat and survey were made under my supervision, and that the property lines shown hereon were obtained from recorded deeds or plats, and that only the property corners noted as monumented were located in the field.

NOT FOR RECORDING

Surveyor's Signature _____ PLS# _____ Date _____

PLAT DATE: MAY 07, 2026

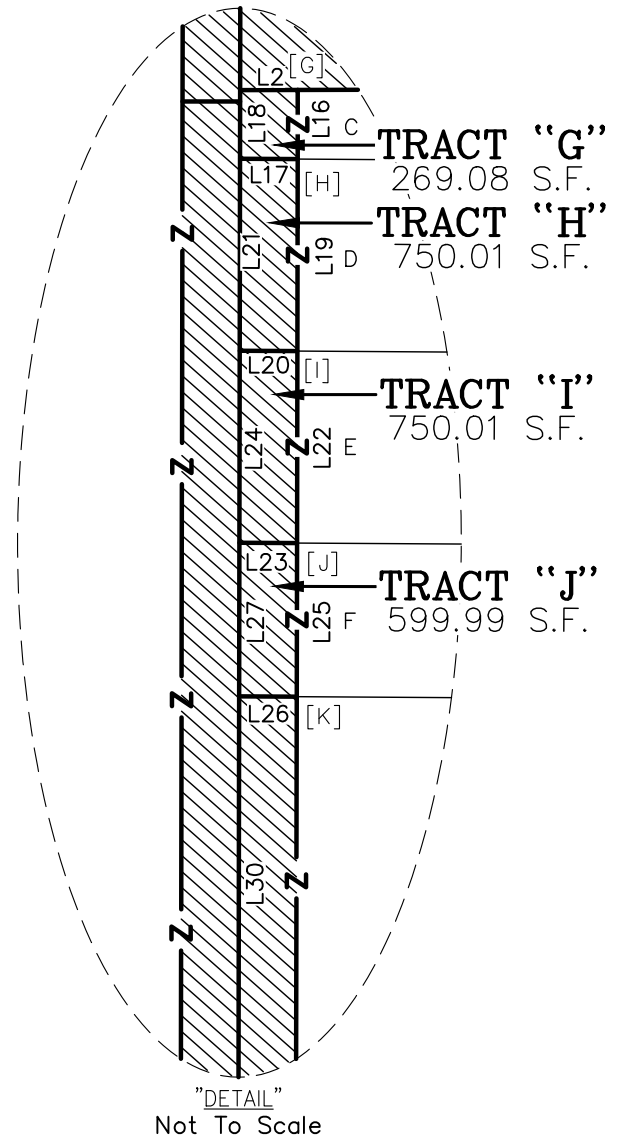
PROPERTY OWNERS TABLE		
A	Trinity High School Foundation, Inc. "139 N. Sherrin Avenue" / Tax Block 19, Lot 314	D.B. 8177, Pg. 878
B	Trinity High School "121 N. Sherrin Avenue" / Tax Block 19, Lot 316	D.B. 5086, Pg. 556
C	Trinity High School Foundation, Inc. "N. Sherrin Avenue" / Tax Block 19, Lot 261	D.B. 6331, Pg. 615
D	Trinity High School Foundation, Inc. "117 N. Sherrin Avenue"	D.B. 6331, Pg. 615
E	Trinity High School Foundation, Inc. "N. Sherrin Avenue" / Tax Block 275, Lot 8	D.B. 6331, Pg. 615
F	Trinity High School Foundation, Inc. "115 N. Sherrin Avenue"	D.B. 6331, Pg. 615



LOCATION MAP
Not To Scale

PROPERTY LINE TABLE		
L1	N83°16'29"W	15.00'
L2	S83°44'29"E	15.00'
L3	N83°16'29"W	15.00'
L4	S83°38'30"E	15.00'
L5	N31°44'24"W	19.01'
L6	S83°44'29"E	31.09'
L7	S83°44'29"E	14.33'
L8	S83°44'29"E	29.33'
L9	N58°34'31"E	17.16'
L10	S06°15'01"W	99.46'
L11	N83°44'29"W	29.72'
L12	N06°28'30"E	99.46'
L13	S06°15'01"W	146.83'
L14	N83°44'29"W	30.29'
L15	N06°28'30"E	146.83'

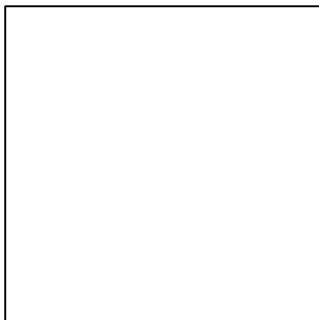
PROPERTY LINE TABLE		
L16	S06°28'30"W	18.00'
L17	N83°16'29"W	15.00'
L18	N06°28'30"E	17.88'
L19	S06°28'30"W	50.00'
L20	N83°16'29"W	15.00'
L21	N06°28'30"E	50.00'
L22	S06°28'30"W	50.00'
L23	N83°16'29"W	15.00'
L24	N06°28'30"E	50.00'
L25	S06°28'30"W	40.00'
L26	N83°16'29"W	15.00'
L27	N06°28'30"E	40.00'
L28	S06°28'30"W	150.00'
L29	N83°16'29"W	15.00'
L30	N06°28'30"E	150.00'



"DETAIL"
Not To Scale

NOTES:

- This is not a boundary survey.
- The purpose of the avenue closure is to restrict vehicular access to school-related traffic exclusively during designated peak school hours in the interest of public safety and orderly operation of school activities.
- Upon approval of this plat, the Variable Avenue will be consolidated with the adjoining property owners at 4023 Shelbyville Rd., 4005 Shelbyville Rd., 141 N Sherrin Ave., 139 N sherrin Ave., 127 N Sherrin Ave., 121 N Sherrin Ave., N Sherrin Ave., 117 N Sherrin Ave., N Sherrin Ave., 115 N Sherrin Ave., 113 N Sherrin Ave., 4025 Shelbyville Road.
- The right-of-way being closed, and as bounded and hatched as shown hereon shall also serve as a variable private access easement for the adjoining properties located along it.
- The Reference Meridian used on this plat to determine the direction of the survey lines was based on the Kentucky State Plane Coordinate System, North Zone 1601, NAD 1983.



LAND SURVEYOR'S CERTIFICATE

I hereby certify that this plat and survey were made under my supervision, and that the property lines shown hereon were obtained from recorded deeds or plats, and that only the property corners noted as monumented were located in the field.

NOT FOR RECORDING

Surveyor's Signature _____ PLS# _____ Date _____



LAND DESIGN & DEVELOPMENT, INC.

ENGINEERING • LAND SURVEYING • LANDSCAPE ARCHITECTURE
503 WASHBURN AVENUE, SUITE 101
LOUISVILLE, KENTUCKY 40222
PHONE: 502.416.9974

RIGHT-OF-WAY CLOSURE PLAT

For:
TRINITY HIGH SCHOOL FOUNDATION INC
4023 & 4025 SHELBYVILLE ROAD
113, 115, 117, 121, 127, 139,
& 141 N. SHERRIN AVENUE
LOUISVILLE, KY 40207
and

ROMAN CATHOLIC BISHOP OF LOUISVILLE
4005 SHELBYVILLE RD., LOU., KY 40207

PLAT DATE: MAY 07, 2026

JUSTIFICATION

1. Adequate Public Facilities - Whether and the extent to which the request would result in demand on public facilities and services (both on-site and off-site), exceeding the capacity or interfering with the function of such facilities and services, existing or programmed, including transportation, utilities, drainage, recreation, education, emergency services, and similar necessary facilities and services. No closure of any public right-of-way shall be approved where an identified current or future need for the facility exists. Where existing or proposed utilities are located within the right-of-way to be closed, it shall be retained as an easement or alternative locations shall be provided for the utilities.

All utilities contained within the current Right-Of-Way will be placed in appropriate easements and remain accessible to provider and surrounding development which relies on said utilities. All emergency vehicles will remain to have access and use of the street.

2. Cost for Improvement - The cost for a street or alley closing, or abandonment of any easement or land dedicated to the use of the public shall be paid by the applicant or developer of a proposed project, including cost of improvements to adjacent rights-of-way or relocation of utilities within an existing easement.

No relocation of any utilities, or improvements to adjacent Right-Of-Ways is proposed at this time.

3. Comprehensive Plan - The extent to which the proposed closure is in compliance with the Goals, Objectives, and Policies of the Comprehensive Plan.

The current road does not serve as access to any other residential or commercial entity other than Trinity High School. Closing of N Sherrin Ave will provide a safer environment for vehicular and pedestrian use of the school campus.

4. Other Matters - Any other matters which the Planning Commission may deem relevant and appropriate.

The road closure lies in the City of St. Matthews. The request to close Sherrin Ave was initiated by the City in an effort to allow Trinity High School to create a safer environment for its students and relieve the City the cost of maintaining the road. The street only serves Trinity High School properties that are being included into the campus as reuse / redevelopment continues.

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CONSENT TO STREET/ALLEY CLOSURE

I have been notified that an application to close North Sherrin Ave (street/alley) will be filed with the Louisville Metro Planning Commission. The Planning Commission will make a recommendation concerning the closure to the legislative body having jurisdiction over the street / alley described above.

I, as an abutting property owner to the street / alley being closed, do hereby consent, and agree to the closure.

Property Owner Signature: 

Name: James Torra / Trinity High School Foundation

Owner Address: 4011 Shelbyville Road Louisville, KY 40206

Subscribed and sworn to, before me, by James Torra, this first

day of August, 2025. My Commission expires: December 3, 2028.

Notary Public: ; KY NP 18242



Louisville Metro Government

Text File

File Number: 26-DDP-0005

Agenda Date: 7/16/2026

Version: 1

Status: Public Hearing

In Control: Planning Commission

File Type: Planning Case

Agenda Number: 7.



26-DDP-0005

Planning Commission
Staff Report
July 16, 2026

General Development Plan – Old Bardstown Road

Location: 8803, 8805, & 8807 Old Bardstown Road
Applicant: Goodwill Industries of Kentucky Inc.
Representative: Bardenwerper Talbott & Roberts, PLLC
Jurisdiction: Louisville Metro
Council District: 22 – Kevin Bratcher
Case Manager: Sydney Fawcett, AICP, Planner I

REQUEST & RECOMMENDED ACTION

1. Revised Detailed District Development Plan with Amendment to Binding Elements
 - Staff finds the justification for the request is adequate and recommends the Planning Commission **RECOMMEND** the Louisville Metro Council **APPROVE** the Revised Detailed District Development Plan with Amendment to Binding Elements

CASE SUMMARY

The subject site is approximately 7.02 acres zoned C-1 Commercial and OR-1 Office Residential in the Neighborhood form district. The subject site is located at the corner of Old Bardstown Road and Fairmount Road west of Bardstown Road. The applicant is proposing to construct three (3) 15,000 square foot office and retail buildings with 182 associated parking spaces. The applicant is requesting the building within the C-1 Commercial zoning district be 27 feet. However, Binding Element #9 restricts the building height within the C-1 Commercial zoning district to 25 feet. Staff recommends removing the binding element as the Neighborhood form district permits structures within the C-1 Commercial zoning district to be up to 35 feet in height.

Related Cases

- **24-ZONE-0105:** Change in zoning from R-4 Single-Family Residential and C-1 Commercial to OR-1 Office Residential and C-1 Commercial with a Detailed District Development Plan

TECHNICAL REVIEW

- Comprehensive Plan 2040
- Land Development Code (Louisville Metro 2025)
- MSD has provided preliminary approval.
- Transportation Planning has provided preliminary approval.

- Detailed District Development Plan Binding Element #12 requires that any significant changes or alterations to the proposed structures (i.e., building height, number of units, number of buildings), any increase in density on the property, any changes in use on the property, and/or any amendments to the binding elements shall be reviewed before the Planning Commission, with final action to be determined by the Metro Council.

STANDARD OF REVIEW AND STAFF ANALYSIS FOR REVISED DETAILED DISTRICT DEVELOPMENT PLAN AND AMENDMENT TO BINDING ELEMENTS

- a. *The conservation of natural resources on the property proposed for development, including: trees and other living vegetation, steep slopes, water courses, flood plains, soils, air quality, scenic views, and historic sites;*

STAFF FINDING: There do not appear to be any environmental constraints or historic resources on the subject site. Tree canopy requirements of the Land Development Code will be provided on the subject site.

- b. *The provisions for safe and efficient vehicular and pedestrian transportation both within the development and the community;*

STAFF FINDING: Provisions for safe and efficient vehicular and pedestrian transportation within and around the development and the community have been provided. Metro Public Works has approved the preliminary development plan.

- c. *The provision of sufficient open space (scenic and recreational) to meet the needs of the proposed development;*

STAFF FINDING: There are no open space requirements for the proposed development.

- d. *The provision of adequate drainage facilities on the subject site in order to prevent drainage problems from occurring on the subject site or within the community;*

STAFF FINDING: The Metropolitan Sewer District has preliminarily approved the development plan and will ensure the provision of adequate drainage facilities on the subject site in order to prevent drainage problems from occurring on the subject site or within the community.

- e. *The compatibility of the overall site design (location of buildings, parking lots, screening, landscaping) and land use or uses with the existing and projected future development of the area;*

STAFF FINDING: The overall site design and land uses are compatible with the existing and future development of the area. Appropriate screening will be provided to screen adjacent properties and roadways.

- f. *Conformance of the development plan with the Comprehensive Plan and Land Development Code. Revised plan certain development plans shall be evaluated for conformance with the non-residential and mixed-use intent of the form districts and comprehensive plan.*

STAFF FINDING: The development plan conforms to applicable guidelines and policies of the Comprehensive Plan. Community Form Goal 1 Policy 4 calls to ensure new development and redevelopment is compatible with the scale and site design of nearby existing development and with the desire pattern of development within the Form District. Community Form Goal 1 Policy 9 suggests implementing an appropriate transition between uses that are substantially different in scale and intensity or density of development. The transition may be achieved through methods such as landscaped buffer yards, vegetative berms, compatible building design and materials, height restrictions and setback requirements. The surrounding area has a mix of single-family, multi-family, and commercial developments. The applicant is providing a 15- to 30- foot landscape buffer and plantings along each property line to screen the proposed development from the existing nearby uses and Bardstown Road. Community Form Goal 1 Policy 11 advocates for setbacks, lot dimensions, and building heights are compatible with those of nearby developments that meet Form District guidelines. The proposal demonstrates compatibility in terms of scale, height, and setbacks with adjacent developments.

Mobility Goal 3 Policy 20 suggests promoting joint access and circulation systems for development sites comprised of more than one buildable lot. The applicant is proposing to create 3 buildable lots and provide vehicular and pedestrian connection between each lot. Two access points will be from Old Bardstown Road, and one access point will be from Fairmount Road.

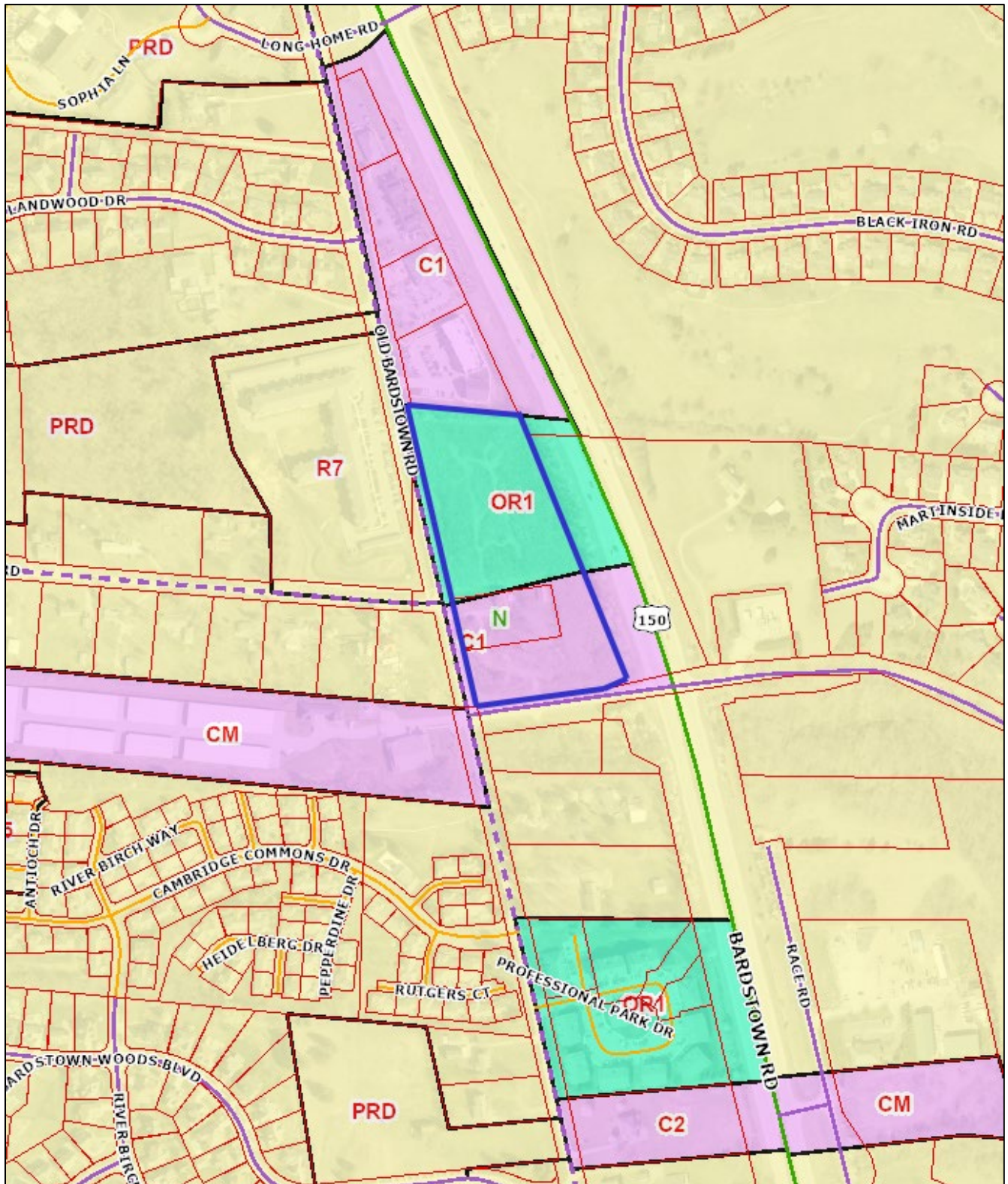
NOTIFICATION

DATE	PURPOSE OF NOTICE	RECIPIENTS
6/26/2026	Planning Commission Public Hearing	1st tier adjoining property owners and current residents; Registered Neighborhood Groups in Council District 22

ATTACHMENTS

1. Zoning Map
2. Aerial Photograph
3. Existing Binding Elements with Proposed Amendments
4. Proposed Binding Elements

1. Zoning Map



2. Aerial Photograph



3. Existing Binding Elements with Proposed Revisions

1. The development shall be in accordance with the approved district development plan, all applicable sections of the Land Development Code (LDC) and agreed upon binding elements unless amended pursuant to the Land Development Code. Any changes/additions/alterations of any binding element(s) shall be submitted to the Planning Commission or the Planning Commission's designee for review and approval; any changes/additions/alterations not so referred shall not be valid.
2. ~~No outdoor advertising signs, small freestanding signs, pennants, balloons, or banners shall be permitted on the site.~~
3. Construction fencing shall be erected when off-site trees or tree canopy exists within 3' of a common property line. Fencing shall be in place prior to any grading or construction to protect the existing root systems from compaction. The fencing shall enclose the entire area beneath the tree canopy and shall remain in place until all construction is completed. No parking, material storage or construction activities are permitted within the protected area.
4. Before any permit (including but not limited to building, parking lot, change of use, site disturbance, alteration permit or demolition permit is requested:
 - a. The development plan must receive full construction approval from Construction Review, Louisville Metro Public Works and the Metropolitan Sewer District.
 - b. Encroachment permits must be obtained from the Kentucky Transportation Cabinet.
 - c. A minor subdivision plat or legal instrument shall be recorded (creating the lot lines as shown on the development plan. A copy of the recorded instrument shall be submitted to the Division of Planning and Design Services prior to obtaining a building permit.
 - d. The property owner/developer must obtain approval of a detailed plan for screening (buffering/landscaping) as described in Chapter 10 prior to requesting a building permit. Such plan shall be implemented prior to occupancy of the site and shall be maintained thereafter.
 - e. A reciprocal access and crossover easement agreement in a form acceptable to the Planning Commission legal counsel shall be created between the adjoining property owners and recorded. A copy of the recorded instrument shall be submitted to the Division of Planning and Design Services prior to obtaining a building permit.
 - f. A Tree Preservation Plan in accordance with Chapter 10 of the LDC shall be reviewed and approved prior to obtaining approval for site disturbance.
 - g. ~~The materials and design of proposed structures shall be substantially the same as depicted in the rendering as presented at the April 10, 2025, Planning Commission meeting. A copy of the approved rendering is available in the case file on record in the offices of the Louisville Metro Planning Commission.~~

5. A certificate of occupancy must be received from the appropriate code enforcement department prior to occupancy of the structure or land for the proposed use. All binding elements requiring action and approval must be implemented prior to requesting issuance of the certificate of occupancy, unless specifically waived by the Planning Commission.
6. There shall be no outdoor music (live, piped, radio or amplified) or outdoor entertainment or outdoor PA system permitted on the site).
7. The applicant, developer, or property owner shall provide copies of these binding elements to tenants, purchasers, contractors, subcontractors and other parties engaged in development of this site and shall advise them of the content of these binding elements. These binding elements shall run with the land and the owner of the property and occupant of the property shall at all times be responsible for compliance with these binding elements. At all times during development of the site, the applicant and developer, their heirs, successors; and assignees, contractors, subcontractors and other parties engaged in development of the site, shall be responsible for compliance with these' binding elements.
8. At such a time the property to the north redevelops for a commercial use, a reciprocal access and crossover easement agreement in a form acceptable to the Planning Commission legal counsel shall be created between the adjoining property owners and recorded.
- ~~9. Buildings on the C-1 zoned portion of the site shall not exceed one (1) story. They shall also not exceed twenty-five (25) feet in height.~~
- ~~10. Buildings on the OR-1 portion of the site shall not exceed two (2) stories. They shall also not exceed thirty-five (35) feet in height.~~
11. The following uses shall be prohibited on site:
 - a. Automobile rental agencies
 - b. Automobile parking areas, public and private
 - c. Automobile service stations with service bays for repair of no more than two vehicles
 - d. Banks, credit unions, savings and loan, check cashing services and similar financial institutions that are primarily payday loan or check cashing operations, or that are only state-regulated are prohibited, but traditional banks and credit unions that are full service and federally regulated are permitted.
 - e. Bowling alleys
 - f. Car washes
 - g. Charitable gaming facilities
 - h. Convenience groceries

-
-
- i. Dry-cleaning, dyeing, pressing, and laundry; distributing stations or retail businesses where no cleaning, dyeing, pressing or laundry is done for other distributing station or cleaning establishments
 - j. Dwelling, Multiple-family if the density exceeds 12.01 dwelling units per acre
 - k. Extended stay lodging
 - l. Hotels and motels
 - m. Package liquor stores
 - n. Pawn shops
 - o. Rental business offering items whose sale is a permitted use in this district, videocassette and similar products, rental and sales but not constituting an adult video cassette rental center
 - p. Restaurants, tea rooms and cafes
 - q. Tents, air structures and other temporary structures intended for occupancy by commercial activities including but not limited to sales, display, and food services, provided that applicable building and fire safety codes are met, and provided further that such structures may not be installed for a period (or periods totaling) more than ten (10) days during a calendar year
12. Any significant increases to the proposed structures (e.g. increase in building height, number of units, number of buildings), any increase in density on the property, any changes in use on the property which directly or indirectly require a public hearing before the Planning Commission or subcommittee thereof, and/or any amendments to the binding elements, other than (i) the addition of new binding elements, (ii) changes to the binding elements that merely update the public hearing date, or (iii) updating a previous version of this binding element to reflect the current language, shall be reviewed before the Planning Commission with final action to be determined by Metro Council.

4. Proposed Binding Elements

1. The development shall be in accordance with the approved district development plan, all applicable sections of the Land Development Code (LDC) and agreed upon binding elements unless amended pursuant to the Land Development Code. Any changes/additions/alterations of any binding element(s) shall be submitted to the Planning Commission or the Planning Commission's designee for review and approval; any changes/additions/alterations not so referred shall not be valid.
2. Construction fencing shall be erected when off-site trees or tree canopy exists within 3' of a common property line. Fencing shall be in place prior to any grading or construction to protect the existing root systems from compaction. The fencing shall enclose the entire area beneath the tree canopy and shall remain in place until all construction is completed. No parking, material storage or construction activities are permitted within the protected area.
3. Before any permit (including but not limited to building, parking lot, change of use, site disturbance, alteration permit or demolition permit is requested:
 - a. The development plan must receive full construction approval from Construction Review, Louisville Metro Public Works and the Metropolitan Sewer District.
 - b. Encroachment permits must be obtained from the Kentucky Transportation Cabinet.
 - c. A minor subdivision plat or legal instrument shall be recorded (creating the lot lines as shown on the development plan. A copy of the recorded instrument shall be submitted to the Division of Planning and Design Services prior to obtaining a building permit.
 - d. The property owner/developer must obtain approval of a detailed plan for screening (buffering/landscaping) as described in Chapter 10 prior to requesting a building permit. Such plan shall be implemented prior to occupancy of the site and shall be maintained thereafter.
 - e. A reciprocal access and crossover easement agreement in a form acceptable to the Planning Commission legal counsel shall be created between the adjoining property owners and recorded. A copy of the recorded instrument shall be submitted to the Division of Planning and Design Services prior to obtaining a building permit.
 - f. A Tree Preservation Plan in accordance with Chapter 10 of the LDC shall be reviewed and approved prior to obtaining approval for site disturbance.
4. A certificate of occupancy must be received from the appropriate code enforcement department prior to occupancy of the structure or land for the proposed use. All binding elements requiring action and approval must be implemented prior to requesting issuance of the certificate of occupancy, unless specifically waived by the Planning Commission.
5. There shall be no outdoor music (live, piped, radio or amplified) or outdoor entertainment or outdoor PA system permitted on the site).

6. The applicant, developer, or property owner shall provide copies of these binding elements to tenants, purchasers, contractors, subcontractors and other parties engaged in development of this site and shall advise them of the content of these binding elements. These binding elements shall run with the land and the owner of the property and occupant of the property shall at all times be responsible for compliance with these binding elements. At all times during development of the site, the applicant and developer, their heirs, successors; and assignees, contractors, subcontractors and other parties engaged In development of the site, shall be responsible for compliance with these' binding elements.
7. At such a time the property to the north redevelops for a commercial use, a reciprocal access and crossover easement agreement In a form acceptable to the Planning Commission legal counsel shall be created between the adjoining property owners and recorded.
8. The following uses shall be prohibited on site:
 1. Automobile rental agencies
 2. Automobile parking areas, public and private
 3. Automobile service stations with service bays for repair of no more than two vehicles
 4. Banks, credit unions, savings and loan, check cashing services and similar financial institutions that are primarily payday loan or check cashing operations, or that are only state-regulated are prohibited, but traditional banks and credit unions that are full service and federally regulated are permitted.
 5. Bowling alleys
 6. Car washes
 7. Charitable gaming facilities
 8. Convenience groceries
 9. Dry-cleaning, dyeing, pressing, and laundry; distributing stations or retail businesses where no cleaning, dyeing, pressing or laundry is done for other distributing station or cleaning establishments
 10. Dwelling, Multiple-family if the density exceeds 12.01 dwelling units per acre
 11. Extended stay lodging
 12. Hotels and motels
 13. Package liquor stores
 14. Pawn shops
 15. Rental business offering items whose sale is a permitted use in this district, videocassette and similar products, rental and sales but not constituting an adult video cassette rental center
 16. Restaurants, tea rooms and cafes
 17. Tents, air structures and other temporary structures intended for occupancy by commercial activities including but not limited to sales, display, and food services, provided that applicable building and fire safety codes are met, and provided further that

such structures may not be installed for a period (or periods totaling) more than ten (10) days during a calendar year

9. Any significant increases to the proposed structures (e.g. increase in building height, number of units, number of buildings), any increase in density on the property, any changes in use on the property which directly or indirectly require a public hearing before the Planning Commission or subcommittee thereof, and/or any amendments to the binding elements, other than (i) the addition of new binding elements, (ii) changes to the binding elements that merely update the public hearing date, or (iii) updating a previous version of this binding element to reflect the current language, shall be reviewed before the Planning Commission with final action to be determined by Metro Council.



VICINITY MAP
(N.T.S.)

LEGEND

- BENCHMARK
- 1/2" IRON PIN W/ 1" PLASTIC CAP STAMPED "WINK PLS 3492" FOUND UNLESS NOTED OTHERWISE
- IRON PIN SET
- CONCRETE R/W MONUMENT
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEAN OUT
- ANCHOR
- UTILITY POLE
- SIGNAL POLE
- ELECTRIC BOX
- ELECTRIC METER
- GAS VALVE
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- GAS METER
- TELEPHONE PESTAL
- STORM SEWER MANHOLE
- DROP BOX INLET
- CURB BOX INLET
- PIPE BOLLARD
- GUTTER OUTLET
- TREE
- MAILBOX
- LAMP POLE
- PROPERTY LINE
- BUILDING SETBACK LINE
- VUA/LBA SETBACK LINE
- EASEMENTS
- LOT LINE TO BE ABANDONED
- CENTERLINE
- UNDERGROUND ELECTRIC
- GAS LINE
- OVERHEAD UTILITIES
- BURIED TELEPHONE
- SANITARY SEWER LINE
- WATER LINE
- STORM SEWER LINE
- FENCE LINE
- TREE PRESERVATION LINE
- DRAINAGE BOUNDARY LINE
- PROPOSED C1 ZONE
- PROPOSED OR1 ZONE
- EXISTING C1 ZONE
- DRAINAGE ARROW
- DRAINAGE ESMT.

GENERAL NOTES:

- CONSTRUCTION PLANS, BOND AND PERMIT ARE REQUIRED BY METRO PUBLIC WORKS (MPW) PRIOR TO CONSTRUCTION APPROVAL FOR ALL WORK WITHIN RIGHT OF WAY.
- SIDEWALK RECONSTRUCTION AND REPAIRS SHALL BE REQUIRED, AS NECESSARY, TO MEET CURRENT MPW STANDARDS AND SHALL BE INSPECTED PRIOR TO FINAL BOND RELEASE.
- ALL NEW AND EXISTING SIDEWALKS SHALL BE BROUGHT UP OR BUILT TO CURRENT ADA STANDARDS.
- ALL PAVED AREAS, EXCLUDING PERVIOUS PAVEMENT, SHALL BE AS FOLLOWS: STANDARD DUTY CONCRETE W/6" 4,000 PSI CONCRETE, 6" COMPACTED AGGREGATE BASE AND HEAVY DUTY CONCRETE W/6" 4,000 PSI CONCRETE, 6" COMPACTED AGGREGATE BASE.
- MITIGATION MEASURES FOR DUST CONTROL SHALL BE IN PLACE DURING CONSTRUCTION TO PREVENT FUGITIVE PARTICULATE EMISSION FROM REACHING EXISTING ROADS AND NEIGHBORING PROPERTIES.
- OFF-STREET LOADING AND REFUSE COLLECTION AREAS SHALL BE LOCATED AND SCREENED SO AS NOT TO BE VISIBLE FROM ALL ADJACENT PROPERTIES.
- ACCESSORY STRUCTURES SHALL BE IN COMPLIANCE WITH SECTIONS 5.5.5 AND 10.2.6 OF THE LOUISVILLE METRO LAND DEVELOPMENT CODE.
- CONCRETE WHEEL STOPS OR CURBING AT LEAST SIX (6) INCHES HIGH AND SIX (6) INCHES WIDE SHALL BE PROVIDED TO PREVENT VEHICLES FROM OVERHANGING ADJUTING SIDEWALKS, PROPERTIES OR PUBLIC RIGHT-OF-WAY, TO PROTECT LANDSCAPED AREAS AND TO PROTECT ADJACENT PROPERTIES. SUCH WHEEL STOPS OR CURBING SHALL BE LOCATED AT LEAST THREE (3) FEET FROM ANY ADJACENT WALL, FENCE, PROPERTY LINE, WOODY VEGETATION, WALKWAY, OR STRUCTURE.
- STREET TREES ARE REQUIRED ALONG ALL STREET FRONTAGES.

MSD NOTES:

- SANITARY SEWER SERVICE WILL BE PROVIDED BY A PSC. FEES AND ANY APPLICABLE CHARGES WILL APPLY.
- CONSTRUCTION PLANS AND DOCUMENTS SHALL COMPLY WITH LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICTS DESIGN MANUAL AND STANDARD SPECIFICATIONS AND OTHER LOCAL, STATE AND FEDERAL ORDINANCES.
- FINAL DESIGN OF THIS SITE MUST MEET ALL MS4 WATER QUALITY REQUIREMENTS AS SET FORTH IN THE MSD REGULATIONS. SITE LAYOUT MAY CHANGE AT DESIGN PHASE DUE TO PROPER SIZING OF BEST GREEN MGMT PRACTICES.
- COMPATIBLE UTILITIES SHALL BE PLACED IN A COMMON TRENCH UNLESS OTHERWISE REQUIRED BY THE RESPONSIBLE AGENCIES.
- ON-SITE DETENTION WILL BE PROVIDED IN THE PROPOSED DETENTION BASIN. POST-DEVELOPED PEAK FLOWS WILL BE LIMITED TO PRE-DEVELOPED PEAK FLOWS FOR THE 2, 10, 25 AND 100-YEAR STORMS OR TO THE CAPACITY OF THE DOWNSTREAM SYSTEM, WHICHEVER IS MORE RESTRICTIVE.
- MSD DRAINAGE BOND REQUIRED PRIOR TO CONSTRUCTION PLAN APPROVAL.
- IF THE FINAL SITE HAS THROUGH DRAINAGE, AN EASEMENT PLAT WILL BE REQUIRED PRIOR TO MSD GRANTING CONSTRUCTION PLAN APPROVAL.
- AN EPSC PLAN SHALL BE DEVELOPED AND APPROVED IN ACCORDANCE WITH MSD DESIGN MANUAL AND STANDARD SPECIFICATIONS PRIOR TO CONSTRUCTION PLAN APPROVAL.

HEALTH DEPT. NOTES:

- EACH PROPOSED LOT/BUILDING MUST CONNECT TO ITS OWN SANITARY SEWER PSC WITH A MINIMUM SIX-INCH SANITARY SEWER.
- OWNER MUST PROVIDE DOCUMENTATION OF CONNECTION TO SANITARY SEWER, PSC, WITH A MINIMUM SIX-INCH SANITARY SEWER.
- SANITARY SEWER SERVICE TO BE PROVIDED BY MSD.
- ALL CONSTRUCTION AND SALES TRAILERS MUST BE PERMITTED BY THE DEPARTMENT OF PUBLIC HEALTH AND WELLNESS IN ACCORDANCE WITH CHAPTER 115 OF LOUISVILLE JEFFERSON COUNTY METRO ORDINANCES.
- MOSQUITO CONTROL IN ACCORDANCE WITH CHAPTER 98 OF LOUISVILLE JEFFERSON COUNTY METRO ORDINANCES.
- ANY FUTURE FOOD SERVICE ESTABLISHMENTS MUST BE IN ACCORDANCE WITH 902 KAR 45.005 REGULATIONS.
- MUST COMPLY WITH ALL CURRENT METRO SMOKING ORDINANCES.
- MUST COMPLY WITH 902 KAR TATTOOING REGULATIONS FOR ANY FUTURE MICROBLADING OR PERMANENT MAKEUP.
- PLANS MUST BE SUBMITTED TO THE HEALTH DEPT. PRIOR TO CONSTRUCTION.

ADDITIONAL NOTES:

- THE SUBJECT PROPERTY IS LOCATED WITHIN THE FERN CREEK FIRE DISTRICT.
- LOCAL FIRE AUTHORITY HAVING JURISDICTION (AHJ) CONTACT INFORMATION: JOE ELSTONE (JELSTONE@FERNCREEKFIRE.COM)
- HYDRANTS: PRIOR TO THE COMBUSTIBLE PHASE OF CONSTRUCTION AN ADEQUATE WATER SUPPLY INCLUDING ACCESSIBLE HYDRANTS FOR FIREFIGHTING PURPOSES MUST BE MADE AVAILABLE, AND NO UTILITIES SHALL BE CONNECTED TO THE STRUCTURE UNTIL ADEQUATE SUPPLY IS PROVIDED (LMCO 94.91).
- GATES: NO GATES SHALL BE INSTALLED WHICH LIMIT OR RESTRICT ACCESS TO A RESIDENTIAL AREA, EXCEPT AS APPROVED BY THE AHJ OF THE REFERENCED FIRE DISTRICT.
- EMERGENCY RESPONDER RADIO COVERAGE: EMERGENCY RADIO SYSTEMS ARE REQUIRED TO MEET MINIMUM SIGNAL STRENGTH CRITERIA, TO BE CONFIRMED VIA THIRD PARTY TESTING, PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY IN SOME BUILDINGS.
- REQUIREMENTS FOR SPECIFICATIONS OF FIRE DEPARTMENT CONNECTIONS (FDC), THREADS, SIZE, LOCATION, PLACEMENT OF THE KNOX BOX, OR FIREFIGHTER SAFETY BUILDING MARKING SIGNAGE MUST BE OBTAINED FROM THE AHJ OF THE REFERENCED FIRE DISTRICT.
- PERMITTED PROJECTS SHALL COMPLY WITH NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 241, STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATION, AND DEMOLITION OPERATIONS.

APPROVED VARIANCE (24-VARIANCE-0179):
CHAPTER 5.3.2 OF THE LOUISVILLE METRO LAND DEVELOPMENT CODE. MAXIMUM FRONT AND STREET SIDE SETBACK OF 80'. We are requesting a variance to increase the maximum setback.

APPROVED WAIVER (24-WAIVER-0195):
CHAPTER 5.6.1 OF THE LOUISVILLE METRO LAND DEVELOPMENT CODE. SERVICE ESTABLISHMENT TO HAVE 50% OF THE WALL SURFACES AT STREET-LEVEL CONSISTING OF CLEAR WINDOWS AND DOORS. We are requesting a waiver to allow for the reduction of the 50% requirement facing Bardstown Road.

PARCEL OWNER, ADDRESS, AND SOURCE OF TITLE
GOODWILL INDUSTRIES OF KENTUCKY
2820 WEST BROADWAY
LOUISVILLE, KY 40211
DEED BOOK 13145 PAGE 993
DEED BOOK 13066 PAGE 418

TREE CANOPY CALCULATIONS	
STATISTIC	PERMITTED / REQUIRED
GROSS SITE AREA:	7.02 +/- AC (305,811.99 +/- SF)
LOT 1:	2.85 +/- AC
LOT 2:	2.12 +/- AC
LOT 3:	1.98 +/- AC
REQUIRED CANOPY FOR DEVELOPMENT:	107,034.2 SF (35.0% OF SITE)
EXISTING TREE CANOPY:	62,574.40 SF (20.46% OF SITE)
EXISTING TREE TO BE PRESERVED:	24,287 SF (7.94% OF SITE)
REMAINING CANOPY TO BE PROVIDED:	82,747.2 SF (27.06% OF SITE)

INTERIOR LANDSCAPING	
STATISTIC	PERMITTED / REQUIRED
TOTAL VEHICLE USE AREA:	94,153.42 SF
INTERIOR LANDSCAPING REQUIRED:	7,061.51 SF (7.5%)
INTERIOR LANDSCAPING PROVIDED:	8,053 SF (8.5%)

ADDITIONAL NOTES:

CROSSOVER ACCESS AND SHARED PARKING ACCESS AGREEMENT TO BE RECORDED PRIOR TO BUILDING PERMITS.

FEES-IN-LIEU OF SIDEWALK ALONG BARDSTOWN ROAD (US HWY 31 E) AND PORTION OF FAIRMOUNT ROAD WILL BE PAID PRIOR TO CONSTRUCTION.

THE OVERALL DEVELOPMENT WILL BE APPROACHED AS A GENERAL DEVELOPMENT PLAN WITH A SINGLE STANDARD SET OF BINDING ELEMENTS THAT COVERS THE WHOLE OF THE DEVELOPMENT SITE. INDIVIDUALIZED BINDING ELEMENTS FOR THE DETAILED ELEMENTS WILL BE INCLUDED SEPARATELY TO ALLOW EACH SITE TO DEVELOP INDEPENDENTLY WITHOUT AMENDING THOSE DETAILED ELEMENTS OR THE ENTIRETY OF DEVELOPMENT AREA SUBJECT TO THOSE DETAILED BINDING ELEMENTS.

FIRE DEPT. NOTES:

- INSTALLATION OF 2 NEW HYDRANTS (AT MINIMUM) WILL BE REQUIRED.
- ANY BUILDING WITH A SPRINKLER SYSTEM WILL NEED A 5-INCH STORZ FIRE DEPT. CONNECTION (LOCATION(S)) CAN BE DETERMINED AT A LATER DATE.
- KNOX BOXES MAY BE REQUIRED.

DEVELOPMENT SUMMARY				
STATISTIC	PERMITTED / REQUIRED	LOT 1	LOT 2	LOT 3
CURRENT ZONING:	N/A	C1	OR1	OR1
PARCEL NUMBER:	N/A	005600940000 & 005600750000	005600750000 & 005600920000	005600920000
FORM DISTRICT:	NEIGHBORHOOD	NEIGHBORHOOD	NEIGHBORHOOD	NEIGHBORHOOD
EXISTING USE:	VACANT	VACANT	VACANT	VACANT
PROPOSED USE:	RETAIL	RETAIL	RETAIL	RETAIL
TOTAL SITE AREA:	N/A	2.85 AC	2.12 AC	1.98 AC
BUILDING SETBACKS:	FRONT YARD: 10' MIN 80' MAX SIDE STREET: 3' OF 0' FOR CORNER LOT SIDE YARD: 0' OR 5' ADJ. RESIDENTIAL REAR YARD: 5'	FRONT (SOUTH): 100.8' SIDE (EAST): 127.93' SIDE (WEST): 70.79' REAR (NORTH): 161.42'	FRONT (SOUTH): 91.86' SIDE (EAST): 39.10' SIDE (WEST): 33.74' REAR (NORTH): 199.52'	FRONT (SOUTH): 92.4' SIDE (EAST): 31.29' SIDE (WEST): 75.69' REAR (NORTH): 156.06'
TOTAL PARKING:	MIN: 100 SF MAX: 100 SF LOT 2 AND 3: MIN: 200 SF MAX: 100 SF	REQUIRED SPACES: 100 SF = 30 MAXIMUM SPACES: 100 SF = 75 PROVIDED SPACES = 55	REQUIRED SPACES: 100 SF = 38 MAXIMUM SPACES: 100 SF = 100 PROVIDED SPACES = 61	REQUIRED SPACES: 100 SF = 38 MAXIMUM SPACES: 100 SF = 100 PROVIDED SPACES = 66

BUILDING SUMMARY				
F.A.R.	MAXIMUM: 1.0	0.146	0.163	0.174
BUILDING AREA:	N/A	15,004 SF	15,057 SF	15,057 SF
BUILDING HEIGHT:	45'	27'	35'	35'

DEVELOPMENT SUMMARY:

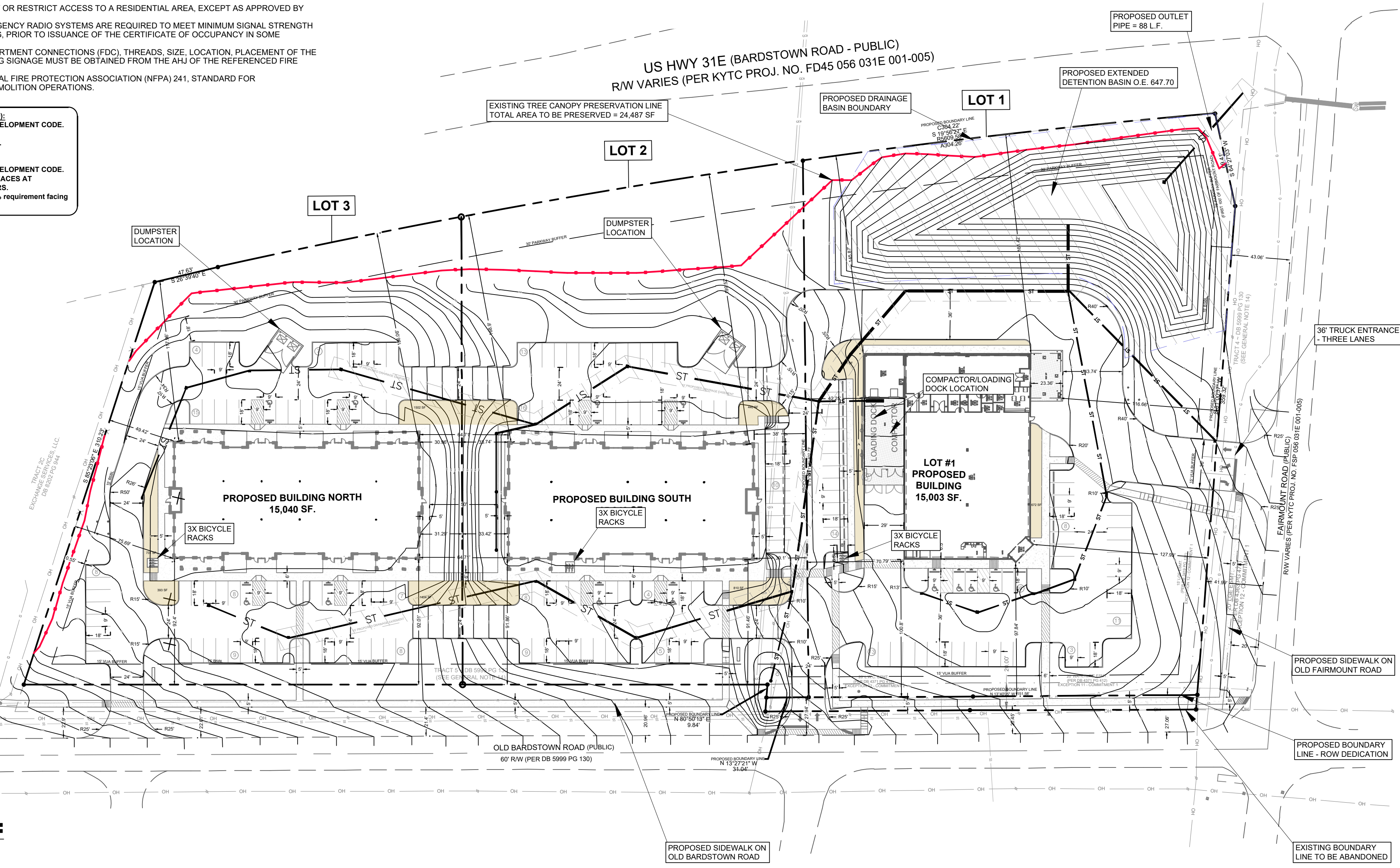
SITE AREA: 7.02 +/- AC.
SITE AREA W/ PROPOSED BOUNDARY LINE: 6.95 +/- AC.
EXISTING ZONING: C1 & OR1
FORM DISTRICT: NEIGHBORHOOD SECONDHAND VARIETY RETAIL
PROPOSED USE: OFFICE SPACE
45,118 TOTAL SF
0.164 AC. (2.3%)
3.94 AC. (56.7%)

PROPOSED BUILDING SIZE:
EXISTING IMPERVIOUS AREA:
PROPOSED IMPERVIOUS AREA:
REQUIRED PARKING:
PROVIDED PARKING:

275 SPACES (MINIMUM)
275 SPACES (MAXIMUM)
182 TOTAL
170 STANDARD SPACES
12 ADA SPACES
12 - SHORT TERM SPACES
0 - LONG TERM SPACES
12 SPACES (0 LONG-TERM/12 SHORT-TERM)
1-STORY PROPOSED/45' ALLOWED

BICYCLE PARKING REQUIRED:
BICYCLE PARKING PROVIDED:
HEIGHT OF STRUCTURE:

PRE-DEVELOPED	POST-DEVELOPED
COMPOSITE CURVE NUMBER: 61.95	COMPOSITE CURVE NUMBER: 81.98
IMPERVIOUS AREA: 0.164 ACRES (98)	IMPERVIOUS AREA: 3.94 ACRES (98)
GRAVEL: 0.026 ACRES (85)	PERVIOUS AREA: 3.01 ACRES (81)
PERVIOUS: 6.83 (81)	'NET INCREASE OF 3.776 ACRES IMPERVIOUS AREA
TOTAL AREA: 7.02 ACRES	LAND USE: COMMERCIAL = LOW DENSITY
LAND USE: RESIDENTIAL	Q (100YR) = 1,819 CFS
Q (100YR) = 24.87 CFS	PROPOSED BASIN EXTENDED DETENTION STORM WATER BASIN



TOTAL AREA DISTURBED:
7.52 ACRES

REVISIONS

NO.	DESCRIPTION

GENERAL DEVELOPMENT PLAN
OLD BARDSTOWN ROAD
8807, 8805, 8803, OLD BARDSTOWN ROAD
LOUISVILLE, KY 40272

ACES
ARNOLD CONSULTING
ENGINEERING SERVICES, INC.
P.O. BOX 1338
BOWLING GREEN, KY 42101
PHONE (270) 780-9445

JOB NUMBER: 25-3205-L
DATE: 06-08-2026
SCALE: 1" = 50'
DRAWN: C. ROGERS
CHECKED: B. ZACKERY
APPROVED:
B. ZACKERY

PRELIMINARY
NOT FOR
CONSTRUCTION

DP
DEVELOPMENT
PLAN



A. L. Post, Inc.
11801 Electron Drive
Louisville, KY 40299
tel. 502.266.5060

HOS Properties

OLD BARDSTOWN ROAD
LOUISVILLE, KY 40272

SCHEMATIC
DESIGN

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Revisions

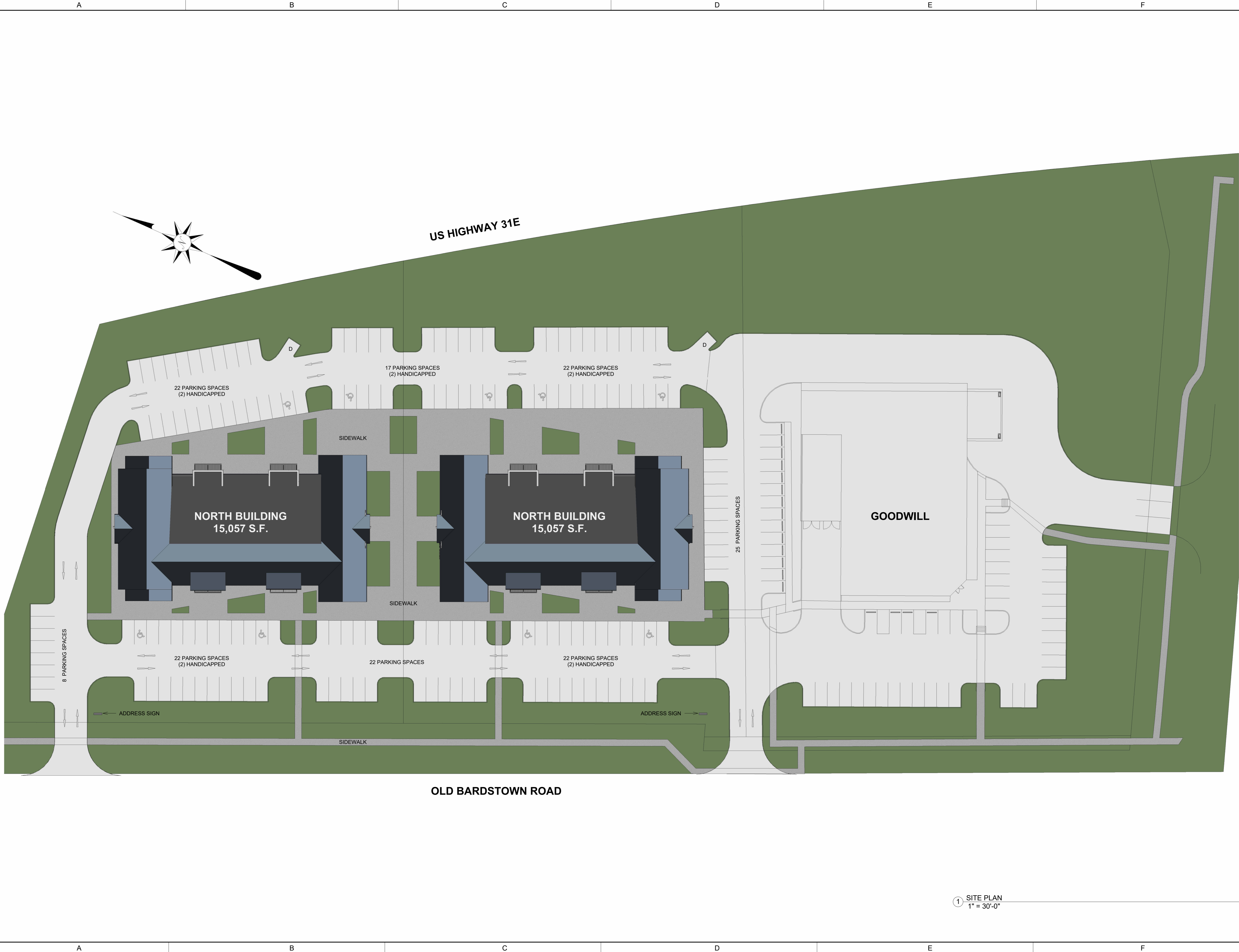
No.	Description	Date

ARCHITECTURAL
SITE PLAN

Project number 7600D
Drawn by A.N.
Checked by L.P.
Date 01-13-2026

A0.1

Scale 1" = 30'-0"



① SITE PLAN
1" = 30'-0"



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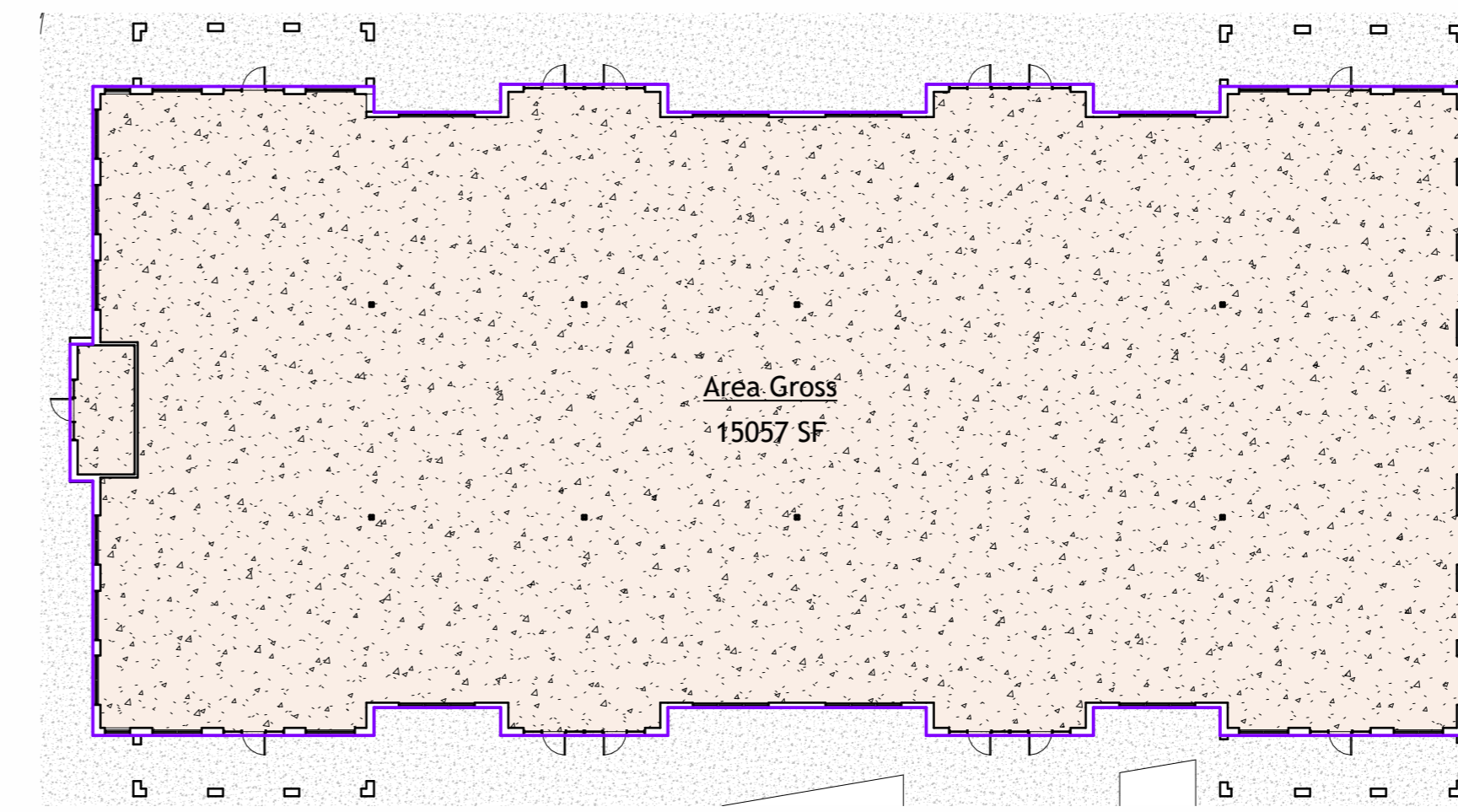
No.	Description	Date

FLOOR PLAN

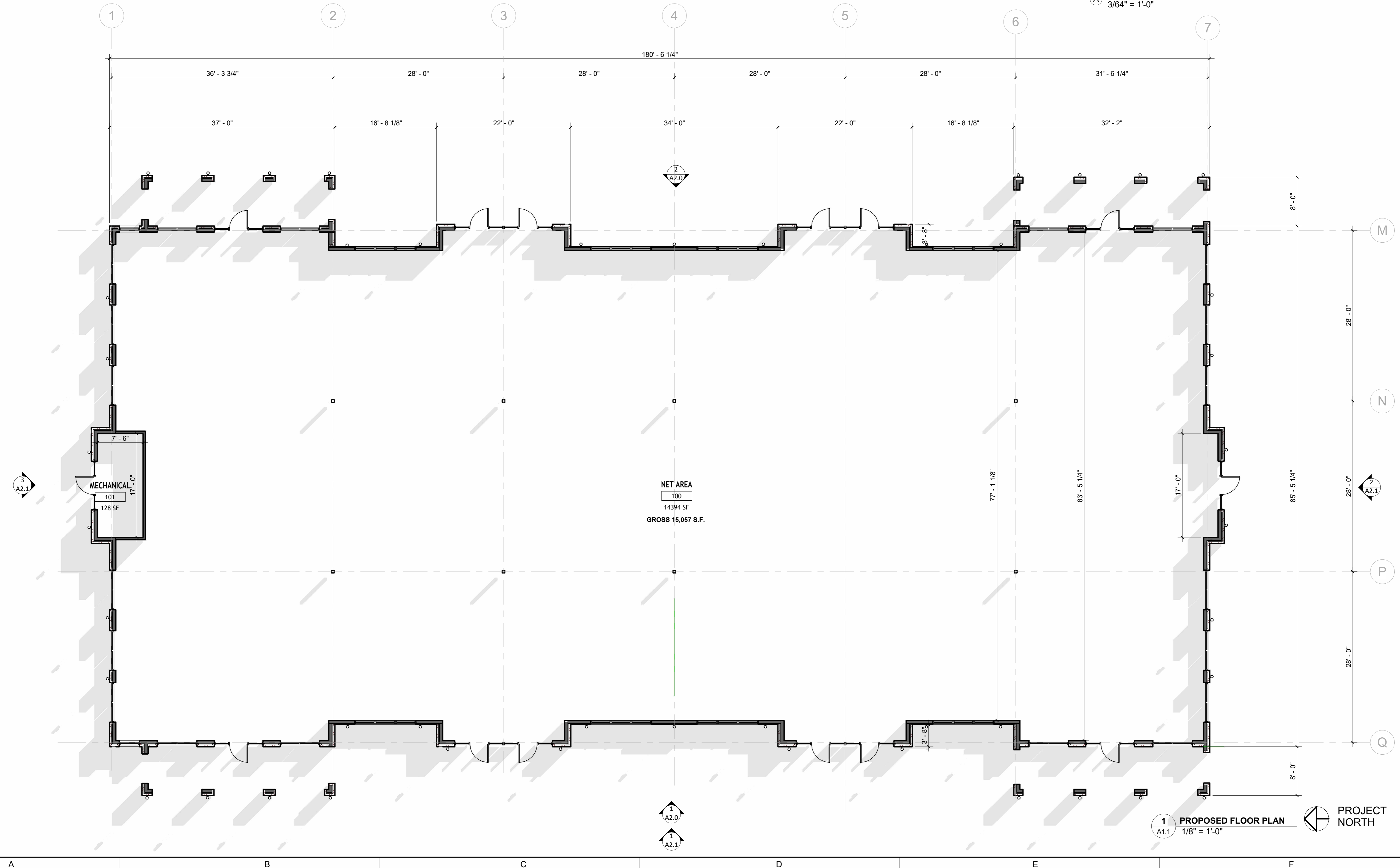
Project number 7600D
Drawn by A.N.
Checked by L.P.
Date 01-13-2026

A1.1

Scale As indicated



A AREA PLAN
3/64" = 1'-0"



1 PROPOSED FLOOR PLAN
A1.1 1/8" = 1'-0"



A

B

C

D

E

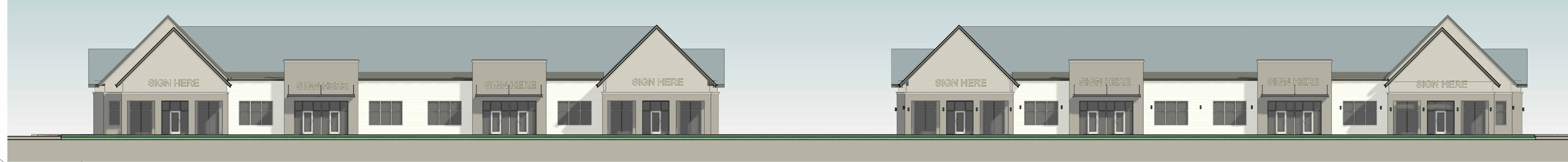
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4

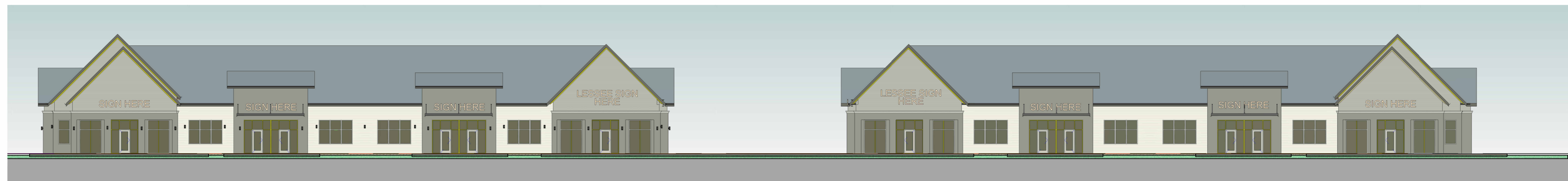
3

2

1



2 Elevation East Overall
A2.0 1/16" = 1'-0"



1 Elevation West Overall
A2.0 1/16" = 1'-0"

A

B

C

D

E

F



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HOS Properties

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593

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Revisions

No.	Description	Date

OVERALL EXTERIOR ELEVATIONS AND RENDERING

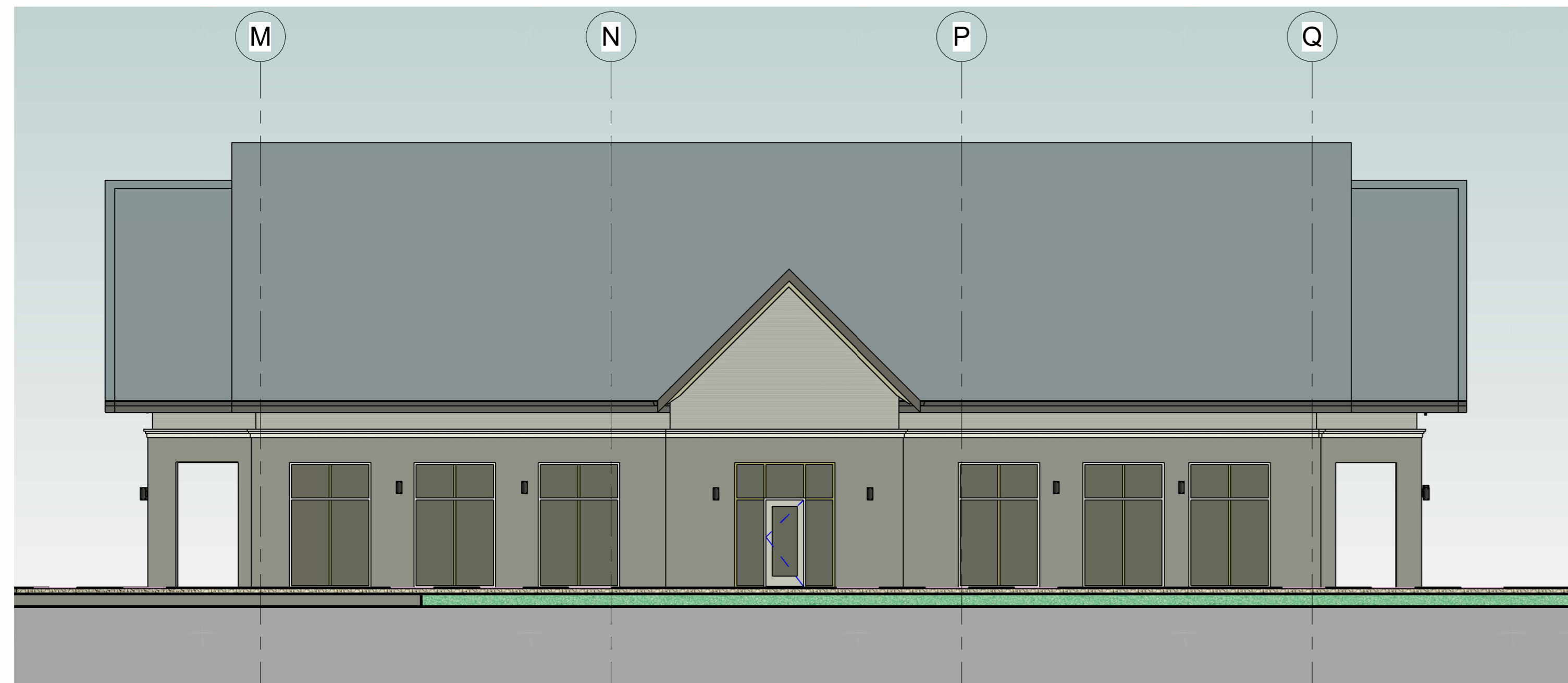
Project number 7600D
Drawn by A.N.
Checked by L.P.
Date 01-13-2026

A2.0

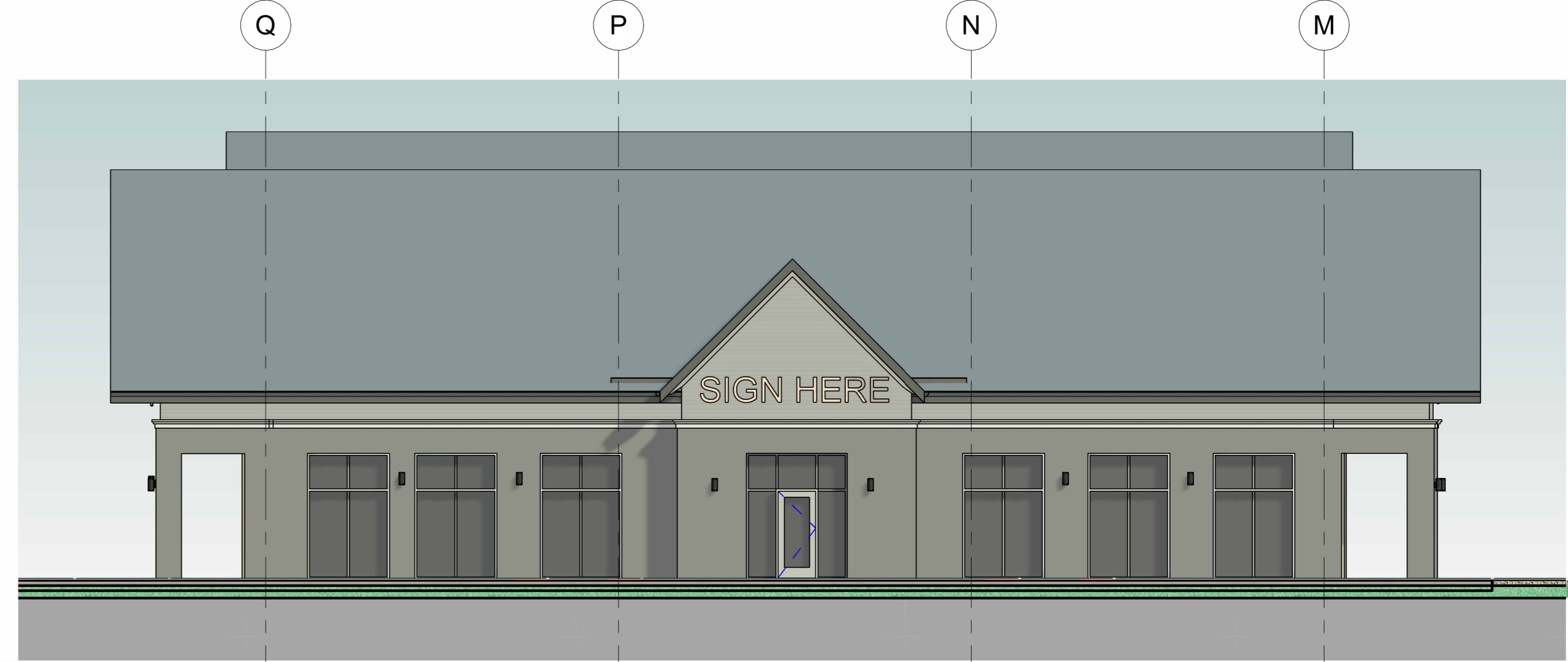
Scale 1/16" = 1'-0"



① Elevation West
1/8" = 1'-0"



③ Elevation North
1/8" = 1'-0"



② Elevation South
1/8" = 1'-0"



④ Elevation East
1/8" = 1'-0"



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HOS Properties
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Revisions

No.	Description	Date

EXTERIOR
ELEVATIONS

Project number 7600D
Drawn by A.N.
Checked by L.P.
Date 01-13-2026

A2.1
Scale 1/8" = 1'-0"

A

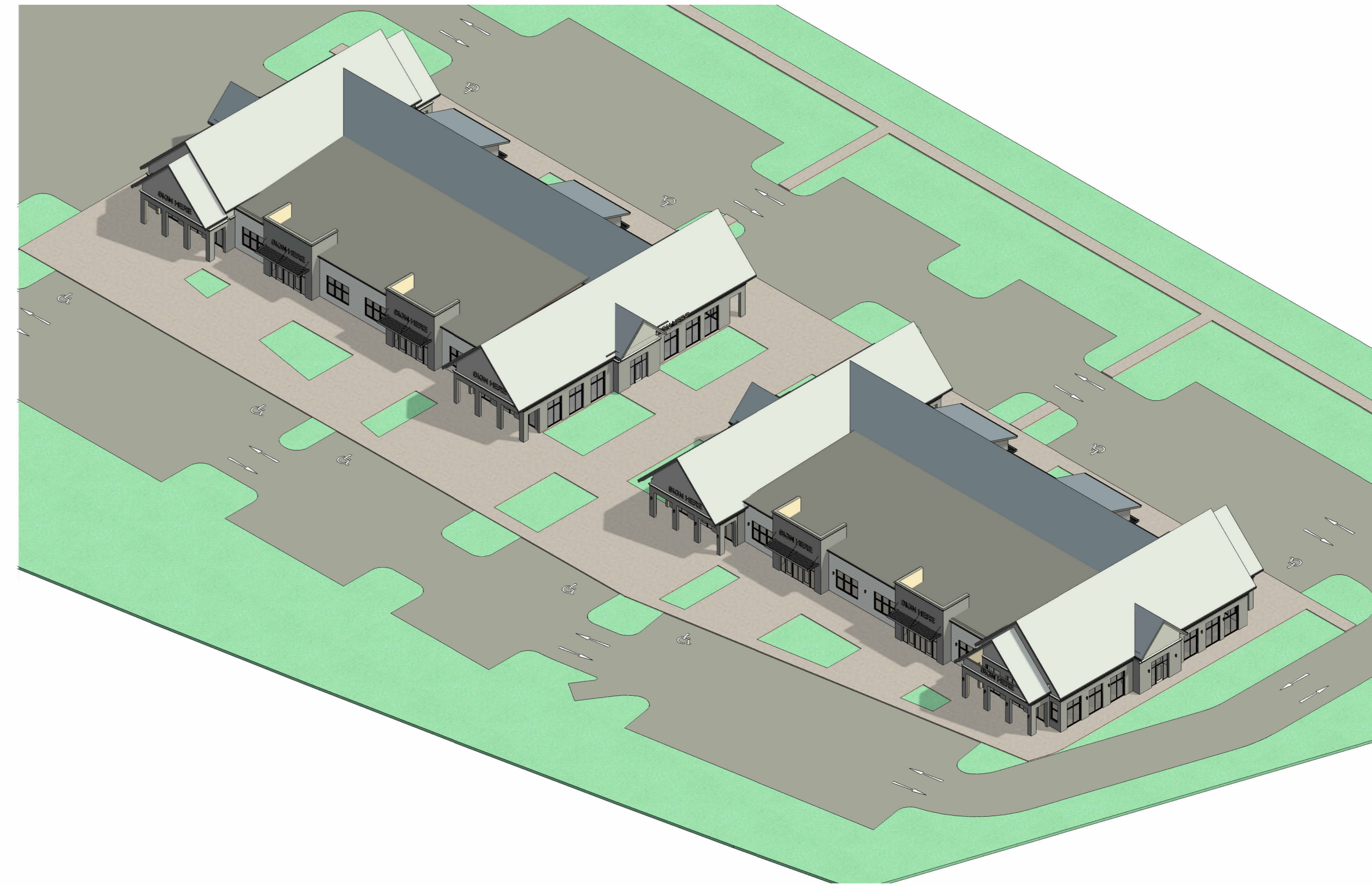
B

C

D

E

F



A

B

C

D

E

F



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HOS Properties

OLD BARDSTOWN ROAD
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595

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Revisions

No.	Description	Date

ISOMETRIC VIEWS

Project number	7600D
Drawn by	A.N.
Checked by	L.P.
Date	01-13-2026

A2.3

Scale



Arnold Consulting Engineering Services, Inc.

P.O. Box 1338
Bowling Green, KY 42101

1136 South Park Drive, Suite 201
Bowling Green, KY 42103

Phone (270)780-9445
Fax (270)780-9873

Louisville Metro Planning
& Design Services
444 South 5th Street Suite 300
Louisville, KY 40202

RE: Letter Of Explanation for Proposed Development

To Whom It May Concern,

We respectfully submit the attached District Development Plan Application for redevelopment of the property located at 8807, 8805, & 8803 Old Bardstown Road, Parcel ID: 005600940000,005600920000 & 005600750000. The parcel containing 7.02 +/- acres are located between Old Bardstown Road and Bardstown Road. Subject properties are located on the corner of Old Bardstown Road and Fairmount Road. We are proposing updating the original development plan and revising the size of lots 2 & 3 as well as updating building location and layout. Please find attached to Accella portal the required submittal items for your consideration. Please contact us with any questions or comments.

Respectfully,

Cheyenne Rogers
Arnold Consulting
Engineering Services. Inc.



Louisville Metro Government

Text File

File Number: 26-ZONE-0028

Agenda Date: 7/16/2026

Version: 1

Status: Public Hearing

In Control: Planning Commission

File Type: Planning Case

Agenda Number: 8.



26-ZONE-0028

Planning Commission
Staff Report
July 16, 2026

WSA Realty Properties LLC Old Henry Road Rezoning

Location: 13112, 13118, 13200 R, & 13206 Old Henry Road
Applicant: WSA Realty Properties LLC
Representative: Bricker Graydon Wyatt LLP
Jurisdiction: Louisville Metro
Council District: 17 – Markus Winkler
Case Manager: Jude Mattingly, *Planner II*

REQUESTS & RECOMMENDED ACTIONS

1. Change in Zoning from R-4 Residential to PEC Planned Employment Center
 - Staff finds the request is in keeping with Plan 2040 and recommends the Planning Commission **RECOMMEND** that the Louisville Metro Council **APPROVE** the requested change in zoning
2. **26-WAIVER-0079:** Waiver of Land Development Code Section 10.2.10 to omit the required 15-foot vehicular use area landscape buffer area along a private access easement.
 - Staff finds the justification for the request is adequate and **RECOMMENDS** the Planning Commission **APPROVE** the Waiver
3. **26-WAIVER-0080:** Waiver of Land Development Code Section 10.2.4.B.8 to omit the required 15-foot property perimeter landscape buffer area along an adjacent M-2 industrial property line.
 - Staff finds the justification for the request is adequate and **RECOMMENDS** the Planning Commission **APPROVE** the Waiver
4. Revised Detailed District Development Plan with Amendments to Binding Elements
 - Staff finds the justification for the request is adequate and **RECOMMENDS** the Planning Commission **APPROVE** the Revised Detailed District Development Plan with Binding Elements

CASE SUMMARY

The subject properties are accessed from Old Henry Road, a minor arterial roadway, and are roughly 0.35 miles southwest of a southbound exit on to Interstate-264. 13200 R, 13206, 0.39 acres of 13112, & 13118 Old Henry Road are presently zoned R-4 residential and are located within a Suburban Workplace form district. The proposal includes a change in zoning on 6.85 acres from the current R-4 residential to PEC Planned Employment Center, a Revised Detailed District Development Plan with proposed Binding Elements for the entirety of the 16.75 acre development site, and a pair of Waiver requests concerning

buffering. The proposal does not include construction of any new structures or installation of parking spaces but would result in 477,589 square feet of outdoor storage area and 40,885 square feet of vehicular use area.

If this proposal were to be approved as presented, the immediate area would be predominantly zoned PEC, M-3, M-2, and M-1 industrial. 9.87 acres of 13112 Old Henry Road were previously rezoned from R-4 and M-2 to PEC under planning case (22-ZONE-0141). The proposal includes amendments to the previously approved binding elements. The remainder of the subject properties are not Plan Certain.

TECHNICAL REVIEW

- Comprehensive Plan 2040
- Old Henry Rd Subarea Plan (2000)
No specific recommendations about these properties but states that the area surrounding Old Henry Rd and Interstate-264 should be planned as a “gateway”
- Land Development Code (Louisville Metro 2025)
- MSD has provided preliminary approval.
- Transportation Planning has provided preliminary approval.

STANDARD OF REVIEW FOR REZONING AND FORM DISTRICT CHANGES

Criteria for granting the proposed form district change/rezoning: *KRS Chapter 100.213*

1. The proposed form district/rezoning change complies with the applicable guidelines and policies Plan 2040; **OR**
2. The existing form district/zoning classification is inappropriate and the proposed classification is appropriate; **OR**
3. There have been major changes of an economic, physical, or social nature within the area involved which were not anticipated in Plan 2040 which have substantially altered the basic character of the area.

STAFF ANALYSIS FOR CHANGE IN ZONING / FORM DISTRICT

The following is staff’s analysis of the proposed rezoning against the Guidelines and Policies of Plan 2040.

The site is located in the Suburban Workplace Form District

A Suburban Workplace is a form characterized by predominately industrial and office uses where the buildings are set back from the street in a landscaped setting. Suburban Workplaces often contain a single large-scale use or a cluster of uses within a master planned development. New larger proposed industrial uses are encouraged to apply for a planned development district.

In order to provide adequate transportation access in suburban workplaces connected roads, public transportation and pedestrian facilities should be encouraged. Walkways to workplace serving uses are encouraged for workplace employees. Development within Suburban Workplace Form Districts may need significant buffering from abutting uses.

STAFF FINDING: The proposal does not represent an expansion of non-residential uses into residential areas but would rather eliminate some of the last remaining residential areas within the Suburban Workplace form in this area. The subject site is surrounded by PEC and industrial zoning districts. The proposal is in an established industrial activity area adjacent to a variety of office and industrial uses readily served by infrastructure and transportation facilities. All required buffers are being provided to the remaining residential site adjacent to the development area.

The proposed zoning would not permit residential development and the proposal calls to demolish the existing residential structures on the subject properties. A majority of the site is presently vacant. Historic preservation staff have reviewed the proposal and did not indicate any concerns related to the demolition of any remaining structures on site.

The proposed change in zoning is adequately justified for approval in the context of the Suburban Workplace form district. PEC zoning and land uses are more consistent with the immediate area than the existing R-4 zoning. The proposal clusters a similar use to what exists in the area to provide a more compatible development pattern.

STANDARD OF REVIEW AND STAFF ANALYSIS FOR 26-WAIVER-0079

(a) The waiver will not adversely affect adjacent property owners; and

STAFF FINDING: The requested waiver will not adversely affect adjacent property owners as the private access easement serves the neighboring M-2 zoned property the 15-foot VUA LBA is implemented against.

(b) The waiver will not violate specific guidelines of Plan 2040;

STAFF FINDING: Community Form Goal 1, Policy 4 calls for the proposal to ensure new development and redevelopment are compatible with the scale and site design of nearby existing development and with the desired pattern of development within the Form District. Quality design and building materials should be promoted to enhance compatibility of development and redevelopment projects. The proposal is of similar intensity to the adjacent sites.

(c) The extent of the waiver of the regulation is the minimum necessary to afford relief to the applicant

STAFF FINDING: The extent of the waiver of the regulation is the minimum necessary to afford relief to the applicant since the private access easement where the 15-foot VUA LBA is implemented against has been relocated to avoid a detention basin.

- (d) *Either: (i) The applicant has incorporated other design measures that exceed the minimums of the district and compensate for non-compliance with the requirements to be waived (net beneficial effect); OR (ii) The strict application of the provisions of the regulation would deprive the applicant of the reasonable use of the land or would create an unnecessary hardship on the applicant.*

STAFF FINDING: The strict application of the provisions of the regulations would deprive the applicant of the reasonable use of the land and would create unnecessary hardship. The 15-foot property perimeter LBA is still provided around the adjacent M-2 property line except for where the private access easement is located.

STANDARD OF REVIEW AND STAFF ANALYSIS FOR 26-WAIVER-0080

- (a) *The waiver will not adversely affect adjacent property owners; and*

STAFF FINDING: The requested waiver will not adversely affect adjacent property owners as the private access easement serves the neighboring M-2 zoned property the 15 feet property perimeter LBA is implemented against.

- (b) *The waiver will not violate specific guidelines of Plan 2040;*

STAFF FINDING: Community Form Goal 1, Policy 4 calls for the proposal to ensure new development and redevelopment are compatible with the scale and site design of nearby existing development and with the desired pattern of development within the Form District. Quality design and building materials should be promoted to enhance compatibility of development and redevelopment projects. The proposal is of similar intensity to the adjacent site.

- (c) *The extent of the waiver of the regulation is the minimum necessary to afford relief to the applicant*

STAFF FINDING: The extent of the waiver of the regulation is the minimum necessary to afford relief to the applicant since the private access easement where the 15-foot property perimeter LBA is implemented against has been relocated to avoid a detention basin.

- (d) *Either: (i) The applicant has incorporated other design measures that exceed the minimums of the district and compensate for non-compliance with the requirements to be waived (net beneficial effect); OR (ii) The strict application of the provisions of the regulation would deprive the applicant of the reasonable use of the land or would create an unnecessary hardship on the applicant.*

STAFF FINDING: The strict application of the provisions of the regulations would deprive the applicant of the reasonable use of the land and would create unnecessary hardship. The 15-foot property perimeter LBA is still provided around the adjacent M-2 property line except for where the private access easement is located.

STANDARD OF REVIEW AND STAFF ANALYSIS FOR REVISED DETAILED DISTRICT DEVELOPMENT PLAN AND AMENDMENT TO BINDING ELEMENTS

- a. *The conservation of natural resources on the property proposed for development, including: trees and other living vegetation, steep slopes, water courses, flood plains, soils, air quality, scenic views, and historic sites;*

STAFF FINDING: There do not appear to be any environmental constraints or historic resources on the subject site. Tree canopy requirements of the Land Development Code will be provided on the subject site.

- b. *The provisions for safe and efficient vehicular and pedestrian transportation both within the development and the community;*

STAFF FINDING: Provisions for safe and efficient vehicular and pedestrian transportation within and around the development and the community have been provided, and the Department of Transportation and the Kentucky Transportation Cabinet have approved the preliminary development plan.

- c. *The provision of sufficient open space (scenic and recreational) to meet the needs of the proposed development;*

STAFF FINDING: There are no open space requirements associated with this proposal.

- d. *The provision of adequate drainage facilities on the subject site in order to prevent drainage problems from occurring on the subject site or within the community;*

STAFF FINDING: The Metropolitan Sewer District has provided preliminary approval for the plan and will ensure the provision of adequate drainage facilities on the subject site in order to prevent drainage problems from occurring on the subject site or within the community.

- e. *The compatibility of the overall site design (location of buildings, parking lots, screening, landscaping) and land use or uses with the existing and projected future development of the area;*

STAFF FINDING: The overall site design and land uses are compatible with the existing and future development of the area. An appropriate Parkway Buffer will be implemented and all screening / landscaping requirements must be implemented prior to receiving a certificate of occupancy.

- f. *Conformance of the development plan with the Comprehensive Plan and Land Development Code. Revised plan certain development plans shall be evaluated for conformance with the non-residential and mixed-use intent of the form districts and comprehensive plan.*

STAFF FINDING: The development plan conforms to all applicable guidelines and policies of the Comprehensive Plan and to requirements of the Land Development Code, except for the requested waivers which are adequately justified for approval.

REQUIRED ACTIONS

- **RECOMMEND** that the Louisville Metro Council **APPROVE** or **DENY** the **Change in Zoning** from R-4 Residential to PEC Planned Employment Center
- **APPROVE** or **DENY 26-WAIVER-0079** of Land Development Code Section 10.2.10 to omit the required 15-foot vehicular use area landscape buffer area along a private access easement.
- **APPROVE** or **DENY 26-WAIVER-0080** of Land Development Code Section 10.2.4.B.8 to omit the required 15-foot property perimeter landscape buffer area along an adjacent M-2 Industrial property line
- **APPROVE** or **DENY** the **Revised Detailed District Development Plan** subject to proposed binding elements

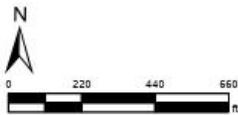
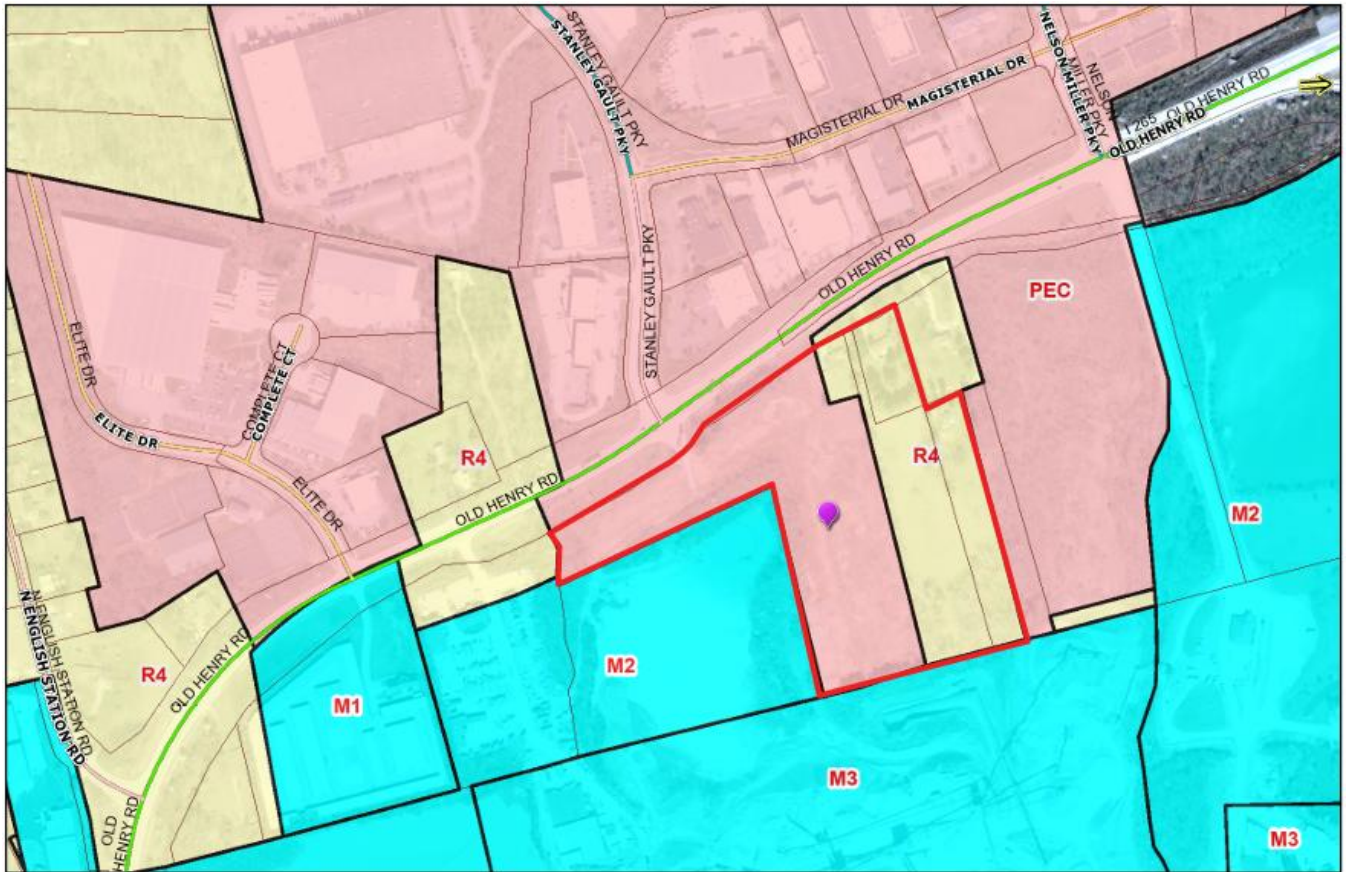
NOTIFICATION

DATE	PURPOSE OF NOTICE	RECIPIENTS
6/29/2026 7/1/2026	Planning Commission Public Hearing	1st and 2nd tier adjoining property owners and current residents; Registered Neighborhood Groups in Council District 17
6/30/2026	Planning Commission Public Hearing	Sign Posting on Property
6/30/2026	Planning Commission Public Hearing	Legal Advertisement in the Courier-Journal

ATTACHMENTS

1. Zoning Map
2. Aerial Photograph
3. Plan 2040 Checklist
4. Existing Binding Elements
5. Proposed Binding Elements

1. ZONING MAP

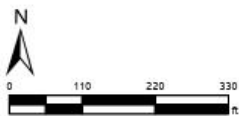


Monday, July 6, 2026 | 12:42 PM



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2. AERIAL PHOTOGRAPH



Monday, July 6, 2026 | 12:47 PM



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3. PLAN 2040 CHECKLIST

+	Exceeds Guideline
✓	Meets Guideline
-	Does Not Meet Guideline
+/-	More Information Needed
NA	Not Applicable

Suburban Workplace: Non-Residential

Plan 2040 Plan Elements/Staff Analysis	
1	<p><u>Community Form: Goal 1, Policy 6.</u> Discourage non-residential expansion into existing residential areas unless applicant can demonstrate that any adverse impact on residential uses will be mitigated. Evaluation of impacts may include, but not be limited to, displacement of residents, loss of affordable housing units, traffic, parking, signs, lighting, noise, odor, and stormwater. Appropriate transitions from non-residential to residential uses should depend on the pattern of development of the Form District and may include natural vegetative buffers, landscaping or the use of higher density residential between lower density residential and/or non-residential.</p> <p>✓ Staff Analysis: The proposal does not represent an expansion of non-residential uses into a residential area. There is a significant area of PEC zoning across Old Henry Road and M-3, M-2, and M-1 Industrial in the immediate area.</p>
2	<p><u>Community Form: Goal 1, Policy 7.</u> Locate higher density and intensity uses near major transportation facilities and transit corridors, employment centers, in or near activity centers and other areas where demand and adequate infrastructure exists or is planned.</p> <p>✓ Staff Analysis: Old Henry Road is classified as a minor arterial roadway and the subject properties are within 0.50 miles of Interstate-264. Most of the immediate area is zoned PEC or industrial and the proposed change in zoning / land use is consistent with the adjacent uses.</p>
3	<p><u>Community Form: Goal 1, Policy 8.</u> Encourage industries to locate in workplace Form Districts or in areas readily served by infrastructure and transportation facilities, including transit, rather than isolated industrial sites.</p> <p>✓ Staff Analysis: The subject properties are located within a Suburban Workplace form district and most of the immediate area is zoned PEC or industrial. There is adequate infrastructure to accommodate the proposal.</p>
4	<p><u>Community Form: Goal 1, Policy 15.</u> When reviewing proposals for siting hazardous uses and uses with air, noise and light emissions, ensure disadvantaged populations are not disproportionately impacted</p> <p>✓ Staff Analysis: The proposal concentrates similar uses and zoning classifications. Land Development Code regulations regarding buffering are being met against the remaining R-4 zoned property and a 30-foot Parkway Buffer is proposed off the Old Henry Road frontage.</p>
5	<p><u>Community Form: Goal 1, Policy 16.</u> Consider impacts on human health, quality of life and the environment including prevailing meteorological conditions and the potential to transport noxious odors, particulates and emissions when reviewing new developments and redevelopments. Special attention should be paid to air and water quality when residences, schools, parks or vulnerable populations will be impacted. Mitigate impacts to areas that are disproportionately affected.</p>

Plan 2040 Plan Elements/Staff Analysis	
✓	<p>Staff Analysis: The subject properties are located in an area that is mostly zoned PEC or industrial. Buffering is being met against the remaining R-4 zoned property. Landscaping will be required that should further mitigate any potential adverse effect on nearby properties.</p>
6	<p>Community Form: Goal 1, Policy 17. <i>Mitigate adverse impacts of traffic from proposed development on nearby existing communities.</i></p> <p>✓ Staff Analysis: The subject properties are located on a minor arterial roadway and are in close proximity to Interstate-264. Additionally, the Department of Transportation and the Kentucky Transportation Cabinet have reviewed and any concerns have been addressed prior to the public hearing.</p>
7	<p>Community Form: Goal 1, Policy 18. <i>Mitigate adverse impacts of noise from proposed development on existing communities.</i></p> <p>✓ Staff Analysis: The proposed zoning of PEC could allow uses that generate noise impacts, however, there are not a significant number of residential uses in the nearby area and buffering as required by the Land Development Code is being met in full against the remaining R-4 zoned property. As an additional layer of protection, a Binding Element forbidding the idling of trucks within 200 feet of any residence has been proposed.</p>
8	<p>Community Form: Goal 1, Policy 21. <i>Require that industries which handle hazardous or flammable materials or are potentially offensive such as junkyards, landfills and quarries are sited to protect public health, safety and welfare and are located away from residential areas and population centers.</i></p> <p>✓ Staff Analysis: PEC zoning would not permit land uses such as a junkyard or landfill. The subject properties are not in an area characterized as residential, however, there is an existing binding element that states that no trucks or trailers that are required by the US Department of Transportation regulations to display hazardous materials placards shall be stored on site.</p>
9	<p>Community Form: Goal 2, Policy 1. <i>Locate activity centers in appropriate areas in all Form Districts. Design and density should be compatible with desired form, adjacent uses, and existing and planned infrastructure.</i></p> <p>✓ Staff Analysis: The proposed PEC zoning would be located adjacent to identical or similar zoning intensities and land uses and as a result is compatible with the design and density within the Suburban Workplace form district.</p>
10	<p>Community Form: Goal 2, Policy 5. <i>Locate retail commercial development in activity centers where it can be demonstrated that sufficient population exists or is anticipated to support it.</i></p> <p>NA Staff Analysis: The proposal does not include retail commercial development; however, PEC can allow for C-1 uses excluding dwellings. The site would be subject to Planning Commission / Metro Council review if redeveloped in the future for retail commercial use.</p>
11	<p>Community Form: Goal 2, Policy 6. <i>Encourage a more compact development pattern in activity centers that result in efficient land use and cost-effective infrastructure investment.</i></p>

Plan 2040 Plan Elements/Staff Analysis	
✓	Staff Analysis: The proposal is consistent with zoning and land uses in the immediate area and as a result the change in zoning to PEC would constitute an efficient land use and cost-effective infrastructure investment.
12	Community Form: Goal 2, Policy 7. Encourage activity centers to include a mixture of compatible land uses in order to reduce traffic congestion by requiring fewer trips, support and enhance alternative modes of travel, and encourage vitality and a sense of place.
✓	Staff Analysis: The proposal is consistent with zoning and land uses in the immediate area. The Department of Transportation have reviewed and provided preliminary approval for the proposal.
13	Community Form: Goal 2, Policy 8. Encourage residential land uses in designated centers. Encourage residential and office uses above retail and other mixed-use multi-story retail buildings.
NA	Staff Analysis: PEC zoning would not permit residential land uses.
14	Community Form: Goal 2, Policy 9. Encourage new developments and rehabilitation of buildings that provide commercial, office and/or residential uses.
NA	Staff Analysis: The proposal does not include the construction of any new structures.
15	Community Form: Goal 2, Policy 10. Encourage outlot development in underutilized parking lots of existing development to promote utilization of existing infrastructure provided specific criteria for elements such as location, scale, signs, parking, lighting, and landscaping are met. Outlot development shall encourage street-level retail with residential units above.
NA	Staff Analysis: The proposal is not part of a larger commercial center and is not an outlot.
16	Community Form: Goal 3, Policy 9. Encourage development that respects the natural features of the site through sensitive site design, avoids substantial changes to the topography, and minimizes property damage and environmental degradation resulting from disturbance of natural systems.
✓	Staff Analysis: The proposal does not include substantial changes to topography nor have any potential steep or unstable slopes, hydric soils, or intense karst features been observed. 30.4% of a required 30% tree canopy area is indicated on the plan to be provided.
17	Community Form: Goal 3, Policy 10. Encourage development to avoid wet or highly permeable soils, severe, steep or unstable slopes where the potential for severe erosion problems exists in order to prevent property damage and public costs associated with soil slippage and foundation failure and to minimize environmental degradation.
✓	Staff Analysis: The proposal does not include substantial changes to topography nor have any potential steep or unstable slopes, hydric soils, or intense karst features been observed.
18	Community Form: Goal 3, Policy 11. Encourage land uses within the Ohio River Corridor that are appropriate for and related to river corridor activities and that are consistent with the goals and objectives of the Ohio River Corridor Master

Plan 2040 Plan Elements/Staff Analysis	
	<p><i>Plan. Reserve appropriate riverfront sites such as the Upper River Road industrial area for river-related development. Allow development of commercial leisure businesses related to the river, such as boating services and restaurants in appropriate locations. Encourage new development in the Ohio River corridor and along key greenway and street connections to provide for public access in new riverfront development and to maintain views of the river from public rights-of-way.</i></p> <p>NA Staff Analysis: The subject properties are not located near the Ohio River.</p>
19	<p>Community Form: Goal 3, Policy 12. <i>When reviewing proposed developments consider changes to flood-prone areas and other features vulnerable to natural disasters such as sinkholes and landslides. Ensure appropriate measures to protect health, safety and welfare of future users of the development.</i></p> <p>✓ Staff Analysis: The subject properties are not located within the regulatory floodplain. MSD have reviewed and provided preliminary approval of the development plan.</p>
20	<p>Community Form: Goal 4, Policy 1. <i>Preserve buildings, sites, districts and landscapes that are recognized as having historic or architectural value and ensure that new land uses are compatible in height, massing, scale, architecture style and placement when located within the impact area of such resources.</i></p> <p>✓ Staff Analysis: Historic Preservation have reviewed and no historic or cultural value has been observed.</p>
21	<p>Community Form: Goal 4, Policy 2. <i>Encourage preservation of distinctive cultural features including landscapes, natural elements and built features.</i></p> <p>✓ Staff Analysis: Historic Preservation have reviewed and no historic or cultural value has been observed.</p>
22	<p>Mobility: Goal 1, Policy 4. <i>Encourage higher densities and intensities within or near existing marketplace corridors, existing and future activity centers, and employment centers to support transit-oriented development and an efficient public transportation system.</i></p> <p>✓ Staff Analysis: The subject properties are located within a Suburban Workplace form district, and the proposed PEC zoning is consistent with the zoning and land uses found within the immediate area.</p>
23	<p>Mobility: Goal 3, Policy 2. <i>To improve mobility, and reduce vehicle miles traveled and congestion, encourage a mixture of compatible land uses that are easily accessible by bicycle, car, transit, pedestrians and people with disabilities. Housing should be encouraged near employment centers.</i></p> <p>✓ Staff Analysis: PEC zoning would not permit residential development. The subject properties are accessed from Old Henry Road which is classified as a minor arterial roadway.</p>
24	<p>Mobility: Goal 3, Policy 3. <i>Evaluate developments for their ability to promote public transit and pedestrian use. Encourage higher density mixed-use developments that reduce the need for multiple automobile trips as a means of achieving air quality standards and providing transportation and housing choices.</i></p>

Plan 2040 Plan Elements/Staff Analysis	
✓	Staff Analysis: The Department of Transportation have reviewed and provided preliminary approval for the development plan.
25	Mobility: Goal 3, Policy 4. <i>Encourage development of walkable centers to connect different modes of travel. Siting of these multi-modal centers shall consider the effects of the following: 4.1. nodal connections identified by Move Louisville; 4.2. impact on freight routes; 4.3. time of operation of facilities; 4.4. safety; 4.5. appropriate linkages between neighborhoods and employment; and 4.6. the potential for reducing travel times and vehicle miles traveled.</i>
✓	Staff Analysis: The Department of Transportation have reviewed and provided preliminary approval for the development plan.
26	Mobility: Goal 3, Policy 5. <i>Evaluate developments for their impact on the transportation network (including the street, pedestrian, transit, freight movement and bike facilities and services) and air quality.</i>
✓	Staff Analysis: The Department of Transportation have reviewed and provided preliminary approval for the development plan. A proposed amendment to a previously approved Binding Element will require the property owner to install sidewalks off-site in an area that would better benefit from them.
27	Mobility: Goal 3, Policy 6. <i>Ensure that those who propose new developments bear or share in rough proportionality the costs of transportation facilities and services made necessary by development.</i>
✓	Staff Analysis: The Department of Transportation have reviewed and provided preliminary approval for the development plan. A proposed amendment to a previously approved Binding Element will require the property owner to install sidewalks off site in an area that would better benefit from them.
28	Mobility: Goal 3, Policy 9. <i>When existing transportation facilities and services are inadequate and public funds are not available to rectify the situation, the developer may be asked to make improvements, roughly proportional to the projected impact of the proposed development, to eliminate present inadequacies if such improvements would be the only means by which the development would be considered appropriate at the proposed location.</i>
✓	Staff Analysis: The Department of Transportation have reviewed and provided preliminary approval for the development plan. A proposed amendment to a previously approved Binding Element will require the property owner to install sidewalks off-site in an area that would better benefit from them.
29	Mobility: Goal 3, Policy 10. <i>Ensure that necessary improvements occur in accordance with long-range transportation plans and level of mobility criteria for all modes of travel.</i>
✓	Staff Analysis: The Department of Transportation have reviewed and provided preliminary approval for the development plan. A proposed amendment to a previously approved Binding Element will require the property owner to install sidewalks off-site in an area that would better benefit from them.
30	Community Facilities: Goal 2, Policy 1. <i>Locate development in areas served by existing utilities or capable of being served by public or private utility extensions.</i>

Plan 2040 Plan Elements/Staff Analysis	
✓	Staff Analysis: No issues with the subject property's ability to be served by utilities have been observed or are anticipated.
31	Community Facilities: Goal 2, Policy 2. <i>Ensure that all development has an adequate supply of potable water and water for fire-fighting purposes. Locate only very low-density land uses on sites that use on-lot sewage disposal systems or on a private supply of potable water.</i>
✓	Staff Analysis: Anchorage Middletown Fire & EMS have reviewed and provided preliminary approval for the development plan.
32	Community Facilities: Goal 2, Policy 3. <i>Ensure that all development has adequate means of sewage treatment and disposal to protect public health and to protect water quality in lakes and streams as determined by the Metropolitan Sewer District (MSD).</i>
✓	Staff Analysis: MSD have reviewed and provided preliminary approval for the development plan.
33	Economic Development: Goal 1, Policy 1. <i>Limit land uses in workplace Form Districts to compatible uses that meet the needs of the industrial subdivision or workplace district and their employees.</i>
✓	Staff Analysis: The subject properties are located within a Suburban Workplace form district, and the proposed PEC zoning is consistent with zoning and land uses in the immediate area.
34	Economic Development: Goal 1, Policy 2. <i>Encourage industries, to the extent possible, to locate in industrial subdivisions or adjacent to an existing industry to take advantage of special infrastructure needs.</i>
✓	Staff Analysis: The subject properties are located within a Suburban Workplace form district, and the proposed PEC zoning is consistent with zoning and land uses in the immediate area.
35	Economic Development: Goal 1, Policy 3. <i>Locate commercial uses generating high volumes of traffic on a major arterial street, at the intersection of two minor arterials, or at a location with adequate access to a major arterial and at locations where nuisances and activities of the proposed use will not adversely affect adjacent areas.</i>
✓	Staff Analysis: PEC zoning can allow for C-1 land uses; however, these commercial uses are not typically high generators of traffic. The subject properties are accessed from Old Henry Road which is classified as a minor arterial roadway and are less than 0.50 miles away from southbound and northbound exits onto Interstate-264.
36	Economic Development: Goal 1, Policy 4. <i>Utilize industrial sites near the airport and the Ohio River to support the growth and development of uses whose infrastructure and production needs require such a location or for land uses that support airport-oriented or river-oriented industrial uses.</i>
NA	Staff Analysis: The subject properties are not located near the Ohio River or an airport.

Plan 2040 Plan Elements/Staff Analysis	
37	<p><u>Economic Development: Goal 1, Policy 5.</u> <i>Require industrial developments to locate with the appropriate transportation connectivity, near an arterial street or within existing industrial subdivisions.</i></p> <p>✓ <u>Staff Analysis:</u> The subject properties are located within a Suburban Workplace form district, and the proposed PEC zoning is consistent with zoning and land uses in the immediate area. The Department of Transportation have reviewed and provided preliminary approval for the development plan.</p>
38	<p><u>Livability: Goal 1, Policy 17.</u> <i>Determine site susceptibility to erosion; identify the presence of on-site carbonate conditions and features that are vulnerable to site disturbance; identify the extent of existing groundwater use and the impacts of the project on groundwater resources, flow patterns, and existing and proposed surface drainage. Then mitigate potential hazards to such systems resulting from the project.</i></p> <p>✓ <u>Staff Analysis:</u> MSD have reviewed and provided preliminary approval for the development plan.</p>
39	<p><u>Livability: Goal 1, Policy 21.</u> <i>Mitigate negative development impacts to the integrity of the regulatory floodplain by encouraging development patterns that minimize disturbance and consider the increased risk of more frequent flooding events.</i></p> <p>✓ <u>Staff Analysis:</u> MSD have reviewed and provided preliminary approval for the development plan.</p>
40	<p><u>Livability: Goal 1, Policy 24.</u> <i>Ensure, to the extent feasible, that critical facilities and those that store or use hazardous wastes are located outside the regulatory floodplain. Where essential community facilities must be located within a floodplain (e.g., pumping stations), ensure that these facilities are designed, located and operated in a manner that minimizes loss of services during flood events as well as limits, to the extent possible, floodplain disturbance.</i></p> <p>✓ <u>Staff Analysis:</u> MSD have reviewed and provided preliminary approval for the development plan.</p>
41	<p><u>Housing: Goal 1, Policy 2.</u> <i>Promote housing options and environments that support aging in place. Encourage housing for older adults and people with disabilities to be located close to shopping and transit routes and, when possible, medical and other supportive facilities.</i></p> <p>NA <u>Staff Analysis:</u> PEC zoning would not permit residential development.</p>
42	<p><u>Housing: Goal 2, Policy 1.</u> <i>Encourage inter-generational, mixed-income and mixed-use development that is connected to the neighborhood and surrounding area.</i></p> <p>NA <u>Staff Analysis:</u> PEC zoning would not permit residential development.</p>
43	<p><u>Housing: Goal 2, Policy 2.</u> <i>Locate housing within proximity to multi-modal transportation corridors providing safe and convenient access to employment opportunities, as well as within proximity to amenities providing neighborhood goods and services. Higher density, accessible residential uses should be located along transit corridors and in or near activity centers.</i></p>

Plan 2040 Plan Elements/Staff Analysis	
NA	Staff Analysis: PEC zoning would not permit residential development.
44	Housing: Goal 3, Policy 2. <i>As neighborhoods evolve, discourage displacement of existing residents from their community.</i>
✓	Staff Analysis: No residents are known to be displaced by this proposal.
45	Housing: Goal 3, Policy 3. <i>Encourage the use of innovative methods such as clustering, mixed-use developments, co-housing, and accessory apartments to increase the production of fair and affordable housing.</i>
NA	Staff Analysis: PEC zoning would not permit residential development.

4. EXISTING BINDING ELEMENTS

1. ~~The development shall be in accordance with the approved district development plan, all applicable sections of the Land Development Code (LDC) and agreed upon binding elements unless amended pursuant to the Land Development Code. Any changes/additions/alterations of any binding element(s) shall be submitted to the Planning Commission or the Planning Commission's designee for review and approval; any changes/additions/alterations not so referred shall not be valid.~~
2. ~~Construction fencing shall be erected when off-site trees or tree canopy exists within 3' of a common property line. Fencing shall be in place prior to any grading or construction to protect the existing root systems from compaction. The fencing shall enclose the entire area beneath the tree canopy and shall remain in place until all construction is completed. No parking, material storage or construction activities are permitted within the protected area.~~
3. ~~Before any permit (including but not limited to building, parking lot, change of use, site disturbance, alteration permit or demolition permit is requested:~~
 - a. ~~The development plan must receive full construction approval from Construction Review, Louisville Metro Public Works and the Metropolitan Sewer District.~~
 - b. ~~The property owner/developer must obtain approval of a detailed plan for screening (buffering/landscaping) as described in Chapter 10 prior to requesting a building permit. Such plan shall be implemented prior to occupancy of the site and shall be maintained thereafter.~~
 - c. ~~A Tree Preservation Plan in accordance with Chapter 10 of the LDC shall be reviewed and approved prior to obtaining approval for site disturbance.~~

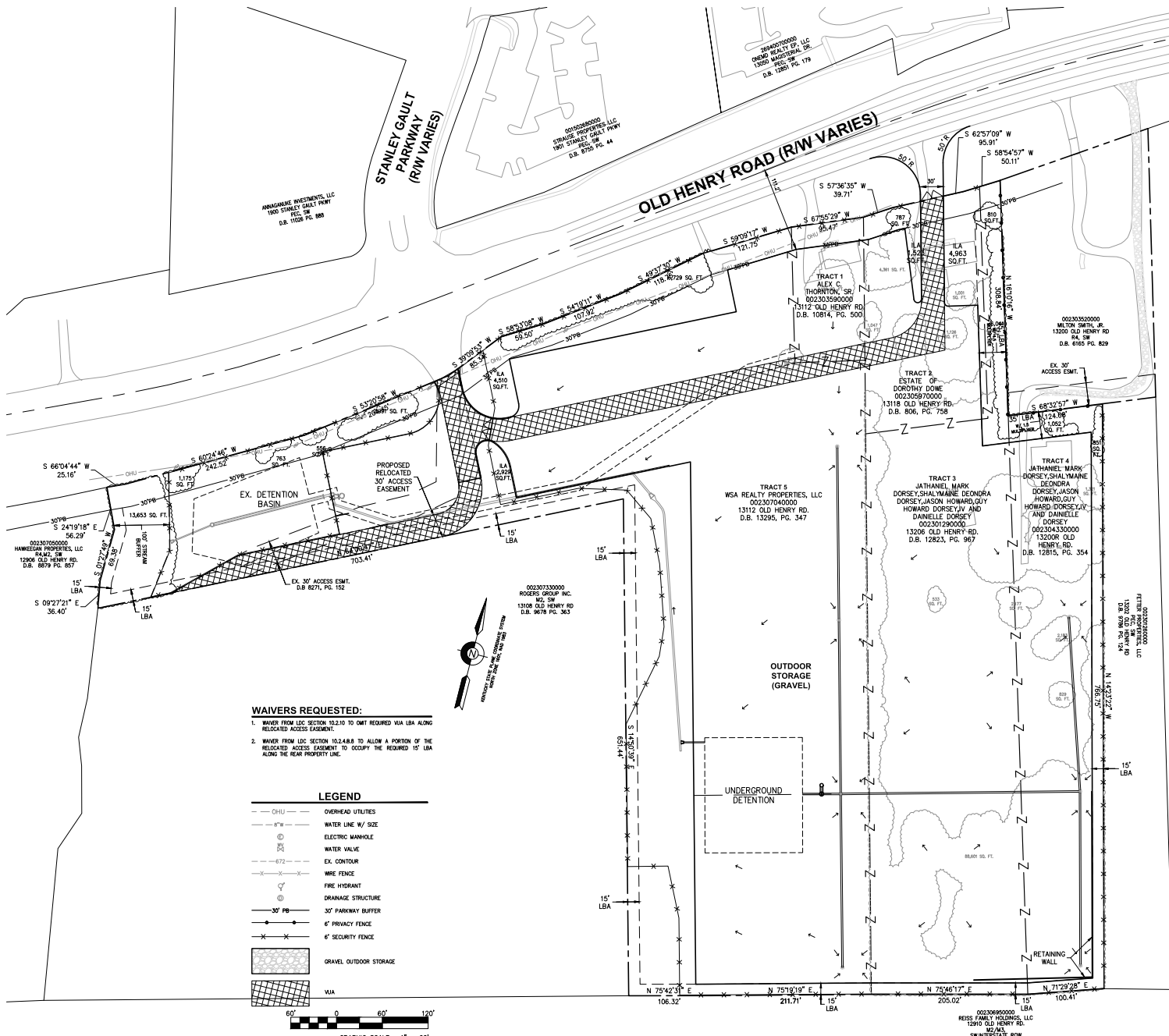
4. ~~A certificate of occupancy must be received from the appropriate code enforcement department prior to occupancy of the structure or land for the proposed use. All binding elements requiring action and approval must be implemented prior to requesting issuance of the certificate of occupancy, unless specifically waived by the Planning Commission.~~
5. ~~The applicant, developer, or property owner shall provide copies of these binding elements to tenants, purchasers, contractors, subcontractors and other parties engaged in development of this site and shall advise them of the content of these binding elements. These binding elements shall run with the land and the owner of the property and occupant of the property shall at all times be responsible for compliance with these binding elements. At all times during development of the site, the applicant and developer, their heirs, successors; and assignees, contractors, subcontractors, and other parties engaged in development of the site, shall be responsible for compliance with these binding elements.~~
6. ~~No idling of trucks shall take place within 200 feet any residence. No overnight idling of trucks shall be permitted on site.~~
7. ~~Prior to requesting a certificate of occupancy for the site, the developer/property owner/applicant shall construct sidewalks along the frontages of 12905 Old Henry Rd and 13103 Old Henry Rd as shown on the sidewalk submitted 5-18-23 on file with Planning and Design Services.~~
8. ~~No trucks or trailers that are required by US Department of Transportation regulations to display hazardous materials placards shall be parked on the site.~~
9. ~~Products used for dust control shall be installed and maintained as recommended by the manufacturer's recommendations~~
10. ~~The applicant shall comply with Public Works requirements for location of the entrance gate. Final location shall be reviewed prior to construction plan approval.~~

5. PROPOSED BINDING ELEMENTS

1. The development shall be in accordance with the approved district development plan, all applicable sections of the Land Development Code (LDC) and agreed upon binding elements unless amended pursuant to the Land Development Code. Any changes/additions/alterations of any binding element(s) shall be submitted to the Planning Commission or the Planning Commission's designee (and to the City of Lyndon, St. Matthews, Hurstbourne, or Middletown etc) for review and approval; any changes/additions/alterations not so referred shall not be valid.
2. Construction fencing shall be erected when off-site trees or tree canopy exists within 3' of a common property line. Fencing shall be in place prior to any grading or construction to protect the existing root systems from compaction. The fencing shall enclose the entire area beneath the tree canopy and shall remain in place until all construction is completed. No parking, material storage or construction activities are permitted within the protected area.
3. Before any permit (including but not limited to building, parking lot, change of use, site disturbance, alteration permit or demolition permit is issued:

- a. The development plan must receive full construction approval from Construction Review, Louisville Metro Public Works and the Metropolitan Sewer District.
 - b. The property owner/developer must obtain approval of a detailed plan for screening (buffering/landscaping) as described in Chapter 10 of the LDC prior to requesting a building permit. Such plan shall be implemented prior to occupancy of the site and shall be maintained thereafter.
 - c. A Tree Preservation Plan in accordance with Chapter 10 of the LDC shall be reviewed and approved prior to obtaining approval for site disturbance.
 - d. A minor plat or legal instrument shall be recorded consolidating the property into one lot. A copy of the recorded instrument shall be submitted to the Office of Planning; transmittal of the approved plans to the office responsible for permit issuance will occur only after receipt of said instrument.
4. The applicant, developer, or property owner shall provide copies of these binding elements to tenants, purchasers, contractors, subcontractors and other parties engaged in development of this site and shall advise them of the content of these binding elements. These binding elements shall run with the land and the owner of the property and occupant of the property shall at all times be responsible for compliance with these binding elements. At all times during development of the site, the applicant and developer, their heirs, successors; and assignees, contractors, subcontractors, and other parties engaged in development of the site, shall be responsible for compliance with these binding elements.
 5. A certificate of occupancy must be received from the appropriate code enforcement department prior to occupancy of the structure or land for the proposed use. All binding elements requiring action and approval must be implemented prior to requesting issuance of the certificate of occupancy, unless specifically waived by the Planning Commission.
 6. No idling of trucks shall take place within 200 feet any residence. No overnight idling of trucks shall be permitted on-site.
 7. Prior to requesting a certificate of occupancy for the site, the developer/property owner applicant shall extend the existing sidewalk within the public right-of-way along Old Henry Road beginning from the eastern property line of 13100 Magisterial Drive and moving eastward across the Old Henry Road frontage of the property addressed at 13130 Magisterial Drive and ending at the eastern property line of 13130 Magisterial Drive, as depicted on the sidewalk exhibit presented to the Louisville Metro Planning Commission on July 16, 2026.
 8. No trucks or trailers that are required by US Department of Transportation regulations to display hazardous materials placards shall be parked on the site.

9. Products used for dust control shall be installed and maintained as recommended by the manufacturer's recommendations.
10. The applicant shall comply with Public Works requirements for location of the entrance gate. Final location shall be reviewed prior to construction plan approval.

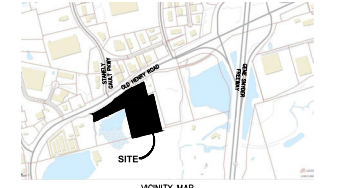
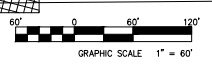


WAIVERS REQUESTED:

1. WAIVER FROM LDC SECTION 10.2.10 TO OMIT REQUIRED VIA LBA ALONG RELOCATED ACCESS EASEMENT.
2. WAIVER FROM LDC SECTION 10.2.4.8.B TO ALLOW A PORTION OF THE RELOCATED ACCESS EASEMENT TO OCCUPY THE REQUIRED 15' LBA ALONG THE REAR PROPERTY LINE.

LEGEND

CHU	OVERHEAD UTILITIES
WATER LINE W/ SIZE	
ELECTRIC MANHOLE	
WATER VALVE	
EX. CONTOUR	
WIRE FENCE	
FIRE HYDRANT	
DRAINAGE STRUCTURE	
30' PARKWAY BUFFER	
6' PRIVACY FENCE	
6' SECURITY FENCE	
GRAVEL OUTDOOR STORAGE	
VIA	



SITE DATA

SITE AREA:	16.84 ACRES (733,303 SQ.FT.)	VEHICLE USE AREA:	40,886 SQ.FT.
EX. ZONING:	REC-24	OUTDOOR STORAGE:	477,588 SQ.FT.
EX. FORM DISTRICT:	SUBURBAN WORKPLACE		
EX. USE:	VACANT	7.5% LA REQUIREMENT:	3,066 SQ.FT.
PROPOSED USE:	OUTDOOR STORAGE	I/A PROVIDED:	13,326 SQ.FT.
		I/A TREES REQUIRED (1/4,000 SQ.FT.):	11
		I/A TREES PROVIDED (MINIMUM):	11

IMPERVIOUS AREA

SITE AREA:	16.84 ACRES (733,303 SQ.FT.)
EX. IMPERVIOUS AREA:	5.10 ACRES (222,317 SQ.FT.)
PROPOSED IMPERVIOUS AREA:	11.90 ACRES (518,474 SQ.FT.)

DETENTION CALCULATIONS

$ExCm = (5.10 \times 0.95) + (11.74 \times 0.30) = 0.50$

$POST Cm = (11.90 \times 0.95) + (4.84 \times 0.30) = 0.76$

$VOLUME = (0.76 - 0.50) \times (2.8/72) \times (16.84 AC) = 1.02 AC.FT. = 44,502 CU.FT.$

TREE CANOPY CALCULATIONS

TOTAL SITE AREA:	733,393 SQ.FT.
EX. TREE CANOPY (FROM AERIAL):	164,827 SQ.FT. (22.5%)
EX. TREE CANOPY TO BE PRESERVED:	35,511 SQ.FT. (4.84%)
TREE CANOPY REQUIRED 30%:	220,018 SQ.FT.
ADDITIONAL TREE CANOPY REQUIRED:	184,507 SQ.FT. (25.16%)
154-TYPE A TREES @ 1,200 SQ.FT. EACH	
TOTAL TREE CANOPY TO BE PROVIDED:	220,514 SQ.FT. (30.04%)

- GENERAL NOTES:**
1. THE DETAILED DISTRICT DEVELOPMENT PLAN COVERS TRACTS 1,2,3,4 AND 5.
 2. TRACTS 1-4 SHALL BE REVIEWED FROM RA TO PEE.
 3. TRACTS 1-5 SHALL BE CONSOLIDATED.
 4. PROPERTY 1-5 IN THE ADJACENT MIDDLEMAN FIRE DISTRICT AND SUBJECT TO APPROVAL.
 5. THERE SHALL BE NO INCREASE IN DRAINAGE RUN-OFF TO THE RIGHT-OF-WAY.
 6. THERE SHALL BE NO COMMERCIAL SIGNS IN THE RIGHT-OF-WAY.
 7. THERE SHALL BE NO LANDSCAPING IN THE RIGHT-OF-WAY WITHOUT AN ENDOCHASMENT PERMIT.
 8. CONSTRUCTION PLANS, ENDOCHASMENT PERMIT AND BOND WILL BE REQUIRED BY KYTC FOR ALL WORK DONE WITHIN OLD HENRY PARKWAY RIGHT-OF-WAY.
 9. COMPATIBLE UTILITY LINES (ELECTRIC, PHONE, CABLE) SHALL BE PLACED IN A COMMON TRENCH UNLESS OTHERWISE REQUIRED BY APPROPRIATE AGENCIES.
 10. THE DEVELOPER WILL BE RESPONSIBLE FOR ANY UTILITY RELOCATION ON THE PROPERTY.
 11. ALL SIGNAGE WILL COMPLY WITH CHAPTER 8 OF THE LAND DEVELOPMENT CODE.
 12. MITIGATION MEASURES FOR DUST CONTROL SHALL BE IN PLACE DURING DEMOLITION AND CONSTRUCTION ACTIVITIES TO PREVENT FUGITIVE PARTICULATE EMISSIONS FROM EXISTING ROADS AND NEIGHBORING PROPERTIES.
 13. ALL NEW OR EXISTING SIGNAGE SHALL EITHER BE BROUGHT UP TO OR BUILT TO A.D.A. CURRENT STANDARDS.
 14. ALL DUMPSTERS AND UTILITY STRUCTURES TO BE SCREENED PER CHAPTER 10 REQUIREMENTS.
 15. MOSQUITO CONTROL IN ACCORDANCE WITH CHAPTER 96 OF THE LOUISVILLE/JEFFERSON COUNTY METRO ORDNANCES.
 16. SITE MUST COMPLY WITH ALL METRO SIGNING ORDNANCES.
 17. ALL LUMINAIRES SHALL BE ANTI-GLOMERATED OR FOCUSED SUCH AS TO CAUSE DIRECT LIGHT FROM THE LUMINAIRE TO BE DIRECTED TOWARD RESIDENTIAL USES OR PROTECTED OPEN SPACES ON ADJACENT OR NEARBY PARCELS, OR TO CREATE GLARE INTERFERING TO PERSONS OPERATING MOTOR VEHICLES ON PUBLIC STREETS AND RIGHT-OF-WAY.
 18. OFF-STREET LOADING AND UNLOADING COLLECTION AREAS SHALL BE LOCATED AND SCREENED SO AS NOT TO BE VISIBLE FROM ADJACENT PUBLIC STREETS AND RESIDENTIAL USES.
 20. ALL EX. STRUCTURES ARE TO BE REMOVED.

- MSD NOTES:**
1. ON-SITE DETENTION WILL BE PROVIDED. POSTDEVELOPED PEAK FLOWS WILL BE LIMITED TO PREDEVELOPED PEAK FLOWS FOR THE 2, 10, 25 AND 100-YEAR STORMS OR TO THE CAPACITY OF THE DOWNSPAIN SYSTEM, WHICHEVER IS MORE RESTRICTIVE. SITE SHALL DRAIN INTO THE INTERMITTENT BLUE LINE STREAM TO THE NORTH WEST SIDE OF THE SITE. ANY INCREASE ONTO THE ADJACENT ROCK QUARRY SHALL BE APPROVED BY THE PROPERTY OWNER VIA A LETTER ACCEPTING THE INCREASE OF DRAINAGE.
 2. CONSTRUCTION PLANS AND DOCUMENTS SHALL COMPLY WITH LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT'S DESIGN MANUAL AND STANDARD SPECIFICATIONS AND OTHER LOCAL, COUNTY AND FEDERAL ORDNANCES.
 3. DRAINAGE PATTERN DEPICTED BY ARROWS IS FOR CONCEPT PURPOSE ONLY. FINAL CONFIGURATION AND DESIGN OF DRAINAGE PIPES AND CHANNELS SHALL BE DETERMINED DURING THE CONSTRUCTION PROCESS. DRAINAGE AND CHANNELS SHALL BE DETERMINED DURING THE CONSTRUCTION PLAN DESIGN PROCESS. DRAINAGE FACILITIES SHALL CONFORM TO MSD REQUIREMENTS.
 4. AN APPROVED EROSION PREVENTION AND SEDIMENT CONTROL (EPPSC) PLAN SHALL BE DEVELOPED AND APPROVED IN ACCORDANCE WITH MSB DESIGN MANUAL AND STANDARD SPECIFICATIONS PRIOR TO CONSTRUCTION PLAN APPROVAL.
 5. MSD DRAINAGE BOND IS REQUIRED PRIOR TO CONSTRUCTION APPROVAL.
 6. THE FINAL DESIGN OF THIS PROJECT MUST MEET ALL MSB WATER QUALITY REGULATIONS ESTABLISHED BY MSB. SITE LAYOUT MAY CHANGE AT THE DISCRETION OF MSB DUE TO PROPER SORTING OF GREEN BEST MANAGEMENT PRACTICES.
 7. MSD SITE DISTURBANCE PERMIT REQUIRED PRIOR TO ISSUE OF BUILDING PERMITS.
 8. BOARD OF HEALTH APPROVAL WILL BE REQUIRED FOR ANY REQUIRED PAVING, NO PUBLIC SANITARY SEWER AVAILABLE FOR THIS SITE.
 9. UNDERGROUND DETENTION BASINS MUST MEET THE REQUIREMENTS OF SECTION 10.3.8.4 OF MSB'S DESIGN MANUAL.

ABEL
 2401 STANLEY GAULT PARKWAY
 SUITE 100
 LOUISVILLE, KY 40223
 (502) 451-2235 FAX (502) 473-7261
 www.abelconstruct.com

FOR REVIEW ONLY

DETAIL DISTRICT DEVELOPMENT PLAN

CLIENT/OWNER NAME:
 WSA REALTY PROPERTIES, LLC
 2401 STANLEY GAULT PARKWAY
 LOUISVILLE, KY 40223

PROJECT LOCATION:
 13112-13118 OLD HENRY ROAD
 PROJECT NO.: KY 40223
 25-0904-0302

REVISIONS (SEE SUMMARY)

NO.	DESCRIPTION	DATE

NOT FOR CONSTRUCTION

DESIGNED BY: HRC
CHECKED BY: HRC
DATE: 6/22/26
SCALE: 1" = 60'

DETAILED DISTRICT DEVELOPMENT PLAN

SHEET NO. 1 **REVISION:**

LDC WAIVERS JUSTIFICATION STATEMENT
WSA REALTY PROPERTIES LLC
13110 Old Henry Road

- 1) Waiver of Land Development Code Section 10.2.10**
- 2) Waiver of Land Development Code Section 10.2.4.B.8**

June 12, 2026

The Applicant, WSA Realty Properties LLC, is requesting a change in zoning from R-4, Single-Family to PEC, Planned Employment Center for approximately 6.97 acres of land located across properties addressed 13112, 13118, 13200 R, and 13206 Old Henry Road, Louisville, Kentucky 40223 which, if approved, will be consolidated with approximately 9.89 acres of abutting land to the west that the Applicant, in 2023, successfully rezoned pursuant to Case No. 22-ZONE-0141 to PEC (taken together, the “Property”). The Applicant intends to use the Property as outdoor storage of construction equipment and the storage of trailers (the “**Proposal**”). No building improvements are being proposed at this time. In conjunction with its rezoning request, and in support of its site design as reflected on the Detailed District Development Plan drafted by Abel Construction (“**DDDP**”) and filed with Louisville Metro Office of Planning, the Applicant is also requesting two (2) waivers from Chapter 10 landscaping requirements of the Land Development Code for Louisville Metro Zoning Authority (“**LDC**”).

The first waiver is from Section 10.2.10 of the LDC to allow the Applicant to omit the required 15’ vehicular use area landscape buffer area (“VUA LBA”) from along the relocated 30’ foot wide private access easement, as specifically depicted on the DDDP (“**Waiver 1**”). The private access easement benefits the neighboring 13108 Old Henry Road property to the south, where the Rogers Group Inc. operates its rock mining and quarry use, and where the heavy truck traffic exits from the Rogers Group property onto the Property and uses the private easement across the Property to access Old Henry Road (the “**Easement**”). Alongside Case No. 22-ZONE-0141, the Planning Commission initially granted waiver relief from LDC 10.2.10 to the Applicant, allowing the Easement as it exists in its current location on the Property to be without the required VUA LBA. But because the Applicant is now adjusting a portion of the Easement on the Property (both access points to/from the Easement will remain in their current respective locations on the Property), shifting a middle portion of the Easement south to an area along the Property’s rear property line shared with the Rogers Group property, the need for additional waiver relief from LDC 10.2.10 is triggered because the minor adjustment to the Easement relocates a part of the Easement to an area of the Property where the previously approved waiver did not address the lack of VUA LBA. This shift in the Easement is meant to provide the heavier truck traffic exiting northward from the Rogers Group Inc. property, across the Property, to Old Henry Road, with better and safer vehicular maneuverability on the Property.

The second waiver being requested is from LDC 10.2.4.B.8 to allow for the relocated Easement benefiting the Rogers Group property, which is zoned M-2, Industrial, to occupy the required 15' landscape buffer area ("LBA") along the Property's southern boundary line shared with the Rogers Group ("**Waiver 2**"). The Rogers Group Property is zoned M-2, Industrial; both the Property and the Rogers Group property are within the Suburban Workplace Form. The relocated Easement is well-screened from the Old Henry Road Parkway by an existing mature tree line along the Property's Old Henry Road frontage. For the reasons specified herein, the waiver requests warrant approvals.

WAVIER 1 – LDC SECTION 10.2.10

The Easement has long been in use and will continue to serve the Rogers Group and the Property, providing a safe drive aisle from private property to the public roadway network. After a minor adjustment to the location of a portion of the Easement, bringing the Easement nearer to the benefiting property, the Easement will remain invisible from the Old Henry Parkway Corridor. The properties from which one can see the Easement area are properties the Easement serves and the Property. Therefore, Waiver 1 will not adversely affect adjoining property owners because the area of omitted VUA LBA is out of any viewshed from Old Henry Road or adjoining properties excluding the Property and the Rogers Group property.

The Waiver complies with Plan 2040 A Comprehensive Plan for Louisville Metro ("Plan 2040") because the area on the Property triggering the Waiver is screened from public view and nearby residential properties. In addition, the Waiver is to not install landscaping to screen the Easement, which has long provided access for industrial vehicles to Old Henry Road and its minor relocation nearer to the property it benefits will act more as an internal vehicular use area for the affected properties than any sort of public roadway needing screening. The Easement will continue providing safe access to industrial vehicular traffic and will remain out of sight from Old Henry Road.

Further, Community Form Goal 1, Policy 4 calls for the Proposal to ensure new development and redevelopment are compatible with the scale and site design of nearby existing development and with the desired pattern of development within the Form District. Quality design and building materials should be promoted to enhance compatibility of development and redevelopment projects. Community Form Goal 1, Policy 9 calls to ensure an appropriate transition between uses that are substantially different in scale and intensity or density of development. The transition may be achieved through methods such as landscaped buffer yards, vegetative berms, compatible building design and materials, height restrictions and setback requirements. Community Form Goal 1, Policy 10 calls to mitigate the impacts caused when incompatible developments unavoidably occur adjacent to one another. Buffers should be used between uses that are substantially different in intensity or density. Buffers should be variable in design and may include landscaping, vegetative berms and/or walls and should address issues such as outdoor lighting, lights from automobiles, illuminated

signs, loud noise, odors, smoke, automobile exhaust or other noxious smells, dust and dirt, litter, junk, outdoor storage, and visual nuisances. Waiver 1 will not violate the Comprehensive Plan, as all required screening will be provided around the subject site adjacent to properties of lower intensity and along the Old Henry Road Parkway and in the area on the Property where Waiver 1 is being requested, there will not be need to be a transition between an outdoor storage of construction equipment use and a rock mining and quarry use because they are mostly compatible with one another.

The extent of the Waiver 1 is the minimum necessary to afford relief to the Applicant because it allows the Applicant to maintain the Easement on its Property to serve the Rogers Group, as it has for years, and without placing a costly burden on the Applicant to install and maintain expensive landscaping as an unnecessarily screen for industrial traffic from the industrial properties the Easement serves. Consequently, should waiver relief not be granted to the Applicant, the strict application of LDC Section 10.2.10 would deprive the Applicant from the continued reasonable use of the Property and be a hardship on the Applicant because the Applicant would then need to expend resources to plant and upkeep considerable landscaping along an access easement used by heavy vehicles, which can easily cause damage to planting and screening materials. Moreover, the VUA LBA would needlessly occupy area on the Property that could be better utilized toward supporting the overall industrial use of the Property, including the use of the Easement by the Rogers Group.

As more fully set forth in its updated justification statement in support of PEC zoning for the Property, the Applicant's DDDP is in agreement with Plan 2040 and, therefore, the Applicant respectfully requests approval of Waiver 1 to allow the Applicant relief from the required 15' VUA LBA along the relocated 30' private access easement, as specified on the Applicant's DDDP.

WAIVER 2 – LDC SECTION 10.2.4.B.8

Waiver 2 is required to allow for the Applicant to relocate the Easement benefiting the Rogers Group property to be within the required 15' landscape buffer area ("LBA") along the Property's (rear) southern boundary line shared with the Rogers Group. Waiver 2 will not adversely affect adjacent property owners because the only property affected by Waiver 2 is the Rogers Group property and the Easement functions more like an internal drive aisle on the Property, supporting Rogers Group traffic. To all other properties excluding the Rogers Group property, the buffer area would be internal to the site and only be visible from the Rogers Group property, which is an intensely used industrial property.

Community Form Goal 1, Policy 4 calls for the proposal to ensure new development and redevelopment are compatible with the scale and site design of nearby existing development and with the desired pattern of development within the Form District. Quality design and building materials should be promoted to enhance compatibility of development and redevelopment projects. Community Form Goal 1,

Policy 9 calls to ensure an appropriate transition between uses that are substantially different in scale and intensity or density of development. The transition may be achieved through methods such as landscaped buffer yards, vegetative berms, compatible building design and materials, height restrictions and setback requirements. Community Form Goal 1, Policy 10 calls to mitigate the impacts caused when incompatible developments unavoidably occur adjacent to one another. Buffers should be used between uses that are substantially different in intensity or density. Buffers should be variable in design and may include landscaping, vegetative berms and/or walls and should address issues such as outdoor lighting, lights from automobiles, illuminated signs, loud noise, odors, smoke, automobile exhaust or other noxious smells, dust and dirt, litter, junk, outdoor storage, and visual nuisances. Waiver 2 will not violate the Comprehensive Plan, because the uses on the neighboring Rogers Group property and the Property will not be incompatible and there is no need to screen the Rogers Group from the very vehicular access easement benefiting the Rogers Group Property. The Easement on the Property will be well screened from views of other neighboring property, especially those of lesser use intensity, and from the Old Henry Parkway.

The extent of the waiver of the regulation is the minimum necessary to afford relief to the Applicant and the strict application of the provisions of the regulation would deprive the Applicant of reasonable use of its land, as buffering the Easement is unnecessary because it would only screen the Easement from the Rogers Group property it benefits. The Easement operates as access for the Rogers Group heavy vehicles to access Old Henry Road and the Applicant having to screen the benefitting property from the easement burdening its own property would create an unfair burden, notably because the waiver will not negatively impact other neighboring properties.

As more fully set forth in its updated justification statement in support of PEC zoning for the Property, the Applicant's DDDP is in agreement with Plan 2040 and, therefore, the Applicant respectfully requests approval of Waiver 2 to allow the Applicant relief from the required 15' LBA along the rear boundary line of the Property so that the relocated 30' private access easement, as specified on the Applicant's DDDP, can occupy the area where the LBA is .

APPLICANT'S UPDATED JUSTIFICATION STATEMENT
ADDRESSING COMPLIANCE WITH PLAN 2040

WSA REALTY PROPERTIES, LLC
26-ZONE-0028

13112 (PARCEL IDs 002307040000 & 002303590000),
13118, 13200 R & 13206 OLD HENRY ROAD

PROPOSED ZONE CHANGE FROM: R-4, SINGLE-FAMILY RESIDENTIAL
TO: PEC, PLANNED EMPLOYMENT CENTER

- THE UPDATED PROPOSAL -

The applicant, WSA Realty Properties, LLC, updates its application to rezone properties located at 13112, 13118, 13200 R and 13206 Old Henry Road, Louisville, KY 40223 (6.97 acres in total, all properties taken together, the "**Rezoning Property**"), from R-4, Single-Family Residential to PEC, Planned Employment Center, to also include property the Louisville Metro Council recently rezoned, under Case No. 22-ZONE-0141, to PEC (approximately 9.898 acres of land, the "**Rezoned Property**"; both the Rezoning Property and the Rezoned Property together, totaling 16.8 acres, are the "**Property**") so that the Property can be used for meeting the demand for outdoor storage with a related accessory use for the storage of trailers on the Property in the immediate future, as further depicted on the Detailed District Development Plan drafted by Abel Construction Company, Inc. (the "**Plan**") and submitted to Metro's Office of Planning as part of the updated zoning application submittal package. As identified on the Plan, the Rezoned Property consists of Tract 5, while the Rezoning Property is comprised of Tracts 1 - 4. Should the Rezoning Property be approved for PEC zoning, Tracts 1 through 5 will be consolidated into one property. PEC zoning is appropriate for the Property because after the outdoor storage use is no longer operating thereon, the Property is well-positioned to support the location and operation of future industrial, commercial and/or office land users similar in nature to those existing users operating within the active Eastpoint Business Park located directly across Old Henry Road from the Property (the "**Updated Proposal**").

The Property is in the Suburban Workplace Form District ("**SWFD**"), along the southern frontage of Old Henry Road and less than 0.33 miles west of the onramp to the Old Henry - Gene Snyder interchange. The Rezoning Property is currently zoned R-4, Single-Family Residential and the Rezoned Property is zoned PEC, Planned Employment Center. The existing residential driveway to the 13112 Old Henry Road property will be improved to meet the standards for a commercial access point, and along with the existing access serving the Rezoned Property, will provide a second access point to the Property. Currently, to the east of the Property, there is one remaining property zoned for R-4 Single-Family and used as a residence (13200 Old Henry Road) between the Property and the Gene Snyder Freeway, while the other properties are zoned either PEC or M-2, Industrial.

Per Section 2.6.3 of the Land Development Code ("**LDC**"), PEC is a hybrid zoning district that permits all uses in the M-2, Industrial zoning district and C-1, Commercial zoning district, including office buildings. Outside of the Rogers Group's limestone quarry use to the Property's south and east, which are on properties zoned M-2 and M-3, Industrial, the vast majority of properties located within the surrounding SWFD are zoned PEC, including within the Eastpoint Business Park sitting across Old Henry Road from the Property. Ideally, in the future, the Property will be developed as an industrial office park resembling Eastpoint Business Park. To accommodate both the short term and long term uses for the Property and the surrounding SWFD, the applicant believes assigning the PEC zoning classification to the Property is the most appropriate zoning district designation moving forward, per Plan 2040, Comprehensive Plan for Louisville Metro ("**Plan 2040**"), because the PEC district is a more flexible zoning designation that allows uses not solely limited to industrial uses and because PEC zoning is already well-established in the existing, active employment center. Therefore, the applicant asserts that PEC zoning for the Property is a better fit for the immediate area long term, because having the ability to locate industrial, commercial, office users, and uses that involve a mix of the same, positions the Property to better respond to changing market forces in the area and because PEZ zoning is consistent with the zoning of the Eastpoint Business Park and the uses that have located and are operating in the Eastpoint Business Park would be welcomed on the Property, across Old Henry Road.

Additionally, from a land use standpoint, the proposed PEC zoning is appropriate for the Property because the Property is bordered: on the south by a large rock quarry operation, a long-established heavy industrial use; on the west by Lee Building Products, an outdoor storage yard of residential and commercial building products; on the east (except for the one remaining single-family property abutting the Property to the east) by property recently rezoned to PEC; and, on the north side across Old Henry Road, by the Eastpoint Business Center, a busy commerce park comprised of various PEC office and logistical users served by heavy trucks, including a major warehouse and distribution center for Kroger. With the Updated Proposal, outdoor storage will be placed on the Property and will be well screened from Old Henry Road. No new buildings are being constructed in the immediate future on the Property.

**THE UPDATED PROPOSAL'S AGREEMENT WITH PLAN 2040
LOUISVILLE METRO'S COMPREHENSIVE PLAN**

WSA Realty, LLC's updated application to rezone the Rezoning Property from the existing R-4, Single-Family Residential to the PEC, Planned Employment Center zoning designation is in agreement with Plan 2040, and, similarly, how the existing R-4, Single Family zoning designation assigned to the Rezoning Property is no longer appropriate for the Rezoning Property and the PEC district designation is appropriate for the Rezoning Property, as justified in detail below and, therefore, the applicant's zoning request comports with KRS 100.211, the Kentucky statutory standard governing rezonings of property. Additionally, the applicant's request to consolidate the Rezoned Property with the Rezoning Property to form one site for outdoor storage, as reflected on the Plan the applicant has submitted to Metro Office of Planning, complies with the applicable goals, objectives and

policies of Plan 2040 and the LDC's standard for site plan approval for the reasons herein discussed and, as a result, warrants approval alongside the zoning request to allow the applicant's Updated Proposal on the Property.

Plan Element 1 - Community Form

The applicant's Updated Proposal conforms to Community Form Plan Element 1 and all of its applicable policies adopted thereunder. The Community Form plan element guides the shape, scale and character of development in ways intended to promote a connected, healthy, authentic, sustainable and equitable built environment. Community Form encourages redevelopment while promoting land use flexibility. As described herein, the applicant's Updated Proposal advances these stated principles of the Community Form because the Updated Proposal involves the use of the Property in a fashion that is consistent with the particular form district – Suburban Workplace – wherein the Property lies, but also in a way that will allow flexible, appropriate future reuse, when the time for the Updated Proposal on the Property comes to an end. In place of the Property's current single-family zoning, the applicant proposes PEC, Planned Employment Center zoning for immediate and future uses of the Property, which will provide flexibility for industrial, commercial, office uses and for users with a mix of uses to locate thereon and reinvest resources into the Property. With such convenient proximity to the Gene Snyder Freeway, and without the need to traverse local roadways serving residential neighborhoods, redevelopment of the Property after the truck storage use concludes is inevitable.

The Updated Proposal complies with Community Form Goal 1, Policy 3.1.10 because the Property lies within a SWFD, which is characterized by predominantly industrial and office uses where the buildings are set back from the street in a landscaped setting. SWFDs often contain a single large-scale use or a cluster of uses within a master planned development. Here, the Updated Proposal will support one user with outdoor storage needs and the combining of the Rezoned Property and the Rezoning Property will provide a larger site for future uses, all of which will sit behind an established screen of trees and plantings along Old Henry Road, a designated parkway. To provide adequate transportation access in SWFDs connected roads, public transportation and pedestrian facilities should be encouraged. Development within SWFDs may need significant buffering from abutting uses. The proposed change in zoning to PEC, Planned Employment Center, complies with Goal 1 of the Community Form Plan Element because the Updated Proposal, in the near term, is for a single user on property located within a large SWFD, where office/warehousing and logistical users operate alongside heavy industrial uses.

Adjacent to the south of the Property is the anchor industrial user of the enveloping SWFD, the Rogers Group Jefferson County Stone's rock, gravel, and sand quarry, which has an operation that spans over 120 acres and is zoned M-2 and M-3, Industrial. Eastpoint Business Center, which is wholly designated PEC, Planned Employment Center (M-2 & C-1 uses), is across Old Henry Road from the Property. This large employment activity center spans from LaGrange Road to the north, Gene Snyder to the east, North English Station to the west and Old Henry Road to the south. The Updated Proposal would appropriately expand the PEC zoning of the employment activity center south to include the Property, which will

incorporate property adjacent to the west that was recently rezoned to PEC (the Rezoned Property was rezoned under Case No. 22-ZONE-0141) to form one PEC site and is also consistent with the zoning designation of property located to the east of the Property at 13300 Old Henry Road, which was also subject of a change in zoning designation to PEC (24-ZONE-0030). In the long term, the applicant hopes to draw similar uses found operating in the Eastpoint Business Park to the Property.

Another property fronting Old Henry Road's southern right-of-way located to the west of the Property is split-zoned R-4/M-2 property (12906 Old Henry Road), where Lee Building Products has its building materials displayed for sale and storage on the property's exterior. To the west of Lee Building Products is property zoned M-1, Industrial and used as a self-storage facility. And except for the remaining residential property located immediately to the east of the Property (and the Property itself), the surrounding SWFD is comprised of M-1, M-2, M-3 and PEC-zoned properties. Therefore, the PEC zoning the Applicant requests for the Property is compatible with the zoning designations of surrounding properties and will complement the pattern of development within the SWFD.

The Property is located along Old Henry Road, a minor arterial roadway, and within less than a half-mile drive west of the on- and off-ramps to/from the Gene Snyder Freeway, providing safe, convenient accessibility via the existing roadway network. Though not as pertinent to the outdoor storage use currently proposed for the Property, TARC serves the Eastpoint Business Center across Old Henry Road, which will support subsequent industries on the Property and their workers who rely on transit for commuting to work. The applicant has been working closely with the owners of the properties comprising the Rezoning Property and the owners are participating in the rezoning and development effort of the Property. And given these R-4 properties are within the SWFD, the expansion of the PEC zoning onto the Property is not necessarily encroaching into a "residential area," which Plan 2040 discourages. The landscape buffer area between this last remaining R-4 property will be well-planted with existing and new trees to create a natural screen to appropriately buffer the Updated Proposal from the residential property adjacent to the northeast of the Property.

Additionally, between the Rezoned Property and the Rezoning Property, two access points will provide vehicular access from Property onto Old Henry Road. The Updated Proposal will improve an existing residential driveway to a full commercial access and, internally, will connect to the western access point on the Property. Another residential driveway will be removed from Old Henry Road. The Updated Proposal will maintain all applicable setbacks and preserve the existing tree canopy within the 30-foot parkway buffer along the Property's Old Henry Road Frontage. Accordingly, the pattern of development along Old Henry Road's southern frontage will remain intact, and any visual intrusions created by the outdoor storage use are effectively screened by natural materials. Other than the erection of a fence for onsite security of the outdoor storage area, no structures are currently proposed to be built onsite. Lighting on the Property will be LDC-compliant, shielded and directed down so that security lighting of the storage area will not leave the property and negatively trespass upon neighboring properties. No hazardous materials will

be stored, handled or disposed of on the Property and no threats of ground water or surface stream contamination will occur from the Updated Proposal.

Goal 2 of the Community Form encourages sustainable growth and density around mixed-use centers and corridors. Goal 2, Policy encourages development of non-residential and mixed uses in designated activity centers provided when a proposed use requires a special location in or near a specific land use or transportation facility. Community Form's Goal 3 is to enhance neighborhoods by protecting and integrating open space, watersheds and other natural resources. Here, the applicant's Updated Proposal is located within an established job center comprised mainly of office/warehouse uses (which include heavy trucks serving logistical/distribution centers), other heavy industrial uses, and some commercial users. Collectively, these mix of users are ideally positioned next to a transportation facility in the Gene Snyder Freeway, thereby allowing for truck traffic and employee vehicular traffic to efficiently access a freeway level roadway without having to traverse local neighborhood roadways. The encompassing SWFD is served by adequate roadway corridors and TARC service within the Eastpoint Business Center. No change to the existing grid pattern of streets is being proposed with this zoning application. The site contains no historic or archaeological resources, including no historic buildings, that contribute to Louisville Metro's authenticity, nor does the site contain blueline or intermittent streams, areas burdened by floodplain, watersheds, viewsheds, or natural resources to protect. The stream buffer areas on the very western side of the Property will be protected. The Property is located far from the Ohio River watershed and no flood prone areas, or wet or highly permeable soils exist on the Property to avoid when developing its ground. Grading portions of the Property is expected and will be coordinated with MSD. Consequently, the Updated Proposal complies with the applicable objectives and policies of Plan 2040 Community Form's Goals 1, 2, 3 and 4. Plan 2040's Goal 5 is inapplicable to this Property and specific Updated Proposal.

Plan Element - 2 Mobility

The applicant's Updated Proposal complies with the intent of Plan 2040's Mobility Plan Element and its applicable goals, objectives and policies. Goal 1 of Plan 2040's Mobility Plan Element is to implement an accessible system of alternative transportation models. Goal 2 of the Mobility Plan Element is to plan, build and maintain a safe, accessible and efficient transportation system, while Goal 3 encourages land use and transportation patterns that connect Louisville Metro and support future growth. The applicant's Updated Proposal complies with Plan 2040's Mobility Plan Element because the Property is supported by existing transportation infrastructure sufficient to accommodate the Updated Proposal and is positioned to well serve future uses that will operate on the Property after the outdoor storage use on the Property ends. The Property is located on a site that will enable proper and direct access to Old Henry Road, a minor arterial roadway, where access serving the proposed use will not adversely affect adjacent areas, and where other PEC users will generate similar types of traffic to the Property, should the Property be rezoned PEC, and therefore the PEC users, current and future users, will share the same transportation facilities, as encouraged by the Mobility plan element.

The site lies within an existing employment activity center with transportation facilities that are compatible with and support access to surrounding land uses. In coordination with KYTC and Louisville Metro Public Works, the existing entrance to the Rezoning Property will be improved from a residential driveway into commercial curb cut and will pair with the current access point in use on the Rezoned Property to facilitate safe vehicular access to and from the proposed development on the Property. Per the Plan, the Updated Proposal will provide internal vehicular connection between the two access points to the Property. Another existing residential driveway to the Property will be removed, thereby reducing the amount of access points on the southern frontage of Old Henry Road. And access to the site will not occur through areas of significantly lower intensity or density in development and site access will provide sight distances consistent with probable traffic speed, terrain and alignments in road design. No additional right-of-way dedication or road improvements are required; the current roadway network maintains more than adequate traffic carrying capacity.

TARC operates a local route within the Eastpoint Business Center directly across Old Henry from the Property, providing other transportation options for employees to access job locations in the area, including for future employees of the land users that may locate on the Property after the truck storage use has concluded operating on the Property. The proposed development ensures proper functioning of internal circulation and appropriate access to the existing roadway system. The Updated Proposal does not contemplate employees who will bike to work, considering not many employees if any will be onsite daily, but upon future redevelopment of the site by another user, the inclusion of bicycle parking and bicycle facilities on the Property should then be added to accommodate another option for employees to commute to work. Employee vehicle parking needs for the Updated Proposal are minimal to almost non-existent. For the foregoing reasons, the Updated Proposal complies with the Mobility Plan Element of Plan 2040, including its Goals 1, 2 and 3 and their applicable Policies.

Plan Element 3 – Community Facilities

Plan 2040's Community Facilities Plan Element provides guidance and recommendations for the proper integration of necessary community resources across Louisville Metro to plan and maintain accessible facilities that will improve the quality of life for existing and future residents and visitors of Louisville Metro. The Updated Proposal complies with Plan 2040's Community Facilities Plan Element, and all its applicable goals, objectives and policies thereunder, because the Property, including both the Rezoning Property and the Rezoned Property, is served by existing infrastructure necessary for the proposed outdoor storage use, all infrastructure systems of which have adequate capacity for the Updated Proposal. Upon future redevelopment of the Property, and to the extent possible, utilities will be located within common easements and trenches, as required by each utility. As previously noted, the site is located within a highly accessible area on Old Henry Road, near the Gene Snyder Freeway interchange, ensuring the existing roadway network is adequate to safely handle the traffic that will be generated by the currently

proposed development, as well as future land users operating on the Property. The site also has an adequate supply of potable water and water for fire-fighting purposes and is served by the Anchorage-Middletown Fire Department. The Property is served by Louisville Metro Police Department's Eighth Division.

Plan Element 4 – Economic Development

The intent of Plan Element 4 of Plan 2040 is to provide a positive, healthy economic climate for citizens of Louisville Metro in a way that cultivates a vibrant city to attract and retain a skilled workforce. Sound economic development planning allows for equitable, sustainable and innovative growth that strengthens our community's ability to attract and retain a strong and diverse workforce. The applicant's Updated Proposal advances the intent of Plan 2040's Economic Development because it will rezone property to PEC, Planned Employment Center, which designation is consistent with the surrounding employment activity center and appropriate for the Rezoning Property; and incorporating the area of the Rezoning Property together with the Rezoned Property will create an even larger contiguous area for one user or a number of similar type users to develop and attract job sources. In time, after the outdoor storage use ceases on the Property, the Property will eventually become available to facilitate a new industrial/commercial/office user(s) within a prime SWFD that is already outfitted with existing infrastructure and utilities, which currently serve other industrial and office/warehouse users that are compatible with the PEC zoning district proposed for the Rezoning Property.

Additionally, the Updated Proposal promotes the Goals and Objectives of Plan 2040's Economic Development Plan Element because the Property has direct access to Old Henry Road and near the Gene Snyder Freeway interchange allowing for PEC traffic to access transportation facilities without having to conflict with heavy residential neighborhood traffic. Thus, locating the Updated Proposal on the Property will ensure safe, efficient and adequate access, making it a prime location for the proposed use, which addresses a dire need in Louisville Metro – a safe, appropriate area for outdoor storage. In short, changing the zoning of the Rezoning Property to PEC will accommodate the Updated Proposal today, as well as provide various greater opportunities for the eventual adaptive reuse of industrial property, considering the flexibility afforded to land users by the PEC zoning district and, with the Updated Proposal, more contiguous space to serve PEC users. Being well-positioned to support new land users compatible with the existing activity center surrounding the Property and be near existing and future residential area for efficient commutes will benefit future job growth of the surrounding center and further Louisville Metro's economic development. Therefore, the Updated Proposal agrees with the Economic Development Plan Element of Plan 2040.

Plan Element 5 – Livability

The Livability Plan Element of Plan 2040 provides guidance and direction for the provision and maintenance of resources necessary for the health and well-being of citizens, including a focus on designing and developing places while prioritizing the protection and

enhancement of the natural environment and the integration of it with the built environment as development occurs. Applicant's Updated Proposal is consistent with the applicable goals, objectives and policies of Plan 2040's Livability Plan Element, primarily those set forth under Goal 1 of the Plan Element, because the rezoning of the Rezoning Property combined with its consolidation with the Rezoned Property proposes no new building of structures on the Property at this time and the Updated Proposal will establish an outdoor storage use on the Property in a fashion that respects the natural environment surrounding the area on the Property, while also maintaining and supplementing the natural buffers aligning the northern and northeastern property lines, thereby screening the Updated Proposal from the last remaining residential property on the south side of Old Henry Road, as well as from the Old Henry Road, a designated parkway. New and existing plantings along Old Henry Road will assist in protecting the parkway character along Old Henry Road corridor. The Property is surrounded by transportation infrastructure (Gene Snyder Freeway and TARC local route for employees who rely on transit), industrial users, a rock/stone quarry, Eastpoint Business Center, and a residential property.

The proposed rezoning of the Rezoning Property complies with Plan 2040's Livability Plan Element because the Property is in the SWFD, which is intended for land uses necessary to meet the needs of the workplace district and their employees. The Property sits within an existing employment center consisting of established industrial and office users and, therefore, is located to take advantage of the existing infrastructure and utilities already in place serving users across Old Henry Road. When combining the Rezoning Property with the Rezoned Property, the site will have two direct access points to Old Henry Road, both of which are conveniently near the Gene Snyder Freeway interchange, ensuring adequate access by all modes of transportation and making it a prime location for the proposed use because trucks and larger vehicles can access the Gene Snyder Freeway in a short distance without having to traverse local roadways. In the short term, the proposed rezoning of the Rezoning Property, in combination with the abutting Rezoned Property to the west, will allow a larger site for an outdoor storage user to utilize the Property until it is time to further develop the Property into a small business park that would incorporate similar character and feel of the Eastpoint Business Park across Old Henry Road from the Property, but at a smaller scale.

Construction plans for storm water drainage and sewer, if necessary (no buildings being proposed), related to the Updated Proposal shall comply with Louisville and Jefferson County Metropolitan Sewer District's Design Manual and standard specifications and other local, state, and federal regulations. The final design of the Updated Proposal must meet all MS4 water quality regulations established by MSD; the site layout may change at design phase due to proper sizing of green management practices. Currently, the Plan shows the existing detention basin on the Rezoned Property, east of the stream buffer and west of an access point and proposed additional detention in an underground area more toward the center rear of the site. Stormwater will be picked up and piped to these two detention areas on the Property. An Erosion Prevention and Sediment Control Plan utilizing best management practices as recommended by MSD will be implemented prior to commencing

construction of the development. No blue line or intermittent streams or water features exist on the Property and the stream buffer at the very western edge of the Rezoned Property will be honored; no indication of hydric soils is present on the Property. No other environmentally sensitive features exist on the Property and, per FEMA Firm Panel 21111C0033F, dated 02/26/2021, no portion of the Property lies within a flood hazard area. The Property contains no known archaeological features on it; and no unstable slopes exist on site of which would cause impediments to the Updated Proposal or redevelopment of the site, whenever that occurs in the future. Consequently, Applicant's Updated Proposal will not have any negative impacts to mitigate on site.

The applicant's Updated Proposal conforms to the requirements of APCD, represents an efficient land use that maintains the existing pattern of development for immediate surrounding area within the SWFD, and utilizes current traffic patterns and existing infrastructure. Although the Property is located within an industrial center, it is positioned in an area supported by transit services in the Eastpoint Business Center. The proposed rezoning of the Property to a more appropriate PEC district will eventually draw reinvestment by a new user(s) to the Property after the outdoor storage uses are concluded or if demand for a different PEC user shortens the timeline for outdoor storage use on the Property. And, with the PEC zoning being proposed for the Property, the intent is to attract users that are similar in nature to those users currently operating in the Eastpoint Business Center across Old Henry Road from the Property. As a result, the Updated Proposal meets Plan 2040's Sustainability Plan Element and all applicable Goals, Objectives and Policies.

Plan Element 6 – Housing

Although the applicant is (appropriately) not pursuing a housing development for the Property, the Updated Proposal will provide for the eventual redevelopment and reinvestment of capital into the Property, which will add to the employment opportunities and supply additional space for new industries and businesses to locate within the already active surrounding SWFD, where residents from nearby and connected Neighborhood Forms can work close to home. As such, additional new employment positions in the area will assist residents of inter-generational, mixed-income and mixed-use development possibly find employment in an area within reasonable commuting distances from where they reside. And with the Rezoning Property being consolidated with the abutting Rezoned Property, the larger site would support a longer list of potential users, thereby increasing the potential for more job sources on the Property. Pedestrian connections already exist within the SWFD as well as accessibility to TARC. The rezoning of the Property to PEC does not displace current residents and the prospect of the Property's redevelopment into another significant industrial/commercial use or office park with industrial use will support existing and future residential uses in the surrounding neighborhood forms.

OLD HENRY ROAD SUBAREA PLAN

On May 9, 2000, the Jefferson County Fiscal Court adopted the Old Henry Road Subarea Plan (the "OHRSP"), predating both Louisville Metro Council's adoption of Plan 2040

and before Plan 2040's predecessor, Cornerstone 2020. The OHRSP has not been updated since its initial adoption. Regardless of its dated nature, the applicant's Updated Proposal is in accord with the OHRSP, its Executive Summary, Major Findings and Recommendations applicable to the Property. The OHRSP was developed to provide land use, transportation, and urban design guidelines and capital improvement recommendations that are necessary to plan for growth and preserve the character of the area.; The Jefferson County Fiscal Court adopted the OHRSP for the purpose of more closely linking land use and transportation improvement decision making at the local level, particularly for areas experiencing growth.

The land area subject to the OHRSP is separated into four planning areas and the Property is situated within OHRSP Planning Area 1. In Planning Area 1, the Property is situated west of Gene Snyder Freeway, between the existing Rogers Group's active and the southern frontage of the Old Henry Roadright-of-way, directly across Old Henry Road from Eastpoint Business Center. The OHRSP's forecast of land uses for the Property acknowledges the Property's unique location adjacent to the rock quarry and how its development potential is difficult to analyze given the large, intense quarry use neighboring it. The OHRSP further forecasted the Property's land use to mirror the land uses established in the Eastpoint Business Center, the properties located therein of which are zoned PEC, Planned Employment Center and, therefore, the PEC zoning designation would be appropriate for the Property so that when the outdoor storage use being requested for the immediate future is no longer in operation, uses similar to those uses in the Eastpoint Business Center can be established on the Property, as envisioned by the OHRSP.

The applicant's Updated Proposal in agreement with OHRSP's Guiding Principle Number 1 - Subarea Gateway - which states the Old Henry Road/Snyder Freeway Interchange and its immediate surroundings should be planned as a "gateway," the function and physical appearance of this gateway should be integrated and consistent with the character of the area it serves as a gateway. The Property, despite not being contiguous to the Gene Snyder Freeway, will remain as-is as viewed from Old Henry Road because the heavily planted front property line will be further reinforced with additional plantings to enhance the Old Henry Road parkway and contribute to the tree-lined gateway, which provides an effective buffer of the Property from Old Henry Road, thereby preserving its visual character and maintaining a gateway feel for Old Henry Road. The applicant's agreement to construct a pedestrian connection along a portion of the northern frontage of Old Henry Road to fill an existing void in the pedestrian connection currently serving said northern frontage of Old Henry Road also furthers the intent and 8 purpose of the OHRSP's Guiding Principle Number 1, thereby bringing the applicant's Updated Proposal into further agreement with the applicable provisions of the OHRSP.

For all the foregoing reasons, including the information shown on the Plan to be discussed at the Planning Commission's Land Development & Transportation Committee, if necessary, and for all other reasons presented at the Louisville Metro Planning Commission's public hearing, this Updated Proposal seeking PEC, Planned Employment Center zoning district designation is appropriate for the Rezoning Property and its consolidation with the Rezoned Property to allow for the Updated Proposal on the Property is also appropriate for the surrounding SWFD and, therefore, complies with all applicable Guidelines and Policies of Plan 2040, Louisville Metro's adopted Comprehensive Plan and with all relevant provisions of the Old Henry Road Subarea Plan. Equally as true, the R-4, Single-Family Residential zoning is no longer appropriate for the Property, considering the Property being within the SWFD for a significant duration, and how during that time many of the surrounding and nearby properties have been rezoned to PEC, which attracted various land uses in the immediate area, all of which except for one remaining residential property, are heavy and light industrial users or larger office/warehouse users.

Respectfully submitted,

Jon Baker
Bricker Graydon Wyatt LLP
400 West Market Street, Suite 2000
Louisville KY 40202
Direct: (502) 562-7316
Fax: (502) 589-0309
Email: jbaker@bricker.com

NEIGHBORHOOD MEETING SUMMARY

<u>Meeting Date and Time:</u>	Monday, February 16, 2026 at 6:00 PM (the meeting started at 6:06 P.M.)
<u>Applicant:</u>	WSA Realty Properties LLC
<u>Owners:</u>	Alex Thornton, Sr., Estate of Dorothy Dowe, Jathaniel Mark Dorsey and family
<u>Properties:</u>	13112, 13118, 13206 and 13200 R. Old Henry Road, Louisville, Kentucky 40223
<u>Location of Meeting:</u>	Front corner of the gym at Mid America East, 2401 Stanley Gault Parkway, Louisville, Kentucky 40223 [moved to cafeteria because of noise in the gym]
<u>Request:</u>	Change in zoning from R-4, Single-Family Residential to PEC, Planned Employment Center Case No. 25-ZONEPA-0157

[Site Plan displayed on easel at the front of the room]

Jon Baker began the meeting by introducing himself and members of the Applicant's development team, including Nima Mahmoodi, engineer with the Kleingers Group and Chelsea Sellers and Laura van Vactor with WSA Realty Properties LLC. Mr. Baker thanked the attendees for participating in the change in zoning process. Mr. Baker explained how the current application is a separate and different application and development from the rezoning proposal found in the 2023 change in zoning file, Case No. 23-ZONE-0141.

Mr. Baker explained the zoning process in Louisville Metro and touched upon the two new changes to the Louisville Metro change in zoning process. First, Mr. Baker explained how it may no longer be required for a zoning application to go before the LD&T committee, assuming all participating reviewing Louisville Metro agencies provide pre-approval. Second, if a zoning application receives a unanimous vote from the Louisville Metro Planning Commission, then it may not need to proceed to the legislative body for a vote, unless a council person calls up the case.

By using the Site Plan on the easel up at the front of the room, Nima Mahmoodi advised the attendees how the Property is to be used by the Applicant, walked through the site plan to discuss access, screening, grading of the Property, employees, if any, etc.

After Nima Mahmoodi concluded presenting the site plan, the meeting was opened up to attendees for comments and questions:

One question was “will PEC zoning allow you to move forward?”

An attendee from Rogers Group commented “Are you parking this site at a higher density of vehicles than the western properties?”

The Rogers Group representatives inquired who owns the mineral rights to the Property.

One attendee asked “where is your proposed cut-through?” The proposed access point is the existing Alex Thornton driveway, but it will be made wider to meet commercial curb cut standards.

One attendee asked about MSD and stormwater drainage and the absorption rate. An explanation was made of the differences between a gravel driveway and an asphalt driveway and attendees were told that MSD will require the Applicant to provide calculations based upon the gravel driveway being impervious.

Another attendee asked “does KYTC review similar to how MSD reviews?”

Comment: additional traffic concern.

The meeting ended at approximately 6:47 P.M.

Members of the Applicant’s team stayed after conclusion of the meeting.

Mattingly, Jude

From: Mary Dries <mpwdries@gmail.com>
Sent: Wednesday, March 18, 2026 3:06 PM
To: Mattingly, Jude
Cc: Eatherly, Kip
Subject: 26-ZONE-0028 for 13112 Old Henry Rd, truck storage

Follow Up Flag: Follow up
Flag Status: Flagged

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March 18, 2026

Subject:
Comments on 26-ZONE-0028 for 13112 Old Henry Rd, truck storage

Jude,
As an area resident who frequently uses Old Henry Rd, I offer the following concerns and requests for the Applicant's consideration and for the Planning Commission's review.

1. Utilize existing, approved Plans. Ensure consistency with the excellent Old Henry Road Subarea Plan and protection of Old Henry Road as a designated Parkway. Attractive frontages have been designed and installed for the vast majority of this large Suburban Workplace area along Old Henry Rd, both west and east of I-265. These frontages include well-landscaped berms, four-board fences, and other natural, wooded-landscape features . . . instead of the highly visible, tall chain-link fencing and gate along Old Henry Rd which was recently installed on the adjacent 10-acre truck storage property at 13110 Old Henry Rd. Essentially all of the attractive frontages along Old Henry Rd have been developed consistent with the following:

- **Old Henry Road Subarea Plan, Guiding Principle No. 1, Subarea Gateway**, which includes: "Care should be taken to ensure that this 'gateway' is a positive experience - and that all the elements of that experience from landscaping to signage are well designed and coordinated." Protecting this attractive, mixed-use Gateway area benefits many nearby neighborhoods including Berrytown, Anchorage, Middletown, and others.
- **Comp Plan 2040, Core Graphic 13, Parkways and Scenic Corridors**, including Old Henry Rd.

2. Avoid duplicating the adjacent, major-eyesore truck storage property at 13110 Old Henry Rd. The adjacent truck storage property (22-ZONE-0141 and 24-LANDSCAPE-0009) should not be duplicated at 13112 Old Henry Rd. The 10-acre truck storage property (and potential future junk storage) at 13110 Old Henry Rd has become a significant eyesore along Old Henry Rd in terms of:

- Contrary to the approved plans, significant portions of the required Tree Canopy Credit Area (TCCA) appear to be removed.

- A large, gravel, truck-storage area has been installed that is highly visible from Old Henry Rd (due to the TCCA removal), and that may be significantly larger than approved.
- And highly-visible, tall chain-link fencing has been installed along Old Henry Rd (as opposed to attractive landscaped berms, four-board fencing, and natural wooded landscapes at most of the other Suburban Workplace businesses along Old Henry Rd).

3. Add Binding Elements to help ensure an attractive frontage along Old Henry Rd. The adjacent truck-storage property at 13110 Old Henry Rd is an example of what is not needed for future projects along Old Henry Rd. My requests include adding Binding Elements that address the following frontage characteristics along Old Henry Rd:

- **Protect the Old Henry Rd buffer area and tree canopy.** Avoid removing existing trees, berms, and vegetation near Old Henry Rd, and add robust landscaping for any gaps. That is, the gravel parking and truck storage area should not be visible from Old Henry Rd.
- **Require an attractive frontage.** Like essentially all parts of Old Henry Rd between Stanley Gault Pkwy and Bush Farm Rd, the Old Henry Rd frontage should include landscaped berms, and/or four-board fencing, and/or existing natural woodland landscape and not highly-visible, tall chain-link fencing and not a highly-visible, gravel truck-storage area. Consistent with the Applicant's Justification Statement (under Plan Element 5 - Livability), a more specific Binding Element should be added to protect "the parkway character along the Old Henry Road corridor", and to avoid excavating, or lowering the existing elevation in the Buffer Area along Old Henry Rd.
- **Require shielded lighting, directed down,** consistent with the Applicant's Justification Statement (under Plan Element 1 - Community Form), which states: "Lighting on the Property will be LDC-compliant, shielded and directed down . . ." A Binding Element which requires lighting that is "shielded and directed down" (to match the Justification Statement) would benefit the "Gateway" area, and is more consistent with the nearby shielded, down lighting throughout the Eastpoint Business Center.
- **Limit roadway access and connectivity to Nelson Miller Pkwy or Stanley Gault Pkwy.** The entire, attractive 700-acre Eastpoint Business Center connects to Old Henry Rd at only two locations, including Nelson Miller Pkwy and Stanley Gault Pkwy. If possible, the Suburban Workplace neighbors south of Old Henry Rd should work together on a roadway connectivity plan with cross-connectivity and 'through' roads that connect to the same two intersections on Old Henry Rd. Additional mid-block access points will unnecessarily add congestion points and make Old Henry Rd less safe. Limiting roadway connectivity along Old Henry Rd would also supports:
 - **Comp Plan 2040, Mobility Goal 2, Policy 9:** "Develop, preserve, and maintain an interconnected system of scenic corridors and parkways. . . ."

In summary, I am only asking that the Applicant should take the time to provide a quality design to hide an unsightly, gravel, truck-storage use. And that is relatively attractive for the area: consistent with the Old Henry Road Subarea Plan's Gateway concept; that protects the Designated Parkway's aesthetics; and that does not add a second major eyesore for the area, with highly visible chain-link fencing and entrance gate, and with highly visible large gravel areas for the storage of trucks or other unknown materials.

Please confirm receipt, and that this email will be added to the Case File.

Thanks for your consideration.
 Mary Dries
 40245

Mattingly, Jude

From: Mary Dries <mpwdries@gmail.com>
Sent: Monday, June 22, 2026 1:21 PM
To: Mattingly, Jude
Cc: Eatherly, Kip
Subject: 26-ZONE-0028 for 13112 Old Henry Rd (truck and equipment storage)

CAUTION: This email came from outside of Louisville Metro. Do not click links, open attachments, or give away private information unless you recognize the sender's email address and know the content is safe.

Re: 26-ZONE-0028 for [13112 Old Henry Rd](#) (truck and equipment storage)

Jude,

In addition to my comments and email from 3-18-2026, following are current suggestions for the Planning Commission's consideration. Many of these comments relate to aesthetics and the Livability Plan Element of Comp Plan 2040.

1. Utilize existing, approved Plans. No changes to my comments from 3-18-2026 to follow the Old Henry Road Subarea Plan, Guiding Principle No. 1 "Subarea Gateway", and to ensure consideration of Core Graphic 13, Parkways and Scenic Corridors from Comp Plan 2040. The Old Henry Road Subarea Plan continues to be a long-standing, excellent planning document which has resulted in one of the most-attractive and best-planned interchange areas along I-265. I reject any suggestion of a "dated nature" of the Old Henry Road Subarea Plan. Good urban plans have a long lifespan when guidelines are consistently followed. For example, other excellent long-standing plans in Louisville include: Olmstead's master plan for Louisville's Parks and Parkways (from 1891); Norton Commons' master plan (from 1997); and The Parklands of Floyds Fork master plan (from 2008).

2. Avoid duplicating the adjacent, eyesore truck storage property at [13110 Old Henry Rd](#). In addition to my previous comments from 3-18-2026, I suggest that:

- The required Tree Canopy Credit Area (TCCA) which was removed during construction should be re-established and enforced for [13110 Old Henry Rd \(Request #1\)](#).
- Chain-link fencing should not be allowed and not be visible along Old Henry Rd, which is a designated Scenic Corridor (**Request #2**). The roadway frontages for essentially all nearby properties along Old Henry Rd (both east and west of I-265) include four-board fencing, well-landscaped berms, other robust landscaping, or natural wooded landscape . . . and not chain-link fencing, with a small number of deciduous tree saplings added.
- The chain-link gate for [13110 Old Henry Rd](#) should also be replaced with an attractive gate entrance that is appropriate for a Scenic Corridor (**Request #3**), and consistent with the nearby and attractive 700-acre Eastpoint Business Center. A large Leasing sign for truck parking spots should also not be allowed along Old Henry Rd at the truck parking entrance location (**Request**

#4). Additional dust control measures should be provided for the gravel truck parking and quarry entrances (**Request #5**), which generate excessive dust and gravel debris on a regular basis along Old Henry Rd west of I-265.

3. Add Binding Elements to help ensure an attractive frontage along Old Henry Rd. In addition to my previous comments from 3-18-2026, I suggest that:

- The gravel truck parking and equipment storage area should have no visibility from Old Henry Rd (**Request #6**). Blocked visibility of the proposed unattractive use is even more important with any additional storage of construction equipment and other unknown junk.
- Ensure that shielded downlighting is required for any lighting added (**Request #7**), consistent with the shielded downlighting that exists throughout the Eastpoint Business Center, and consistent with shielded downlighting for essentially all other properties near the I-265 subarea gateway at Old Henry Rd. I suspect that the LDC does not specifically require shielded downlighting for a PEC area, without a descriptive Binding Element.
- Ensure no hazardous materials in the future (**Request #8**), consistent with the Applicant's updated justification statement.
- And limit commercial access for Old Henry Rd to Nelson Miller Pkwy and Stanley Gault Pkwy:
 - The entire, attractive 700-acre Eastpoint Business Center efficiently and safely connects to Old Henry Rd at only two locations, including Nelson Miller Pkwy and Stanley Gault Pkwy. A new mid-block commercial entrance location between Nelson Miller Pkwy and Stanley Gault Pkwy should not be allowed or widened for a 20 to 35-acre truck and equipment gravel storage area (**Request #9**).
 - Per the Applicant's updated justification statement: "The OHRSP further forecasted the Property's land use to mirror the land uses established in the Eastpoint Business Center". This mirroring of Eastpoint Business Center should also apply for the two existing and safe commercial roadway connections to Old Henry Road (without adding an unnecessary and unsafe midblock commercial entrance on the south side of Old Henry Rd).
 - The proposed mid-block commercial entrance between Nelson Miller Pkwy and Stanley Gault Pkwy would be located at an unsafe location. Old Henry Rd transitions from two westbound lanes to one westbound lane at this location, with merging or weaving of westbound traffic causing traffic safety precautions for drivers (even without adding new traffic and trucks turning left onto Old Henry Rd at the same location from an unnecessary mid-block entrance "with full commercial access"). Truck and equipment storage should not require an additional widened mid-block entrance. And a different future PEC use for the property may add extra traffic and trucks that should connect to Old Henry Rd at either Nelson Miller Pkwy or Stanley Gault Pkwy.

These are all reasonable requests (consistent with Comp Plan 2040) to provide better aesthetics for an unattractive, gravel PEC truck and equipment storage area proposed along a Scenic Corridor, and to minimize negative impacts for the area's commuters and the nearby neighborhoods of Berrytown, Anchorage, and Middletown.

Please confirm receipt, and that this email and my email from 3-18-2026 will be included in the Case File.

Thanks for your consideration.

Mary Dries
40245



Louisville Metro Government

Text File

File Number: 26-ZONE-0057

Agenda Date: 7/16/2026

Version: 1

Status: Public Hearing

In Control: Planning Commission

File Type: Planning Case

Agenda Number: 9.



26-ZONING-0057

Planning Commission
Staff Report
July 16, 2026

E Indian Trail Commercial

Location: 4107 & 4111 E Indian Trail
Applicant: MHF&O LLC
Representative: Bricker Graydon Wyatt LLP
Jurisdiction: Louisville Metro
Council District: 10 – Josie Raymond
Case Manager: Zack Jones, Planner II

REQUESTS & RECOMMENDED ACTIONS

1. Change in Zoning from R-4 Single Family Residential to C-2 Commercial
 - Staff finds the request is in keeping with Plan 2040 and recommends the Planning Commission **RECOMMEND** that the Louisville Metro Council **APPROVE** the requested change in zoning.
2. General District Development Plan with Binding Elements
 - Staff finds the justification for the request is adequate and recommends the Planning Commission **APPROVE** the General District Development Plan

CASE SUMMARY

The subject property is located on E Indian Trail, a minor arterial roadway at this location, near the intersection of Poplar Level Road. The site is currently zoned R-4 Single Family Residential and C-2 Commercial in the Suburban Marketplace Corridor form district on roughly .78 acres. The surrounding land uses are predominantly commercial along E Indian Trail and Poplar Level Road, with the exception of residential zoning to the southeast of the property. The applicant is proposing to rezone the property to C-2 Commercial in its entirety with only general commercial uses and a general plan identified at this time. The proposal does not include exterior alterations to the structure(s) or site as part of this development. While the applicant owns the property directly to the west, staff notes that property is presently zoned C-2 and not part of this development plan.

TECHNICAL REVIEW

- Comprehensive Plan 2040
- Land Development Code (Louisville Metro 2025)
- MSD has provided preliminary approval.
- Transportation Planning has provided preliminary approval.

STANDARD OF REVIEW FOR REZONING AND FORM DISTRICT CHANGES

Criteria for granting the proposed form district change/rezoning: *KRS Chapter 100.213*

1. The proposed form district/rezoning change complies with the applicable guidelines and policies Plan 2040; **OR**
2. The existing form district/zoning classification is inappropriate and the proposed classification is appropriate; **OR**
3. There have been major changes of an economic, physical, or social nature within the area involved which were not anticipated in Plan 2040 which have substantially altered the basic character of the area.

STAFF ANALYSIS FOR CHANGE IN ZONING / FORM DISTRICT

The following is staff's analysis of the proposed rezoning against the Guidelines and Policies of Plan 2040.

The site is located in the Suburban Marketplace Corridor Form District

Suburban Marketplace Corridors are generally located along major roadways with well-defined beginning and ending points and established depths along the length of the corridor. The pattern of development is distinguished by a mixture of medium-to high- intensity uses. Accommodations for transit users, bicyclists and pedestrians are encouraged in an effort to attract a variety of users as well as to minimize automobile dependency and traffic congestion. Transit-oriented development and park and ride facilities are encouraged to facilitate the creation of transit nodes throughout the community. Connectivity to nearby uses should be encouraged. Developers should be encouraged to design new commercial development in compact groups of buildings, which use the same curb cut, share parking, have a common freestanding sign identifying the uses and have a common buffering or streetscape plan with respect to any abutting uses of lower density or intensity. This form may include medium to high-density residential uses that are designed to be compatible with both the non-residential uses along the corridor and the lower-density residential uses in adjacent Form Districts. Medium density residential uses may serve as a transition area from lower-to higher-density residential uses and should be encouraged in this form.

Proposed new commercial uses are encouraged to locate within the boundaries of existing corridors. Reuse of locations within existing corridors is preferred over expansion of a corridor. Proposals to expand defined corridors represent significant policy decisions. When considering proposals that result in an extension of suburban marketplace corridors, particular emphasis should be placed on: (a) use or reuse of land within existing corridors; (b) potential for disruption of established residential neighborhoods; and (c) compliance with the site and community design standards of the Land Development Code.

STAFF FINDING: The zoning change to C-2 is appropriate at this location, as the proposed rezoning will not constitute a non-residential expansion into an existing residential area, as the subject site is presently at the center of activity center located at E Indian Trail and Poplar Level Road. There will be minimal or no displacement of residents, no loss of affordable housing units, and the use is unlikely to

negatively burden existing transportation infrastructure. The subject site is located in an existing commercial corridor on E Indian Trail, a minor arterial roadway, and Poplar Level Road, a major arterial roadway. The site is in the Suburban Marketplace Corridor form and the proposed zone is overall compatible with the existing uses in the form as well as the immediate area.

The proposed zoning district is generally in compliance with the plan elements and CHASE principles of Plan 2040. All other agency comments should be addressed to demonstrate compliance with the remaining Goals, Objectives and Policies of Plan 2040.

A checklist is attached to the end of this staff report with a more detailed analysis. The Louisville Metro Planning Commission is charged with making a recommendation to the Louisville Metro Council regarding the appropriateness of this zoning map amendment. The Louisville Metro Council has zoning authority over the property in question.

All other agency comments should be addressed to demonstrate compliance with the remaining Guidelines and Policies of Plan 2040.

The Louisville Metro Planning Commission is charged with making a recommendation to the Louisville Metro Council regarding the appropriateness of this zoning map amendment. The Louisville Metro Council has zoning authority over the property in question.

STANDARD OF REVIEW AND STAFF ANALYSIS FOR GENERAL DISTRICT DEVELOPMENT PLAN AND BINDING ELEMENTS

- a. *The conservation of natural resources on the property proposed for development, including: trees and other living vegetation, steep slopes, water courses, flood plains, soils, air quality, scenic views, and historic sites;*

STAFF FINDING: There do not appear to be any environmental constraints or historic resources on the subject site including living vegetation, steep slopes, water courses, flood plains, etc. Tree canopy requirements of the Land Development Code will be provided on the subject site in compliance with Land Development Code requirements.

- b. *The provisions for safe and efficient vehicular and pedestrian transportation both within the development and the community;*

STAFF FINDING: Provisions for safe and efficient vehicular and pedestrian transportation within and around the development, and Metro Public Works preliminarily approved the preliminary development plan. Right-of-way is noted on the plan to be dedicated at the time a Detailed District Development Plan is filed on site.

- c. *The provision of sufficient open space (scenic and recreational) to meet the needs of the proposed development;*

STAFF FINDING: The site is proposed to presently provide the same amount of open as is currently existing on the site. Any further development of the site will have to comply with Land Development Code requirements for buffers and tree canopy on site.

- d. *The provision of adequate drainage facilities on the subject site in order to prevent drainage problems from occurring on the subject site or within the community;*

STAFF FINDING: The Metropolitan Sewer District has provided preliminary approval for the plan and has not conveyed any concerns with the proposal.

- e. *The compatibility of the overall site design (location of buildings, parking lots, screening, landscaping) and land use or uses with the existing and projected future development of the area;*

STAFF FINDING: The overall site design and land uses are compatible with the existing and future development of the area. Additional landscape buffering and screening may be provided to screen adjacent properties upon further development and a Detailed District Development Plan, specifically for adjacent Vehicle Use Areas. The overall site design is generally compatible with the existing sites in the vicinity, including the complementary facilities on the same side of E Indian Trail in the immediate vicinity.

- f. *Conformance of the development plan with the Comprehensive Plan and Land Development Code. Revised plan certain development plans shall be evaluated for conformance with the non-residential and mixed-use intent of the form districts and comprehensive plan.*

STAFF FINDING: The development plan generally conforms to the applicable guidelines and policies of the Comprehensive Plan and to requirements of the Land Development Code. The proposal is complementary to the existing facilities surrounding the area and could allow development in the future that complies with the non-residential and mixed-use intent of the form districts and comprehensive plan.

REQUIRED ACTIONS

- **RECOMMEND** that the Louisville Metro Council **APPROVE** or **DENY** the **Change in Zoning** from R-4 Single Family Residential to M-2 Industrial
- **APPROVE** or **DENY** the **General District Development Plan** subject to proposed binding elements

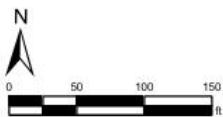
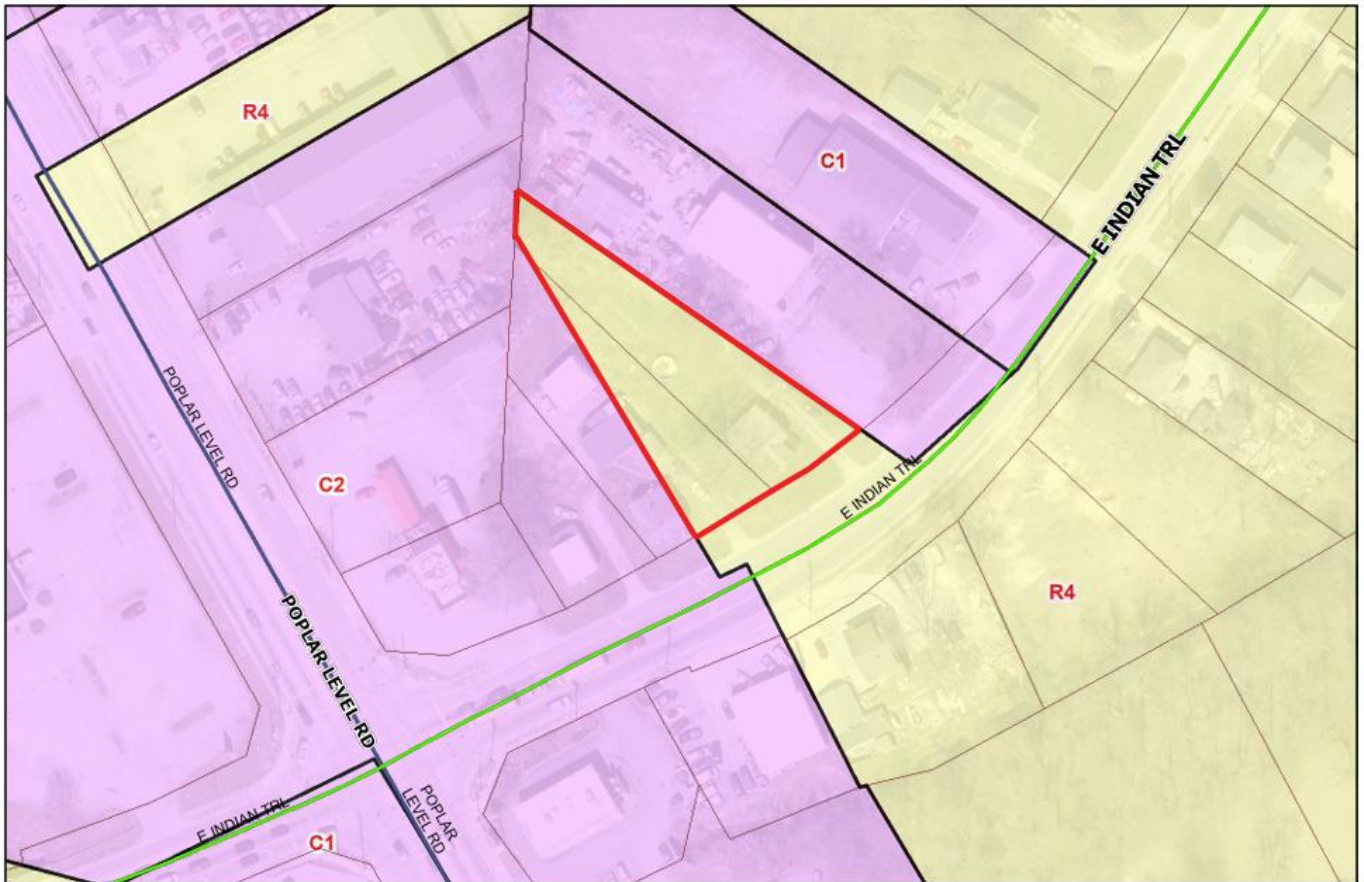
NOTIFICATION

DATE	PURPOSE OF NOTICE	RECIPIENTS
7/1/2026	Planning Commission Public Hearing	1st and 2nd tier adjoining property owners and current residents; Registered Neighborhood Groups in Council District 10
6/30/2026	Planning Commission Public Hearing	Sign Posting on Property
7/1/2026	Planning Commission Public Hearing	Legal Advertisement in the Courier-Journal

ATTACHMENTS

1. Zoning Map
2. Aerial Photograph
3. Plan 2040 Checklist
4. Proposed Binding Elements

1. ZONING MAP

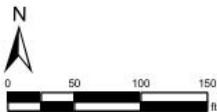


Thursday, July 2, 2026 | 10:50 AM



This map is not a legal document and should only be used for general reference and identification.

2. AERIAL MAP



Thursday, July 2, 2026 | 10:51 AM



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3. STAFF PLAN 2040 CHECKLIST

+	Exceeds Guideline
✓	Meets Guideline
-	Does Not Meet Guideline
+/-	More Information Needed
NA	Not Applicable

Suburban Marketplace Corridor: Non-Residential

Plan 2040 Plan Elements/Staff Analysis	
1	<p><u>Community Form: Goal 1, Policy 6.</u> Discourage non-residential expansion into existing residential areas unless applicant can demonstrate that any adverse impact on residential uses will be mitigated. Evaluation of impacts may include, but not be limited to, displacement of residents, loss of affordable housing units, traffic, parking, signs, lighting, noise, odor, and stormwater. Appropriate transitions from non-residential to residential uses should depend on the pattern of development of the Form District and may include natural vegetative buffers, landscaping or the use of higher density residential between lower density residential and/or non-residential.</p> <p>✓ <u>Staff Analysis:</u> The proposal would not constitute a non-residential expansion into an existing residential area as this property is entirely surround by commercial zoning on the north and southwest side of E Indian Trail. While there are residential uses in the vicinity, the site is located along E Indian Trail in a commercial corridor. Displacement of existing residents would be minimal, if any. The proposed zone would not create negative burdens as it relates to traffic, parking, lighting, and stormwater.</p>
2	<p><u>Community Form: Goal 1, Policy 7.</u> Locate higher density and intensity uses near major transportation facilities and transit corridors, employment centers, in or near activity centers and other areas where demand and adequate infrastructure exists or is planned.</p> <p>✓ <u>Staff Analysis:</u> The site is located on E Indian Trail, a minor arterial roadway. There is access to transit very near this location.</p>
3	<p><u>Community Form: Goal 1, Policy 8.</u> Encourage industries to locate in workplace Form Districts or in areas readily served by infrastructure and transportation facilities, including transit, rather than isolated industrial sites.</p> <p>N/A <u>Staff Analysis:</u> The proposal is not for industrial zoning.</p>
4	<p><u>Community Form: Goal 1, Policy 15.</u> When reviewing proposals for siting hazardous uses and uses with air, noise and light emissions, ensure disadvantaged populations are not disproportionately impacted.</p> <p>✓ <u>Staff Analysis:</u> The proposal would not permit hazardous uses, and uses with air, noise and light emissions must comply with code restrictions, and shouldn't disproportionately impact disadvantaged populations.</p>
5	<p><u>Community Form: Goal 1, Policy 16.</u> Consider impacts on human health, quality of life and the environment including prevailing meteorological conditions and the potential to transport noxious odors, particulates and emissions when reviewing new developments and redevelopments. Special attention should be paid to air and water quality when residences, schools, parks or vulnerable populations will be impacted. Mitigate impacts to areas that are disproportionately affected.</p> <p>✓ <u>Staff Analysis:</u> The proposed zoning district would not permit uses generating noxious odors, particulates or emissions, and should not create disparate impacts for populations disproportionately affected.</p>

Plan 2040 Plan Elements/Staff Analysis	
6	<p>Community Form: Goal 1, Policy 17. Mitigate adverse impacts of traffic from proposed development on nearby existing communities.</p> <p>✓ Staff Analysis: Primary access to the site is via E Indian Trail, a minor arterial roadway with access to transit at this location. This should not disparately impact existing communities.</p>
7	<p>Community Form: Goal 1, Policy 18. Mitigate adverse impacts of noise from proposed development on existing communities.</p> <p>✓ Staff Analysis: This proposal should not adversely impact the majority of the surrounding commercially zoned area, and the proposed zone should not create adverse impact from noise on the community.</p>
8	<p>Community Form: Goal 1, Policy 21. Require that industries which handle hazardous or flammable materials or are potentially offensive such as junkyards, landfills and quarries are sited to protect public health, safety and welfare and are located away from residential areas and population centers.</p> <p>N/A Staff Analysis: The proposed zoning district would not permit industries which handle hazardous or flammable materials, or which are similar in use to junkyards, landfills or quarries.</p>
9	<p>Community Form: Goal 2, Policy 1. Locate activity centers in appropriate areas in all Form Districts. Design and density should be compatible with desired form, adjacent uses, and existing and planned infrastructure.</p> <p>✓ Staff Analysis: The site is located on E Indian Trail, a minor arterial roadway with access to transit at this location, and within an existing marketplace corridor form.</p>
10	<p>Community Form: Goal 2, Policy 5. Locate retail commercial development in activity centers where it can be demonstrated that sufficient population exists or is anticipated to support it.</p> <p>✓ Staff Analysis: The site is located on E Indian Trail, a minor arterial roadway with access to transit at this location, and within an existing traditional marketplace corridor form.</p>
11	<p>Community Form: Goal 2, Policy 6. Encourage a more compact development pattern in activity centers that result in efficient land use and cost-effective infrastructure investment.</p> <p>✓ Staff Analysis: The proposed zoning could encourage a more compact pattern of development in the suburban marketplace corridor.</p>
12	<p>Community Form: Goal 2, Policy 7. Encourage activity centers to include a mixture of compatible land uses in order to reduce traffic congestion by requiring fewer trips, support and enhance alternative modes of travel, and encourage vitality and a sense of place.</p> <p>✓ Staff Analysis: The site is located on an existing transit route and in a suburban marketplace corridor.</p>
13	<p>Community Form: Goal 2, Policy 8. Encourage residential land uses in designated centers. Encourage residential and office uses above retail and other mixed-use multi-story retail buildings.</p> <p>✓ Staff Analysis: The proposed zoning could permit residential and office uses above retail.</p>
14	<p>Community Form: Goal 2, Policy 9. Encourage new developments and rehabilitation of buildings that provide commercial, office and/or residential uses.</p> <p>✓ Staff Analysis: The proposal indicates the re-use or preservation of the existing structures on site.</p>
15	<p>Community Form: Goal 2, Policy 10. Encourage outlot development in underutilized parking lots of existing development to promote utilization of existing infrastructure provided specific criteria for elements such as location, scale, signs, parking, lighting, and landscaping are met. Outlot development shall encourage street-level retail with residential units above.</p> <p>N/A Staff Analysis: The proposed site is currently an improved site with structures and therefore would not see the development of an existing outlot.</p>
16	<p>Community Form: Goal 3, Policy 9. Encourage development that respects the natural features of the site through sensitive site design, avoids substantial changes to the topography, and minimizes property damage and environmental degradation resulting from disturbance of natural systems.</p>

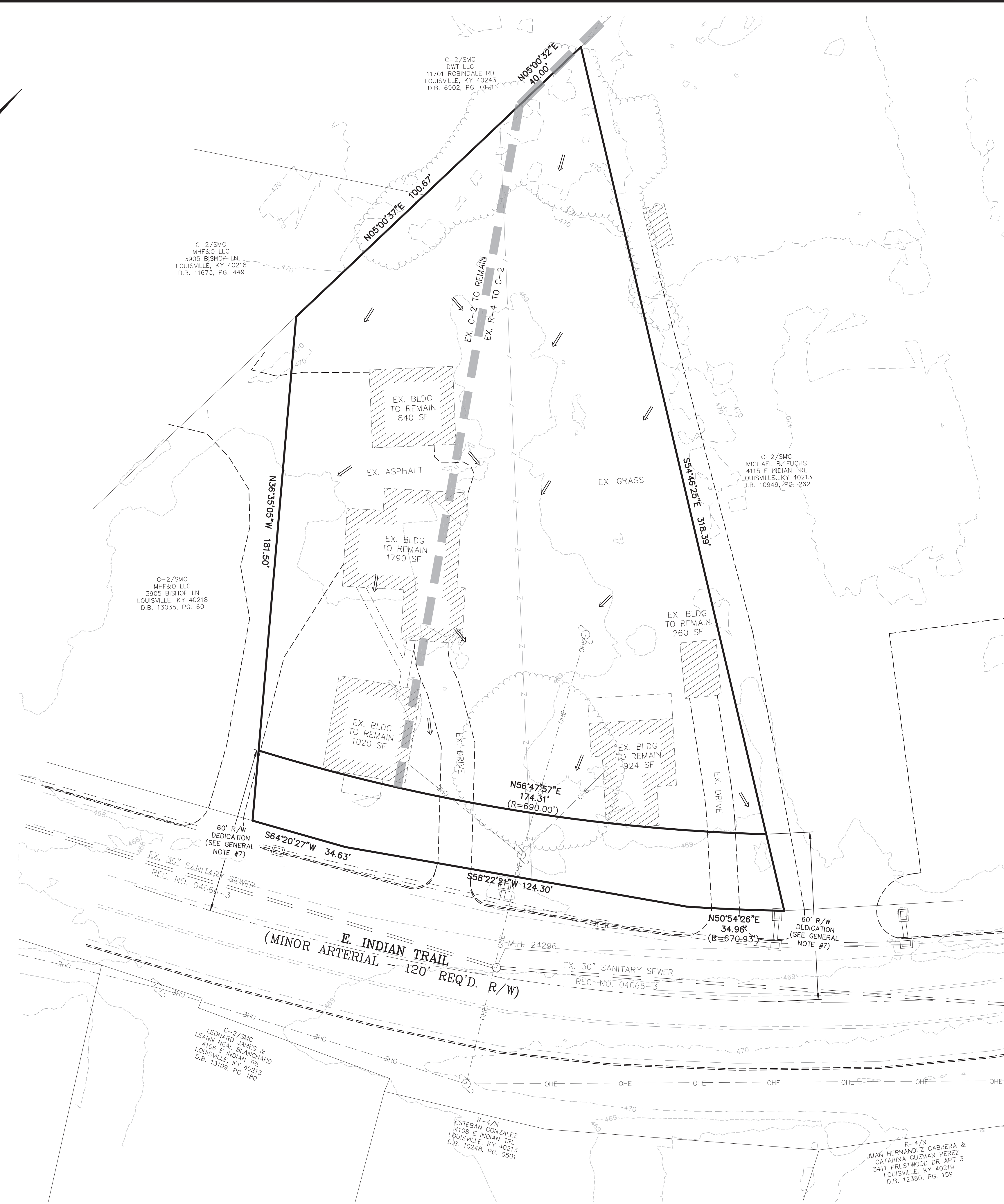
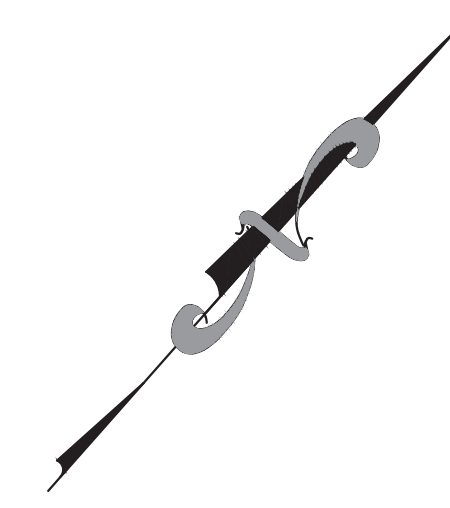
Plan 2040 Plan Elements/Staff Analysis	
✓	Staff Analysis: No natural features are evident on the site and the development should not disturb natural systems on site.
17	Community Form: Goal 3, Policy 10. Encourage development to avoid wet or highly permeable soils, severe, steep or unstable slopes where the potential for severe erosion problems exists in order to prevent property damage and public costs associated with soil slippage and foundation failure and to minimize environmental degradation.
✓	Staff Analysis: No wet or highly permeable soils, or severe, steep or unstable slopes are evident on the site.
18	Community Form: Goal 3, Policy 11. Encourage land uses within the Ohio River Corridor that are appropriate for and related to river corridor activities and that are consistent with the goals and objectives of the Ohio River Corridor Master Plan. Reserve appropriate riverfront sites such as the Upper River Road industrial area for river-related development. Allow development of commercial leisure businesses related to the river, such as boating services and restaurants in appropriate locations. Encourage new development in the Ohio River corridor and along key greenway and street connections to provide for public access in new riverfront development and to maintain views of the river from public rights-of-way.
N/A	Staff Analysis: The site is not located within the Ohio River Corridor.
19	Community Form: Goal 3, Policy 12. When reviewing proposed developments consider changes to flood-prone areas and other features vulnerable to natural disasters such as sinkholes and landslides. Ensure appropriate measures to protect health, safety and welfare of future users of the development.
✓	Staff Analysis: The site is not located in a flood-prone area or on karst terrain.
20	Community Form: Goal 4, Policy 1. Preserve buildings, sites, districts and landscapes that are recognized as having historic or architectural value and ensure that new land uses are compatible in height, massing, scale, architecture style and placement when located within the impact area of such resources.
✓	Staff Analysis: Historic Preservation has preliminarily approved the proposal.
21	Community Form: Goal 4, Policy 2. Encourage preservation of distinctive cultural features including landscapes, natural elements and built features.
✓	Staff Analysis: Historic Preservation has preliminarily approved the proposal.
22	Mobility: Goal 1, Policy 4. Encourage higher densities and intensities within or near existing marketplace corridors, existing and future activity centers, and employment centers to support transit-oriented development and an efficient public transportation system.
✓	Staff Analysis: The site is located within an existing marketplace corridor and along a transit route.
23	Mobility: Goal 3, Policy 1. Encourage a mix of complementary neighborhood serving businesses and services in neighborhood and village centers to encourage short trips easily made by walking or bicycling.
✓	Staff Analysis: The proposed zoning could permit a mix of complementary neighborhood-serving businesses and services.
24	Mobility: Goal 3, Policy 2. To improve mobility, and reduce vehicle miles traveled and congestion, encourage a mixture of compatible land uses that are easily accessible by bicycle, car, transit, pedestrians and people with disabilities. Housing should be encouraged near employment centers.
✓	Staff Analysis: The site is easily accessible by car and transit. Development of the site with the proposed zoning could provide access for pedestrians and people with disabilities to Poplar Level Road. The proposed zoning would encourage a mixture of compatible land uses.
25	Mobility: Goal 3, Policy 3. Evaluate developments for their ability to promote public transit and pedestrian use. Encourage higher density mixed-use developments that reduce the need for multiple automobile trips as a means of achieving air quality standards and providing transportation and housing choices.
✓	Staff Analysis: The site is in close proximity to a transit route and development of the site would provide.

Plan 2040 Plan Elements/Staff Analysis	
26	<p>Mobility: Goal 3, Policy 4. Encourage development of walkable centers to connect different modes of travel. Siting of these multi-modal centers shall consider the effects of the following: 4.1. nodal connections identified by Move Louisville; 4.2. impact on freight routes; 4.3. time of operation of facilities; 4.4. safety; 4.5. appropriate linkages between neighborhoods and employment; and 4.6. the potential for reducing travel times and vehicle miles traveled.</p> <p>✓ Staff Analysis: Transportation Planning has preliminarily approved the proposal.</p>
27	<p>Mobility: Goal 3, Policy 5. Evaluate developments for their impact on the transportation network (including the street, pedestrian, transit, freight movement and bike facilities and services) and air quality.</p> <p>✓ Staff Analysis: Transportation Planning has preliminarily approved the proposal.</p>
28	<p>Mobility: Goal 3, Policy 6. Ensure that those who propose new developments bear or share in rough proportionality the costs of transportation facilities and services made necessary by development.</p> <p>✓ Staff Analysis: Transportation Planning has preliminarily approved the proposal. Right of way will be dedicated upon submittal of a Detailed District Development Plan.</p>
29	<p>Mobility: Goal 3, Policy 9. When existing transportation facilities and services are inadequate and public funds are not available to rectify the situation, the developer may be asked to make improvements, roughly proportional to the projected impact of the proposed development, to eliminate present inadequacies if such improvements would be the only means by which the development would be considered appropriate at the proposed location.</p> <p>✓ Staff Analysis: Transportation Planning has preliminarily approved the proposal. Right of way will be dedicated upon submittal of a Detailed District Development Plan.</p>
30	<p>Mobility: Goal 3, Policy 10. Ensure that necessary improvements occur in accordance with long-range transportation plans and level of mobility criteria for all modes of travel.</p> <p>✓ Staff Analysis: Transportation Planning has preliminarily approved the proposal.</p>
31	<p>Community Facilities: Goal 2, Policy 1. Locate development in areas served by existing utilities or capable of being served by public or private utility extensions.</p> <p>✓ Staff Analysis: The relevant utilities have not identified any concerns related to the proposal.</p>
32	<p>Community Facilities: Goal 2, Policy 2. Ensure that all development has an adequate supply of potable water and water for fire-fighting purposes. Locate only very low-density land uses on sites that use on-lot sewage disposal systems or on a private supply of potable water.</p> <p>✓ Staff Analysis: Louisville Water Company has not identified concerns related to the proposal.</p>
33	<p>Community Facilities: Goal 2, Policy 3. Ensure that all development has adequate means of sewage treatment and disposal to protect public health and to protect water quality in lakes and streams as determined by the Metropolitan Sewer District (MSD).</p> <p>✓ Staff Analysis: MSD has preliminarily approved the proposal.</p>
34	<p>Economic Development: Goal 1, Policy 2. Encourage industries, to the extent possible, to locate in industrial subdivisions or adjacent to an existing industry to take advantage of special infrastructure needs.</p> <p>N/A Staff Analysis: The proposal is not for industrial zoning.</p>
35	<p>Economic Development: Goal 1, Policy 3. Locate commercial uses generating high volumes of traffic on a major arterial street, at the intersection of two minor arterials, or at a location with adequate access to a major arterial and at locations where nuisances and activities of the proposed use will not adversely affect adjacent areas.</p> <p>✓ Staff Analysis: The site is located on E Indian Trail, a minor arterial roadway with access to transit at this location, and near the intersection of Poplar Level Road.</p>

Plan 2040 Plan Elements/Staff Analysis	
36	<p><u>Economic Development: Goal 1, Policy 4.</u> Utilize industrial sites near the airport and the Ohio River to support the growth and development of uses whose infrastructure and production needs require such a location or for land uses that support airport-oriented or river-oriented industrial uses.</p> <p>N/A <u>Staff Analysis:</u> The proposal is not for industrial zoning. The site is not near the airport or the Ohio River.</p>
37	<p><u>Economic Development: Goal 1, Policy 5.</u> Require industrial developments to locate with the appropriate transportation connectivity, near an arterial street or within existing industrial subdivisions.</p> <p>N/A <u>Staff Analysis:</u> The proposal is not for industrial zoning.</p>
38	<p><u>Livability: Goal 1, Policy 17.</u> Determine site susceptibility to erosion; identify the presence of on-site carbonate conditions and features that are vulnerable to site disturbance; identify the extent of existing groundwater use and the impacts of the project on groundwater resources, flow patterns, and existing and proposed surface drainage. Then mitigate potential hazards to such systems resulting from the project.</p> <p>N/A <u>Staff Analysis:</u> The site does not appear to be located on karst terrain.</p>
39	<p><u>Livability: Goal 1, Policy 21.</u> Mitigate negative development impacts to the integrity of the regulatory floodplain by encouraging development patterns that minimize disturbance and consider the increased risk of more frequent flooding events.</p> <p>✓ <u>Staff Analysis:</u> The site is not located in the floodplain.</p>
40	<p><u>Livability: Goal 1, Policy 24.</u> Ensure, to the extent feasible, that critical facilities and those that store or use hazardous wastes are located outside the regulatory floodplain. Where essential community facilities must be located within a floodplain (e.g., pumping stations), ensure that these facilities are designed, located and operated in a manner that minimizes loss of services during flood events as well as limits, to the extent possible, floodplain disturbance.</p> <p>✓ <u>Staff Analysis:</u> The site is not located in the floodplain.</p>
41	<p><u>Housing: Goal 1, Policy 2.</u> Promote housing options and environments that support aging in place. Encourage housing for older adults and people with disabilities to be located close to shopping and transit routes and, when possible, medical and other supportive facilities.</p> <p>✓ <u>Staff Analysis:</u> The proposed zoning could support aging in place and creating housing for older adults.</p>
42	<p><u>Housing: Goal 2, Policy 1.</u> Encourage inter-generational, mixed-income and mixed-use development that is connected to the neighborhood and surrounding area.</p> <p>✓ <u>Staff Analysis:</u> The proposed zoning could permit inter-generational mixed-income and mixed-use development. The site is accessible to the neighborhood and surrounding area.</p>
43	<p><u>Housing: Goal 2, Policy 2.</u> Locate housing within proximity to multi-modal transportation corridors providing safe and convenient access to employment opportunities, as well as within proximity to amenities providing neighborhood goods and services. Higher density, accessible residential uses should be located along transit corridors and in or near activity centers.</p> <p>✓ <u>Staff Analysis:</u> The site is located on E Indian Trail, a minor arterial roadway and transit corridor at this location. The proposed zoning district would permit housing.</p>
44	<p><u>Housing: Goal 3, Policy 2.</u> As neighborhoods evolve, discourage displacement of existing residents from their community.</p> <p>✓ <u>Staff Analysis:</u> Displacements of residents, if any, would be minimal as it relates to the proposal.</p>
45	<p><u>Housing: Goal 3, Policy 3.</u> Encourage the use of innovative methods such as clustering, mixed-use developments, co-housing, and accessory apartments to increase the production of fair and affordable housing.</p> <p>✓ <u>Staff Analysis:</u> The proposed zoning district could permit innovative methods of housing.</p>

4. PROPOSED GENERAL PLAN BINDING ELEMENTS

1. The development shall be in accordance with the approved district development plan, all applicable sections of the Land Development Code (LDC) and agreed upon binding elements unless amended pursuant to the Land Development Code. Any changes/additions/alterations of any binding element(s) shall be submitted to the Planning Commission or the Planning Commission's designee for review and approval; any changes/additions/alterations not so referred shall not be valid.
2. Prior to development (includes clearing and grading) of each site or phase of this project, the applicant, developer, or property owner shall obtain approval of a Detailed District Development Plan in accordance with Chapter 11, Part 6. Each plan shall be in adequate detail and subject to additional binding elements.
3. Before any permit (including but not limited to building, parking lot, change of use, site disturbance, alteration permit or demolition permit is requested:
 - a. The development plan must receive full construction approval from Construction Review, Louisville Metro Public Works and the Metropolitan Sewer District. .
 - b. The property owner/developer must obtain approval of a detailed plan for screening (buffering/landscaping) as described in Chapter 10 prior to requesting a building permit. Such plan shall be implemented prior to occupancy of the site and shall be maintained thereafter.
4. The applicant, developer, or property owner shall provide copies of these binding elements to tenants, purchasers, contractors, subcontractors and other parties engaged in development of this site and shall advise them of the content of these binding elements. These binding elements shall run with the land and the owner of the property and occupant of the property shall at all times be responsible for compliance with these binding elements. At all times during development of the site, the applicant and developer, their heirs, successors; and assignees, contractors, subcontractors, and other parties engaged in development of the site, shall be responsible for compliance with these binding elements.
5. Tree clearing and site grading for individual lots in the development shall be permitted only in accordance with approved Detailed District Development Plans for each section of the development, except for as needed to install roadways and utility equipment.
6. Right-of-way to be dedicated along E Indian Trail as required by Public Works will be provided at the time of approval of a Detailed District Development Plan.



LOCATION MAP
NOT TO SCALE

PROJECT DATA

TOTAL SITE AREA	= ±0.86 Ac. (37,504 SF)
EXISTING ZONING	= R-4/C-2
PROPOSED ZONING	= C-2
FORM DISTRICT	= SUBURBAN MARKETPLACE CORRIDOR
EXISTING USE	= RESIDENTIAL
PROPOSED USE	= COMMERCIAL
EXISTING BUILDING AREA	= 4,834 SF

GENERAL NOTES:

1. Site lighting shall not shine in the eyes of drivers. If it does it shall be re-aimed, shielded, or turned off.
2. Benchmark and topographical information shown hereon were derived from aerial data. Boundary information was drawn from Lojic.
3. The contours shown on this plat are based on LIDAR point cloud data acquired through KyFromAbove, a Kentucky State funded program. The vertical datum used is the North American Vertical Datum of 1988 (NAVD 88), with a current geoid model of "GEOID18" used for conversion between ellipsoid and orthometric heights.
4. Subject lots to be consolidated.
5. TCCA not required as there is no new development proposed at this time.
6. Compatible utilities shall be placed in a common trench unless otherwise required by appropriate agencies.
7. Right-of-Way dedication to be provided at DDDP level review and approval.

MSD NOTES:

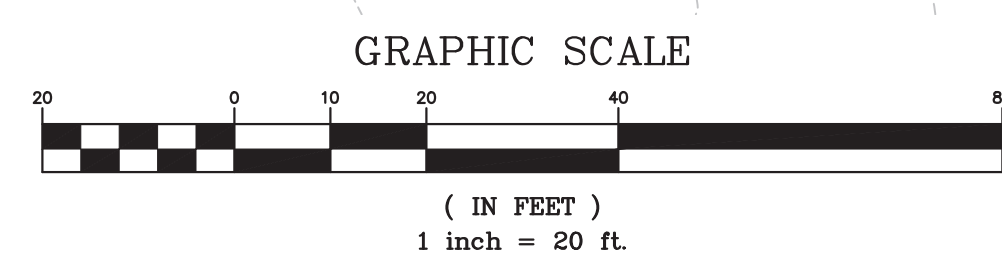
1. Existing sanitary sewer service onsite to remain.
2. No portion of the site is within the 100 year flood plain per FIRM Map No. 21111 C 0077 F dated February 26, 2021.
3. Drainage pattern depicted by arrows (⇒) is for conceptual purposes.
4. If the site has thru drainage an easement plat will be required prior to MSD granting construction plan approval.
5. This project is subject to MS4 Water Quality Regulations once the incremental area of disturbance sums equal to or greater than 1 acre of disturbance. Per this preliminary development plan, the area of disturbance is 0 SF.

FIRE DEPARTMENT NOTES:

1. The subject property is located in the Okolona Fire District.
2. Local Fire Authority Having Jurisdiction (AHJ) Contact information: Frankie Nalley (frankie.nalley@okolonafire.com).
3. Hydrants: Prior to the combustible phase of construction an adequate water supply including accessible hydrants for firefighting purposes must be made available, and no utilities shall be connected to the structure until adequate supply is provided (LMCO 94.81).
4. Gates: No gates shall be installed which limit or restrict access to a residential area except as approved by AHJ of the referenced Fire District.
5. Emergency Responder Radio Coverage: Emergency Radio Systems are required to meet minimum signal strength criteria, to be confirmed via third party testing, prior to issuance of the Certificate of Occupancy in some buildings.
6. Requirements for specification of Fire Department Connections (FDC), threads, size, location, placement of the Knox Box, or Firefighter Safety Building Marking Signage must be obtained from the AHJ of the referenced Fire District.
7. Permitted projects shall comply with national fire Protection Association (NFPA) 241, Standard for Safeguarding Construction, Alteration, and Demolition Operations.

LEGEND

	EXISTING CONTOUR
	EXISTING SANITARY SEWER
	EXISTING STORM AND CATCH BASIN
	EXISTING ZONING LINE
	EXISTING UTILITY POLE
	EXISTING OVERHEAD ELECTRIC



SITE ADDRESS:
4107 & 4111 E INDIAN TRAIL
LOUISVILLE, KY 40213
TAX BLOCK 0624, LOT 0353 & 0354
D.B. 13035, PG. 60

COUNCIL DISTRICT - 10
FIRE PROTECTION DISTRICT - OKOLONA
MUNICIPALITY - WATTERSON PARK

CASE #

WATER/SUB#

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	06.03.26	ADDRESSED AGENCY COMMENTS	ZS
2	06.30.26	CHANGED R/W DEDICATION	ZS

PROJECT DATA	ENGINEER'S SEAL
FILE NAME: 26034 - ZONE CHANGE	
DATE: 04.01.26	
CHECKED BY: ZS	
SCALE: AS SHOWN	
GRANN BY: ZS	
SURVEYOR'S SEAL	

GENERAL PLAN

4107-4111 E INDIAN TRAIL

OWNER/DEVELOPER
MHF&O LLC
3905 BISHOP LN
LOUISVILLE, KY 40218

LD&D
LAND DESIGN & DEVELOPMENT, INC.
BUSINESS: LAND SURVEYING, LANDSCAPE ARCHITECTURE
627 WATTERSON AVENUE, SUITE 101, LOUISVILLE, KENTUCKY 40222
PHONE: 502.426.9714
WEB SITE: WWW.LD&D.COM

JOB NO.	26034
SHEET	1
OF	1

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ZONING APPLICATION'S COMPLIANCE WITH PLAN 2040

**4111 E. INDIAN TRAIL (0.360 ACRE)
PORTION OF 4107 E. INDIAN TRAIL (0.194 ACRE)
PROPOSED ZONE CHANGE FROM: R-4, SINGLE-FAMILY RESIDENTIAL
TO: C-2, COMMERCIAL**

THE PROPOSAL

The Applicant, MHF&O, LLC, proposes its application to rezone to C-2, Commercial approximately 0.554 acres of land it owns and is zoned R-4, Single-Family Residential and covers the entirety of one property located at 4111 and a portion of the adjacent property at 4107 E. Indian Trail, Louisville, KY 40213, the latter parcel of property of which is currently split zoned C-2 and R-4 (the "**Property**"). Should the Property be successfully rezoned, the Applicant will consolidate it with three additional adjacent C-2 zoned parcels of property it owns that are located at 4103 and 4105 E. Indian Trail and 4103 Poplar Level Road to form a larger site ("**Site**"). No land user is identified at this time. Once consistently zoned under one zoning designation district, however, the Site's marketability will improve for attracting a corner commercial land user or users to the Site that will provide opportunities for neighborhood-serving users to provide goods and services benefitting the nearby neighborhoods and anchor the southern boundary of the Suburban Marketplace Corridor Form District ("**SMCFD**"), which also coincides with the southern boundary to the City of Watterson Park, with a viable activity center (the "**Proposal**"). The Applicant also files its related general development plan (the "**GDP**") for the Site, as drafted by Land Design and Development Inc. LD&D).

THE PROPOSAL'S AGREEMENT WITH PLAN 2040 LOUISVILLE METRO'S COMPREHENSIVE PLAN

The proposed application to rezone the Property from its existing R-4, Single-Family Residential designation to C-2, Commercial is in agreement with Plan 2040, A Comprehensive Plan for Louisville Metro ("**Plan 2040**"), as justified in detail hereinbelow, and therefore C-2 zoning is an appropriate designation for the Property and should be approved.

Plan Element 1 - Community Form

The Applicant's Proposal conforms to Community Form Plan Element 1 and all applicable Goals, Objectives and Policies adopted thereunder. Plan 2040's Community Form Plan Element guides the shape, scale and character of development in ways intended to promote a connected, healthy, authentic, sustainable and equitable built environment. Community Form encourages redevelopment while promoting land use flexibility. As described herein, the Applicant's Proposal advances these stated principles of the Community Form because the Proposal involves an appropriate rezoning of a sliver of remaining R-4, Single-Family Residential land area sandwiched between properties that are

zoned C-2, Commercial and located within the SMCFD, at the busy intersection of Poplar Level Road, a major arterial roadway, and E. Indian Trail, a minor arterial roadway. Rezoning the Property to C-2 will allow for a number of properties located at this intersection to be consolidated into a usable commercial site, which, when formed, can facilitate a commercial user or users on the Property. The C-2 zoning district adds flexibility in permissible commercial land uses that can attract desired users to the Property and the Site can be designed with the necessary supporting parking, landscaping, property stormwater drainage, if necessary, and safe access to the roadway network, all of which will inject much needed vitality into the existing underperforming condition of these corner properties, thereby strengthening the interrelationship between the SMCFD and the adjacent Neighborhood Form District ("**NFD**").

The Property is currently located within the SMCFD. Per Goal 1, Policy 3.1.8 of Plan 2040, Suburban Marketplace Corridors are generally located along major roadways with well-defined beginning and ending points and established depths along the length of the corridor. The pattern of development is distinguished by a mixture of medium-to high-intensity uses. Accommodation for transit users, bicyclists and pedestrians are encouraged in an effort to attract a variety of users as well as to minimize automobile dependency and traffic congestion. Transit-oriented development and park and ride facilities are encouraged to facilitate the creation of transit nodes throughout the community. Connectivity to nearby uses should be encouraged. Developers should be encouraged to design new commercial development in compact groups of buildings, which use the same curb cut, share parking, have a common freestanding sign identifying the uses and have a common buffering or streetscape plan with respect to any abutting uses of lower density or intensity. This form may include medium to high-density residential uses that are designed to be compatible with both the non-residential uses along the corridor and the lower-density residential uses in adjacent Form Districts. Proposed new commercial uses are encouraged to locate within the boundaries of existing corridors. Reuse of locations within existing corridors is preferred over expansion of a corridor.

The Property is situated between properties already zoned C-2, Commercial and across E. Indian Trail from another property zoned C-2 Commercial and property adjacent to the east of that C-2 property that is zoned R-4, Single-Family Residential. The Property and the Site sit within a SMCFD that includes this intersection and both sides of a stretch of Poplar Level Roadway that runs between the northern section and southern section of a very large Suburban Workplace Form District ("**SWFD**") comprised of all sizes of employers from the large Haier/GE to the southeast, to an active industrial park to the north that also includes the large employer Churchill Downs gaming facility. This particular corner where the Site lies is ripe for redevelopment as a neighborhood-serving commercial use or small commercial center, which can also act as an effective transition between the lower intensity residential uses to the east and to the south of the Property and the higher intensity commercial users fronting the commercial corridor to the north.

The rezoning of the Property is an appropriate correction to make to this leftover remaining slice of single-family zoning district because the Property's location at the corner of two major corridors and within the SMCFD places the Property within an established

commercial area, as recognized by Plan 2040, and because the Property is surrounded by commercial users. Therefore, the rezoning of the Property is not an expansion of commercial zoning into a residential area, not an expansion to the boundaries of the existing SMCFD as it is today, and the redevelopment of the Property will not displace residents. The C-2 zoning being sought for the Property will not allow for hazardous materials to be handled or stored onsite, nor will it permit the location of industrial uses on the Property, nor permit noxious odors, particulates or emissions. The Property's proximity near an expansive SWFD will support industrial users and their employees, however, because the C-2 zoning being assigned to the Property can provide goods and services to these employees commuting to or from work. Uses with air, noise and light emissions must comply with LMCO and LDC restrictions already in place and applicable to the Property.

The Proposal aims to reinforce the adjacent NFD by allowing for the placement of appropriate neighborhood-serving commercial users that will attract customers on foot or bicycle or transit from nearby residents and workers who are employed by existing job centers in the adjacent SWFD, as well as capture traffic already traveling the Poplar Level and E. Indian Trail corridors. C-2 zoning for the Property will open the door for five (5) C-2 zoned properties to be utilized as one commercial site and instill flexibility for more variety in land uses to locate thereon, which, in turn, creates potential for a more sustainable commercial site, which strengthens the viability of both the SMCFD and the adjacent NFD. Indeed, the flexibility in land uses the C-2 zoning district affords will help the Site attract tenants to the existing commercial activity center, thereby maintaining a draw for customers to come to the Site, where said customers can access various goods and services all from the same property. The ability to attract new commercial tenants to revitalize the Property supports the nearby residential uses that rely on nearby access to commercial uses for goods and services and for potential job opportunities. Should residential uses be desired on the Property in the future, the C-2 zoning district can accommodate such a use. Residential uses atop commercial spaces could be an option, depending on appropriate site design.

The Property will be accessed via E. Indian Trail and, upon redevelopment, the then applicant will need to work with Louisville Metro Public Works and KYTC to ensure safe, efficient access is established to the Site. Cross-access to neighboring C-2 properties will be established if it makes sense. No junkyards, landfills or quarries would be permitted or even feasible on the Property. Details setting forth parking areas, required building heights, interior and perimeter landscaping, signage and required setbacks will be displayed on detailed plans in the future, when a commercial user(s) pursue development on the Site, including the Property. Considering the limited size of the Property and the Site, a compact development pattern could prove to be ideal for Site improvements. The Applicant is willing to consider reasonable binding elements on its GDP to address compatibility of future users with the residences east and south of the Property, thereby protecting residential users no matter which commercial users end up locating on the Property. Existing structures on the Site will be maintained until proposed redevelopment requires their removal. For the aforementioned reasons, the Proposal is in accord with Goal 2 of Plan 2040's Community Form because, as explained herein, the Proposal encourages sustainable growth and supports density around mixed-use centers and corridors.

In response to applicable Policies under Plan 2040's Community Form's 3rd Goal, the Property and the Site contain no historic or archaeological resources that contribute to Louisville Metro's authenticity, nor does the site contain watersheds, viewsheds, karst areas or natural resources to leave undisturbed and protected. No flood prone areas or wet or highly permeable soils, areas within floodplain or severe, steep or unstable slopes exist on the Property or on the Site to avoid. No environmental resources or water features are present on either the Property or the Site, thereby nothing on the Site is worth protecting for the purpose of enhancing residential neighborhoods. Open Space is not required for the Proposal and there is no available area on the already developed Property for any meaningful or functional open space to be established. Consequently, the Proposal complies with the applicable objectives and policies of Plan 2040 Community Form's Goals 1, 2 and 3. Plan 2040's Goals 4 and 5 are inapplicable to this Property and specific Proposal.

Plan Element 2 - Mobility

The Applicant's Proposal complies with the intent of Plan 2040's Mobility Plan Element and its applicable goals, objectives and policies. Goal 1 of Plan 2040's Mobility Plan Element is to implement an accessible system of alternative transportation modes. Goal 2 of the Mobility Plan Element is to plan, build and maintain a safe, accessible and efficient transportation system, while Goal 3 encourages land use and transportation patterns that connect Louisville Metro and support future growth. The Applicant's Proposal complies with Plan 2040's Mobility Plan Element because the Property is part of an activity center at the intersection of major and minor arterial roadways and within a SMCFD and, when redeveloped, will utilize safe access points to the Property, as reviewed and approved by Louisville Metro Public Works, Metro Transportation Planning and KYTC for customers to use when visiting the site seeking goods and service from neighborhood-serving users.

Opportunities for cross-access to neighboring properties will arise as those neighboring properties develop in the future. Considering the Property is currently contiguous to C-2 zoned properties, should the remaining R-4 portion of the Property be rezoned to C-2, access to the Property will not occur through areas of significantly lower intensity or density. Easy access to TARC routes on Poplar Level Rd. supports the rezoning of the Property to a commercial district and the future placement of neighborhood-serving commercial uses will encourage pedestrians to access the property via sidewalks, the construction of which will be required upon redevelopment of the Property. Also, upon redevelopment of the Property, the Applicant will work with KYTC on any alterations to the Poplar Level curb cuts to the Property, if necessary. Bicycle parking will be provided on the Site in support of a new commercial user for the future user's customers or employees who desire or need to bike to the Property. Therefore, once redeveloped into a cohesive commercial site, an accessible system of alternative transportation modes, including pedestrian connections, vehicular connections and transit will serve the Property.

Depending on the ultimate commercial users for the Property, and the particular needs of those users, detailed district development plan(s) ("**DDDP**") will be required for submittal and review. These DDDPs of future commercial users will depict the specific parking areas and vehicular use areas for the respective users, which said details will be

reviewed for compliance with applicable LDC regulations at the time of filing. Information related to necessary right-of-way dedications, lane widths, turn lanes, if necessary, proper site distances and proper turning radii will be set forth on those required detailed plans. The proposed change to C-2 zoning for the Property will permit a mix of complimentary neighborhood-serving uses to support the surrounding neighborhoods and, as mentioned, there are multi-modal mobility options for visitors to access the Property, thereby shortening trips for residents in search of goods and services. Consequently, the existing modes of transportation available to access the Property encourage connections between land uses, neighborhoods, and different geographic areas of Louisville Metro and support the Property's and surrounding SMCFD's future growth. For the foregoing reasons, the Proposal complies with the Mobility Plan Element of Plan 2040, including its Goals 1, 2 and 3 and their applicable Policies.

Plan Element 3 – Community Facilities

Plan 2040's Community Facilities Plan Element provides guidance and recommendations for the proper integration of necessary community resources across Louisville Metro to plan and maintain accessible facilities that will improve the quality of life for existing and future residents and visitors of Louisville Metro. The Proposal complies with Plan 2040's Community Facilities Plan Element, and all applicable Goals, Objectives and Policies thereunder, because the Property has access to all necessary utilities to support commercial use of the Property. The Applicant will work with utility providers on site design and hooking up buildings when the time comes for commercial users to locate on the Property. The Property also has an adequate supply of potable water and water for fire-fighting purposes and is served by the Louisville's Okolona District, which has a nearby fire district station #3 1.1 miles to the southeast of the Property at 1714 Rangeland Rd, Louisville, KY 40219. The Louisville Metro Police Department's Sixth Division is assigned to the Property.

Plan Element 4 – Economic Development

The intent of Plan Element 4 of Plan 2040 is to provide a positive, healthy economic climate for citizens of Louisville Metro in a way that cultivates a vibrant city to attract and retain a highly skilled workforce. Sound economic development planning allows for equitable, sustainable and innovative growth that strengthens our community's ability to attract and retain a strong and diverse workforce. The Applicant's Proposal advances the intent of Plan 2040's Economic Development because it will designate consistent and appropriate zoning across all five (5) parcels that comprise the Property, thereby allowing the owner to form a corner commercial site at the intersection of minor and major arterial roadways and within a SMCFD. The rezoning will pave the way to attract a neighborhood serving commercial land user to the Property, which will provide new vitality and sustainability to an underserved portion of the enveloping SMFD. The Property's prime location also provides it with strong opportunities to capture traffic trips already traveling either the Poplar Level or the E. Indian Trail corridors.

By removing the remaining R-4 zoning from the Property in favor of the proposed C-2 zoning designation, the Property will be marketable to a commercial user who might otherwise hesitate to be interested in the Property considering the existing zoning gap between the C-2-zoned areas of the Property. And, rezoning the Property to C-2 removes this intervening zoning gap, thereby providing a larger commercial site, although moderate in its fully consolidated size, which will widen the list of potential commercial users who could utilize the Property to establish and operate thereon a business. The increase in marketability to attract various neighborhood-serving commercial users is positive for economic development of the neighborhood, the SMCFD, and beyond, as it increases the options for quality tenants that provide needed and sought after goods and services to support everyday life of residents within the adjacent NFD and should a tenant of the Property not succeed for whatever reason, the Property can attract replacement commercial tenants.

The Property is already part of an activity center of commercial properties aligning Poplar Level Road that is outfitted with existing infrastructure to serve commercial users and their customers. Additionally, the Proposal promotes the Goals and Objectives of Plan 2040's Economic Development Plan Element because it would permit land uses compatible with the existing commercial activity center and lure more neighborhood serving commercial uses. TARC serves this section of Poplar Level Road where the Property sits. Therefore, access to nearby transit gives patron guests of the future commercial users of the Property, and employees working on the Property, multi-modal transportation options to travel to/from the Property. As a result, the Proposal on the Property will help various folks engage in the local Louisville Metro marketplace. Therefore, the Proposal agrees with Plan 2040's Economic Development Plan Element and its applicable policies.

Plan Element 5 – Livability

The Livability Plan Element of Plan 2040 provides guidance and direction for the provision and maintenance of resources necessary for the health and well-being of citizens, including a focus designing and developing places while prioritizing the protection and enhancement of the natural environment and the integration of it with the built environment as development occurs. The Applicant's Proposal is consistent with the applicable Goals, Objectives and Policies of Plan 2040's Livability Plan Element, primarily those set forth under Goal 1 of the Plan Element, because the rezoning of the R-4 portion of the Property will help attract commercial users to the site that can provide everyday commercial goods and services in support of the adjacent NFD residents and nearby SWFD workers, which will help shorten travel distances and vehicular travel time for certain goods and services, thereby helping to reduce emissions along popular corridors in the immediate area. When redevelopment of the site in support of a commercial user occurs, the requirement for a DDDP will be triggered, which, when submitted, will reflect the addition of tree plantings and new landscaping to the Property, and specifics related to management of stormwater drainage on the Property will be addressed.

The Property contains no environmental sensitivities that, when the Property is redeveloped, would be disrupted and harm the Property or negatively impact any abutting

properties. No area associated with the Proposal is in the regulatory floodplain, nor the 100-year flood hazard area (per FEMA FIRM Panel 21111C0077F). The Property shows thereon no indication of Hydric soils. The Property contains no characteristics of carbonate or karst areas being present and possesses no protected waterways, riparian zones, nor blue line streams – perennial or intermittent. Also, the Property is home to no known archaeological features on it. No severe, steep or unstable slopes exist on Property of which would cause impediments to its current use or to its redevelopment a corner commercial site, whenever that may occur in the future. Consequently, Applicant’s Proposal will have no negative impacts to mitigate on the Site.

The rezoning of the Property conforms to the requirements of APCD, represents an appropriate zoning designation that strengthens the existing pattern of development along these stretches of the Poplar Level Road and E. Indian Trail corridors and for the immediate surrounding activity center within the SMCDFD. The Property will rely on current traffic patterns and infrastructure. The Property is in an area supported by nearby transit services whereby accessing the site is not limited to only vehicle access.

Plan Element 6 – Housing

The Housing Plan Element strives to enhance housing opportunities for all citizens of Louisville Metro by promoting equitable housing means, ensuring diverse, quality, physically accessible, affordable housing choices with access to opportunities, services and amenities. The following three Goals are set forth within the Housing Plan Element: 1) Expand and ensure a diverse range of housing choices; 2) Facilitate the development of connected mixed-use neighborhoods; and 3) Ensure long-term affordability and livable options in all neighborhoods. The Proposal is not for housing. C-2 zoning does permit various housing options, however, including single-family or multi-family residential housing types and the different housing styles under each type, which could support aging in place, inter-generational, mixed income and mixed-use development that would benefit the SWFD and the nearby NFDs. Transit also serves the Property via Poplar Level Road. Therefore, should the Property be repurposed in the future to residential use, the C-2 zoning district does support housing choice for redevelopment of the Site. Considering the entirety of the Site is under two (2) acres and located at a busy roadway intersection, the potential for building housing on the Property is low, unless the Property is consolidated with additional properties to form an even larger site.

The proposed C-2, Commercial zoning for the Property will provide opportunities for a variety of commercial users to locate and operate on the Property, which will contribute to the existing activity center along Poplar Level Roadway and at this corner of Poplar Level and E. Indian Trail, further supporting residents in the adjacent NFD. The sliver of land area subject of the rezoning request contains two residential structures, one of which is used commercially (within the commercially zoned portion of the parcel) and with the other residential structure, the applicant allows a resident to live there temporarily for little to no rent. The residents is aware of the portion of the Property is being rezoned to support a future commercial user, thereby providing the resident with notice to find a different location to reside.

For all the foregoing reasons, including the information shown on the submitted GDP to be discussed at the Planning Commission's Land Development & Transportation Committee, if necessary, and for all other reasons presented at the Planning Commission's public hearing, the Applicant's Proposal to rezone the Property from its existing R-4, Single-Family Residential designation to C-2, Commercial, including the associated GDP, complies with all other applicable Guidelines and Policies of Plan 2040, Louisville Metro's adopted Comprehensive Plan.

Respectfully submitted,

Jon Baker
Bricker Graydon Wyatt, LLP
400 West Market Street, Suite 2000
Louisville KY 40202
Direct: (502) 562-7316
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Email: jbaker@bricker.com



Louisville Metro Government

Text File

File Number: 25-ZONE-0121

Agenda Date: 7/16/2026

Version: 1

Status: Public Hearing

In Control: Planning Commission

File Type: Planning Case

Agenda Number: 10.



25-ZONE-0121

Planning Commission
Staff Report
July 16, 2026

Old Six Mile Multi-Family

Location: 9614 Old Six Mile Lane
Applicant: Goose Holdings LLC
Representative: Dinsmore & Shohl LLP
Jurisdiction: Jeffersontown
Council District: 11 – Kevin Kramer
Case Manager: Zack Jones, Planner II

REQUESTS & RECOMMENDED ACTIONS

1. Change in Zoning from R-4 Single Family Residential to R5-A Multi-Family Residential
 - Staff finds the request is in keeping with Plan 2040 and recommends the Planning Commission **RECOMMEND** that the Jeffersontown City Council **APPROVE** the requested change in zoning.
2. **25-WAIVER-0176:** Waiver from Land Development Code Table 10.2.3 to waive the 15 foot landscape buffer area to 6 feet
 - Staff finds the justification for the requests are adequate and **RECOMMENDS** that the Jeffersontown City Council **APPROVE** the Waiver.
3. Detailed District Development Plan with Binding Elements
 - Staff finds the justification for the request is adequate and **RECOMMENDS** that the Jeffersontown City Council **APPROVE** the Detailed District Development Plan.

CASE SUMMARY

The subject is located off Old Six Mile Lane, a local road, in the City of Jeffersontown. The property is presently zoned R-4 Single Family in the Neighborhood form district. The proposal is for the development of 18 multi-family units on roughly 2 acres, necessitating the requested R-5A zoning. The area entirely around the property is zoned R-4, though there are institutional uses adjacent to the site with additional multi-family in the vicinity in addition to single family uses.

The applicant has proposed to rezone the subject properties to R-5A Multi-Family Residential. The proposal originally included the preservation of the existing home at the front of the site along Old Six Mile Lane, but the proposal is now for all new units on site. A duplex has been proposed where the single family home has been located.

TECHNICAL REVIEW

- Comprehensive Plan 2040
- Jeffersontown Land Development Code (2021)
- MSD has provided preliminary approval.
- Transportation Planning has provided preliminary approval.

STANDARD OF REVIEW FOR REZONING AND FORM DISTRICT CHANGES

Criteria for granting the proposed form district change/rezoning: *KRS Chapter 100.213*

1. The proposed form district/rezoning change complies with the applicable guidelines and policies Plan 2040; **OR**
2. The existing form district/zoning classification is inappropriate and the proposed classification is appropriate; **OR**
3. There have been major changes of an economic, physical, or social nature within the area involved which were not anticipated in Plan 2040 which have substantially altered the basic character of the area.

STAFF ANALYSIS FOR CHANGE IN ZONING / FORM DISTRICT

The following is staff's analysis of the proposed rezoning against the Guidelines and Policies of Plan 2040.

The site is located in the Suburban Workplace Form District

Neighborhood Form is characterized by predominantly residential uses that vary from low to high density and that blend compatibly into the existing landscape and neighborhood areas. High-density uses will be limited in scope to minor or major arterials and to areas that have limited impact on the low to moderate density residential areas.

The Neighborhood Form will contain diverse housing types in order to provide housing choice for differing ages, incomes and abilities. New neighborhoods are encouraged to incorporate these different housing types within a neighborhood as long as the different types are designed to be compatible with nearby land uses. These types may include, but not be limited to, large lot single family developments with cul-de-sacs, traditional neighborhoods with short blocks or walkways in the middle of long blocks to connect with other streets, villages and zero-lot line neighborhoods with open space, and high density multi-family housing.

The Neighborhood Form may contain open space and, at appropriate locations, civic uses and neighborhood centers with a mixture of uses such as offices, retail shops, restaurants and services. These neighborhood centers should be at a scale that is appropriate for nearby neighborhoods. The Neighborhood Form should provide for accessibility and connectivity between adjacent uses and neighborhoods by automobile, pedestrian, bicycle and transit.

Neighborhood streets may be either curvilinear, rectilinear or in a grid pattern and should be designed to support physical activity for all users and invite human interaction. Streets are connected and easily accessible to each other, using design elements such as short blocks or bike/walkways in the middle of long blocks to connect with other streets. Examples of design elements that encourage this interaction include narrow street widths, street trees, sidewalks, shaded seating/gathering areas and bus stops. Placement of utilities should permit the planting of shade trees along both sides of the streets.

STAFF FINDING: The site is located at along Old Six Mile Lane, a local roadway that serves a variety of residential densities in the immediate area. The proposed zoning district constitutes an appropriate transition between new multi-family development and existing institutional uses adjacent to the subject site. Landscape buffer areas, building setbacks and design, and maximum height requirements aid in ensuring compatibility with surrounding communities. The preliminary plan meets all Jeffersontown Land Development Code requirements, specifically the Neighborhood form district requirements that ensure new development is built at a scale that is compatible with existing development.

All other agency comments should be addressed to demonstrate compliance with the remaining Guidelines and Policies of Plan 2040.

The Louisville Metro Planning Commission is charged with making a recommendation to the Jeffersontown City Council regarding the appropriateness of this zoning map amendment. The Jeffersontown City Council has zoning authority over the property in question.

STANDARD OF REVIEW AND STAFF ANALYSIS FOR 25-WAIVER-0176

(a) The waiver will not adversely affect adjacent property owners; and

STAFF FINDING: The requested waiver for reduced landscape buffer area will not adversely affect adjacent property owners as the adjacent property is a public school and a need for a higher standard of landscape buffering may not be necessary at this location, and the orientation of the site still provides substantial buffering and green space to the adjacent properties.

(b) The waiver will not violate specific guidelines of Plan 2040;

STAFF FINDING: Community Form Goal 1, Policy 4 calls for the proposal to ensure new development and redevelopment are compatible with the scale and site design of nearby existing development and with the desired pattern of development within the Form District. Quality design and building materials should be promoted to enhance compatibility of development and redevelopment projects. Housing Goal 3, Policy 3 calls for the proposal to encourage the use of innovative methods such as clustering, mixed-use developments, co-housing, and accessory apartments to increase the production of fair and affordable housing. The proposed plan for the reduced landscape buffer area is in conformance with these standards as it allows for an opportunity to add a compact, efficient housing footprint while not greatly compromising the development standards encourage by Plan 2040.

(c) The extent of the waiver of the regulation is the minimum necessary to afford relief to the applicant

STAFF FINDING: The extent of the waiver of the regulation is the minimum necessary to afford relief to the applicant as the proposed the applicants are proposing a 6 foot landscape buffer in place of the waived buffer, allowing the parking and refuse design to work while still providing as much buffer as reasonably possible.

(d) Either: (i) The applicant has incorporated other design measures that exceed the minimums of the district and compensate for non-compliance with the requirements to be waived (net beneficial effect); OR (ii) The strict application of the provisions of the regulation would deprive the applicant of the reasonable use of the land or would create an unnecessary hardship on the applicant.

STAFF FINDING: The applicant has incorporated other design measures that compensate for non-compliance with the requirements to be waived as they are providing substantial buffering of the site, proposing a dense yet compatible multi-family footprint, in addition to providing other substantial plantings, trees, and open space on site.

STANDARD OF REVIEW AND STAFF ANALYSIS FOR DETAILED DISTRICT DEVELOPMENT PLAN AND AMENDMENT TO BINDING ELEMENTS

- a. *The conservation of natural resources on the property proposed for development, including: trees and other living vegetation, steep slopes, water courses, flood plains, soils, air quality, scenic views, and historic sites;*

STAFF FINDING: There is a portion of the existing site that was indicated to have Karst and erodible soil potential, and the proposal provides that such features if found will be properly mitigated on site. There do not appear to be any other environmental constraints or historic resources on the subject site. Tree canopy requirements of the Jeffersontown Land Development Code will be provided on site.

- b. *The provisions for safe and efficient vehicular and pedestrian transportation both within the development and the community;*

STAFF FINDING: Provisions for safe and efficient vehicular and pedestrian transportation within and around the development and the community has been provided, and Metro Public has approved the preliminary development plan. The proposal includes a right-of-way dedication along Old Six Mile Lane per Public Works' request.

- c. *The provision of sufficient open space (scenic and recreational) to meet the needs of the proposed development;*

STAFF FINDING: Open space is required per the Jeffersontown Land Development Code for residential use of this type, and the proposal meets the minimum standards for both recreational open space as well as total/scenic open space.

- d. *The provision of adequate drainage facilities on the subject site in order to prevent drainage problems from occurring on the subject site or within the community;*

STAFF FINDING: The Metropolitan Sewer District has preliminarily approved the request and has not identified outstanding issues related to the proposal.

- e. *The compatibility of the overall site design (location of buildings, parking lots, screening, landscaping) and land use or uses with the existing and projected future development of the area;*

STAFF FINDING: The overall site design and land uses are compatible with the existing and future development of the area, provided the Planning Commission finds the area of waiver acceptable. Appropriate landscape buffering and screening will be provided to screen adjacent properties, including both residential and non-residential. The overall site design is generally compatible with the existing sites in the vicinity.

- f. *Conformance of the development plan with the Comprehensive Plan and Land Development Code. Revised plan certain development plans shall be evaluated for conformance with the non-residential and mixed-use intent of the form districts and comprehensive plan.*

STAFF FINDING: The development plan generally conforms to the applicable guidelines and policies of the Comprehensive Plan and to requirements of the Land Development Code. The proposal is complementary to the existing housing and uses in the surrounding the area, and proposes a compact yet compatible residential footprint on the site.

REQUIRED ACTIONS

- **RECOMMEND** that the Jeffersontown City Council **APPROVE** or **DENY** the **Change in Zoning** from R-4 Single Family Residential to R-5A Multi-Family Residential.
- **RECOMMEND** that the Jeffersontown City Council **APPROVE** or **DENY 25-WAIVER-0176** from Land Development Code Table 10.2.3 to waive the 15 foot landscape buffer area to 6 feet.
- **RECOMMEND** that the Jeffersontown City Council **APPROVE** or **DENY** the **Detailed District Development Plan** subject to proposed binding elements.

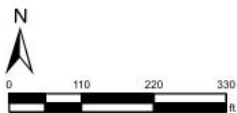
NOTIFICATION

DATE	PURPOSE OF NOTICE	RECIPIENTS
7/1/2026	Planning Commission Public Hearing	1st and 2nd tier adjoining property owners and current residents; Registered Neighborhood Groups in Council District 11
6/30/2026	Planning Commission Public Hearing	Sign Posting on Property
7/1/2026	Planning Commission Public Hearing	Legal Advertisement in the Courier-Journal

ATTACHMENTS

1. Zoning Map
2. Aerial Photograph
3. Plan 2040 Checklist
4. Proposed Binding Elements

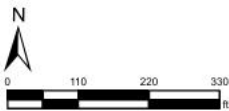
1. ZONING MAP



Thursday, July 2, 2026 | 12:28 PM



2. AERIAL MAP



Thursday, July 2, 2026 | 12:27 PM



LOJIC © 2026
This map is not a legal document and should only be used for general reference and identification.

3. STAFF PLAN 2040 CHECKLIST

+	Exceeds Guideline
✓	Meets Guideline
-	Does Not Meet Guideline
+/-	More Information Needed
NA	Not Applicable

Neighborhood: Residential

Plan 2040 Plan Elements/Staff Analysis	
1	<p><u>Community Form: Goal 1, Policy 7.</u> <i>Locate higher density and intensity uses near major transportation facilities and transit corridors, employment centers, in or near activity centers and other areas where demand and adequate infrastructure exists or is planned.</i></p> <p>✓ <u>Staff Analysis:</u> The proposed rezoning would locate higher density residential next to an established school and will have adequate infrastructure that exists or is planned. The subject site is also roughly a half-mile from Taylorsville Road which has several commercial uses and transit stops.</p>
2	<p><u>Community Form: Goal 1, Policy 9.</u> <i>Ensure an appropriate transition between uses that are substantially different in scale and intensity or density of development. The transition may be achieved through methods such as landscaped buffer yards, vegetative berms, compatible building design and materials, height restrictions and setback requirements.</i></p> <p>✓ <u>Staff Analysis:</u> The proposal is compatible with other surrounding residential uses. Substantial buffering, plantings, trees, and open space have been provided, particularly along common residential property lines.</p>
3	<p><u>Community Form: Goal 2, Policy 9.</u> <i>Encourage new developments and rehabilitation of buildings that provide commercial, office and/or residential uses.</i></p> <p>✓ <u>Staff Analysis:</u> The proposed development will see the demolition of the existing residential structure on site. However, staff recognizes the constraints of the site and the loss would only be of one residential unit.</p>
4	<p><u>Community Form: Goal 3, Policy 10.</u> <i>Encourage development to avoid wet or highly permeable soils, severe, steep or unstable slopes where the potential for severe erosion problems exists in order to prevent property damage and public costs associated with soil slippage and foundation failure and to minimize environmental degradation.</i></p> <p>✓ <u>Staff Analysis:</u> The subject site does not appear to have any environmental constraints. A Karst survey note is provided on the plan.</p>
5	<p><u>Community Form: Goal 4, Policy 2.</u> <i>Encourage preservation of distinctive cultural features including landscapes, natural elements and built features.</i></p> <p>✓ <u>Staff Analysis:</u> There are no distinctive cultural features to preserve on the subject site.</p>
6	<p><u>Community Form: Goal 4, Policy 3.</u> <i>Encourage preservation and/or adaptive reuse of historic sites listed on or eligible for the National Register of Historic Places and/or recognized by the Louisville Metro Landmarks Commission or other national, state or local government historic preservation agencies.</i></p> <p>✓ <u>Staff Analysis:</u> Historic Preservation has reviewed the proposal, and the structure to be demolished was not noted to have historical value or constitute the need for a 30-day hold.</p>

Plan 2040 Plan Elements/Staff Analysis	
7	<p>Mobility: Goal 1, Policy 4. Encourage higher densities and intensities within or near existing marketplace corridors, existing and future activity centers, and employment centers to support transit-oriented development and an efficient public transportation system.</p> <p>✓ Staff Analysis: The proposed change in zoning will allow for multi-family to be located on Old Six Mile Lane which connects to Taylorsville Road that has existing commercial activity and transit.</p>
8	<p>Mobility: Goal 2, Policy 4. Avoid access to development through areas of significantly lower intensity or density development if such access would create significant nuisances.</p> <p>✓ Staff Analysis: The proposed plan does not propose access to the development through areas of significantly lower intensity or density.</p>
9	<p>Mobility: Goal 3, Policy 2. To improve mobility, and reduce vehicle miles traveled and congestion, encourage a mixture of compatible land uses that are easily accessible by bicycle, car, transit, pedestrians and people with disabilities. Housing should be encouraged near employment centers.</p> <p>✓ Staff Analysis: The proposed multi-family development will be compatible with the other land uses in the area, which also include predominantly residential land uses.</p>
10	<p>Mobility: Goal 3, Policy 5. Evaluate developments for their impact on the transportation network (including the street, pedestrian, transit, freight movement and bike facilities and services) and air quality.</p> <p>✓ Staff Analysis: Transportation Planning and Public Works have provided preliminary approval of the request.</p>
11	<p>Mobility: Goal 3, Policy 6. Ensure that those who propose new developments bear or share in rough proportionality the costs of transportation facilities and services made necessary by development.</p> <p>✓ Staff Analysis: Transportation Planning and Public Works have provided preliminary approval of the request. The proposal details right-of-way along Old Six Mile Lane to be dedicated and sidewalks to be constructed.</p>
12	<p>Mobility: Goal 3, Policy 9. When existing transportation facilities and services are inadequate and public funds are not available to rectify the situation, the developer may be asked to make improvements, roughly proportional to the projected impact of the proposed development, to eliminate present inadequacies if such improvements would be the only means by which the development would be considered appropriate at the proposed location.</p> <p>✓ Staff Analysis: Transportation Planning and Public Works have provided preliminary approval of the request. The proposal details right-of-way along Old Six Mile Lane to be dedicated and sidewalks to be constructed.</p>
13	<p>Mobility: Goal 3, Policy 10. Ensure that necessary improvements occur in accordance with long-range transportation plans and level of mobility criteria for all modes of travel.</p> <p>✓ Staff Analysis: Transportation Planning and Public Works have provided preliminary approval of the request.</p>
14	<p>Mobility: Goal 3, Policy 21. Prevent safety hazards caused by direct residential access to high speed roadways.</p> <p>✓ Staff Analysis: The proposed development avoids direct residential access to high-speed roadways. The proposed multi-family development has an interior drive that connect to Old Six Mile Lane.</p>
15	<p>Community Facilities: Goal 2, Policy 1. Locate development in areas served by existing utilities or capable of being served by public or private utility extensions.</p> <p>✓ Staff Analysis: The subject site is located in an area served by existing utilities.</p>
16	<p>Community Facilities: Goal 2, Policy 2. Ensure that all development has an adequate supply of potable water and water for fire-fighting purposes. Locate only very low-density land uses on sites that use on-lot sewage disposal systems or on a private supply of potable water.</p> <p>✓ Staff Analysis: The Louisville Water Company has not provided concerns related to the request.</p>
17	<p>Community Facilities: Goal 2, Policy 3. Ensure that all development has adequate means of sewage treatment and disposal to protect public health and to protect water quality in lakes and streams as determined by the Metropolitan Sewer District (MSD).</p> <p>✓ Staff Analysis: MSD has provided preliminary approval of the request.</p>

Plan 2040 Plan Elements/Staff Analysis	
18	<p><u>Livability: Goal 1, Policy 5.</u> Encourage development that recognizes and incorporates the unique characteristics of identified general landscape types and native plant communities (e.g., upland hardwood forest) throughout Louisville Metro.</p> <p>✓ <u>Staff Analysis:</u> There are no general landscapes or native plant communities to preserve on the subject site.</p>
19	<p><u>Livability: Goal 1, Policy 17.</u> Determine site susceptibility to erosion; identify the presence of on-site carbonate conditions and features that are vulnerable to site disturbance; identify the extent of existing groundwater use and the impacts of the project on groundwater resources, flow patterns, and existing and proposed surface drainage. Then mitigate potential hazards to such systems resulting from the project.</p> <p>✓ <u>Staff Analysis:</u> There are no environmental constraints on the subject site and it is not located within the regulatory floodplain.</p>
20	<p><u>Livability: Goal 1, Policy 21.</u> Mitigate negative development impacts to the integrity of the regulatory floodplain by encouraging development patterns that minimize disturbance and consider the increased risk of more frequent flooding events.</p> <p>✓ <u>Staff Analysis:</u> The subject site is not located within the regulatory floodplain. MSD has preliminarily approved the request.</p>
21	<p><u>Housing: Goal 1, Policy 1.</u> Encourage a variety of housing types including, but not limited to, detached and attached single family, multi-family, mixed use, zero lot line, average lot, cluster, and co-housing. Allow for accessory residential structures and apartments. Housing types should reflect the Form District pattern.</p> <p>✓ <u>Staff Analysis:</u> The proposed zoning district will allow for multi-family residential development that increases the types of housing available in the area.</p>
22	<p><u>Housing: Goal 1, Policy 2.</u> Promote housing options and environments that support aging in place. Encourage housing for older adults and people with disabilities to be located close to shopping and transit routes and, when possible, medical and other supportive facilities.</p> <p>✓ <u>Staff Analysis:</u> The proposed change in zoning will allow for multi-family residential units that could promote housing options and environments that support aging in place.</p>
23	<p><u>Housing: Goal 2, Policy 1.</u> Encourage inter-generational, mixed-income and mixed-use development that is connected to the neighborhood and surrounding area.</p> <p>✓ <u>Staff Analysis:</u> The proposed change in zoning will bring additional units to the neighborhood in an area with complete road networks. It will give the opportunity for mixed-income or inter-generational housing.</p>
24	<p><u>Housing: Goal 2, Policy 2.</u> Locate housing within proximity to multi-modal transportation corridors providing safe and convenient access to employment opportunities, as well as within proximity to amenities providing neighborhood goods and services. Higher density, accessible residential uses should be located along transit corridors and in or near activity centers.</p> <p>✓ <u>Staff Analysis:</u> The proposed change in zoning will allow for higher density residential near an activity center at Taylorsville Road.</p>
25	<p><u>Housing: Goal 3, Policy 1.</u> Encourage provision of fair and affordable housing by providing a variety of ownership options and unit costs throughout Louisville Metro. Expand opportunities for people to live in quality, variably priced housing in locations of their choice by encouraging affordable and accessible housing in dispersed locations throughout Louisville Metro.</p> <p>✓ <u>Staff Analysis:</u> The proposed change in zoning will allow for higher density residential and will encourage accessible housing in dispersed locations throughout Louisville Metro.</p>
26	<p><u>Housing: Goal 3, Policy 2.</u> As neighborhoods evolve, discourage displacement of existing residents from their community.</p> <p>✓ <u>Staff Analysis:</u> The proposal will not displace significant, if any, existing residents from the community.</p>
27	<p><u>Housing: Goal 3, Policy 3.</u> Encourage the use of innovative methods such as clustering, mixed-use developments, co-housing, and accessory apartments to increase the production of fair and affordable housing.</p> <p>✓ <u>Staff Analysis:</u> The proposed rezoning would allow for a higher density in residential and with opportunity to increase the production of fair and affordable housing.</p>

4. Proposed Binding Elements

1. The development shall be in accordance with the approved district development plan and agreed upon binding elements unless amended pursuant to the Zoning District Regulations. Any changes, additions or alterations of any binding element(s) shall be submitted to the Planning Commission and to the city of Jeffersontown for review and approval; any changes/additions/alterations not so referred shall not be valid.
2. The size and location of any proposed freestanding sign must be in compliance with the City of Jeffersontown Sign Ordinance.
3. Any area proposed to be used for outdoor sales, display or storage in accordance with Section 4.4.8 shall be accurately delineated on the development plan.
4. Outdoor lighting (for parking lot illumination and security) shall meet the requirements of Section 4.1.3 of the Land Development Code.
5. Construction fencing shall be erected when off-site trees or tree canopy exists within 3' of a common property line. Fencing shall be in place prior to any grading or construction to protect the existing root systems from compaction. The fencing shall enclose the entire area beneath the tree canopy and shall remain in place until all construction is completed. No parking, material storage or construction activities are permitted within the protected area.
6. Before any permit (including but not limited to building, parking lot, change of use or alteration permit) is requested:
 - a. The development plan must receive full construction approval from the City of Jeffersontown (10416 Watterson Trail) and the Metropolitan Sewer District (700 West Liberty).
 - b. Encroachment permit must be obtained from the Kentucky Department of Transportation, Bureau of Highways, as applicable.
 - c. The property owner/developer must obtain approval of a detailed plan for screening (buffering/landscaping) as described in Chapter 10.
 - d. A Tree Preservation Plan in accordance with Chapter 10 of the LDC shall be reviewed and approved prior to obtaining approval for site disturbance.
7. If a building permit is not issued within two years of the date of approval of the plan, the property shall not be used in any manner unless a revised district development plan is approved or an extension is granted by the Planning Commission and the City of Jeffersontown.
8. A certificate of occupancy must be received from the appropriate code enforcement department prior to new occupancy of the structure or land for the proposed use. All binding elements requiring action and approval must be implemented prior to requesting issuance of the certificate of occupancy, unless specifically waived by the Planning Commission and City of Jeffersontown.

9. The applicant, developer, or property owner shall provide copies of these binding elements to tenants, purchasers, contractors, subcontractors and other parties engaged in development of this site and shall advise them of the content of these binding elements. Binding elements shall run with the land and the owner of the property and occupant of the property shall at all times be responsible for compliance with these binding elements. At all times during development of the site, the applicant and developer, their heirs, successors; and assignees, contractors, subcontractors, and other parties engaged in development of the site, shall be responsible for compliance with these binding elements.

10. All off-street parking areas shall be permanently and continually maintained in good condition and free from potholes, weeds, dirt, trash and other debris.

GENERAL NOTES

- PARKING AREAS AND DRIVE Lanes TO BE A HARD AND DURABLE SURFACE.
- NO PORTION OF THE SITE IS WITHIN THE 100-YR FLOODPLAIN PER FEMA FIRM MAP NO. 21111C0063F, DATED FEBRUARY 26th, 2021.
- THERE ARE NO WETLANDS ON THIS PROPERTY.
- ALL SITE LIGHTING SHALL BE SHIELDED AND DIRECTED DOWNWARD AND AWAY FROM ALL ADJACENT RESIDENTIAL AREAS.
- SITE LIGHTING SHOULD NOT SHINE IN THE EYES OF DRIVERS. IF IT DOES, IT SHOULD BE RE- AimED, SHIELDED, OR TURNED OFF.
- ANY PROPOSED LIGHTING TO NOT SURPASS 0.5 FOOT CANDLES PAST THE PROPERTY LINE, PER CODE.
- ALL DUMPSTER AND SERVICE STRUCTURES TO BE SCREENED IN COMPLIANCE WITH CHAPTER 10.
- THE LOUISVILLE WATER COMPANY WILL PROVIDE DOMESTIC WATER SERVICE TO THE SITE. THE EXPENSES REQUIRED TO PROVIDE SERVICE TO THE SITE WILL BE THE RESPONSIBILITY OF THE OWNER/DEVELOPER.
- THE LOUISVILLE METROPOLITAN SEWER DISTRICT (MSD) WILL PROVIDE SANITARY SEWER SERVICE TO THIS SITE VIA SANITARY SEWER EXTENSION. WASTE WATER TREATMENT PROVIDED AT THE JEFFERSONTOWN TREATMENT PLANT.
- EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITIES ON SITE. ALL DISTURBED AREAS NOT INDICATED TO RECEIVE A SPECIFIC SURFACE TREATMENT WILL BE SEED.
- AN ENCROACHMENT PERMIT AND BOND WILL BE REQUIRED FOR ALL WORK WITHIN RIGHT-OF-WAY.
- CONSTRUCTION PLANS, BOND AND PERMIT ARE REQUIRED BY METRO PUBLIC WORKS PRIOR TO CONSTRUCTION APPROVAL.
- MITIGATION MEASURES FOR DUST CONTROL SHALL BE IN PLACE DURING CONSTRUCTION TO PREVENT PARTICULATE MATTER FROM REACHING EXISTING ROADS AND NEIGHBORING PROPERTIES.
- COMPATIBLE UTILITY LINES (ELECTRIC, PHONE, CABLE) SHALL BE PLACED IN A COMMON TRENCH UNLESS OTHERWISE REQUIRED/PERMITTED BY APPROPRIATE AGENCIES.
- CONCRETE WHEEL STOPS OR CURBING AT LEAST SIX (6) INCHES HIGH AND SIX (6) INCHES WIDE SHALL BE PROVIDED TO PREVENT VEHICLES FROM OVERHANGING ADJACENT SIDEWALKS, PROPERTIES OR PUBLIC RIGHTS-OF-WAY, TO PROTECT LANDSCAPE AREAS AND TO PROTECT ADJACENT PROPERTIES. SUCH WHEEL STOPS OR CURBING SHALL BE LOCATED AT LEAST THREE (3) FEET FROM ANY ADJACENT WALL, FENCE, PROPERTY LINE, WOODY VEGETATION, WALKWAY OR STRUCTURE.
- DEED OF CONSOLIDATION TO BE RECORDED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.

- CITY OF JEFFERSONTOWN APPROVAL AND METROPOLITAN SEWER DISTRICT APPROVAL IS REQUIRED.
- CONSTRUCTION PLANS AND DOCUMENTS SHALL COMPLY WITH MSD'S DESIGN MANUAL AND STANDARD SPECIFICATIONS AND OTHER LOCAL, STATE AND FEDERAL ORDINANCES.
- EXISTING SIDEWALK RECONSTRUCTION AND REPAIRS SHALL BE REQUIRED, AS NECESSARY, TO MEET CURRENT MPW STANDARDS AND SHALL BE INSPECTED PRIOR TO FINAL BOND RELEASE.
- AN EPSC PLAN SHALL BE DEVELOPED AND APPROVED IN ACCORDANCE WITH MSD DESIGN MANUAL AND SPECIFICATIONS PRIOR TO CONSTRUCTION PLAN APPROVAL.
- ALL NEW AND EXISTING SIDEWALKS SHALL EITHER BE BROUGHT UP TO OR BUILT TO CURRENT ADA STANDARDS.
- ENCROACHMENT PERMITS MUST BE OBTAINED FROM THE JEFFERSONTOWN PUBLIC WORKS DEPARTMENT.
- A KARST SURVEY/REPORT - DATED OCTOBER 9, 2025 - WAS PERFORMED BY ATLAS. NO KARST FEATURES WERE OBSERVED ONSITE DURING FIELD ACTIVITIES.
- A CROSS OVER ACCESS AGREEMENT TO RUN WITH THE LAND AND IN A FORM ACCEPTABLE TO PLANNING COMMISSION LEGAL COUNSEL SHALL BE PROVIDED AT TIME OF DEVELOPMENT TO THE ADJACENT VACANT PROPERTY.
- STREET TREES WILL BE PROVIDED AS REQUIRED BY CODE.
- UTILITY EASEMENTS CANNOT ENCRUCH MORE THAN 50% INTO THE LANDSCAPE BUFFER AREAS PER CODE.
- ROOFTOP EQUIPMENT SHALL BE SCREENED SO AS NOT TO BE VISIBLE FROM THE GROUND SURFACE PER CODE.
- ON DEVELOPMENT OF ADJACENT PROPERTIES, A UNIFIED ACCESS SHALL BE DEVELOPED TO PROVIDE FOR MOVEMENT THROUGHOUT ADJACENT SITES AS DETERMINED APPROPRIATE BY PLANNING AND DESIGN / JEFFERSONTOWN. A CROSS ACCESS AGREEMENT TO RUN WITH THE LAND AND IN A FORM ACCEPTABLE TO PLANNING COMMISSION LEGAL COUNSEL SHALL BE RECORDED PRIOR TO THE TIME OF CONSTRUCTION APPROVAL FOR THE ADJACENT PROPERTY TO BE DEVELOPED.

EROSION PREVENTION & SEDIMENT CONTROL NOTES

THE APPROVED EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) PLAN SHALL BE IMPLEMENTED PRIOR TO ANY LAND DISTURBING ACTIVITY ON THE CONSTRUCTION SITE. ANY MODIFICATIONS TO THE APPROVED SWPPP PLAN MUST BE REVIEWED AND APPROVED BY MSD'S PRIVATE DEVELOPMENT REVIEW OFFICE. SWPPP BMP'S SHALL BE INSTALLED PER THE PLAN AND MSD STANDARDS.

ACTIONS MUST BE TAKEN TO MINIMIZE THE TRACKING OF MUD AND SOIL FROM CONSTRUCTION AREAS ONTO PUBLIC ROADWAYS. SOIL TRACKED ONTO THE ROADWAY SHALL BE REMOVED DAILY.

SOIL STOCKPILES SHALL BE LOCATED AWAY FROM STREAMS, PONDS, SWALES, AND CATCH BASINS. SOIL STOCKPILES SHALL BE SEED, MULCHED, AND ADEQUATELY CONTAINED THROUGH USE OF SILT FENCE.

WHERE CONSTRUCTION OR LAND DISTURBANCE ACTIVITY WILL OR HAS TEMPORARILY CEASED ON ANY PORTION OF A SITE, TEMPORARY SITE STABILIZATION MEASURES SHALL BE REQUIRED AS SOON AS PRACTICABLE, BUT NO LATER THAN 14 CALENDAR DAYS AFTER THE ACTIVITY HAS CEASED.

SEDIMENT LADEN GROUND WATER ENCOUNTERED DURING THE TRENCHING, BORING, OR OTHER EXCAVATION ACTIVITIES SHALL BE PUMPED TO A SEDIMENT TRAPPING DEVICE PRIOR TO BEING DISCHARGED INTO A STREAM, POND, SWALE, AND/OR CATCH BASIN.

CITY OF JEFFERSONTOWN NOTES

THE DEVELOPMENT SHALL BE IN ACCORDANCE WITH THE APPROVED DEVELOPMENT PLAN. ALL APPLICABLE SECTIONS OF THE LAND DEVELOPMENT CODE AND AGREED UPON BINDING ELEMENTS UNLESS AMENDED PURSUANT TO THE LAND DEVELOPMENT CODE. ANY CHANGES/ ADDITIONS/ ALTERATIONS OF THE PLAN SHALL BE SUBMITTED TO THE CITY OF JEFFERSONTOWN FOR REVIEW AND APPROVAL. ANY CHANGES/ADDITIONS/ALTERATIONS NOT SO REFERRED SHALL NOT BE VALID.

ALL OFF-STREET PARKING AREAS SHALL BE PERMANENTLY AND CONTINUALLY MAINTAINED IN GOOD CONDITION AND FREE FROM POTHOLES, WEEDS, DIRT, TRASH AND OTHER DEBRIS.

MITIGATION MEASURES FOR DUST CONTROL SHALL BE IN PLACE DURING CONSTRUCTION TO PREVENT FUGITIVE PARTICULATE EMISSIONS FROM REACHING EXISTING ROADS AND NEIGHBORHOOD PROPERTIES.

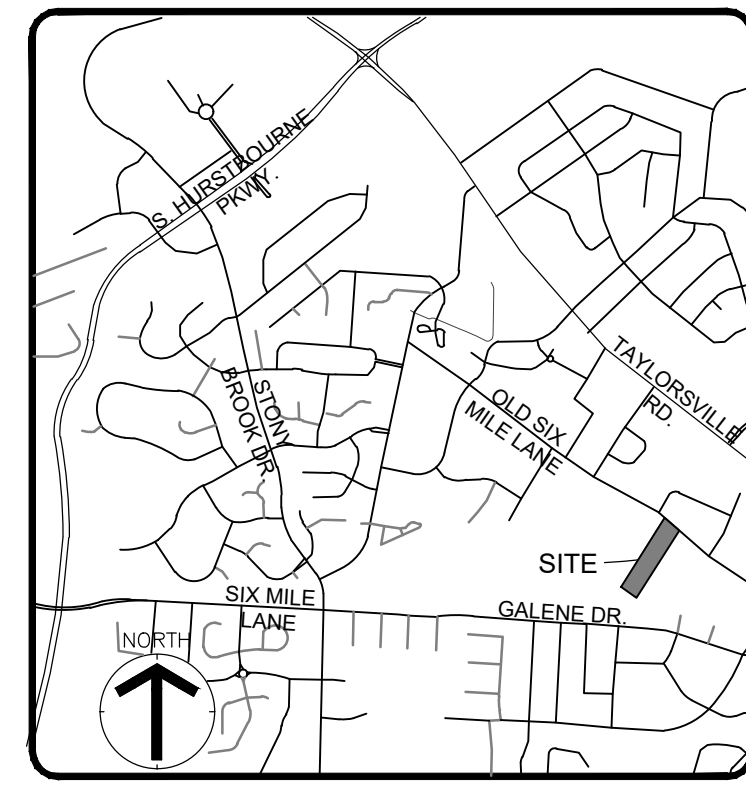
- BEFORE ANY PERMIT (INCLUDING BUT NOT LIMITED TO BUILDING, PARKING LOT, CHANGE OF USE OR ALTERATION PERMIT) IS REQUESTED:
- THE DEVELOPMENT MUST RECEIVE FULL CONSTRUCTION APPROVAL FROM THE CITY OF JEFFERSONTOWN (10416 WATERSON TRAIL) AND METROPOLITAN SEWER DISTRICT (700 WEST LIBERTY)
 - ENCROACHMENT PERMITS MUST BE OBTAINED FROM THE KENTUCKY TRANSPORTATION CABINET OR ENCROACHMENT PERMITS MUST BE OBTAINED FROM THE LOUISVILLE METRO PUBLIC WORKS DEPARTMENT (IF REQUIRED).

MSD NOTES

- CONSTRUCTION PLANS AND DOCUMENTS SHALL COMPLY WITH THE LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT'S DESIGN MANUAL AND STANDARD SPECIFICATIONS.
- WASTEWATER: SANITARY SEWER SERVICE WILL BE PROVIDED BY LATERAL EXTENSION AND IS SUBJECT TO FEES AND ANY APPLICABLE CHANGES. SANITARY SEWER FLOW WILL BE TREATED AT THE DEREK R. GUTHRIE WATER QUALITY TREATMENT CENTER.
- DRAINAGE: DRAINAGE PATTERN DEPICTED BY ARROWS (--->) IS FOR CONCEPT PURPOSES ONLY. FINAL CONFIGURATION AND SIZE OF DRAINAGE PIPES, CHANNELS AND WATER QUALITY METHODS SHALL BE DETERMINED DURING THE CONSTRUCTION PLAN DESIGN PROCESS. DRAINAGE FACILITIES SHALL CONFORM TO MSD REQUIREMENTS. USE OF EX. DRAINAGE CONNECTIONS & STORM WATER REQUIREMENTS SHALL BE COORDINATED WITH MSD.
- NO PORTION OF THE SUBJECT PROPERTY LIES WITHIN A FLOOD HAZARD AREA PER FEMA'S FIRM MAPPING, (21111C0063F REV. FEBRUARY 26, 2021).
- AN EPSC PLAN WILL BE SUBMITTED TO MSD FOR APPROVAL PRIOR TO ANY CONSTRUCTION ACTIVITY.
- ONSITE DETENTION WILL BE REQUIRED. POST-DEVELOPED PEAK FLOWS WILL BE LIMITED TO PRE-DEVELOPED PEAK FLOWS FOR THE 2, 10, 25 AND 50% OF THE 100-YEAR STORMS OR TO THE CAPACITY OF THE DOWNSTEAM SYSTEM, WHICHEVER IS MORE RESTRICTIVE.
- DOWNSTEAM IMPROVEMENTS ARE REQUIRED TO CONSTRUCT A PUBLIC OUTFALL ALONG THE RIGHT-OF-WAY DOWN TO THE CULVERT UNDER OLD SIX MILE LANE.
- THE FINAL DESIGN OF THIS PROJECT MUST MEET ALL MSA WATER QUALITY REGULATIONS ESTABLISHED BY MSD. SITE LAYOUT MAY CHANGE AT THE CONSTRUCTION DESIGN PHASE DUE TO PROPERLY SIZING OF GREEN BEST MANAGEMENT PRACTICES.
- SUBJECT TO JEFFERSONTOWN APPROVAL PRIOR TO MSD CONSTRUCTION PLAN APPROVAL.
- IF THE FINAL SITE DESIGN HAS THROUGH DRAINAGE, AN EASEMENT PLAT WILL BE REQUIRED PRIOR TO MSD GRANTING CONSTRUCTION PLAN APPROVAL.
- THE FINAL DESIGN OF THIS PROJECT MUST MEET ALL MSA WATER QUALITY REGULATIONS ESTABLISHED BY MSD. SITE LAYOUT MAY CHANGE AT THE DESIGN PHASE DUE TO PROPER SIZING OF GREEN BEST MANAGEMENT PRACTICES.
- MSD DRAINAGE BOND REQUIRED PRIOR TO CONSTRUCTION PLAN APPROVAL.

FIRE NOTES

- THE SUBJECT PROPERTY IS LOCATED WITHIN THE JEFFERSONTOWN FIRE DISTRICT.
- LOCAL FIRE AUTHORITY HAVING JURISDICTION CONTACT INFORMATION: NAME: TOM CARROLL (FIRE MARSHAL) EMAIL: TCARROLL@JEFFERSONTOWNKY.COM
- HYDRANTS: PRIOR TO COMPLETION OF CONSTRUCTION AN ADEQUATE WATER SUPPLY INCLUDING ACCESSIBLE HYDRANTS FOR FIREFIGHTING PURPOSES MUST BE MADE AVAILABLE, AND NO UTILITIES SHALL BE CONNECTED TO THE STRUCTURE UNTIL ADEQUATE SUPPLY IS PROVIDED (LMD# 94.81)
- GATES: NO GATES SHALL BE INSTALLED WHICH LIMIT OR RESTRICT ACCESS TO A RESIDENTIAL AREA, EXCEPT AS APPROVED BY THE AHJ OF THE REFERENCED FIRE DISTRICT.
- EMERGENCY RESPONDER RADIO COVERAGE: EMERGENCY RADIO SYSTEMS ARE REQUIRED TO MEET MINIMUM SIGNAL STRENGTH CRITERIA, TO BE CONFIRMED VIA THIRD PARTY TESTING PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY IN SOME BUILDINGS.
- REQUIREMENTS FOR SPECIFICATIONS OF FIRE DEPARTMENT CONNECTIONS (FDC), THREADS, SIZE, LOCATION, PLACEMENT OF THE KNOX BOX, OR FIREFIGHTER SAFETY BUILDING MARKETING SIGNAGE MUST BE OBTAINED FROM THE AHJ OF THE REFERENCED FIRE DISTRICT.
- PERMITTED PROJECTS SHALL COMPLY WITH NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 241 STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATION, AND DEMOLITION OPERATIONS.

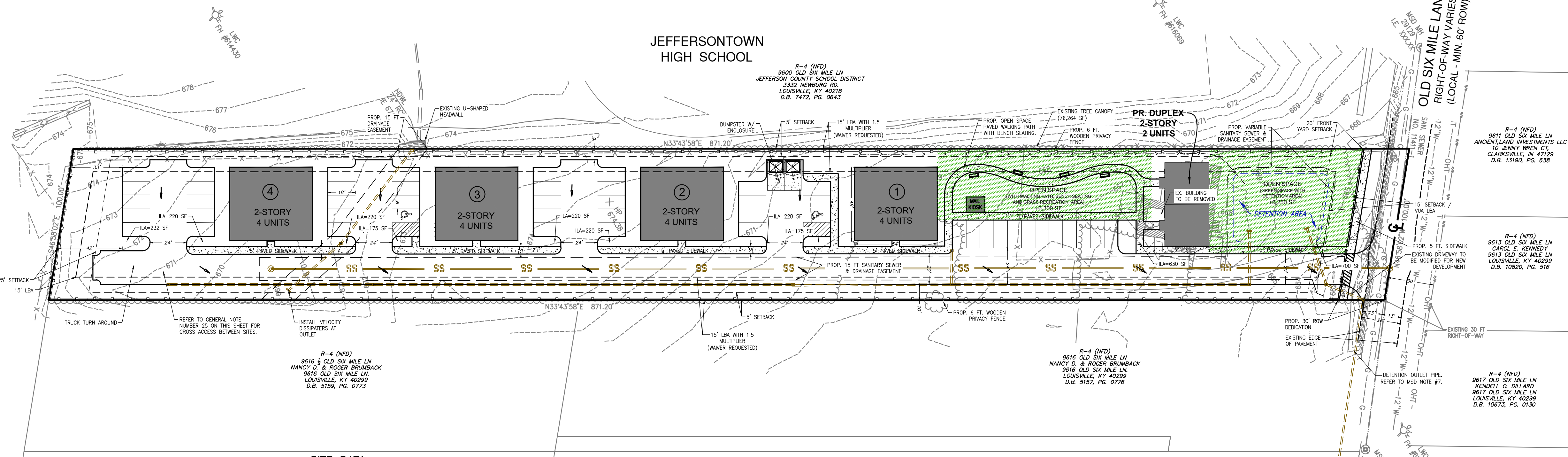


LOCATION MAP NOT TO SCALE

LEGEND

- EX. TREE
- EX. FIRE HYDRANT
- EX. LIGHT POLE
- EX. UTILITY POLE
- EX. SIGN
- EX. PROPERTY LINE
- EX. FENCE
- EX. WATER LINE
- EX. GAS LINE
- EX. OVERHEAD ELECTRIC
- EX. UNDERGROUND ELECTRIC
- EX. SWALE
- EX. STORM SEWER
- EX. SANITARY SEWER
- EX. CONCRETE
- EX. EDGE OF PAVEMENT
- PR. STORM SEWER w/ EPSC ROCK CHCK
- PR. SANITARY SEWER
- PR. SWALE
- PR. CONCRETE
- PR. EDGE OF PAVEMENT
- PR. FENCE
- PR. SILT FENCE
- FLOW ARROW
- LIMITS OF EXISTING BUILDING
- LIMITS OF PROPOSED BUILDING
- LIMITS OF OPEN SPACE

JEFFERSONTOWN HIGH SCHOOL



OWNER
GOOSE HOLDINGS, LLC
808 RUGBY PLACE
LOUISVILLE, KY 40222

OWNER SOURCE OF TITLE
PARCEL 004502230000: DB 12679 /PG 691

SITE ADDRESS
THE GOOSE
9614 OLD SIX MILE LANE
JEFFERSONTOWN, KY 40299

DEVELOPER
NB-DEVELOP
315 SOUTHERN INDIANA AVE
JEFFERSONVILLE, IN 47130

SITE DATA

EXISTING FORM DISTRICT.....	NEIGHBORHOOD
EXISTING ZONING.....	R-4
PROPOSED ZONING.....	R-5A
CITY AHJ.....	JEFFERSONTOWN
ADOPTED ORDINANCE.....	LDC MAY 2021
GROSS ACREAGE.....	(85,975 SF) 1.974 AC
R/W DEDICATION.....	(3,000 SF) 0.069 AC
NET ACREAGE.....	(82,975 SF) 1.905 AC
EXISTING USE.....	SINGLE-FAMILY RESIDENTIAL
PROPOSED USE.....	MULTI-FAMILY RESIDENTIAL
PROPOSED DUPLEX BUILDING FOOTPRINT.....	(1) 1,627 SF
PROPOSED TOWNHOME BUILDING FOOTPRINT.....	(4) 2,600 SF
PROPOSED TOTAL DWELLING UNITS.....	18 UNITS
MAX. BUILDING HEIGHT ALLOWED.....	35 FT
PROPOSED TOWNHOME BUILDING HEIGHT.....	29 FT
PROPOSED DUPLEX HEIGHT.....	23 FT

DIMENSIONAL INFO (LDC TABLE 5.3.1)

FRONT SETBACK.....	20 FT
SIDE SETBACK.....	5 FT
REAR SETBACK.....	25 FT
MAX. BUILDING HEIGHT.....	35 FT
PROP. BUILDING HEIGHT.....	35 FT
MAX. F.A.R. ALLOWED.....	0.50(PER LDC 2.2.9.E)
PROPOSED F.A.R.....	0.29
PROPOSED DENSITY.....	9.4 D.U./AC
MAX. DENSITY ALLOWED.....	12.01 D.U./AC

PARKING REQUIREMENTS (LDC TABLE 9.1.2A)

PROPOSED USE.....	MULTI-FAMILY UNIT OF CALCULATION.....
TOTAL QUANTITY OF UNITS.....	18
MIN. REQUIRED PARKING (1.5 SPACES / UNIT).....	27 SPACES
MAX ALLOWED PARKING (3 SPACES / UNIT).....	54 SPACES
PARKING PROVIDED.....	48 SPACES

IMPERVIOUS SURFACE CALCULATIONS

TOTAL SITE AREA.....	83,635 (1.92 AC)
EXISTING IMPERVIOUS SURFACE.....	10,000 SF (12%)
PROPOSED IMPERVIOUS SURFACE.....	48,125 SF (58%)
PERCENTAGE OF CHANGE.....	381%

TREE CANOPY REQUIREMENTS (CLASS C, LDC TABLE 10.1.1)

TOTAL SITE AREA.....	83,635 (1.92 AC)
EXISTING TREE CANOPY.....	76,264 SF (91%)
TOTAL TREE CANOPY REQUIRED.....	16,727 SF (20%)
EXISTING TREE CANOPY TO BE PRESERVED.....	NONE (0%)
PROPOSED TREE CANOPY TO BE PLANTED.....	16,727 SF (20%)

LANDSCAPE REQUIREMENTS (LDC TABLE 10.2.3, 10.2.6, 10.2.8)

LANDSCAPE BUFFER AREA (LBA) ALONG RESIDENTIAL.....	15 FT WITH 1.5 MULTIPLIER
VEHICULAR USE AREA (VUA).....	31,270 SF
REQUIRED VUA BUFFER.....	15 FT
INTERIOR LANDSCAPE AREAS REQUIRED (7.5%).....	2,350 SF
INTERIOR LANDSCAPE AREAS PROVIDED.....	2,350 SF

OPEN SPACE REQUIREMENTS (LDC 5.11.9)

OPEN SPACE REQUIRED.....	15% (12,550 SF)
OPEN SPACE PROVIDED.....	15% (12,550 SF)
(6,000 SF OF RECREATIONAL OPEN SPACE WITH WALKING PATH PROVIDED AT GREEN SPACE NEXT TO MAIL PAVILION.)	

DETENTION CALCULATIONS

ESTIMATED VOLUME REQUIRED = ΔCRA/12	
ΔC = 0.75-0.30.....	0.45
R =	2.8
A = SITE AREA.....	83,635 SF OR 1.92 AC
VOLUME REQUIRED.....	8,782 CF
BASIN AREA.....	2,600 SF
DEPTH OF BASIN.....	3.4 FT
VOLUME PROVIDED.....	8,800 CF

UTILITIES NOTES

ALL UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE. INDIVIDUAL SERVICE LINES ARE NOT SHOWN. PRIOR TO ANY EXCAVATION, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE NECESSARY UTILITY AGENCIES AND OBTAIN THE PRECISE LOCATION OF THEIR FACILITIES. THE CONTRACTOR SHALL FAMILIARIZE THEMSELV WITH ALL UTILITY REQUIREMENTS AS SET OUT ON THE PLANS, IN THE SPECIFICATIONS, AND IN THE SPECIAL PROVISIONS.

THE CONTRACTOR OR SUBCONTRACTOR SHALL NOTIFY THE UTILITY PROTECTION CENTER "HOLEY MOLEY" (TOLL FREE PHONE NO. 1-800-382-5544) FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY CONSTRUCTION ON THIS PROJECT. THIS NUMBER WAS ESTABLISHED TO PROVIDE ACCURATE LOCATIONS OF EXISTING BELOW GROUND UTILITIES (I.E. CABLES, ELECTRIC WIRES, GAS & WATER LINES).

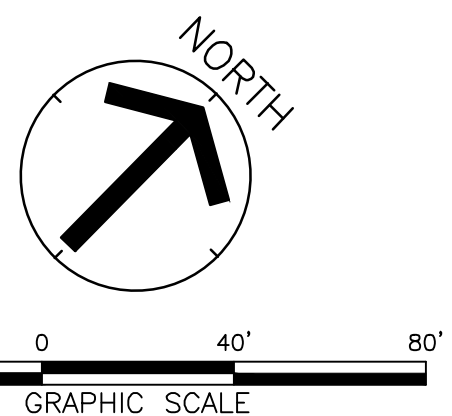
WAIVER REQUESTED

A WAIVER IS REQUESTED FROM THE MAY 2021 VERSION OF THE LDC, CHAPTER 10 PART 2 TABLE 10.2.3 TO REDUCE THE 15FT LBA TO 6FT TO ALLOW FOR ENCROACHMENTS AS SHOWN ON THE PLAN.

UTILITY NOTE:

ALL UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE. INDIVIDUAL SERVICE LINES ARE NOT SHOWN. THE CONTRACTOR OR SUBCONTRACTOR SHALL NOTIFY KENTUCKY 811(PHONE NO. 811) FORTY EIGHT HOURS IN ADVANCE OF ANY CONSTRUCTION ON THIS PROJECT. THIS NUMBER WAS ESTABLISHED TO PROVIDE ACCURATE LOCATIONS OF EXISTING BELOW GROUND UTILITIES (I.E. CABLES, ELECTRIC WIRES, GAS, AND WATERLINES). THE CONTRACTOR SHALL BE RESPONSIBLE FOR BECOMING FAMILIAR WITH ALL UTILITY REQUIREMENTS SET FORTH ON THE PLANS IN THE TECHNICAL SPECIFICATIONS AND SPECIAL PROVISIONS.

Revision	Date	Description	Detailed by	Chk'd by	Approved By
3	4/17/26	TRC COMMENTS (2ND REVIEW)	ELP		
2	XX/XX/XX	TRC COMMENTS (1ST REVIEW)			
1	XX/XX/25	AGENCY COMMENTS (1ST REVIEW)			



PLANNING CASE #25-ZONE-53, WM #12907

ENGINEER:
HERITAGE ENGINEERING, LLC
642 South 4th Street
Suite 100
Louisville, KY 40202
(502) 562-1412
(502) 562-1413 Fax

DEVELOPER:
NB-DEVELOP
315 SOUTHERN INDIANA AVENUE
JEFFERSONVILLE, IN 47130
(812) 654-9204

PROJECT:
DEVELOPMENT PLAN FOR OLD SIX MILE MULTI-FAMILY
9614 OLD SIX MILE LANE
LOUISVILLE, KY 40299

JOB NO:	25035
HORIZ. SCALE:	1" = 40'
VERT SCALE:	N/A
DESIGNED BY:	CGH
DETAILED BY:	CGH
CHECKED BY:	JDC
DATE:	APRIL 2026

SHEET
C09

Waiver Justification Statement

Goose Holdings, LLC

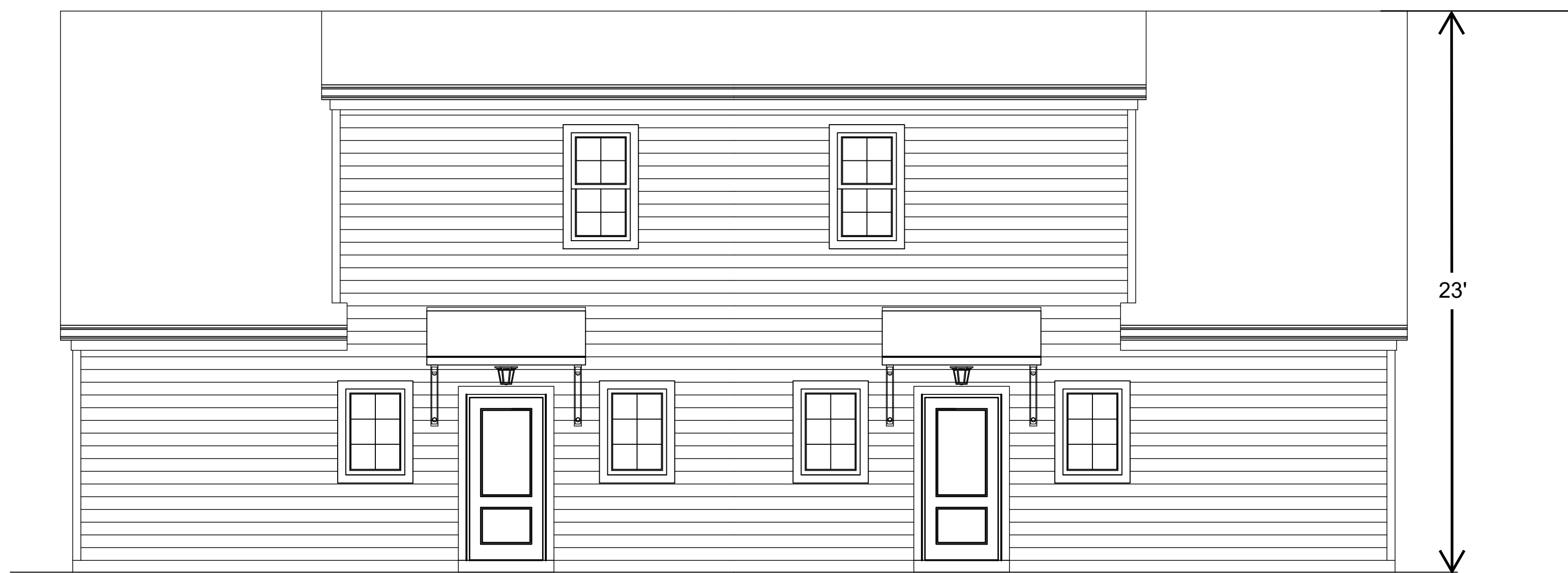
9614 Old Six Mile Lane

The applicant requests a waiver to allow the entrance drive, parking areas, proposed and existing buildings, and trash receptacles to encroach into the required 15-foot Landscape Buffer Area. The proposed waiver will not adversely affect adjacent property owners in that the waiver will allow for a driveway in approximately the same location as the existing driveway to the subject property. Further, the area to the Northwest of the driveway will be improved with a detention area that will appear as open space. The applicant has also committed to including landscape buffering and a solid fence on the Southeast side of the proposed driveway.

The proposed waiver will not violate the Plan 2040 comprehensive plan. The proposed development is for an 18-unit multifamily community. The subject property is located between Jeffersontown High School and single family residences to the Southeast, with multifamily residences across Old Six Mile lane and nearby. The proposed use is compatible with the existing land use pattern and represents appropriate infill development. Because the property is as narrow as it is, and the location of the proposed access point mirrors the existing driveway, the encroachment into the landscape buffer area is unavoidable to allow for functional site circulation, parking, building placement, and service areas.

The extent of the waiver of the regulation is the minimum necessary to afford relief to the applicant. The applicant is constrained by the location of the existing driveway, and the configuration of the parcel requires certain site elements—specifically the driveway, parking, buildings, and trash receptacles—to encroach into the Landscape Buffer Area. The applicant will offset these encroachments with landscaping along the Southeast side of the driveway in order to soften the appearance of the access point.

The strict application of the provisions of the regulation would deprive the applicant of the reasonable use of the land. As stated above, the applicant is constrained by the location of the existing driveway and other access points across Old Six Mile Lane. Allowing the applicant to improve the driveway into the subject property and limited encroachment of site elements into the Landscape Buffer Area while also incorporating landscape material and a solid fence will prevent this unnecessary hardship.



2 SOUTH ELEVATION
A4.02 1/4" = 1'-0"



2 WEST ELEVATION
A4.02 1/4" = 1'-0"



3 NORTH ELEVATION - FACES OLD SIX MILE
A4.02 1/4" = 1'-0"

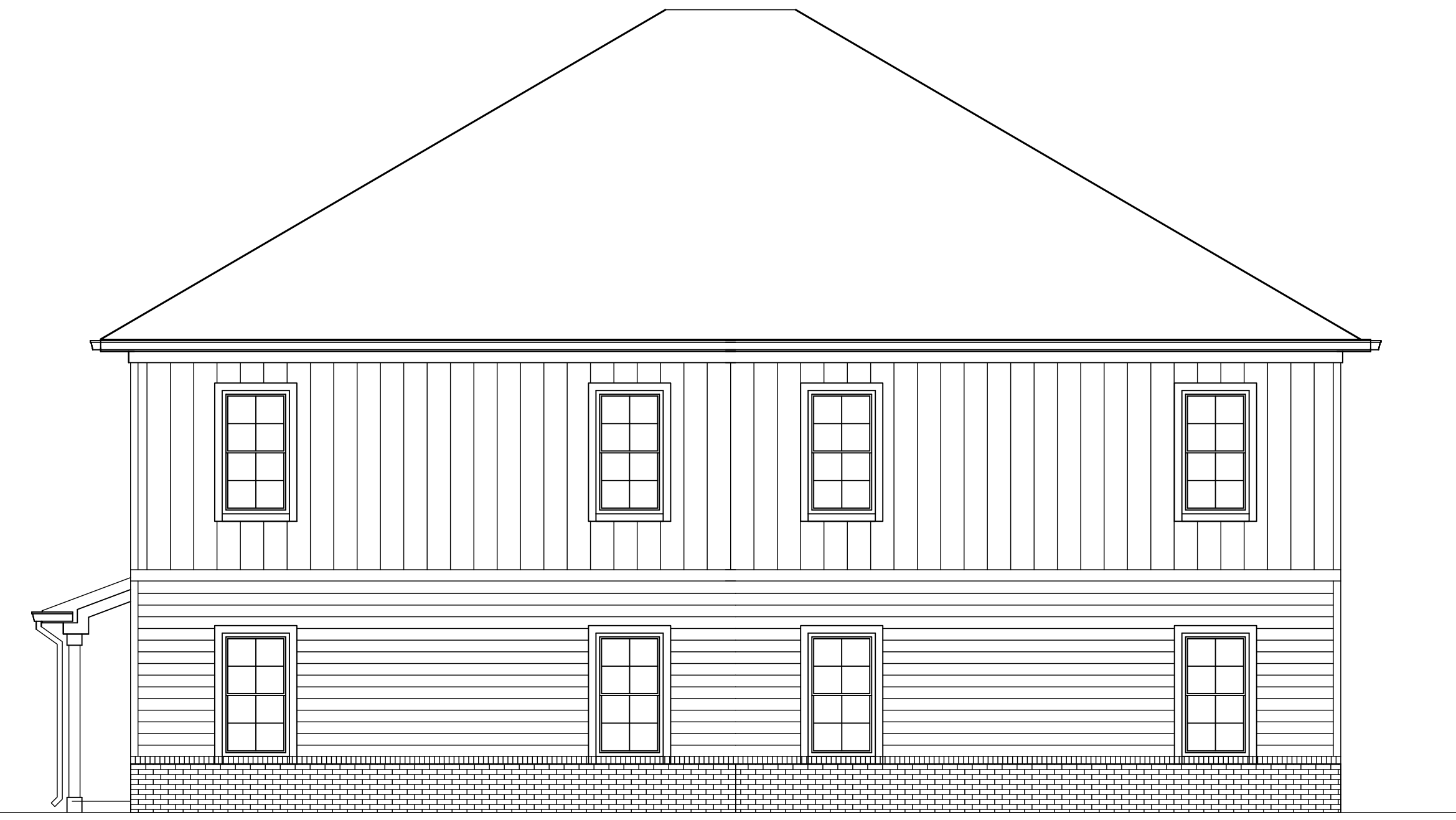


2 EAST ELEVATION
A4.02 1/4" = 1'-0"

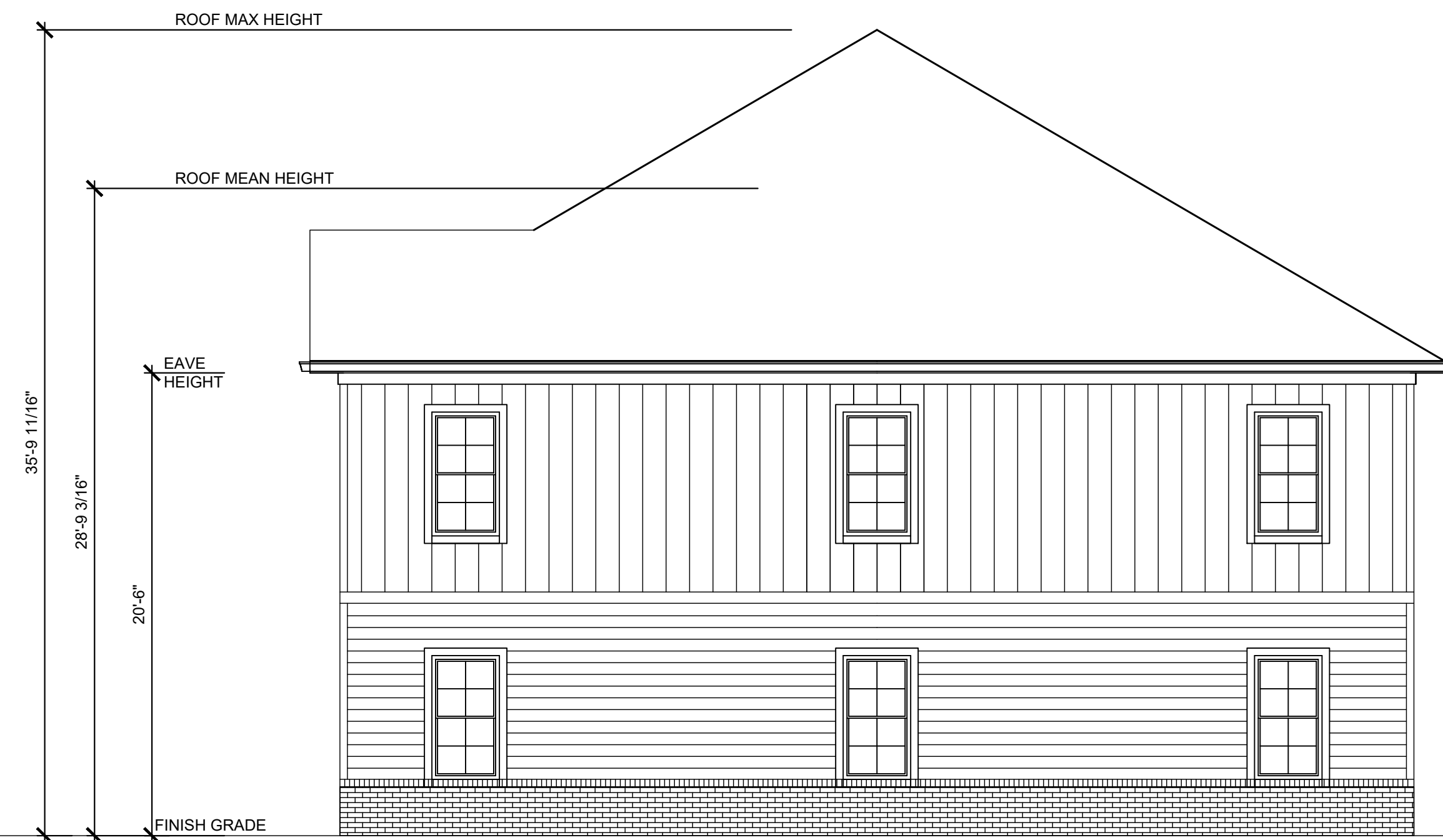
PROPOSED DUPLEX ELEVATIONS
(2-STORY / 2 UNIT BUILDING)



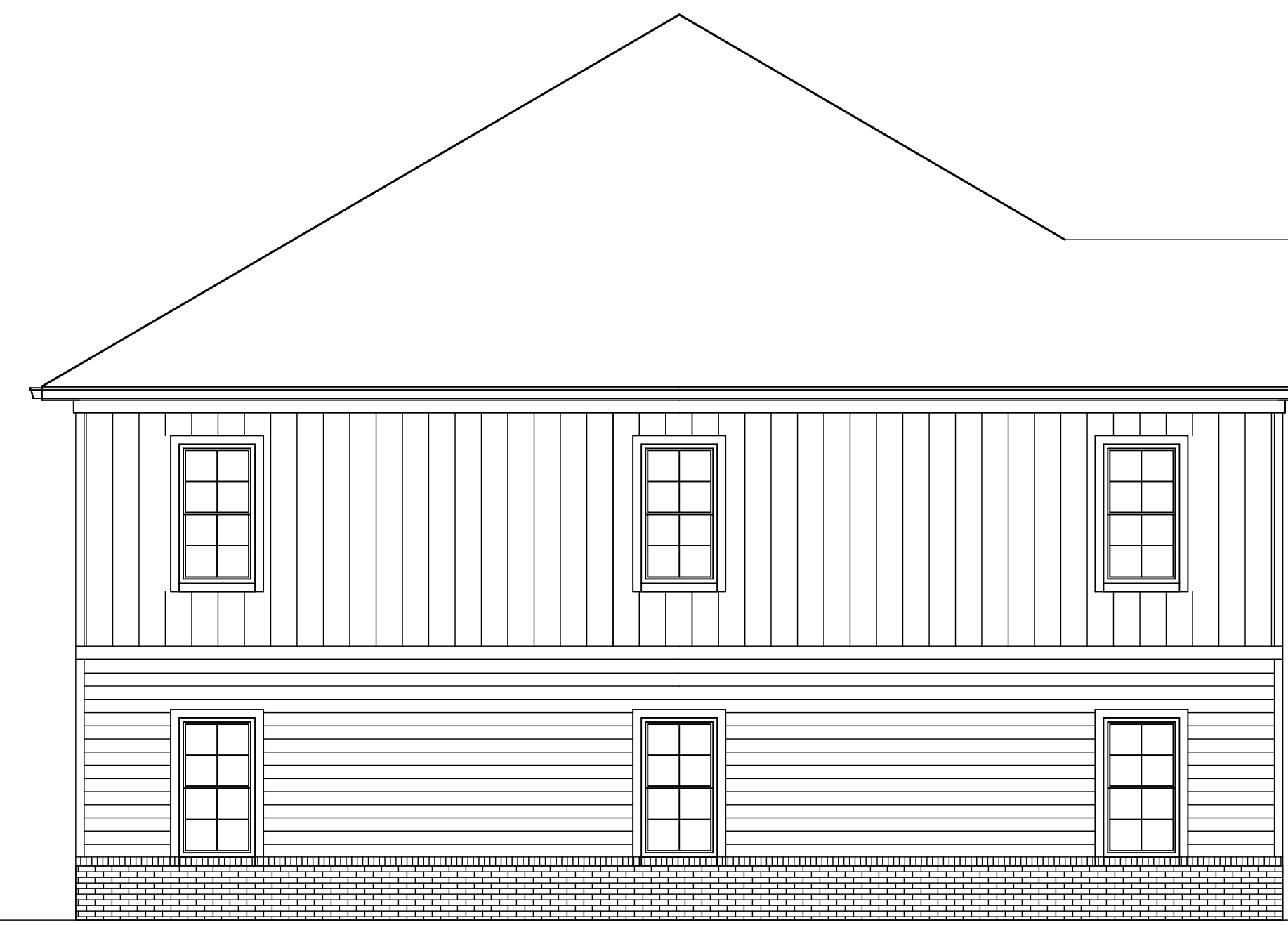
1 EAST ELEVATION
A4.01 3/16" = 1'-0"



2 WEST ELEVATION
A4.01 3/16" = 1'-0"

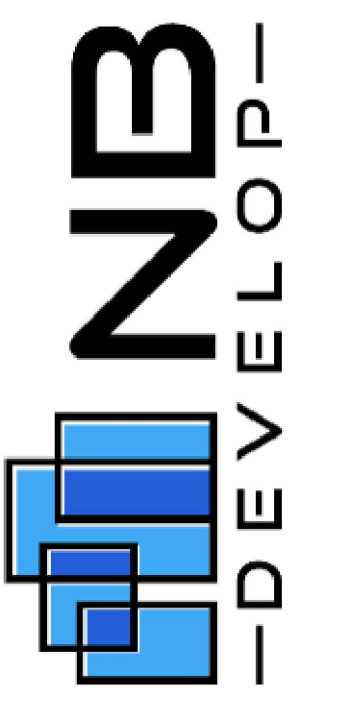


3 NORTH ELEVATION
A4.01 3/16" = 1'-0"



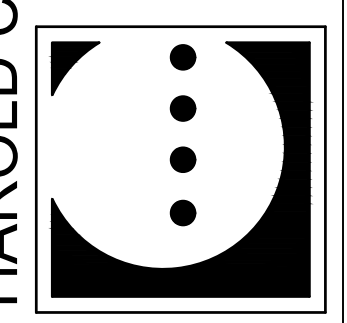
4 SOUTH ELEVATION
A4.01 3/16" = 1'-0"

PROPOSED MULTI-FAMILY UNIT ELEVATIONS
(2-STORY / 4 UNIT BUILDING)
Received June 22, 2026



NB-DEVELOP
1419 E. MARKET ST. NEW ALBANY IN 47150
502-272-4726
OLD SIX MILE LANE
APARTMENTS

HAROLD COX ARCHITECTS
HAROLD W. COX JR.
ARCHITECT
5703 LOVERS LANE
LOUISVILLE KY 40299
502.775.9139
EMAIL: hcox001@aol.com



A4-2	DATE	12-18-25
	BY	LMM, HWC
	CHK	HWC
REVISIONS		

JUSTIFICATION STATEMENT

Goose Holdings, LLC **9614 Old Six Mile Lane**

INTRODUCTION

Goose Holdings, LLC (the "Applicant") proposes to re-zone the property located at 9614 Old Six Mile Lane from R-4 Single-Family Residential to R-5A Multi-Family Residential to allow for the redevelopment of the property as an apartment community. The proposed development will include 4 new residential buildings containing a total of 18 units and two additional units within the existing home with associated parking. Two new buildings will be two-story and two will be three-story. Residents will enjoy over 12,000 square feet of open space, more than what is required and 16,727 square feet of tree canopy to be planted. For the reasons set out below, the proposed rezoning complies with the applicable Plan Elements of the Plan 2040 Comprehensive Plan.

COMMUNITY FORM

The proposal complies with the intent and applicable guidelines and policies of the Community Form Plan Element. The subject property is located in the Neighborhood Form District, which the Comprehensive Plan states is a form “characterized by predominantly residential uses that vary from low to high density and that blend compatibly into the existing landscape and neighborhood areas...The Neighborhood Form will contain diverse housing types in order to provide housing choice for differing ages, incomes and abilities. New neighborhoods are encouraged to incorporate these different housing types within a neighborhood as long as the different types are designed to be compatible with nearby land uses. These types may include, but not be limited to...multi-family housing...” The proposed development is an apartment community within an area that contains mostly single-family development with some multi-family nearby and is adjacent to the Jeffersontown High School. Here, the proposal is consistent with the Neighborhood Form district as it will repurpose the existing lot to serve as an apartment community, offering additional housing in the area. In addition, the Applicant has designed the parking areas so that parking spaces are located in between the buildings to maintain the current distance between adjoining residential properties.

MOBILITY

The proposed development complies with the intent and applicable guidelines and policies of the Mobility Plan Element. The proposed development will be accessed via Old Six Mile Lane, which will adequately serve the proposed use.

COMMUNITY FACILITIES

The proposed development complies with the intent and applicable policies of the Community Facilities Plan Element. The subject property is adequately served by all utilities, including water and sewer.

ECONOMIC DEVELOPMENT

The proposed development complies with the intent and applicable policies of the Economic Development Plan Element. The development repurposes the vacant area of the existing lot to provide more housing options in the vicinity. The proposed development will provide new housing options near the Jeffersontown High School and the commercial uses along Taylorsville Road. Diverse housing options in the community will serve employers and employees alike.

LIVABILITY

The proposed development complies with the intent and applicable policies of the Livability Plan Element. The proposed development will include open space areas and will also comply with the tree canopy preservation and planting requirements of the LDC.

HOUSING

The proposed development complies with the intent and applicable policies of the Housing Plan Element. A primary objective of the Housing Plan Element is to provide housing choices throughout our community. Residents will have a new housing choice in this area of the community.

Clark, Molly

From: Harrington, Scott
Sent: Wednesday, July 9, 2025 9:50 AM
To: [REDACTED] Kramer, Kevin; Clark, Molly
Subject: RE: Contact Councilman Kevin Kramer [#2713]

Mr. Hudson,

I'm including the case manager, Molly Clark, on this email so she can add your comments to the official record so Planning Commissioners can read them.

Thank you!

Scott



Scott W. Harrington | Legislative Assistant
Office of Councilman Kevin J. Kramer
Louisville Metro Council | District 11

phone: 502.574.3456

email: scott.harrington@louisvilleky.gov

 [Sign up for District 11's E-Newsletter](#)

City Hall

601 West Jefferson Street
Louisville, Kentucky 40202

From: Councilman Kevin Kramer <no-reply@wufoo.com>
Sent: Wednesday, July 9, 2025 8:17 AM
To: Kramer, Kevin <Kevin.Kramer@louisvilleky.gov>; Harrington, Scott <Scott.Harrington@louisvilleky.gov>
Subject: Contact Councilman Kevin Kramer [#2713]

Name * David Hudson

Address 

* 3711 Longview Road
Louisville, KY 40299
United States

Phone (502) 554-7071

Number

*

Email *

[REDACTED]

Comments *

I am writing about the proposed building of apartments at 9614 Old Six Mile Lane. I will be unable to attend the meeting next Tuesday at the Jeffersonian but wanted to make my feeling about the proposed complex known. I will say it bluntly, NO MORE APARTMENTS IN JEFFERSONTOWN!!!! I am also very concerned about the development taking place on Taylorsville Road. I am all for progress but please do not keep approving more building as I do not want to see J-town turn into another bottleneck like Bardstown Road in Fern Creek.

Thank you.

David Hudson

3711 Longview Road

Louisville, KY 40299

(502) 554-7071

[REDACTED]

Jones, Zachary

From: Jones, Zachary
Sent: Tuesday, May 26, 2026 12:14 PM
To: 'Steve Rusie'
Subject: RE: 25-ZONE-0121

Good afternoon Steve,

Thanks for reaching out. I do not see a spot zoning case. Firstly, it's residential to residential. While there's an increase in density, it's not greatly exaggerated beyond the context of the area. The high school adjacent isn't a traditional R-4 use. Further, there are R-6 & R-7 zoned properties very nearby. And most importantly it complies broadly, even encouraged, with the goals and policies of the comprehensive plan. If this was a case of M-1 Industrial proposed, for example, or it was another incompatible zone, I would feel differently.

I appreciate the question Steve! I always encourage conversation and feedback and am happy to assist you all how I can.

Best,

Zack Jones
Planner II
Office of Planning - Louisville Metro Government
444 S. Fifth St. #300, Louisville, KY 40202
Office: (502) 574-6230 | **Direct:** (502) 574-8224



OFFICE OF
PLANNING

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From: Steve Rusie <srusie@jeffersontownky.gov>
Sent: Friday, May 22, 2026 8:11 AM
To: Jones, Zachary <Zachary.Jones@louisvilleky.gov>
Subject: 25-ZONE-0121

CAUTION: This email came from outside of Louisville Metro. Do not click links, open attachments, or give away private information unless you recognize the sender's email address and know the content is safe.

9614 Old Six Mile Lane

Any thoughts about this being spot zoning? The other multi-family rezonings along Old Six Mile have been adjacent to other multi-family zoned and used properties.

Steve

Stephen Rusie, AICP
Planning Manager
City of Jeffersontown
10416 Watterson Trail
Jeffersontown, KY 40299-3749
Phone: (502) 267-8333
Fax: (502) 267-0547





Louisville Metro Government

Text File

File Number: 26-LDC-0008.

Agenda Date: 7/16/2026

Version: 1

Status: Public Hearing

In Control: Planning Commission

File Type: Planning Case

Agenda Number: 11.

**Planning Commission
Staff Report**
July 16, 2026



Case No:	26-LDC-0008
Request:	Text Amendment to the Jeffersontown Land Development Code concerning Town Center and Neighborhood Form Districts
Project Name:	Text Amendment to the Jeffersontown Land Development Code concerning Town Center and Neighborhood Form Districts
Jurisdiction:	Jeffersontown
Applicant:	City of Jeffersontown
Council Districts:	11, 18, 20 & 26
Case Manager:	Stephen Rusie, AICP, Planning Manager, City of Jeffersontown

REQUEST

Text Amendment to the Jeffersontown Land Development Code concerning Town Center and Neighborhood Form Districts

The City of Jeffersontown has adopted Resolution No. 855, Series 2026 requesting that the Louisville Metro Planning Commission review a proposed amendment of the City of Jeffersontown Ordinance No. 1415, series 2021, regarding maximum building heights in the Town Center and Neighborhood Form Districts.

**Neighborhood Form District
Chapter 5.3.1.c table 5.3.1. Dimensional standards: residential development**

For the R-7, OR-1, R-8A, OR-2, CR, CN, OR-3, OTF, C-1 and C-2 Zoning Districts the maximum height allowed is 45-feet.

~~***additional height is allowed, if all required setbacks are increased five feet for each additional ten feet of building height, or fraction thereof, over 45 feet. This extra setback does not apply to off-street parking and maneuvering areas.~~ Non-residential uses are subject to building height limits as established in table 5.3.2

**Town Center Form District
Chapter 5.2.4.C.3.F Building Height**

Except as limited in the form district transition zone, the maximum permitted building height is ~~120~~ 45 feet.;

APPLICABLE PLANS AND POLICIES

Plan 2040 (Comprehensive Plan)
Land Development Code

3.1.3. Neighborhood: The Neighborhood Form is characterized by predominantly residential uses that vary from low to high density and that blend compatibly into the existing landscape and neighborhood areas.

3.1.5. Town Center: The Town Center is a traditional and preferred form, larger in scale than the neighborhood center, which forms a focal point of activity. The Town Center has an identifiable core and is

often located at a historic crossroads or the intersection of a major thoroughfare(s) and a collector roadway with connections to surrounding neighborhoods through walkways, local streets and residential collector streets.

Town Centers are easily disrupted by new forms of development. Therefore, the harmony and compatibility of infill and redevelopment in Town Centers should receive special attention.

The Comprehensive Plan envisions the preservation and enhancement of those town centers that already exist.

STAFF ANALYSIS

Neighborhood Form District:

In order to ensure that new developments are compatible with the existing Jeffersontown residential neighborhoods any new developments in the R-7 and above zoning districts will be limited to a 45-foot height limitation unless it can be shown that a taller height would not be incompatible with the existing neighborhood as determined by the City of Jeffersontown Board of Adjustments.

Town Center Form District:

The City of Jeffersontown's existing Town Center does not include any buildings taller than three stories so to ensure that future development or re-development is compatible with the existing Town Center the reduction of the allowed height from 120-feet to 45-feet will ensure compatibility with the Jeffersontown Town Center unless it can be shown that a taller height would not be incompatible with the existing Town Center as determined by the City of Jeffersontown Board of Adjustments.

PLAN 2040

Policy	Plan Element or Portion of Plan Element
Community Form: Goal 1	
2.1	Evaluate the appropriateness of a land development proposal in the context of: 2.1.1. the description, character and function of the Form District designated for the area in which the subject site is located; 2.1.2. the intensity and density of the proposed land use or mixture of land uses; 2.1.3. the effect of the proposed development on the movement of people and goods; and 2.1.4. the compatibility of the proposed use or uses with surrounding uses including the relationship of the use, mass, scale, height, materials, building footprint, orientation, setback and design of the proposed building or buildings with that of surrounding buildings.
3.1.3	Neighborhood (1.3.1.3, page 41)
3.1.5	Town Center (1.3.1.5, page 42)
4.	Ensure new development and redevelopment are compatible with the scale and site design of nearby existing development and with the desired pattern of development within the Form District. Quality design and building materials should be promoted to enhance compatibility of development and redevelopment projects.
5.	Allow a mixture of densities as long as their designs are compatible. Adjacent residential areas in different density categories may require actions to provide an appropriate transition between the areas. Examples include vegetative buffers, open spaces, landscaping and/or a transition of densities, site design, <u>building heights</u> , building design, materials and orientation that is compatible with those of nearby residences.
9.	Ensure an appropriate transition between uses substantially different in scale and intensity or density of development. The transition may be achieved through methods such as landscaped buffer yards, vegetative berms, compatible building design and materials, <u>height restrictions</u> and setback requirements.
11.	Ensure setbacks, lot dimensions and <u>building heights</u> are compatible with those of nearby developments that meet Form District guidelines.

CITY OF JEFFERSONTOWN
JEFFERSON COUNTY, KENTUCKY

RESOLUTION NO. 855, SERIES 2026

A RESOLUTION REQUESTING THAT THE LOUISVILLE METRO PLANNING COMMISSION REVIEW A PROPOSED AMENDMENT OF THE CITY OF JEFFERSONTOWN ORDINANCE NO. 1415, SERIES 2021, AND ADOPTING AMENDMENTS TO CHAPTER 5 PART 2 AND CHAPTER 5 PART 3 OF THE LAND DEVELOPMENT CODE TO:

AMEND 5.2.4.C.3.F BUILDING HEIGHT. EXCEPT AS LIMITED IN THE FORM DISTRICT TRANSITION ZONE, THE MAXIMUM PERMITTED BUILDING HEIGHT IS ~~40~~ 45 FEET.;

AND:

CHAPTER 5.3.1.C TABLE 5.3.1. DIMENSIONAL STANDARDS: RESIDENTIAL DEVELOPMENT ***~~ADDITIONAL HEIGHT IS ALLOWED, IF ALL REQUIRED SETBACKS ARE INCREASED FIVE FEET FOR EACH ADDITIONAL TEN FEET OF BUILDING HEIGHT, OR FRACTION THEREOF, OVER 45 FEET. THIS EXTRA SETBACK DOES NOT APPLY TO OFF STREET PARKING AND MANUVERING AREAS.~~ NON-RESIDENTIAL USES ARE SUBJECT TO BUILDING HEIGHT LIMITS AS ESTABLISHED IN TABLE 5.3.2

WHEREAS, the City Council of the City of Jeffersontown recognizes a need to promote compatibility in the Town Center and Neighborhood Form Districts; and,

WHEREAS, the City Council of the City of Jeffersontown finds that the proposed amendment to Chapter 5, Part 2 and Chapter 5.3 of the LDC are in conformance with the comprehensive plan because this amendment is in compliance with the following comprehensive plan guidelines, and,

WHEREAS, the City Council of the City of Jeffersontown further finds that the proposal meets **Goal 1.2.1.4** regarding **Compatibility**, because the proposal ensures that building heights, are compatible with nearby land uses and to minimize impacts to existing residential areas, schools and other sensitive areas in the community; and,

WHEREAS, the City Council of the City of Jeffersontown further finds that the proposed amendment allows for new residential developments to “blend complatibly into the existing landscape and neighborhood areas” (**Goal 1.3.1.3 Neighborhood Form District**) ; and,

WHEREAS, the City Council of the City of Jeffersontown further finds that the proposal meets **Goal 1.3.1.5** regarding the **Town Center Form District**, because the proposal allows harmony and compatibility of infill and redevelopment in the Jeffersontown Town Center.

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of Jeffersontown, Kentucky that the City Council does hereby REQUEST the Louisville Metro Planning Commission review Chapter 5, Part 2 and Chapter 5 Part 3.1 of the Jeffersontown Land Development Code as adopted by Ordinance No. 1415, Series 2021, proposed amendments to the following height restrictions: and

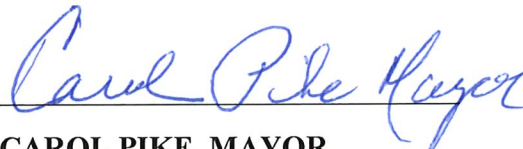
5.2.4.C.3.F Building Height

Except as limited in the form district transition zone, the maximum permitted building height is ~~420~~ 45 feet.; and

Chapter 5.3.1.c table 5.3.1. Dimensional standards: residential development

~~*** additional height is allowed, if all required setbacks are increased five feet for each additional ten feet of building height, or fraction thereof, over 45 feet. This extra setback does not apply to off street parking and maneuvering areas. Non-residential uses are subject to building height limits as established in table 5.3.2~~


INTRODUCED, SECONDED, READ AND ADOPTED by the City Council of the City of Jeffersontown on the 7th day of April, 2026 on the same occasion signed by the Mayor of the City of Jeffersontown and declared to be in full force and effect according to law.


 CAROL PIKE, MAYOR

ATTEST:

Bill Fox

BILL FOX, CITY CLERK





Louisville Metro Government

Text File

File Number: 26-LDC-0004.

Agenda Date: 7/16/2026

Version: 1

Status: Public Hearing

In Control: Planning Commission

File Type: Planning Case

Agenda Number: 12.



26-LDC-0004

Planning Commission
Staff Report
July 16, 2026

Text Amendment to the City of Shively Land Development Code – Fencing

Location: Shively
Applicant: City of Shively
Representative: n/a
Jurisdiction: Shively
Council District: 3- Shameka Parrish-Wright
Case Manager: Jude Mattingly, Planner II

REQUESTS & RECOMMENDED ACTIONS

1. Text Amendment to the Shively Land Development Code (LDC) related to fencing.
 - Staff find the text amendment is in keeping with Plan 2040 and recommend that the Planning Commission **RECOMMEND** that the City of Shively **APPROVE** the text amendment

CASE SUMMARY

The Shively City Council adopted Municipal Order No. 4, Series 2026 directing the Planning Commission and Office of Planning staff to review the City of Shively's Land Development Code (LDC) and return recommendations related to materials identified as not suitable in the construction of fencing.

Specifically, the City Council has some concern with solid sheet metal panels, corrugated metal roofing panels, and other similar materials being used as they have identified negative aesthetic and appearance effects on neighborhoods, and safety concerns that are inconsistent with their character and development standards. Currently, Section 4.4.3 of the City of Shively LDC does not explicitly prohibit any specific material, but rather is in-line with Louisville Metro's LDC which allows for fences constructed of a solid material (masonry, wood) with an opacity of at least 80% and up to 8 ft in height to be located in required side and rear yards and fences with an opacity of less than 80% (e.g. chain link) and up to 6 ft in the side and rear yards.

Staff have also discovered a conflict with the City of Shively Code of Ordinances and Land Development Code that could be addressed in any amendment. A Shively ordinance does not allow fences to be installed in the front yard.

In summary, the amendment:

- Revises the definition of “fences” to not include solid sheet metal or corrugated metal roofing materials as appropriate
- Resolves contradictions with Shively Code of Ordinances about fencing in the front yard
- Prohibits the use of solid sheet metal and corrugated metal roofing panels as fencing material

The full text of this amendment is included as Attachment 1 at the end of this report.

TECHNICAL REVIEW

Local Zoning Requirements:

The following is a summary of the existing Shively LDC provisions:

- Materials are only mentioned in relation to height restrictions.

Shively Code of Ordinances Requirements:

- Shively Code of Ordinances 96.46 prohibits fences from being constructed in the front yard which contradicts the Shively LDC. Staff recommend lining up the two.

State Requirements:

The State provisions do not regulate design materials as they are generally dictated by local regulations and ordinances.

Peer City/County Review:

City	Similar Regulation	Special Notes
Lexington, KY	No	No specifically prohibited materials to be used for fencing.
Indianapolis, IN	Yes	Scrap or waste materials are only permitted if they have been recycled or reprocessed into building material for sale to the public
Cincinnati, OH	Yes	Materials do not appear to be specifically prohibited; however it appears a zoning administrator has discretion to deny materials deemed inappropriate.
Memphis, TN	Yes	Permissible materials that does not include solid sheet metal or corrugated metal roofing panels are listed.
Nashville, TN	Yes	Requires any metal materials to be manufactured and/or

		treated in a manner to prevent rust or corrosion.
Dallas, TX	Yes	Sheet metal and corrugated metal explicitly prohibited.

Recommendation Analysis:

The peer cities that staff reviewed that did contain restrictions or outright prohibitions on acceptable fencing materials enacted these regulations in the relatively recent past. Indicating that the use of solid sheet metal panels or corrugated metal roofing panels as fencing materials may be a more recent trend.

Concerns indicated by other peer cities have included the durability and safety of these materials as they appear to have a short life span and are more susceptible to weather events that can lead to damage of surrounding properties, negative impacts to the character and appearance of neighborhoods, and environmental concerns related to heat generation.

By incorporating the proposed text amendments, the contradiction between Shively Code of Ordinances and Shively Land Development Code will be eliminated, and a measure that promotes quality design and building materials to encourage the growth of neighborhoods is instituted.

STANDARD OF REVIEW FOR TEXT AMENDMENTS

Content of zoning regulations: *KRS 100.203*

Procedure for amending the text of regulation: *KRS Chapter 100.211*

STAFF ANALYSIS FOR TEXT AMENDMENT

The following is staff’s analysis of the proposed amendment against the Guidelines and Policies of Plan 2040.

The amendment advances the following Goals, Objectives, and Policies of Plan 2040:

- **Community Form Goal 1:** Guide the form and design of development to respond to distinctive physical, historic and cultural qualities. This goal calls for quality design and building materials be promoted to enhance compatibility of development and redevelopment projects.

STAFF FINDING: The proposed amendments advance goals, objectives, and policies of Plan 2040, as well as its CHASE principles by promoting quality design and materials are promoted.

In the event that a fence is proposed that incorporates these materials, an applicant would still be able to request a waiver that would be reviewed by the Planning Commission.

NOTIFICATION

DATE	PURPOSE OF NOTICE	RECIPIENTS
7/8/2026	Planning Commission Public Hearing	Registered Neighborhood Groups for all Council District 3
6/25/2026	Planning Commission Public Hearing	Legal Advertisement in the Courier-Journal

ATTACHMENTS

1. Proposed Text Amendments
2. Proposed Findings for the Planning Commission

1. Proposed Text Amendment

The Planning Commission must make a recommendation to the legislative body of the City of Shively to approve, approve with modifications, or deny the LDC text amendments. The proposed changes are presented as specific amendments to the City of Shively version of the LDC.

Shively Land Development Code

Chapter 1, Part 2 Definitions

Fence: Any construction of wood, metal, wire mesh, masonry, or other material **but not including solid sheet metal panels, corrugated metal roofing panels, or any other metal material with an opacity of more than 80%**, erected for the purpose of assuring privacy and protection, but excluding shrubbery and plantings.

Chapter 4 Part 4 Accessory Uses and Miscellaneous Standards

4.4.3 Fences, Walls, and Signature Entrances

A. Fences and Walls

1. Height and Location:

NOTE: *If a fence is mandated by the Land Development Code the finished side of the fence must face the lower intensity use. Sec Section 10.4.9*

- a. In the R-R, R-E, R-1, R-3, R-4, R-5, PRD, U-N, R-5A, R-5B, TNZD, R-6, R-7, R-8A, OR, OR-1, OR-2, OR-3, PD (residential use) and OTF Districts:

- i. Fences and Walls, up to 48 inches in height in the suburban form districts and 42 inches in the traditional form districts, may be located within the required ~~front~~ ~~and~~ street side yards except as provided in Figure 4.4.1.
- ii. Fences and Walls up to 8 feet in height and constructed of a solid material (masonry, wood) with an opacity of at least 80% may be located within required side and rear yards. Fences and walls with an opacity less than 80% (e.g. chain link fences) up to 6 feet in height may be located within required side and rear yards. Exception: Wrought iron fences up to 8 feet in height may be located within the required side and rear yards.

NOTE: Refer to Chapter 5 part 4 for design standards applicable to fences in traditional form districts.

- iii. The following materials are prohibited for the construction of a fence
 - (a) Solid Sheet Metal Panels
 - (b) Corrugated Metal Roofing Panels

- iii. iv. The height of fences or walls located in a required side or rear yard shall be measured from the lowest grade within a distance of one foot on either side of the fence to the highest point of any portion of the fence.

NOTE: Retaining walls shall be subject to the height and setback requirements of this section

- iv. v. The total height of fences within 5 feet of a public sidewalk or roadway pavements shall be measured by adding the height of the fence and the height of the change of grade. The total height of fences more than 5 feet from a public sidewalk or roadway pavements shall be measured by measuring the height of the fence only. Refer to Figure 4.4.2 for an example of the correct method of measuring fence heights.
- v. vi. On double frontage lots, where one of the required front yards adjoins a major arterial, minor arterial or collector roadway, and where access is prohibited, a fence or wall may be constructed within that yard up to a height of 8 feet.

b. In all other zoning districts:

- i. Fences and walls in all other zoning districts shall be restricted by the maximum building height of that district except when abutting R-R, R-E, R-1, R-2, R-3, R-4, R-5, PRD, U-N, R-5A, R-6, R-7, R-8A, OR-1, OR-2, OR-3, PD (residential use) and the OTF Districts in which case a i), ii), ~~and~~ iii), ~~and~~ iv) above shall apply.

NOTE: *It is important to check a property's deed for restrictions on fences (location materials and general permissibility).*

Chapter 5.4.1 Traditional Form Districts (except for DFD)

B. Public Realm Area (see figure 5.4.1)

1. Encroachments/accessory structures. Encroachments and accessory structures are not permitted in the Public Realm except:

- a. Fences and walls that are no more than 42 inches in height may be located within the required ~~front and~~ street side yards and fences must be either painted or stained. Pickets must be vertical and spaced no less than 4 inches apart.

2. Proposed Findings for the Planning Commission

WHEREAS, the Commission finds that the City of Shively passed Municipal Order No. 4, Series 2026 requesting that staff review the Land Development Code (LDC) and develop recommended changes related to fencing; and

WHEREAS, the Commission finds that the amendments advance the Goals, Objectives, and Policies of Plan 2040, as well as its CHASE principles; and

WHEREAS, the Commission finds that regulating fencing is in compliance with Community Form Goal 1, in order to guide the form and design of development to respond to distinctive physical, historic and cultural qualities. This goal calls for quality design and building materials be promoted to enhance compatibility of development and redevelopment projects.

CITY OF SHIVELY
MUNICIPAL ORDER NO. 4, SERIES 2026
A MUNICIPAL ORDER OF THE CITY COUNCIL OF THE CITY OF SHIVELY,
KENTUCKY, RECOMMENDING AN AMENDMENT TO SECTION 4.4.3(A)(1)(a)(ii)
OF THE LAND DEVELOPMENT CODE TO PROHIBIT THE USE OF SOLID METAL
SHEET PANELS AND CORRUGATED METAL ROOFING MATERIALS AS
FENCING MATERIALS.

WHEREAS, the City of Shively is a Home Rule City organized under the laws of the Commonwealth of Kentucky and is authorized to exercise powers in furtherance of the public health, safety, and welfare, and

WHEREAS, the Shively City Council has reviewed the provisions of Section 4.4.3(A)(1)(a)(ii) of the Land Development Code governing permitted fencing materials within the City, and

WHEREAS, the Shively City Council finds that the use of solid sheet metal panels, corrugated metal roofing panels, and similar materials when used as fencing can negatively affect neighborhood appearance, may create safety concerns, and are inconsistent with the character and development standards desired within the city, and

WHEREAS, the Shively City Council desires to ensure that fencing materials used throughout the city are appropriate, durable, and designed for use as fencing products, and

WHEREAS, the Shively City Council believes that Section 4.4.3(A)(1)(a)(ii) of the Shively Land Development Code should be amended to expressly prohibit the use of solid sheet metal panels and corrugated metal roofing materials as fencing, now therefore:

BE IT ORDERED by the governing authority of the City of Shively, Kentucky:

SECTION 1. The Shively City Council hereby recommends that Section 4.4.3(A)(1)(a)(ii) of the Land Development Code be amended to prohibit the use of solid sheet metal panels, corrugated metal roofing panels, and similar roofing or siding materials when used as fencing.

SECTION 2. The Shively City Council recommends that the amendment clarify that such materials are not considered acceptable fencing materials unless they are specifically manufactured and designed for fencing purposes.

SECTION 3. The Shively City Council hereby directs that this Municipal Order be forwarded to the Planning Commission for consideration and initiation of a formal text amendment to the Land Development Code consistent with the intent of this Municipal Order.

SECTION 4. The Planning Commission shall undertake a review of the current LDC and make recommendations for an amendment to the LDC, Section 4.4.3(A)(1)(a)(ii) to prohibit solid sheet metal fencing and corrugated metal roofing as fencing materials in the City of Shively.

Entered this 4th day of May 2026.

Introduced by: Ms. Thompson

Maria D. Johnson

Attest: *Mitzi R. Kasitz*

Maria Johnson, Mayor

Mitzi R. Kasitz, City Clerk

Council	Yea	Nay
Ms. Burton-McBroom	√	—
Mr. Gibson	√	—
Ms. Gibson	√	—
Ms. Thompson	√	—
Mr. Vincent	√	—
Ms. Wakaba	√	—



Louisville Metro Government

Text File

File Number: 26-LDC-0003.

Agenda Date: 7/16/2026

Version: 1

Status: Public Hearing

In Control: Planning Commission

File Type: Planning Case

Agenda Number: 13.



26-LDC-0003

Planning Commission
Staff Report
July 16, 2026

Text Amendment to the Land Development Code - Package Liquor Stores

Location: Louisville Metro
Applicant: Louisville Metro Government
Representative: n/a
Jurisdiction: Louisville Metro
Council District: All Council Districts
Case Manager: Joseph Haberman, AICP, Planning & Design Manager

REQUESTS & RECOMMENDED ACTIONS

1. Text Amendment to the Land Development Code (LDC) related to Package Liquor Stores
 - Staff finds the text amendment is in keeping with Plan 2040 and recommends that the Planning Commission **RECOMMEND** that the Louisville Metro Council and other legislative bodies with zoning authority **APPROVE** the text amendment

CASE SUMMARY

The Louisville Metro Council passed a resolution on November 13, 2025 requesting that staff review the Land Development Code (LDC) and develop recommendations to improve the regulations for package liquor stores.

Package liquor stores, with no-site alcohol consumption, are currently permitted by right in C-1, C-2, C-3, C-M, EZ-1, and PEC. The use is also permitted in some areas of PVD (Village Center only) and the Old Louisville/Limerick TNZD (Neighborhood Center and Neighborhood Center Transition: Edge Transition only). In addition, stores may be permitted with a conditional use permit in the TNZD's Neighborhood Transition-Center area.

A summary of the amendments:

- Define "Package Liquor Store" by following an established definition in KRS 243.240 that is utilized for licensing purposes.
- Continue to allow a package liquor store in any zoning district in which it is currently permitted, but with the addition of special standards.
- Allow a package liquor store that cannot meet a special standard with a conditional use permit.
- Update related TNZD provisions to better incorporate the changes within Old Louisville and Limerick.

The full text of this amendment is included as Attachment 1 at the end of this report.

TECHNICAL REVIEW

LDC Overview:

Package liquor stores with no on-site alcohol consumption are currently permitted by right in the C-1, C-2, C-3, C-M, EZ-1, and PEC zoning districts. The use is also permitted in some areas of PVD zoning district (Village Center only) and the Old Louisville/Limerick TNZD zoning district (Neighborhood Center and Neighborhood Center Transition: Edge Transition only). In addition, stores may be permitted with a conditional use permit in the Old Louisville/Limerick TNZD's Neighborhood Transition-Center area.

While not explicitly addressed in the LDC, on-site consumption has been permitted at locations with a zoning classification that allows for another use that permits on-site consumption, such as a tavern. In addition to having a zoning classification that allows on-site consumption, the business must have an ABC license that allows for such consumption.

Kentucky Revised Statutes (KRS):

Chapters 241, 243, and 244 of KRS contain the alcoholic beverage control laws for Kentucky. In general, to open a package liquor store, the business (or licensee) needs a quota retail package license, which permits the retail sale of distilled spirits and wine in unbroken packages for off-premises consumption.

Louisville Metro Code of Ordinances (LMCO):

Chapter 113 of the LMCO contains the local licensing provisions for alcoholic beverages for Metro. These regulations, known as the Alcoholic Beverage Control Ordinance, are administered and enforced by the Louisville Metro Government ABC Administrator. In addition to providing the licensing provisions, this ordinance also provides operating regulations, including the operating hours for a licensee to sell distilled spirits or wine.

Peer City/County Review:

Throughout the US, liquor stores are often subject to requirements intended to limit concentration and/or maintain adequate separation from nearby sensitive uses. These requirements are typically implemented at the state level and associated with licensing rather than zoning. However, some cities, including Indianapolis, IN and Des Moines, IA, have implemented separation requirements for package liquor stores at the local level. In addition, some cities, including Anchorage, AK and Des Moines, IA, require conditional use permits, or similar special exception approvals, for liquor stores.

Indianapolis allows liquor stores by right in most of the city's commercial and mixed use zones. Use specific standards include a separation of at least 100 ft from any protected district and 500 ft from any Indoor Recreation & Entertainment that caters to, or markets itself predominantly to, persons under 21-

years of age. Conversely, new Indoor Recreation & Entertainment that caters to, or markets itself predominantly to, persons under 21-years of age must be at least 500 ft away from any liquor store.

Des Moines also has separation requirements for liquor stores, but in addition, the city requires conditional use permits. The use is permitted in some of the city's commercial zones. Standards include at least 500 ft separation from any church or place of worship, school, public park or licensed child care facility (not applicable in all zones) and at least 1,320 ft from any lot where any limited retail sales, fuel stations, liquor stores and tobacco stores engaged in the sale of alcoholic liquor is located.

STANDARD OF REVIEW FOR TEXT AMENDMENTS

Content of zoning regulations: *KRS 100.203*

Procedure for amending the text of regulation: *KRS Chapter 100.211*

STAFF ANALYSIS FOR TEXT AMENDMENT

The following is staff's analysis of the proposed amendment against the Guidelines and Policies of Plan 2040.

The amendment advances the following Goals, Objectives, and Policies of Plan 2040:

- **Community Form Goal 1:** Guide the form and design of development to respond to distinctive physical, historic and cultural qualities.
- **Community Form Goal 1, Objective c.:** Growth and development patterns are implemented to foster health and prosperity for all neighborhoods.
- **Community Form Goal 1, Policy 16:** Consider impacts on human health, quality of life and the environment including prevailing meteorological conditions and the potential to transport noxious odors, particulates and emissions when reviewing new developments and redevelopments. Special attention should be paid to air and water quality when residences, schools, parks or vulnerable populations will be impacted. Mitigate impacts to areas that are disproportionately affected.
- **Community Form Goal 2:** Encourage sustainable growth and density around mixed-use centers and corridors.
- **Community Form Goal 2, Policy 2:** Encourage development of non-residential and mixed uses in designated activity centers provided: 2.1. proposed uses, density and design are compatible with adjacent uses and meets Form District guidelines; or 2.2. when a proposed use requires a special location in or near a specific land use, transportation facility or when a use does not fit well into a compact center (e.g., car dealerships or lumberyards).
- **Livability Goal 2:** Ensure equitable health and safety outcomes for all.

STAFF FINDING: The proposed requirements are modeled in part after the LDC regulations for smoking retail stores, which were established to safeguard vulnerable populations such as children from businesses that primarily sell unhealthy products intended for adults. The separation requirements limit

such businesses from overconcentrating in an area and keep retailers at a suitable distance from other uses in which vulnerable populations may congregate.

If a standard cannot be met, there is an opportunity for the use to be permitted with a conditional use permit. Conditional use permits are decided upon on a case-by-case basis following a public hearing. Conditions of approval may be applied to mitigate any adverse impacts.

NOTIFICATION

DATE	PURPOSE OF NOTICE	RECIPIENTS
7/8/2026	Planning Commission Public Hearing	Registered Neighborhood Groups for all Council Districts
6/25/2026	Planning Commission Public Hearing	Legal Advertisement in the Courier-Journal

ATTACHMENTS

1. Proposed Text Amendments
2. Proposed Findings for the Planning Commission

1. Proposed Text Amendment

The Planning Commission must make a recommendation to Metro Council and the legislative bodies of cities with zoning authority to approve, approve with modifications, or deny the LDC text amendments. The proposed changes are presented as specific amendments to the Louisville Metro version of the LDC. The cities with zoning authority in Louisville Metro have different versions. If any of the cities consider incorporating the amendments into its LDC, staff will assist the city in preparing specific amendments that reflect the nature of the changes recommended below.

Louisville Metro Land Development Code

Chapter 1, Part 2 Definitions

Package Liquor Store – A retail establishment with a retail package license that sells distilled spirits and wine in unbroken packages for consumption off the licensed premises (unless such sales are otherwise allowed under a different permitted use type and with proper licensing).

Chapter 2 Part 4 Commercial Zoning Districts

2.4.3 C-1 Commercial District

The following provisions shall apply in the C-1 Commercial District unless other-wise provided in these regulations:

A. Permitted Uses:

~~Package liquor stores (no on-site alcohol consumption allowed)~~

2.4.4 C-2 Commercial District

The following provisions shall apply in the C-2 Commercial District unless other-wise provided in these regulations:

A. Permitted Uses:

~~Package liquor stores (no on-site alcohol consumption allowed)~~

2.7.5 Traditional Neighborhood Zoning District – Old Louisville/Limerick

Table 2.7.5: Table 1 Old Louisville/Limerick TNZD Land Uses – General

TNZD Land Use Category	Neighborhood General	Neighborhood Transition-Center	Neighborhood Center	Neighborhood Center Transition:	Neighborhood General Campus Edge	LDC Section Providing Special

				Edge Transition	Transition	or Conditional Use Standards

Commercial Uses						

Entertainment, outdoor	NP	P/CU	P	P	NP	11.5A.1.B 4.2.TBD
Package liquor stores (no on-site alcohol consumption allowed)	NP	P/CU	PS	PS	NP	11.5A.1.B 4.2.TBD and 4.3.TBD
Taverns, bars, saloons	NP	P/CU	P	P	NP	11.5A.1.B 4.2.TBD

Other Uses						
Historic house museums	P/CU	P/CU	P/CU	P/CU	NP	11.5A.1.B and 4.2.TBD

Table 2.7.5: Table 8 Old Louisville/Limerick TNZD - Uses Permitted as Conditional Uses in the Neighborhood Transition–Center

Land Use Category	Description of Uses Permitted as Conditional Uses

Commercial Uses	
Entertainment, Activity – Outdoor	Entertainment activity—outdoor Outdoor Entertainment as permitted by Section 11.5A.1.B 4.2.TBD of the this Land Development Code. In addition, review shall include at a minimum: an analysis of nearby residential uses and potential impacts, screening and buffering needed to protect adjacent residential uses, and limited hours of operation.
Package liquor stores (no on-site alcohol consumption allowed)	Package liquor stores as permitted by Section 11.5A.1.B 4.2.TBD of the this Land Development Code. In addition, review shall include a minimum: an analysis of nearby residential uses and potential impacts, screening and buffering needed to protect adjacent residential uses, and limited hours of operation.
Tavern, bar saloon	Tavern, bar, saloon as permitted by Section 11.5A.1.B 4.2.TBD of the this Land Development Code. In addition, review shall include a minimum: an analysis of nearby residential uses and potential impacts, screening and buffering needed to protect adjacent residential uses, and limited hours of operation.
Other Uses	

Historic House Museums	Historic house museums as permitted by Section 11.5A.1.B 4.2.TBD of the this Land Development Code. In addition, review shall include a

	minimum: an analysis of nearby residential uses and potential impacts, screening and buffering needed to protect adjacent residential uses, and limited hours of operation.

Table 2.7.5: Table 10 Old Louisville/Limerick TNZD - Uses Permitted with Special Standards in the Neighborhood Center

Land Use Category	Description of Uses Permitted Uses

Transitional Housing	Transitional Housing as permitted by Section 4.3.14 of this Land Development Code.
<u>Commercial Uses</u>	
<u>Package liquor stores</u>	<u>Package liquor stores as permitted by Section 4.3.TBD of this Land Development Code.</u>
Other Uses	

Table 2.7.5: Table 14 Old Louisville/Limerick TNZD - Uses Permitted With Special Standards in the Neighborhood Center Transition: Edge Transition

Land Use Category	Description of Uses Permitted Uses

Transitional Housing	Transitional Housing as permitted by Section 4.3.14 of this Land Development Code.
<u>Commercial Uses</u>	
<u>Package liquor stores</u>	<u>Package liquor stores as permitted by Section 4.3.TBD of this Land Development Code.</u>
Other Uses	

Chapter 4 Part 2 Conditional Uses

4.2.1 Intent and Applicability

Certain land uses due to their extent, nature of operation, limited application, or relationship to natural resources are considered as exceptional cases. The uses listed in this Part may be permitted in certain districts by Conditional Use Permit following a public hearing before the Board of Zoning Adjustment provided such uses will not have an adverse effect on neighboring property, are not in conflict with Goals, Objectives, and Policies of the Comprehensive Plan, the proposed uses are essential to or will

promote the public health, safety, and the general welfare in one or more zones, and are in compliance with the listed standards and requirements.

The following uses are subject to the Conditional Use Permit process:

Section	Conditional Use

4.2.TBD	<u>Package Liquor Stores</u>
4.2.TBD	<u>Outdoor Entertainment; Package Liquor Stores; Taverns, Bars, Saloons; and Historic House Museums in the Old Louisville/Limerick TNZD Neighborhood Transition-Center</u>

4.2.TBD Package Liquor Stores

Any Package Liquor Store that does not meet the provisions of Section 4.3.TBD may be allowed in the C-1, C-2, C-3, C-M, EZ-1, PEC, PVD (Village Center only), and Old Louisville/Limerick TNZD (Neighborhood Center and Neighborhood Center Transition: Edge Transition only) districts upon the granting of a conditional use permit and compliance with the listed requirements.

- A. As part of the application, the applicant shall provide written justification for each listed requirement in this section that cannot be met, demonstrating the reasons why relief should be granted and how such relief would not adversely impact any adjacent property.
- B. No Package Liquor Store shall be located within 1,000 feet of the boundary of any parcel occupied by any of the following sensitive uses (as measured in a straight line from parcel boundary to parcel boundary): 1) Public or private early childhood, elementary, middle or high school; 2) Park; 3) Public Playground; 4) Public Community Center; 5) Child Care Center; 6) Public Library; and/or 7) Another Package Liquor Store.
 - 1. Reasons for Potential Relief:
 - a. Properties adjacent to the subject property are within nonresidential zoning districts.
 - b. There is a significant environmental feature or primary collector or higher classification road that separates the package liquor store from a sensitive use within the buffer area.
 - c. A sensitive use within the buffer area is located on the perimeter of the buffer area, with part of the property being located outside of the buffer area.
- C. There shall be no on-site alcohol consumption allowed unless the subject zoning district also permits a bar, saloon, or tavern and the space used for on-site consumption is appropriately permitted for such use/occupation. As an exception, limited on-site alcohol consumption may occur for sampling with the appropriate license. No relief shall be granted to this standard.
- D. The business shall maintain the proper license required for the alcoholic beverage sales. Any required license shall be in good standing and if not the sales of products regulated by the license are prohibited. No relief shall be granted to this standard.

4.2.TBD Outdoor Entertainment; Package Liquor Stores; Taverns, Bars, Saloons; and Historic House Museums in the Old Louisville/Limerick TNZD Neighborhood Transition-Center

Any Outdoor Entertainment; Package Liquor Store; Tavern, Bar, Saloon; and Historic House Museum in the Old Louisville/Limerick TNZD Neighborhood Transition-Center upon the granting of a conditional use permit and compliance with the listed requirements.

A. The review shall include an analysis of nearby residential uses and potential impacts, screening and buffering needed to protect adjacent residential uses, and limited hours of operation. The Board may apply conditions to mitigate adverse impacts associated with this analysis.

B. No Package Liquor Store shall be located within 1,000 feet of the boundary of any parcel occupied by any of the following sensitive uses (as measured in a straight line from parcel boundary to parcel boundary): 1) Public or private early childhood, elementary, middle or high school; 2) Park; 3) Public Playground; 4) Public Community Center; 5) Child Care Center; 6) Public Library; and/or 7) Another Package Liquor Store.

1. Reasons for Potential Relief:

a. Properties adjacent to the subject property are within nonresidential zoning districts.

b. There is a significant environmental feature or primary collector or higher classification road that separates the package liquor store from a sensitive use within the buffer area.

c. A sensitive use within the buffer area is located on the perimeter of the buffer area, with part of the property being located outside of the buffer area.

C. The business shall maintain the proper license required for any alcoholic beverage sales. Any required license shall be in good standing and if not the sales of products regulated by the license are prohibited. No relief shall be granted to this standard.

Chapter 4 Part 3 Permitted Uses with Special Standards

4.3.1 Intent and Applicability

Certain uses are appropriate in certain districts only if special standards are applied. Waivers and variances for these special standards shall not be permitted because the uses listed below may only be permitted when these standards have been met. These uses listed in this Part are permitted in the districts indicated provided they conform to the standards and requirements listed in each section.

4.3.2 General Provisions

In addition to meeting the special standards listed under the particular use in this Section, all Permitted Uses with Special Standards shall be required to comply with the requirements of this Land Development Code, except to the extent that they conflict with an applicable special standard, in which case the special standard shall prevail. Proposed developments in accordance with this Part shall be processed using the Category 2 review procedure (Section 11.6.3). Applications shall include materials needed to demonstrate compliance with the special standards.

4.3.TBD Package Liquor Stores

Package Liquor Stores are permitted in C-1, C-2, C-3, C-M, EZ-1, PEC, PVD (Village Center only), and Old Louisville/Limerick TNZD (Neighborhood Center and Neighborhood Center Transition: Edge Transition only) districts subject to the following special standards. A Package Liquor Store that does

not meet the special standards set forth in this section may be eligible to be approved with a conditional use permit pursuant to Section 4.2.TBD of this Land Development Code.

A. No Package Liquor Store shall be located within 1,000 feet of the boundary of any parcel occupied by any of the following uses (as measured in a straight line from parcel boundary to parcel boundary):

1. Public or private early childhood, elementary, middle or high school
2. Park
3. Public Playground
4. Public Community Center
5. Child Care Center
6. Public Library
7. Another Package Liquor Store

Exception: A new Package Liquor Store is exempt from the separation requirement from another package liquor store in A.7. if located on the same lot or development site as a *Grocery Store*.

As this land use is permitted with special standards, an advanced approval by the Office of Planning is not formally required by this Land Development Code. The burden is on the property owner/business operator to determine compliance with these separation requirements prior to investment in the site and/or operation. The Planning Director, or their designee, may review for compliance with this separation requirement as part of a zoning confirmation, rezoning, or development plan review as well as during the review of any local license application. The Director or designee shall utilize the best available data to verify and confirm compliance.

In order to be nonconforming to this requirement, a Package Liquor Store must establish that it has been lawfully in operation on the effective date of the initial ordinance establishing the special standard (TBD 2026) and continuously in operation to date. If one of the uses listed above is established thereafter, the Package Liquor Store shall become a nonconforming use at that time and subject to the provisions related to such nonconforming use, including but not limited to those restricting expansion and pertaining to abandonment.

B. There shall be no on-site alcohol consumption allowed unless the subject zoning district also permits a bar, saloon, or tavern and the space used for on-site consumption is appropriately permitted for such use/occupation. As an exception, limited on-site alcohol consumption may occur for sampling with the appropriate license.

C. The business shall maintain the proper license required for the alcoholic beverage sales. Any required license shall be in good standing and if not the sales of products regulated by the license are prohibited.

Chapter 4 Part 4 Accessory Uses and Miscellaneous Standards

4.4.13 Accessory Sales of Smoking Retail Store Products at a Business Not Classified as a Smoking Retail Store

Any use that meets the definition of Smoking Retail Store shall be regulated as such in Section 4.3.26 of this Land Development Code. If a use does not meet the definition of Smoking Retail Store, accessory sales of Smoking Retail Store Products may be permitted subject to the following standards:

- B. The principal use shall be a use that involves the retail sale of merchandise that is dominant to that of Smoking Retail Products. It shall be a use in which it is customary to include the retail sale of Smoking Retail Products, such as a Convenience Grocery, Convenience Store, Drug Store, Grocery Store or Package Liquor Store.

4.4.14 Accessory Retail Sales of Alcoholic Beverages at a Business Not Classified as a Package Liquor Store

Any use that meets the definition of Package Liquor Store shall be regulated as such in [Section 4.3.TBD](#) of this Land Development Code. If a use does not meet the definition of Package Liquor Store, accessory sales of distilled spirits and wine in unbroken packages may be permitted subject to the following standards:

- A. The principal use shall be a use that is dominant to that of the retail sales of distilled spirits and wine in unbroken packages. It shall be a use in which it is customary to include the retail sale of distilled spirits and wine in unbroken packages, such as a winery or distillery.
- B. The business shall maintain the proper license required for the alcoholic beverage sales. Any required license shall be in good standing and if not the sales of products regulated by the license are prohibited.

Chapter 9 Part 1 Motor Vehicle Parking Standards

Table 9.1.3B Minimum and Maximum Motor Vehicle Parking Based on Use

GENERAL ACTIVITIES (¹ LBCS Code)	SPECIFIC ACTIVITIES (¹ LBCS Code)	MINIMUM REQUIREMENT	MAXIMUM REQUIREMENT

Shopping, business, or trade (2000)			
	Shopping (goods or service-oriented) (2100)	Suburban Form: 1 per 500 sq. ft. of gross floor area Traditional Form: 1 per 1,000 sq. ft. of gross floor area	1 per 200 sq. ft. of gross floor area

9.1.14 Queuing for Drive-Through Facilities

Use	Minimum Spaces	Measured From
Bank Teller Lane, Laundromats/Dry Cleaners, Drug Store, Ice Cream Parlor, Package Liquor Store, and all other drive-through lanes not specifically listed	3 per Lane	Teller or Window

2. Proposed Findings for the Planning Commission

WHEREAS, the Commission finds that the Louisville Metro Council passed Resolution No. R-134-25 requesting that the Commission review the Land Development Code (LDC) and develop recommended changes related to package liquor stores; and

WHEREAS, the Commission finds that Louisville Metro's current comprehensive plan, known as Plan 2040, became effective on January 1, 2019; and

WHEREAS, the Commission finds that the amendments advance the Goals, Objectives, and Policies of Plan 2040, as well as its CHASE principles; and

WHEREAS, the Commission finds that the amendments address Plan 2040's Livability Element by providing guidance and direction for the provision and maintenance of the resources necessary for the health and well-being of citizens; and

WHEREAS, the Commission finds that the amendments meet Livability Goal 2 by addressing the overconcentration of package liquor stores in order to ensure equitable health and safety outcomes for all; and

WHEREAS, the Commission finds that the amendments meet Community Form Goal 1, Objective c. by adjusting the regulations to better implement development patterns to foster health and prosperity for all neighborhoods; and

WHEREAS, the Commission finds that the amendments meet Community Form Goal 1, Policy 16 by considering the impacts of package liquor stores on human health and quality of life; and

WHEREAS, the Commission finds that the amendments meet Community Form Goal 2, Policy 2 by encouraging development of package liquor stores, which are non-residential uses, in designated activity centers.

RESOLUTION NO. _____, SERIES 2025

**A RESOLUTION REQUESTING THE PLANNING COMMISSION REVIEW
THE LOUISVILLE METRO LAND DEVELOPMENT CODE RELATING TO
PACKAGE LIQUOR STORES.**

SPONSORED BY: COUNCIL MEMBERS BATSHON, HUDSON, AND OWEN

WHEREAS, the Legislative Council of the Louisville/Jefferson County Metro Government (“Council”) often receives citizen complaints concerning, and observes criminal reports based on activities occurring in or near, package liquor stores; and

WHEREAS, the Council has examined the zoning of other commercial uses that involve the sale of products with known adverse health effects in recent years, namely Smoking Retail Stores; and

WHEREAS, the Council has found it appropriate to modify the regulation of such uses through various methods including prohibiting them in lower zoning classifications, making them permitted with special standards or by Conditional Use Permit, and creating distancing requirements from similar uses as well as schools, parks, religious buildings, and other sensitive uses; and

WHEREAS, under the Land Development Code, Package Liquor Stores are currently allowed in C-1, C-2, C-3, CM, EZ-1, and PEC zoning districts; and

WHEREAS, the Council has observed that Package Liquor Stores are often concentrated, not just in certain Council districts, but on certain streets, blocks, and even intersections; and

WHEREAS, the Council is concerned with such concentration and questions whether the use should be treated the same whether it is zoned low-intensity commercial, high-intensity commercial, or industrial; and

WHEREAS, the Council believes it important to investigate these issues as well as how peer cities and modern best planning practices handle Package Liquor Stores; and

WHEREAS, such changes will require study, a public hearing, and recommendation by the Planning Commission.

NOW, THEREFORE, BE IT RESOLVED BY THE LEGISLATIVE COUNCIL OF THE LOUISVILLE/JEFFERSON COUNTY METRO GOVERNMENT (“COUNCIL”) AS FOLLOWS:

SECTION I: The Planning Commission is hereby directed to undertake a review of the current Louisville Metro Land Development Code with regard to Package Liquor Stores and make recommendations to the Council regarding how the regulation of this use should be amended. Among those considerations should be the application of distancing requirements similar to those applied to Smoking Retail Stores. Such recommendations shall be returned to Council within 180 days of its receipt of this Resolution.

SECTION II: This Resolution shall take effect upon its passage and approval or otherwise becoming law.

Sonya Harward
Metro Council Clerk

Brent Ackerson
President of the Council

Craig Greenberg
Mayor

Approval Date

APPROVED AS TO FORM AND LEGALITY:

Michael J. O'Connell
Jefferson County Attorney

By: _____

R-134-25 Amend LDC Regarding Package Liquor Stores.docx (TF 10-24-25)