



CEDAR-LEE-MEADOWBROOK TRAFFIC STUDY

Traffic Memorandum

May, 2022

CITY OF CLEVELAND HEIGHTS

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Cedar-Lee-Meadowbrook Traffic Memorandum

The goal of the Cedar-Lee-Meadowbrook Traffic Study is to assess traffic operations and traffic-related impacts to the Cedar-Lee District transportation network from the proposed Cedar-Lee-Meadowbrook development. This memorandum includes the following:

- Study Overview
- Existing Condition Summary
- Cedar-Lee-Meadowbrook Development Plan
- Proposed City Recommendations

STUDY OVERVIEW

The proposed Cedar-Lee-Meadowbrook development is located in Cleveland Heights' Cedar-Lee District, as highlighted in Figure 1. The study area includes the following intersections:

1. Washington/Lee (signal)
2. Cedar/Lee (signal)
3. Tullamore/Lee (unsignalized)
4. Meadowbrook/Lee (signal)
5. Silsby/Lee (signal)
6. West of Wendy's/Cedar (signal)
7. Kildare/Cedar (signal)

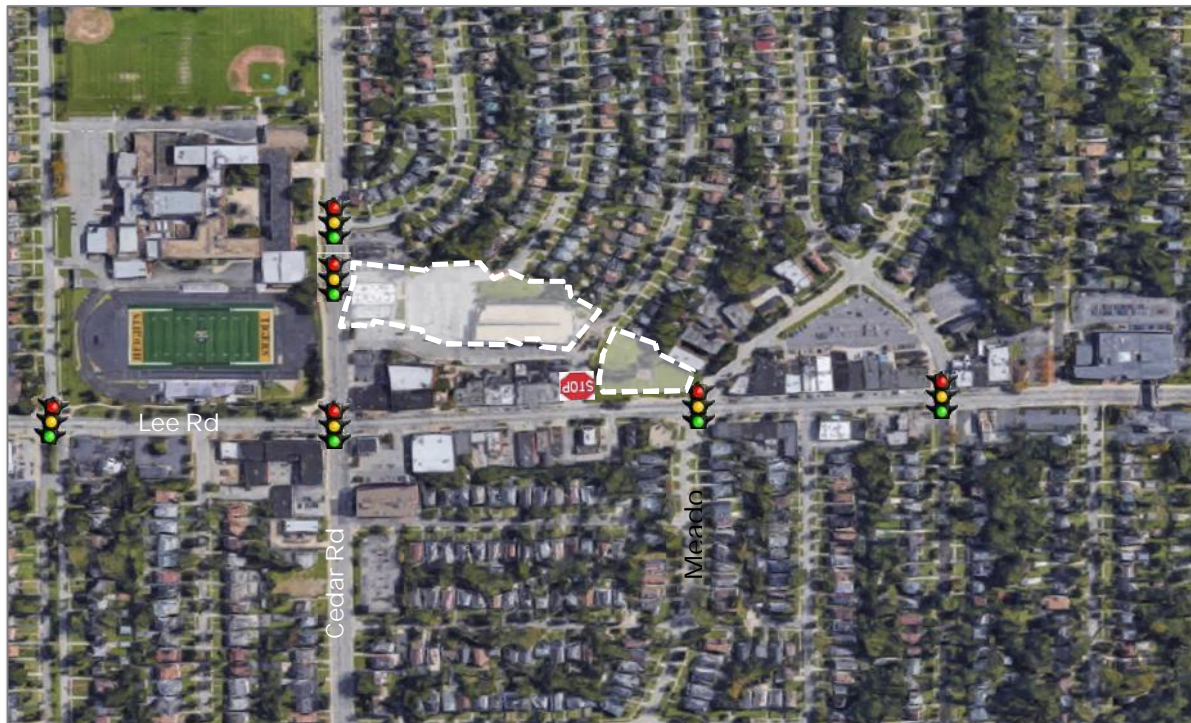


Figure 1. Cedar-Lee-Meadowbrook Study Area



EXISTING CONDITIONS SUMMARY

The existing conditions information is documented to understand transportation functions for the defined study area transportation network.

BACKGROUND INFORMATION

The following plans and documents outline previous work and the City's intention to develop a safer environment on city streets.

1. 2018 City of Cleveland Heights Complete and Green Streets Policy: Approved in 2018, the policy describes the City's commitment to the comfort and safety of all users of city streets with special attention to the least mobile and most vulnerable. Complete and Green Streets are roadways designed and operated to accommodate users of all ages and abilities safely and comfortably, including cyclists, pedestrians, transit riders, elderly, wheelchair users, delivery and service personnel, and emergency responders; and to reduce, accommodate, and slow stormwater runoff as part of a comprehensive stormwater management system. The policy requires the City to approach every project as an opportunity for improvements as well as privately constructed streets and parking lots to adhere to the policy.

The Cedar-Lee-Meadowbrook Development project provides the opportunity to incorporate accommodations for safety improvements.

2. 2017 City of Cleveland Heights Master Plan: The City's Master Plan strives to create vibrant neighborhoods, strong business districts, hubs for arts and culture, a complete transportation network with high-quality infrastructure, and an environmentally sustainable community that is safe, engaged, and diverse. The following goals and subsequent actions are directly related to this study and development.
 - a. Goal: promote biking and walking with a system of complete streets that incorporate options for all types of transportation.
 - i. Action: fund streetscape improvements in Cedar-Lee. The City already has streetscape plans for Cedar Fairmount and Cedar-Lee that should be completed.
 - b. Goal: review the sidewalk network to ensure a well-connected system of routes that are accessible for residents of all abilities.
 - i. Action: review the city's intersections to ensure they are safe and comfortable for pedestrians of all abilities. Cleveland Heights should review and improve key intersections where pedestrian and bicycle crashes are particularly high or where unusual intersections create confusing conditions for pedestrians. Improvements to these intersections could include better lighting, more visible crosswalks, better signal timing, ADA ramp improvements, or other changes.
3. 2007 Cedar-Lee Transportation and Streetscape Plan: Funded through NOACA's TLCI program, this plan outlined development possibilities and improvements to the streets in the Cedar-Lee business district. The plan included pedestrian, bicycle, and transit system improvements. This document guides the streetscape improvements being made to the district.

TRAFFIC VOLUMES

Traffic data collection was not scoped as part of this project due to pandemic impacts on current traffic volumes and patterns. As such, study area traffic volumes were compiled from existing pre-pandemic historical counts at the Cedar/Lee intersection and the NOACA travel demand model.



Due to the location of the development site and given the characteristics of the surrounding roadway network, assessment of traffic operations was focused on the Cedar/Lee intersection.

Average daily traffic volume information, shown in Table 1, was collected from the available historical resources and the NOACA travel demand model. Weekday AM and PM peak hour traffic volumes for the study area, shown in Table 2, were obtained from the NOACA travel demand model. This methodology which utilized existing available traffic volume data, served as a workaround for field data collection, a necessity given the COVID-related impacts to current traffic volumes and patterns.

Table 1. ADT Counts

ROADWAY		2015*	2019*	2020^	2045^
Cedar	ADT	16,500	21,900	14,400	14,300
	AM	1,300	1,500	1,300	1,200
	PM	1,600	1,900	1,400	1,400
Lee	ADT	10,900	11,100	12,300	11,500
	AM	800	700	1,200	1,200
	PM	1,100	1,000	1,300	1,300
All numbers have been rounded to the nearest hundred * traffic counts, ^ projected volumes from NOACA model					

Table 2. Intersection Counts

INTERSECTION	PERIOD	YEAR	NBL	NBT	NBR	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBT	SBR
Cedar & Lee	AM	2015	45	342	50	0	403	27	3	723	54	58	321	19
		2020	22	474	74	42	502	4	11	690	6	52	509	105
		2045	29	455	64	38	499	3	13	675	3	40	443	116
	PM	2015	43	420	61	0	780	57	4	597	66	83	440	35
		2020	10	612	40	99	695	34	75	495	5	80	526	87
		2045	10	544	38	106	681	33	71	501	4	71	499	97
Meadow-brook & Lee	AM	2020	24	545	0	0	2	32	0	2	26	0	522	2
		2045	21	516	0	0	2	28	0	1	32	0	459	0
	PM	2020	43	585	0	26	5	40	0	5	51	0	634	0
		2045	38	531	0	7	5	36	0	6	54	0	602	0
Washington & Lee	AM	2020	31	461	18	27	29	62	83	93	6	21	491	9
		2045	30	435	17	23	22	45	100	99	5	8	430	16
	PM	2020	49	565	71	21	115	49	53	68	31	22	586	3
		2045	45	507	73	21	123	48	66	63	22	3	543	16



TRAFFIC OPERATIONS

The traffic volume data was used to understand traffic patterns within the Cedar-Lee District, enabling a qualitative assessment of anticipated operational impacts on the study area roadway network. The speed limit is 35 mph on Cedar Road. The speed limit on Lee Road is 25 mph north of Silsby Road and 30 mph south of Silsby. Table 3 documents the existing condition of the study area intersections. In addition to these intersections, there are numerous marked mid-block pedestrian crossings with Rapid Rectangular Flashing Beacons (RRFB) to alert vehicles to pedestrians crossing the street.

Table 3. Cedar-Lee-Meadowbrook Traffic Operations

INTERSECTION	TRAFFIC CONTROL	CROSSWALKS	TURN LANES
Washington/Lee	Signalized with pedestrian signals and pushbuttons.	Zebra-styled crosswalks on all four approaches. The west leg of the intersection is divided by a median that provides pedestrian refuge.	Left turn lanes on the north and south legs of the intersection.
Cedar/Lee	Signalized with pedestrian signals and pushbuttons. No EB and WB left turns allowed during peak hours.	Zebra-styled crosswalks on all four approaches.	Left turn lanes on the north and south legs of the intersection.
Tullamore/Lee	Two-way stop-controlled intersection with a RRFB on the south leg.	Zebra-styled crosswalks on the south and east leg of the intersection. A driveway on the west side of the north leg prohibits a pedestrian crossing.	Two-way left turn lane on the north leg.
Meadowbrook/Lee	Signalized with pedestrian signals and pushbuttons. No turn on red traveling westbound.	Zebra-styled crosswalks on all four approaches.	Left turn lanes on the north and south legs of the intersection.
Silsby/Lee	Two-way stop-controlled intersection with a RRFB on the south leg.	Zebra-styled crosswalks on the south and west leg of the intersection.	Northbound left turn lane.
West of Wendy's/Cedar	Signalized with pedestrian signals and pushbuttons.	Ladder-styled crosswalk on the west leg of the intersection.	No dedicated turn lanes.
Kildare/Cedar	Signalized with pedestrian signals and pushbuttons. No northbound turn on red and westbound left turns during peak hours.	Ladder-styled crosswalk on the east and south legs of the intersection.	No dedicated turn lanes.

CRASH DATA

A crash overview was conducted for the years 2018-2020. During that period, there were 103 documented crashes along Cedar Road and Lee Road within the study area. Of those 103 crashes, there were zero fatalities and two serious injuries. 61% of crashes occurred at an intersection. Nine of the crashes (9%) involved a pedestrian or bicycle. The most common crash type was rear end crashes.

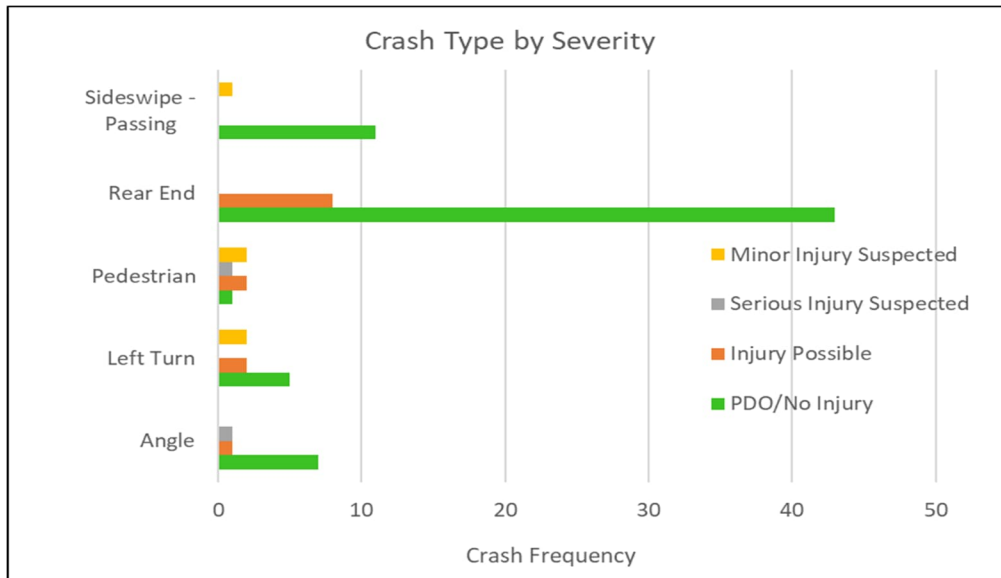


Figure 2. Cedar-Lee-Meadowbrook Crash Type Frequency

TRANSIT

There are two bus routes within the study area with eight stops. Figure 3 illustrates the route paths and designated stops. Transit waiting environments throughout the study area vary from bus stop signs to bus shelters at the Cedar & Lee intersection. Service frequency information for each route is:

- 11: Quincy-Cedar to Downtown
 - o 30min headway
- 40: Lakeview-Lee to Taft-Eddy
 - o 30min Headway

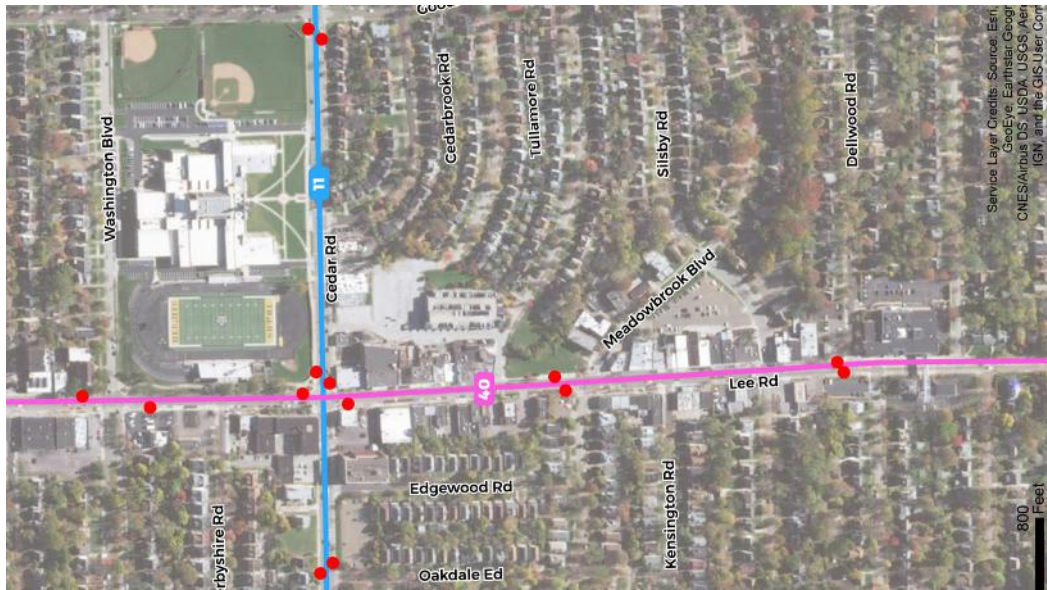


Figure 3. Cedar-Lee Transit Operations

NON-MOTORIZED TRAVEL

Walking, biking, and riding transit are intricately linked and reinforce each other when it comes to providing a robust network of connectivity options for people. Non-motorized facilities include sidewalks, bike lanes, pathways, trails, and other facilities that keep people separated from motor vehicle traffic. Non-motorized connectivity is important, and all modes of travel should be safe and comfortable for all users.

The presence and general condition of sidewalks were assessed through field reviews. There was minimal visible deterioration of the concrete or other distress, other than weeds growing in the sidewalk joints. Multiple businesses have patios adjacent to or on the sidewalk areas. There are several marked mid-block crosswalks across Lee Road with rapid rectangular flashing beacons. For bicycle accommodations, there are sharrows along Lee Road and multiple bicycle racks on Lee Road and Cedar Road within the study area.

CEDAR-LEE-MEADOWBROOK DEVELOPMENT PLAN

Cedar-Lee-Meadowbrook is a mixed-use development that integrates residential and commercial uses and public realm enhancements. The site plan capitalizes on opportunities to provide bicycle and pedestrian connections as well as motor vehicle access to the site. The development provides public realm amenities, including a park near Meadowbrook Boulevard and public space with pathways along the eastern part of the site.

TRIP GENERATION

- Retail
 - o AM peak: 57% entering, 43% exiting
 - o PM peak: 52% entering, 48% exiting
- Residential
 - o AM peak: 22% entering, 78% exiting
 - o PM peak: 65% entering, 35% exiting

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Table 4. Site-Generated Traffic Volumes Entering and Exiting the Development Site.

TYPE OF TRIP	AM TRIPS	AM TRIPS 25% REDUCED	PM TRIPS	PM TRIPS 25% REDUCED
Entering	44 - 51	33 - 39	122 - 136	92 - 102
Exiting	127 - 133	96 - 100	74 - 87	56 - 66
Total	171 - 184	129 - 139	196 - 223	148 - 168

CEDAR-LEE-MEADOWBROOK DEVELOPMENT TRIP DISTRIBUTION & TRAFFIC ASSIGNMENT

Existing traffic volumes and travel patterns at the Cedar/Lee intersection are evenly distributed between the north, south, east and west for both the AM and PM peak hours. As such, site generated traffic volumes were similarly distributed evenly between north, east, south, and west. Traffic volumes were assigned to the site access drives and distributed along the study area street network based on this distribution pattern. The NOACA model projects a decrease in regional traffic volumes for the horizon year. This means that in 2045, anticipated traffic volumes with site-generated traffic will be roughly equivalent to 2020 traffic volumes without site-generated traffic.

Table 5. Lee/Cedar Intersection Traffic Volumes and Projections

INTERSECTION		2019*	2020^	2020 W/ SITE TRAFFIC	2045^	2045 W/ SITE TRAFFIC
Cedar & Lee	AM	2,200	2,500	2,640	2,400	2,540
	PM	2,900	2,700	2,870	2,700	2,870
All numbers have been rounded to the nearest tenth * traffic counts, ^ projected volumes from NOACA model						

Based on the predicted site-generated traffic volumes and the results of the analysis, the proposed Cedar-Lee-Meadowbrook development is expected to have minimal impact on traffic operations and operational efficiency at the Cedar/Lee intersection. The addition of the site generated traffic (Table 4) to the current and future year Cedar/Lee intersection volumes (Table 2) for the AM and PM peak hours indicate an increase of approximately six percent during both AM and PM peak hours for current and future year traffic conditions (Table 5). This equates to roughly two additional vehicles traveling through the Cedar/Lee intersection per minute during the AM peak hour and three additional vehicles during the PM peak hour. No roadway networking additions are recommended based on this minimal increase in projected traffic.

SITE ACCESS & CIRCULATION

Vehicular access to the Cedar-Lee-Meadowbrook development is provided via the site's west access drive on Cedar Road east of the Cedar/Lee intersection and via Tullamore Road. Both points of access are unsignalized intersections. The west access drive should be monitored for performance and safety. Should the monitoring show an increase in crashes, it may be appropriate to restrict the drive to right in/right out movements during peak hours if congestion and queuing at the Cedar/Lee intersection impacts the ability for vehicles to safely turn left in and out of the site. Tullamore intersection operations are expected to remain unchanged due to the site-generated traffic volumes. It may be beneficial for the City to investigate the feasibility of signaling the Lee/Tullamore intersection based on signal warrants and to enhance pedestrian crossing movements across Lee Road.

Currently, pedestrians crossing Cedar to travel to and from the high school are facilitated by the traffic signal by Wendy's. Although the access drive beside Wendy's will be removed as part of the development, the signal should be retained or modified to a HAWK signal to continue to provide a signalized crossing for pedestrian use.

BEST PRACTICES

As development continues in the Cedar-Lee District area, the city should look to implement best practices for placemaking and pedestrian/bicycle safety. Best practices involve every step of the process from policy decisions to design implementation. Placemaking includes public gathering spaces and amenities in the public realm that accommodate pedestrians, fostering livability and activity within the district. Bicycle and pedestrian safety are enhanced with provision of facilities and treatments that support non-motorized mobility and improve safety. This could consist of bicycle infrastructure, pedestrian amenities, and pedestrian crossing treatments, including unsignalized, mid-block locations. A variety of potential treatments are described below.

DATA COLLECTION

Best practices are rooted in a comprehensive understanding of existing facilities and conditions to aid in the identification of successful infrastructure improvements. Existing conditions data that could be collected should include:

- Survey of existing street conditions
- Pedestrian collision data
- Community outreach

It is a combination of these three data sources that allow for informed decisions that benefit the entire community.

CURB EXTENSIONS, MEDIANS, RAISED CROSSWALKS

Pedestrian crossing distances are shortened, and potential pedestrian-vehicle conflict areas are reduced with installation of curb extensions and/or medians. Generally, curb extensions should extend a minimum of six feet into the street adjacent to shadow on-street parallel parking spaces, or 12 feet adjacent to diagonal parking, and no further than the edge of the travel lane or bicycle lane. Raised crosswalks at the marked pedestrian crossings improve pedestrian safety by raising the height/visibility of pedestrians and calming traffic. In addition, raised crosswalks facilitate crossings for mobility-challenged pedestrians.



Figure 5. Curb Extension and Median Examples



Figure 6. Raised Crosswalk Examples

PEDESTRIAN SCALE LIGHTING

Pedestrian-scale lighting improves accessibility by illuminating sidewalks, crosswalks, curbs, curb lamps, and signs as well as barriers and potential hazards. Well-lit pedestrian areas improve visibility of pedestrian for motorists as well as enhancing personal security. From the pedestrians' point of view, frequent lampposts of lower height and illumination are preferred over fewer lampposts that are very tall and bright. Pedestrian-scale lighting should be employed in areas of high pedestrian activity and where implementation is practical. Lampposts should be staggered on opposite sides of the street and be placed at crosswalks, bus stops, and corners. Pedestrian-scale lighting and motor vehicle-scale lighting each should be provided as a complement to the other to ensure that both sidewalks and travel lanes are effectively illuminated.

WOONERF (SHARED-STREET)

The Dutch woonerf or "shared street" concept is a living street that implements shared spaces and traffic calming to accomplish a pedestrian friendly environment. Woonerfs combine some of the other elements discussed to create a sense of place. Additional potential elements include:

- Street trees at key locations are positioned to narrow the views along the street, creating a subconscious slowing for drivers
- The zero-curb plaza is designed to act as a speed table - another detail that promotes slower movement
- Pavement coloring, texture, landscaping and amenities around the zero-curb plaza area are designed to sharpen the focus of drivers. There is a lot going on here, so slowing down and paying attention is a natural reaction.
- Maintaining the jog/curve in the path reduces the feeling of a convenient "straight shot" through this space
- A change in color at the edges of the street (visually narrowing 11' driving lanes to 9' or 10') will also support a subconscious slowing of vehicular movement, especially when there is vehicular traffic moving in both directions



Figure 7. Seattle Woonerf Example



PROPOSED CITY RECOMMENDATIONS

The proposed Cedar-Lee-Meadowbrook development is expected to have negligible impact on study area traffic volumes and associated traffic operations. However, through plan development, several potential improvements were identified for the city street network that would improve traffic operations and safety within the Cedar-Lee District. These improvements would be implemented by the City, potentially with Development Partners, as feasible.

- **Signal timings & progression along Lee Road corridor**

Recommend evaluation of traffic signal operations to assess potential to improve signal progression and operational efficiency. Providing good signal coordination can be used to reinforce speed limit compliance and it also can improve driver behavior by minimizing the number of times drivers are stopped at signals.

- **Install raised crosswalks along Lee Road**

Provision of raised crosswalks at the marked pedestrian crossings at the unsignalized locations on Lee Road is expected to improve pedestrian safety by raising the height/visibility of pedestrians and calming traffic. In addition, raised crosswalks facilitate crossings for mobility-challenged pedestrians. Implementation will need to be coordinated with public works and safety services.

- **Replace RRFBs with Pedestrian Hybrid Beacons**

Recommend evaluation of replacement of RRFBs at marked pedestrian crossings with pedestrian hybrid beacons (HAWK pedestrian signals). These signals replicate standard traffic signal heads and generally experience improved driver compliance in stopping for pedestrians in the crosswalk, resulting in improved pedestrian safety.

- **Convert signal at Wendy's driveway to pedestrian hybrid beacon**

The existing signal at the access drive beside Wendy's will be removed with the elimination of the access drive as part of the development project. Conversion of the traffic signal to a pedestrian hybrid beacon (HAWK pedestrian signal) will help safely maintain pedestrian access between the development and the high school. Conversion should be analyzed but it is expected to function adequately given the presence of the existing signal and associated driver expectations along the corridor.

- **Modify accessible parking pavement markings on Lee Road**

Field observations indicate existing angled pavement markings on the east side of Lee Road in front of Boss Dog and Heights Arts are often misused as angle parking. Recommend conversion to standard handicapped or loading zone parking designation, with appropriate pavement markings and signage.

- **Evaluate speed limit sign locations**

Evaluate placement of northbound and southbound speed limit signage on Lee Road to ensure their visibility and potentially improve driver compliance.

- **Parking enforcement**

Recommend focus on enforcement of parking restrictions to discourage illegal parking and improve compliance with intended use of designated and restricted parking areas.

- **RTA Coordination**

Recommend continued coordination with RTA on potential bus stop upgrades and relocations.

Appendix A

CEDAR-LEE-MEADOWBROOK

Kick-Off Parking & Traffic Community Workshop

August 5, 2021

Lee Road Library

City of Cleveland Heights
Flaherty & Collins
City Architecture
DESMAN
WSP

WELCOME

City of Cleveland Heights
Flaherty & Collins
City Architecture
DESMAN
WSP

Tonight's Workshop

- Opening Remarks and Introduction
- Engagement and Meetings
- Presentation on Initial Traffic and Parking Studies
- Breakout Sessions
- Recap of Breakout Sessions
- Next Steps and Continued Engagement
- Opportunity to Connect with Consultant Team and City Staff

OPENING REMARKS & INTRODUCTION

City of Cleveland Heights Planning Director
Eric Zamft, AICP

City of Cleveland Heights
Flaherty & Collins
City Architecture
DESMAN
WSP

CEDAR-LEE-MEADOWBROOK REDEVELOPMENT FRAMEWORK OF ANTICIPATED MEETINGS*

Initial Community Meetings



1. **Kick-Off Parking & Traffic Community Workshop #1** on existing conditions (8/5, 6 PM at the Library)
.....
2. **Public Spaces and Connectivity Open House** (8/11, 6 PM, Atrium at City Hall)
3. **Architectural Board of Review (ABR) Preliminary Design Review Special Meeting** (Date and Time TBD, Council Chambers)
4. **Planning & Development Committee of Council Meeting** including Committee workshop on redevelopment of Cedar-Lee-Meadowbrook (Date and Time TBD, Council Chambers)
5. **Parking & Traffic Community Workshop #2** on recommendations (Date, Time, Location TBD)

Formal Review Process with Opportunities for Public Comment

6. **Planning Commission Public Meeting #1** (Date and Time TBD based upon receipt of application, Council Chambers)
7. **Planning Commission Public Meeting #2** (Date and Time TBD, Council Chambers)
8. **Board of Zoning Appeals (BZA) Public Meeting** (Date and Time TBD, Council Chambers)
9. **ABR Public Meeting** (Date and Time TBD, Council Chambers)

Vision: Strengthen the Cedar-Lee District and businesses city-wide, provide a greater range of residential opportunities, and enhance the desirability of the City of Cleveland Heights through inspired new mixed-use development.

Goal #1: Promote Cleveland Heights' rich legacy and progressive future

Goal #2: Support Cedar-Lee businesses, residents and visitors

Goal #3: Provide new housing options for Cleveland Heights

Goal #4: Create integrated, inclusive and connected public spaces

Goal #5: Capitalize on recent district investments

2004 - Zoning updates to permit & attract mixed-use development

2007 - Original Development (Neyer) Parking Garage Constructed

2011 - City-Wide Strategic Development Plan identifies site as development

Oct. 2020 – Request for Proposals is re-issued

Apr. 2021 - Flaherty & Collins team selected

July 2021 – Memorandum of Understanding (MOU) executed

Aug. 5, 2021 - Process Kick-Off

CONSULTANT TEAM INTRODUCTION

DESMAN: Gregory Shumate

WSP: Nancy Lyon-Stadler & Nora Anderson

City Architecture: Michelle Bandy-Zalatoris & Alex Pesta

City of Cleveland Heights
Flaherty & Collins
City Architecture
DESMAN
WSP



TRAFFIC & PARKING STUDY AREA

City of Cleveland Heights
Flaherty & Collins
City Architecture
DESMAN
WSP



REVIEW
BACKGROUND
INFORMATION,
STUDY AREA
INTERSECTION AND
EXISTING ROADWAY
FEATURES



WORK WITH
NOACA TO GET
UPDATED
COUNT
PROJECTIONS



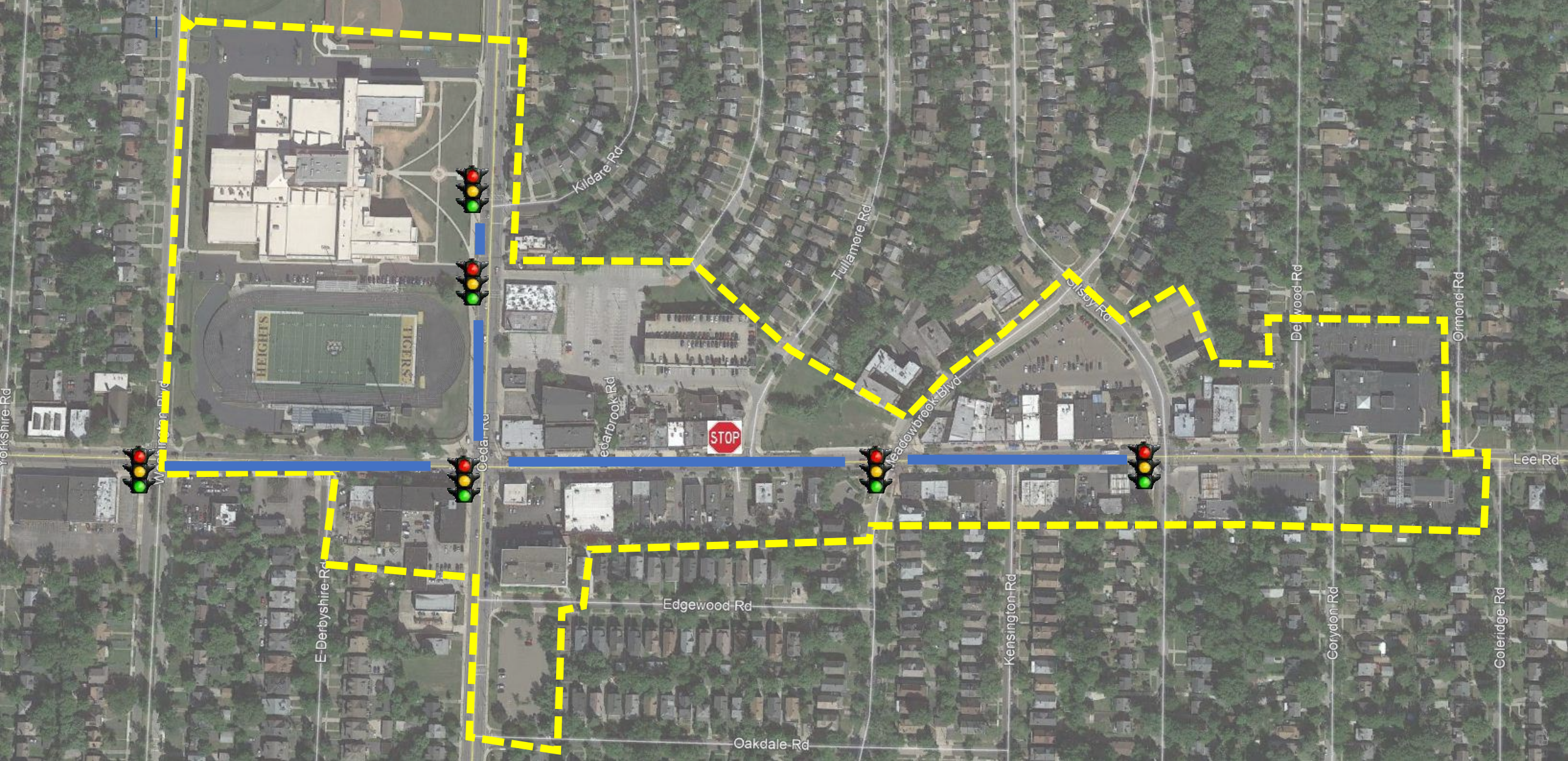
REVIEW
CRASH
ANALYSIS



REVIEW TRANSIT
SERVICE AND
NON-MOTORIZED
TRANSPORTATION
OPTIONS

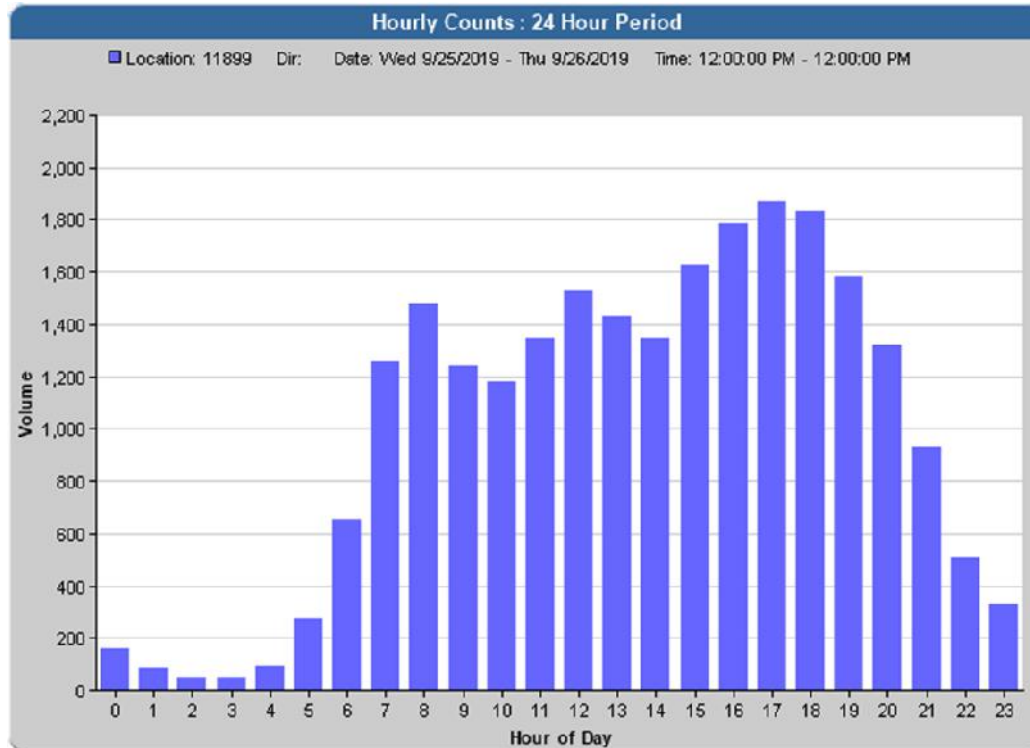


UNDERSTAND AND
ADDRESS
TRANSPORTATION
IMPACTS



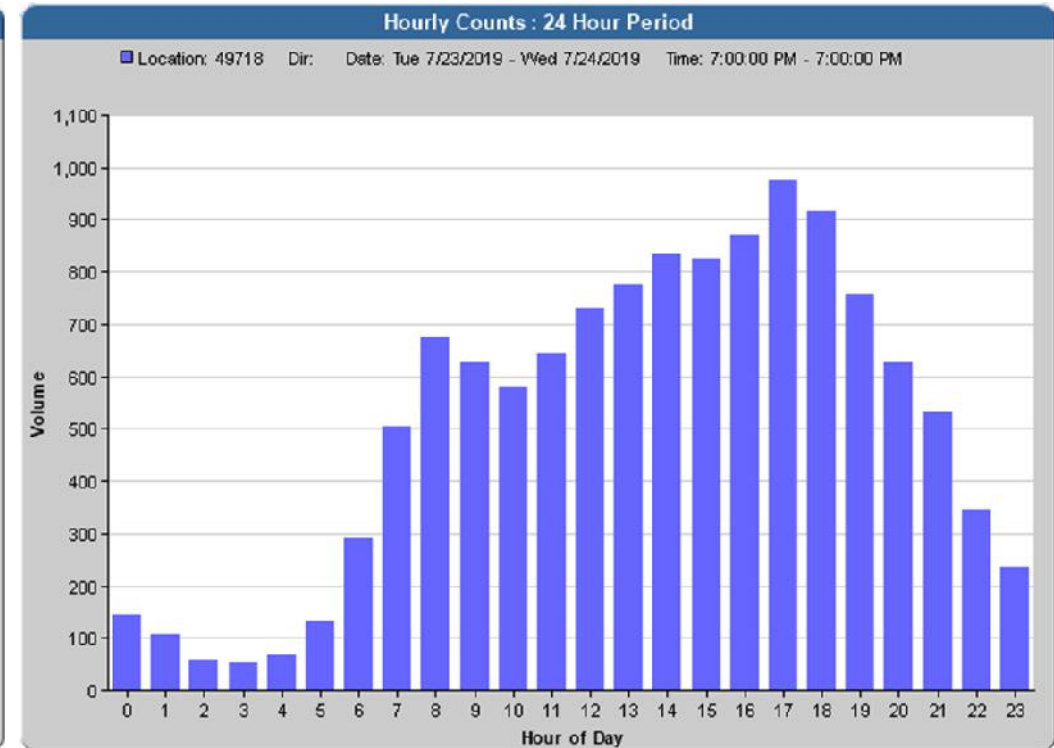
Cedar Road

AADT: 21,902
AM Peak: 11:45-12:45, 1,517
PM Peak: 5:30-6:30, 1,906



Lee Road

AADT: 11,161
AM Peak: 11:45-12:45, 719
PM Peak: 5:30-6:30, 984

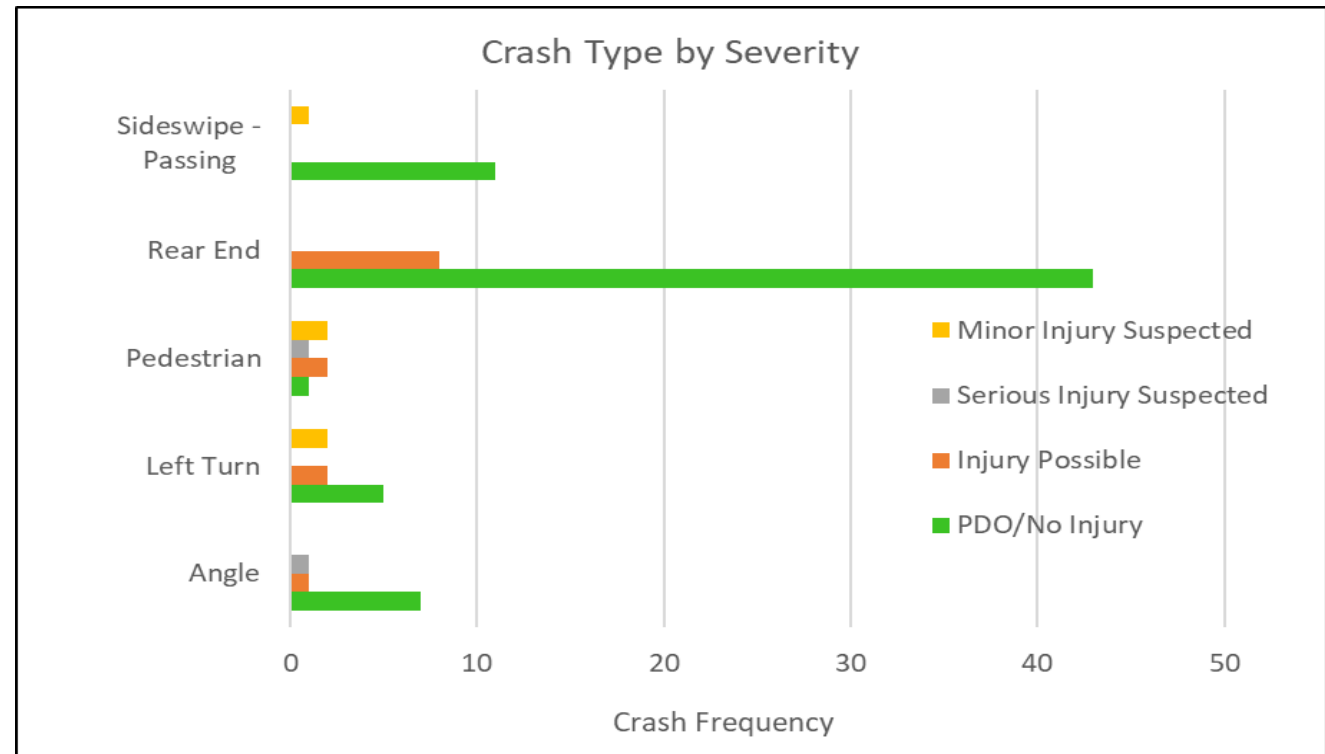
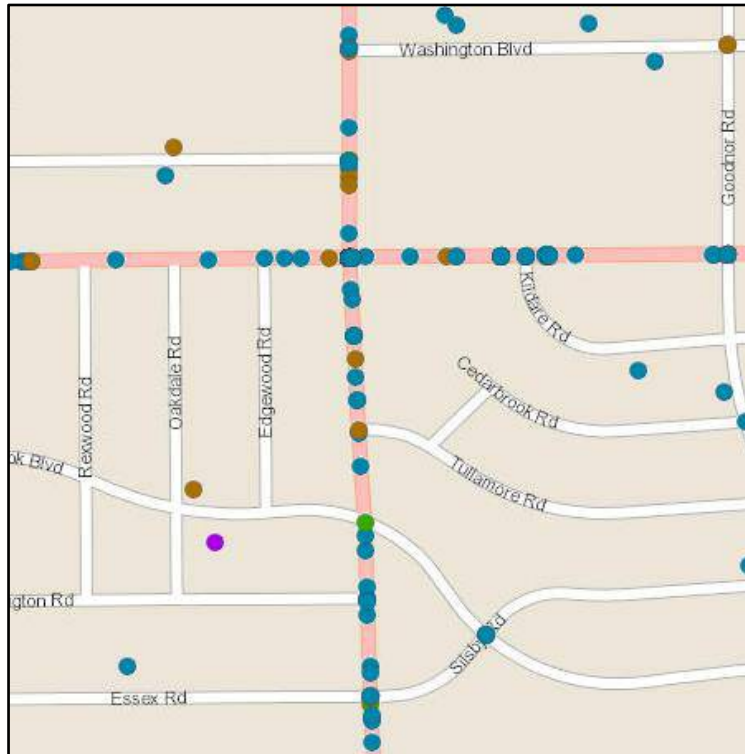


Study Area Crash Data

103 crashes,

- no fatalities
- 2 serious injuries (2018-2020)
- 9 ped/bike crashes

- 40 crashes at an intersection
- 63 crashes not at an intersection





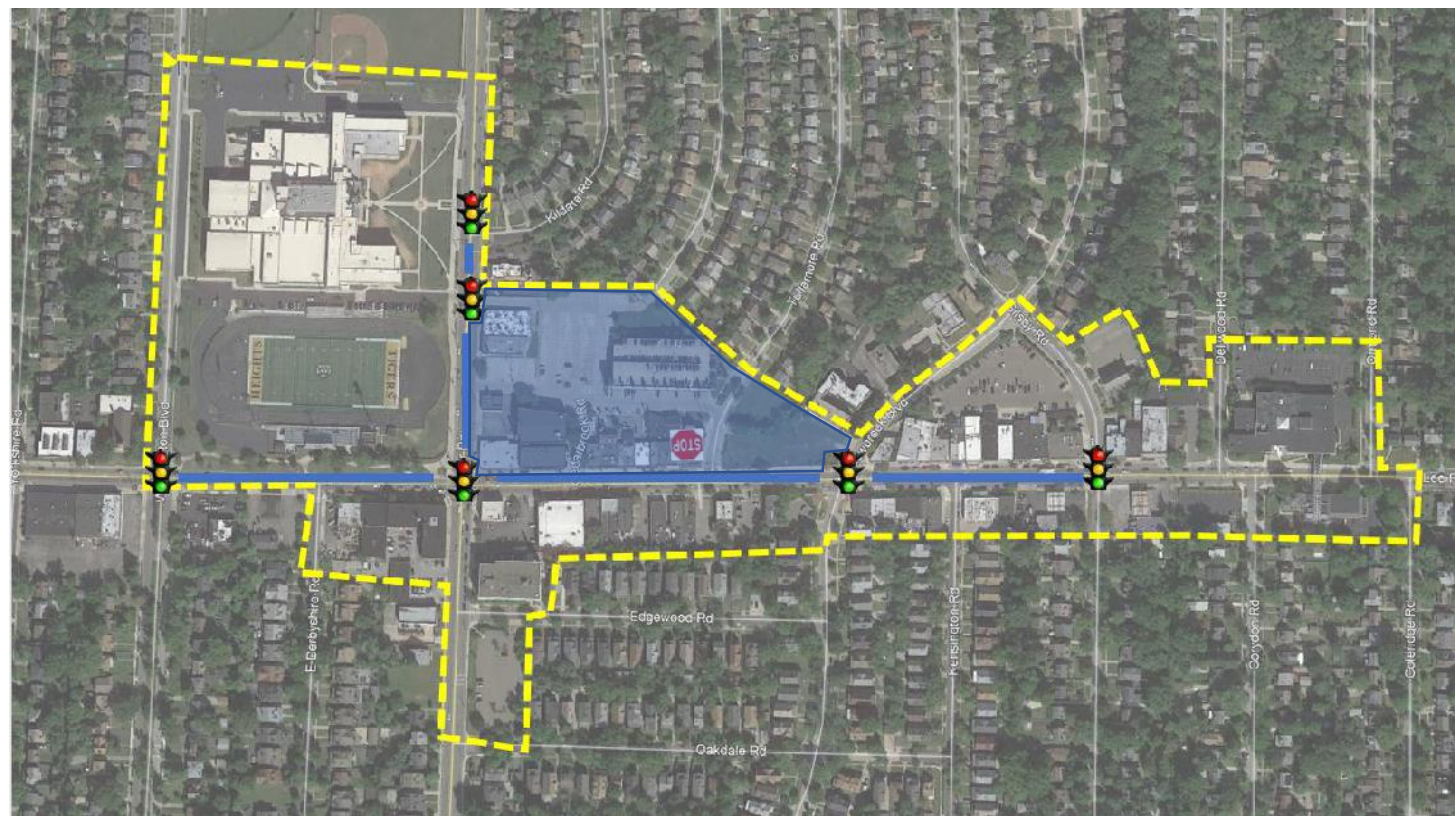
WORK WITH NOACA TO
GET UPDATED COUNT
PROJECTIONS

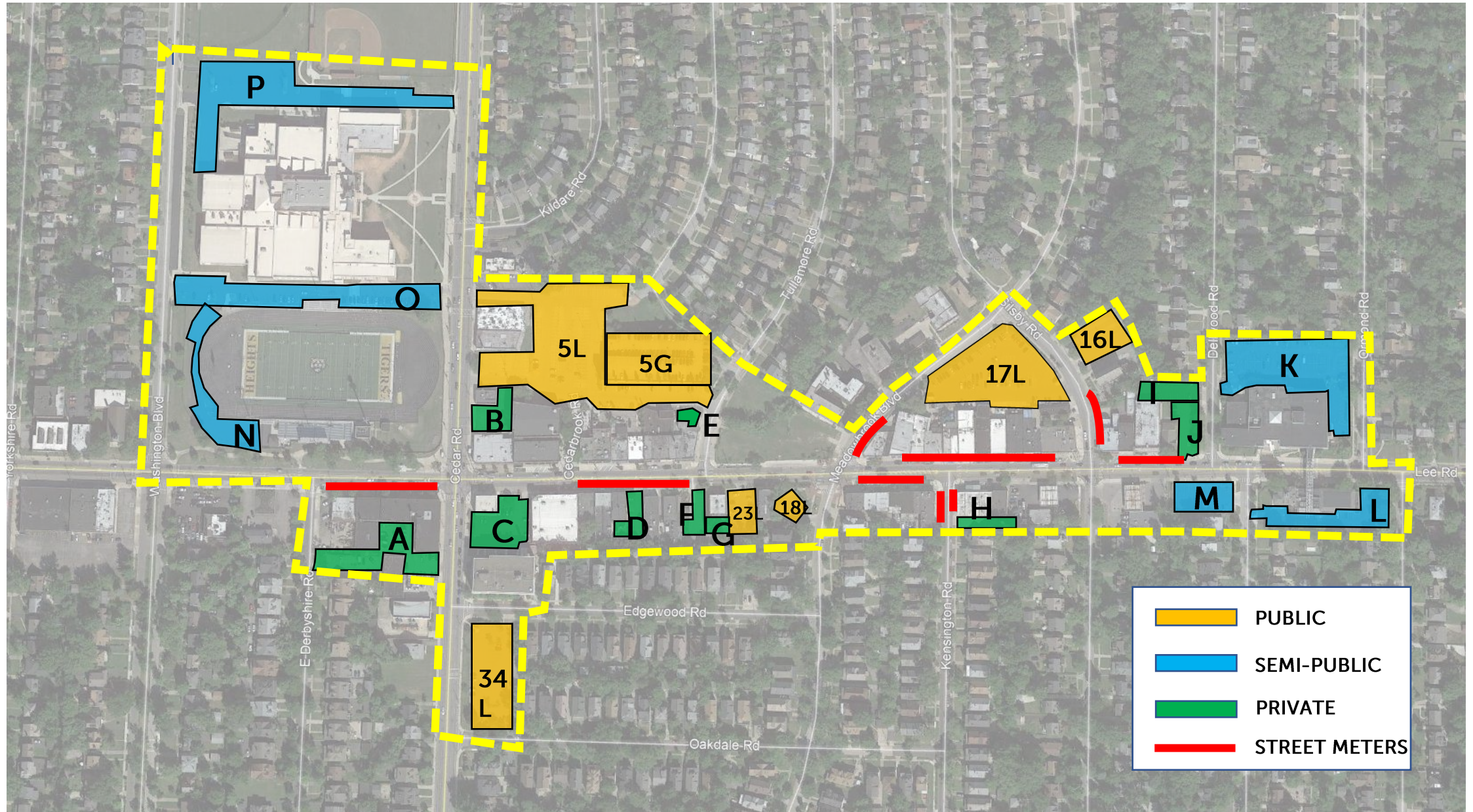


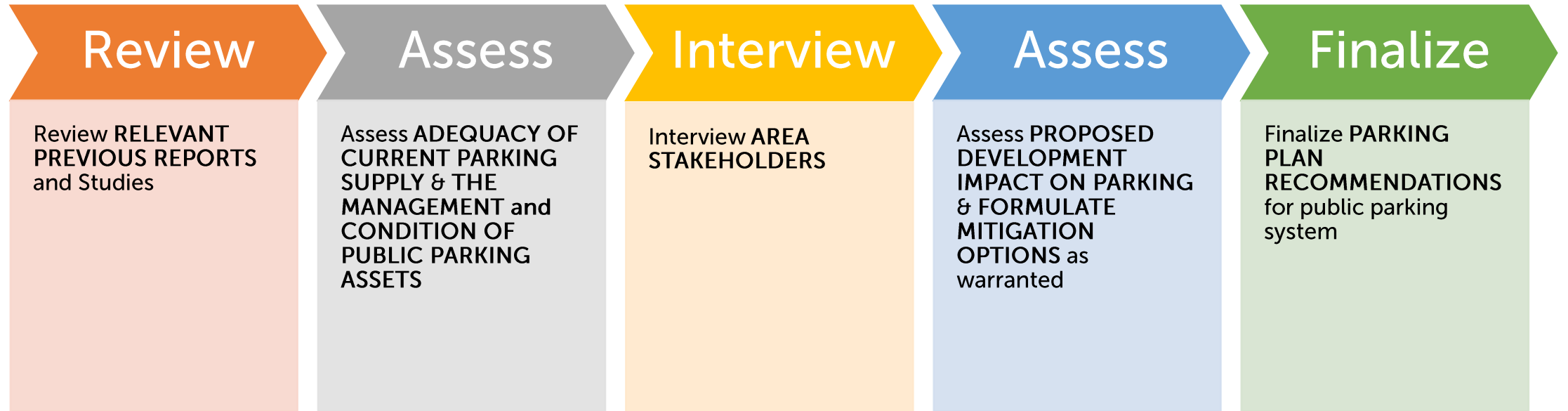
REVIEW TRANSIT SERVICE
AND NON-MOTORIZED
TRANSPORTATION
OPTIONS



UNDERSTAND AND
ADDRESS
TRANSPORTATION
IMPACTS









- 20 Existing off-street facilities provide 1,392 parking spaces
 - 59% Public (*City Controlled*)
 - 26% Semi-Public, and
 - 15% Private
- 47 Metered on-street spaces
- Existing parking supply evenly distributed north to south, but mostly concentrated on east side of Lee Road.
- Parking demand typically peaks on Fridays and Saturdays between 5:00pm and 10:00pm
- DESMAN has Pre-COVID parking survey data for the area from 2019



New or revised
parking rules and/or
policies

Potential on- and
off-street parking
technology upgrades

General signage and
wayfinding

Public Parking Asset
Management
Strategies

Transient and Permit
Parking rates

Special Event Parking
Considerations

Parking Garage
Condition
Assessment 10yr
Capital Expenditure
Estimates

Interim Parking
Strategies During
Project Development

Post Implementation
Assessment of
Parking Issues

LET'S MEET AT THE STATIONS

BREAKOUT SESSIONS

City of Cleveland Heights
Flaherty & Collins
City Architecture
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WSP



RECAP OF BREAKOUT SESSIONS

City of Cleveland Heights
Flaherty & Collins
City Architecture
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Goal #5: Capitalize on recent district investments

NEXT STEPS

City of Cleveland Heights
Flaherty & Collins
City Architecture
DESMAN
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Top of the Hill

MetroHealth Expansion

2728 Lancashire Road
Redevelopment

Cedar-Lee-Meadowbrook

Neighborhood Redevelopment

Severance Town Center
Redevelopment

[Home](#) > [Government](#) > [Departments](#) > [Economic Development](#) > [Development Projects](#) > Cedar-Lee-Meadowbrook

CEDAR-LEE-MEADOWBROOK



Community Engagement

The City and its partners are committed to engaging with and keeping the community informed about the Cedar-Lee-Meadowbrook redevelopment. A series of focused community conversations pertaining to this vital project will be held in the coming months. Upcoming meetings include: Kick-Off Parking & Traffic Community Workshop – August 5 at 6:00 PM at the Lee Road Library and Public Spaces and Connectivity Open House – August 11 at 6:00 PM in the Atrium at City Hall. The full framework of meetings can be downloaded below (under July 2021). Materials from these meetings will be posted below as the timeline is updated. The City also welcomes comments from residents; a comments section is provided at the bottom of this page.

Updated Project Vision and Goals

Vision:

UPCOMING EVENTS

AUGUST 5

Kick-Off Parking &
Traffic Community
Workshop

6:00 pm
Lee Road Library
2345 Lee Road

Public Comment

Central to the City of Cleveland Heights moving forward with the Cedar-Lee-Meadowbrook redevelopment is the sharing of community ideas. Recognizing that not everyone is able to participate in community meetings, we want to provide an additional online forum to gather feedback. A comment form is below. We have also provided a specific question to gather your feedback on. Please check back regularly, as we will be adding new questions periodically.

Question #1:

As the project moves forward, it is critical to support businesses, residents, and visitors through clear and timely communication. The City will maintain this Cedar-Lee-Meadowbrook webpage as a central location for information. What other ways do you prefer to receive updates and notices regarding this project?

First Name *

Last Name *

Email Address *

Question or Comment *

SUBMIT

THANK YOU

City of Cleveland Heights Planning Director

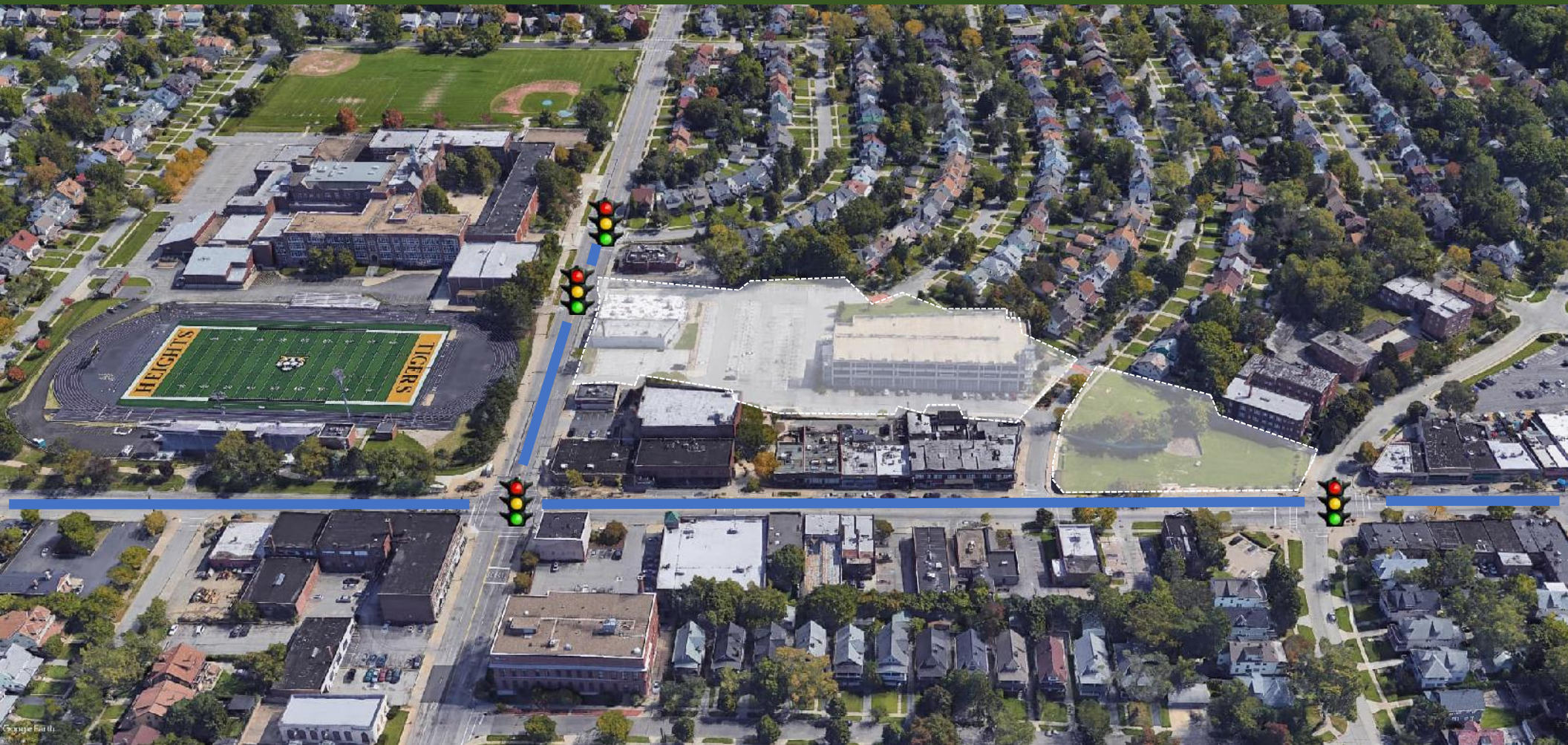
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City of Cleveland Heights
Flaherty & Collins
City Architecture
DESMAN
WSP

Cedar-Lee-Meadowbrook Traffic Operations

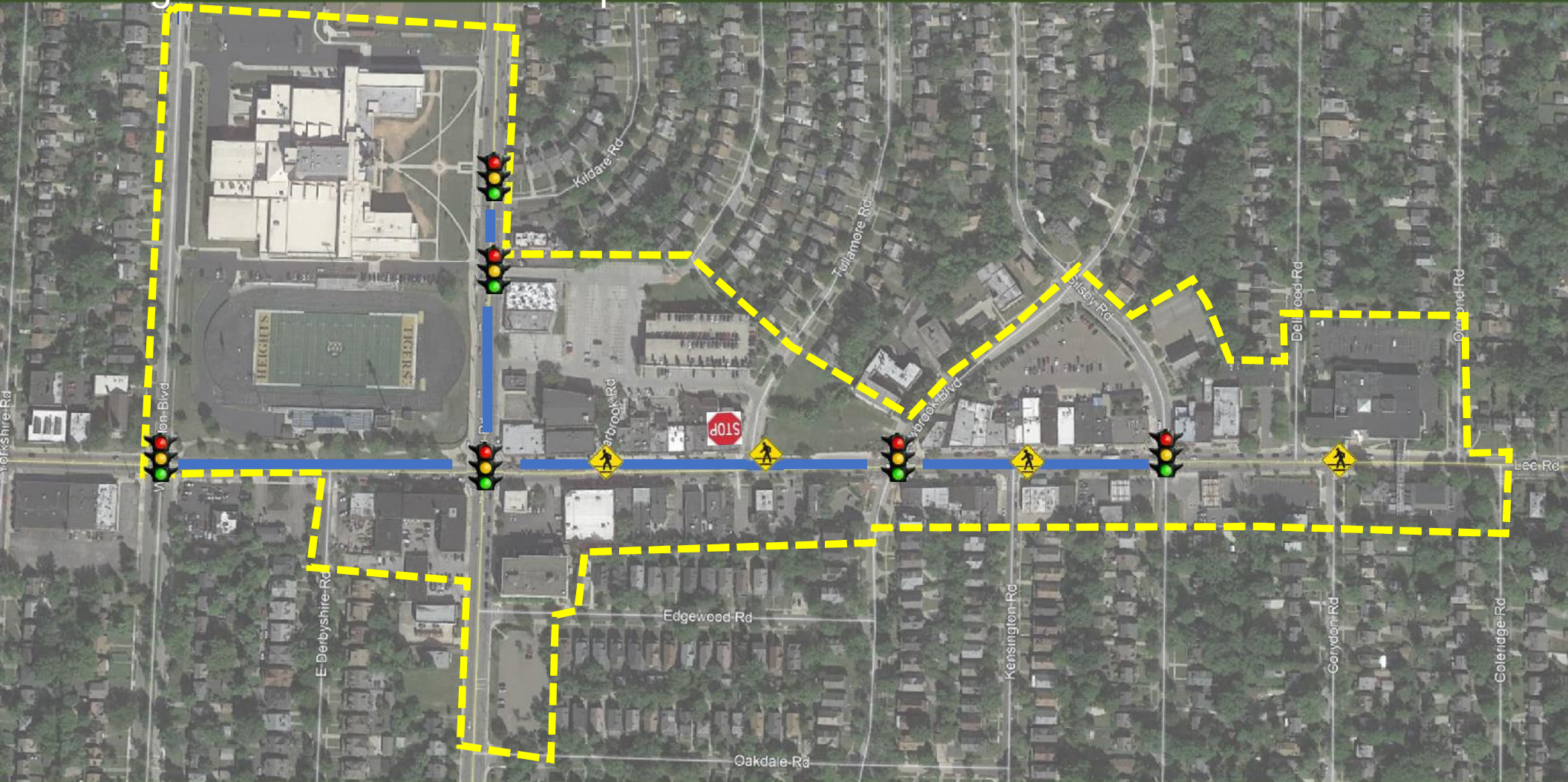


Cedar-Lee-Meadowbrook Traffic Operations - Agenda

- Review Existing Conditions
- Discuss Site Impacts
 - Trip Generation
 - Trip Distribution
- Propose Recommendations
 - Traffic
 - Transit

Edits made post 12/14/2021 public meeting
are indicated in red text

Existing Conditions - Traffic Operations



Existing Conditions - Transit

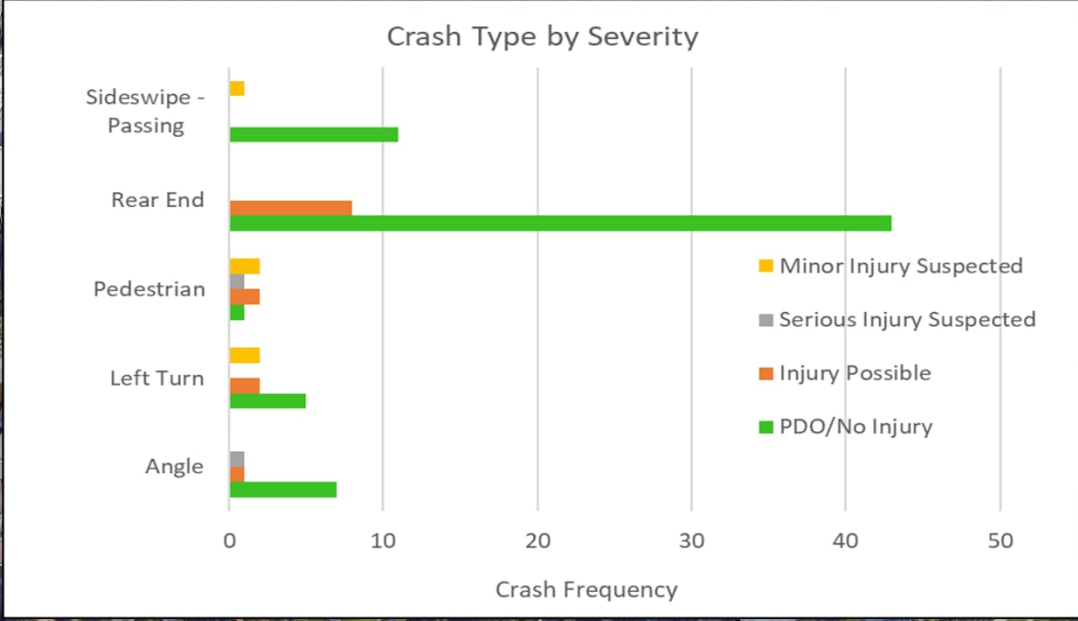
- 11: QUINCY-CEDAR TO DOWNTOWN
 - 30MIN HEADWAY
- 40: LAKEVIEW-LEE TO TAFT-EDDY
 - 30MIN HEADWAY



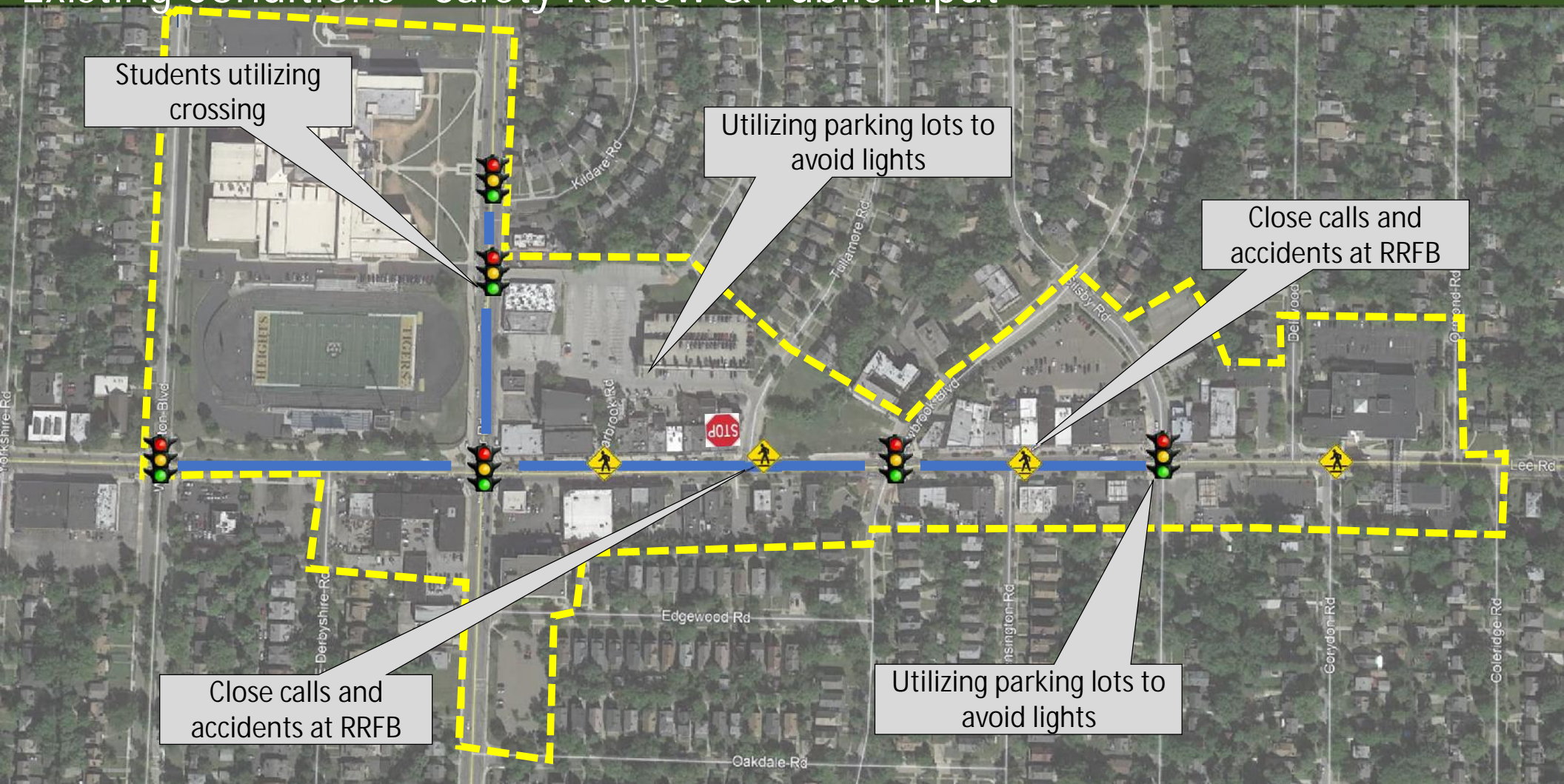
Existing Conditions - Crash Data

Study Area Crash Data

- 103 crashes,
- No fatalities
- 2 serious injuries (2018-2020)
- 9 ped/bike crashes
- 40 crashes at an intersection
- 63 crashes not at an intersection



Existing Conditions - Safety Review & Public Input



Existing Conditions - Traffic Volumes (NOACA Data)

Roadway		2019 [*]	2020 [^]	2045 [^]
Cedar	ADT	21,900	14,400	14,300
	AM	1,500	1,300	1,200
	PM	1,900	1,400	1,400
Lee	ADT	11,100	12,300	11,500
	AM	700	1,200	1,200
	PM	1,000	1,300	1,300

^{*} Traffic counts

[^] Projected volumes from NOACA model

Trip Generation – Site Types



- RETAIL
 - 3,000 SF
 - 6,000-10,000 SF*
- RESIDENTIAL
 - 206 UNITS
- ITE TRIP GENERATION CALCULATIONS

*Final retail space will be defined in the next phase of project development.

Trip Generation – Directional Distribution & Volumes

- RETAIL
 - AM: 57% ENTERING, 43% EXITING
 - PM: 52% ENTERING, 48% EXITING
- RESIDENTIAL
 - AM: 22% ENTERING, 78% EXITING
 - PM: 65% ENTERING, 35% EXITING

Type of Trip	AM	AM 25% Reduced	PM	PM 25% Reduced	AM	AM 25% Reduced	PM	PM 25% Reduced
Entering	38	29	112	84	44 - 51	33 - 39	122 - 136	92 - 102
Exiting	124	93	63	48	127 - 133	96 - 100	74 - 87	56 - 66
Total	162	122	175	132	171 - 184	129 - 139	196 - 223	148 - 168

Trip reduction factors: linked trips, alternate mode trips, pass-by trips, post pandemic commute patterns

Volumes in red are updates based on the potential retail SF range

Trip Generation - Traffic Volumes

Comparison of volumes at the Cedar & Lee intersection with and without development site traffic

Intersection		2019 [*]	2020 [^]	2020 w/ Site Traffic	2045 [^]	2045 w/ Site Traffic
Cedar & Lee	AM	2,200	2,500	2,640	2,400	2,540
	PM	2,900	2,700	2,870	2,700	2,870

^{*} Traffic counts

[^] Projected volumes from NOACA model

Trip Distribution - Site Access



Signalized driveway
West of Wendy's to be
removed. Crossing to be
evaluated.

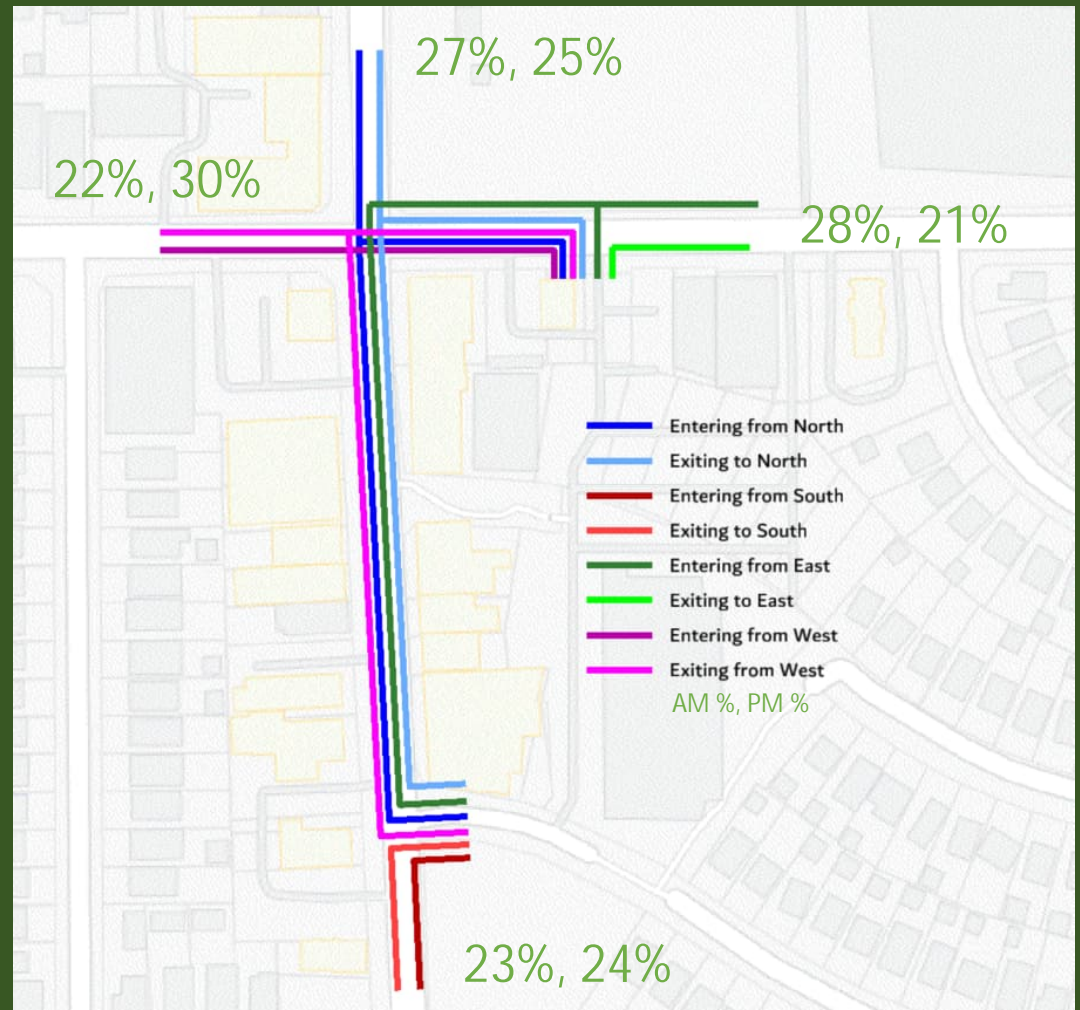
Bollards restricting
access into
neighborhood to remain

Full movement access
to be provided for
driveway on to Cedar

Full movement access
to be provided for
driveway on Tullamore

Trip Distribution – Network Distribution

- Based on regional trends, total site volumes are distributed evenly between all directions →
- Based on the ease of access to the site, distribution between the two entrances were split as follows:
 - To the West/North:
 - 75% via Tullamore
 - 25% via Cedar
 - To the East:
 - 25% via Tullamore
 - 75% via Cedar
 - To the South:
 - 100% via Tullamore
- Site generated traffic adds less than 5% traffic volumes at Cedar-Lee intersection
(site traffic as a percentage of total traffic remains less than 5%)



Recommendations - Traffic



Recommendations - RRFB vs PHB

- Striping alone is less than 30% effective at stopping traffic for mid-block crossings
- Pedestrian Hybrid Beacons (HAWKs)
 - Traffic control signal activated by a pedestrian
 - 1st phase: stop for pedestrians
 - 2nd phase: yield to pedestrians



Recommendations - Raised Crosswalks

- Makes pedestrians more visible
- Can reduce crashes by 45%
- Best on roadways 30 mph or less
- Allows pedestrians to cross at the same grade as the sidewalk



Recommendations - Transit

- Coordinate configuration and layout with RTA
- Bus stop locations
 - Bus pull-outs

Relocate Bus Stop

Bus pull-out

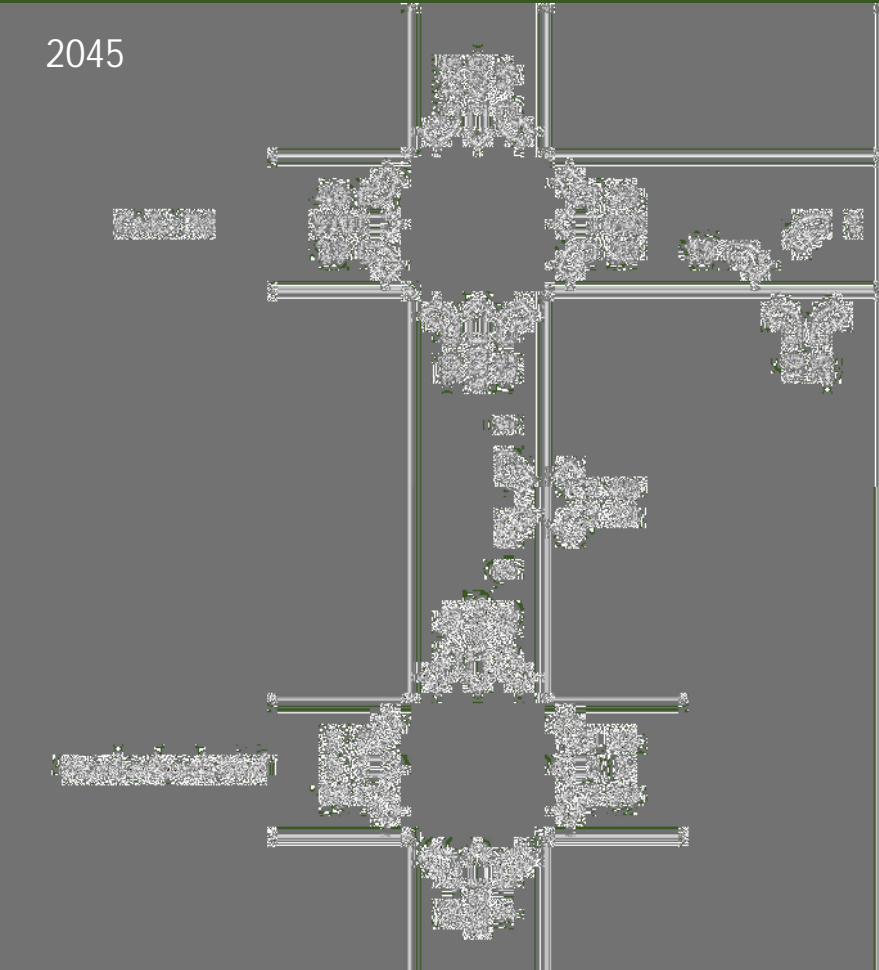
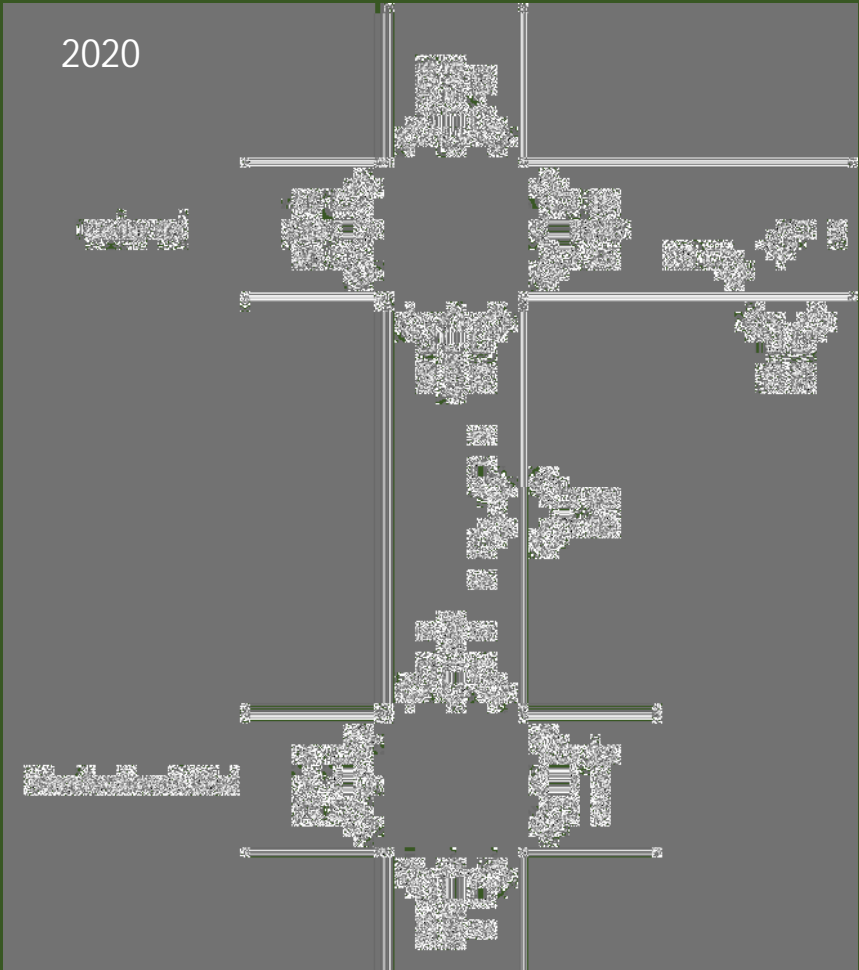
Bus pull-out

Modify pull-out

Thank you

Eric - Next slides for potential Q&A

Trip Distribution - AM Turning Movement Volumes



Trip Distribution - PM Turning Movement Volumes

