

Agenda
Transportation Commission
City Of Edina, Minnesota
VIRTUAL MEETING

Members of the public can observe the meeting by watching the live stream on YouTube at youtube.com/edinatv or can by listen in by calling 833-360-0793 with Conference ID 7875045.

Thursday, July 16, 2020
6:00 PM

- I. Call To Order
- II. Roll Call
- III. Approval Of Meeting Agenda
- IV. Approval Of Meeting Minutes
 - A. Approval of Minutes - Regular Meeting of June 18, 2020
- V. Reports/Recommendations
 - A. Traffic Safety Report of June 30, 2020
 - B. Draft Local Speed Limit Evaluation
 - C. Traffic and Parking Study - 4425 Valley View Road
 - D. 2020 Work Plan Updates
 - E. 2021 Work Plan Development
- VI. Chair And Member Comments
 - A. Street Funding Task Force Update
- VII. Staff Comments
- VIII. Calendar Of Events
 - A. Schedule of Upcoming Meetings and Events as of July 10, 2020
- IX. Adjournment

The City of Edina wants all residents to be comfortable being part of the public process. If you need assistance in the way of hearing amplification, an interpreter, large-print documents or something else, please call 952-927-8861 72 hours in advance of the meeting.



CITY OF EDINA

4801 West 50th Street

Edina, MN 55424

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Date: July 16, 2020

Agenda Item #: IV.A.

To: Transportation Commission

Item Type:

Minutes

From: Andrew Scipioni, Transportation Planner

Item Activity:

Subject: Approval of Minutes - Regular Meeting of June 18, 2020

Action

ACTION REQUESTED:

Approve the minutes of the Transportation Commission regular meeting of June 18, 2020.

INTRODUCTION:

See attached draft minutes.

ATTACHMENTS:

Draft Minutes, June 18, 2020



Minutes
City Of Edina, Minnesota
Transportation Commission
WebEx
June 18, 2020

I. Call To Order

Chair Richman called the meeting to order at 6:01 p.m.

II. Roll Call

Answering roll call were Commissioners Ahler, Johnson, Lafferty, McCarthy, Plumb-Smith, Richman, Ruthruff, Scherer, Erickson

Absent: Commissioners Kane, Venell

Staff present: Transportation Planner Andrew Scipioni

III. Approval Of Meeting Agenda

Motion was made by Commissioner Johnson and seconded by Commissioner McCarthy to approve the agenda. All voted aye. Motion carried.

IV. Approval Of Meeting Minutes

Motion was made by Commissioner Ahler and seconded by Commissioner Lafferty approving the February 20, 2020 meeting minutes. All voted aye. Motion carried.

V. Reports/Recommendations

A. Equity Criteria for PACS Fund Projects Update

Staff Liaison Scipioni updated the Commission on the draft equity criteria for PACS projects. Comments made by Commissioners included;

- 3 possible scores per category may be easier to understand than 6
- 6 categories may be preferable for some criteria, like race
- Question whether it's more appropriate to divide the census tracts into equal intervals or equal class sizes
- Consider using color gradient rather than multiple colors to make maps more accessible
- Consider combining the Community criteria to create one number for each census tract
- Southdale area is high in a number of Community criteria; may skew prioritization of projects
- Suggest using middle school and high school bussing distances for Education criteria
- Suggest running decisions by Race & Equity Coordinator

Commissioner Kane arrived at 6:15 p.m.

B. 2020 Work Plan Updates

- #1 North loop discontinued, Council approved contract renewal for South loop, on-demand service continues

- #2 No update
- #3 Commissioners presented ordinance recommendation at City Council work session April 7, staff is proceeding with policy recommendation for Council consideration
- #4 No update
- #5 No update
- #6 No update
- #7 No update

C. 2020 Work Plan Updates

Staff Liaison Scipioni informed the Commission of the 2021 Work Plan development schedule.

Commissioner began discussing possible initiatives and were asked to bring ideas to the next meeting for consideration.

VI. Chair and Member Comments

Commissioner Johnson requested an update on the sidewalks requested by residents in the Lake Edina/South Cornelia neighborhoods. Staff Liaison Scipioni updated the Commission on staff's response to the petitions received for and against sidewalks on Hibiscus Avenue, Gilford Drive and Kellogg Avenue.

Commissioner Kane commended the City's new organics recycling initiative and asked if a portion of collected fees would go to road repair noting the additional trucks required for this service.

Commissioner Ruthruff noted that the schedule of upcoming meetings shows future meetings will be conducted in the Community Room of City Hall instead of online. Staff Liaison Scipioni clarified that future meetings will continue to be held online until further notice.

Commissioner Richman welcomed Commissioner Lafferty to his first meeting and requested an update on Hennepin County's restriping of France Avenue, which Staff Liaison Scipioni provided.

Commissioner Sherer expressed his enthusiasm to service on the Street Funding Task Force, whose first meeting is June 30.

VII. Staff Comments

- City Hall parking lot reconstruction is nearly completed
- W 58th St reconstruction and Valley View Rd sidewalk projects are underway
- Staff's recommendation for city speed limits will be presented at July meeting

VIII. Schedule of Meeting and Events as of June 12, 2020

For information purposes only, no discussion.

IX. Adjournment

Motion was made by Commissioner Lafferty and seconded by Commissioner Ahler to adjourn the June 18, 2020 meeting at 7:38 p.m. All voted Aye. Motion Carried.



CITY OF EDINA

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Date: July 16, 2020

Agenda Item #: V.A.

To: Transportation Commission

Item Type:

Report and Recommendation

From: Nick Bauler, Traffic Safety Coordinator

Item Activity:

Subject: Traffic Safety Report of June 30, 2020

Discussion

ACTION REQUESTED:

Review and comment on the Traffic Safety Report of June 30, 2020.

INTRODUCTION:

See attached staff report. Comments received by the Commission will be included in the staff report provided to City Council at their August 5 regular meeting.

ATTACHMENTS:

Traffic Safety Report of June 30, 2020



Date: July 16, 2020

To: Transportation Commission

From: Nick Bauler, Traffic Safety Coordinator

Subject: Traffic Safety Preview of June 30, 2020

Information / Background:

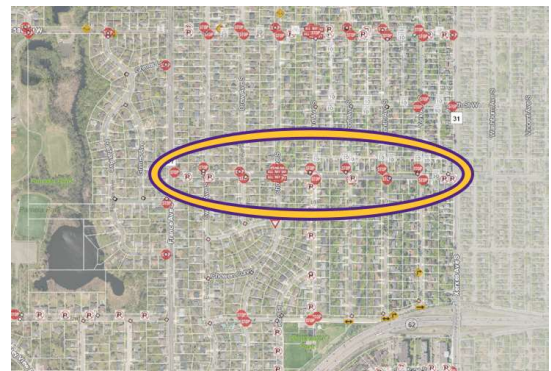
The Traffic Safety Committee (TSC) review of traffic safety matters occurred on June 30. The Traffic Safety Coordinator, City Engineer, Streets Public Service Worker, Transportation Planner, Public Works Director and Assistant City Planner were in attendance for these meetings. The Police Sergeant was not able to attend but was informed of the decisions and had no objections to the recommendations.

On each of the items, persons involved have been contacted and the staff recommendation has been discussed with them. They were informed that if they disagree with the recommendation or have additional facts to present, they can submit correspondence to the Transportation Commission and/or to City Council prior to the August 5 regular meeting.

Section A: Items on which the Traffic Safety Committee recommends action

A1. Request for safety improvements on West 60th Street

- As West 58th Street is closed for reconstruction, residents are noticing increased traffic volumes.
- West 60th Street has an ADT range of 1,500-2,370 vpd.
- 85% speed ranges from 26.4 to 33.1 mph.
- Parking is restricted on the south side.
- All-way stop control is present at Chowen Avenue.
- Mill & overlay is anticipated for 2021.
- Proposed sidewalk is anticipated for 2026.
- 6 reported crashes have occurred since November 2015.
- No speed limit sign is preset for eastbound traffic entering from France Avenue (35 mph to 30 mph).

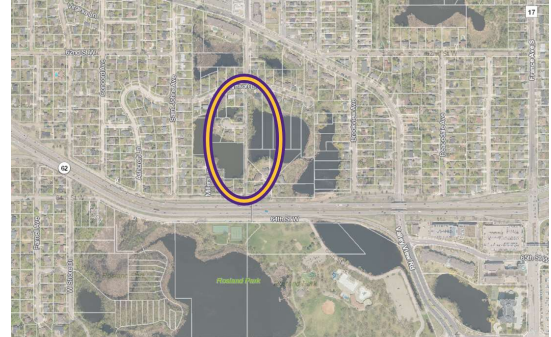


W 60th St between France and Xerxes Aves

Staff recommends installing a 30-mph speed limit sign for eastbound traffic on West 60th Street east of France Avenue. Other long-term changes are not recommended at this time due to the temporary nature of the construction detour.

A2. Request for safety improvements on the shared-use path between Nancy Lane and West 64th Street

- Resident expressed concerned about fast bicyclists nearly hitting pedestrians.
- The path is 8' wide and currently signed as a Bike Route.
- Wooddale Avenue north of this path has bike boulevard pavement markings and signage.
- No crashes have been reported along path.



Shared-use path between Nancy Ln and W 64th St

Staff recommends updating signage to better indicate the shared-use nature of path. Staff is also recommending installing centerline striping to assist in separating two-way pedestrian and bicycle traffic.

A3. Request for a crosswalk on Parklawn Avenue at new Lake Edina Park playground

- New playground was built in Fall 2019.
- Parklawn Avenue was reconstructed in 2017.
- The Nine Mile Creek Regional Trail runs along Parklawn Avenue and through Lake Edina Park.
- ADT on Parklawn Avenue is 2,500 vpd.
- Advisory speeds along the roadway curves are 20-25 mph.
- A southbound bus stop is located on the west side of Parklawn Avenue adjacent to the playground.
- One crash was reported near the playground in 2016.
- A 24-hour crossing study showed 20 crosses during the peak hour (6:00 p.m.).



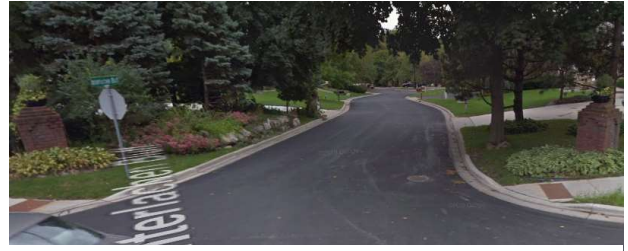
Parklawn Ave at Lake Edina Park

Staff recommends installing a marked crosswalk with road-side signs as is warranted by the current policy. It is recommended that the crosswalk be installed near the bus stop landing located on the west side of Parklawn Ave for optimal sight lines.

Section B: Items on which the Traffic Safety Committee recommends no action

B1. Request for a No Outlet sign for Interlachen Bluff

- This request has been made multiple times in previous years.
- 8 properties are adjacent to Interlachen Bluff.
- ADT on Interlachen Bluff is 94 vpd.
- Staff only recommends No Outlet signs when the end of the street cannot be seen from the entrance.
- The end of the cul-de-sac is visible from Interlachen Boulevard, though slightly obscured due to the landscaped island.

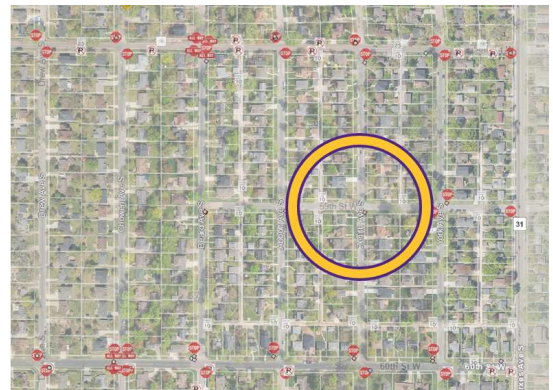


Interlachen Bluff street view from Interlachen Blvd

Staff recommends no changes. The measured traffic volume is appropriate given the context of the roadway. Staff does not believe that a No Outlet sign will deter drivers from utilizing Interlachen Bluff for turnarounds.

B2. Request for stop signs at Zenith Avenue and West 59th Street

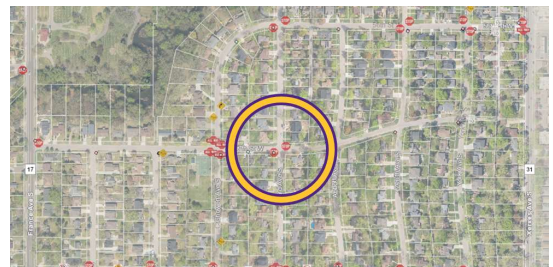
- In May, a 6-year-old traveling south on bicycle down the alley to the east was hit by a westbound driver on West 59th Street.
- Several residents are requesting stop controls at Zenith Avenue and W 59th Street; the intersection is currently uncontrolled.
- West 59th Street and Zenith Avenue have ADTs of 90 and 175, respectively.
- No crashes have been reported in the last 10 years.
- Both streets were reconstructed in 2019.

W 59th St at Zenith Ave

Staff recommends no changes. Stop signs are not warranted and no crashes have been reported at the intersection. Installing unwarranted stop signs would not prevent the accident mentioned above.

B3. Request for all-way stop at W 57th Street and Beard Avenue

- 8 residents submitted a request for all-way stop control.
- Residents are concerned about vehicles passing through intersection without looking properly.
- Two-way stop control is present on West 57th Street.
- West 57th Street ADT ranges from 900 to 230 vpd. Beard Avenue ADT is 260 vpd.
- Sight line concerns are present on the northeast and southwest corners.
- The last reported crash took place in December 2013 due to failure to yield to right of way.

W 57th St at Beard Ave

Staff recommends no changes. Warrants are not met for an all-way stop and current sight line concerns are mitigated by the two-way stop control.

B4. Request for “Resident Only Parking” along Cornelia Circle

- Residents at Cornelia Circle are requesting parking restrictions to keep Rosland Park visitors from parking within cul-de-sac.
- In 2018, City Council approved Traffic Safety recommendation to add a pedestrian ramp on north sidewalk of W 66th Street to improve access to park paths.
- Since then, all 4 homeowners on Cornelia Circle have requested that no ramp be installed as it would lead to an increased number of park visitors in cul-de-sac.

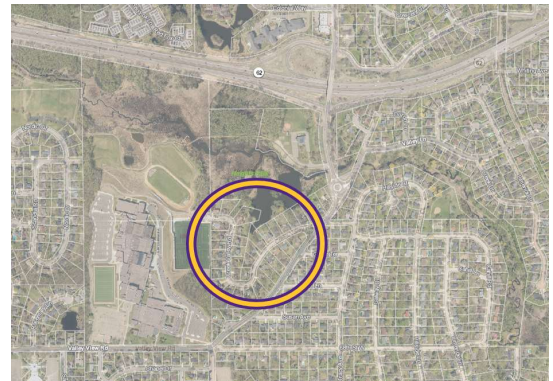


13 vehicles parked in Cornelia Cir during Rosland Park event

Staff recommends no changes to current on-street parking within Cornelia Circle. Staff also recommends not installing a pedestrian ramp on the north side of West 66th Street as prior request was made by a non-Cornelia Circle resident.

B5. Traffic calming requests on Creek Valley Road

- Since new Edina High School athletic fields were built, residents have complained about increased traffic and speeds.
- 2019 ADT and 85% speed is 240 vpd and 26.3 mph, respectively.
- Engineering is proposing a project to realign and narrow the intersection of Creek Valley Road and Valley View Road to reduce vehicle speeds.
- Residents are still requesting traffic calming signage (Slow-Small Children Playing, dynamic speed display sign, or motion-activated signage).
- No crashes have been reported on Creek Valley Road other than at the intersection with Valley View Road (6 in the last 10 years).



Creek Valley Rd

Staff recommends no changes. The proposed intersection realignment is anticipated to be constructed later this summer.

B6. Request to improve crosswalk on Wooddale Avenue at West 60th Street

- Resident is concerned that vehicles aren't stopping for pedestrians.
- Crosswalk was installed in 2019 following warrants (roadside signs and in-street marking).
- 3 crashes have occurred since 2015 (including a bicyclist hit on Wooddale Avenue).
- ADT and 85% speed on Wooddale Avenue is 3,570 vpd and 33.8 mph, respectively.
- On-street parking is present on the east side of Wooddale Avenue.
- Shared bike lanes are present on Wooddale Avenue.



Wooddale Ave street view facing north

Staff has double-sided the road-side signs to increase visibility to drivers. No additional changes are recommended.

Section D: Other traffic safety items handled

D1. Two concerns were raised regarding a van parking on the west side of Hansen Road impacting resident's sight lines when exiting their driveways. Hansen Road is scheduled to be reconstructed in 2021 and parking is likely to be restricted to one side of the street. The residents was informed to submit a petition to City Council to restrict parking on the west side of the street with the upcoming project. The EPD was contacted to enforce any on-street parking restrictions the vehicle may be failing to follow.

D2. A request was submitted stating protestors on a pedestrian bridge over Highway 62 were not following social distancing guidelines and distracting drivers. The EPD was contacted about this concern.

D3. A request was made for on-street parking enforcement on the 4000 block of Sunnyside Avenue. The submission stated vehicles were parked on the restricted side of the street. The EPD was contacted for enforcement.

D4. A resident was concerned with vehicles not yielding to crossing pedestrians at the RRFB over Xerxes Avenue at West 64th Street. Hennepin County was informed of this request and updated their signal timing. The EPD was contacted, as well, for enforcement.

D5. A submission was received about the quality of pavement on Lincoln Drive along the shared-use path installed in 2019. The resident was concerned with potholes and the lack of pavement markings, causing confusion for drivers. A mill and overlay project is anticipated for later this year.

D6. An online submission was made regarding a removed Road Closed sign at York Avenue and West 59th Street for the West 58th Street reconstruction project. The project inspector was informed of this concern and a new sign was installed.

D7. A request was made to update parking restriction signage along Xerxes Avenue adjacent to 5624-5628. Hennepin County reviewed this request and recommended no updates to verbiage for the restrictions.

D8. A request was made to restrict parking on Wyman Avenue north of Highway 62. This section of Wyman Avenue was reconstructed in 2017 and was designed to allow one-sided parking. The resident was recommended to fill out a petition with neighbors directly impacted by adding parking restrictions.

D9. A request for a crosswalk was made over Gleason Road at McCauley Trail. The resident was informed a crosswalk is anticipated to be installed later this year.

D10. An online submission was made regarding a tree blocking visibility of a stop sign at the intersection of West 59th Street and York Avenue. The City Forrester sent a notice to the property owner to trim the tree.

D11. An online submission was received regarding a traffic signal being hit by a vehicle on France Avenue at Gallagher Drive. Hennepin County was informed of this concern and it has been fixed.

D12. A request for an all-way stop was made at the intersection of Belmore Lane and Dearborn Street. This intersection met no warrants as no crashes were reported and traffic volumes are too low.

D13. A request was made to improve sight lines at the southwest corner of West 66th Street and York Avenue. As the area of concern is maintained by Homewood Suites, the manager was contacted and informed of the concern and has removed some plants to improve sight lines.

D14. A request was made to install stop signs at both intersections of Kellogg Avenue and Oaklawn Avenue on West 55th Street. Upon site visits, adequate sight lines are available from all legs of both intersections. ADTs on Kellogg and Oaklawn Avenues do not exceed 160 and ADT on West 55th Street is 360. The last reported crash was at Oaklawn Avenue in June 2015. No stop signs are warranted.

D15. A request was submitted for an all-way stop at the intersection of Wooddale Avenue and West 60th Street due to pedestrian safety concerns. All-way stop warrants are not met based on traffic volumes, crash history or sight lines.



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Date: July 16, 2020

Agenda Item #: V.B.

To: Transportation Commission

Item Type:

Report and Recommendation

From: Andrew Scipioni, Transportation Planner

Item Activity:

Subject: Draft Local Speed Limit Evaluation

Discussion

ACTION REQUESTED:

Review and comment on staff's draft recommendations for reducing local speed limits citywide.

INTRODUCTION:

See attached staff report and supporting materials. Staff will present this draft recommendation to City Council at their July 21 work session for review and further direction.

ATTACHMENTS:

Draft Staff Report: Local Speed Limit Evaluation

Existing Speed Limits

Proposed Speed Limits



Date: July 10, 2020

To: Transportation Commission

From: Andrew Scipioni, Transportation Planner

Subject: Local Speed Limit Evaluation [DRAFT]

Executive Summary

This report is a summary of the analysis conducted to direct the City of Edina's approach to setting speed limits on local streets in accordance with City policies and recent State legislation. The current speed limit on most streets owned by the City of Edina is 30 miles per hour (mph), which is the statutory urban speed limit set by the Minnesota State Legislature. Effective August 1, 2019, cities have the authority to set speed limits on streets they control.

The recommended speed limits on local streets are as follows:

- 30 mph on four-lane major streets
- 25 mph on two-lane major streets
- 20 mph on major streets within School Zones (no change from current restriction)
- 20 mph on minor streets
- 15 mph on minor streets within School Zones (no change from current restriction)
- 10 mph on alleys (no change from current restriction)

Speed limits on streets owned by other jurisdictions will remain as they are, unless changed by their respective agencies. These include streets owned by the Minnesota Department of Transportation, Hennepin County and private streets.

These new speed limits are recommended based on the findings from detailed technical analysis, including:

- Lower speeds reduce the likelihood and severity of motor vehicle crashes.
- Utilizing the 85th-percentile to set speed limits prioritizes motor vehicle traffic over the safety of all modes of transportation, including pedestrians and cyclists.

- Lower speed limits promote public health and safety and support the goals established in the Comprehensive Plan and the Living Streets Plan.
- A tiered approach to local speed limits is most appropriate for Edina given the wide range of traffic volumes and percentage of non-local traffic on city streets. This approach is consistent with that implemented by other cities that strive to accommodate all modes of transportation.

Background

In 2006, Edina's Transportation Commission recommended that City Council adopt a resolution recommending a 25-mph speed limit policy in residential areas. City staff, at the time, instead recommended that Council adopt a resolution supporting lowering the statutory urban residential speed limit from 30 to 25 mph. Council subsequently passed Resolution 2006-64, which stated that "the City of Edina does hereby strongly support a statewide lowering of the speed limit from 30 miles per hour to 25 miles per hour on local, residential roadways." Rationale provided in the resolution included:

- "Drivers traveling at high speeds are less aware of their surroundings and have less time to notice and react to pedestrians and bicyclists."
- "Relatively small increases in vehicle speed can greatly increase the chances that a pedestrian will die in a vehicle-to-pedestrian crash."
- "Experts on street design say that 20 to 25 miles per hour is the maximum safe speed for residential streets."
- "The City of Edina supports ensuring speed limits maximize safety for all roadway users including drivers, pedestrians and bicyclists."

In 2008, Council adopted Resolution 2008-27, requesting State Representative Ron Erhardt sponsor legislation granting permission to form a Speed Limit Task Force to begin a state-wide study of the feasibility of 25 mph speed limits and that said study be completed before the start of the 2009 legislative session. The 2008 Comprehensive Plan also included the following policy statements:

- "Support state legislation to decrease statutory urban speed limits from 30 to 25 miles per hour."
- "Complete speed zone studies and establish speed zones for Safe Routes to School."

In 2009, the City received Safe Routes to School (SRTS) funding for implementation of a city-wide school speed zone study. This study was prepared by VSB & Associates, Inc. and evaluated conditions near six elementary schools, two middle schools, one high school and three private schools in Edina. The purpose of the study was to "determine and implement school speed zones adjacent to each school" and to "provide safe conditions to encourage students to walk and bike to school." Council subsequently adopted Resolution 2009-66, adopting the Edina Schools Speed Zone Study and authorizing implementation of the recommended signage plan. New signage was installed prior to the start of the 2009/2010 school year.

In 2012, the Transportation Commission wrote an advisory communication to Council recommending that the City revise its speed limit policy to be more consistent with current state legislation and "accurately communicate the authority the City has to reduce speed limits." The Commission noted that the City had

previously lowered speed limits on some local streets with bike lanes to 25 miles per hour and had established reduced speeds in school zones as permitted by state statute.

Between 2013 and 2015, the City developed and adopted the Living Streets Policy and Plan. Living Streets balance the needs of motorists, bicyclists, pedestrians and transit riders in ways that promote safety and convenience, enhance community identity, create economic vitality, improve environmental sustainability, and provide meaningful opportunities for active living and better health. Living Streets principles that guide the City's approach to speed limits include:

- "Living Streets are high-quality transportation facilities that meet the needs of the most vulnerable users such as pedestrians, cyclists, children, seniors and the disabled."
- "Living Streets provide access and mobility for all transportation modes while enhancing safety and convenience for all users."
- "Living Streets will improve the current and future quality of life of the public."

These principles are further echoed in the draft 2018 Comprehensive Plan, which notes that today's primary transportation planning focus includes increasing safety and ensuring that the transportation needs of all users will be considered and all modes will be appropriately accommodated.

Between 2011 and 2019, the City's biennial Quality of Life survey asked residents to assess traffic concerns in their neighborhoods. About 40% of residents have consistently expressed that speeding is a moderate-to-extreme problem in their neighborhood.

In May 2019, the Minnesota Legislature passed and Governor Tim Walz signed legislation granting cities the authority to set speed limits on streets they control:

"A city may establish speed limits for city streets under the city's jurisdiction other than the limits provided in subdivision 2 without conducting an engineering and traffic investigation. This subdivision does not apply to town roads, county highways, or trunk highways in the city. A city that establishes speed limits pursuant to this section must implement speed limit changes in a consistent and understandable manner. The city must erect appropriate signs to display the speed limit. A city that uses the authority under this subdivision must develop procedures to set speed limits based on the city's safety, engineering, and traffic analysis. At a minimum, the safety, engineering, and traffic analysis must consider national urban speed limit guidance and studies, local traffic crashes, and methods to effectively communicate the change to the public."

- Minnesota Statutes, Section 169.14, Subd. 5h

Existing Conditions

The current speed limit on most local streets in Edina is 30 mph, which is the statutory urban speed limit for the State of Minnesota. The speed limit on Hennepin County roads in Edina varies between 30 and 40 mph. The speed limit for Minnesota Department of Transportation (MnDOT) trunk highways in Edina is 55 mph. Figure 1 shows all existing speed limits within Edina.

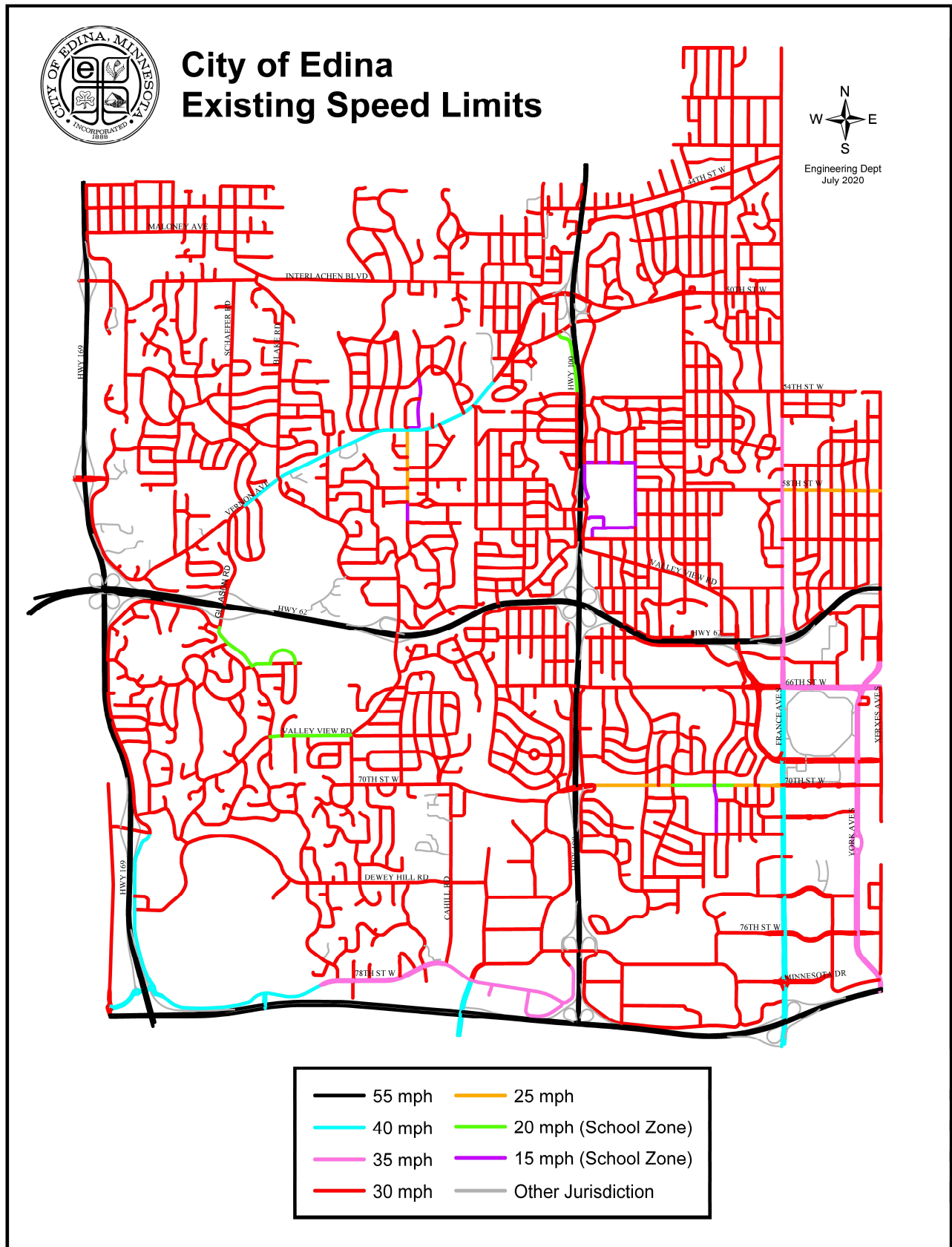


Figure I: Existing Speed Limits (as of January 2020)

National Research and Guidance

National Transportation Safety Board

In 2017, the National Transportation Safety Board (NTSB) published “Reducing Speeding-Related Crashes Involving Passenger Vehicles,” a safety study examining causes, trends and countermeasures to prevent these types of crashes. The findings of this study include:

- “Speed increases the likelihood of serious and fatal crash involvement, although the exact relationship is complex due to many factors.”
- “Speed increases the injury severity of a crash.”
- The Manual on Uniform Traffic Control Devices (MUTCD) guidance for setting speed limits in speed zones is based on the 85th percentile speed, but there is not strong evidence that, within a given traffic flow, the 85th-percentile speed equates to the speed with the lowest crash involvement rate on all road types.”
- “Unintended consequences of the reliance on using the 85th-percentile speed for changing speed limits in speed zones include higher operating speeds and new higher, 85th-percentile speeds in the speed zones, and an increase in operating speeds outside the speed zones.”
- “The safe system approach to setting speed limits in urban areas is an improvement over conventional approaches because it considers the vulnerability of all road users.”

Among the recommendations of this report is for a revision to the MUTCD to “incorporate the safe system approach for urban roads to strengthen protection for vulnerable road users.”

National Association of City Transportation Officials

The National Association of City Transportation Officials (NACTO) identifies two different approaches for setting urban speed limits.

Citywide

Under this approach, a city designates a speed limit that applies to all roadways within their jurisdiction. NACTO recommends a 25-mph speed limit for this strategy. “Setting or lowering default citywide speed limits is an inexpensive, scalable way to quickly improve safety outcomes, and establish a basis for larger safety gains. Default citywide limits also provide consistent expectations and messages about speed across the jurisdiction, which is easy for drivers to follow.”

Category of Street

Under this approach, a city develops a tiered system of speed limits. NACTO recommends the following tiered system:

- 25 mph on Major streets. “Major streets feature a combination of high motor vehicle traffic volume, signalization of major intersection, and an inherently multimodal street environment.”

- 20 mph on Minor streets. “Minor streets include physically small streets where low speeds are often already present, as well as low-vehicle-volume streets with few or no transit stops.”
- 10 mph on alleys and shared streets

“Citywide speed limits are generally easier to implement and may be easier for driver to follow. However, in cities where there is clear differentiation between major arterial streets and local or minor streets, setting speed limits based on category of street can sometimes allow cities to lower speed limits on a large number of streets below what would be allowable citywide (i.e. 20 mph on minor streets vs. 25 mph citywide). If cities have the authority to set default speed limits, they should decide whether to implement citywide limits or category limits based on what makes sense given the local conditions.”

Manual on Uniform Traffic Control Devices

The Manual on Uniform Traffic Control Devices (MUTCD), published by the Federal Highway Administration (FHWA), defines the standards used to install and maintain traffic control devices on public transportation systems. The current MUTCD includes the following standards and guidance related to speed limits:

- “Speed zones (other than statutory speed limits) shall only be established on the basis of an engineering study that has been performed in accordance with traffic engineering practices. The engineering study shall include an analysis of the current speed distribution of free-flowing vehicles.”
- “The Speed Limit sign...shall display the limit established by law, ordinance, regulation or as adopted by the authorized agency based on the engineering study. The speed limits displayed shall be in multiples of 5 mph.”
- “State and local agencies should conduct engineering studies to reevaluate non-statutory speed limits on segments of their roadways that have undergone significant changes since the last review, such as the addition or elimination of parking or driveways, changes in traffic control signal coordination, or significant changes in traffic volumes.”
- “When a speed limit within a speed zone is posted, it should be within 5 mph of the 85th percentile speed of free-flowing traffic.”
- “Other factors that may be considered when establishing or reevaluating speed limits are the following:
 - A. Road characteristics, shoulder condition, grade, alignment, and sight distance;
 - B. The pace;
 - C. Roadside development and environment;
 - D. Parking practices and pedestrian activity; and
 - E. Reported crash experience for at least a 12-month period”

The National Committee on Uniform Traffic Control Devices (NCUTD) recently recommended changes to the current MUTCD guidance related to speed limits to the FHWA. These recommendations included:

- Removing the standard that “the engineering study shall include an analysis of the current speed distribution of free-flowing vehicles.”

- Upgrading and revising the considerations for establishing speed zones to read “Factors that should be considered when establishing or reevaluating speed limits within speed zones are the following:
 - A. Speed distribution of free-flowing vehicles (such as current 85th percentile, the pace, and review of past speed studies)
 - B. Reported crash experience for at least a 12-month period relative to similar roadways
 - C. Road characteristics (such as lane widths, curb/shoulder condition, grade, alignment, median type, and sight distance)
 - D. Road context (such as roadside development and environment including number of driveways and land use, functional classification, parking practices, presence of sidewalks/bicycle facilities)
 - E. Road users (such as pedestrian activity, bicycle activity).
- Revising the guidance statement regarding the posted speed limit being made within 5 mph of the 85th percentile speed to apply only “on freeways, expressways, or rural highways.”

The FHWA will consider whether to incorporate these recommendations into the next edition of the MUTCD. MnDOT utilizes a slightly different version referred to as the MN MUTCD. Both documents are identical in language related to speed limits. If the MUTCD is updated, it is anticipated that the MN MUTCD will be updated accordingly.

Safety Implications

Vehicle stopping distance is an important factor in the likelihood of a crash. Figure 2 shows the correlation between vehicle speed and average stopping distance as calculated by the American Association of State Highway and Transportation Officials (AASHTO). For example, a reduction from 30 to 20 mph results in an additional 85 feet (or about 5 car lengths) of stopping distance.

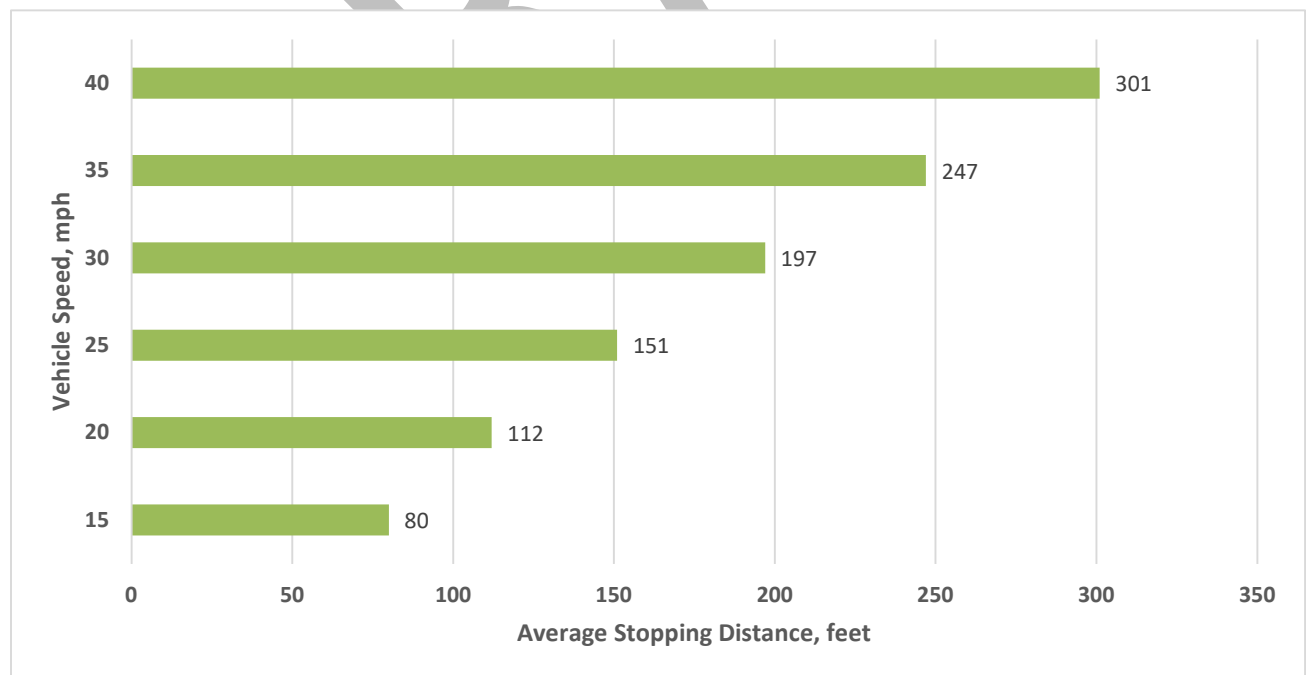


Figure 2. Average Stopping Distance vs. Speed (AASHTO)

Exact stopping distance calculations vary depending on specific reaction times and braking speed, but when controlling for those variables, higher speeds always result in longer stopping distances.

Speed also impacts the severity of injury resulting from crashes, particularly for pedestrians and cyclists. Figure 3 compares vehicle speeds to the likelihood of severe injury or death to a pedestrian in an accident. This data is taken from the US Department of Transportation, though multiple other agencies have conducted comparable studies with similar results.

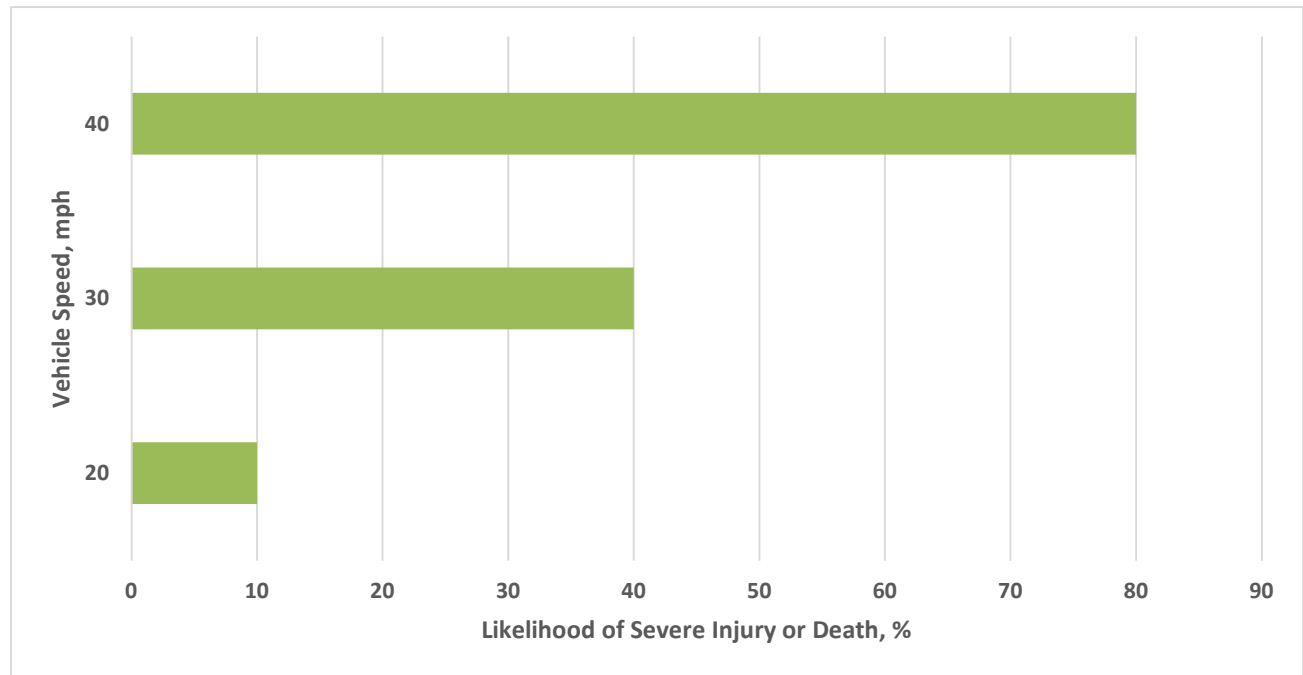


Figure 3. Pedestrian Injury Risk vs. Speed

It's also important to note that other factors contribute to the level of risk, including the age of the pedestrian.

Speed Limit Changes by Other Cities

New York City, NY

The statutory urban speed limit in the State of New York is 30 mph. In 2014, New York City lowered the majority of local speed limits from 30 to 25 mph. Some quieter residential areas, or “slow zones” were kept at 20 mph and some larger streets have speed limits higher than 25 mph.

Seattle, WA

The statutory urban speed limit in the State of Washington is 25 mph. In 2016, Seattle adopted a tiered system for local speed limits; 25 mph for arterial streets and 20 mph for residential streets unless otherwise signed. In addition, Seattle has been lowering speed limits on busier streets in recent years, piloting the use of the 50th percentile speed rather than the 85th to set speed limits. Following implementation of these changes on downtown streets, Seattle experienced a 13% reduction in total crashes and a 20% reduction in fatal and serious injury crashes.

Portland, OR

The statutory urban speed limit in the State of Oregon is 25 mph. Portland has also implemented a tiered system for local speed limits between 2016 and 2018; 15-25 mph for residential districts, 20 mph for school zones, business districts and arterial streets and 15 mph for alleys. Changes made to local speed limits require approval from the Oregon Department of Transportation.

Boston, MA

The statutory urban speed limit in the State of Massachusetts is 25 mph. In 2017, Boston lowered speed limits citywide from 30 to 35 mph. A study conducted in 2018 by the Insurance Institute for Highway Safety concluded that “lowering the speed limit in urban areas is an effective countermeasure to reduce speeds and improve safety for all road users.”

Minneapolis/St. Paul, MN

Earlier this year, the Cities of Minneapolis and St. Paul announced plans to implement similar tiered systems for local speed limits; 25 mph for major streets (mixed-use, commercial and downtown streets) and 20 mph for minor streets (industrial and residential streets). Both cities intend for these changes to make streets safer for all users and to support their Vision Zero goal of zero traffic deaths or severe injuries.

Local Traffic/Crash Analysis

Staff reviewed local traffic data collected between 2016 and 2019. This data was reviewed based on the roadway classifications identified in the Living Streets Plan; Minor Arterial, Collector, Local Connector or Local road (see Table 1).

| Roadway Classification | Average Daily Traffic, vpd | Data Points | 85 th Percentile Speed Range, mph | Average 85 th Percentile Speed, mph |
|------------------------|----------------------------|-------------|--|--|
| Minor Arterial | 4,500 – 15,000 | 5 | 36.5 – 41.9 | 39.5 |
| Collector | 1,200 – 10,300 | 56 | 21.6 – 39.0 | 32.7 |
| Local Connector | 250 – 3,000 | 46 | 23.5 – 35.2 | 30.0 |
| Local | 30 – 1,200 | 64 | 17.9 - 32.5 | 25.4 |

Table 1: Local Traffic Analysis, 2016-2019

Relevant findings from this analysis include:

1. 85th percentile speeds tend to decrease as roadway classification and traffic volumes decrease.
2. The majority of drivers on Local and Local Connector roads obey the posted speed limit (most of these roads are currently 30 mph).
3. Wider roads (Minor Arterials and Collectors) tend to have higher speeds than narrower roads (Local Connectors and Locals).

4. Highway frontage roads tend to have the highest recorded speeds (8 of the 10 highest observed 85th percentile speeds were on frontage roads adjacent to Highways 100, 169 and 494.

Crash data from the Minnesota Department of Public Safety was used to review local traffic accidents. This analysis included reported accidents on County, Municipal State Aid and local roads in Edina over a 5-year period between 2015 and 2019. Relevant findings from this analysis include:

1. Accidents were generally concentrated at intersections and along high-volume roads.
2. More than 50% of accidents on Municipal State Aid or local roads occurred at intersections.
3. Nearly all (96%) of accidents on Municipal State Aid or local roads occurred under a posted speed limit of 30 mph.
4. Only one fatal crash was reported over this time period; a pedestrian was struck and killed on France Avenue in 2016.
5. Proportionately, the severity of accidents was similar regardless of roadway type, with the majority resulting merely in property damage (see Table 2).

| Crash Severity | Local Roads | Municipal State Aid Roads | County Roads |
|------------------------|--------------------|----------------------------------|---------------------|
| Property Damage | 70.9% | 67.9% | 67.4% |
| Possible Injury | 17.3% | 16.9% | 16.7% |
| Minor Injury | 9.8% | 13.6% | 13.4% |
| Serious Injury | 1.7% | 1.4% | 1.8% |
| Fatality | - | - | 0.2% |
| Unknown | 0.3% | 0.2% | 0.5% |

Table 2. Local Crash Analysis, 2015-2019

6. Most accidents had no clear contributing action reported. Regardless of roadway type, distracted driving, failing to yield the right-of-way, and running red lights were generally reported more frequently than speeding.
7. Accidents involving pedestrians or cyclists were relatively rare (less than 10%) and generally occurred along County or Municipal State Aid roads. The greatest concentration of these is in the southeast quadrant of Edina, primarily along France Avenue and York Avenue.
8. Accidents involving a pedestrian or cyclist were more than three times as likely to result in a minor or serious injury compared to overall crashes.

Basis for Recommendation

Following review of the research and data included in this report, staff's recommendation is based on the following findings:

1. Lower speeds reduce the likelihood and severity of motor vehicle crashes.
2. Utilizing the 85th percentile to set speed limits prioritizes motor vehicle traffic over the safety of all modes of transportation, including pedestrians and cyclists.
3. Lower speed limits promote public health and safety and support the goals established in the Comprehensive Plan and Living Streets Plan.
4. A tiered approach to local speed limits is most appropriate for Edina given the wide range of traffic volumes and percentage of non-local traffic on city streets. This approach is consistent with that implemented by other cities that strive to accommodate all modes of transportation (Minneapolis, Portland, Seattle and Boston).

Recommendations for City of Edina Speed Limits

Staff recommends a tiered approach to setting local speed limits in Edina. Table 3 summarizes the recommended changes.

| Category | Recommended Speed Limit, mph | Current Speed Limit, mph | Percent of Local Mileage |
|---|------------------------------|--------------------------|--------------------------|
| Major Streets – Arterial | 30 | 30 – 40 | 7% |
| Major Streets - Collector | 25 | 25 – 30 | 19% |
| Major Streets – Collector (School Zone) | 20 | 20 | 1% |
| Minor Streets | 20 | 30 | 72% |
| Minor Streets (School Zone) | 15 | 15 | 1% |
| Alleys | 10 | 10 | - |

Table 3. Summary of Recommended Speed Limit Changes

Major Streets – Arterial: These roads are categorized as Minor Arterials or Collectors in the Living Streets Plan. They are generally four-lane Municipal State Aid roads with limited driveway access that connect to County roads or State highways. The majority have no on-street parking, sidewalks on both sides and carry transit service. Examples include West 50th Street between Grange Road and Wooddale Avenue and West 78th Street between Gleason Road and Bush Lake Road.

Major Streets – Collector: These roads are categorized as Collectors or Local Connectors in the Living Streets Plan. They are generally two-lane Municipal State Aid roads, highway frontage roads or roads within commercial or industrial areas with medium-to-high driveway access. The majority have parking restricted

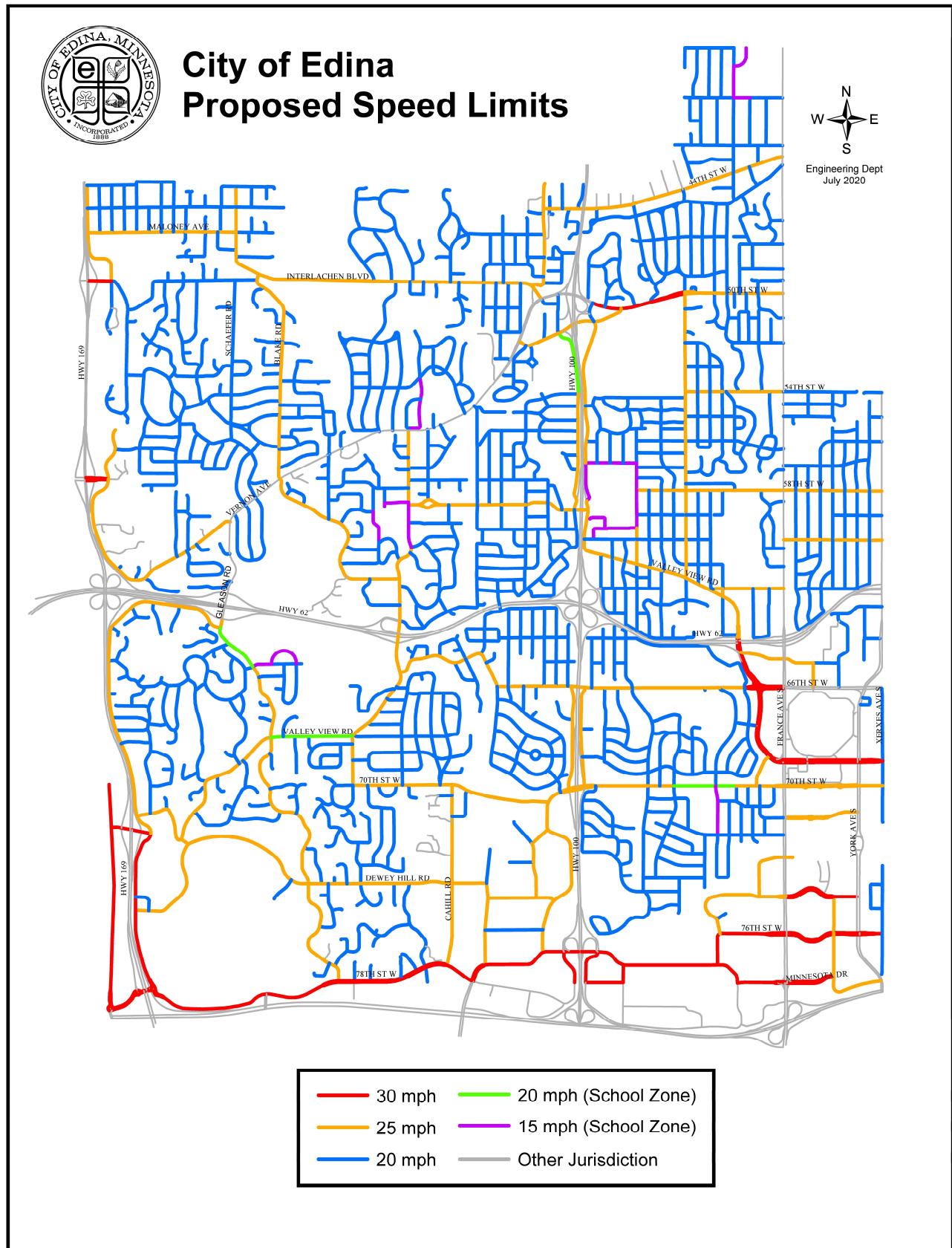
on one or both sides, a sidewalk on at least one side and many carry transit service. Examples include Olinger Blvd between Vernon Avenue and Tracy Avenue and West 66th Street between Ridgeview Drive and Valley View Road.

Minor Streets: These roads are categorized as Local streets in the Living Streets Plan. They are generally two-lane residential roads with high driveway access or roads within commercial districts that have high pedestrian volumes. The majority have parking on both sides, no sidewalks and do not carry transit service. Examples include Hansen Road between Vernon Avenue and Benton Avenue and Market Street between Halifax Avenue and France Avenue.

School Zones: These are defined as portions of the street adjacent to school grounds where children have access to the street. Seven of these zones currently exist in Edina, adjacent to Our Lady of Grace Catholic, Highlands Elementary, Countryside Elementary, Normandale Elementary/Concord Elementary/South View Middle, Creek Valley Elementary, Valley View Middle/Edina High, and Cornelia Elementary School. These areas are proposed to remain at their existing 15- or 20-mph restrictions with a few minor changes to further reduce speeds on other adjacent streets. One new 15-mph School Zone is recommended on Inglewood Avenue, Grimes Avenue and West 42nd Street adjacent to Golden Years Montessori and Avail Academy.

Alleys: These are public thoroughfares with less than 30 feet of allocated right-of-way. Section 169.14 of the Minnesota Statutes and Section 26-7 of City Code currently restricts speed limits in alleys to no more than 10 mph.

Figure 4 shows all recommended speed limits on local roads in Edina.

**Figure 4. Recommended Speed Limits**

The NTSB safety study previously mentioned in this report notes that “a comprehensive approach to speeding typically involves multiple countermeasures.” Drivers are influenced by the geometric characteristics of a roadway as well as the posted speed limit. In addition to these recommended speed limits, staff recommends continuing to follow Living Streets design standards with pavement management projects when feasible. These design standards include minimum roadway widths and reallocation of right-of-way for pedestrian and bicycle infrastructure. Physical changes to roadways will complement the lowered speed limits to reduce vehicle speeds and improve safety for all modes of transportation.

Coordination

Internal partners – Public Works, Police

External partners – Eden Prairie, Minnetonka, Hopkins, St. Louis Park, Minneapolis, Richfield, Bloomington, Hennepin County, Metro Transit, Minnesota Department of Transportation

Next Steps

Communications and Education Plan

Signage Plan

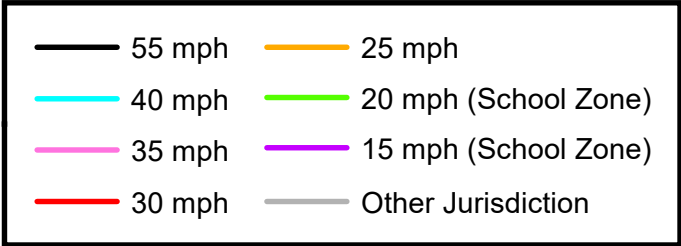
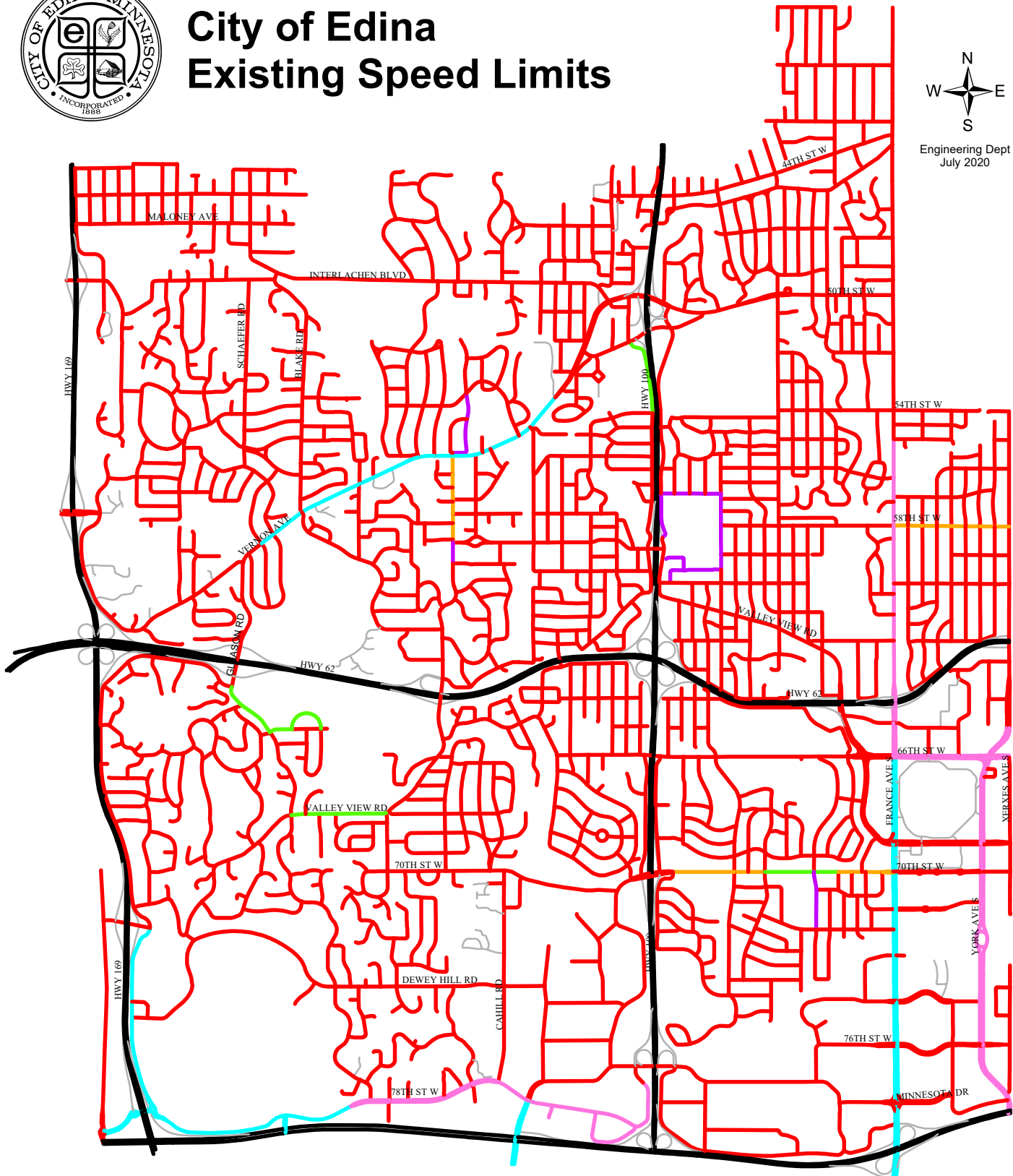
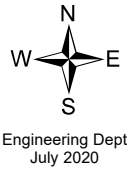
Traffic Signal Plan

Enforcement Plan

Evaluation Plan and Future Modifications

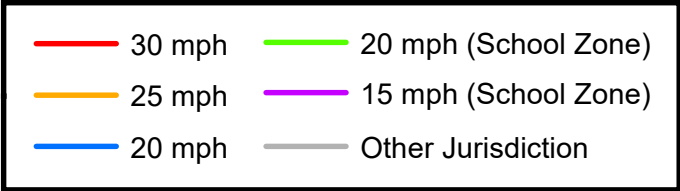
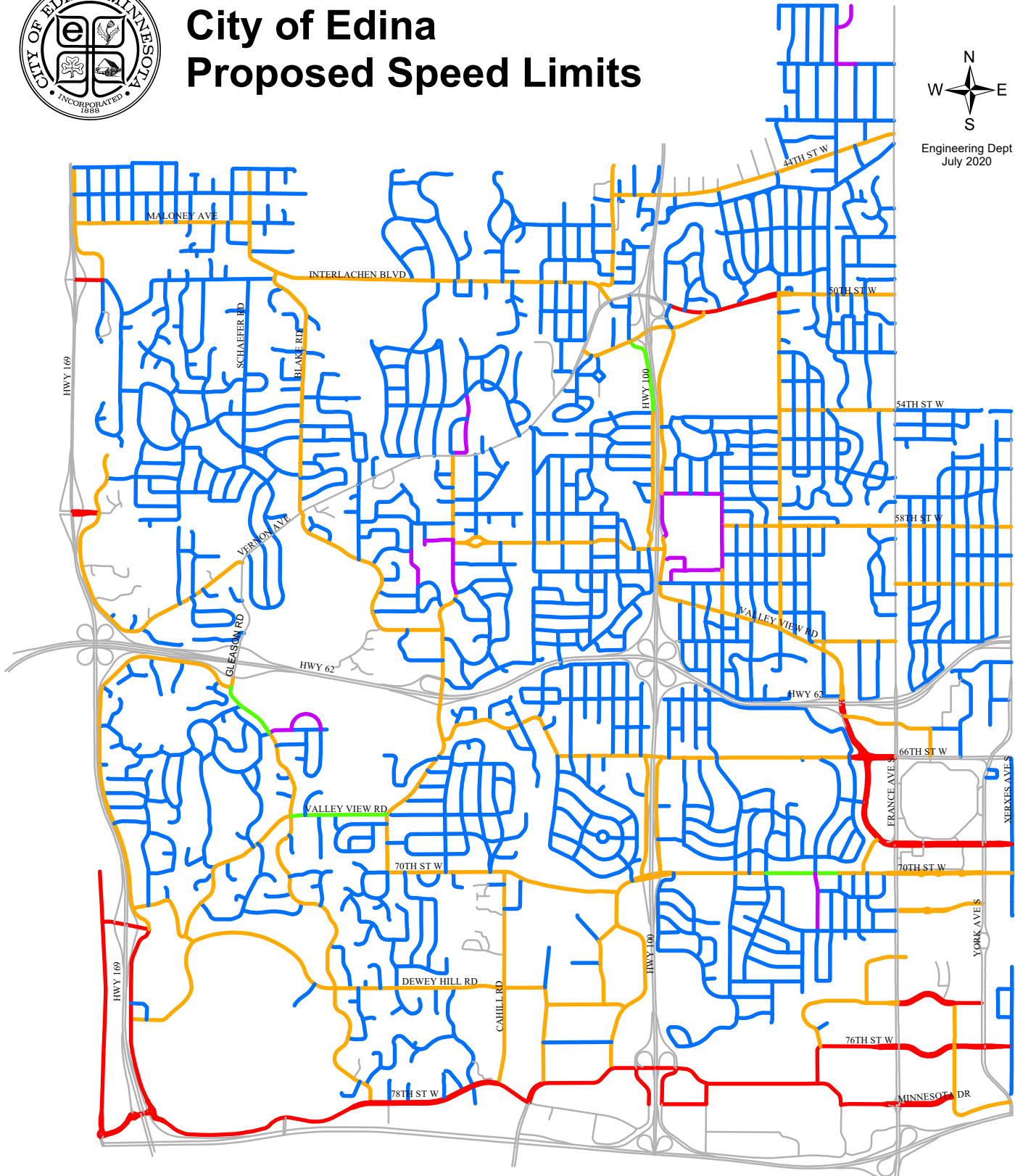
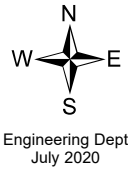


City of Edina Existing Speed Limits





City of Edina Proposed Speed Limits





CITY OF EDINA

4801 West 50th Street

Edina, MN 55424

www.edinamn.gov

Date: July 16, 2020

Agenda Item #: V.C.

To: Transportation Commission

Item Type:
Other

From: Andrew Scipioni, Transportation Planner

Item Activity:
Discussion

Subject: Traffic and Parking Study - 4425 Valley View Road

ACTION REQUESTED:

Review and comment on the traffic and parking study for 4425 Valley View Road and discuss other transportation-related impacts.

INTRODUCTION:

See attached staff report and supporting materials.

The Planning Commission recommended approval of the Conditional Use Permit and variances associated with the proposed project at their July 8 regular meeting. City Council will consider approval at their July 21 regular meeting.

ATTACHMENTS:

Staff Memo: Transportation Review

Traffic and Parking Study

Revised Site Plan

Preliminary Bike Room

Sketch Plan Submittal



Date: July 2, 2020

To: Cary Teague – Community Development Director
Chad Millner, PE – Director of Engineering

Cc: 4425 Valley View Road, Owner and Development Team

From: Andrew Scipioni – Transportation Planner

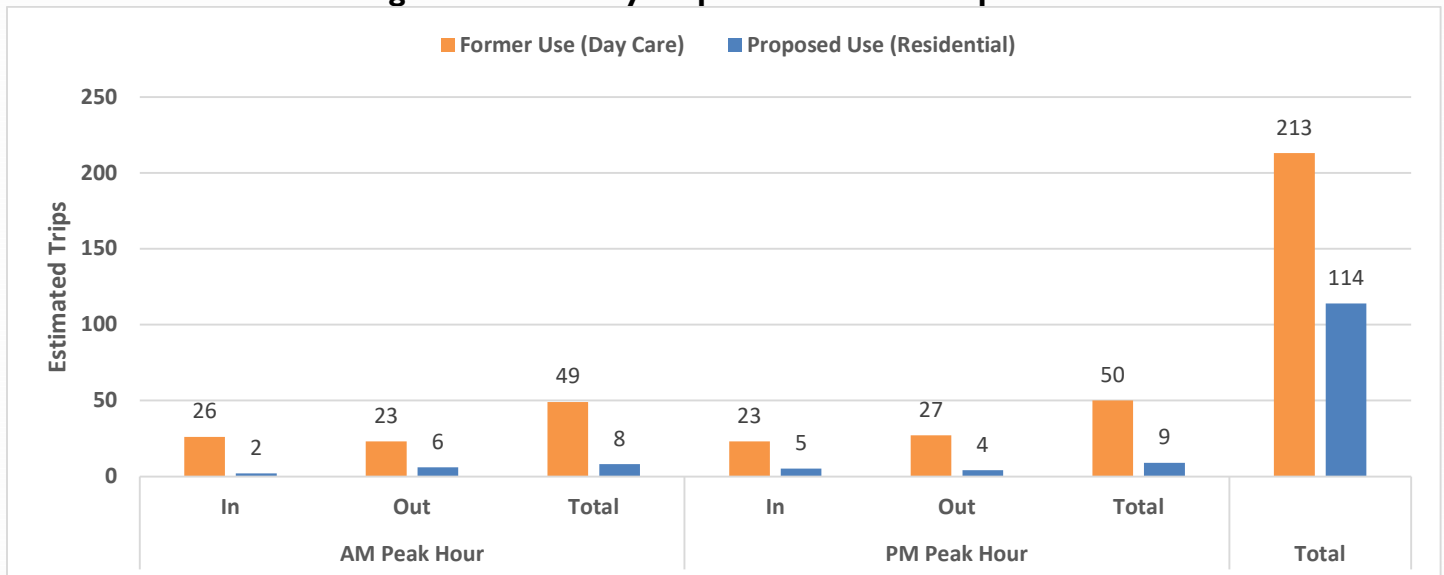
Re: **4425 Valley View Road – Transportation Review**

DJR Architecture is proposing to construct a new residential building at 4425 Valley View Road. This site formerly housed a day care facility (New Horizon Academy) that has since relocated to 4412 Valley View Road. The proposed redevelopment would replace the existing one-story building with a three-story, 21-unit apartment building. Wenck Associates, Inc. completed a traffic and parking assessment for this project on behalf of the City. This memo will discuss the conclusions of that assessment and review how the proposed development complies with approved City plans and policies related to transportation.

Trip Generation

Figure I shows the estimated trip generation for the proposed residential use compared to that of the previous use. Estimated trips were calculated using the Trip Generation Manual, 10th Edition, published by the Institute for Transportation Engineers (ITE) based on the size of the vacant day care building and the number of proposed residential units.

Figure I: Weekday Trip Generation Comparison



Wenck's assessment shows a significant reduction in trip generation for the proposed use compared to the previous use. Peak hour trips would be reduced by more than 80% and total trips would be reduced by almost 50%.

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In addition, three adjacent intersections were studied: Valley View Road and Wooddale Avenue, Valley View Road and Kellogg Avenue, and Valley View Road and West 62nd Street. The proposed redevelopment was found not to change the level of service (or traffic delay) for any movement at any of these intersections. Overall, minimal impact to traffic operations is anticipated and no improvements would be necessary to accommodate this project.

Parking Analysis

23 parking spaces are required for this redevelopment based on the number and size of proposed residential units (see Table 1). Using ITE parking data, Wenck concluded that the peak parking demand for this project would be 25 spaces. With 32 enclosed parking spaces proposed, the project fulfills the City's minimum requirements and the estimated peak parking demand.

Table 1: Required Parking Spaces

| Residential Unit Size | Required Parking Spaces per Unit | Number of Units | Total Required Parking Spaces |
|-----------------------|----------------------------------|-----------------|-------------------------------|
| ≤ 1,500 square feet | 1 | 18 | 18 |
| > 1,500 square feet | 1.5 | 3 | 4.5 (5) |
| Total | | 21 | 22.5 (23) |

Compliance with Transportation Plans/Policies

Table 2 details the ways in which the proposed redevelopment supports current City transportation plans and policies.

Table 2: Compliance with Transportation Plans/Policies

| Draft 2018 Comprehensive Plan | |
|--|--|
| Goal/Policy | Explanation |
| <ul style="list-style-type: none">Reduce the overall dependence on and use of single-occupancy vehicles by promoting land use patterns that allow for shorter vehicle trips and the use of alternative travel options. | The project site is adjacent to sidewalks, shared bike lanes and transit service. |
| <ul style="list-style-type: none">Develop and manage parking provisions to encourage joint and shared use of facilities, ride-sharing and bicycle parking. | The project is proposed to include an outside bike rack along Valley View Road and a bike room in the underground garage with capacity for 20 bikes. |
| <ul style="list-style-type: none">Provide and maintain adequate access to and from, and safety on, local and regional roadway adjacent to community redevelopment and other activity that potentially impacts the City of Edina. | The project is proposed to remove the existing driveway access off Valley View Road and utilize a shared driveway with 4412 Valley View Road. |
| Living Streets Plan (2015) | |
| Goal/Policy | Explanation |
| <ul style="list-style-type: none">Living Streets provide access and mobility for all transportation modes while enhancing safety and convenience for all users. | The project provides accommodations for motorists, cyclists and pedestrians. |

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| | |
|--|---|
| <ul style="list-style-type: none">The City will require new developments to provide interconnected street and sidewalk networks that connect to existing or planned streets or sidewalks on the perimeter of the development. | The proposal includes replacing the existing back-of-curb sidewalk with a boulevard-style sidewalk adjacent to the property along Valley View Road. |
| <ul style="list-style-type: none">Living Streets will improve the current and future quality of life for the public. | The proposed boulevard-style sidewalk will improve pedestrian safety and comfort adjacent to the property. |
| Wooddale/Valley View Small Area Plan (2015) | |
| Goal/Policy | Explanation |
| <ul style="list-style-type: none">Ensure safe and convenient travel for traffic passing through and within the Study Area by limiting the number of driveways providing access between the roadway system and private property. | The project is proposed to remove the existing driveway access off Valley View Road and utilize a shared driveway with 4412 Valley View Road. |
| <ul style="list-style-type: none">Ensure adequate parking supplies that are located on-site in accordance with specific land uses, meet multi-modal parking needs, and are safe and secure. | All required resident and visitor parking is located on-site in an underground garage which also includes a bike storage room. |
| <ul style="list-style-type: none">Design public rights-of-way to facilitate and encourage safe and convenient multi-modal travel by providing sidewalks, boulevards, marked crosswalks, and pedestrian-oriented street lighting within the Study Area and connectivity for pedestrians and cyclists to surrounding neighborhoods and destinations. | The proposed boulevard-style sidewalk will improve pedestrian safety and comfort adjacent to the property. The site is located adjacent to existing pedestrian, bicycle and transit infrastructure. |

Travel Demand Management Opportunities

In addition to the measures already proposed, the applicant should consider additional strategies to support alternative modes of transportation to and from the site and reduce the impact of motor vehicles in the neighborhood. Examples of other strategies include:

- Providing an on-site bicycle repair station
- Providing directional signage for location transportation amenities (e.g. bus stops, bicycle parking)
- Designating 10% of parking spaces for electric vehicles (or making 10% EV-ready)
- Providing information to tenants/employees about pedestrian and bicycle facilities, transit services, commuter programs and ride-share opportunities.
- Subsidizing transit passes for tenants/employees (Metro Transit's local Route 6 bus has a stop at Wooddale Avenue and Valley View Road. The future E Line bus rapid transit (BRT) service on France Avenue will likely have stations at West 62nd Street, approximately half a mile from the project site and accessible by existing pedestrian and bicycle facilities.)

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Traffic and Parking Study for 4425 Valley View Road in Edina, MN

Prepared for:
City of Edina

4801 W. 50th Street
Edina, MN 55424



Prepared by:

WENCK Associates, Inc.
1800 Pioneer Creek Center
Maple Plain, MN 55359
Phone: 7963-479-4200
Fax: 763-479-4242

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I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.



DATE: July 6, 2020

Edward F. Terhaar
License No. 24441

1.0 Executive Summary

The purpose of this Traffic and Parking Study is to evaluate the impacts of the proposed new residential building located at 4425 Valley View Road in Edina, MN. The project site is located on the south side of Valley View Road east of Wooddale Avenue. The proposed project location is currently occupied by a vacant day care building.

This study examined weekday a.m. and p.m. peak hour traffic impacts of the proposed redevelopment at the following intersections:

- Valley View Road/Wooddale Avenue
- Valley View Road/Kellogg Avenue
- Valley View Road/62nd Street

The proposed project will involve removal of the existing building and constructing a new apartment building with 21 dwelling units. The project includes 32 underground parking stalls. As shown in the site plan, one access point is provided on Valley View Road. The project is expected to be completed in 2022.

The conclusions drawn from the information and analyses presented in this report are as follows:

- The proposed development is expected to generate 8 net trips during the weekday a.m. peak hour, 9 net trips during the weekday p.m. peak hour, and 114 net weekday daily trips.
- Traffic generated by the proposed development has minimal impact on intersection operations. No improvements are needed at the intersections analyzed to accommodate the proposed project.
- A trip generation comparison with a day care use on the site shows the number of trips generated by the proposed apartment building is lower in the a.m. and p.m. peak hours and during a typical weekday.
- The project owner is encouraged to provide bicycle spaces to promote bicycle use by residents. Long-term spaces for residents within the building and outside racks are recommended. The provision of a bicycle maintenance station will also help encourage bicycle use by residents.
- The proposed number of parking spaces can accommodate the expected peak parking demand based on Institute of Transportation Engineers (ITE) data.
- In order to promote transit to residents of the apartment building, the project owner is encouraged to provide the following information:
 - Maps that show the area bus routes and schedules.
 - Information on starting and joining commuter programs.
 - Other information or actions that encourage use of alternative modes of transportation.

2.0 Purpose and Background

The purpose of this Traffic and Parking Study is to evaluate the impacts of the proposed new residential building located at 4425 Valley View Road in Edina, MN. The project site is located on the south side of Valley View Road east of Wooddale Avenue. The proposed project location is currently occupied by a vacant day care building. The project location is shown in **Figure 1**.

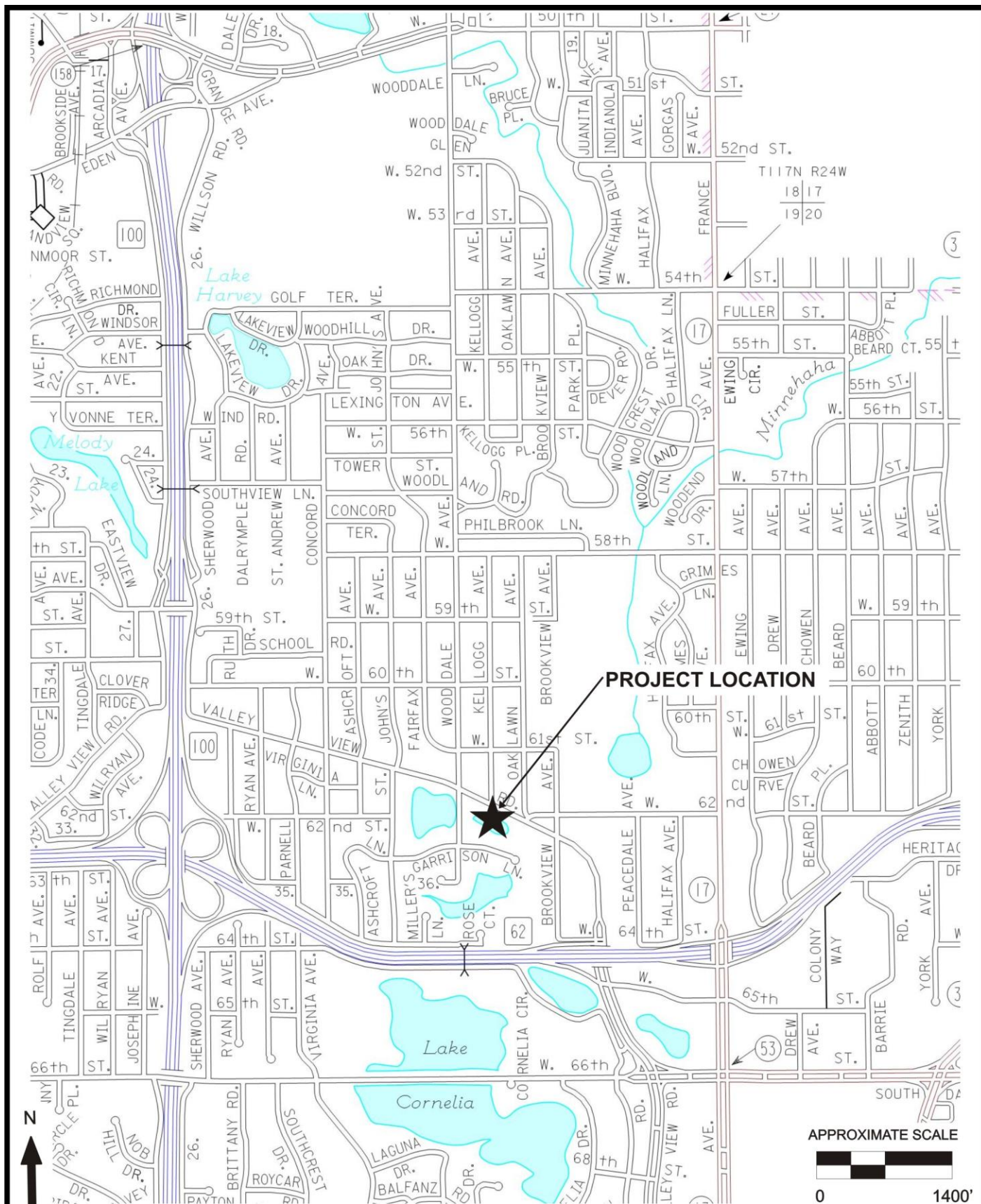
This study examined weekday a.m. and p.m. peak hour traffic impacts of the proposed redevelopment at the following intersections:

- Valley View Road/Wooddale Avenue
- Valley View Road/Kellogg Avenue
- Valley View Road/62nd Street

Proposed Development Characteristics

The proposed project will involve removal of the existing building and constructing a new apartment building with 21 dwelling units. The project includes 32 underground parking stalls. As shown in the site plan, one access point is provided on Valley View Road.

The project is expected to be completed in 2022. The current site plan is shown in **Figure 2**.



PROJECT LOCATION

APPROXIMATE SCALE



Responsive partner.
Exceptional outcomes.

**TRAFFIC AND PARKING
STUDY FOR
4425 VALLEY VIEW ROAD
IN EDINA, MN**

**FIGURE 1
PROJECT LOCATION**



FIGURE 2
SITE PLAN

TRAFFIC AND PARKING
STUDY FOR
4425 VALLEY VIEW ROAD
IN EDINA, MN

3.0 Existing Conditions

The proposed site is currently occupied by a vacant building. The site is bounded by Valley View Road on the north, an office building to the west, and residential uses to the east and south.

Near the site location, Valley View Road is a three-lane local roadway. Wooddale Avenue is a two-lane undivided north/south roadway. Kellogg Avenue and 61st Street are two-lane undivided roadways. Existing conditions at the proposed project location are shown in **Figure 3** and described below.

Valley View Road/Wooddale Avenue

This four-way intersection is controlled with a traffic signal. The eastbound and westbound approaches provide one left turn lane and one through/right turn lane. The northbound and southbound approaches consist of one shared left turn/through/right turn lane. Striped crosswalks are present across all legs.

Valley View Road/Kellogg Avenue

This three-way intersection is controlled with a stop sign on the southbound Kellogg Avenue approach. The eastbound and westbound approaches provide one left turn lane and one through/right turn lane. The southbound approach consists of one shared left turn/right turn lane. A bike lane is provided on both sides of Valley View Road.

Valley View Road/62nd Street

This three-way intersection is controlled with a stop sign on the southbound 62nd Street approach. The eastbound and westbound approaches provide one left turn lane and one through/right turn lane. The southbound approach consists of one shared left turn/right turn lane. A bike lane is provided on both sides of Valley View Road.

Traffic Volume Data

Turn movement data for the intersections was collected during the weekday a.m. (7:00 - 9:00 a.m.) and p.m. (4:00 - 6:00 p.m.) peak periods in June 2020.



FIGURE 3
EXISTING CONDITIONS

TRAFFIC AND PARKING
STUDY FOR
4425 VALLEY VIEW ROAD
IN EDINA, MN

4.0 Traffic Forecasts

Traffic Forecast Scenarios

To adequately address the impacts of the proposed project, forecasts and analyses were completed for the year 2023. Specifically, weekday a.m. and p.m. peak hour traffic forecasts were completed for the following scenarios:

- *2020 Existing.* Existing volumes were determined through traffic counts at the subject intersections. The existing volume information includes trips generated by the uses near the project site.
- *2023 No-Build.* Existing volumes at the subject intersections were increased by 1.0 percent per year to determine 2023 No-Build volumes. The 1.0 percent per year growth rate was calculated based on both recent growth experienced near the site and projected growth in the area.
- *2023 Build.* Trips generated by the proposed development were added to the 2023 No-Build volumes to determine 2023 Build volumes.

Trip Generation for Proposed Project

Weekday a.m. and p.m. peak hour trip generation for the proposed development were calculated based on data presented in the tenth edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE). The resultant trip generation estimates are shown in **Table 4-1**.

Table 4-1
Trip Generation for Proposed Project

| Land Use | Size | Weekday AM Peak Hour | | | Weekday PM Peak Hour | | | Weekday Daily |
|------------|-------|----------------------|-----|-------|----------------------|-----|-------|---------------|
| | | In | Out | Total | In | Out | Total | Total |
| Apartments | 21 DU | 2 | 6 | 8 | 5 | 4 | 9 | 114 |

DU=dwelling unit

As shown, the project adds 8 net trips during the a.m. peak hour, 9 net trips during the p.m. peak hour, and 114 net trips daily.

Trip Generation Comparison for Land Use Alternative

In addition to the proposed apartment building use, trip generation estimates were developed for the previous day care use for comparison purposes. The number of trips were calculated based on data presented in *Trip Generation*, Tenth Edition, published by the Institute of Transportation Engineers. The resultant trip generation estimates are shown in **Table 4-2**.

Table 4-2
Trip Generation for Alternative Land Use

| Land Use | Size | Weekday AM Peak Hour | | | Weekday PM Peak Hour | | | Weekday Daily |
|----------|----------|----------------------|-----|-------|----------------------|-----|-------|---------------|
| | | In | Out | Total | In | Out | Total | Total |
| Day care | 4,480 SF | 26 | 23 | 49 | 23 | 27 | 50 | 213 |

SF=square feet

The comparison show the number of trips generated by the proposed apartment building is lower in the a.m. and p.m. peak hours and during a typical weekday.

Trip Distribution Percentages

Trip distribution percentages for the subject development trips were established based on the nearby roadway network, existing and expected future traffic patterns, and location of the subject development in relation to major attractions and population concentrations.

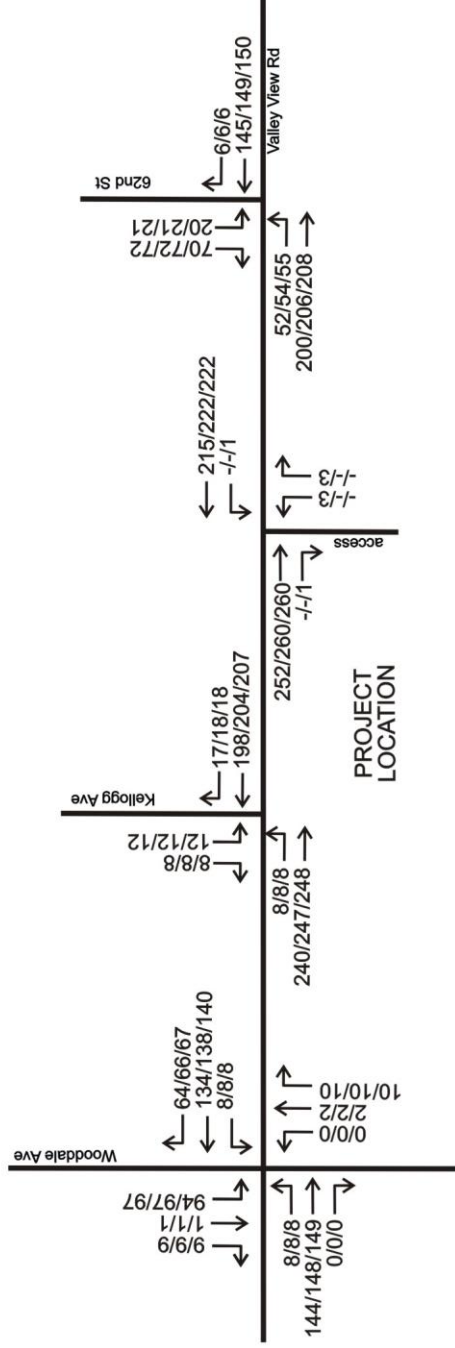
The distribution percentages for trips generated by the proposed development are as follows:

- 40 percent to/from the east on Valley View Road
- 30 percent to/from the west on Valley View Road
- 10 percent to/from the east on 62nd Street
- 15 percent to/from the north on Wooddale Avenue
- 2 percent to/from the north on Kellogg Avenue
- 3 percent to/from the north on Oaklawn Avenue

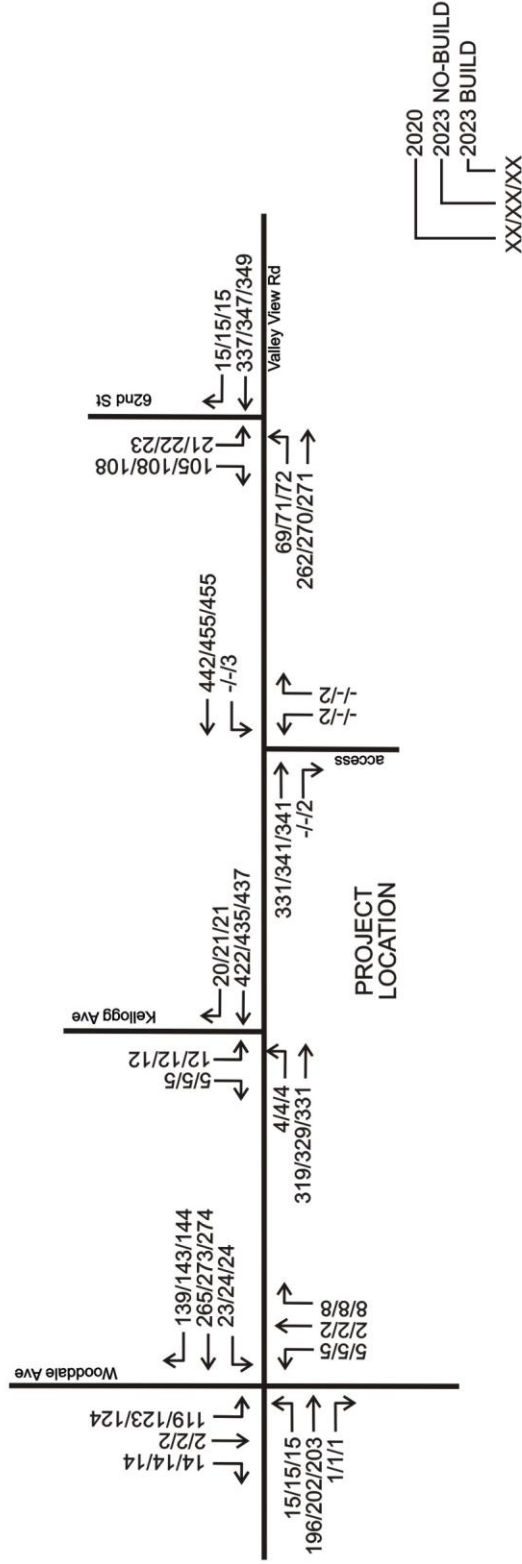
Traffic Volumes

Development trips were assigned to the surrounding roadway network using the preceding trip distribution percentages. Traffic volumes were established for all the forecasting scenarios described earlier during the weekday a.m. and p.m. peak hours. The resultant traffic volumes are presented in **Figure 4**.

A.M. PEAK HOUR



P.M. PEAK HOUR



5.0 Traffic Analysis

Intersection Level of Service Analysis

Traffic analyses were completed for the subject intersections for all scenarios described earlier during the weekday a.m. and p.m. peak hours using Synchro software. Initial analysis was completed using existing geometrics and intersection control.

Capacity analysis results are presented in terms of level of service (LOS), which is defined in terms of traffic delay at the intersection. LOS ranges from A to F. LOS A represents the best intersection operation, with little delay for each vehicle using the intersection. LOS F represents the worst intersection operation with excessive delay. The following is a detailed description of the conditions described by each LOS designation:

- Level of service A corresponds to a free flow condition with motorists virtually unaffected by the intersection control mechanism. For a signalized or an unsignalized intersection, the average delay per vehicle would be approximately 10 seconds or less.
- Level of service B represents stable flow with a high degree of freedom, but with some influence from the intersection control device and the traffic volumes. For a signalized intersection, the average delay ranges from 10 to 20 seconds. An unsignalized intersection would have delays ranging from 10 to 15 seconds for this level.
- Level of service C depicts a restricted flow which remains stable, but with significant influence from the intersection control device and the traffic volumes. The general level of comfort and convenience changes noticeably at this level. The delay ranges from 20 to 35 seconds for a signalized intersection and from 15 to 25 seconds for an unsignalized intersection at this level.
- Level of service D corresponds to high-density flow in which speed and freedom are significantly restricted. Though traffic flow remains stable, reductions in comfort and convenience are experienced. The control delay for this level is 35 to 55 seconds for a signalized intersection and 25 to 35 seconds for an unsignalized intersection.
- Level of service E represents unstable flow of traffic at or near the capacity of the intersection with poor levels of comfort and convenience. The delay ranges from 55 to 80 seconds for a signalized intersection and from 35 to 50 seconds for an unsignalized intersection at this level.
- Level of service F represents forced flow in which the volume of traffic approaching the intersection exceeds the volume that can be served. Characteristics often experienced include long queues, stop-and-go waves, poor travel times, low comfort and convenience, and increased accident exposure. Delays over 80 seconds for a signalized intersection and over 50 seconds for an unsignalized intersection correspond to this level of service.

The LOS results for the study intersections are discussed below.

Valley View Road/Wooddale Avenue (traffic signal controlled) - During the a.m. peak hour under 2020, 2023 No-Build, and 2023 Build conditions, all movements operate at LOS A. The overall intersection operates at LOS A for all scenarios.

During the p.m. peak hour under 2020, 2023 No-Build, and 2023 Build conditions, all movements at LOS B or better. The overall intersection operates at LOS A for all scenarios.

The traffic generated by the proposed development has minimal impact on the intersection operations and does not change the level of service of any movement.

Valley View Road/Kellogg Avenue (southbound stop controlled) - During the a.m. peak hour under 2020, 2023 No-Build, and 2023 Build conditions, all movements operate at LOS B or better. The overall intersection operates at LOS A for all scenarios.

During the p.m. peak hour under 2020, 2023 No-Build, and 2023 Build conditions, all movements operate at LOS B or better. The overall intersection operates at LOS A for all scenarios.

The traffic generated by the proposed development has minimal impact on the intersection operations and does not change the level of service of any movement.

Valley View Road/62nd Street (southbound stop controlled) - During the a.m. peak hour under 2020, 2023 No-Build, and 2023 Build conditions, all movements operate at LOS B or better. The overall intersection operates at LOS A for all scenarios.

During the p.m. peak hour under 2020, 2023 No-Build, and 2023 Build conditions, all movements operate at LOS B or better. The overall intersection operates at LOS A for all scenarios.

The traffic generated by the proposed development has minimal impact on the intersection operations and does not change the level of service of any movement.

Overall Traffic Impact

Trips generated by the proposed development are expected to have minimal impact on traffic operations on the surrounding street system. No improvements are needed at the subject intersections to accommodate the proposed project.

Bicycle and Pedestrian Facilities

Under existing conditions, sidewalk is provided both sides of Valley View Road, on the east side of Wooddale Avenue, and on 62nd Street between Valley View Road and Brookview Avenue. A shared-use path is provided on 62nd Street between Brookview Avenue and France Avenue. Sidewalk is not provided on Kellogg Avenue, Oaklawn Avenue, or 61st Street. A striped bicycle lane is provided on both sides of Valley View Road. Bicycles are allowed on all the surrounding streets.

Future plans for this area include additional sidewalk on 60th Street, which is located north of the proposed project. Future plans for this area also include upgraded bike lanes and

shared-use paths on Wooddale Avenue and Valley View Road. The proposed project will benefit from the existing and proposed sidewalk and bicycle facilities in this area.

The area near the project site has substantial pedestrian and bicycle traffic. Retail uses in the northwest quadrant of the Valley View Road/Wooddale Avenue intersection are popular destinations for the surrounding neighborhoods. The project owner is encouraged to provide bicycle spaces to promote bicycle use by residents. Long-term spaces for residents within the building and outside racks are recommended. The provision of a bicycle maintenance station will also help encourage bicycle use by residents.

Transit Facilities

The subject site presently is served by the Metro Transit bus route 6 on Valley View Road and Wooddale Avenue. Bus stops exist at the corner of Valley View Road and Wooddale Avenue.

In order to promote transit to residents of the apartment building, the project owner is encouraged to provide the following information:

- Maps that show the area bus routes, light rail and bus schedules, and bicycle and pedestrian facilities.
- Information on starting and joining commuter programs.
- Other information or actions that encourage use of alternative modes of transportation.

6.0 Parking Analysis

As described earlier, the project includes 32 underground parking stalls. The proposed amount of parking was compared to industry standards to determine adequacy.

Parking data from the Institute of Transportation Engineers (ITE) was used to determine the expected parking demand for the proposed land uses. Data provided in the ITE publication *Parking Generation*, 5th Edition, indicates the various proposed uses peak at different times during the day. The ITE data was adjusted to account for the expected modal split for the site.

Based on the ITE data, the peak weekday parking demand for the overall site occurs between 6 am and 8 am. The peak parking demand during that time period is 25 spaces. The 32 spaces provided can accommodate the expected peak parking demand.

7.0 Conclusions and Recommendations

The conclusions drawn from the information and analyses presented in this report are as follows:

- The proposed development is expected to generate 8 net trips during the weekday a.m. peak hour, 9 net trips during the weekday p.m. peak hour, and 114 net weekday daily trips.
- Traffic generated by the proposed development has minimal impact on intersection operations. No improvements are needed at the intersections analyzed to accommodate the proposed project.
- A trip generation comparison with a day care use on the site shows the number of trips generated by the proposed apartment building is lower in the a.m. and p.m. peak hours and during a typical weekday.
- The project owner is encouraged to provide bicycle spaces to promote bicycle use by residents. Long-term spaces for residents within the building and outside racks are recommended. The provision of a bicycle maintenance station will also help encourage bicycle use by residents.
- The proposed number of parking spaces can accommodate the expected peak parking demand based on Institute of Transportation Engineers (ITE) data.
- In order to promote transit to residents of the apartment building, the project owner is encouraged to provide the following information:
 - Maps that show the area bus routes and schedules.
 - Information on starting and joining commuter programs.
 - Other information or actions that encourage use of alternative modes of transportation.

8.0 Appendix

- Level of Service Worksheets

3: Wooddale & Valley View Rd

07/06/2020

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | 1 | 1> | 0 | 1 | 1> | 0 | 0 | <1> | 0 | 0 | <1> | 0 |
| Traffic Volume (veh/h) | 8 | 144 | 1 | 8 | 134 | 64 | 1 | 2 | 10 | 94 | 1 | 9 |
| Future Volume (veh/h) | 8 | 144 | 1 | 8 | 134 | 64 | 1 | 2 | 10 | 94 | 1 | 9 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 8 | 150 | 1 | 8 | 140 | 67 | 1 | 2 | 10 | 98 | 1 | 9 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 446 | 389 | 3 | 496 | 251 | 120 | 175 | 68 | 264 | 550 | 17 | 25 |
| Arrive On Green | 0.01 | 0.21 | 0.21 | 0.01 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 |
| Sat Flow, veh/h | 1781 | 1856 | 12 | 1781 | 1195 | 572 | 54 | 322 | 1252 | 1235 | 81 | 120 |
| Grp Volume(v), veh/h | 8 | 0 | 151 | 8 | 0 | 207 | 13 | 0 | 0 | 108 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1868 | 1781 | 0 | 1767 | 1627 | 0 | 0 | 1436 | 0 | 0 |
| Q Serve(g_s), s | 0.1 | 0.0 | 1.6 | 0.1 | 0.0 | 2.5 | 0.0 | 0.0 | 0.0 | 1.3 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 0.1 | 0.0 | 1.6 | 0.1 | 0.0 | 2.5 | 0.1 | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.01 | 1.00 | | 0.32 | 0.08 | | 0.77 | 0.91 | | 0.08 |
| Lane Grp Cap(c), veh/h | 446 | 0 | 392 | 496 | 0 | 371 | 506 | 0 | 0 | 592 | 0 | 0 |
| V/C Ratio(X) | 0.02 | 0.00 | 0.39 | 0.02 | 0.00 | 0.56 | 0.03 | 0.00 | 0.00 | 0.18 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 839 | 0 | 1535 | 889 | 0 | 1452 | 1623 | 0 | 0 | 1579 | 0 | 0 |
| 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 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 7.4 | 0.0 | 8.1 | 7.3 | 0.0 | 8.4 | 7.5 | 0.0 | 0.0 | 8.0 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 | 1.3 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| 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 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | 0.7 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 7.4 | 0.0 | 8.7 | 7.3 | 0.0 | 9.7 | 7.5 | 0.0 | 0.0 | 8.1 | 0.0 | 0.0 |
| LnGrp LOS | A | A | A | A | A | A | A | A | A | A | A | A |
| Approach Vol, veh/h | | 159 | | | 215 | | | 13 | | | 108 | |
| Approach Delay, s/veh | | 8.6 | | | 9.6 | | | 7.5 | | | 8.1 | |
| Approach LOS | | A | | | A | | | A | | | A | |
| Timer - Assigned Phs | | 2 | 3 | 4 | | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 9.5 | 4.8 | 9.5 | | 9.5 | 4.8 | 9.5 | | | | |
| Change Period (Y+Rc), s | | 4.5 | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 21.5 | 5.5 | 19.5 | | 21.5 | 5.5 | 19.5 | | | | |
| Max Q Clear Time (g_c+l1), s | | 2.1 | 2.1 | 3.6 | | 3.5 | 2.1 | 4.5 | | | | |
| Green Ext Time (p_c), s | | 0.0 | 0.0 | 0.6 | | 0.5 | 0.0 | 1.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 8.9 | | | | | | | | | |
| HCM 6th LOS | | | A | | | | | | | | | |

Intersection

Int Delay, s/veh 0.6

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | 1 | 1 | 1> | 0 | 1> | 0 |
| Traffic Vol, veh/h | 8 | 240 | 198 | 17 | 12 | 8 |
| Future Vol, veh/h | 8 | 240 | 198 | 17 | 12 | 8 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 150 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 8 | 245 | 202 | 17 | 12 | 8 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|---------------|
| Conflicting Flow All | 219 | 0 | 0 472 211 |
| Stage 1 | - | - | - 211 - |
| Stage 2 | - | - | - 261 - |
| Critical Hdwy | 4.12 | - | - 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - 5.42 - |
| Critical Hdwy Stg 2 | - | - | - 5.42 - |
| Follow-up Hdwy | 2.218 | - | - 3.518 3.318 |
| Pot Cap-1 Maneuver | 1350 | - | - 551 829 |
| Stage 1 | - | - | - 824 - |
| Stage 2 | - | - | - 783 - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 1350 | - | - 548 829 |
| Mov Cap-2 Maneuver | - | - | - 548 - |
| Stage 1 | - | - | - 819 - |
| Stage 2 | - | - | - 783 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.2 | 0 | 10.9 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1350 | - | - | - | 634 |
| HCM Lane V/C Ratio | 0.006 | - | - | - | 0.032 |
| HCM Control Delay (s) | 7.7 | - | - | - | 10.9 |
| HCM Lane LOS | A | - | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.1 |

Intersection

Int Delay, s/veh 2.7

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | 1 | <1 | 1> | 0 | 1> | 0 |
| Traffic Vol, veh/h | 52 | 200 | 145 | 6 | 20 | 70 |
| Future Vol, veh/h | 52 | 200 | 145 | 6 | 20 | 70 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 150 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 55 | 211 | 153 | 6 | 21 | 74 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|---------------|
| Conflicting Flow All | 159 | 0 | 0 477 156 |
| Stage 1 | - | - | - 156 - |
| Stage 2 | - | - | - 321 - |
| Critical Hdwy | 4.12 | - | - 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - 5.42 - |
| Critical Hdwy Stg 2 | - | - | - 5.42 - |
| Follow-up Hdwy | 2.218 | - | - 3.518 3.318 |
| Pot Cap-1 Maneuver | 1420 | - | - 547 890 |
| Stage 1 | - | - | - 872 - |
| Stage 2 | - | - | - 735 - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 1420 | - | - 526 890 |
| Mov Cap-2 Maneuver | - | - | - 526 - |
| Stage 1 | - | - | - 838 - |
| Stage 2 | - | - | - 735 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 1.6 | 0 | 10.3 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1420 | - | - | - | 771 |
| HCM Lane V/C Ratio | 0.039 | - | - | - | 0.123 |
| HCM Control Delay (s) | 7.6 | 0 | - | - | 10.3 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.4 |

3: Wooddale & Valley View Rd

07/06/2020

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | 1 | 1> | 0 | 1 | 1> | 0 | 0 | <1> | 0 | 0 | <1> | 0 |
| Traffic Volume (veh/h) | 8 | 148 | 1 | 8 | 138 | 66 | 1 | 2 | 10 | 97 | 1 | 9 |
| Future Volume (veh/h) | 8 | 148 | 1 | 8 | 138 | 66 | 1 | 2 | 10 | 97 | 1 | 9 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 8 | 154 | 1 | 8 | 144 | 69 | 1 | 2 | 10 | 101 | 1 | 9 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 446 | 398 | 3 | 497 | 256 | 123 | 174 | 67 | 262 | 548 | 17 | 24 |
| Arrive On Green | 0.01 | 0.21 | 0.21 | 0.01 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 |
| Sat Flow, veh/h | 1781 | 1856 | 12 | 1781 | 1195 | 573 | 54 | 322 | 1252 | 1240 | 79 | 116 |
| Grp Volume(v), veh/h | 8 | 0 | 155 | 8 | 0 | 213 | 13 | 0 | 0 | 111 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1868 | 1781 | 0 | 1767 | 1627 | 0 | 0 | 1436 | 0 | 0 |
| Q Serve(g_s), s | 0.1 | 0.0 | 1.7 | 0.1 | 0.0 | 2.6 | 0.0 | 0.0 | 0.0 | 1.3 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 0.1 | 0.0 | 1.7 | 0.1 | 0.0 | 2.6 | 0.2 | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.01 | 1.00 | | 0.32 | 0.08 | | 0.77 | 0.91 | | 0.08 |
| Lane Grp Cap(c), veh/h | 446 | 0 | 401 | 497 | 0 | 379 | 503 | 0 | 0 | 589 | 0 | 0 |
| V/C Ratio(X) | 0.02 | 0.00 | 0.39 | 0.02 | 0.00 | 0.56 | 0.03 | 0.00 | 0.00 | 0.19 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 837 | 0 | 1526 | 888 | 0 | 1443 | 1613 | 0 | 0 | 1569 | 0 | 0 |
| 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 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 7.3 | 0.0 | 8.0 | 7.3 | 0.0 | 8.4 | 7.5 | 0.0 | 0.0 | 8.0 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 | 1.3 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| 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 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | 0.7 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 7.4 | 0.0 | 8.6 | 7.3 | 0.0 | 9.7 | 7.5 | 0.0 | 0.0 | 8.2 | 0.0 | 0.0 |
| LnGrp LOS | A | A | A | A | A | A | A | A | A | A | A | A |
| Approach Vol, veh/h | | 163 | | | 221 | | | 13 | | | 111 | |
| Approach Delay, s/veh | | 8.6 | | | 9.6 | | | 7.5 | | | 8.2 | |
| Approach LOS | | A | | | A | | | A | | | A | |
| Timer - Assigned Phs | | 2 | 3 | 4 | | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 9.5 | 4.8 | 9.6 | | 9.5 | 4.8 | 9.6 | | | | |
| Change Period (Y+Rc), s | | 4.5 | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 21.5 | 5.5 | 19.5 | | 21.5 | 5.5 | 19.5 | | | | |
| Max Q Clear Time (g_c+l1), s | | 2.2 | 2.1 | 3.7 | | 3.5 | 2.1 | 4.6 | | | | |
| Green Ext Time (p_c), s | | 0.0 | 0.0 | 0.7 | | 0.5 | 0.0 | 1.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 8.9 | | | | | | | | | |
| HCM 6th LOS | | | A | | | | | | | | | |

Intersection

Int Delay, s/veh 0.5

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | 1 | 1 | 1> | 0 | 1> | 0 |
| Traffic Vol, veh/h | 8 | 247 | 204 | 18 | 12 | 8 |
| Future Vol, veh/h | 8 | 247 | 204 | 18 | 12 | 8 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 150 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 8 | 252 | 208 | 18 | 12 | 8 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|---------------|
| Conflicting Flow All | 226 | 0 | 0 485 217 |
| Stage 1 | - | - | - 217 - |
| Stage 2 | - | - | - 268 - |
| Critical Hdwy | 4.12 | - | - 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - 5.42 - |
| Critical Hdwy Stg 2 | - | - | - 5.42 - |
| Follow-up Hdwy | 2.218 | - | - 3.518 3.318 |
| Pot Cap-1 Maneuver | 1342 | - | - 541 823 |
| Stage 1 | - | - | - 819 - |
| Stage 2 | - | - | - 777 - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 1342 | - | - 538 823 |
| Mov Cap-2 Maneuver | - | - | - 538 - |
| Stage 1 | - | - | - 814 - |
| Stage 2 | - | - | - 777 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 0.2 | 0 | 11 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1342 | - | - | - | 625 |
| HCM Lane V/C Ratio | 0.006 | - | - | - | 0.033 |
| HCM Control Delay (s) | 7.7 | - | - | - | 11 |
| HCM Lane LOS | A | - | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.1 |

Intersection

Int Delay, s/veh 2.7

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | 1 | <1 | 1> | 0 | 1> | 0 |
| Traffic Vol, veh/h | 54 | 206 | 149 | 6 | 21 | 72 |
| Future Vol, veh/h | 54 | 206 | 149 | 6 | 21 | 72 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 150 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 57 | 217 | 157 | 6 | 22 | 76 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|---------------|
| Conflicting Flow All | 163 | 0 | 0 491 160 |
| Stage 1 | - | - | - 160 - |
| Stage 2 | - | - | - 331 - |
| Critical Hdwy | 4.12 | - | - 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - 5.42 - |
| Critical Hdwy Stg 2 | - | - | - 5.42 - |
| Follow-up Hdwy | 2.218 | - | - 3.518 3.318 |
| Pot Cap-1 Maneuver | 1416 | - | - 537 885 |
| Stage 1 | - | - | - 869 - |
| Stage 2 | - | - | - 728 - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 1416 | - | - 516 885 |
| Mov Cap-2 Maneuver | - | - | - 516 - |
| Stage 1 | - | - | - 834 - |
| Stage 2 | - | - | - 728 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 1.6 | 0 | 10.4 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h) | 1416 | - | - | - | 762 |
| HCM Lane V/C Ratio | 0.04 | - | - | - | 0.128 |
| HCM Control Delay (s) | 7.6 | 0 | - | - | 10.4 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.4 |

3: Wooddale & Valley View Rd

07/06/2020

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | 1 | 1> | 0 | 1 | 1> | 0 | 0 | <1> | 0 | 0 | <1> | 0 |
| Traffic Volume (veh/h) | 8 | 149 | 1 | 8 | 140 | 67 | 1 | 2 | 10 | 97 | 1 | 9 |
| Future Volume (veh/h) | 8 | 149 | 1 | 8 | 140 | 67 | 1 | 2 | 10 | 97 | 1 | 9 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 8 | 155 | 1 | 8 | 146 | 70 | 1 | 2 | 10 | 101 | 1 | 9 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 445 | 402 | 3 | 499 | 259 | 124 | 173 | 67 | 261 | 546 | 17 | 24 |
| Arrive On Green | 0.01 | 0.22 | 0.22 | 0.01 | 0.22 | 0.22 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 |
| Sat Flow, veh/h | 1781 | 1856 | 12 | 1781 | 1195 | 573 | 54 | 322 | 1252 | 1240 | 79 | 116 |
| Grp Volume(v), veh/h | 8 | 0 | 156 | 8 | 0 | 216 | 13 | 0 | 0 | 111 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1868 | 1781 | 0 | 1767 | 1627 | 0 | 0 | 1436 | 0 | 0 |
| Q Serve(g_s), s | 0.1 | 0.0 | 1.7 | 0.1 | 0.0 | 2.6 | 0.0 | 0.0 | 0.0 | 1.3 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 0.1 | 0.0 | 1.7 | 0.1 | 0.0 | 2.6 | 0.2 | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.01 | 1.00 | | 0.32 | 0.08 | | 0.77 | 0.91 | | 0.08 |
| Lane Grp Cap(c), veh/h | 445 | 0 | 405 | 499 | 0 | 383 | 502 | 0 | 0 | 587 | 0 | 0 |
| V/C Ratio(X) | 0.02 | 0.00 | 0.39 | 0.02 | 0.00 | 0.56 | 0.03 | 0.00 | 0.00 | 0.19 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 835 | 0 | 1521 | 889 | 0 | 1439 | 1609 | 0 | 0 | 1564 | 0 | 0 |
| 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 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 7.3 | 0.0 | 8.0 | 7.2 | 0.0 | 8.4 | 7.6 | 0.0 | 0.0 | 8.1 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 | 1.3 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| 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 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | 0.7 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 7.3 | 0.0 | 8.6 | 7.3 | 0.0 | 9.7 | 7.6 | 0.0 | 0.0 | 8.2 | 0.0 | 0.0 |
| LnGrp LOS | A | A | A | A | A | A | A | A | A | A | A | A |
| Approach Vol, veh/h | | 164 | | | 224 | | | 13 | | | 111 | |
| Approach Delay, s/veh | | 8.6 | | | 9.6 | | | 7.6 | | | 8.2 | |
| Approach LOS | | A | | | A | | | A | | | A | |
| Timer - Assigned Phs | | 2 | 3 | 4 | | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 9.5 | 4.8 | 9.7 | | 9.5 | 4.8 | 9.7 | | | | |
| Change Period (Y+Rc), s | | 4.5 | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 21.5 | 5.5 | 19.5 | | 21.5 | 5.5 | 19.5 | | | | |
| Max Q Clear Time (g_c+l1), s | | 2.2 | 2.1 | 3.7 | | 3.5 | 2.1 | 4.6 | | | | |
| Green Ext Time (p_c), s | | 0.0 | 0.0 | 0.7 | | 0.5 | 0.0 | 1.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 8.9 | | | | | | | | | |
| HCM 6th LOS | | | A | | | | | | | | | |

Intersection

Int Delay, s/veh 0.5

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | 1 | 1 | 1> | 0 | 1> | 0 |
| Traffic Vol, veh/h | 8 | 248 | 207 | 18 | 12 | 8 |
| Future Vol, veh/h | 8 | 248 | 207 | 18 | 12 | 8 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 150 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 8 | 253 | 211 | 18 | 12 | 8 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|---------------|
| Conflicting Flow All | 229 | 0 | 0 489 220 |
| Stage 1 | - | - | - 220 - |
| Stage 2 | - | - | - 269 - |
| Critical Hdwy | 4.12 | - | - 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - 5.42 - |
| Critical Hdwy Stg 2 | - | - | - 5.42 - |
| Follow-up Hdwy | 2.218 | - | - 3.518 3.318 |
| Pot Cap-1 Maneuver | 1339 | - | - 538 820 |
| Stage 1 | - | - | - 817 - |
| Stage 2 | - | - | - 776 - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 1339 | - | - 535 820 |
| Mov Cap-2 Maneuver | - | - | - 535 - |
| Stage 1 | - | - | - 812 - |
| Stage 2 | - | - | - 776 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 0.2 | 0 | 11 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1339 | - | - | - | 621 |
| HCM Lane V/C Ratio | 0.006 | - | - | - | 0.033 |
| HCM Control Delay (s) | 7.7 | - | - | - | 11 |
| HCM Lane LOS | A | - | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.1 |

Intersection

Int Delay, s/veh 2.7

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | 1 | <1 | 1> | 0 | 1> | 0 |
| Traffic Vol, veh/h | 54 | 208 | 150 | 6 | 21 | 72 |
| Future Vol, veh/h | 54 | 208 | 150 | 6 | 21 | 72 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 150 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 57 | 219 | 158 | 6 | 22 | 76 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|---------------|
| Conflicting Flow All | 164 | 0 | 0 494 161 |
| Stage 1 | - | - | - 161 - |
| Stage 2 | - | - | - 333 - |
| Critical Hdwy | 4.12 | - | - 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - 5.42 - |
| Critical Hdwy Stg 2 | - | - | - 5.42 - |
| Follow-up Hdwy | 2.218 | - | - 3.518 3.318 |
| Pot Cap-1 Maneuver | 1414 | - | - 535 884 |
| Stage 1 | - | - | - 868 - |
| Stage 2 | - | - | - 726 - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 1414 | - | - 514 884 |
| Mov Cap-2 Maneuver | - | - | - 514 - |
| Stage 1 | - | - | - 833 - |
| Stage 2 | - | - | - 726 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 1.6 | 0 | 10.4 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h) | 1414 | - | - | - | 760 |
| HCM Lane V/C Ratio | 0.04 | - | - | - | 0.129 |
| HCM Control Delay (s) | 7.7 | 0 | - | - | 10.4 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.4 |

Intersection

Int Delay, s/veh 0.1

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | 1> | 0 | 1 | 1 | 1> | 0 |
| Traffic Vol, veh/h | 260 | 1 | 1 | 222 | 3 | 3 |
| Future Vol, veh/h | 260 | 1 | 1 | 222 | 3 | 3 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | 50 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 268 | 1 | 1 | 229 | 3 | 3 |

| Major/Minor | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 269 |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Critical Hdwy | - | - | 4.12 |
| Critical Hdwy Stg 1 | - | - | - |
| Critical Hdwy Stg 2 | - | - | - |
| Follow-up Hdwy | - | - | 2.218 |
| Pot Cap-1 Maneuver | - | - | 1295 |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1295 |
| Mov Cap-2 Maneuver | - | - | - |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |

| Approach | EB | WB | NB |
|----------------------|----|----|------|
| HCM Control Delay, s | 0 | 0 | 10.8 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 627 | - | - | 1295 | - |
| HCM Lane V/C Ratio | 0.01 | - | - | 0.001 | - |
| HCM Control Delay (s) | 10.8 | - | - | 7.8 | - |
| HCM Lane LOS | B | - | - | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

3: Wooddale & Valley View Rd

07/06/2020

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | 1 | 1> | 0 | 1 | 1> | 0 | 0 | <1> | 0 | 0 | <1> | 0 |
| Traffic Volume (veh/h) | 15 | 196 | 1 | 23 | 265 | 139 | 5 | 2 | 8 | 119 | 2 | 14 |
| Future Volume (veh/h) | 15 | 196 | 1 | 23 | 265 | 139 | 5 | 2 | 8 | 119 | 2 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 16 | 204 | 1 | 24 | 276 | 145 | 5 | 2 | 8 | 124 | 2 | 15 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 421 | 633 | 3 | 602 | 404 | 212 | 207 | 88 | 151 | 440 | 12 | 27 |
| Arrive On Green | 0.02 | 0.34 | 0.34 | 0.03 | 0.35 | 0.35 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| Sat Flow, veh/h | 1781 | 1860 | 9 | 1781 | 1155 | 607 | 257 | 503 | 868 | 1219 | 71 | 154 |
| Grp Volume(v), veh/h | 16 | 0 | 205 | 24 | 0 | 421 | 15 | 0 | 0 | 141 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1869 | 1781 | 0 | 1761 | 1628 | 0 | 0 | 1444 | 0 | 0 |
| Q Serve(g_s), s | 0.2 | 0.0 | 2.4 | 0.3 | 0.0 | 6.1 | 0.0 | 0.0 | 0.0 | 2.4 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 0.2 | 0.0 | 2.4 | 0.3 | 0.0 | 6.1 | 0.2 | 0.0 | 0.0 | 2.6 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.34 | 0.33 | | 0.53 | 0.88 | | 0.11 |
| Lane Grp Cap(c), veh/h | 421 | 0 | 636 | 602 | 0 | 616 | 446 | 0 | 0 | 480 | 0 | 0 |
| V/C Ratio(X) | 0.04 | 0.00 | 0.32 | 0.04 | 0.00 | 0.68 | 0.03 | 0.00 | 0.00 | 0.29 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 690 | 0 | 1455 | 854 | 0 | 1371 | 1130 | 0 | 0 | 1111 | 0 | 0 |
| 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 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 6.7 | 0.0 | 7.2 | 6.1 | 0.0 | 8.2 | 10.2 | 0.0 | 0.0 | 11.2 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 1.3 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| 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 | 0.0 | 0.0 | 0.6 | 0.1 | 0.0 | 1.6 | 0.1 | 0.0 | 0.0 | 0.7 | 0.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 6.7 | 0.0 | 7.5 | 6.1 | 0.0 | 9.6 | 10.2 | 0.0 | 0.0 | 11.5 | 0.0 | 0.0 |
| LnGrp LOS | A | A | A | A | A | A | B | A | A | B | A | A |
| Approach Vol, veh/h | | 221 | | | 445 | | | 15 | | | 141 | |
| Approach Delay, s/veh | | 7.5 | | | 9.4 | | | 10.2 | | | 11.5 | |
| Approach LOS | | A | | | A | | | B | | | B | |
| Timer - Assigned Phs | | 2 | 3 | 4 | | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 9.7 | 5.4 | 14.6 | | 9.7 | 5.1 | 14.9 | | | | |
| Change Period (Y+Rc), s | | 4.5 | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 18.3 | 5.1 | 23.1 | | 18.3 | 5.1 | 23.1 | | | | |
| Max Q Clear Time (g_c+l1), s | | 2.2 | 2.3 | 4.4 | | 4.6 | 2.2 | 8.1 | | | | |
| Green Ext Time (p_c), s | | 0.0 | 0.0 | 1.0 | | 0.6 | 0.0 | 2.4 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 9.3 | | | | | | | | | |
| HCM 6th LOS | | | A | | | | | | | | | |

Intersection

Int Delay, s/veh 0.3

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | 1 | 1 | 1> | 0 | 1> | 0 |
| Traffic Vol, veh/h | 4 | 319 | 422 | 20 | 12 | 5 |
| Future Vol, veh/h | 4 | 319 | 422 | 20 | 12 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 150 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 4 | 326 | 431 | 20 | 12 | 5 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|---------------|
| Conflicting Flow All | 451 | 0 | 0 775 441 |
| Stage 1 | - | - | - 441 - |
| Stage 2 | - | - | - 334 - |
| Critical Hdwy | 4.12 | - | - 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - 5.42 - |
| Critical Hdwy Stg 2 | - | - | - 5.42 - |
| Follow-up Hdwy | 2.218 | - | - 3.518 3.318 |
| Pot Cap-1 Maneuver | 1109 | - | - 366 616 |
| Stage 1 | - | - | - 648 - |
| Stage 2 | - | - | - 725 - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 1109 | - | - 365 616 |
| Mov Cap-2 Maneuver | - | - | - 365 - |
| Stage 1 | - | - | - 645 - |
| Stage 2 | - | - | - 725 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.1 | 0 | 14.1 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1109 | - | - | - | 415 |
| HCM Lane V/C Ratio | 0.004 | - | - | - | 0.042 |
| HCM Control Delay (s) | 8.3 | - | - | - | 14.1 |
| HCM Lane LOS | A | - | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.1 |

Intersection

Int Delay, s/veh 2.7

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | 1 | <1 | 1> | 0 | 1> | 0 |
| Traffic Vol, veh/h | 69 | 262 | 337 | 15 | 21 | 105 |
| Future Vol, veh/h | 69 | 262 | 337 | 15 | 21 | 105 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 150 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 73 | 276 | 355 | 16 | 22 | 111 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|---------------|
| Conflicting Flow All | 371 | 0 | 0 785 363 |
| Stage 1 | - | - | - 363 - |
| Stage 2 | - | - | - 422 - |
| Critical Hdwy | 4.12 | - | - 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - 5.42 - |
| Critical Hdwy Stg 2 | - | - | - 5.42 - |
| Follow-up Hdwy | 2.218 | - | - 3.518 3.318 |
| Pot Cap-1 Maneuver | 1188 | - | - 361 682 |
| Stage 1 | - | - | - 704 - |
| Stage 2 | - | - | - 662 - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 1188 | - | - 339 682 |
| Mov Cap-2 Maneuver | - | - | - 339 - |
| Stage 1 | - | - | - 661 - |
| Stage 2 | - | - | - 662 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 1.7 | 0 | 13 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1188 | - | - | - | 584 |
| HCM Lane V/C Ratio | 0.061 | - | - | - | 0.227 |
| HCM Control Delay (s) | 8.2 | 0 | - | - | 13 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 0.9 |

3: Wooddale & Valley View Rd

07/06/2020

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | 1 | 1> | 0 | 1 | 1> | 0 | 0 | <1> | 0 | 0 | <1> | 0 |
| Traffic Volume (veh/h) | 15 | 202 | 1 | 24 | 273 | 143 | 5 | 2 | 8 | 123 | 2 | 14 |
| Future Volume (veh/h) | 15 | 202 | 1 | 24 | 273 | 143 | 5 | 2 | 8 | 123 | 2 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 16 | 210 | 1 | 25 | 284 | 149 | 5 | 2 | 8 | 128 | 2 | 15 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 414 | 640 | 3 | 600 | 410 | 215 | 205 | 88 | 154 | 441 | 13 | 26 |
| Arrive On Green | 0.02 | 0.34 | 0.34 | 0.03 | 0.35 | 0.35 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| Sat Flow, veh/h | 1781 | 1860 | 9 | 1781 | 1155 | 606 | 262 | 500 | 870 | 1223 | 71 | 149 |
| Grp Volume(v), veh/h | 16 | 0 | 211 | 25 | 0 | 433 | 15 | 0 | 0 | 145 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1869 | 1781 | 0 | 1761 | 1631 | 0 | 0 | 1443 | 0 | 0 |
| Q Serve(g_s), s | 0.2 | 0.0 | 2.5 | 0.3 | 0.0 | 6.3 | 0.0 | 0.0 | 0.0 | 2.5 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 0.2 | 0.0 | 2.5 | 0.3 | 0.0 | 6.3 | 0.2 | 0.0 | 0.0 | 2.7 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.34 | 0.33 | | 0.53 | 0.88 | | 0.10 |
| Lane Grp Cap(c), veh/h | 414 | 0 | 643 | 600 | 0 | 625 | 447 | 0 | 0 | 480 | 0 | 0 |
| V/C Ratio(X) | 0.04 | 0.00 | 0.33 | 0.04 | 0.00 | 0.69 | 0.03 | 0.00 | 0.00 | 0.30 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 678 | 0 | 1395 | 845 | 0 | 1315 | 1144 | 0 | 0 | 1122 | 0 | 0 |
| 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 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 6.7 | 0.0 | 7.3 | 6.1 | 0.0 | 8.3 | 10.3 | 0.0 | 0.0 | 11.3 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 1.4 | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 |
| 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 | 0.0 | 0.0 | 0.7 | 0.1 | 0.0 | 1.7 | 0.1 | 0.0 | 0.0 | 0.7 | 0.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 6.8 | 0.0 | 7.6 | 6.1 | 0.0 | 9.7 | 10.3 | 0.0 | 0.0 | 11.7 | 0.0 | 0.0 |
| LnGrp LOS | A | A | A | A | A | A | B | A | A | B | A | A |
| Approach Vol, veh/h | | 227 | | | 458 | | | 15 | | | 145 | |
| Approach Delay, s/veh | | 7.5 | | | 9.5 | | | 10.3 | | | 11.7 | |
| Approach LOS | | A | | | A | | | B | | | B | |
| Timer - Assigned Phs | | 2 | 3 | 4 | | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 9.8 | 5.4 | 14.9 | | 9.8 | 5.1 | 15.2 | | | | |
| Change Period (Y+Rc), s | | 4.5 | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 18.9 | 5.1 | 22.5 | | 18.9 | 5.1 | 22.5 | | | | |
| Max Q Clear Time (g_c+l1), s | | 2.2 | 2.3 | 4.5 | | 4.7 | 2.2 | 8.3 | | | | |
| Green Ext Time (p_c), s | | 0.0 | 0.0 | 1.0 | | 0.6 | 0.0 | 2.4 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 9.4 | | | | | | | | | |
| HCM 6th LOS | | | A | | | | | | | | | |

Intersection

Int Delay, s/veh 0.3

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | 1 | 1 | 1> | 0 | 1> | 0 |
| Traffic Vol, veh/h | 4 | 329 | 435 | 21 | 12 | 5 |
| Future Vol, veh/h | 4 | 329 | 435 | 21 | 12 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 150 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 4 | 336 | 444 | 21 | 12 | 5 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|---------------|
| Conflicting Flow All | 465 | 0 | 0 799 455 |
| Stage 1 | - | - | - 455 - |
| Stage 2 | - | - | - 344 - |
| Critical Hdwy | 4.12 | - | - 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - 5.42 - |
| Critical Hdwy Stg 2 | - | - | - 5.42 - |
| Follow-up Hdwy | 2.218 | - | - 3.518 3.318 |
| Pot Cap-1 Maneuver | 1096 | - | - 355 605 |
| Stage 1 | - | - | - 639 - |
| Stage 2 | - | - | - 718 - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 1096 | - | - 354 605 |
| Mov Cap-2 Maneuver | - | - | - 354 - |
| Stage 1 | - | - | - 636 - |
| Stage 2 | - | - | - 718 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.1 | 0 | 14.3 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1096 | - | - | - | 403 |
| HCM Lane V/C Ratio | 0.004 | - | - | - | 0.043 |
| HCM Control Delay (s) | 8.3 | - | - | - | 14.3 |
| HCM Lane LOS | A | - | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.1 |

Intersection

Int Delay, s/veh 2.8

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | 1 | <1 | 1> | 0 | 1> | 0 |
| Traffic Vol, veh/h | 71 | 270 | 347 | 15 | 22 | 108 |
| Future Vol, veh/h | 71 | 270 | 347 | 15 | 22 | 108 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 150 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 75 | 284 | 365 | 16 | 23 | 114 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|---------------|
| Conflicting Flow All | 381 | 0 | 0 807 373 |
| Stage 1 | - | - | - 373 - |
| Stage 2 | - | - | - 434 - |
| Critical Hdwy | 4.12 | - | - 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - 5.42 - |
| Critical Hdwy Stg 2 | - | - | - 5.42 - |
| Follow-up Hdwy | 2.218 | - | - 3.518 3.318 |
| Pot Cap-1 Maneuver | 1177 | - | - 351 673 |
| Stage 1 | - | - | - 696 - |
| Stage 2 | - | - | - 653 - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 1177 | - | - 329 673 |
| Mov Cap-2 Maneuver | - | - | - 329 - |
| Stage 1 | - | - | - 651 - |
| Stage 2 | - | - | - 653 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 1.7 | 0 | 13.3 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1177 | - | - | - | 572 |
| HCM Lane V/C Ratio | 0.063 | - | - | - | 0.239 |
| HCM Control Delay (s) | 8.3 | 0 | - | - | 13.3 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 0.9 |

3: Wooddale & Valley View Rd

07/06/2020

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | 1 | 1> | 0 | 1 | 1> | 0 | 0 | <1> | 0 | 0 | <1> | 0 |
| Traffic Volume (veh/h) | 15 | 203 | 1 | 24 | 274 | 144 | 5 | 2 | 8 | 124 | 2 | 14 |
| Future Volume (veh/h) | 15 | 203 | 1 | 24 | 274 | 144 | 5 | 2 | 8 | 124 | 2 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 16 | 211 | 1 | 25 | 285 | 150 | 5 | 2 | 8 | 129 | 2 | 15 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 413 | 642 | 3 | 599 | 410 | 216 | 205 | 88 | 154 | 441 | 13 | 26 |
| Arrive On Green | 0.02 | 0.35 | 0.35 | 0.03 | 0.36 | 0.36 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| Sat Flow, veh/h | 1781 | 1860 | 9 | 1781 | 1154 | 607 | 263 | 499 | 871 | 1224 | 71 | 148 |
| Grp Volume(v), veh/h | 16 | 0 | 212 | 25 | 0 | 435 | 15 | 0 | 0 | 146 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1869 | 1781 | 0 | 1761 | 1632 | 0 | 0 | 1443 | 0 | 0 |
| Q Serve(g_s), s | 0.2 | 0.0 | 2.5 | 0.3 | 0.0 | 6.4 | 0.0 | 0.0 | 0.0 | 2.5 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 0.2 | 0.0 | 2.5 | 0.3 | 0.0 | 6.4 | 0.2 | 0.0 | 0.0 | 2.8 | 0.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 0.34 | 0.33 | | 0.53 | 0.88 | | 0.10 |
| Lane Grp Cap(c), veh/h | 413 | 0 | 645 | 599 | 0 | 626 | 448 | 0 | 0 | 480 | 0 | 0 |
| V/C Ratio(X) | 0.04 | 0.00 | 0.33 | 0.04 | 0.00 | 0.69 | 0.03 | 0.00 | 0.00 | 0.30 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 676 | 0 | 1390 | 844 | 0 | 1310 | 1141 | 0 | 0 | 1119 | 0 | 0 |
| 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 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 6.8 | 0.0 | 7.3 | 6.1 | 0.0 | 8.3 | 10.3 | 0.0 | 0.0 | 11.4 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 1.4 | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 |
| 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 | 0.0 | 0.0 | 0.7 | 0.1 | 0.0 | 1.7 | 0.1 | 0.0 | 0.0 | 0.7 | 0.0 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 6.8 | 0.0 | 7.6 | 6.1 | 0.0 | 9.7 | 10.4 | 0.0 | 0.0 | 11.7 | 0.0 | 0.0 |
| LnGrp LOS | A | A | A | A | A | A | B | A | A | B | A | A |
| Approach Vol, veh/h | | 228 | | | 460 | | | 15 | | | 146 | |
| Approach Delay, s/veh | | 7.6 | | | 9.5 | | | 10.4 | | | 11.7 | |
| Approach LOS | | A | | | A | | | B | | | B | |
| Timer - Assigned Phs | | 2 | 3 | 4 | | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 9.9 | 5.4 | 14.9 | | 9.9 | 5.1 | 15.3 | | | | |
| Change Period (Y+Rc), s | | 4.5 | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | | 18.9 | 5.1 | 22.5 | | 18.9 | 5.1 | 22.5 | | | | |
| Max Q Clear Time (g_c+l1), s | | 2.2 | 2.3 | 4.5 | | 4.8 | 2.2 | 8.4 | | | | |
| Green Ext Time (p_c), s | | 0.0 | 0.0 | 1.1 | | 0.6 | 0.0 | 2.4 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 9.4 | | | | | | | | | |
| HCM 6th LOS | | | A | | | | | | | | | |

Intersection

Int Delay, s/veh 0.3

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | 1 | 1 | 1> | 0 | 1> | 0 |
| Traffic Vol, veh/h | 4 | 331 | 437 | 21 | 12 | 5 |
| Future Vol, veh/h | 4 | 331 | 437 | 21 | 12 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 150 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 4 | 338 | 446 | 21 | 12 | 5 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|---------------|
| Conflicting Flow All | 467 | 0 | 0 803 457 |
| Stage 1 | - | - | - 457 - |
| Stage 2 | - | - | - 346 - |
| Critical Hdwy | 4.12 | - | - 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - 5.42 - |
| Critical Hdwy Stg 2 | - | - | - 5.42 - |
| Follow-up Hdwy | 2.218 | - | - 3.518 3.318 |
| Pot Cap-1 Maneuver | 1094 | - | - 353 604 |
| Stage 1 | - | - | - 638 - |
| Stage 2 | - | - | - 716 - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 1094 | - | - 352 604 |
| Mov Cap-2 Maneuver | - | - | - 352 - |
| Stage 1 | - | - | - 635 - |
| Stage 2 | - | - | - 716 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.1 | 0 | 14.4 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1094 | - | - | - | 401 |
| HCM Lane V/C Ratio | 0.004 | - | - | - | 0.043 |
| HCM Control Delay (s) | 8.3 | - | - | - | 14.4 |
| HCM Lane LOS | A | - | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.1 |

Intersection

Int Delay, s/veh 2.8

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | 1 | <1 | 1> | 0 | 1> | 0 |
| Traffic Vol, veh/h | 72 | 271 | 349 | 15 | 23 | 108 |
| Future Vol, veh/h | 72 | 271 | 349 | 15 | 23 | 108 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 150 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 76 | 285 | 367 | 16 | 24 | 114 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|---------------|
| Conflicting Flow All | 383 | 0 | 0 812 375 |
| Stage 1 | - | - | - 375 - |
| Stage 2 | - | - | - 437 - |
| Critical Hdwy | 4.12 | - | - 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - 5.42 - |
| Critical Hdwy Stg 2 | - | - | - 5.42 - |
| Follow-up Hdwy | 2.218 | - | - 3.518 3.318 |
| Pot Cap-1 Maneuver | 1175 | - | - 348 671 |
| Stage 1 | - | - | - 695 - |
| Stage 2 | - | - | - 651 - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 1175 | - | - 325 671 |
| Mov Cap-2 Maneuver | - | - | - 325 - |
| Stage 1 | - | - | - 650 - |
| Stage 2 | - | - | - 651 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 1.7 | 0 | 13.4 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1175 | - | - | - | 565 |
| HCM Lane V/C Ratio | 0.065 | - | - | - | 0.244 |
| HCM Control Delay (s) | 8.3 | 0 | - | - | 13.4 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 1 |

Intersection

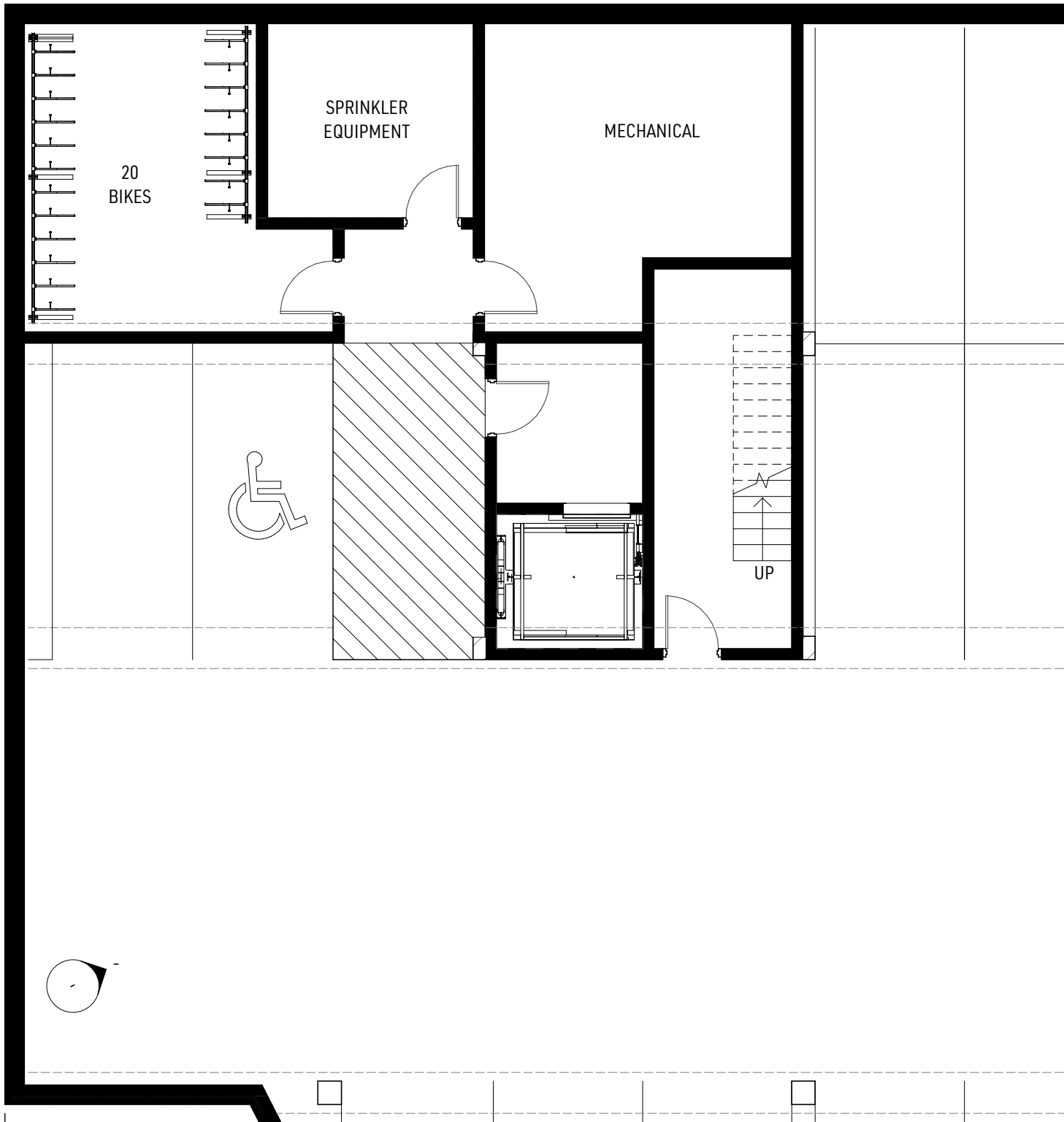
Int Delay, s/veh 0.1

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | 1> | 0 | 1 | 1 | 1> | 0 |
| Traffic Vol, veh/h | 341 | 2 | 3 | 455 | 2 | 2 |
| Future Vol, veh/h | 341 | 2 | 3 | 455 | 2 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | 50 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 352 | 2 | 3 | 469 | 2 | 2 |

| Major/Minor | Major1 | Major2 | Minor1 | | | |
|----------------------|--------|--------|--------|---|-------|-------|
| Conflicting Flow All | 0 | 0 | 354 | 0 | 828 | 353 |
| Stage 1 | - | - | - | - | 353 | - |
| Stage 2 | - | - | - | - | 475 | - |
| Critical Hdwy | - | - | 4.12 | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | - | - | 2.218 | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | - | - | 1205 | - | 341 | 691 |
| Stage 1 | - | - | - | - | 711 | - |
| Stage 2 | - | - | - | - | 626 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 1205 | - | 340 | 691 |
| Mov Cap-2 Maneuver | - | - | - | - | 340 | - |
| Stage 1 | - | - | - | - | 710 | - |
| Stage 2 | - | - | - | - | 626 | - |

| Approach | EB | WB | NB |
|----------------------|----|-----|----|
| HCM Control Delay, s | 0 | 0.1 | 13 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 456 | - | - | 1205 | - |
| HCM Lane V/C Ratio | 0.009 | - | - | 0.003 | - |
| HCM Control Delay (s) | 13 | - | - | 8 | - |
| HCM Lane LOS | B | - | - | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |



SHEET LIST:

COVER SHEET

SCHEMATIC SITE PLAN

CIVIL SURVEY

LANDSCAPE CONTEXT PLAN

FLOOR PLANS

PROJECT DATA

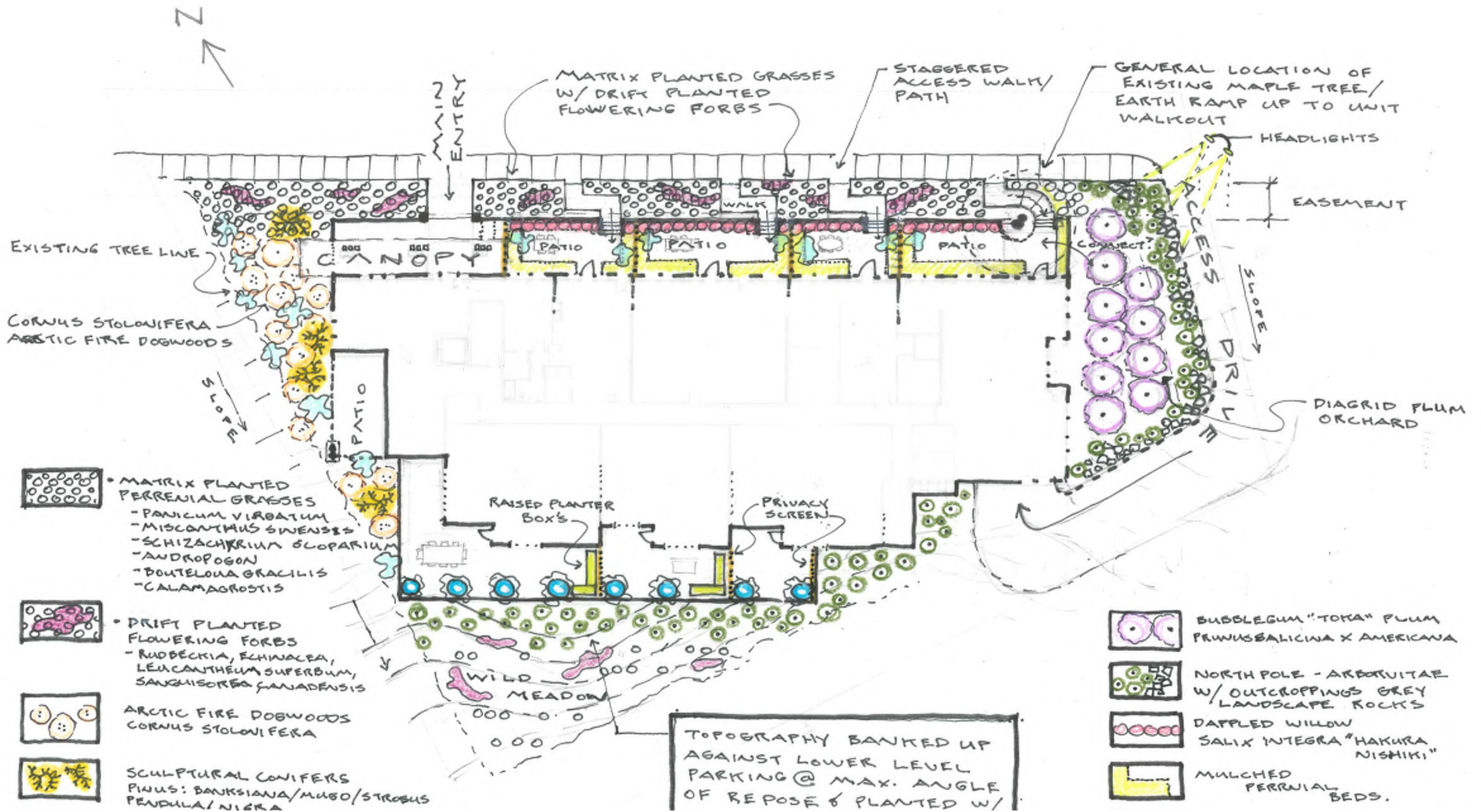
NORTHEAST RENDER

NORTHWEST RENDER

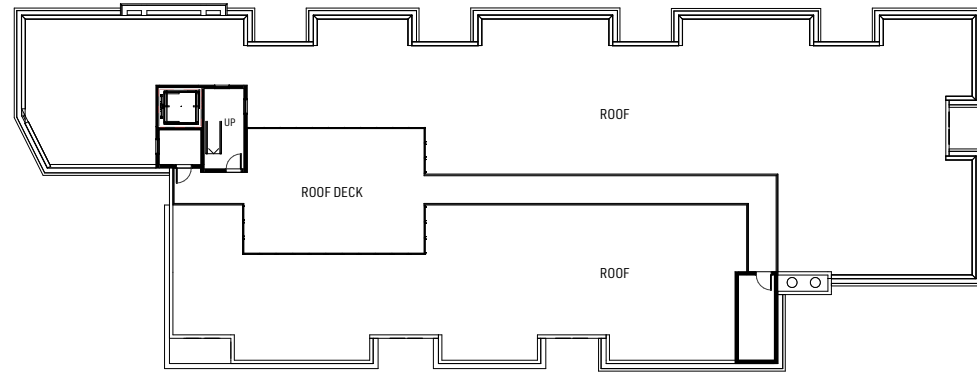


4425 Valley View Road - Sketch Plan Review Submittal

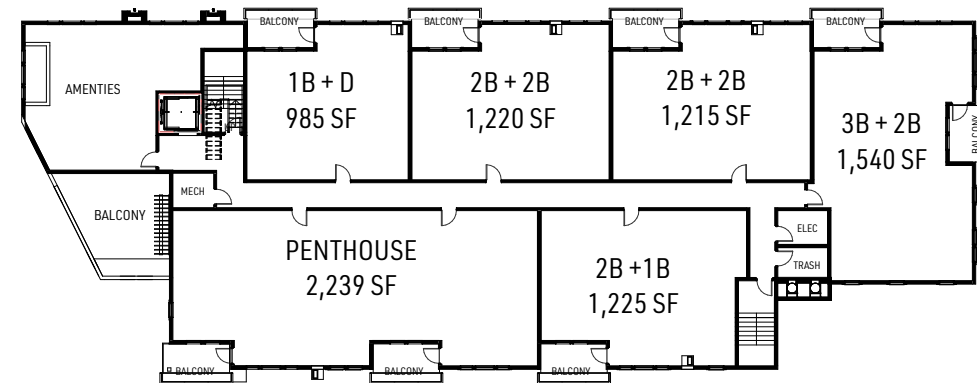




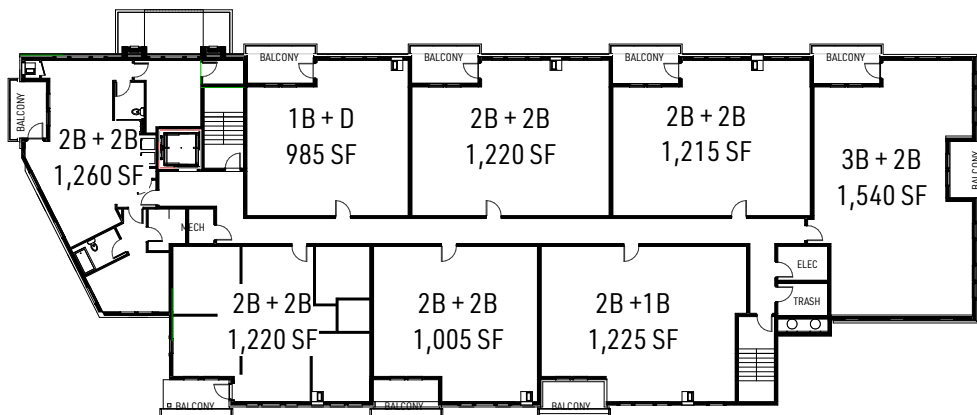
| APARTMENT UNIT MIX: | |
|---------------------|----------|
| 1 BR + DEN | 3 |
| 2BR + 1BA | 3 |
| 2BR + 2BA | 11 |
| 3BR + 2 BA | 3 |
| PENTHOUSE | 1 |
| TOTAL: | 21 UNITS |



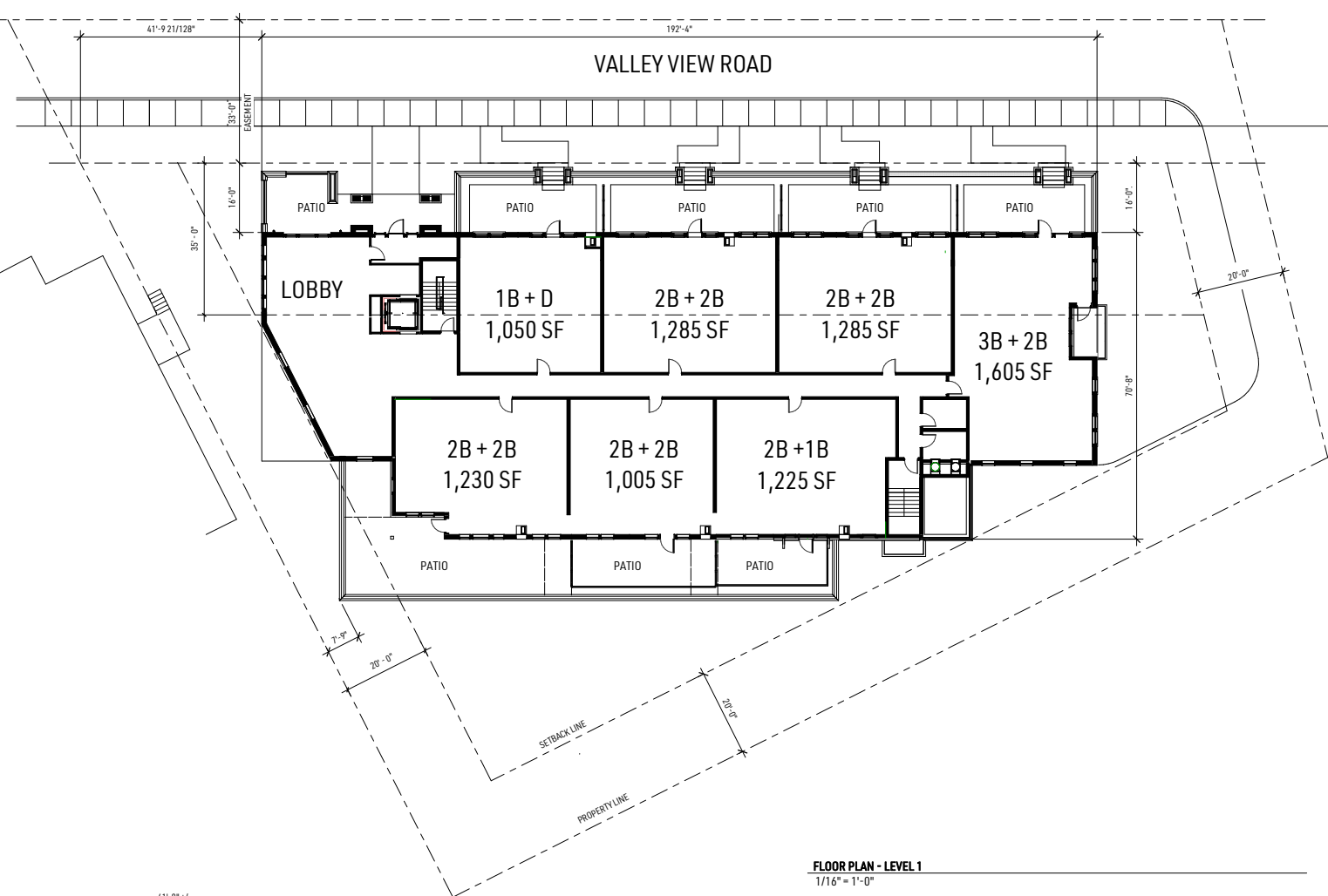
LEVEL 4 - 1/16"
1/16" = 1'-0"



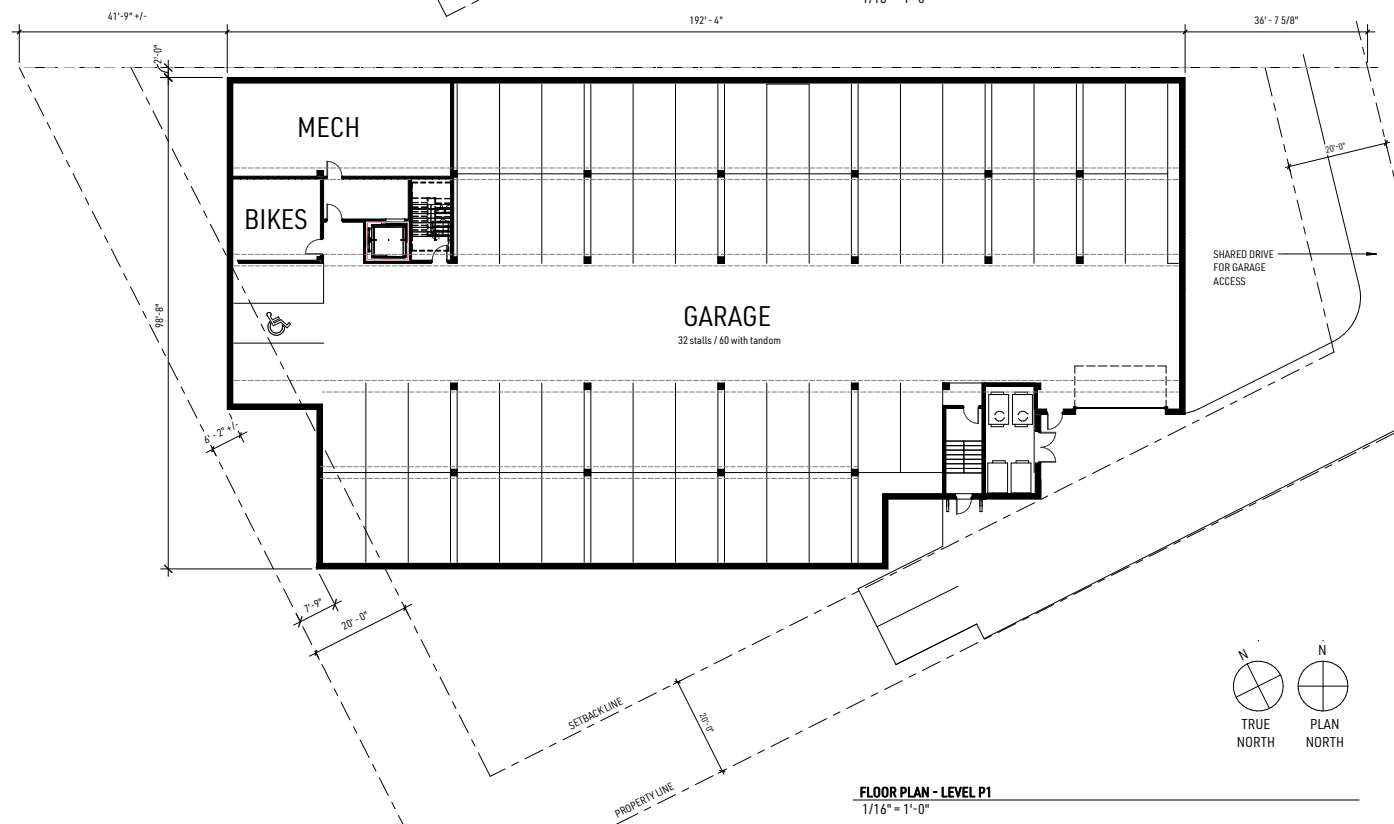
FLOOR PLAN - LEVEL 3
1/16" = 1'-0"



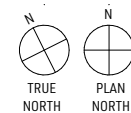
FLOOR PLAN - LEVEL 2
1/16" = 1'-0"



FLOOR PLAN - LEVEL 1
1/16" = 1'-0"



FLOOR PLAN - LEVEL P1
1/16" = 1'-0"



SITE AREA: SF Acres
PID Numbers: 30,381 sf .71 ac (per Hennepin County w/o street)
1902824430117

ZONING CLASSIFICATION:

Current Zoning: PCD-1 (Planned Commercial Distrcit)
Small Area Plan: Wooddale Valley View SAP

PROJECT DATA:

| | Allowable/Req: | Proposed: |
|-----------|----------------|--------------------|
| Base FAR: | 1.0 30,381 | 1.08 or 33,333 GSF |

| | |
|------------------|------------------------------------|
| TOTAL GSF: | 49,466 GSF |
| Building Height: | 3 stories or 36'-0" 3 stories |


| | | |
|--------------------------|----------------|-----------------------|
| Density: | 30 units /acre | 21 units/acre |
| Units: | 21 | 21 units |
| Req. Parking Swc 36-1312 | | |
| Residential: | 31 stalls | 32 standard/28 tandem |

SETBACKS:

| | | |
|-------|-----|-------------------------------|
| Front | 35* | 16'-0" |
| Side | 25* | 20'-0" / 6'-0" WEST SIDE @ P1 |
| Rear | 25* | 20'-0" |

*or Building Height if greater

Wooddale Valley View
SMALL AREA PLAN



Published
March 19, 2015

See Resolutions 2017-102 and 2018-26 which reflect a comprehensive plan amendment and a rezoning to properties that are now within the Wooddale & Valley View SAP

THE PROPOSED PROJECT WAS DEVELOPED TO MEET THE
WOODDALE VALLEY VIEW SMALL AREA DESIGN PLAN
GUILDELINES







CITY OF EDINA

4801 West 50th Street

Edina, MN 55424

www.edinamn.gov

Date: July 16, 2020

Agenda Item #: V.D.

To: Transportation Commission

Item Type:

Other

From: Andrew Scipioni, Transportation Planner

Item Activity:

Subject: 2020 Work Plan Updates

Information

ACTION REQUESTED:

None; Commissioners will provide updates on the status of 2020 Work Plan initiatives (unless an item is elsewhere on the current agenda).

INTRODUCTION:

See attached work plan.

ATTACHMENTS:

2020 Work Plan Progress Report



Transportation Commission

2020 Work Plan

| Initiative #1 | Initiative Type | Completion Date | Council Charge |
|--|--------------------|-----------------|--------------------------|
| Review and Recommend Review and evaluate performance of CloverRide circulator services (North and South) and make recommendations to Council for future service after contracts expire. | Continue | Q3 | 3 (review and recommend) |
| | Lead Commissioners | Budget | Staff Support |
| | Erik Ruthruff | | |
| | | NA | Staff Liaison, CTS |
| Progress Report: | | | |

Jan: Task Force met 1/20. South Loop ridership has grown, while North Loop is struggling to attract riders. Next Task Force meeting is 3/13.

Feb: No update.

Mar: MEETING CANCELLED

Apr: MEETING CANCELLED

May: MEETING CANCELLED

Jun: Service contract renewed for South Loop only; on-demand service is continuing due to pandemic.

| Initiative #2 | Initiative Type | Completion Date | Council Charge |
|---|--------------------|-----------------|------------------------|
| Review and Comment Review and comment on traffic impact studies associated with proposed developments. | Ongoing | Q4 | 2 (review and comment) |
| | Lead Commissioners | Budget | Staff Support |
| | Lori Richman | | Staff Liaison |
| | | NA | |
| Progress Report: | | | |

Jan: No update.

Feb: Commission reviewed parking assessment for 4500 France Avenue.

Mar: MEETING CANCELLED

Apr: MEETING CANCELLED

May: MEETING CANCELLED

Jun: No update.

| Initiative #3 | Initiative Type | | Completion Date | Council Charge |
|---|----------------------|----|------------------------|----------------|
| Review and Comment | New | Q4 | 2 (review and comment) | |
| Review and comment on staff's recommendations for Travel Demand Management policy / ordinance. | Lead Commissioners | | Budget | Staff Support |
| | Bruce McCarthy, Kirk | | Staff Liaison | |
| | Johnson | NA | | |
| Progress Report: | | | | |
| Jan: Work session scheduled for 4/7 to discuss TDM recommendation with Council. | | | | |
| Feb: No update. | | | | |
| Mar: MEETING CANCELLED | | | | |
| Apr: MEETING CANCELLED | | | | |
| May: MEETING CANCELLED | | | | |
| Jun: Commissioners presented ordinance recommendation at City Council work session, staff is proceeding with policy recommendation for Council consideration. | | | | |

| Initiative #4 | Initiative Type | | Completion Date | |
|---|--------------------|--------|------------------------|---------------|
| Review and Comment Review and comment on staff's framework for the completion of traffic impact studies conducted for proposed development / redevelopment projects. | New | Q4 | 2 (review and comment) | |
| | Lead Commissioners | Budget | | Staff Support |
| | Bocar Kane, | | Staff Liaison | |
| | Jill Plumb-Smith | NA | | |
| Progress Report: | | | | |
| Jan: No update. | | | | |
| Feb: Met 2 weeks ago, looked at existing policy, researching traffic study process of neighboring cities. | | | | |
| Mar: MEETING CANCELLED | | | | |
| Apr: MEETING CANCELLED | | | | |
| May: MEETING CANCELLED | | | | |
| Jun: No update. | | | | |

| Initiative #5 | Initiative Type | Completion Date | Council Charge |
|---|--------------------|---------------------|-----------------------|
| Review and Decide | Continue | Q4 | 4 (review and decide) |
| Develop and coordinate up to six educational activities to inform the community about transportation safety (which will include an annual community event). | Lead Commissioners | Budget | Staff Support |
| | Mindy Ahler | Funds not available | |
| | | | Staff liaison, CTS |
| Progress Report: | | | |
| Jan: No update. Feb: No update. Mar: MEETING CANCELLED Apr: MEETING CANCELLED May: MEETING CANCELLED Jun: No update. | | | |

| Initiative #6 | Initiative Type | Completion Date | Council Charge |
|--|--------------------|---------------------|------------------------|
| Review and Comment | Ongoing | Q4 | 2 (review and comment) |
| Review and comment on monthly Traffic Safety Reports | Lead Commissioners | Budget | Staff Support |
| | Lori Richman | Funds not available | Staff Liaison |
| | | | |
| Progress Report: | | | |
| Jan: No update. Feb: Reviewed and commented on 2019 Traffic Safety Summary Report. Mar: MEETING CANCELLED Apr: MEETING CANCELLED May: MEETING CANCELLED Jun: No update. | | | |

| Initiative #7 | Initiative Type | Completion Date | Council Charge |
|---|--------------------|-----------------|------------------------|
| Review and Comment | Ongoing | Q4 | 2 (review and comment) |
| Review and comment on proposed Capital Improvement projects, including roadway reconstructions and projects funded by the Pedestrian and Cyclist Safety (PACS) Fund | Lead Commissioners | Budget | Staff Support |
| | Lori Richman | | Staff Liaison |
| | | NA | |
| Progress Report: | | | |
| Jan: 2019 PACS Fund Summary Report will be presented at 2/20. Feb: Reviewed and commented on 2019 PACS Fund Summary report. Mar: MEETING CANCELLED Apr: MEETING CANCELLED May: MEETING CANCELLED Jun: No update. | | | |

| Parking Lot |
|-------------|
| |
| |



CITY OF EDINA

4801 West 50th Street

Edina, MN 55424

www.edinamn.gov

Date: July 16, 2020

Agenda Item #: V.E.

To: Transportation Commission

Item Type:

Other

From: Andrew Scipioni, Transportation Planner

Item Activity:

Subject: 2021 Work Plan Development

Discussion

ACTION REQUESTED:

None; Commissioners will discuss possible initiatives to include in the 2021 Work Plan.

INTRODUCTION:

See attached supporting materials. The Commission must approve their proposed 2021 Work Plan by their September 17 regular meeting.

ATTACHMENTS:

Work Plan History

Draft 2018 Comprehensive Plan Transportation Goals

**Transportation Commission Work Plan Initiatives
2013-2020**

| Year | Initiative | Description | Partners |
|------|------------|--|-----------------|
| 2020 | 1 | Review and evaluate performance of CloverRide circulator services (North and South) and make recommendations to Council for future service after contracts expire. | |
| | 2 | Review and comment on traffic impact studies associated with proposed developments. | |
| | 3 | Review and comment on staff's recommendations for Travel Demand Management policy/ordinance. | |
| | 4 | Review and comment on staff's framework for the completion of traffic impact studies conducted for proposed development/redevelopment projects. | |
| | 5 | Develop and coordinate up to six educational activities to inform the community about transportation safety (which will include an annual community event). | |
| | 6 | Review and comment on monthly Traffic Safety Reports. | |
| | 7 | Review and comment on proposed Capital Improvement projects, including roadway reconstructions and projects funded by the Pedestrian and Cyclist Safety (PACS) Fund. | |
| 2019 | 1 | Chair/co-chair a cross-commission committee to review Travel Demand Management options and recommend a TDM policy or ordinance for Council consideration | PC |
| | 2 | Serve on a cross-commission committee to determine if a process is feasible for the Transportation Commission to provide input on transportation-related issues, including traffic study results associated with development/redevelopment | PC |
| | 3 | Annually, spring through fall, the commission will coordinate an educational campaign to inform community members about pedestrian, bicycle and motorist safety which will include an annual community event | |
| | 4 | Monitor and evaluate the CloverRide circulator service and make recommendations to Council for future service after twelve-month agreement expires | |
| | 5 | Review and comment on PACS Fund allocating process with a race and equity lens | CHC, HRRC, PARC |
| | 6 | Serve on a cross-commission committee to complete requirements for Edina to receive the AARP City Designation | |
| | 7 | Serve on a cross-commission committee to develop a draft plan on Edina Grand Rounds, including wayfinding | PARC |
| 2018 | 1 | Recommend pilot plan for Edina/Southdale Circulator including pilot routes and evaluation plan for the Edina/Southdale Bus Circulator Pilot Project | |
| | 2 | Invite neighboring transportation commission to have joint meeting with the Edina Transportation Commission | |
| | 3 | Review and comment on solutions for high school motor vehicle traffic and parking affecting neighborhoods adjacent to Edina High School | |
| | 4 | Assist as requested with the development of the City's new Comprehensive Guide Plan | |
| | PL | Define and implement equity criteria for PACS Fund projects, and integrate with the City's Race and Equity Task Force efforts | |
| 2017 | 1 | If City staff secures funds, support and guide the engagement process for, and potential study of, passenger rail in Edina | |
| | 2 | Assist as requested with the development of the City's new Comprehensive Guide Plan | |
| | 3 | Review transportation impact analysis process to better implement Living Streets | PC |
| | 4 | Review and comment on transportation projects in the Capital Improvement Plan, mill and overlay/seal coat projects, and monthly traffic safety reports | |
| | 5 | Review and comment on pedestrian and bicycle master plan | |
| 2016 | 1 | Study and report community circulator | |
| | 2 | Organize and host a transportation-themed event with speaker(s) | |
| | 3 | Prepare and comment on Comprehensive Pedestrian and Bicycle Plan for inclusion in 2018 Comprehensive Plan | |
| | 4 | Review Edina To Go app and provide recommendations to staff regarding organization/categories for reporting concerns related to streets/transportation | |
| | 5 | Review data from City's QLS (2011, 2013, 2015) and conduct 2 public meetings to identify gaps around the City's transportation systems | |
| | 6 | Make recommendations to staff for evaluation of the Living Streets and Streets Smarts outreach campaigns | |
| | 7 | Provide input to staff on the creation of a walking map of the City indicating routes and areas of interest | |
| 2015 | 1 | Review and recommend modifications to roadway reconstruction project survey content and methodology | |
| | 2 | Review and recommend modifications to Traffic Safety Request process | |
| | 3 | Greater Southdale Area Transportation and Circulator Study implementation | |
| | 4 | Study access to and from Southwest LRT stations in St. Louis Park, Hopkins, Minnetonka and Eden Prairie | |
| 2014 | 1 | Living Streets Plan | |
| | 2 | Meet with Police Department and Public Works annually to discuss shared interests such as traffic education and enforcement, street maintenance as it affects cyclists and pedestrians, etc. | |
| | 3 | Valley View Rd between Gleason Rd and Antrim Rd - work with school district and Active Routes to School working group to address traffic issues | |
| | 4 | Educational safety campaign | |
| 2013 | 1 | Living Streets Policy implementation | |
| | 2 | Review transportation projects in the proposed Capital Improvement Program | |
| | 3 | TLC Bike Boulevard project | |
| | PL | Grandview Area Transportation Plan implementation | |

City of Edina 2018 Draft Comprehensive Plan Transportation Chapter Goals and Policies

1. Improve mobility for residents, visitors and businesses (including those with transportation disadvantages) through the creation and maintenance of a balanced system of transportation alternatives for transit users, pedestrians, bicyclists and motorists.
 - 1.1. Increase protected and separate bike facilities between nodes, parks, schools and City facilities as indicated in the Pedestrian and Bicycle Master Plan.
 - 1.2. Connectivity between nodes shall be enhanced to include three modes of transportation where at least one is non-motorized.
 - 1.3. Create safe and convenient pedestrian and bicycle connections between major traffic generators, with particular emphasis on continuity at roadway and other barrier crossings.
 - 1.4. Connect to regional non-motorized transportation networks by reviewing and recommending pedestrian and bicycle facilities throughout Edina cooperatively with the Three Rivers Park District and Hennepin County.
 - 1.5. Support recommendations of the Pedestrian and Bicycle Master Plan for implementation.
2. Implement a fully multi-modal transportation system that supports the land use vision and future land use plan for managing and shaping future growth.
3. Minimize the impacts of the transportation system on Edina's environment and neighborhood quality of life and emphasize methods to reduce greenhouse gas emissions.
 - 3.1. Strive for transportation infrastructure designs that have a neutral to positive impact on the natural environment.
 - 3.2. Effectively balance access from and mobility on Edina's roadways, prioritizing safe and efficient movement between the city's primary nodes, parks, schools and community facilities.
4. Reduce the overall dependence on and use of single-occupant vehicles by promoting land use patterns that allow for shorter vehicular trips and the use of alternative travel options.
 - 4.1. Take a comprehensive approach to reducing single-occupant vehicle trips by involving those who live, work and shop.
5. Promote a travel demand management (TDM) program through a coordinated program of regulations, marketing, and provision of alternative workplace and travel options.
 - 5.1. Partner with Commuter Services to encourage all forms of travel demand management in order to reduce single occupancy vehicle travel, overall vehicle miles of travel, reduce petroleum consumption, and improve air quality.
 - 5.2. Review and recommend policies necessitating a TDM Plan and/or a transit component with all types of development and redevelopment. Review and implement substantive requirements associated with these TDM Plans, potentially including TDM escrow accounts, transit passes, preferential parking for car-poolers, and other measures.
 - 5.3. Review all major new developments in light of the potential for ridesharing including bus accessibility, preferential parking for carpools/vanpools, and mixed-use development.
 - 5.4. Support preferential treatments for transit and high occupancy vehicles on streets and highways.
 - 5.5. Include transit planning in the construction or upgrading of streets and highways.
6. Encourage and support attractive and reliable high-performance transit service and connections.
 - 6.1. Increase transit options for Edina residents, focusing on connecting the underserved western segment of Edina with the eastern segment.
 - 6.2. Provide transit service to connect nodes and commercial hubs.
7. Develop and manage parking provision to encourage joint and shared use of facilities, ride-sharing (car pools and van pools), and bicycle parking.
 - 7.1. Encourage and develop preferred locations in surface and structured parking for electric vehicles (personal and shared) and car pool/van pool vehicles.
 - 7.2. Provide or require covered and secure bicycle parking (including e-bicycles) in all parking structures.
 - 7.3. Continuously evaluate the need for, and design of, parking facilities (e.g. effects of autonomous vehicles and future conversion of parking structures to inhabited buildings) and revise regulations as necessary.

8. Invest in infrastructure to support the continued growth in low- to zero-emission technology and support regional and statewide efforts to educate and adopt electric vehicles.
 - 8.1. Continue to install chargers at City facilities where use can benefit residents, City fleet, and partners.
 - 8.2. Ensure that the methodology to determine electric vehicle charging locations considers both public and private facilities with an inclusive and equitable lens.
 - 8.3. Provide residents and businesses the opportunity to learn the benefits of zero emission vehicles through outreach, education and events.
 - 8.4. Advocate for electric vehicle charging programs and incentives with the state, utilities, and car manufacturers.
9. Provide for efficient movement of goods within Edina, while minimizing the impacts of freight traffic on other trips and reducing negative impacts on land uses on freight corridors.
 - 9.1. Through the use of technology, minimize congestion on neighborhood streets and ensure the safety while balancing delivery service requirements.
 - 9.2. Serve major truck users and intermodal facilities with good minor arterial access to the metropolitan highway system.
 - 9.3. Investigate and implement solutions to minimize the impact of delivery of goods by drone in residential areas.
10. Engage, seek input from and educate all segments of the community regarding transportation-related issues and projects impacting the City.
 - 10.1. Develop and implement methodology for consistent education of motorist, pedestrian and cyclist safety as indicated in the Pedestrian and Bicycle Master Plan.
 - 10.2. Seek inclusive, equitable and meaningful public participation throughout the community in all transportation studies and projects conducted by the City.
11. Identify new and continuing sources for transportation infrastructure funding by seeking to partner where feasible with federal, state, county and adjacent community sources.
 - 11.1. Pursue and support regional or multi-community funding sources for improvements that provide regional or multi-community benefit.
 - 11.2. Support research efforts into more efficient and cost-effective management, maintenance and replacement of street surfaces.
 - 11.3. Support governmental jurisdiction over roadways that reflect the role of the roadway in the overall transportation system.
 - 11.4. Encourage the legislature to continue a dedicated source for funding for efficient mass transit.
 - 11.5. Encourage the legislature to provide stable, long-term roadway funding for capital, operating/traffic management, and maintenance.
 - 11.6. Develop and support legislation permitting a transportation utility.
12. Design roadway facilities according to their intended service function and neighborhood context.
 - 12.1. Upgrade existing roadways when warranted by demonstrated volume, safety or functional needs, taking into consideration environmental limitations.
 - 12.2. Design/enhance residential street systems to discourage through traffic and to be compatible with lower speed bicycling and walking. This includes consideration of traffic calming measures on local streets, local connectors and, in some cases, collector streets.
 - 12.3. Use adequate transitions and buffers including, but not limited to, earth berms, walls, landscaping and distance to mitigate the undesirable impact of high volume roadways.
 - 12.4. Consider the use of sound mitigating features for residential development adjacent to high volume roadways, and make property owners and land developers responsible for noise attenuation at new developments near high volume roadways.
 - 12.5. Encourage beautification of local roadways, where appropriate, with amenities such as boulevard trees, decorative street lighting, and monuments.
 - 12.6. Monitor and address transportation requirements associated with demographic trends, such as an aging population.

13. Provide and maintain adequate access to and from, and safety on, local and regional roadways.
 - 13.1. Provide logical street networks to connect residential areas to the regional highway system and local activity centers.
 - 13.2. Adequately control access points to the regional roadway system (including minor arterials) in terms of driveway openings and side street intersections.
 - 13.3. Provide access to the local street system (including collector, local connector and local streets) in a manner that balances the need to safely and efficiently operate the street system with the need for access to land.
 - 13.4. Separate, to the extent possible, conflicting uses on the roadway system in order to minimize safety problems. Give special attention to pedestrian and bicycle routes.
 - 13.5. Review and update regional and local functional street classification and coordinate with adjacent cities and Hennepin County. Review and recommend traffic calming policies and consider traffic calming implementation where requested by residents using the Living Streets Plan as the primary guide.
 - 13.6. Review and monitor citywide traffic volumes, congestion, existing traffic calming devices and measures, accident history, vehicle violation history, speed limits and enforcement.
 - 13.7. Educate public on vehicle operations including public relations campaigns that focus on individual responsibilities to each other rather than individual rights only.
 - 13.8. When requested by the Edina Transportation Commission and/or the Planning Commission, review land use that may impact traffic implementations. Continue to monitor adjacent community redevelopment and other activity that potentially impacts the City of Edina.
 - 13.9. Evaluate and implement measures required for school safety.
14. Manage, maintain and operate roadways to maximize wherever possible the safety and mobility of all users and all modes.
 - 14.1. Cooperate with other agencies having jurisdiction over streets and highways in Edina to assure implementation of Living Streets elements, good roadway conditions and operating efficiency.
 - 14.2. Continue the implementation of the I-494 frontage road system through ongoing coordination with MnDOT, Hennepin County, and the cities of Richfield and Bloomington.
 - 14.3. Maintain roads by repairing weather-related and other damage. Continue current on-going pavement improvement plan.
 - 14.4. Use economic and environmentally sound management techniques for snow and ice removal.
 - 14.5. Replace substandard bridges and bridges that present safety or traffic problems.
 - 14.6. Track developments regarding the most current transportation systems and technologies, evaluate and implement as warranted.
 - 14.7. Support state legislation to decrease statutory urban speed limits from 30 to 25 miles per hour.



CITY OF EDINA

4801 West 50th Street

Edina, MN 55424

www.edinamn.gov

Date: July 16, 2020

Agenda Item #: VI.A.

To: Transportation Commission

Item Type:

Other

From: Andrew Scipioni, Transportation Planner

Item Activity:

Subject: Street Funding Task Force Update

Information

ACTION REQUESTED:

None.

INTRODUCTION:

Commissioner Scherer will update the Commission on the first meeting of the Street Funding Task Force.



CITY OF EDINA

4801 West 50th Street

Edina, MN 55424

www.edinamn.gov

Date: July 16, 2020

Agenda Item #: VIII.A.

To: Transportation Commission

Item Type:

Other

From: Andrew Scipioni, Transportation Planner

Item Activity:

Subject: Schedule of Upcoming Meetings and Events as of
July 10, 2020

Information

ACTION REQUESTED:

None.

INTRODUCTION:

See attached schedule of upcoming meetings and events.

ATTACHMENTS:

Schedule of Upcoming Meetings and Events as of July 10, 2020

| |
|--|
| <p style="text-align: center;">Transportation Commission</p> <p style="text-align: center;">Schedule of Upcoming Meetings/Events (as of July 10, 2020)</p> |
|--|

| | | | | |
|----------|---------------|---------|----------------------------|--|
| Thursday | Jul 16 | 6:00 PM | Virtual (WebEx) | Regular Meeting |
| Thursday | Aug 20 | 6:00 PM | *City Hall, Community Room | Regular Meeting |
| Thursday | Sep 17 | 6:00 PM | *City Hall, Community Room | Regular Meeting |
| Tuesday | Oct 6 | 5:30 PM | *City Hall, Community Room | City Council Work Session – Board/Commission Work Plan Meeting (chair presentations) |
| Thursday | Oct 22 | 6:00 PM | *City Hall, Community Room | Regular Meeting |
| Tuesday | Nov 17 | 5:30 PM | *City Hall, Community Room | City Council Work Session – Board/Commission Work Plan Meeting (staff recommendations) |
| Thursday | Nov 19 | 6:00 PM | *City Hall, Community Room | Regular Meeting |
| Thursday | Dec 17 | 6:00 PM | *City Hall, Community Room | Regular Meeting |
| Thursday | Jan 21, 2021 | 6:00 PM | *City Hall, Community Room | Regular Meeting |
| Thursday | Feb 18, 2021 | 6:00 PM | *City Hall, Community Room | Regular Meeting |
| Thursday | Mar 18, 2021 | 6:00 PM | *City Hall, Community Room | Regular Meeting |
| Thursday | Apr 15, 2021 | 6:00 PM | *City Hall, Community Room | Regular Meeting |
| Thursday | May 20, 2021 | 6:00 PM | *City Hall, Community Room | Regular Meeting |
| Thursday | June 17, 2021 | 6:00 PM | *City Hall, Community Room | Regular Meeting |

* Future meetings may be conducted virtually at the discretion of the City. Staff will continue to monitor the situation related to COVID-19 and make decisions that prioritize the health and safety of residents and staff.