Staff Report

(with attachments)

Presented to the

Planning & Zoning Commission

February 15, 2024

Development Review Staff Report

Agenda Item 3

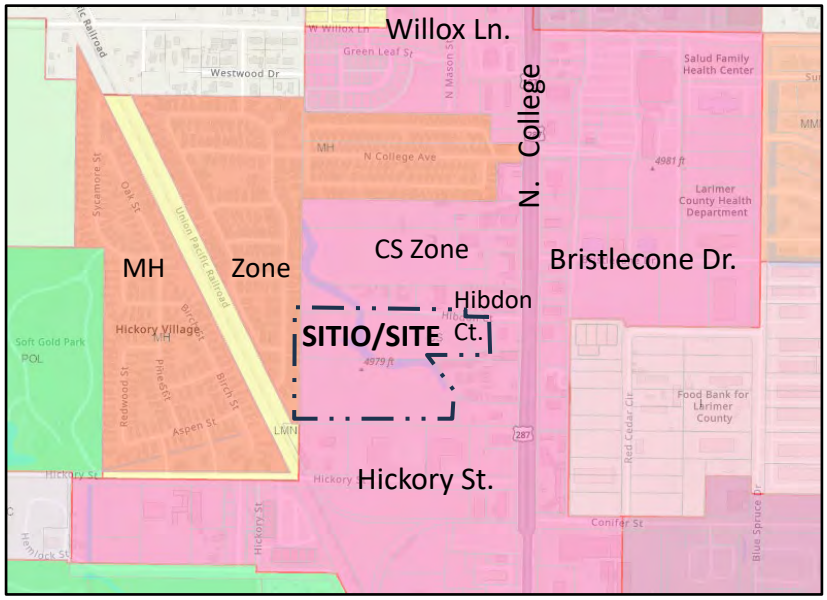
Planning and Zoning Commission Hearing February 15, 2024

Mason Street Infrastructure Overall Development Plan

Summary of Request

This is a proposed Overall Development Plan (ODP), #ODP230001, for infrastructure improvements associated with a new segment of North Mason Street extending south from Hibdon Court.

Zoning Map



Next Steps

The ODP sets the stage for subsequent Project Development Plans (PDPs).

Location

Hibdon Court and the existing access drive on a North Mason Street alignment north of Hickory Street in the North College Corridor. Parcel #'s 9702100918 and 9702100007.

Property Owner

North College 1311, LLC
262 E. Mountain Avenue
Fort Collins, Colorado 80524

Applicant/Representative

Klara Rossouw
Ripley Design Inc.
419 Canyon Avenue Ste. 200
Fort Collins, CO 80521

Staff

Clark Mapes, City Planner

Contents

Staff Recommendation

Approval of the ODP.

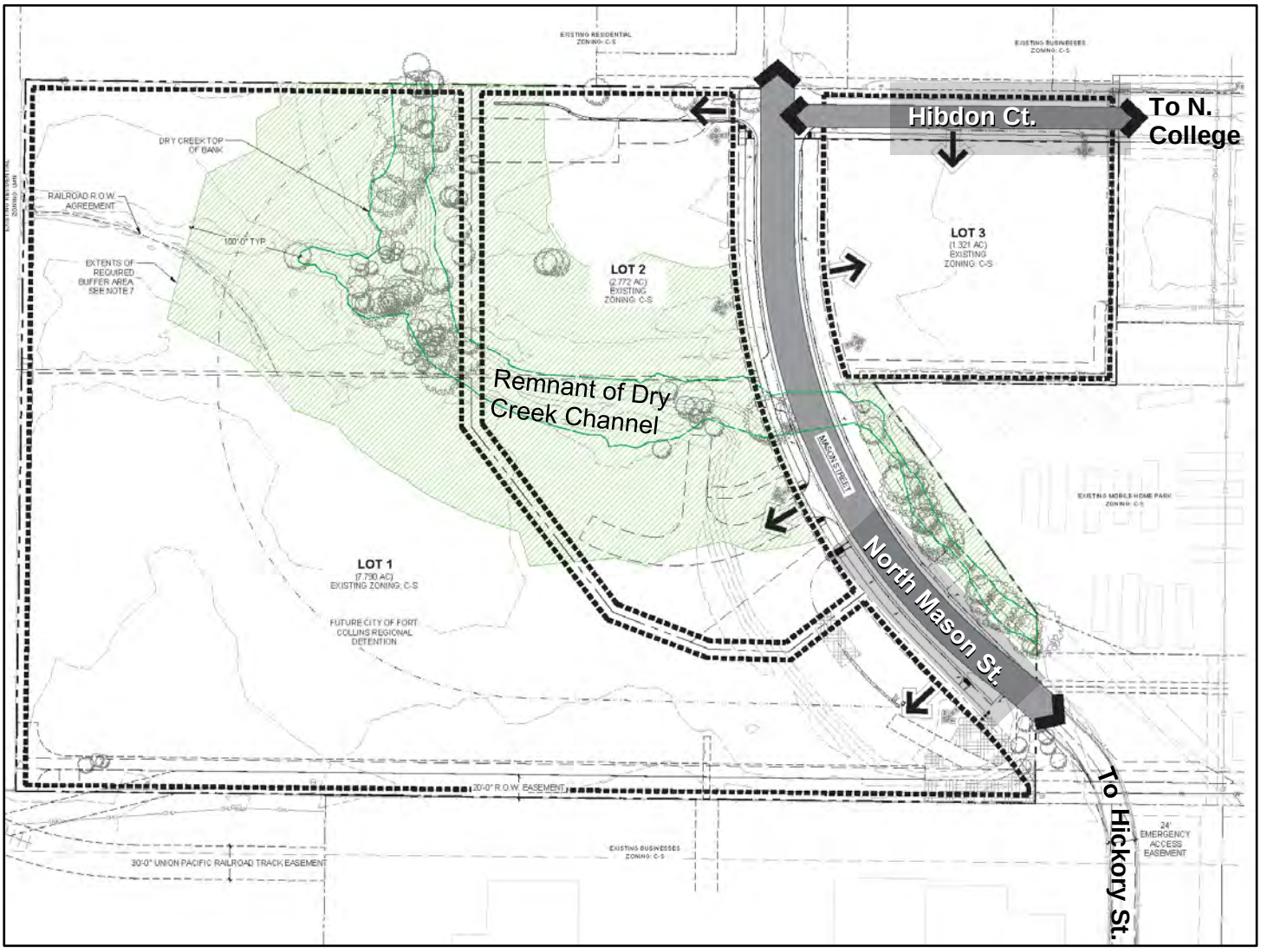
1. Project Introduction

A. PROJECT DESCRIPTION

The purpose of this proposed ODP is to guide pending and future development plans by outlining some key parameters for any development on the subject property.

The property currently comprises two unplatted land parcels. The ODP outlines reconfiguration of the existing parcels into 3 future lots and right-of-way (ROW) for a segment of a future North Mason Street, to be created in a future subdivision plat. The parcel reconfiguration and a drainage plan provide for a planned regional stormwater detention facility, and for a developable lot with additional street frontage.

The plan provides a framework for vehicular access points and pedestrian connectivity, and identifies a significant natural feature -- a remnant of the original Dry Creek channel -- that will need to be addressed in detail in any subsequent Project Development Plans.



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The proposed street right-of-way represents improvement of a segment of an existing 24-foot drive in an access easement, which is a step toward long-planned retrofitting of Mason Street into the area along with drainage and utility infrastructure.

The reconfiguration of land parcels as shown in the ODP involves a transaction between the owners of the two existing parcels—the applicant and the City. Negotiation of a beneficial configuration has involved significant exploration of stormwater drainage and detention needs, and implications of a natural habitat buffer zone for Dry Creek which would be required in any development.

B. DEVELOPMENT STATUS/BACKGROUND

1. Annexation and Planning

The land was annexed as part of the 1959 North College Annex. The North College corridor area had been divided into multiple parcel ownership in private transactions through the first half of the 20th century. Parcels along the west side of North College were developed with a commercial strip of buildings along the highway with full-movement vehicle access to every parcel and no defined edge improvements or coordinated drainage system. Original ad hoc development included little to no attention to rear areas behind the highway frontage in terms of infrastructure or development.

Retrofitting an extension of Mason Street west of North College Avenue has been an important part of planning for the evolving North College corridor since the first North College Corridor Plan in 1995.

Extensive City planning and related investment since that time has led to numerous incremental improvements in the corridor plan area including a drainage master plan and a 2016 North College Improvements capital project that built a drainage system along the highway, sidewalks, curbs and gutters, medians, and the existing access drive. The drive exists in an access easement.

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2. Surrounding Zoning and Land Use

	North	South	East	West
Zoning	Service Commercial (CS)	Service Commercial (CS)	Service Commercial (CS)	Manufactured Housing (MH)
Land Use	Two houses, auto repair with outdoor storage, Montclair mobile homes with outdoor storage	Industrial operations (steel supply)	Commercial buildings along the highway, Stonecrest mobile homes	Hickory Village Manufactured Housing Development

3. Dry Creek

An isolated remnant of Dry Creek runs across the subject property. Dry Creek was a significant tributary of the Poudre River prior to settlement of the area in the late 1800s and early land development in what is now the North College corridor. Its drainage basin extends 20 miles north of the city. Original development of the North College corridor was built up across the channel and floodplain, virtually eliminating the channel and most evidence of it. A few small remnants of the channel still exist, and one of those runs through the subject property. A major City capital project upstream removed the floodplain in 2006.

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2. Comprehensive Plan

A. CITY PLAN (2019)

City Plan is the comprehensive plan for the City of Fort Collins. It provides a forward-looking vision and overall policy framework for land use and transportation citywide. Land Use Code standards then implement policy direction in *City Plan*. Policy is not regulatory in the manner of the Land Use Code, but staff still considers pertinent policy direction when it aids interpretation of the standards in the review of development proposals.

B. NORTH COLLEGE CORRIDOR PLAN (2006)

The *North College Corridor Plan* is a related element of City Plan with much more specific, pertinent policy direction tailored to the circumstances of the area. It specifically describes the need to evolve a more complete network of streets, drives, and alleyways serviced by public access and utilities, behind the highway frontage. It emphasizes the need to adapt citywide standards to fit specific circumstances when retrofitting streets into existing developed and partially developed areas.

Relatedly, it explains that “Almost any (re)development project has multiple infrastructure needs and one requirement leads to another, all the way down to the lack of a drainage system for the entire area. While a drainage system is not an end in itself, it is perhaps the first priority in land development.” It explains the issue and need in detail, and notes that a drainage system report was completed in the same time frame as the corridor plan.

And likewise, it explains the need and issues related to other utility infrastructure which is aging or lacking.

A number of infrastructure improvements have been completed consistent with the plan since 2006, with one example being the alley-like access drive which will become a segment of North Mason Street.

The proposed ODP is directly consistent with the corridor plan.

3. Land Use Code Article 2

A. DIVISION 2.2 – DEVELOPMENT REVIEW PROCEDURES

Applicable Code Standard	Summary of Code Requirement and Staff Analysis	Staff Findings
2.2.1-2.2.8 Procedural Steps	These subsections outline the required steps for processing development applications. Pertinent steps have been: **Preliminary Design Review** A Preliminary Design Review meeting for the original concept for infrastructure and a Fort Collins Rescue Mission development held on 10/14/22. **First Submittal** The application was submitted on May 26, 2023. **Neighborhood Meeting** A neighborhood meeting was held May 10, 2023. **Notice (Posted, Written and Published)** Posted Notice: Sign posted June 7, 2023, Sign #740. Written Hearing Notice: January 31, 2024, 234 addresses mailed. Published Hearing Notice: Scheduled for February 4, 2024.	Complies

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B. DIVISION 2.3 - OVERALL DEVELOPMENT PLAN

Division 2.3 contains the standards for ODPs.

Applicable Code Standard	Summary of Code Requirement and Analysis	Staff Findings
2.3.1 Purpose	The purpose of the overall development plan (ODP) is to establish general planning and development control parameters for projects that will be developed in phases with multiple development plan submittals while allowing sufficient flexibility to permit detailed planning in subsequent submittals. Approval of an overall development plan does not establish any right to develop property in accordance with the plan.	Complies

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2.3.2 (H)(1) and (3)-(6)	An ODP must comply with the following pertinent criteria, slightly paraphrased: (1) The plan shall be consistent with the permitted uses and pertinent zone district standards in Article 4 and pertinent general development standards in Article 3 that can be applied at the level of detail required for an overall development plan submittal. • The ODP does not indicate land uses. • It indicates street improvements consistent with standards for vehicular, pedestrian, and bicycle access in Article 3 at an appropriate level of detail. • It indicates drainage and stormwater detention improvements, and utilities that would be needed to enable development, at an appropriate level of detail. (3) The plan shall conform to the Master Street Plan requirements and street pattern/connectivity standards, and demonstrate how the development, when fully constructed, will meet the Transportation Level of Service Requirements in Section 3.6.4, with submittal of a Master Plan Level Transportation Impact Study (TIS). • The Mason Street improvements help to fulfill the Master Street Plan. • A TIS was prepared, reviewed and accepted by staff. It uses certain assumptions for land use including a homeless shelter along the lines of the proposed shelter. Its conclusions are not dependent on the exact uses that may be developed because the additional trips have little or no impact on the operations of the study intersections when compared to the background scenario. Relatedly, it concludes that the Master Street Plan identifies Mason Street as a collector, however the study indicates that projected volumes are well below the capacity threshold and can be accommodated with a local street cross-section unless significant development occurs beyond the assumptions. (4) The plan shall provide for the location of transportation connections to adjoining properties in such manner as to ensure connectivity into and through the overall development plan site from neighboring properties for vehicular, pedestrian and bicycle movement. • The two streets and an existing unpaved drive access to a mobile home development on the east provide this connectivity. • No new connections are feasible due to physical conditions around the site comprising existing development, the large stormwater detention pond, the natural habitat buffer zone for Dry Creek, and a railroad spur and power transmission corridor along the south edge of the plan. (5) The plan shall show the general location and approximate size of any natural habitats and features and shall indicate a proposed rough estimate of the natural area buffer zones pursuant to code Section 3.4.1(E) which governs the buffer zones. • An Environmental Characterization Study (ECS) was by a professional firm. The study is attached. • A remnant of Dry Creek is a prominent natural feature that runs across the site. The Ecological Characterization Study suggests that drainage has not been present on the property in a long time as no riparian vegetation	Complies

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	is found in the area. Rather, the majority of the vegetation that is present comprises upland species. Wildlife use of the site is low due to the surrounding urban development, seasonal mowing, and dominance by non-native species. • Any impacts to the habitat will be addressed at the time of a subsequent PDP. A tree inventory, and any needed tree mitigation plans will be included in any PDP review process (6) The plan shall be consistent with the appropriate Drainage Basin Master Plan. • The ODP incorporates crucial parameters for master planned regional detention at an appropriate level of detail. The reconfiguration of the two existing parcels reflects the parameters.	

4. Land Use Code Article 3

Article 3 standards do not apply to ODP's except for the few references found in Section 2.3, as explained above.

5. Land Use Code Article 4

No Article 4 zone district standards are pertinent to the ODP.

6. Findings of Fact/Conclusion

In evaluating the request for the Mason Street Infrastructure Overall Development Plan #ODP230001, staff makes the following findings of fact and conclusions:

1. The Overall Development Plan complies with the applicable procedural and administrative requirements of Article 2 of the Land Use Code.
2. The Overall Development Plan complies with the applicable standards for Overall Development Plans which are located in Division 2.3 of the Land Use Code.

7. Recommendation

Staff recommends that the Planning and Zoning Commission approve the Mason Street Infrastructure Overall Development Plan #ODP230001, based on the Findings of Fact and supporting explanations found in the staff report.

8. Attachments

1. Applicant Narrative
2. Overall Development Plan Set
3. Ecological Characterization Study
4. Traffic Impact Study
5. Staff Presentation
6. Applicant Presentation

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ripley design
LANDSCAPE ARCHITECTURE, LAND PLANNING

Mason Street Infrastructure | Overall Development Plan

Project Narrative

May 24th, 2023
Revised January 22nd, 2024

Past Meeting Dates:

Preliminary Design Review:	October 12th, 2022
Neighborhood Meeting:	May 5th, 2023

Applicant: 1311 N. College, LLC.

General Information:
The Mason Street Overall Development Plan (ODP) is located in the North College Corridor along Mason Street between Hibdon Court and Hickory Lane. The site currently exists as two parcels, one of which is owned by 1311 N College LLC, and the other, City of Fort Collins. The existing zoning for the two parcels is Community Service District (C-S), and no changes to the zoning are being proposed. As part of the ODP, the existing parcels are being reconfigured into 3 lots to benefit the future detention volumes needed for the regional detention facility, and provide additional lot frontage along Mason for future development.

The Mason Street ODP provides framework for potential vehicular access points, pedestrian connectivity, and identified significant natural features that should be addressed in detail with subsequent Project Development Plans (PDP). Mason Street and Hibdon Court are considered and noted as part of the required public roadways.

As required per the Land Use Code, any site-specific information such as parking, buildings, use, etc. will be evaluated with subsequent Project Development Plan submittals.

Transportation Improvements
With the ODP, 71' of Right-of-Way (R.O.W) is noted for the future of Mason Street. The ultimate R.O.W will accommodate a widened sidewalk, a tree lawn, a designated bike lane, and two vehicular drive lanes. A traffic study was conducted and is submitted with this proposal. For each of the new lots, vehicular and pedestrian access points are identified in relationship to the proposed roadways.

Neighborhood Meeting Summary:
A neighborhood meeting was held for the ODP. Several people attended the meeting both in-person and virtually, and the tone was that of curiosity and general interest. Most comments related to detention and tie-in to the surrounding infrastructure, and how Mason Street would be aligned in the future. Specific comments related to Mason Street along our property frontage noted a desire for a bicycle and pedestrian friendly street section.

ODP Site Design:
Although no site-specific information is proposed with this ODP, it is noted that that there is a habitat feature located in the center of the site in the north associated with the Dry Creek Drainage. The Ecological Characterization Study suggests that drainage has not been present on the property in a long time as no riparian vegetation is found in the area. Interestingly, the majority of the vegetation that is present on site are upland species.
Any impacts to the habitat shall be addressed at the time of a subsequent PDP submittal for on-site work. A tree inventory, and any needed tree mitigation plans will be provided during the PDP review process.

The ODP is proposing to improve the regional sanitation line and the regional water line. An 8" water line will be installed in Mason Street and connect the existing water lines in Hibdon Court and Hickory Street. A 12" sanitary line will also be installed from north to south along Mason Street. The 12" sanitary line will connect at Hibdon Court and run south and tie into an existing manhole which is in a 20' Utility Easement just east of Lot 2. These sanitary and water line alignments follow the concepts laid out in the City's Mason Street Master Plan.

Phasing:
Regarding the future uses of the property, the intent of the ODP is for the land to be developed as separate proposals and at different times. Currently the timeline and phasing of future development is uncertain.

Comment Response Letter:
A copy of the letter received at Preliminary Design Review in October is submitted along with this first round package. The comment responses reflect those that are specific to this ODP, and the infrastructure package. Any comments related to buildings and site-specific design will be addressed when subsequent PDPs are submitted.

NOTES

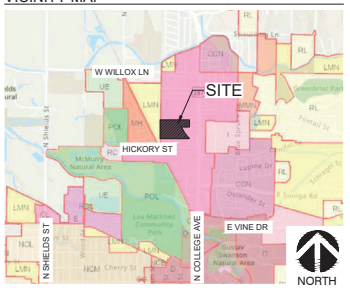
1. THE PURPOSE OF THE OVERALL DEVELOPMENT PLAN IS TO ESTABLISH GENERAL PLANNING AND DEVELOPMENT CONTROL PARAMETERS FOR PROJECTS THAT WILL BE DEVELOPED IN PHASES WITH MULTIPLE SUBMITTALS WHILE ALLOWING SUFFICIENT FLEXIBILITY TO PERMIT DETAILED PLANNING IN SUBSEQUENT SUBMITTALS. APPROVAL OF AN OVERALL DEVELOPMENT PLAN DOES NOT ESTABLISH ANY VESTED RIGHT TO DEVELOP PROPERTY IN ACCORDANCE WITH THE PLAN.
2. THE MASON STREET OVERALL DEVELOPMENT PLAN IS PLANNED TO BE MIXED USE DEVELOPMENT, AND THE PARCELS SHALL CONSIST OF USES ALLOWABLE IN THE COMMERCIAL SERVICE (C-S) ZONE DISTRICT PER THE LAND USE (LUC SEC 4.22). AS CHANGES OCCUR IN THE REQUIREMENTS OF THE OVERALL DEVELOPMENT, IT MAY BE NECESSARY TO MODIFY THE OVERALL DEVELOPMENT PLAN. THE DEPICTIONS ON THIS PLAN ARE BASED UPON THE BEST ESTIMATE OF THE DEVELOPMENT AT THIS TIME. AS CHANGES OCCUR IN THE REQUIREMENTS OF THE OVERALL DEVELOPMENT PLAN, IT MAY BE NECESSARY TO MODIFY THE OVERALL DEVELOPMENT PLAN.
3. FIRE HYDRANTS WILL BE PROVIDED AS REQUIRED BY THE POUDRE FIRE AUTHORITY STANDARDS.
4. BOUNDARY CONNECTIONS SHALL BE IN COMPLIANCE WITH APPLICABLE LAND USE CODE AND LARIMER COUNTY URBAN AREA STREET STANDARDS IN PLACE AT THE TIME OF DEVELOPMENT APPLICATION SUBMITTAL UNLESS MODIFICATIONS AND/OR ENGINEERING VARIANCES ARE APPROVED.
5. ALL DEVELOPMENT MUST COMPLY WITH APPLICABLE STANDARDS CONTAINED IN THE LAND USE CODE ARTICLE 3, CITY CODE CHAPTER 10 AT THE TIME OF APPLICATION FOR A PROJECT DEVELOPMENT PLAN.
6. THIS OVERALL DEVELOPMENT PLAN SHOWS THE GENERAL LOCATION AND APPROXIMATE SIZE OF ALL , HABITATS AND FEATURES WITHIN ITS BOUNDARIES, AND THE ROUGH ESTIMATE OF THE REQUIRED NATURAL AREA BUFFER ZONES. ANY SUBSEQUENT DEVELOPMENT REVIEW APPLICATIONS SHALL BE SUBJECT TO THE REQUIREMENTS OF LAND USE CODE SECTION 3.4.1 AND THE PERFORMANCE STANDARDS OUTLINED THEREIN.
7. PLEASE SEE SECTION 3.4.1 OF THE LAND USE CODE FOR ALLOWABLE USES WITHIN THE NATURAL HABITAT BUFFER ZONES.

SITE DATA

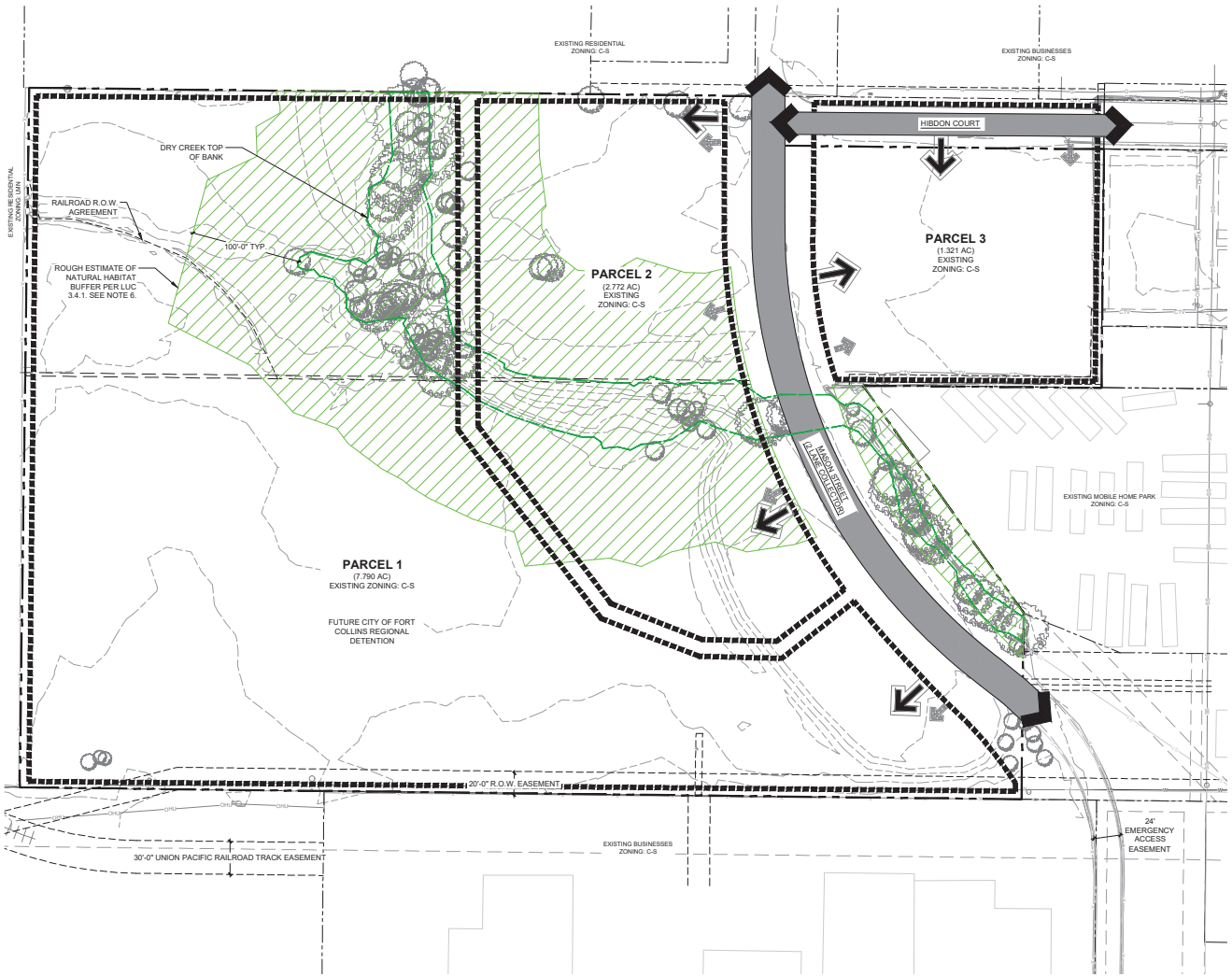
LOT	ZONE DISTRICT	APPROXIMATE GROSS AREA (ACRES)
1	SERVICE COMMERCIAL (C-S)	7.790
2	SERVICE COMMERCIAL (C-S)	2.772
3	SERVICE COMMERCIAL (C-S)	1.321
	TOTAL:	11.88

NOTE: BUSINESS TYPES, HEIGHT AND FLOOR AREA SHALL COMPLY WITH CURRENT ZONING REGULATIONS AT TIME OF DEVELOPMENT. LAND USE ACREAGE MAY CHANGE BASED ON FUTURE PDP SUBMITTALS. OPEN SPACE AREA WILL CONFORM WITH CURRENT LAND USE CODE AND REGULATIONS AT TIME OF PROJECT DEVELOPMENT PLAN SUBMITTAL.

VICINITY MAP



N.T.S.



LEGEND

- ODP BOUNDARY
- PARCEL BOUNDARIES
- EXISTING TREES
- FUTURE PUBLIC STREET
- TOP OF BANK
- ROUGH ESTIMATE OF NATURAL HABITAT BUFFER PER LUC 3.4.1. SEE NOTE 6.
- VEHICULAR ACCESS POINT
- PEDESTRIAN ACCESS POINT

UTILITY LEGEND

- FO = FIBER OPTIC
- G = GAS
- = STORM DRAIN
- SS = SANITARY SEWER
- T = TELEPHONE
- UE = UNDERGROUND ELECTRIC
- W = WATER LINE
- OHU = OVERHEAD UTILITY LINE
- CTV = CABLE TV LINE

UTILITIES SHOWN FOR REFERENCE ONLY

PLANNING CERTIFICATE

APPROVED BY THE DIRECTOR OF COMMUNITY DEVELOPMENT AND NEIGHBORHOOD SERVICES OF THE CITY OF FORT COLLINS, COLORADO ON THIS _____ DAY OF _____, 20__.

DIRECTOR SIGNATURE

OWNER'S CERTIFICATE

THE UNDERSIGNED DOES/DO HEREBY CERTIFY THAT I/WE ARE THE LAWFUL OWNERS OF THE REAL PROPERTY DESCRIBED ON THIS SITE PLAN AND DO HEREBY CERTIFY THAT I/WE ACCEPT THE CONDITIONS AND RESTRICTIONS SET FORTH ON SAID SITE PLAN.

OWNER (SIGNED) Date

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME

THIS _____ DAY OF _____ A.D., 20____ BY

(PRINT NAME)

AS _____

MY COMMISSION EXPIRES: _____

WITNESS MY HAND AND OFFICIAL SEAL.

NOTARY PUBLIC ADDRESS

MASON STREET

ODP SUBMITTAL

FORT COLLINS, CO

PREPARED BY:

ripley design

LANDSCAPE ARCHITECTURE, LAND PLANNING

419 Canyon Ave. Suite 200 Fort Collins, CO 80521
phone 970.224.5828 | fax 970.224.6857 | www.ripleydesigninc.com

LAND PLANNER

RIPLEY DESIGN INC.
Klara Rossouw
419 Canyon Ave. Suite 200
Fort Collins, CO 80521
p. 970.224.5828

OWNER/APPLICANT

NORTH COLLEGE 1311, LLC
262 E. Mountain Ave.
Fort Collins, CO 80524
p. 970.490.2626

ENGINEER

NORTHERN ENGINEERING
Blaine Mathisen
301 N Howes St, Suite 100
Fort Collins, CO 80521
p. 970.221.4158

NORTH SCALE: 1"=50'-0" (0, 25, 50, 100)

ORIGINAL SIZE 24X36

ISSUED

No.	DESCRIPTION	DATE
01	ODP	05/04/2023

REVISIONS

No.	DESCRIPTION	DATE

ODP SITE PLAN

SEAL:

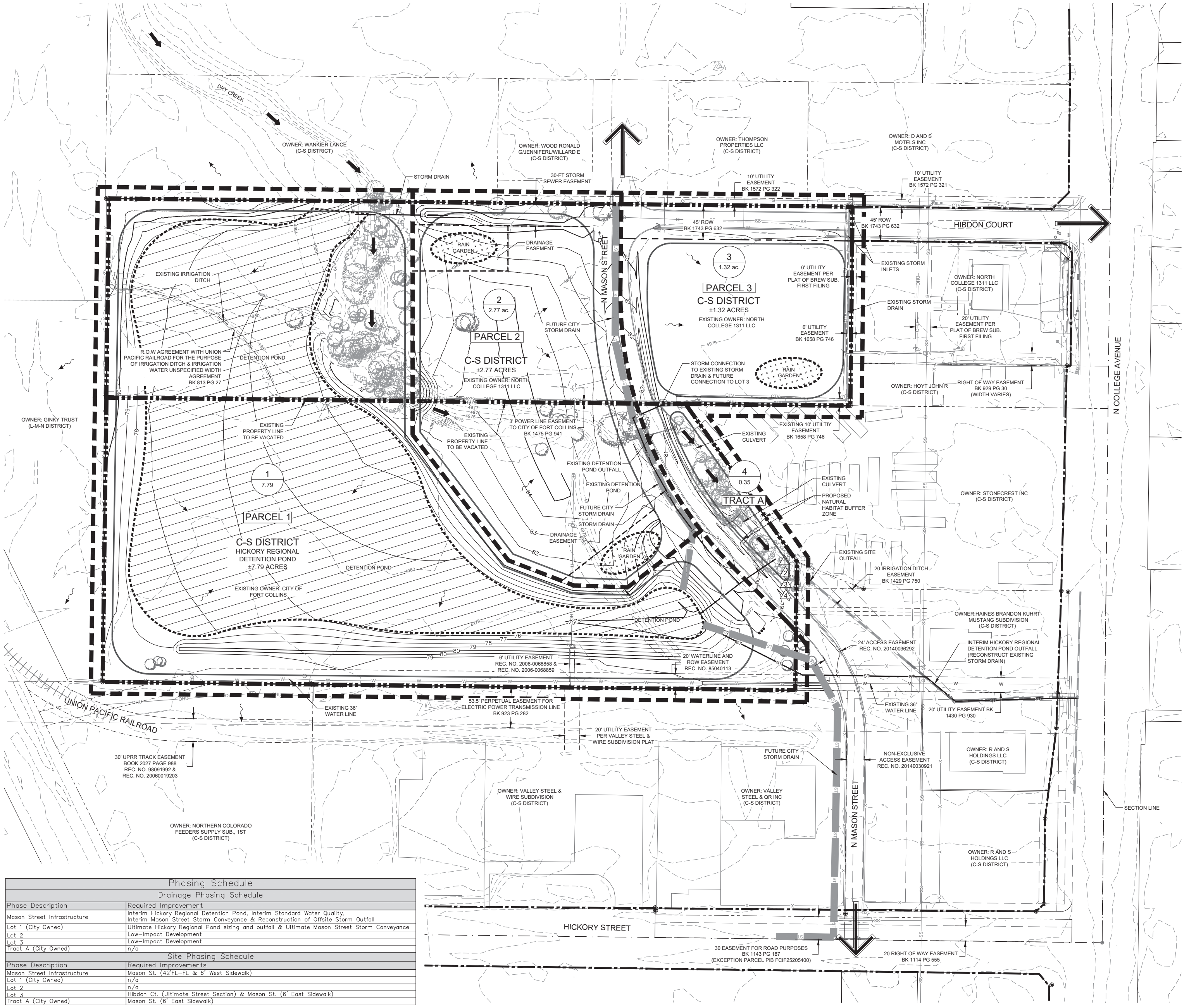
ENTITLEMENT DRAWINGS NOT FOR CONSTRUCTION

PROJECT No.:	R23-008
DRAWN BY:	LO
REVIEWED BY:	KR

DRAWING NUMBER:

1 OF 1

Plotted By: Hailey Jorgensen **Layout:** ODP SITE PLAN **Printed On:** 2/14/2024 4:54 PM **File Name:** ODP SITE PLAN.dwg



Phasing Schedule	
Drainage Phasing Schedule	
Phase Description	Required Improvement
Mason Street Infrastructure	Interim Hickory Regional Detention Pond, Interim Standard Water Quailty, Interim Mason Street Storm Conveyance & Reconstruction of Offsite Storm Outfall
Lot 1 (City Owned)	Ultimate Hickory Regional Pond sizing and outfall & Ultimate Mason Street Storm Conveyance
Lot 2	Low–Impact Development
Lot 3	Low–Impact Development
Tract A (City Owned)	n/a
Site Phasing Schedule	
Phase Description	Required Improvements
Mason Street Infrastructure	Mason St. (42'FL–FL & 6' West Sidewalk)
Lot 1 (City Owned)	n/a
Lot 2	n/a
Lot 3	Hibdon Ct. (Ultimate Street Section) & Mason St. (6' East Sidewalk)
Tract A (City Owned)	Mason St. (6' East Sidewalk)

NORTH

60 0 60 120 180

(IN FEET)
1 INCH = 60 FEET

LEGEND:

PROPERTY BOUNDARY

RIGHT–OF–WAY

*DEVELOPMENT PARCEL BUBBLE (FOR GRAPHICAL PURPOSES ONLY)

PROPOSED NATURAL HABITAT BUFFER ZONE

DRAINAGE BASIN LABEL — BASIN DESIGNATION C; 0.60 ac BASIN AREA (AC)

BASIN DESIGN POINT

DRAINAGE BASIN BOUNDARY

VEHICULAR & BIKE/PED ACCESS POINT

EXISTING DRAINAGE FLOW ARROW (DIRECT FLOW)

EXISTING DRAINAGE FLOW ARROW (OVERLAND FLOW)

NOTES:

1. ALL PROJECT DATA IS ON THE CITY OF FORT COLLINS VERTICAL DATUM; NAVD88. SEE OVERALL DEVELOPMENT PLAN FOR BENCHMARK REFERENCES.
2. ACCESS POINTS SHOWN ON THE ODP ARE APPROXIMATE. EXACT LOCATIONS TO BE DETERMINED DURING THE PDP PROCESS. TWO POINTS OF FIRE ACCESS HAVE BEEN PLANNED TO SERVICE DEVELOPMENT.
3. PLANNING AREA ACREAGE AND BOUNDARIES ARE PRELIMINARY AND SUBJECT TO CHANGE WITH DETAILED PLANNING.
5. PLEASE SEE SECTION 3.4.1 OF THE LAND USE CODE FOR ALLOWABLE USES WITHIN THE NATURAL HABITAT BUFFER ZONE
6. REFER TO ODP AND OVERALL DRAINAGE REPORT FOR ADDITIONAL INFORMATION.

CALL UTILITY NOTIFICATION CENTER OF COLORADO

811 Know what's below. Call before you dig.

CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

REVIEW SET
NOT FOR CONSTRUCTION
02/14/2024

Revisions: No. By: Date:

These drawings are instruments of service provided by Northern Engineering Services, Inc. and are not to be used for any type of construction unless signed and sealed by a Professional Engineer in the employ of Northern Engineering Services, Inc.

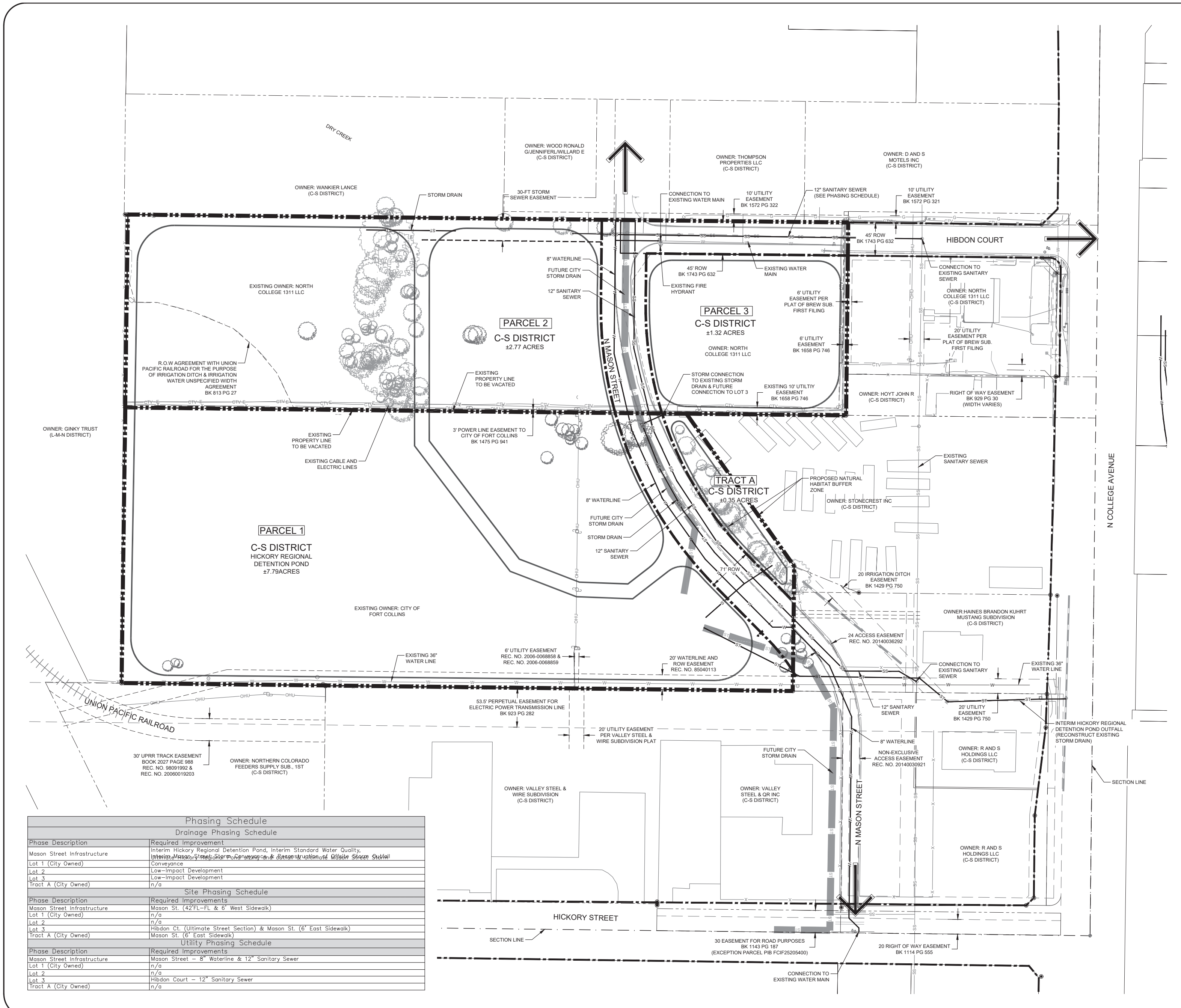
NORTHERN ENGINEERING
SURVEY | MUNICIPAL | LAND DEVELOPMENT
FORT COLLINS | GREELEY 970.221.4158 NORTHERNENGINEERING.COM

PROJECT: 1971-001
DATE: 02/14/2024
DESIGNED BY: M. RUEBEL
SCALE: 1" = 60'
DRAWN BY: M. RUEBEL
P. MANAGER: B.MATHISON

FORT COLLINS RESCUE MISSION

MASTER DRAINAGE PLAN

Sheet
MDP



Phasing Schedule	
Drainage Phasing Schedule	
Phase Description	Required Improvement
Mason Street Infrastructure	Interim Hickory Regional Detention Pond, Interim Standard Water Quailty, Interim Mason Street Storm Conveyance & Reconstruction of Offsite Storm Outfall / Ultimate Hickory Regional Pond sizing and outfall & Ultimate Mason Street Storm
Lot 1 (City Owned)	Conveyance
Lot 2	Low–Impact Development
Lot 3	Low–Impact Development
Tract A (City Owned)	n/a
Site Phasing Schedule	
Phase Description	Required Improvements
Mason Street Infrastructure	Mason St. (42'FL–FL & 6' West Sidewalk)
Lot 1 (City Owned)	n/a
Lot 2	n/a
Lot 3	Hibdon Ct. (Ultimate Street Section) & Mason St. (6' East Sidewalk)
Tract A (City Owned)	Mason St. (6' East Sidewalk)
Utility Phasing Schedule	
Phase Description	Required Improvements
Mason Street Infrastructure	Mason Street – 8" Waterline & 12" Sanitary Sewer
Lot 1 (City Owned)	n/a
Lot 2	n/a
Lot 3	Hibdon Court – 12" Sanitary Sewer
Tract A (City Owned)	n/a

NORTH

60 0 60 120 180

(IN FEET)
1 INCH = 60 FEET

LEGEND:

- PROPERTY BOUNDARY
- RIGHT–OF–WAY
- *DEVELOPMENT PARCEL BUBBLE (FOR GRAPHICAL PURPOSES ONLY)
- EXISTING WATER MAIN
- EXISTING SANITARY SEWER
- PROPOSED WATER MAIN
- PROPOSED SANITARY SEWER
- PROPOSED STORM DRAIN
- PROPOSED NATURAL HABITAT BUFFER ZONE
- VEHICULAR & BIKE/PED ACCESS POINT

NOTES:

1. ALL WATER LINES AND SANITARY SEWER LINES ARE PART OF THE CITY OF FORT COLLINS.
2. PROPOSED SERVICES CONNECTIONS ARE PLANNED TO BE MADE FROM EXISTING UTILITY MAINS. PROPOSED UTILITIES SHOWN WITH THE MASTER UTILITY PLAN ARE CONCEPTUAL IN NATURE AND ARE SUBJECT TO CHANGE WITH SUBSEQUENT PROJECT DEVELOPMENT PLAN APPLICATIONS.
3. PLANNING AREA ACREAGES AND BOUNDARIES ARE PRELIMINARY AND SUBJECT TO CHANGE WITH DETAILED PLANNING.
4. REFER TO ODP AND MASTER DRAINAGE PLAN FOR ADDITIONAL INFORMATION.
5. PLEASE SEE SECTION 3.4.1 OF THE LAND USE CODE FOR ALLOWABLE USES WITHIN THE NATURAL HABITAT BUFFER ZONE

CALL UTILITY NOTIFICATION CENTER OF COLORADO

811
Know what's below. Call before you dig.

CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

Revisions:
No.

REVIEW SET
NOT FOR CONSTRUCTION
01/24/2024

These drawings are instruments of service provided by Northern Engineering Services, Inc. and are not to be used for any type of construction unless signed and sealed by a Professional Engineer in the employ of Northern Engineering Services, Inc.

NORTHERN ENGINEERING
SURVEY | MUNICIPAL | LAND DEVELOPMENT
FORT COLLINS | GREELEY

PROJECT: 1971-001
DATE: 01/24/2024
SCALE: 1" = 60'
DESIGNED BY: M. RUEBEL
DRAWN BY: M. RUEBEL
P. MANAGER: B.MATHISON

NORTH MASON STREET
OVERALL DEVELOPMENT PLAN
MASTER UTILITY PLAN

Sheet
MUP

Technical Memo

PO Box 272150
Fort Collins, CO 80527

11Date: February 17, 2023

To: City of Fort Collins, Planning, Development, and Transportation, Environmental Department

From: Cedar Creek Associates, Inc.

Subject: 1311 North College Ecological Characterization Study

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This Ecological Characterization Study (ECS) Memo is submitted to address City of Fort Collins Land Use Code (Section 3.4.1) requirements to identify habitats and natural resource areas on or within proximity of proposed developments. The Project Site is comprised of parcels 9702100007 and 9702100918 and is situated between Willox Lane and Hickory Street to the north/south. Mason street generally runs along the Project Site's eastern boundary (Figure 1). Ecological characteristics were evaluated on September 13, 2022.

A data review was conducted to gather information and assist in the evaluation of potential natural biological resources within the property. The data review entailed an evaluation of online resources and publications to determine the presence or potential occurrence of important natural and biological resources. This data review included:

- U.S. Fish and Wildlife Service (USFWS) Federally Listed and Proposed Endangered, Threatened, and Candidate Species and Critical Habitat as identified by the USFWS Information, Planning, and Conservation System (IPaC) Official Species List and Critical Habitat Mapper;
- Migratory Bird Treaty Act (MBTA) and Bald and Golden Eagle Protection Act (BGEPA) protected species as identified on the IPAC Trust Resources Report;
- The Colorado Natural Heritage Program database statewide species and natural community tracking list for Larimer County;
- Colorado Parks and Wildlife (CPW) Threatened and Endangered Species List;
- City's Natural Areas Species of Concern list (Restoration Plan 2016-2025, 2016);
- The City's Land Use Code (Article 3, Section 3.4.1);
- The City's Natural Habitat and Features Inventory Map (2000);
- The Colorado Wetland Inventory (CWI);
- USFWS National Wetlands Inventory (NWI); and
- US Natural Resources Conservation Service (NRCS) Web Soil Survey.

The following provides a summary of information required by Fort Collins Land Use Code under 3.4.1 (D) (1) items (a) through (k).

ECOLOGICAL STUDY CHARACTERIZATION CHECKLIST

(a & j – General Ecological Function and Wildlife Use). Dominant vegetation supported in the uplands are non-native pasture species such as smooth brome (*Bromus inermis*) and orchard grass (*Dactylis glomerata*) along with non-native forbs such as alfalfa (*Medicago sative*) and prickly lettuce (*Lactuca serriola*). Non-native species also dominate Dry Creek, which does not exhibit bed and bank, throughout all strata. Dominant trees include the non-native species crack willow (*Salix fragilis*), Siberian elm (*Ulmus pumila*) and white popular (*Populus alba*) while smooth brome is dominant in the herbaceous layer.

Wildlife use of the Project Site is low due to the surrounding urban development, seasonal mowing, and dominance by non-native species. The mature trees located along the drainage channel and SE boundary of the Project Site provides suitable perching, nesting, and foraging habitat for songbirds and raptors. No raptors or nests were observed in trees on the property during the site visit. Future raptor nesting in trees within the Project Site is unlikely due to surrounding human activities and the lack of suitable, adjacent foraging habitats. Wildlife species capable of existing within or using the Project Site are limited to those species that are either habitat generalists capable of existing in modified urban environments or species which use a wide variety of habitats for foraging over a large area.

According to the NCRS Web Soil Survey, the Project Site is comprised mainly of Nunn clay loam 0-1 percent slopes. This is a poorly drained, not highly erosive soil and is not classified as hydric. The topography of the Project Site is generally level with gradual drainage into Dry Creek.

Attached Photos provide representative views of the Project Site.

A winter raptor nesting survey was conducted on December 5th 2022, which was after leaf fall to facilitate observation of nests. There were no raptor nests identified on any trees in or adjacent to the project area.

(b & f – Wetland and Water Delineation) Dry Creek is not considered a wetland by the NWI or CWI. Additionally, an investigation of the area using methodology described in the USACE wetland delineation manual show no dominant wetland species. There is no high-water mark or evidence of flowing water, and no bed or bank is established within the extent of the channel.

(c – Prominent Views) The Project Site does not provide any significant or unobstructed views of natural areas or other important visual features.

(d – Native Vegetation Summary) Native vegetation is limited on the Project Site and is only present in a few small patches of Western wheatgrass (*Pascopyrum smithii*) in the upland pastures and horse tail (*Equisetum sp.*) and showy milkweed (*Asclepias speciosa*) in the drainage channel. Other native woody species observed on the Project site include rose (*Rosa woodsii*), wild licorice (*Glycyrrhiza lepidota*) and narrowleaf willow (Salix exigua). A linear stand of cottonwood (*Populus deltoides*) trees is also present along the SE boundary of the Project Site but is lacking an herbaceous understory due to residential development.

(e – Non-native Vegetation Summary) The trees present along the drainage channel and road provide suitable foraging, perching, and nesting habitat for urban adapted avifauna. They create shade, provide canopy cover, and offer aesthetic and cooling value. The ecological value of these trees is diminished by the proximity to the residences, limited suitable habitat in the surrounding area and lack of a native herbaceous understory.

(g – Sensitive Species Habitat) Showy milkweed is present in the NW portion of the Project Site. This genus (*Asclepias sp.*) serves as the obligate host plant for the Monarch butterfly (*Danaus*

plexippus), a USFWS candidate species.

The project area was also evaluated with regards to potential habitat for state and federal listed threatened and endangered species, and it was determined that no suitable habitat exists for Preble's meadow jumping mouse (*Zapus hudsonius preblei*), Ute ladies'-tresses (*Spiranthes diluvialis*), or Western prairie fringed orchid (*Platanthera praeclara*).

(h – Special Habitat Features) The most prominent ecological feature on the Project Site is Dry Creek bisecting the property, which is considered a Natural Habitat Feature by the City of Fort Collins. In accordance with Section 3.4.1, this feature requires a 100-foot buffer zone. The channel is comprised mainly of non-native vegetation and exhibits no indication of flowing water with no establishment of a stream bed or bank.

(i – Wildlife Movement Corridors) Dry Creek provides some cover and movement potential for highly mobile, urbanized wildlife species such as mule deer (*Odocoileus hemionus*), raccoon (Procyon lotor), and coyote (*Canis latrans*). Lack of flowing water, significant native vegetation or quality surrounding habitat limits the Project Sites potential as a wildlife movement corridor.

(k – Timing Issues) Nesting avifauna should be considered during development planning of the Project Site. Mature trees provide suitable nesting habitat for several species. To the extent possible, tree removal and ground disturbing activities should be limited during the migratory bird nesting season (February 1st to July 31st). Raptor avoidance should also be observed and should follow CPW recommended buffer zones and seasonal restrictions.

(l – Proposed Mitigation) In accordance with Section 3.4.1, a 100-foot buffer zone around the Dry Creek is warranted for the Project Site. Impacts to showy milkweed should be avoided, if possible. However, if they are disturbed, seeding of showy milkweed should be implemented in the Natural Habitat Buffer Zone as mitigation. Additionally, a qualified biologist should survey any trees that are slated for removal during the nesting season (from February 1st to July 31st). These surveys ensure compliance with the Migratory Bird Treaty Act by verifying no active bird nests are disturbed.

Miles
0 0.025 0.05

N W E S

Map Legend

1131 North College Project Boundary

CEDAR CREEK ASSOCIATES, INC.

Coordinate System:
NAD 1983 HARN
StatePlane Colorado FIPS 0501

Sources:
Cedar Creek, City of Fort Collins

1311 North College Project Area

Figure 1: Ecological Characterization Study

Project Name: 1311 North College		**Location:** Fort Collins, Colorado
Photo ID Number: IMG_1063	**Date:** 9/13/22	
Site ID: South Pasture		
Description: Representative of the vegetation community within the mowed pastures.		

Project Name: 1311 North College		**Location:** Fort Collins, Colorado
Photo ID Number: IMG_1072	**Date:** 9/13/22	
Site ID: Cottonwood		
Description: Cottonwood stand along Mason St.		

Project Name: 1311 North College		**Location:** Fort Collins, Colorado
Photo ID Number: IMG_1177	**Date:** 9/13/22	
Site ID: Dry Creek		
Description: Representative of Dry Creek and associated upland vegetation communities.		

Project Name: 1311 North College		**Location:** Fort Collins, Colorado
Photo ID Number: IMG_1179	**Date:** 9/13/22	
Site ID: Dry Creek		
Description: Representative of Dry Creek and associated upland vegetation communities.		

Project Name: 1311 North College		**Location:** Fort Collins, Colorado
Photo ID Number: IMG_1069	**Date:** 9/13/22	
Site ID: North Pasture		
Description: Representative of the north pasture un-mowed vegetation community. Milkweed present.		

Project Name: 1311 North College		**Location:** Fort Collins, Colorado
Photo ID Number: IMG_1070	**Date:** 9/13/22	
Site ID: North Pasture 01		
Description: Representative of the north pasture non-mowed vegetation community. Wild licorice present.		

Project Name: 1311 North College		**Location:** Fort Collins, Colorado
Photo ID Number: IMG_1176	**Date:** 9/13/22	
Site ID: Dry Creek		
Description: Representative of misuse within Dry Creek.		

Project Name: 1311 North College		**Location:** Fort Collins, Colorado
Photo ID Number: 1311 N College12-59-00	**Date:** 8/17/22	
Site ID: Dry Creek		
Description: Dry Creek along the eastern boundary		

North College 1311
Overall Development Plan
Traffic Impact Study

1st Submittal Date: May 24, 2023

Updated: October 11, 2023

Submitted To:
North College 1311, LLC
262 E. Mountain Avenue
Fort Collins, CO 80524

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Denver, CO 80203

FOX TUTTLE

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NORTH COLLEGE 1311 ODP

TRAFFIC IMPACT STUDY

1.0 Introduction

The Fox Tuttle Transportation Group prepared this traffic impact study for the North College 1311 Overall Development Plan (ODP), which includes three properties along Mason Street, between Hickory Street and Hibdon Court. The two properties in the southwest corner of Mason Street and Hibdon Court is proposed to include a new Fort Collins Rescue Mission campus which will include a day-use area and an overnight shelter area to serve and aid men that are currently experiencing homelessness. This portion of the ODP was included in a previous traffic impact study and is the baseline for this current traffic study. The third property is located in the southeast corner of Mason Street and Hibdon Court and is planned to be developed in the future with a facility that complements the Rescue Mission and provides support for the community. **Figure 1** includes a vicinity map for the proposed project.

The purpose of this study is to assist in identifying potential traffic impacts within the study area as a result of this project. The traffic study addresses existing, short-term (Year 2025), and long-term (Year 2045) peak hour intersection conditions in the study area with and without the project generated traffic. The information contained in this study is anticipated to be used by City of Fort Collins staff to identify any intersection or roadway deficiencies and potential improvements for the short-term future conditions. This study focused on the weekday AM and PM peak hours which are typically the highest traffic volumes for the adjacent roadway network.

The traffic impact study is consistent with the requirements of the City of Fort Collins' standards set forth in Chapter 4 of the *Larimer County Urban Area Street Standards* (revised 2019). A copy of the approved Transportation Impact Study Base Assumptions Form is attached in the **Appendix** for reference.

2.0 Project Description

For the west two lots, the Fort Collins Rescue Mission Project proposes to construct a new 43,000 square foot building with up to 200 beds for people experiencing homelessness and the shelter will also include restrooms, showers, living and dining areas, library, meeting rooms, kitchen, donation storage, laundry rooms, business offices, and outdoor space. The facility also plans to include administrative offices for staff and volunteers. It is understood the shelter will be open 24 hours per day, seven (7) days a week to provide services to those in need.

The east lot is approximately 1.29± acres and the exact land use that will be constructed on this site. There is potential for a community garden, multi-family dwelling units, day care center, recreational uses, food catering services, music/arts studio, or other complimentary services for the Rescue Mission. For the purpose of this traffic study, it was assumed that a 10,000 square foot day care facility would be constructed since it was estimated to create the highest level of traffic of the permitted uses.

Currently, the sites are vacant and the adjacent land uses include a couple single-family residents, mobile home park, lodging, small retail, and light industrial. The North College 1311 ODP location is in close proximity to services across College Avenue including the Food Bank of Larimer County, Larimer County Department of Human Services, and the Murphy Center for Hope.

Access to the Rescue Mission site is planned via two new full-movement, side-street stop-controlled access points on Mason Street. The north access will become the west leg to the existing intersection of Mason Street at Hibdon Court. The south access on Mason Street is proposed to be approximately 650 feet south of Hibdon Court. For the east site, a site plan has not been developed therefore one full movement access was assumed to be located on Hibdon Court. **Figure 2** includes a conceptual site plan and access for the project.

3.0 Study Considerations

3.1 Data Collection

Intersection turning movement volumes were collected by Idax Data Solutions in early December 2022 at four (4) existing intersections during the weekday AM and PM peak hours. Daily (24-hour) traffic volumes were gathered on Hibdon Court east of Mason Street and on Mason Street south of Hibdon Court. Historic daily volumes and future forecasts along College Avenue (US 287) within the vicinity of the project site were gathered from the CDOT's Transportation Data Management System (TDMS).

The existing traffic volumes are illustrated on **Figure 3**. The existing intersection geometry and traffic control are also shown on this figure. Count data sheets are provided in the **Appendix**.

3.2 Evaluation Methodology

The traffic operations analysis addressed the unsignalized intersection operations using the procedures and methodologies set forth by the *Highway Capacity Manual (HCM)* [1]. Existing Peak Hour Factor (PHF) were applied to the intersections for all evaluation scenarios. Study intersections were assessed using Synchro (v11) software.

3.3 Level of Service Definitions

A level of service analysis was conducted to determine the existing and future performance of the study intersections and to determine the most appropriate traffic control device and need for auxiliary lanes.

To measure and describe the operational status of the study intersections, transportation engineers and planners commonly use a grading system referred to as "Level of Service" (LOS) that is defined by the HCM. LOS characterizes the operational conditions of an intersection's traffic flow, ranging from LOS A (indicating very good, free flow operations) and LOS F (indicating congested and sometimes oversaturated conditions). These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with traveling through the intersections. The intersection LOS is represented as a delay in seconds per vehicle for the intersection as a whole and for each turning movement. A more detailed discussion of the LOS methodology is contained in the **Appendix** for reference.

The Fort Collins standards within the *Larimer County Urban Area Street Standards (LUCASS)* consider LOS A through D to be good for the overall intersection operations with LOS E or better as acceptable in peak hours. For individual movements, LOS E and F may be acceptable for left-turns or minor streets. Specific standards are provided in Table 4-3 in *LUCASS* and as shown to the right.

Table 4-3
Fort Collins (GMA and City Limits)
Motor Vehicle LOS Standards (Intersections)

Intersection type	Land Use (from structure plan)			
		Other corridors within:		
	Commercial corridors	Mixed use districts	Low density mixed use residential	All other areas
Signalized intersections (overall)	D	E*	D	D
Any Leg	E	E	D	E
Any Movement	E	E	D	E
Stop sign control (arterial/collector or local—any approach leg)	N/A	F**	F**	E
Stop sign control (arterial/arterial, arterial/collector, or collector/local—any approach leg)	N/A	C	C	C

* mitigating measures required
** considered normal in an urban environment

[1] Highway Capacity Manual, Highway Research Board Special Report 209, Transportation Research Board, National Research Council, 6th Edition (2016).

4.0 Existing Conditions

4.1 Roadways

The study area boundaries are based on the amount of traffic to be generated by the project and potential impact to the existing roadway network. The study area was defined in coordination with the City of Fort Collins staff and is outlined in the *Transportation Impact Study Base Assumptions Form* (located in the **Appendix**). The primary public roadways that serve the project site are discussed in the following text and illustrated on **Figure 3**.

North College Avenue (US 287) is a four-lane arterial that provides north-south connectivity through the entirety of Fort Collins and connects to several communities within Northern Colorado and Southern Wyoming. This section of North College Avenue is part of an interstate commerce truck route and is subject to access management documents developed by the Colorado Department of Transportation, Larimer County, and the City of Fort Collins. The roadway provides two (2) through lanes in each direction, on-street bike lanes, a landscaped parkway, and 8-foot sidewalks. Access control is provided via a raised, landscaped median. The posted speed limit is 40 mph within the vicinity of the project site. North College Avenue currently serves approximately 25,100 vpd north of Hibdon Court (Year 2021, CDOT). North College Avenue will provide the primary north/south access for the proposed Fort Collins Rescue Mission.

Hickory Street is a collector street that travels west of North College and provides access to the Hickory Village neighborhood, light industrial businesses, and recreational areas. At North College Avenue, Hickory Street is the western leg of an offset intersection with Conifer Street. In its current configuration, Hickory Street provides a single through lane per direction, on-street parking, and attached sidewalks. Near the Mason Street intersection, this roadway has an approximately 56-foot-wide paved section. The posted speed limit is 25 mph. Although Hickory Street currently terminates at South Gold Park, the City's *Master Street Plan* shows Hickory Street extending west to Shield Street.

Mason Street is a local roadway with a paved 22-foot section, within the study area, that provides rear-lot access to several properties fronting North College Avenue. This portion of Mason Street is approximately 0.3-mile in length starting north of Hickory Street and does not connect to Midtown. The roadway is located within a permanent public access easement and provides a single travel lane per direction. Currently, there is no curb and gutter nor sidewalk. There is no posted speed limit, but assumed to be 25 miles per hour, a typical speed for local streets. Mason Street currently serves approximately 140 vpd south of Hibdon Court (Year 2022, Count).

Per the City of Fort Collins' *Master Street Plan* and comments provided by City staff in the *Preliminary Development Review Document*, Mason Street is classified as a "Collector – With

Parking". This street classification includes one (1) travel lane per direction, on-street bicycle lanes, on-street parking, a landscaped parkway, and 5-foot sidewalks.

Hibdon Court is a local street that connects Mason Street and North College Avenue. Starting at North College Avenue and extending west approximately 300', Hibdon Court is a 36-foot-wide roadway with curb and gutter and accommodates a single travel lane in each direction. Pedestrian connectivity is provided via a 5-foot attached sidewalk on the south side of the road. Continuing west to Mason Street, Hibdon Court transitions to a 22-foot-wide roadway with no curb and gutter nor sidewalks. There are no designated on-street bicycle lanes. There is no posted speed limit, however, it is assumed to be 25 miles per hour, a typical speed for local streets. Hibdon Court currently serves approximately 260 vpd east of Mason Street (Year 2022, Count).

4.2 Intersections

The study area includes four intersections that are listed below with the current traffic control and were analyzed for existing and future background year traffic operations:

1. Mason Street at Hibdon Court (side-street stop-controlled)
2. North College Avenue at Hibdon Court (side-street stop-controlled)
3. Mason Street at Hickory Street (side-street stop-controlled)
4. North College Avenue at Hickory Street (signalized)

The existing lane configuration at each of the study locations is illustrated on **Figure 3**.

4.3 Pedestrian and Bicycle Facilities

The City of Fort Collins adheres to the *Larimer County Urban Area Street Standards (LUCASS)* and the roadway cross sections defined therein. All of the study roadways are identified as "complete streets" and are anticipated to provide amenities promoting and encouraging multimodal activity while balancing with the vehicular needs.

North College Avenue provides on-street bicycle lanes and 8-foot sidewalk on both sides of the roadway. These improvements extend along North College Avenue, connecting Old Town Fort Collins to the city limits at Highway 1. These facilities serve as the multimodal backbone for North Fort Collins and provide access to various commercial, residential, recreational, and community services. Hickory Street also provides defined multimodal connectivity though on-street bicycle lanes and variable width, attached sidewalks.

There is currently a 5-foot sidewalk on Hibdon Court on the south side for approximately 300 feet west of North College Avenue. The remaining segment of Hibdon Court does not have sidewalks. As is typical on local streets, on-street bike lanes are not striped; however, bicyclists are permitted to ride with traffic.

In its current configuration, Mason Street does not have dedicated multimodal improvements.

4.4 Transit

The City of Fort Collins has a dedicated transit service, Transfort, that serves the community. Transfort's primary hub is the Downtown Transit Center (DTC), located on the east side of Mason Street between Maple Street and Laporte Avenue. For a fee, community members can access various destinations throughout Fort Collins from the DTC. Two routes, #8 and #81, serve Northern Fort Collins and the project area

Routes #8 and #81 utilize the same loop, but travel in opposite directions. Both routes utilize the same transit stops, including stops located on the far sides of the Hibdon Court intersection which is anticipated to be useful for future patrons of the Fort Collins Rescue Mission.

4.5 Existing Intersection Capacity Analysis

The existing volumes, lane configuration, and traffic control are illustrated on **Figure 3**. The results of the LOS calculations for the study intersections are summarized in **Table 1**. The 95th percentile queues are summarized in **Table 2**. The intersection level of service worksheets and queue reports are attached in the **Appendix**. **All study intersections are currently operating at LOS A in the AM and PM peak hours, with all movements and approaches operating at LOS D or better.** The 95th percentile queues were calculated to be maintained within the existing storage lengths at all of the study intersections.

5.0 Future Traffic Conditions

5.1 Annual Growth Factor and Future Volume Methodology

In order to forecast the future peak hour traffic volumes, background traffic growth assumptions were based on the Colorado Department of Transportation's (CDOT) 20-year factors and discussed with City of Fort Collins staff. Based on the CDOT forecasts on North College Avenue, it was assumed there will be an annual growth rate of 1.0% on this arterial. Based on discussions with the City of Fort Collins, there are no known developments occurring within the study area to be included in the growth along Mason Street or Hibdon Court. Therefore, 1.0% annual growth was assumed along the local roadways for consistency with the growth on North College Avenue.

Using these assumptions, the Year 2025 background traffic was estimated and summarized on **Figure 4** and the Year 2045 background traffic is shown on **Figure 5.**

5.2 Future Roadway Assumptions

It was assumed that the study roadways will remain the same as existing in the future. Although Mason Street is defined as a Collector roadway in the future per the City's *Master Street Plan*, the future analyses assumed the existing lane configuration and traffic control at the study intersections due to the low volumes and unknown development potential beyond the current proposed for North College 1311 ODP. The currently proposed changes to the City's *Land Use Code* may downgrade Mason Street to a local street within the study area. The traffic analysis assumed that Mason Street would include one travel lane per direction, which will be the case regardless of the roadway classification (local or collector).

5.3 Year 2025 Background Intersection Capacity Analysis

The study area intersections were evaluated to determine baseline operations for the Year 2025 background scenario and to identify any capacity constraints associated with background traffic. The background volumes, lane configuration, and traffic control are illustrated on **Figure 4**.

The level of service criteria discussed previously was applied to the study area intersections to determine the impacts with the short-term background volumes. The results of the LOS calculations for the intersections are summarized in **Table 1.** The intersection level of service worksheets and queue reports are attached in the **Appendix**.

The study intersections were shown to operate similarly to the existing conditions with LOS A overall in the AM and PM peak hours in Year 2025 Background, as well as all of the movements and approaches estimated to continue to operate at LOS D or better. The 95th percentile queues for 2025 Background traffic also remain essentially unchanged as identified in **Table 2** and continue to be maintained within the existing storage lengths.

5.4 Year 2045 Background Intersection Capacity Analysis

The study area intersections were evaluated to determine baseline operations for the Year 2045 background scenario and to identify any capacity constraints associated with background traffic. The background volumes, lane configuration, and traffic control are illustrated on **Figure 5**.

The level of service criteria discussed previously was applied to the study area intersections to determine the impacts with the short-term background volumes. The results of the LOS calculations for the intersections are summarized in **Table 1.** The intersection level of service worksheets and queue reports are attached in the **Appendix**.

The study intersections were estimated to continue to operate overall at LOS A in both peak hours with the majority of movements operating at LOS D or better. The 95th percentile queues for 2045 Background were calculated to remain within the existing storage lengths as shown in **Table 2**.

At the intersection of **North College Avenue and Hibdon Court**, it was estimated that the eastbound approach will begin to operate at LOS E in the AM peak hour. The 95th percentile queue was calculated to be 15 feet (one vehicle or less). *LUCASS* permits this level of delay on side-streets along arterial roadways. Based on the low volume on the side-street and minimal queuing, no mitigation measure is recommended. This is a typical situation along major arterials during peak periods.

6.0 Proposed North College 1311 ODP Project

6.1 Rescue Mission (West Lots) Trip Generation

With no comparable trip generation category within Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, local data from a comparable shelter was gathered and utilized to estimate the number of vehicular trips associated with the proposed Fort Collins Rescue Mission. Denver Rescue Mission provided detailed information on the staffing, operational needs, and anticipated number of people served on a daily basis for the new shelter. The new shelter will be open 24 hours per day, seven (7) days a week, year-round. The summary of future operations is listed below:

- **Employees – 34 people daily**
    - Three (3) staffing shifts:
        - Daytime Shift (8:30 am to 4:30 pm): 16 employees
        - Swing Shift (2:00 pm to 10:30 pm): 11 employees
        - Overnight shift (10:00 pm to 8:30 am): 7 employees
    - Majority of staff drives to the facility.

  - Once on site, staff cannot leave the site.
  - Based on the peak commuting hours, the Daytime Shift and the Overnight Shift will contribute to the AM and PM peak hour trips.

- **Interns/Volunteers – 27 people daily**
  - Similar work shifts to employees.
    - Daytime Shift (8:30 am to 4:30 pm): 2 interns, 12 volunteers
    - Swing Shift (2:00 pm to 10:30 pm): 0 interns, 13 volunteers
    - Overnight shift (10:00 pm to 8:30 am): 0 interns, 0 volunteers
  - Majority arriving to the site via driving a vehicle.
  - Once on site, interns and volunteers cannot leave the site.

- **Visitors – 10 people daily**
  - This is community members who visit the site but are not users of the facility.
  - Typically arrive during the Daytime shift and not within the AM or PM peak hours.
  - Majority of visitors arrive by vehicle.

- **Deliveries – 2 per day**
  - These deliveries support the facility's operational needs with supplies and donations.
  - Typically arrive during the Daytime shift but not within the AM or PM peak hours.
  - All deliveries arrive by vehicle.

- **Partner Organization Visitors – up to 5 vehicles per day**
  - These are people visiting the site to provide services for patrons.
  - Typically arrive during the Daytime shift but not within the AM or PM peak hours.
  - All Partner Organization Visitors arrive by vehicle.

- **Patrons (Users of the Facility) – typically 100 per day and 40 per night**
  - These are the people who are served by the shelter as they are currently experiencing homelessness.
  - Typically arrive by walking, biking, or transit. It is rare for a patron to arrive by vehicle.
  - Patrons arrive and depart at any time during the day or night, typically before and after a meal. Some stay for a short period of time while others remain for days.

The trip generation estimates are summarized in **Table 3**. **It is estimated that the shelter facility will generate 156 new trips per day, with 35 trips occurring in the AM peak hour and 26 trips occurring in the PM peak hour.**

Table 3. Rescue Mission Trip Generation Summary

Users of Facility	Quantity	Unit	Average Daily Trips			AM Peak Hour Trips			PM Peak Hour Trips		
			Total	In	Out	Total	In	Out	Total	In	Out
Employees	34	People	68	34	34	23	16	7	16	0	16
Volunteers/Interns	27	People	54	27	27	12	8	4	10	10	0
Visitors*	10	People	20	10	10	0	0	0	0	0	0
Deliveries*	2	Veh.	4	2	2	0	0	0	0	0	0
Partner Organization Visitors*	5	Veh.	10	5	5	0	0	0	0	0	0
Patrons *	100	People	0	0	0	0	0	0	0	0	0
			156	***78***	***78***	***35***	***24***	***11***	***26***	***10***	***16***

Source: Data from Denver Rescue Mission facilities of similar size and operations, as well as expected operations for new facilitie

** Trips not included as they do not occur during the Peak Hours*

6.2 East Lot Trip Generation

A trip generation estimate was performed to determine the traffic characteristics of the assumed day care center on the East Lot of the North College 1311 ODP. The trip rates contained in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*[2] were applied to estimate the traffic associated with the potential day care center. **Table 4** provides the detailed trip generation for the East Lot.

Table 4. East Lot Trip Generation Summary

Land Use	Size	Unit	Average Daily Trips				AM Peak Hour Trips				PM Peak Hour Trips			
			Rate	Total	In	Out	Rate	Total	In	Out	Rate	Total	In	Out
ITE#565: Day Care Center	10	KSF	47.62	476	238	238	11.00	110	58	52	11.12	111	52	59

Source: ITE Trip Generation 11th Edition, 2021.

2 *Trip Generation Manual, 11th Edition*, Institute of Transportation Engineers, 2021.

The proposed project is expected to experience mostly new trips, also known as 'primary trips', as discussed below:

> Primary Trips. These trips are made specifically to visit the site and are considered "new" trips. Primary trips would not have been made if the proposed project did not exist. Therefore, this is the only trip type that increases the total number of trips made on a regional basis.

There is potential for families to walk, bike, or use transit to access the future day care center; however, for conservative purposes, a non-auto reduction was not taken. **It was estimated that a day care center in the East Lot will generate approximately 476 daily vehicle trips with 110 vehicle trips in the AM peak hour and 111 vehicle trips in the PM peak hour.**

6.3 Trip Distribution and Assignment

The estimated trip volumes presented in **Table 3** and **Table 4** were distributed onto the study area roadway network based on existing traffic characteristics of the area, existing and future land uses, and the relationship of this project to the greater Fort Collins community. Two distribution scenarios were assumed: one for the Rescue Mission and the other for the day care center assumed in the East Lot.

Based on information provided by Denver Rescue Mission, it was assumed that 25% of vehicular traffic will come from North College Avenue and the remaining 75% will come from South College Avenue for the shelter. For the East Lot, it was assumed 35% will come from North College Avenue, 5% will come from West Hickory Street, and the remaining 60% will come from South College Avenue.

The trip distribution through the study intersections for the shelter is shown on **Figure 6A** and the distribution for the day care center is shown on **Figure 6B.** The projected site traffic was assigned to the study area roadway network and proposed accesses for the weekday AM and PM peak hour periods. The site generated volumes for the shelter are shown on **Figure 7A** and the site generated volumes for the day care center are shown on **Figure 7B**.

7.0 Future Traffic Conditions with Site Development

This section projects the future traffic conditions with the completion of the proposed Fort Collins Rescue Mission project and the development of the East Lot, assuming a day care center.

7.1 Year 2025 Background + Project Intersection Capacity Analysis

For the purpose of this traffic study for the North College 1311 ODP, it was assumed the Rescue Mission and day care center would be constructed and in use by Year 2025. The site-generated volumes were added to the projected Year 2025 background volumes and are illustrated on **Figure 8**. The results of the LOS calculations for the intersections are summarized on **Table 1.** The 95th percentile queues are

summarized in **Table 2**. The intersection level of service worksheets and queue reports are attached in the **Appendix**.

The project trips have little to no impact on the operations of the study intersections when compared to the background scenario. All intersections were calculated to continue to operate at a LOS A overall in the AM and PM peak hours. The 95th percentile queues were calculated to be maintained within the existing storage lengths at all of the study intersections.

At the intersection of **North College Avenue and Hibdon Court**, it was estimated that the eastbound approach will begin to operate at LOS E in the AM peak hour due to slightly increased volume. The 95th percentile queue was calculated to be 25 feet (one vehicle or less). *LUCASS* permits this level of delay on side-streets along arterial roadways. Based on the low volume on the side-street and minimal queuing, no mitigation measure is recommended. This is a typical situation along major arterials during peak periods.

7.2 Year 2045 Background + Project Intersection Capacity Analysis

The site-generated volumes were added to the projected Year 2045 background volumes and are illustrated on **Figure 9**. The results of the LOS calculations for the intersections are summarized in **Table 1.** The 95th percentile queues are summarized in **Table 2**. The intersection level of service worksheets and queue reports are attached in the **Appendix**.

The project trips have little to no impact on the operations of the study intersections when compared to the background scenario. The majority of the study intersections were calculated to continue to operate at a LOS A overall in the AM and PM peak hours. The 95th percentile queues were calculated to be maintained within the existing storage lengths at all of the study intersections.

At the intersection of **North College Avenue and Hibdon Court**, the overall performance was estimated to change to LOS B in the PM peak hour with all movements operating at LOS D or better. During the AM peak hour, it was estimated that the eastbound approach will begin to operate at LOS F due to slightly increased volume on Hibdon Court and the increase in volume on North College Avenue. The 95th percentile queue was calculated to be 45 feet (two vehicles or less). *LUCASS* permits this level of delay on side-streets along arterial roadways. Based on the low volume on the side-street and minimal queuing, no mitigation measure is recommended. This is a typical situation along major arterials during peak periods.

8.0 Future Multi-Modal Trips and Facilities

In discussions with the Denver Rescue Mission, it is anticipated that all users of the shelter will be arriving and departing to/from the site by walking, biking, or using transit. It is likely they will utilize the existing multi-modal facilities through Fort Collins. The proposed northern shelter will add 200 beds for men currently experiencing homelessness and the numbers of patrons at one time can vary greatly by time of day, day of week, weather, or season of the year. It is challenging to calculate the number of multi-modal trips and the pattern at which they would occur. However, it is anticipated that the sidewalks, bike lanes, trails, and bus routes connected to the study area will have an increase in people utilizing them.

The City of Fort Collins endorses "complete streets" for all roadway classifications, which are streets that serve both vehicular and multi-modal traffic. With Hibdon Court being defined as a local street and Mason Street being currently defined as a collector level street, both streets will be able to accommodate and provide multimodal use. Hibdon Court will need the south sidewalk to be continued to Mason Street. Mason Street will need a sidewalk on at least one side of the roadway to connect to existing sidewalks; however, there are portions of Mason Street that are adjacent to other property owners that are not currently developing. If the Hibdon Court sidewalk is completed, then at a minimum people who walk, bike, or use transit can easily connect between North College Avenue and the proposed shelter.

It is our understanding that the City's *Municipal Code* obligates the owner of a parcel to construct local street improvements adjacent to the parcel's frontage at the time of development. With the new Fort Collins Rescue Mission project, Mason Street will likely need to be upgraded along the property frontage. The City's *Master Street Plan* currently would require Mason Street to be constructed as a collector, however, this traffic study indicates the projected volumes can be accommodated with a local street cross-section.

LCUASS does not provide functional parameters for Fort Collins but includes parameters for Loveland, which were used for comparison purposes. The standards state that "Major Collectors" are intended to serve between 3,000 and 7,000 vpd. Existing counts on Mason Street, south of Hibdon Court, indicated there are approximately 140 vpd. With background growth and the proposed project, the daily vehicle volume was calculated to increase to 525 vpd. The estimated future volumes on Mason Street are significantly lower than the collector volume threshold; therefore, the city may consider changing the roadway classification to "local" for this segment of Mason Street. To reach the bottom of the collector volume range, other properties on Mason Street would have to redevelop and generate traffic. For informational purposes, this would be a minimum of 265 single-family detached homes or 370 multi-family units (market-rate) or 37,000 square feet of commercial retail.

9.0 Pedestrian LOS

The pedestrian LOS is based on five (5) criteria: directness, continuity, street crossings, visual interest and amenity, and security as outlined in the *Fort Collins Pedestrian Plan*[3]. The City's plan describes the categories as follows:

- **Directness** is the measurement of walking trip length and how well the environment provides direct pedestrian connections to destinations such as transit stops, schools, parks, commercial areas, or activity areas.

- **Continuity** is the measurement of the completeness of the sidewalk system by looking at the physical consistency, type of sidewalk, and visual connection from block to block. This category also evaluates if the pedestrian facility meets the current design standards.

- **Street Crossings** is the evaluation of safe crossings that encourages people to walk. There are four (4) street crossing types that are based on traffic control and roadway classification (minor or major). Street crossing LOS is based on pedestrian exposure and design elements that increase awareness of pedestrian presence, including number of lanes, crosswalk markings, signal indication, lighting level, pedestrian signal indication, pedestrian character, sight distance, and corner ramps.

- **Visual Interest and Amenity** considers the attractiveness and features of the pedestrian system and compatibility with local architecture.

- **Security** is the evaluation of a pedestrian's perspective of security with visual sight lines, separation from vehicles, and lighting level.

Each of the areas was evaluated for the study area and the LOS for each is discussed on the following pages.

DIRECTNESS – LOS B

The directness LOS is based on six (6) destinations anticipated to be visited by patrons of the proposed project. Only one (1) of the listed destinations is within the recommended 0.25-mile radius, which is the southbound bus stop on College Road. The remaining destinations are within 0.7-miles in actual walking distance. **Table 5** contains the actual walking distance, minimum distance, comparison ratios, and LOS for

[3] *Fort Collins Pedestrian Plan*, https://www.fcgov.com/fcmoves/files/ped-plan.pdf?1592323966, 2011.

each destination as measured from the intersection of Mason Street and Hibdon Court. The LOS letter grade was determined from information provided in Table P.1 of the *Fort Collins Pedestrian Plan*.

Table 5. Directness Level-of-Service

Destination	Actual Distance	Minimum Distance	Ratio	LOS
Bus Stop - Northbound College Road	1,797 ft. (0.45 mi)	1,236 ft. (0.23 mi)	1.45	C
Bus Stop - Southbound College Road	1,203 ft. (0.23 mi)	1,203 ft. (0.23 mi)	1.00	A
Grocery - King Soopers	3,247 ft. (0.61 mi)	3,376 ft. (0.64 mi)	0.96	A
Food Bank of Larimer County	3,700 ft. (0.70 mi)	2,407 ft. (0.46 mi)	1.54	C
Larimer County Department of Human Services	3,371 ft. (0.64 mi)	2,208 ft. (0.42 mi)	1.53	C
Murphy Center for Hope	3,329 ft. (0.63 mi)	2,821 ft. (0.53 mi)	1.18	A
Average	***2,775 ft. (0.53 mi)***	***2,209 ft. (0.42 mi)***	***1.26***	***B***

CONTINUITY – LOS D

In the study area, there are quality sidewalks on some of the streets. Unfortunately, neither of the adjacent streets, Mason Street and Hibdon Court, have sidewalks currently. Per the City standards, LOS D reflects areas where sidewalks are not provided on both sides of the street or there are breaches in the system. Therefore, the continuity of the study area is considered LOS D.

STREET CROSSINGS (SIGNALIZED) – LOS C

There are two (2) signalized intersections in the study area: North College Road at Hickory Court/Conifer Street and North College Road at Willox Lane. Both intersections include curb ramps, colored crosswalks, pedestrian push buttons and signals, pedestrian and roadway level lighting, and good sight distance.

At both intersections, crossing North College Road requires pedestrians to walk across six (6) lanes including a wide median and bike lanes. Therefore, both signalized intersections are categorized were determined to be LOS C for street crossings due to the number of lanes.

VISUAL INTEREST AND AMENITY – LOS D

Although some of the neighboring streets could be classified as a LOS B others are classified as LOS D. The lowest level of service was selected for this category.

North College Road within the study area is classified as LOS B due to generous sidewalks, landscaping, street furniture, and lighting. Hickory Street is classified as LOS C since the sidewalks are functional but

there is little to no visual interest or amenities. Mason Street and Hibdon Court are classified as LOS D since there are limited or no pedestrian facilities. These adjacent roadways have no visual interest for amenities for pedestrians and there is a lack of comfort.

SECURITY - LOS E

The streets adjacent to the project side, Mason Street and Hibdon Court, have a low level of pedestrian security. The majority of these streets do not have sidewalks which does not create separation between pedestrians and vehicles. There is minimal lighting and large recreational vehicles were observed to be parked along the limited portions of sidewalk along Hibdon Court. Additionally, Mason Street contains breaches in pedestrian visibility due to horizontal curvature and fencing.

SUMMARY

In summary, the existing pedestrian facilities meet some of the minimum LOS by category while others are not met, as shown on **Table 6**.

Table 6. Pedestrian Level-of-Service Summary

	Directness	Continuity	Street Crossing	Visual Interest and Amenity	Security
Minimum LOS Threshold	C	C	C	C	C
Existing Facilities	B	D	C	D	E
Met?	***Yes***	***No***	***Yes***	***No***	***No***

The North College 1311 ODP project plans to construct multimodal facilities adjacent to the project site, which is anticipated to improve the pedestrian LOS. As Hibdon Court's continuity, visual interest, and security improve with the site completion, it will provide a direct pedestrian route to North College Road. It should be noted that Mason Street will not meet the minimum LOS thresholds until properties south of the project properties are redeveloped to include upgraded multimodal facilities.

10.0 Conclusion

The North College 1311 ODP includes three properties along Mason Street between Hickory Street and Hibdon Court. The two properties in the southwest corner of Mason Street and Hibdon Court is proposed to include a new Fort Collins Rescue Mission to provide people experiencing homelessness with basic needs and resources to enter permanent housing and self-sufficiency. It is understood that there will be 200 beds and the shelter will also include restrooms, showers, living and dining areas, library, meeting

rooms, kitchen, donation storage, laundry rooms, business offices, and outdoor space. The facility also plans to include administrative offices for staff and volunteers. Access to the Rescue Mission is planned via two full movement, side-street stop-controlled intersections on Mason Street.

The third property is located in the southeast corner of Mason Street and Hibdon Court and is planned to be developed in the future with a facility that complements the Rescue Mission and provides supportive services for the community. For conservative purposes for this traffic study, it was assumed that a day care center would be constructed on the East Lot.

Vehicular traffic volumes associated with the Rescue Mission have been developed through in-depth conversations with Denver Rescue Mission staff to account for anticipated staff, interns, volunteers, visitors, and operational services at full build out. Traffic associated with the potential day care center was estimated by utilizing national trip rates. Volumes were analyzed for the existing, short-term (Year 2025, anticipated construction year), and long-term (Year 2045) scenarios. The three properties are anticipated to generate approximately 632 trips daily, 145 AM peak hour, and 137 PM peak hour trips at buildout during the weekday.

In summary, the existing roadways and intersections within the study area can accommodate the trips associated with the North College 1311 ODP. There are no mitigation measures needed to support the vehicular traffic. It is recommended that multi-modal connectivity be provided along the project frontage to support the patrons that are likely to arrive/depart via walking, biking, or using transit.

Although the City's *Master Street Plan* identifies Mason Street as a collector roadway, the volumes associated with the site are well below the capacity threshold for a local street. Unless significant development occurs (or is anticipated to occur), Mason Street could functionally operate as a local street.

Tables and Figures:

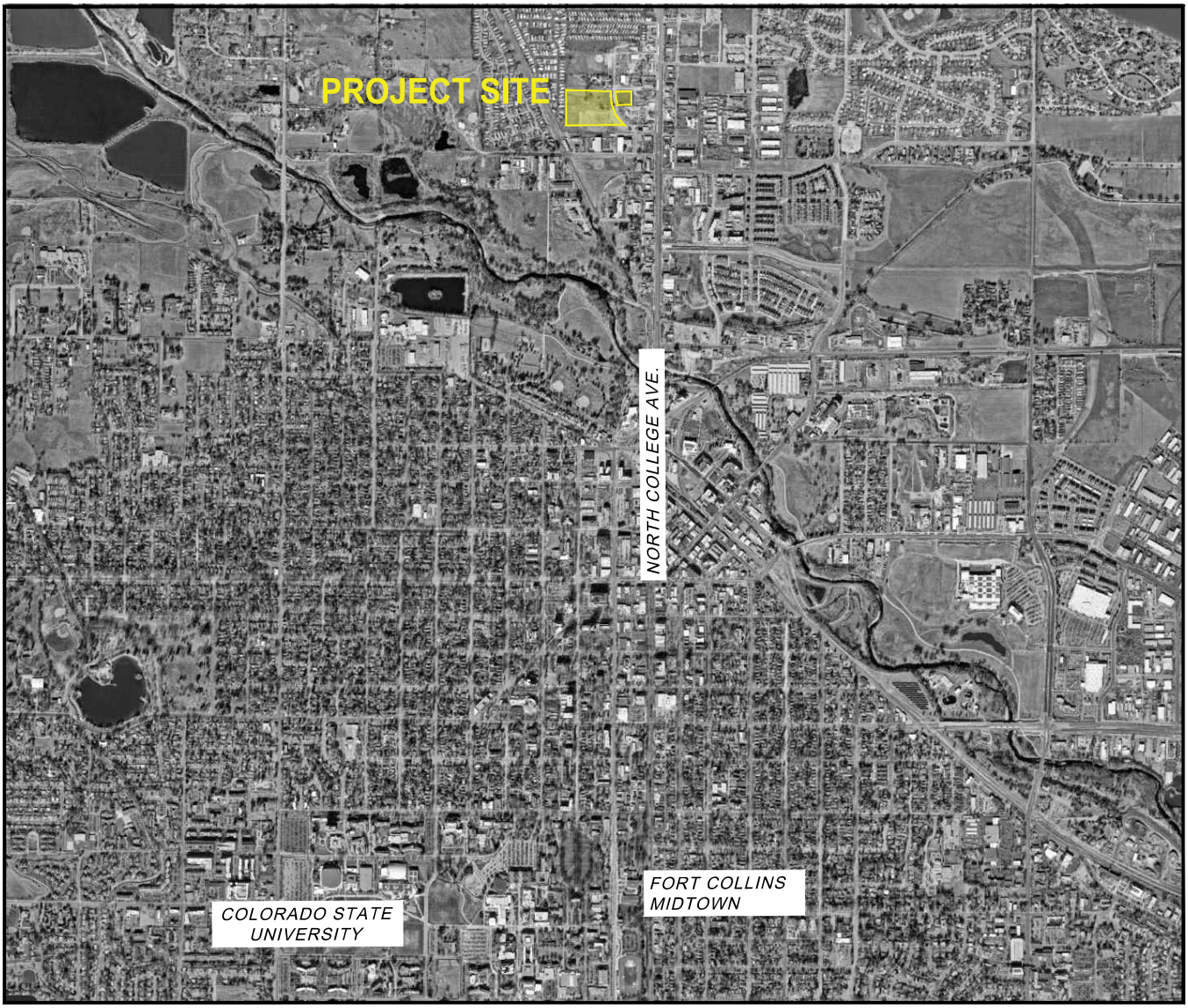
Table 1 - Peak Hour Intersection Level of Service Summary

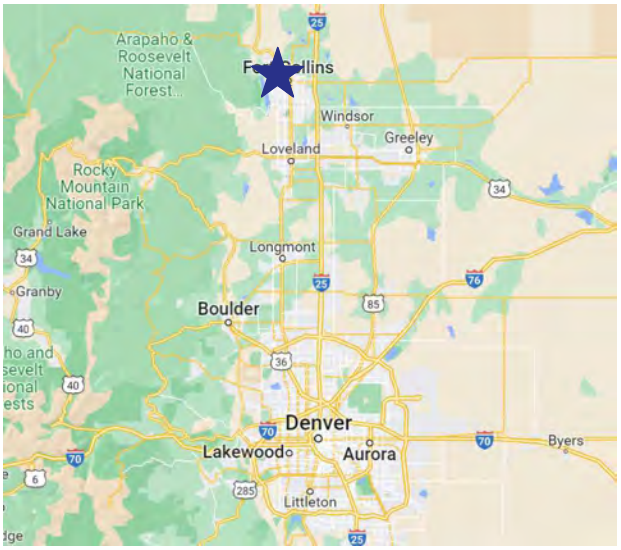
Intersection and Critical Movements/Approaches	Existing				Year 2025 Background				Year 2025 Background + Project				Year 2045 Background				Year 2045 Background + Project			
	AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
STOP SIGN CONTROL																				
1. Mason St & Hibdon Ct	**4**	**A**	**5**	**A**	**4**	**A**	**5**	**A**	**7**	**A**	**6**	**A**	**4**	**A**	**5**	**A**	**7**	**A**	**6**	**A**
Eastbound Left+Through+Right									*9*	*A*	*9*	*A*					*9*	*A*	*9*	*A*
Westbound Left+Right	*10*	*A*	*9*	*A*	*10*	*A*	*9*	*A*					*9*	*A*	*9*	*A*				
Westbound Left+Through+Right									*11*	*B*	*10*	*A*					*11*	*B*	*10*	*A*
Northbound Through+Right	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*					*0*	*A*	*0*	*A*				
Northbound Left+Through+Right									*7*	*A*	*7*	*A*					*7*	*A*	*7*	*A*
Southbound Left+Through	*0*	*A*	*7*	*A*	*0*	*A*	*7*	*A*					*0*	*A*	*7*	*A*				
Southbound Left+Through+Right									*0*	*A*	*7*	*A*					*0*	*A*	*7*	*A*
2. North College Ave & Hibdon Ct	**0**	**A**	**0**	**A**	**0**	**A**	**0**	**A**	**1**	**A**	**1**	**A**	**1**	**A**	**0**	**A**	**2**	**A**	**1**	**A**
Eastbound Left+Through+Right	*25*	*C*	*14*	*B*	*26*	*D*	*15*	*B*	*37*	**E**	*17*	*C*	*43*	**E**	*18*	*C*	*61*	**F**	*22*	*C*
Westbound Left+Through+Right	*0*	*A*	*11*	*B*	*0*	*B*	*11*	*B*	*0*	*A*	*11*	*B*	*0*	*B*	*12*	*B*	*0*	*A*	*12*	*B*
Northbound Left	*11*	*B*	*10*	*B*	*11*	*A*	*10*	*B*	*12*	*B*	*11*	*B*	*13*	*A*	*11*	*B*	*13*	*B*	*11*	*B*
Northbound Through	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*
Southbound Through+Right	*0*	*A*	*9*	*A*	*0*	*A*	*9*	*A*	*0*	*A*	*9*	*A*	*0*	*A*	*10*	*A*	*0*	*A*	*10*	*A*
3. Mason St & Hickory St	**0**	**A**	**1**	**A**	**0**	**A**	**1**	**A**	**2**	**A**	**2**	**A**	**0**	**A**	**1**	**A**	**1**	**A**	**2**	**A**
Eastbound Left+Through	*8*	*A*	*8*	*A*	*8*	*A*	*8*	*A*	*8*	*A*	*8*	*A*	*8*	*A*	*8*	*A*	*8*	*A*	*8*	*A*
Westbound Through+Right	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*
Southbound Left+Right	*11*	*B*	*11*	*B*	*11*	*B*	*11*	*B*	*12*	*B*	*11*	*B*	*11*	*B*	*11*	*B*	*13*	*B*	*13*	*B*
101. Hibdon Ct at Access	*Project Intersection*				*Project Intersection*				**6**	**A**	**5**	**A**	*Project Intersection*				**6**	**A**	**5**	**A**
Eastbound Through+Right									*0*	*A*	*0*	*A*					*0*	*A*	*0*	*A*
Westbound Left+Through									*7*	*A*	*7*	*A*					*7*	*A*	*7*	*A*
Northbound Left+Right									*9*	*A*	*9*	*A*					*9*	*A*	*9*	*A*
102. Mason St at Rescue Mission Acces	*Project Intersection*				*Project Intersection*				**1**	**A**	**0**	**A**	*Project Intersection*				**1**	**A**	**0**	**A**
Eastbound Left+Right									*9*	*A*	*9*	*A*					*9*	*A*	*9*	*A*
Northbound Left+Through									*7*	*A*	*7*	*A*					*7*	*A*	*7*	*A*
Southbound Through+Right									*0*	*A*	*0*	*A*					*0*	*A*	*0*	*A*
SIGNAL CONTROL																				
4. North College Ave & Hickory St	**6**	**A**	**8**	**A**	**7**	**A**	**8**	**A**	**8**	**A**	**10**	**A**	**7**	**A**	**9**	**A**	**9**	**A**	**11**	**B**
Eastbound Left	*33*	*C*	*45*	*D*	*33*	*C*	*45*	*D*	*32*	*C*	*43*	*D*	*32*	*C*	*44*	*D*	*31*	*C*	*42*	*D*
Eastbound Right	*43*	*D*	*54*	*D*	*43*	*D*	*54*	*D*	*41*	*D*	*53*	*D*	*42*	*D*	*53*	*D*	*40*	*D*	*52*	*D*
Northbound Left	*7*	*A*	*7*	*A*	*8*	*A*	*7*	*A*	*11*	*B*	*10*	*A*	*12*	*B*	*10*	*B*	*19*	*B*	*15*	*B*
Northbound Through	*3*	*A*	*4*	*A*	*3*	*A*	*4*	*A*	*4*	*A*	*5*	*A*	*4*	*A*	*5*	*A*	*4*	*A*	*6*	*A*
Southbound Through	*4*	*A*	*4*	*A*	*4*	*A*	*4*	*A*	*5*	*A*	*5*	*A*	*5*	*A*	*4*	*A*	*6*	*A*	*5*	*A*
Southbound Right	*3*	*A*	*3*	*A*	*3*	*A*	*3*	*A*	*3*	*A*	*3*	*A*	*3*	*A*	*3*	*A*	*3*	*A*	*4*	*A*

Note: Delay represented in average seconds per vehicle.

Table 2 - Peak Hour Estimated 95th Percentile Queues

Intersections and Lane Groups	Ex. Storage Length (ft)	Year 2022 Existing		Year 2025 Background		Year 2025 with Project		Year 2045 Background		Year 2045 with Project	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1. Mason St & Hibdon Ct		*Stop-Control*		*Stop-Control*		*Stop-Control*		*Stop-Control*		*Stop-Control*	
Eastbound Left+Through+Right	-					0'	0'			0'	0'
Westbound Left+Right	-	0'	3'	0'	3'			0'	3'		
Westbound Left+Through+Right	-					25'	8'			25'	8'
Northbound Through+Right	-	0'	0'	0'	0'			0'	0'		
Northbound Left+Through+Right	-					3'	0'			3'	0'
Southbound Left+Through	-	0'	0'	0'	0'			0'	0'		
Southbound Left+Through+Right	-					0'	0'			0'	0'
2. North College Ave & Hibdon Ct		*Stop-Control*		*Stop-Control*		*Stop-Control*		*Stop-Control*		*Stop-Control*	
Eastbound Left+Through+Right	-	8'	5'	8'	10'	25'	15'	15'	5'	45'	20'
Westbound Left+Through+Right	-	0'	0'	0'	0'	0'	0'	0'	0'	0'	0'
Northbound Left	100'	3'	3'	3'	3'	5'	5'	3'	5'	8'	5'
Northbound Through	-	0'	0'	0'	0'	0'	0'	0'	0'	0'	0'
Southbound Through+Right	-	0'	0'	0'	0'	0'	0'	0'	0'	0'	0'
3. Mason St & Hickory St		*Stop-Control*		*Stop-Control*		*Stop-Control*		*Stop-Control*		*Stop-Control*	
Eastbound Left+Through	-	0'	0'	0'	0'	0'	0'	0'	0'	0'	0'
Westbound Through+Right	-	0'	0'	0'	0'	0'	0'	0'	0'	0'	0'
Southbound Left+Right	-	0'	3'	0'	3'	8'	10'	0'	3'	10'	18'
4. North College Ave & Hickory St		*Signalized*		*Signalized*		*Signalized*		*Signalized*		*Signalized*	
Eastbound Left	200'	29'	81'	30'	82'	41'	98'	33'	93'	45'	110'
Eastbound Right	-	39'	35'	44'	35'	63'	38'	68'	48'	89'	79'
Northbound Left	160'	53'	57'	56'	60'	94'	78'	90'	83'	**166'**	113'
Northbound Through	-	91'	188'	94'	196'	98'	200'	112'	247'	116'	252'
Southbound Through	-	153'	140'	158'	145'	162'	148'	195'	178'	198'	182'
Southbound Right	90'	12'	12'	13'	12'	13'	12'	16'	15'	16'	15'
101. Hibdon Ct at Access		*Project Intersection*		*Project Intersection*		*Stop-Control*		*Project Intersection*		*Stop-Control*	
Eastbound Through+Right	-					0'	0'			0'	0'
Westbound Left+Through	-					3'	3'			3'	3'
Northbound Left+Right	-					5'	5'			5'	5'
102. Mason St at Rescue Mission Access		*Project Intersection*		*Project Intersection*		*Stop-Control*		*Project Intersection*		*Stop-Control*	
Eastbound Left+Right	-					0'	0'			0'	0'
Northbound Left+Through	-					0'	0'			0'	0'
Southbound Through+Right	-					0'	0'			0'	0'





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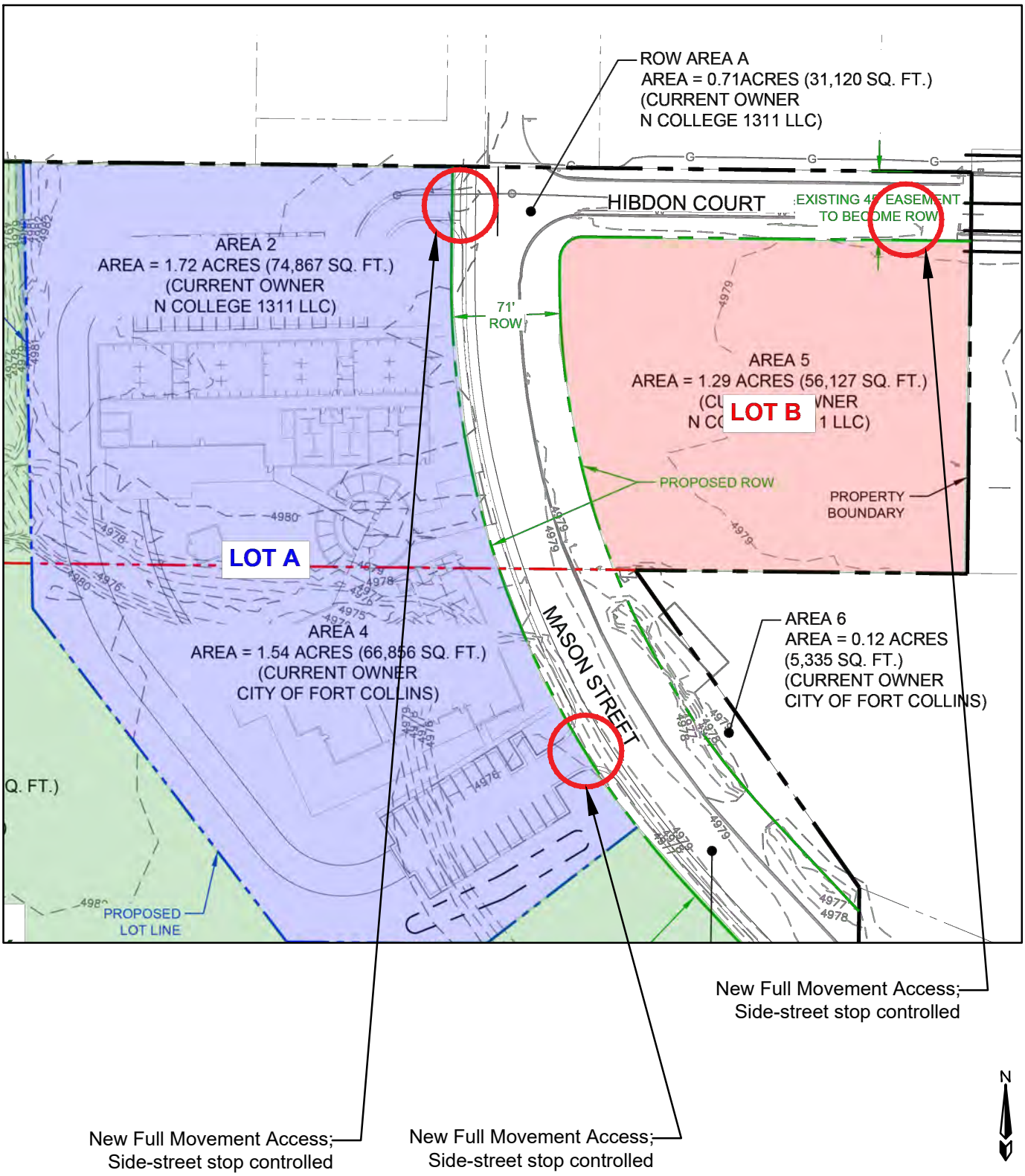
NORTH COLLEGE 1311 ODP TRAFFIC IMPACT STUDY - FORT COLLINS, CO

VICINITY MAP

Project #	23043	Original Scale	NTS	Date	5/24/2023	Drawn by	CAF	Figure #	1



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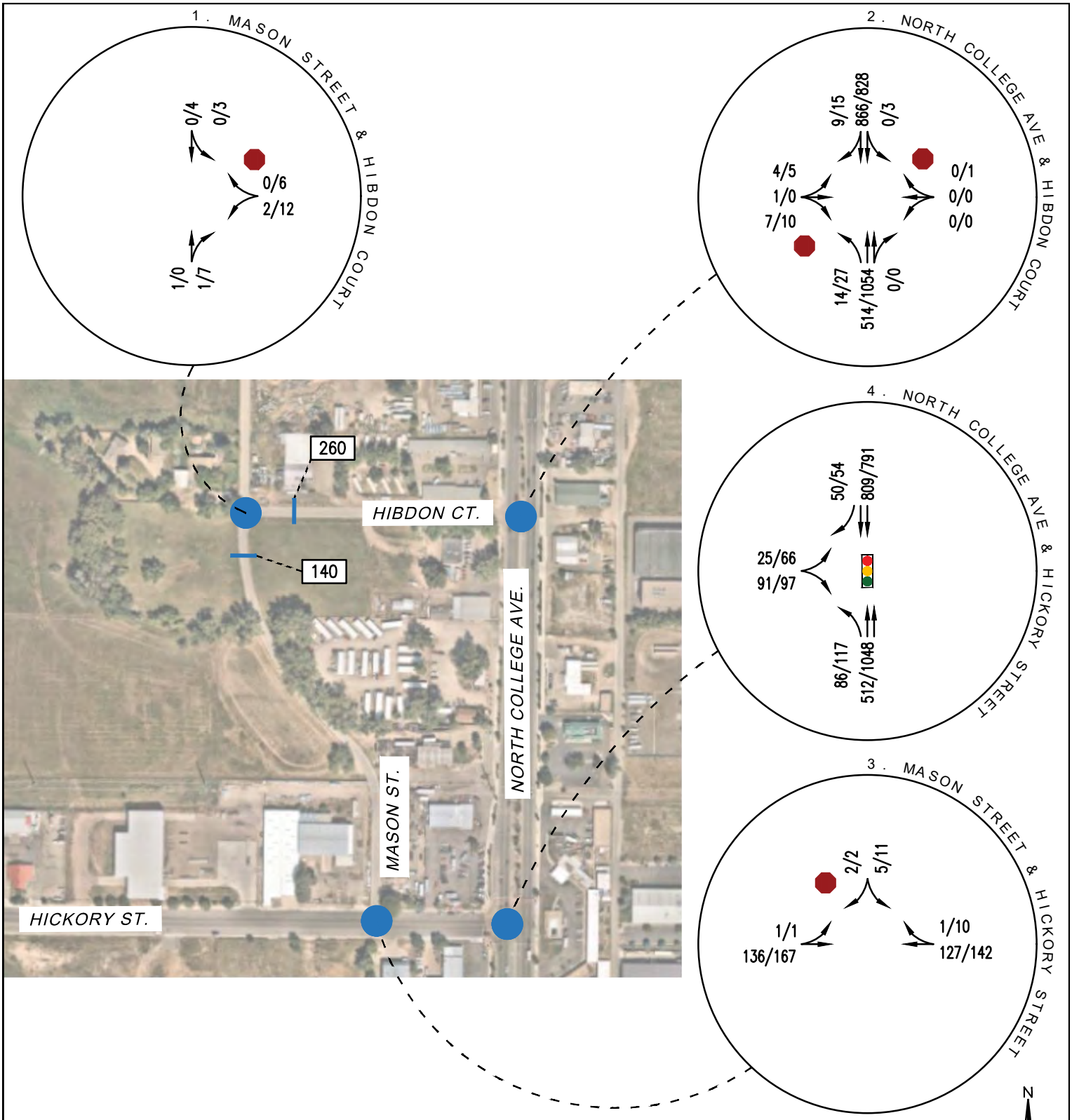
NORTH COLLEGE 1311 ODP TRAFFIC IMPACT STUDY - FORT COLLINS, CO

CONCEPTUAL SITE PLAN

Project #	23043	Original Scale	NTS	Date	5/24/2023	Drawn by	CAF	Figure #	2



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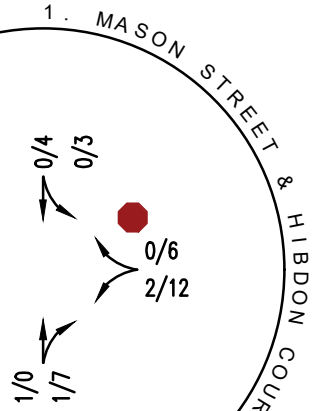
NORTH COLLEGE 1311 ODP TRAFFIC IMPACT STUDY - FORT COLLINS, CO

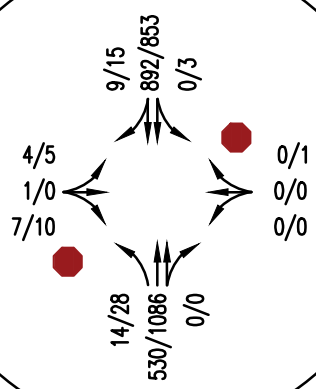
YEAR 2022 EXISTING TRAFFIC VOLUMES

Project #	23043	Original Scale	NTS	Date	5/24/2023	Drawn by	CAF	Figure #	3

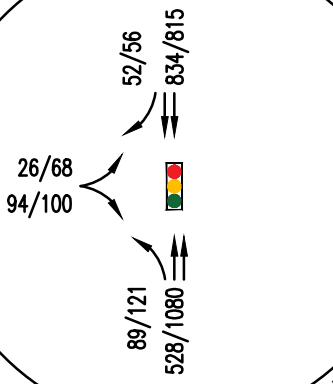
1. MASON STREET & HIBDON COURT



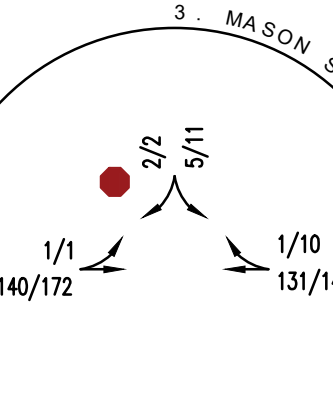
2. NORTH COLLEGE AVE & HIBDON COURT



4. NORTH COLLEGE AVE & HICKORY STREET



3. MASON STREET & HICKORY STREET



N

KEY

X,XXX DAILY TRAFFIC VOLUME

XX/XX AM/PM PEAK HOUR TRAFFIC VOLUME

LANE CONFIGURATION

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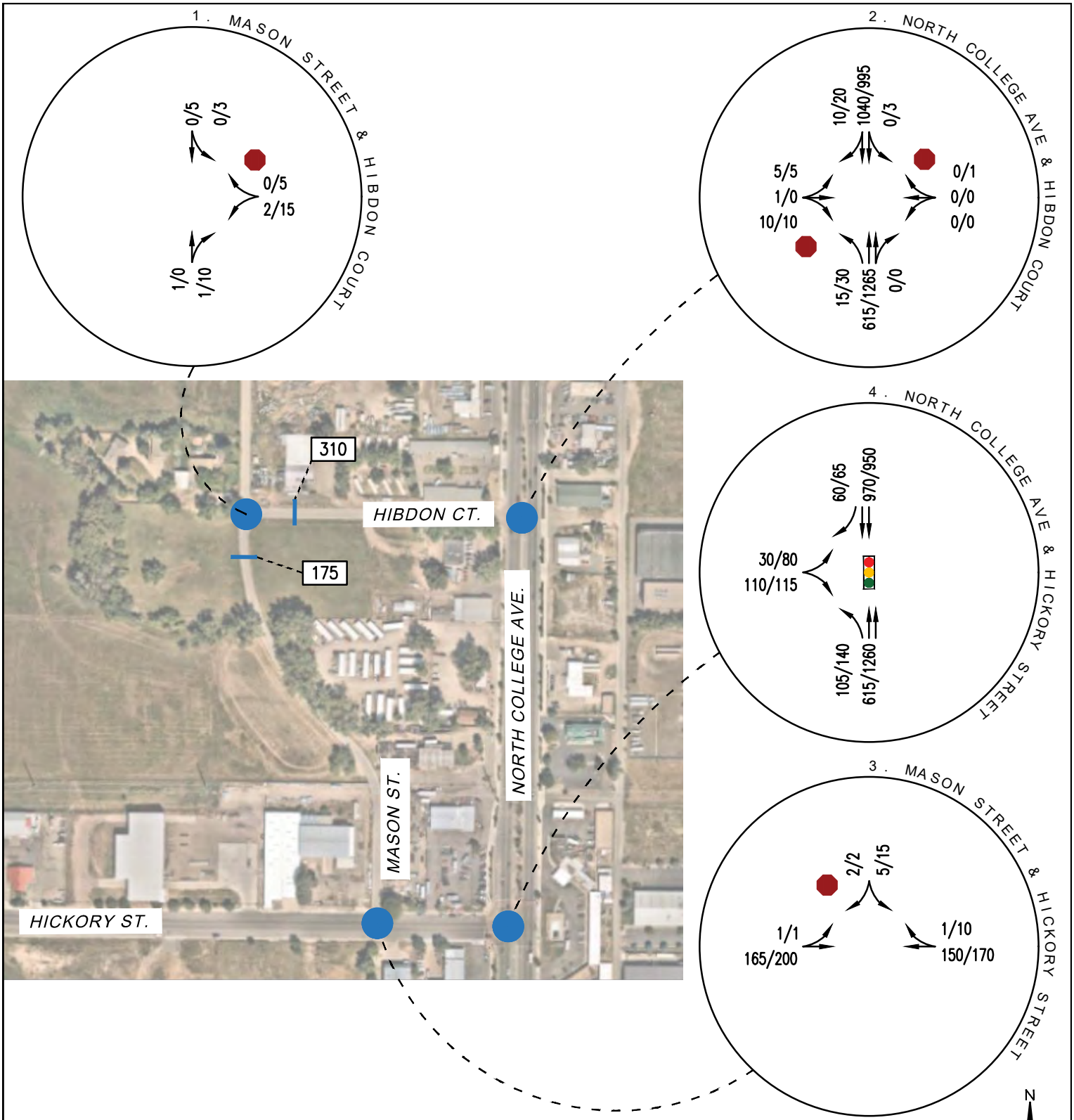
NORTH COLLEGE 1311 ODP TRAFFIC IMPACT STUDY - FORT COLLINS, CO

YEAR 2025 BACKGROUND TRAFFIC VOLUMES

Project #	23043	Original Scale	NTS	Date	5/24/2023	Drawn by	CAF	Figure #	4



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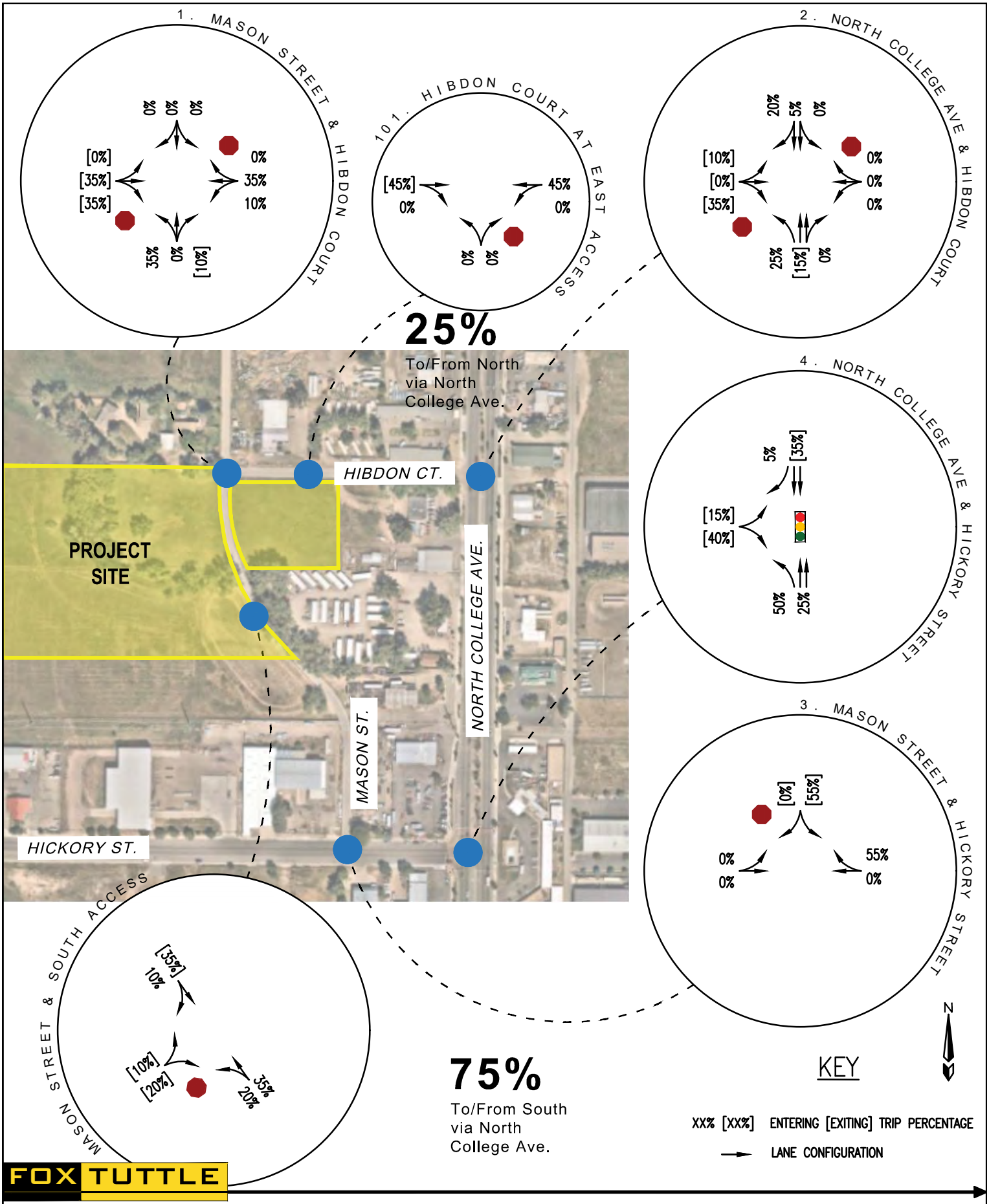
NORTH COLLEGE 1311 ODP TRAFFIC IMPACT STUDY - FORT COLLINS, CO

YEAR 2045 BACKGROUND TRAFFIC VOLUMES

Project #	23043	Original Scale	NTS	Date	5/24/2023	Drawn by	CAF	Figure #	5



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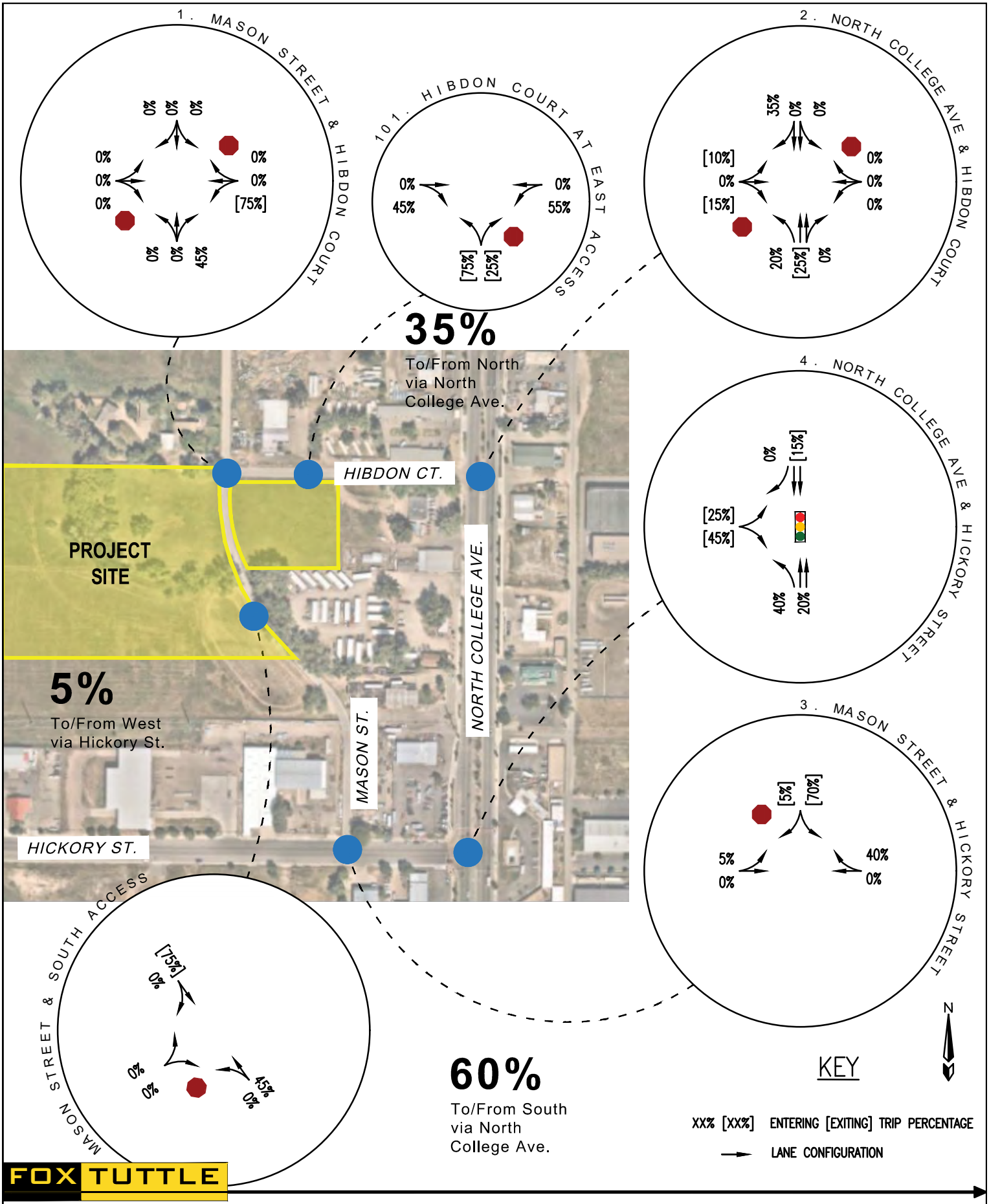
NORTH COLLEGE 1311 ODP TRAFFIC IMPACT STUDY - FORT COLLINS, CO

SITE TRIP DISTRIBUTION - RESCUE MISSION

Project #	23043	Original Scale	NTS	Date	5/24/2023	Drawn by	CAF	Figure #	6A

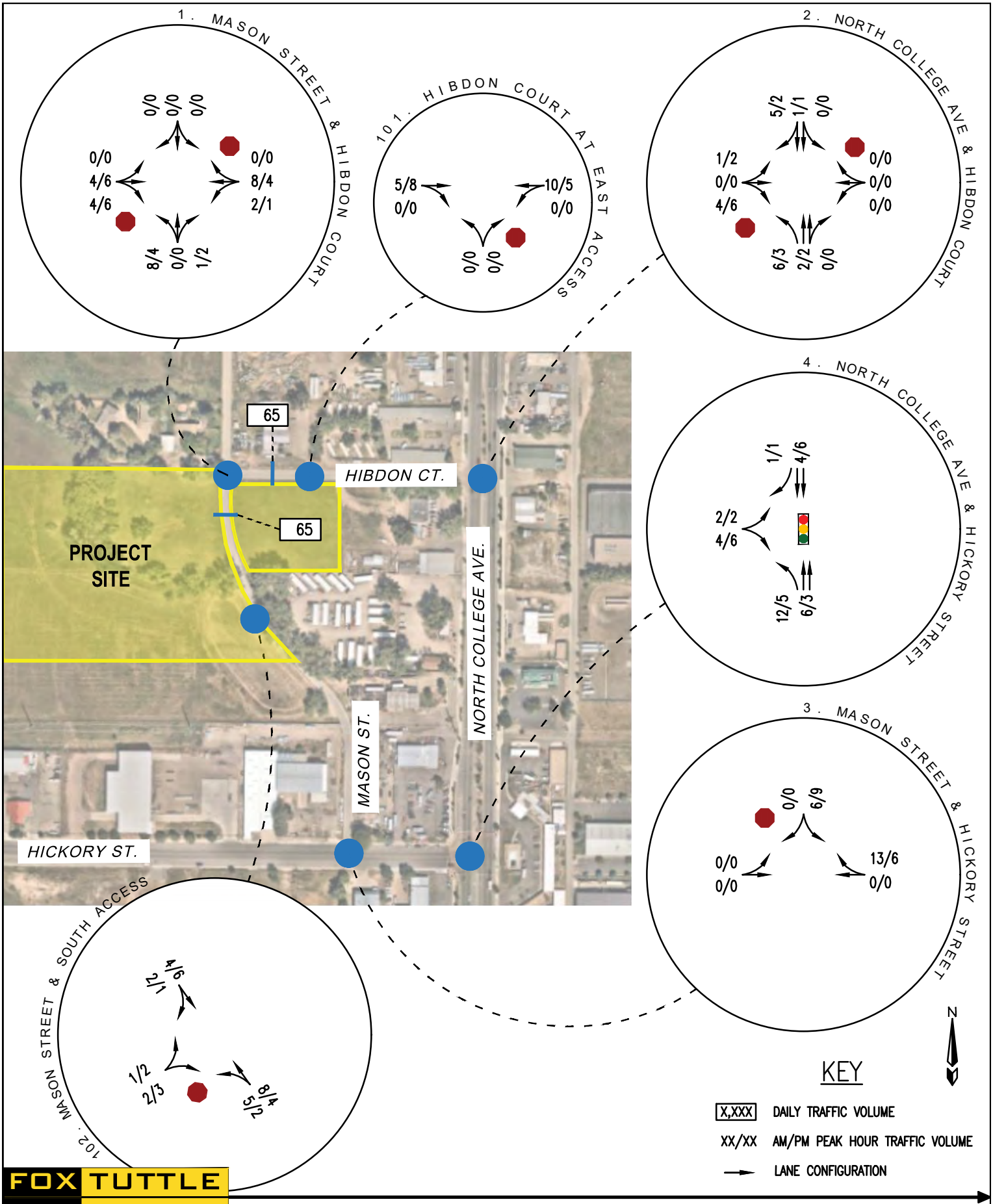


FOX TUTTLE
TRANSPORTATION GROUP

NORTH COLLEGE 1311 ODP TRAFFIC IMPACT STUDY - FORT COLLINS, CO

SITE TRIP DISTRIBUTION - EAST LOT

Project #	23043	Original Scale	NTS	Date	5/24/2023	Drawn by	CAF	Figure #	6B

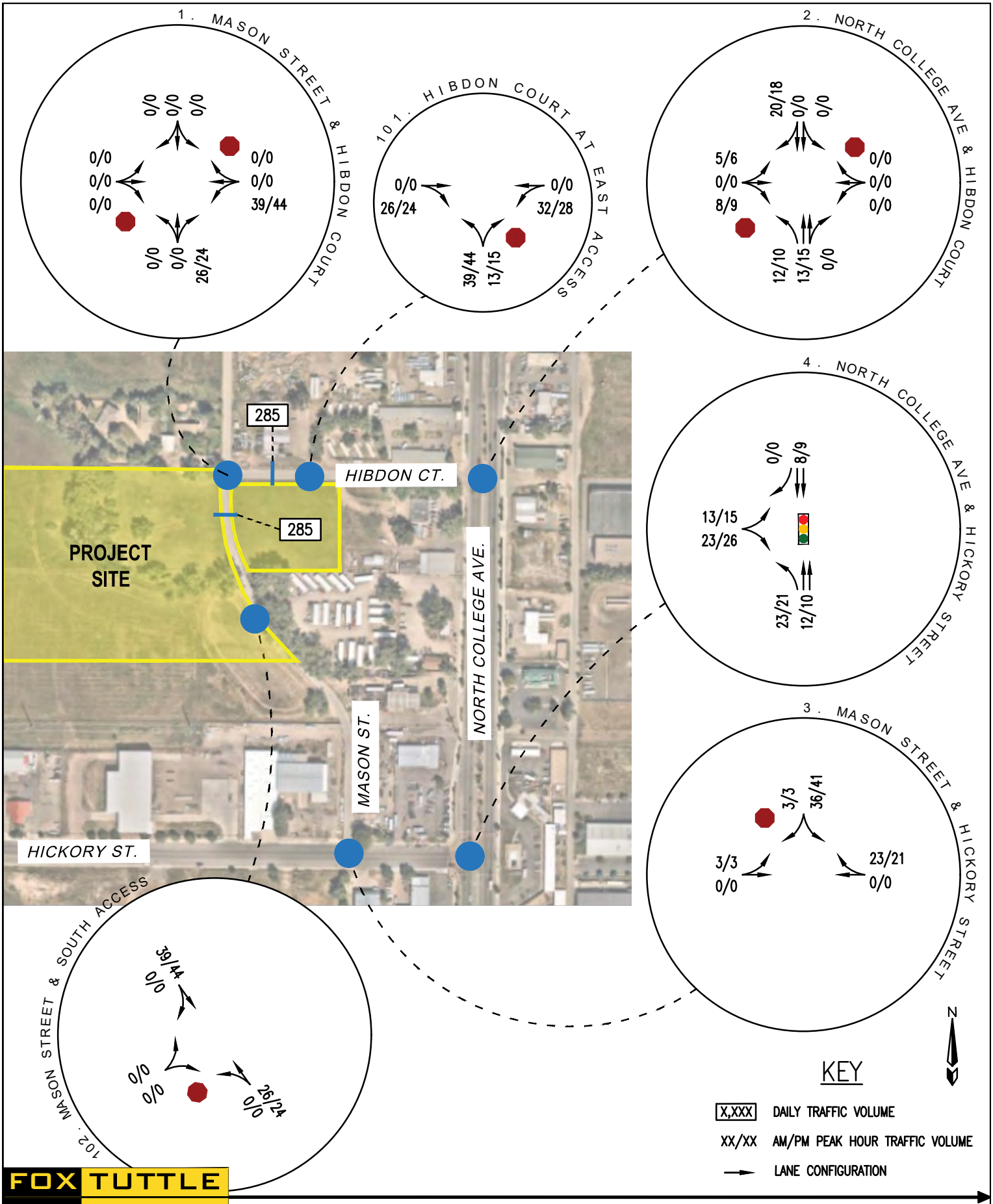


FOX TUTTLE
TRANSPORTATION GROUP

NORTH COLLEGE 1311 ODP TRAFFIC IMPACT STUDY - FORT COLLINS, CO

SITE-GENERATED TRIP VOLUMES - RESCUE MISSION

Project #	23043	Original Scale	NTS	Date	5/24/2023	Drawn by	CAF	Figure #	7A

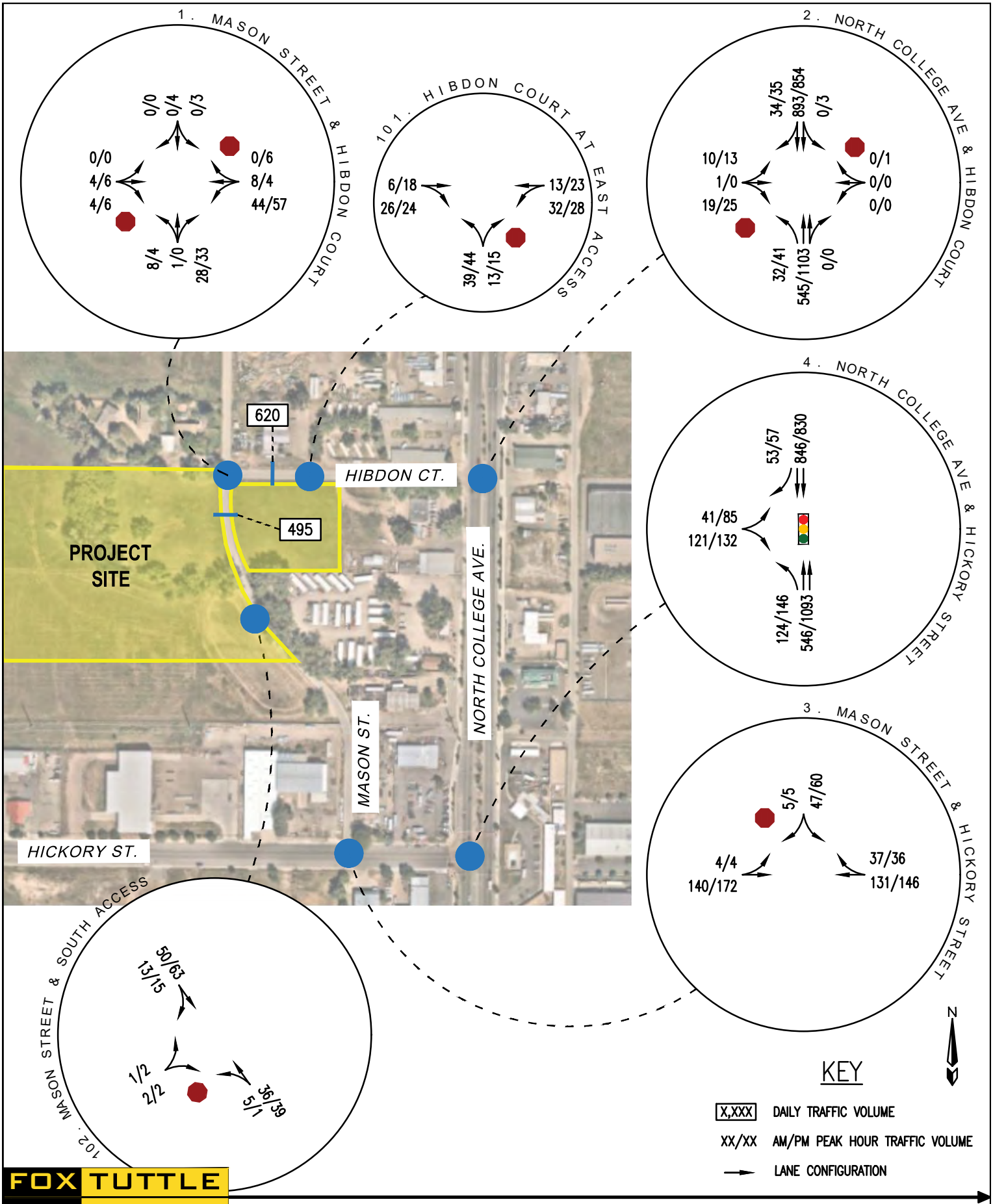


FOX TUTTLE
TRANSPORTATION GROUP

NORTH COLLEGE 1311 ODP TRAFFIC IMPACT STUDY - FORT COLLINS, CO

SITE-GENERATED TRIP VOLUMES - EAST LOT

Project #	23043	Original Scale	NTS	Date	5/24/2023	Drawn by	CAF	Figure #	7B



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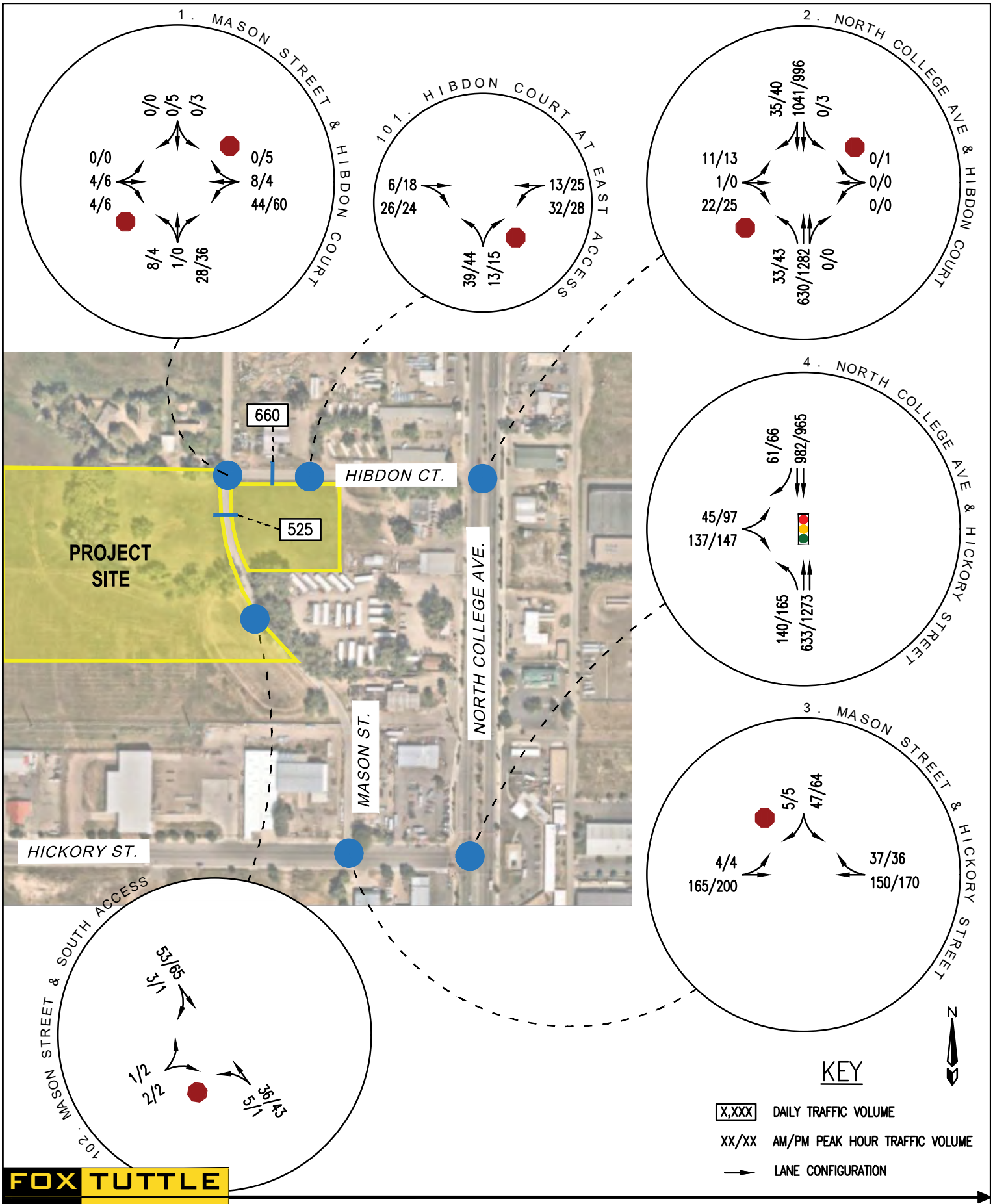
NORTH COLLEGE 1311 ODP TRAFFIC IMPACT STUDY - FORT COLLINS, CO

YEAR 2025 BACKGROUND + SITE-GENERATED TRAFFIC VOLUMES

Project #	23043	Original Scale	NTS	Date	5/24/2023	Drawn by	CAF	Figure #	8



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NORTH COLLEGE 1311 ODP TRAFFIC IMPACT STUDY - FORT COLLINS, CO

YEAR 2045 BACKGROUND + SITE-GENERATED TRAFFIC VOLUMES

Project #	23043	Original Scale	NTS	Date	5/24/2023	Drawn by	CAF	Figure #	9

Appendix:

Transportation Impact Study Base Assumptions Form

Level of Service Definitions

Existing Traffic Data

Intersection Capacity Worksheets

Transportation Impact Study
Base Assumptions Form

Attachment A
Transportation Impact Study Base Assumptions

Project Information		
Project Name	Fort Collins Rescue Mission	
Project Location	Parcel west and south of the Mason Street & Hibdon Ct. Intersection	
TIS Assumptions		
Type of Study	Full:	Intermediate: X
	MTIS:	Memo:
Study Area Boundaries	North: Hibdon Ct.	South: Hickory St.
	East: North College Ave.	West: Mason St.
Study Years	Short Range: 2025	Long Range: N/A
Future Traffic Growth Rate	1% growth (per 11/30/22 discussion and CDOT OTIS data)	
Study Intersections	1. All access drives	5. N. College Ave. & Hickory St.
	2. Mason St. & Hibdon Ct.	6.
	3. N. College Ave. & Hibdon Ct.	7.
	4. Mason St. & Hickory St.	8.
Time Period for Study	AM: 7:00-9:00 / PM: 4:00-6:00	Sat Noon:
Trip Generation Rates	Trip generation rates based on similar sized facility with similar services and shifts. Propose 33 trips AM Peak, 26 Trips PM Peak	
Trip Adjustment Factors	Passby: N/A	Captive Market: N/A
Overall Trip Distribution	SEE ATTACHED SKETCH	
Mode Split Assumptions	No multi-modal adjustments since trip generation is based on people who drive to the location.	
Design Vehicle Information	Anticipating typical passenger vehicles for trips associated with staff and volunteers.	
Committed Roadway Improvements	To be determined during development review process. Current analysis using a 1% growth factor and projected trips associated with site does not warrant specific turn lanes along North College.	
Other Traffic Studies	None.	
Areas Requiring Special Study	Multimodal activity associated with users of facility.	

Date: _____

Traffic Engineer: Cassie Slade 01/05/2023

Local Entity Engineer: Steven Gilchrist 01/04/2023

Attachment B
Transportation Impact Study
Pedestrian Analysis Worksheet

		DESTINATION						
Origin (project land use)		Rec.	Res.←	Inst.	Ofc/Bus.	Com.	Ind.	Other (Specify)
	Recreation							
	1) Residential		See Attached Spreadsheet					
	Institution (school, church, civic)							
	Office/Business							
	Commercial							
	Industrial							
	Other (specify) Ft. Collins Rescue Mission							

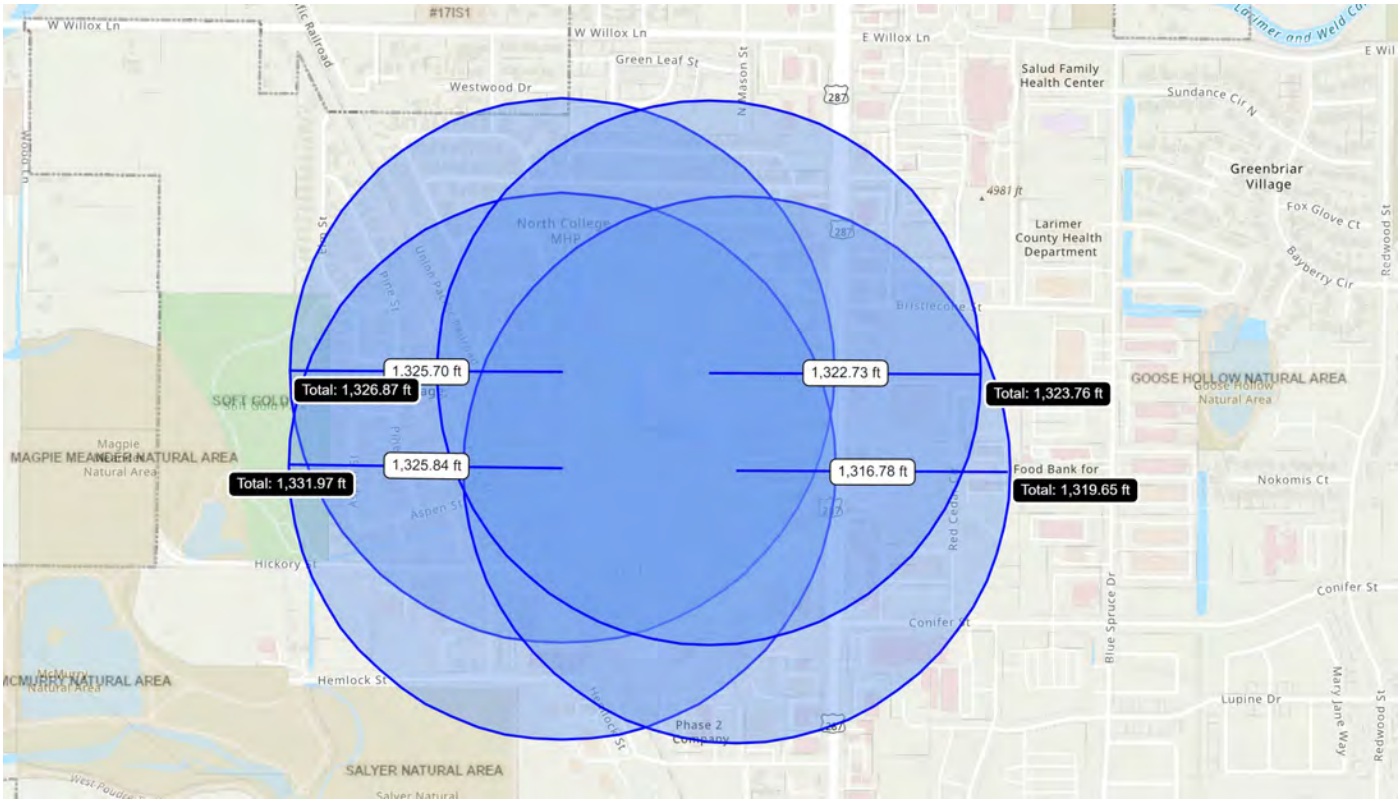
INSTRUCTIONS:
Identify the pedestrian destinations within 1320' (1.5 miles for schools) of the project boundary in the spaces above. The pedestrian Level of Service for the facility/corridor linking these destinations to the project site will be based on the directness, continuity, types of street crossings, walkway surface condition, visual interest/amenity, and security of the selected route(s).

← 12 Dwelling units or more.

Transportation Impact Study
Pedestrian Analysis Worksheet

	Recreation	Residential	Inst.	Ofc/Bus.	Com.	Ind.	Other
Recreation							
Residential							
Institution							
Office/Business							
Commercial							
Industrial							
Other (Fort Collins Rescue Mission	Hickory Trail, Soft Gold Park, Salyer Natural Area	North College Mobile Home Park, Revive, Hickory Village, Stonecrest Mobile Home Park, single family home adjacent to site.	Food Bank for Larimer County*	Various auto oriented repair services	Various Businesses off North College, JAX, banks, the Lyric, touches Country Club Corners Development**	Rocky Mountain Recycling, Valley Steel and Wire,	Several North College Hotels fall within the 1320' radius.

*Other services, including Larimer County Services off Willox, the Murphy Center, Homeward Alliance, the Health District Family Dental Clinic, WIC, and Salud are near the site but outside the 1320' radius.
** North College Marketplace near the development but outside the 1320' radius.


1,325.70 ft
Total: 1,326.87 ft
1,322.73 ft
Total: 1,323.76 ft
1,325.84 ft
Total: 1,331.97 ft
1,316.78 ft
Total: 1,319.65 ft
W Willox Ln
E Willox Ln
Green Leaf St
Westwood Dr
Salud Family Health Center
Sundance Cir N
Greenbriar Village
Fox Glove Ct
Bayberry Cir
Redwood St
Larimer County Health Department
North College MHP
GOOSE HOLLOW NATURAL AREA
Goose Hollow Natural Area
MAGPIE MEANDER NATURAL AREA
Magpie Meander Natural Area
Food Bank for
Nokomis Ct
Hickory St
Conifer St
Blue Spruce Dr
Hemlock St
Lupine Dr
Mary Jane Way
McMurry Natural Area
SALYER NATURAL AREA
Salyer Natural
Phase 2
Company
287

Proposed location for
new Ft. Collins Rescue
Mission campus

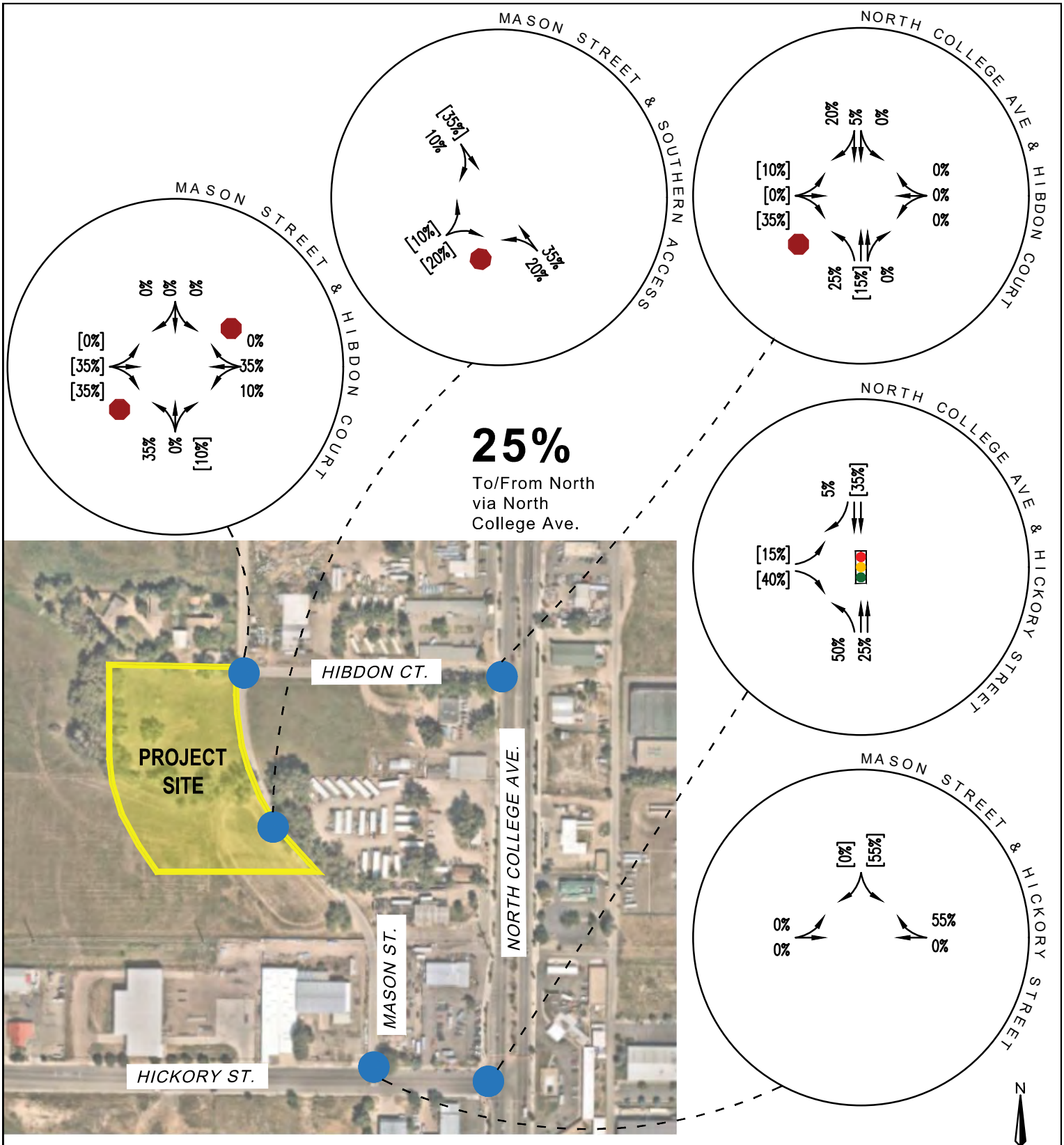
FOX TUTTLE

Table 3 - Trip Generation Summary

Users of Facility	Unit	Non-Auto Factor	Average Daily Trips				AM Peak Hour Trips				PM Peak Hour Trips			
			Rate	Total	In	Out	Rate	Total	In	Out	Rate	Total	In	Out
Employees (16 total)	People	1.00		68	34	34		23	16	7		16	0	16
Volunteers/Interns (10 Total)	People	1.00		44	22	22		10	10	0		10	0	10
Visitors*	People	1.00		20	10	10		0	0	0		0	0	0
Deliveries*	People	1.00		4	2	2		0	0	0		0	0	0
Partner Organization Visitors*	People	1.00		10	5	5		0	0	0		0	0	0
Patrons *	People	0.00		0	0	0		0	0	0		0	0	0
Total New Trips				***146***	***73***	***73***		***33***	***26***	***7***		***26***	***0***	***26***

Source: Data from Denver Rescue Mission facilities of similar siz and operations.

**** Trips not included as they do not occur during the Peak Hours***



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FORT COLLINS RESCUE MISSION TRAFFIC ANALYSIS STUDY - FORT COLLINS, CO

SITE TRIP DISTRIBUTION

Project #	22099	Original Scale	NTS	Date	12/19/22	Drawn by	JKL	Figure #	6

Level of Service Definitions

LEVEL OF SERVICE DEFINITIONS

In rating roadway and intersection operating conditions with existing or future traffic volumes, "Levels of Service" (LOS) A through F are used, with LOS A indicating very good operation and LOS F indicating poor operation. Levels of service at signalized and unsignalized intersections are closely associated with vehicle delays experienced in seconds per vehicle. More complete level of service definitions and delay data for signal and stop sign controlled intersections are contained in the following table for reference.

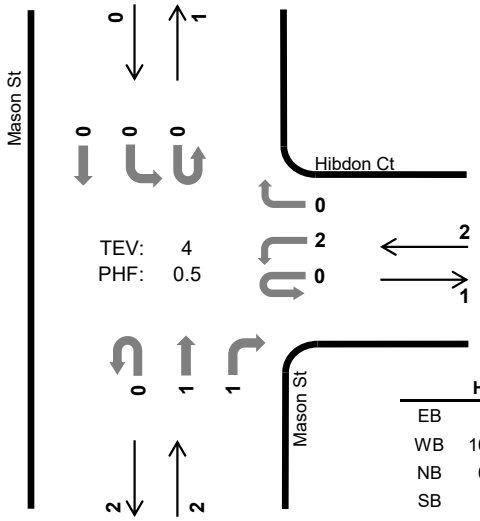
Level of Service Rating	Delay in seconds per vehicle *(a)*		Definition
	Signalized	Unsignalized	
A	0.0 to 10.0	0.0 to 10.0	Low vehicular traffic volumes; primarily free flow operations. Density is low and vehicles can freely maneuver within the traffic stream. Drivers are able to maintain their desired speeds with little or no delay.
B	10.1 to 20.0	10.1 to 15.0	Stable vehicular traffic volume flow with potential for some restriction of operating speeds due to traffic conditions. Vehicle maneuvering is only slightly restricted. The stopped delays are not bothersome and drivers are not subject to appreciable tension.
C	20.1 to 35.0	15.1 to 25.0	Stable traffic operations, however the ability for vehicles to maneuver is more restricted by the increase in traffic volumes. Relatively satisfactory operating speeds prevail, but adverse signal coordination or longer vehicle queues cause delays along the corridor.
D	35.1 to 55.0	25.1 to 35.0	Approaching unstable vehicular traffic flow where small increases in volume could cause substantial delays. Most drivers are restricted in ability to maneuver and selection of travel speeds due to congestion. Driver comfort and convenience are low, but tolerable.
E	55.1 to 80.0	35.1 to 50.0	Traffic operations characterized by significant approach delays and average travel speeds of one-half to one-third the free flow speed. Vehicular flow is unstable and there is potential for stoppages of brief duration. High signal density, extensive vehicle queuing, or corridor signal progression/timing are the typical causes of vehicle delays at signalized corridors.
F	> 80.0	> 50.0	Forced vehicular traffic flow and operations with high approach delays at critical intersections. Vehicle speeds are reduced substantially, and stoppages may occur for short or long periods of time because of downstream congestion.

(a) Delay ranges based on Highway Capacity Manual (6th Edition, 2016) criteria.

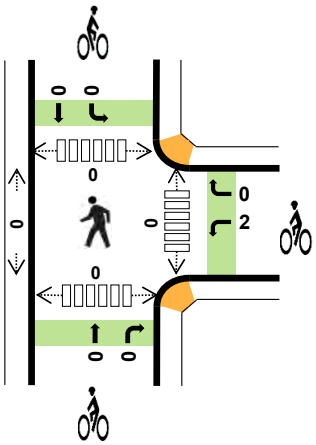
Existing Traffic Data

Mason St
Hibdon Ct

Peak Hour



Date: 12/07/2022
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	-	-
WB	100.0%	0.25
NB	0.0%	0.25
SB	-	-
TOTAL	50.0%	0.50

Two-Hour Count Summaries

Interval Start		n/a Eastbound				Hibdon Ct Westbound				Mason St Northbound				Mason St Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM		0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
7:30 AM		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**2**	3
8:00 AM		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
8:15 AM		**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**4**
8:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
8:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total		0	0	0	0	0	3	0	0	0	0	1	1	0	0	0	0	5	0
Peak Hour	**All**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**4**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**
	HV%	**-**	**-**	**-**	**-**	**-**	**100%**	**-**	**-**	**-**	**-**	**0%**	**0%**	**-**	**-**	**-**	**-**	**50%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	***2***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:00 AM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:15 AM	**0**	**2**	**0**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
8:30 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	0	0	0	0	*0*	0	0	3	0	*3*	0	0	0	0	*0*
Count Total	0	3	0	0	*3*	0	2	3	0	*5*	0	0	0	0	*0*
Peak Hr	**0**	**2**	**0**	**0**	***2***	**0**	**2**	**0**	**0**	***2***	**0**	**0**	**0**	**0**	***0***

Garrett Strang
720-646-1008
garrett.strang@idax.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	n/a				Hibdon Ct				Mason St				Mason St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:15 AM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**2**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	n/a			Hibdon Ct			Mason St			Mason St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	3	0	0	0	3	3
Count Total	0	0	0	2	0	0	0	0	3	0	0	0	5	0
Peak Hour	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Garrett Strang
720-646-1008
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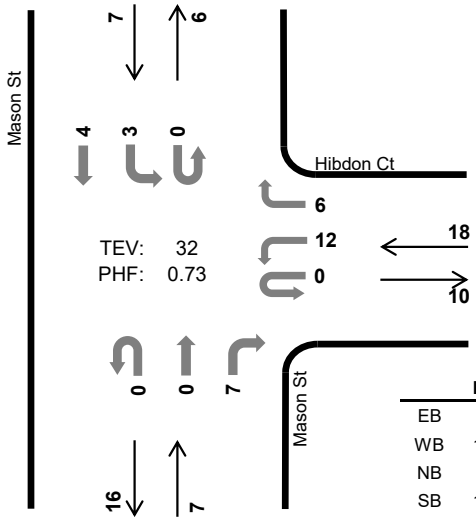
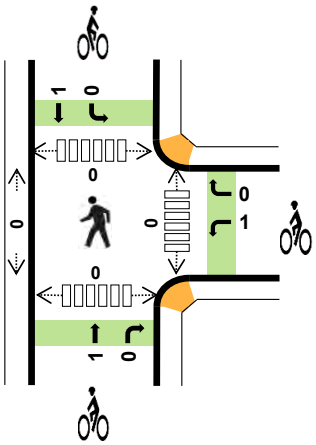
Mason St
Hibdon Ct

Peak Hour

Date: 12/07/2022
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM



	HV %:	PHF
EB	-	-
WB	11.1%	0.75
NB	0.0%	0.58
SB	14.3%	0.44
TOTAL	9.4%	0.73



Two-Hour Count Summaries

Interval Start		n/a Eastbound				Hibdon Ct Westbound				Mason St Northbound				Mason St Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**3**	**0**	**0**	**1**	**0**	**5**	0
4:15 PM		**0**	**0**	**0**	**0**	**0**	**3**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**7**	0
4:30 PM		**0**	**0**	**0**	**0**	**0**	**3**	**0**	**2**	**0**	**0**	**0**	**2**	**0**	**2**	**2**	**0**	**11**	0
4:45 PM		**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**9**	**32**
5:00 PM		0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	29
5:15 PM		0	0	0	0	0	0	0	2	0	0	0	0	0	1	2	0	5	27
5:30 PM		0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	3	19
5:45 PM		0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	3	13
Count Total		0	0	0	0	0	16	0	10	0	0	1	7	0	4	7	0	45	0
Peak Hour	**All**	**0**	**0**	**0**	**0**	**0**	**12**	**0**	**6**	**0**	**0**	**0**	**7**	**0**	**3**	**4**	**0**	**32**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	**0**
	HV%	**-**	**-**	**-**	**-**	**-**	**0%**	**-**	**33%**	**-**	**-**	**-**	**0%**	**-**	**0%**	**25%**	**-**	**9%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	**0**	**1**	**0**	**1**	***2***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	*0*
4:15 PM	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:30 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***
5:00 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
5:15 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	0	2	0	1	*3*	0	1	1	1	*3*	0	0	0	0	*0*
Peak Hr	**0**	**2**	**0**	**1**	***3***	**0**	**1**	**1**	**1**	***3***	**0**	**0**	**0**	**0**	***0***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	n/a				Hibdon Ct				Mason St				Mason St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	3	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	n/a			Hibdon Ct			Mason St			Mason St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**3**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	1	0	0	0	1	0	0	1	0	3	0
Peak Hour	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**3**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

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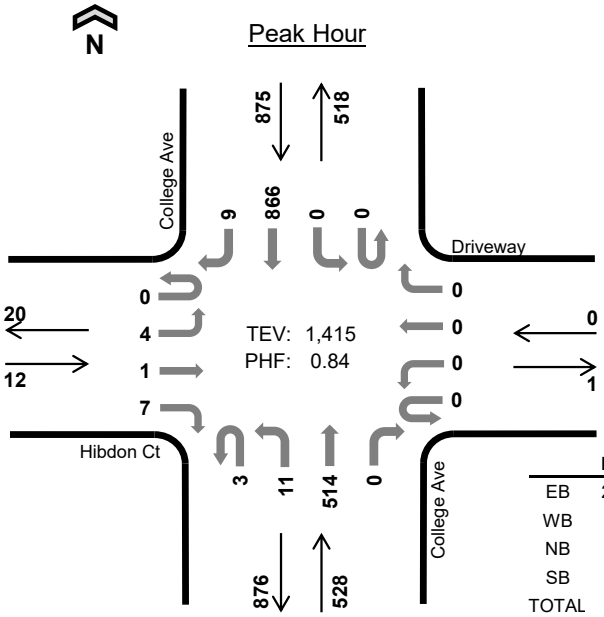
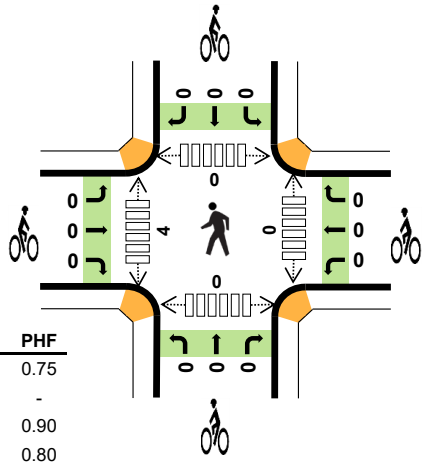
College Ave
Hibdon Ct

Peak Hour

Date: 12/07/2022
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM





	HV %:	PHF
EB	25.0%	0.75
WB	-	-
NB	9.1%	0.90
SB	7.5%	0.80
TOTAL	8.3%	0.84

Two-Hour Count Summaries

Interval Start	Hibdon Ct Eastbound				Driveway Westbound				College Ave Northbound				College Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	1	86	0	0	0	135	3	225	0
7:15 AM	0	1	0	1	0	0	0	0	0	1	104	0	0	0	182	1	290	0
7:30 AM	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**112**	**0**	**0**	**0**	**230**	**3**	**347**	0
7:45 AM	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**4**	**140**	**0**	**0**	**0**	**271**	**2**	**422**	1,284
8:00 AM	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**1**	**5**	**123**	**0**	**0**	**0**	**160**	**1**	**293**	1,352
8:15 AM	**0**	**0**	**1**	**3**	**0**	**0**	**0**	**0**	**0**	**2**	**139**	**0**	**0**	**0**	**205**	**3**	**353**	**1,415**
8:30 AM	0	2	0	2	0	0	0	0	1	1	120	0	0	0	188	2	316	1,384
8:45 AM	0	1	1	0	0	1	0	1	0	2	139	0	1	0	196	4	346	1,308
Count Total	0	8	2	10	0	1	0	1	4	16	963	0	1	0	1,567	19	2,592	0
Peak Hour All	**0**	**4**	**1**	**7**	**0**	**0**	**0**	**0**	**3**	**11**	**514**	**0**	**0**	**0**	**866**	**9**	**1,415**	**0**
Peak Hour HV	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**47**	**0**	**0**	**0**	**63**	**3**	**117**	**0**
Peak Hour HV%	**-**	**25%**	**0%**	**29%**	**-**	**-**	**-**	**-**	**0%**	**9%**	**9%**	**-**	**-**	**-**	**7%**	**33%**	**8%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	11	15	*26*	0	0	0	0	*0*	1	1	0	0	*2*
7:15 AM	0	0	19	4	*23*	0	0	0	2	*2*	0	3	0	0	*3*
7:30 AM	**1**	**0**	**13**	**12**	***26***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
7:45 AM	**1**	**0**	**11**	**15**	***27***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:00 AM	**0**	**0**	**8**	**21**	***29***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
8:15 AM	**1**	**0**	**16**	**18**	***35***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	***2***
8:30 AM	2	0	14	14	*30*	0	0	0	0	*0*	2	2	0	0	*4*
8:45 AM	0	0	10	20	*30*	0	0	1	0	*1*	2	4	1	0	*7*
Count Total	5	0	102	119	*226*	0	0	1	2	*3*	5	14	1	0	*20*
Peak Hour	**3**	**0**	**48**	**66**	***117***	**0**	**0**	**0**	**0**	***0***	**0**	**4**	**0**	**0**	***4***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Hibdon Ct				Driveway				College Ave				College Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	11	0	0	0	15	0	26	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	19	0	0	0	3	1	23	0
7:30 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**0**	**0**	**0**	**12**	**0**	**26**	0
7:45 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**0**	**0**	**14**	**1**	**27**	102
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**21**	**0**	**29**	105
8:15 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**15**	**0**	**0**	**0**	**16**	**2**	**35**	**117**
8:30 AM	0	0	0	2	0	0	0	0	0	1	13	0	0	0	14	0	30	121
8:45 AM	0	0	0	0	0	0	0	0	0	0	10	0	0	0	20	0	30	124
Count Total	0	1	0	4	0	0	0	0	0	2	100	0	0	0	115	4	226	0
Peak Hour	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**47**	**0**	**0**	**0**	**63**	**3**	**117**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Hibdon Ct			Driveway			College Ave			College Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	2	2	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Count Total	0	0	0	0	0	0	0	1	0	0	0	2	3	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

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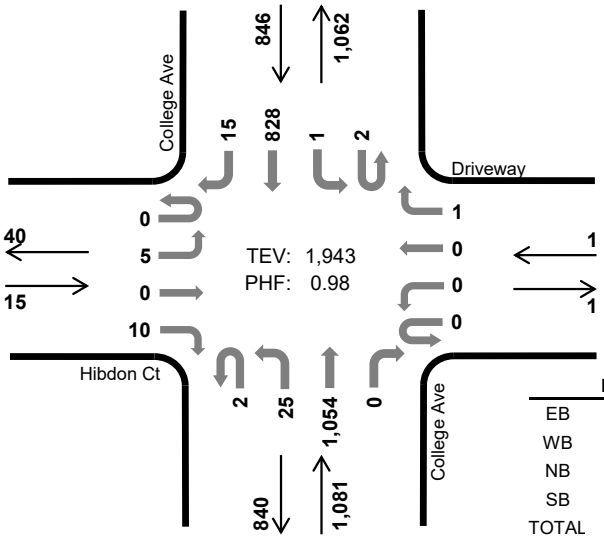
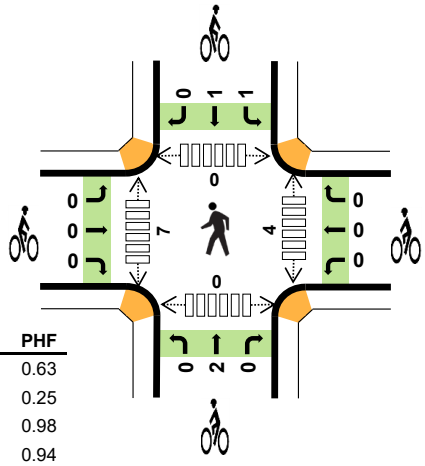
College Ave
Hibdon Ct

Peak Hour

Date: 12/07/2022
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM





	HV %:	PHF
EB	0.0%	0.63
WB	0.0%	0.25
NB	3.5%	0.98
SB	5.0%	0.94
TOTAL	4.1%	0.98

Two-Hour Count Summaries

Interval Start		Hibdon Ct Eastbound				Driveway Westbound				College Ave Northbound				College Ave Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	2	0	3	0	0	0	0	2	7	250	0	0	0	197	3	464	0
4:15 PM		**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**8**	**262**	**0**	**0**	**0**	**199**	**6**	**479**	0
4:30 PM		**0**	**1**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**7**	**266**	**0**	**0**	**1**	**211**	**4**	**494**	0
4:45 PM		**0**	**2**	**0**	**4**	**0**	**0**	**0**	**1**	**0**	**2**	**259**	**0**	**2**	**0**	**221**	**3**	**494**	1,931
5:00 PM		**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**8**	**267**	**0**	**0**	**0**	**197**	**2**	**476**	**1,943**
5:15 PM		0	1	0	2	0	0	0	0	2	4	263	0	0	0	196	2	470	1,934
5:30 PM		0	1	0	3	0	0	0	0	1	5	261	0	0	0	200	4	475	1,915
5:45 PM		0	2	0	4	0	0	0	0	0	2	206	1	0	0	165	3	383	1,804
Count Total		0	11	0	22	0	0	0	1	7	43	2,034	1	2	1	1,586	27	3,735	0
Peak Hour	**All**	**0**	**5**	**0**	**10**	**0**	**0**	**0**	**1**	**2**	**25**	**1,054**	**0**	**2**	**1**	**828**	**15**	**1,943**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**37**	**0**	**0**	**0**	**42**	**0**	**80**	**0**
	HV%	**-**	**0%**	**-**	**0%**	**-**	**-**	**-**	**0%**	**0%**	**4%**	**4%**	**-**	**0%**	**0%**	**5%**	**0%**	**4%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	0	0	22	13	*35*	0	0	0	0	*0*	1	7	1	0	*9*
4:15 PM	**0**	**0**	**14**	**11**	***25***	**0**	**0**	**1**	**0**	***1***	**2**	**0**	**0**	**0**	*2*
4:30 PM	**0**	**0**	**13**	**11**	***24***	**0**	**0**	**0**	**1**	***1***	**2**	**2**	**0**	**0**	*4*
4:45 PM	**0**	**0**	**7**	**14**	***21***	**0**	**0**	**1**	**0**	***1***	**0**	**2**	**0**	**0**	*2*
5:00 PM	**0**	**0**	**4**	**6**	***10***	**0**	**0**	**0**	**1**	***1***	**0**	**3**	**0**	**0**	***3***
5:15 PM	0	0	7	11	*18*	0	0	0	0	*0*	1	1	0	0	*2*
5:30 PM	0	0	13	10	*23*	0	0	0	0	*0*	1	2	0	0	*3*
5:45 PM	0	0	2	5	*7*	0	0	0	0	*0*	0	4	0	4	*8*
Count Total	0	0	82	81	*163*	0	0	2	2	*4*	7	21	1	4	*33*
Peak Hour	**0**	**0**	**38**	**42**	***80***	**0**	**0**	**2**	**2**	***4***	**4**	**7**	**0**	**0**	***11***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Hibdon Ct				Driveway				College Ave				College Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	1	21	0	0	0	13	0	35	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**13**	**0**	**0**	**0**	**11**	**0**	**25**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**0**	**0**	**0**	**11**	**0**	**24**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**14**	**0**	**21**	105
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**6**	**0**	**10**	**80**
5:15 PM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	11	0	18	73
5:30 PM	0	0	0	0	0	0	0	0	0	0	13	0	0	0	10	0	23	72
5:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	5	0	7	58
Count Total	0	0	0	0	0	0	0	0	0	2	80	0	0	0	81	0	163	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**37**	**0**	**0**	**0**	**42**	**0**	**80**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Hibdon Ct			Driveway			College Ave			College Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	3
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**4**
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	0	2	0	1	1	0	4	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**1**	**0**	**4**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

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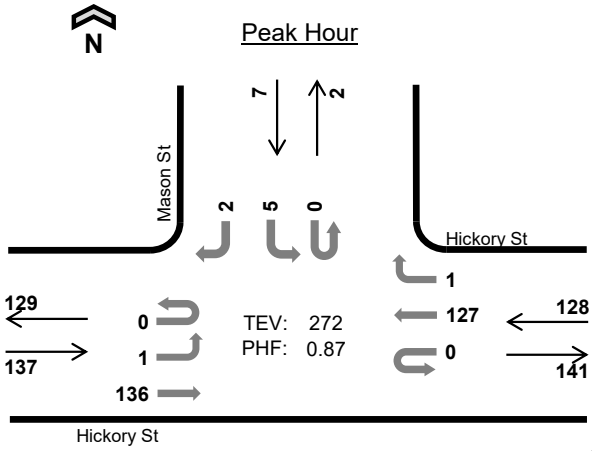
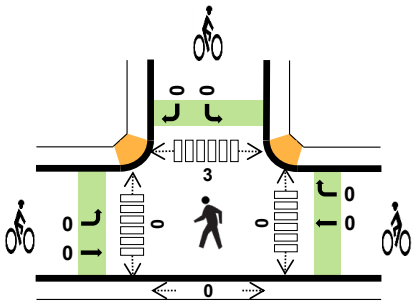
Mason St
Hickory St



Date: 12/07/2022
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM



	HV %:	PHF
EB	2.9%	0.65
WB	3.9%	0.80
NB	-	-
SB	42.9%	0.88
TOTAL	4.4%	0.87

Two-Hour Count Summaries

Interval Start		Hickory St Eastbound				Hickory St Westbound				N/A Northbound				Mason St Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	21	0	0	0	14	0	0	0	0	0	0	0	0	0	35	0
7:15 AM		0	0	22	0	0	0	20	0	0	0	0	0	0	1	0	1	44	0
7:30 AM		0	0	33	0	0	0	27	0	0	0	0	0	0	0	0	0	60	0
7:45 AM		**0**	**1**	**27**	**0**	**0**	**0**	**39**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**70**	209
8:00 AM		**0**	**0**	**24**	**0**	**0**	**0**	**40**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**66**	240
8:15 AM		**0**	**0**	**32**	**0**	**0**	**0**	**24**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**58**	254
8:30 AM		**0**	**0**	**53**	**0**	**0**	**0**	**24**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**78**	**272**
8:45 AM		0	0	26	0	1	0	23	0	0	0	0	0	0	0	0	0	50	252
Count Total		0	1	238	0	1	0	211	1	0	0	0	0	0	6	0	3	461	0
Peak Hour	**All**	**0**	**1**	**136**	**0**	**0**	**0**	**127**	**1**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**2**	**272**	**0**
	HV	**0**	**0**	**4**	**0**	**0**	**0**	**4**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**12**	**0**
	HV%	**-**	**0%**	**3%**	**-**	**-**	**-**	**3%**	**100%**	**-**	**-**	**-**	**-**	**-**	**20%**	**-**	**100%**	**4%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	2	1	0	0	*3*	0	0	0	0	*0*	0	0	1	0	*1*
7:15 AM	2	1	0	1	*4*	0	1	0	0	*1*	0	0	0	0	*0*
7:30 AM	1	0	0	0	*1*	0	0	0	2	*2*	0	0	1	0	*1*
7:45 AM	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	*1*
8:00 AM	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	*1*
8:15 AM	**1**	**2**	**0**	**2**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	*1*
8:30 AM	**3**	**2**	**0**	**0**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
8:45 AM	0	0	0	0	*0*	4	0	0	0	*4*	0	0	1	0	*1*
Count Total	9	7	0	4	*20*	4	1	0	2	*7*	0	0	6	0	*6*
Peak Hr	**4**	**5**	**0**	**3**	***12***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**3**	**0**	***3***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Hickory St				Hickory St				N/A				Mason St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0
7:15 AM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	1	4	0
7:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	9
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	7
8:15 AM	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**5**	8
8:30 AM	**0**	**0**	**3**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**12**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Count Total	0	0	9	0	0	0	6	1	0	0	0	0	0	1	0	3	20	0
Peak Hour	**0**	**0**	**4**	**0**	**0**	**0**	**4**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**12**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Hickory St			Hickory St			N/A			Mason St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	2	2	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:45 AM	3	1	0	0	0	0	0	0	0	0	0	0	4	4
Count Total	3	1	0	0	1	0	0	0	0	0	0	2	7	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

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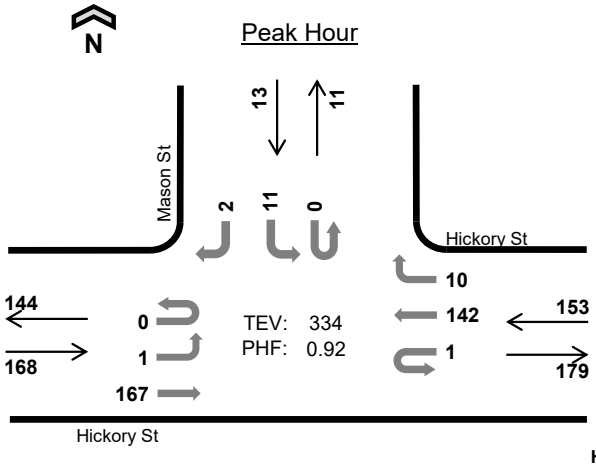
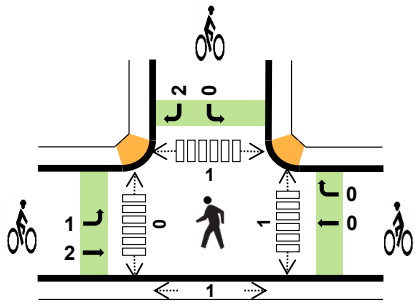
Mason St
Hickory St

Peak Hour



Date: 12/07/2022
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM



	HV %:	PHF
EB	1.8%	0.93
WB	2.0%	0.87
NB	-	-
SB	0.0%	0.65
TOTAL	1.8%	0.92

Two-Hour Count Summaries

Interval Start		Hickory St Eastbound				Hickory St Westbound				N/A Northbound				Mason St Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	2	40	0	0	0	43	3	0	0	0	0	0	1	0	1	90	0
4:15 PM		0	0	24	0	0	0	40	2	0	0	0	0	0	4	0	2	72	0
4:30 PM		**0**	**1**	**35**	**0**	**0**	**0**	**36**	**2**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**79**	0
4:45 PM		**0**	**0**	**43**	**0**	**0**	**0**	**38**	**6**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	**91**	332
5:00 PM		**0**	**0**	**45**	**0**	**0**	**0**	**29**	**2**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**79**	321
5:15 PM		**0**	**0**	**44**	**0**	**1**	**0**	**39**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**85**	**334**
5:30 PM		0	0	19	0	0	0	32	2	0	0	0	0	0	2	0	0	55	310
5:45 PM		0	0	22	0	0	0	37	1	0	0	0	0	0	1	0	1	62	281
Count Total		0	3	272	0	1	0	294	18	0	0	0	0	0	19	0	6	613	0
Peak Hour	**All**	**0**	**1**	**167**	**0**	**1**	**0**	**142**	**10**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**2**	**334**	**0**
	HV	**0**	**0**	**3**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**
	HV%	**-**	**0%**	**2%**	**-**	**0%**	**-**	**2%**	**0%**	**-**	**-**	**-**	**-**	**-**	**0%**	**-**	**0%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	2	0	0	2	*4*	0	0	0	0	*0*	0	0	0	0	*0*
4:15 PM	0	0	0	0	*0*	1	0	0	0	*1*	1	0	1	0	*2*
4:30 PM	**1**	**1**	**0**	**0**	***2***	**2**	**0**	**0**	**1**	***3***	**0**	**0**	**0**	**1**	*1*
4:45 PM	**1**	**1**	**0**	**0**	***2***	**1**	**0**	**0**	**0**	***1***	**1**	**0**	**0**	**0**	*1*
5:00 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	*1*
5:15 PM	**1**	**1**	**0**	**0**	***2***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	***0***
5:30 PM	0	0	0	0	*0*	2	0	0	0	*2*	6	0	1	0	*7*
5:45 PM	0	0	0	0	*0*	0	1	0	0	*1*	2	0	0	0	*2*
Count Total	5	3	0	2	*10*	6	1	0	2	*9*	10	0	3	1	*14*
Peak Hr	**3**	**3**	**0**	**0**	***6***	**3**	**0**	**0**	**2**	***5***	**1**	**0**	**1**	**1**	***3***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Hickory St				Hickory St				N/A				Mason St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	1	4	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	0
4:45 PM	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	8
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	4
5:15 PM	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**6**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	0	5	0	0	0	3	0	0	0	0	0	0	1	0	1	10	0
Peak Hour	**0**	**0**	**3**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Hickory St			Hickory St			N/A			Mason St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
4:30 PM	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	0
4:45 PM	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	5
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	5
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**5**
5:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	2	4
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	4
Count Total	1	5	0	0	1	0	0	0	0	0	0	2	9	0
Peak Hour	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**5**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

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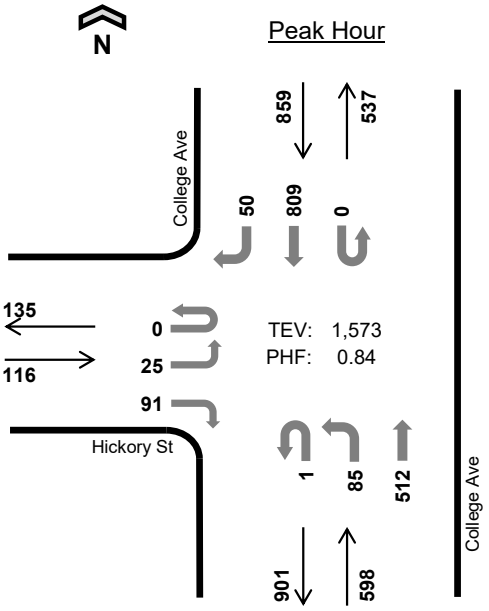
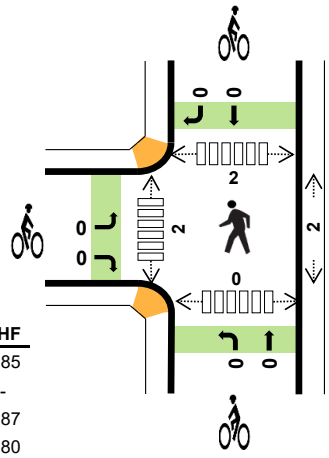
College Ave
Hickory St

Peak Hour



Date: 12/07/2022
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	2.6%	0.85
WB	-	-
NB	8.7%	0.87
SB	7.2%	0.80
TOTAL	7.4%	0.84

Two-Hour Count Summaries

Interval Start		Hickory St Eastbound				N/A Westbound				College Ave Northbound				College Ave Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	3	0	17	0	0	0	0	0	8	75	0	0	0	125	7	235	0
7:15 AM		0	4	0	17	0	0	0	0	0	15	98	0	0	0	172	10	316	0
7:30 AM		**0**	**5**	**0**	**29**	**0**	**0**	**0**	**0**	**0**	**16**	**116**	**0**	**0**	**0**	**215**	**13**	**394**	0
7:45 AM		**0**	**8**	**0**	**20**	**0**	**0**	**0**	**0**	**1**	**32**	**138**	**0**	**0**	**0**	**254**	**13**	**466**	1,411
8:00 AM		**0**	**6**	**0**	**19**	**0**	**0**	**0**	**0**	**0**	**22**	**122**	**0**	**0**	**0**	**143**	**17**	**329**	1,505
8:15 AM		**0**	**6**	**0**	**23**	**0**	**0**	**0**	**0**	**0**	**15**	**136**	**0**	**0**	**0**	**197**	**7**	**384**	**1,573**
8:30 AM		0	15	0	39	0	0	0	0	1	21	117	0	0	0	183	8	384	1,563
8:45 AM		0	6	0	22	0	0	0	0	0	12	138	0	0	0	179	13	370	1,467
Count Total		0	53	0	186	0	0	0	0	2	141	940	0	0	0	1,468	88	2,878	0
Peak Hour	**All**	**0**	**25**	**0**	**91**	**0**	**0**	**0**	**0**	**1**	**85**	**512**	**0**	**0**	**0**	**809**	**50**	**1,573**	**0**
	HV	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**2**	**50**	**0**	**0**	**0**	**62**	**0**	**117**	**0**
	HV%	**-**	**0%**	**-**	**3%**	**-**	**-**	**-**	**-**	**0%**	**2%**	**10%**	**-**	**-**	**-**	**8%**	**0%**	**7%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	2	0	12	14	*28*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	2	0	17	3	*22*	0	0	0	0	*0*	0	2	0	0	*2*
7:30 AM	**1**	**0**	**14**	**11**	***26***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**0**	**0**	**13**	**14**	***27***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:00 AM	**1**	**0**	**7**	**20**	***28***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
8:15 AM	**1**	**0**	**18**	**17**	***36***	**0**	**0**	**0**	**0**	***0***	**2**	**1**	**2**	**0**	***5***
8:30 AM	3	0	18	17	*38*	0	0	0	0	*0*	2	2	0	0	*4*
8:45 AM	0	0	8	21	*29*	1	0	0	0	*1*	0	4	0	0	*4*
Count Total	10	0	107	117	*234*	1	0	0	0	*1*	4	10	2	0	*16*
Peak Hr	**3**	**0**	**52**	**62**	***117***	**0**	**0**	**0**	**0**	***0***	**2**	**2**	**2**	**0**	***6***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Hickory St				N/A				College Ave				College Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	2	0	0	0	0	0	0	12	0	0	0	13	1	28	0
7:15 AM	0	1	0	1	0	0	0	0	0	1	16	0	0	0	3	0	22	0
7:30 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**0**	**0**	**0**	**11**	**0**	**26**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**0**	**0**	**0**	**14**	**0**	**27**	103
8:00 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**20**	**0**	**28**	103
8:15 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**16**	**0**	**0**	**0**	**17**	**0**	**36**	**117**
8:30 AM	0	1	0	2	0	0	0	0	0	3	15	0	0	0	17	0	38	129
8:45 AM	0	0	0	0	0	0	0	0	0	0	8	0	0	0	21	0	29	131
Count Total	0	2	0	8	0	0	0	0	0	6	101	0	0	0	116	1	234	0
Peak Hour	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**2**	**50**	**0**	**0**	**0**	**62**	**0**	**117**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Hickory St			N/A			College Ave			College Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Count Total	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

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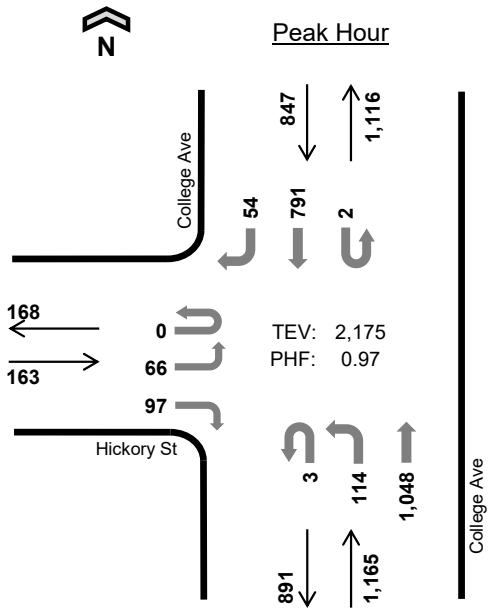
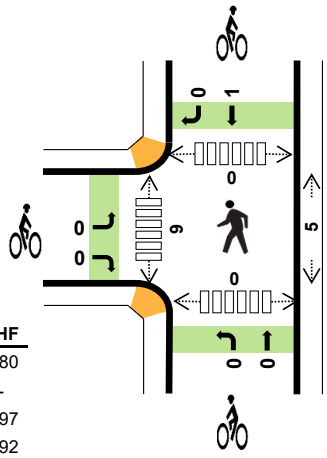
College Ave
Hickory St

Date: 12/07/2022
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM

Peak Hour



	HV %:	PHF
EB	3.1%	0.80
WB	-	-
NB	5.0%	0.97
SB	5.8%	0.92
TOTAL	5.1%	0.97



Two-Hour Count Summaries

Interval Start	Hickory St Eastbound				N/A Westbound				College Ave Northbound				College Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**12**	**0**	**28**	**0**	**0**	**0**	**0**	**1**	**33**	**266**	**0**	**2**	**0**	**182**	**16**	**540**	0
4:15 PM	**0**	**20**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**27**	**266**	**0**	**0**	**0**	**188**	**13**	**527**	0
4:30 PM	**0**	**14**	**0**	**25**	**0**	**0**	**0**	**0**	**0**	**25**	**269**	**0**	**0**	**0**	**201**	**15**	**549**	0
4:45 PM	**0**	**20**	**0**	**31**	**0**	**0**	**0**	**0**	**2**	**29**	**247**	**0**	**0**	**0**	**220**	**10**	**559**	**2,175**
5:00 PM	0	12	0	37	0	0	0	0	2	27	252	0	1	0	181	11	523	2,158
5:15 PM	0	17	0	33	0	0	0	0	2	30	246	0	0	0	198	14	540	2,171
5:30 PM	0	14	0	12	0	0	0	0	1	23	245	0	0	0	193	15	503	2,125
5:45 PM	0	4	0	19	0	0	0	0	1	30	217	0	0	0	161	9	441	2,007
Count Total	0	113	0	198	0	0	0	0	9	224	2,008	0	3	0	1,524	103	4,182	0
Peak Hour All	**0**	**66**	**0**	**97**	**0**	**0**	**0**	**0**	**3**	**114**	**1,048**	**0**	**2**	**0**	**791**	**54**	**2,175**	**0**
Peak Hour HV	**0**	**1**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**3**	**55**	**0**	**0**	**0**	**49**	**0**	**112**	**0**
Peak Hour HV%	**-**	**2%**	**-**	**4%**	**-**	**-**	**-**	**-**	**0%**	**3%**	**5%**	**-**	**0%**	**-**	**6%**	**0%**	**5%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	**3**	**0**	**22**	**13**	***38***	**0**	**0**	**0**	**0**	***0***	**0**	**6**	**0**	**0**	*6*
4:15 PM	**0**	**0**	**15**	**10**	***25***	**0**	**0**	**0**	**0**	***0***	**2**	**1**	**0**	**0**	*3*
4:30 PM	**1**	**0**	**12**	**13**	***26***	**0**	**0**	**0**	**1**	***1***	**3**	**1**	**0**	**0**	*4*
4:45 PM	**1**	**0**	**9**	**13**	***23***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	***1***
5:00 PM	0	0	5	7	*12*	0	0	0	0	*0*	1	4	3	0	*8*
5:15 PM	1	0	9	8	*18*	0	0	0	0	*0*	2	1	0	0	*3*
5:30 PM	0	0	13	11	*24*	0	0	0	0	*0*	0	1	1	0	*2*
5:45 PM	0	0	2	5	*7*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	6	0	87	80	*173*	0	0	0	1	*1*	8	15	4	0	*27*
Peak Hr	**5**	**0**	**58**	**49**	***112***	**0**	**0**	**0**	**1**	***1***	**5**	**9**	**0**	**0**	***14***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Hickory St				N/A				College Ave				College Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**22**	**0**	**0**	**0**	**13**	**0**	**38**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**14**	**0**	**0**	**0**	**10**	**0**	**25**	0
4:30 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**11**	**0**	**0**	**0**	**13**	**0**	**26**	0
4:45 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**8**	**0**	**0**	**0**	**13**	**0**	**23**	**112**
5:00 PM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	7	0	12	86
5:15 PM	0	0	0	1	0	0	0	0	0	1	8	0	0	0	7	1	18	79
5:30 PM	0	0	0	0	0	0	0	0	0	1	12	0	0	0	11	0	24	77
5:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	5	0	7	61
Count Total	0	1	0	5	0	0	0	0	0	5	82	0	0	0	79	1	173	0
Peak Hour	**0**	**1**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**3**	**55**	**0**	**0**	**0**	**49**	**0**	**112**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Hickory St			N/A			College Ave			College Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	1	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

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Intersection Capacity Worksheets: 2022 Existing

Intersection	
Int Delay, s/veh	4.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	0	1	1	0	0
Future Vol, veh/h	2	0	1	1	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	25	25	25	25	92	92
Heavy Vehicles, %	100	100	0	0	2	2
Mvmt Flow	8	0	4	4	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	7	6	0	0	8	0
Stage 1	6	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	7.4	7.2	-	-	4.12	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	6.4	-	-	-	-	-
Follow-up Hdwy	4.4	4.2	-	-	2.218	-
Pot Cap-1 Maneuver	810	850	-	-	1612	-
Stage 1	812	-	-	-	-	-
Stage 2	817	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	810	850	-	-	1612	-
Mov Cap-2 Maneuver	810	-	-	-	-	-
Stage 1	812	-	-	-	-	-
Stage 2	817	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	810	1612	-
HCM Lane V/C Ratio	-	-	0.01	-	-
HCM Control Delay (s)	-	-	9.5	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑↑↱			↑↑↱	
Traffic Vol, veh/h	4	1	7	0	0	0	14	514	0	0	866	9
Future Vol, veh/h	4	1	7	0	0	0	14	514	0	0	866	9
Conflicting Peds, #/hr	0	0	0	0	0	0	4	0	0	0	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	97	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	25	25	25	90	90	90	80	80	80
Heavy Vehicles, %	25	25	25	0	0	0	9	9	9	8	8	8
Mvmt Flow	5	1	9	0	0	0	16	571	0	0	1083	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1411	1696	551	1145	1701	286	1098	0	0	-	-	0
Stage 1	1093	1093	-	603	603	-	-	-	-	-	-	-
Stage 2	318	603	-	542	1098	-	-	-	-	-	-	-
Critical Hdwy	8	7	7.4	7.5	6.5	6.9	4.28	-	-	-	-	-
Critical Hdwy Stg 1	7	6	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7	6	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.75	4.25	3.55	3.5	4	3.3	2.29	-	-	-	-	-
Pot Cap-1 Maneuver	*125	93	423	258	114	*888	592	-	-	0	-	-
Stage 1	*192	244	-	774	692	-	-	-	-	0	-	-
Stage 2	*782	647	-	497	291	-	-	-	-	0	-	-
Platoon blocked, %	1	1		1	1	1		-	-		-	-
Mov Cap-1 Maneuver	*122	90	421	244	111	*888	590	-	-	-	-	-
Mov Cap-2 Maneuver	*122	90	-	244	111	-	-	-	-	-	-	-
Stage 1	*186	243	-	753	673	-	-	-	-	-	-	-
Stage 2	*761	629	-	483	290	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	24.8	0	0.3	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	590	-	-	198	-	-	-
HCM Lane V/C Ratio	0.026	-	-	0.081	-	-	-
HCM Control Delay (s)	11.3	-	-	24.8	0	-	-
HCM Lane LOS	B	-	-	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	136	127	1	5	2
Future Vol, veh/h	1	136	127	1	5	2
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	65	65	80	80	88	88
Heavy Vehicles, %	3	3	4	4	43	43
Mvmt Flow	2	209	159	1	6	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	163	0	-	0	376	163
Stage 1	-	-	-	-	163	-
Stage 2	-	-	-	-	213	-
Critical Hdwy	4.13	-	-	-	6.83	6.63
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	2.227	-	-	-	3.887	3.687
Pot Cap-1 Maneuver	1410	-	-	-	552	785
Stage 1	-	-	-	-	776	-
Stage 2	-	-	-	-	734	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1406	-	-	-	548	783
Mov Cap-2 Maneuver	-	-	-	-	548	-
Stage 1	-	-	-	-	772	-
Stage 2	-	-	-	-	732	-

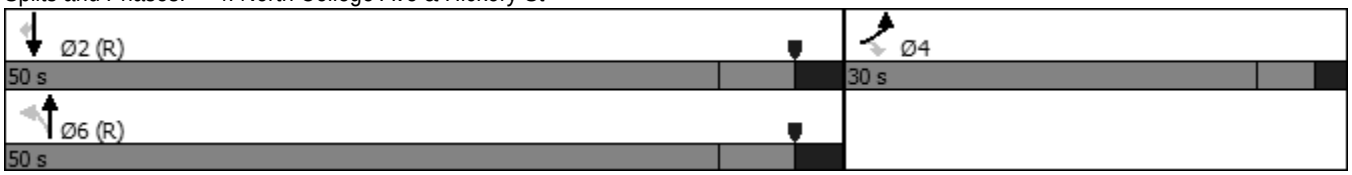
Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	11.1
HCM LOS			B

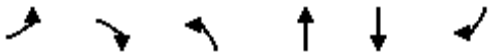
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1406	-	-	-	599
HCM Lane V/C Ratio	0.001	-	-	-	0.013
HCM Control Delay (s)	7.6	0	-	-	11.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	25	91	86	512	809	50
Future Volume (vph)	25	91	86	512	809	50
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	4			6	2	
Permitted Phases		4	6			2
Detector Phase	4	4	6	6	2	2
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0	10.0	10.0	10.0
Minimum Split (s)	25.5	25.5	24.5	24.5	24.5	24.5
Total Split (s)	30.0	30.0	50.0	50.0	50.0	50.0
Total Split (%)	37.5%	37.5%	62.5%	62.5%	62.5%	62.5%
Yellow Time (s)	3.5	3.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	-1.0	0.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.5	5.5	6.5	6.5	6.5	6.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 47 (59%), Referenced to phase 2:SBT and 6:NBTL, Start of Red
Natural Cycle: 60
Control Type: Actuated-Coordinated

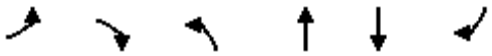
Splits and Phases: 4: North College Ave & Hickory St





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	29	107	99	589	1011	63
v/c Ratio	0.12	0.39	0.27	0.23	0.39	0.05
Control Delay	29.0	13.2	7.5	4.2	5.1	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.0	13.2	7.5	4.2	5.1	2.0
Queue Length 50th (ft)	14	8	11	34	68	1
Queue Length 95th (ft)	29	39	53	91	153	12
Internal Link Dist (ft)	250			150	860	
Turn Bay Length (ft)		98	125			95
Base Capacity (vph)	558	543	369	2565	2613	1152
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.20	0.27	0.23	0.39	0.05

Intersection Summary



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	25	91	86	512	809	50
Future Volume (veh/h)	25	91	86	512	809	50
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1767	1767	1796	1796
Adj Flow Rate, veh/h	29	107	99	589	1011	62
Peak Hour Factor	0.85	0.85	0.87	0.87	0.80	0.80
Percent Heavy Veh, %	3	3	9	9	7	7
Cap, veh/h	183	143	416	2547	2590	1154
Arrive On Green	0.10	0.09	0.76	0.76	0.76	0.76
Sat Flow, veh/h	1767	1572	497	3445	3503	1520
Grp Volume(v), veh/h	29	107	99	589	1011	62
Grp Sat Flow(s),veh/h/ln	1767	1572	497	1678	1706	1520
Q Serve(g_s), s	1.2	5.3	6.8	4.1	8.1	0.8
Cycle Q Clear(g_c), s	1.2	5.3	14.9	4.1	8.1	0.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	183	143	416	2547	2590	1154
V/C Ratio(X)	0.16	0.75	0.24	0.23	0.39	0.05
Avail Cap(c_a), veh/h	563	482	416	2547	2590	1154
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.7	35.5	5.9	2.8	3.3	2.4
Incr Delay (d2), s/veh	0.4	7.5	1.3	0.2	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.3	0.7	0.8	1.6	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	33.1	43.0	7.2	3.0	3.7	2.5
LnGrp LOS	C	D	A	A	A	A
Approach Vol, veh/h	136			688	1073	
Approach Delay, s/veh	40.9			3.6	3.7	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		67.2		12.8		67.2
Change Period (Y+Rc), s		7.5		5.5		7.5
Max Green Setting (Gmax), s		42.5		24.5		42.5
Max Q Clear Time (g_c+I1), s		10.1		7.3		16.9
Green Ext Time (p_c), s		4.8		0.4		3.6

Intersection Summary	
HCM 6th Ctrl Delay	6.3
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	6	0	7	3	4
Future Vol, veh/h	12	6	0	7	3	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	58	58	44	44
Heavy Vehicles, %	11	11	0	0	14	14
Mvmt Flow	16	8	0	12	7	9

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	29	6	0	0	12	0
Stage 1	6	-	-	-	-	-
Stage 2	23	-	-	-	-	-
Critical Hdwy	6.51	6.31	-	-	4.24	-
Critical Hdwy Stg 1	5.51	-	-	-	-	-
Critical Hdwy Stg 2	5.51	-	-	-	-	-
Follow-up Hdwy	3.599	3.399	-	-	2.326	-
Pot Cap-1 Maneuver	963	1051	-	-	1532	-
Stage 1	994	-	-	-	-	-
Stage 2	977	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	958	1051	-	-	1532	-
Mov Cap-2 Maneuver	958	-	-	-	-	-
Stage 1	994	-	-	-	-	-
Stage 2	972	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	3.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	987	1532	-
HCM Lane V/C Ratio	-	-	0.024	0.004	-
HCM Control Delay (s)	-	-	8.7	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑↑↱			↑↑↱	
Traffic Vol, veh/h	5	0	10	0	0	1	27	1054	0	3	828	15
Future Vol, veh/h	5	0	10	0	0	1	27	1054	0	3	828	15
Conflicting Peds, #/hr	0	0	0	0	0	0	7	0	4	4	0	7
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	97	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	63	63	25	25	25	98	98	98	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	4	4	4	5	5	5
Mvmt Flow	8	0	16	0	0	4	28	1076	0	3	881	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1496	2038	456	1583	2046	542	904	0	0	1080	0	0
Stage 1	902	902	-	1136	1136	-	-	-	-	-	-	-
Stage 2	594	1136	-	447	910	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.18	-	-	4.2	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.24	-	-	2.25	-	-
Pot Cap-1 Maneuver	*292	*87	557	*230	*86	*643	736	-	-	*944	-	-
Stage 1	*303	*359	-	*606	*531	-	-	-	-	-	-	-
Stage 2	*606	*531	-	*566	*356	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*279	*83	553	*215	*81	*641	731	-	-	*941	-	-
Mov Cap-2 Maneuver	*279	*83	-	*215	*81	-	-	-	-	-	-	-
Stage 1	*289	*354	-	*581	*509	-	-	-	-	-	-	-
Stage 2	*580	*509	-	*546	*351	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.2	10.7	0.3	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	731	-	-	417	641	* 941	-	-
HCM Lane V/C Ratio	0.038	-	-	0.057	0.006	0.003	-	-
HCM Control Delay (s)	10.1	-	-	14.2	10.7	8.8	-	-
HCM Lane LOS	B	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	167	142	10	11	2
Future Vol, veh/h	1	167	142	10	11	2
Conflicting Peds, #/hr	1	0	0	1	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	87	87	65	65
Heavy Vehicles, %	2	2	2	2	0	0
Mvmt Flow	1	180	163	11	17	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	175	0	-	0	353	170
Stage 1	-	-	-	-	170	-
Stage 2	-	-	-	-	183	-
Critical Hdwy	4.12	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.218	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1401	-	-	-	649	879
Stage 1	-	-	-	-	865	-
Stage 2	-	-	-	-	853	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1400	-	-	-	647	878
Mov Cap-2 Maneuver	-	-	-	-	647	-
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	852	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.5
HCM LOS			B

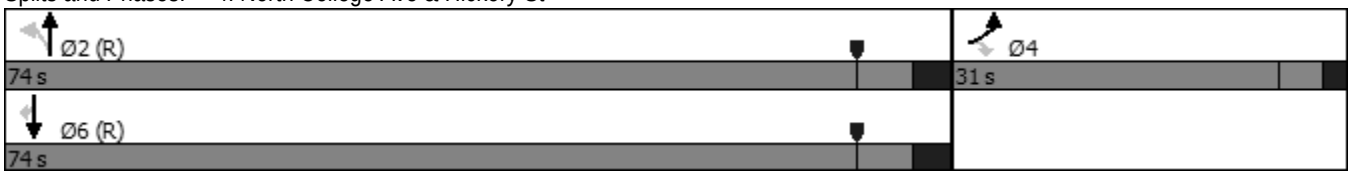
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1400	-	-	-	674
HCM Lane V/C Ratio	0.001	-	-	-	0.03
HCM Control Delay (s)	7.6	0	-	-	10.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

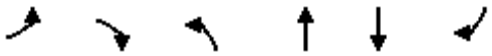
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	66	97	117	1048	791	54
Future Volume (vph)	66	97	117	1048	791	54
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0	10.0	10.0	10.0
Minimum Split (s)	25.5	25.5	24.5	24.5	24.5	24.5
Total Split (s)	31.0	31.0	74.0	74.0	74.0	74.0
Total Split (%)	29.5%	29.5%	70.5%	70.5%	70.5%	70.5%
Yellow Time (s)	3.5	3.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	-1.0	0.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.5	5.5	6.5	6.5	6.5	6.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 105
Actuated Cycle Length: 105
Offset: 64 (61%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

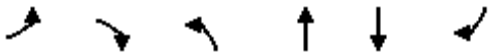
Splits and Phases: 4: North College Ave & Hickory St





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	83	121	121	1080	860	59
v/c Ratio	0.40	0.43	0.27	0.41	0.33	0.05
Control Delay	46.7	12.2	6.0	4.9	4.4	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.7	12.2	6.0	4.9	4.4	1.3
Queue Length 50th (ft)	53	0	17	94	68	0
Queue Length 95th (ft)	81	35	57	188	140	12
Internal Link Dist (ft)	250			150	860	
Turn Bay Length (ft)		98	125			95
Base Capacity (vph)	442	472	449	2665	2640	1138
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.26	0.27	0.41	0.33	0.05

Intersection Summary



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	66	97	117	1048	791	54
Future Volume (veh/h)	66	97	117	1048	791	54
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1826	1826	1811	1811
Adj Flow Rate, veh/h	82	121	121	1080	860	59
Peak Hour Factor	0.80	0.80	0.97	0.97	0.92	0.92
Percent Heavy Veh, %	3	3	5	5	6	6
Cap, veh/h	192	156	493	2729	2707	1200
Arrive On Green	0.11	0.10	0.79	0.79	0.79	0.79
Sat Flow, veh/h	1767	1572	593	3561	3532	1526
Grp Volume(v), veh/h	82	121	121	1080	860	59
Grp Sat Flow(s),veh/h/ln	1767	1572	593	1735	1721	1526
Q Serve(g_s), s	4.6	7.9	7.7	10.1	7.5	0.9
Cycle Q Clear(g_c), s	4.6	7.9	15.1	10.1	7.5	0.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	192	156	493	2729	2707	1200
V/C Ratio(X)	0.43	0.78	0.25	0.40	0.32	0.05
Avail Cap(c_a), veh/h	446	382	493	2729	2707	1200
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.7	46.2	5.3	3.5	3.2	2.5
Incr Delay (d2), s/veh	1.5	8.0	1.2	0.4	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	3.4	0.9	2.4	1.8	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	45.2	54.2	6.5	3.9	3.5	2.6
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	203			1201	919	
Approach Delay, s/veh	50.6			4.2	3.4	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		89.1		15.9		89.1
Change Period (Y+Rc), s		7.5		5.5		7.5
Max Green Setting (Gmax), s		66.5		25.5		66.5
Max Q Clear Time (g_c+I1), s		17.1		9.9		9.5
Green Ext Time (p_c), s		6.8		0.6		4.0

Intersection Summary	
HCM 6th Ctrl Delay	7.9
HCM 6th LOS	A

Intersection Capacity Worksheets: Year 2025 Background

Intersection	
Int Delay, s/veh	4.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	0	1	1	0	0
Future Vol, veh/h	2	0	1	1	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	25	25	25	25	92	92
Heavy Vehicles, %	100	100	0	0	2	2
Mvmt Flow	8	0	4	4	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	7	6	0	0	8	0
Stage 1	6	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	7.4	7.2	-	-	4.12	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	6.4	-	-	-	-	-
Follow-up Hdwy	4.4	4.2	-	-	2.218	-
Pot Cap-1 Maneuver	810	850	-	-	1612	-
Stage 1	812	-	-	-	-	-
Stage 2	817	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	810	850	-	-	1612	-
Mov Cap-2 Maneuver	810	-	-	-	-	-
Stage 1	812	-	-	-	-	-
Stage 2	817	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	810	1612	-
HCM Lane V/C Ratio	-	-	0.01	-	-
HCM Control Delay (s)	-	-	9.5	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑↑↱			↑↑↱	
Traffic Vol, veh/h	4	1	7	0	0	0	14	530	0	0	890	9
Future Vol, veh/h	4	1	7	0	0	0	14	530	0	0	890	9
Conflicting Peds, #/hr	0	0	0	0	0	0	4	0	0	0	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	97	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	25	25	25	90	90	90	80	80	80
Heavy Vehicles, %	25	25	25	0	0	0	9	9	9	8	8	8
Mvmt Flow	5	1	9	0	0	0	16	589	0	0	1113	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1450	1744	566	1178	1749	295	1128	0	0	-	-	0
Stage 1	1123	1123	-	621	621	-	-	-	-	-	-	-
Stage 2	327	621	-	557	1128	-	-	-	-	-	-	-
Critical Hdwy	8	7	7.4	7.5	6.5	6.9	4.28	-	-	-	-	-
Critical Hdwy Stg 1	7	6	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7	6	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.75	4.25	3.55	3.5	4	3.3	2.29	-	-	-	-	-
Pot Cap-1 Maneuver	*114	85	413	241	105	*888	576	-	-	0	-	-
Stage 1	*183	235	-	751	677	-	-	-	-	0	-	-
Stage 2	*782	631	-	487	282	-	-	-	-	0	-	-
Platoon blocked, %	1	1		1	1	1		-	-		-	-
Mov Cap-1 Maneuver	*111	82	411	228	102	*888	574	-	-	-	-	-
Mov Cap-2 Maneuver	*111	82	-	228	102	-	-	-	-	-	-	-
Stage 1	*177	234	-	730	658	-	-	-	-	-	-	-
Stage 2	*760	614	-	473	281	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	26.4	0	0.3	0
HCM LOS	D	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	574	-	-	184	-	-	-
HCM Lane V/C Ratio	0.027	-	-	0.087	-	-	-
HCM Control Delay (s)	11.4	-	-	26.4	0	-	-
HCM Lane LOS	B	-	-	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	140	131	1	5	2
Future Vol, veh/h	1	140	131	1	5	2
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	65	65	80	80	88	88
Heavy Vehicles, %	3	3	4	4	43	43
Mvmt Flow	2	215	164	1	6	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	168	0	-	0	387	168
Stage 1	-	-	-	-	168	-
Stage 2	-	-	-	-	219	-
Critical Hdwy	4.13	-	-	-	6.83	6.63
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	2.227	-	-	-	3.887	3.687
Pot Cap-1 Maneuver	1404	-	-	-	544	780
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	729	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1400	-	-	-	540	778
Mov Cap-2 Maneuver	-	-	-	-	540	-
Stage 1	-	-	-	-	767	-
Stage 2	-	-	-	-	727	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	11.2
HCM LOS			B

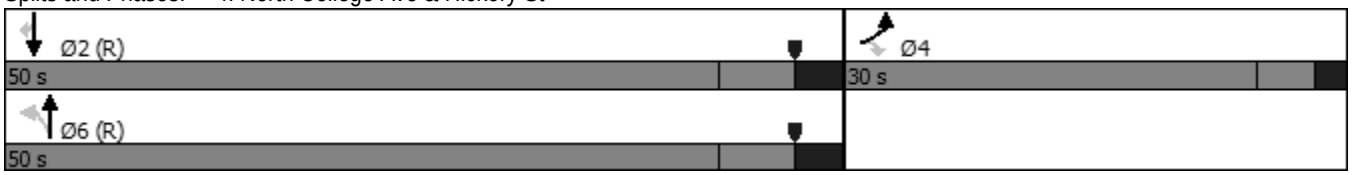
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1400	-	-	-	592
HCM Lane V/C Ratio	0.001	-	-	-	0.013
HCM Control Delay (s)	7.6	0	-	-	11.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

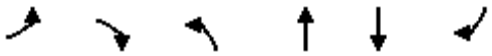
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	26	94	89	528	834	52
Future Volume (vph)	26	94	89	528	834	52
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	4			6	2	
Permitted Phases		4	6			2
Detector Phase	4	4	6	6	2	2
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0	10.0	10.0	10.0
Minimum Split (s)	25.5	25.5	24.5	24.5	24.5	24.5
Total Split (s)	30.0	30.0	50.0	50.0	50.0	50.0
Total Split (%)	37.5%	37.5%	62.5%	62.5%	62.5%	62.5%
Yellow Time (s)	3.5	3.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	-1.0	0.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.5	5.5	6.5	6.5	6.5	6.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 47 (59%), Referenced to phase 2:SBT and 6:NBTL, Start of Red
Natural Cycle: 60
Control Type: Actuated-Coordinated

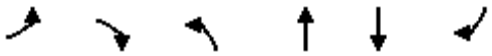
Splits and Phases: 4: North College Ave & Hickory St





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	31	111	102	607	1043	65
v/c Ratio	0.13	0.41	0.29	0.24	0.40	0.06
Control Delay	29.0	15.3	8.0	4.3	5.2	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.0	15.3	8.0	4.3	5.2	2.1
Queue Length 50th (ft)	15	13	12	35	72	1
Queue Length 95th (ft)	30	44	56	94	158	13
Internal Link Dist (ft)	250			150	860	
Turn Bay Length (ft)		98	125			95
Base Capacity (vph)	558	538	354	2560	2608	1150
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.21	0.29	0.24	0.40	0.06

Intersection Summary



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	26	94	89	528	834	52
Future Volume (veh/h)	26	94	89	528	834	52
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1767	1767	1796	1796
Adj Flow Rate, veh/h	31	111	102	607	1042	65
Peak Hour Factor	0.85	0.85	0.87	0.87	0.80	0.80
Percent Heavy Veh, %	3	3	9	9	7	7
Cap, veh/h	189	148	402	2537	2579	1149
Arrive On Green	0.11	0.09	0.76	0.76	0.76	0.76
Sat Flow, veh/h	1767	1572	481	3445	3503	1520
Grp Volume(v), veh/h	31	111	102	607	1042	65
Grp Sat Flow(s),veh/h/ln	1767	1572	481	1678	1706	1520
Q Serve(g_s), s	1.3	5.5	7.6	4.3	8.6	0.9
Cycle Q Clear(g_c), s	1.3	5.5	16.2	4.3	8.6	0.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	189	148	402	2537	2579	1149
V/C Ratio(X)	0.16	0.75	0.25	0.24	0.40	0.06
Avail Cap(c_a), veh/h	563	482	402	2537	2579	1149
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	35.3	6.3	2.9	3.4	2.5
Incr Delay (d2), s/veh	0.4	7.4	1.5	0.2	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.4	0.8	0.8	1.7	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	32.9	42.7	7.8	3.1	3.9	2.6
LnGrp LOS	C	D	A	A	A	A
Approach Vol, veh/h	142			709	1107	
Approach Delay, s/veh	40.5			3.8	3.8	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		67.0		13.0		67.0
Change Period (Y+Rc), s		7.5		5.5		7.5
Max Green Setting (Gmax), s		42.5		24.5		42.5
Max Q Clear Time (g_c+I1), s		10.6		7.5		18.2
Green Ext Time (p_c), s		5.0		0.4		3.8

Intersection Summary	
HCM 6th Ctrl Delay	6.5
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	6	0	7	3	4
Future Vol, veh/h	12	6	0	7	3	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	58	58	44	44
Heavy Vehicles, %	11	11	0	0	14	14
Mvmt Flow	16	8	0	12	7	9

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	29	6	0	0	12	0
Stage 1	6	-	-	-	-	-
Stage 2	23	-	-	-	-	-
Critical Hdwy	6.51	6.31	-	-	4.24	-
Critical Hdwy Stg 1	5.51	-	-	-	-	-
Critical Hdwy Stg 2	5.51	-	-	-	-	-
Follow-up Hdwy	3.599	3.399	-	-	2.326	-
Pot Cap-1 Maneuver	963	1051	-	-	1532	-
Stage 1	994	-	-	-	-	-
Stage 2	977	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	958	1051	-	-	1532	-
Mov Cap-2 Maneuver	958	-	-	-	-	-
Stage 1	994	-	-	-	-	-
Stage 2	972	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	3.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	987	1532	-
HCM Lane V/C Ratio	-	-	0.024	0.004	-
HCM Control Delay (s)	-	-	8.7	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑↑↱			↑↑↱	
Traffic Vol, veh/h	5	0	10	0	0	1	28	1086	0	3	853	15
Future Vol, veh/h	5	0	10	0	0	1	28	1086	0	3	853	15
Conflicting Peds, #/hr	0	0	0	0	0	0	7	0	4	4	0	7
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	97	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	63	63	25	25	25	98	98	98	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	4	4	4	5	5	5
Mvmt Flow	8	0	16	0	0	4	29	1108	0	3	907	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1540	2098	469	1630	2106	558	930	0	0	1112	0	0
Stage 1	928	928	-	1170	1170	-	-	-	-	-	-	-
Stage 2	612	1170	-	460	936	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.18	-	-	4.2	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.24	-	-	2.25	-	-
Pot Cap-1 Maneuver	*259	*76	546	*201	*74	*643	719	-	-	*944	-	-
Stage 1	*292	*349	-	*606	*531	-	-	-	-	-	-	-
Stage 2	*606	*531	-	*556	*346	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*246	*71	542	*188	*70	*641	714	-	-	*941	-	-
Mov Cap-2 Maneuver	*246	*71	-	*188	*70	-	-	-	-	-	-	-
Stage 1	*278	*344	-	*580	*507	-	-	-	-	-	-	-
Stage 2	*578	*507	-	*536	*341	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.9	10.7	0.3	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	714	-	-	387	641	* 941	-	-
HCM Lane V/C Ratio	0.04	-	-	0.062	0.006	0.003	-	-
HCM Control Delay (s)	10.3	-	-	14.9	10.7	8.8	-	-
HCM Lane LOS	B	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	172	146	10	11	2
Future Vol, veh/h	1	172	146	10	11	2
Conflicting Peds, #/hr	1	0	0	1	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	87	87	65	65
Heavy Vehicles, %	2	2	2	2	0	0
Mvmt Flow	1	185	168	11	17	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	180	0	-	0	363	175
Stage 1	-	-	-	-	175	-
Stage 2	-	-	-	-	188	-
Critical Hdwy	4.12	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.218	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1396	-	-	-	640	874
Stage 1	-	-	-	-	860	-
Stage 2	-	-	-	-	849	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1395	-	-	-	638	873
Mov Cap-2 Maneuver	-	-	-	-	638	-
Stage 1	-	-	-	-	858	-
Stage 2	-	-	-	-	848	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.6
HCM LOS			B

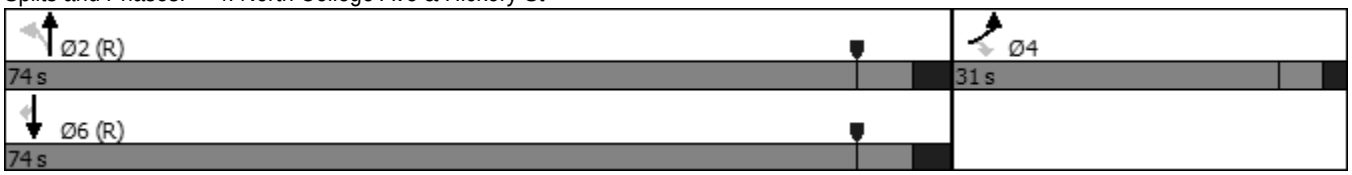
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1395	-	-	-	666
HCM Lane V/C Ratio	0.001	-	-	-	0.03
HCM Control Delay (s)	7.6	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

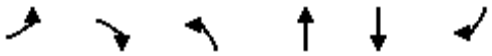
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	68	100	121	1080	815	56
Future Volume (vph)	68	100	121	1080	815	56
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0	10.0	10.0	10.0
Minimum Split (s)	25.5	25.5	24.5	24.5	24.5	24.5
Total Split (s)	31.0	31.0	74.0	74.0	74.0	74.0
Total Split (%)	29.5%	29.5%	70.5%	70.5%	70.5%	70.5%
Yellow Time (s)	3.5	3.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	-1.0	0.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.5	5.5	6.5	6.5	6.5	6.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 105
Actuated Cycle Length: 105
Offset: 64 (61%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 4: North College Ave & Hickory St





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	85	125	125	1113	886	61
v/c Ratio	0.40	0.44	0.29	0.42	0.34	0.05
Control Delay	46.9	12.1	6.3	5.0	4.5	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.9	12.1	6.3	5.0	4.5	1.3
Queue Length 50th (ft)	54	0	18	98	71	0
Queue Length 95th (ft)	82	35	60	196	145	12
Internal Link Dist (ft)	250			150	860	
Turn Bay Length (ft)		98	125			95
Base Capacity (vph)	442	475	436	2663	2638	1138
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.26	0.29	0.42	0.34	0.05

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	68	100	121	1080	815	56
Future Volume (veh/h)	68	100	121	1080	815	56
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1826	1826	1811	1811
Adj Flow Rate, veh/h	85	125	125	1113	886	61
Peak Hour Factor	0.80	0.80	0.97	0.97	0.92	0.92
Percent Heavy Veh, %	3	3	5	5	6	6
Cap, veh/h	197	160	478	2720	2697	1196
Arrive On Green	0.11	0.10	0.78	0.78	0.78	0.78
Sat Flow, veh/h	1767	1572	578	3561	3532	1526
Grp Volume(v), veh/h	85	125	125	1113	886	61
Grp Sat Flow(s),veh/h/ln	1767	1572	578	1735	1721	1526
Q Serve(g_s), s	4.7	8.1	8.4	10.7	7.9	0.9
Cycle Q Clear(g_c), s	4.7	8.1	16.3	10.7	7.9	0.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	197	160	478	2720	2697	1196
V/C Ratio(X)	0.43	0.78	0.26	0.41	0.33	0.05
Avail Cap(c_a), veh/h	446	382	478	2720	2697	1196
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.6	46.0	5.7	3.6	3.3	2.6
Incr Delay (d2), s/veh	1.5	8.0	1.3	0.5	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	3.6	1.0	2.6	1.9	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	45.1	54.0	7.0	4.1	3.6	2.6
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	210			1238	947	
Approach Delay, s/veh	50.4			4.4	3.6	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		88.8		16.2		88.8
Change Period (Y+Rc), s		7.5		5.5		7.5
Max Green Setting (Gmax), s		66.5		25.5		66.5
Max Q Clear Time (g_c+I1), s		18.3		10.1		9.9
Green Ext Time (p_c), s		7.1		0.6		4.1

Intersection Summary	
HCM 6th Ctrl Delay	8.1
HCM 6th LOS	A

Intersection Capacity Worksheets: Year 2045 Background

Intersection	
Int Delay, s/veh	4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	0	1	1	0	0
Future Vol, veh/h	2	0	1	1	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	25	25	25	25	92	92
Heavy Vehicles, %	2	2	0	0	2	2
Mvmt Flow	8	0	4	4	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	7	6	0	0	8	0
Stage 1	6	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	1014	1077	-	-	1612	-
Stage 1	1017	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1014	1077	-	-	1612	-
Mov Cap-2 Maneuver	1014	-	-	-	-	-
Stage 1	1017	-	-	-	-	-
Stage 2	1022	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1014	1612	-
HCM Lane V/C Ratio	-	-	0.008	-	-
HCM Control Delay (s)	-	-	8.6	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	1	10	0	0	0	15	615	0	0	1040	10
Future Vol, veh/h	5	1	10	0	0	0	15	615	0	0	1040	10
Conflicting Peds, #/hr	0	0	0	0	0	0	4	0	0	0	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	97	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	92	92	92	90	90	90	80	80	80
Heavy Vehicles, %	10	10	10	0	0	0	9	9	9	8	8	8
Mvmt Flow	7	1	13	0	0	0	17	683	0	0	1300	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1687	2028	661	1368	2034	342	1317	0	0	-	-	0
Stage 1	1311	1311	-	717	717	-	-	-	-	-	-	-
Stage 2	376	717	-	651	1317	-	-	-	-	-	-	-
Critical Hdwy	7.7	6.7	7.1	7.5	6.5	6.9	4.28	-	-	-	-	-
Critical Hdwy Stg 1	6.7	5.7	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.7	5.7	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.6	4.1	3.4	3.5	4	3.3	2.29	-	-	-	-	-
Pot Cap-1 Maneuver	56	52	387	108	58	660	485	-	-	0	-	-
Stage 1	156	212	-	391	437	-	-	-	-	0	-	-
Stage 2	596	413	-	429	229	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	54	50	386	99	56	660	483	-	-	-	-	-
Mov Cap-2 Maneuver	54	50	-	99	56	-	-	-	-	-	-	-
Stage 1	150	211	-	377	422	-	-	-	-	-	-	-
Stage 2	575	399	-	412	228	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	42.9	0	0.3	0
HCM LOS	E	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	483	-	-	116	-	-	-
HCM Lane V/C Ratio	0.035	-	-	0.184	-	-	-
HCM Control Delay (s)	12.7	-	-	42.9	0	-	-
HCM Lane LOS	B	-	-	E	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.6	-	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	165	150	1	5	2
Future Vol, veh/h	1	165	150	1	5	2
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	65	65	80	80	88	88
Heavy Vehicles, %	3	3	4	4	10	10
Mvmt Flow	2	254	188	1	6	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	192	0	-	0	450	192
Stage 1	-	-	-	-	192	-
Stage 2	-	-	-	-	258	-
Critical Hdwy	4.13	-	-	-	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	2.227	-	-	-	3.59	3.39
Pot Cap-1 Maneuver	1375	-	-	-	552	830
Stage 1	-	-	-	-	822	-
Stage 2	-	-	-	-	767	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1371	-	-	-	548	828
Mov Cap-2 Maneuver	-	-	-	-	548	-
Stage 1	-	-	-	-	818	-
Stage 2	-	-	-	-	765	-

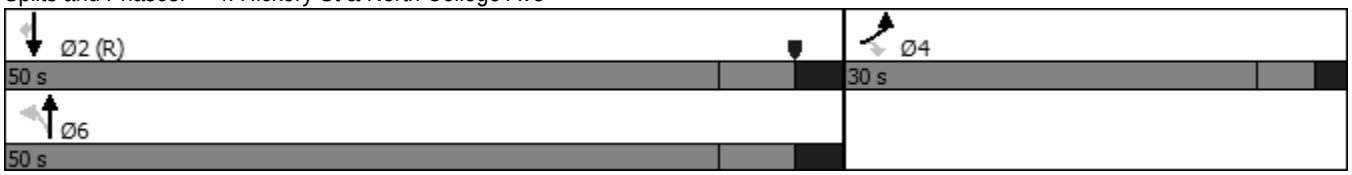
Approach	EB	WB	SB
HCM Control Delay, s	0	0	11
HCM LOS			B

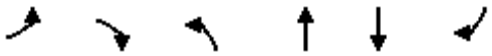
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1371	-	-	-	607
HCM Lane V/C Ratio	0.001	-	-	-	0.013
HCM Control Delay (s)	7.6	0	-	-	11
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	30	110	105	615	970	60
Future Volume (vph)	30	110	105	615	970	60
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	4			6	2	
Permitted Phases		4	6			2
Detector Phase	4	4	6	6	2	2
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0	10.0	10.0	10.0
Minimum Split (s)	25.5	25.5	24.5	24.5	24.5	24.5
Total Split (s)	30.0	30.0	50.0	50.0	50.0	50.0
Total Split (%)	37.5%	37.5%	62.5%	62.5%	62.5%	62.5%
Yellow Time (s)	3.5	3.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	-1.0	0.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.5	5.5	6.5	6.5	6.5	6.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Max	Max	C-Max	C-Max
Act Effct Green (s)	12.0	11.0	60.8	60.8	60.8	60.8
Actuated g/C Ratio	0.15	0.14	0.76	0.76	0.76	0.76

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 47 (59%), Referenced to phase 2:SBT, Start of Red
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.49
Intersection Signal Delay: 7.5
Intersection Capacity Utilization 55.6%
Analysis Period (min) 15

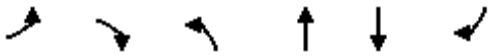
Splits and Phases: 4: Hickory St & North College Ave





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	35	129	121	707	1213	75
v/c Ratio	0.13	0.49	0.44	0.28	0.47	0.07
Control Delay	28.0	24.7	13.3	4.9	6.3	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.0	24.7	13.3	4.9	6.3	2.4
Queue Length 50th (ft)	16	35	19	50	106	2
Queue Length 95th (ft)	33	68	90	112	195	16
Internal Link Dist (ft)	250			150	860	
Turn Bay Length (ft)		98				95
Base Capacity (vph)	558	517	278	2518	2565	1132
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.25	0.44	0.28	0.47	0.07

Intersection Summary



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	30	110	105	615	970	60
Future Volume (veh/h)	30	110	105	615	970	60
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1767	1767	1796	1796
Adj Flow Rate, veh/h	35	129	121	707	1212	75
Peak Hour Factor	0.85	0.85	0.87	0.87	0.80	0.80
Percent Heavy Veh, %	3	3	9	9	7	7
Cap, veh/h	212	169	334	2493	2535	1129
Arrive On Green	0.12	0.11	0.74	0.74	0.74	0.74
Sat Flow, veh/h	1767	1572	405	3445	3503	1520
Grp Volume(v), veh/h	35	129	121	707	1212	75
Grp Sat Flow(s),veh/h/ln	1767	1572	405	1678	1706	1520
Q Serve(g_s), s	1.4	6.4	13.6	5.5	11.3	1.1
Cycle Q Clear(g_c), s	1.4	6.4	24.9	5.5	11.3	1.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	212	169	334	2493	2535	1129
V/C Ratio(X)	0.17	0.76	0.36	0.28	0.48	0.07
Avail Cap(c_a), veh/h	563	482	334	2493	2535	1129
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.6	34.7	9.1	3.4	4.1	2.8
Incr Delay (d2), s/veh	0.4	7.0	3.0	0.3	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.7	1.3	1.4	2.5	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	32.0	41.7	12.1	3.6	4.8	2.9
LnGrp LOS	C	D	B	A	A	A
Approach Vol, veh/h	164			828	1287	
Approach Delay, s/veh	39.7			4.9	4.6	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		65.9		14.1		65.9
Change Period (Y+Rc), s		7.5		5.5		7.5
Max Green Setting (Gmax), s		42.5		24.5		42.5
Max Q Clear Time (g_c+I1), s		13.3		8.4		26.9
Green Ext Time (p_c), s		6.1		0.4		4.4

Intersection Summary	
HCM 6th Ctrl Delay	7.3
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	4.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	5	0	10	3	5
Future Vol, veh/h	15	5	0	10	3	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	58	58	44	44
Heavy Vehicles, %	11	11	2	2	10	10
Mvmt Flow	20	7	0	17	7	11

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	34	9	0	0	17	0
Stage 1	9	-	-	-	-	-
Stage 2	25	-	-	-	-	-
Critical Hdwy	6.51	6.31	-	-	4.2	-
Critical Hdwy Stg 1	5.51	-	-	-	-	-
Critical Hdwy Stg 2	5.51	-	-	-	-	-
Follow-up Hdwy	3.599	3.399	-	-	2.29	-
Pot Cap-1 Maneuver	957	1047	-	-	1550	-
Stage 1	991	-	-	-	-	-
Stage 2	975	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	952	1047	-	-	1550	-
Mov Cap-2 Maneuver	952	-	-	-	-	-
Stage 1	991	-	-	-	-	-
Stage 2	970	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	2.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	974	1550	-
HCM Lane V/C Ratio	-	-	0.027	0.004	-
HCM Control Delay (s)	-	-	8.8	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑↑↱			↑↑↱	
Traffic Vol, veh/h	5	0	10	0	0	1	30	1265	0	3	995	20
Future Vol, veh/h	5	0	10	0	0	1	30	1265	0	3	995	20
Conflicting Peds, #/hr	0	0	0	0	0	0	7	0	4	4	0	7
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	97	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	63	63	25	25	25	98	98	98	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	4	4	4	5	5	5
Mvmt Flow	8	0	16	0	0	4	31	1291	0	3	1059	21

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1791	2440	547	1893	2450	650	1087	0	0	1295	0	0
Stage 1	1083	1083	-	1357	1357	-	-	-	-	-	-	-
Stage 2	708	1357	-	536	1093	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.18	-	-	4.2	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.24	-	-	2.25	-	-
Pot Cap-1 Maneuver	*189	*36	486	*136	*35	*555	626	-	-	*815	-	-
Stage 1	*235	*296	-	*524	*458	-	-	-	-	-	-	-
Stage 2	*524	*458	-	*501	*293	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*178	*33	483	*125	*32	*553	622	-	-	*812	-	-
Mov Cap-2 Maneuver	*178	*33	-	*125	*32	-	-	-	-	-	-	-
Stage 1	*222	*291	-	*496	*434	-	-	-	-	-	-	-
Stage 2	*494	*434	-	*480	*288	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.7	11.6	0.3	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	622	-	-	307	553	* 812	-	-
HCM Lane V/C Ratio	0.049	-	-	0.078	0.007	0.004	-	-
HCM Control Delay (s)	11.1	-	-	17.7	11.6	9.5	-	-
HCM Lane LOS	B	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	0	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	200	170	10	15	2
Future Vol, veh/h	1	200	170	10	15	2
Conflicting Peds, #/hr	1	0	0	1	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	87	87	65	65
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	215	195	11	23	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	207	0	-	0	420	202
Stage 1	-	-	-	-	202	-
Stage 2	-	-	-	-	218	-
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	1364	-	-	-	590	839
Stage 1	-	-	-	-	832	-
Stage 2	-	-	-	-	818	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1363	-	-	-	588	838
Mov Cap-2 Maneuver	-	-	-	-	588	-
Stage 1	-	-	-	-	830	-
Stage 2	-	-	-	-	817	-

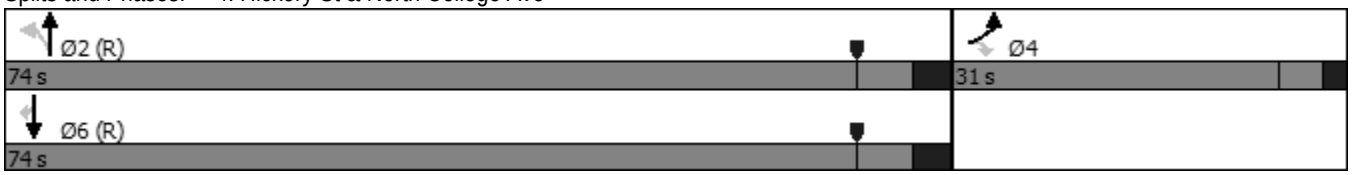
Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.2
HCM LOS			B

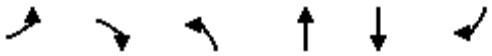
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1363	-	-	-	609
HCM Lane V/C Ratio	0.001	-	-	-	0.043
HCM Control Delay (s)	7.6	0	-	-	11.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	80	115	140	1260	950	65
Future Volume (vph)	80	115	140	1260	950	65
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0	10.0	10.0	10.0
Minimum Split (s)	25.5	25.5	24.5	24.5	24.5	24.5
Total Split (s)	31.0	31.0	74.0	74.0	74.0	74.0
Total Split (%)	29.5%	29.5%	70.5%	70.5%	70.5%	70.5%
Yellow Time (s)	3.5	3.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	-1.0	0.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.5	5.5	6.5	6.5	6.5	6.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	13.2	12.2	80.8	80.8	80.8	80.8
Actuated g/C Ratio	0.13	0.12	0.77	0.77	0.77	0.77
v/c Ratio						

Cycle Length: 105
Actuated Cycle Length: 105
Offset: 64 (61%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.49
Intersection Signal Delay: 7.5
Intersection Capacity Utilization 55.0%
Analysis Period (min) 15

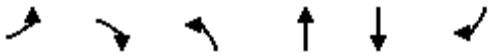
Splits and Phases: 4: Hickory St & North College Ave





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	100	144	144	1299	1033	71
v/c Ratio	0.45	0.49	0.39	0.49	0.39	0.06
Control Delay	47.9	15.6	8.8	5.8	5.0	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.9	15.6	8.8	5.8	5.0	1.6
Queue Length 50th (ft)	64	11	25	132	93	1
Queue Length 95th (ft)	93	48	83	247	178	15
Internal Link Dist (ft)	250			150	860	
Turn Bay Length (ft)		98				95
Base Capacity (vph)	442	476	365	2645	2620	1131
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.30	0.39	0.49	0.39	0.06

Intersection Summary



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	80	115	140	1260	950	65
Future Volume (veh/h)	80	115	140	1260	950	65
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1826	1826	1811	1811
Adj Flow Rate, veh/h	100	144	144	1299	1033	71
Peak Hour Factor	0.80	0.80	0.97	0.97	0.92	0.92
Percent Heavy Veh, %	3	3	5	5	6	6
Cap, veh/h	219	180	404	2675	2654	1177
Arrive On Green	0.12	0.11	0.77	0.77	0.77	0.77
Sat Flow, veh/h	1767	1572	498	3561	3532	1526
Grp Volume(v), veh/h	100	144	144	1299	1033	71
Grp Sat Flow(s),veh/h/ln	1767	1572	498	1735	1721	1526
Q Serve(g_s), s	5.5	9.4	14.0	14.4	10.3	1.2
Cycle Q Clear(g_c), s	5.5	9.4	24.3	14.4	10.3	1.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	219	180	404	2675	2654	1177
V/C Ratio(X)	0.46	0.80	0.36	0.49	0.39	0.06
Avail Cap(c_a), veh/h	446	382	404	2675	2654	1177
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.7	45.3	7.9	4.4	3.9	2.9
Incr Delay (d2), s/veh	1.5	7.9	2.4	0.6	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	4.1	1.6	4.2	2.6	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.2	53.2	10.3	5.0	4.4	3.0
LnGrp LOS	D	D	B	A	A	A
Approach Vol, veh/h	244			1443	1104	
Approach Delay, s/veh	49.5			5.6	4.3	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		87.5		17.5		87.5
Change Period (Y+Rc), s		7.5		5.5		7.5
Max Green Setting (Gmax), s		66.5		25.5		66.5
Max Q Clear Time (g_c+I1), s		26.3		11.4		12.3
Green Ext Time (p_c), s		9.9		0.7		5.1

Intersection Summary	
HCM 6th Ctrl Delay	8.9
HCM 6th LOS	A

Intersection Capacity Worksheets: Year 2025 Background+ Project

Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	4	4	44	8	0	8	1	28	0	0	0
Future Vol, veh/h	0	4	4	44	8	0	8	1	28	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	25	25	25	25	25	25	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	0	0	2	2	2
Mvmt Flow	0	4	4	176	32	0	32	4	112	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	141	181	1	129	125	60	1	0	0	116	0	0
Stage 1	1	1	-	124	124	-	-	-	-	-	-	-
Stage 2	140	180	-	5	1	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	829	713	1084	844	765	1005	1622	-	-	1473	-	-
Stage 1	1022	895	-	880	793	-	-	-	-	-	-	-
Stage 2	863	750	-	1017	895	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	789	698	1084	823	749	1005	1622	-	-	1473	-	-
Mov Cap-2 Maneuver	789	698	-	823	749	-	-	-	-	-	-	-
Stage 1	1001	895	-	862	776	-	-	-	-	-	-	-
Stage 2	810	734	-	1008	895	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.3	11	1.6	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1622	-	-	849	811	1473	-	-
HCM Lane V/C Ratio	0.02	-	-	0.01	0.256	-	-	-
HCM Control Delay (s)	7.3	0	-	9.3	11	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0	1	0	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑↑↱			↑↑↱	
Traffic Vol, veh/h	10	1	19	0	0	0	32	545	0	0	893	34
Future Vol, veh/h	10	1	19	0	0	0	32	545	0	0	893	34
Conflicting Peds, #/hr	0	0	0	0	0	0	4	0	0	0	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	97	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	92	92	92	90	90	90	80	80	80
Heavy Vehicles, %	10	10	10	0	0	0	9	9	9	8	8	8
Mvmt Flow	13	1	25	0	0	0	36	606	0	0	1116	43

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1517	1820	584	1237	1841	303	1163	0	0	-	-	0
Stage 1	1142	1142	-	678	678	-	-	-	-	-	-	-
Stage 2	375	678	-	559	1163	-	-	-	-	-	-	-
Critical Hdwy	7.7	6.7	7.1	7.5	6.5	6.9	4.28	-	-	-	-	-
Critical Hdwy Stg 1	6.7	5.7	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.7	5.7	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.6	4.1	3.4	3.5	4	3.3	2.29	-	-	-	-	-
Pot Cap-1 Maneuver	76	70	435	134	76	699	558	-	-	0	-	-
Stage 1	200	257	-	413	455	-	-	-	-	0	-	-
Stage 2	597	431	-	486	271	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	72	65	433	118	71	699	556	-	-	-	-	-
Mov Cap-2 Maneuver	72	65	-	118	71	-	-	-	-	-	-	-
Stage 1	186	256	-	386	425	-	-	-	-	-	-	-
Stage 2	558	403	-	455	270	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	37.2	0	0.7	0
HCM LOS	E	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	556	-	-	151	-	-	-
HCM Lane V/C Ratio	0.064	-	-	0.265	-	-	-
HCM Control Delay (s)	11.9	-	-	37.2	0	-	-
HCM Lane LOS	B	-	-	E	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1	-	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	140	131	37	47	5
Future Vol, veh/h	4	140	131	37	47	5
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	65	65	80	80	88	88
Heavy Vehicles, %	3	3	4	4	10	10
Mvmt Flow	6	215	164	46	53	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	213	0	-	0	417	190
Stage 1	-	-	-	-	190	-
Stage 2	-	-	-	-	227	-
Critical Hdwy	4.13	-	-	-	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	2.227	-	-	-	3.59	3.39
Pot Cap-1 Maneuver	1351	-	-	-	577	832
Stage 1	-	-	-	-	823	-
Stage 2	-	-	-	-	792	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1347	-	-	-	571	830
Mov Cap-2 Maneuver	-	-	-	-	571	-
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	790	-

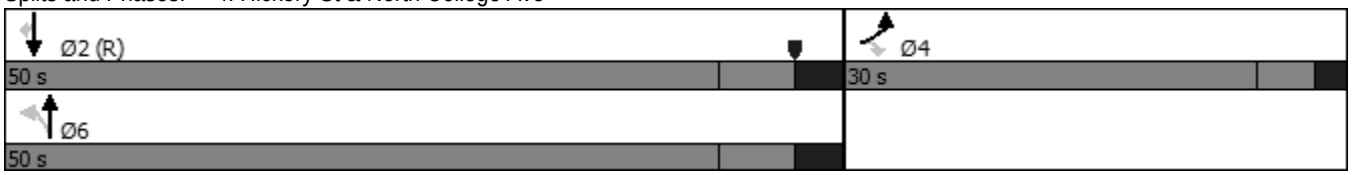
Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	11.8
HCM LOS			B

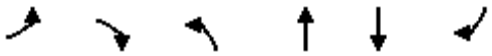
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1347	-	-	-	589
HCM Lane V/C Ratio	0.005	-	-	-	0.1
HCM Control Delay (s)	7.7	0	-	-	11.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	41	121	124	546	846	53
Future Volume (vph)	41	121	124	546	846	53
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	4			6	2	
Permitted Phases		4	6			2
Detector Phase	4	4	6	6	2	2
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0	10.0	10.0	10.0
Minimum Split (s)	25.5	25.5	24.5	24.5	24.5	24.5
Total Split (s)	30.0	30.0	50.0	50.0	50.0	50.0
Total Split (%)	37.5%	37.5%	62.5%	62.5%	62.5%	62.5%
Yellow Time (s)	3.5	3.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	-1.0	0.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.5	5.5	6.5	6.5	6.5	6.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Max	Max	C-Max	C-Max

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 47 (59%), Referenced to phase 2:SBT, Start of Red
Natural Cycle: 65
Control Type: Actuated-Coordinated

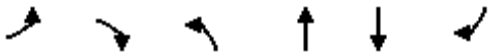
Splits and Phases: 4: Hickory St & North College Ave





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	48	142	143	628	1058	66
v/c Ratio	0.19	0.51	0.45	0.26	0.44	0.06
Control Delay	29.4	20.7	12.4	5.0	6.1	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.4	20.7	12.4	5.0	6.1	2.2
Queue Length 50th (ft)	22	29	22	41	82	1
Queue Length 95th (ft)	41	63	94	98	162	13
Internal Link Dist (ft)	250			150	860	
Turn Bay Length (ft)		98				95
Base Capacity (vph)	558	536	315	2372	2416	1070
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.26	0.45	0.26	0.44	0.06

Intersection Summary



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	41	121	124	546	846	53
Future Volume (veh/h)	41	121	124	546	846	53
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1767	1767	1796	1796
Adj Flow Rate, veh/h	48	142	143	628	1058	66
Peak Hour Factor	0.85	0.85	0.87	0.87	0.80	0.80
Percent Heavy Veh, %	3	3	9	9	7	7
Cap, veh/h	229	184	380	2460	2501	1114
Arrive On Green	0.13	0.12	0.73	0.73	0.73	0.73
Sat Flow, veh/h	1767	1572	473	3445	3503	1520
Grp Volume(v), veh/h	48	142	143	628	1058	66
Grp Sat Flow(s),veh/h/ln	1767	1572	473	1678	1706	1520
Q Serve(g_s), s	1.9	7.0	13.4	4.9	9.6	1.0
Cycle Q Clear(g_c), s	1.9	7.0	23.0	4.9	9.6	1.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	229	184	380	2460	2501	1114
V/C Ratio(X)	0.21	0.77	0.38	0.26	0.42	0.06
Avail Cap(c_a), veh/h	563	482	380	2460	2501	1114
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	34.3	8.6	3.5	4.1	3.0
Incr Delay (d2), s/veh	0.4	6.6	2.8	0.3	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.0	1.5	1.3	2.2	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.6	40.9	11.4	3.8	4.7	3.1
LnGrp LOS	C	D	B	A	A	A
Approach Vol, veh/h	190			771	1124	
Approach Delay, s/veh	38.6			5.2	4.6	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		65.1		14.9		65.1
Change Period (Y+Rc), s		7.5		5.5		7.5
Max Green Setting (Gmax), s		42.5		24.5		42.5
Max Q Clear Time (g_c+I1), s		11.6		9.0		25.0
Green Ext Time (p_c), s		5.1		0.5		4.3

Intersection Summary	
HCM 6th Ctrl Delay	7.9
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	5.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	6	26	32	13	39	13
Future Vol, veh/h	6	26	32	13	39	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	28	35	14	42	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	35	0	105	21
Stage 1	-	-	-	-	21	-
Stage 2	-	-	-	-	84	-
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	-	-	1576	-	893	1056
Stage 1	-	-	-	-	1002	-
Stage 2	-	-	-	-	939	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1576	-	873	1056
Mov Cap-2 Maneuver	-	-	-	-	873	-
Stage 1	-	-	-	-	1002	-
Stage 2	-	-	-	-	918	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5.2	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	913	-	-	1576	-
HCM Lane V/C Ratio	0.062	-	-	0.022	-
HCM Control Delay (s)	9.2	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	2	5	36	50	3
Future Vol, veh/h	1	2	5	36	50	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	6	41	57	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	112	59	60	0	-	0
Stage 1	59	-	-	-	-	-
Stage 2	53	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	885	1007	1544	-	-	-
Stage 1	964	-	-	-	-	-
Stage 2	970	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	881	1007	1544	-	-	-
Mov Cap-2 Maneuver	881	-	-	-	-	-
Stage 1	960	-	-	-	-	-
Stage 2	970	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	0.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1544	-	961	-	-
HCM Lane V/C Ratio	0.004	-	0.004	-	-
HCM Control Delay (s)	7.3	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	6	6	57	4	5	4	0	33	3	5	0
Future Vol, veh/h	0	6	6	57	4	5	4	0	33	3	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	75	75	75	58	58	58	44	44	44
Heavy Vehicles, %	2	2	2	11	11	11	2	2	2	10	10	10
Mvmt Flow	0	7	7	76	5	7	7	0	57	7	11	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	74	96	11	75	68	29	11	0	0	57	0	0
Stage 1	25	25	-	43	43	-	-	-	-	-	-	-
Stage 2	49	71	-	32	25	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.21	6.61	6.31	4.12	-	-	4.2	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.21	5.61	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.21	5.61	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.599	4.099	3.399	2.218	-	-	2.29	-	-
Pot Cap-1 Maneuver	916	794	1070	893	806	1020	1608	-	-	1498	-	-
Stage 1	993	874	-	949	842	-	-	-	-	-	-	-
Stage 2	964	836	-	962	857	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	899	786	1070	875	798	1020	1608	-	-	1498	-	-
Mov Cap-2 Maneuver	899	786	-	875	798	-	-	-	-	-	-	-
Stage 1	988	870	-	944	838	-	-	-	-	-	-	-
Stage 2	947	832	-	944	853	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	9.6	0.8	2.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1608	-	-	906	879	1498	-	-
HCM Lane V/C Ratio	0.004	-	-	0.014	0.1	0.005	-	-
HCM Control Delay (s)	7.2	0	-	9	9.6	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑↑↱			↑↑↱	
Traffic Vol, veh/h	13	0	25	0	0	1	41	1103	0	3	854	35
Future Vol, veh/h	13	0	25	0	0	1	41	1103	0	3	854	35
Conflicting Peds, #/hr	0	0	0	0	0	0	7	0	4	4	0	7
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	97	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	63	63	25	25	25	98	98	98	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	4	4	4	5	5	5
Mvmt Flow	21	0	40	0	0	4	42	1126	0	3	909	37

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1588	2155	480	1675	2173	567	953	0	0	1130	0	0
Stage 1	941	941	-	1214	1214	-	-	-	-	-	-	-
Stage 2	647	1214	-	461	959	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.18	-	-	4.2	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.24	-	-	2.25	-	-
Pot Cap-1 Maneuver	*226	*66	537	*178	*63	*643	705	-	-	*944	-	-
Stage 1	*287	*345	-	*606	*531	-	-	-	-	-	-	-
Stage 2	*606	*531	-	*555	*338	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*212	*61	533	*156	*58	*641	700	-	-	*941	-	-
Mov Cap-2 Maneuver	*212	*61	-	*156	*58	-	-	-	-	-	-	-
Stage 1	*268	*340	-	*568	*497	-	-	-	-	-	-	-
Stage 2	*566	*497	-	*510	*333	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.4	10.7	0.4	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	700	-	-	351	641	* 941	-	-
HCM Lane V/C Ratio	0.06	-	-	0.172	0.006	0.003	-	-
HCM Control Delay (s)	10.5	-	-	17.4	10.7	8.8	-	-
HCM Lane LOS	B	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.6	0	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	172	131	37	47	5
Future Vol, veh/h	4	172	131	37	47	5
Conflicting Peds, #/hr	1	0	0	1	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	87	87	65	65
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	185	151	43	72	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	195	0	-	0	368	174
Stage 1	-	-	-	-	174	-
Stage 2	-	-	-	-	194	-
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	1378	-	-	-	632	869
Stage 1	-	-	-	-	856	-
Stage 2	-	-	-	-	839	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1377	-	-	-	629	868
Mov Cap-2 Maneuver	-	-	-	-	629	-
Stage 1	-	-	-	-	853	-
Stage 2	-	-	-	-	838	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	11.4
HCM LOS			B

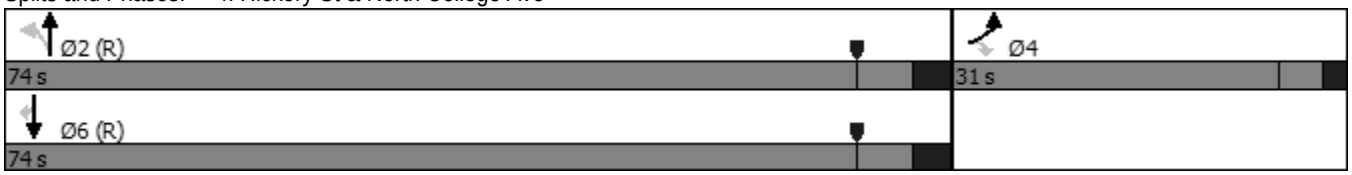
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1377	-	-	-	646
HCM Lane V/C Ratio	0.003	-	-	-	0.124
HCM Control Delay (s)	7.6	0	-	-	11.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

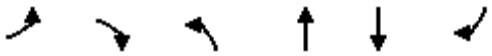
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	85	132	146	1093	830	57
Future Volume (vph)	85	132	146	1093	830	57
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0	10.0	10.0	10.0
Minimum Split (s)	25.5	25.5	24.5	24.5	24.5	24.5
Total Split (s)	31.0	31.0	74.0	74.0	74.0	74.0
Total Split (%)	29.5%	29.5%	70.5%	70.5%	70.5%	70.5%
Yellow Time (s)	3.5	3.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	-1.0	0.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.5	5.5	6.5	6.5	6.5	6.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 105
Actuated Cycle Length: 105
Offset: 64 (61%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

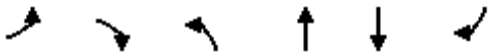
Splits and Phases: 4: Hickory St & North College Ave





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	106	165	151	1127	902	62
v/c Ratio	0.47	0.50	0.36	0.43	0.35	0.06
Control Delay	48.2	11.5	7.6	5.3	4.7	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.2	11.5	7.6	5.3	4.7	1.4
Queue Length 50th (ft)	68	0	26	108	79	0
Queue Length 95th (ft)	98	38	78	200	148	12
Internal Link Dist (ft)	250			150	860	
Turn Bay Length (ft)		98				95
Base Capacity (vph)	442	505	423	2637	2613	1127
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.33	0.36	0.43	0.35	0.06

Intersection Summary



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	85	132	146	1093	830	57
Future Volume (veh/h)	85	132	146	1093	830	57
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1826	1826	1811	1811
Adj Flow Rate, veh/h	106	165	151	1127	902	62
Peak Hour Factor	0.80	0.80	0.97	0.97	0.92	0.92
Percent Heavy Veh, %	3	3	5	5	6	6
Cap, veh/h	243	201	450	2628	2607	1156
Arrive On Green	0.14	0.13	0.76	0.76	0.76	0.76
Sat Flow, veh/h	1767	1572	569	3561	3532	1526
Grp Volume(v), veh/h	106	165	151	1127	902	62
Grp Sat Flow(s),veh/h/ln	1767	1572	569	1735	1721	1526
Q Serve(g_s), s	5.8	10.7	12.5	12.2	9.0	1.1
Cycle Q Clear(g_c), s	5.8	10.7	21.5	12.2	9.0	1.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	243	201	450	2628	2607	1156
V/C Ratio(X)	0.44	0.82	0.34	0.43	0.35	0.05
Avail Cap(c_a), veh/h	446	382	450	2628	2607	1156
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.5	44.6	7.7	4.6	4.2	3.2
Incr Delay (d2), s/veh	1.2	8.0	2.0	0.5	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	4.6	1.6	3.7	2.4	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	42.8	52.6	9.7	5.1	4.5	3.3
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	271			1278	964	
Approach Delay, s/veh	48.7			5.6	4.5	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		86.1		18.9		86.1
Change Period (Y+Rc), s		7.5		5.5		7.5
Max Green Setting (Gmax), s		66.5		25.5		66.5
Max Q Clear Time (g_c+I1), s		23.5		12.7		11.0
Green Ext Time (p_c), s		8.1		0.7		4.2

Intersection Summary	
HCM 6th Ctrl Delay	9.8
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	4.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	18	24	28	25	44	15
Future Vol, veh/h	18	24	28	25	44	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	26	30	27	48	16

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	46	0	120	33
Stage 1	-	-	-	-	33	-
Stage 2	-	-	-	-	87	-
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	-	-	1562	-	876	1041
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	936	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1562	-	858	1041
Mov Cap-2 Maneuver	-	-	-	-	858	-
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	917	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.9	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	898	-	-	1562	-
HCM Lane V/C Ratio	0.071	-	-	0.019	-
HCM Control Delay (s)	9.3	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	2	1	39	63	1
Future Vol, veh/h	2	2	1	39	63	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	65	65	65	65
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	2	2	60	97	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	162	98	99	0	-	0
Stage 1	98	-	-	-	-	-
Stage 2	64	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	829	958	1494	-	-	-
Stage 1	926	-	-	-	-	-
Stage 2	959	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	828	958	1494	-	-	-
Mov Cap-2 Maneuver	828	-	-	-	-	-
Stage 1	925	-	-	-	-	-
Stage 2	959	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1494	-	888	-	-
HCM Lane V/C Ratio	0.001	-	0.005	-	-
HCM Control Delay (s)	7.4	0	9.1	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection Capacity Worksheets: Year 2045 Background+ Project

Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	4	4	44	8	0	8	1	28	0	0	0
Future Vol, veh/h	0	4	4	44	8	0	8	1	28	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	25	25	25	25	25	25	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	0	0	2	2	2
Mvmt Flow	0	4	4	176	32	0	32	4	112	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	141	181	1	129	125	60	1	0	0	116	0	0
Stage 1	1	1	-	124	124	-	-	-	-	-	-	-
Stage 2	140	180	-	5	1	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	829	713	1084	844	765	1005	1622	-	-	1473	-	-
Stage 1	1022	895	-	880	793	-	-	-	-	-	-	-
Stage 2	863	750	-	1017	895	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	789	698	1084	823	749	1005	1622	-	-	1473	-	-
Mov Cap-2 Maneuver	789	698	-	823	749	-	-	-	-	-	-	-
Stage 1	1001	895	-	862	776	-	-	-	-	-	-	-
Stage 2	810	734	-	1008	895	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.3	11	1.6	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1622	-	-	849	811	1473	-	-
HCM Lane V/C Ratio	0.02	-	-	0.01	0.256	-	-	-
HCM Control Delay (s)	7.3	0	-	9.3	11	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0	1	0	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑↑↱			↑↑↱	
Traffic Vol, veh/h	11	1	22	0	0	0	33	630	0	0	1041	35
Future Vol, veh/h	11	1	22	0	0	0	33	630	0	0	1041	35
Conflicting Peds, #/hr	0	0	0	0	0	0	4	0	0	0	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	97	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	92	92	92	90	90	90	80	80	80
Heavy Vehicles, %	10	10	10	0	0	0	9	9	9	8	8	8
Mvmt Flow	15	1	29	0	0	0	37	700	0	0	1301	44

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1751	2101	677	1425	2123	350	1349	0	0	-	-	0
Stage 1	1327	1327	-	774	774	-	-	-	-	-	-	-
Stage 2	424	774	-	651	1349	-	-	-	-	-	-	-
Critical Hdwy	7.7	6.7	7.1	7.5	6.5	6.9	4.28	-	-	-	-	-
Critical Hdwy Stg 1	6.7	5.7	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.7	5.7	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.6	4.1	3.4	3.5	4	3.3	2.29	-	-	-	-	-
Pot Cap-1 Maneuver	50	46	377	98	51	652	471	-	-	0	-	-
Stage 1	153	208	-	362	411	-	-	-	-	0	-	-
Stage 2	557	388	-	429	221	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	47	42	376	83	47	652	469	-	-	-	-	-
Mov Cap-2 Maneuver	47	42	-	83	47	-	-	-	-	-	-	-
Stage 1	140	207	-	333	379	-	-	-	-	-	-	-
Stage 2	513	357	-	393	220	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	61.4	0	0.7	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	469	-	-	107	-	-	-
HCM Lane V/C Ratio	0.078	-	-	0.424	-	-	-
HCM Control Delay (s)	13.3	-	-	61.4	0	-	-
HCM Lane LOS	B	-	-	F	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	1.8	-	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	165	150	37	47	5
Future Vol, veh/h	4	165	150	37	47	5
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	65	65	80	80	88	88
Heavy Vehicles, %	3	3	4	4	10	10
Mvmt Flow	6	254	188	46	53	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	237	0	-	0	480	214
Stage 1	-	-	-	-	214	-
Stage 2	-	-	-	-	266	-
Critical Hdwy	4.13	-	-	-	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	2.227	-	-	-	3.59	3.39
Pot Cap-1 Maneuver	1324	-	-	-	530	806
Stage 1	-	-	-	-	803	-
Stage 2	-	-	-	-	760	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1320	-	-	-	524	804
Mov Cap-2 Maneuver	-	-	-	-	524	-
Stage 1	-	-	-	-	797	-
Stage 2	-	-	-	-	758	-

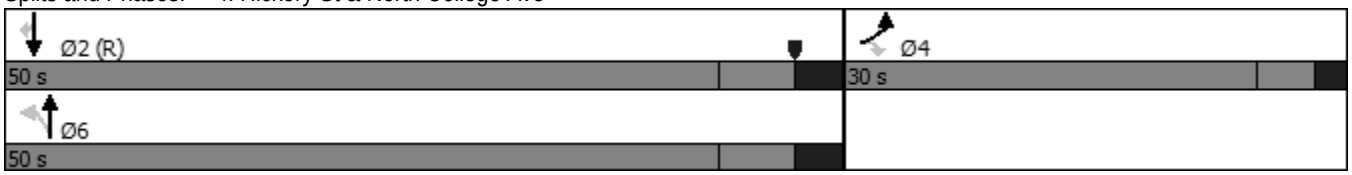
Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	12.5
HCM LOS			B

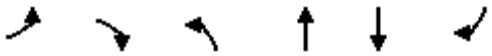
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1320	-	-	-	542
HCM Lane V/C Ratio	0.005	-	-	-	0.109
HCM Control Delay (s)	7.7	0	-	-	12.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	45	137	140	633	982	61
Future Volume (vph)	45	137	140	633	982	61
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	4			6	2	
Permitted Phases		4	6			2
Detector Phase	4	4	6	6	2	2
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0	10.0	10.0	10.0
Minimum Split (s)	25.5	25.5	24.5	24.5	24.5	24.5
Total Split (s)	30.0	30.0	50.0	50.0	50.0	50.0
Total Split (%)	37.5%	37.5%	62.5%	62.5%	62.5%	62.5%
Yellow Time (s)	3.5	3.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	-1.0	0.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.5	5.5	6.5	6.5	6.5	6.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Max	Max	C-Max	C-Max

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 47 (59%), Referenced to phase 2:SBT, Start of Red
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 4: Hickory St & North College Ave

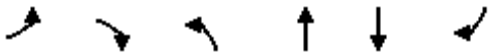




Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	53	161	161	728	1228	76
v/c Ratio	0.19	0.57	0.66	0.31	0.52	0.07
Control Delay	28.1	28.3	26.6	5.7	7.4	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.1	28.3	26.6	5.7	7.4	2.6
Queue Length 50th (ft)	24	51	36	58	121	2
Queue Length 95th (ft)	45	89	#166	116	198	16
Internal Link Dist (ft)	250			150	860	
Turn Bay Length (ft)		98				95
Base Capacity (vph)	558	516	243	2316	2359	1046
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.31	0.66	0.31	0.52	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	45	137	140	633	982	61
Future Volume (veh/h)	45	137	140	633	982	61
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1767	1767	1796	1796
Adj Flow Rate, veh/h	53	161	161	728	1228	76
Peak Hour Factor	0.85	0.85	0.87	0.87	0.80	0.80
Percent Heavy Veh, %	3	3	9	9	7	7
Cap, veh/h	252	205	314	2416	2456	1094
Arrive On Green	0.14	0.13	0.72	0.72	0.72	0.72
Sat Flow, veh/h	1767	1572	399	3445	3503	1520
Grp Volume(v), veh/h	53	161	161	728	1228	76
Grp Sat Flow(s),veh/h/ln	1767	1572	399	1678	1706	1520
Q Serve(g_s), s	2.1	7.9	23.7	6.2	12.6	1.2
Cycle Q Clear(g_c), s	2.1	7.9	36.3	6.2	12.6	1.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	252	205	314	2416	2456	1094
V/C Ratio(X)	0.21	0.79	0.51	0.30	0.50	0.07
Avail Cap(c_a), veh/h	563	482	314	2416	2456	1094
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	33.7	12.9	4.0	4.9	3.3
Incr Delay (d2), s/veh	0.4	6.5	5.9	0.3	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.4	2.4	1.7	3.0	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.7	40.2	18.7	4.3	5.6	3.4
LnGrp LOS	C	D	B	A	A	A
Approach Vol, veh/h	214			889	1304	
Approach Delay, s/veh	37.9			6.9	5.5	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		64.1		15.9		64.1
Change Period (Y+Rc), s		7.5		5.5		7.5
Max Green Setting (Gmax), s		42.5		24.5		42.5
Max Q Clear Time (g_c+I1), s		14.6		9.9		38.3
Green Ext Time (p_c), s		6.1		0.6		2.1

Intersection Summary	
HCM 6th Ctrl Delay	8.9
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	5.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	6	26	32	13	39	13
Future Vol, veh/h	6	26	32	13	39	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	28	35	14	42	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	35	0	105	21
Stage 1	-	-	-	-	21	-
Stage 2	-	-	-	-	84	-
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	-	-	1576	-	893	1056
Stage 1	-	-	-	-	1002	-
Stage 2	-	-	-	-	939	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1576	-	873	1056
Mov Cap-2 Maneuver	-	-	-	-	873	-
Stage 1	-	-	-	-	1002	-
Stage 2	-	-	-	-	918	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5.2	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	913	-	-	1576	-
HCM Lane V/C Ratio	0.062	-	-	0.022	-
HCM Control Delay (s)	9.2	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	2	5	36	53	3
Future Vol, veh/h	1	2	5	36	53	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	6	41	60	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	115	62	63	0	-	0
Stage 1	62	-	-	-	-	-
Stage 2	53	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	881	1003	1540	-	-	-
Stage 1	961	-	-	-	-	-
Stage 2	970	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	877	1003	1540	-	-	-
Mov Cap-2 Maneuver	877	-	-	-	-	-
Stage 1	957	-	-	-	-	-
Stage 2	970	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	0.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1540	-	957	-	-
HCM Lane V/C Ratio	0.004	-	0.004	-	-
HCM Control Delay (s)	7.3	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	6	6	60	4	5	4	0	36	3	5	0
Future Vol, veh/h	0	6	6	60	4	5	4	0	36	3	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	75	75	75	58	58	58	44	44	44
Heavy Vehicles, %	2	2	2	11	11	11	2	2	2	10	10	10
Mvmt Flow	0	7	7	80	5	7	7	0	62	7	11	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	76	101	11	77	70	31	11	0	0	62	0	0
Stage 1	25	25	-	45	45	-	-	-	-	-	-	-
Stage 2	51	76	-	32	25	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.21	6.61	6.31	4.12	-	-	4.2	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.21	5.61	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.21	5.61	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.599	4.099	3.399	2.218	-	-	2.29	-	-
Pot Cap-1 Maneuver	914	789	1070	891	804	1018	1608	-	-	1491	-	-
Stage 1	993	874	-	947	840	-	-	-	-	-	-	-
Stage 2	962	832	-	962	857	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	897	781	1070	873	796	1018	1608	-	-	1491	-	-
Mov Cap-2 Maneuver	897	781	-	873	796	-	-	-	-	-	-	-
Stage 1	988	870	-	942	836	-	-	-	-	-	-	-
Stage 2	945	828	-	944	853	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	9.6	0.7	2.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1608	-	-	903	877	1491	-	-
HCM Lane V/C Ratio	0.004	-	-	0.014	0.105	0.005	-	-
HCM Control Delay (s)	7.2	0	-	9	9.6	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑↑↱			↑↑↱	
Traffic Vol, veh/h	13	0	25	0	0	1	43	1282	0	3	996	40
Future Vol, veh/h	13	0	25	0	0	1	43	1282	0	3	996	40
Conflicting Peds, #/hr	0	0	0	0	0	0	7	0	4	4	0	7
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	97	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	63	63	25	25	25	98	98	98	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	4	4	4	5	5	5
Mvmt Flow	21	0	40	0	0	4	44	1308	0	3	1060	43

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1837	2495	559	1936	2516	658	1110	0	0	1312	0	0
Stage 1	1095	1095	-	1400	1400	-	-	-	-	-	-	-
Stage 2	742	1400	-	536	1116	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.18	-	-	4.2	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.24	-	-	2.25	-	-
Pot Cap-1 Maneuver	*163	*31	478	*118	*29	*555	613	-	-	*815	-	-
Stage 1	*231	*292	-	*524	*458	-	-	-	-	-	-	-
Stage 2	*524	*458	-	*501	*285	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*151	*28	475	*101	*26	*553	609	-	-	*812	-	-
Mov Cap-2 Maneuver	*151	*28	-	*101	*26	-	-	-	-	-	-	-
Stage 1	*213	*287	-	*484	*423	-	-	-	-	-	-	-
Stage 2	*482	*423	-	*455	*280	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.8	11.6	0.4	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	609	-	-	274	553	* 812	-	-
HCM Lane V/C Ratio	0.072	-	-	0.22	0.007	0.004	-	-
HCM Control Delay (s)	11.4	-	-	21.8	11.6	9.5	-	-
HCM Lane LOS	B	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.8	0	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	200	170	36	64	5
Future Vol, veh/h	4	200	170	36	64	5
Conflicting Peds, #/hr	1	0	0	1	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	87	87	65	65
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	215	195	41	98	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	237	0	-	0	441	217
Stage 1	-	-	-	-	217	-
Stage 2	-	-	-	-	224	-
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	1330	-	-	-	574	823
Stage 1	-	-	-	-	819	-
Stage 2	-	-	-	-	813	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1329	-	-	-	571	822
Mov Cap-2 Maneuver	-	-	-	-	571	-
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	812	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	12.5
HCM LOS			B

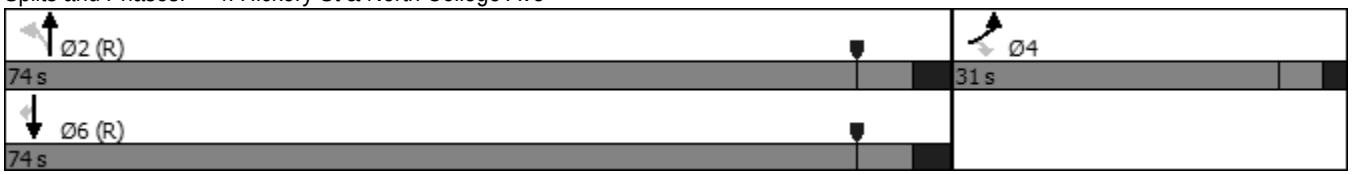
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1329	-	-	-	584
HCM Lane V/C Ratio	0.003	-	-	-	0.182
HCM Control Delay (s)	7.7	0	-	-	12.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.7

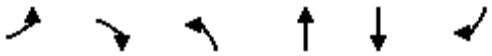
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	97	147	165	1273	965	66
Future Volume (vph)	97	147	165	1273	965	66
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	10.0	10.0	10.0	10.0
Minimum Split (s)	25.5	25.5	24.5	24.5	24.5	24.5
Total Split (s)	31.0	31.0	74.0	74.0	74.0	74.0
Total Split (%)	29.5%	29.5%	70.5%	70.5%	70.5%	70.5%
Yellow Time (s)	3.5	3.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	-1.0	0.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.5	5.5	6.5	6.5	6.5	6.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 105
Actuated Cycle Length: 105
Offset: 64 (61%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated

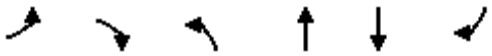
Splits and Phases: 4: Hickory St & North College Ave





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	121	184	170	1312	1049	72
v/c Ratio	0.51	0.61	0.48	0.50	0.40	0.06
Control Delay	49.0	24.3	11.5	6.2	5.3	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.0	24.3	11.5	6.2	5.3	1.7
Queue Length 50th (ft)	77	39	35	144	103	2
Queue Length 95th (ft)	110	79	113	252	182	15
Internal Link Dist (ft)	250			150	860	
Turn Bay Length (ft)		98				95
Base Capacity (vph)	442	473	352	2616	2591	1119
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.39	0.48	0.50	0.40	0.06

Intersection Summary



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	97	147	165	1273	965	66
Future Volume (veh/h)	97	147	165	1273	965	66
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1826	1826	1811	1811
Adj Flow Rate, veh/h	121	184	170	1312	1049	72
Peak Hour Factor	0.80	0.80	0.97	0.97	0.92	0.92
Percent Heavy Veh, %	3	3	5	5	6	6
Cap, veh/h	265	221	379	2585	2564	1137
Arrive On Green	0.15	0.14	0.75	0.75	0.75	0.75
Sat Flow, veh/h	1767	1572	490	3561	3532	1526
Grp Volume(v), veh/h	121	184	170	1312	1049	72
Grp Sat Flow(s),veh/h/ln	1767	1572	490	1735	1721	1526
Q Serve(g_s), s	6.6	12.0	20.4	16.3	11.7	1.3
Cycle Q Clear(g_c), s	6.6	12.0	32.1	16.3	11.7	1.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	265	221	379	2585	2564	1137
V/C Ratio(X)	0.46	0.83	0.45	0.51	0.41	0.06
Avail Cap(c_a), veh/h	446	382	379	2585	2564	1137
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	43.9	10.8	5.5	4.9	3.6
Incr Delay (d2), s/veh	1.2	7.9	3.8	0.7	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	5.2	2.4	5.0	3.2	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.9	51.9	14.6	6.2	5.4	3.7
LnGrp LOS	D	D	B	A	A	A
Approach Vol, veh/h	305			1482	1121	
Approach Delay, s/veh	47.9			7.2	5.3	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		84.7		20.3		84.7
Change Period (Y+Rc), s		7.5		5.5		7.5
Max Green Setting (Gmax), s		66.5		25.5		66.5
Max Q Clear Time (g_c+I1), s		34.1		14.0		13.7
Green Ext Time (p_c), s		10.1		0.8		5.2

Intersection Summary	
HCM 6th Ctrl Delay	10.7
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	4.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	18	24	28	25	44	15
Future Vol, veh/h	18	24	28	25	44	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	26	30	27	48	16

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	46	0	120	33
Stage 1	-	-	-	-	33	-
Stage 2	-	-	-	-	87	-
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	-	-	1562	-	876	1041
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	936	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1562	-	858	1041
Mov Cap-2 Maneuver	-	-	-	-	858	-
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	917	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.9	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	898	-	-	1562	-
HCM Lane V/C Ratio	0.071	-	-	0.019	-
HCM Control Delay (s)	9.3	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	2	1	43	65	1
Future Vol, veh/h	2	2	1	43	65	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	65	65	65	65	65
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	3	2	66	100	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	171	101	102	0	-	0
Stage 1	101	-	-	-	-	-
Stage 2	70	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	819	954	1490	-	-	-
Stage 1	923	-	-	-	-	-
Stage 2	953	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	818	954	1490	-	-	-
Mov Cap-2 Maneuver	818	-	-	-	-	-
Stage 1	922	-	-	-	-	-
Stage 2	953	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1490	-	881	-	-
HCM Lane V/C Ratio	0.001	-	0.007	-	-
HCM Control Delay (s)	7.4	0	9.1	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-