Permit # _____
Board _____
Mtg. Date _____

NEW ALBANY

Community Development Planning Application

Project Information

Site Address 6734 thru 6800 Bevelhymer Road

Parcel Numbers 222-000619, 222-000620, 222-000621

Acres 5.23+/- # of lots created 5

Choose Application Type	Circle all Details that Apply			
☐ Appeal				
☐ Certificate of Appropriateness				
☐ Conditional Use				
☒ Development Plan	Preliminary	Final	Comprehensive	Amendment
☐ Plat	Preliminary	Final		
☐ Lot Changes	Combination	Split	Adjustment	
☐ Minor Commercial Subdivision				
☐ Vacation	Easement		Street	
☐ Variance				
☐ Extension Request				
☒ Zoning	Amendment (rezoning)		Text Modification	

Description of Request: We are requesting the 3 parcels to be re-zoned to I-PUD. The intent is to combine the parcels and re-plat to 4 commercial lots plus a lot for the retention basin. We have attached a preliminary development plan in addition to the re-zoning request.

Contacts

Property Owner's Name: BEVEL NEW ALBANY LLC
Address: 1209 HILL ROAD N, SUITE 200
City, State, Zip: PICKERINGTON, OHIO 43147
Phone number: _____ Fax: _____
Email: EESKANDER@NELEARNINGGROUP.COM

Applicant's Name: STEPHEN BUTLER
Address: 2440 DAYTON XENIA ROAD, SUITE B
City, State, Zip: BEAVERCREEK, OHIO 45434
Phone number: 937.490.9460 Fax: _____
Email: SBUTLER@COMMUNITYCIVILENGINEERS.COM

Signature

Site visits to the property by City of New Albany representatives are essential to process this application. The Owner/Applicant, as signed below, hereby authorizes Village of New Albany representatives, employees and appointed and elected officials to visit, photograph and post a notice on the property described in this application. I certify that the information here within and attached to this application is true, correct and complete.

Signature of Owner _____ Date: 10/19/2023
Signature of Applicant _____ Date: 10/19/2023

Community Civil Engineers, LLC

October 31, 2023

Ms. Chelsea Nichols
Community Development Department
99 West Main Street
New Albany, Ohio 43054

RE: Walton Farms
6734 Bevelhymer Road

Dear Chelsea:

Community Civil Engineers is pleased to provide some additional information as noted in your email received 10/25/2023. Listed below is our response (in blue) and the information requested.

- 12 paper copies attached
- Legal descriptions attached
- Affidavit attached

  - *A school impact statement. The written statement should be regarding the potential impact of the proposed use on the student population of the local school districts.*
    It is unlikely that this development will add to the student population of the local school districts. This development is designed to serve needs within the community, such as a daycare with a curriculum to give the up and coming students entering the school district a head start in education.

  - *Any deed restrictions, easement, covenants and encumbrances to be imposed to control the use, development and maintenance of the are to be rezoned.*
    The proposed uses will have to adhere to the zoning text of the development, controlling uses and building materials. The development also intends to have a mutual shared ingress/egress, utility and parking agreements. The development will also construct a public drive along the eastern property line with a fifty-foot right-of-way.

  - *An estimate of the utility requirements of the area, should the amendment be adopted, including sewer, water, and electricity. The provision of water, sanitary sewer and surface drainage facilities, including engineering feasibility studies or other evidence of reasonableness. All utility services shall be underground.*
    Required utilities for the development are generally in the immediate area; water main is on the East edge of Bevelhymer fronting the development.
    Electric is located along the surrounds the site to along the south property line and along the East edge of Bevelhymer Road.
    Sanitary Sewer is located on the west side of Bevelhymer Road. It will be necessary, at the developers cost, to extend the sanitary approximately 500'+/- from its current location to the northern edge of the development.

Storm sewer will be installed as part of the development with a network of curb inlets and storm sewer being routed to the detention basin on the southern edge of the development.

- *A written statement of the following:*
- *The existing use and zoning district, the proposed use and zoning district, how the proposed amendment will impact adjacent and proximate properties, The relationship of the development to existing and future land use in the surrounding areas, the street system, community facilities, services and other public improvements*.
  The current zoning district is R-1.
  The proposed zoning district is I-PUD, this matches the zoning district to the south. The development is bounded to the north by Single Family residential, to the East a wooded vacant lot zoned R-1, the south by commercial uses zoned I-PUD and to the West both commercial and residential. The intent of this rezoning is to provide a transition from the residential to the North to the business park to the South and follow the New Albany 2020 Strategic Plan.

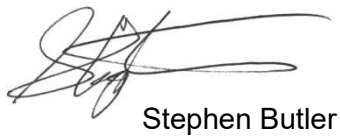
- *Verification that an application, if required, has been submitted to the Ohio Environmental Protection Agency in compliance with Section 401 of the Clean Water Act in which anyone who wishes to discharge dredged or fill material into waters of the United States must obtain a Water Quality Certification Permit from the Ohio Environmental Protection Agency. In the case of an isolated wetland either a general state or individual state isolated wetland permit must be obtained from the Ohio Environmental Protection Agency (Sections 6111.021. - 6111.024. of House Bill 231).*
  This item is not required

- *Verification that an application, if required, has been submitted to the U.S. Army Corps of Engineers, in compliance with Section 404 of the Clean Water Act in which anyone who wishes to discharge dredged or fill material into waters of the United States must obtain either a nationwide or individual permit from the U.S. Army Corps of Engineers.*
  This item is not required.

- *The schedule of site development, construction of structures and associated facilities. Such schedule shall include the proposed use or reuse of existing features such as topography, streets, easements and natural areas.*
  It is the intent to submit final development plans once the preliminary plan and the rezoning are approved. It would be the intent to break ground as soon as possible, There is no intent to keep the existing structures however, we do intend to preserve trees along the eastern property line as construction permits.

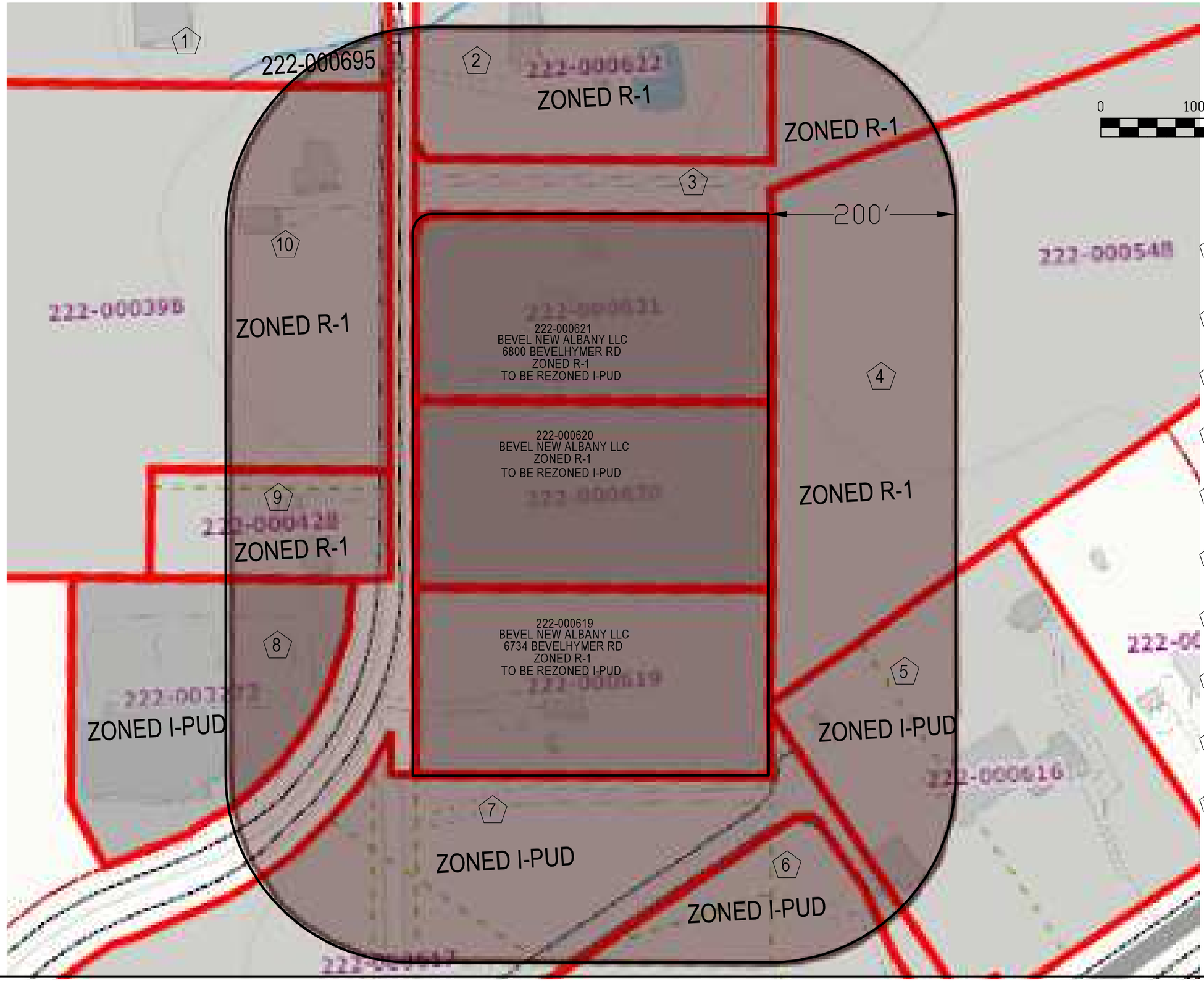
Please contact me at your convenience at 937.903.8553 if you have any concerns or require any additional information.

Sincerely,



Stephen Butler
President

1111.03 (e)



0 100 200 300 N

1. 222-000695
MELE MATTHEW
SHOCKEY ALANA
6851 BEVELHYMER ROAD
ZONED R-1

2. 222-000622
LANE JEFFREY
6850 BEVELHYMER RD
ZONED R-1

3. 222-000624
STEPHENS KAREN J
ZONED R-1
6828 BEVELHYMER RD

4. 222-000548
PUCKETT CYNTHIA MEEKS
PUCKETT STEVEN M
ZONED R-1

5. 222-000616
SULLY RIZ LLC
9999 JOHNSTOWN RD
ZONED I-PUD

6. 222-005117
ALDI INC (OHIO)
9895 JOHNSTOWN RD
ZONED I-PUD

7. 222-000617
NEW ALBANY COMPANY LLC
9887 JOHNSTOWN RD
ZONED I-PUD

8. 222-003272
BROADWAY BOUND DANCE CENTRE
6701 BEVELHYMER RD
ZONED I-PUD

9. 222-000428
BEVELHYMER ROAD LLC
6735 BEVELHYMER RD
ZONED R-1

10. 222-000398
BEVELHYMER ROAD LLC
6821 BEVELHYMER RD
ZONED R-1

REVISIONS

CCE
Community Civil Engineers, LLC
2440 DAYTON-XENIA ROAD, SUITE B
BEAVERCREEK, OHIO 45434
TEL. 937.490.9460 FAX 937.426.9798

ADJOINERS MAP

BEVEL NEW ALBANY
NEW ALBANY
6734 BEVELHYMER ROAD
NEW ALBANY
FRANKLIN COUNTY, OHIO 43054

DESIGN: SMB	DATE: 10/10/2023
DRAWN: KDE	
CHECK: SMB	
JOB #: 22-522	AJ1

MATTHEW MELE &
ALANA SHOCKEY
6851 BEVELHYMER RD
NEW ALBANY OH 43054
222-000695-00

CYNTHIA MEEKS PUCKETT
& STEVEN M PUCKETT
709 S 5TH ST
COLUMBUS OH 43206
222-000548-00

NEW ALBANY COMPANY LLC
8000 WALTON PKWY, STE 120
NEW ALBANY OH 43054
222-000617-00

BEVEL NEW ALBANY LLC
1209 HILL RD N STE #200
PICKERINGTON OH 43147
222-000622-00

JEFFREY LANE
6850 BEVELHYMER RD
NEW ALBANY OH 43054
222-000622-00

SULLY RIZ LLC
73 WILSON BLVD STE 103
FISHERVILLE VA 29939
222-000616-00

BROADWAY BOUND DANCE CENTRE
6701 BEVELHYMER RD
NEW ALBANY OH 43054
222-003272-00

KAREN J STEPHENS
6828 BEVELHYMER RD
NEW ALBANY OH 43054
222-000622-00

ALDI INC (OHIO)
4400 S. CHARLESTON PIKE
SPRINGFIELD OH 45502
222-005117-00

BEVELHYMER ROAD LLC
170 N SUNBURY RD
WESTERVILLE, OH 43081
222-000428-00 & 222-000398-00

Winton Farms Affidavit

I, Stephen Butler, applicant for the re-zoning of the three parcels totaling 5.23+/- acres, with Franklin County parcel numbers 222-000619, 222-000620, 222-000621 do hereby affirm;

All property owners within 200 feet of the three parcels proposed to be rezoned, and their tax mailing addresses as appearing on the Franklin County Auditor's current tax list as of October 16th, 2023, have been provided with this application. This list is based solely on the records of the Office of the Auditor of Franklin County, Ohio, as provided on its website.

By: _____
Stephen Butler
Community Civil Engineers, LLC

STATE OF OHIO
COUNTY OF FRANLIN SS.

Subscribed and sworn to before me this 31 day of October, 2023.

_____
Notary Public

Amber K. Porter
Notary Public, State of Ohio
My Commission Expires 07-05-2026

My Commission Expires: 7-5-2026

DO NOT DETACH

Instrument Number: 202110050178808
Recorded Date: 10/05/2021 9:55:00 AM

Daniel J. O'Connor Jr.
Franklin County Recorder
373 South High Street, 18th Floor
Columbus, OH 43215
(614) 525-3930
http://Recorder.FranklinCountyOhio.gov
Recorder@FranklinCountyOhio.gov

Return To (Mail Envelope):
LAND AND MORTGAGE TITLE AGENCY

Mail Envelope

Transaction Number: T20210125936
Document Type: DEED
Document Page Count: 3

Submitted By (Mail):
LAND AND MORTGAGE TITLE AGENCY

Mail

First Grantor:
LAMAR HOLDING CO LLC , TR

First Grantee:
BEVEL NEW ALBANY LLC

Fees:	
Document Recording Fee:	$34.00
Additional Pages Fee:	$8.00
Total Fees:	$42.00
Amount Paid:	$42.00
Amount Due:	$0.00

Instrument Number: 202110050178808
Recorded Date: 10/05/2021 9:55:00 AM

OFFICIAL RECORDING COVER PAGE

DO NOT DETACH

THIS PAGE IS NOW PART OF THIS RECORDED DOCUMENT

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If an error on the cover page appears on our website after review please let our office know.

COVER PAGE DOES NOT INCLUDE ALL DATA, PLEASE SEE INDEX AND DOCUMENT FOR ANY ADDITIONAL INFORMATION.

3

22807

Conveyance
Mandatory: 400.00
Permissive: 800.00 BD
MICHAEL STINZIANO FRANKLIN COUNTY AUDITOR

TRANSFERRED

OCT 04 2021

MICHAEL STINZIANO
AUDITOR
FRANKLIN COUNTY, OHIO

GENERAL WARRANTY DEED BY A LIMITED LIABILITY COMPANY

KNOW ALL MEN BY THESE PRESENTS, that LAMAR HOLDING CO. LLC.,TRUSTEE an Ohio Limited Liability Company, the Grantor(s), for valuable consideration paid, grants with general warranty covenants to Bevel New Albany LLC

Tax mailing address is: 1209 Hill Road North, Suite 200 Pickerington Ohio 43147
The following REAL PROPERTY:

See Exhibit "A"

Subject to taxes and assessments which are now or hereafter become liens on said premises and except conditions, **restrictions and easements and oil and gas leases, if any, contained in former instruments of record for said premises, subject to all of which this conveyance is made.**

Parcel No: 222-000620-00 & 222-000621-00
Property Address: 6800 Bevelhymer Road, New Albany Ohio 43054
Prior Instrument Number: 202103160047420

Signed this 14th day of September 2021

Lamar Holding Co. LLC, Trustee
Mark E. Creamer
Authorized Member

210200003

Land and Mortgage
Title Box

State of Ohio

County of Franklin

BE IT REMEMBERED, That on this 14th day of September, 2021 before me, the subscriber, a notary public in and for said state, personally herein, came, Lamar Holding Co. LLC, Trustee By. Mark E. Creamer, Authorized Member, the Grantors in the foregoing Deed, and acknowledged the signing thereof to be her voluntary act and deed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed my seal on this day and year aforesaid.

NOTARY PUBLIC

NOTARIAL SEAL STATE OF OHIO

LISA D. ROOKARD
Notary Public, State of Ohio
My Commission Expires 12-04-2021

This Instrument was prepared by:

David Douglas, Attorney at Law, 600 E. Rich Street, Columbus, Ohio 43215

Auditor's and Recorder's Stamps

EXHIBIT 'A'

SITUATED IN THE STATE OF OHIO, COUNTY OF FRANKLIN AND IN THE TOWNSHIP OF PLAIN:

Being Lot Number Thirty Two (32) and Thirty-Three (33) of PLAIN VIEW FARMS NO. 2 as the same is numbered and delineated upon the recorded plat thereof, of record in Plat Book 34, page 22, Recorder's Office, Franklin County, Ohio.

Parcel Number: 222-000620-00 & 222-000621-00
Property Address: 6800 Bevelhymer Road New Albany Ohio 43054

DO NOT DETACH

Instrument Number: 202202090022716
Recorded Date: 02/09/2022 10:03:43 AM

Daniel J. O'Connor Jr.
Franklin County Recorder
373 South High Street, 18th Floor
Columbus, OH 43215
(614) 525-3930
http://Recorder.FranklinCountyOhio.gov
Recorder@FranklinCountyOhio.gov

Return To (Mail Envelope):
LAND AND MORTGAGE TITLE AGENCY

Mail Envelope

Transaction Number: T20220016593
Document Type: DEED
Document Page Count: 3

Submitted By (Mail):
LAND AND MORTGAGE TITLE AGENCY

Mail

First Grantor:	**First Grantee:**
LAMAR HOLDING CO LLC	BEVEL NEW ALBANY LLC

Fees:		**Instrument Number:** 202202090022716
Document Recording Fee:	$34.00	**Recorded Date:** 02/09/2022 10:03:43 AM
Additional Pages Fee:	$8.00	
Total Fees:	$42.00	
Amount Paid:	$42.00	
Amount Due:	$0.00	

OFFICIAL RECORDING COVER PAGE

DO NOT DETACH

THIS PAGE IS NOW PART OF THIS RECORDED DOCUMENT

NOTE: If the document data differs from this cover sheet, please first check the document on our website to ensure it has been corrected. The document data always supersedes the cover page.

If an error on the cover page appears on our website after review please let our office know.

COVER PAGE DOES NOT INCLUDE ALL DATA, PLEASE SEE INDEX AND DOCUMENT FOR ANY ADDITIONAL INFORMATION.

3
2/4

TRANSFERRED

FEB 08 2022

MICHAEL STINZIANO
AUDITOR
FRANKLIN COUNTY, OHIO

90001372
CONVEYANCE TAX
EXEMPT
M SEK
MICHAEL STINZIANO
FRANKLIN COUNTY AUDITOR

GENERAL WARRANTY DEED BY A LIMITED LIABILITY COMPANY

KNOW ALL MEN BY THESE PRESENTS, that Lamar Holding Co LLC, an Ohio Limited Liability Company, the Grantor(s), for valuable consideration paid, grants with general warranty covenants to Bevel New Albany LLC

Tax mailing address is: 1269 HILL RD. N. PICKERINGTON, OH 43147
The following REAL PROPERTY:

See Exhibit "A"

Subject to taxes and assessments which are now or hereafter become liens on said premises and except conditions, restrictions and easements and oil and gas leases, if any, contained in former instruments of record for said premises, subject to all of which this conveyance is made.

Parcel No:0222-000619-00
Property Address: 6734 Bevelhymer Road, New Albany Ohio 43054
Prior Instrument Number: 202103160047604
Signed this 16 day of February 2021

MEC

Lamar Holding Co LLC
By: Mark E. Creamer, Member

State of Ohio

County of Franklin

BE IT REMEMBERED, That on this 7th day of February 2022 before me, the subscriber, a notary public in and for said state, personally herein, came, Mark E. Creamer Member of Lamar Holding Company LLC, an Ohio Limited Liability Company, the Grantors in the foregoing Deed, and acknowledged the signing thereof to be his voluntary act and deed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed my seal on this day and year aforesaid.

NOTARY PUBLIC

NOTARIAL SEAL STATE OF OHIO

LISA D. ROOKARD
Notary Public, State of Ohio
My Commission Expires 12-04-2026

This Instrument was prepared by:

Robert G. Kenmedy, Attorney at Law, 600 E. Rich Street, Columbus, Ohio 43215

Auditor's and Recorder's Stamps

EXHIBIT 'A'

Situated in the State of Ohio, County of Franklin, and in the Township of Plain:

Being Lot Number Thirty-One (31) of PLAIN VIEW FARMS ADDITION NO.2, as the same is numbered and delineated upon the recorded plat thereof, of record in Plat Book 34, Page 22, Recorder's Office, Franklin County, Ohio

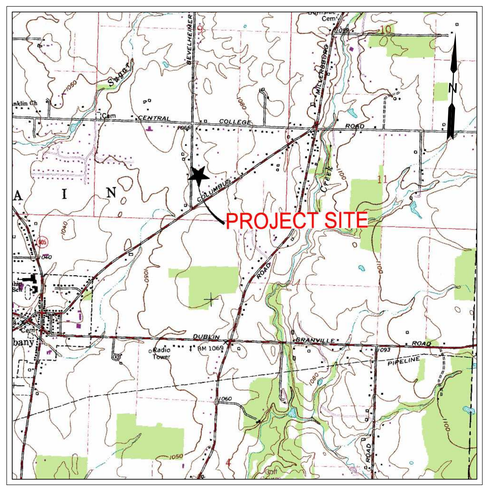
Parcel Number: 222-000619-00
Property Address: 6734 Bevelheimer Road, New Albany, Ohio 43054

WALTON FARMS
OF
NEW ALBANY

INFILL PLANNED UNIT DEVELOPMENT (IPUD)
6734 BEVELHYMER ROAD
NEW ALBANY
FRANKLIN COUNTY OHIO

INDEX OF SHEETS

VICINITY MAP
NO SCALE



USGS MAP
SCALE: 1" = 2,000'

REVISIONS

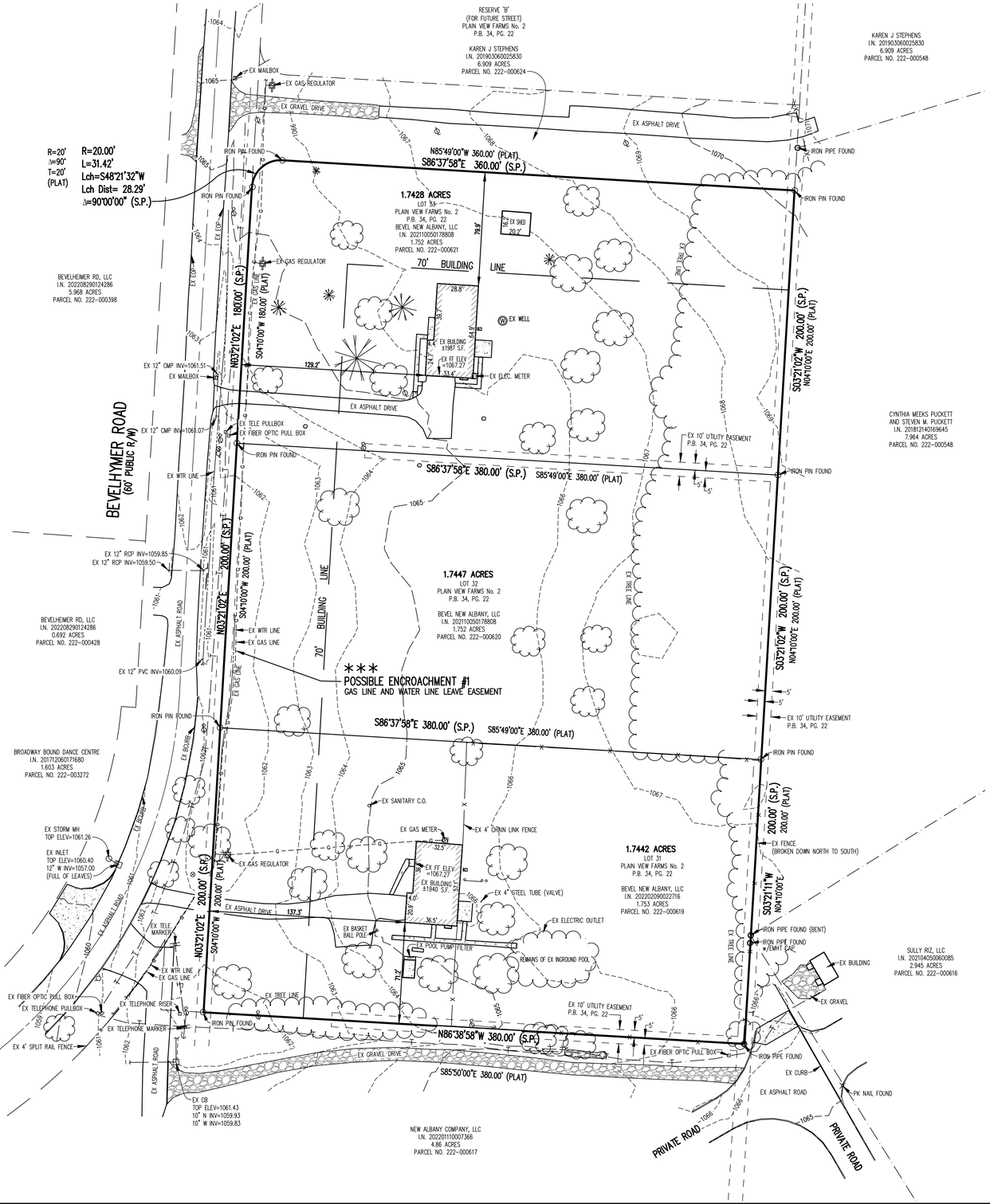
PREPARED FOR:

Community Civil Engineers, LLC
2440 DAYTON-XENIA ROAD, SUITE B
BEAVERCREEK, OHIO 45434
TEL. 937.490.9460 FAX 937.426.9798

TITLE SHEET
WALTON FARMS
NEW ALBANY
6734 BEVELHYMER ROAD
NEW ALBANY, OHIO 43054
FRANKLIN COUNTY, OHIO

STATE OF OHIO
STEPHEN M. BUTLER
67164
REGISTERED PROFESSIONAL ENGINEER

DESIGN: SMB	DATE: 10/31/2023
DRAWN: KOE	
CHECK: SMB	C1
JOB #: 21-474	



H:\CADD\Projects\Butler\New Albany\NEW ALBANY ALTA.DWG, DEC 14, 2022 – 14:23:42

SCHEDULE BI EXCEPTIONS:

OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY COMMITMENT NO. 210200002 AND NO. 210200003, BOTH WITH AN EFFECTIVE DATE OF JANUARY 25, 2021 TO BE CONSIDERED A PART OF THIS SURVEY.

LOT 31 PLAIN VIEW FARMS ADDITION NO. 2

11 EASEMENT GRANTED TO COLUMBUS AND SOUTHERN OHIO ELECTRIC OF RECORD IN VOLUME 2365, PAGE 294 AND VOLUME 2548, PAGE 546, RECORDER'S OFFICE, FRANKLIN COUNTY, OHIO. (VOL. 2365, PG. 294 APPEARS TO AFFECT, CAN NOT BE DETERMINED, EASEMENT IS UNREADABLE, VOL. 2548, PG. 546, AFFECTS, PLOTTED)

12 BUILDING SETBACK LINES AND UTILITY EASEMENTS, AS SHOWN ON THE RECORDED SUBDIVISION PLAT. (P.B. 34, PG. 22 AFFECTS, PLOTTED)

BUT, HOWEVER, DELETING ANY COVENANT, CONDITION OR RESTRICTIONS INDICATING A PREFERENCE, LIMITATION OR DISCRIMINATION BASED UPON RACE, COLOR, RELIGION, SEX, HANDICAP, FAMILIAL STATUS OR NATIONAL ORIGIN TO THE EXTENT SUCH MATTERS VIOLATE 42 USC 3604(c).

LOT 32 AND 33 PLAIN VIEW FARMS ADDITION NO. 2

11 EASEMENT GRANTED TO COLUMBUS AND SOUTHERN OHIO ELECTRIC OF RECORD IN VOLUME 2365, PAGE 294 RECORDER'S OFFICE, FRANKLIN COUNTY, OHIO. (APPEARS TO AFFECT, CAN NOT BE DETERMINED, EASEMENT IS UNREADABLE)

12 EASEMENT GRANTED TO COLUMBIA GAS OF OHIO, INC. OF RECORD IN VOLUME 2920, PAGE 336, RECORDER'S OFFICE, FRANKLIN COUNTY, OHIO. (CAN NOT BE DETERMINED, EASEMENT IS UNREADABLE)

13 BUILDING SETBACK LINES AND UTILITY EASEMENTS, AS SHOWN ON THE RECORDED SUBDIVISION PLAT. (P.B. 34, PG. 22 AFFECTS, PLOTTED)

BUT, HOWEVER, DELETING ANY COVENANT, CONDITION OR RESTRICTIONS INDICATING A PREFERENCE, LIMITATION OR DISCRIMINATION BASED UPON RACE, COLOR, RELIGION, SEX, HANDICAP, FAMILIAL STATUS OR NATIONAL ORIGIN TO THE EXTENT SUCH MATTERS VIOLATE 42 USC 3604(c).

NOTES:

1) THE ADDRESS OF THE SUBJECT TRACT IS:

   6734 AND 6800 BEVELHEIMER ROAD, NEW ALBANY, OHIO 43054

2) SITE APPEARS ON FEMA MAP NO. 39049C0208K WITH AN EFFECTIVE DATE OF JUNE 17, 2008 AND 39049C0208K WITH AN EFFECTIVE DATE OF JUNE 17, 2008 AND ARE LOCATED IN ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN).

3) SITE IS ZONED: R-1 (RESIDENTIAL ESTATE DISTRICT)
   NO ZONING REPORT PROVIDED.

4) THERE WERE NO PUBLIC PARKING SPACES ON THE SUBJECT TRACT AT THE TIME OF THIS SURVEY.

5) THERE WAS NO OBSERVED EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS ON THE SUBJECT TRACT AT THE TIME OF THIS SURVEY.

6) THERE WAS NO OBSERVED EVIDENCE OF RECENT STREET WORK OR SIDEWALK CONSTRUCTION ON THE SUBJECT TRACT AT THE TIME OF THIS SURVEY.

7) THERE WAS NO OBSERVED EVIDENCE OF RECENT FIELD WETLAND DELINEATION ON THE SUBJECT TRACT AT THE TIME OF THIS SURVEY.

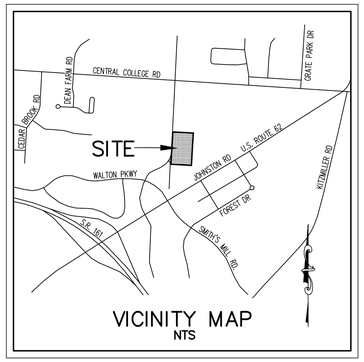
8) THE SUBJECT PROPERTIES HAVE DIRECT ACCESS TO BEVELHEIMER ROAD BY PRIVATE DRIVES.

9) THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLAN HAVE BEEN OBTAINED BY FIELD CHECKS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE SURVEYOR DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS. THE CONTRACTOR SHOULD VERIFY LOCATIONS WITH THE UTILITY COMPANIES AND/OR THE OHIO UTILITIES PROTECTION SERVICE AT 1-800-362-2764 NOT LESS THAN 48 HOURS BEFORE STARTING ANY DEMOLITION OR EXCAVATION ACTIVITIES.

SURVEY LEGEND:

EX CROSS NOTCH FOUND	EX. GAS METER
EX 5/8"IRON PIN FOUND	EX. GUY WIRE
EX 1"IRON PIPE FOUND	EX. GAS VALVE
EX CONCRETE MONUMENT FOUND	EX. LIGHT POLE
EX PK NAIL FOUND	EX. POWER POLE
EX RAILROAD SPIKE FOUND	EX. TRANSFORMER
EX. BOLLARD	EX. WATER METER PIT
EX. CATCH BASIN	EX. WELL
EX. CURB INLET	IRON PIN SET (5/8" DIA, 30" LONG)
EX. FIRE HYDRANT	CONCRETE MONUMENT SET
EX. MANHOLE	PK NAIL SET
EX. WATER VALVE	CROSS NOTCH SET
EX. AIR CONDITIONING UNIT	(S.P.) STATE PLANE COORDINATE SYSTEM
	BOUNDARY LINE
EX R/W	RIGHT-OF-WAY LINE
	EXISTING EASEMENT
EX WTR	EXISTING WATER LINE
EX SAN.	EXISTING SANITARY SEWER LINE
G G G	EXISTING GAS LINE
T T T	EXISTING TELEPHONE LINE

GRAPHIC SCALE
−40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.



VICINITY MAP
NTS

BASIS OF BEARING
BEARINGS ARE BASED ON THE EAST RIGHT-OF-WAY LINE OF BEVELHEIMER ROAD AS TAKEN FROM THE NAD 83 OHIO STATE PLANE COORDINATE SYSTEM, GRID SOUTH ZONE 3402, GEOID 2012A. (N03°21'02"E)

DESCRIPTIONS:

OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY COMMITMENT NO. 210200002

THE LAND REFERRED TO IN THIS COMMITMENT IS DESCRIBED AS FOLLOWS:

SITUATED IN THE STATE OF OHIO, COUNTY OF FRANKLIN, AND TOWNSHIP OF PLAIN:

BEING LOT NUMBER THIRTY TWO (31) OF PLAIN VIEW FARMS ADDITION NO. 2, AS THE SAME IS NUMBERED AND DELINEATED UPON THE RECORDED PLAT THEREOF, OF RECORD IN PLAT BOOK 34, PAGE 22, RECORDER'S OFFICE, FRANKLIN COUNTY, OHIO.

PARCEL NUMBER: 222-000619-00
PROPERTY ADDRESS: 6734 BEVELHEIMER ROAD
NEW ALBANY, OHIO 43054

OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY COMMITMENT NO. 210200003

THE LAND REFERRED TO IN THIS COMMITMENT IS DESCRIBED AS FOLLOWS:

SITUATED IN THE STATE OF OHIO, COUNTY OF FRANKLIN, AND TOWNSHIP OF PLAIN:

BEING LOT NUMBER THIRTY TWO (32) AND THIRTY THREE (33) OF PLAIN VIEW FARMS NO. 2, AS THE SAME IS NUMBERED AND DELINEATED UPON THE RECORDED PLAT THEREOF, OF RECORD IN PLAT BOOK 34, PAGE 22, RECORDER'S OFFICE, FRANKLIN COUNTY, OHIO.

PARCEL NUMBER: 222-000621-00 AND 222-000620-00
PROPERTY ADDRESS: 6800 BEVELHYMER ROAD
NEW ALBANY, OHIO 43054

CERTIFICATION:

TO: BEVEL NEW ALBANY, LLC AND OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 5, 6(a), 7(a)(b1), 8, 9, 11(b), 13, 16 AND 17 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON NOVEMBER 23, 2022.

VANATTA ENGINEERING

PRELIMINARY

JEFFREY A. VAN ATTA
PROFESSIONAL OHIO REGISTERED
SURVEYOR #7354

DATE

STATE OF OHIO
JEFFREY A. VAN ATTA
7354
REGISTERED PROFESSIONAL SURVEYOR

2 WORKING DAYS
BEFORE YOU DIG
CALL TOLL FREE 800-362-2764
OHIO UTILITIES PROTECTION SERVICE

NO.	DATE	REVISION

VANATTA ENGINEERING INC
570 Congress Park Dr • Dayton, OH 45459
Phone: 937.438.3550
Fax: 937.438.3945

ALTA/NSPS LAND TITLE SURVEY
LOTS 31, 32 AND 33
PLAIN VIEW FARMS No. 2
5.2317 ACRES

LOCATED IN
CITY OF NEW ALBANY, FRANKLIN COUNTY, OHIO

DATE: DEC. 14, 2022
SCALE: 1"=40'
PROJECT No. 7930
FILE No.
SHEET NO.

1 of 1

FUTURE PUBLIC ROAD

FUTURE ROAD

IRON PIPE FOUND

CONNECT ACCESS TO FUTURE PUBLIC ROAD WHEN IT IS CONSTRUCTED

IRON PIN FOUND

EX TELE PULLBOX

IRON PIN FOUND

13'

8'

40' R/W

50.0'

25.0'

6.0'

13'

50.0'

IRON PIN FOUND

4 RAIL WHITE HORSE FENCE

PROPOSED BLDG

EX EOP

8' LEISURE PATH

6" WTR. LAT

6" SAN. LAT.

PROPOSED CURB

EX EOP

PROPOSED RIGHT OF WAY

R/W

5' CONC. WALK

EX 12" CMP INV=1061.51

EX MAILBOX

ACCESS TO BE REMOVED ONCE FUTURE PUBLIC ROAD IS CONSTRUCTED

24'

BEVELHYMER ROAD

EX TELE PULLBOX

EX FIBER OPTIC PULL BOX

EX 12" CMP INV=1061.07

IRON PIN FOUND

2" WTR. LAT

EX WTR LINE

40' R/W

50'

PROPOSED BLDG

FUTURE DRIVE

6" SAN. LAT.

R/W

10' PARKING SETBACK

PUBLIC ROAD (50' R/W)

IRON PIN FOUND

EX 12" RCP INV=1059.85

EX 12" RCP INV=1059.50

PROPOSED CURB

400'~12" SAN @ 0.50%

4 RAIL WHITE HORSE FENCE

PROPOSED BLDG

EX ASPHALT ROAD

EX WTR LINE

6" SAN. LAT.

EX 12" PVC INV=1060.09

R/W

24'

IRON PIN FOUND

EX SAN MH TOP ELEV=1060.59 INV=1034.98

93'~12" SAN @ 0.50%

6" SAN. LAT.

EX BOURB

PROPOSED BLDG 6,000 SF

2" WTR. LAT

4 RAIL WHITE HORSE FENCE

R/W

10' UTILITY EASEMENT

25' BLDG SETBACK

EX TREE LINE

IRON PIN FOUND

EX STORM MH TOP ELEV=1061.26

EX INLET TOP ELEV=1060.40 12" W INV=1057.00 (FULL OF LEAVES)

EX 12" SAN. SEWER

EX ASPHALT ROAD

EX TELE MARKER

EX WTR LINE

50' BUILDING SETBACK

PROPOSED WET RETENTION BASIN

IRON PIPE FOUND (BENT)

IRON PIPE FOUND w/EMHT CAP

EX BUILDING

EX GRAVEL

10'

PROPOSED RIGHT OF WAY

EX FIBER OPTIC PULL BOX

EX TELEPHONE PULLBOX

EX TELEPHONE RISER

EX TELEPHONE MARKER

IRON PIN FOUND

EX GRAVEL DRIVE

IRON PIPE FOUND

PK NAIL FOUND

0 30 60 90

N

REVISIONS

PREPARED FOR:

Community Civil Engineers, LLC
2440 DAYTON-XENIA ROAD, SUITE B
BEAVERCREEK, OHIO 45434
TEL. 937.490.9460 FAX 937.426.9798

PRELIMINARY DEVELOPMENT PLAN

WALTON FARMS NEW ALBANY

6734 BEVELHYMER ROAD
NEW ALBANY, OHIO 43054
FRANKLIN COUNTY, OHIO

STATE OF OHIO
STEPHEN M. BUTLER
E-67164
REGISTERED PROFESSIONAL ENGINEER

DESIGN: SMB	DATE: 10/31/2023
DRAWN: KDE	
CHECK: SMB	
JOB #: 22-522	

C3

REVISIONS

PREPARED FOR:

Community Civil Engineers, LLC
2440 DAYTON-XENIA ROAD, SUITE B
BEAVERCREEK, OHIO 45434
TEL. 937.490.9460 FAX 937.426.9798

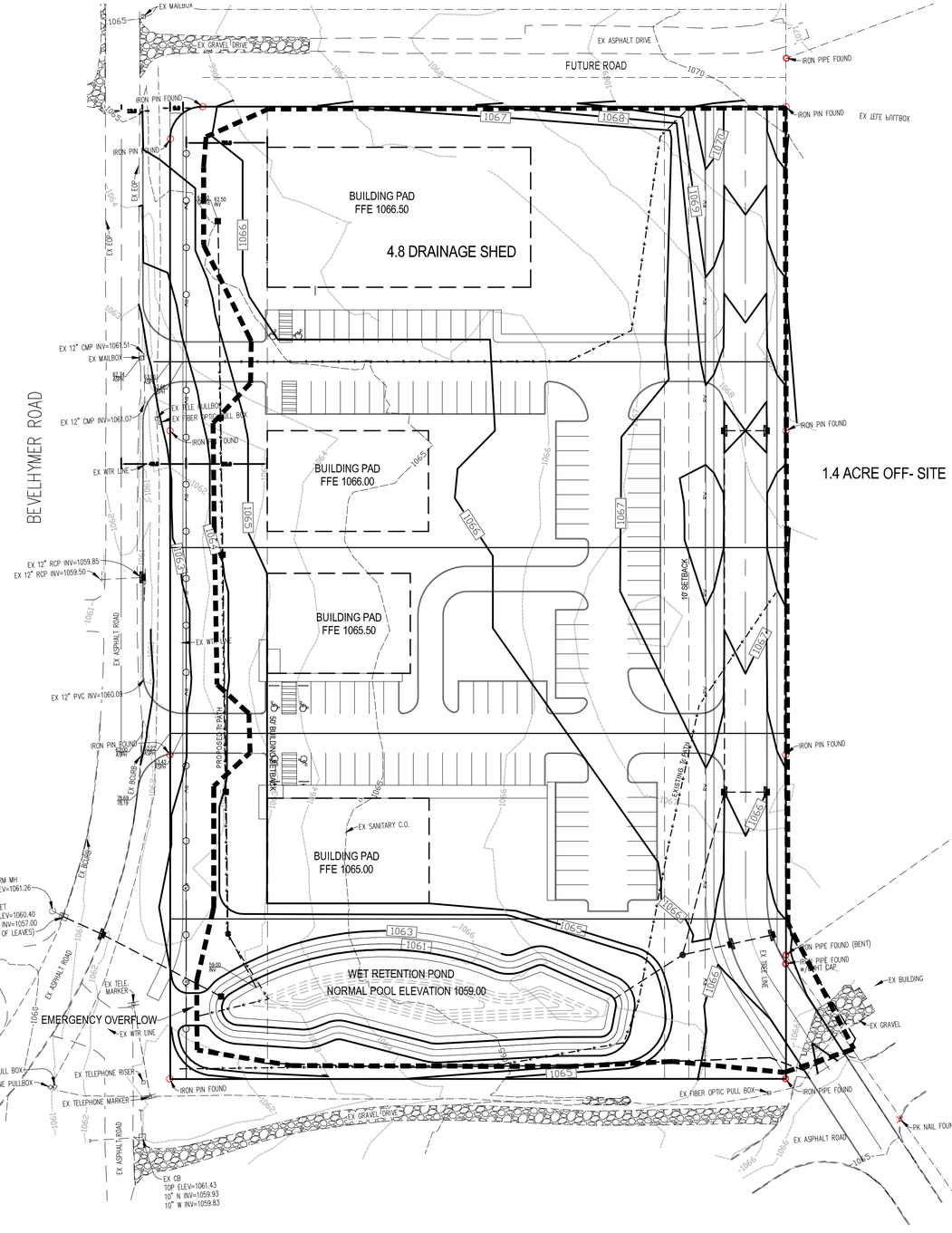
PRELIMINARY MASS GRADING

WALTON FARMS
NEW ALBANY

6734 BEVELHYMER ROAD
NEW ALBANY, OHIO 43054
FRANKLIN COUNTY, OHIO

STATE OF OHIO
STEVEN M. BRAH
E-67164
REGISTERED PROFESSIONAL ENGINEER

DESIGN: SMB	DATE: 10/31/2023
DRAWN: KDE	
CHECK: SMB	
JOB #: 22-522	C4



REVISIONS

PREPARED FOR:

Community Civil Engineers, LLC
2440 DAYTON-XENIA ROAD, SUITE B
BEAVERCREEK, OHIO 45434
TEL: 937.490.9460 FAX: 937.426.9798

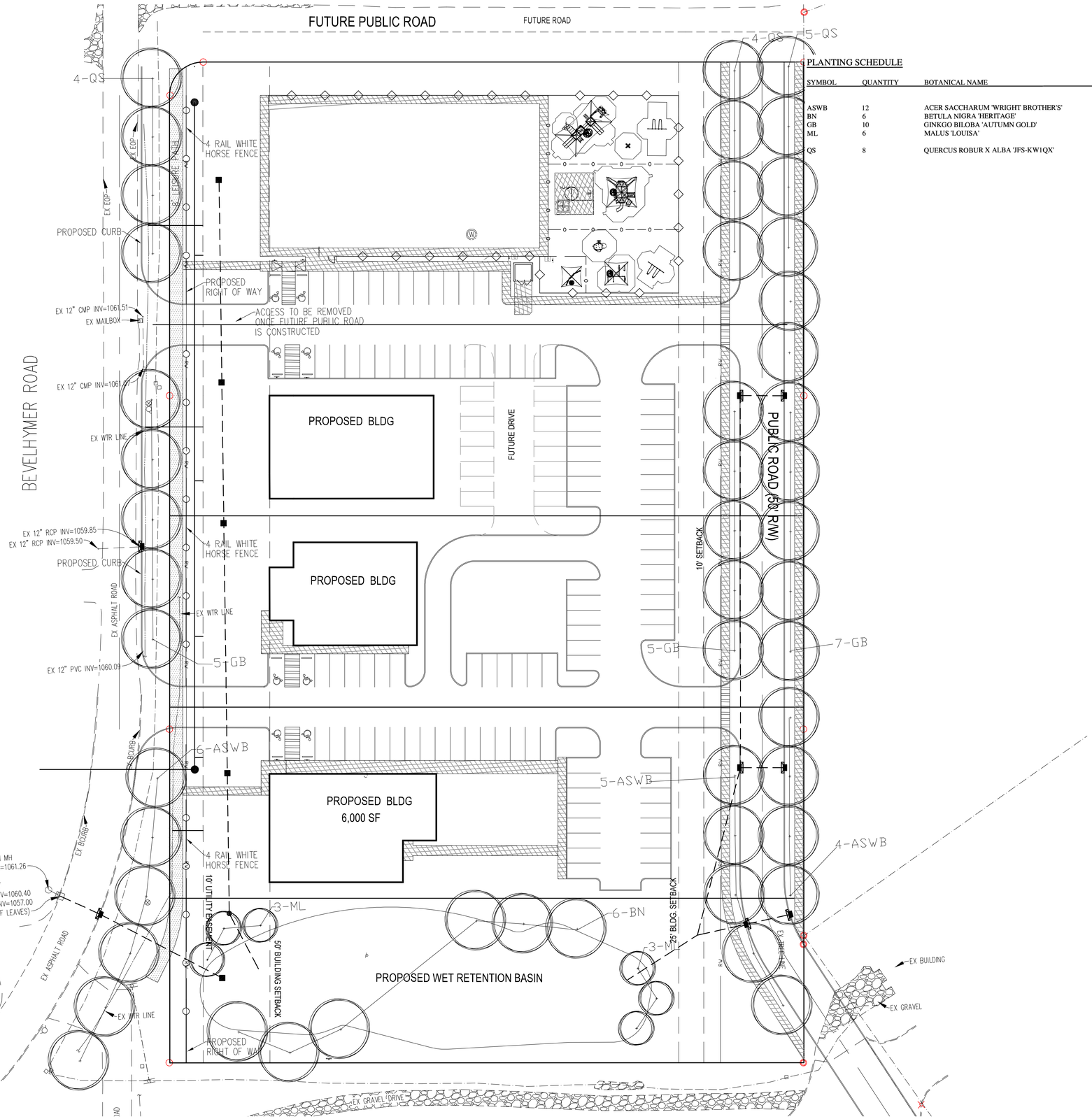
DRAINAGE PLAN

WALTON FARMS
NEW ALBANY

6734 BEVELHYMER ROAD
NEW ALBANY, OHIO 43054
FRANKLIN COUNTY, OHIO

STATE OF OHIO
STEPHEN M. BUTLER
67164
REGISTERED PROFESSIONAL ENGINEER

DESIGN: SMB	DATE: 10/10/2023
DRAWN: KOE	
CHECK: SMB	C5
JOB #: 22-522	



0 30 60 90

N

PLANTING SCHEDULE

SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE (AT PLANTING)	COMMENTS
ASWB	12	ACER SACCHARUM 'WRIGHT BROTHER'S'	WRIGHT BROTHER'S SUGAR MAPLE	2.0" CALIPER B&B	6'CLEAR TRUNK HEIGHT@PLANTING
BN	6	BETULA NIGRA 'HERITAGE'	HERITATGE RIVER BIRCH	12' HEIGHT B&B	MULTI-TRUNK
GB	10	GINKGO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD MALE GINKGO	2.0" CALIPER B&B	6'CLEAR TRUNK HEIGHT@PLANTING
ML	6	MALUS 'LOUISA'	LOUISA CRABAPPLE	2.0" CALIPER B&B	6' CLEAR TRUNK HEIGHT @PLANTING
QS	8	QUERCUS ROBUR X ALBA 'JFS-KW1QX'	STREETSPIRE OAK	2.0" CALIPER B&B	6'CLEAR TRUNK HEIGHT @PLANTING

SPECIFICATIONS FOR LANDSCAPE PLANTINGS

LANDSCAPE CONTRACTOR SHALL:

Provide all plant material in conformance to the guidelines established by the current American Standard for Nursery Stock, published by the American Association of Nurserymen. All planting materials shall be grade A Specimen stock. No substitutions shall be permitted unless approved by the owner.
Provide and install all plantings in conformance with the highest Ohio Nursery and Landscape Association Industry standards, state laws, and New Albany, OHIO.
Locate and verify the existence of all utilities prior to starting any work, and protect underground utilities from any damage.
Locate planting beds and tree locations per plan.
Remove and dispose of weeds, or other materials in planting beds that could interfere with plant growth and health. No plant shall be put into the ground before finish grading has been finished and approved by the Owner's project representative, landscape architect, or equal.
Place a four-inch layer of well-composted leaf mold in all planting beds, including annual planting flower beds as shown per plan around building perimeter and ground sign.
Thoroughly roto-till into existing soil before planting. After planting, all plants shall bear the same relationship to the finished grade as the plant's original grade before digging.
Grade plant beds to ensure positive drainage away from plantings, building foundations, sidewalks and pavement.
Place a two-inch layer of shredded hardwood bark mulch cover in all planting beds, and in a four-foot diameter circle around trees in turf areas. Planting bed widths shall be sufficient to accommodate future plant growth.
Provide a one-year guarantee on woody plants. Any plant that dies or does not thrive shall be replaced during the guarantee period.
Provide and install an appropriate seed mixture for the Detension Basin area. Seed mixtures to be approved by Landscape Architect and Owner's Representative.
Provide seeding or sodding for turf grass areas per plan with a Turf Type Tall Fescue Mixture.
Supply written instructions to owner for maintaining plants in a healthy condition.

REVISIONS

PREPARED FOR:

LANDSCAPE PLAN BY
PAMELA K. WHITE
OHIO PROFESSIONAL LANDSCAPE ARCHITECT #460
937-830-2770 pamelakw@gmail.com

PRELIMINARY LANDSCAOE PLAN

WALTON FARMS
NEW ALBANY
6734 BEVELHYMER ROAD
NEW ALBANY, OHIO
FRANKLIN COUNTY, OHIO 43054

STATE OF OHIO
PAMELA K WHITE
460
REGISTERED
LANDSCAPE ARCHITECT

DESIGN: SMB	DATE: 10/31/2023
DRAWN: KOE	
CHECK: SMB	
JOB #: 22-522	L1

WALTON FARMS ZONING DISTRICT
I-PUD
November 3, 2023

The Walton Farms Zoning District consists of 5.23+/- acres located at 6734 thru 6800 Bevelhymer Road. The development is bounded to the north by Single Family residential, to the East a wooded vacant lot zoned R-1, the south by commercial uses zoned I-PUD and to the West both commercial and residential. The intent of this rezoning is to allow for commercial development on real property which is presently zoned R-1 in accordance with standards which are uniform across the property that is the subject of this text. The intent is also to provide a transition from the residential to the North to the business park to the South and follow the New Albany 2020 Strategic Plan.

Unless otherwise specified in the submitted drawings or in this written text, the development standards of Part Eleven, Title Five of the Codified Ordinances of the City of New Albany shall apply to this Zoning District. In the event of a conflict between the standards contained in this text and those which are contained in the Codified Ordinances, this text shall govern. Where this text is silent on any standard, the standard contained in the Codified Ordinances shall be applied.

I. Walton Farms Zoning District:

A. **Summary**: The rezoning is for the entire 5.23+/- acres with frontage on Bevelhymer Road.

B. **Permitted Uses**: The following uses shall be permitted in Walton Farms Zoning District:

Except as expressly prohibited below, the permitted uses contained in the Codified Ordinances of the City of New Albany, C-1 Neighborhood Business District-, Section 1145.02 shall be permitted. Swim schools shall also be permitted.

Conditional uses contained in Section 1145.03 of the Codified Ordinances shall be allowed in this subarea, provided that the conditional uses comply with and are reviewed in accordance with Chapter 1115 of the Codified Ordinances. The following uses shall be prohibited in the development:

1. Billboards and other off-premises signs, subject to the regulations of Section 1169.08(e).
2. Armory.
3. Sexually Oriented Businesses.
4. Self-service laundries.
5. Commercial radio transmitting or television station and appurtenances.
6. Funeral Parlor.
7. Gasoline service stations, or retail convenience stores selling gasoline as an ancillary activity.
8. Kennels.
9. Residential uses.

III. DEVELOPMENT STANDARDS:

A. Lot and Setback Commitments

1. Minimum Parcel Size and Frontage: Each parcel within this Zoning District shall be a minimum of 0.75 acres in size and shall have a minimum of 95 feet of frontage on a public street.

2. Limitation on Single Retail Users: No single retail user in this Zoning District shall occupy more than 14,100 square feet of gross floor area of a building.

3. Bevelhymer Road: There shall be a minimum pavement setback of 45 feet and a minimum building setback of 50 feet from Bevelhymer Road right-of-way. Patios, porches, awnings, and similar architectural elements can encroach up to 5 feet into the building setbacks.

4. Perimeters: Except as provided in the immediately preceding Section II.A.5 below, there shall be a minimum pavement setback of 10 feet and a minimum building setback of 25 feet from all perimeter boundary lines of this Zoning District.

5. Interior Boundaries: Setbacks along all internal property boundaries between adjoining parcels within this Zoning District shall be zero for all buildings and pavement unless otherwise specified in this text.

6. Lot Coverage: There shall be a maximum impervious lot coverage of 80% in this Zoning District. Individual parcels may exceed this limitation provided that the overall lot coverage in the development does not exceed this percentage.

B. Access, Loading, Parking and Other Traffic Commitments

1. Vehicular Parking: Vehicular parking for each use shall be provided per Section 1167 of the Codified Ordinances unless otherwise approved with a shared parking plan as part of a final development plan. In the event that a particular use does not have a parking requirement defined by such section of the Codified Ordinances, the Planning Commission shall review and approve the amount of parking required for that use as part of a final development plan considering customary parking ratios for similar uses and/or data from the proposed user in support of the number of spaces being provided. The development has shared parking agreements and may utilize parking of the entire development spaces throughout the entire development. Cross access easements between sits shall be provided.

2. Bicycle Parking: Bicycle parking shall be provided on each parcel at the rate of one space per 2,500 square feet of gross building floor area located on that parcel, provided that in no circumstance shall any parcel be required to provide more than 10 bicycle parking spaces.

3. Vehicular Access: Vehicular access to the Zoning District shall be provided from (a) two full movement access points on Bevelhymer Road, whereas the most northern access point shall be removed, once the future public road, North and adjacent to the development and connecting to Bevelhymer is constructed;(b) two full access curb cuts from a public road connecting the commercial development to the South, and the future public road to the North and adjacent to the development, once the public road is constructed.

Vehicular circulation within the development generally shall be provided in accordance with the circulation plan that accompanies this text, with locations to be finalized at the time of final development plan approval. Internal drives which are in addition to those which are shown on the circulation plan may be provided as approved as part of a final development plan to provide efficiency of traffic movement within individual parcels.

A declaration of reciprocal easements or a reciprocal easement agreement shall be recorded against the real property within this Development prior to the issuance of the first building permit in the Zoning District in order to provide for perpetual vehicular and pedestrian cross access easements, cross utility easements, and other easements which are necessary or desirable for the efficient development of Walton Farms. Maintenance of private drives and sidewalks internal to this Zoning District shall be the responsibility of the owners of property within this Zoning District. A copy of the relevant recorded instrument as contemplated by this paragraph shall be submitted to the City along with the first application for a building permit in this Zoning District.

4. Pedestrian Access: An 8-foot-wide asphalt leisure trail is required to be installed along the Bevelhymer Road frontage of the site. A 5-foot wide concrete sidewalk shall be installed on the west side of the public drive to be constructed generally along or parallel to the private drive that runs along the rear boundary. Sidewalks shall be installed at such time as private site development occurs. Individual parcels within the development shall establish at least one pedestrian connection to the sidewalk in some form, to be reviewed at the time of final development plan. If such connection crosses a parking area it shall be striped. Each building shall have a concreate sidewalk between its front façade and adjacent parking areas.

5. Rights-of-Way: The developer shall dedicate right-of-way along Bevelhymer Road to the city of New Albany for a distance of 40 feet as measured from the centerline of Bevelhymer Road. The developer shall grant easements to the city of New Albany adjacent to the rights of way in order to install and maintain street scape improvements and/or utilities. The proposed right-of-way width and easements are to be sufficient enough to accommodate the City street capital improvement projects.

Additionally, the developer shall dedicate right-of-way to the city of New Albany for a distance of 50 feet for a public street to be constructed as part of this development measured from the existing rear boundary line. Within the right-of-way a 6’ tree lawn and 5’ wide sidewalk shall be provided on both sides of the road. The developer shall grant easements to the city of New Albany adjacent to the rights of way in order to install and maintain street scape improvements and/or utilities. The proposed right-of-way width

and easements are to be sufficient enough to accommodate the City street capital improvement projects.

6. Loading and Service Areas: Loading and service areas shall be fully screened from off-site view by the use of walls, fences, and/or landscaping.

C. Architectural Standards:

1. Application of DGRs: Except as otherwise set forth in this text, the City's Design Guidelines and Requirements shall apply to this Zoning District, provided, however, that deviations from them shall be permitted if approved as part of a separate variance application reviewed by Planning Commission in conjunction with a final development plan application.

2. Style: Buildings shall be designed to be seen from 360 degrees with the same caliber of finish on all facades/elevations. Building additions, whether attached or detached, shall be of similar design, materials, and construction.

3. Height: The maximum building height (as measured per the Codified Ordinances) shall not exceed 35 feet. The maximum number of stories shall not exceed one and a half stories. Otherwise, architectural elements such as monitors, chimneys, and cupolas may exceed the height limitations of this text as permitted by the Codified Ordinances.

4. Features: The following architectural features shall be required and shall be scaled according to the size of the individual tenant. These features may be scaled to a group of smaller side-by-side tenants when architecturally appropriate:

a. Roofs may be sloped or flat, provided that flat roofs utilize a heavy cornice;

b. Roof elements that emphasize and reduce the building scale at the building storefront such as, but not limited to, dormers, cupolas, roof spires, and hip and gable roofs;

c. Complete screening of all roof-mounted equipment shall be required on all sides of buildings with materials that are consistent and harmonious with the building's façade and character. Such screening shall be provided in order to screen the equipment from grade level off-site view and to buffer sound generated by such equipment; and

d. Complete screening of all ground-mounted mechanical and other equipment at ground level by walls, fencing, or landscaping that is consistent and harmonious with the materials and character of the nearest primary building shall be required.

5. Exterior Elevations: All exterior elevations of each building shall be required to have the following characteristics:

a. Consistency of Finish: The same palette of exterior finishes and color shall be used on all sides of a building. Unfinished rear facades of buildings shall be prohibited.

b. Exterior Wall Finish: Brick, brick veneer, metal, cementitious products such as Hardiplank or its equivalent, wood, EIFS and composite material may be used as exterior wall finish materials where approved. Vinyl as an exterior material is prohibited. Exterior wall finish materials must be used to complete massing elements. The application of brick or brick veneer to a single building façade is prohibited. Tinted glass shall be permitted, reflective or mirrored glass shall be prohibited as approved.

c. Roofs: General roof massing shall incorporate pitched or flat roofs. If a flat roof is used, strong cornice lines must be integrated. Acceptable roof materials include dimensional asphalt shingles, natural and synthetic slate, cedar shake, and standing seam metal.

d. Parapets: Parapets shall use a classical cornice with molded shapes made of any of the following durable materials: stone, cast stone, architectural pre-cast concrete, gypsum fiber reinforced concrete, expanded insulation finish system (EIFS), or similar materials.

e. Fascias: Roof fascias shall be proportioned to the scale of the roof element and shall employ classical molding details such as crown molding. The same material shall be used for fascias and cornices.

f. Gutters and Downspouts: Sloped roofs shall be required to employ gutters and downspouts for drainage. All gutters shall be of a metal type and shall be painted to match fascias.

g. Exterior Doors: All exterior doors other than doors whose primary purpose is for the entry or exit of customers shall be made of a heavy gauge metal.

h. Prefabricated Buildings: Prefabricated metal buildings, untreated masonry block structures, and buildings featuring an exterior finish entirely of glass are prohibited.

6. Operable Doors: The City's Design Guidelines and Requirements require an operable and active front door to be provided along all public roads.

D. Buffering, Landscaping, Open Space and Screening Commitments

1. Landscape Standards Along Public Rights-of-Way:

a. Street Trees: Deciduous street trees are required within the rights-of-way along Bevelhymer Road. Trees are to be a minimum of two-inch caliper and shall be provided at an average of 1 tree for every 30 linear feet of frontage on center. Along the unnamed public road connection on the East side of the development, a double row of street trees shall be provided on the West side of the public road. Final street design and quantity shall be reviewed at the time of the final development plan. Any trees requiring removal or which are damaged or destroyed during construction of this development shall be replaced in the same locations. Street trees shall not obstruct site distance or signage, subject to staff approval.

b. Fencing: A four-board white horse fence shall be installed along Bevelhymer Road, except where vehicular or pedestrian access points for the development are provided. The white horse fence shall be extended along the entire frontage of Bevelhymer Road.

c. Screening of Parking: Any surface parking areas adjacent to Bevelhymer Road shall be screened from the respective rights-of-way with a minimum of a 30-inch tall continuous planting hedge, fence, wall or earth mound or any combination of the foregoing. The 30-inch height shall be measured from the adjacent parking area. Within the required minimum pavement setback area there shall be a minimum of 6 trees per 100 lineal feet. Trees may be deciduous, ornamental, evergreens, or any combination thereof as approved. This planting requirement shall not apply in areas where pedestrian or vehicular ingress and/or egress are provided, or where existing trees are found.

3. General.

a. Minimum Tree Size.

Tree	Perimeter Minimum Tree Size	Parking Lot Minimum Tree Size
Ornamental Tree	2” Caliper	2” Caliper
Deciduous Shade Trees	2” Caliper	2” Caliper
Evergreen Trees	6’ – 8’ tall	4’ tall

b. Perimeter Shrubbery. Deciduous and evergreen shrubs are permitted and shall be a minimum size of 24 inches in height at installation.

c. Interior Landscaping. The required amount of interior landscaping shall be a minimum of eight percent (8%) of the total area of parking lot pavement. The landscaping areas shall include both shrubs and parking lot trees as required by Codified Ordinance 1171.06(a)(3) and be arranged in such a manner so as to visually break up large expanses of pavement.

E. Dumpsters, Lighting, Outdoor Display Areas and other Environmental Commitments

1. Mechanical Equipment: Any external mechanical equipment shall be screened at ground level from all adjacent public streets and from properties which are outside of but adjacent to this development with materials that are similar to or the same as used on the majority of the building, or with fencing or landscaping. Complete screening of all roof-mounted equipment shall be required on all four sides of buildings with materials that are consistent and harmonious with the building's façade and character. Such screening shall be provided in order to screen the equipment from off-site view and to buffer sound generated by such equipment. The screening of the mechanical equipment should be coordinated with the rest of the architecture so as to avoid being seen as an "add-on".

2. Service Areas and Dumpsters: All service areas (including, without limitation, loading docks) and dumpsters shall be fully screened from all public roads and from adjacent properties located outside of this Zoning District at ground level with walls, fencing, or landscaping. Walls shall be of the same materials and design used on the building walls and shall be complemented with landscaping. Exterior storage of materials, supplies, equipment, or products is prohibited.

3. Lighting:

a. Street Lighting: Public street lights may be removed, relocated, replaced, and/or supplemented if necessary to accommodate the installation and operation of access points onto public streets and to adequately light these areas, as approved as part of a final development plan. New street lights shall be the same or substantially similar style, color, and specifications as existing street lights.

b. Parking Lots and Driveways: All parking lot and private driveway lighting shall be cut-off type fixtures and down cast. Lighting along private drives internal to this subarea (if any) shall be presented for review and approval as part of a final development plan. Light poles within this subarea shall be black or New Albany green and constructed of metal. Parking lot lighting shall not exceed 18 feet in height. Parking lot lighting shall be from a controlled source in order to eliminate light spillage beyond the boundaries of the development. For any proposed development that is adjacent to property located outside of this Zoning District where residential uses exist or are permitted, a photometric plan demonstrating zero light spillage onto such properties shall be submitted for review and approval by the Planning Commission as part of a final development plan.

c. Ground-Mounted Lighting: Landscape uplighting from a concealed source shall be permitted. Any ground lighting that is permitted shall be shielded and landscaped.

d. Prohibited Lighting: No permanent colored lights or neon lights shall be used on the exterior of any building.

e. Security Lighting: Security lighting, when used, shall be of a motion-sensor type.

f. Consistent Appearance: Exterior lighting fixtures shall be similar in appearance throughout this subarea. All exterior lighting mounted to a building shall be located on the first floor only. Uplighting of a building is prohibited.

g. Other Requirements: All other lighting on the site shall be in accordance with the City's Codified Ordinances.

F. Graphics and Signage Commitment

1. Locations; Master Sign Plan: Locations for ground signs and building signs will be unique to specific user and therefore shall be presented for review and approval by the Planning Commission as part of a final development plan.

2. Specifications: Permitted sizes, designs, colors, shapes, and other specifications for ground and building signs shall be consistent with the 2013 Trust Corp Signage Recommendations Plan which was approved by the City in 2013 for the real property located on the south side of U.S. Route 62/Johnstown Road. Any changes or deviations from that plan shall require the review and approval of the Planning Commission.

3. Entry Signs: Two ground identification signs shall be permitted along each public street within this zoning district. One ground sign shall be permitted at each vehicular access point into this zoning district from a public street in order to identify users within this Zoning District. The ground signs shall be dual identification.

4. Illumination: Backlighting of individual letters on wall-mounted signage shall be permitted. Internally illuminated wall-mounted and ground-mounted signage shall be prohibited.

5. Prohibited Signs: No signs shall be painted directly on the surface of the building, wall or fence. No wall murals shall be allowed. No roof signs or parapet signs shall be permitted nor shall a sign extend higher than the roof of a building. No flashing, traveling animated or intermittently illuminated signs or banners, tethered balloons or pennants shall be used. Temporary interior window advertisements are prohibited. Gas station pricing signs shall not be permitted to be digital.

The following signs are not permitted as permanent signs: Banner or streamers, sidewalk or curb signs (sandwich type), portable displays or mobile signs, gas filled devices, roof-mounted signs, revolving or rotating signs, neon signs, and signs installed on gas station fueling area canopies.

6. Other Requirements: All signage shall conform to the standards set forth in Section 1169 of the Codified Ordinances, unless otherwise stated above.

G. Utilities. All new utilities in this subarea shall be installed underground.

H. Appeals and Variances:

1. Appeals:

(a) Taking of Appeals: Appeals to the Board of Zoning Appeals concerning interpretation or administration of the text or the underlying zoning ordinance by the Zoning Officer or any other administrative official may be taken by any person aggrieved, including a tenant, or by a governmental officer, department, board, or bureau. Such appeal shall be taken within twenty days after the date of the decision by filing a notice of appeal specifying the grounds thereof with the officer from whom the appeal is taken and the Board of Zoning Appeals.

(b) Imminent Peril: An appeal shall stay all proceedings in furtherance of the action appealed from, unless the Zoning Officer certifies to the Board of Zoning Appeals, after notice of appeal shall have been filed with them, that by reason of facts stated in the application a stay would, in their opinion, cause imminent peril to life or property. In such case, the proceeding shall not be stayed other than by a restraining order which may, on due cause shown, be granted by the Board of Zoning Appeals, after notice to the Zoning Officer or by judicial proceedings.

2. Nature of Variance: On a particular property, extraordinary circumstances may exist making a strict enforcement of the applicable development standards of the PUD portion of this text or the Zoning Ordinance unreasonable and, therefore, the procedure for variance from development standards is provided to allow the flexibility necessary to adapt to changed or unusual conditions, both foreseen and unforeseen, under circumstances which do not ordinarily involve a change of the primary use of the land or structure permitted.

3. Variance Process: The procedures and requirements of Chapter 1113, Variances of the Codified Ordinances of the City of New Albany shall be followed in cases of variances. The Planning Commission shall hear requests for variances in this zoning district.

CARPENTER MARTY transportation

Bevelhymer Mixed Commercial Development

Traffic Impact Study

Prepared for: Alt Architecture

June 14, 2023

6612 Singletree Drive
Columbus, OH 43229
614.656.2424
www.cmtran.com

Table of Contents

List of Tables

List of Figures

I. Purpose of Report & Study Objectives

The purpose of this traffic analysis and report is to document the potential traffic impacts of a mixed commercial development located in New Albany, OH. This traffic impact study (TIS) is required by the City of New Albany as part of the development approval process.

II. Proposed Development

A. Off-Site Developments

The study area includes the proposed site access point and the intersections of Bevelhymer Road with Central College Road and Walton Parkway as well as the intersection of Johnstown Road & Sheetz Access.

The surrounding area is largely developed with residential developments to the north, and retail developments on all other sides. Several retail developments are located along US-62 immediately southeast of the proposed site. These include Sheetz, Aldi, Dunkin Donuts, and Valvoline. The existing site is currently developed as a single-family residence and is located opposite the Broadway Bound Dance Center along Bevelhymer Road.

B. On-Site Development

Location

The site is located on the east side of Bevelhymer Road, approximately 1000 feet north of Walton Parkway. **Figure 1** shows the location of the proposed site in central Ohio and **Figure 2** shows the study area.

Figure 1 – Location in Central Ohio

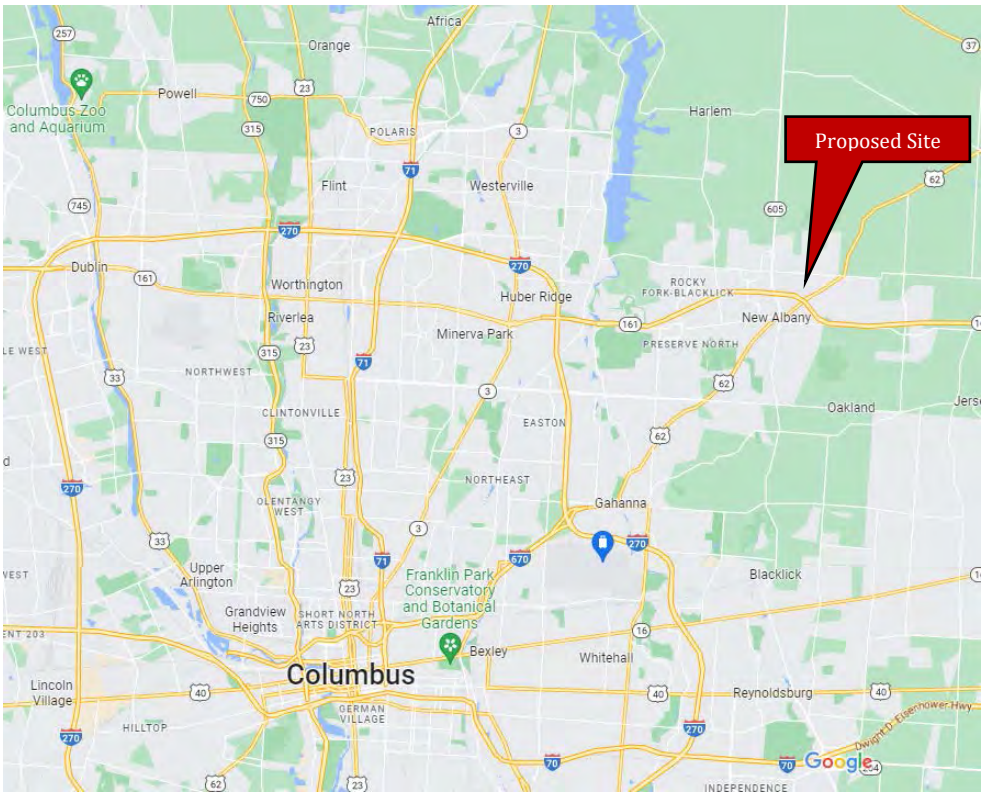


Figure 2 – Location of the Proposed Development (Yellow), Site Drives, and Study Intersections

Land Use & Intensity

The site is proposed to develop as a 13,940 SF day care center, a 5,040 SF medical-dental office building, a 6,700 SF health/fitness club, and 7,500 SF office building. The development is proposed to have two full access points along Bevelhymer Road and access to the Johnstown Road & Sheetz Access intersection via a backage road. The site concept plan is provided in **Appendix A.**

III. Area Conditions

A. Area of Influence

The study intersections for the proposed development are listed below. Numbers correspond to **Figure 2**.

1. Central College Road & Bevelhymer Road
2. Walton Parkway & Bevelhymer Road
3. Johnstown Road & Sheetz Access
4. Bevelhymer Road & Site Access 1
5. Bevelhymer Road & Site Access 2

Bevelhymer Road has a two-lane section with a posted speed limit of 35 MPH.

B. Jurisdictions

The proposed site and all intersections are under City of New Albany jurisdiction.

C. Traffic Volumes & Conditions

AM and PM peak turning movement counts for the Bevelhymer Road intersections with Central College Road and Walton Parkway were collected on February 28 and March 1, 2023, by Carpenter Marty Transportation (CM). Count data at the Johnstown Road & Sheetz Access intersection was obtained from the Johnstown and Smith's Mill Fueling Center TIS. Growth rate data for the Bevelhymer Road intersections was provided by Mid-Ohio Regional Planning Commission (MORPC). Growth rate data along Johnstown Road was obtained from the Johnstown and Smith's Mill Fueling Center (Sheetz) TIS.

Count data and growth rate data can be found in **Appendix B**.

IV. Projected Traffic

A. Background and "No Build" Traffic

For analysis, the Opening Year of the development is 2024 and the Design, or Horizon Year, is 2034. The previously described linear annual growth rates were applied to the count data to produce Background volumes for the Opening and Horizon Years.

Trips for the Sheetz development were taken from the Johnstown and Smith's Mill Fueling Center TIS and extrapolated throughout the study area based on count data and engineering judgement. Trips for the Dunkin', Valvoline, and ALDI developments were generated using the ITE methodologies and the Trip Generation Manual, 11th Edition. Land use codes (LUC) *850 – Supermarket, 941 – Quick Lubrication Vehicle Shop,* and *937 – Coffee/Donut Shop with Drive-Through Window* were used to generate trips for the background developments. **Table 1** summarizes the trip generation for the background developments. The full trip generation details can be found in **Appendix C**.

Table 1 – Background Developments Trip Generation Summary

Land Use	Size		Weekday AM Peak		Weekday PM Peak	
			Entry	Exit	Entry	Exit
850 – Supermarket	20,000 SF	**Total**	**34**	**23**	**105**	**105**
		Internal	1	3	11	8
		Pass-By	0	0	31	32
		Non-Pass-By	33	20	63	65
941 – Quick Lubrication Vehicle Shop	2 Servicing Positions	**Total**	**4**	**2**	**5**	**4**
		Internal	1	0	1	1
		Pass-By	0	0	0	0
		Non-Pass-By	3	2	4	3
937 – Coffee/Donut Shop with Drive-Through Window	2,500 SF	**Total**	**109**	**105**	**49**	**49**
		Internal	2	1	7	10
		Pass-By	52	51	21	20
		Non-Pass-By	55	53	21	19
Cumulative Total			**147**	**130**	**159**	**158**
Total Internal			**4**	**4**	**19**	**19**
Total Pass-By			**52**	**51**	**52**	**52**
Total Non-Pass-By			**91**	**75**	**88**	**87**

These trips were added to the Background traffic to produce No Build traffic for the Opening and Horizon Years.

B. Proposed Development "Build" Traffic

Trips for the proposed development were generated using the ITE methodologies and the Trip Generation Manual, 11th Edition. LUC *565 – Day Care Center, 720 – Medical-Dental Office Building – Stand-Alone, 492 – Health/Fitness Club,* and *712 – Small Office Building* were used to generate trips for the proposed development. **Table 2** summarizes the trip generation for the proposed development. The full trip generation details can be found in **Appendix C**.

Table 2 – Proposed Site Trip Generation Summary

Land Use	Size		Weekday AM Peak		Weekday PM Peak	
			Entry	Exit	Entry	Exit
565 – Day Care Center	13,940 SF	**Total**	**81**	**72**	**73**	**82**
		Internal	0	0	0	0
		Pass-By	0	0	0	0
		Non-Pass-By	81	72	73	82
720 – Medical-Dental Office Building – Stand-Alone	5,040 SF	**Total**	**13**	**3**	**5**	**12**
		Internal	0	0	0	0
		Pass-By	0	0	0	0
		Non-Pass-By	13	3	5	12
492 – Health/Fitness Club	6,700 SF	**Total**	**4**	**4**	**23**	**18**
		Internal	0	0	0	0
		Pass-By	0	0	0	0
		Non-Pass-By	4	4	23	18
712 – Small Office Building	7,500 SF	**Total**	**10**	**2**	**6**	**11**
		Internal	0	0	0	0
		Pass-By	0	0	0	0
		Non-Pass-By	10	2	6	11
Cumulative Total			**108**	**81**	**107**	**123**
Total Internal			**0**	**0**	**0**	**0**
Total Pass-By			**0**	**0**	**0**	**0**
Total Non-Pass-By			**108**	**81**	**107**	**123**

Site traffic was distributed to/from the site based on count data, knowledge of the surrounding area, and engineering judgement. Trips from the background developments (Sheetz, ALDI, Dunkin', and Valvoline) were slightly redistributed for Build scenarios due to the introduction of a backage road connecting Bevelhymer Road and Johnstown Road via the proposed development. Additionally, a portion of the proposed development site traffic is expected to utilize the backage road connection to US-62. Changes in cut-through traffic from background developments via the new backage road is expected to be minimal as there is already a connection to these developments via Walton Parkway, approximately 250' south of Bevelhymer Road. The newly distributed background development traffic and the site traffic was added to the Background traffic to produce Build traffic for the Opening and Horizon Years. The full volume calculations can be found in **Appendix D.**

V. Traffic Analysis

A. Turn Lane Warrant & Length Analysis

A turn lane warrant analysis was conducted at the proposed site access points using standard ODOT turn lane warrant graphs. If a turn lane was warranted in any particular scenario, the length was calculated using methodologies in the ODOT Location and Design (L&D) Manual and it was represented as such in the capacity analysis unless otherwise noted.

B. Capacity Analysis

Highway Capacity Software (HCS) 2023 was used to analyze capacity at all study intersections. A minimum Level-of-Service (LOS) of D for the overall intersection/

approaches, and LOS E for individual movements, during peak traffic hours was considered acceptable at each intersection. If unacceptable LOS/delay occurred in No Build or Build analysis scenarios, mitigation was determined to bring LOS/delay back to acceptable levels.

C. Sight Distance Analysis

Sight distance triangles for vehicles exiting the site access points were analyzed per ODOT methodologies.

VI. Results

A. Turn Lane Warrant & Length Analysis

Results of the turn lane warrant analysis show that no turn lanes are warranted at the site access points. The full turn lane warrant analysis can be found in **Appendix E.**

B. Capacity Analysis

Results of the baseline capacity analysis for the study intersections in each analysis scenario can be seen in **Table 3**. The full capacity analysis can be found in **Appendix F.**

Table 3 – Baseline Capacity Analysis Summary (LOS/delay)

Intersection	Approach/ Movement	Opening Year (2024)				Horizon Year (2034)			
		AM No Build	AM Build	PM No Build	PM Build	AM No Build	AM Build	PM No Build	PM Build
Central College Rd & Bevelhymer Rd	EB	A/9.0	A/9.4	C/17.2	C/20.2	B/10.1	B/10.6	D/26.8	D/32.3
	WB	A/9.7	B/10.3	E/48.8	F/88.2	B/11.2	B/12.2	F/210.6	F/267.8
	NB	A/8.6	A/9.0	B/14.7	C/18.6	A/9.2	A/9.8	C/18.2	C/24.3
	SB	A/9.1	A/9.4	D/32.4	E/44.4	A/10.0	B/10.5	F/68.7	F/101.8
	Total	**A/9.2**	**A/9.7**	**D/33.9**	**F/52.6**	**B/10.4**	**B/11.0**	**F/113.0**	**F/114.0**
Walton Pkwy & Bevelhymer Rd	EB Left	A/7.7	A/7.8	A/7.6	A/7.7	A/7.8	A/7.9	A/7.6	A/7.7
	WB Left	A/7.5	A/7.5	A/7.7	A/7.7	A/7.6	A/7.6	A/7.8	A/7.8
	NB	B/11.0	B/11.3	B/14.9	C/15.6	B/11.6	B/12.0	C/17.5	C/18.4
	SB	B/13.4	B/14.5	C/22.7	D/28.0	C/15.2	C/16.8	E/42.6	F/63.1
Johnstown Rd & Sheetz Access	EB	B/17.0	B/18.0	B/18.9	B/19.5	B/18.5	B/19.7	C/20.5	C/21.1
	WB	C/28.3	C/31.5	C/29.6	C/31.5	C/34.8	D/40.6	D/35.7	D/39.0
	NB	D/43.7	D/43.2	D/51.3	D/50.9	D/43.7	D/43.2	D/51.3	D/50.9
	SB	D/49.8	D/49.6	D/49.5	D/50.4	D/49.8	D/49.6	D/49.5	D/50.4
	Total	**C/29.0**	**C/30.5**	**C/30.8**	**C/31.8**	**C/31.5**	**C/34.2**	**C/32.9**	**C/34.4**
Site Access 1 & Bevelhymer Rd	WB	---	B/10.2	---	B/11.5	---	B/10.4	---	B/12.4
	SB Left	---	A/7.5	---	A/7.7	---	A/7.6	---	A/7.8
Site Access 2 & Bevelhymer Rd	WB	---	B/10.3	---	B/11.5	---	B/10.6	---	B/12.2
	SB Left	---	A/7.5	---	A/7.7	---	A/7.5	---	A/7.7

As shown in **Table 3**, the intersection of Central College Road & Bevelhymer Road shows LOS/delay in all PM scenarios that exceeds typically acceptable criteria. Additionally, the southbound approach of the Walton Parkway & Bevelhymer Road intersection shows unacceptable LOS levels in the Horizon Year PM scenarios.

Mitigation was determined for the intersection of Central College Road & Bevelhymer Road. For all-way stop controlled intersections, additional lanes are typically not recommended to avoid driver confusion. Thus, revised intersection control was evaluated. Eight total hours of count data (6-10am, 2-6pm) was obtained. Using this data, a signal warrant analysis was completed to determine if a signal would meet Warrant 1, Warrant 2, and Warrant 3 based

on methodologies in the Ohio Manual of Uniform Traffic Control Devices (OMUTCD) for the various analysis scenarios. Central College Road has a posted speed limit of 45 MPH, so the 70% volume threshold was utilized for the warrant analysis. **Table 4** below summarizes the results of the signal warrant analysis. The full signal warrant analysis is provided in **Appendix G**.

Table 4 – Central College Road & Bevelhymer Road Signal Warrant Analysis Summary

Scenario	2024	2034
No Build	W1 not met W2 not met W3 met	W1 not met W2 met @ 70% W3 met
Build	W1 not met W2 not met W3 met	W1 not met W2 met @ 70% W3 met

As shown in **Table 4**, a signal at the intersection is expected to meet peak hour warrants (Warrant #3) in the Opening Year scenarios and both peak-hour and four-hour warrants (Warrant #2 and #3) in the Horizon Year scenarios. Traffic signals are typically only installed when Warrant #2 (four-hour) is met at a minimum. Thus, signalization should be considered for the Horizon Year of this TIS. Left turn lanes along Central College Road are recommended to be installed alongside signalization of the intersection to improve safety conditions. The length of the left turn lanes are 225' and 245' for the eastbound left and westbound left, respectively. Both turn lane lengths are inclusive of a 50' diverging taper. Capacity analysis under signalized control shows acceptable LOS/delay. The results of the signalized analysis can be found in **Appendix F**.

No improvements are recommended for the Walton Parkway & Bevelhymer Road intersection. Although southbound approach delays exceed typically acceptable criteria in both Build and No Build conditions, queue lengths are minimal and volume to capacity ratios are all under 1.0 in the Opening Year. For the Horizon year, signalization of the intersection could be considered depending on additional development/growth in the surrounding area and a signal warrant evaluation. If signalization is not considered feasible, a southbound left turn restriction could be implemented. A future public road connection between US-62 and Bevelhymer Road would be expected to remove some pressure off the Walton Parkway & Bevelhymer Road intersection. However, analysis of this future improvement is not within the scope of this TIS.

C. Sight Distance Analysis

Results of the sight distance analysis show that there is potential for the obstruction of sight lines of vehicles turning right out of Site Access 2, if vehicles are queued along the driveway to the Broadway Bound Dance Center. Otherwise, no obstructions are present for vehicles exiting the proposed site. Sight distance exhibits can be found in **Appendix H**.

VII. Recommendations and Conclusions

Based on the results of the turn lane warrant analysis, no turn lanes meet warrants for the proposed access points, and none are recommended. Based on the results of the capacity and

signal warrant analysis, it is recommended that signalization be considered in the future at the Central College Road & Bevelhymer Road intersection, alongside the installation of a 225' eastbound left turn lane and a 245' westbound left turn lane, as a No Build improvement. The warrant analysis shows the signal would be expected to meet Warrant #1 and #2 in the Horizon Year in No Build and Build conditions. No roadway improvements are recommended as a part of the proposed development. However, a right-of-way dedication of 50' from the centerline of Bevelhymer Road is recommended, per City comment, to provide the City of New Albany sufficient width for future improvements to Bevelhymer Road.

VIII. Appendices

Appendix A – MOU & Site Plan
Appendix B – Count Data and Growth Rates
Appendix C – Trip Generation
Appendix D – Volume Calculations
Appendix E – Turn Lane Warrant and Length Analysis
Appendix F – Capacity Analysis
Appendix G – Signal Warrant Analysis
Appendix H – Sight Distance Exhibits

Appendix A
MOU & Site Plan

Appendix A

CARPENTER MARTY transportation

Leiana Yates

From: Drew Laurent
Sent: Wednesday, March 8, 2023 2:43 PM
To: Will Walther; Dave Samuelson
Cc: Stephen Butler; Leiana Yates; Chelsea Cousins
Subject: RE: Primrose Daycare-summary of Jan 26 2023 traffic meeting

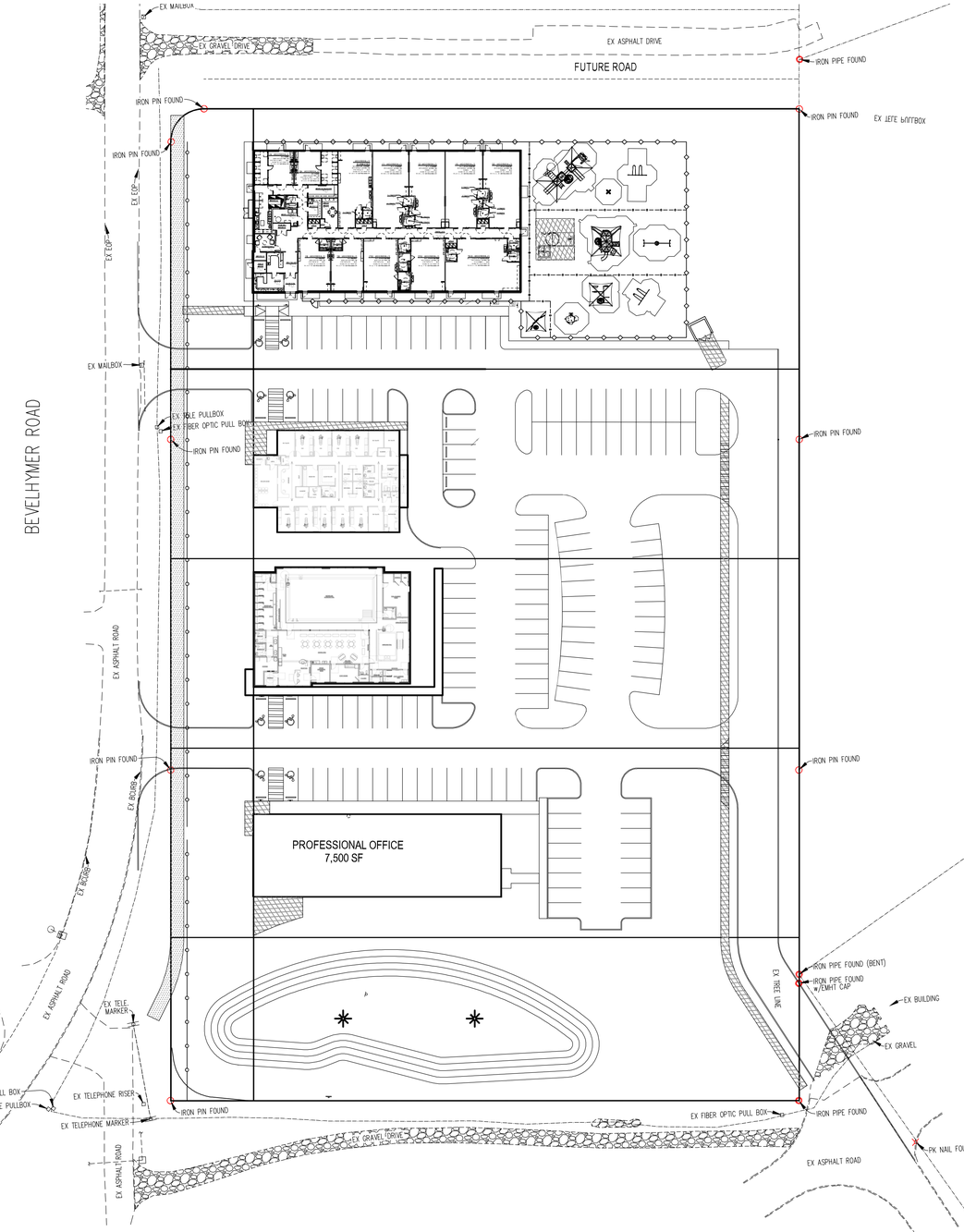
Will/Dave,

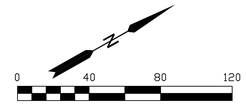
Below is a quick MOU for your records. We've discussed this in detail so I don't think you'll have any comments, but please let me know if you do. They're proposing two access points to Bevelhymer for the four uses with cross access.

Thank you!

Traffic Impact Study Scope	
Data Collection	Obtain AM (6-10) and PM (2-6) Peak traffic volumes at the following intersections for two typical weekdays: 1) Central College Road & Bevelhymer Road 2) Walton Parkway & Bevelhymer Road Clean up and review count data.
Analysis	Generate trips for the proposed development using ITE data and the OTISS program. Assign trips to the proposed access point according to a distribution determined from counts, area knowledge/travel patterns, and engineering judgment.
Analysis	Develop Opening Day (2024) and Horizon Year (2034) traffic plates for Build, No Build, AM, and PM Peaks based on growth rates that will be obtained from MORPC.
Analysis	Use HCS to perform capacity analysis at the following intersections: 1) Central College Road & Bevelhymer Road 2) Walton Parkway & Bevelhymer Road 3) Bevelhymer Road & Site Access Points Determine mitigation for unacceptable LOS/delay, if necessary.
Analysis	Perform turn lane warrant analyses at the proposed access points based on ODOT criteria and standard ODOT turn lane warrant graphs. Calculate warranted turn lane lengths.
Analysis	Develop intersection sight distance exhibits for the proposed access points per methodologies in the ODOT L&D Manual.
Report	Develop a full report that documents the analysis, results, conclusions, and recommendations for City of New Albany review.

Drew Laurent, AICP





REVISIONS

PREPARED FOR:

Community Civil Engineers, LLC
2440 DAYTON-XENIA ROAD, SUITE B
BEAVERCREEK, OHIO 45434
TEL: 937.490.9460 FAX: 937.426.9798

CONCEPT
PRIMROSE SCHOOL NEW ALBANY

6734 BEVELHYMER ROAD
NEW ALBANY
FRANKLIN COUNTY, OHIO 43054

DESIGN: SMB	DATE: 03/17/2023
DRAWN: KOE	
CHECK: SMB	
JOB #: 22-522	CP8

Appendix B
Count Data and Growth Rates

Appendix B

CARPENTER MARTY transportation

Central College Road & Bevelhymer Road - TMC

Tue Feb 28, 2023
Full Length (6 AM-10 AM, 2 PM-6 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1043101, Location: 40.09708, -82.792984

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US

Leg	Central College Road					Central College Road					Bevelhymer Road					Bevelhymer Road					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	Int
2023-02-28 6:00AM	1	1	2	0	**4**	1	10	0	0	**11**	1	2	2	0	**5**	1	9	0	0	**10**	**30**
6:15AM	0	10	3	0	**13**	6	4	1	0	**11**	0	4	2	0	**6**	0	5	0	0	**5**	**35**
6:30AM	3	9	4	0	**16**	5	10	1	0	**16**	1	3	0	0	**4**	0	8	1	0	**9**	**45**
6:45AM	0	25	3	0	**28**	8	12	1	0	**21**	1	7	0	0	**8**	1	9	0	0	**10**	**67**
Hourly Total	4	45	12	0	**61**	20	36	3	0	**59**	3	16	4	0	**23**	2	31	1	0	**34**	**177**
7:00AM	2	14	5	0	**21**	12	21	2	0	**35**	2	6	3	0	**11**	1	16	1	0	**18**	**85**
7:15AM	3	16	7	0	**26**	14	34	0	0	**48**	2	3	3	0	**8**	2	31	10	0	**43**	**125**
7:30AM	1	32	9	0	**42**	14	36	0	0	**50**	5	7	3	0	**15**	2	21	8	0	**31**	**138**
7:45AM	6	31	8	0	**45**	12	28	1	0	**41**	5	16	11	0	**32**	2	21	5	0	**28**	**146**
Hourly Total	12	93	29	0	**134**	52	119	3	0	**174**	14	32	20	0	**66**	7	89	24	0	**120**	**494**
8:00AM	3	28	14	0	**45**	16	24	0	0	**40**	5	5	1	0	**11**	2	28	4	0	**34**	**130**
8:15AM	5	41	10	0	**56**	13	23	1	0	**37**	5	8	7	0	**20**	3	23	3	0	**29**	**142**
8:30AM	2	37	6	0	**45**	9	16	2	0	**27**	7	6	7	0	**20**	2	11	2	0	**15**	**107**
8:45AM	3	17	12	0	**32**	15	19	2	0	**36**	2	11	7	0	**20**	0	25	6	0	**31**	**119**
Hourly Total	13	123	42	0	**178**	53	82	5	0	**140**	19	30	22	0	**71**	7	87	15	0	**109**	**498**
9:00AM	5	26	6	0	**37**	2	12	0	0	**14**	6	15	3	0	**24**	2	15	5	0	**22**	**97**
9:15AM	1	21	3	0	**25**	3	17	1	0	**21**	2	10	3	0	**15**	2	8	2	0	**12**	**73**
9:30AM	1	20	3	0	**24**	3	10	0	0	**13**	2	8	0	0	**10**	1	5	0	0	**6**	**53**
9:45AM	0	14	4	0	**18**	4	12	0	0	**16**	2	6	0	0	**8**	1	13	0	0	**14**	**56**
Hourly Total	7	81	16	0	**104**	12	51	1	0	**64**	12	39	6	0	**57**	6	41	7	0	**54**	**279**
2:00PM	3	23	4	0	**30**	5	12	1	0	**18**	6	8	1	0	**15**	0	1	3	0	**4**	**67**
2:15PM	5	22	6	0	**33**	3	23	1	0	**27**	3	19	4	0	**26**	3	9	2	0	**14**	**100**
2:30PM	4	28	4	0	**36**	11	22	2	0	**35**	3	11	10	0	**24**	1	12	0	0	**13**	**108**
2:45PM	2	11	5	0	**18**	3	22	2	0	**27**	4	16	8	0	**28**	2	12	2	0	**16**	**89**
Hourly Total	14	84	19	0	**117**	22	79	6	0	**107**	16	54	23	0	**93**	6	34	7	0	**47**	**364**
3:00PM	4	25	4	0	**33**	4	28	3	0	**35**	7	14	7	0	**28**	1	9	6	0	**16**	**112**
3:15PM	4	21	6	0	**31**	4	28	0	0	**32**	5	16	4	0	**25**	0	17	5	0	**22**	**110**
3:30PM	3	18	7	0	**28**	4	24	1	0	**29**	7	17	4	0	**28**	1	16	2	0	**19**	**104**
3:45PM	5	27	4	0	**36**	9	24	3	0	**36**	10	20	15	0	**45**	0	20	5	0	**25**	**142**
Hourly Total	16	91	21	0	**128**	21	104	7	0	**132**	29	67	30	0	**126**	2	62	18	0	**82**	**468**
4:00PM	9	33	5	0	**47**	7	32	2	0	**41**	11	15	10	0	**36**	0	17	6	0	**23**	**147**
4:15PM	7	19	5	0	**31**	5	32	2	0	**39**	5	20	5	0	**30**	1	22	4	0	**27**	**127**
4:30PM	5	28	4	0	**37**	5	38	1	0	**44**	3	28	10	0	**41**	1	22	2	0	**25**	**147**
4:45PM	4	34	11	0	**49**	6	37	0	0	**43**	12	19	11	0	**42**	2	18	4	0	**24**	**158**
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5:00PM	3	30	10	0	**43**	9	44	8	0	**61**	9	23	12	0	**44**	0	17	10	0	**27**	**175**
5:15PM	8	32	13	0	**53**	7	57	2	0	**66**	7	17	8	0	**32**	2	21	10	0	**33**	**184**
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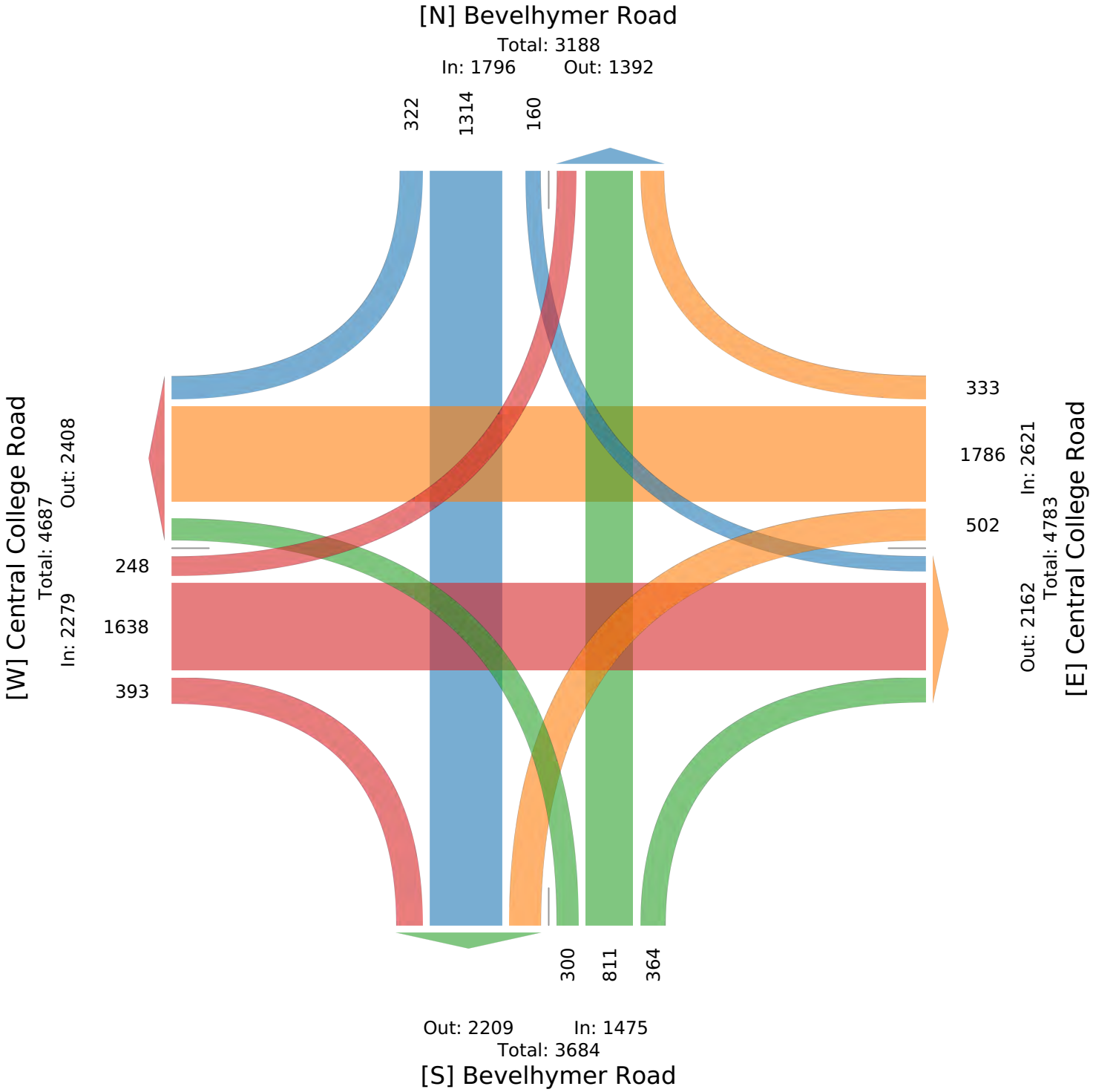
Hourly Total	26	133	38	0	**197**	35	195	18	0	**248**	31	84	46	0	**161**	6	61	35	0	**102**	**708**
2023-03-01 6:00AM	0	3	2	0	**5**	3	6	0	0	**9**	1	2	0	0	**3**	3	7	0	0	**10**	**27**
6:15AM	0	9	5	0	**14**	3	7	0	0	**10**	1	2	0	0	**3**	0	5	1	0	**6**	**33**
6:30AM	1	14	3	0	**18**	3	6	1	0	**10**	1	4	1	0	**6**	0	10	0	0	**10**	**44**
6:45AM	0	23	3	0	**26**	6	15	0	0	**21**	1	12	3	0	**16**	2	7	0	0	**9**	**72**
Hourly Total	1	49	13	0	**63**	15	34	1	0	**50**	4	20	4	0	**28**	5	29	1	0	**35**	**176**
7:00AM	0	13	4	0	**17**	12	23	2	0	**37**	1	7	2	0	**10**	1	19	5	0	**25**	**89**
7:15AM	2	19	9	0	**30**	18	47	1	0	**66**	3	5	0	0	**8**	0	34	10	0	**44**	**148**
7:30AM	2	31	8	0	**41**	18	32	0	0	**50**	5	7	6	0	**18**	2	21	6	0	**29**	**138**
7:45AM	2	34	3	0	**39**	2	36	1	0	**39**	4	13	8	0	**25**	4	22	3	0	**29**	**132**
Hourly Total	6	97	24	0	**127**	50	138	4	0	**192**	13	32	16	0	**61**	7	96	24	0	**127**	**507**
8:00AM	3	35	12	0	**50**	12	30	0	0	**42**	3	11	0	0	**14**	1	30	7	0	**38**	**144**
8:15AM	5	49	4	0	**58**	6	20	1	0	**27**	1	8	5	0	**14**	3	18	5	0	**26**	**125**
8:30AM	6	31	8	0	**45**	11	21	2	0	**34**	5	12	5	0	**22**	3	23	0	0	**26**	**127**
8:45AM	2	27	11	0	**40**	11	21	1	0	**33**	3	3	3	0	**9**	3	16	5	0	**24**	**106**

Leg	Central College Road					Central College Road					Bevelhymer Road					Bevelhymer Road					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
Hourly Total	16	142	35	0	**193**	40	92	4	0	**136**	12	34	13	0	**59**	10	87	17	0	**114**	**502**
9:00AM	2	26	5	0	**33**	7	23	0	0	**30**	5	12	6	0	**23**	4	14	4	0	**22**	**108**
9:15AM	3	22	4	0	**29**	4	17	2	0	**23**	2	11	1	0	**14**	0	12	3	0	**15**	**81**
9:30AM	0	17	8	0	**25**	4	12	1	0	**17**	4	9	3	0	**16**	0	9	2	0	**11**	**69**
9:45AM	2	19	3	0	**24**	8	11	1	0	**20**	2	4	1	0	**7**	0	8	0	0	**8**	**59**
Hourly Total	7	84	20	0	**111**	23	63	4	0	**90**	13	36	11	0	**60**	4	43	9	0	**56**	**317**
2:00PM	1	16	2	0	**19**	5	19	1	0	**25**	5	10	5	0	**20**	1	13	3	0	**17**	**81**
2:15PM	6	32	6	0	**44**	8	28	0	0	**36**	2	12	5	0	**19**	4	7	3	0	**14**	**113**
2:30PM	3	24	3	0	**30**	10	16	2	0	**28**	3	18	10	0	**31**	1	11	3	0	**15**	**104**
2:45PM	5	22	6	0	**33**	6	22	2	0	**30**	10	11	2	0	**23**	2	15	5	0	**22**	**108**
Hourly Total	15	94	17	0	**126**	29	85	5	0	**119**	20	51	22	0	**93**	8	46	14	0	**68**	**406**
3:00PM	5	24	3	0	**32**	8	32	1	0	**41**	6	22	6	0	**34**	2	13	1	0	**16**	**123**
3:15PM	4	21	7	0	**32**	9	23	3	0	**35**	3	11	10	0	**24**	0	11	4	0	**15**	**106**
3:30PM	5	33	4	0	**42**	5	23	3	0	**31**	4	18	13	0	**35**	3	22	3	0	**28**	**136**
3:45PM	5	35	5	0	**45**	6	27	3	0	**36**	6	15	13	0	**34**	0	20	5	0	**25**	**140**
Hourly Total	19	113	19	0	**151**	28	105	10	0	**143**	19	66	42	0	**127**	5	66	13	0	**84**	**505**
4:00PM	5	38	3	0	**46**	5	37	3	0	**45**	10	18	8	0	**36**	3	12	5	0	**20**	**147**
4:15PM	12	34	9	0	**55**	8	46	42	0	**96**	5	27	12	0	**44**	8	61	14	0	**83**	**278**
4:30PM	5	39	11	0	**55**	19	69	44	0	**132**	15	19	11	0	**45**	10	56	5	0	**71**	**303**
4:45PM	6	37	5	0	**48**	5	60	30	0	**95**	4	15	6	0	**25**	14	70	23	0	**107**	**275**
Hourly Total	28	148	28	0	**204**	37	212	119	0	**368**	34	79	37	0	**150**	35	199	47	0	**281**	**1003**
5:00PM	10	38	14	0	**62**	11	66	33	0	**110**	12	18	10	0	**40**	12	75	20	0	**107**	**319**
5:15PM	7	36	10	0	**53**	17	83	34	0	**134**	5	17	6	0	**28**	10	71	21	0	**102**	**317**
5:30PM	6	35	6	0	**47**	5	64	33	0	**102**	9	27	9	0	**45**	12	54	18	0	**84**	**278**
5:45PM	16	38	5	0	**59**	9	39	38	0	**86**	4	27	7	0	**38**	12	64	15	0	**91**	**274**
Hourly Total	39	147	35	0	**221**	42	252	138	0	**432**	30	89	32	0	**151**	46	264	74	0	**384**	**1188**
Total	248	1638	393	0	**2279**	502	1786	333	0	**2621**	300	811	364	0	**1475**	160	1314	322	0	**1796**	**8171**
% Approach	10.9%	71.9%	17.2%	0%	**-**	19.2%	68.1%	12.7%	0%	**-**	20.3%	55.0%	24.7%	0%	**-**	8.9%	73.2%	17.9%	0%	**-**	-
% Total	3.0%	20.0%	4.8%	0%	**27.9%**	6.1%	21.9%	4.1%	0%	**32.1%**	3.7%	9.9%	4.5%	0%	**18.1%**	2.0%	16.1%	3.9%	0%	**22.0%**	-
Lights	226	1598	390	0	**2214**	495	1741	318	0	**2554**	298	796	349	0	**1443**	157	1287	321	0	**1765**	7976
% Lights	91.1%	97.6%	99.2%	0%	**97.1%**	98.6%	97.5%	95.5%	0%	**97.4%**	99.3%	98.2%	95.9%	0%	**97.8%**	98.1%	97.9%	99.7%	0%	**98.3%**	97.6%
Articulated Trucks	0	5	0	0	**5**	1	9	0	0	**10**	0	0	1	0	**1**	0	5	0	0	**5**	21
% Articulated Trucks	0%	0.3%	0%	0%	**0.2%**	0.2%	0.5%	0%	0%	**0.4%**	0%	0%	0.3%	0%	**0.1%**	0%	0.4%	0%	0%	**0.3%**	0.3%
Buses and Single-Unit Trucks	22	35	3	0	**60**	6	36	15	0	**57**	2	15	14	0	**31**	3	22	1	0	**26**	174
% Buses and Single-Unit Trucks	8.9%	2.1%	0.8%	0%	**2.6%**	1.2%	2.0%	4.5%	0%	**2.2%**	0.7%	1.8%	3.8%	0%	**2.1%**	1.9%	1.7%	0.3%	0%	**1.4%**	2.1%

*L: Left, R: Right, T: Thru, U: U-Turn

Central College Road & Bevelhymer Road - TMC
Tue Feb 28, 2023
Full Length (6 AM-10 AM, 2 PM-6 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1043101, Location: 40.09708, -82.792984

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US



Central College Road & Bevelhymer Road - TMC

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US

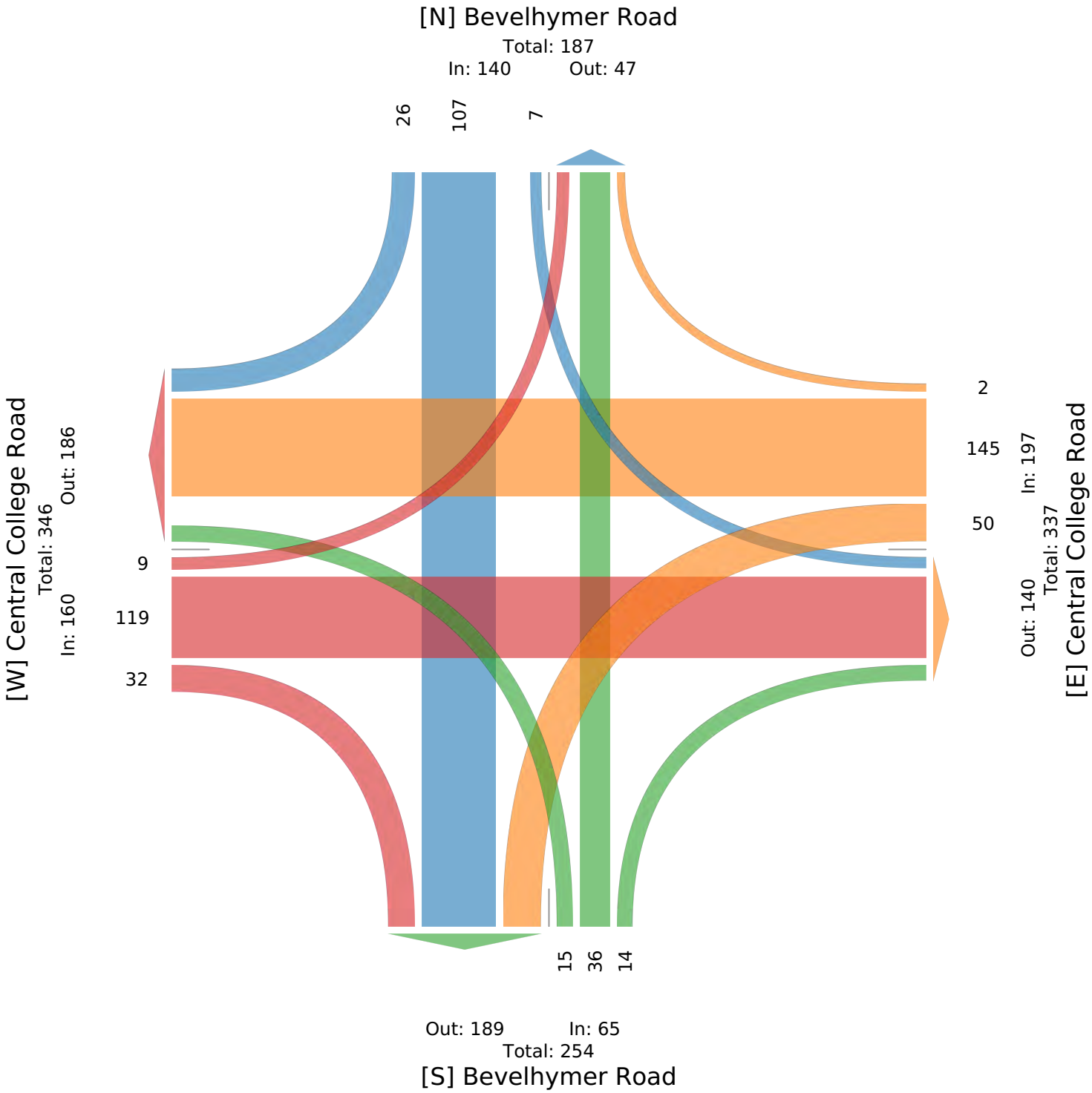
Wed Mar 1, 2023
AM Peak (Mar 01 2023 7:15AM - 8:15 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1043101, Location: 40.09708, -82.792984

Leg	Central College Road					Central College Road					Bevelhymer Road					Bevelhymer Road					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	Int
2023-03-01 7:15AM	2	19	9	0	**30**	18	47	1	0	**66**	3	5	0	0	**8**	0	34	10	0	**44**	**148**
7:30AM	2	31	8	0	**41**	18	32	0	0	**50**	5	7	6	0	**18**	2	21	6	0	**29**	**138**
7:45AM	2	34	3	0	**39**	2	36	1	0	**39**	4	13	8	0	**25**	4	22	3	0	**29**	**132**
8:00AM	3	35	12	0	**50**	12	30	0	0	**42**	3	11	0	0	**14**	1	30	7	0	**38**	**144**
Total	9	119	32	0	**160**	50	145	2	0	**197**	15	36	14	0	**65**	7	107	26	0	**140**	**562**
% Approach	5.6%	74.4%	20.0%	0%	-	25.4%	73.6%	1.0%	0%	-	23.1%	55.4%	21.5%	0%	-	5.0%	76.4%	18.6%	0%	-	-
% Total	1.6%	21.2%	5.7%	0%	**28.5%**	8.9%	25.8%	0.4%	0%	**35.1%**	2.7%	6.4%	2.5%	0%	**11.6%**	1.2%	19.0%	4.6%	0%	**24.9%**	-
PHF	0.750	0.850	0.667	-	**0.800**	0.694	0.771	0.500	-	**0.746**	0.750	0.692	0.438	-	**0.650**	0.438	0.787	0.650	-	**0.795**	0.949
Lights	6	119	32	0	**157**	50	138	2	0	**190**	15	36	13	0	**64**	7	106	26	0	**139**	550
% Lights	66.7%	100%	100%	0%	**98.1%**	100%	95.2%	100%	0%	**96.4%**	100%	100%	92.9%	0%	**98.5%**	100%	99.1%	100%	0%	**99.3%**	97.9%
Articulated Trucks	0	0	0	0	**0**	0	1	0	0	**1**	0	0	0	0	**0**	0	0	0	0	**0**	1
% Articulated Trucks	0%	0%	0%	0%	**0%**	0%	0.7%	0%	0%	**0.5%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0.2%
Buses and Single-Unit Trucks	3	0	0	0	**3**	0	6	0	0	**6**	0	0	1	0	**1**	0	1	0	0	**1**	11
% Buses and Single-Unit Trucks	33.3%	0%	0%	0%	**1.9%**	0%	4.1%	0%	0%	**3.0%**	0%	0%	7.1%	0%	**1.5%**	0%	0.9%	0%	0%	**0.7%**	2.0%

*L: Left, R: Right, T: Thru, U: U-Turn

Central College Road & Bevelhymer Road - TMC
Wed Mar 1, 2023
AM Peak (Mar 01 2023 7:15AM - 8:15 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1043101, Location: 40.09708, -82.792984

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US



Central College Road & Bevelhymer Road - TMC

Wed Mar 1, 2023
PM Peak (Mar 01 2023 4:30PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1043101, Location: 40.09708, -82.792984

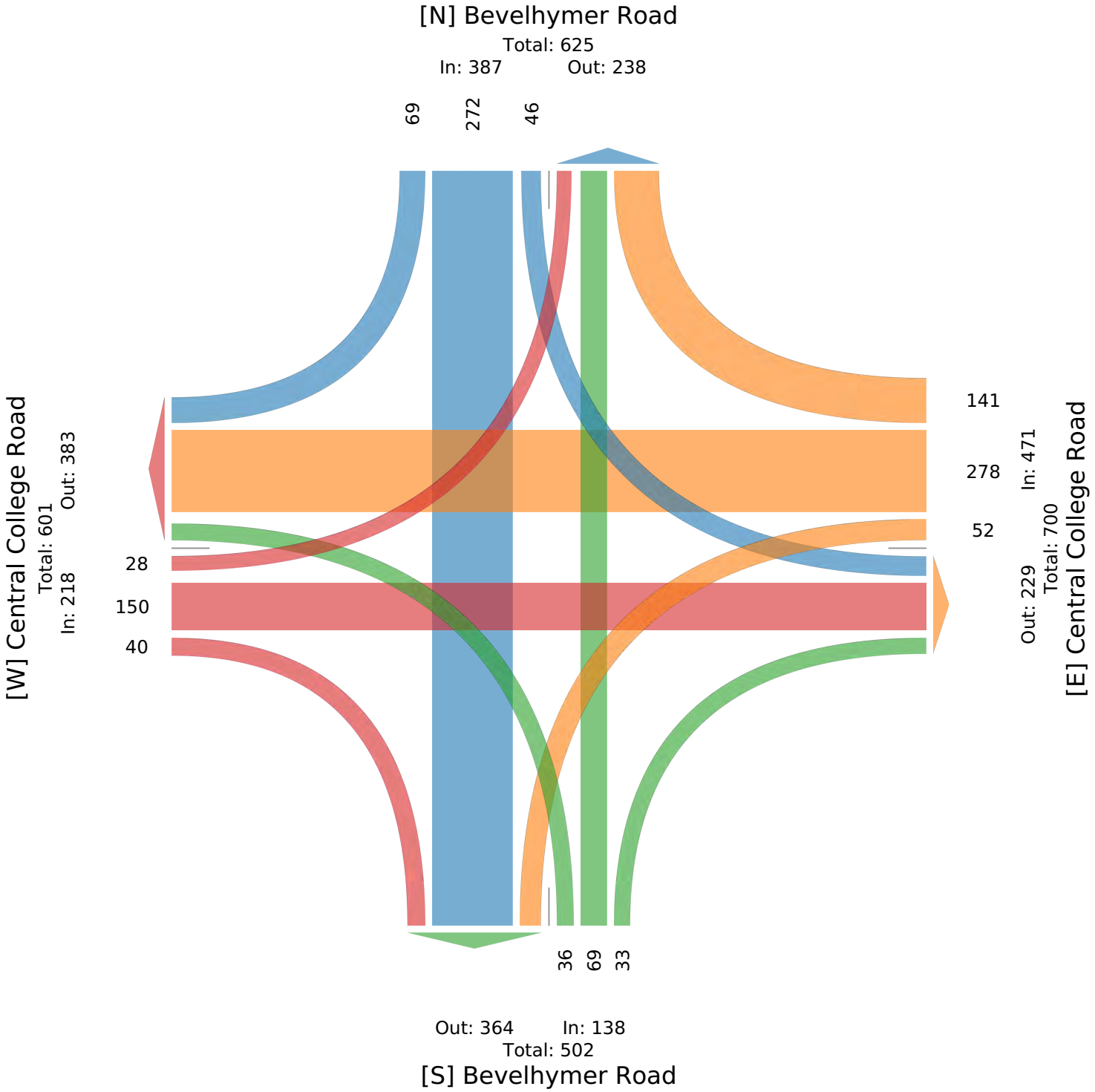
Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US

Leg	Central College Road					Central College Road					Bevelhymer Road					Bevelhymer Road					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
2023-03-01 4:30PM	5	39	11	0	**55**	19	69	44	0	**132**	15	19	11	0	**45**	10	56	5	0	**71**	**303**
4:45PM	6	37	5	0	**48**	5	60	30	0	**95**	4	15	6	0	**25**	14	70	23	0	**107**	**275**
5:00PM	10	38	14	0	**62**	11	66	33	0	**110**	12	18	10	0	**40**	12	75	20	0	**107**	**319**
5:15PM	7	36	10	0	**53**	17	83	34	0	**134**	5	17	6	0	**28**	10	71	21	0	**102**	**317**
Total	28	150	40	0	**218**	52	278	141	0	**471**	36	69	33	0	**138**	46	272	69	0	**387**	**1214**
% Approach	12.8%	68.8%	18.3%	0%	**-**	11.0%	59.0%	29.9%	0%	**-**	26.1%	50.0%	23.9%	0%	**-**	11.9%	70.3%	17.8%	0%	**-**	-
% Total	2.3%	12.4%	3.3%	0%	**18.0%**	4.3%	22.9%	11.6%	0%	**38.8%**	3.0%	5.7%	2.7%	0%	**11.4%**	3.8%	22.4%	5.7%	0%	**31.9%**	-
PHF	0.700	0.962	0.714	-	**0.879**	0.684	0.837	0.801	-	**0.879**	0.600	0.908	0.750	-	**0.767**	0.821	0.907	0.750	-	**0.904**	0.951
Lights	28	145	39	0	**212**	50	274	138	0	**462**	36	69	32	0	**137**	45	264	69	0	**378**	1189
% Lights	100%	96.7%	97.5%	0%	**97.2%**	96.2%	98.6%	97.9%	0%	**98.1%**	100%	100%	97.0%	0%	**99.3%**	97.8%	97.1%	100%	0%	**97.7%**	97.9%
Articulated Trucks	0	0	0	0	**0**	0	3	0	0	**3**	0	0	0	0	**0**	0	2	0	0	**2**	5
% Articulated Trucks	0%	0%	0%	0%	**0%**	0%	1.1%	0%	0%	**0.6%**	0%	0%	0%	0%	**0%**	0%	0.7%	0%	0%	**0.5%**	0.4%
Buses and Single-Unit Trucks	0	5	1	0	**6**	2	1	3	0	**6**	0	0	1	0	**1**	1	6	0	0	**7**	20
% Buses and Single-Unit Trucks	0%	3.3%	2.5%	0%	**2.8%**	3.8%	0.4%	2.1%	0%	**1.3%**	0%	0%	3.0%	0%	**0.7%**	2.2%	2.2%	0%	0%	**1.8%**	1.6%

*L: Left, R: Right, T: Thru, U: U-Turn

Central College Road & Bevelhymer Road - TMC
Wed Mar 1, 2023
PM Peak (Mar 01 2023 4:30PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1043101, Location: 40.09708, -82.792984

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US



Walton Parkway & Bevelhymer Road - TMC

Tue Feb 28, 2023
Full Length (6 AM-10 AM, 2 PM-6 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1043098, Location: 40.091534, -82.795167

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US

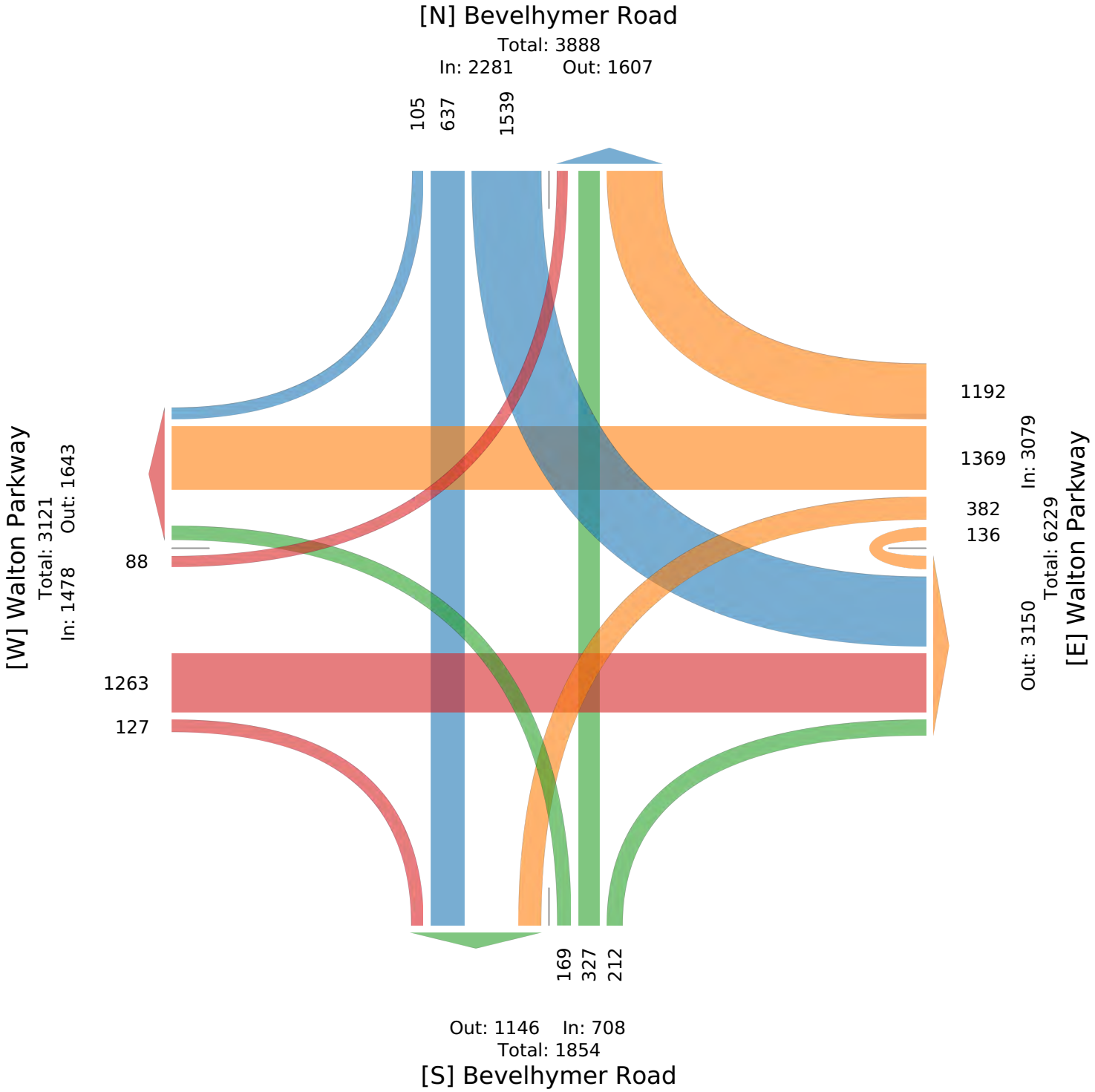
Leg	Walton Parkway					Walton Parkway					Bevelhymer Road					Bevelhymer Road					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	Int
2023-02-28 6:00AM	0	6	3	0	**9**	1	3	4	1	**9**	1	0	2	0	**3**	8	3	0	0	**11**	**32**
6:15AM	1	3	0	0	**4**	1	3	3	2	**9**	1	2	0	0	**3**	11	4	0	0	**15**	**31**
6:30AM	0	15	0	0	**15**	6	5	3	4	**18**	0	1	1	0	**2**	15	2	0	0	**17**	**52**
6:45AM	1	11	0	0	**12**	5	9	7	6	**27**	0	1	4	0	**5**	14	7	1	0	**22**	**66**
Hourly Total	2	35	3	0	**40**	13	20	17	13	**63**	2	4	7	0	**13**	48	16	1	0	**65**	**181**
7:00AM	0	13	3	0	**16**	7	12	10	3	**32**	4	1	3	0	**8**	23	8	1	0	**32**	**88**
7:15AM	0	17	2	0	**19**	7	21	7	1	**36**	4	0	5	0	**9**	35	11	3	0	**49**	**113**
7:30AM	0	25	4	0	**29**	10	30	14	2	**56**	3	4	9	0	**16**	30	13	4	0	**47**	**148**
7:45AM	2	26	3	0	**31**	10	29	27	2	**68**	2	4	4	0	**10**	30	15	4	0	**49**	**158**
Hourly Total	2	81	12	0	**95**	34	92	58	8	**192**	13	9	21	0	**43**	118	47	12	0	**177**	**507**
8:00AM	0	19	2	0	**21**	8	36	6	2	**52**	7	10	9	0	**26**	39	14	2	0	**55**	**154**
8:15AM	1	24	2	0	**27**	5	34	15	7	**61**	6	4	6	0	**16**	31	11	6	0	**48**	**152**
8:30AM	3	22	2	0	**27**	2	22	13	2	**39**	2	1	2	0	**5**	13	14	0	0	**27**	**98**
8:45AM	1	4	2	0	**7**	5	30	15	3	**53**	3	6	0	0	**9**	39	13	2	0	**54**	**123**
Hourly Total	5	69	8	0	**82**	20	122	49	14	**205**	18	21	17	0	**56**	122	52	10	0	**184**	**527**
9:00AM	0	39	2	0	**41**	8	18	19	7	**52**	1	5	6	0	**12**	17	7	1	0	**25**	**130**
9:15AM	1	15	3	0	**19**	6	15	11	2	**34**	3	1	4	0	**8**	9	4	1	0	**14**	**75**
9:30AM	0	9	0	0	**9**	4	10	9	2	**25**	1	1	3	0	**5**	7	3	0	0	**10**	**49**
9:45AM	0	4	1	0	**5**	4	8	6	3	**21**	1	1	1	0	**3**	17	4	0	0	**21**	**50**
Hourly Total	1	67	6	0	**74**	22	51	45	14	**132**	6	8	14	0	**28**	50	18	2	0	**70**	**304**
2:00PM	1	14	1	0	**16**	4	29	10	4	**47**	0	3	8	0	**11**	11	3	0	0	**14**	**88**
2:15PM	2	11	0	0	**13**	1	11	23	0	**35**	0	1	2	0	**3**	10	6	0	0	**16**	**67**
2:30PM	1	16	1	0	**18**	2	17	21	1	**41**	2	4	4	0	**10**	18	11	0	0	**29**	**98**
2:45PM	1	11	1	0	**13**	2	14	22	5	**43**	2	5	3	0	**10**	18	2	0	0	**20**	**86**
Hourly Total	5	52	3	0	**60**	9	71	76	10	**166**	4	13	17	0	**34**	57	22	0	0	**79**	**339**
3:00PM	1	20	1	0	**22**	6	16	31	3	**56**	0	3	3	0	**6**	9	7	0	0	**16**	**100**
3:15PM	2	14	1	0	**17**	3	16	19	2	**40**	0	4	3	0	**7**	19	6	2	0	**27**	**91**
3:30PM	1	18	0	0	**19**	5	24	27	0	**56**	2	3	3	0	**8**	24	5	0	0	**29**	**112**
3:45PM	7	14	1	0	**22**	10	19	32	1	**62**	3	9	8	0	**20**	19	7	0	0	**26**	**130**
Hourly Total	11	66	3	0	**80**	24	75	109	6	**214**	5	19	17	0	**41**	71	25	2	0	**98**	**433**
4:00PM	1	30	1	0	**32**	9	26	29	2	**66**	0	10	3	0	**13**	30	5	3	0	**38**	**149**
4:15PM	2	18	2	0	**22**	2	18	25	0	**45**	1	6	5	0	**12**	26	8	1	0	**35**	**114**
4:30PM	3	19	3	0	**25**	1	16	34	0	**51**	2	4	3	0	**9**	23	11	1	0	**35**	**120**
4:45PM	5	17	3	0	**25**	5	21	41	0	**67**	2	9	4	0	**15**	19	10	2	0	**31**	**138**
Hourly Total	11	84	9	0	**104**	17	81	129	2	**229**	5	29	15	0	**49**	98	34	7	0	**139**	**521**
5:00PM	3	46	6	0	**55**	5	25	41	1	**72**	4	5	5	0	**14**	24	11	5	0	**40**	**181**
5:15PM	2	36	4	0	**42**	9	24	30	0	**63**	3	7	5	0	**15**	21	13	2	0	**36**	**156**
5:30PM	2	12	4	0	**18**	8	22	45	2	**77**	2	8	4	0	**14**	21	11	3	0	**35**	**144**
5:45PM	1	16	3	0	**20**	9	18	32	1	**60**	3	7	3	0	**13**	18	11	3	0	**32**	**125**
Hourly Total	8	110	17	0	**135**	31	89	148	4	**272**	12	27	17	0	**56**	84	46	13	0	**143**	**606**
2023-03-01 6:00AM	0	4	0	0	**4**	0	2	2	0	**4**	2	0	1	0	**3**	9	0	0	0	**9**	**20**
6:15AM	0	9	0	0	**9**	2	6	3	0	**11**	0	0	0	0	**0**	14	1	0	0	**15**	**35**
6:30AM	0	12	0	0	**12**	9	6	5	0	**20**	2	1	1	0	**4**	11	4	0	0	**15**	**51**
6:45AM	0	13	0	0	**13**	8	12	13	5	**38**	2	3	1	0	**6**	14	4	0	0	**18**	**75**
Hourly Total	0	38	0	0	**38**	19	26	23	5	**73**	6	4	3	0	**13**	48	9	0	0	**57**	**181**
7:00AM	0	12	6	0	**18**	11	14	10	5	**40**	1	0	6	0	**7**	26	7	1	0	**34**	**99**
7:15AM	0	17	1	0	**18**	7	16	10	3	**36**	1	2	1	0	**4**	39	18	3	0	**60**	**118**
7:30AM	0	17	5	0	**22**	6	47	17	0	**70**	6	3	0	0	**9**	35	13	3	0	**51**	**152**
7:45AM	1	14	0	0	**15**	10	57	19	2	**88**	6	6	1	0	**13**	21	7	2	0	**30**	**146**
Hourly Total	1	60	12	0	**73**	34	134	56	10	**234**	14	11	8	0	**33**	121	45	9	0	**175**	**515**
8:00AM	0	20	4	0	**24**	11	39	14	2	**66**	7	1	3	0	**11**	42	11	1	0	**54**	**155**
8:15AM	1	24	6	0	**31**	13	31	13	10	**67**	6	3	2	0	**11**	23	5	0	0	**28**	**137**
8:30AM	2	21	3	0	**26**	8	42	14	4	**68**	6	5	2	0	**13**	28	8	6	0	**42**	**149**
8:45AM	1	17	2	0	**20**	13	62	11	4	**90**	5	3	3	0	**11**	33	8	2	0	**43**	**164**

Leg	Walton Parkway					Walton Parkway					Bevelhymer Road					Bevelhymer Road					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
Hourly Total	4	82	15	0	**101**	45	174	52	20	**291**	24	12	10	0	**46**	126	32	9	0	**167**	**605**
9:00AM	0	27	3	0	**30**	6	24	19	1	**50**	1	5	3	0	**9**	20	6	2	0	**28**	**117**
9:15AM	0	13	1	0	**14**	7	23	12	4	**46**	3	3	5	0	**11**	11	6	1	0	**18**	**89**
9:30AM	0	12	3	0	**15**	3	15	14	1	**33**	0	3	3	0	**6**	19	5	0	0	**24**	**78**
9:45AM	1	12	0	0	**13**	6	7	9	2	**24**	2	1	1	0	**4**	12	7	0	0	**19**	**60**
Hourly Total	1	64	7	0	**72**	22	69	54	8	**153**	6	12	12	0	**30**	62	24	3	0	**89**	**344**
2:00PM	3	19	1	0	**23**	3	28	15	3	**49**	2	4	6	0	**12**	15	5	0	0	**20**	**104**
2:15PM	2	20	1	0	**23**	4	13	17	3	**37**	0	2	2	0	**4**	15	5	1	0	**21**	**85**
2:30PM	2	16	0	0	**18**	1	18	26	2	**47**	2	6	2	0	**10**	19	6	0	0	**25**	**100**
2:45PM	2	20	1	0	**23**	3	18	19	2	**42**	3	3	6	0	**12**	22	4	0	0	**26**	**103**
Hourly Total	9	75	3	0	**87**	11	77	77	10	**175**	7	15	16	0	**38**	71	20	1	0	**92**	**392**
3:00PM	3	20	1	0	**24**	4	27	28	1	**60**	0	7	1	0	**8**	15	6	1	0	**22**	**114**
3:15PM	3	19	0	0	**22**	4	18	16	0	**38**	0	10	5	0	**15**	20	8	0	0	**28**	**103**
3:30PM	3	26	2	0	**31**	7	17	33	4	**61**	1	5	6	0	**12**	33	7	0	0	**40**	**144**
3:45PM	2	26	1	0	**29**	1	11	32	3	**47**	2	5	4	0	**11**	24	4	1	0	**29**	**116**
Hourly Total	11	91	4	0	**106**	16	73	109	8	**206**	3	27	16	0	**46**	92	25	2	0	**119**	**477**
4:00PM	1	32	1	0	**34**	10	20	33	2	**65**	1	5	4	0	**10**	18	8	2	0	**28**	**137**
4:15PM	3	35	4	0	**42**	9	30	29	0	**68**	6	19	1	0	**26**	40	29	2	0	**71**	**207**
4:30PM	2	33	6	0	**41**	14	30	18	0	**62**	8	27	4	0	**39**	47	40	6	0	**93**	**235**
4:45PM	3	44	0	0	**47**	9	23	12	0	**44**	8	15	3	0	**26**	56	25	5	0	**86**	**203**
Hourly Total	9	144	11	0	**164**	42	103	92	2	**239**	23	66	12	0	**101**	161	102	15	0	**278**	**782**
5:00PM	4	52	7	0	**63**	2	32	16	0	**50**	5	23	5	0	**33**	48	39	5	0	**92**	**238**
5:15PM	1	42	4	0	**47**	9	26	14	1	**50**	9	11	3	0	**23**	60	34	9	0	**103**	**223**
5:30PM	2	33	3	0	**38**	7	39	39	1	**86**	5	8	1	0	**14**	46	27	3	0	**76**	**214**
5:45PM	1	18	0	0	**19**	5	15	29	0	**49**	2	8	1	0	**11**	56	20	2	0	**78**	**157**
Hourly Total	8	145	14	0	**167**	23	112	98	2	**235**	21	50	10	0	**81**	210	120	19	0	**349**	**832**
Total	88	1263	127	0	**1478**	382	1369	1192	136	**3079**	169	327	212	0	**708**	1539	637	105	0	**2281**	**7546**
% Approach	6.0%	85.5%	8.6%	0%	**-**	12.4%	44.5%	38.7%	4.4%	**-**	23.9%	46.2%	29.9%	0%	**-**	67.5%	27.9%	4.6%	0%	**-**	-
% Total	1.2%	16.7%	1.7%	0%	**19.6%**	5.1%	18.1%	15.8%	1.8%	**40.8%**	2.2%	4.3%	2.8%	0%	**9.4%**	20.4%	8.4%	1.4%	0%	**30.2%**	-
Lights	80	1172	120	0	**1372**	378	1287	1171	136	**2972**	165	326	208	0	**699**	1510	631	105	0	**2246**	7289
% Lights	90.9%	92.8%	94.5%	0%	**92.8%**	99.0%	94.0%	98.2%	100%	**96.5%**	97.6%	99.7%	98.1%	0%	**98.7%**	98.1%	99.1%	100%	0%	**98.5%**	96.6%
Articulated Trucks	0	0	0	0	**0**	0	2	1	0	**3**	0	0	0	0	**0**	5	1	0	0	**6**	9
% Articulated Trucks	0%	0%	0%	0%	**0%**	0%	0.1%	0.1%	0%	**0.1%**	0%	0%	0%	0%	**0%**	0.3%	0.2%	0%	0%	**0.3%**	0.1%
Buses and Single-Unit Trucks	8	91	7	0	**106**	4	80	20	0	**104**	4	1	4	0	**9**	24	5	0	0	**29**	248
% Buses and Single-Unit Trucks	9.1%	7.2%	5.5%	0%	**7.2%**	1.0%	5.8%	1.7%	0%	**3.4%**	2.4%	0.3%	1.9%	0%	**1.3%**	1.6%	0.8%	0%	0%	**1.3%**	3.3%

*L: Left, R: Right, T: Thru, U: U-Turn

Walton Parkway & Bevelhymer Road - TMC
Tue Feb 28, 2023
Full Length (6 AM-10 AM, 2 PM-6 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1043098, Location: 40.091534, -82.795167

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US



Walton Parkway & Bevelhymer Road - TMC

Tue Feb 28, 2023
AM Peak (Feb 28 2023 7:30AM - 8:30 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1043098, Location: 40.091534, -82.795167

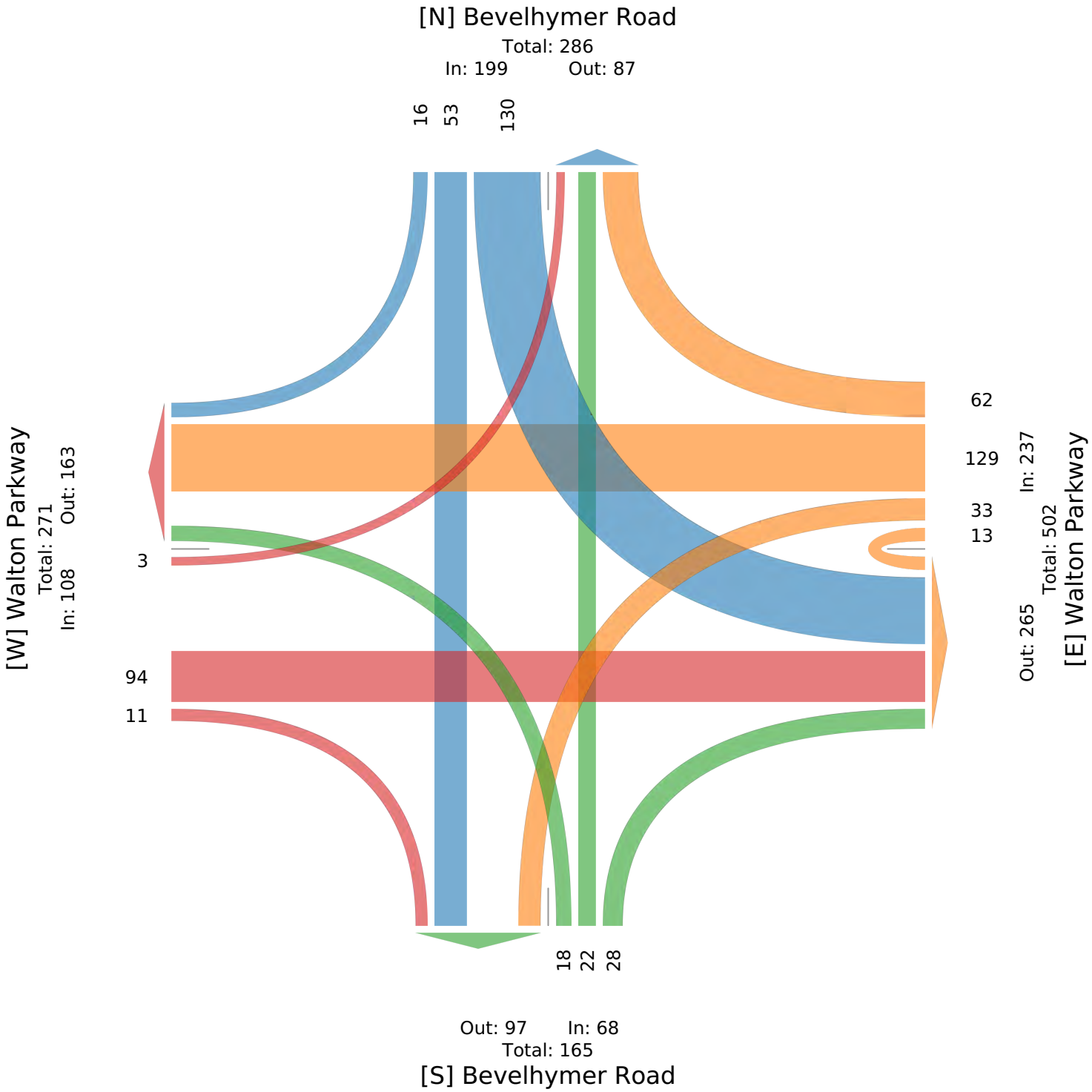
Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US

Leg	Walton Parkway					Walton Parkway					Bevelhymer Road					Bevelhymer Road					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
2023-02-28 7:30AM	0	25	4	0	**29**	10	30	14	2	**56**	3	4	9	0	**16**	30	13	4	0	**47**	**148**
7:45AM	2	26	3	0	**31**	10	29	27	2	**68**	2	4	4	0	**10**	30	15	4	0	**49**	**158**
8:00AM	0	19	2	0	**21**	8	36	6	2	**52**	7	10	9	0	**26**	39	14	2	0	**55**	**154**
8:15AM	1	24	2	0	**27**	5	34	15	7	**61**	6	4	6	0	**16**	31	11	6	0	**48**	**152**
Total	3	94	11	0	**108**	33	129	62	13	**237**	18	22	28	0	**68**	130	53	16	0	**199**	**612**
% Approach	2.8%	87.0%	10.2%	0%	**-**	13.9%	54.4%	26.2%	5.5%	**-**	26.5%	32.4%	41.2%	0%	**-**	65.3%	26.6%	8.0%	0%	**-**	-
% Total	0.5%	15.4%	1.8%	0%	**17.6%**	5.4%	21.1%	10.1%	2.1%	**38.7%**	2.9%	3.6%	4.6%	0%	**11.1%**	21.2%	8.7%	2.6%	0%	**32.5%**	-
PHF	0.375	0.904	0.688	-	**0.871**	0.825	0.896	0.574	0.464	**0.871**	0.643	0.550	0.778	-	**0.654**	0.833	0.883	0.667	-	**0.905**	0.968
Lights	2	85	10	0	**97**	33	125	59	13	**230**	17	22	28	0	**67**	127	53	16	0	**196**	590
% Lights	66.7%	90.4%	90.9%	0%	**89.8%**	100%	96.9%	95.2%	100%	**97.0%**	94.4%	100%	100%	0%	**98.5%**	97.7%	100%	100%	0%	**98.5%**	96.4%
Articulated Trucks	0	0	0	0	**0**	0	0	1	0	**1**	0	0	0	0	**0**	0	0	0	0	**0**	1
% Articulated Trucks	0%	0%	0%	0%	**0%**	0%	0%	1.6%	0%	**0.4%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0.2%
Buses and Single-Unit Trucks	1	9	1	0	**11**	0	4	2	0	**6**	1	0	0	0	**1**	3	0	0	0	**3**	21
% Buses and Single-Unit Trucks	33.3%	9.6%	9.1%	0%	**10.2%**	0%	3.1%	3.2%	0%	**2.5%**	5.6%	0%	0%	0%	**1.5%**	2.3%	0%	0%	0%	**1.5%**	3.4%

*L: Left, R: Right, T: Thru, U: U-Turn

Walton Parkway & Bevelhymer Road - TMC
Tue Feb 28, 2023
AM Peak (Feb 28 2023 7:30AM - 8:30 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1043098, Location: 40.091534, -82.795167

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US



Walton Parkway & Bevelhymer Road - TMC

Wed Mar 1, 2023
PM Peak (Mar 01 2023 4:30PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1043098, Location: 40.091534, -82.795167

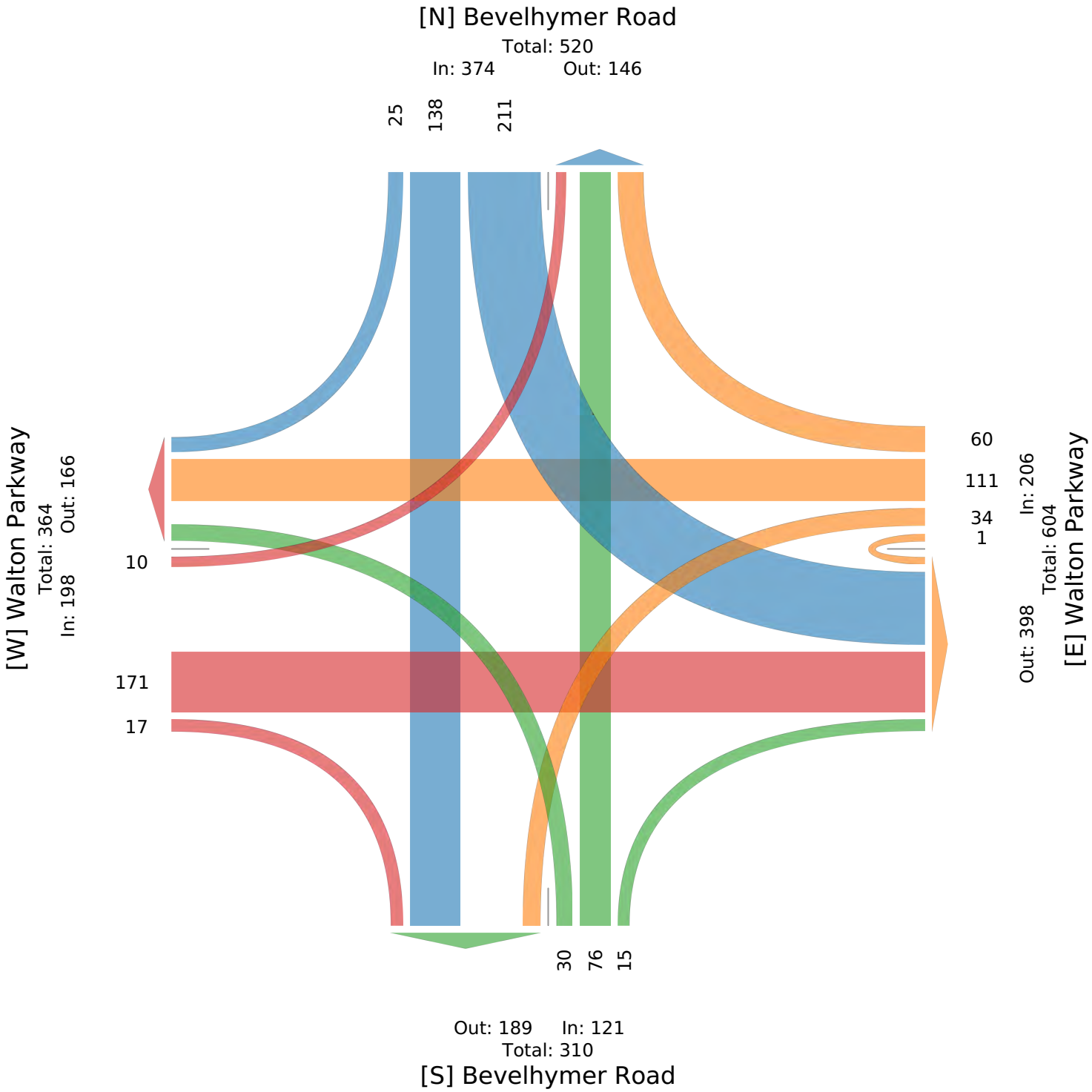
Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US

Leg	Walton Parkway					Walton Parkway					Bevelhymer Road					Bevelhymer Road					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
2023-03-01 4:30PM	2	33	6	0	**41**	14	30	18	0	**62**	8	27	4	0	**39**	47	40	6	0	**93**	**235**
4:45PM	3	44	0	0	**47**	9	23	12	0	**44**	8	15	3	0	**26**	56	25	5	0	**86**	**203**
5:00PM	4	52	7	0	**63**	2	32	16	0	**50**	5	23	5	0	**33**	48	39	5	0	**92**	**238**
5:15PM	1	42	4	0	**47**	9	26	14	1	**50**	9	11	3	0	**23**	60	34	9	0	**103**	**223**
Total	10	171	17	0	**198**	34	111	60	1	**206**	30	76	15	0	**121**	211	138	25	0	**374**	**899**
% Approach	5.1%	86.4%	8.6%	0%	**-**	16.5%	53.9%	29.1%	0.5%	**-**	24.8%	62.8%	12.4%	0%	**-**	56.4%	36.9%	6.7%	0%	**-**	-
% Total	1.1%	19.0%	1.9%	0%	**22.0%**	3.8%	12.3%	6.7%	0.1%	**22.9%**	3.3%	8.5%	1.7%	0%	**13.5%**	23.5%	15.4%	2.8%	0%	**41.6%**	-
PHF	0.625	0.822	0.607		**0.786**	0.607	0.867	0.833	0.250	**0.831**	0.833	0.704	0.750		**0.776**	0.879	0.863	0.694		**0.908**	0.944
Lights	10	171	17	0	**198**	34	111	60	1	**206**	30	75	15	0	**120**	203	136	25	0	**364**	888
% Lights	100%	100%	100%	0%	**100%**	100%	100%	100%	100%	**100%**	100%	98.7%	100%	0%	**99.2%**	96.2%	98.6%	100%	0%	**97.3%**	98.8%
Articulated Trucks	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	1	0	0	0	**1**	1
% Articulated Trucks	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0.5%	0%	0%	0%	**0.3%**	0.1%
Buses and Single-Unit Trucks	0	0	0	0	**0**	0	0	0	0	**0**	0	1	0	0	**1**	7	2	0	0	**9**	10
% Buses and Single-Unit Trucks	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	1.3%	0%	0%	**0.8%**	3.3%	1.4%	0%	0%	**2.4%**	1.1%

*L: Left, R: Right, T: Thru, U: U-Turn

Walton Parkway & Bevelhymer Road - TMC
Wed Mar 1, 2023
PM Peak (Mar 01 2023 4:30PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1043098, Location: 40.091534, -82.795167

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US



Johnstown Road and Turkey Hill Signal - TMC

Tue Dec 3, 2019
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 731125, Location: 40.091578, -82.791113

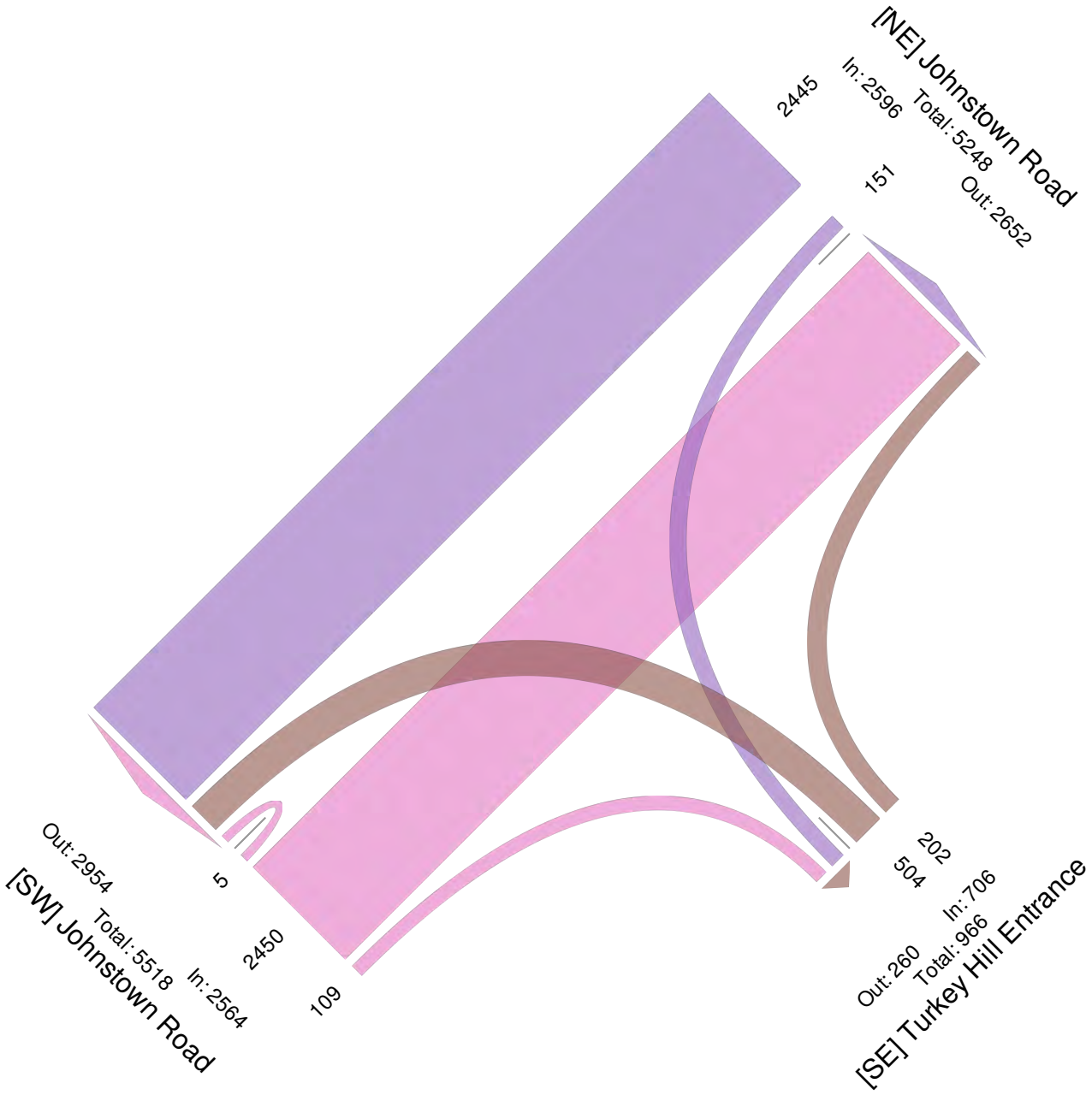
Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US

Leg Direction	Turkey Hill Entrance Northwestbound				Johnstown Road Northeastbound				Johnstown Road Southwestbound				
Time	L	R	U	**App**	T	R	U	**App**	L	T	U	**App**	**Int**
2019-12-03 7:00AM	17	7	0	**24**	65	2	0	**67**	6	183	0	**189**	**280**
7:15AM	26	8	0	**34**	81	2	0	**83**	7	205	0	**212**	**329**
7:30AM	17	11	0	**28**	117	4	0	**121**	12	162	0	**174**	**323**
7:45AM	27	12	0	**39**	135	2	0	**137**	14	163	0	**177**	**353**
Hourly Total	87	38	0	**125**	398	10	0	**408**	39	713	0	**752**	**1285**
8:00AM	24	6	0	**30**	172	4	0	**176**	7	151	0	**158**	**364**
8:15AM	21	12	0	**33**	195	5	0	**200**	11	178	0	**189**	**422**
8:30AM	19	6	0	**25**	103	3	0	**106**	8	175	0	**183**	**314**
8:45AM	16	8	0	**24**	98	5	2	**105**	10	166	0	**176**	**305**
Hourly Total	80	32	0	**112**	568	17	2	**587**	36	670	0	**706**	**1405**
4:00PM	38	13	0	**51**	204	4	1	**209**	11	93	0	**104**	**364**
4:15PM	40	14	0	**54**	208	8	0	**216**	8	114	0	**122**	**392**
4:30PM	35	17	0	**52**	174	10	0	**184**	6	102	0	**108**	**344**
4:45PM	50	22	0	**72**	168	19	1	**188**	10	140	0	**150**	**410**
Hourly Total	163	66	0	**229**	754	41	2	**797**	35	449	0	**484**	**1510**
5:00PM	43	15	0	**58**	196	10	0	**206**	9	138	0	**147**	**411**
5:15PM	35	19	0	**54**	185	11	0	**196**	10	158	0	**168**	**418**
5:30PM	52	16	0	**68**	181	11	1	**193**	8	150	0	**158**	**419**
5:45PM	44	16	0	**60**	168	9	0	**177**	14	167	0	**181**	**418**
Hourly Total	174	66	0	**240**	730	41	1	**772**	41	613	0	**654**	**1666**
Total	504	202	0	**706**	2450	109	5	**2564**	151	2445	0	**2596**	**5866**
% Approach	71.4%	28.6%	0%	-	95.6%	4.3%	0.2%	-	5.8%	94.2%	0%	-	-
% Total	8.6%	3.4%	0%	**12.0%**	41.8%	1.9%	0.1%	**43.7%**	2.6%	41.7%	0%	**44.3%**	-
Lights	491	197	0	**688**	2333	103	5	**2441**	147	2317	0	**2464**	5593
% Lights	97.4%	97.5%	0%	**97.5%**	95.2%	94.5%	100%	**95.2%**	97.4%	94.8%	0%	**94.9%**	95.3%
Articulated Trucks	2	1	0	**3**	33	1	0	**34**	0	38	0	**38**	75
% Articulated Trucks	0.4%	0.5%	0%	**0.4%**	1.3%	0.9%	0%	**1.3%**	0%	1.6%	0%	**1.5%**	1.3%
Buses and Single-Unit Trucks	11	4	0	**15**	84	5	0	**89**	4	90	0	**94**	198
% Buses and Single-Unit Trucks	2.2%	2.0%	0%	**2.1%**	3.4%	4.6%	0%	**3.5%**	2.6%	3.7%	0%	**3.6%**	3.4%

*L: Left, R: Right, T: Thru, U: U-Turn

Johnstown Road and Turkey Hill Signal - TMC
Tue Dec 3, 2019
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 731125, Location: 40.091578, -82.791113

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US



Johnstown Road and Turkey Hill Signal - TMC

Tue Dec 3, 2019
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 731125, Location: 40.091578, -82.791113

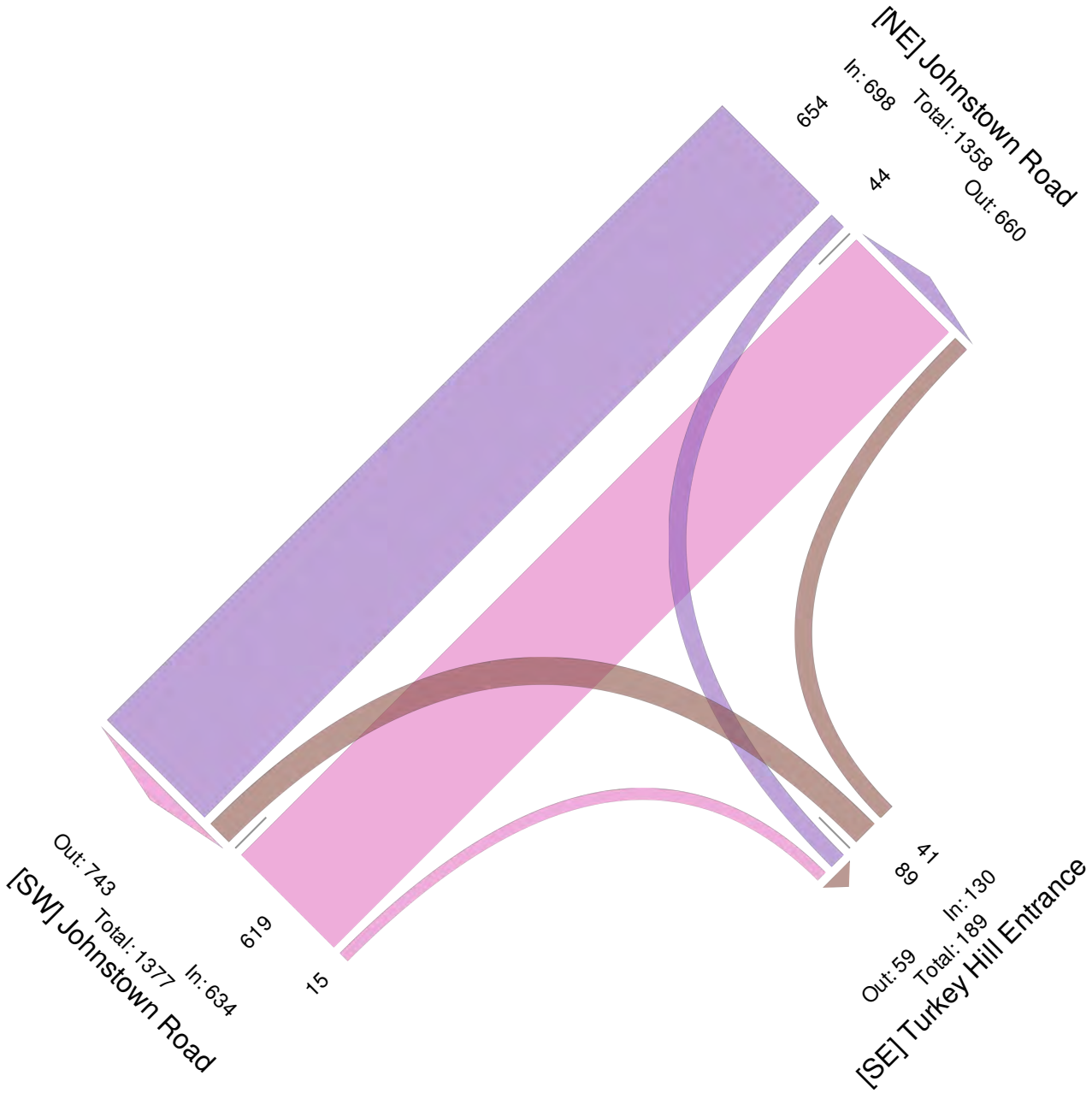
Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US

Leg Direction	Turkey Hill Entrance Northwestbound				Johnstown Road Northeastbound				Johnstown Road Southwestbound				
Time	L	R	U	**App**	T	R	U	**App**	L	T	U	**App**	**Int**
2019-12-03 7:30AM	17	11	0	**28**	117	4	0	**121**	12	162	0	**174**	**323**
7:45AM	27	12	0	**39**	135	2	0	**137**	14	163	0	**177**	**353**
8:00AM	24	6	0	**30**	172	4	0	**176**	7	151	0	**158**	**364**
8:15AM	21	12	0	**33**	195	5	0	**200**	11	178	0	**189**	**422**
Total	89	41	0	**130**	619	15	0	**634**	44	654	0	**698**	**1462**
% Approach	68.5%	31.5%	0%	-	97.6%	2.4%	0%	-	6.3%	93.7%	0%	-	-
% Total	6.1%	2.8%	0%	**8.9%**	42.3%	1.0%	0%	**43.4%**	3.0%	44.7%	0%	**47.7%**	-
PHF	0.824	0.854	-	**0.833**	0.794	0.750	-	**0.793**	0.786	0.919	-	**0.923**	0.866
Lights	83	38	0	**121**	591	13	0	**604**	43	618	0	**661**	1386
% Lights	93.3%	92.7%	0%	**93.1%**	95.5%	86.7%	0%	**95.3%**	97.7%	94.5%	0%	**94.7%**	94.8%
Articulated Trucks	1	0	0	**1**	9	1	0	**10**	0	10	0	**10**	21
% Articulated Trucks	1.1%	0%	0%	**0.8%**	1.5%	6.7%	0%	**1.6%**	0%	1.5%	0%	**1.4%**	1.4%
Buses and Single-Unit Trucks	5	3	0	**8**	19	1	0	**20**	1	26	0	**27**	55
% Buses and Single-Unit Trucks	5.6%	7.3%	0%	**6.2%**	3.1%	6.7%	0%	**3.2%**	2.3%	4.0%	0%	**3.9%**	3.8%

*L: Left, R: Right, T: Thru, U: U-Turn

Johnstown Road and Turkey Hill Signal - TMC
Tue Dec 3, 2019
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 731125, Location: 40.091578, -82.791113

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US



Johnstown Road and Turkey Hill Signal - TMC

Tue Dec 3, 2019
PM Peak (5 PM - 6 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 731125, Location: 40.091578, -82.791113

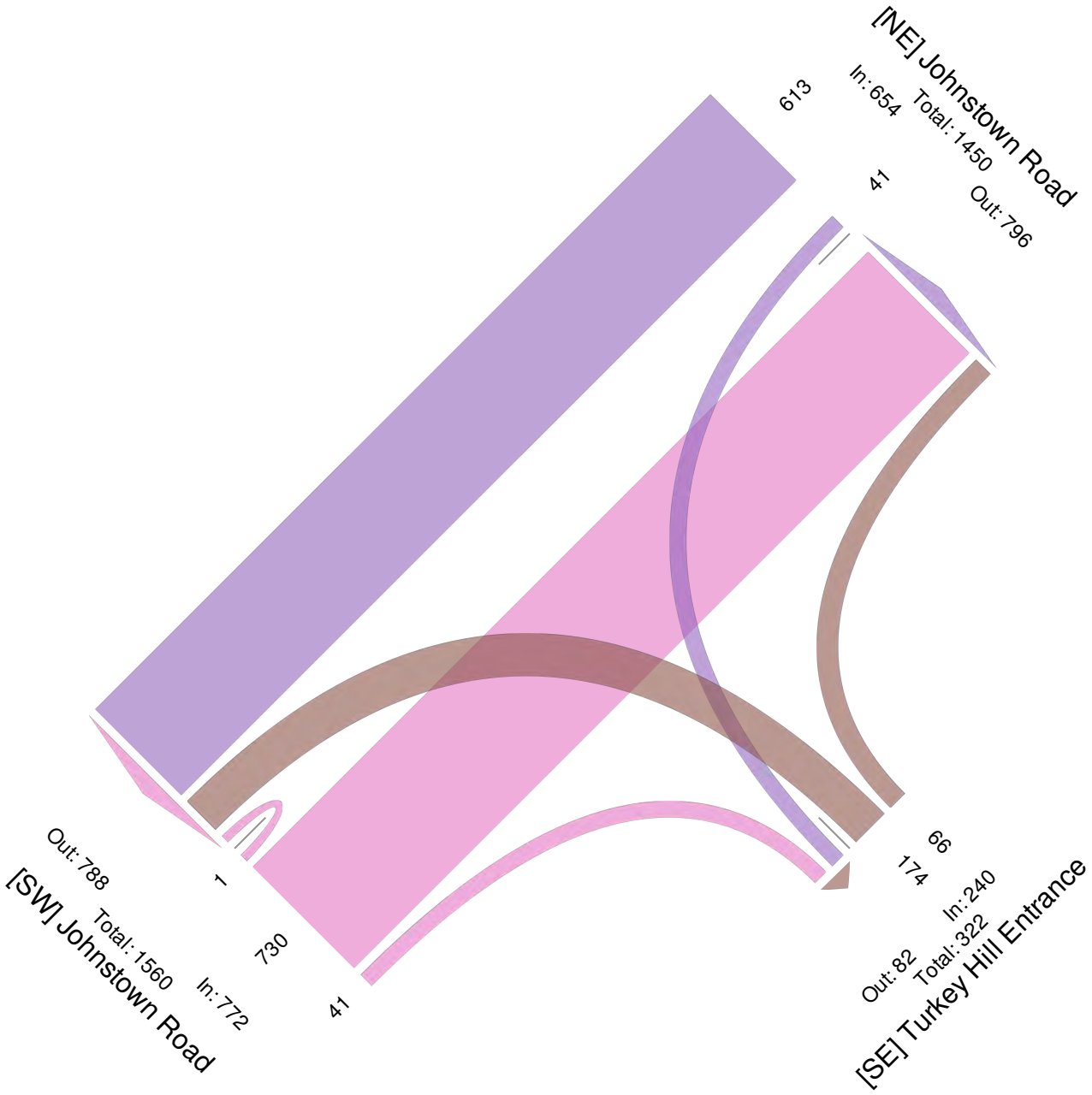
Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US

Leg Direction	Turkey Hill Entrance Northwestbound				Johnstown Road Northeastbound				Johnstown Road Southwestbound				
Time	L	R	U	**App**	T	R	U	**App**	L	T	U	**App**	**Int**
2019-12-03 5:00PM	43	15	0	**58**	196	10	0	**206**	9	138	0	**147**	**411**
5:15PM	35	19	0	**54**	185	11	0	**196**	10	158	0	**168**	**418**
5:30PM	52	16	0	**68**	181	11	1	**193**	8	150	0	**158**	**419**
5:45PM	44	16	0	**60**	168	9	0	**177**	14	167	0	**181**	**418**
Total	174	66	0	**240**	730	41	1	**772**	41	613	0	**654**	**1666**
% Approach	72.5%	27.5%	0%	-	94.6%	5.3%	0.1%	-	6.3%	93.7%	0%	-	-
% Total	10.4%	4.0%	0%	**14.4%**	43.8%	2.5%	0.1%	**46.3%**	2.5%	36.8%	0%	**39.3%**	-
PHF	0.837	0.868	-	**0.882**	0.931	0.932	0.250	**0.937**	0.732	0.918	-	**0.903**	0.994
Lights	172	65	0	**237**	712	40	1	**753**	40	592	0	**632**	1622
% Lights	98.9%	98.5%	0%	**98.8%**	97.5%	97.6%	100%	**97.5%**	97.6%	96.6%	0%	**96.6%**	97.4%
Articulated Trucks	0	0	0	**0**	4	0	0	**4**	0	7	0	**7**	11
% Articulated Trucks	0%	0%	0%	**0%**	0.5%	0%	0%	**0.5%**	0%	1.1%	0%	**1.1%**	0.7%
Buses and Single-Unit Trucks	2	1	0	**3**	14	1	0	**15**	1	14	0	**15**	33
% Buses and Single-Unit Trucks	1.1%	1.5%	0%	**1.3%**	1.9%	2.4%	0%	**1.9%**	2.4%	2.3%	0%	**2.3%**	2.0%

*L: Left, R: Right, T: Thru, U: U-Turn

Johnstown Road and Turkey Hill Signal - TMC
Tue Dec 3, 2019
PM Peak (5 PM - 6 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 731125, Location: 40.091578, -82.791113

Provided by: Carpenter Marty (CM) Transportation Inc.
6612 Singletree Drive, Columbus, OH, 43229, US



Chelsea Cousins

From: Hwashik Jang <hjang@morpc.org>
Sent: Wednesday, March 29, 2023 10:21 AM
To: Leiana Yates
Cc: Drew Laurent; Nick Gill
Subject: RE: Growth Rate Request - Primrose New Albany TIS

Leiana,

We have completed processing growth rates for your traffic study intersections.

Please use linear annual growth rates as summarized below.

Location	Linear Annual Growth Rate
Central College Rd e/o Bevelhymer Rd	3.10%
Bevelhymer Rd n/o Central College Rd	1.60%
Central College Rd w/o Bevelhymer Rd	2.80%
Bevelhymer Rd s/o Central College Rd	1.80%
Walton Pkwy e/o Bevelhymer Rd	1.10%
Bevelhymer Rd n/o Walton Pkwy	1.80%
Walton Pkwy w/o Bevelhymer Rd	2.10%
Bevelhymer Rd s/o Walton Pkwy	1.80%

Note: The above rate was derived based on planning level analysis by using MORPC's regional travel demand model.

If you have any questions, please let me know.

Thanks,

HWASHIK JANG
Senior Planner | **Mid-Ohio Regional Planning Commission**
T: 614.233.4145 | hjang@morpc.org
111 Liberty Street, Suite 100 | Columbus, OH 43215

From: Leiana Yates <lyates@cmtran.com>
Sent: Monday, March 6, 2023 7:33 AM
To: Hwashik Jang <hjang@morpc.org>
Cc: Drew Laurent <dlaurent@cmtran.com>; Nick Gill <NGILL@morpc.org>
Subject: Growth Rate Request - Primrose New Albany TIS

Dave Samuelson

From: Hwashik Jang <hjang@morpc.org>
Sent: Wednesday, May 22, 2019 2:07 PM
To: Dave Samuelson
Cc: Michael E. Barker; Matt Ferris; Matt Sloat; Zhuojun Jiang; Nick Gill
Subject: RE: US 62/SR 161 improvement project

Dave,

We have completed processing growth rates for your traffic study.
Please use a linear annual growth rate as summarized in the following table below.

Location	Linear Annual Growth Rate
US62 e/o Smith Mill Rd	1.30%
Smith Mill Rd n/o US62	2.40%
US62 w/o Smith Mill Rd	1.80%
Smith Mill Rd s/o US62	2.50%
Zarley St e/o US62	0.50%
US62 n/o Zarley St	1.80%
Zarley St w/o US62	0.50%
US62 s/o Zarley St	1.80%
SR 161 WB Ramp e/o US62	3.00%
US62 n/o SR 161 WB Ramp	1.80%
SR 161 WB Ramp w/o US62	1.50%
US62 s/o SR 161 WB Ramp	1.70%
SR 161 EB Ramp e/o US62	3.00%
US62 n/o SR 161 EB Ramp	1.70%
SR 161 EB Ramp w/o US62	1.50%
US62 s/o SR 161 EB Ramp	1.40%
US62 e/o Thurston Hall Rd	1.40%
Thurston Hall Rd n/o US62	1.00%
US62 w/o Thurston Hall Rd	1.40%
Thurston Hall Rd s/o US62	1.00%

Note: The above rate was derived based on planning level analysis by using MORPC's regional travel demand model.

If you have any questions, please let me know.

Thanks,

HWASHIK JANG

Appendix C
Trip Generation

Appendix C

CARPENTER MARTY transportation

Scenario - 1

Scenario Name: Primrose AM Peak
User Group:
Dev. phase: 1
No. of Years to Project Traffic : 0
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method Rate/Equation	Entry Split%	Exit Split%	Total
565 - Day Care Center	General Urban/Suburban	1000 Sq. Ft. GFA	13.94	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Average	81	72	153
Data Source: Trip Generation Manual, 11th Ed					11.00	53%	47%	
720 - Medical-Dental Office Building - Stand-Alone	General Urban/Suburban	1000 Sq. Ft. GFA	5.04	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LOG)	13	3	16
Data Source: Trip Generation Manual, 11th Ed					Ln(T) =0.90Ln(X) + 1.34	79%	21%	
492 - Health/Fitness Club	General Urban/Suburban	1000 Sq. Ft. GFA	6.7	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Average	4	4	8
Data Source: Trip Generation Manual, 11th Ed					1.31	51%	49%	
712 - Small Office Building	General Urban/Suburban	1000 Sq. Ft. GFA	7.5	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Average	10	2	12
Data Source: Trip Generation Manual, 11th Ed					1.67	82%	18%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
565 - Day Care Center	100	100	1	1	53	47
720 - Medical-Dental Office Building - Stand-Alone	100	100	1.4	1.4	79	21
492 - Health/Fitness Club	100	100	1	1	51	49
712 - Small Office Building	99	100	1.1	1.1	82	18

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Person Trips by Vehicle		Person Trips by Other Modes		Total Baseline Site Person Trips	
	Entry	Exit	Entry	Exit	Entry	Exit
565 - Day Care Center	81	72	0	0	81	72
	153		0		153	
720 - Medical-Dental Office Building - Stand-Alone	18	5	0	0	18	5
	23		0		23	
492 - Health/Fitness Club	4	4	0	0	4	4
	8		0		8	
712 - Small Office Building	11	2	0	0	11	2
	13		0		13	

INTERNAL VEHICLE TRIP REDUCTION

LAND USE GROUP ASSIGNMENT:

Land Use	Land Use Group
565 - Day Care Center	Others
720 - Medical-Dental Office Building - Stand-Alone	Office
492 - Health/Fitness Club	Cinema
712 - Small Office Building	Office

BALANCED PERSON TRIPS:

565 - Day Care Center

Persons Exit	PAF	UIPTC	Unconstrained Demand
72	1	0	0
Persons Entry	PAF	UIPTC	Unconstrained Demand
81	1	0	0

==>>> BALANCED ==>>>
0
<<<== BALANCED <<<==
0

720 - Medical-Dental Office Building-Stand-Alone

Unconstrained Demand	UIPTC	PAF	Persons Entry
0	0	1	18
Unconstrained Demand	UIPTC	PAF	Persons Exit
0	0	1	5

565 - Day Care Center								492 - Health/Fitness Club
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
72	1	0	0	**0**	0	0	1	4
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
81	1	0	0	**0**	0	0	1	4

565 - Day Care Center								712 - Small Office Building
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
72	1	0	0	**0**	0	0	1	11
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
81	1	0	0	**0**	0	0	1	2

720 - Medical-Dental Office Building-Stand-Alone								492 - Health/Fitness Club
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
5	1	0	0	**0**	0	0	1	4
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
18	1	0	0	**0**	0	0	1	4

720 - Medical-Dental Office Building-Stand-Alone								712 - Small Office Building
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
5	1	0	0	**0**	0	0	1	11
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
18	1	0	0	**0**	0	0	1	2

492 - Health/Fitness Club								712 - Small Office Building
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
4	1	0	0	**0**	0	0	1	11
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
4	1	0	0	**0**	0	0	1	2

INTERNAL PERSON TRIPS:

565 - Day Care Center

Internal Person Trips From	Entry	Exit	Total
720 - Medical-Dental Office Building-Stand-Alone	0	0	0
492 - Health/Fitness Club	0	0	0
712 - Small Office Building	0	0	0
Total Internal Person Trips	**0**	**0**	**0**

720 - Medical-Dental Office Building-Stand-Alone

Internal Person Trips From	Entry	Exit	Total
565 - Day Care Center	0	0	0
492 - Health/Fitness Club	0	0	0
712 - Small Office Building	0	0	0
Total Internal Person Trips	**0**	**0**	**0**

492 - Health/Fitness Club

Internal Person Trips From	Entry	Exit	Total
565 - Day Care Center	0	0	0
720 - Medical-Dental Office Building-Stand-Alone	0	0	0
712 - Small Office Building	0	0	0
Total Internal Person Trips	**0**	**0**	**0**

712 - Small Office Building

Internal Person Trips From	Entry	Exit	Total

565 - Day Care Center	0	0	0
720 - Medical-Dental Office Building-Stand-Alone	0	0	0
492 - Health/Fitness Club	0	0	0
Total Internal Person Trips	**0**	**0**	**0**

INTERNAL VEHICLE TRIPS AND CAPTURE:

565 - Day Care Center

Total Internal Person Trips	0	0	0
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**0**	**0**	**0**
Total External Vehicle Trips	81	72	153
Internal Vehicle Trip Capture	**0%**	**0%**	**0%**

720 - Medical-Dental Office Building-Stand-Alone

Total Internal Person Trips	0	0	0
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**0**	**0**	**0**
Total External Vehicle Trips	13	3	16
Internal Vehicle Trip Capture	**0%**	**0%**	**0%**

492 - Health/Fitness Club

Total Internal Person Trips	0	0	0
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**0**	**0**	**0**
Total External Vehicle Trips	4	4	8
Internal Vehicle Trip Capture	**0%**	**0%**	**0%**

712 - Small Office Building

Total Internal Person Trips	0	0	0
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**0**	**0**	**0**
Total External Vehicle Trips	10	2	12
Internal Vehicle Trip Capture	**0%**	**0%**	**0%**

PASS-BY VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Pass-by Vehicle Trip %		Pass-by Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
565 - Day Care Center	81	72	0.00%	0.00%	0	0
720 - Medical-Dental Office Building - Stand-Alone	13	3	0.00%	0.00%	0	0
492 - Health/Fitness Club	4	4	0.00%	0.00%	0	0
712 - Small Office Building	10	2	0.00%	0.00%	0	0

DIVERTED VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Diverted Vehicle Trip %		Diverted Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
565 - Day Care Center	81	72	0.00%	0.00%	0	0
720 - Medical-Dental Office Building - Stand-Alone	13	3	0.00%	0.00%	0	0
492 - Health/Fitness Club	4	4	0.00%	0.00%	0	0
712 - Small Office Building	10	2	0.00%	0.00%	0	0

EXTRA VEHICLE TRIP REDUCTION

Land Use	(External - (Pass-by + Diverted)) Vehicle Trips		Extra Vehicle Trip Reduction %		Extra Reduced Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit

565 - Day Care Center	81	72	0.00%	0.00%	0	0
720 - Medical-Dental Office Building - Stand-Alone	13	3	0.00%	0.00%	0	0
492 - Health/Fitness Club	4	4	0.00%	0.00%	0	0
712 - Small Office Building	10	2	0.00%	0.00%	0	0

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
565 - Day Care Center	81	72	153
720 - Medical-Dental Office Building - Stand-Alone	13	3	16
492 - Health/Fitness Club	4	4	8
712 - Small Office Building	10	2	12

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	108	81	189
Internal Vehicle Trips	0	0	0
External Vehicle Trips	108	81	189
Internal Vehicle Trip Capture	0%	0%	0%
Pass-by Vehicle Trips	0	0	0
Diverted Vehicle Trips	0	0	0
Extra Reduced Vehicle Trips	0	0	0
New Vehicle Trips	108	81	189

Scenario - 2

Scenario Name: Primrose PM Peak
User Group:
Dev. phase: 1
No. of Years to Project Traffic : 0
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method Rate/Equation	Entry Split%	Exit Split%	Total
565 - Day Care Center	General	1000 Sq. Ft. GFA	13.94	Weekday, Peak Hour of Adjacent Street Traffic,	Average	73	82	155
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban			One Hour Between 4 and 6 p.m.	11.12	47%	53%	
720 - Medical-Dental Office Building - Stand-Alone	General	1000 Sq. Ft. GFA	5.04	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LIN)	5	12	17
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban			One Hour Between 4 and 6 p.m.	T = 4.07(X) - 3.17	30%	70%	
492 - Health/Fitness Club	General	1000 Sq. Ft. GFA	6.7	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LOG)	23	18	41
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban			One Hour Between 4 and 6 p.m.	Ln(T) =0.67Ln(X) + 2.44	57%	43%	
712 - Small Office Building	General	1000 Sq. Ft. GFA	7.5	Weekday, Peak Hour of Adjacent Street Traffic,	Average	6	11	17
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban			One Hour Between 4 and 6 p.m.	2.16	34%	66%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
565 - Day Care Center	100	100	1	1	47	53
720 - Medical-Dental Office Building - Stand-Alone	100	100	1.4	1.4	30	70
492 - Health/Fitness Club	100	100	1	1	57	43
712 - Small Office Building	100	99	1.1	1.1	34	66

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Person Trips by Vehicle		Person Trips by Other Modes		Total Baseline Site Person Trips	
	Entry	Exit	Entry	Exit	Entry	Exit
565 - Day Care Center	73	82	0	0	73	82
	155		0		155	
720 - Medical-Dental Office Building - Stand-Alone	7	17	0	0	7	17
	24		0		24	
492 - Health/Fitness Club	23	18	0	0	23	18
	41		0		41	
712 - Small Office Building	6	12	0	0	6	12
	18		0		18	

INTERNAL VEHICLE TRIP REDUCTION

LAND USE GROUP ASSIGNMENT:

Land Use	Land Use Group
565 - Day Care Center	Others
720 - Medical-Dental Office Building - Stand-Alone	Office
492 - Health/Fitness Club	Cinema
712 - Small Office Building	Office

BALANCED PERSON TRIPS:

565 - Day Care Center

Persons Exit	PAF	UIPTC	Unconstrained Demand
82	1	0	0
Persons Entry	PAF	UIPTC	Unconstrained Demand
73	1	0	0

==>>> BALANCED ==>>>
0
<<<== BALANCED <<<==
0

720 - Medical-Dental Office Building-Stand-Alone

Unconstrained Demand	UIPTC	PAF	Persons Entry
0	0	1	7
Unconstrained Demand	UIPTC	PAF	Persons Exit
0	0	1	17

565 - Day Care Center								492 - Health/Fitness Club
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
82	1	0	0	**0**	0	0	1	23
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
73	1	0	0	**0**	0	0	1	18

565 - Day Care Center								712 - Small Office Building
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
82	1	0	0	**0**	0	0	1	6
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
73	1	0	0	**0**	0	0	1	12

720 - Medical-Dental Office Building-Stand-Alone								492 - Health/Fitness Club
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
17	1	0	0	**0**	0	0	1	23
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
7	1	0	0	**0**	0	0	1	18

720 - Medical-Dental Office Building-Stand-Alone								712 - Small Office Building
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
17	1	0	0	**0**	0	0	1	6
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
7	1	0	0	**0**	0	0	1	12

492 - Health/Fitness Club								712 - Small Office Building
Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
18	1	0	0	**0**	0	0	1	6
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Persons Exit
23	1	0	0	**0**	0	0	1	12

INTERNAL PERSON TRIPS:

565 - Day Care Center

Internal Person Trips From	Entry	Exit	Total
720 - Medical-Dental Office Building-Stand-Alone	0	0	0
492 - Health/Fitness Club	0	0	0
712 - Small Office Building	0	0	0
Total Internal Person Trips	**0**	**0**	**0**

720 - Medical-Dental Office Building-Stand-Alone

Internal Person Trips From	Entry	Exit	Total
565 - Day Care Center	0	0	0
492 - Health/Fitness Club	0	0	0
712 - Small Office Building	0	0	0
Total Internal Person Trips	**0**	**0**	**0**

492 - Health/Fitness Club

Internal Person Trips From	Entry	Exit	Total
565 - Day Care Center	0	0	0
720 - Medical-Dental Office Building-Stand-Alone	0	0	0
712 - Small Office Building	0	0	0
Total Internal Person Trips	**0**	**0**	**0**

712 - Small Office Building

Internal Person Trips From	Entry	Exit	Total

565 - Day Care Center	0	0	0
720 - Medical-Dental Office Building-Stand-Alone	0	0	0
492 - Health/Fitness Club	0	0	0
Total Internal Person Trips	**0**	**0**	**0**

INTERNAL VEHICLE TRIPS AND CAPTURE:

565 - Day Care Center

Total Internal Person Trips	0	0	0
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**0**	**0**	**0**
Total External Vehicle Trips	73	82	155
Internal Vehicle Trip Capture	**0%**	**0%**	**0%**

720 - Medical-Dental Office Building-Stand-Alone

Total Internal Person Trips	0	0	0
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**0**	**0**	**0**
Total External Vehicle Trips	5	12	17
Internal Vehicle Trip Capture	**0%**	**0%**	**0%**

492 - Health/Fitness Club

Total Internal Person Trips	0	0	0
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**0**	**0**	**0**
Total External Vehicle Trips	23	18	41
Internal Vehicle Trip Capture	**0%**	**0%**	**0%**

712 - Small Office Building

Total Internal Person Trips	0	0	0
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**0**	**0**	**0**
Total External Vehicle Trips	6	11	17
Internal Vehicle Trip Capture	**0%**	**0%**	**0%**

PASS-BY VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Pass-by Vehicle Trip %		Pass-by Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
565 - Day Care Center	73	82	0.00%	0.00%	0	0
720 - Medical-Dental Office Building - Stand-Alone	5	12	0.00%	0.00%	0	0
492 - Health/Fitness Club	23	18	0.00%	0.00%	0	0
712 - Small Office Building	6	11	0.00%	0.00%	0	0

DIVERTED VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Diverted Vehicle Trip %		Diverted Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
565 - Day Care Center	73	82	0.00%	0.00%	0	0
720 - Medical-Dental Office Building - Stand-Alone	5	12	0.00%	0.00%	0	0
492 - Health/Fitness Club	23	18	0.00%	0.00%	0	0
712 - Small Office Building	6	11	0.00%	0.00%	0	0

EXTRA VEHICLE TRIP REDUCTION

Land Use	(External - (Pass-by + Diverted)) Vehicle Trips		Extra Vehicle Trip Reduction %		Extra Reduced Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit

565 - Day Care Center	73	82	0.00%	0.00%	0	0
720 - Medical-Dental Office Building - Stand-Alone	5	12	0.00%	0.00%	0	0
492 - Health/Fitness Club	23	18	0.00%	0.00%	0	0
712 - Small Office Building	6	11	0.00%	0.00%	0	0

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
565 - Day Care Center	73	82	155
720 - Medical-Dental Office Building - Stand-Alone	5	12	17
492 - Health/Fitness Club	23	18	41
712 - Small Office Building	6	11	17

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	107	123	230
Internal Vehicle Trips	0	0	0
External Vehicle Trips	107	123	230
Internal Vehicle Trip Capture	0%	0%	0%
Pass-by Vehicle Trips	0	0	0
Diverted Vehicle Trips	0	0	0
Extra Reduced Vehicle Trips	0	0	0
New Vehicle Trips	107	123	230

Scenario - 3

Scenario Name: ALDI AM Peak
Dev. phase: 1
Analyst Note:
Warning:
User Group:
No. of Years to Project Traffic : 0

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method Rate/Equation	Entry Split%	Exit Split%	Total
850 - Supermarket	General	1000 Sq. Ft. GFA	20	Weekday, Peak Hour of Adjacent Street Traffic,	Average	34	23	57
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban			One Hour Between 7 and 9 a.m.	2.86	59%	41%	
941 - Quick Lubrication Vehicle Shop	General	Servicing Positions	2	Weekday, Peak Hour of Adjacent Street Traffic,	Average	4	2	6
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban			One Hour Between 7 and 9 a.m.	3.00	67%	33%	
937 - Coffee/Donut Shop with Drive-Through Window	General	1000 Sq. Ft. GFA	2.5	Weekday, Peak Hour of Adjacent Street Traffic,	Average	109	105	214
Data Source: Trip Generation Manual, 11th Ed	Urban/Suburban			One Hour Between 7 and 9 a.m.	85.88	51%	49%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
850 - Supermarket	100	100	1	1	59	41
941 - Quick Lubrication Vehicle Shop	100	100	1	1	67	33
937 - Coffee/Donut Shop with Drive-Through Window	100	100	1	1	51	49

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Person Trips by Vehicle		Person Trips by Other Modes		Total Baseline Site Person Trips	
	Entry	Exit	Entry	Exit	Entry	Exit
850 - Supermarket	34	23	0	0	34	23
	57		0		57	
941 - Quick Lubrication Vehicle Shop	4	2	0	0	4	2
	6		0		6	
937 - Coffee/Donut Shop with Drive-Through Window	109	105	0	0	109	105
	214		0		214	

INTERNAL VEHICLE TRIP REDUCTION

LAND USE GROUP ASSIGNMENT:

Land Use	Land Use Group
850 - Supermarket	Retail
941 - Quick Lubrication Vehicle Shop	Resturant
937 - Coffee/Donut Shop with Drive-Through Window	Resturant

BALANCED PERSON TRIPS:

850 - Supermarket

Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
23	1	6.5	2	**1**	1	25	1	4
Persons Entry	**PAF**	**UIPTC**	**Unconstrained Demand**	**<<<== BALANCED <<<==**	**Unconstrained Demand**	**UIPTC**	**PAF**	**Persons Exit**
34	1	4	1	**0**	0	7	1	2

941 - Quick Lubrication Vehicle Shop

850 - Supermarket

Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
23	1	6.5	2	**2**	27	25	1	110
Persons Entry	**PAF**	**UIPTC**	**Unconstrained Demand**	**<<<== BALANCED <<<==**	**Unconstrained Demand**	**UIPTC**	**PAF**	**Persons Exit**

937 - Coffee/Donut Shop with Drive-Through Window

34	1	4	1	**1**	7	7	1	105

941 - Quick Lubrication Vehicle Shop								937 - Coffee/Donut Shop with Drive-Through Window
Persons Exit	PAF	UIPTC	Unconstrained Demand	**==>>> BALANCED ==>>>**	Unconstrained Demand	UIPTC	PAF	Persons Entry
2	1	0	0	**0**	0	0	1	110
Persons Entry	PAF	UIPTC	Unconstrained Demand	**<<<== BALANCED <<<==**	Unconstrained Demand	UIPTC	PAF	Persons Exit
4	1	0	0	**0**	0	0	1	105

INTERNAL PERSON TRIPS:

850 - Supermarket

Internal Person Trips From	Entry	Exit	Total
941 - Quick Lubrication Vehicle Shop	0	1	1
937 - Coffee/Donut Shop with Drive-Through Window	1	2	3
Total Internal Person Trips	**1**	**3**	**4**

941 - Quick Lubrication Vehicle Shop

Internal Person Trips From	Entry	Exit	Total
850 - Supermarket	1	0	1
937 - Coffee/Donut Shop with Drive-Through Window	0	0	0
Total Internal Person Trips	**1**	**0**	**1**

937 - Coffee/Donut Shop with Drive-Through Window

Internal Person Trips From	Entry	Exit	Total
850 - Supermarket	2	1	3
941 - Quick Lubrication Vehicle Shop	0	0	0
Total Internal Person Trips	**2**	**1**	**3**

INTERNAL VEHICLE TRIPS AND CAPTURE:

850 - Supermarket

Total Internal Person Trips	1	3	4
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**1**	**3**	**4**
Total External Vehicle Trips	33	20	53
Internal Vehicle Trip Capture	**3%**	**13%**	**0%**

941 - Quick Lubrication Vehicle Shop

Total Internal Person Trips	1	0	1
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**1**	**0**	**1**
Total External Vehicle Trips	3	2	5
Internal Vehicle Trip Capture	**25%**	**0%**	**0%**

937 - Coffee/Donut Shop with Drive-Through Window

Total Internal Person Trips	2	1	3
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**2**	**1**	**3**
Total External Vehicle Trips	107	104	211
Internal Vehicle Trip Capture	**2%**	**1%**	**0%**

PASS-BY VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Pass-by Vehicle Trip %		Pass-by Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
850 - Supermarket	33	20	0.00%	0.00%	0	0
941 - Quick Lubrication Vehicle Shop	3	2	0.00%	0.00%	0	0

937 - Coffee/Donut Shop with Drive-Through Window	107	104	49.00%	49.00%	52	51

DIVERTED VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Diverted Vehicle Trip %		Diverted Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
850 - Supermarket	33	20	0.00%	0.00%	0	0
941 - Quick Lubrication Vehicle Shop	3	2	0.00%	0.00%	0	0
937 - Coffee/Donut Shop with Drive-Through Window	107	104	0.00%	0.00%	0	0

EXTRA VEHICLE TRIP REDUCTION

Land Use	(External - (Pass-by + Diverted)) Vehicle Trips		Extra Vehicle Trip Reduction %		Extra Reduced Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
850 - Supermarket	33	20	0.00%	0.00%	0	0
941 - Quick Lubrication Vehicle Shop	3	2	0.00%	0.00%	0	0
937 - Coffee/Donut Shop with Drive-Through Window	55	53	0.00%	0.00%	0	0

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
850 - Supermarket	33	20	53
941 - Quick Lubrication Vehicle Shop	3	2	5
937 - Coffee/Donut Shop with Drive-Through Window	55	53	108

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	147	130	277
Internal Vehicle Trips	4	4	8
External Vehicle Trips	143	126	269
Internal Vehicle Trip Capture	3%	3%	3%
Pass-by Vehicle Trips	52	51	103
Diverted Vehicle Trips	0	0	0
Extra Reduced Vehicle Trips	0	0	0
New Vehicle Trips	91	75	166

Scenario - 4

Scenario Name: ALDI PM Peak
User Group:
Dev. phase: 1
No. of Years to Project Traffic : 0
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method / Rate/Equation	Entry Split%	Exit Split%	Total
850 - Supermarket	General Urban/Suburban	1000 Sq. Ft. GFA	20	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LOG)	105	105	210
Data Source: Trip Generation Manual, 11th Ed					Ln(T) =0.81Ln(X) + 2.92	50%	50%	
941 - Quick Lubrication Vehicle Shop	General Urban/Suburban	Servicing Positions	2	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Average	5	4	9
Data Source: Trip Generation Manual, 11th Ed					4.85	56%	44%	
937 - Coffee/Donut Shop with Drive-Through Window	General Urban/Suburban	1000 Sq. Ft. GFA	2.5	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Average	49	49	98
Data Source: Trip Generation Manual, 11th Ed					38.99	50%	50%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
850 - Supermarket	100	100	1	1	50	50
941 - Quick Lubrication Vehicle Shop	100	100	1	1	56	44
937 - Coffee/Donut Shop with Drive-Through Window	100	100	1	1	50	50

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Person Trips by Vehicle		Person Trips by Other Modes		Total Baseline Site Person Trips	
	Entry	Exit	Entry	Exit	Entry	Exit
850 - Supermarket	105	105	0	0	105	105
	210		0		210	
941 - Quick Lubrication Vehicle Shop	5	4	0	0	5	4
	9		0		9	
937 - Coffee/Donut Shop with Drive-Through Window	49	49	0	0	49	49
	98		0		98	

INTERNAL VEHICLE TRIP REDUCTION

LAND USE GROUP ASSIGNMENT:

Land Use	Land Use Group
850 - Supermarket	Retail
941 - Quick Lubrication Vehicle Shop	Resturant
937 - Coffee/Donut Shop with Drive-Through Window	Resturant

BALANCED PERSON TRIPS:

850 - Supermarket — 941 - Quick Lubrication Vehicle Shop

Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
105	1	14.5	15	**1**	1	14.5	1	5
Persons Entry	**PAF**	**UIPTC**	**Unconstrained Demand**	**<<<== BALANCED <<<==**	**Unconstrained Demand**	**UIPTC**	**PAF**	**Persons Exit**
105	1	25	26	**1**	1	20.5	1	4

850 - Supermarket — 937 - Coffee/Donut Shop with Drive-Through Window

Persons Exit	PAF	UIPTC	Unconstrained Demand	==>>> BALANCED ==>>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
105	1	14.5	15	**7**	7	14.5	1	49
Persons Entry	**PAF**	**UIPTC**	**Unconstrained Demand**	**<<<== BALANCED <<<==**	**Unconstrained Demand**	**UIPTC**	**PAF**	**Persons Exit**

105	1	25	26	**10**	10	20.5	1	49
941 - Quick Lubrication Vehicle Shop							937 - Coffee/Donut Shop with Drive-Through Window	
Persons Exit	PAF	UIPTC	Unconstrained Demand	**==>>> BALANCED ==>>>**	Unconstrained Demand	UIPTC	PAF	Persons Entry
4	1	0	0	**0**	0	0	1	49
Persons Entry	PAF	UIPTC	Unconstrained Demand	**<<<== BALANCED <<<==**	Unconstrained Demand	UIPTC	PAF	Persons Exit
5	1	0	0	**0**	0	0	1	49

INTERNAL PERSON TRIPS:

850 - Supermarket

Internal Person Trips From	Entry	Exit	Total
941 - Quick Lubrication Vehicle Shop	1	1	2
937 - Coffee/Donut Shop with Drive-Through Window	10	7	17
Total Internal Person Trips	**11**	**8**	**19**

941 - Quick Lubrication Vehicle Shop

Internal Person Trips From	Entry	Exit	Total
850 - Supermarket	1	1	2
937 - Coffee/Donut Shop with Drive-Through Window	0	0	0
Total Internal Person Trips	**1**	**1**	**2**

937 - Coffee/Donut Shop with Drive-Through Window

Internal Person Trips From	Entry	Exit	Total
850 - Supermarket	7	10	17
941 - Quick Lubrication Vehicle Shop	0	0	0
Total Internal Person Trips	**7**	**10**	**17**

INTERNAL VEHICLE TRIPS AND CAPTURE:

850 - Supermarket

Total Internal Person Trips	11	8	19
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**11**	**8**	**19**
Total External Vehicle Trips	94	97	191
Internal Vehicle Trip Capture	**10%**	**8%**	**0%**

941 - Quick Lubrication Vehicle Shop

Total Internal Person Trips	1	1	2
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**1**	**1**	**2**
Total External Vehicle Trips	4	3	7
Internal Vehicle Trip Capture	**18%**	**23%**	**0%**

937 - Coffee/Donut Shop with Drive-Through Window

Total Internal Person Trips	7	10	17
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**7**	**10**	**17**
Total External Vehicle Trips	42	39	81
Internal Vehicle Trip Capture	**14%**	**21%**	**0%**

PASS-BY VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Pass-by Vehicle Trip %		Pass-by Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
850 - Supermarket	94	97	33.00%	33.00%	31	32
941 - Quick Lubrication Vehicle Shop	4	3	0.00%	0.00%	0	0

937 - Coffee/Donut Shop with Drive-Through Window	42	39	50.00%	50.00%	21	20

DIVERTED VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Diverted Vehicle Trip %		Diverted Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
850 - Supermarket	94	97	0.00%	0.00%	0	0
941 - Quick Lubrication Vehicle Shop	4	3	0.00%	0.00%	0	0
937 - Coffee/Donut Shop with Drive-Through Window	42	39	0.00%	0.00%	0	0

EXTRA VEHICLE TRIP REDUCTION

Land Use	(External - (Pass-by + Diverted)) Vehicle Trips		Extra Vehicle Trip Reduction %		Extra Reduced Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
850 - Supermarket	63	65	0.00%	0.00%	0	0
941 - Quick Lubrication Vehicle Shop	4	3	0.00%	0.00%	0	0
937 - Coffee/Donut Shop with Drive-Through Window	21	19	0.00%	0.00%	0	0

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
850 - Supermarket	63	65	128
941 - Quick Lubrication Vehicle Shop	4	3	7
937 - Coffee/Donut Shop with Drive-Through Window	21	19	40

RESULTS

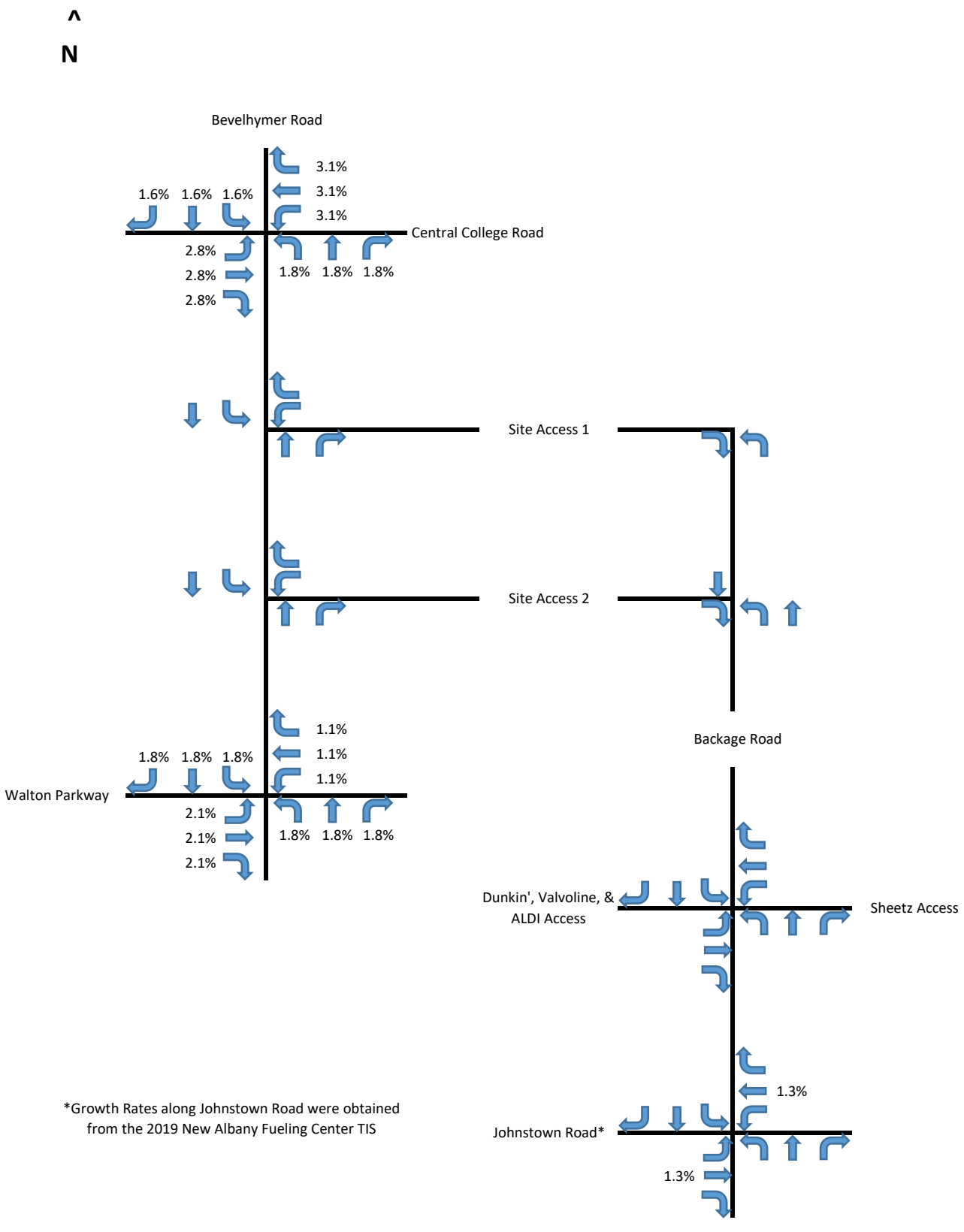
Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	159	158	317
Internal Vehicle Trips	19	19	38
External Vehicle Trips	140	139	279
Internal Vehicle Trip Capture	12%	12%	12%
Pass-by Vehicle Trips	52	52	104
Diverted Vehicle Trips	0	0	0
Extra Reduced Vehicle Trips	0	0	0
New Vehicle Trips	88	87	175

Appendix D
Volume Calculations

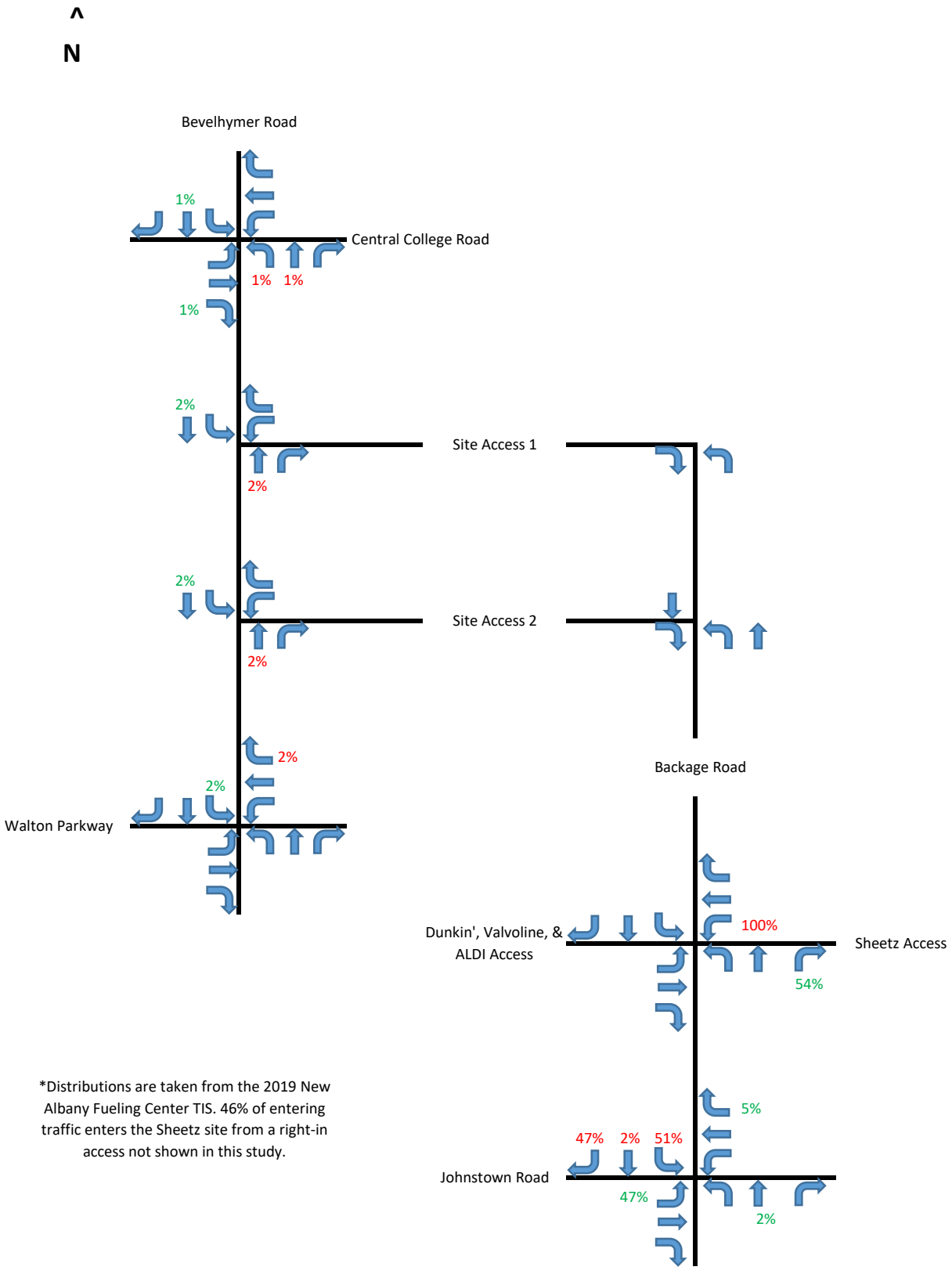
Appendix D

CARPENTER MARTY transportation

CARPENTER MARTY transportation	Year	Period	Scenario	Plate
			Primrose Site Non-Pass-By Distribution	

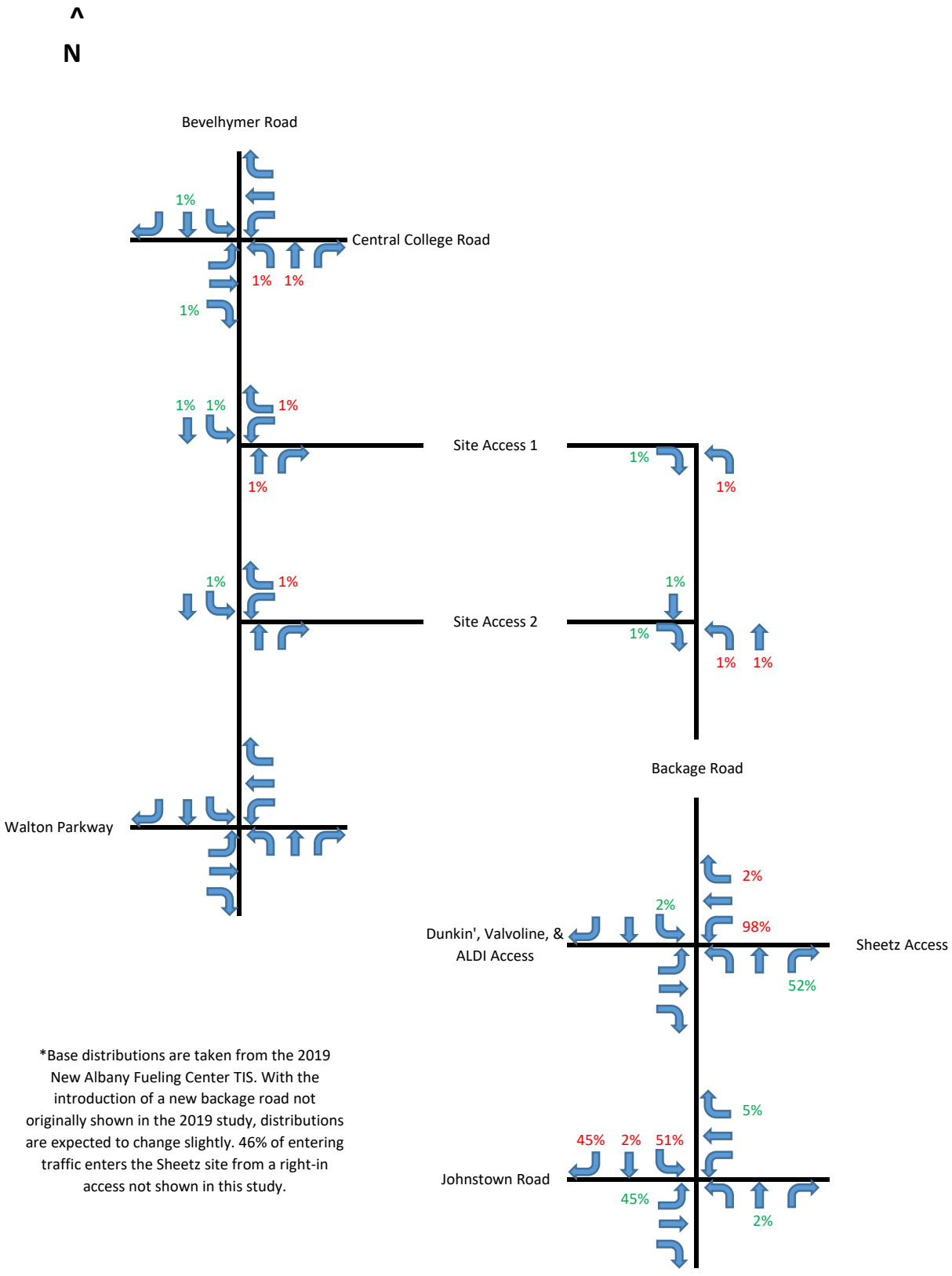


	Year	Period	Scenario	Plate
CARPENTER MARTY transportation		AM	Sheetz Non-Pass-By Distribution*	



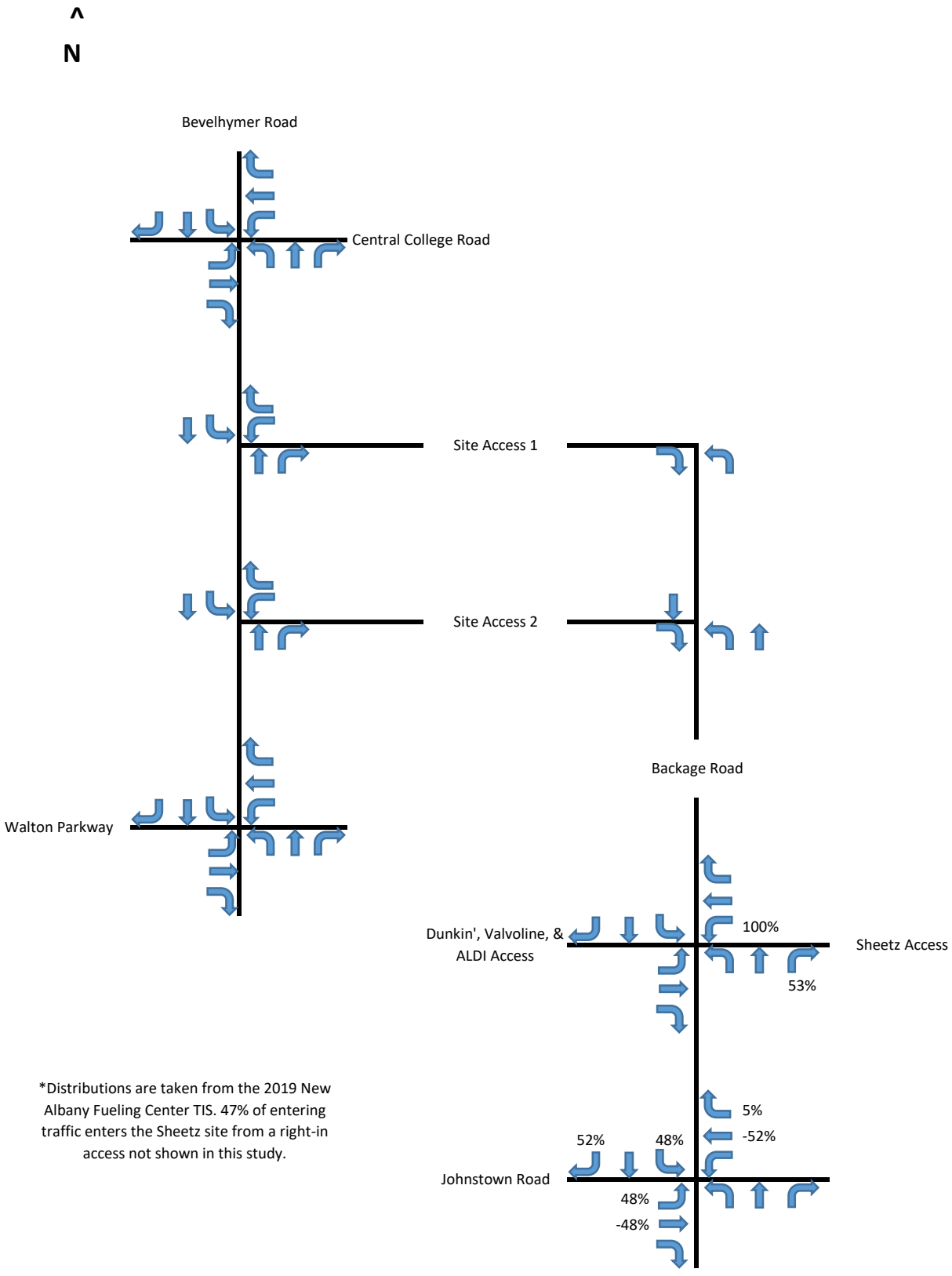
*Distributions are taken from the 2019 New Albany Fueling Center TIS. 46% of entering traffic enters the Sheetz site from a right-in access not shown in this study.

CARPENTER MARTY transportation	Year	Period	Scenario	Plate
		AM	Sheetz Non-Pass-By Distribution* - With Backage Road	



*Base distributions are taken from the 2019 New Albany Fueling Center TIS. With the introduction of a new backage road not originally shown in the 2019 study, distributions are expected to change slightly. 46% of entering traffic enters the Sheetz site from a right-in access not shown in this study.

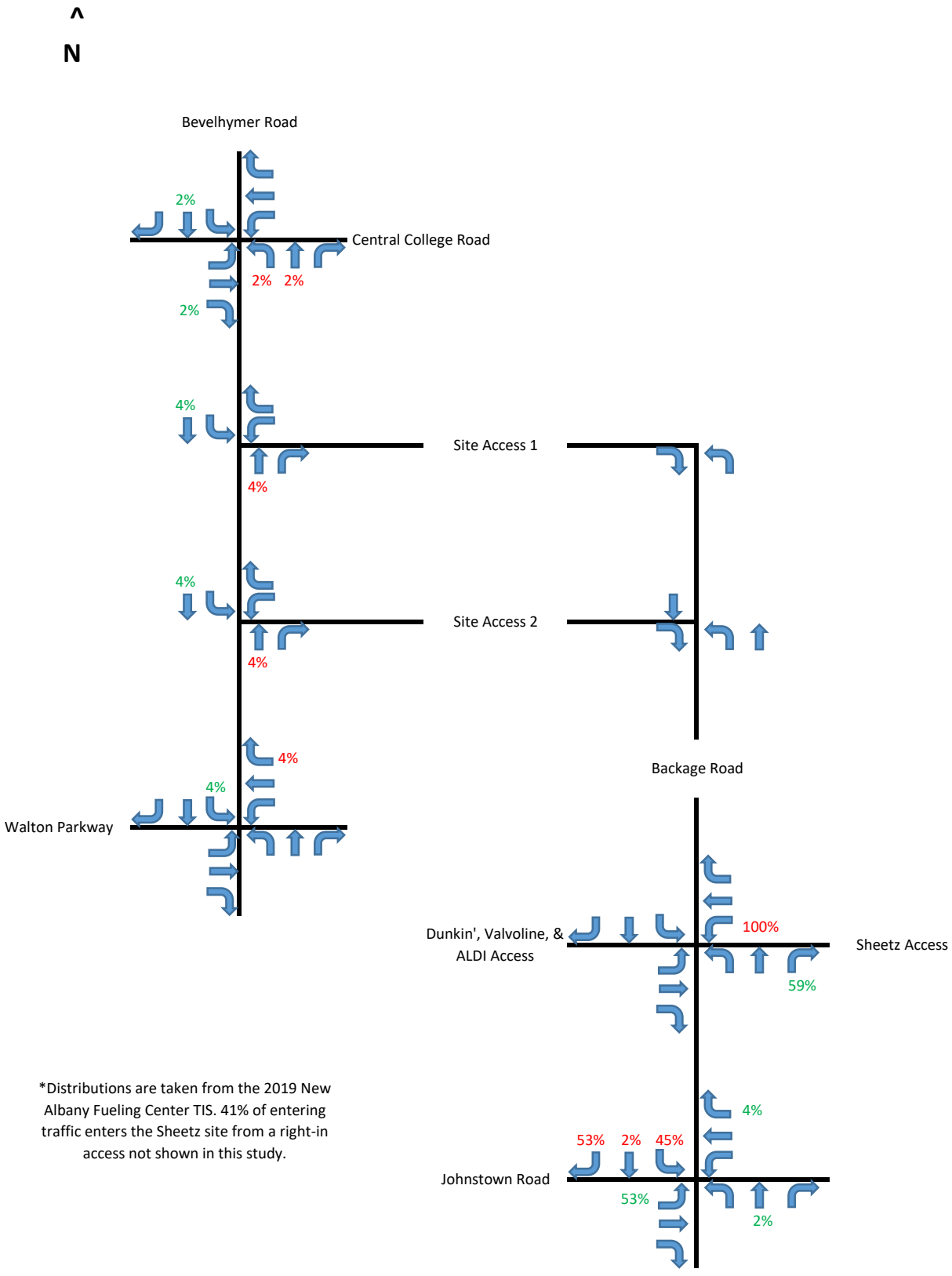
	Year	Period	Scenario	Plate
CARPENTER MARTY transportation		AM	Sheetz Pass-By Distribution*	



*Distributions are taken from the 2019 New Albany Fueling Center TIS. 47% of entering traffic enters the Sheetz site from a right-in access not shown in this study.

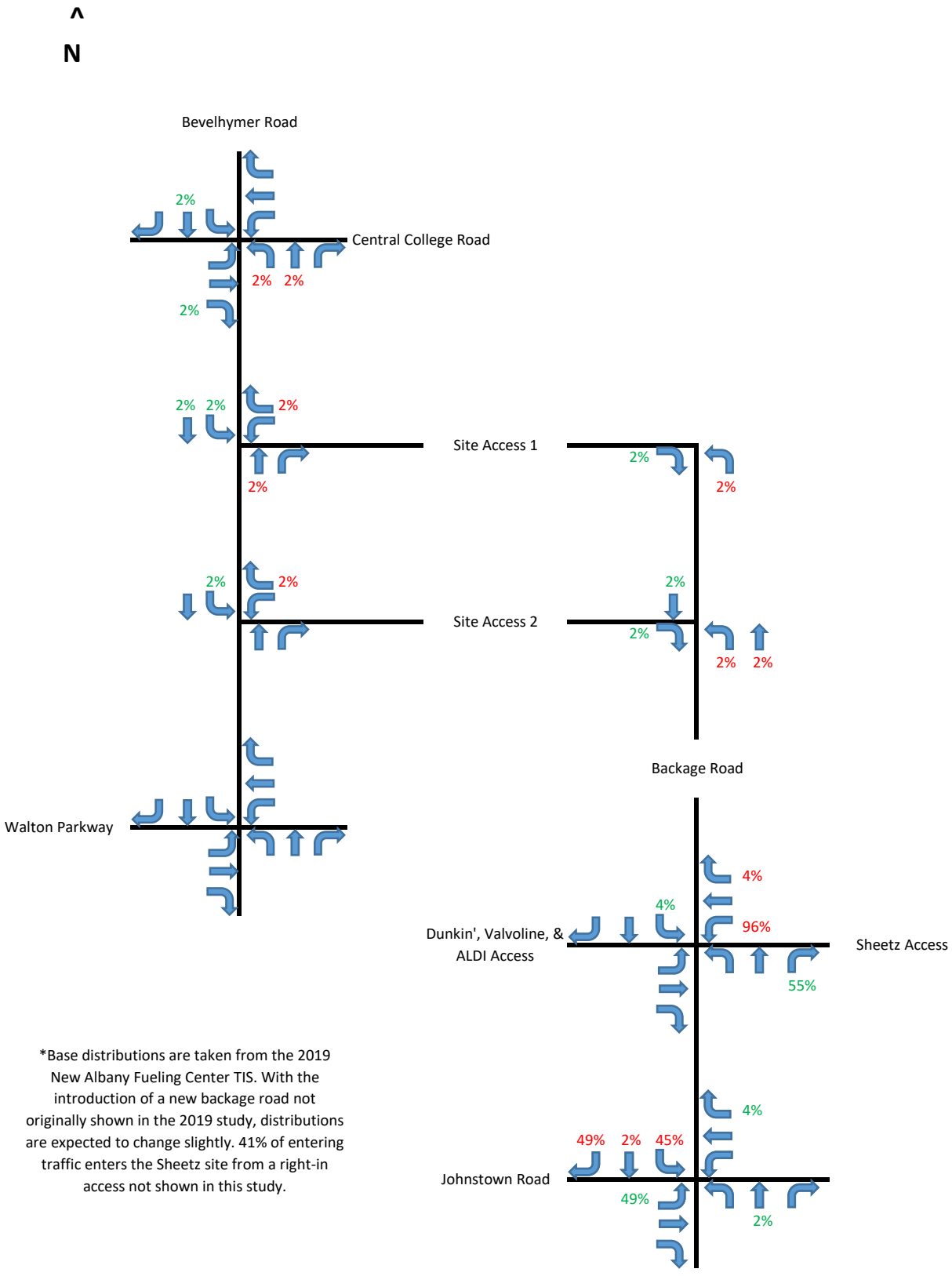
Bevelhymer Mixed Commercial TIS
Traffic Volume Calculations

	Year	Period	Scenario	Plate
CARPENTER MARTY transportation		PM	Sheetz Non-Pass-By Distribution*	



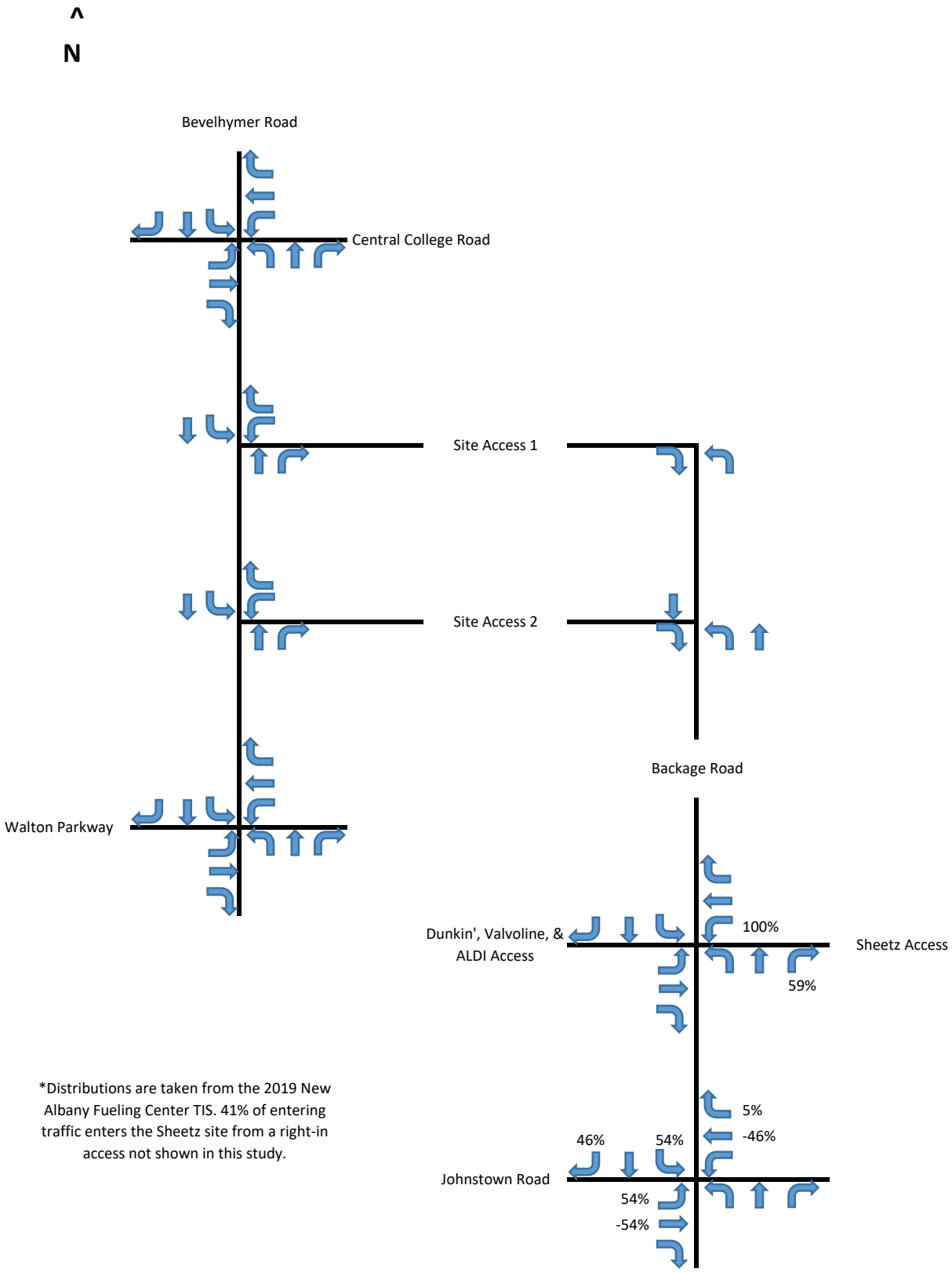
*Distributions are taken from the 2019 New Albany Fueling Center TIS. 41% of entering traffic enters the Sheetz site from a right-in access not shown in this study.

	Year	Period	Scenario	Plate
CARPENTER MARTY transportation		AM	Sheetz Non-Pass-By Distribution* - With Backage Road	



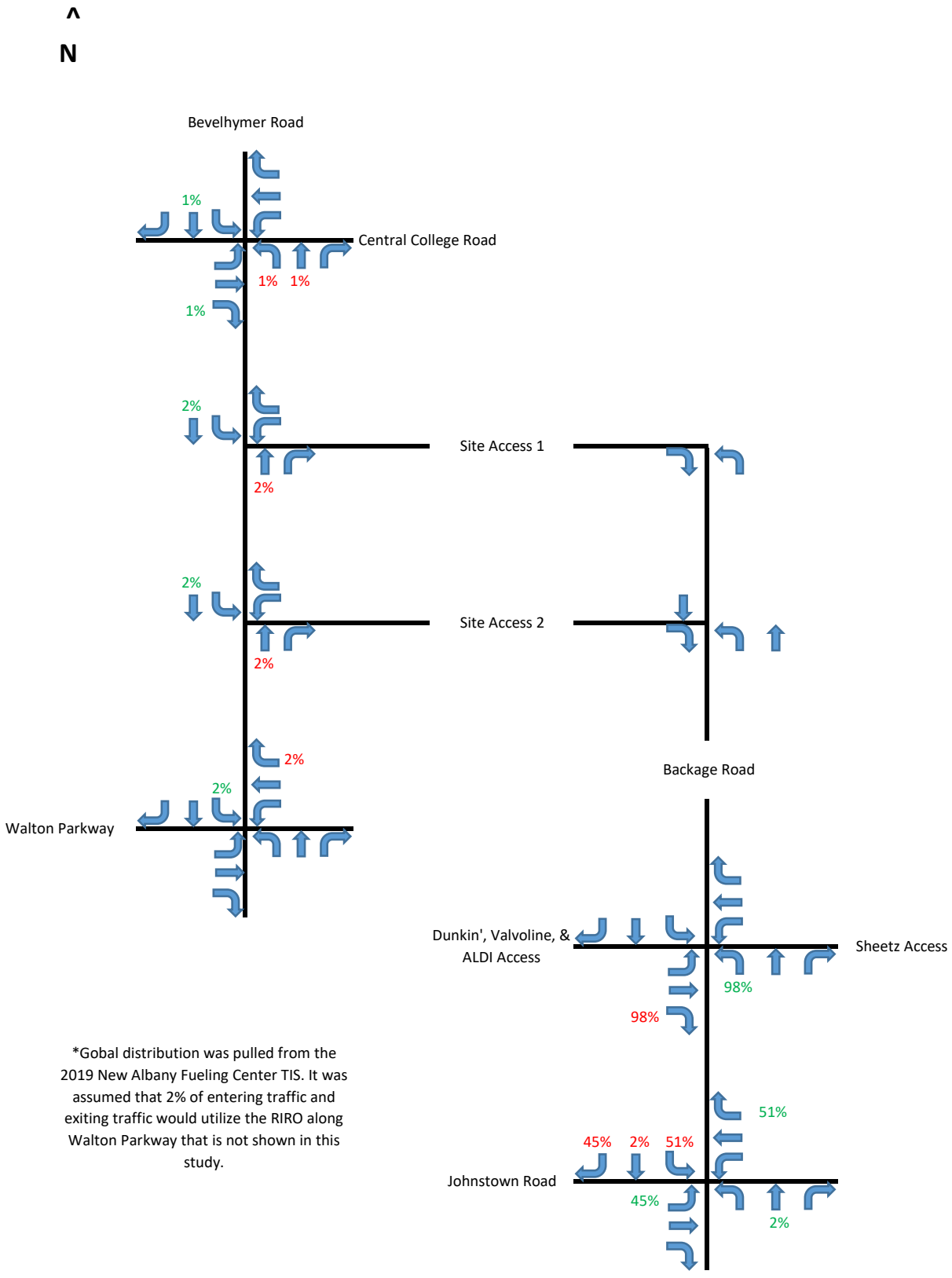
*Base distributions are taken from the 2019 New Albany Fueling Center TIS. With the introduction of a new backage road not originally shown in the 2019 study, distributions are expected to change slightly. 41% of entering traffic enters the Sheetz site from a right-in access not shown in this study.

	Year	Period	Scenario	Plate
CARPENTER MARTY transportation		PM	Sheetz Pass-By Distribution*	



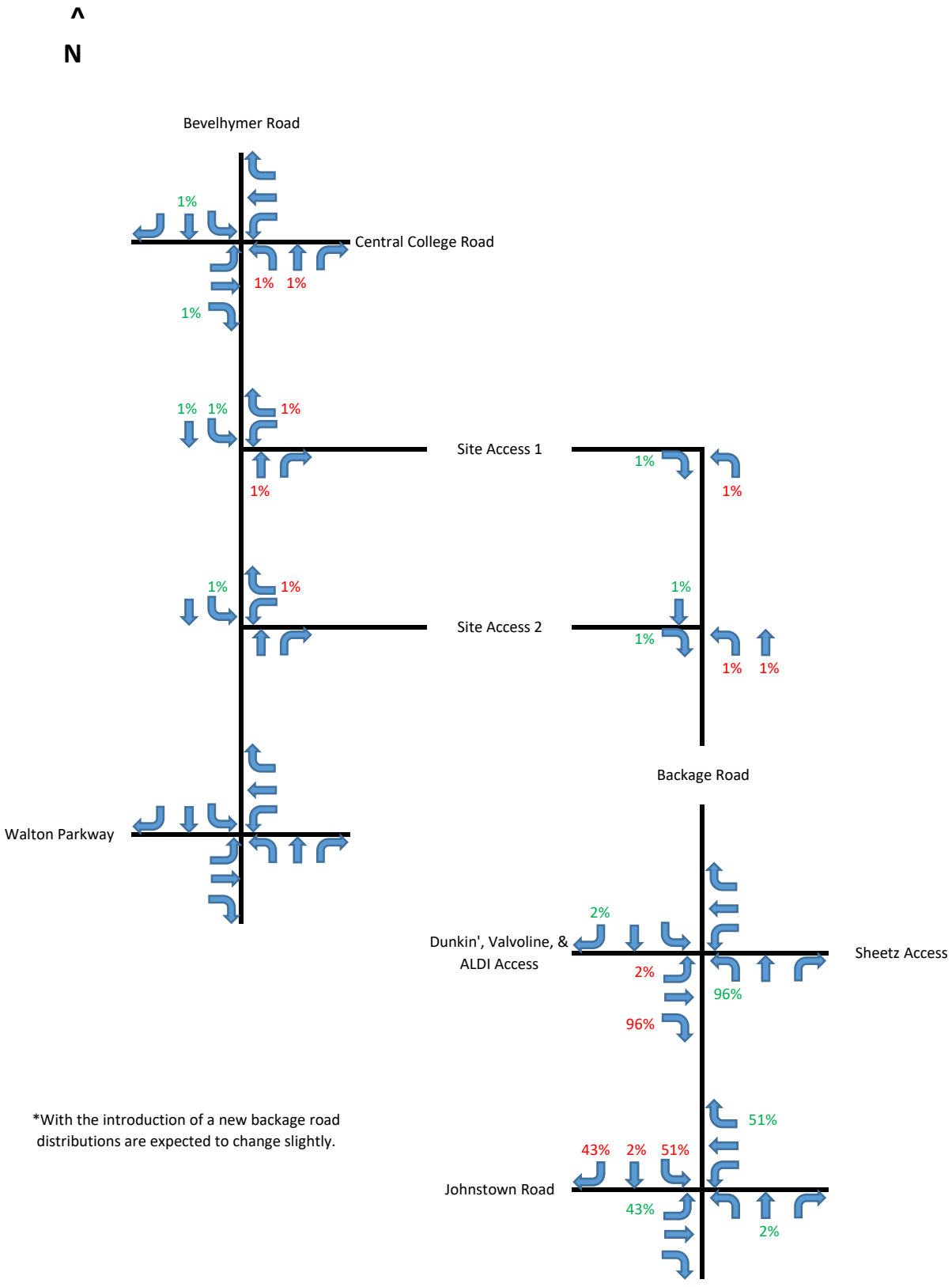
*Distributions are taken from the 2019 New Albany Fueling Center TIS. 41% of entering traffic enters the Sheetz site from a right-in access not shown in this study.

	Year	Period	Scenario	Plate
CARPENTER MARTY transportation		AM	Dunkin', Valvoline, & ALDI Non-Pass-By Distribution*	



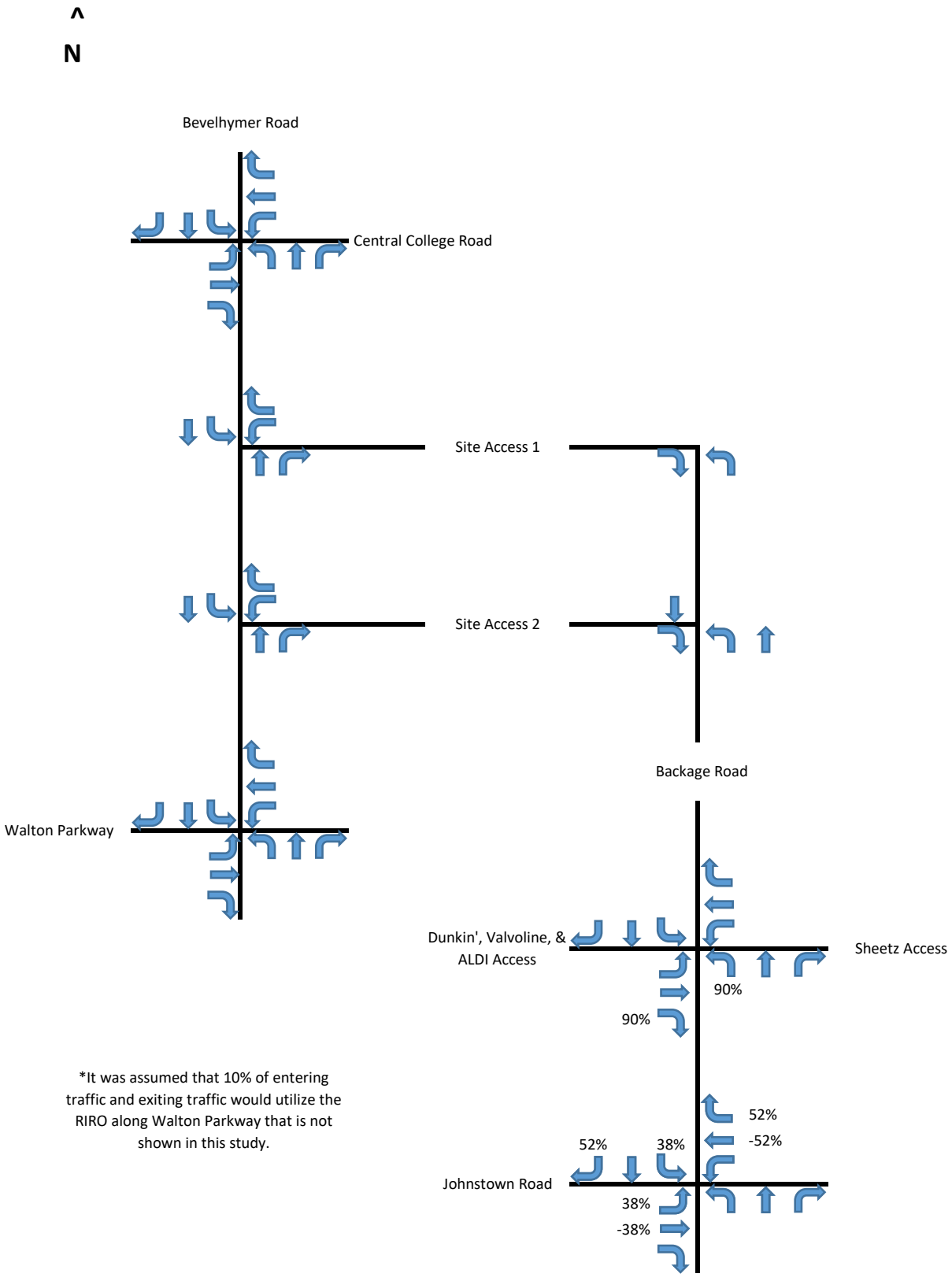
*Gobal distribution was pulled from the 2019 New Albany Fueling Center TIS. It was assumed that 2% of entering traffic and exiting traffic would utilize the RIRO along Walton Parkway that is not shown in this study.

	Year	Period	Scenario	Plate
CARPENTER MARTY transportation		AM	Dunkin', Valvoline, & ALDI Non-Pass-By Distribution - With Backage Road*	



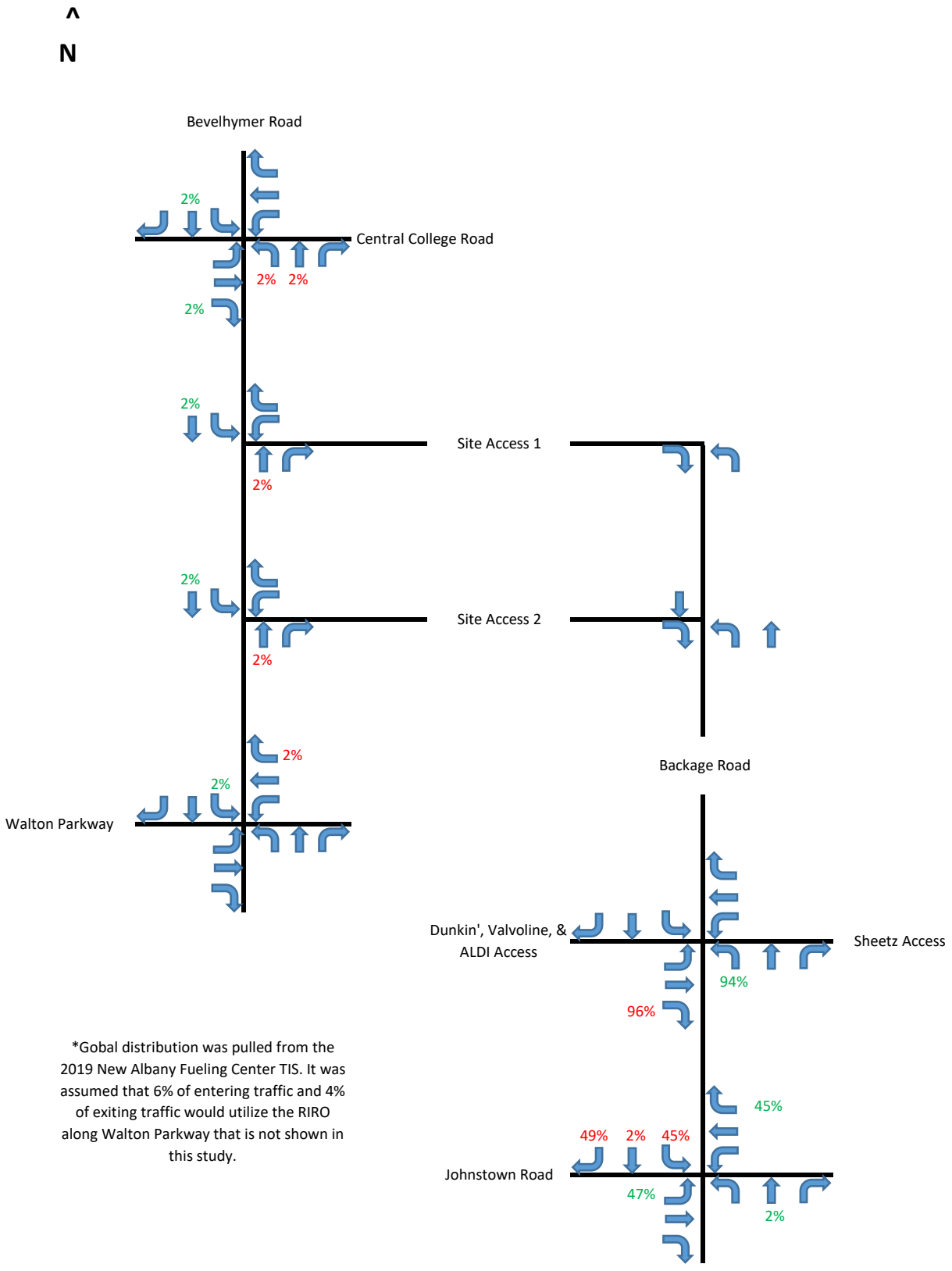
*With the introduction of a new backage road distributions are expected to change slightly.

CARPENTER MARTY transportation	Year	Period	Scenario	Plate
		AM	Dunkin', Valvoline, & ALDI Pass-By Distribution	



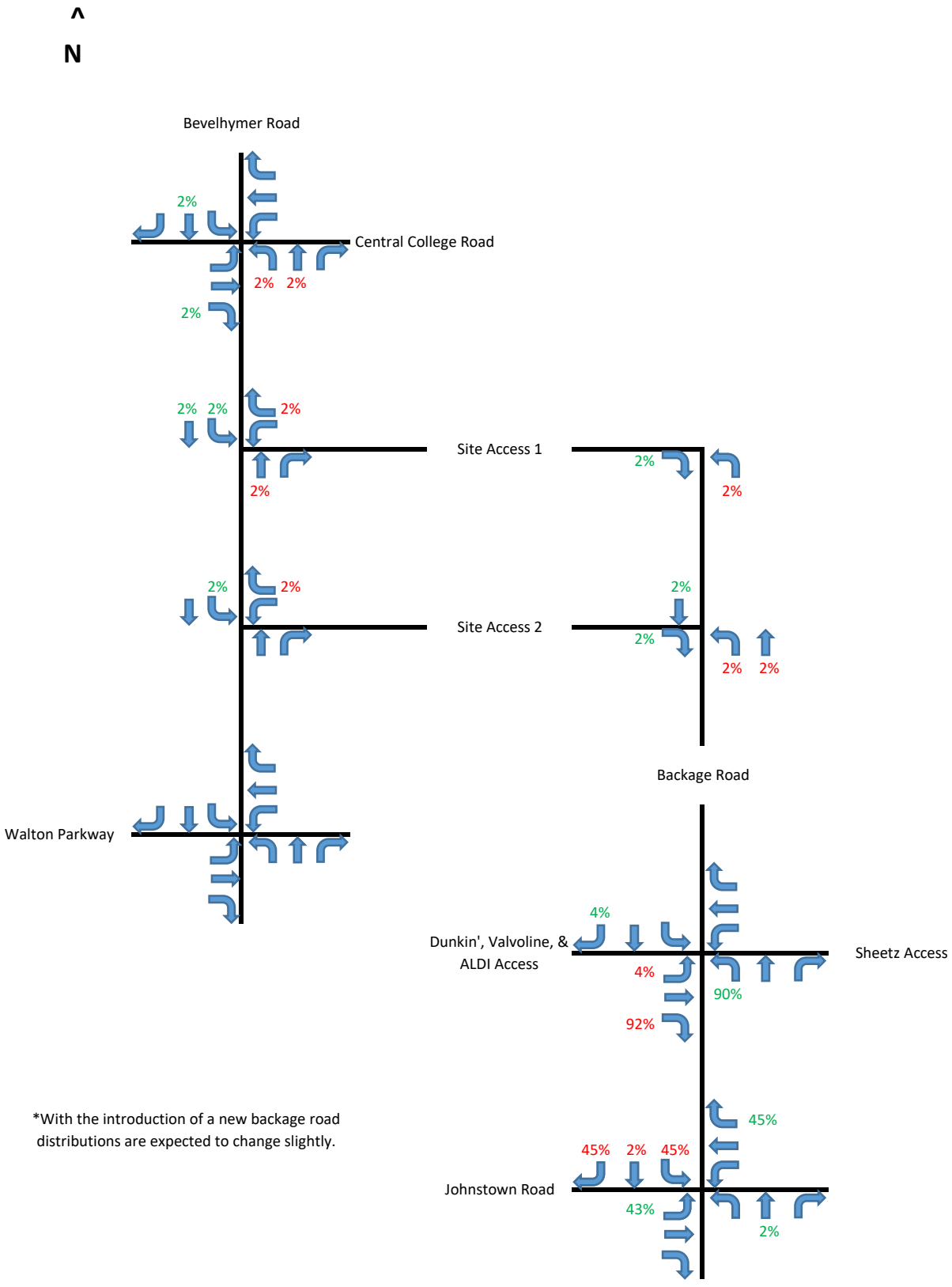
Bevelhymer Mixed Commercial TIS
Traffic Volume Calculations

CARPENTER MARTY transportation	Year	Period	Scenario	Plate
		PM	Dunkin', Valvoline, & ALDI Non-Pass-By Distribution*	



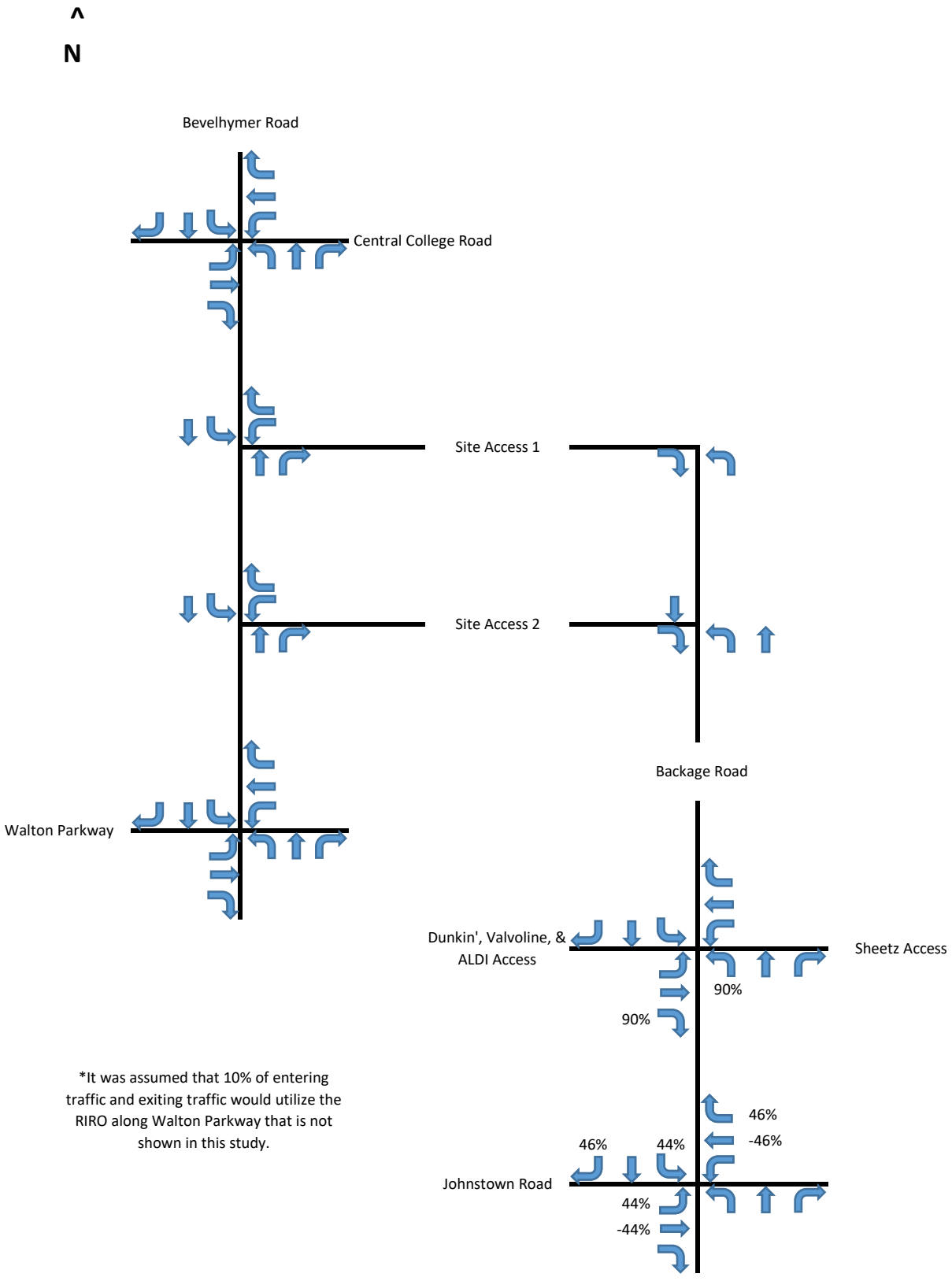
*Gobal distribution was pulled from the 2019 New Albany Fueling Center TIS. It was assumed that 6% of entering traffic and 4% of exiting traffic would utilize the RIRO along Walton Parkway that is not shown in this study.

	Year	Period	Scenario	Plate
CARPENTER MARTY transportation		PM	Dunkin', Valvoline, & ALDI Non-Pass-By Distribution - With Backage Road*	



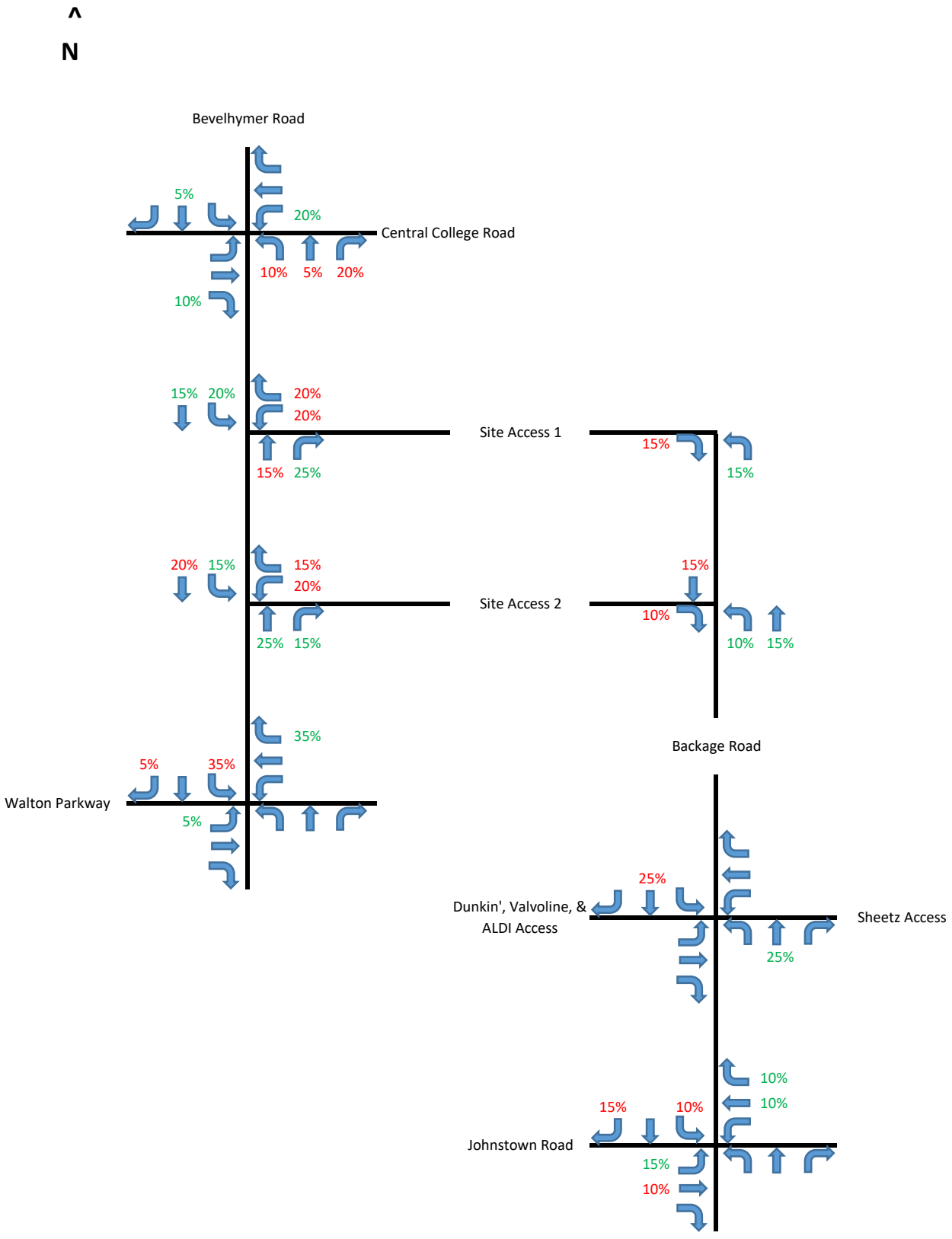
*With the introduction of a new backage road distributions are expected to change slightly.

	Year	Period	Scenario	Plate
CARPENTER MARTY transportation		PM	Dunkin', Valvoline, & ALDI Pass-By Distribution	

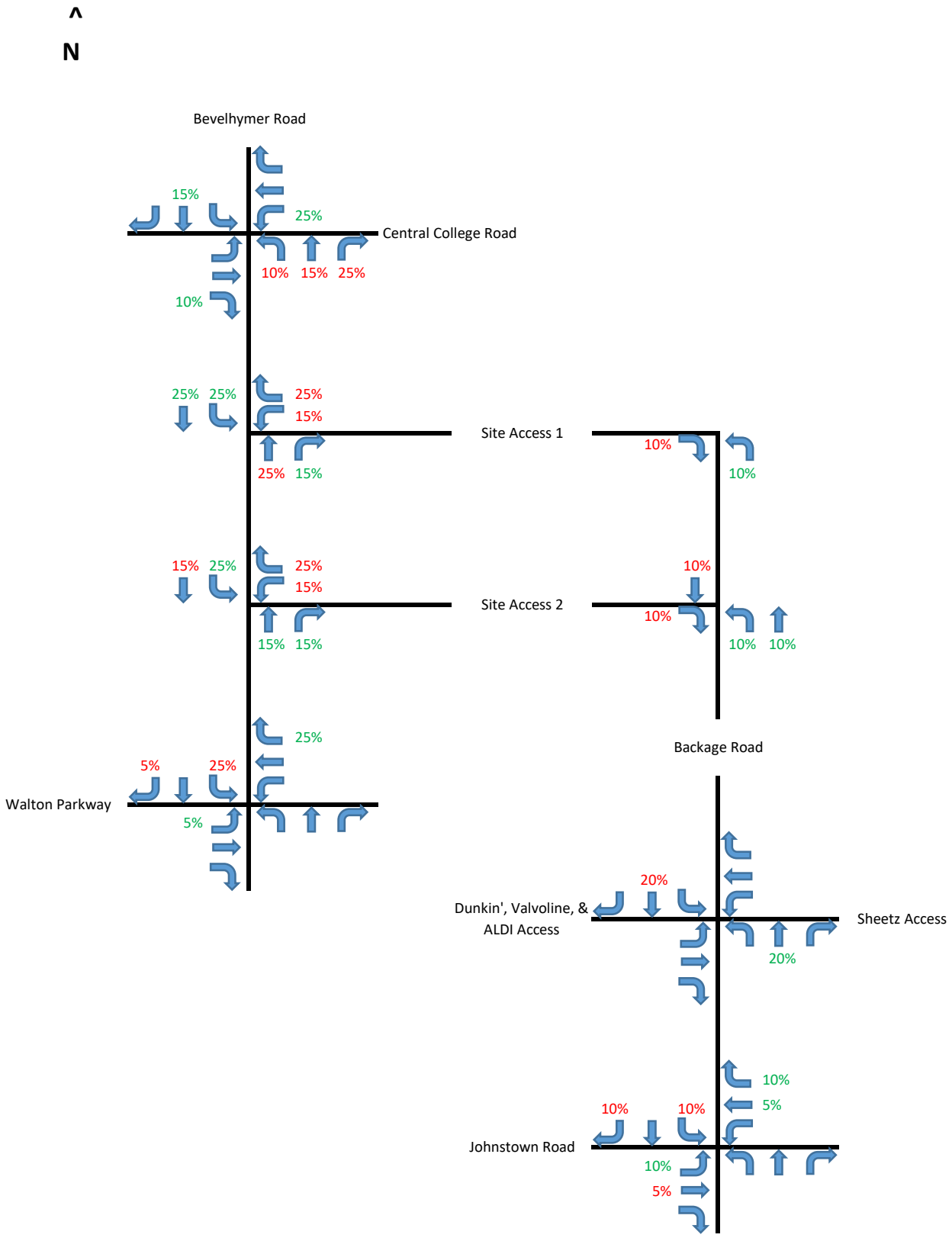


Bevelhymer Mixed Commercial TIS
Traffic Volume Calculations

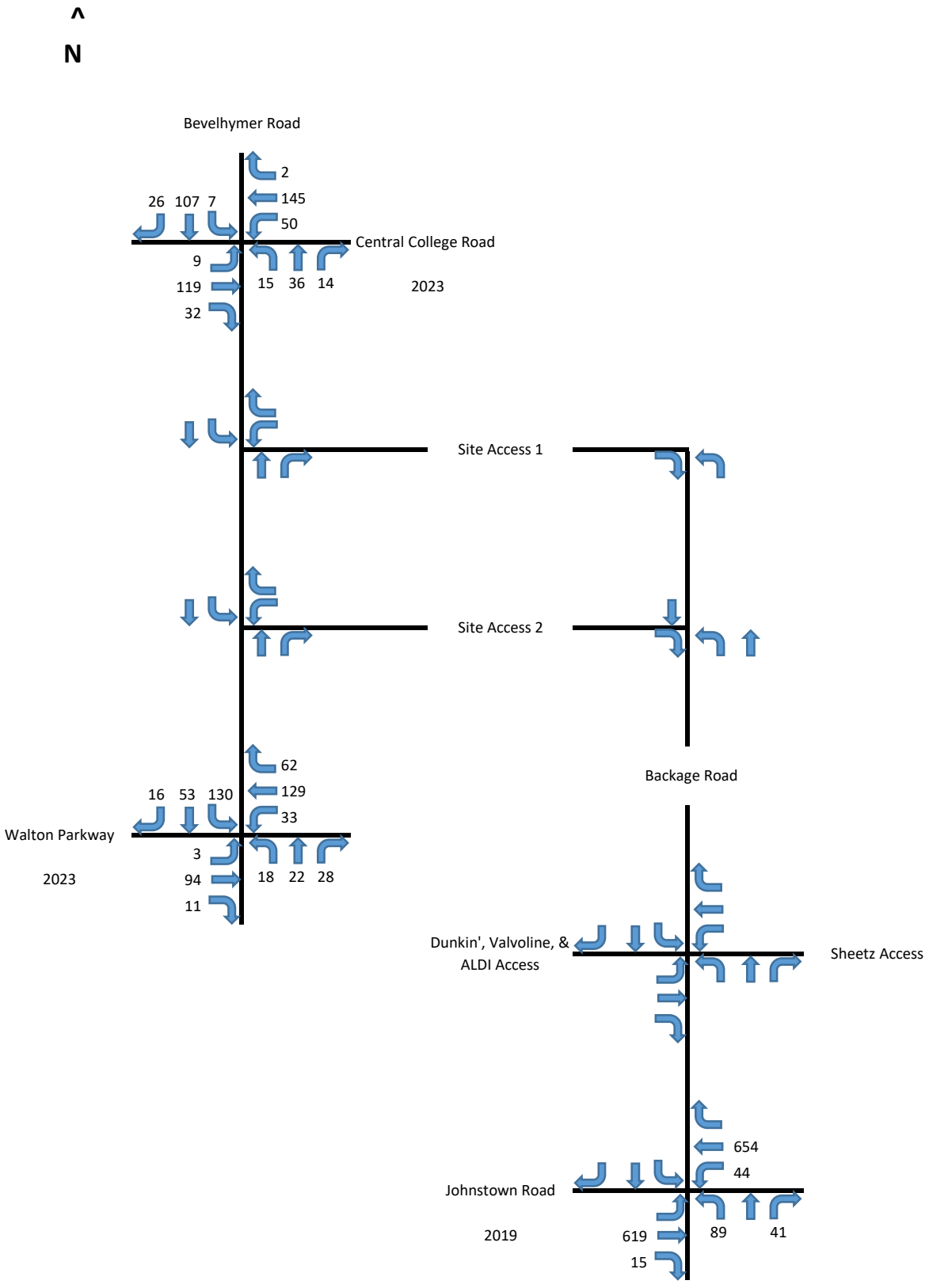
CARPENTER MARTY transportation	Year	Period	Scenario	Plate
		AM	Primrose Site Non-Pass-By Distribution	



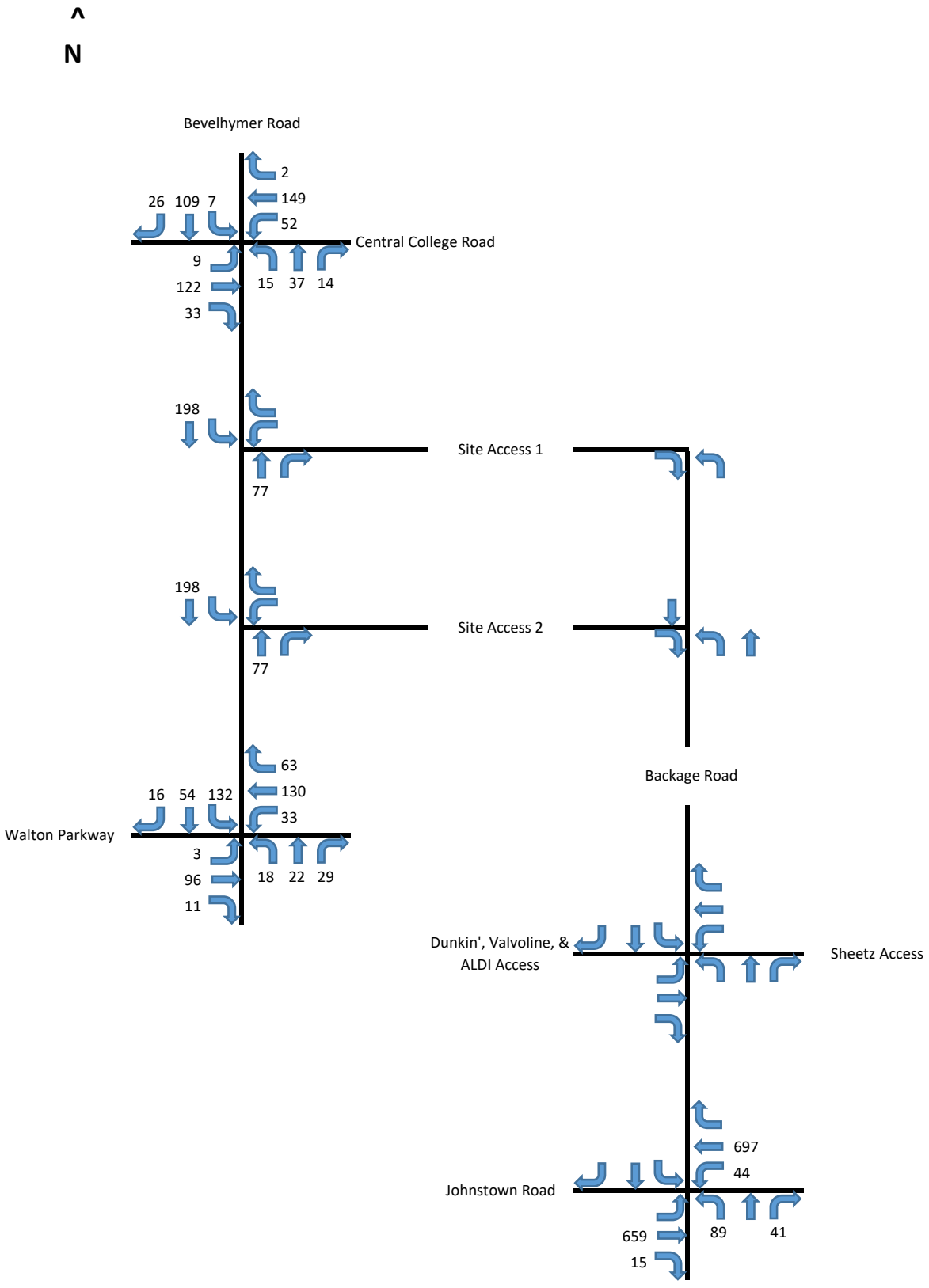
CARPENTER MARTY transportation	Year	Period	Scenario	Plate
		PM	Primrose Site Non-Pass-By Distribution	



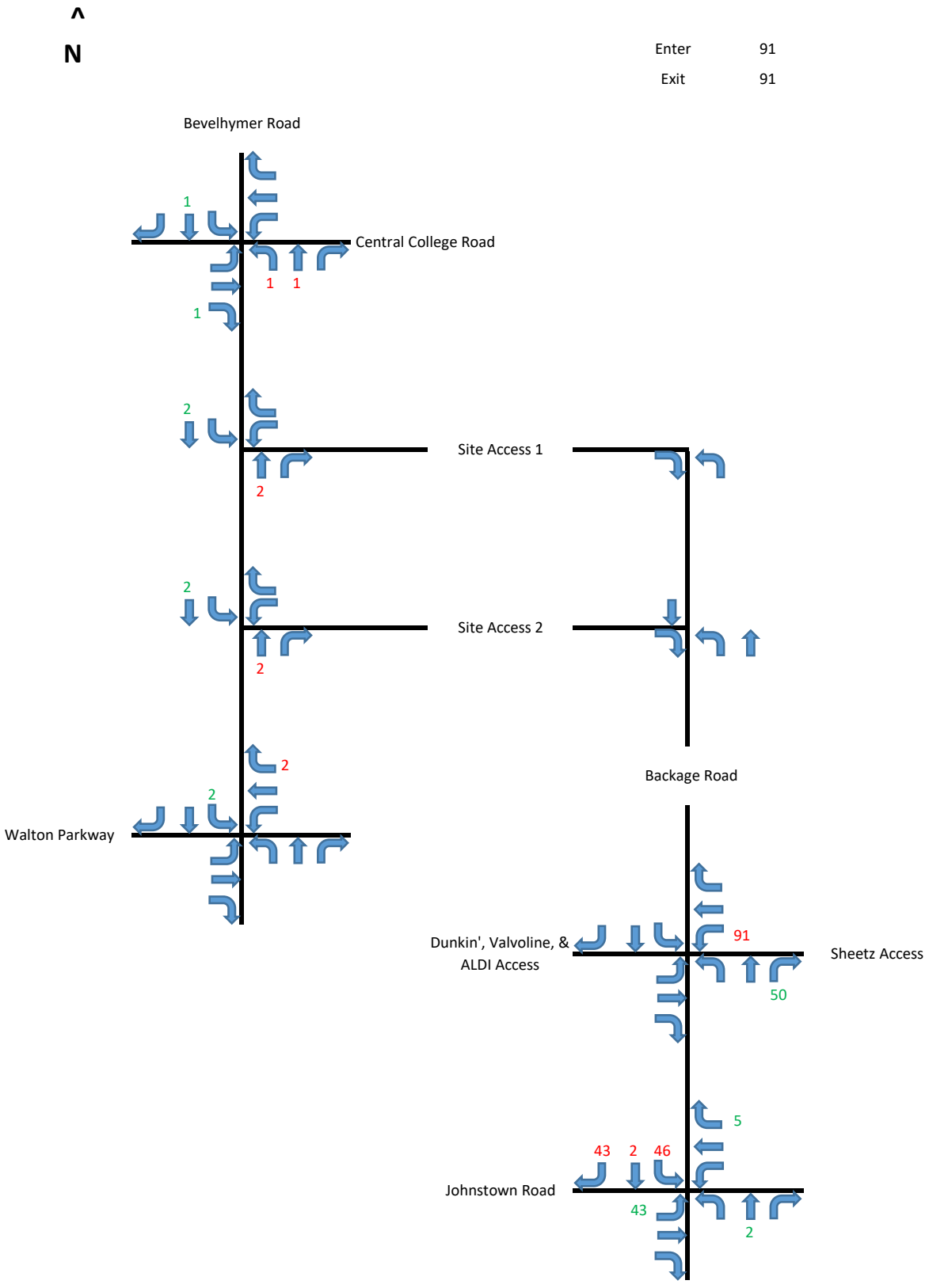
CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	Varies	AM	Count	A1



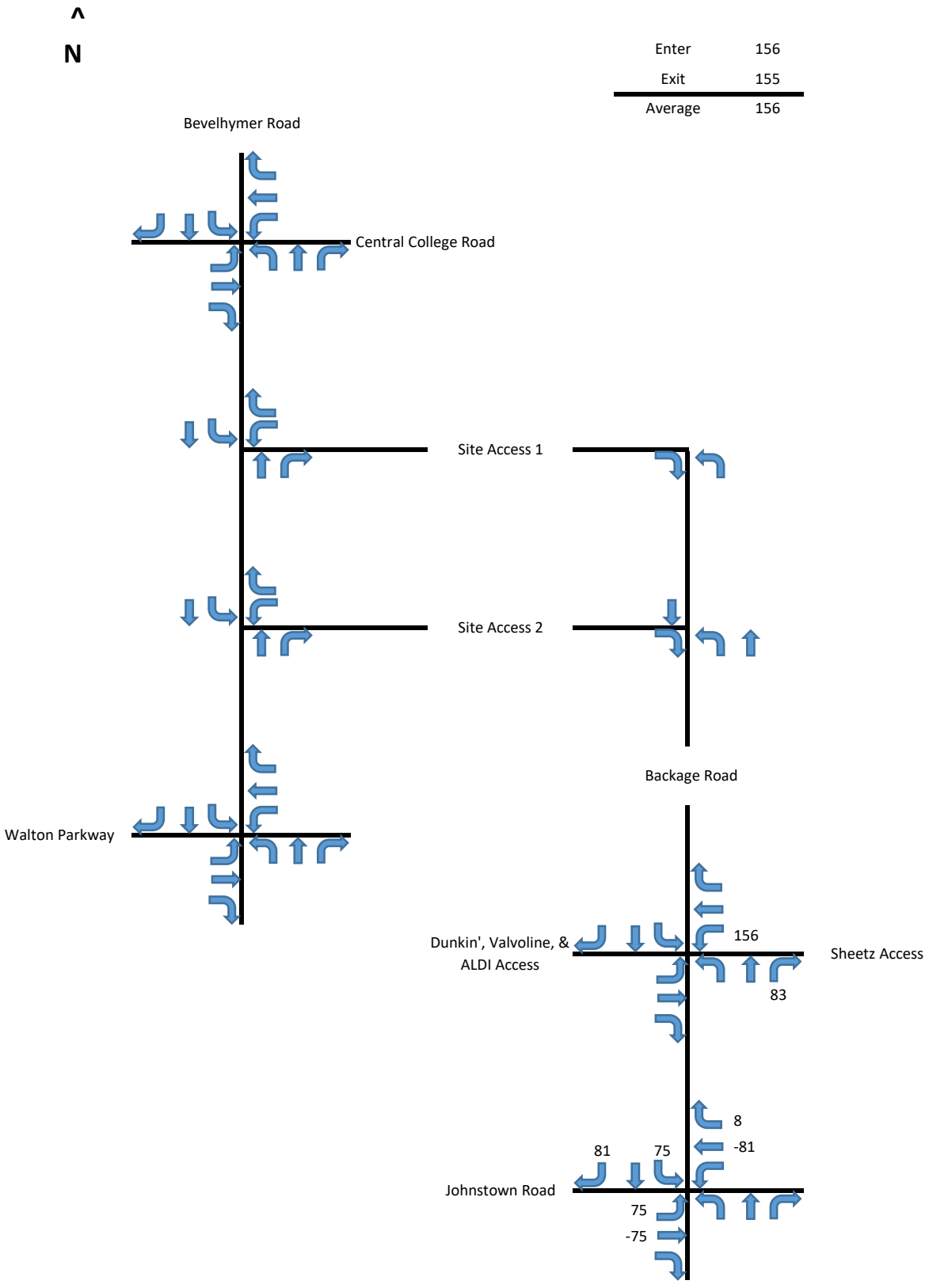
Year	Period	Scenario	Plate
2024	AM	Background	B1 = A1 Grown



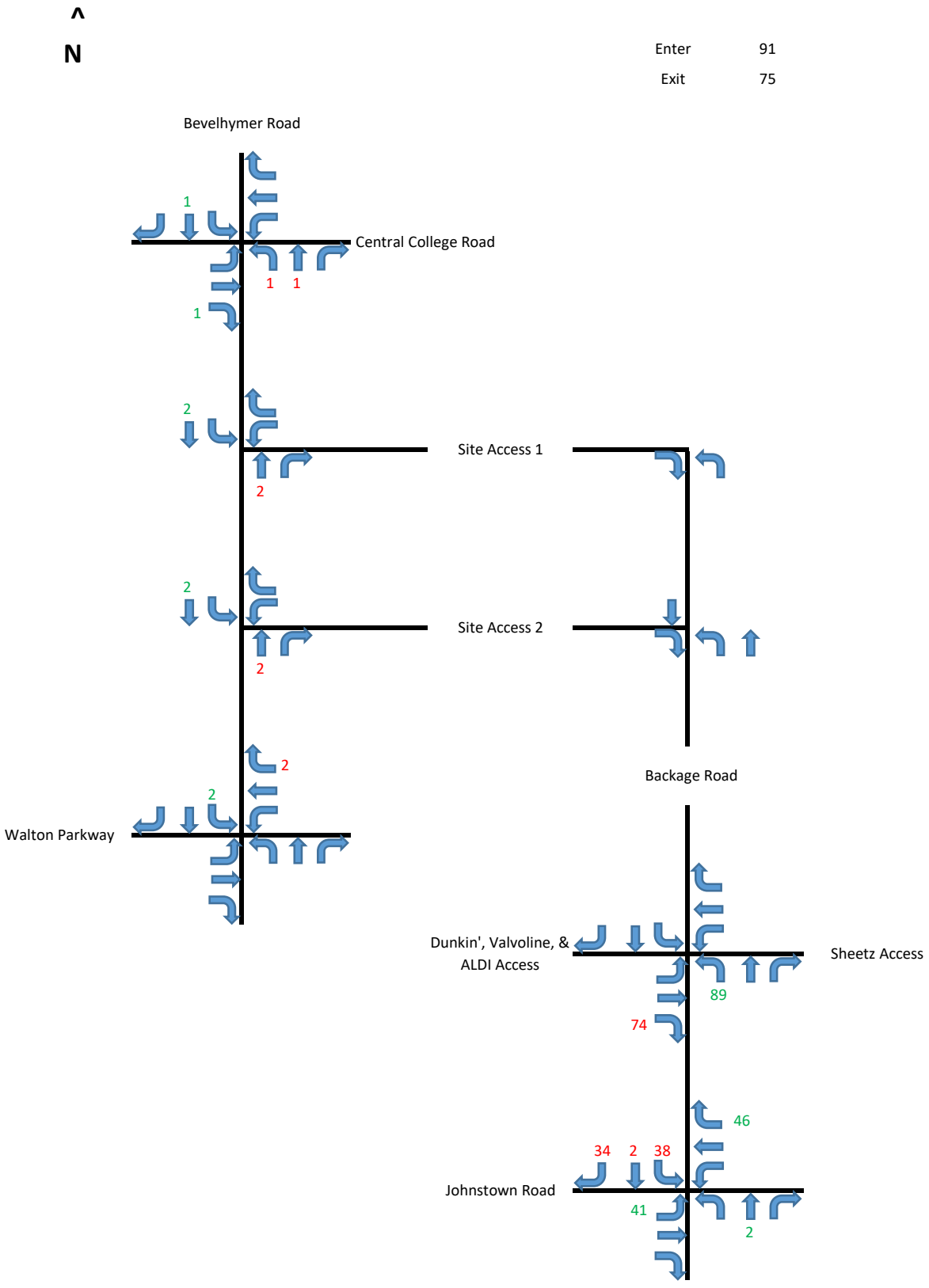
Year	Period	Scenario	Plate
	AM	Sheetz Non-Pass-By Traffic	C1



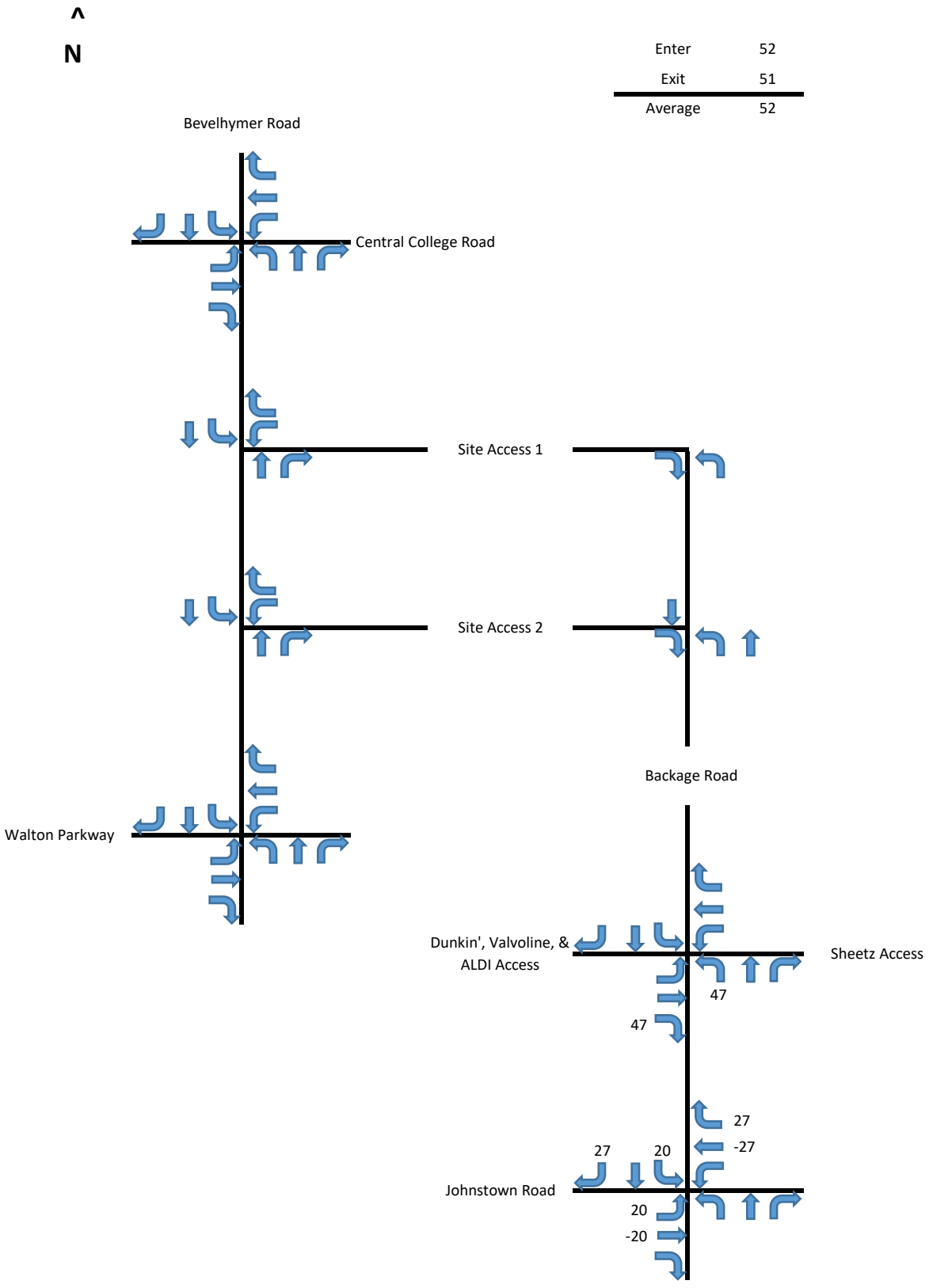
CARPENTER MARTY transportation	Year	Period	Scenario	Plate
		AM	Sheetz Pass-By Traffic	D1



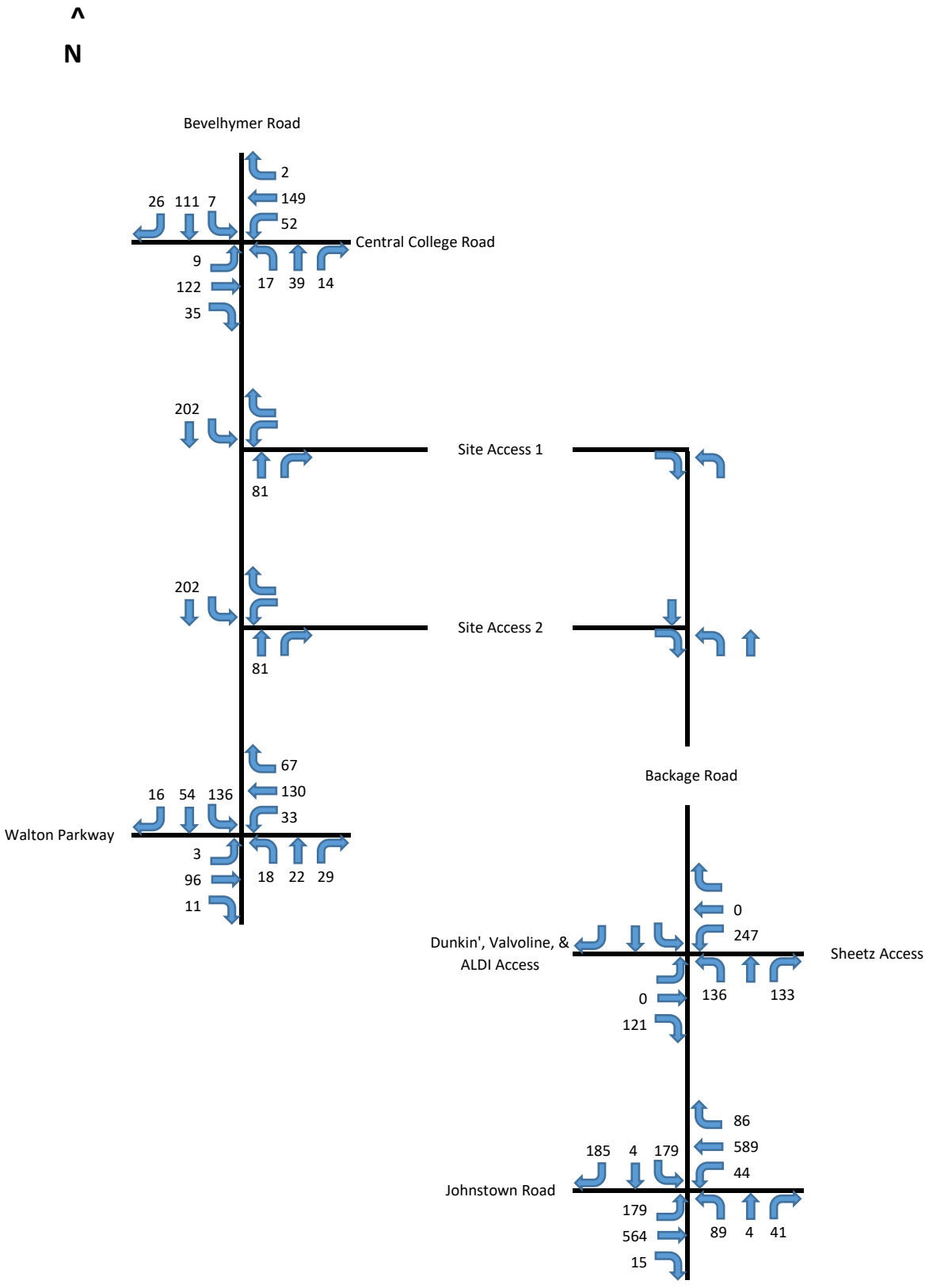
CARPENTER MARTY transportation	Year	Period	Scenario	Plate
		AM	Dunkin', Valvoline, & ALDI Non-Pass-By Traffic	E1



	Year	Period	Scenario	Plate
CARPENTER MARTY transportation		AM	Dunkin', Valvoline, & ALDI Pass-By Traffic	F1



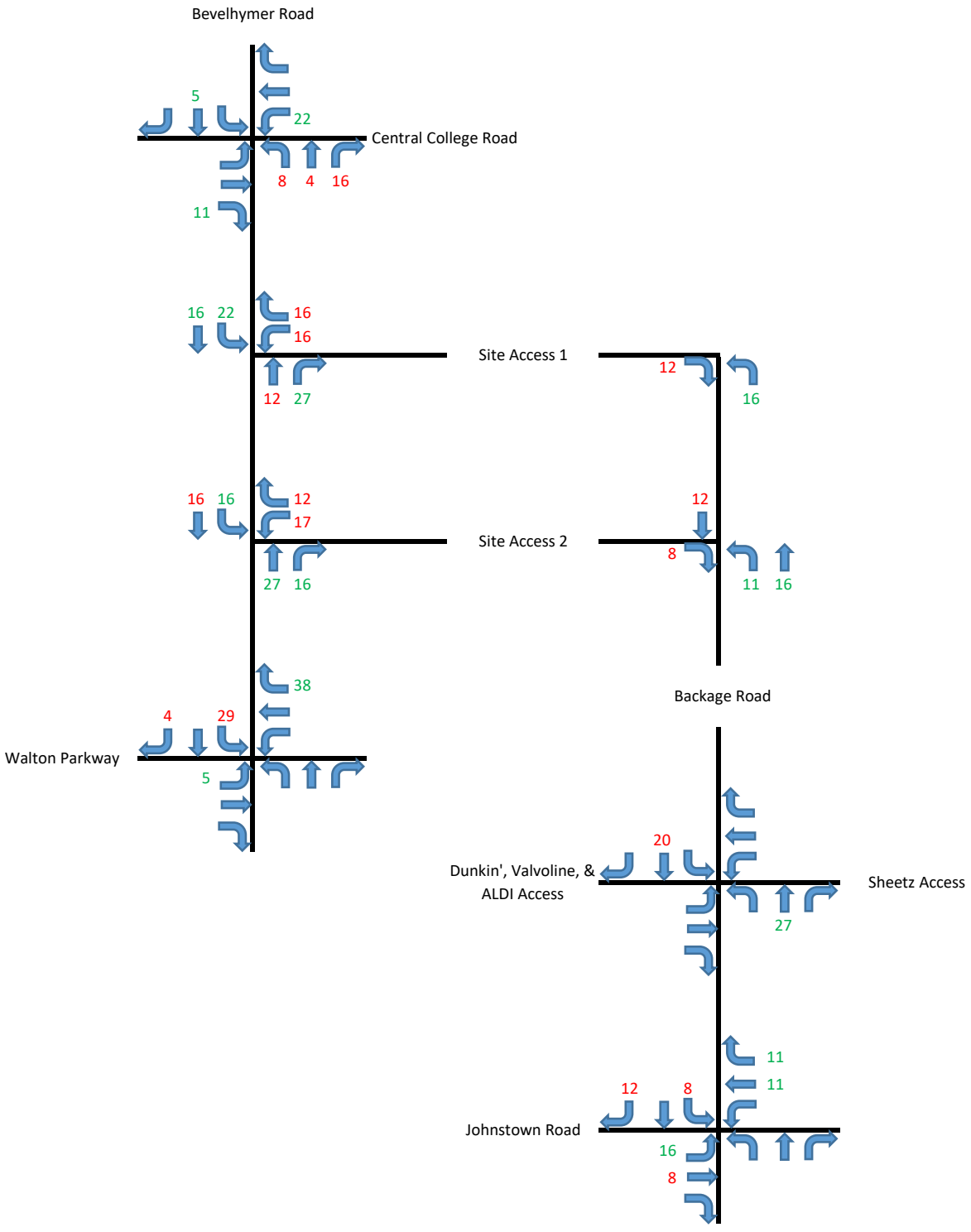
Year	Period	Scenario	Plate
2024	AM	No Build	G1 = B1 + C1 + D1 + E1 + F1



Year	Period	Scenario	Plate
	AM	Primrose Site Non-Pass-By Traffic	H1

^
N

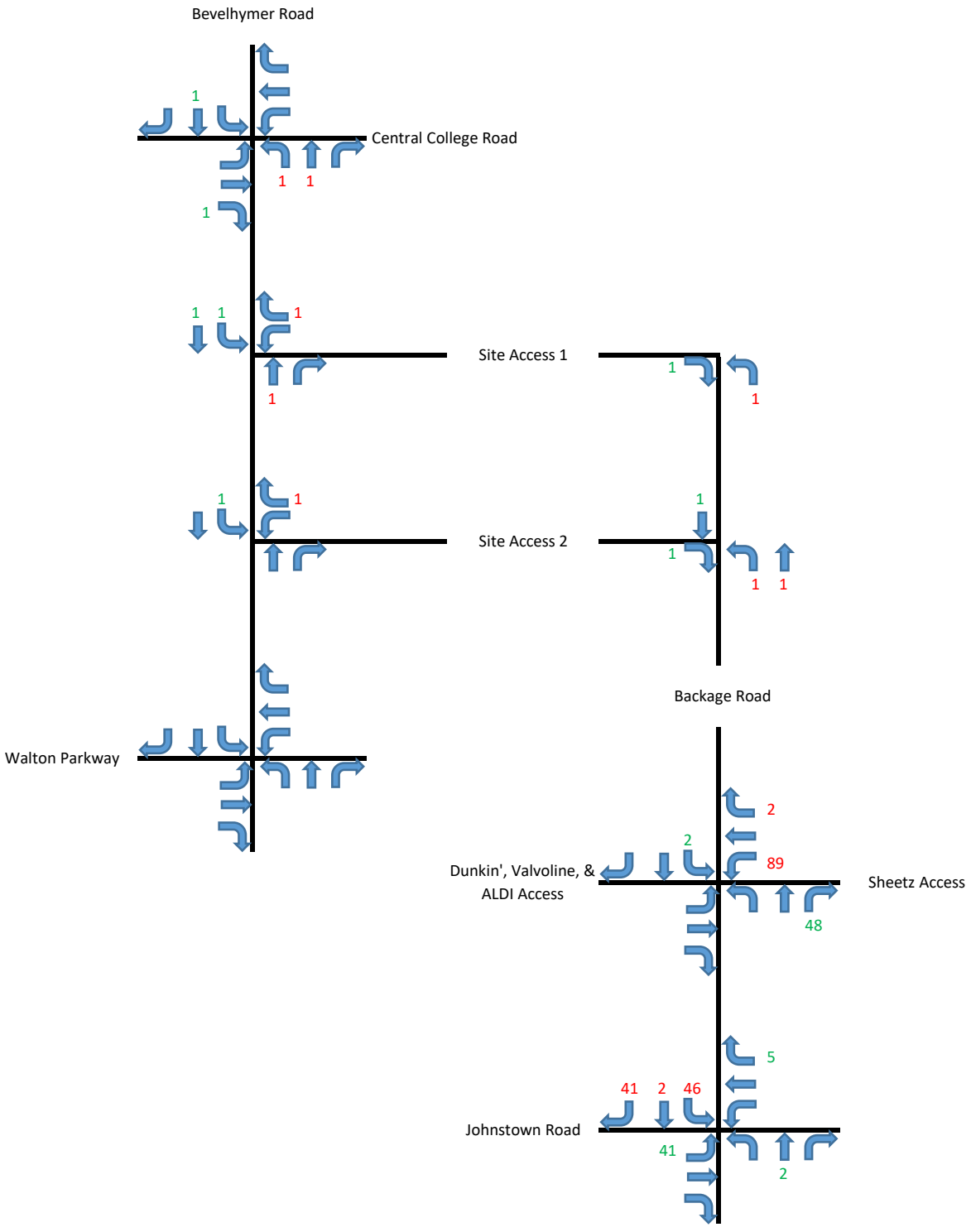
Enter 108
Exit 81



Year	Period	Scenario	Plate
	AM	Sheetz Non-Pass-By Traffic - with Backage Road	I1

^
N

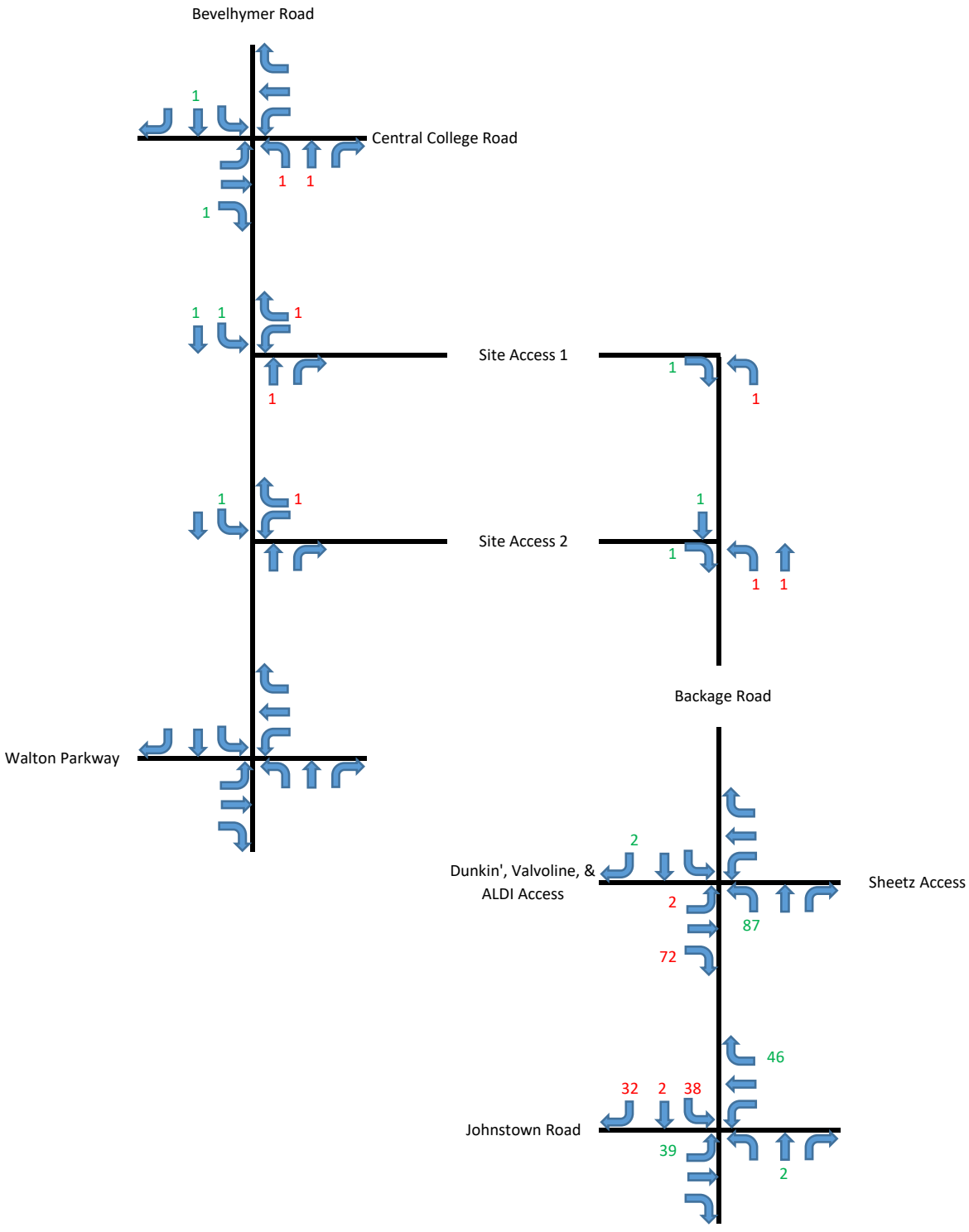
Enter 91
Exit 91



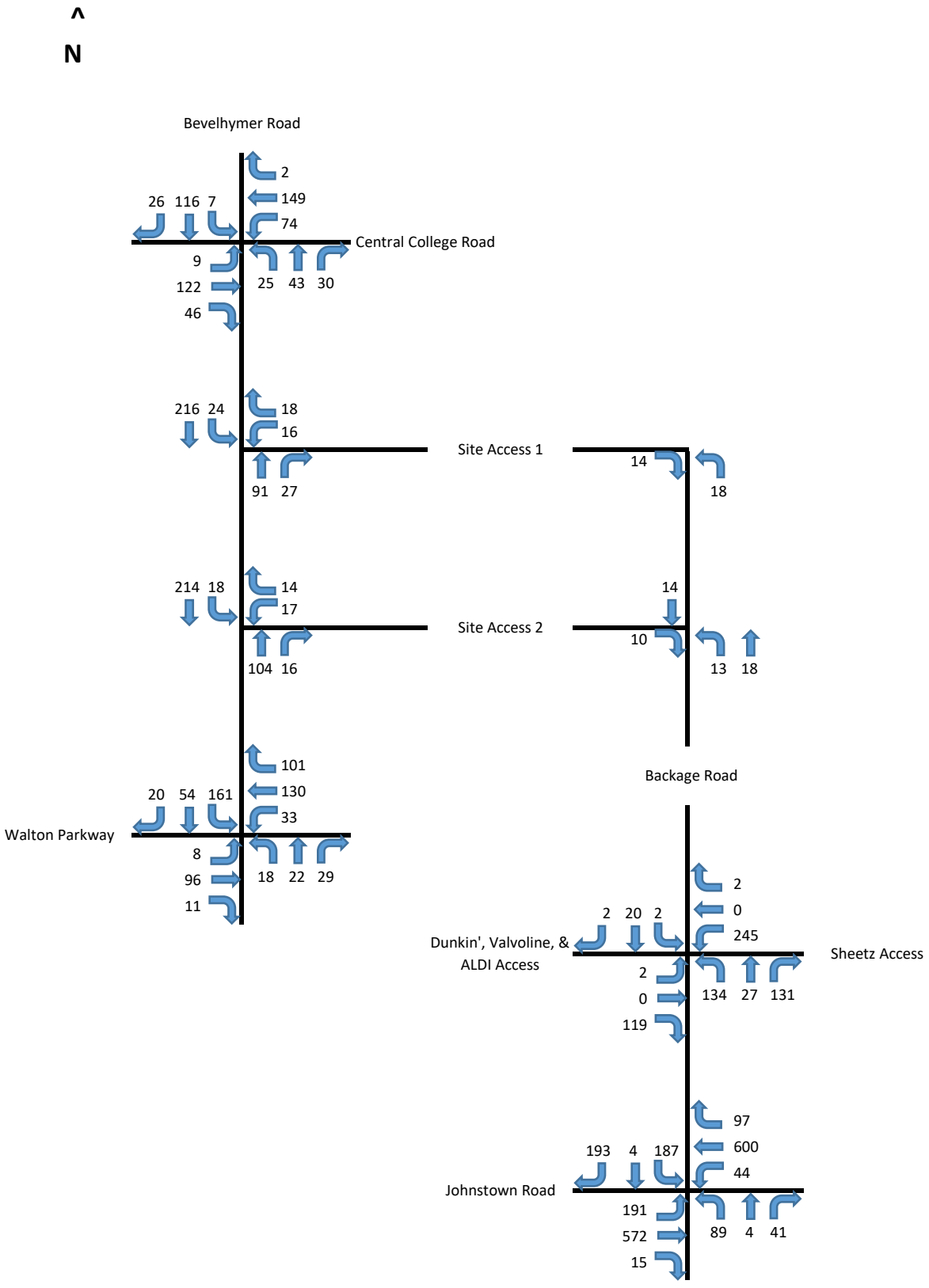
CARPENTER MARTY transportation	Year	Period	Scenario	Plate
		AM	Dunkin', Valvoline, & ALDI Non-Pass-By Traffic - with Backage Road	J1

^
N

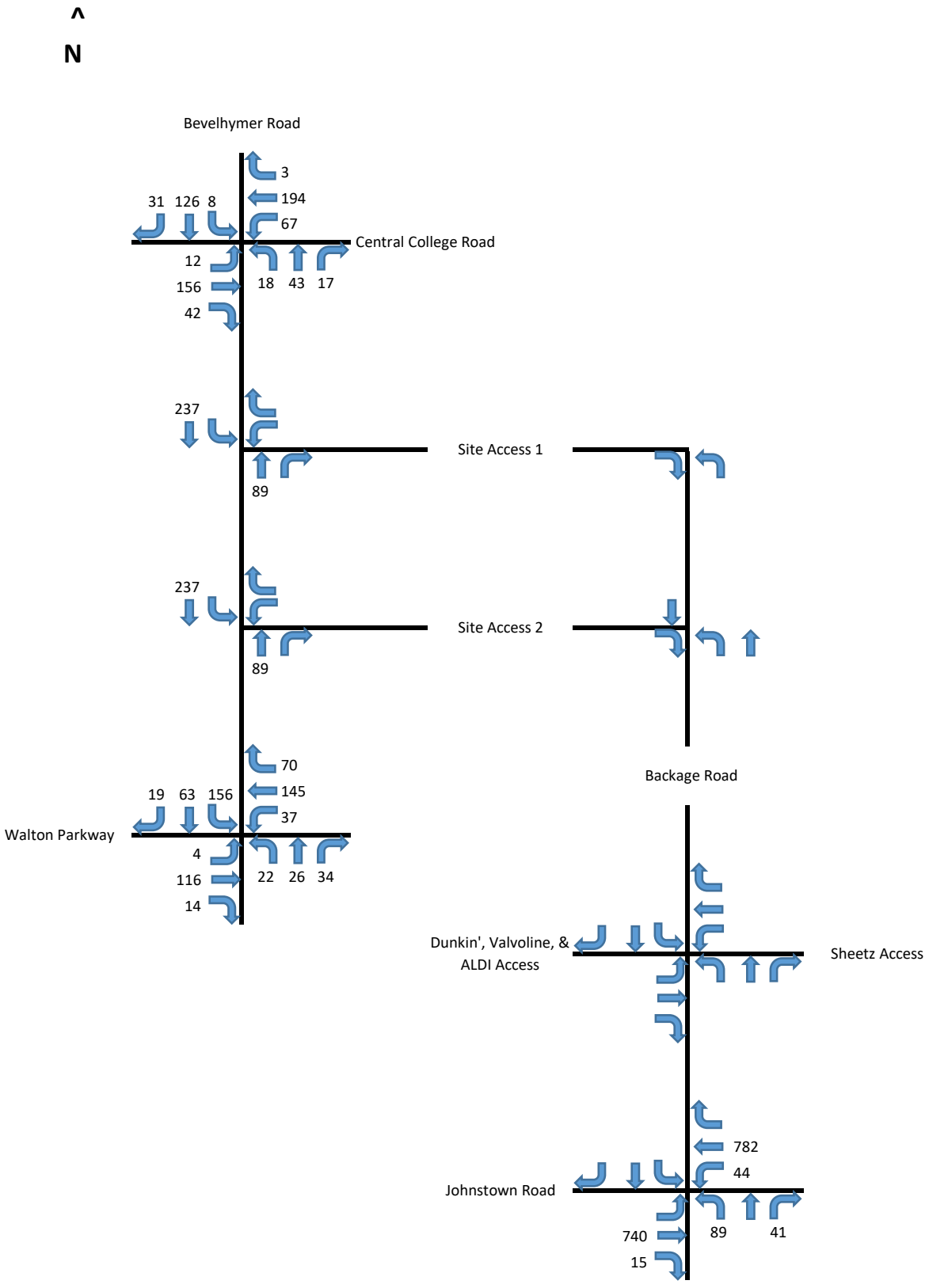
Enter 91
Exit 75



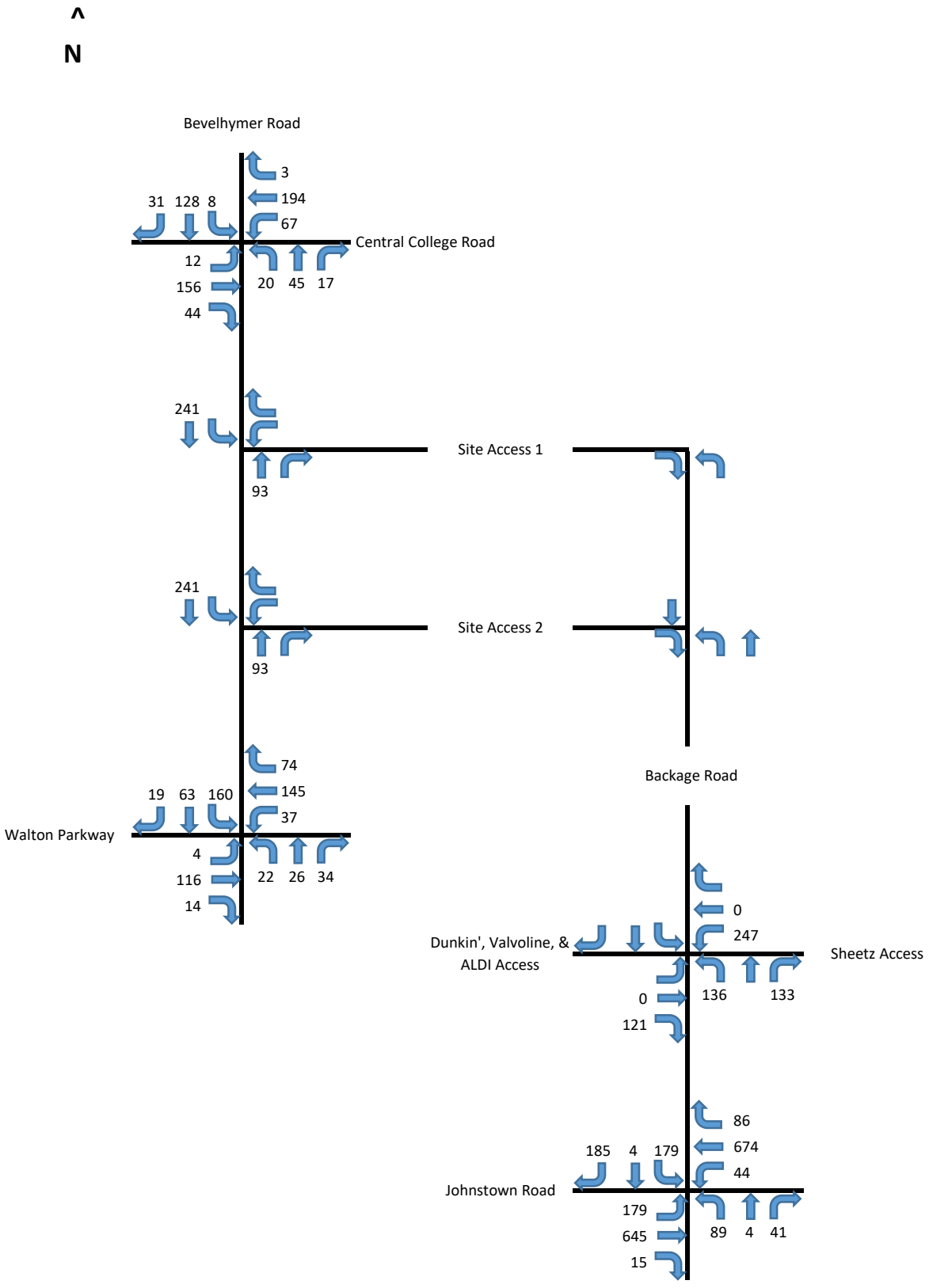
CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2024	AM	Build	K1 = B1 + D1 + F1 + H1 + I1 + J1



Year	Period	Scenario	Plate
2034	AM	Background	L1 = A1 Grown

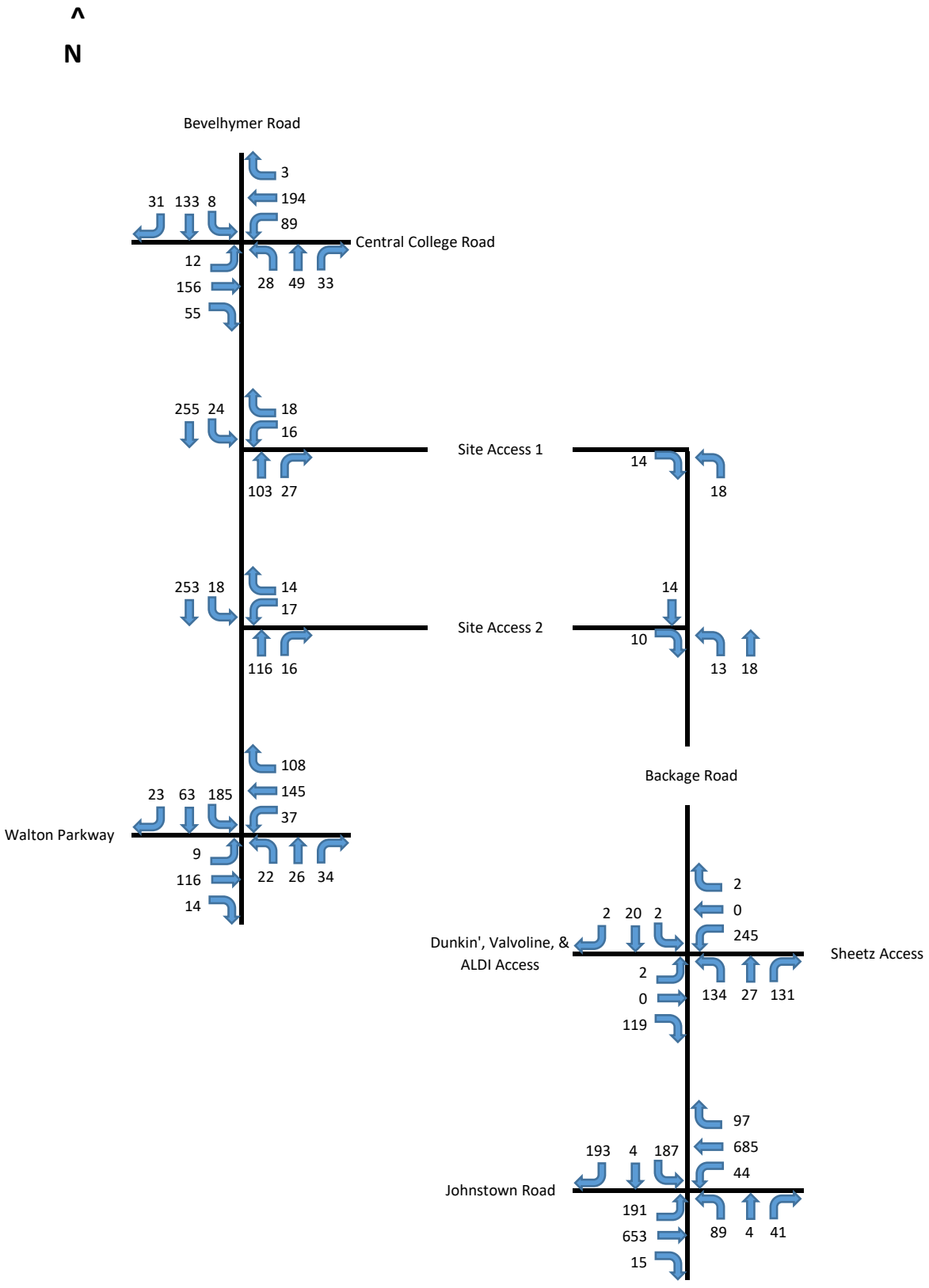


Year	Period	Scenario	Plate
2034	AM	No Build	M1 = C1 + D1 + E1 + F1 + L1

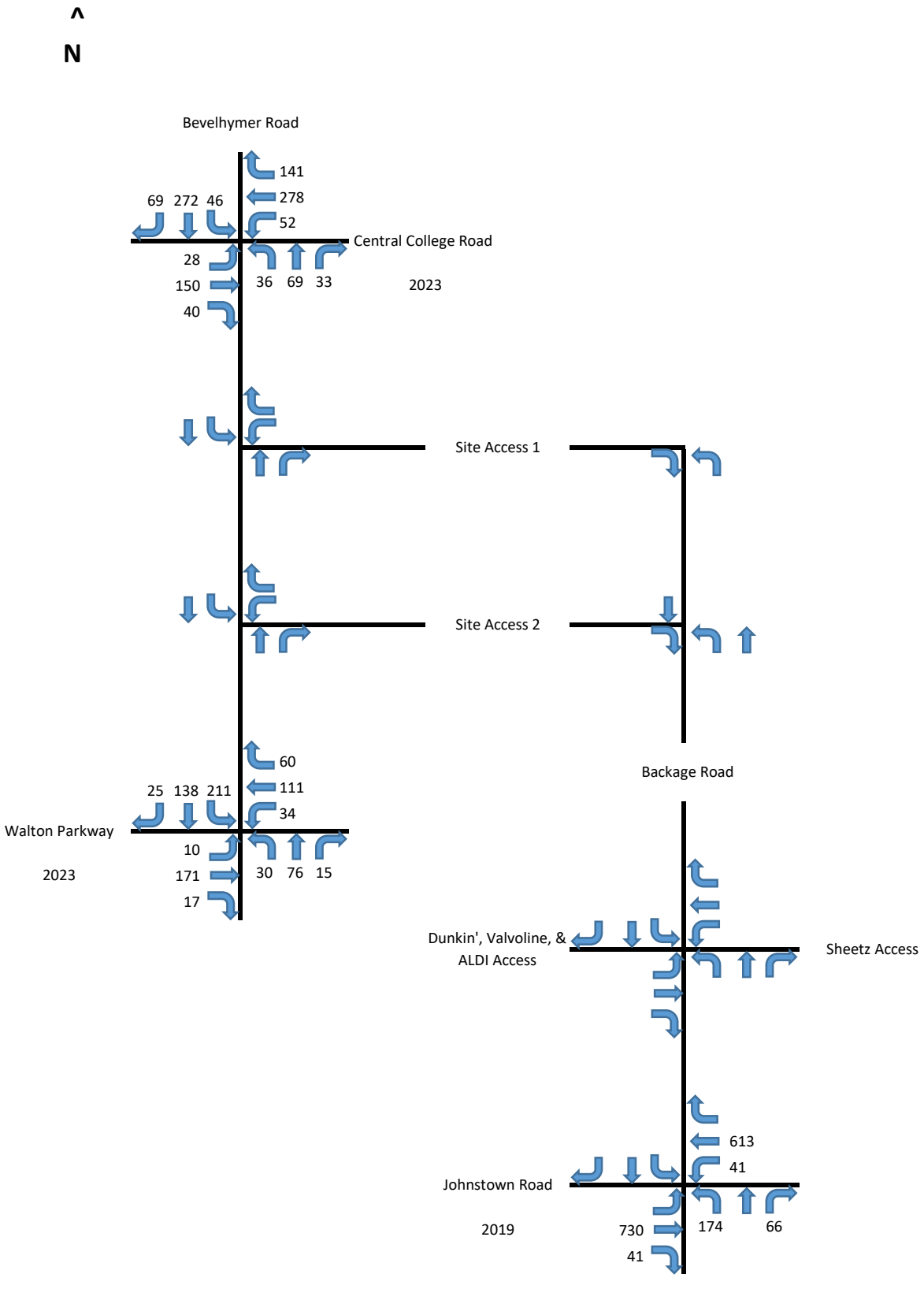


Bevelhymer Mixed Commercial TIS
Traffic Volume Calculations

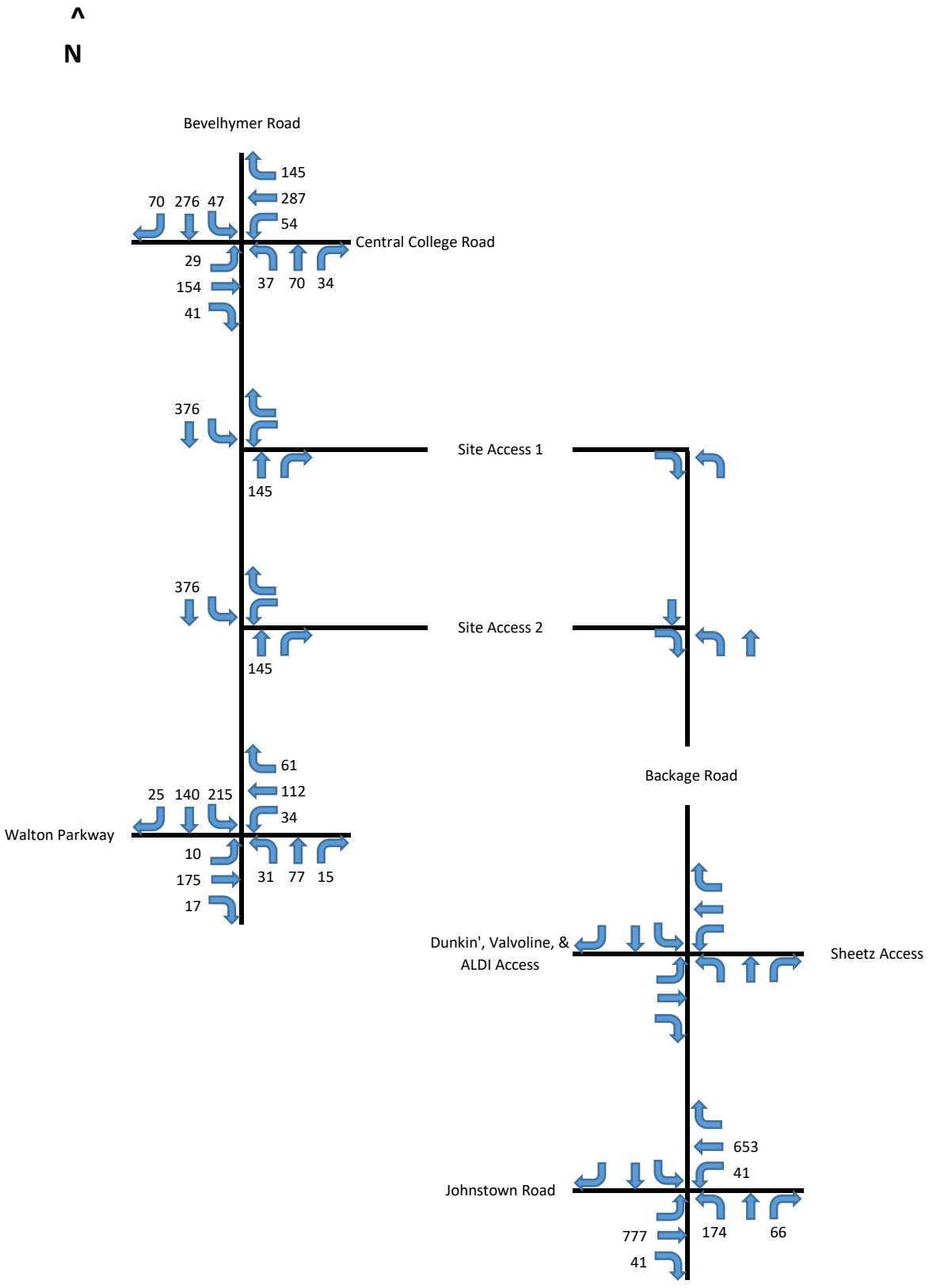
CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2034	AM	Build	N1 = D1 + F1 + H1 + I1 + J1 + L1



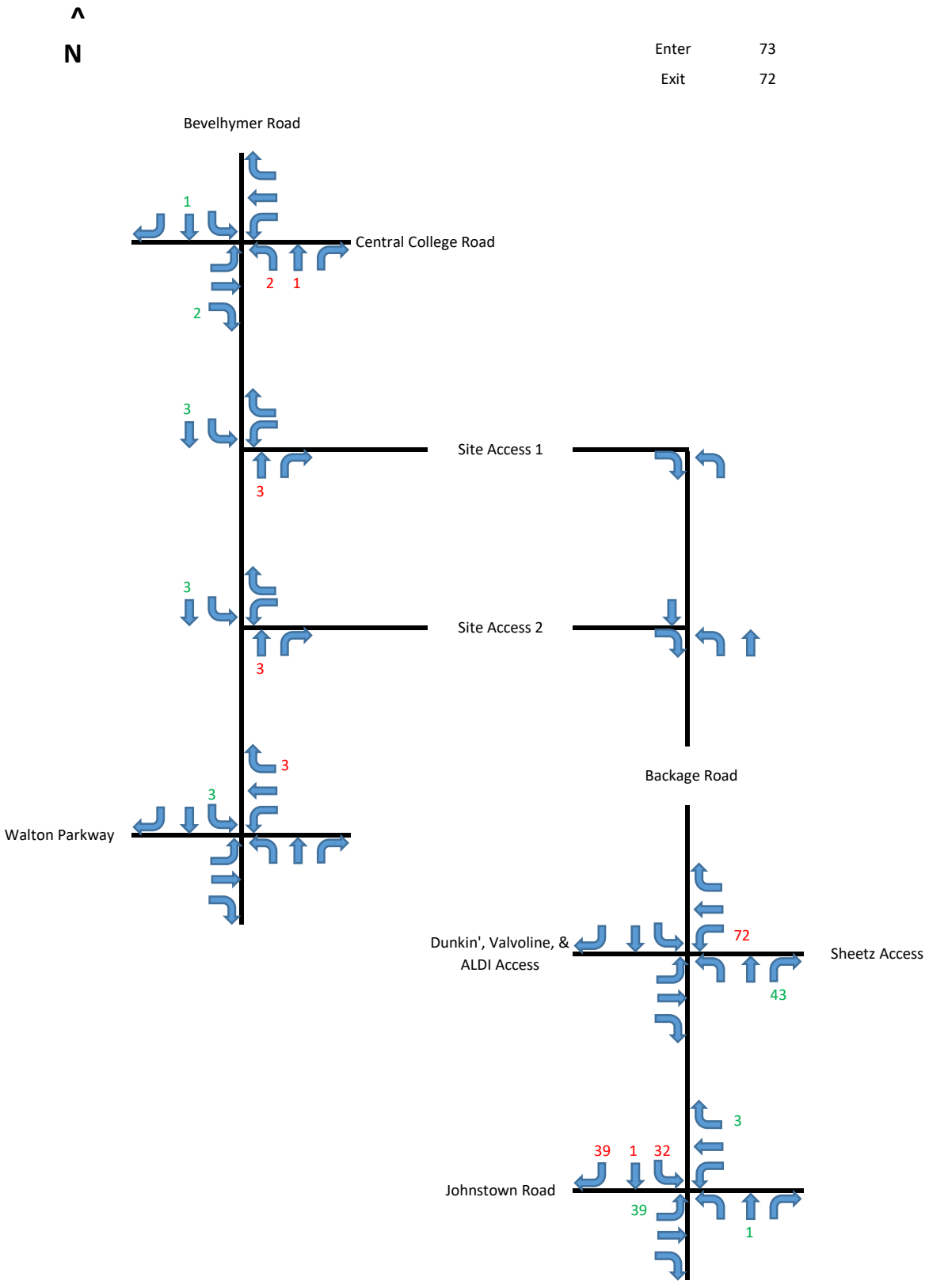
CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	Varies	PM	Count	A2



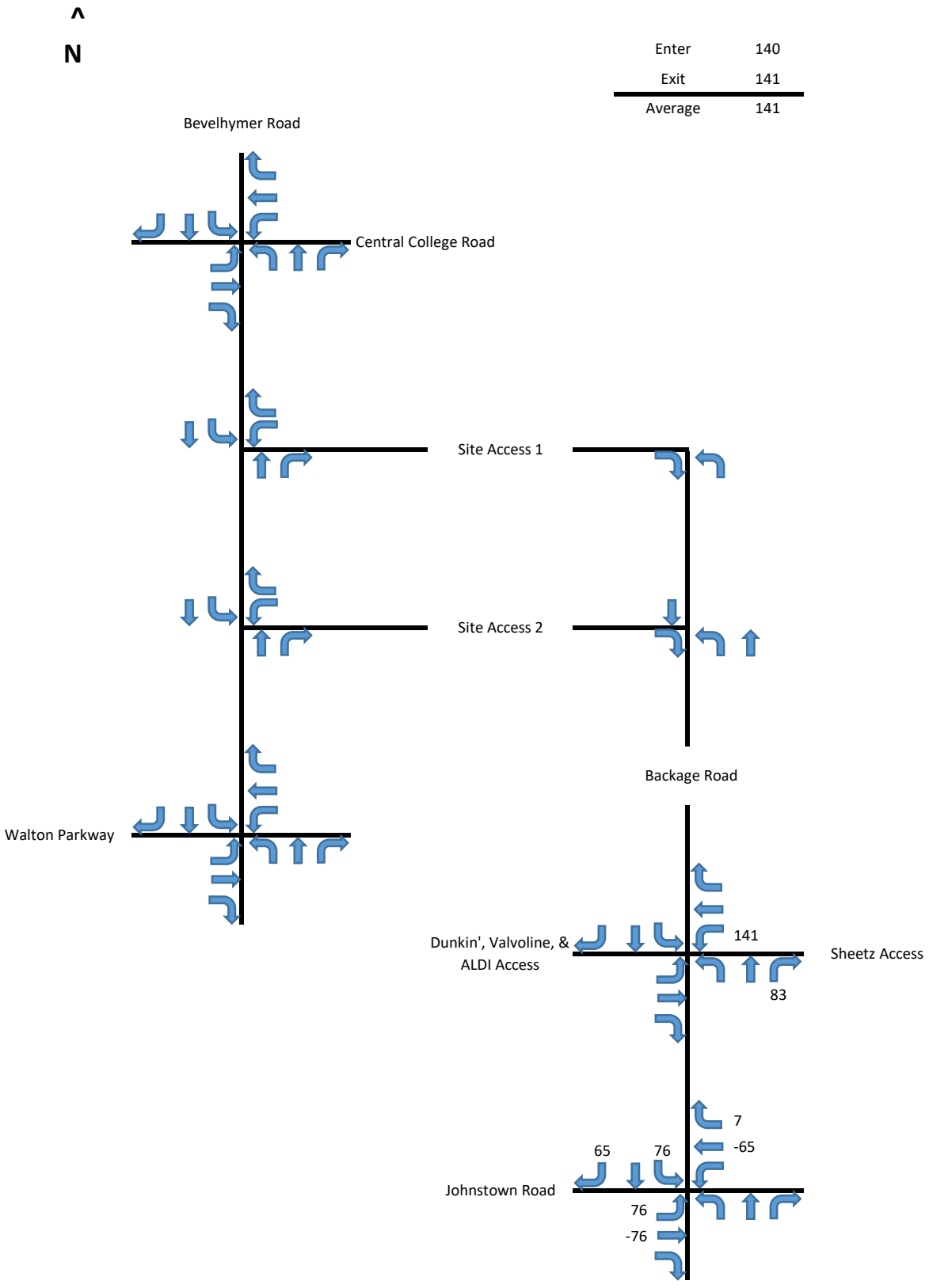
Year	Period	Scenario	Plate
2024	PM	Background	B2 = A2 Grown



	Year	Period	Scenario	Plate
CARPENTER MARTY transportation		PM	Sheetz Non-Pass-By Traffic	C2



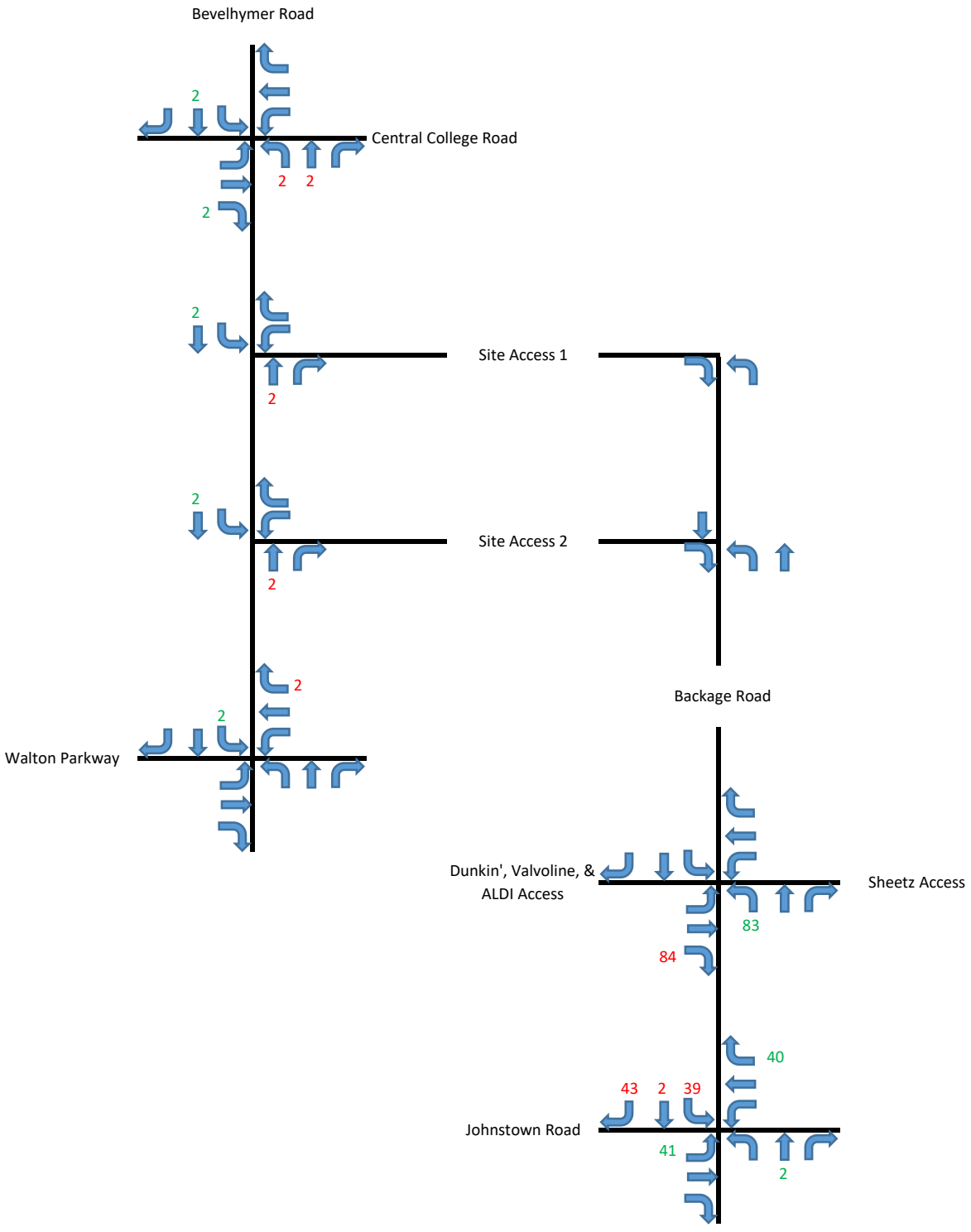
CARPENTER MARTY transportation	Year	Period	Scenario	Plate
		PM	Sheetz Pass-By Traffic	D2



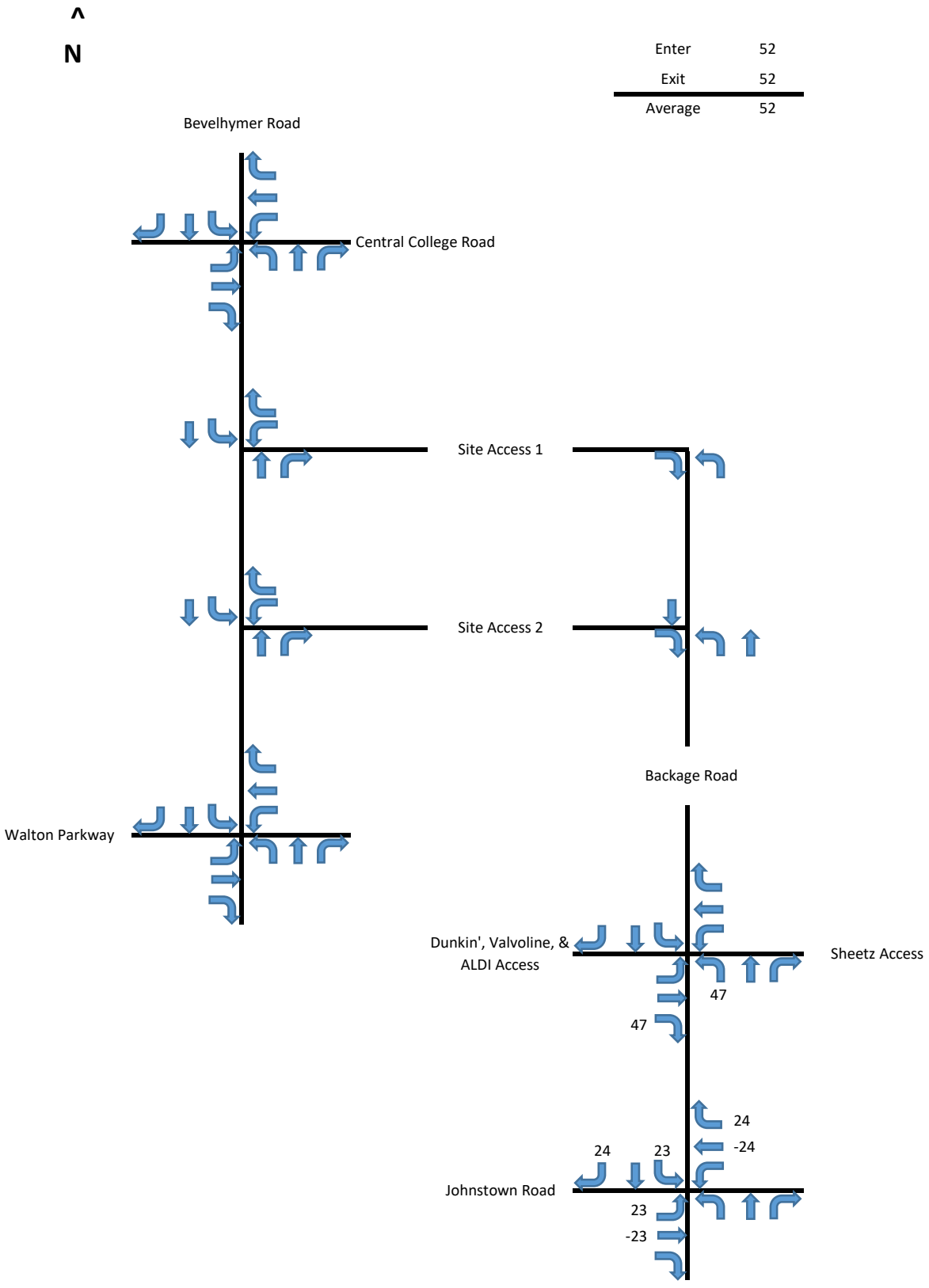
CARPENTER MARTY transportation	Year	Period	Scenario	Plate
		PM	Dunkin', Valvoline, & ALDI Non-Pass-By Traffic	E2

^
N

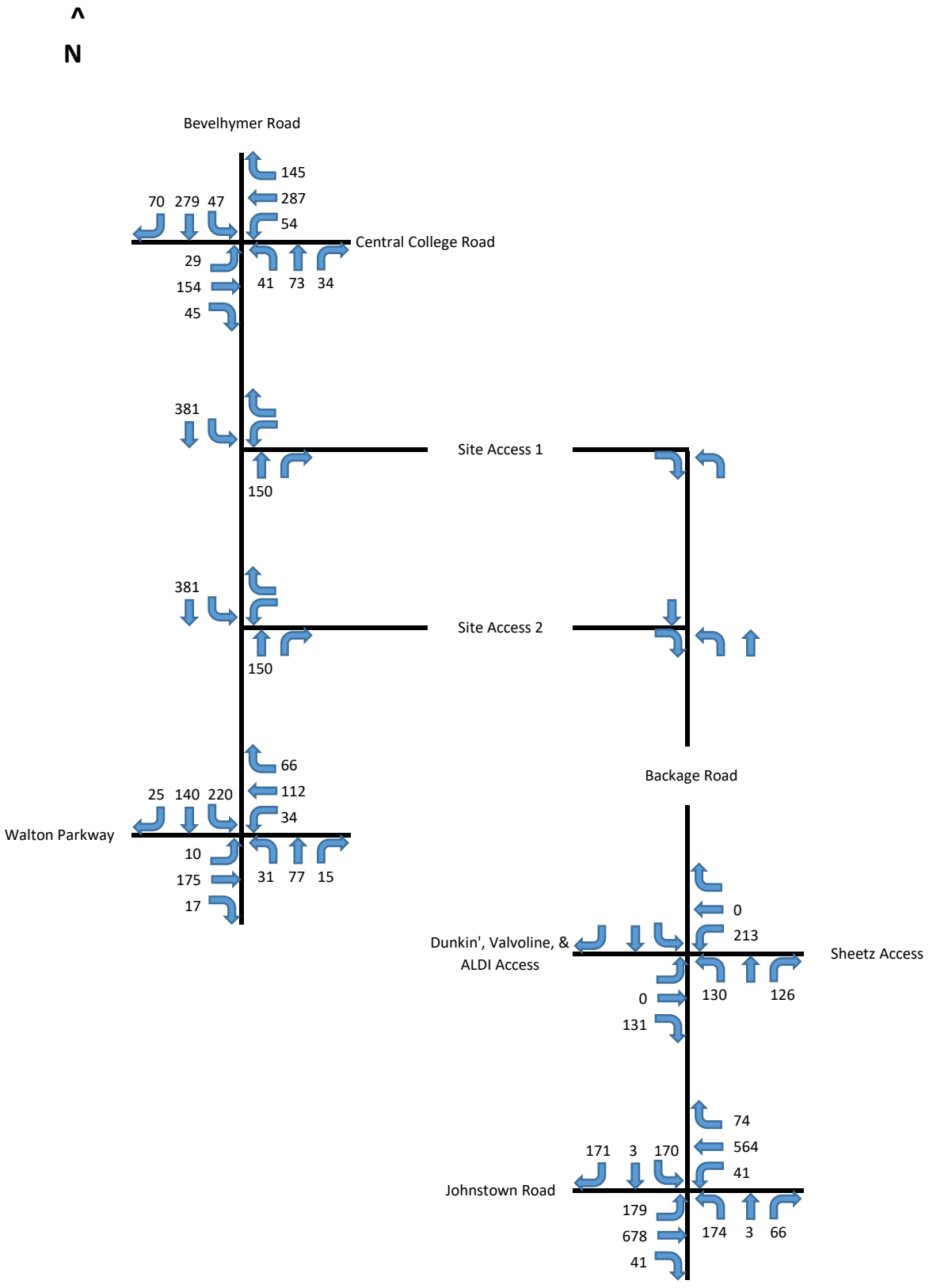
Enter 88
Exit 87



CARPENTER MARTY transportation	Year	Period	Scenario	Plate
		PM	Dunkin', Valvoline, & ALDI Pass-By Traffic	F2



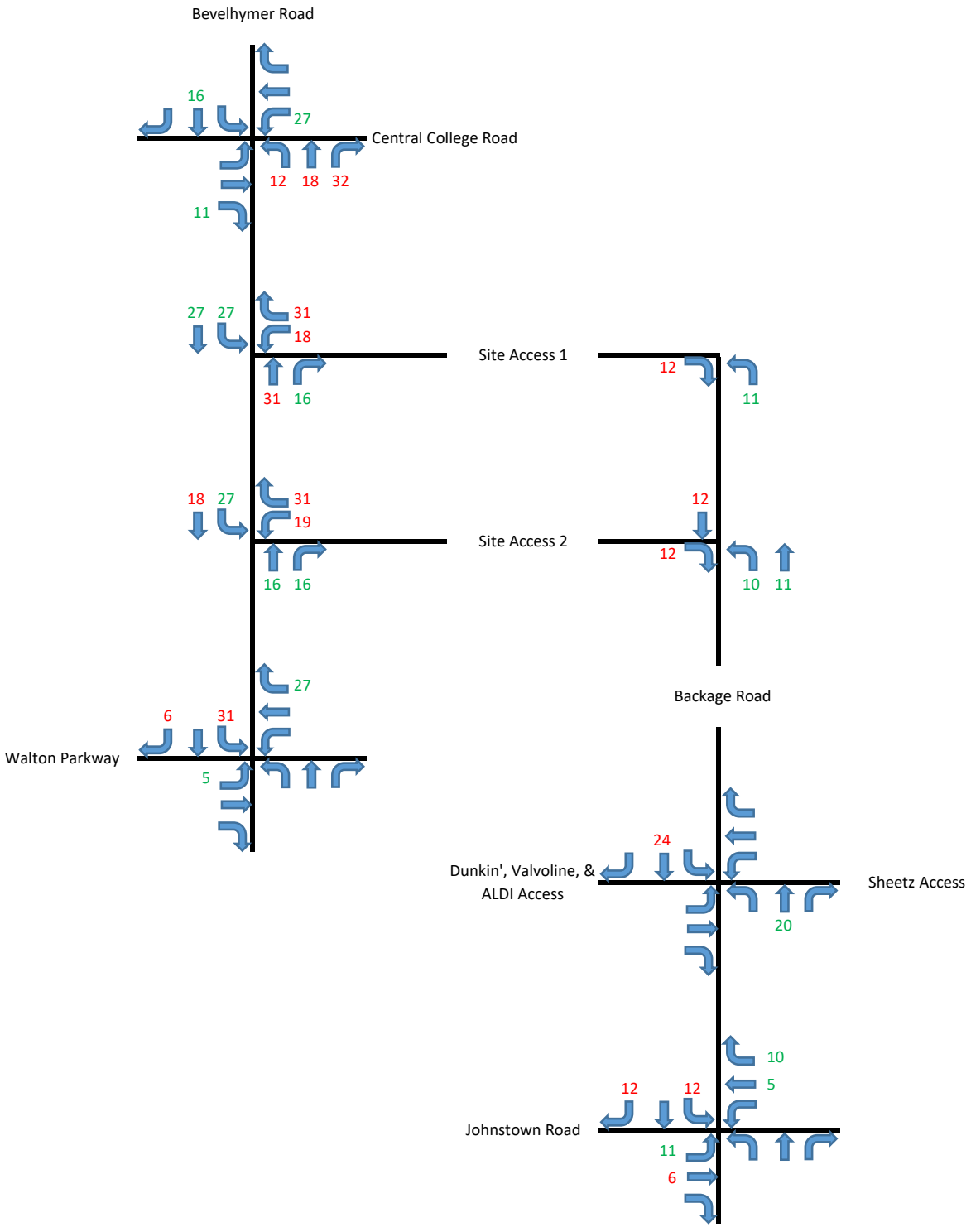
	Year	Period	Scenario	Plate
CARPENTER MARTY transportation	2024	PM	No Build	G2 = B2 + C2 + D2 + E2 + F2



Year	Period	Scenario	Plate
	PM	Primrose Site Non-Pass-By Traffic	H2

^
N

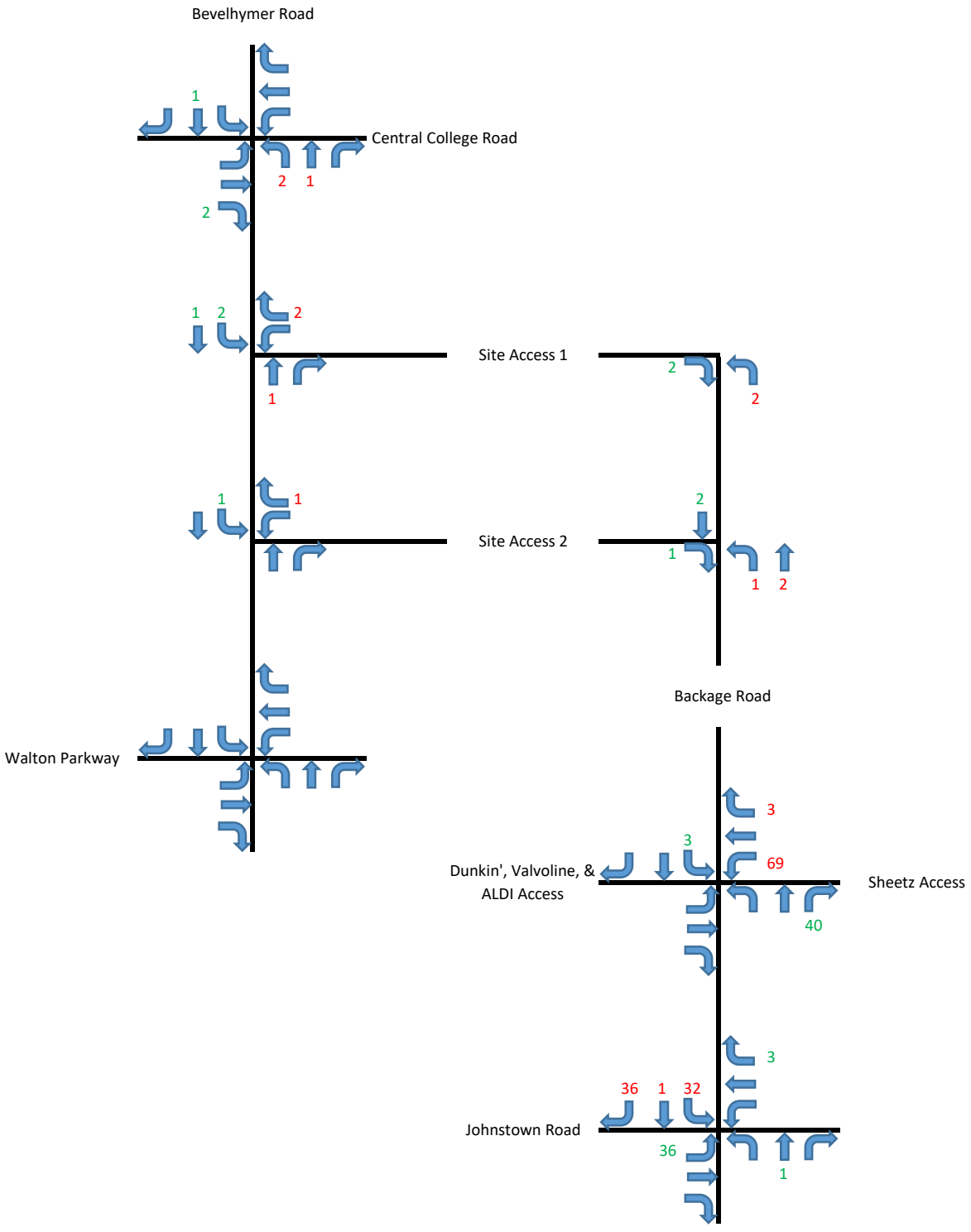
Enter 107
Exit 123



CARPENTER MARTY transportation	Year	Period	Scenario	Plate
		PM	Sheetz Non-Pass-By Traffic - with Backage Road	I2

^
N

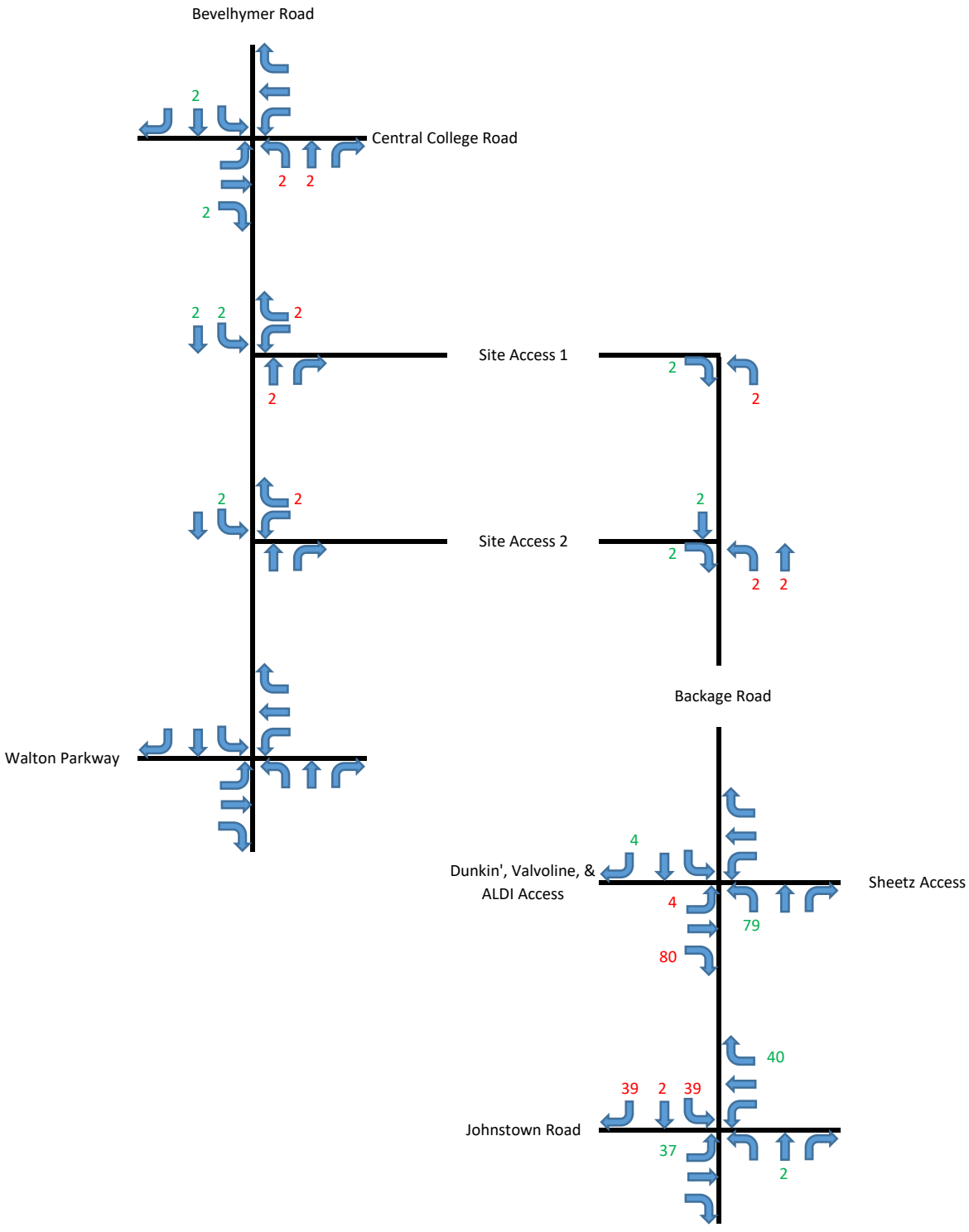
Enter 73
Exit 72



CARPENTER MARTY transportation	Year	Period	Scenario	Plate
		PM	Dunkin', Valvoline, & ALDI Non-Pass-By Traffic - with Backage Road	J2

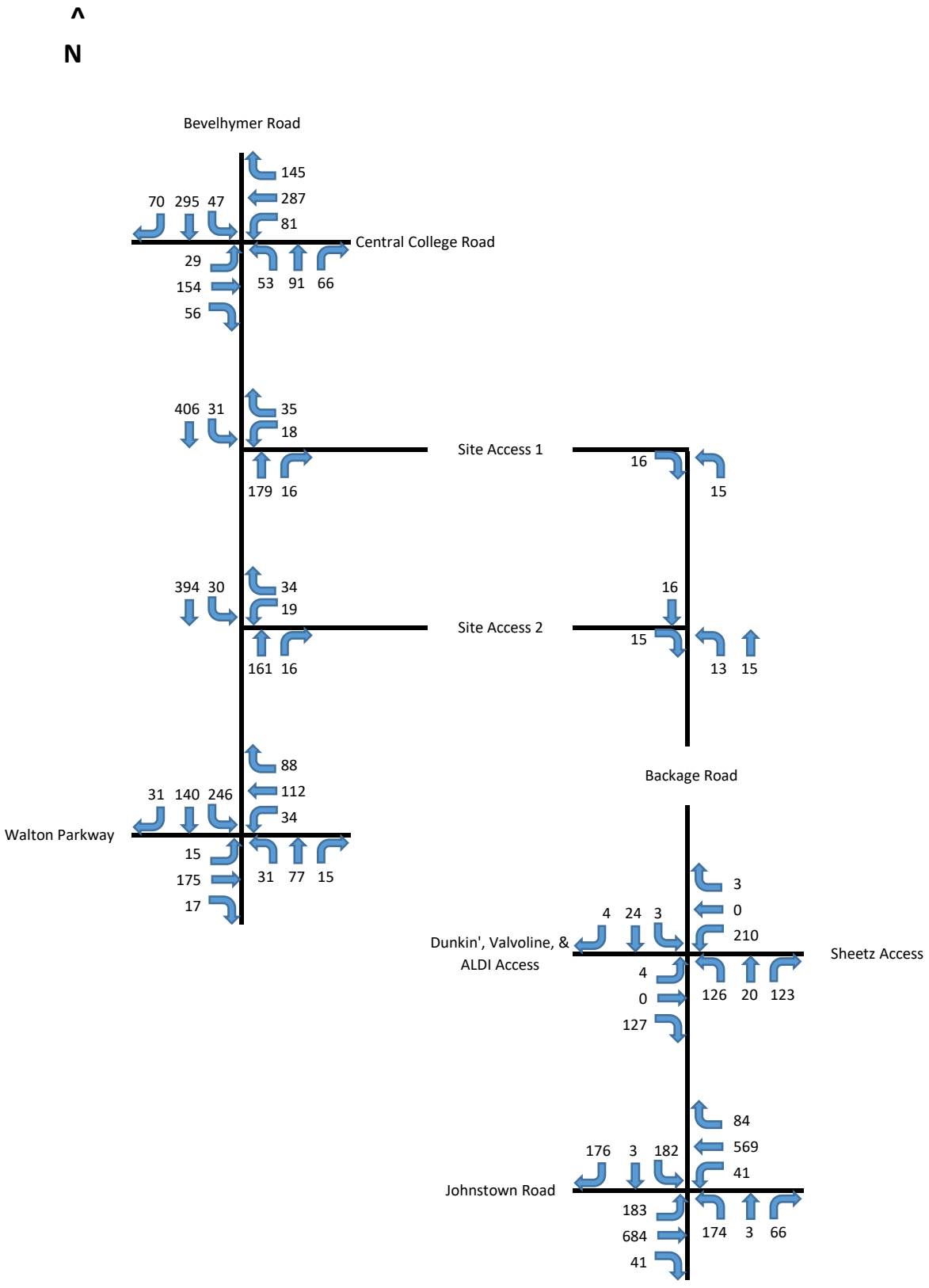
^
N

Enter 88
Exit 87

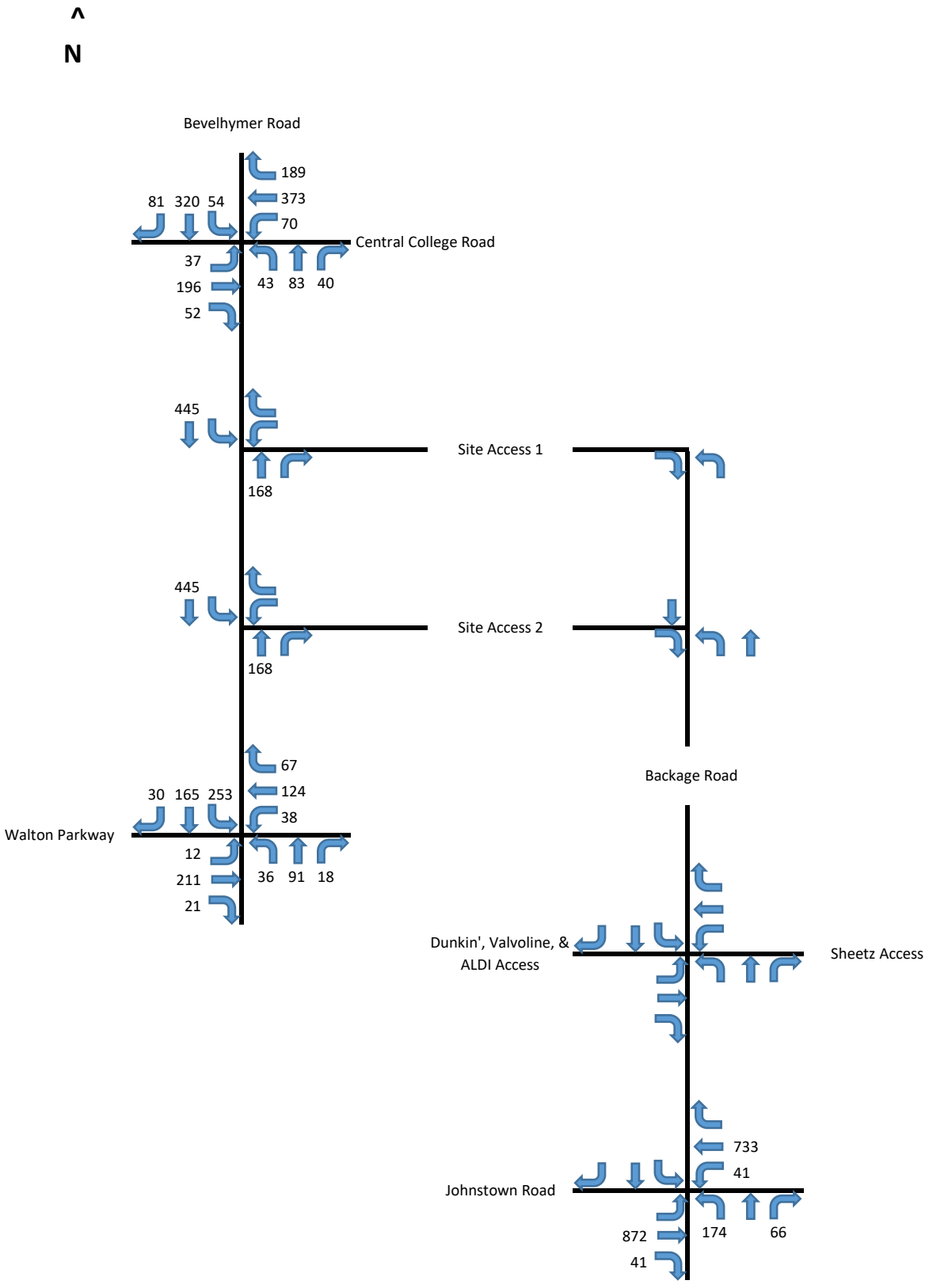


Bevelhymer Mixed Commercial TIS
Traffic Volume Calculations

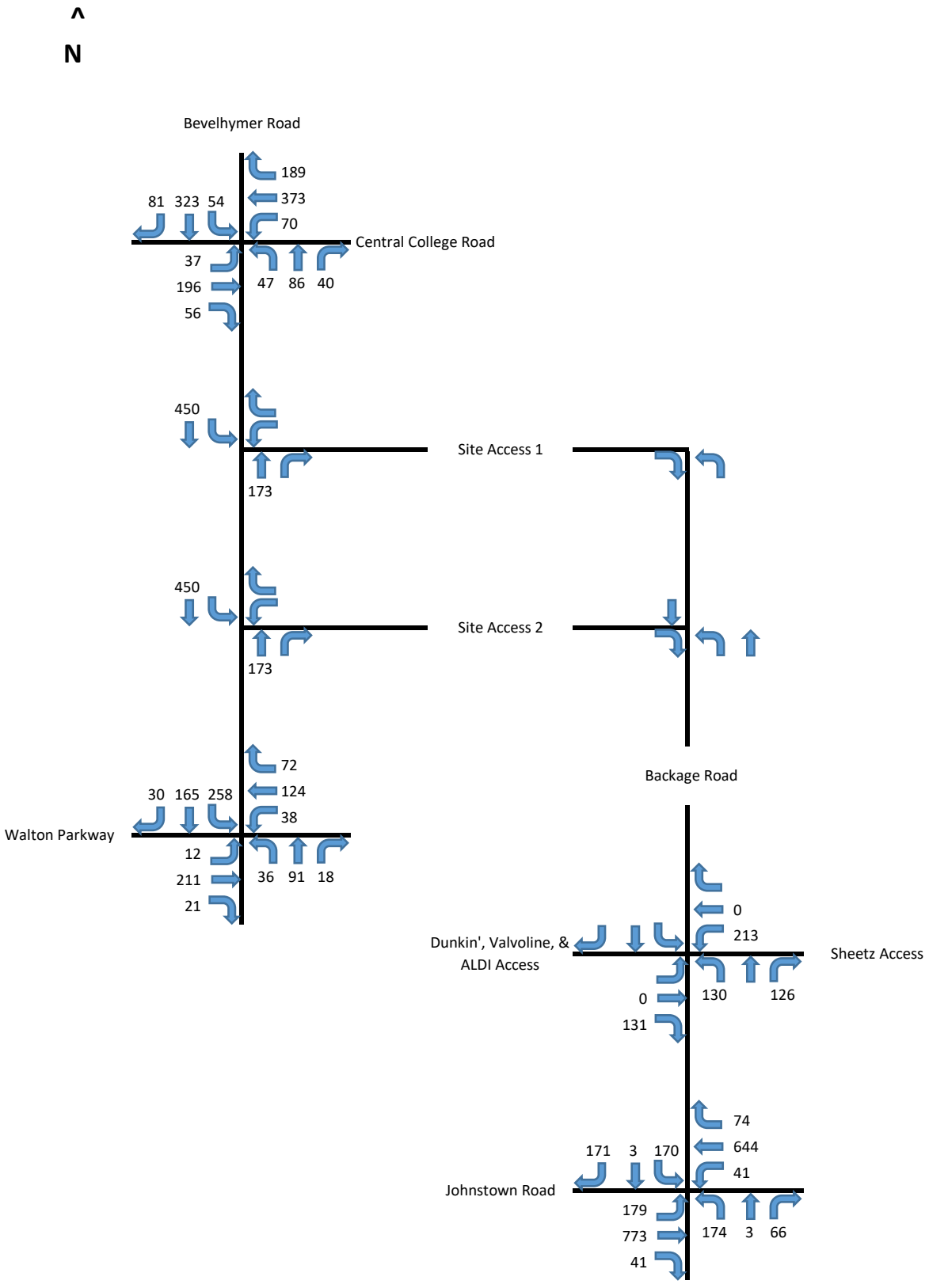
	Year	Period	Scenario	Plate
CARPENTER MARTY transportation	2024	PM	Build	K2 = B2 + D2 + F2 + H2 + I2 + J2



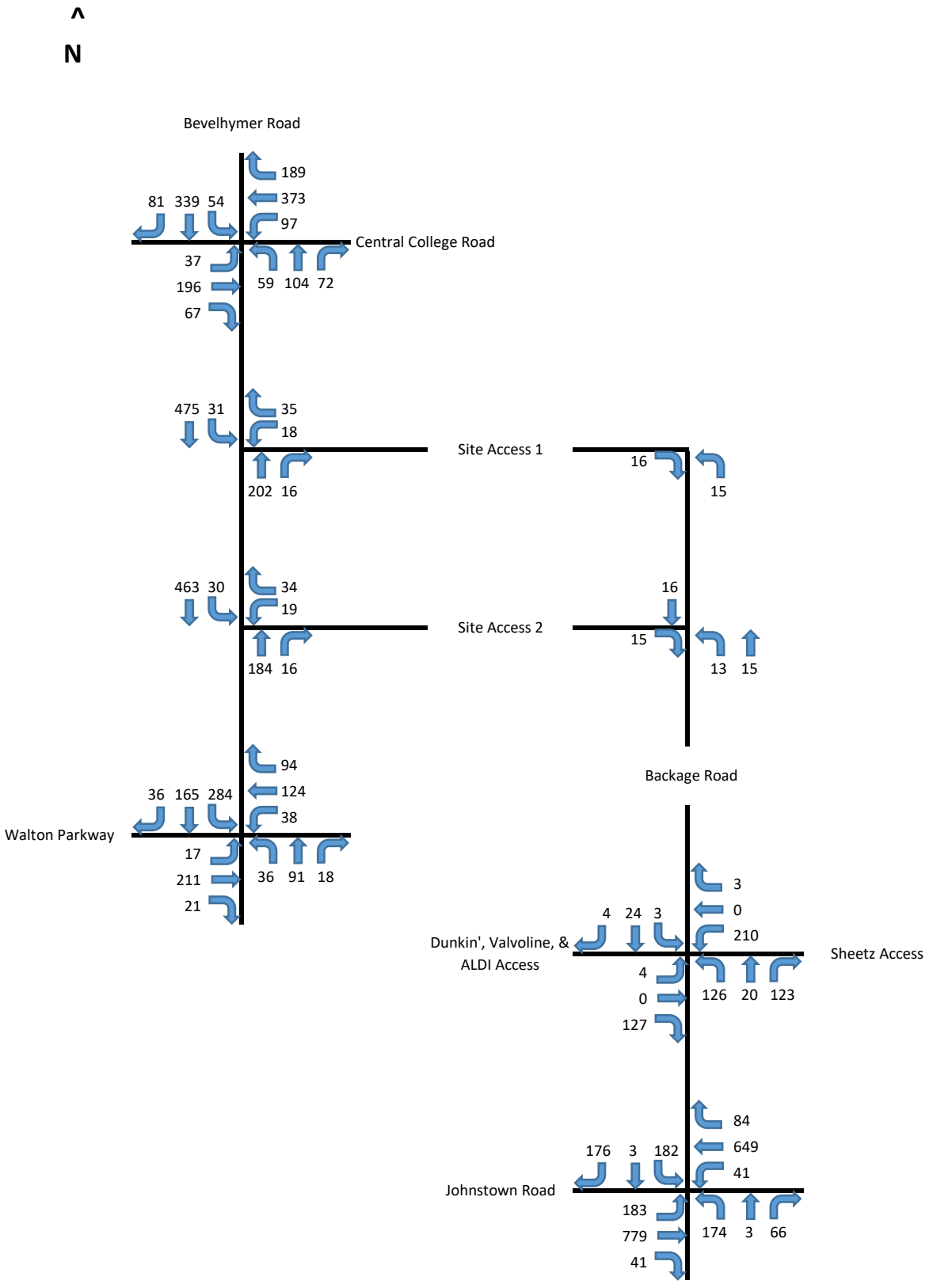
Year	Period	Scenario	Plate
2034	PM	Background	L2 = A2 Grown



	Year	Period	Scenario	Plate
CARPENTER MARTY transportation	2034	PM	No Build	M2 = C2 + D2 + E2 + F2 + L2



CARPENTER MARTY transportation	Year	Period	Scenario	Plate
	2034	PM	Build	N2 = D2 + F2 + H2 + I2 + J2 + L2

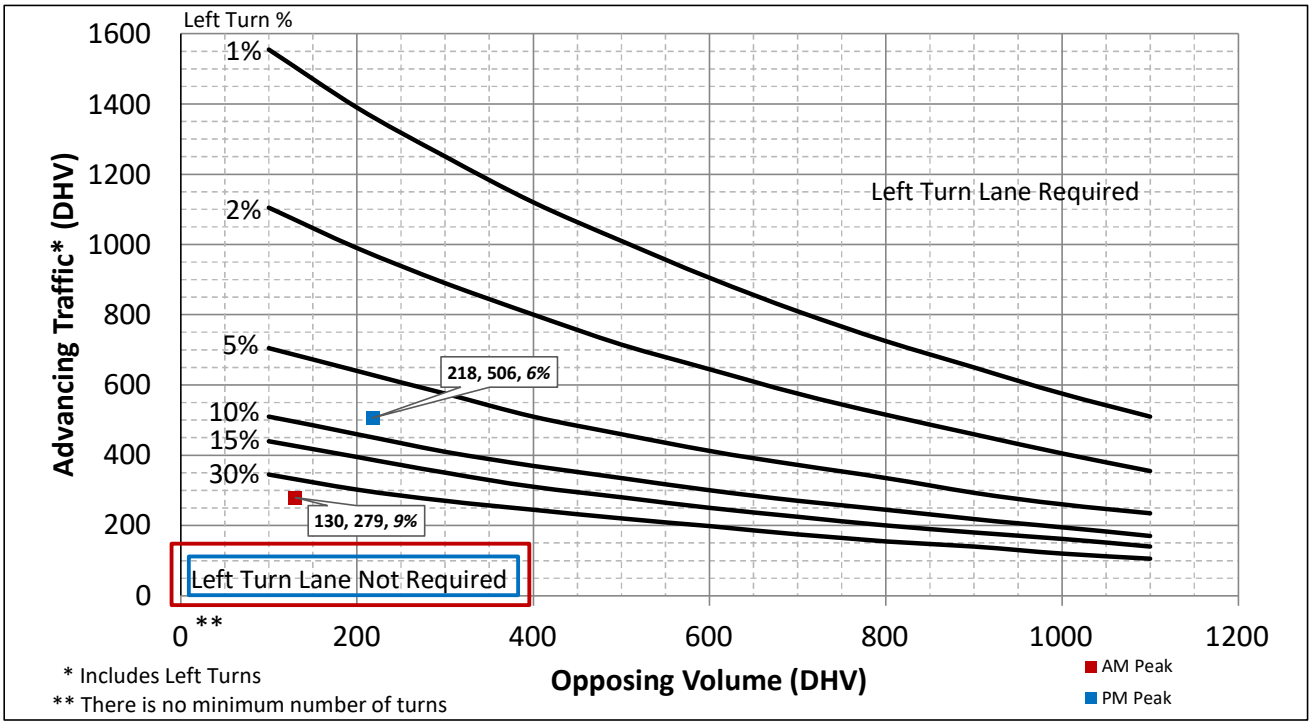


Appendix E
Turn Lane Warrant Analysis

CARPENTER MARTY transportation

2-Lane Highway Left Turn Lane Warrant

(= < 40 mph or 70 kph Posted Speed)

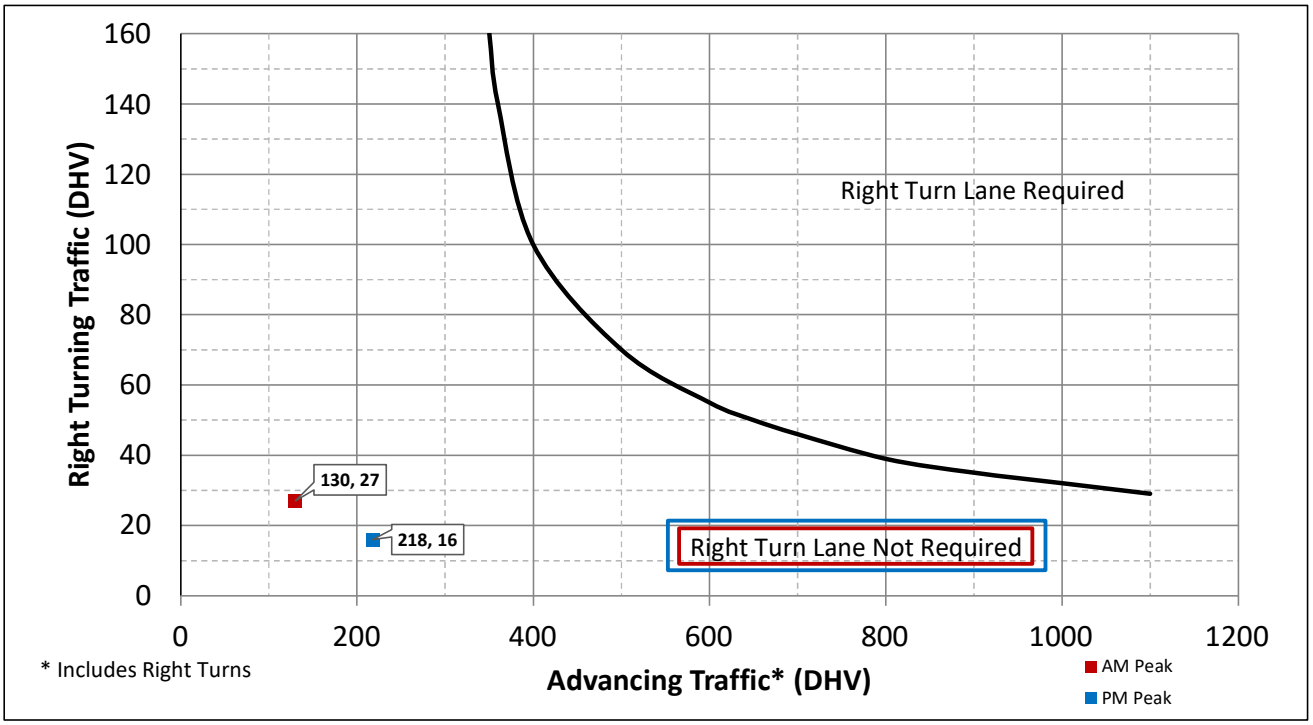


Turn Lane Length Calculations

AM Peak	Design Speed	40	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	24	VPH
	Advancing Traffic	279	VPH
	Opposing Volume	130	VPH
	Left Turn Percentage	9%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	125	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	320	
PM Peak	Design Speed	40	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	31	VPH
	Advancing Traffic	506	VPH
	Opposing Volume	218	VPH
	Left Turn Percentage	6%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	125	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	320	
Is Left Turn Warrant Met		**No**	**No Left Turn Lane Required**

2-Lane Highway Right Turn Lane Warrant

(= < 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

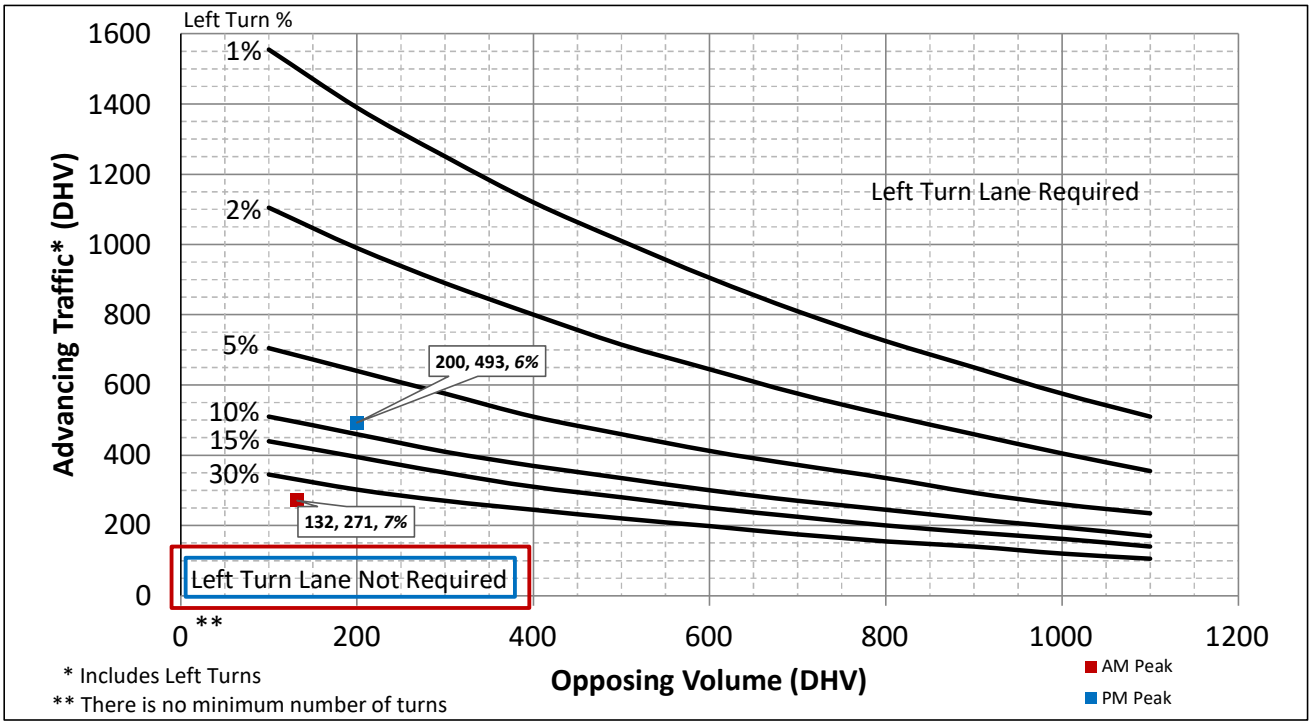
AM Peak	Design Speed	40	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	27	VPH
	Advancing Traffic	130	VPH
	Right Turn Percentage	21%	
	Location Type	Through Road	
	Condition	C	
	Vehicles/Cycle	1	
	Turn Lane Length	165	
PM Peak	Design Speed	40	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	16	VPH
	Advancing Traffic	218	VPH
	Right Turn Percentage	7%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	125	
Is Right Turn Warrant Met		No	No Right Turn Lane Required

** Turn Lane Length includes 50 ft diverging taper*

** Turn Lane Length includes 50 ft diverging taper*

2-Lane Highway Left Turn Lane Warrant

(= < 40 mph or 70 kph Posted Speed)

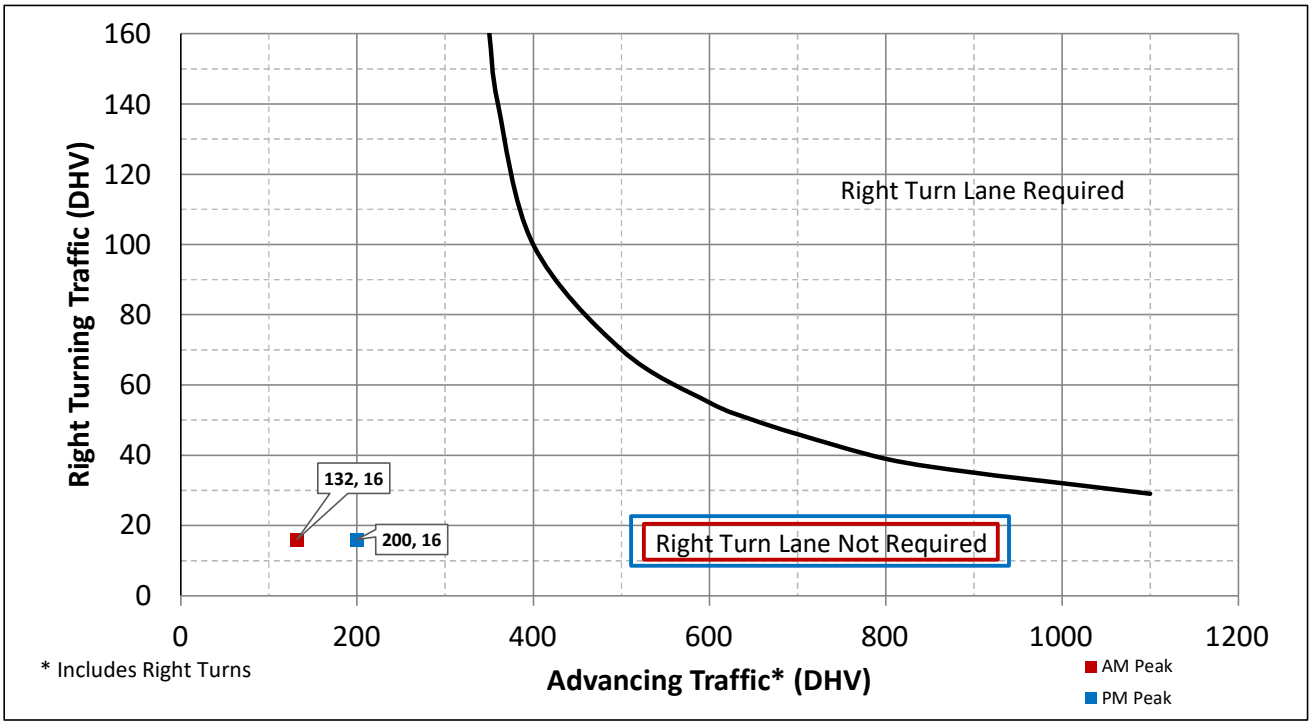


Turn Lane Length Calculations

AM Peak	Design Speed	40	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	18	VPH
	Advancing Traffic	271	VPH
	Opposing Volume	132	VPH
	Left Turn Percentage	7%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	125	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	320	
PM Peak	Design Speed	40	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	30	VPH
	Advancing Traffic	493	VPH
	Opposing Volume	200	VPH
	Left Turn Percentage	6%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	125	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	320	
Is Left Turn Warrant Met		**No**	**No Left Turn Lane Required**

2-Lane Highway Right Turn Lane Warrant

(= < 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

AM Peak	Design Speed	40	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	16	VPH
	Advancing Traffic	132	VPH
	Right Turn Percentage	12%	
	Location Type	Through Road	
	Condition	C	
	Vehicles/Cycle	1	
	Turn Lane Length	165	
PM Peak	Design Speed	40	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	16	VPH
	Advancing Traffic	200	VPH
	Right Turn Percentage	8%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	125	
Is Right Turn Warrant Met		No	No Right Turn Lane Required

** Turn Lane Length includes 50 ft diverging taper*

** Turn Lane Length includes 50 ft diverging taper*

Left Turn Lane Length Calculations

AM Peak	Design Speed	50	mph
	Traffic Control	Signalized - 2 Phase	
	Cycle Length	Unknown	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	12	VPH
	Advancing Traffic	223	VPH
	Left Turn Percentage	5%	
	Location Type	Intersection	
	Condition	B or C	
	Vehicles/Cycle	1	
	Turn Lane Length	See Column to Right	225
	Offset Width	12	
	Approach Taper	600	
PM Peak	Design Speed	50	mph
	Traffic Control	Signalized - 2 Phase	
	Cycle Length	Unknown	
	Cycles Per Hour	60	*Assume 60*
	Turn Lane Volume	37	VPH
	Advancing Traffic	300	VPH
	Left Turn Percentage	12%	
	Location Type	Intersection	
	Condition	B or C	
	Vehicles/Cycle	1	
	Turn Lane Length	See Column to Right	225
	Offset Width	12	
	Approach Taper	600	

Left Turn Lane Length Calculations

AM Peak	**Design Speed**	50	**mph**
	Traffic Control	Signalized - 2 Phase	
	Cycle Length	Unknown	
	Cycles Per Hour	60	***Assume 60***
	Turn Lane Volume	89	**VPH**
	Advancing Traffic	286	**VPH**
	Left Turn Percentage	31%	
	Location Type	Intersection	
	Condition	B or C	
	Vehicles/Cycle	2	
	Turn Lane Length	See Column to Right	245
	Offset Width	12	
	Approach Taper	600	
PM Peak	**Design Speed**	50	**mph**
	Traffic Control	Signalized - 2 Phase	
	Cycle Length	Unknown	
	Cycles Per Hour	60	***Assume 60***
	Turn Lane Volume	97	**VPH**
	Advancing Traffic	659	**VPH**
	Left Turn Percentage	15%	
	Location Type	Intersection	
	Condition	B or C	
	Vehicles/Cycle	2	
	Turn Lane Length	See Column to Right	245
	Offset Width	12	
	Approach Taper	600	

Appendix F
Capacity Analysis

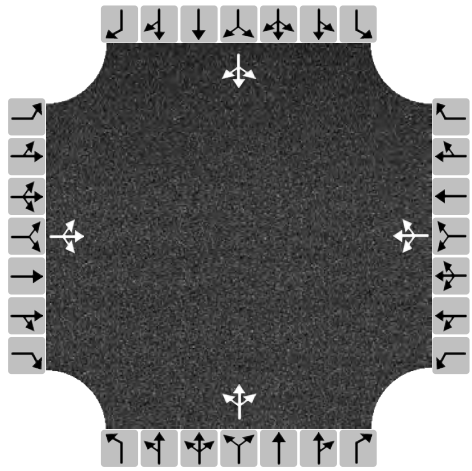
CARPENTER MARTY transportation

HCS All-Way Stop Control Report

General and Site Information

Analyst	LRY
Agency/Co.	CMTran
Date Performed	
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	AM No Build
Project Description	Primrose New Albany TIS
Intersection	Central College Road & Bevelhymer R...
Jurisdiction	New Albany
East/West Street	Central College Road
North/South Street	Bevelhymer Road
Peak Hour Factor	0.95

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	9	122	35	52	149	2	17	39	14	7	111	26
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	175			214			74			152		
Percent Heavy Vehicles	2			4			2			1		
Initial Departure Headway, h_d (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.155			0.190			0.065			0.135		
Final Departure Headway, h_d (s)	4.67			4.81			5.03			4.87		
Final Degree of Utilization, x	0.227			0.286			0.103			0.205		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, t_s (s)	2.67			2.81			3.03			2.87		

Capacity, Delay and Level of Service

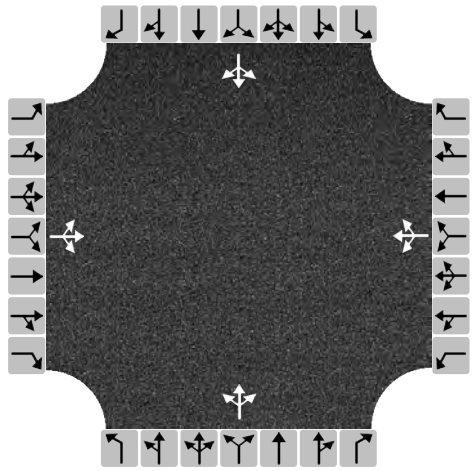
Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	175			214			74			152		
Capacity (veh/h)	771			748			716			739		
95% Queue Length, Q_{95} (veh)	0.9			1.2			0.3			0.8		
Control Delay (s/veh)	9.0			9.7			8.6			9.1		
Level of Service, LOS	A			A			A			A		
Approach Delay (s/veh) | LOS	9.0	A		9.7	A		8.6	A		9.1	A	
Intersection Delay (s/veh) | LOS	9.2						A					

HCS All-Way Stop Control Report

General and Site Information

Analyst	LRY
Agency/Co.	CMTran
Date Performed	
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	AM Build
Project Description	Primrose New Albany TIS
Intersection	Central College Road & Bevelhymer R...
Jurisdiction	New Albany
East/West Street	Central College Road
North/South Street	Bevelhymer Road
Peak Hour Factor	0.95

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	9	122	46	74	149	2	25	43	30	7	116	26
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	186			237			103			157		
Percent Heavy Vehicles	2			4			2			1		
Initial Departure Headway, h_d (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.166			0.211			0.092			0.139		
Final Departure Headway, h_d (s)	4.79			4.95			5.10			5.03		
Final Degree of Utilization, x	0.248			0.326			0.146			0.219		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, t_s (s)	2.79			2.95			3.10			3.03		

Capacity, Delay and Level of Service

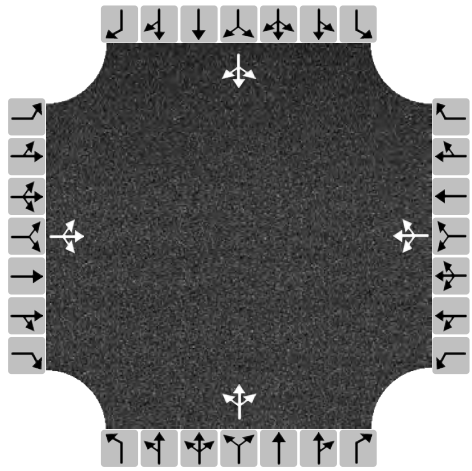
Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	186			237			103			157		
Capacity (veh/h)	751			727			707			715		
95% Queue Length, Q_{95} (veh)	1.0			1.4			0.5			0.8		
Control Delay (s/veh)	9.4			10.3			9.0			9.4		
Level of Service, LOS	A			B			A			A		
Approach Delay (s/veh) | LOS	9.4	A		10.3	B		9.0	A		9.4	A	
Intersection Delay (s/veh) | LOS	9.7						A					

HCS All-Way Stop Control Report

General and Site Information

Analyst	LRY
Agency/Co.	CMTran
Date Performed	
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	PM No Build
Project Description	Primrose New Albany TIS
Intersection	Central College Road & Bevelhymer R...
Jurisdiction	New Albany
East/West Street	Central College Road
North/South Street	Bevelhymer Road
Peak Hour Factor	0.95

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	29	154	45	54	287	145	41	73	34	47	279	70
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	240			512			156			417		
Percent Heavy Vehicles	3			2			1			2		
Initial Departure Headway, h_d (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.213			0.455			0.138			0.371		
Final Departure Headway, h_d (s)	7.35			6.56			7.79			6.93		
Final Degree of Utilization, x	0.490			0.932			0.337			0.803		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, t_s (s)	5.35			4.56			5.79			4.93		

Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	240			512			156			417		
Capacity (veh/h)	490			549			462			519		
95% Queue Length, Q_{95} (veh)	2.7			11.7			1.5			7.6		
Control Delay (s/veh)	17.2			48.8			14.7			32.4		
Level of Service, LOS	C			E			B			D		
Approach Delay (s/veh) | LOS	17.2	C		48.8	E		14.7	B		32.4	D	
Intersection Delay (s/veh) | LOS	33.9						D					

HCS All-Way Stop Control Report

General and Site Information

Analyst	LRY
Agency/Co.	CMTran
Date Performed	
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	PM Build
Project Description	Primrose New Albany TIS
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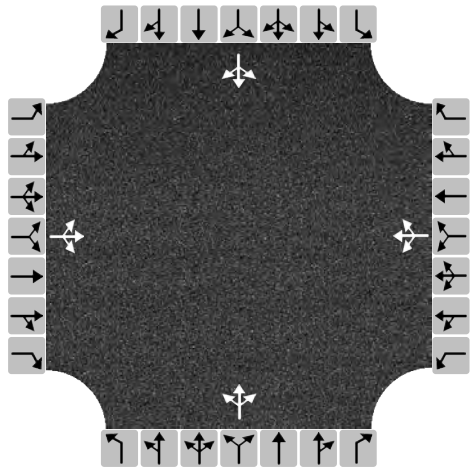
Jurisdiction	New Albany
East/West Street	Central College Road
North/South Street	Bevelhymer Road
Peak Hour Factor	0.95

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	29	154	56	81	287	145	53	91	66	47	295	70
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	252			540			221			434		
Percent Heavy Vehicles	3			2			1			2		
Initial Departure Headway, h_d (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.224			0.480			0.196			0.385		
Final Departure Headway, h_d (s)	7.90			7.16			8.03			7.34		
Final Degree of Utilization, x	0.552			1.075			0.493			0.885		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, t_s (s)	5.90			5.16			6.03			5.34		

Capacity, Delay and Level of Service

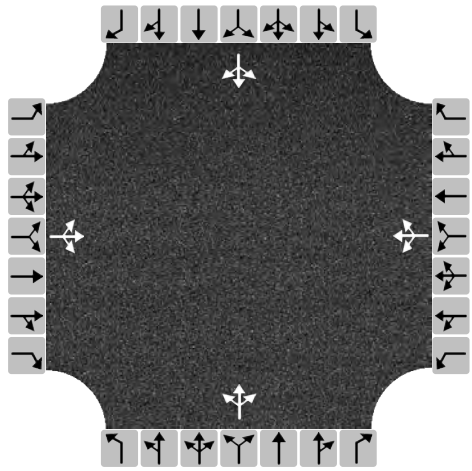
Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	252			540			221			434		
Capacity (veh/h)	455			502			448			490		
95% Queue Length, Q_{95} (veh)	3.3			16.8			2.7			9.7		
Control Delay (s/veh)	20.2			88.2			18.6			44.4		
Level of Service, LOS	C			F			C			E		
Approach Delay (s/veh) | LOS	20.2	C		88.2	F		18.6	C		44.4	E	
Intersection Delay (s/veh) | LOS	52.6						F					

HCS All-Way Stop Control Report

General and Site Information

Analyst	LRY
Agency/Co.	CMTran
Date Performed	
Analysis Year	2034
Analysis Time Period (hrs)	0.25
Time Analyzed	AM No Build
Project Description	Primrose New Albany TIS
Intersection	Central College Road & Bevelhymer R...
Jurisdiction	New Albany
East/West Street	Central College Road
North/South Street	Bevelhymer Road
Peak Hour Factor	0.95

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	12	156	44	67	194	3	20	45	17	8	128	31
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	223			278			86			176		
Percent Heavy Vehicles	2			4			2			1		
Initial Departure Headway, h_d (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.198			0.247			0.077			0.156		
Final Departure Headway, h_d (s)	4.92			5.03			5.42			5.22		
Final Degree of Utilization, x	0.305			0.388			0.130			0.255		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, t_s (s)	2.92			3.03			3.42			3.22		

Capacity, Delay and Level of Service

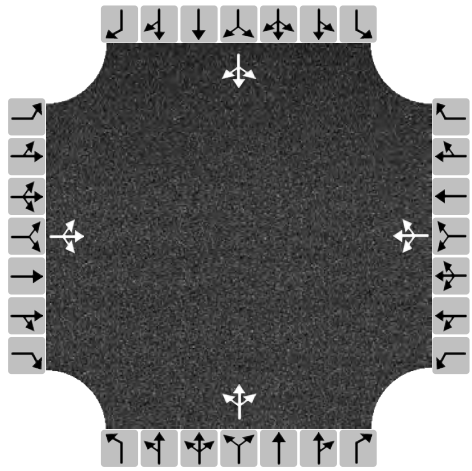
Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	223			278			86			176		
Capacity (veh/h)	731			716			665			690		
95% Queue Length, Q_{95} (veh)	1.3			1.8			0.4			1.0		
Control Delay (s/veh)	10.1			11.2			9.2			10.0		
Level of Service, LOS	B			B			A			A		
Approach Delay (s/veh) | LOS	10.1	B		11.2	B		9.2	A		10.0	A	
Intersection Delay (s/veh) | LOS	10.4						B					

HCS All-Way Stop Control Report

General and Site Information

Analyst	LRY
Agency/Co.	CMTran
Date Performed	
Analysis Year	2034
Analysis Time Period (hrs)	0.25
Time Analyzed	AM Build
Project Description	Primrose New Albany TIS
Intersection	Central College Road & Bevelhymer R...
Jurisdiction	New Albany
East/West Street	Central College Road
North/South Street	Bevelhymer Road
Peak Hour Factor	0.95

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	12	156	55	89	194	3	28	49	33	8	133	31
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	235			301			116			181		
Percent Heavy Vehicles	2			4			2			1		
Initial Departure Headway, h_d (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.209			0.268			0.103			0.161		
Final Departure Headway, h_d (s)	5.10			5.22			5.55			5.44		
Final Degree of Utilization, x	0.333			0.436			0.179			0.274		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, t_s (s)	3.10			3.22			3.55			3.44		

Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	235			301			116			181		
Capacity (veh/h)	706			690			649			662		
95% Queue Length, Q_{95} (veh)	1.5			2.2			0.6			1.1		
Control Delay (s/veh)	10.6			12.2			9.8			10.5		
Level of Service, LOS	B			B			A			B		
Approach Delay (s/veh) | LOS	10.6	B		12.2	B		9.8	A		10.5	B	
Intersection Delay (s/veh) | LOS	11.0						B					

HCS All-Way Stop Control Report

General and Site Information

Analyst	LRY
Agency/Co.	CMTran
Date Performed	
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Project Description	Primrose New Albany TIS
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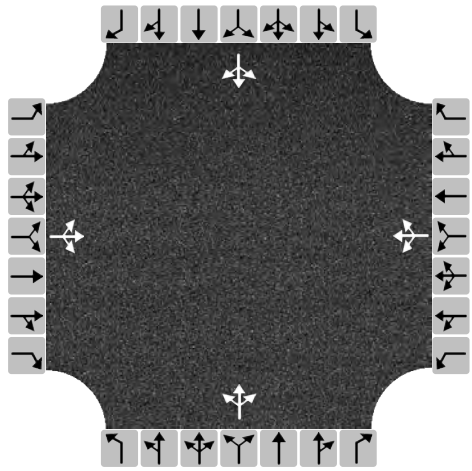
Jurisdiction	New Albany
East/West Street	Central College Road
North/South Street	Bevelhymer Road
Peak Hour Factor	0.95

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	37	196	56	70	373	189	47	86	40	54	323	81
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	304			665			182			482		
Percent Heavy Vehicles	3			2			1			2		
Initial Departure Headway, h_d (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.270			0.591			0.162			0.429		
Final Departure Headway, h_d (s)	8.08			7.53			8.66			7.47		
Final Degree of Utilization, x	0.683			1.392			0.438			1.001		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, t_s (s)	6.08			5.53			6.66			5.47		

Capacity, Delay and Level of Service

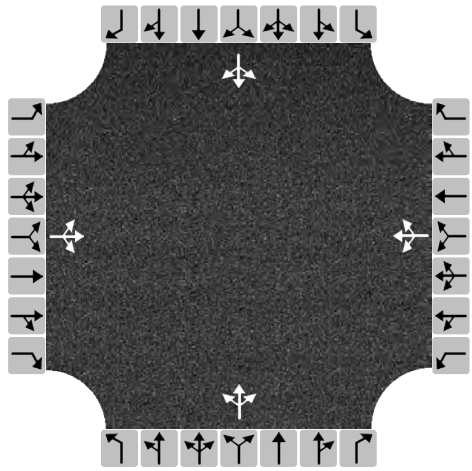
Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	304			665			182			482		
Capacity (veh/h)	446			478			416			482		
95% Queue Length, Q_{95} (veh)	5.0			31.4			2.2			13.5		
Control Delay (s/veh)	26.8			210.6			18.2			68.7		
Level of Service, LOS	D			F			C			F		
Approach Delay (s/veh) | LOS	26.8	D		210.6	F		18.2	C		68.7	F	
Intersection Delay (s/veh) | LOS	113.0						F					

HCS All-Way Stop Control Report

General and Site Information

Analyst	LRY
Agency/Co.	CMTran
Date Performed	
Analysis Year	2034
Analysis Time Period (hrs)	0.25
Time Analyzed	PM Build
Project Description	Primrose New Albany TIS
Intersection	Central College Road & Bevelhymer R...
Jurisdiction	New Albany
East/West Street	Central College Road
North/South Street	Bevelhymer Road
Peak Hour Factor	0.95

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume (veh/h)	37	196	67	97	373	189	59	104	72	54	339	81
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	316			694			247			499		
Percent Heavy Vehicles	3			2			1			2		
Initial Departure Headway, h_d (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.281			0.617			0.220			0.444		
Final Departure Headway, h_d (s)	8.48			7.91			8.78			7.97		
Final Degree of Utilization, x	0.744			1.524			0.603			1.105		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, t_s (s)	6.48			5.91			6.78			5.97		

Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	316			694			247			499		
Capacity (veh/h)	425			455			410			452		
95% Queue Length, Q_{95} (veh)	6.0			36.9			3.8			17.0		
Control Delay (s/veh)	32.3			267.8			24.3			101.8		
Level of Service, LOS	D			F			C			F		
Approach Delay (s/veh) | LOS	32.3	D		267.8	F		24.3	C		101.8	F	
Intersection Delay (s/veh) | LOS	144.0						F					

HCS Two-Way Stop-Control Report

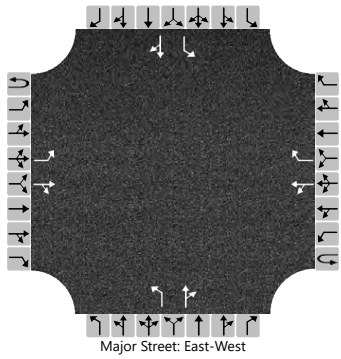
General Information

Analyst	LRY
Agency/Co.	CMTran
Date Performed	
Analysis Year	2024
Time Analyzed	AM No Build
Intersection Orientation	East-West
Project Description	Primrose New Albany TIS

Site Information

Intersection	Walton Parkway & Bevelhymer Road
Jurisdiction	New Albany
East/West Street	Walton Parkway
North/South Street	Bevelhymer Road
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		1	1	0		1	1	0
Configuration		L		TR		LT		R		L		TR		L		TR
Volume (veh/h)		3	96	11		33	130	67		18	22	29		136	54	16
Percent Heavy Vehicles (%)		10				3				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized						No										
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.20				4.13				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.29				2.23				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		3				34				19		53		140		72
Capacity, c (veh/h)		1322				1474				495		713		527		607
v/c Ratio		0.00				0.02				0.04		0.07		0.27		0.12
95% Queue Length, Q_{95} (veh)		0.0				0.1				0.1		0.2		1.1		0.4
Control Delay (s/veh)		7.7				7.5	0.1			12.6		10.5		14.3		11.7
Level of Service (LOS)		A				A	A			B		B		B		B
Approach Delay (s/veh)	0.2				1.1				11.0				13.4			
Approach LOS	A				A				B				B			

HCS Two-Way Stop-Control Report

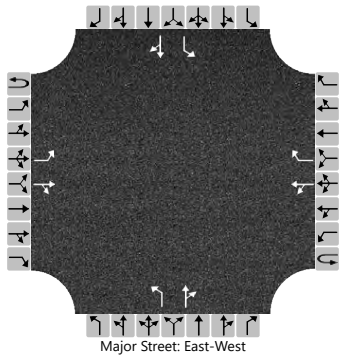
General Information

Analyst	LRY
Agency/Co.	CMTran
Date Performed	
Analysis Year	2024
Time Analyzed	AM Build
Intersection Orientation	East-West
Project Description	Primrose New Albany TIS

Site Information

Intersection	Walton Parkway & Bevelhymer Road
Jurisdiction	New Albany
East/West Street	Walton Parkway
North/South Street	Bevelhymer Road
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		1	1	0		1	1	0
Configuration		L		TR		LT		R		L		TR		L		TR
Volume (veh/h)		8	96	11		33	130	101		18	22	29		161	54	20
Percent Heavy Vehicles (%)		10				3				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized						No										
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.20				4.13				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.29				2.23				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		8				34				19		53		166		76
Capacity, c (veh/h)		1283				1474				467		687		502		595
v/c Ratio		0.01				0.02				0.04		0.08		0.33		0.13
95% Queue Length, Q_{95} (veh)		0.0				0.1				0.1		0.2		1.4		0.4
Control Delay (s/veh)		7.8				7.5	0.1			13.0		10.7		15.7		11.9
Level of Service (LOS)		A				A	A			B		B		C		B
Approach Delay (s/veh)	0.5				1.0				11.3				14.5			
Approach LOS	A				A				B				B			

HCS Two-Way Stop-Control Report

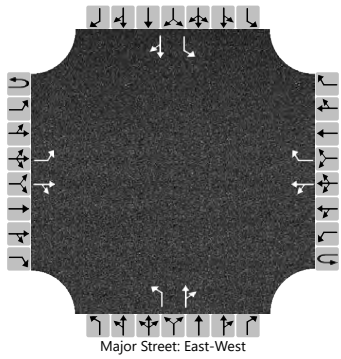
General Information

Analyst	LRY
Agency/Co.	CMTran
Date Performed	
Analysis Year	2024
Time Analyzed	PM No Build
Intersection Orientation	East-West
Project Description	Primrose New Albany TIS

Site Information

Intersection	Walton Parkway & Bevelhymer Road
Jurisdiction	New Albany
East/West Street	Walton Parkway
North/South Street	Bevelhymer Road
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		1	1	0		1	1	0
Configuration		L		TR		LT		R		L		TR		L		TR
Volume (veh/h)		10	175	17		34	112	66		31	77	15		220	140	25
Percent Heavy Vehicles (%)		0				0				1	1	1		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized						No										
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.11	6.51	6.21		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.51	4.01	3.31		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11				36				33		98		234		176
Capacity, c (veh/h)		1397				1379				302		507		382		520
v/c Ratio		0.01				0.03				0.11		0.19		0.61		0.34
95% Queue Length, Q_{95} (veh)		0.0				0.1				0.4		0.7		3.9		1.5
Control Delay (s/veh)		7.6				7.7	0.1			18.4		13.8		28.2		15.4
Level of Service (LOS)		A				A	A			C		B		D		C
Approach Delay (s/veh)		0.4				1.3				14.9				22.7		
Approach LOS		A				A				B				C		

HCS Two-Way Stop-Control Report

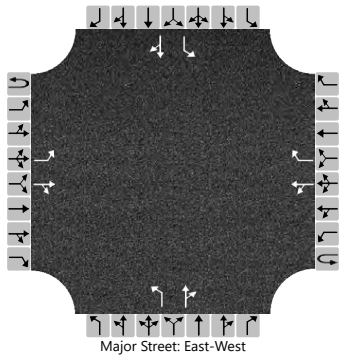
General Information

Analyst	LRY
Agency/Co.	CMTran
Date Performed	
Analysis Year	2024
Time Analyzed	PM Build
Intersection Orientation	East-West
Project Description	Primrose New Albany TIS

Site Information

Intersection	Walton Parkway & Bevelhymer Road
Jurisdiction	New Albany
East/West Street	Walton Parkway
North/South Street	Bevelhymer Road
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		1	1	0		1	1	0
Configuration		L		TR		LT		R		L		TR		L		TR
Volume (veh/h)		15	175	17		34	112	88		31	77	15		246	140	31
Percent Heavy Vehicles (%)		0				0				1	1	1		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized						No										
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.11	6.51	6.21		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.51	4.01	3.31		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		16				36				33		98		262		182
Capacity, c (veh/h)		1370				1379				283		486		364		511
v/c Ratio		0.01				0.03				0.12		0.20		0.72		0.36
95% Queue Length, Q_{95} (veh)		0.0				0.1				0.4		0.7		5.4		1.6
Control Delay (s/veh)		7.7				7.7	0.1			19.4		14.3		36.5		15.9
Level of Service (LOS)		A				A	A			C		B		E		C
Approach Delay (s/veh)		0.6				1.2				15.6				28.0		
Approach LOS		A				A				C				D		

HCS Two-Way Stop-Control Report

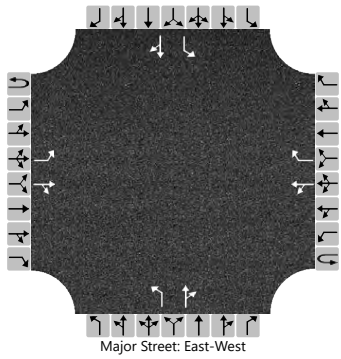
General Information

Analyst	LRY
Agency/Co.	CMTran
Date Performed	
Analysis Year	2034
Time Analyzed	AM No Build
Intersection Orientation	East-West
Project Description	Primrose New Albany TIS

Site Information

Intersection	Walton Parkway & Bevelhymer Road
Jurisdiction	New Albany
East/West Street	Walton Parkway
North/South Street	Bevelhymer Road
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		1	1	0		1	1	0
Configuration		L		TR		LT		R		L		TR		L		TR
Volume (veh/h)		4	116	14		37	145	74		22	26	34		160	63	19
Percent Heavy Vehicles (%)		10				3				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized						No										
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.20				4.13				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.29				2.23				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		4				38				23		62		165		85
Capacity, c (veh/h)		1297				1444				437		673		473		569
v/c Ratio		0.00				0.03				0.05		0.09		0.35		0.15
95% Queue Length, Q_{95} (veh)		0.0				0.1				0.2		0.3		1.5		0.5
Control Delay (s/veh)		7.8				7.6	0.1			13.7		10.9		16.6		12.4
Level of Service (LOS)		A				A	A			B		B		C		B
Approach Delay (s/veh)	0.2				1.2				11.6				15.2			
Approach LOS	A				A				B				C			

HCS Two-Way Stop-Control Report

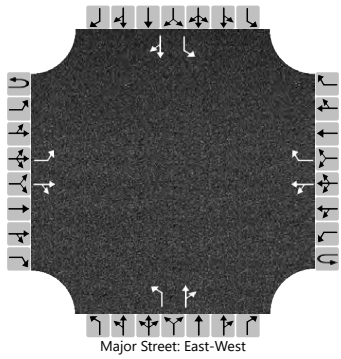
General Information

Analyst	LRY
Agency/Co.	CMTran
Date Performed	
Analysis Year	2034
Time Analyzed	AM Build
Intersection Orientation	East-West
Project Description	Primrose New Albany TIS

Site Information

Intersection	Walton Parkway & Bevelhymer Road
Jurisdiction	New Albany
East/West Street	Walton Parkway
North/South Street	Bevelhymer Road
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		1	1	0		1	1	0
Configuration		L		TR		LT		R		L		TR		L		TR
Volume (veh/h)		9	116	14		37	145	108		22	26	34		185	63	23
Percent Heavy Vehicles (%)		10				3				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized						No										
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.20				4.13				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.29				2.23				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		9				38				23		62		191		89
Capacity, c (veh/h)		1258				1444				411		648		450		557
v/c Ratio		0.01				0.03				0.06		0.10		0.42		0.16
95% Queue Length, Q_{95} (veh)		0.0				0.1				0.2		0.3		2.1		0.6
Control Delay (s/veh)		7.9				7.6	0.1			14.3		11.1		18.8		12.7
Level of Service (LOS)		A				A	A			B		B		C		B
Approach Delay (s/veh)	0.5				1.0				12.0				16.8			
Approach LOS	A				A				B				C			

HCS Two-Way Stop-Control Report

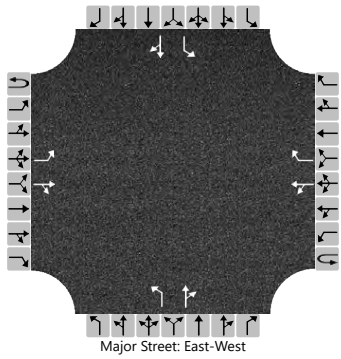
General Information

Analyst	LRY
Agency/Co.	CMTran
Date Performed	
Analysis Year	2034
Time Analyzed	PM No Build
Intersection Orientation	East-West
Project Description	Primrose New Albany TIS

Site Information

Intersection	Walton Parkway & Bevelhymer Road
Jurisdiction	New Albany
East/West Street	Walton Parkway
North/South Street	Bevelhymer Road
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		1	1	0		1	1	0
Configuration		L		TR		LT		R		L		TR		L		TR
Volume (veh/h)		12	211	21		38	124	72		36	91	18		258	165	30
Percent Heavy Vehicles (%)		0				0				1	1	1		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized						No										
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.11	6.51	6.21		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.51	4.01	3.31		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		13				40				38		116		274		207
Capacity, c (veh/h)		1374				1331				228		461		314		474
v/c Ratio		0.01				0.03				0.17		0.25		0.87		0.44
95% Queue Length, Q_{95} (veh)		0.0				0.1				0.6		1.0		8.0		2.2
Control Delay (s/veh)		7.6				7.8	0.2			24.0		15.4		60.9		18.4
Level of Service (LOS)		A				A	A			C		C		F		C
Approach Delay (s/veh)	0.4				1.3				17.5				42.6			
Approach LOS	A				A				C				E			

HCS Two-Way Stop-Control Report

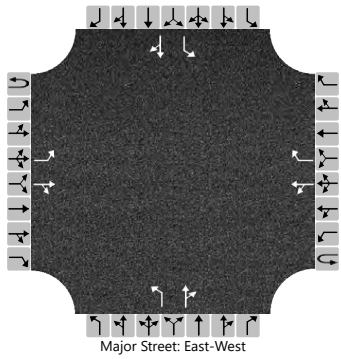
General Information

Analyst	LRY
Agency/Co.	CMTran
Date Performed	
Analysis Year	2034
Time Analyzed	PM Build
Intersection Orientation	East-West
Project Description	Primrose New Albany TIS

Site Information

Intersection	Walton Parkway & Bevelhymer Road
Jurisdiction	New Albany
East/West Street	Walton Parkway
North/South Street	Bevelhymer Road
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		1	1	0		1	1	0
Configuration		L		TR		LT		R		L		TR		L		TR
Volume (veh/h)		17	211	21		38	124	94		36	91	18		284	165	36
Percent Heavy Vehicles (%)		0				0				1	1	1		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized						No										
Median Type | Storage		Undivided														

Critical and Follow-up Headways

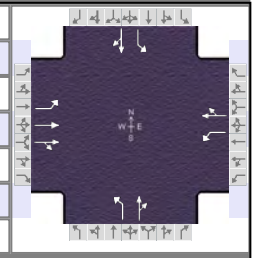
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.11	6.51	6.21		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.51	4.01	3.31		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		18				40				38		116		302		214
Capacity, c (veh/h)		1348				1331				212		441		298		466
v/c Ratio		0.01				0.03				0.18		0.26		1.01		0.46
95% Queue Length, Q_{95} (veh)		0.0				0.1				0.6		1.0		10.9		2.4
Control Delay (s/veh)		7.7				7.8	0.2			25.7		16.0		94.2		19.1
Level of Service (LOS)		A				A	A			D		C		F		C
Approach Delay (s/veh)	0.5				1.2				18.4				63.1			
Approach LOS	A				A				C				F			

HCS Signalized Intersection Results Summary

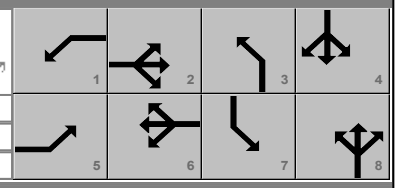
General Information				Intersection Information	
Agency	CMTran			Duration, h	0.250
Analyst	LRY	Analysis Date	Apr 12, 2023	Area Type	Other
Jurisdiction	New Albany	Time Period	AM No Build	PHF	0.92
Urban Street	US-62	Analysis Year	2024	Analysis Period	1> 7:00
Intersection	Johnstown Road & She…	File Name	Johnstown - OY AM No Build.xus		
Project Description	Bevelhymer Mixed Retail TIS				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	179	564	15	44	589	86	89	4	41	179	4	185

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.6	2.8	62.5	7.3	0.7	17.1	
Yellow	4.0	0.0	4.0	4.0	0.0	4.0	
Red	2.0	0.0	2.0	2.0	0.0	2.0	



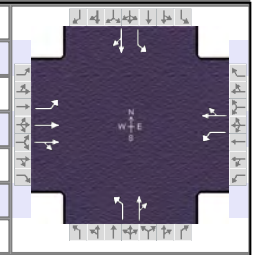
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	14.4	71.4	11.6	68.5	13.3	23.1	14.0	23.8
Change Period, (*Y+R c*), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.0	0.0	3.0	0.0	3.1	3.5	3.3	3.5
Queue Clearance Time (*g s*), s	8.1		3.4		7.5	5.3	10.0	17.3
Green Extension Time (*g e*), s	0.3	0.0	0.1	0.0	0.0	0.6	0.0	0.5
Phase Call Probability	1.00		0.80		0.96	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	0.00	1.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	195	316	313	48	734		97	49		195	205	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1767	1856	1838	1767	1814		1767	1594		1767	1578	
Queue Service Time (*g s*), s	6.1	11.2	11.2	1.4	39.0		5.5	3.3		8.0	15.3	
Cycle Queue Clearance Time (*g c*), s	6.1	11.2	11.2	1.4	39.0		5.5	3.3		8.0	15.3	
Green Ratio (*g/C*)	0.59	0.54	0.54	0.57	0.52		0.20	0.14		0.21	0.15	
Capacity (*c*), veh/h	324	1011	1001	485	945		172	227		333	234	
Volume-to-Capacity Ratio (*X*)	0.601	0.313	0.313	0.099	0.776		0.563	0.216		0.585	0.877	
Back of Queue (*Q*), ft/ln (95 th percentile)	103.9	209.3	203.7	24.7	605.8		112.8	59.8		77.3	268	
Back of Queue (*Q*), veh/ln (95 th percentile)	4.1	8.2	8.1	1.0	23.7		4.4	2.3		3.0	10.5	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.65	0.31	0.31	0.14	0.87		0.90	0.27		0.97	1.03	
Uniform Delay (*d 1*), s/veh	20.0	15.0	15.0	12.0	23.1		41.5	45.5		43.4	50.0	
Incremental Delay (*d 2*), s/veh	0.7	0.8	0.8	0.0	6.2		1.1	0.2		1.8	4.1	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	20.7	15.8	15.8	12.0	29.3		42.6	45.7		45.2	54.1	
Level of Service (LOS)	C	B	B	B	C		D	D		D	D	
Approach Delay, s/veh / LOS	17.0	B		28.3	C		43.7	D		49.8	D	
Intersection Delay, s/veh / LOS	29.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.90	B	2.14	B	2.14	B
Bicycle LOS Score / LOS	1.17	A	1.78	B	0.73	A	1.15	A

HCS Signalized Intersection Results Summary

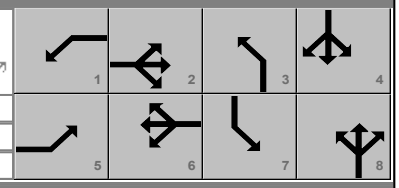
General Information				Intersection Information	
Agency	CMTran			Duration, h	0.250
Analyst	LRY	Analysis Date	Apr 12, 2023	Area Type	Other
Jurisdiction	New Albany	Time Period	AM Build	PHF	0.92
Urban Street	US-62	Analysis Year	2024	Analysis Period	1> 7:00
Intersection	Johnstown Road & She…	File Name	Johnstown - OY AM Build.xus		
Project Description	Bevelhymer Mixed Retail TIS				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	191	572	15	44	600	97	89	4	41	187	4	193

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.6	3.4	61.3	7.2	0.8	17.7						
Yellow	4.0	0.0	4.0	4.0	0.0	4.0						
Red	2.0	0.0	2.0	2.0	0.0	2.0						



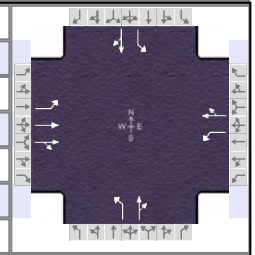
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	15.0	70.7	11.6	67.3	13.2	23.7	14.0	24.5
Change Period, (*Y+R c*), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.0	0.0	3.0	0.0	3.1	3.5	3.3	3.5
Queue Clearance Time (*g s*), s	8.6		3.5		7.5	5.2	10.0	17.9
Green Extension Time (*g e*), s	0.4	0.0	0.1	0.0	0.0	0.6	0.0	0.5
Phase Call Probability	1.00		0.80		0.96	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	0.00	1.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	208	320	318	48	758		97	49		203	214	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1767	1856	1839	1767	1810		1767	1594		1767	1577	
Queue Service Time (*g s*), s	6.6	11.5	11.5	1.5	42.2		5.5	3.2		8.0	15.9	
Cycle Queue Clearance Time (*g c*), s	6.6	11.5	11.5	1.5	42.2		5.5	3.2		8.0	15.9	
Green Ratio (*g/C*)	0.59	0.54	0.54	0.56	0.51		0.21	0.15		0.21	0.15	
Capacity (*c*), veh/h	304	1001	992	476	925		171	235		340	243	
Volume-to-Capacity Ratio (*X*)	0.684	0.320	0.320	0.100	0.819		0.564	0.208		0.598	0.882	
Back of Queue (*Q*), ft/ln (95 th percentile)	115.3	214.5	208.5	25.5	659.1		112.1	59.3		89.9	277	
Back of Queue (*Q*), veh/ln (95 th percentile)	4.5	8.4	8.3	1.0	25.7		4.4	2.3		3.5	10.8	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.72	0.32	0.32	0.15	0.94		0.90	0.26		1.12	1.07	
Uniform Delay (*d 1*), s/veh	22.2	15.4	15.4	12.5	24.7		41.1	45.0		43.2	49.7	
Incremental Delay (*d 2*), s/veh	1.0	0.8	0.9	0.0	8.0		1.1	0.2		2.0	4.1	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	23.2	16.2	16.2	12.6	32.7		42.2	45.2		45.2	53.8	
Level of Service (LOS)	C	B	B	B	C		D	D		D	D	
Approach Delay, s/veh / LOS	18.0	B		31.5	C		43.2	D		49.6	D	
Intersection Delay, s/veh / LOS	30.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.90	B	2.14	B	2.14	B
Bicycle LOS Score / LOS	1.19	A	1.82	B	0.73	A	1.18	A

HCS Signalized Intersection Results Summary

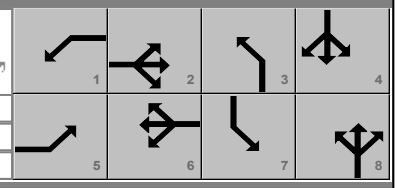
General Information				Intersection Information	
Agency	CMTran			Duration, h	0.250
Analyst	LRY	Analysis Date	Apr 12, 2023	Area Type	Other
Jurisdiction	New Albany	Time Period	PM No Build	PHF	0.92
Urban Street	US-62	Analysis Year	2024	Analysis Period	1> 17:00
Intersection	Johnstown Road & She…	File Name	Johnstown - OY PM No Build.xus		
Project Description	Bevelhymer Mixed Retail TIS				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	179	678	41	41	564	74	174	3	66	170	3	171

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.4	3.3	59.7	10.0	1.0	16.6						
Yellow	4.0	0.0	4.0	4.0	0.0	4.0						
Red	2.0	0.0	2.0	2.0	0.0	2.0						



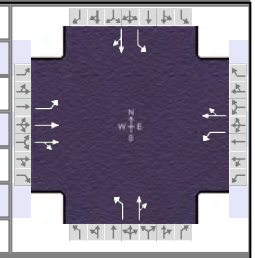
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	14.7	69.0	11.4	65.7	17.0	23.6	16.0	22.6
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.0	0.0	3.0	0.0	3.1	3.5	3.3	3.5
Queue Clearance Time (g_s), s	8.4		3.4		13.0	7.1	12.0	16.1
Green Extension Time (g_e), s	0.3	0.0	0.0	0.0	0.0	0.6	0.0	0.5
Phase Call Probability	1.00		0.77		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	0.00	1.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	195	395	387	45	693		189	75		185	189	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1767	1856	1818	1767	1818		1767	1583		1767	1577	
Queue Service Time (g_s), s	6.4	15.4	15.4	1.4	37.2		11.0	5.1		10.0	14.1	
Cycle Queue Clearance Time (g_c), s	6.4	15.4	15.4	1.4	37.2		11.0	5.1		10.0	14.1	
Green Ratio (*g/C*)	0.57	0.53	0.53	0.54	0.50		0.23	0.15		0.22	0.14	
Capacity (*c*), veh/h	328	974	955	400	905		246	232		322	218	
Volume-to-Capacity Ratio (*X*)	0.593	0.405	0.405	0.111	0.767		0.767	0.324		0.574	0.869	
Back of Queue (*Q*), ft/ln (95 th percentile)	110.8	272.7	262.7	24.7	588.2		243.2	92.9		219.7	253.8	
Back of Queue (*Q*), veh/ln (95 th percentile)	4.3	10.7	10.5	1.0	23.0		9.5	3.6		8.6	9.9	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.69	0.41	0.40	0.14	0.84		1.95	0.41		2.75	0.98	
Uniform Delay (d_1), s/veh	20.3	17.2	17.2	13.8	24.5		40.9	45.9		41.3	50.6	
Incremental Delay (d_2), s/veh	0.6	1.3	1.3	0.0	6.2		12.3	0.3		1.6	5.3	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	20.9	18.4	18.5	13.8	30.6		53.3	46.2		42.9	56.0	
Level of Service (LOS)	C	B	B	B	C		D	D		D	E	
Approach Delay, s/veh / LOS	18.9	B		29.6	C		51.3	D		49.5	D	
Intersection Delay, s/veh / LOS	30.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.91	B	2.14	B	2.14	B
Bicycle LOS Score / LOS	1.29	A	1.71	B	0.92	A	1.10	A

HCS Signalized Intersection Results Summary

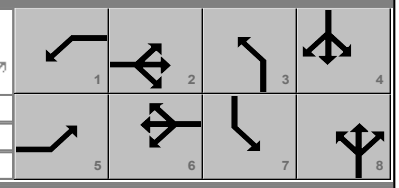
General Information				Intersection Information	
Agency	CMTran			Duration, h	0.250
Analyst	LRY	Analysis Date	Apr 12, 2023	Area Type	Other
Jurisdiction	New Albany	Time Period	PM Build	PHF	0.92
Urban Street	US-62	Analysis Year	2024	Analysis Period	1> 17:00
Intersection	Johnstown Road & She…	File Name	Johnstown - OY PM Build.xus		
Project Description	Bevelhymer Mixed Retail TIS				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	183	684	41	41	569	84	174	3	66	182	3	176

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.4	3.5	59.1	10.0	1.0	17.0	
Yellow	4.0	0.0	4.0	4.0	0.0	4.0	
Red	2.0	0.0	2.0	2.0	0.0	2.0	



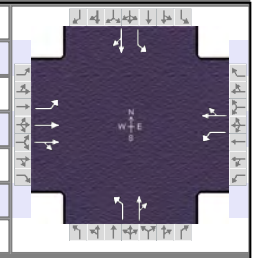
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	14.9	68.6	11.4	65.1	17.0	24.0	16.0	23.0
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.0	0.0	3.0	0.0	3.1	3.5	3.3	3.5
Queue Clearance Time (g_s), s	8.6		3.4		13.0	7.1	12.0	16.5
Green Extension Time (g_e), s	0.3	0.0	0.0	0.0	0.0	0.6	0.0	0.5
Phase Call Probability	1.00		0.77		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	0.00	1.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	199	398	390	45	710		189	75		198	195	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1767	1856	1818	1767	1814		1767	1583		1767	1577	
Queue Service Time (g_s), s	6.6	15.7	15.7	1.4	39.2		11.0	5.1		10.0	14.5	
Cycle Queue Clearance Time (g_c), s	6.6	15.7	15.7	1.4	39.2		11.0	5.1		10.0	14.5	
Green Ratio (*g/C*)	0.57	0.52	0.52	0.54	0.49		0.23	0.15		0.22	0.14	
Capacity (*c*), veh/h	313	968	948	395	893		246	237		327	223	
Volume-to-Capacity Ratio (*X*)	0.635	0.411	0.411	0.113	0.795		0.768	0.316		0.605	0.872	
Back of Queue (*Q*), ft/ln (95 th percentile)	115.2	278	267.5	25.2	620.3		242.4	92.4		39.9	262.2	
Back of Queue (*Q*), veh/ln (95 th percentile)	4.5	10.9	10.7	1.0	24.2		9.5	3.6		1.6	10.2	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.72	0.42	0.41	0.14	0.89		1.94	0.41		0.50	1.01	
Uniform Delay (d_1), s/veh	21.5	17.5	17.5	14.1	25.4		40.6	45.5		41.6	50.4	
Incremental Delay (d_2), s/veh	0.8	1.3	1.3	0.0	7.2		12.4	0.3		2.3	6.6	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	22.3	18.8	18.8	14.1	32.6		52.9	45.8		43.9	57.0	
Level of Service (LOS)	C	B	B	B	C		D	D		D	E	
Approach Delay, s/veh / LOS	19.5	B		31.5	C		50.9	D		50.4	D	
Intersection Delay, s/veh / LOS	31.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.91	B	2.14	B	2.14	B
Bicycle LOS Score / LOS	1.30	A	1.73	B	0.92	A	1.14	A

HCS Signalized Intersection Results Summary

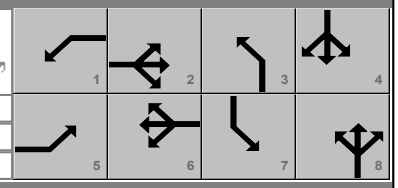
General Information				Intersection Information	
Agency	CMTran			Duration, h	0.250
Analyst	LRY	Analysis Date	Apr 12, 2023	Area Type	Other
Jurisdiction	New Albany	Time Period	AM No Build	PHF	0.92
Urban Street	US-62	Analysis Year	2034	Analysis Period	1> 7:00
Intersection	Johnstown Road & She…	File Name	Johnstown - HY AM No Build.xus		
Project Description	Bevelhymer Mixed Retail TIS				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	179	645	15	44	674	86	89	4	41	179	4	185

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.6	2.8	62.5	7.3	0.7	17.1	
Yellow	4.0	0.0	4.0	4.0	0.0	4.0	
Red	2.0	0.0	2.0	2.0	0.0	2.0	



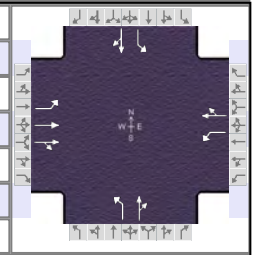
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	14.4	71.4	11.6	68.5	13.3	23.1	14.0	23.8
Change Period, (*Y+R c*), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.0	0.0	3.0	0.0	3.1	3.5	3.3	3.5
Queue Clearance Time (*g s*), s	8.1		3.4		7.5	5.3	10.0	17.3
Green Extension Time (*g e*), s	0.3	0.0	0.1	0.0	0.0	0.6	0.0	0.5
Phase Call Probability	1.00		0.80		0.96	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	0.00	1.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	195	360	357	48	826		97	49		195	205	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1767	1856	1840	1767	1819		1767	1594		1767	1578	
Queue Service Time (*g s*), s	6.1	13.2	13.2	1.4	47.8		5.5	3.3		8.0	15.3	
Cycle Queue Clearance Time (*g c*), s	6.1	13.2	13.2	1.4	47.8		5.5	3.3		8.0	15.3	
Green Ratio (*g/C*)	0.59	0.54	0.54	0.57	0.52		0.20	0.14		0.21	0.15	
Capacity (*c*), veh/h	264	1011	1002	447	948		172	227		333	234	
Volume-to-Capacity Ratio (*X*)	0.737	0.356	0.356	0.107	0.872		0.563	0.216		0.585	0.877	
Back of Queue (*Q*), ft/ln (95 th percentile)	129.1	238.1	231.2	24.7	749.6		112.8	59.8		77.3	268	
Back of Queue (*Q*), veh/ln (95 th percentile)	5.0	9.3	9.2	1.0	29.3		4.4	2.3		3.0	10.5	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.81	0.36	0.36	0.14	1.07		0.90	0.27		0.97	1.03	
Uniform Delay (*d 1*), s/veh	24.5	15.4	15.4	12.2	25.2		41.5	45.5		43.4	50.0	
Incremental Delay (*d 2*), s/veh	1.5	1.0	1.0	0.0	10.9		1.1	0.2		1.8	4.1	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	26.0	16.4	16.4	12.2	36.1		42.6	45.7		45.2	54.1	
Level of Service (LOS)	C	B	B	B	D		D	D		D	D	
Approach Delay, s/veh / LOS	18.5	B		34.8	C		43.7	D		49.8	D	
Intersection Delay, s/veh / LOS	31.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.90	B	2.14	B	2.14	B
Bicycle LOS Score / LOS	1.24	A	1.93	B	0.73	A	1.15	A

HCS Signalized Intersection Results Summary

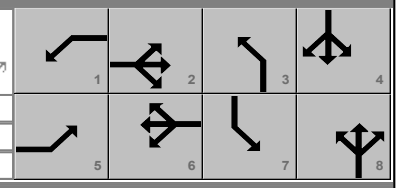
General Information				Intersection Information	
Agency	CMTran			Duration, h	0.250
Analyst	LRY	Analysis Date	Apr 12, 2023	Area Type	Other
Jurisdiction	New Albany	Time Period	AM Build	PHF	0.92
Urban Street	US-62	Analysis Year	2034	Analysis Period	1> 7:00
Intersection	Johnstown Road & She…	File Name	Johnstown - HY AM Build.xus		
Project Description	Bevelhymer Mixed Retail TIS				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	191	653	15	44	685	97	89	4	41	187	4	193

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.6	3.4		61.3	7.2	0.8	17.7					
Yellow	4.0	0.0		4.0	4.0	0.0	4.0					
Red	2.0	0.0		2.0	2.0	0.0	2.0					



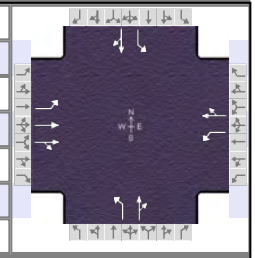
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	15.0	70.7	11.6	67.3	13.2	23.7	14.0	24.5
Change Period, (*Y+R c*), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.0	0.0	3.0	0.0	3.1	3.5	3.3	3.5
Queue Clearance Time (*g s*), s	8.6		3.5		7.5	5.2	10.0	17.9
Green Extension Time (*g e*), s	0.4	0.0	0.1	0.0	0.0	0.6	0.0	0.5
Phase Call Probability	1.00		0.80		0.96	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	0.00	1.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	208	364	362	48	850		97	49		203	214	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1767	1856	1841	1767	1815		1767	1594		1767	1577	
Queue Service Time (*g s*), s	6.6	13.5	13.5	1.5	51.7		5.5	3.2		8.0	15.9	
Cycle Queue Clearance Time (*g c*), s	6.6	13.5	13.5	1.5	51.7		5.5	3.2		8.0	15.9	
Green Ratio (*g/C*)	0.59	0.54	0.54	0.56	0.51		0.21	0.15		0.21	0.15	
Capacity (*c*), veh/h	243	1001	993	438	928		171	235		340	243	
Volume-to-Capacity Ratio (*X*)	0.854	0.364	0.364	0.109	0.916		0.564	0.208		0.598	0.882	
Back of Queue (*Q*), ft/ln (95 th percentile)	139.4	243.4	236.7	25.5	828.5		112.1	59.3		89.9	277	
Back of Queue (*Q*), veh/ln (95 th percentile)	5.4	9.5	9.5	1.0	32.4		4.4	2.3		3.5	10.8	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.87	0.37	0.36	0.15	1.18		0.90	0.26		1.12	1.07	
Uniform Delay (*d 1*), s/veh	26.2	15.8	15.8	12.7	27.0		41.1	45.0		43.2	49.7	
Incremental Delay (*d 2*), s/veh	3.3	1.0	1.0	0.0	15.2		1.1	0.2		2.0	4.1	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	29.5	16.9	16.9	12.8	42.1		42.2	45.2		45.2	53.8	
Level of Service (LOS)	C	B	B	B	D		D	D		D	D	
Approach Delay, s/veh / LOS	19.7	B		40.6	D		43.2	D		49.6	D	
Intersection Delay, s/veh / LOS	34.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.90	B	2.14	B	2.14	B
Bicycle LOS Score / LOS	1.26	A	1.97	B	0.73	A	1.18	A

HCS Signalized Intersection Results Summary

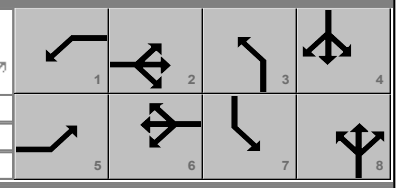
General Information				Intersection Information	
Agency	CMTran			Duration, h	0.250
Analyst	LRY	Analysis Date	Apr 12, 2023	Area Type	Other
Jurisdiction	New Albany	Time Period	PM No Build	PHF	0.92
Urban Street	US-62	Analysis Year	2034	Analysis Period	1> 17:00
Intersection	Johnstown Road & She…	File Name	Johnstown - HY PM No Build.xus		
Project Description	Bevelhymer Mixed Retail TIS				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	179	773	41	41	644	74	174	3	66	170	3	171

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.4	3.3	59.7	10.0	1.0	16.6						
Yellow	4.0	0.0	4.0	4.0	0.0	4.0						
Red	2.0	0.0	2.0	2.0	0.0	2.0						



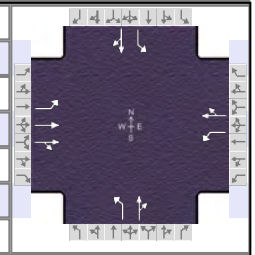
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	14.7	69.0	11.4	65.7	17.0	23.6	16.0	22.6
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.0	0.0	3.0	0.0	3.1	3.5	3.3	3.5
Queue Clearance Time (g_s), s	8.4		3.4		13.0	7.1	12.0	16.1
Green Extension Time (g_e), s	0.3	0.0	0.0	0.0	0.0	0.6	0.0	0.5
Phase Call Probability	1.00		0.77		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	0.00	1.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	195	446	438	45	780		189	75		185	189	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1767	1856	1822	1767	1822		1767	1583		1767	1577	
Queue Service Time (g_s), s	6.4	18.1	18.1	1.4	45.2		11.0	5.1		10.0	14.1	
Cycle Queue Clearance Time (g_c), s	6.4	18.1	18.1	1.4	45.2		11.0	5.1		10.0	14.1	
Green Ratio (*g/C*)	0.57	0.53	0.53	0.54	0.50		0.23	0.15		0.22	0.14	
Capacity (*c*), veh/h	271	974	957	363	907		246	232		322	218	
Volume-to-Capacity Ratio (*X*)	0.717	0.458	0.458	0.123	0.861		0.767	0.324		0.574	0.869	
Back of Queue (*Q*), ft/ln (95 th percentile)	117.2	311.5	300	24.7	719.7		243.2	92.9		219.7	253.8	
Back of Queue (*Q*), veh/ln (95 th percentile)	4.6	12.2	12.0	1.0	28.1		9.5	3.6		8.6	9.9	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.73	0.47	0.46	0.14	1.03		1.95	0.41		2.75	0.98	
Uniform Delay (d_1), s/veh	24.2	17.8	17.8	14.1	26.5		40.9	45.9		41.3	50.6	
Incremental Delay (d_2), s/veh	1.3	1.6	1.6	0.1	10.5		12.3	0.3		1.6	5.3	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	25.6	19.4	19.4	14.2	37.0		53.3	46.2		42.9	56.0	
Level of Service (LOS)	C	B	B	B	D		D	D		D	E	
Approach Delay, s/veh / LOS	20.5	C		35.7	D		51.3	D		49.5	D	
Intersection Delay, s/veh / LOS	32.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.91	B	2.14	B	2.14	B
Bicycle LOS Score / LOS	1.38	A	1.85	B	0.92	A	1.10	A

HCS Signalized Intersection Results Summary

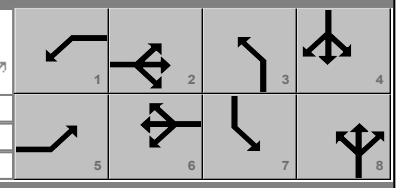
General Information				Intersection Information	
Agency	CMTran			Duration, h	0.250
Analyst	LRY	Analysis Date	Apr 12, 2023	Area Type	Other
Jurisdiction	New Albany	Time Period	PM Build	PHF	0.92
Urban Street	US-62	Analysis Year	2034	Analysis Period	1> 17:00
Intersection	Johnstown Road & She…	File Name	Johnstown - HY PM Build.xus		
Project Description	Bevelhymer Mixed Retail TIS				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	183	779	41	41	649	84	174	3	66	182	3	176

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.4	3.5		59.1	10.0	1.0	17.0					
Yellow	4.0	0.0		4.0	4.0	0.0	4.0					
Red	2.0	0.0		2.0	2.0	0.0	2.0					



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	14.9	68.6	11.4	65.1	17.0	24.0	16.0	23.0
Change Period, (*Y+R c*), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.0	0.0	3.0	0.0	3.1	3.5	3.3	3.5
Queue Clearance Time (*g s*), s	8.6		3.4		13.0	7.1	12.0	16.5
Green Extension Time (*g e*), s	0.3	0.0	0.0	0.0	0.0	0.6	0.0	0.5
Phase Call Probability	1.00		0.77		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	0.00	1.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	199	450	442	45	797		189	75		198	195	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1767	1856	1822	1767	1818		1767	1583		1767	1577	
Queue Service Time (*g s*), s	6.6	18.4	18.4	1.4	47.5		11.0	5.1		10.0	14.5	
Cycle Queue Clearance Time (*g c*), s	6.6	18.4	18.4	1.4	47.5		11.0	5.1		10.0	14.5	
Green Ratio (*g/C*)	0.57	0.52	0.52	0.54	0.49		0.23	0.15		0.22	0.14	
Capacity (*c*), veh/h	256	968	951	358	895		246	237		327	223	
Volume-to-Capacity Ratio (*X*)	0.776	0.465	0.465	0.125	0.890		0.768	0.316		0.605	0.872	
Back of Queue (*Q*), ft/ln (95 th percentile)	123.9	316.5	304.9	25.2	766		242.4	92.4		39.9	262.2	
Back of Queue (*Q*), veh/ln (95 th percentile)	4.8	12.4	12.2	1.0	29.9		9.5	3.6		1.6	10.2	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.77	0.48	0.47	0.14	1.09		1.94	0.41		0.50	1.01	
Uniform Delay (*d 1*), s/veh	25.3	18.1	18.1	14.4	27.5		40.6	45.5		41.6	50.4	
Incremental Delay (*d 2*), s/veh	1.9	1.6	1.6	0.1	12.9		12.4	0.3		2.3	6.6	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	27.3	19.7	19.8	14.5	40.4		52.9	45.8		43.9	57.0	
Level of Service (LOS)	C	B	B	B	D		D	D		D	E	
Approach Delay, s/veh / LOS	21.1	C		39.0	D		50.9	D		50.4	D	
Intersection Delay, s/veh / LOS	34.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.91	B	2.14	B	2.14	B
Bicycle LOS Score / LOS	1.39	A	1.88	B	0.92	A	1.14	A

HCS Two-Way Stop-Control Report

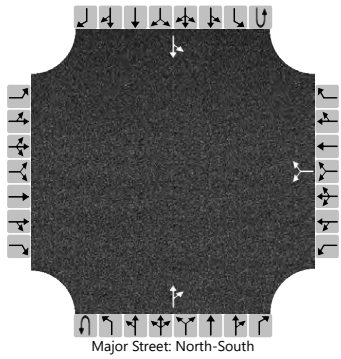
General Information

Analyst	LRY
Agency/Co.	CMTran
Date Performed	
Analysis Year	2024
Time Analyzed	AM Build
Intersection Orientation	North-South
Project Description	Primrose New Albany TIS

Site Information

Intersection	Bevelhymer Road & Site Access 1
Jurisdiction	New Albany
East/West Street	Site Access 1
North/South Street	Bevelhymer Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						16		18			91	27		24	216	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized																
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							37							26		
Capacity, c (veh/h)							734							1451		
v/c Ratio							0.05							0.02		
95% Queue Length, Q_{95} (veh)							0.2							0.1		
Control Delay (s/veh)							10.2							7.5	0.2	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)							10.2							0.9		
Approach LOS							B							A		

HCS Two-Way Stop-Control Report

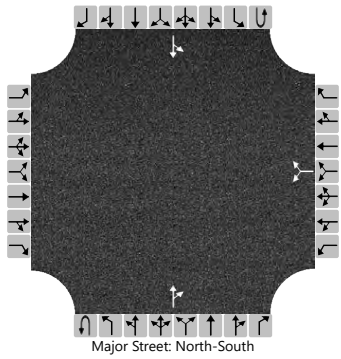
General Information

Analyst	LRY
Agency/Co.	CMTran
Date Performed	
Analysis Year	2024
Time Analyzed	PM Build
Intersection Orientation	North-South
Project Description	Primrose New Albany TIS

Site Information

Intersection	Bevelhymer Road & Site Access 1
Jurisdiction	New Albany
East/West Street	Site Access
North/South Street	Bevelhymer Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						19		34			161	16		30	394	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized																
Median Type | Storage							Undivided									

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							58							33		
Capacity, c (veh/h)							611							1375		
v/c Ratio							0.09							0.02		
95% Queue Length, Q_{95} (veh)							0.3							0.1		
Control Delay (s/veh)							11.5							7.7	0.2	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)							11.5							0.8		
Approach LOS							B							A		

HCS Two-Way Stop-Control Report

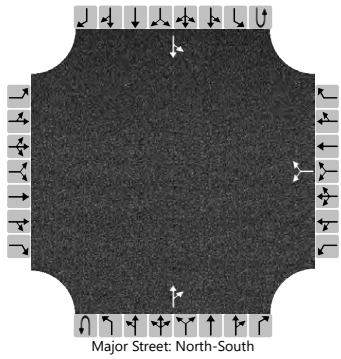
General Information

Analyst	LRY
Agency/Co.	CMTran
Date Performed	
Analysis Year	2034
Time Analyzed	AM Build
Intersection Orientation	North-South
Project Description	Primrose New Albany TIS

Site Information

Intersection	Bevelhymer Road & Site Access 1
Jurisdiction	New Albany
East/West Street	Site Access 1
North/South Street	Bevelhymer Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						16		18			103	27		24	255	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							37							26		
Capacity, c (veh/h)							698							1436		
v/c Ratio							0.05							0.02		
95% Queue Length, Q_{95} (veh)							0.2							0.1		
Control Delay (s/veh)							10.4							7.6	0.2	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)						10.4								0.8		
Approach LOS						B								A		

HCS Two-Way Stop-Control Report

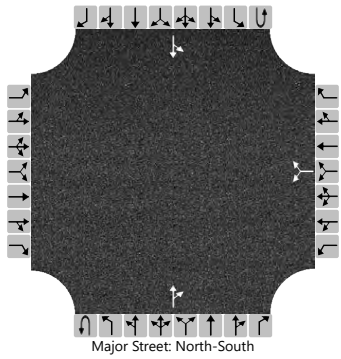
General Information

Analyst	LRY
Agency/Co.	CMTran
Date Performed	
Analysis Year	2034
Time Analyzed	PM Build
Intersection Orientation	North-South
Project Description	Primrose New Albany TIS

Site Information

Intersection	Bevelhymer Road & Site Access 1
Jurisdiction	New Albany
East/West Street	Site Access 1
North/South Street	Bevelhymer Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						18		35			202	16		31	475	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized																
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							58							34		
Capacity, c (veh/h)							546							1324		
v/c Ratio							0.11							0.03		
95% Queue Length, Q_{95} (veh)							0.4							0.1		
Control Delay (s/veh)							12.4							7.8	0.3	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)							12.4							0.7		
Approach LOS							B							A		

HCS Two-Way Stop-Control Report

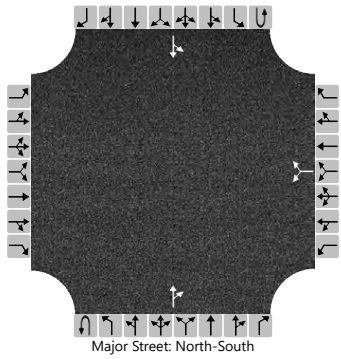
General Information

Analyst	LRY
Agency/Co.	CMTran
Date Performed	
Analysis Year	2024
Time Analyzed	AM Build
Intersection Orientation	North-South
Project Description	Primrose New Albany TIS

Site Information

Intersection	Bevelhymer Road & Site Access 2
Jurisdiction	New Albany
East/West Street	Site Access 2
North/South Street	Bevelhymer Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						17		14			104	16		18	214	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized																
Median Type | Storage							Undivided									

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							34							20		
Capacity, c (veh/h)							713							1449		
v/c Ratio							0.05							0.01		
95% Queue Length, Q_{95} (veh)							0.1							0.0		
Control Delay (s/veh)							10.3							7.5	0.1	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)							10.3							0.7		
Approach LOS							B							A		

HCS Two-Way Stop-Control Report

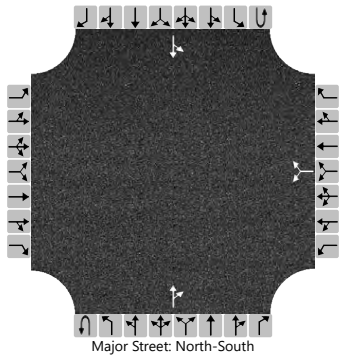
General Information

Analyst	LRY
Agency/Co.	CMTran
Date Performed	
Analysis Year	2024
Time Analyzed	PM Build
Intersection Orientation	North-South
Project Description	Primrose New Albany TIS

Site Information

Intersection	Bevelhymer Road & Site Access 2
Jurisdiction	New Albany
East/West Street	Site Access 2
North/South Street	Bevelhymer Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						19		34			161	16		30	394	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized																
Median Type | Storage							Undivided									

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							58							33		
Capacity, c (veh/h)							611							1375		
v/c Ratio							0.09							0.02		
95% Queue Length, Q_{95} (veh)							0.3							0.1		
Control Delay (s/veh)							11.5							7.7	0.2	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)							11.5							0.8		
Approach LOS							B							A		

HCS Two-Way Stop-Control Report

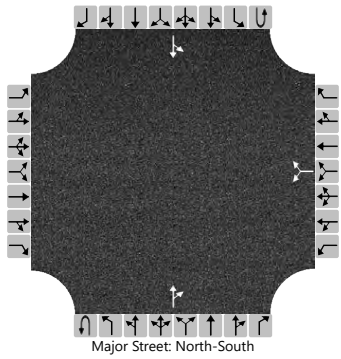
General Information

Analyst	LRY
Agency/Co.	CMTran
Date Performed	
Analysis Year	2034
Time Analyzed	AM Build
Intersection Orientation	North-South
Project Description	Primrose New Albany TIS

Site Information

Intersection	Bevelhymer Road & Site Access 2
Jurisdiction	New Albany
East/West Street	Site Access 2
North/South Street	Bevelhymer Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						17		14			116	16		18	253	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized																
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							34							20		
Capacity, c (veh/h)							675							1433		
v/c Ratio							0.05							0.01		
95% Queue Length, Q_{95} (veh)							0.2							0.0		
Control Delay (s/veh)							10.6							7.5	0.1	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)							10.6							0.6		
Approach LOS							B							A		

HCS Two-Way Stop-Control Report

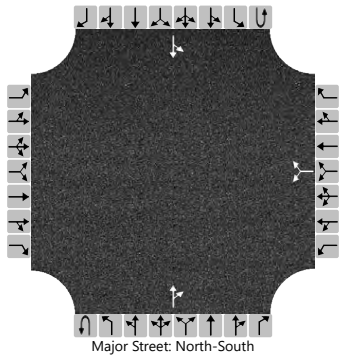
General Information

Analyst	LRY
Agency/Co.	CMTran
Date Performed	
Analysis Year	2034
Time Analyzed	PM Build
Intersection Orientation	North-South
Project Description	Primrose New Albany TIS

Site Information

Intersection	Bevelhymer Road & Site Access 2
Jurisdiction	New Albany
East/West Street	Site Access 2
North/South Street	Bevelhymer Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						19		34			184	16		30	463	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized																
Median Type | Storage							Undivided									

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

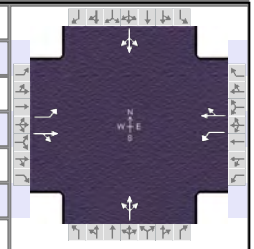
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							58							33		
Capacity, c (veh/h)							558							1346		
v/c Ratio							0.10							0.02		
95% Queue Length, Q_{95} (veh)							0.3							0.1		
Control Delay (s/veh)							12.2							7.7	0.3	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)							12.2							0.7		
Approach LOS							B							A		

Bevelhymer Road & Central College Road
Signalized

HCS Signalized Intersection Results Summary

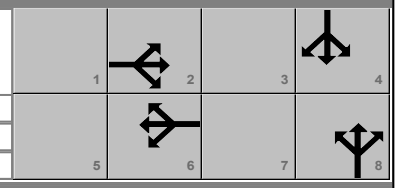
General Information				Intersection Information	
Agency	CMTran			Duration, h	0.250
Analyst	LRY	Analysis Date	Apr 17, 2023	Area Type	Other
Jurisdiction	New Albnay	Time Period	AM No Build	PHF	0.92
Urban Street	Central College Road	Analysis Year	2034	Analysis Period	1> 7:00
Intersection	Central College Road &…	File Name	Central College - HY AM No Build Signal.xus		
Project Description	Primrose New Albany TIS				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	12	156	44	67	194	3	20	45	17	8	128	31

Signal Information			
Cycle, s	41.6	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	20.0	9.6	0.0	0.0	0.0	0.0	
Yellow	4.0	4.0	0.0	0.0	0.0	0.0	
Red	2.0	2.0	0.0	0.0	0.0	0.0	



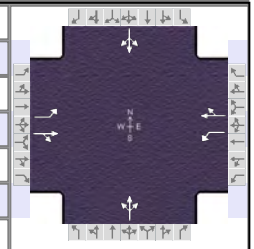
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		6.0		8.0		8.0
Phase Duration, s		26.0		26.0		15.6		15.6
Change Period, ($Y+R_c$), s		6.0		6.0		6.0		6.0
Max Allow Headway (*MAH*), s		3.1		3.1		3.1		3.1
Queue Clearance Time (g_s), s		5.1		6.6		3.7		5.5
Green Extension Time (g_e), s		0.8		0.8		0.3		0.2
Phase Call Probability		1.00		1.00		0.96		0.96
Max Out Probability		0.00		0.00		0.06		0.31

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	13	217		73	214			89			182	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1167	1799		1145	1836			1697			1811	
Queue Service Time (g_s), s	0.3	3.0		1.7	2.8			0.0			0.0	
Cycle Queue Clearance Time (g_c), s	3.1	3.0		4.6	2.8			1.7			3.5	
Green Ratio (*g/C*)	0.48	0.48		0.48	0.48			0.23			0.23	
Capacity (*c*), veh/h	655	866		643	883			498			507	
Volume-to-Capacity Ratio (*X*)	0.020	0.251		0.113	0.242			0.179			0.358	
Back of Queue (*Q*), ft/ln (95 th percentile)	2	27.9		12	27.7			25.1			53.6	
Back of Queue (*Q*), veh/ln (95 th percentile)	0.1	1.1		0.5	1.1			1.0			2.1	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.01	0.01		0.05	0.01			0.01			0.03	
Uniform Delay (d_1), s/veh	7.2	6.4		7.7	6.3			13.0			13.7	
Incremental Delay (d_2), s/veh	0.0	0.1		0.0	0.1			0.1			0.2	
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0			0.0			0.0	
Control Delay (*d*), s/veh	7.3	6.4		7.8	6.4			13.0			13.8	
Level of Service (LOS)	A	A		A	A			B			B	
Approach Delay, s/veh / LOS	6.5	A		6.7	A		13.0	B		13.8	B	
Intersection Delay, s/veh / LOS	9.0						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.64	B	1.64	B	1.90	B	1.90	B
Bicycle LOS Score / LOS	0.87	A	0.96	A	0.63	A	0.79	A

HCS Signalized Intersection Results Summary

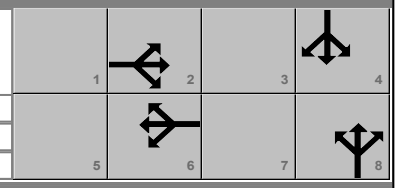
General Information				Intersection Information	
Agency	CMTran			Duration, h	0.250
Analyst	LRY	Analysis Date	Apr 17, 2023	Area Type	Other
Jurisdiction	New Albnay	Time Period	AM Build	PHF	0.92
Urban Street	Central College Road	Analysis Year	2034	Analysis Period	1> 7:00
Intersection	Central College Road &…	File Name	Central College - HY AM Build Signal.xus		
Project Description	Primrose New Albany TIS				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	12	159	55	89	194	3	28	49	33	8	133	31

Signal Information			
Cycle, s	41.7	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	20.0	9.7	0.0	0.0	0.0	0.0	
Yellow	4.0	4.0	0.0	0.0	0.0	0.0	
Red	2.0	2.0	0.0	0.0	0.0	0.0	



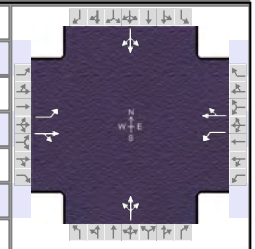
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		6.0		8.0		8.0
Phase Duration, s		26.0		26.0		15.7		15.7
Change Period, ($Y+R_c$), s		6.0		6.0		6.0		6.0
Max Allow Headway (*MAH*), s		3.1		3.1		3.2		3.2
Queue Clearance Time (g_s), s		5.2		7.6		4.3		5.7
Green Extension Time (g_e), s		0.9		0.9		0.3		0.3
Phase Call Probability		1.00		1.00		0.97		0.97
Max Out Probability		0.00		0.00		0.13		0.38

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	13	233		97	214			120			187	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1167	1788		1130	1836			1657			1812	
Queue Service Time (g_s), s	0.3	3.2		2.3	2.9			0.0			0.0	
Cycle Queue Clearance Time (g_c), s	3.1	3.2		5.6	2.9			2.3			3.7	
Green Ratio (*g/C*)	0.48	0.48		0.48	0.48			0.23			0.23	
Capacity (*c*), veh/h	652	857		626	880			494			512	
Volume-to-Capacity Ratio (*X*)	0.020	0.271		0.154	0.243			0.242			0.365	
Back of Queue (*Q*), ft/ln (95 th percentile)	2	30.8		16.8	28.2			34.4			55.5	
Back of Queue (*Q*), veh/ln (95 th percentile)	0.1	1.2		0.7	1.1			1.4			2.2	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.01	0.02		0.07	0.01			0.02			0.03	
Uniform Delay (d_1), s/veh	7.3	6.5		8.2	6.4			13.2			13.7	
Incremental Delay (d_2), s/veh	0.0	0.1		0.0	0.1			0.1			0.2	
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0			0.0			0.0	
Control Delay (*d*), s/veh	7.3	6.6		8.2	6.5			13.3			13.8	
Level of Service (LOS)	A	A		A	A			B			B	
Approach Delay, s/veh / LOS	6.6	A		7.0	A		13.3	B		13.8	B	
Intersection Delay, s/veh / LOS	9.2						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.64	B	1.64	B	1.90	B	1.90	B
Bicycle LOS Score / LOS	0.89	A	1.00	A	0.68	A	0.80	A

HCS Signalized Intersection Results Summary

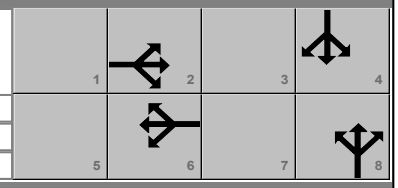
General Information				Intersection Information	
Agency	CMTran			Duration, h	0.250
Analyst	LRY	Analysis Date	Apr 17, 2023	Area Type	Other
Jurisdiction	New Albnay	Time Period	PM No Build	PHF	0.95
Urban Street	Central College Road	Analysis Year	2034	Analysis Period	1> 7:00
Intersection	Central College Road &…	File Name	Central College - HY PM No Build Signal.xus		
Project Description	Primrose New Albany TIS				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	37	196	56	70	373	189	47	86	40	54	323	81

Signal Information			
Cycle, s	46.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	20.0	14.8	0.0	0.0	0.0	0.0	
Yellow	4.0	4.0	0.0	0.0	0.0	0.0	
Red	2.0	2.0	0.0	0.0	0.0	0.0	



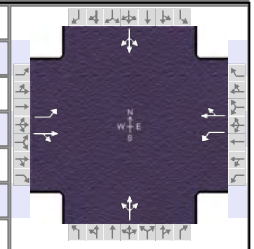
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		6.0		8.0		8.0
Phase Duration, s		26.0		26.0		20.8		20.8
Change Period, ($Y+R_c$), s		6.0		6.0		6.0		6.0
Max Allow Headway (*MAH*), s		3.1		3.1		3.2		3.2
Queue Clearance Time (g_s), s		17.6		15.5		5.6		14.1
Green Extension Time (g_e), s		0.7		2.0		0.8		0.7
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		1.00		0.01		0.57		0.18

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	39	265		74	592			182			482	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	819	1784		1114	1764			1593			1751	
Queue Service Time (g_s), s	2.0	4.7		2.2	13.5			0.0			6.8	
Cycle Queue Clearance Time (g_c), s	15.6	4.7		6.9	13.5			3.6			12.1	
Green Ratio (*g/C*)	0.43	0.43		0.43	0.43			0.32			0.32	
Capacity (*c*), veh/h	267	762		518	753			602			640	
Volume-to-Capacity Ratio (*X*)	0.146	0.348		0.142	0.785			0.303			0.753	
Back of Queue (*Q*), ft/ln (95 th percentile)	14.7	56.7		19	165.2			54			187.7	
Back of Queue (*Q*), veh/ln (95 th percentile)	0.6	2.2		0.7	6.5			2.1			7.4	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.07	0.03		0.08	0.05			0.02			0.10	
Uniform Delay (d_1), s/veh	18.3	9.0		11.3	11.6			12.2			15.0	
Incremental Delay (d_2), s/veh	0.1	0.1		0.0	0.7			0.1			1.6	
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0			0.0			0.0	
Control Delay (*d*), s/veh	18.4	9.1		11.4	12.3			12.3			16.5	
Level of Service (LOS)	B	A		B	B			B			B	
Approach Delay, s/veh / LOS	10.3	B		12.2	B		12.3	B		16.5	B	
Intersection Delay, s/veh / LOS	13.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.65	B	1.65	B	1.89	B	1.89	B
Bicycle LOS Score / LOS	0.99	A	1.59	B	0.79	A	1.28	A

HCS Signalized Intersection Results Summary

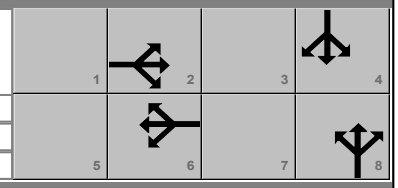
General Information				Intersection Information	
Agency	CMTran			Duration, h	0.250
Analyst	LRY	Analysis Date	Apr 17, 2023	Area Type	Other
Jurisdiction	New Albnay	Time Period	PM Build	PHF	0.95
Urban Street	Central College Road	Analysis Year	2034	Analysis Period	1> 7:00
Intersection	Central College Road &…	File Name	Central College - HY PM Build Signal.xus		
Project Description	Primrose New Albany TIS				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	37	196	67	97	373	189	59	104	72	54	339	81

Signal Information			
Cycle, s	47.6	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	20.0	15.6	0.0	0.0	0.0	0.0	
Yellow	4.0	4.0	0.0	0.0	0.0	0.0	
Red	2.0	2.0	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		6.0		8.0		8.0
Phase Duration, s		26.0		26.0		21.6		21.6
Change Period, ($Y+R_c$), s		6.0		6.0		6.0		6.0
Max Allow Headway (*MAH*), s		3.2		3.2		3.2		3.2
Queue Clearance Time (g_s), s		18.0		15.9		7.1		14.7
Green Extension Time (g_e), s		0.6		2.2		0.6		0.9
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		1.00		0.00		1.00		0.08

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	39	277		102	592			247			499	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	819	1774		1102	1764			1595			1747	
Queue Service Time (g_s), s	2.1	5.1		3.3	13.9			0.0			7.1	
Cycle Queue Clearance Time (g_c), s	16.0	5.1		8.4	13.9			5.1			12.7	
Green Ratio (*g/C*)	0.42	0.42		0.42	0.42			0.33			0.33	
Capacity (*c*), veh/h	255	745		496	741			618			657	
Volume-to-Capacity Ratio (*X*)	0.153	0.372		0.206	0.799			0.400			0.759	
Back of Queue (*Q*), ft/ln (95 th percentile)	15.3	63.1		28.9	174.8			76.6			192.2	
Back of Queue (*Q*), veh/ln (95 th percentile)	0.6	2.5		1.1	6.9			3.0			7.6	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.07	0.03		0.12	0.05			0.03			0.10	
Uniform Delay (d_1), s/veh	19.1	9.5		12.4	12.1			12.5			14.9	
Incremental Delay (d_2), s/veh	0.1	0.1		0.1	0.8			0.2			1.0	
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0			0.0			0.0	
Control Delay (*d*), s/veh	19.2	9.6		12.5	12.8			12.6			16.0	
Level of Service (LOS)	B	A		B	B			B			B	
Approach Delay, s/veh / LOS	10.8	B		12.8	B		12.6	B		16.0	B	
Intersection Delay, s/veh / LOS	13.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.66	B	1.66	B	1.89	B	1.89	B
Bicycle LOS Score / LOS	1.01	A	1.63	B	0.90	A	1.31	A

Appendix G
Signal Warrant Analysis

Appendix G

CARPENTER MARTY transportation

STUDY AND ANALYSIS INFORMATION

Municipality:	New Albany	**Traffic Volumes Obtained By:**	CMTran
County:	Franklin	**Analysis Date:**	
ODOT Engineering District:	6	**Agency/ Company Name Performing Warrant Analysis:**	CMTran
Google map link:			

Analysis Information

Data Collection Date:	3/1/2023
Day of the Week:	Wednesday
Is the intersection in a built-up area of an isolated community of <10,000 population?	No
Existing Traffic Signal at intersection:	No
Total Number of Approaches at Intersection:	4

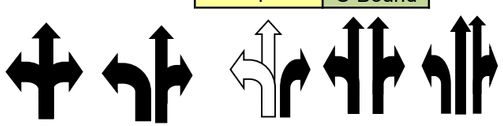
Major Street Information

Major Street Name and Route Number:	Central College Road	
Major Street Approach Direction:	E-Bound W-Bound	
Number of Thru Lanes on Each Major Street Approach:	1	**LANE(S)**
Speed Limit or 85th Percentile Speed on the Major Street*:	45	**MPH**

*Unknown assumes below 45 mph

Minor Street Information

Minor Street Name and Route Number:	Bevelhymer Road	
Minor Street Approach Configuration:	1	N-Bound
	1	S-Bound



Number of Thru Lanes on Each Minor Street Approach:	1	**LANE(S)**
Apply Right Turn Lane Reduction*:	Yes	

*Right Turn Lane Reduction Shall be used for Warrants 1, 2, & 3 for New ODOT Signals. Please refer to TEM 402-3.2 for clarification and criteria under which Right Turn Reduction is not required.

TRAFFIC SIGNAL WARRANT ANALYSIS FINDINGS

	Applicable?	Warrant Satisfied?	Notes and Comments:	
Warrant 1, Eight-Hour Vehicular Volume	Yes	**No**		
Warrant 2, Four-Hour Vehicular Volume	Yes	**No**		
Warrant 3, Peak Hour	Yes	**Yes**	Signals installed under Warrant 3 should be traffic actuated.	**Peak Hour** 4:30 PM 5:30 PM

For Warrants 1-3, new ODOT signals must be based off of 100% volume thresholds (TEM 402-3.2)

Warrant 4, Pedestrian Volume	No		If this warrant is met, and a traffic control signal is justified by an engineering study, the traffic control signal shall be equipped with pedestrian signal heads complying with the provisions set forth in Chapter 4E of the OMUTCD.	**Peak Hour** 4:30 PM 5:30 PM
Warrant 5, School Crossing	No		N/A	
Warrant 6, Coordinated Signal System	No		(Shall not be used as the sole warrant in the analysis)	
Warrant 7, Crash Experience	No		If this is the sole warrant, signal must be semi-actuated with control devices which provide proper coordination if installed at an intersection within a coordinated system and normally should be fully traffic actuated if installed at an isolated intersection.	
Warrant 8, Roadway Network	No		(Shall not be used as the sole warrant in the analysis)	
Warrant 9, Intersection Near a Grade Crossing	No		Figure 4C-9	
Multi-Way Stop Warrant	No		May be used as an interim measure if traffic signal warrants are satisfied.	

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

If no warrants are satisfied, additional options may be considered:

1. An engineering study, performed by a firm prequalified by ODOT for signal design, if approved by the ODOT district, may be used to justify a new signal installation or retention of an existing signal that otherwise does not meet the published warrants. An example of such an instance is a traffic signal in proximity to a railroad crossing that serves to reduce queuing across the tracks.
2. According to TEM 402-2, If the actual turning movement counts fail to satisfy a signal warrant, it may be acceptable to use traffic volumes projected to the second year after project completion. The **Modeling and Forecasting Section** should provide the projected traffic volumes.
3. A pedestrian hybrid beacon may be considered for installation to facilitate pedestrian crossings at a location that does not meet traffic signal warrants (see Chapter 4C of TEM) or at a location that meets traffic signal warrants under Sections 4C.05 and/or 4C.06 but a decision is made to not install a traffic control signal. **Please fill inputs on PHB Score Sheet and submit to ODOT.**

Considerations such as geometrics and lack of sight distance generally have not been accepted in lieu of satisfying signal warrants. These considerations may allow an otherwise unwarranted traffic signal to be retained at **100 percent** local cost. Please review TEM 402-4 for details.

Conclusion:

Notes: 2024 No Build - w RTR

OMUTCD WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME

Number of Lanes for Moving Traffic on Each Approach	
Major Street:	1 Lane
Minor Street:	1 Lane

Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street? Yes

**Only applicable after an adequate trial of other alternatives (See section 4C.02.06 of the 2012 OMUTCD)*

Lanes Major/ Minor	Adjusted Volumes		Condition A				Condition B				Combination A/B*							
											Cond. A		Cond. B		Cond. A		Cond. B	
	Major	Minor	100%		70%		100%		70%		80%		80%		56%		56%	
			Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.
1 / 1	X		500	150	350	105	750	75	525	53	400	120	600	60	280	84	420	42
2+ / 1			600	150	420	105	900	75	630	53	480	120	720	60	336	84	504	42
2+ / 2+			600	200	420	140	900	100	630	70	480	160	720	80	336	112	504	56
1 / 2+			500	200	350	140	750	100	525	70	400	160	600	80	280	112	420	56
12:00 AM	0	0																
12:15 AM	0	0																
12:30 AM	0	0																
12:45 AM	0	0																
1:00 AM	0	0																
1:15 AM	0	0																
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5:00 AM	0	0																
5:15 AM	14	13																
5:30 AM	38	19																
5:45 AM	66	29																
6:00 AM	114	38																
6:15 AM	155	53																
6:30 AM	230	90																
6:45 AM	296	108													1	1		
7:00 AM	328	128																
7:15 AM	367	141			1	1												
7:30 AM	355	123																
7:45 AM	342	121													1	1		
8:00 AM	337	116																
8:15 AM	308	101																
8:30 AM	275	90																
8:45 AM	236	75																
9:00 AM	206	60																
9:15 AM	141	36																
9:30 AM	87	23																
9:45 AM	45	8																
10:00 AM	0	0																
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1:30 PM	127	37																
1:45 PM	186	66																
2:00 PM	251	89																
2:15 PM	281	103													1	1		
2:30 PM	268	107																
2:45 PM	284	110																
3:00 PM	302	119																
3:15 PM	320	121													1	1		
3:30 PM	405	158			1	1					1	1						
3:45 PM	522	202	1	1													1	1
4:00 PM	586	281							1	1								
4:15 PM	669	365											1	1	1	1		
4:30 PM	708	383			1	1					1	1						
4:45 PM	669	393	1	1													1	1
5:00 PM	670	379							1	1								
5:15 PM	494	270													1	1		
5:30 PM	301	171																
5:45 PM	148	89																
6:00 PM	0	0																
6:15 PM	0	0																
6:30 PM	0	0																
6:45 PM	0	0																
7:00 PM	0	0																
7:15 PM	0	0																
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7:45 PM	0	0																
8:00 PM	0	0																
8:15 PM	0	0																
8:30 PM	0	0																
8:45 PM	0	0																
9:00 PM	0	0																
9:15 PM	0	0																
9:30 PM	0	0																
9:45 PM	0	0																
HOURS MET			**2**	**2**	**3**	**3**	**0**	**0**	**2**	**2**	**2**	**2**	**1**	**1**	**6**	**6**	**2**	**2**
WARRANT SATISFIED?			**NO**		**NO**		**NO**		**NO**		**NO**				**NO**			

Warrant Met: No

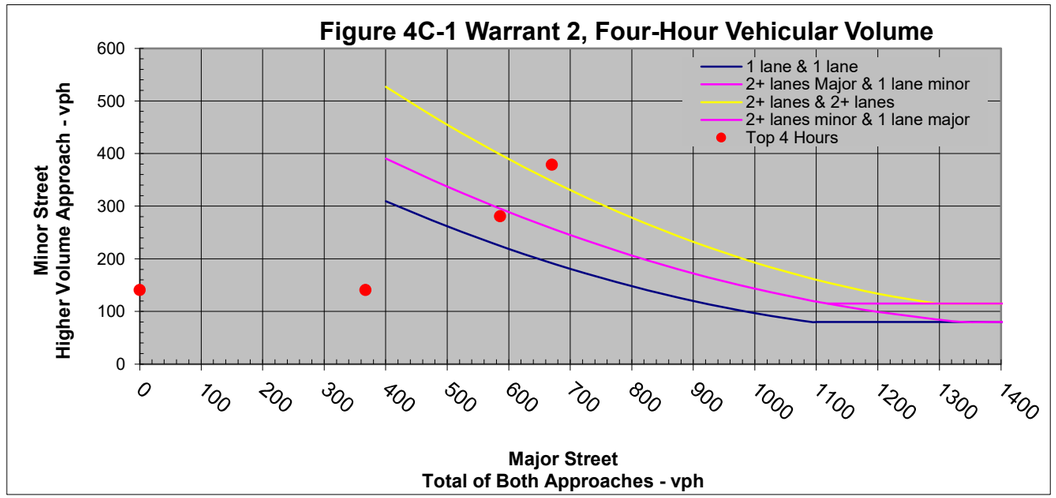
Notes:

OMUTCD WARRANT 2, FOUR-HOUR VEHICULAR VOLUME

Number of Lanes for Moving Traffic on Each Approach		Total Number of Unique Hours Met on Figure 4C-1	2
Major street:	1 Lane	Total Number of Unique Hours Met on Figure 4C-2 (70% Factor)	2
Minor Street:	1 Lane		

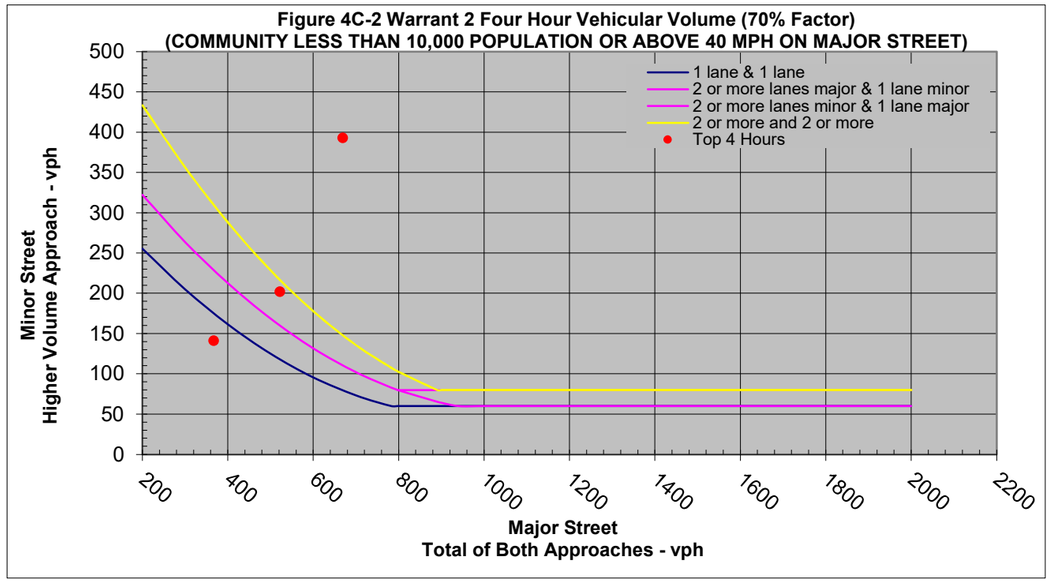
Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street?	Yes

Hour Interval Beginning At	Raw Traffic Counts				Total Major Approach Volumes	Highest Actual Minor Street Approach Volumes	Hour Met?	Hour Met? (70% Factor)
	Minor - Bevelhymer Road		Major - Central College Road					
	N-Bound	S-Bound	W-Bound	E-Bound				
6:00 AM	28	38	50	64	114	38		
6:15 AM	34	53	79	76	155	53		
6:30 AM	39	90	137	93	230	90		
6:45 AM	50	108	179	117	296	108		
7:00 AM	58	128	198	130	328	128		
7:15 AM	63	141	203	164	367	141		
7:30 AM	68	123	163	192	355	123		
7:45 AM	72	121	146	196	342	121		
8:00 AM	57	116	140	197	337	116		
8:15 AM	65	101	128	180	308	101		
8:30 AM	65	90	124	151	275	90		
8:45 AM	60	75	106	130	236	75		
9:00 AM	58	60	92	114	206	60		
9:15 AM	36	33	61	80	141	36		
9:30 AM	23	19	37	50	87	23		
9:45 AM	7	8	20	25	45	8		
10:00 AM	0	0	0	0	0	0		
10:15 AM	0	0	0	0	0	0		
10:30 AM	0	0	0	0	0	0		
10:45 AM	0	0	0	0	0	0		
11:00 AM	0	0	0	0	0	0		
11:15 AM	0	0	0	0	0	0		
11:30 AM	0	0	0	0	0	0		
11:45 AM	0	0	0	0	0	0		
12:00 PM	0	0	0	0	0	0		
12:15 PM	0	0	0	0	0	0		
12:30 PM	0	0	0	0	0	0		
12:45 PM	0	0	0	0	0	0		
1:00 PM	0	0	0	0	0	0		
1:15 PM	19	23	26	19	45	23		
1:30 PM	37	36	63	64	127	37		
1:45 PM	66	51	91	95	186	66		
2:00 PM	89	72	122	129	251	89		
2:15 PM	103	71	138	143	281	103		
2:30 PM	107	72	137	131	268	107		
2:45 PM	110	85	141	143	284	110		
3:00 PM	119	88	147	155	302	119		
3:15 PM	121	91	151	169	320	121		
3:30 PM	140	158	213	192	405	158		
3:45 PM	151	202	317	205	522	202		Met
4:00 PM	143	281	378	208	586	281	Met	
4:15 PM	147	365	445	224	669	365		
4:30 PM	132	383	486	222	708	383		
4:45 PM	132	393	455	214	669	393		Met
5:00 PM	145	379	445	225	670	379	Met	
5:15 PM	107	270	332	162	494	270		
5:30 PM	80	171	193	108	301	171		
5:45 PM	37	89	88	60	148	89		
6:00 PM	0	0	0	0	0	0		
6:15 PM	0	0	0	0	0	0		
6:30 PM	0	0	0	0	0	0		
6:45 PM	0	0	0	0	0	0		
7:00 PM	0	0	0	0	0	0		
7:15 PM	0	0	0	0	0	0		
7:30 PM	0	0	0	0	0	0		
7:45 PM	0	0	0	0	0	0		
8:00 PM	0	0	0	0	0	0		



Top Hours for Figure 4C-1	Start Time	End Time	Major Street	Minor Street
Top Hour	5:00 PM	6:00 PM	670	379
2nd Highest Hour	4:00 PM	5:00 PM	586	281
3rd Highest Hour	12:00 AM	1:00 AM	0	141
4th Highest Hour	7:15 AM	8:15 AM	367	141

Top Hours for Figure 4C-2	Start Time	End Time	Major Street	Minor Street
Top Hour	4:45 PM	5:45 PM	669	393
2nd Highest Hour	3:45 PM	4:45 PM	522	202
3rd Highest Hour	12:00 AM	1:00 AM	0	141
4th Highest Hour	7:15 AM	8:15 AM	367	141



Are the requirements for Warrant 2 met?: No

OMUTCD WARRANT 3, PEAK HOUR

Number of Lanes for Moving Traffic on Each Approach		Peak Hour Start time	4:30 PM
Major Street:	1 Lane	Peak Hour End Time	5:30 PM
Minor Street:	1 Lane		

Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street?	Yes
Is this signal warrant being applied for an unusual case, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time?	No

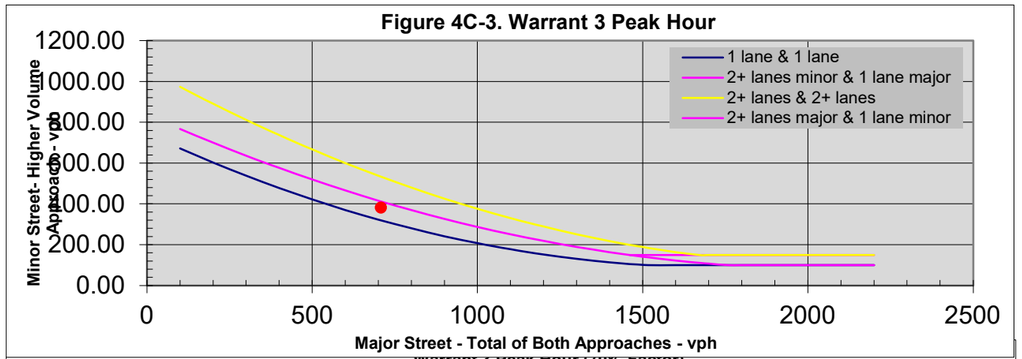
Indicate whether all three of the following conditions for the same 1 hour (any four consecutive 15-minute periods) of an average day are present*

Does the total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equal or exceed 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach?	
Does the volume on the same minor-street approach (one direction only) equal or exceed 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes?	Yes
Does the total entering volume serviced during the hour equal or exceed 650 vehicles per hour for intersection with three approaches or 800 vehicles per hour for intersections with four or more approaches?	Yes

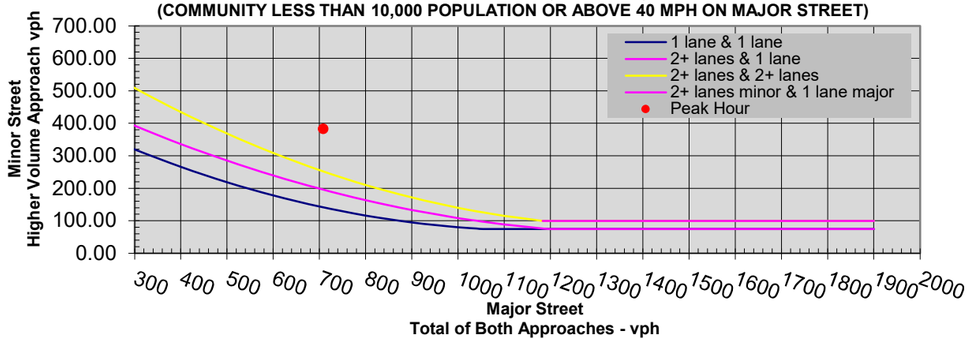
**If applicable, attach all supporting calculations and documentation.*

Are the requirements for Warrant 3 met?: Yes

Figure 4C-3. Warrant 3 Peak Hour



Warrant 3 Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



Hour Vehicular Volume

Hour Interval Beginning At	Major Street Combined Vehicles Per Hour (VPH)	Highest Minor Street Approach Vehicles Per Hour (VPH)	Sum of Major Street and Highest Minor Street	Sum of Major Street and Combined Minor Street
6:00 AM	114	38	152	180
6:15 AM	155	53	208	242
6:30 AM	230	90	320	359
6:45 AM	296	108	404	454
7:00 AM	328	128	456	514
7:15 AM	367	141	508	571
7:30 AM	355	123	478	546
7:45 AM	342	121	463	535
8:00 AM	337	116	453	510
8:15 AM	308	101	409	474
8:30 AM	275	90	365	430
8:45 AM	236	75	311	371
9:00 AM	206	60	266	324
9:15 AM	141	36	177	210
9:30 AM	87	23	110	129
9:45 AM	45	8	53	60
10:00 AM	0	0	0	0
10:15 AM	0	0	0	0
10:30 AM	0	0	0	0
10:45 AM	0	0	0	0
11:00 AM	0	0	0	0
11:15 AM	0	0	0	0
11:30 AM	0	0	0	0
11:45 AM	0	0	0	0
12:00 PM	0	0	0	0
12:15 PM	0	0	0	0
12:30 PM	0	0	0	0
12:45 PM	0	0	0	0
1:00 PM	0	0	0	0
1:15 PM	45	23	68	87
1:30 PM	127	37	164	200
1:45 PM	186	66	252	303
2:00 PM	251	89	340	412
2:15 PM	281	103	384	455
2:30 PM	268	107	375	447
2:45 PM	284	110	394	479
3:00 PM	302	119	421	509
3:15 PM	320	121	441	532
3:30 PM	405	158	563	703
3:45 PM	522	202	724	875
4:00 PM	586	281	867	1010
4:15 PM	669	365	1034	1181
4:30 PM	708	383	1091	1223
4:45 PM	669	393	1062	1194
5:00 PM	670	379	1049	1194
5:15 PM	494	270	764	871
5:30 PM	301	171	472	552
5:45 PM	148	89	237	274
6:00 PM	0	0	0	0
6:15 PM	0	0	0	0
6:30 PM	0	0	0	0
6:45 PM	0	0	0	0
7:00 PM	0	0	0	0
7:15 PM	0	0	0	0
7:30 PM	0	0	0	0
7:45 PM	0	0	0	0
8:00 PM	0	0	0	0

Actual Peak Hour Major Traffic Volume	Actual Peak Hour Minor Traffic Volume	Required Peak Hour Minor Traffic Volume for Fig. 4C-3	Required Peak Hour Minor Traffic Volume for Fig. 4C-4
708	383	320	142

Start Time	Southbound Approach						Westbound Approach						Northbound Approach						Eastbound Approach						NOTES:
	Southbound						Westbound						Nouthbound						Eastbound						
	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	
12:00 AM						0						0						0						0	It should be noted that if data is copied overtop of the Hourly Totals or Approach Totals, that the 'AutoSum' Formula will be lost. This should not affect the actual totals if the data was copied from a program that performs the calculations for the user.
12:15 AM						0						0						0						0	
12:30 AM						0						0						0						0	
12:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:00 AM						0						0						0						0	
1:15 AM						0						0						0						0	
1:30 AM						0						0						0						0	
1:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2:00 AM						0						0						0						0	
2:15 AM						0						0						0						0	
2:30 AM						0						0						0						0	
2:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:00 AM						0						0						0						0	
3:15 AM						0						0						0						0	
3:30 AM						0						0						0						0	
3:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 AM						0						0						0						0	
4:15 AM						0						0						0						0	
4:30 AM						0						0						0						0	
4:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 AM						0						0						0						0	
5:15 AM						0						0						0						0	
5:30 AM						0						0						0						0	
5:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6:00 AM	0	10	3			13	0	6	3			9	0	2	1			3	2	3	0			5	
6:15 AM	1	5	0			6	0	7	3			10	0	2	1			3	5	9	0			14	
6:30 AM	0	10	0			10	1	6	3			10	1	4	1			6	3	14	1			18	
6:45 AM	0	7	2			9	0	15	6			21	3	12	1			16	3	24	0			27	
Hourly Total	1	32	5	0	0	38	1	34	15	0	0	50	4	20	4	0	0	28	13	50	1	0	0	64	
7:00 AM	5	23	1			29	2	24	12			38	2	7	1			10	0	13	4			17	
7:15 AM	10	35	0			45	1	48	19			68	0	5	3			8	2	20	9			31	
7:30 AM	6	21	2			29	0	33	19			52	6	7	5			18	2	32	8			42	
7:45 AM	3	22	4			29	1	37	2			40	8	13	4			25	2	35	3			40	
Hourly Total	24	101	7	0	0	132	4	142	52	0	0	198	16	32	13	0	0	61	6	100	24	0	0	130	
8:00 AM	7	35	1			43	0	31	12			43	0	11	3			14	3	36	12			51	
8:15 AM	5	18	3			26	1	21	6			28	5	8	1			14	5	50	4			59	
8:30 AM	0	23	3			26	2	22	11			35	5	12	5			22	6	32	8			46	
8:45 AM	5	16	3			24	1	22	11			34	3	3	3			9	2	28	11			41	
Hourly Total	17	92	10	0	0	119	4	96	40	0	0	140	13	34	12	0	0	59	16	146	35	0	0	197	
9:00 AM	4	19	4			27	0	24	7			31	6	12	5			23	2	27	5			34	
9:15 AM	3	12	0			15	2	18	4			24	1	11	2			14	3	23	4			30	
9:30 AM	2	9	0			11	1	12	4			17	3	9	4			16	0	17	8			25	
9:45 AM	0	8	0			8	1	11	8			20	1	4	2			7	2	20	3			25	
Hourly Total	9	48	4	0	0	61	4	65	23	0	0	92	11	36	13	0	0	60	7	87	20	0	0	114	
10:00 AM						0						0						0						0	
10:15 AM						0						0						0						0	
10:30 AM						0						0						0						0	
10:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:00 AM						0						0						0						0	
11:15 AM						0						0						0						0	
11:30 AM						0						0						0						0	
11:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:00 PM						0						0						0						0	
12:15 PM						0						0						0						0	
12:30 PM						0						0						0						0	
12:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:00 PM						0						0						0						0	
1:15 PM						0						0						0						0	
1:30 PM						0						0						0						0	
1:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
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2:15 PM	3	7	4			14	0	29	8			37	5	12	2			19	6	33	6			45	
2:30 PM	3	11	1			15	2	16	10			28	10	18	3			31	3	25	3			31	
2:45 PM	5	15	2			22	2	23	6			31	2	11	10			23	6	23	5			34	
Hourly Total	14	52	8	0	0	74	5	88	29	0	0	122	22	51	20	0	0	93	17	97	15	0	0	129	
3:00 PM	1	19	2			22	1	33	8			42	6	22	6			34	3	25	5			33	
3:15 PM	4	11	0			15	3	24	9			36	10	11	3			24	7	22	4			33	
3:30 PM	3	22	3			28	3	24	5			32	13	18	4			35	4	34	5			43	
3:45 PM	5	20	0			25	3	28	6			37	13	15	6			34	5	36	5			46	
Hourly Total	13	72	5	0	0	90	10	109	28	0	0	147	42	66	19	0	0	127	19	117	19	0	0	155	
4:00 PM	5	18	3			26	3	38	5			46	8	18	10			36	3	39	5			47	
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4:30 PM	5	57	10			72	45	71	20			136	11	19	15			45	11	40	5			56	
4:45 PM	23	71	14			108	31	62	5			98	6	15	4			25	5	38	6			49	
Hourly Total	47	208	35	0	0	290	122	218	38	0	0	378	37	79	34	0	0	150	28	152	28	0	0	208	
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5:30 PM	18	55	12			85	34	66	5			105	9	27	9			45	6	36	6			48	
5:45 PM	15	65	12			92	39	40	9			88	7	27	4			38	5	39	16			60	
Hourly Total	74	273	46	0	0	393	142	260	43	0	0	445	32	89	30	0	0	151	35	151	39	0	0	225	
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6:15 PM						0						0						0						0	
6:30 PM						0						0						0						0	
6:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
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7:15 PM						0						0						0						0	
7:30 PM						0						0						0						0	
7:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
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8:15 PM						0						0						0						0	
8:30 PM						0						0						0						0	
8:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 PM						0						0						0						0	
9:15 PM						0						0						0						0	
9:30 PM						0						0						0						0	
9:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:00 PM						0						0						0						0	
10:15 PM						0						0						0						0	
10:30 PM						0						0						0						0	
10:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:00 PM						0						0						0						0	
11:15 PM						0						0						0						0	
11:30 PM						0						0						0						0	
11:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Count Data at the Central College Road & Bevelhymer Road intersection collected on 3/1/2023

	Southbound						Westbound						Northbound						Eastbound		
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left
0:00																					
12:15																					
12:30																					
12:45																					
1:00																					
1:15																					
1:30																					
1:45																					
2:00																					
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4:15																					
4:30																					
4:45																					
5:00																					
5:15																					
5:30																					
5:45																					
6:00	0	7	3				0	6	3				0	2	1				2	3	0
6:15	1	5	0				0	7	3				0	2	1				5	9	0
6:30	0	10	0				1	6	3				1	4	1				3	14	1
6:45	0	7	2				0	15	6				3	12	1				3	23	0
7:00	5	19	1				2	23	12				2	7	1				0	13	4
7:15	10	34	0				1	47	18				0	5	3				2	19	9
7:30	6	21	2				0	32	18				6	7	5				2	31	8
7:45	3	22	4				1	36	2				8	13	4				2	34	3
8:00	7	30	1				0	30	12				0	11	3				3	35	12
8:15	5	18	3				1	20	6				5	8	1				5	49	4
8:30	0	23	3				2	21	11				5	12	5				6	31	8
8:45	5	16	3				1	21	11				3	3	3				2	27	11
9:00	4	14	4				0	23	7				6	12	5				2	26	5
9:15	3	12	0				2	17	4				1	11	2				3	22	4
9:30	2	9	0				1	12	4				3	9	4				0	17	8
9:45	0	8	0				1	11	8				1	4	2				2	19	3
10:00																					
10:15																					
10:30																					
10:45																					
11:00																					
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12:45																					
1:00																					
1:15																					
1:30																					
1:45																					
2:00	3	13	1				1	19	5				5	10	5				2	16	1
2:15	3	7	4				0	28	8				5	12	2				6	32	6
2:30	3	11	1				2	16	10				10	18	3				3	24	3
2:45	5	15	2				2	22	6				2	11	10				6	22	5
3:00	1	13	2				1	32	8				6	22	6				3	24	5
3:15	4	11	0				3	23	9				10	11	3				7	21	4
3:30	3	22	3				3	23	5				13	18	4				4	33	5
3:45	5	20	0				3	27	6				13	15	6				5	35	5
4:00	5	12	3				3	37	5				8	18	10				3	38	5
4:15	14	61	8				42	46	8				12	27	5				9	34	12
4:30	5	56	10				44	69	19				11	19	15				11	39	5
4:45	23	70	14				30	60	5				6	15	4				5	37	6
5:00	20	75	12				33	66	11				10	18	12				14	38	10
5:15	21	71	10				34	83	17				6	17	5				10	36	7
5:30	18	54	12				33	64	5				9	27	9				6	35	6
5:45	15	64	12				38	39	9				7	27	4				5	38	16
6:00																					
6:15																					
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11:00																					
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11:30																					
11:45																					

Grown Count Data

	Southbound						Westbound						Northbound						Eastbound		
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left
0:00																					
12:15																					
12:30																					
12:45																					
1:00																					
1:15																					
1:30																					
1:45																					
2:00																					
2:15																					
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4:15																					
4:30																					
4:45																					
5:00																					
5:15																					
5:30																					
5:45																					
6:00	0	7	3				0	6	3				0	2	1				2	3	0
6:15	1	5	0				0	7	3				0	2	1				5	9	0
6:30	0	10	0				1	6	3				1	4	1				3	14	1
6:45	0	7	2				0	15	6				3	12	1				3	24	0
7:00	5	19	1				2	24	12				2	7	1				0	13	4
7:15	10	35	0				1	48	19				0	5	3				2	20	9
7:30	6	21	2				0	33	19				6	7	5				2	32	8
7:45	3	22	4				1	37	2				8	13	4				2	35	3
8:00	7	30	1				0	31	12				0	11	3				3	36	12
8:15	5	18	3				1	21	6				5	8	1				5	50	4
8:30	0	23	3				2	22	11				5	12	5				6	32	8
8:45	5	16	3				1	22	11				3	3	3				2	28	11
9:00	4	14	4				0	24	7				6	12	5				2	27	5
9:15	3	12	0				2	18	4				1	11	2				3	23	4
9:30	2	9	0				1	12	4				3	9	4				0	17	8
9:45	0	8	0				1	11	8				1	4	2				2	20	3
10:00																					
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1:15																					
1:30																					
1:45																					
2:00	3	13	1				1	20	5				5	10	5				2	16	1
2:15	3	7	4				0	29	8				5	12	2				6	33	6
2:30	3	11	1				2	16	10				10	18	3				3	25	3
2:45	5	15	2				2	23	6				2	11	10				6	23	5
3:00	1	13	2				1	33	8				6	22	6				3	25	5
3:15	4	11	0				3	24	9				10	11	3				7	22	4
3:30	3	22	3				3	24	5				13	18	4				4	34	5
3:45	5	20	0				3	28	6				13	15	6				5	36	5
4:00	5	12	3				3	38	5				8	18	10				3	39	5
4:15	14	62	8				43	47	8				12	27	5				9	35	12
4:30	5	57	10				45	71	20				11	19	15				11	40	5
4:45	23	71	14				31	62	5				6	15	4				5	38	6
5:00	20	76	12				34	68	11				10	18	12				14	39	10
5:15	21	72	10				35	86	18				6	17	5				10	37	7
5:30	18	55	12				34	66	5				9	27	9				6	36	6
5:45	15	65	12				39	40	9				7	27	4				5	39	16
6:00																					
6:15																					
6:30																					
6:45																					
7:00																					
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11:00																					
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11:30																					
11:45																					

Growth Rates	
Southbound	1.6%
Westbound	3.1%
Northbound	1.8%
Eastbound	2.8%
Collection Year	2023
Design Year	2024

Trip Distribution (Sheetz Development) - Distribution matches thePM Peak distribution used in the TIS volumes.

	2% Entry Southbound						Westbound						2% Exit Northbound		2% Exit				Eastbound			960 - Super Convenience Market/Gas Station*		710 Weekday
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left	Entry %	Exit %	Entry/Exit
0:00																						1.2%	1.3%	2399
12:15																								
12:30																								
12:45																								
1:00																						0.8%	0.9%	
1:15																								
1:30																								
1:45																								
2:00																						0.6%	0.6%	
2:15																								
2:30																								
2:45																								
3:00																						0.8%	0.7%	
3:15																								
3:30																								
3:45																								
4:00																						1.6%	1.5%	
4:15																								
4:30																								
4:45																								
5:00																						3.1%	3.0%	
5:15																								
5:30																								
5:45																								
6:00		2												0	0					0		4.7%	4.5%	
6:15																								
6:30																								
6:45																								
7:00		3												0	0					0		6.0%	5.9%	
7:15																								
7:30																								
7:45																								
8:00		3												0	0					0		6.5%	6.4%	
8:15																								
8:30																								
8:45																								
9:00		3												0	0					0		5.6%	5.7%	
9:15																								
9:30																								
9:45																								
10:00																						5.3%	5.3%	
10:15																								
10:30																								
10:45																								
11:00																						5.8%	5.7%	
11:15																								
11:30																								
11:45																								
12:00																						6.6%	6.6%	
12:15																								
12:30																								
12:45																								
1:00																						6.2%	5.9%	
1:15																								
1:30																								
1:45																								
2:00		3												0	0					0		6.0%	6.2%	
2:15																								
2:30																								
2:45																								
3:00		3												0	0					0		6.8%	6.8%	
3:15																								
3:30																								
3:45																								
4:00		3												0	0					0		6.3%	6.5%	
4:15																								
4:30																								
4:45																								
5:00		3												0	0					0		6.7%	6.9%	
5:15																								
5:30																								
5:45																								
6:00																						5.3%	5.4%	
6:15																								
6:30																								
6:45																								
7:00																						3.9%	4.0%	
7:15																								
7:30																								
7:45																								
8:00																						3.4%	3.4%	
8:15																								
8:30																								
8:45																								
9:00																						2.8%	2.7%	
9:15																								
9:30																								
9:45																								
10:00																						2.1%	2.1%	
10:15																								
10:30																								
10:45																								
11:00																						1.9%	2.0%	
11:15																								
11:30																								
11:45																								

*No official hourly distribution exists for LUC - 960. Therefore, the hourly distribution for LUC - 945 Convenience Store/Gas Station was utilized.

Trip Distribution (Dunkin' Development) - Distribution matches thePM Peak distribution used in the TIS volumes.

	2% Entry Southbound						Westbound						2% Exit Northbound		2% Exit				2% Entry Eastbound			937 - Coffee/Donut Shop with Drive-Through Window		937 Weekday Entry/Exit
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left	Entry %	Exit %	
0:00																						0.1%	0.1%	667
12:15																								
12:30																								
12:45																								
1:00																						0.1%	0.1%	
1:15																								
1:30																								
1:45																								
2:00																						0.0%	0.1%	
2:15																								
2:30																								
2:45																								
3:00																						0.4%	0.1%	
3:15																								
3:30																								
3:45																								
4:00																						1.9%	1.5%	
4:15																								
4:30																								
4:45																								
5:00																						8.2%	6.8%	
5:15																								
5:30																								
5:45																								
6:00		1												0	0				0			10.0%	8.9%	
6:15																								
6:30																								
6:45																								
7:00		1												0	0				0			10.3%	9.8%	
7:15																								
7:30																								
7:45																								
8:00		1												0	0				0			10.0%	10.1%	
8:15																								
8:30																								
8:45																								
9:00		1												0	0				0			7.7%	8.5%	
9:15																								
9:30																								
9:45																								
10:00																						7.2%	7.6%	
10:15																								
10:30																								
10:45																								
11:00																						6.7%	7.2%	
11:15																								
11:30																								
11:45																								
12:00																						5.4%	6.1%	
12:15																								
12:30																								
12:45																								
1:00																						6.3%	5.7%	
1:15																								
1:30																								
1:45																								
2:00		1												0	0				0			5.2%	5.6%	
2:15																								
2:30																								
2:45																								
3:00		1												0	0				0			5.7%	5.3%	
3:15																								
3:30																								
3:45																								
4:00		1												0	0				0			4.6%	4.2%	
4:15																								
4:30																								
4:45																								
5:00		0												0	0				0			2.7%	3.4%	
5:15																								
5:30																								
5:45																								
6:00																						2.7%	3.0%	
6:15																								
6:30																								
6:45																								
7:00																						2.1%	2.2%	
7:15																								
7:30																								
7:45																								
8:00																						1.2%	1.9%	
8:15																								
8:30																								
8:45																								
9:00																						1.2%	1.2%	
9:15																								
9:30																								
9:45																								
10:00																						0.4%	0.6%	
10:15																								
10:30																								
10:45																								
11:00																						0.0%	0.1%	
11:15																								
11:30																								
11:45																								

Trip Distribution (Valvoline Development) - Distribution matches the PM Peak distribution used in the TIS volumes.

	2% Entry Southbound							Westbound						2% Exit Northbound		2% Exit			2% Entry Eastbound			941 - Quick Lubrication Vehicle Shop		941 Weekday
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left	Entry %	Exit %	Entry/Exit
0:00																						0.0%	0.0%	40
12:15																								
12:30																								
12:45																								
1:00																						0.0%	0.0%	
1:15																								
1:30																								
1:45																								
2:00																						0.0%	0.0%	
2:15																								
2:30																								
2:45																								
3:00																						0.0%	0.0%	
3:15																								
3:30																								
3:45																								
4:00																						0.0%	0.0%	
4:15																								
4:30																								
4:45																								
5:00																						0.0%	0.0%	
5:15																								
5:30																								
5:45																								
6:00		0												0	0				0			0.0%	0.0%	
6:15																								
6:30																								
6:45																								
7:00		0												0	0				0			0.0%	0.0%	
7:15																								
7:30																								
7:45																								
8:00		0												0	0				0			12.5%	4.2%	
8:15																								
8:30																								
8:45																								
9:00		0												0	0				0			10.4%	8.3%	
9:15																								
9:30																								
9:45																								
10:00																						12.5%	12.5%	
10:15																								
10:30																								
10:45																								
11:00																						10.4%	14.6%	
11:15																								
11:30																								
11:45																								
12:00																						6.3%	6.3%	
12:15																								
12:30																								
12:45																								
1:00																						8.3%	8.3%	
1:15																								
1:30																								
1:45																								
2:00		0												0	0				0			12.5%	6.3%	
2:15																								
2:30																								
2:45																								
3:00		0												0	0				0			12.5%	10.4%	
3:15																								
3:30																								
3:45																								
4:00		0												0	0				0			8.3%	14.6%	
4:15																								
4:30																								
4:45																								
5:00		0												0	0				0			6.3%	14.6%	
5:15																								
5:30																								
5:45																								
6:00																						0.0%	0.0%	
6:15																								
6:30																								
6:45																								
7:00																						0.0%	0.0%	
7:15																								
7:30																								
7:45																								
8:00																						0.0%	0.0%	
8:15																								
8:30																								
8:45																								
9:00																						0.0%	0.0%	
9:15																								
9:30																								
9:45																								
10:00																						0.0%	0.0%	
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10:30																								
10:45																								
11:00																						0.0%	0.0%	
11:15																								
11:30																								
11:45																								

Trip Distribution (Dunkin' Development) - Distribution matches the PM Peak distribution used in the TIS volumes.

	2% Entry Southbound						Westbound						2% Exit Northbound			2% Exit			2% Entry Eastbound			850 - Supermarket		850 Weekday
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left	Entry %	Exit %	Entry/Exit
0:00																						0.0%	0.2%	1104
12:15																								
12:30																								
12:45																								
1:00																						0.0%	0.0%	
1:15																								
1:30																								
1:45																								
2:00																						0.0%	0.0%	
2:15																								
2:30																								
2:45																								
3:00																						0.0%	0.0%	
3:15																								
3:30																								
3:45																								
4:00																						0.2%	0.1%	
4:15																								
4:30																								
4:45																								
5:00																						0.5%	0.1%	
5:15																								
5:30																								
5:45																								
6:00		0												0	0				0			0.6%	0.0%	
6:15																								
6:30																								
6:45																								
7:00		0												0	0				0			1.5%	1.4%	
7:15																								
7:30																								
7:45																								
8:00		1												0	0				0			4.3%	3.3%	
8:15																								
8:30																								
8:45																								
9:00		1												0	0				0			5.1%	4.4%	
9:15																								
9:30																								
9:45																								
10:00																						6.4%	5.4%	
10:15																								
10:30																								
10:45																								
11:00																						7.4%	7.3%	
11:15																								
11:30																								
11:45																								
12:00																						9.3%	9.9%	
12:15																								
12:30																								
12:45																								
1:00																						8.7%	7.5%	
1:15																								
1:30																								
1:45																								
2:00		2												0	0				0			8.8%	9.2%	
2:15																								
2:30																								
2:45																								
3:00		2												0	0				0			8.9%	8.5%	
3:15																								
3:30																								
3:45																								
4:00		2												0	0				0			9.8%	9.7%	
4:15																								
4:30																								
4:45																								
5:00		2												0	0				0			9.5%	9.5%	
5:15																								
5:30																								
5:45																								
6:00																						7.8%	9.3%	
6:15																								
6:30																								
6:45																								
7:00																						5.6%	6.6%	
7:15																								
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7:45																								
8:00																						3.8%	4.2%	
8:15																								
8:30																								
8:45																								
9:00																						1.9%	2.8%	
9:15																								
9:30																								
9:45																								
10:00																						0.0%	0.4%	
10:15																								
10:30																								
10:45																								
11:00																						0.0%	0.2%	
11:15																								
11:30																								
11:45																								

STUDY AND ANALYSIS INFORMATION

Municipality:	New Albany	**Traffic Volumes Obtained By:**	CMTran
County:	Franklin	**Analysis Date:**	
ODOT Engineering District:	6	**Agency/ Company Name Performing Warrant Analysis:**	CMTran
Google map link:			

Analysis Information

Data Collection Date:	3/1/2023
Day of the Week:	Wednesday
Is the intersection in a built-up area of an isolated community of <10,000 population?	No
Existing Traffic Signal at intersection:	No
Total Number of Approaches at Intersection:	4

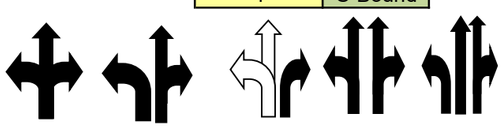
Major Street Information

Major Street Name and Route Number:	Central College Road	
Major Street Approach Direction:	E-Bound W-Bound	
Number of Thru Lanes on Each Major Street Approach:	1	**LANE(S)**
Speed Limit or 85th Percentile Speed on the Major Street*:	45	**MPH**

*Unknown assumes below 45 mph

Minor Street Information

Minor Street Name and Route Number:	Bevelhymer Road	
Minor Street Approach Configuration:	1	N-Bound
	1	S-Bound



Number of Thru Lanes on Each Minor Street Approach:	1	**LANE(S)**
Apply Right Turn Lane Reduction*:	Yes	

*Right Turn Lane Reduction Shall be used for Warrants 1, 2, & 3 for New ODOT Signals. Please refer to TEM 402-3.2 for clarification and criteria under which Right Turn Reduction is not required.

TRAFFIC SIGNAL WARRANT ANALYSIS FINDINGS

	Applicable?	Warrant Satisfied?	Notes and Comments:
Warrant 1, Eight-Hour Vehicular Volume	Yes	**No**	
Warrant 2, Four-Hour Vehicular Volume	Yes	**No**	
Warrant 3, Peak Hour	Yes	**Yes**	Signals installed under Warrant 3 should be traffic actuated. **Peak Hour**: 4:30 PM, 5:30 PM
For Warrants 1-3, new ODOT signals must be based off of 100% volume thresholds (TEM 402-3.2)			
Warrant 4, Pedestrian Volume	No		If this warrant is met, and a traffic control signal is justified by an engineering study, the traffic control signal shall be equipped with pedestrian signal heads complying with the provisions set forth in Chapter 4E of the OMUTCD. **Peak Hour**: 4:30 PM, 5:30 PM
Warrant 5, School Crossing	No		N/A
Warrant 6, Coordinated Signal System	No		(Shall not be used as the sole warrant in the analysis)
Warrant 7, Crash Experience	No		If this is the sole warrant, signal must be semi-actuated with control devices which provide proper coordination if installed at an intersection within a coordinated system and normally should be fully traffic actuated if installed at an isolated intersection.
Warrant 8, Roadway Network	No		(Shall not be used as the sole warrant in the analysis)
Warrant 9, Intersection Near a Grade Crossing	No		Figure 4C-9
Multi-Way Stop Warrant	No		May be used as an interim measure if traffic signal warrants are satisfied.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

If no warrants are satisfied, additional options may be considered:

1. An engineering study, performed by a firm prequalified by ODOT for signal design, if approved by the ODOT district, may be used to justify a new signal installation or retention of an existing signal that otherwise does not meet the published warrants. An example of such an instance is a traffic signal in proximity to a railroad crossing that serves to reduce queuing across the tracks.
2. According to TEM 402-2, If the actual turning movement counts fail to satisfy a signal warrant, it may be acceptable to use traffic volumes projected to the second year after project completion. The **Modeling and Forecasting Section** should provide the projected traffic volumes.
3. A pedestrian hybrid beacon may be considered for installation to facilitate pedestrian crossings at a location that does not meet traffic signal warrants (see Chapter 4C of TEM) or at a location that meets traffic signal warrants under Sections 4C.05 and/or 4C.06 but a decision is made to not install a traffic control signal. **Please fill inputs on PHB Score Sheet and submit to ODOT.**

Considerations such as geometrics and lack of sight distance generally have not been accepted in lieu of satisfying signal warrants. These considerations may allow an otherwise unwarranted traffic signal to be retained at **100 percent** local cost. Please review TEM 402-4 for details.

Conclusion:

Notes: 2024 Build - w RTR

OMUTCD WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME

Number of Lanes for Moving Traffic on Each Approach	
Major Street:	1 Lane
Minor Street:	1 Lane

Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street? Yes

**Only applicable after an adequate trial of other alternatives (See section 4C.02.06 of the 2012 OMUTCD)*

Lanes Major/ Minor	Adjusted Volumes		Condition A				Condition B				Combination A/B*							
											Cond. A		Cond. B		Cond. A		Cond. B	
	Major	Minor	100%		70%		100%		70%		80%		80%		56%		56%	
			Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.
1 / 1	X		500	150	350	105	750	75	525	53	400	120	600	60	280	84	420	42
2+ / 1			600	150	420	105	900	75	630	53	480	120	720	60	336	84	504	42
2+ / 2+			600	200	420	140	900	100	630	70	480	160	720	80	336	112	504	56
1 / 2+			500	200	350	140	750	100	525	70	400	160	600	80	280	112	420	56
12:00 AM	0	0																
12:15 AM	0	0																
12:30 AM	0	0																
12:45 AM	0	0																
1:00 AM	0	0																
1:15 AM	0	0																
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5:00 AM	0	0																
5:15 AM	22	17																
5:30 AM	46	23																
5:45 AM	74	33																
6:00 AM	122	42																
6:15 AM	182	66																
6:30 AM	257	103																
6:45 AM	323	121													1	1		
7:00 AM	355	141			1	1												
7:15 AM	392	152																
7:30 AM	380	134																
7:45 AM	367	132													1	1		
8:00 AM	362	127			1	1												
8:15 AM	322	107																
8:30 AM	289	96																
8:45 AM	250	81																
9:00 AM	220	73																
9:15 AM	141	36																
9:30 AM	87	23																
9:45 AM	45	8																
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1:00 PM	0	0																
1:15 PM	54	34																
1:30 PM	136	52																
1:45 PM	195	81																
2:00 PM	260	103																
2:15 PM	295	124													1	1		
2:30 PM	282	128																
2:45 PM	298	131																
3:00 PM	316	140																
3:15 PM	342	152													1	1		
3:30 PM	427	172			1	1					1	1					1	1
3:45 PM	544	212	1	1					1	1								
4:00 PM	608	291											1	1				
4:15 PM	697	376													1	1		
4:30 PM	736	394			1	1					1	1					1	1
4:45 PM	697	404	1	1					1	1								
5:00 PM	698	390											1	1				
5:15 PM	494	270													1	1		
5:30 PM	301	171																
5:45 PM	148	89																
6:00 PM	0	0																
6:15 PM	0	0																
6:30 PM	0	0																
6:45 PM	0	0																
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8:45 PM	0	0																
9:00 PM	0	0																
9:15 PM	0	0																
9:30 PM	0	0																
9:45 PM	0	0																
HOURS MET			**2**	**2**	**4**	**4**	**0**	**0**	**2**	**2**	**2**	**2**	**2**	**2**	**6**	**6**	**2**	**2**
WARRANT SATISFIED?			**NO**		**NO**		**NO**		**NO**		**NO**				**NO**			

Warrant Met: No

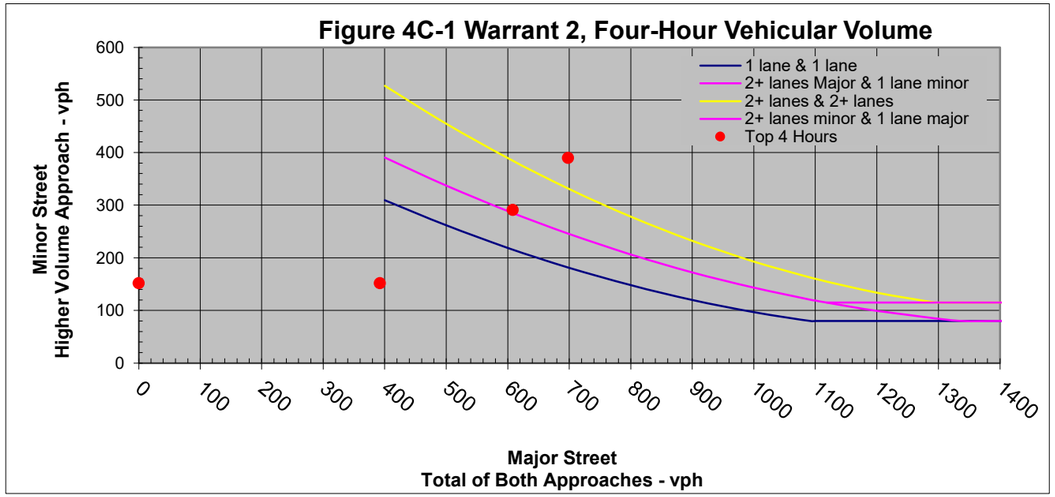
Notes:

OMUTCD WARRANT 2, FOUR-HOUR VEHICULAR VOLUME

Number of Lanes for Moving Traffic on Each Approach		Total Number of Unique Hours Met on Figure 4C-1	2
Major street:	1 Lane	Total Number of Unique Hours Met on Figure 4C-2 (70% Factor)	2
Minor Street:	1 Lane		

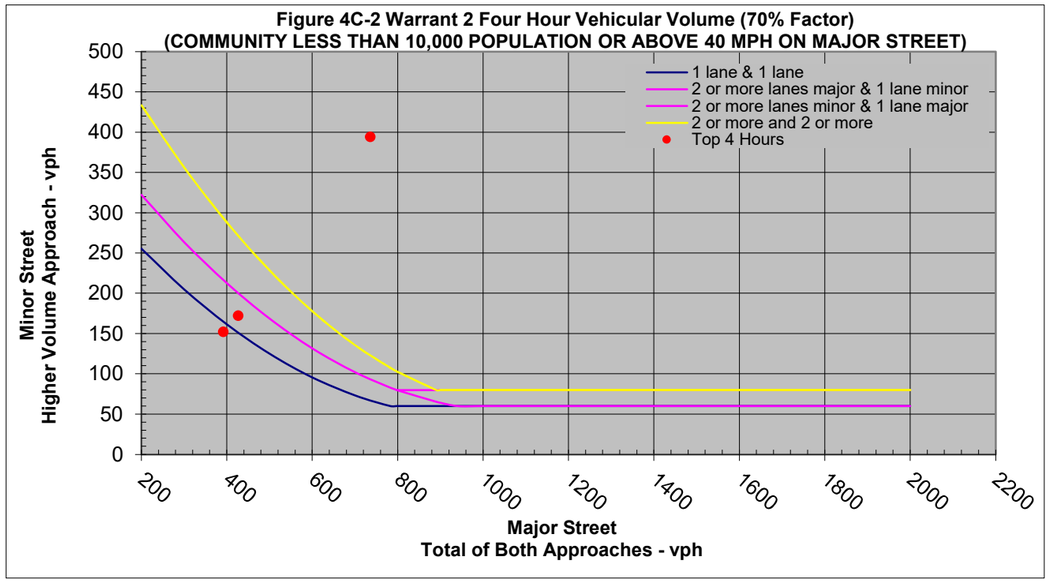
Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street? Yes

Hour Interval Beginning At	Raw Traffic Counts				Total Major Approach Volumes	Highest Actual Minor Street Approach Volumes	Hour Met?	Hour Met? (70% Factor)
	Minor - Bevelhymer Road		Major - Central College Road					
	N-Bound	S-Bound	W-Bound	E-Bound				
6:00 AM	37	42	56	66	122	42		
6:15 AM	62	66	99	83	182	66		
6:30 AM	67	103	157	100	257	103		
6:45 AM	78	121	199	124	323	121		
7:00 AM	86	141	218	137	355	141		
7:15 AM	89	152	221	171	392	152		
7:30 AM	94	134	181	199	380	134		
7:45 AM	98	132	164	203	367	132		
8:00 AM	83	127	158	204	362	127		
8:15 AM	79	107	137	185	322	107		
8:30 AM	80	96	133	156	289	96		
8:45 AM	74	81	115	135	250	81		
9:00 AM	73	66	101	119	220	73		
9:15 AM	36	33	61	80	141	36		
9:30 AM	23	19	37	50	87	23		
9:45 AM	7	8	20	25	45	8		
10:00 AM	0	0	0	0	0	0		
10:15 AM	0	0	0	0	0	0		
10:30 AM	0	0	0	0	0	0		
10:45 AM	0	0	0	0	0	0		
11:00 AM	0	0	0	0	0	0		
11:15 AM	0	0	0	0	0	0		
11:30 AM	0	0	0	0	0	0		
11:45 AM	0	0	0	0	0	0		
12:00 PM	0	0	0	0	0	0		
12:15 PM	0	0	0	0	0	0		
12:30 PM	0	0	0	0	0	0		
12:45 PM	0	0	0	0	0	0		
1:00 PM	0	0	0	0	0	0		
1:15 PM	34	28	32	22	54	34		
1:30 PM	52	41	69	67	136	52		
1:45 PM	81	56	97	98	195	81		
2:00 PM	103	77	128	132	260	103		
2:15 PM	124	78	148	147	295	124		
2:30 PM	128	79	147	135	282	128		
2:45 PM	131	92	151	147	298	131		
3:00 PM	140	95	157	159	316	140		
3:15 PM	152	101	167	175	342	152		
3:30 PM	172	168	229	198	427	172		Met
3:45 PM	182	212	333	211	544	212		
4:00 PM	175	291	394	214	608	291	Met	
4:15 PM	188	376	465	232	697	376		
4:30 PM	173	394	506	230	736	394		Met
4:45 PM	174	404	475	222	697	404		
5:00 PM	186	390	465	233	698	390	Met	
5:15 PM	107	270	332	162	494	270		
5:30 PM	80	171	193	108	301	171		
5:45 PM	37	89	88	60	148	89		
6:00 PM	0	0	0	0	0	0		
6:15 PM	0	0	0	0	0	0		
6:30 PM	0	0	0	0	0	0		
6:45 PM	0	0	0	0	0	0		
7:00 PM	0	0	0	0	0	0		
7:15 PM	0	0	0	0	0	0		
7:30 PM	0	0	0	0	0	0		
7:45 PM	0	0	0	0	0	0		
8:00 PM	0	0	0	0	0	0		



Top Hours for Figure 4C-1	Start Time	End Time	Major Street	Minor Street
Top Hour	5:00 PM	6:00 PM	698	390
2nd Highest Hour	4:00 PM	5:00 PM	608	291
3rd Highest Hour	12:00 AM	1:00 AM	0	152
4th Highest Hour	7:15 AM	8:15 AM	392	152

Top Hours for Figure 4C-2	Start Time	End Time	Major Street	Minor Street
Top Hour	4:30 PM	5:30 PM	736	394
2nd Highest Hour	3:30 PM	4:30 PM	427	172
3rd Highest Hour	12:00 AM	1:00 AM	0	171
4th Highest Hour	7:15 AM	8:15 AM	392	152



Are the requirements for Warrant 2 met?: No

OMUTCD WARRANT 3, PEAK HOUR

Number of Lanes for Moving Traffic on Each Approach		Peak Hour Start time	4:30 PM
Major Street:	1 Lane	Peak Hour End Time	5:30 PM
Minor Street:	1 Lane		

Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street?	Yes
Is this signal warrant being applied for an unusual case, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time?	No

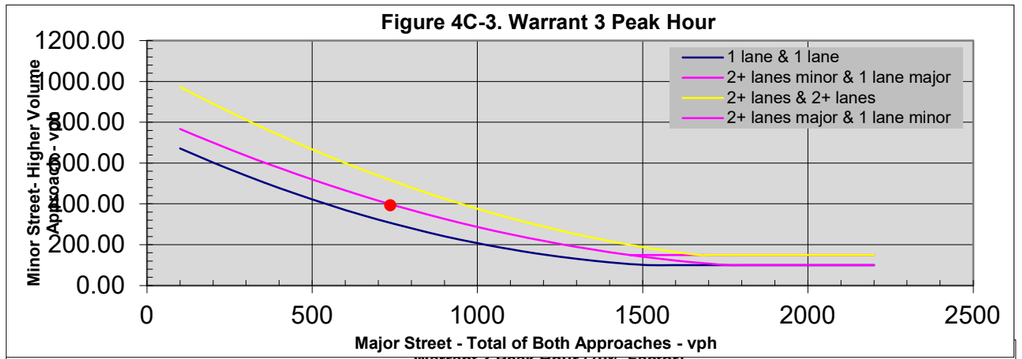
Indicate whether all three of the following conditions for the same 1 hour (any four consecutive 15-minute periods) of an average day are present*

Does the total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equal or exceed 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach?	
Does the volume on the same minor-street approach (one direction only) equal or exceed 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes?	Yes
Does the total entering volume serviced during the hour equal or exceed 650 vehicles per hour for intersection with three approaches or 800 vehicles per hour for intersections with four or more approaches?	Yes

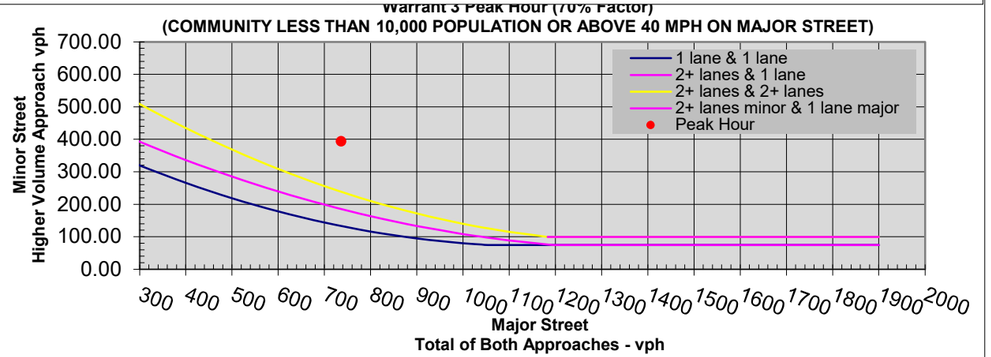
**If applicable, attach all supporting calculations and documentation.*

Are the requirements for Warrant 3 met?: Yes

Figure 4C-3. Warrant 3 Peak Hour



Warrant 3 Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



Hour Interval Beginning At	Major Street Combined Vehicles Per Hour (VPH)	Highest Minor Street Approach Vehicles Per Hour (VPH)	Sum of Major Street and Highest Minor Street	Sum of Major Street and Combined Minor Street
	Hour Vehicular Volume			
6:00 AM	122	42	164	201
6:15 AM	182	66	248	310
6:30 AM	257	103	360	427
6:45 AM	323	121	444	522
7:00 AM	355	141	496	582
7:15 AM	392	152	544	633
7:30 AM	380	134	514	608
7:45 AM	367	132	499	597
8:00 AM	362	127	489	572
8:15 AM	322	107	429	508
8:30 AM	289	96	385	465
8:45 AM	250	81	331	405
9:00 AM	220	73	293	359
9:15 AM	141	36	177	210
9:30 AM	87	23	110	129
9:45 AM	45	8	53	60
10:00 AM	0	0	0	0
10:15 AM	0	0	0	0
10:30 AM	0	0	0	0
10:45 AM	0	0	0	0
11:00 AM	0	0	0	0
11:15 AM	0	0	0	0
11:30 AM	0	0	0	0
11:45 AM	0	0	0	0
12:00 PM	0	0	0	0
12:15 PM	0	0	0	0
12:30 PM	0	0	0	0
12:45 PM	0	0	0	0
1:00 PM	0	0	0	0
1:15 PM	54	34	88	116
1:30 PM	136	52	188	229
1:45 PM	195	81	276	332
2:00 PM	260	103	363	440
2:15 PM	295	124	419	497
2:30 PM	282	128	410	489
2:45 PM	298	131	429	521
3:00 PM	316	140	456	551
3:15 PM	342	152	494	595
3:30 PM	427	172	599	767
3:45 PM	544	212	756	938
4:00 PM	608	291	899	1074
4:15 PM	697	376	1073	1261
4:30 PM	736	394	1130	1303
4:45 PM	697	404	1101	1275
5:00 PM	698	390	1088	1274
5:15 PM	494	270	764	871
5:30 PM	301	171	472	552
5:45 PM	148	89	237	274
6:00 PM	0	0	0	0
6:15 PM	0	0	0	0
6:30 PM	0	0	0	0
6:45 PM	0	0	0	0
7:00 PM	0	0	0	0
7:15 PM	0	0	0	0
7:30 PM	0	0	0	0
7:45 PM	0	0	0	0
8:00 PM	0	0	0	0

Actual Peak Hour Major Traffic Volume	Actual Peak Hour Minor Traffic Volume	Required Peak Hour Minor Traffic Volume for Fig. 4C-3	Required Peak Hour Minor Traffic Volume for Fig. 4C-4
736	394	308	133

Start Time	Southbound Approach						Westbound Approach						Northbound Approach						Eastbound Approach						NOTES:
	Southbound						Westbound						Nouthbound						Eastbound						
	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	
12:00 AM						0						0						0						0	It should be noted that if data is copied overtop of the Hourly Totals or Approach Totals, that the 'AutoSum' Formula will be lost. This should not affect the actual totals if the data was copied from a program that performs the calculations for the user.
12:15 AM						0						0						0						0	
12:30 AM						0						0						0						0	
12:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:00 AM						0						0						0						0	
1:15 AM						0						0						0						0	
1:30 AM						0						0						0						0	
1:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2:00 AM						0						0						0						0	
2:15 AM						0						0						0						0	
2:30 AM						0						0						0						0	
2:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:00 AM						0						0						0						0	
3:15 AM						0						0						0						0	
3:30 AM						0						0						0						0	
3:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 AM						0						0						0						0	
4:15 AM						0						0						0						0	
4:30 AM						0						0						0						0	
4:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 AM						0						0						0						0	
5:15 AM						0						0						0						0	
5:30 AM						0						0						0						0	
5:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6:00 AM	0	14	3			17	0	6	9			15	2	5	6			13	4	3	0			7	
6:15 AM	1	5	0			6	0	7	3			10	0	2	1			3	5	9	0			14	
6:30 AM	0	10	0			10	1	6	3			10	1	4	1			6	3	14	1			18	
6:45 AM	0	7	2			9	0	15	6			21	3	12	1			16	3	24	0			27	
Hourly Total	1	36	5	0	0	42	1	34	21	0	0	56	6	23	9	0	0	38	15	50	1	0	0	66	
7:00 AM	5	36	1			42	2	24	32			58	7	16	16			39	7	13	4			24	
7:15 AM	10	35	0			45	1	48	19			68	0	5	3			8	2	20	9			31	
7:30 AM	6	21	2			29	0	33	19			52	6	7	5			18	2	32	8			42	
7:45 AM	3	22	4			29	1	37	2			40	8	13	4			25	2	35	3			40	
Hourly Total	24	114	7	0	0	145	4	142	72	0	0	218	21	41	28	0	0	90	13	100	24	0	0	137	
8:00 AM	7	46	1			54	0	31	30			61	5	18	18			41	10	36	12			58	
8:15 AM	5	18	3			26	1	21	6			28	5	8	1			14	5	50	4			59	
8:30 AM	0	23	3			26	2	22	11			35	5	12	5			22	6	32	8			46	
8:45 AM	5	16	3			24	1	22	11			34	3	3	3			9	2	28	11			41	
Hourly Total	17	103	10	0	0	130	4	96	58	0	0	158	18	41	27	0	0	86	23	146	35	0	0	204	
9:00 AM	4	25	4			33	0	24	16			40	9	16	13			38	7	27	5			39	
9:15 AM	3	12	0			15	2	18	4			24	1	11	2			14	3	23	4			30	
9:30 AM	2	9	0			11	1	12	4			17	3	9	4			16	0	17	8			25	
9:45 AM	0	8	0			8	1	11	8			20	1	4	2			7	2	20	3			25	
Hourly Total	9	54	4	0	0	67	4	65	32	0	0	101	14	40	21	0	0	75	12	87	20	0	0	119	
10:00 AM						0						0						0						0	
10:15 AM						0						0						0						0	
10:30 AM						0						0						0						0	
10:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:00 AM						0						0						0						0	
11:15 AM						0						0						0						0	
11:30 AM						0						0						0						0	
11:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:00 PM						0						0						0						0	
12:15 PM						0						0						0						0	
12:30 PM						0						0						0						0	
12:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:00 PM						0						0						0						0	
1:15 PM						0						0						0						0	
1:30 PM						0						0						0						0	
1:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2:00 PM	3	24	1			28	1	20	11			32	8	15	12			35	5	16	1			22	
2:15 PM	3	7	4			14	0	29	8			37	5	12	2			19	6	33	6			45	
2:30 PM	3	11	1			15	2	16	10			28	10	18	3			31	3	25	3			31	
2:45 PM	5	15	2			22	2	23	6			31	2	11	10			23	6	23	5			34	
Hourly Total	14	57	8	0	0	79	5	88	35	0	0	128	25	56	27	0	0	108	20	97	15	0	0	132	
3:00 PM	1	26	2			29	1	33	18			52	11	28	17			56	7	25	5			37	
3:15 PM	4	11	0			15	3	24	9			36	10	11	3			24	7	22	4			33	
3:30 PM	3	22	3			28	3	24	5			32	13	18	4			35	4	34	5			43	
3:45 PM	5	20	0			25	3	28	6			37	13	15	6			34	5	36	5			46	
Hourly Total	13	79	5	0	0	97	10	109	38	0	0	157	47	72	30	0	0	149	23	117	19	0	0	159	
4:00 PM	5	28	3			36	3	38	21			62	15	28	26			69	9	39	5			53	
4:15 PM	14	62	8			84	43	47	8			98	12	27	5			44	9	35	12			56	
4:30 PM	5	57	10			72	45	71	20			136	11	19	15			45	11	40	5			56	
4:45 PM	23	71	14			108	31	62	5			98	6	15	4			25	5	38	6			49	
Hourly Total	47	218	35	0	0	300	122	218	54	0	0	394	44	89	50	0	0	183	34	152	28	0	0	214	
5:00 PM	20	92	12			124	34	68	31			133	18	31	34			83	22	39	10			71	
5:15 PM	21	72	10			103	35	86	18			139	6	17	5			28	10	37	7			54	
5:30 PM	18	55	12			85	34	66	5			105	9	27	9			45	6	36	6			48	
5:45 PM	15	65	12			92	39	40	9			88	7	27	4			38	5	39	16			60	
Hourly Total	74	284	46	0	0	404	142	260	63	0	0	465	40	102	52	0	0	194	43	151	39	0	0	233	
6:00 PM						0						0						0						0	
6:15 PM						0						0						0						0	
6:30 PM						0						0						0						0	
6:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:00 PM						0						0						0						0	
7:15 PM						0						0						0						0	
7:30 PM						0						0						0						0	
7:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 PM						0						0						0						0	
8:15 PM						0						0						0						0	
8:30 PM						0						0						0						0	
8:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 PM						0						0						0						0	
9:15 PM						0						0						0						0	
9:30 PM						0						0						0						0	
9:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:00 PM						0						0						0						0	
10:15 PM						0						0						0						0	
10:30 PM						0						0						0						0	
10:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:00 PM						0						0						0						0	
11:15 PM						0						0						0						0	
11:30 PM						0						0						0						0	
11:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Count Data at the Central College Road & Bevelhymer Road intersection collected on 3/1/2023

	Southbound						Westbound						Northbound						Eastbound		
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left
0:00																					
12:15																					
12:30																					
12:45																					
1:00																					
1:15																					
1:30																					
1:45																					
2:00																					
2:15																					
2:30																					
2:45																					
3:00																					
3:15																					
3:30																					
3:45																					
4:00																					
4:15																					
4:30																					
4:45																					
5:00																					
5:15																					
5:30																					
5:45																					
6:00	0	7	3				0	6	3				0	2	1				2	3	0
6:15	1	5	0				0	7	3				0	2	1				5	9	0
6:30	0	10	0				1	6	3				1	4	1				3	14	1
6:45	0	7	2				0	15	6				3	12	1				3	23	0
7:00	5	19	1				2	23	12				2	7	1				0	13	4
7:15	10	34	0				1	47	18				0	5	3				2	19	9
7:30	6	21	2				0	32	18				6	7	5				2	31	8
7:45	3	22	4				1	36	2				8	13	4				2	34	3
8:00	7	30	1				0	30	12				0	11	3				3	35	12
8:15	5	18	3				1	20	6				5	8	1				5	49	4
8:30	0	23	3				2	21	11				5	12	5				6	31	8
8:45	5	16	3				1	21	11				3	3	3				2	27	11
9:00	4	14	4				0	23	7				6	12	5				2	26	5
9:15	3	12	0				2	17	4				1	11	2				3	22	4
9:30	2	9	0				1	12	4				3	9	4				0	17	8
9:45	0	8	0				1	11	8				1	4	2				2	19	3
10:00																					
10:15																					
10:30																					
10:45																					
11:00																					
11:15																					
11:30																					
11:45																					
12:00																					
12:15																					
12:30																					
12:45																					
1:00																					
1:15																					
1:30																					
1:45																					
2:00	3	13	1				1	19	5				5	10	5				2	16	1
2:15	3	7	4				0	28	8				5	12	2				6	32	6
2:30	3	11	1				2	16	10				10	18	3				3	24	3
2:45	5	15	2				2	22	6				2	11	10				6	22	5
3:00	1	13	2				1	32	8				6	22	6				3	24	5
3:15	4	11	0				3	23	9				10	11	3				7	21	4
3:30	3	22	3				3	23	5				13	18	4				4	33	5
3:45	5	20	0				3	27	6				13	15	6				5	35	5
4:00	5	12	3				3	37	5				8	18	10				3	38	5
4:15	14	61	8				42	46	8				12	27	5				9	34	12
4:30	5	56	10				44	69	19				11	19	15				11	39	5
4:45	23	70	14				30	60	5				6	15	4				5	37	6
5:00	20	75	12				33	66	11				10	18	12				14	38	10
5:15	21	71	10				34	83	17				6	17	5				10	36	7
5:30	18	54	12				33	64	5				9	27	9				6	35	6
5:45	15	64	12				38	39	9				7	27	4				5	38	16
6:00																					
6:15																					
6:30																					
6:45																					
7:00																					
7:15																					
7:30																					
7:45																					
8:00																					
8:15																					
8:30																					
8:45																					
9:00																					
9:15																					
9:30																					
9:45																					
10:00																					
10:15																					
10:30																					
10:45																					
11:00																					
11:15																					
11:30																					
11:45																					

Grown Count Data

	Southbound						Westbound						Northbound						Eastbound		
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left
0:00																					
12:15																					
12:30																					
12:45																					
1:00																					
1:15																					
1:30																					
1:45																					
2:00																					
2:15																					
2:30																					
2:45																					
3:00																					
3:15																					
3:30																					
3:45																					
4:00																					
4:15																					
4:30																					
4:45																					
5:00																					
5:15																					
5:30																					
5:45																					
6:00	0	7	3				0	6	3				0	2	1				2	3	0
6:15	1	5	0				0	7	3				0	2	1				5	9	0
6:30	0	10	0				1	6	3				1	4	1				3	14	1
6:45	0	7	2				0	15	6				3	12	1				3	24	0
7:00	5	19	1				2	24	12				2	7	1				0	13	4
7:15	10	35	0				1	48	19				0	5	3				2	20	9
7:30	6	21	2				0	33	19				6	7	5				2	32	8
7:45	3	22	4				1	37	2				8	13	4				2	35	3
8:00	7	30	1				0	31	12				0	11	3				3	36	12
8:15	5	18	3				1	21	6				5	8	1				5	50	4
8:30	0	23	3				2	22	11				5	12	5				6	32	8
8:45	5	16	3				1	22	11				3	3	3				2	28	11
9:00	4	14	4				0	24	7				6	12	5				2	27	5
9:15	3	12	0				2	18	4				1	11	2				3	23	4
9:30	2	9	0				1	12	4				3	9	4				0	17	8
9:45	0	8	0				1	11	8				1	4	2				2	20	3
10:00																					
10:15																					
10:30																					
10:45																					
11:00																					
11:15																					
11:30																					
11:45																					
12:00																					
12:15																					
12:30																					
12:45																					
1:00																					
1:15																					
1:30																					
1:45																					
2:00	3	13	1				1	20	5				5	10	5				2	16	1
2:15	3	7	4				0	29	8				5	12	2				6	33	6
2:30	3	11	1				2	16	10				10	18	3				3	25	3
2:45	5	15	2				2	23	6				2	11	10				6	23	5
3:00	1	13	2				1	33	8				6	22	6				3	25	5
3:15	4	11	0				3	24	9				10	11	3				7	22	4
3:30	3	22	3				3	24	5				13	18	4				4	34	5
3:45	5	20	0				3	28	6				13	15	6				5	36	5
4:00	5	12	3				3	38	5				8	18	10				3	39	5
4:15	14	62	8				43	47	8				12	27	5				9	35	12
4:30	5	57	10				45	71	20				11	19	15				11	40	5
4:45	23	71	14				31	62	5				6	15	4				5	38	6
5:00	20	76	12				34	68	11				10	18	12				14	39	10
5:15	21	72	10				35	86	18				6	17	5				10	37	7
5:30	18	55	12				34	66	5				9	27	9				6	36	6
5:45	15	65	12				39	40	9				7	27	4				5	39	16
6:00																					
6:15																					
6:30																					
6:45																					
7:00																					
7:15																					
7:30																					
7:45																					
8:00																					
8:15																					
8:30																					
8:45																					
9:00																					
9:15																					
9:30																					
9:45																					
10:00																					
10:15																					
10:30																					
10:45																					
11:00																					
11:15																					
11:30																					
11:45																					

Growth Rates	
Southbound	1.6%
Westbound	3.1%
Northbound	1.8%
Eastbound	2.8%
Collection Year	2023
Design Year	2024

Trip Distribution (Sheetz Development) - Distribution matches thePM Peak distribution used in the TIS volumes.

	2% Entry Southbound						Westbound						2% Exit Northbound		2% Exit				Eastbound			960 - Super Convenience Market/Gas Station*		710 Weekday
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left	Entry %	Exit %	Entry/Exit
0:00																						1.2%	1.3%	2399
12:15																								
12:30																								
12:45																								
1:00																						0.8%	0.9%	
1:15																								
1:30																								
1:45																								
2:00																						0.6%	0.6%	
2:15																								
2:30																								
2:45																								
3:00																						0.8%	0.7%	
3:15																								
3:30																								
3:45																								
4:00																						1.6%	1.5%	
4:15																								
4:30																								
4:45																								
5:00																						3.1%	3.0%	
5:15																								
5:30																								
5:45																								
6:00		2												0	0					0		4.7%	4.5%	
6:15																								
6:30																								
6:45																								
7:00		3												0	0					0		6.0%	5.9%	
7:15																								
7:30																								
7:45																								
8:00		3												0	0					0		6.5%	6.4%	
8:15																								
8:30																								
8:45																								
9:00		3												0	0					0		5.6%	5.7%	
9:15																								
9:30																								
9:45																								
10:00																						5.3%	5.3%	
10:15																								
10:30																								
10:45																								
11:00																						5.8%	5.7%	
11:15																								
11:30																								
11:45																								
12:00																						6.6%	6.6%	
12:15																								
12:30																								
12:45																								
1:00																						6.2%	5.9%	
1:15																								
1:30																								
1:45																								
2:00		3												0	0					0		6.0%	6.2%	
2:15																								
2:30																								
2:45																								
3:00		3												0	0					0		6.8%	6.8%	
3:15																								
3:30																								
3:45																								
4:00		3												0	0					0		6.3%	6.5%	
4:15																								
4:30																								
4:45																								
5:00		3												0	0					0		6.7%	6.9%	
5:15																								
5:30																								
5:45																								
6:00																						5.3%	5.4%	
6:15																								
6:30																								
6:45																								
7:00																						3.9%	4.0%	
7:15																								
7:30																								
7:45																								
8:00																						3.4%	3.4%	
8:15																								
8:30																								
8:45																								
9:00																						2.8%	2.7%	
9:15																								
9:30																								
9:45																								
10:00																						2.1%	2.1%	
10:15																								
10:30																								
10:45																								
11:00																						1.9%	2.0%	
11:15																								
11:30																								
11:45																								

*No official hourly distribution exists for LUC - 960. Therefore, the hourly distribution for LUC - 945 Convenience Store/Gas Station was utilized.

Trip Distribution (Dunkin' Development) - Distribution matches thePM Peak distribution used in the TIS volumes.

	2% Entry Southbound						Westbound						2% Exit Northbound			2% Exit			2% Entry Eastbound			937 - Coffee/Donut Shop with Drive-Through Window		937 Weekday
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left	Entry %	Exit %	Entry/Exit
0:00																						0.1%	0.1%	667
12:15																								
12:30																								
12:45																								
1:00																						0.1%	0.1%	
1:15																								
1:30																								
1:45																								
2:00																						0.0%	0.1%	
2:15																								
2:30																								
2:45																								
3:00																						0.4%	0.1%	
3:15																								
3:30																								
3:45																								
4:00																						1.9%	1.5%	
4:15																								
4:30																								
4:45																								
5:00																						8.2%	6.8%	
5:15																								
5:30																								
5:45																								
6:00		1												0	0				0			10.0%	8.9%	
6:15																								
6:30																								
6:45																								
7:00		1												0	0				0			10.3%	9.8%	
7:15																								
7:30																								
7:45																								
8:00		1												0	0				0			10.0%	10.1%	
8:15																								
8:30																								
8:45																								
9:00		1												0	0				0			7.7%	8.5%	
9:15																								
9:30																								
9:45																								
10:00																						7.2%	7.6%	
10:15																								
10:30																								
10:45																								
11:00																						6.7%	7.2%	
11:15																								
11:30																								
11:45																								
12:00																						5.4%	6.1%	
12:15																								
12:30																								
12:45																								
1:00																						6.3%	5.7%	
1:15																								
1:30																								
1:45																								
2:00		1												0	0				0			5.2%	5.6%	
2:15																								
2:30																								
2:45																								
3:00		1												0	0				0			5.7%	5.3%	
3:15																								
3:30																								
3:45																								
4:00		1												0	0				0			4.6%	4.2%	
4:15																								
4:30																								
4:45																								
5:00		0												0	0				0			2.7%	3.4%	
5:15																								
5:30																								
5:45																								
6:00																						2.7%	3.0%	
6:15																								
6:30																								
6:45																								
7:00																						2.1%	2.2%	
7:15																								
7:30																								
7:45																								
8:00																						1.2%	1.9%	
8:15																								
8:30																								
8:45																								
9:00																						1.2%	1.2%	
9:15																								
9:30																								
9:45																								
10:00																						0.4%	0.6%	
10:15																								
10:30																								
10:45																								
11:00																						0.0%	0.1%	
11:15																								
11:30																								
11:45																								

Trip Distribution (Valvoline Development) - Distribution matches the PM Peak distribution used in the TIS volumes.

	2% Entry												2% Exit	2% Exit					2% Entry			941 - Quick Lubrication Vehicle Shop		941 Weekday
	Southbound						Westbound						Northbound						Eastbound					
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left	Entry %	Exit %	Entry/Exit
0:00																						0.0%	0.0%	40
12:15																								
12:30																								
12:45																								
1:00																						0.0%	0.0%	
1:15																								
1:30																								
1:45																								
2:00																						0.0%	0.0%	
2:15																								
2:30																								
2:45																								
3:00																						0.0%	0.0%	
3:15																								
3:30																								
3:45																								
4:00																						0.0%	0.0%	
4:15																								
4:30																								
4:45																								
5:00																						0.0%	0.0%	
5:15																								
5:30																								
5:45																								
6:00		0											0	0					0			0.0%	0.0%	
6:15																								
6:30																								
6:45																								
7:00		0											0	0					0			0.0%	0.0%	
7:15																								
7:30																								
7:45																								
8:00		0											0	0					0			12.5%	4.2%	
8:15																								
8:30																								
8:45																								
9:00		0											0	0					0			10.4%	8.3%	
9:15																								
9:30																								
9:45																								
10:00																						12.5%	12.5%	
10:15																								
10:30																								
10:45																								
11:00																						10.4%	14.6%	
11:15																								
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11:45																								
12:00																						6.3%	6.3%	
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12:30																								
12:45																								
1:00																						8.3%	8.3%	
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1:30																								
1:45																								
2:00		0											0	0					0			12.5%	6.3%	
2:15																								
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2:45																								
3:00		0											0	0					0			12.5%	10.4%	
3:15																								
3:30																								
3:45																								
4:00		0											0	0					0			8.3%	14.6%	
4:15																								
4:30																								
4:45																								
5:00		0											0	0					0			6.3%	14.6%	
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8:00																						0.0%	0.0%	
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10:00																						0.0%	0.0%	
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10:30																								
10:45																								
11:00																						0.0%	0.0%	
11:15																								
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Trip Distribution (Dunkin' Development) - Distribution matches the PM Peak distribution used in the TIS volumes.

	2% Entry Southbound						Westbound						2% Exit Northbound			2% Exit			2% Entry Eastbound			850 - Supermarket		850 Weekday
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left	Entry %	Exit %	Entry/Exit
0:00																						0.0%	0.2%	1104
12:15																								
12:30																								
12:45																								
1:00																						0.0%	0.0%	
1:15																								
1:30																								
1:45																								
2:00																						0.0%	0.0%	
2:15																								
2:30																								
2:45																								
3:00																						0.0%	0.0%	
3:15																								
3:30																								
3:45																								
4:00																						0.2%	0.1%	
4:15																								
4:30																								
4:45																								
5:00																						0.5%	0.1%	
5:15																								
5:30																								
5:45																								
6:00		0												0	0				0			0.6%	0.0%	
6:15																								
6:30																								
6:45																								
7:00		0												0	0				0			1.5%	1.4%	
7:15																								
7:30																								
7:45																								
8:00		1												0	0				0			4.3%	3.3%	
8:15																								
8:30																								
8:45																								
9:00		1												0	0				0			5.1%	4.4%	
9:15																								
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9:45																								
10:00																						6.4%	5.4%	
10:15																								
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10:45																								
11:00																						7.4%	7.3%	
11:15																								
11:30																								
11:45																								
12:00																						9.3%	9.9%	
12:15																								
12:30																								
12:45																								
1:00																						8.7%	7.5%	
1:15																								
1:30																								
1:45																								
2:00		2												0	0				0			8.8%	9.2%	
2:15																								
2:30																								
2:45																								
3:00		2												0	0				0			8.9%	8.5%	
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4:00		2												0	0				0			9.8%	9.7%	
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4:45																								
5:00		2												0	0				0			9.5%	9.5%	
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6:00																						7.8%	9.3%	
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7:00																						5.6%	6.6%	
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7:45																								
8:00																						3.8%	4.2%	
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9:00																						1.9%	2.8%	
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9:30																								
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10:00																						0.0%	0.4%	
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10:45																								
11:00																						0.0%	0.2%	
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Trip Distribution (Site Traffic - Day Care Center) - Distribution matches the PM Peak distribution used in the TIS volumes.

	15% Entry Southbound						25% Entry Westbound						10% Exit 15% Exit 25% Exit Northbound						10% Entry Eastbound			565 - Day Care Center		565 Weekday Entry/Exit
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left	Entry %	Exit %	332
0:00																						0.0%	0.0%	
12:15																								
12:30																								
12:45																								
1:00																						0.0%	0.0%	
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2:00																						0.0%	0.0%	
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3:00																						0.0%	0.0%	
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4:00																						0.0%	0.0%	
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5:00																						1.0%	0.2%	
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6:00		3							5				1	2	4				2			6.2%	4.3%	
6:15																								
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6:45																								
7:00		10							16				5	8	14				6			19.5%	16.3%	
7:15																								
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7:45																								
8:00		7							11				4	6	11				4			13.2%	12.8%	
8:15																								
8:30																								
8:45																								
9:00		3							4				2	2	4				2			5.4%	4.6%	
9:15																								
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9:45																								
10:00																						2.6%	2.9%	
10:15																								
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11:00																						2.6%	2.6%	
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12:00																						2.1%	2.6%	
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1:00																						3.0%	3.2%	
1:15																								
1:30																								
1:45																								
2:00		2							3				1	2	4				1			4.1%	4.5%	
2:15																								
2:30																								
2:45																								
3:00		4							6				2	3	6				2			7.5%	6.9%	
3:15																								
3:30																								
3:45																								
4:00		7							11				5	7	12				5			13.6%	14.0%	
4:15																								
4:30																								
4:45																								
5:00		8							14				6	9	16				6			16.7%	18.7%	
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6:00																						2.4%	6.3%	
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7:00																						0.0%	0.0%	
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Trip Distribution (Site Development - Medical-Dental Office Building) - Distribution matches the PM Peak distribution used in the TIS volumes.

	15% Entry							25% Entry						10% Exit	15% Exit	25% Exit				10% Entry			720 - Medical-Dental Office Buildng		720 Weekday
	Southbound						Westbound						Northbound						Eastbound						
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left	Entry %	Exit %	Entry/Exit
0:00																						0.0%	0.0%	54
12:15																								
12:30																								
12:45																								
1:00																						0.0%	0.0%	
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2:00																						0.0%	0.0%	
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3:00																						0.3%	0.1%	
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4:00																						1.4%	0.5%	
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4:45																								
5:00																						0.7%	0.5%	
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5:30																								
5:45																								
6:00		0							0				0	0	0				0			1.9%	0.5%	
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6:30																								
6:45																								
7:00		1							1				0	0	0				0			6.8%	1.0%	
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7:30																								
7:45																								
8:00		1							2				0	0	1				1			12.2%	5.9%	
8:15																								
8:30																								
8:45																								
9:00		1							2				0	1	1				1			11.4%	9.1%	
9:15																								
9:30																								
9:45																								
10:00																						10.6%	10.0%	
10:15																								
10:30																								
10:45																								
11:00																						7.7%	10.4%	
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12:00																						6.8%	8.2%	
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12:45																								
1:00																						10.4%	7.6%	
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1:45																								
2:00		1							1				1	1	1				1			9.6%	9.9%	
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2:45																								
3:00		1							1				1	1	1				0			9.0%	10.1%	
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3:45																								
4:00		0							1				1	1	1				0			5.8%	10.1%	
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4:45																								
5:00		0							0				0	1	1				0			2.8%	8.3%	
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6:00																						1.2%	3.6%	
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7:00																						1.1%	1.9%	
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8:00																						0.2%	1.2%	
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9:00																						0.1%	0.6%	
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10:00																						0.1%	0.2%	
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Trip Distribution (Dunkin' Development) - Distribution matches the PM Peak distribution used in the TIS volumes.

	15% Entry Southbound						25% Entry Westbound						10% Exit 15% Exit 25% Exit Northbound						10% Entry Eastbound			492 - Health/Fitness Club*	
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left	Entry %	Exit %
0:00																						0.0%	0.1%
12:15																							
12:30																							
12:45																							
1:00																						0.0%	0.1%
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2:00																						0.0%	0.0%
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3:00																						0.0%	0.0%
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4:00																						1.3%	0.1%
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4:30																							
4:45																							
5:00																						3.7%	1.0%
5:15																							
5:30																							
5:45																							
6:00		1							1				1	1	1				0			3.5%	4.2%
6:15																							
6:30																							
6:45																							
7:00		1							2				0	1	1				1			5.7%	3.5%
7:15																							
7:30																							
7:45																							
8:00		2							3				1	1	2				1			8.9%	4.8%
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8:30																							
8:45																							
9:00		1							2				1	1	2				1			6.9%	6.3%
9:15																							
9:30																							
9:45																							
10:00																						6.2%	5.2%
10:15																							
10:30																							
10:45																							
11:00																						4.0%	6.4%
11:15																							
11:30																							
11:45																							
12:00																						4.9%	6.9%
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12:30																							
12:45																							
1:00																						2.2%	2.9%
1:15																							
1:30																							
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2:00		1							1				0	1	1				0			3.2%	3.0%
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3:00		1							2				1	1	2				1			5.3%	6.4%
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3:45																							
4:00		2							3				1	1	2				1			8.5%	6.0%
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4:45																							
5:00		3							5				1	2	3				2			15.0%	9.6%
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6:00																						8.4%	8.6%
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7:00																						7.6%	12.2%
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8:00																						3.2%	7.6%
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9:00																						1.7%	4.3%
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10:00																						0.0%	0.7%
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11:00																						0.0%	0.1%
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492 Weekday Entry/Exit
128

*No official hourly distribution exists for LUC - 492. Therefore, the hourly distribution for LUC - 495 Recreational Community Center was utilized.

Trip Distribution (Site Development - Small Office Building) - Distribution matches the PM Peak distribution used in the TIS volumes.

	15% Entry						25% Entry						10% Exit	15% Exit	25% Exit				10% Entry			712 - Small Office Building		712 Weekday
	Southbound						Westbound						Northbound						Eastbound					
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left	Entry %	Exit %	Entry/Exit
0:00																						0.0%	0.0%	54
12:15																								
12:30																								
12:45																								
1:00																						0.0%	0.0%	
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6:00		0							0				0	0	0				0			0.0%	0.0%	
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6:45																								
7:00		1							1				0	0	0				0			6.8%	0.4%	
7:15																								
7:30																								
7:45																								
8:00		1							2				0	0	1				1			15.0%	3.9%	
8:15																								
8:30																								
8:45																								
9:00		1							1				0	0	1				1			9.5%	4.3%	
9:15																								
9:30																								
9:45																								
10:00																						8.4%	6.4%	
10:15																								
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10:45																								
11:00																						8.2%	12.8%	
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12:00																						10.9%	14.2%	
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12:30																								
12:45																								
1:00																						8.6%	6.6%	
1:15																								
1:30																								
1:45																								
2:00		1							1				1	1	1				1			9.7%	9.5%	
2:15																								
2:30																								
2:45																								
3:00		1							1				1	1	2				1			10.3%	11.3%	
3:15																								
3:30																								
3:45																								
4:00		1							1				0	1	1				0			7.2%	9.1%	
4:15																								
4:30																								
4:45																								
5:00		0							1				1	1	2				0			4.7%	17.7%	
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6:00																						0.6%	3.7%	
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STUDY AND ANALYSIS INFORMATION

Municipality:	New Albany	**Traffic Volumes Obtained By:**	CMTran
County:	Franklin	**Analysis Date:**	
ODOT Engineering District:	6	**Agency/ Company Name Performing Warrant Analysis:**	CMTran
Google map link:			

Analysis Information

Data Collection Date:	3/1/2023
Day of the Week:	Wednesday
Is the intersection in a built-up area of an isolated community of <10,000 population?	No
Existing Traffic Signal at intersection:	No
Total Number of Approaches at Intersection:	4

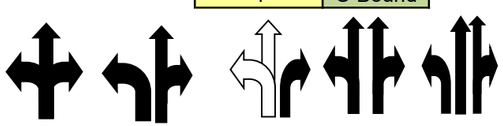
Major Street Information

Major Street Name and Route Number:	Central College Road	
Major Street Approach Direction:	E-Bound W-Bound	
Number of Thru Lanes on Each Major Street Approach:	1	**LANE(S)**
Speed Limit or 85th Percentile Speed on the Major Street*:	45	**MPH**

*Unknown assumes below 45 mph

Minor Street Information

Minor Street Name and Route Number:	Bevelhymer Road	
Minor Street Approach Configuration:	1	N-Bound
	1	S-Bound



Number of Thru Lanes on Each Minor Street Approach:	1	**LANE(S)**
Apply Right Turn Lane Reduction*:	Yes	

*Right Turn Lane Reduction Shall be used for Warrants 1, 2, & 3 for New ODOT Signals. Please refer to TEM 402-3.2 for clarification and criteria under which Right Turn Reduction is not required.

TRAFFIC SIGNAL WARRANT ANALYSIS FINDINGS

	Applicable?	Warrant Satisfied?	Notes and Comments:
Warrant 1, Eight-Hour Vehicular Volume	Yes	**No**	
Warrant 2, Four-Hour Vehicular Volume	Yes	**No**	Figure 4C-2 (70% Factor)
Warrant 3, Peak Hour	Yes	**Yes**	Signals installed under Warrant 3 should be traffic actuated. **Peak Hour**: 4:30 PM, 5:30 PM

For Warrants 1-3, new ODOT signals must be based off of 100% volume thresholds (TEM 402-3.2)

Warrant 4, Pedestrian Volume	No		If this warrant is met, and a traffic control signal is justified by an engineering study, the traffic control signal shall be equipped with pedestrian signal heads complying with the provisions set forth in Chapter 4E of the OMUTCD. **Peak Hour**: 4:30 PM, 5:30 PM
Warrant 5, School Crossing	No		N/A
Warrant 6, Coordinated Signal System	No		(Shall not be used as the sole warrant in the analysis)
Warrant 7, Crash Experience	No		If this is the sole warrant, signal must be semi-actuated with control devices which provide proper coordination if installed at an intersection within a coordinated system and normally should be fully traffic actuated if installed at an isolated intersection.
Warrant 8, Roadway Network	No		(Shall not be used as the sole warrant in the analysis)
Warrant 9, Intersection Near a Grade Crossing	No		Figure 4C-9
Multi-Way Stop Warrant	No		May be used as an interim measure if traffic signal warrants are satisfied.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

If no warrants are satisfied, additional options may be considered:

1. An engineering study, performed by a firm prequalified by ODOT for signal design, if approved by the ODOT district, may be used to justify a new signal installation or retention of an existing signal that otherwise does not meet the published warrants. An example of such an instance is a traffic signal in proximity to a railroad crossing that serves to reduce queuing across the tracks.
2. According to TEM 402-2, If the actual turning movement counts fail to satisfy a signal warrant, it may be acceptable to use traffic volumes projected to the second year after project completion. The **Modeling and Forecasting Section** should provide the projected traffic volumes.
3. A pedestrian hybrid beacon may be considered for installation to facilitate pedestrian crossings at a location that does not meet traffic signal warrants (see Chapter 4C of TEM) or at a location that meets traffic signal warrants under Sections 4C.05 and/or 4C.06 but a decision is made to not install a traffic control signal. **Please fill inputs on PHB Score Sheet and submit to ODOT.**

Considerations such as geometrics and lack of sight distance generally have not been accepted in lieu of satisfying signal warrants. These considerations may allow an otherwise unwarranted traffic signal to be retained at **100 percent** local cost. Please review TEM 402-4 for details.

Conclusion:

Notes: 2034 No Build - w RTR

OMUTCD WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME

Number of Lanes for Moving Traffic on Each Approach	
Major Street:	1 Lane
Minor Street:	1 Lane

Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street? Yes

**Only applicable after an adequate trial of other alternatives (See section 4C.02.06 of the 2012 OMUTCD)*

Lanes Major/ Minor	Adjusted Volumes		Condition A				Condition B				Combination A/B*							
											Cond. A		Cond. B		Cond. A		Cond. B	
	Major	Minor	100%		70%		100%		70%		80%		80%		56%		56%	
			Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.
1 / 1	X		500	150	350	105	750	75	525	53	400	120	600	60	280	84	420	42
2+ / 1			600	150	420	105	900	75	630	53	480	120	720	60	336	84	504	42
2+ / 2+			600	200	420	140	900	100	630	70	480	160	720	80	336	112	504	56
1 / 2+			500	200	350	140	750	100	525	70	400	160	600	80	280	112	420	56
12:00 AM	0	0																
12:15 AM	0	0																
12:30 AM	0	0																
12:45 AM	0	0																
1:00 AM	0	0																
1:15 AM	0	0																
1:30 AM	0	0																
1:45 AM	0	0																
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4:45 AM	0	0																
5:00 AM	0	0																
5:15 AM	19	15																
5:30 AM	51	22																
5:45 AM	87	34																
6:00 AM	149	44																
6:15 AM	202	61																
6:30 AM	298	104													1	1		
6:45 AM	383	124			1	1												
7:00 AM	424	149									1	1					1	1
7:15 AM	474	164																
7:30 AM	458	144													1	1		
7:45 AM	442	143			1	1												
8:00 AM	435	136									1	1					1	1
8:15 AM	397	119																
8:30 AM	354	106													1	1		
8:45 AM	303	88																
9:00 AM	266	69																
9:15 AM	182	43																
9:30 AM	113	27																
9:45 AM	59	9																
10:00 AM	0	0																
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12:30 PM	0	0																
12:45 PM	0	0																
1:00 PM	0	0																
1:15 PM	58	26																
1:30 PM	165	44																
1:45 PM	241	80																
2:00 PM	326	106													1	1		
2:15 PM	365	122			1	1												
2:30 PM	346	128																
2:45 PM	367	132																
3:00 PM	390	143													1	1		
3:15 PM	415	147			1	1					1	1						
3:30 PM	528	185	1	1					1	1							1	1
3:45 PM	680	235											1	1				
4:00 PM	762	325					1	1							1	1		
4:15 PM	869	423			1	1					1	1						
4:30 PM	917	448	1	1					1	1							1	1
4:45 PM	867	461											1	1				
5:00 PM	870	440					1	1							1	1		
5:15 PM	641	314			1	1					1	1						
5:30 PM	392	199																
5:45 PM	193	104																
6:00 PM	0	0																
6:15 PM	0	0																
6:30 PM	0	0																
6:45 PM	0	0																
7:00 PM	0	0																
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8:45 PM	0	0																
9:00 PM	0	0																
9:15 PM	0	0																
9:30 PM	0	0																
9:45 PM	0	0																
HOURS MET			**2**	**2**	**6**	**6**	**2**	**2**	**2**	**2**	**5**	**5**	**2**	**2**	**7**	**7**	**4**	**4**
WARRANT SATISFIED?			**NO**		**NO**		**NO**		**NO**		**NO**				**NO**			

Warrant Met: No

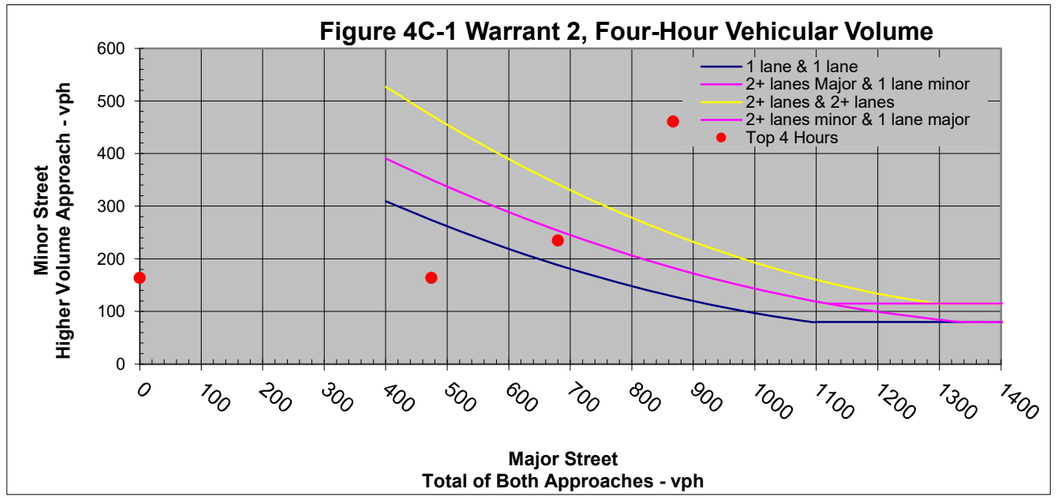
Notes:

OMUTCD WARRANT 2, FOUR-HOUR VEHICULAR VOLUME

Number of Lanes for Moving Traffic on Each Approach		Total Number of Unique Hours Met on Figure 4C-1	2
Major street:	1 Lane	Total Number of Unique Hours Met on Figure 4C-2 (70% Factor)	4
Minor Street:	1 Lane		

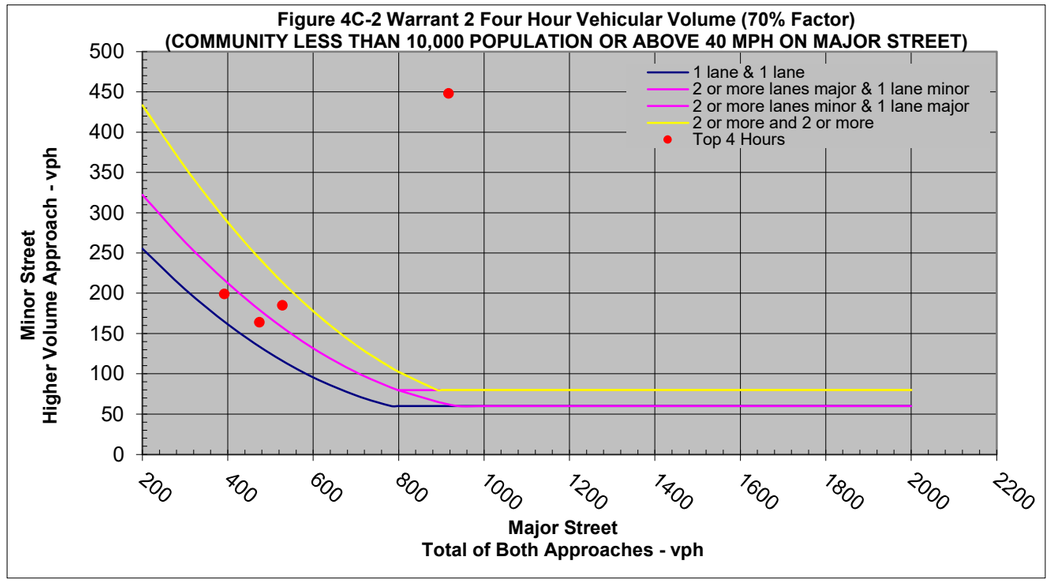
Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street?	Yes

Hour Interval Beginning At	Raw Traffic Counts				Total Major Approach Volumes	Highest Actual Minor Street Approach Volumes	Hour Met?	Hour Met? (70% Factor)
	Minor - Bevelhymer Road		Major - Central College Road					
	N-Bound	S-Bound	W-Bound	E-Bound				
6:00 AM	31	44	66	83	149	44		
6:15 AM	39	61	104	98	202	61		
6:30 AM	46	104	179	119	298	104		
6:45 AM	59	124	233	150	383	124		
7:00 AM	70	149	257	167	424	149		
7:15 AM	76	164	263	211	474	164		Met
7:30 AM	82	144	211	247	458	144		
7:45 AM	87	143	190	252	442	143		
8:00 AM	69	136	182	253	435	136		
8:15 AM	78	119	166	231	397	119		
8:30 AM	78	106	161	193	354	106		
8:45 AM	72	88	137	166	303	88		
9:00 AM	69	69	120	146	266	69		
9:15 AM	43	39	80	102	182	43		
9:30 AM	27	22	49	64	113	27		
9:45 AM	8	9	27	32	59	9		
10:00 AM	0	0	0	0	0	0		
10:15 AM	0	0	0	0	0	0		
10:30 AM	0	0	0	0	0	0		
10:45 AM	0	0	0	0	0	0		
11:00 AM	0	0	0	0	0	0		
11:15 AM	0	0	0	0	0	0		
11:30 AM	0	0	0	0	0	0		
11:45 AM	0	0	0	0	0	0		
12:00 PM	0	0	0	0	0	0		
12:15 PM	0	0	0	0	0	0		
12:30 PM	0	0	0	0	0	0		
12:45 PM	0	0	0	0	0	0		
1:00 PM	0	0	0	0	0	0		
1:15 PM	23	26	33	25	58	26		
1:30 PM	44	42	82	83	165	44		
1:45 PM	80	59	119	122	241	80		
2:00 PM	106	84	160	166	326	106		
2:15 PM	122	82	182	183	365	122		
2:30 PM	128	83	180	166	346	128		
2:45 PM	132	99	185	182	367	132		
3:00 PM	143	103	192	198	390	143		
3:15 PM	147	108	198	217	415	147		
3:30 PM	169	185	280	248	528	185		Met
3:45 PM	181	235	415	265	680	235	Met	
4:00 PM	172	325	494	268	762	325		
4:15 PM	175	423	581	288	869	423		
4:30 PM	158	448	632	285	917	448		Met
4:45 PM	158	461	592	275	867	461	Met	
5:00 PM	173	440	580	290	870	440		
5:15 PM	127	314	432	209	641	314		
5:30 PM	96	199	252	140	392	199		Met
5:45 PM	44	104	115	78	193	104		
6:00 PM	0	0	0	0	0	0		
6:15 PM	0	0	0	0	0	0		
6:30 PM	0	0	0	0	0	0		
6:45 PM	0	0	0	0	0	0		
7:00 PM	0	0	0	0	0	0		
7:15 PM	0	0	0	0	0	0		
7:30 PM	0	0	0	0	0	0		
7:45 PM	0	0	0	0	0	0		
8:00 PM	0	0	0	0	0	0		



Top Hours for Figure 4C-1	Start Time	End Time	Major Street	Minor Street
Top Hour	4:45 PM	5:45 PM	867	461
2nd Highest Hour	3:45 PM	4:45 PM	680	235
3rd Highest Hour	12:00 AM	1:00 AM	0	164
4th Highest Hour	7:15 AM	8:15 AM	474	164

Top Hours for Figure 4C-2	Start Time	End Time	Major Street	Minor Street
Top Hour	4:30 PM	5:30 PM	917	448
2nd Highest Hour	3:30 PM	4:30 PM	528	185
3rd Highest Hour	7:15 AM	8:15 AM	474	164
4th Highest Hour	5:30 PM	6:30 PM	392	199



Are the requirements for Warrant 2 met?: No

OMUTCD WARRANT 3, PEAK HOUR

Number of Lanes for Moving Traffic on Each Approach		Peak Hour Start time	4:30 PM
Major Street:	1 Lane	Peak Hour End Time	5:30 PM
Minor Street:	1 Lane		

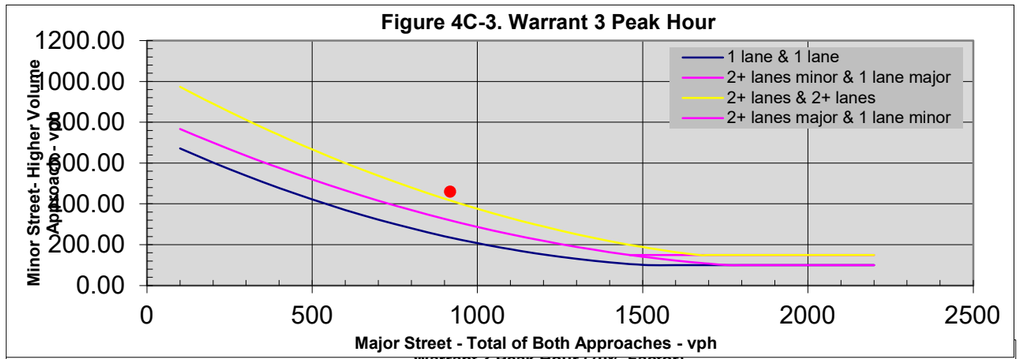
Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street?	Yes
Is this signal warrant being applied for an unusual case, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time?	No

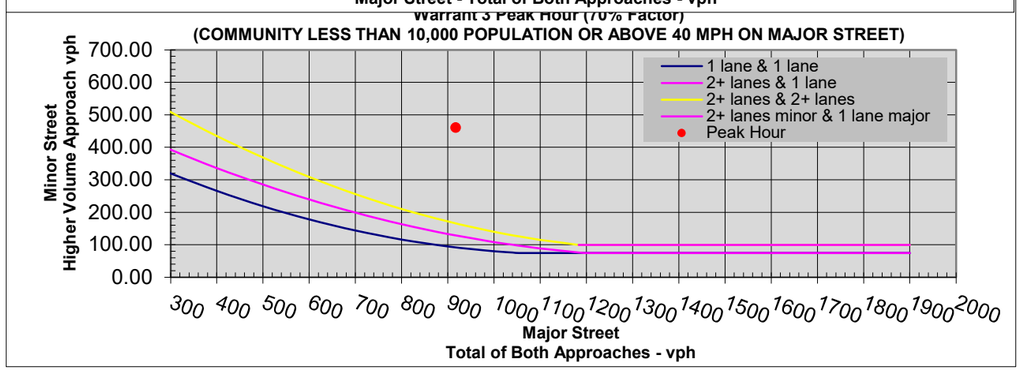
Indicate whether all three of the following conditions for the same 1 hour (any four consecutive 15-minute periods) of an average day are present*

Does the total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equal or exceed 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach?	
Does the volume on the same minor-street approach (one direction only) equal or exceed 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes?	Yes
Does the total entering volume serviced during the hour equal or exceed 650 vehicles per hour for intersection with three approaches or 800 vehicles per hour for intersections with four or more approaches?	Yes

**If applicable, attach all supporting calculations and documentation.*

Are the requirements for Warrant 3 met?: Yes





Hour Interval Beginning At	Major Street Combined Vehicles Per Hour (VPH)	Highest Minor Street Approach Vehicles Per Hour (VPH)	Sum of Major Street and Highest Minor Street	Sum of Major Street and Combined Minor Street
	Hour Vehicular Volume			
6:00 AM	149	44	193	224
6:15 AM	202	61	263	302
6:30 AM	298	104	402	448
6:45 AM	383	124	507	566
7:00 AM	424	149	573	643
7:15 AM	474	164	638	714
7:30 AM	458	144	602	684
7:45 AM	442	143	585	672
8:00 AM	435	136	571	640
8:15 AM	397	119	516	594
8:30 AM	354	106	460	538
8:45 AM	303	88	391	463
9:00 AM	266	69	335	404
9:15 AM	182	43	225	264
9:30 AM	113	27	140	162
9:45 AM	59	9	68	76
10:00 AM	0	0	0	0
10:15 AM	0	0	0	0
10:30 AM	0	0	0	0
10:45 AM	0	0	0	0
11:00 AM	0	0	0	0
11:15 AM	0	0	0	0
11:30 AM	0	0	0	0
11:45 AM	0	0	0	0
12:00 PM	0	0	0	0
12:15 PM	0	0	0	0
12:30 PM	0	0	0	0
12:45 PM	0	0	0	0
1:00 PM	0	0	0	0
1:15 PM	58	26	84	107
1:30 PM	165	44	209	251
1:45 PM	241	80	321	380
2:00 PM	326	106	432	516
2:15 PM	365	122	487	569
2:30 PM	346	128	474	557
2:45 PM	367	132	499	598
3:00 PM	390	143	533	636
3:15 PM	415	147	562	670
3:30 PM	528	185	713	882
3:45 PM	680	235	915	1096
4:00 PM	762	325	1087	1259
4:15 PM	869	423	1292	1467
4:30 PM	917	448	1365	1523
4:45 PM	867	461	1328	1486
5:00 PM	870	440	1310	1483
5:15 PM	641	314	955	1082
5:30 PM	392	199	591	687
5:45 PM	193	104	297	341
6:00 PM	0	0	0	0
6:15 PM	0	0	0	0
6:30 PM	0	0	0	0
6:45 PM	0	0	0	0
7:00 PM	0	0	0	0
7:15 PM	0	0	0	0
7:30 PM	0	0	0	0
7:45 PM	0	0	0	0
8:00 PM	0	0	0	0

Actual Peak Hour Major Traffic Volume	Actual Peak Hour Minor Traffic Volume	Required Peak Hour Minor Traffic Volume for Fig. 4C-3	Required Peak Hour Minor Traffic Volume for Fig. 4C-4
917	461	236	92

Start Time	Southbound Approach						Westbound Approach						Northbound Approach						Eastbound Approach						NOTES:
	Southbound						Westbound						Nouthbound						Eastbound						
	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	
12:00 AM						0						0						0						0	It should be noted that if data is copied overtop of the Hourly Totals or Approach Totals, that the 'AutoSum' Formula will be lost. This should not affect the actual totals if the data was copied from a program that performs the calculations for the user.
12:15 AM						0						0						0						0	
12:30 AM						0						0						0						0	
12:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:00 AM						0						0						0						0	
1:15 AM						0						0						0						0	
1:30 AM						0						0						0						0	
1:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2:00 AM						0						0						0						0	
2:15 AM						0						0						0						0	
2:30 AM						0						0						0						0	
2:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:00 AM						0						0						0						0	
3:15 AM						0						0						0						0	
3:30 AM						0						0						0						0	
3:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 AM						0						0						0						0	
4:15 AM						0						0						0						0	
4:30 AM						0						0						0						0	
4:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 AM						0						0						0						0	
5:15 AM						0						0						0						0	
5:30 AM						0						0						0						0	
5:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6:00 AM	0	11	4			15	0	8	4			12	0	2	1			3	3	4	0			7	
6:15 AM	1	6	0			7	0	9	4			13	0	2	1			3	7	12	0			19	
6:30 AM	0	12	0			12	1	8	4			13	1	5	1			7	4	18	1			23	
6:45 AM	0	8	2			10	0	20	8			28	4	14	1			19	4	30	0			34	
Hourly Total	1	37	6	0	0	44	1	45	20	0	0	66	5	23	4	0	0	32	18	64	1	0	0	83	
7:00 AM	6	26	1			33	3	31	16			50	2	8	1			11	0	17	5			22	
7:15 AM	12	40	0			52	1	63	24			88	0	6	4			10	3	25	12			40	
7:30 AM	7	25	2			34	0	43	24			67	7	8	6			21	3	41	10			54	
7:45 AM	4	26	5			35	1	48	3			52	10	16	5			31	3	44	4			51	
Hourly Total	29	117	8	0	0	154	5	185	67	0	0	257	19	38	16	0	0	73	9	127	31	0	0	167	
8:00 AM	8	40	1			49	0	40	16			56	0	13	4			17	4	46	16			66	
8:15 AM	6	21	4			31	1	27	8			36	6	10	1			17	7	64	5			76	
8:30 AM	0	27	4			31	3	28	15			46	6	14	6			26	8	41	10			59	
8:45 AM	6	19	4			29	1	28	15			44	4	4	4			12	3	35	14			52	
Hourly Total	20	107	13	0	0	140	5	123	54	0	0	182	16	41	15	0	0	72	22	186	45	0	0	253	
9:00 AM	5	21	5			31	0	31	9			40	7	14	6			27	3	34	7			44	
9:15 AM	4	14	0			18	3	23	5			31	1	13	2			16	4	29	5			38	
9:30 AM	2	11	0			13	1	16	5			22	4	11	5			20	0	22	10			32	
9:45 AM	0	9	0			9	1	15	11			27	1	5	2			8	3	25	4			32	
Hourly Total	11	55	5	0	0	71	5	85	30	0	0	120	13	43	15	0	0	71	10	110	26	0	0	146	
10:00 AM						0						0						0						0	
10:15 AM						0						0						0						0	
10:30 AM						0						0						0						0	
10:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:00 AM						0						0						0						0	
11:15 AM						0						0						0						0	
11:30 AM						0						0						0						0	
11:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:00 PM						0						0						0						0	
12:15 PM						0						0						0						0	
12:30 PM						0						0						0						0	
12:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:00 PM						0						0						0						0	
1:15 PM						0						0						0						0	
1:30 PM						0						0						0						0	
1:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2:00 PM	4	21	1			26	1	25	7			33	6	12	6			24	3	21	1			25	
2:15 PM	4	8	5			17	0	38	11			49	6	14	2			22	8	42	8			58	
2:30 PM	4	13	1			18	3	21	13			37	12	22	4			38	4	31	4			39	
2:45 PM	6	18	2			26	3	30	8			41	2	13	12			27	8	29	7			44	
Hourly Total	18	60	9	0	0	87	7	114	39	0	0	160	26	61	24	0	0	111	23	123	20	0	0	166	
3:00 PM	1	21	2			24	1	43	11			55	7	26	7			40	4	31	7			42	
3:15 PM	5	13	0			18	4	31	12			47	12	13	4			29	9	27	5			41	
3:30 PM	4	26	4			34	4	31	7			42	16	22	5			43	5	43	7			55	
3:45 PM	6	24	0			30	4	36	8			48	16	18	7			41	7	46	7			60	
Hourly Total	16	84	6	0	0	106	13	141	38	0	0	192	51	79	23	0	0	153	25	147	26	0	0	198	
4:00 PM	6	20	4			30	4	50	7			61	10	22	12			44	4	50	7			61	
4:15 PM	16	72	9			97	56	62	11			129	14	32	6			52	12	44	16			72	
4:30 PM	6	66	12			84	59	93	25			177	13	23	18			54	14	51	7			72	
4:45 PM	27	82	16			125	40	80	7			127	7	18	5			30	7	48	8			63	
Hourly Total	55	240	41	0	0	336	159	285	50	0	0	494	44	95	41	0	0	180	37	193	38	0	0	268	
5:00 PM	24	93	14			131	44	89	15			148	12	22	14			48	18	50	13			81	
5:15 PM	25	83	12			120	46	111	23			180	7	20	6			33	13	47	9			69	
5:30 PM	21	64	14			99	44	86	7			137	11	32	11			54	8	46	8			62	
5:45 PM	18	75	14			107	51	52	12			115	8	32	5			45	7	50	21			78	
Hourly Total	88	315	54	0	0	457	185	338	57	0	0	580	38	106	36	0	0	180	46	193	51	0	0	290	
6:00 PM						0						0						0						0	
6:15 PM						0						0						0						0	
6:30 PM						0						0						0						0	
6:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:00 PM						0						0						0						0	
7:15 PM						0						0						0						0	
7:30 PM						0						0						0						0	
7:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 PM						0						0						0						0	
8:15 PM						0						0						0						0	
8:30 PM						0						0						0						0	
8:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 PM						0						0						0						0	
9:15 PM						0						0						0						0	
9:30 PM						0						0						0						0	
9:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:00 PM						0						0						0						0	
10:15 PM						0						0						0						0	
10:30 PM						0						0						0						0	
10:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:00 PM						0						0						0						0	
11:15 PM						0						0						0						0	
11:30 PM						0						0						0						0	
11:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Count Data at the Central College Road & Bevelhymer Road intersection collected on 3/1/2023

	Southbound						Westbound						Northbound						Eastbound		
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left
0:00																					
12:15																					
12:30																					
12:45																					
1:00																					
1:15																					
1:30																					
1:45																					
2:00																					
2:15																					
2:30																					
2:45																					
3:00																					
3:15																					
3:30																					
3:45																					
4:00																					
4:15																					
4:30																					
4:45																					
5:00																					
5:15																					
5:30																					
5:45																					
6:00	0	7	3				0	6	3				0	2	1				2	3	0
6:15	1	5	0				0	7	3				0	2	1				5	9	0
6:30	0	10	0				1	6	3				1	4	1				3	14	1
6:45	0	7	2				0	15	6				3	12	1				3	23	0
7:00	5	19	1				2	23	12				2	7	1				0	13	4
7:15	10	34	0				1	47	18				0	5	3				2	19	9
7:30	6	21	2				0	32	18				6	7	5				2	31	8
7:45	3	22	4				1	36	2				8	13	4				2	34	3
8:00	7	30	1				0	30	12				0	11	3				3	35	12
8:15	5	18	3				1	20	6				5	8	1				5	49	4
8:30	0	23	3				2	21	11				5	12	5				6	31	8
8:45	5	16	3				1	21	11				3	3	3				2	27	11
9:00	4	14	4				0	23	7				6	12	5				2	26	5
9:15	3	12	0				2	17	4				1	11	2				3	22	4
9:30	2	9	0				1	12	4				3	9	4				0	17	8
9:45	0	8	0				1	11	8				1	4	2				2	19	3
10:00																					
10:15																					
10:30																					
10:45																					
11:00																					
11:15																					
11:30																					
11:45																					
12:00																					
12:15																					
12:30																					
12:45																					
1:00																					
1:15																					
1:30																					
1:45																					
2:00	3	13	1				1	19	5				5	10	5				2	16	1
2:15	3	7	4				0	28	8				5	12	2				6	32	6
2:30	3	11	1				2	16	10				10	18	3				3	24	3
2:45	5	15	2				2	22	6				2	11	10				6	22	5
3:00	1	13	2				1	32	8				6	22	6				3	24	5
3:15	4	11	0				3	23	9				10	11	3				7	21	4
3:30	3	22	3				3	23	5				13	18	4				4	33	5
3:45	5	20	0				3	27	6				13	15	6				5	35	5
4:00	5	12	3				3	37	5				8	18	10				3	38	5
4:15	14	61	8				42	46	8				12	27	5				9	34	12
4:30	5	56	10				44	69	19				11	19	15				11	39	5
4:45	23	70	14				30	60	5				6	15	4				5	37	6
5:00	20	75	12				33	66	11				10	18	12				14	38	10
5:15	21	71	10				34	83	17				6	17	5				10	36	7
5:30	18	54	12				33	64	5				9	27	9				6	35	6
5:45	15	64	12				38	39	9				7	27	4				5	38	16
6:00																					
6:15																					
6:30																					
6:45																					
7:00																					
7:15																					
7:30																					
7:45																					
8:00																					
8:15																					
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8:45																					
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9:15																					
9:30																					
9:45																					
10:00																					
10:15																					
10:30																					
10:45																					
11:00																					
11:15																					
11:30																					
11:45																					

Grown Count Data

	Southbound						Westbound						Northbound						Eastbound		
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left
0:00																					
12:15																					
12:30																					
12:45																					
1:00																					
1:15																					
1:30																					
1:45																					
2:00																					
2:15																					
2:30																					
2:45																					
3:00																					
3:15																					
3:30																					
3:45																					
4:00																					
4:15																					
4:30																					
4:45																					
5:00																					
5:15																					
5:30																					
5:45																					
6:00	0	8	4				0	8	4				0	2	1				3	4	0
6:15	1	6	0				0	9	4				0	2	1				7	12	0
6:30	0	12	0				1	8	4				1	5	1				4	18	1
6:45	0	8	2				0	20	8				4	14	1				4	30	0
7:00	6	22	1				3	31	16				2	8	1				0	17	5
7:15	12	40	0				1	63	24				0	6	4				3	25	12
7:30	7	25	2				0	43	24				7	8	6				3	41	10
7:45	4	26	5				1	48	3				10	16	5				3	44	4
8:00	8	35	1				0	40	16				0	13	4				4	46	16
8:15	6	21	4				1	27	8				6	10	1				7	64	5
8:30	0	27	4				3	28	15				6	14	6				8	41	10
8:45	6	19	4				1	28	15				4	4	4				3	35	14
9:00	5	16	5				0	31	9				7	14	6				3	34	7
9:15	4	14	0				3	23	5				1	13	2				4	29	5
9:30	2	11	0				1	16	5				4	11	5				0	22	10
9:45	0	9	0				1	15	11				1	5	2				3	25	4
10:00																					
10:15																					
10:30																					
10:45																					
11:00																					
11:15																					
11:30																					
11:45																					
12:00																					
12:15																					
12:30																					
12:45																					
1:00																					
1:15																					
1:30																					
1:45																					
2:00	4	15	1				1	25	7				6	12	6				3	21	1
2:15	4	8	5				0	38	11				6	14	2				8	42	8
2:30	4	13	1				3	21	13				12	22	4				4	31	4
2:45	6	18	2				3	30	8				2	13	12				8	29	7
3:00	1	15	2				1	43	11				7	26	7				4	31	7
3:15	5	13	0				4	31	12				12	13	4				9	27	5
3:30	4	26	4				4	31	7				16	22	5				5	43	7
3:45	6	24	0				4	36	8				16	18	7				7	46	7
4:00	6	14	4				4	50	7				10	22	12				4	50	7
4:15	16	72	9				56	62	11				14	32	6				12	44	16
4:30	6	66	12				59	93	25				13	23	18				14	51	7
4:45	27	82	16				40	80	7				7	18	5				7	48	8
5:00	24	88	14				44	89	15				12	22	14				18	50	13
5:15	25	83	12				46	111	23				7	20	6				13	47	9
5:30	21	64	14				44	86	7				11	32	11				8	46	8
5:45	18	75	14				51	52	12				8	32	5				7	50	21
6:00																					
6:15																					
6:30																					
6:45																					
7:00																					
7:15																					
7:30																					
7:45																					
8:00																					
8:15																					
8:30																					
8:45																					
9:00																					
9:15																					
9:30																					
9:45																					
10:00																					
10:15																					
10:30																					
10:45																					
11:00																					
11:15																					
11:30																					
11:45																					

Growth Rates	
Southbound	1.6%
Westbound	3.1%
Northbound	1.8%
Eastbound	2.8%
Collection Year	2023
Design Year	2034

Trip Distribution (Sheetz Development) - Distribution matches thePM Peak distribution used in the TIS volumes.

	2% Entry Southbound						Westbound						2% Exit Northbound		2% Exit				Eastbound			960 - Super Convenience Market/Gas Station*		710 Weekday Entry/Exit
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left	Entry %	Exit %	
0:00																						1.2%	1.3%	2399
12:15																								
12:30																								
12:45																								
1:00																						0.8%	0.9%	
1:15																								
1:30																								
1:45																								
2:00																						0.6%	0.6%	
2:15																								
2:30																								
2:45																								
3:00																						0.8%	0.7%	
3:15																								
3:30																								
3:45																								
4:00																						1.6%	1.5%	
4:15																								
4:30																								
4:45																								
5:00																						3.1%	3.0%	
5:15																								
5:30																								
5:45																								
6:00		2												0	0					0		4.7%	4.5%	
6:15																								
6:30																								
6:45																								
7:00		3												0	0					0		6.0%	5.9%	
7:15																								
7:30																								
7:45																								
8:00		3												0	0					0		6.5%	6.4%	
8:15																								
8:30																								
8:45																								
9:00		3												0	0					0		5.6%	5.7%	
9:15																								
9:30																								
9:45																								
10:00																						5.3%	5.3%	
10:15																								
10:30																								
10:45																								
11:00																						5.8%	5.7%	
11:15																								
11:30																								
11:45																								
12:00																						6.6%	6.6%	
12:15																								
12:30																								
12:45																								
1:00																						6.2%	5.9%	
1:15																								
1:30																								
1:45																								
2:00		3												0	0					0		6.0%	6.2%	
2:15																								
2:30																								
2:45																								
3:00		3												0	0					0		6.8%	6.8%	
3:15																								
3:30																								
3:45																								
4:00		3												0	0					0		6.3%	6.5%	
4:15																								
4:30																								
4:45																								
5:00		3												0	0					0		6.7%	6.9%	
5:15																								
5:30																								
5:45																								
6:00																						5.3%	5.4%	
6:15																								
6:30																								
6:45																								
7:00																						3.9%	4.0%	
7:15																								
7:30																								
7:45																								
8:00																						3.4%	3.4%	
8:15																								
8:30																								
8:45																								
9:00																						2.8%	2.7%	
9:15																								
9:30																								
9:45																								
10:00																						2.1%	2.1%	
10:15																								
10:30																								
10:45																								
11:00																						1.9%	2.0%	
11:15																								
11:30																								
11:45																								

*No official hourly distribution exists for LUC - 960. Therefore, the hourly distribution for LUC - 945 Convenience Store/Gas Station was utilized.

Trip Distribution (Dunkin' Development) - Distribution matches thePM Peak distribution used in the TIS volumes.

	2% Entry Southbound						Westbound						2% Exit Northbound		2% Exit				2% Entry Eastbound			937 - Coffee/Donut Shop with Drive-Through Window		937 Weekday
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left	Entry %	Exit %	Entry/Exit
0:00																						0.1%	0.1%	667
12:15																								
12:30																								
12:45																								
1:00																						0.1%	0.1%	
1:15																								
1:30																								
1:45																								
2:00																						0.0%	0.1%	
2:15																								
2:30																								
2:45																								
3:00																						0.4%	0.1%	
3:15																								
3:30																								
3:45																								
4:00																						1.9%	1.5%	
4:15																								
4:30																								
4:45																								
5:00																						8.2%	6.8%	
5:15																								
5:30																								
5:45																								
6:00		1												0	0				0			10.0%	8.9%	
6:15																								
6:30																								
6:45																								
7:00		1												0	0				0			10.3%	9.8%	
7:15																								
7:30																								
7:45																								
8:00		1												0	0				0			10.0%	10.1%	
8:15																								
8:30																								
8:45																								
9:00		1												0	0				0			7.7%	8.5%	
9:15																								
9:30																								
9:45																								
10:00																						7.2%	7.6%	
10:15																								
10:30																								
10:45																								
11:00																						6.7%	7.2%	
11:15																								
11:30																								
11:45																								
12:00																						5.4%	6.1%	
12:15																								
12:30																								
12:45																								
1:00																						6.3%	5.7%	
1:15																								
1:30																								
1:45																								
2:00		1												0	0				0			5.2%	5.6%	
2:15																								
2:30																								
2:45																								
3:00		1												0	0				0			5.7%	5.3%	
3:15																								
3:30																								
3:45																								
4:00		1												0	0				0			4.6%	4.2%	
4:15																								
4:30																								
4:45																								
5:00		0												0	0				0			2.7%	3.4%	
5:15																								
5:30																								
5:45																								
6:00																						2.7%	3.0%	
6:15																								
6:30																								
6:45																								
7:00																						2.1%	2.2%	
7:15																								
7:30																								
7:45																								
8:00																						1.2%	1.9%	
8:15																								
8:30																								
8:45																								
9:00																						1.2%	1.2%	
9:15																								
9:30																								
9:45																								
10:00																						0.4%	0.6%	
10:15																								
10:30																								
10:45																								
11:00																						0.0%	0.1%	
11:15																								
11:30																								
11:45																								

Trip Distribution (Valvoline Development) - Distribution matches the PM Peak distribution used in the TIS volumes.

	2% Entry												2% Exit	2% Exit					2% Entry			941 - Quick Lubrication Vehicle Shop		941 Weekday
	Southbound						Westbound						Northbound						Eastbound					
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left	Entry %	Exit %	Entry/Exit
0:00																						0.0%	0.0%	40
12:15																								
12:30																								
12:45																								
1:00																						0.0%	0.0%	
1:15																								
1:30																								
1:45																								
2:00																						0.0%	0.0%	
2:15																								
2:30																								
2:45																								
3:00																						0.0%	0.0%	
3:15																								
3:30																								
3:45																								
4:00																						0.0%	0.0%	
4:15																								
4:30																								
4:45																								
5:00																						0.0%	0.0%	
5:15																								
5:30																								
5:45																								
6:00		0											0	0					0			0.0%	0.0%	
6:15																								
6:30																								
6:45																								
7:00		0											0	0					0			0.0%	0.0%	
7:15																								
7:30																								
7:45																								
8:00		0											0	0					0			12.5%	4.2%	
8:15																								
8:30																								
8:45																								
9:00		0											0	0					0			10.4%	8.3%	
9:15																								
9:30																								
9:45																								
10:00																						12.5%	12.5%	
10:15																								
10:30																								
10:45																								
11:00																						10.4%	14.6%	
11:15																								
11:30																								
11:45																								
12:00																						6.3%	6.3%	
12:15																								
12:30																								
12:45																								
1:00																						8.3%	8.3%	
1:15																								
1:30																								
1:45																								
2:00		0											0	0					0			12.5%	6.3%	
2:15																								
2:30																								
2:45																								
3:00		0											0	0					0			12.5%	10.4%	
3:15																								
3:30																								
3:45																								
4:00		0											0	0					0			8.3%	14.6%	
4:15																								
4:30																								
4:45																								
5:00		0											0	0					0			6.3%	14.6%	
5:15																								
5:30																								
5:45																								
6:00																						0.0%	0.0%	
6:15																								
6:30																								
6:45																								
7:00																						0.0%	0.0%	
7:15																								
7:30																								
7:45																								
8:00																						0.0%	0.0%	
8:15																								
8:30																								
8:45																								
9:00																						0.0%	0.0%	
9:15																								
9:30																								
9:45																								
10:00																						0.0%	0.0%	
10:15																								
10:30																								
10:45																								
11:00																						0.0%	0.0%	
11:15																								
11:30																								
11:45																								

Trip Distribution (Dunkin' Development) - Distribution matches the PM Peak distribution used in the TIS volumes.

	2% Entry Southbound							Westbound						2% Exit Northbound			2% Exit			2% Entry Eastbound			850 - Supermarket		850 Weekday
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left	Entry %	Exit %	Entry/Exit
0:00																						0.0%	0.2%	1104
12:15																								
12:30																								
12:45																								
1:00																						0.0%	0.0%	
1:15																								
1:30																								
1:45																								
2:00																						0.0%	0.0%	
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3:00																						0.0%	0.0%	
3:15																								
3:30																								
3:45																								
4:00																						0.2%	0.1%	
4:15																								
4:30																								
4:45																								
5:00																						0.5%	0.1%	
5:15																								
5:30																								
5:45																								
6:00		0												0	0				0			0.6%	0.0%	
6:15																								
6:30																								
6:45																								
7:00		0												0	0				0			1.5%	1.4%	
7:15																								
7:30																								
7:45																								
8:00		1												0	0				0			4.3%	3.3%	
8:15																								
8:30																								
8:45																								
9:00		1												0	0				0			5.1%	4.4%	
9:15																								
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11:00																						7.4%	7.3%	
11:15																								
11:30																								
11:45																								
12:00																						9.3%	9.9%	
12:15																								
12:30																								
12:45																								
1:00																						8.7%	7.5%	
1:15																								
1:30																								
1:45																								
2:00		2												0	0				0			8.8%	9.2%	
2:15																								
2:30																								
2:45																								
3:00		2												0	0				0			8.9%	8.5%	
3:15																								
3:30																								
3:45																								
4:00		2												0	0				0			9.8%	9.7%	
4:15																								
4:30																								
4:45																								
5:00		2												0	0				0			9.5%	9.5%	
5:15																								
5:30																								
5:45																								
6:00																						7.8%	9.3%	
6:15																								
6:30																								
6:45																								
7:00																						5.6%	6.6%	
7:15																								
7:30																								
7:45																								
8:00																						3.8%	4.2%	
8:15																								
8:30																								
8:45																								
9:00																						1.9%	2.8%	
9:15																								
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9:45																								
10:00																						0.0%	0.4%	
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10:30																								
10:45																								
11:00																						0.0%	0.2%	
11:15																								
11:30																								
11:45																								

STUDY AND ANALYSIS INFORMATION

Municipality:	New Albany	**Traffic Volumes Obtained By:**	CMTran
County:	Franklin	**Analysis Date:**	
ODOT Engineering District:	6	**Agency/ Company Name Performing Warrant Analysis:**	CMTran
Google map link:			

Analysis Information

Data Collection Date: 3/1/2023

Day of the Week: Wednesday

Is the intersection in a built-up area of an isolated community of <10,000 population? No

Existing Traffic Signal at intersection: No

Total Number of Approaches at Intersection: 4

Major Street Information

Major Street Name and Route Number: Central College Road

Major Street Approach Direction: E-Bound / W-Bound

Number of Thru Lanes on Each Major Street Approach: 1 **LANE(S)**

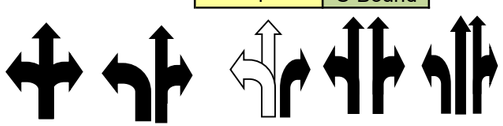
Speed Limit or 85th Percentile Speed on the Major Street*: 45 **MPH**

*Unknown assumes below 45 mph

Minor Street Information

Minor Street Name and Route Number: Bevelhymer Road

Minor Street Approach Configuration: 1 N-Bound / 1 S-Bound



1 2 3 4 5

Number of Thru Lanes on Each Minor Street Approach: 1 **LANE(S)**

Apply Right Turn Lane Reduction*: Yes

*Right Turn Lane Reduction Shall be used for Warrants 1, 2, & 3 for New ODOT Signals. Please refer to TEM 402-3.2 for clarification and criteria under which Right Turn Reduction is not required.

TRAFFIC SIGNAL WARRANT ANALYSIS FINDINGS

	Applicable?	Warrant Satisfied?	Notes and Comments:
Warrant 1, Eight-Hour Vehicular Volume	Yes	**No**	
Warrant 2, Four-Hour Vehicular Volume	Yes	**No**	Figure 4C-2 (70% Factor)
Warrant 3, Peak Hour	Yes	**Yes**	Signals installed under Warrant 3 should be traffic actuated. Peak Hour: 4:30 PM, 5:30 PM

For Warrants 1-3, new ODOT signals must be based off of 100% volume thresholds (TEM 402-3.2)

Warrant 4, Pedestrian Volume	No		If this warrant is met, and a traffic control signal is justified by an engineering study, the traffic control signal shall be equipped with pedestrian signal heads complying with the provisions set forth in Chapter 4E of the OMUTCD. Peak Hour: 4:30 PM, 5:30 PM
Warrant 5, School Crossing	No		N/A
Warrant 6, Coordinated Signal System	No		(Shall not be used as the sole warrant in the analysis)
Warrant 7, Crash Experience	No		If this is the sole warrant, signal must be semi-actuated with control devices which provide proper coordination if installed at an intersection within a coordinated system and normally should be fully traffic actuated if installed at an isolated intersection.
Warrant 8, Roadway Network	No		(Shall not be used as the sole warrant in the analysis)
Warrant 9, Intersection Near a Grade Crossing	No		Figure 4C-9
Multi-Way Stop Warrant	No		May be used as an interim measure if traffic signal warrants are satisfied.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

If no warrants are satisfied, additional options may be considered:

1. An engineering study, performed by a firm prequalified by ODOT for signal design, if approved by the ODOT district, may be used to justify a new signal installation or retention of an existing signal that otherwise does not meet the published warrants. An example of such an instance is a traffic signal in proximity to a railroad crossing that serves to reduce queuing across the tracks.
2. According to TEM 402-2, If the actual turning movement counts fail to satisfy a signal warrant, it may be acceptable to use traffic volumes projected to the second year after project completion. The **Modeling and Forecasting Section** should provide the projected traffic volumes.
3. A pedestrian hybrid beacon may be considered for installation to facilitate pedestrian crossings at a location that does not meet traffic signal warrants (see Chapter 4C of TEM) or at a location that meets traffic signal warrants under Sections 4C.05 and/or 4C.06 but a decision is made to not install a traffic control signal. **Please fill inputs on PHB Score Sheet and submit to ODOT.**

Considerations such as geometrics and lack of sight distance generally have not been accepted in lieu of satisfying signal warrants. These considerations may allow an otherwise unwarranted traffic signal to be retained at **100 percent** local cost. Please review TEM 402-4 for details.

Conclusion:

Notes: 2034 Build - w RTR

OMUTCD WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME

Number of Lanes for Moving Traffic on Each Approach	
Major Street:	1 Lane
Minor Street:	1 Lane

Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street? Yes

**Only applicable after an adequate trial of other alternatives (See section 4C.02.06 of the 2012 OMUTCD)*

Lanes Major/ Minor	Adjusted Volumes		Condition A				Condition B				Combination A/B*							
											Cond. A		Cond. B		Cond. A		Cond. B	
	Major	Minor	100%		70%		100%		70%		80%		80%		56%		56%	
			Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.
1 / 1	X		500	150	350	105	750	75	525	53	400	120	600	60	280	84	420	42
2+ / 1			600	150	420	105	900	75	630	53	480	120	720	60	336	84	504	42
2+ / 2+			600	200	420	140	900	100	630	70	480	160	720	80	336	112	504	56
1 / 2+			500	200	350	140	750	100	525	70	400	160	600	80	280	112	420	56
12:00 AM	0	0																
12:15 AM	0	0																
12:30 AM	0	0																
12:45 AM	0	0																
1:00 AM	0	0																
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4:45 AM	0	0																
5:00 AM	0	0																
5:15 AM	27	19																
5:30 AM	59	26																
5:45 AM	95	38																
6:00 AM	157	48																
6:15 AM	229	74																
6:30 AM	325	117													1	1		
6:45 AM	410	137			1	1					1	1						
7:00 AM	451	162															1	1
7:15 AM	499	175																
7:30 AM	483	155													1	1		
7:45 AM	467	154			1	1					1	1						
8:00 AM	460	147															1	1
8:15 AM	411	125																
8:30 AM	368	112													1	1		
8:45 AM	317	94																
9:00 AM	280	83																
9:15 AM	182	43																
9:30 AM	113	27																
9:45 AM	59	9																
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12:15 PM	0	0																
12:30 PM	0	0																
12:45 PM	0	0																
1:00 PM	0	0																
1:15 PM	67	38																
1:30 PM	174	58																
1:45 PM	250	94																
2:00 PM	335	121													1	1		
2:15 PM	379	143			1	1												
2:30 PM	360	149																
2:45 PM	381	153																
3:00 PM	404	164									1	1			1	1		
3:15 PM	437	178			1	1											1	1
3:30 PM	550	201	1	1					1	1								
3:45 PM	702	245											1	1				
4:00 PM	784	335					1	1			1	1			1	1		
4:15 PM	897	438			1	1											1	1
4:30 PM	945	459	1	1					1	1								
4:45 PM	895	472											1	1				
5:00 PM	898	455					1	1			1	1			1	1		
5:15 PM	641	314			1	1											1	1
5:30 PM	392	199																
5:45 PM	193	104																
6:00 PM	0	0																
6:15 PM	0	0																
6:30 PM	0	0																
6:45 PM	0	0																
7:00 PM	0	0																
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8:45 PM	0	0																
9:00 PM	0	0																
9:15 PM	0	0																
9:30 PM	0	0																
9:45 PM	0	0																
HOURS MET			**2**	**2**	**6**	**6**	**2**	**2**	**2**	**2**	**5**	**5**	**2**	**2**	**7**	**7**	**5**	**5**
WARRANT SATISFIED?			**NO**		**NO**		**NO**		**NO**		**NO**				**NO**			

Warrant Met: No

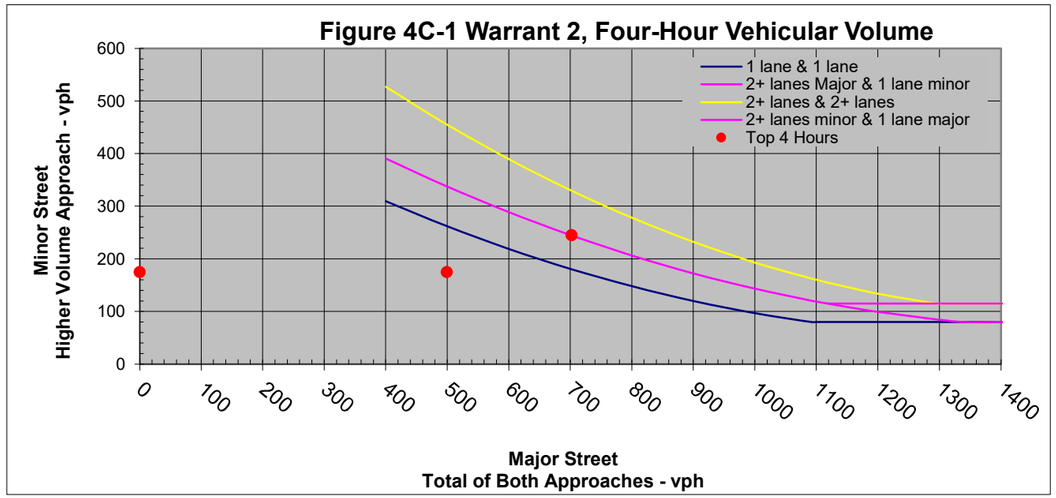
Notes:

OMUTCD WARRANT 2, FOUR-HOUR VEHICULAR VOLUME

Number of Lanes for Moving Traffic on Each Approach		Total Number of Unique Hours Met on Figure 4C-1	2
Major street:	1 Lane	Total Number of Unique Hours Met on Figure 4C-2 (70% Factor)	5
Minor Street:	1 Lane		

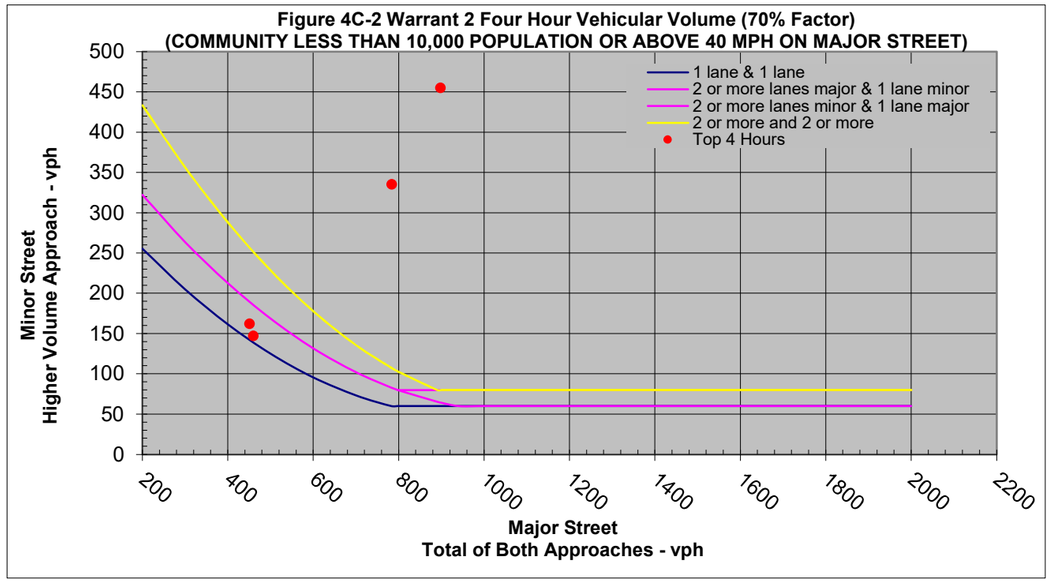
Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street? Yes

Hour Interval Beginning At	Raw Traffic Counts				Total Major Approach Volumes	Highest Actual Minor Street Approach Volumes	Hour Met?	Hour Met? (70% Factor)
	Minor - Bevelhymer Road		Major - Central College Road					
	N-Bound	S-Bound	W-Bound	E-Bound				
6:00 AM	41	48	72	85	157	48		
6:15 AM	67	74	124	105	229	74		
6:30 AM	74	117	199	126	325	117		
6:45 AM	87	137	253	157	410	137		
7:00 AM	98	162	277	174	451	162		Met
7:15 AM	102	175	281	218	499	175		
7:30 AM	108	155	229	254	483	155		
7:45 AM	113	154	208	259	467	154		
8:00 AM	95	147	200	260	460	147		Met
8:15 AM	92	125	175	236	411	125		
8:30 AM	92	112	170	198	368	112		
8:45 AM	87	94	146	171	317	94		
9:00 AM	83	75	129	151	280	83		
9:15 AM	43	39	80	102	182	43		
9:30 AM	27	22	49	64	113	27		
9:45 AM	8	9	27	32	59	9		
10:00 AM	0	0	0	0	0	0		
10:15 AM	0	0	0	0	0	0		
10:30 AM	0	0	0	0	0	0		
10:45 AM	0	0	0	0	0	0		
11:00 AM	0	0	0	0	0	0		
11:15 AM	0	0	0	0	0	0		
11:30 AM	0	0	0	0	0	0		
11:45 AM	0	0	0	0	0	0		
12:00 PM	0	0	0	0	0	0		
12:15 PM	0	0	0	0	0	0		
12:30 PM	0	0	0	0	0	0		
12:45 PM	0	0	0	0	0	0		
1:00 PM	0	0	0	0	0	0		
1:15 PM	38	31	39	28	67	38		
1:30 PM	58	47	88	86	174	58		
1:45 PM	94	64	125	125	250	94		
2:00 PM	121	89	166	169	335	121		
2:15 PM	143	89	192	187	379	143		
2:30 PM	149	90	190	170	360	149		
2:45 PM	153	106	195	186	381	153		
3:00 PM	164	110	202	202	404	164		Met
3:15 PM	178	118	214	223	437	178		
3:30 PM	201	195	296	254	550	201		
3:45 PM	212	245	431	271	702	245	Met	
4:00 PM	203	335	510	274	784	335		Met
4:15 PM	217	438	601	296	897	438		
4:30 PM	199	459	652	293	945	459		
4:45 PM	199	472	612	283	895	472	Met	
5:00 PM	214	455	600	298	898	455		Met
5:15 PM	127	314	432	209	641	314		
5:30 PM	96	199	252	140	392	199		
5:45 PM	44	104	115	78	193	104		
6:00 PM	0	0	0	0	0	0		
6:15 PM	0	0	0	0	0	0		
6:30 PM	0	0	0	0	0	0		
6:45 PM	0	0	0	0	0	0		
7:00 PM	0	0	0	0	0	0		
7:15 PM	0	0	0	0	0	0		
7:30 PM	0	0	0	0	0	0		
7:45 PM	0	0	0	0	0	0		
8:00 PM	0	0	0	0	0	0		



Top Hours for Figure 4C-1	Start Time	End Time	Major Street	Minor Street
Top Hour	4:45 PM	5:45 PM	895	472
2nd Highest Hour	3:45 PM	4:45 PM	702	245
3rd Highest Hour	12:00 AM	1:00 AM	0	175
4th Highest Hour	7:15 AM	8:15 AM	499	175

Top Hours for Figure 4C-2	Start Time	End Time	Major Street	Minor Street
Top Hour	5:00 PM	6:00 PM	898	455
2nd Highest Hour	4:00 PM	5:00 PM	784	335
3rd Highest Hour	7:00 AM	8:00 AM	451	162
4th Highest Hour	8:00 AM	9:00 AM	460	147



Are the requirements for Warrant 2 met?: No

OMUTCD WARRANT 3, PEAK HOUR

Number of Lanes for Moving Traffic on Each Approach		Peak Hour Start time	4:30 PM
Major Street:	1 Lane	Peak Hour End Time	5:30 PM
Minor Street:	1 Lane		

Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street?	Yes
Is this signal warrant being applied for an unusual case, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time?	No

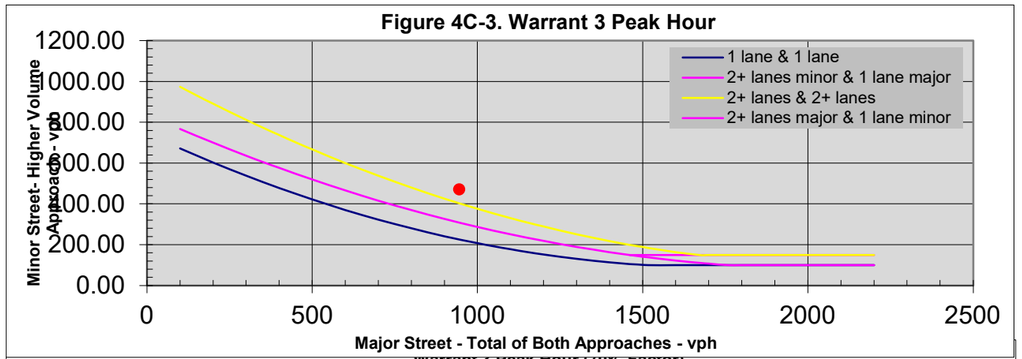
Indicate whether all three of the following conditions for the same 1 hour (any four consecutive 15-minute periods) of an average day are present*

Does the total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equal or exceed 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach?	
Does the volume on the same minor-street approach (one direction only) equal or exceed 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes?	Yes
Does the total entering volume serviced during the hour equal or exceed 650 vehicles per hour for intersection with three approaches or 800 vehicles per hour for intersections with four or more approaches?	Yes

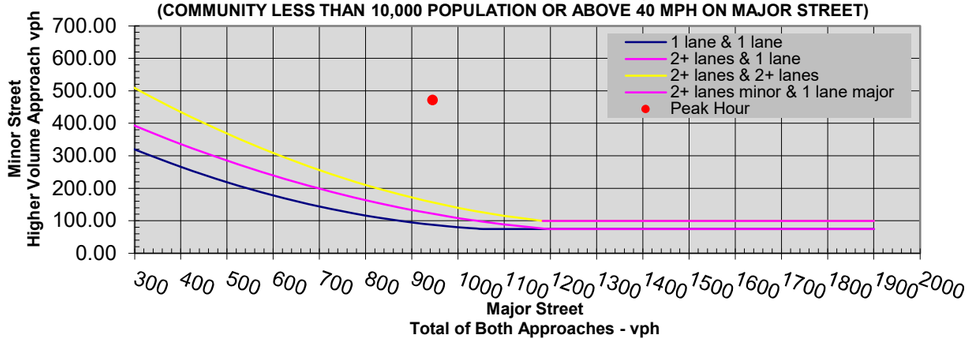
**If applicable, attach all supporting calculations and documentation.*

Are the requirements for Warrant 3 met?: Yes

Figure 4C-3. Warrant 3 Peak Hour



Warrant 3 Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



Hour Interval Beginning At	Major Street Combined Vehicles Per Hour (VPH)	Highest Minor Street Approach Vehicles Per Hour (VPH)	Sum of Major Street and Highest Minor Street	Sum of Major Street and Combined Minor Street
	Hour Vehicular Volume			
6:00 AM	157	48	205	246
6:15 AM	229	74	303	370
6:30 AM	325	117	442	516
6:45 AM	410	137	547	634
7:00 AM	451	162	613	711
7:15 AM	499	175	674	776
7:30 AM	483	155	638	746
7:45 AM	467	154	621	734
8:00 AM	460	147	607	702
8:15 AM	411	125	536	628
8:30 AM	368	112	480	572
8:45 AM	317	94	411	498
9:00 AM	280	83	363	438
9:15 AM	182	43	225	264
9:30 AM	113	27	140	162
9:45 AM	59	9	68	76
10:00 AM	0	0	0	0
10:15 AM	0	0	0	0
10:30 AM	0	0	0	0
10:45 AM	0	0	0	0
11:00 AM	0	0	0	0
11:15 AM	0	0	0	0
11:30 AM	0	0	0	0
11:45 AM	0	0	0	0
12:00 PM	0	0	0	0
12:15 PM	0	0	0	0
12:30 PM	0	0	0	0
12:45 PM	0	0	0	0
1:00 PM	0	0	0	0
1:15 PM	67	38	105	136
1:30 PM	174	58	232	279
1:45 PM	250	94	344	408
2:00 PM	335	121	456	545
2:15 PM	379	143	522	611
2:30 PM	360	149	509	599
2:45 PM	381	153	534	640
3:00 PM	404	164	568	678
3:15 PM	437	178	615	733
3:30 PM	550	201	751	946
3:45 PM	702	245	947	1159
4:00 PM	784	335	1119	1322
4:15 PM	897	438	1335	1552
4:30 PM	945	459	1404	1603
4:45 PM	895	472	1367	1566
5:00 PM	898	455	1353	1567
5:15 PM	641	314	955	1082
5:30 PM	392	199	591	687
5:45 PM	193	104	297	341
6:00 PM	0	0	0	0
6:15 PM	0	0	0	0
6:30 PM	0	0	0	0
6:45 PM	0	0	0	0
7:00 PM	0	0	0	0
7:15 PM	0	0	0	0
7:30 PM	0	0	0	0
7:45 PM	0	0	0	0
8:00 PM	0	0	0	0

Actual Peak Hour Major Traffic Volume	Actual Peak Hour Minor Traffic Volume	Required Peak Hour Minor Traffic Volume for Fig. 4C-3	Required Peak Hour Minor Traffic Volume for Fig. 4C-4
945	472	226	88

Start Time	Southbound Approach						Westbound Approach						Northbound Approach						Eastbound Approach						NOTES:
	Southbound						Westbound						Nouthbound						Eastbound						
	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	
12:00 AM						0						0						0						0	It should be noted that if data is copied overtop of the Hourly Totals or Approach Totals, that the 'AutoSum' Formula will be lost. This should not affect the actual totals if the data was copied from a program that performs the calculations for the user.
12:15 AM						0						0						0						0	
12:30 AM						0						0						0						0	
12:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:00 AM						0						0						0						0	
1:15 AM						0						0						0						0	
1:30 AM						0						0						0						0	
1:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2:00 AM						0						0						0						0	
2:15 AM						0						0						0						0	
2:30 AM						0						0						0						0	
2:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:00 AM						0						0						0						0	
3:15 AM						0						0						0						0	
3:30 AM						0						0						0						0	
3:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 AM						0						0						0						0	
4:15 AM						0						0						0						0	
4:30 AM						0						0						0						0	
4:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 AM						0						0						0						0	
5:15 AM						0						0						0						0	
5:30 AM						0						0						0						0	
5:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6:00 AM	0	15	4			19	0	8	10			18	2	5	6			13	5	4	0			9	
6:15 AM	1	6	0			7	0	9	4			13	0	2	1			3	7	12	0			19	
6:30 AM	0	12	0			12	1	8	4			13	1	5	1			7	4	18	1			23	
6:45 AM	0	8	2			10	0	20	8			28	4	14	1			19	4	30	0			34	
Hourly Total	1	41	6	0	0	48	1	45	26	0	0	72	7	26	9	0	0	42	20	64	1	0	0	85	
7:00 AM	6	39	1			46	3	31	36			70	7	17	16			40	7	17	5			29	
7:15 AM	12	40	0			52	1	63	24			88	0	6	4			10	3	25	12			40	
7:30 AM	7	25	2			34	0	43	24			67	7	8	6			21	3	41	10			54	
7:45 AM	4	26	5			35	1	48	3			52	10	16	5			31	3	44	4			51	
Hourly Total	29	130	8	0	0	167	5	185	87	0	0	277	24	47	31	0	0	102	16	127	31	0	0	174	
8:00 AM	8	51	1			60	0	40	34			74	5	20	19			44	11	46	16			73	
8:15 AM	6	21	4			31	1	27	8			36	6	10	1			17	7	64	5			76	
8:30 AM	0	27	4			31	3	28	15			46	6	14	6			26	8	41	10			59	
8:45 AM	6	19	4			29	1	28	15			44	4	4	4			12	3	35	14			52	
Hourly Total	20	118	13	0	0	151	5	123	72	0	0	200	21	48	30	0	0	99	29	186	45	0	0	260	
9:00 AM	5	27	5			37	0	31	18			49	10	18	14			42	8	34	7			49	
9:15 AM	4	14	0			18	3	23	5			31	1	13	2			16	4	29	5			38	
9:30 AM	2	11	0			13	1	16	5			22	4	11	5			20	0	22	10			32	
9:45 AM	0	9	0			9	1	15	11			27	1	5	2			8	3	25	4			32	
Hourly Total	11	61	5	0	0	77	5	85	39	0	0	129	16	47	23	0	0	86	15	110	26	0	0	151	
10:00 AM						0						0						0						0	
10:15 AM						0						0						0						0	
10:30 AM						0						0						0						0	
10:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:00 AM						0						0						0						0	
11:15 AM						0						0						0						0	
11:30 AM						0						0						0						0	
11:45 AM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:00 PM						0						0						0						0	
12:15 PM						0						0						0						0	
12:30 PM						0						0						0						0	
12:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:00 PM						0						0						0						0	
1:15 PM						0						0						0						0	
1:30 PM						0						0						0						0	
1:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2:00 PM	4	26	1			31	1	25	13			39	9	17	13			39	6	21	1			28	
2:15 PM	4	8	5			17	0	38	11			49	6	14	2			22	8	42	8			58	
2:30 PM	4	13	1			18	3	21	13			37	12	22	4			38	4	31	4			39	
2:45 PM	6	18	2			26	3	30	8			41	2	13	12			27	8	29	7			44	
Hourly Total	18	65	9	0	0	92	7	114	45	0	0	166	29	66	31	0	0	126	26	123	20	0	0	169	
3:00 PM	1	28	2			31	1	43	21			65	12	32	18			62	8	31	7			46	
3:15 PM	5	13	0			18	4	31	12			47	12	13	4			29	9	27	5			41	
3:30 PM	4	26	4			34	4	31	7			42	16	22	5			43	5	43	7			55	
3:45 PM	6	24	0			30	4	36	8			48	16	18	7			41	7	46	7			60	
Hourly Total	16	91	6	0	0	113	13	141	48	0	0	202	56	85	34	0	0	175	29	147	26	0	0	202	
4:00 PM	6	30	4			40	4	50	23			77	17	32	28			77	10	50	7			67	
4:15 PM	16	72	9			97	56	62	11			129	14	32	6			52	12	44	16			72	
4:30 PM	6	66	12			84	59	93	25			177	13	23	18			54	14	51	7			72	
4:45 PM	27	82	16			125	40	80	7			127	7	18	5			30	7	48	8			63	
Hourly Total	55	250	41	0	0	346	159	285	66	0	0	510	51	105	57	0	0	213	43	193	38	0	0	274	
5:00 PM	24	104	14			142	44	89	35			168	20	35	36			91	26	50	13			89	
5:15 PM	25	83	12			120	46	111	23			180	7	20	6			33	13	47	9			69	
5:30 PM	21	64	14			99	44	86	7			137	11	32	11			54	8	46	8			62	
5:45 PM	18	75	14			107	51	52	12			115	8	32	5			45	7	50	21			78	
Hourly Total	88	326	54	0	0	468	185	338	77	0	0	600	46	119	58	0	0	223	54	193	51	0	0	298	
6:00 PM						0						0						0						0	
6:15 PM						0						0						0						0	
6:30 PM						0						0						0						0	
6:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:00 PM						0						0						0						0	
7:15 PM						0						0						0						0	
7:30 PM						0						0						0						0	
7:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 PM						0						0						0						0	
8:15 PM						0						0						0						0	
8:30 PM						0						0						0						0	
8:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 PM						0						0						0						0	
9:15 PM						0						0						0						0	
9:30 PM						0						0						0						0	
9:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:00 PM						0						0						0						0	
10:15 PM						0						0						0						0	
10:30 PM						0						0						0						0	
10:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:00 PM						0						0						0						0	
11:15 PM						0						0						0						0	
11:30 PM						0						0						0						0	
11:45 PM						0						0						0						0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Count Data at the Central College Road & Bevelhymer Road intersection collected on 3/1/2023

	Southbound						Westbound						Northbound						Eastbound		
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left
0:00																					
12:15																					
12:30																					
12:45																					
1:00																					
1:15																					
1:30																					
1:45																					
2:00																					
2:15																					
2:30																					
2:45																					
3:00																					
3:15																					
3:30																					
3:45																					
4:00																					
4:15																					
4:30																					
4:45																					
5:00																					
5:15																					
5:30																					
5:45																					
6:00	0	7	3				0	6	3				0	2	1				2	3	0
6:15	1	5	0				0	7	3				0	2	1				5	9	0
6:30	0	10	0				1	6	3				1	4	1				3	14	1
6:45	0	7	2				0	15	6				3	12	1				3	23	0
7:00	5	19	1				2	23	12				2	7	1				0	13	4
7:15	10	34	0				1	47	18				0	5	3				2	19	9
7:30	6	21	2				0	32	18				6	7	5				2	31	8
7:45	3	22	4				1	36	2				8	13	4				2	34	3
8:00	7	30	1				0	30	12				0	11	3				3	35	12
8:15	5	18	3				1	20	6				5	8	1				5	49	4
8:30	0	23	3				2	21	11				5	12	5				6	31	8
8:45	5	16	3				1	21	11				3	3	3				2	27	11
9:00	4	14	4				0	23	7				6	12	5				2	26	5
9:15	3	12	0				2	17	4				1	11	2				3	22	4
9:30	2	9	0				1	12	4				3	9	4				0	17	8
9:45	0	8	0				1	11	8				1	4	2				2	19	3
10:00																					
10:15																					
10:30																					
10:45																					
11:00																					
11:15																					
11:30																					
11:45																					
12:00																					
12:15																					
12:30																					
12:45																					
1:00																					
1:15																					
1:30																					
1:45																					
2:00	3	13	1				1	19	5				5	10	5				2	16	1
2:15	3	7	4				0	28	8				5	12	2				6	32	6
2:30	3	11	1				2	16	10				10	18	3				3	24	3
2:45	5	15	2				2	22	6				2	11	10				6	22	5
3:00	1	13	2				1	32	8				6	22	6				3	24	5
3:15	4	11	0				3	23	9				10	11	3				7	21	4
3:30	3	22	3				3	23	5				13	18	4				4	33	5
3:45	5	20	0				3	27	6				13	15	6				5	35	5
4:00	5	12	3				3	37	5				8	18	10				3	38	5
4:15	14	61	8				42	46	8				12	27	5				9	34	12
4:30	5	56	10				44	69	19				11	19	15				11	39	5
4:45	23	70	14				30	60	5				6	15	4				5	37	6
5:00	20	75	12				33	66	11				10	18	12				14	38	10
5:15	21	71	10				34	83	17				6	17	5				10	36	7
5:30	18	54	12				33	64	5				9	27	9				6	35	6
5:45	15	64	12				38	39	9				7	27	4				5	38	16
6:00																					
6:15																					
6:30																					
6:45																					
7:00																					
7:15																					
7:30																					
7:45																					
8:00																					
8:15																					
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8:45																					
9:00																					
9:15																					
9:30																					
9:45																					
10:00																					
10:15																					
10:30																					
10:45																					
11:00																					
11:15																					
11:30																					
11:45																					

Grown Count Data

	Southbound						Westbound						Northbound						Eastbound		
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left
0:00																					
12:15																					
12:30																					
12:45																					
1:00																					
1:15																					
1:30																					
1:45																					
2:00																					
2:15																					
2:30																					
2:45																					
3:00																					
3:15																					
3:30																					
3:45																					
4:00																					
4:15																					
4:30																					
4:45																					
5:00																					
5:15																					
5:30																					
5:45																					
6:00	0	8	4				0	8	4				0	2	1				3	4	0
6:15	1	6	0				0	9	4				0	2	1				7	12	0
6:30	0	12	0				1	8	4				1	5	1				4	18	1
6:45	0	8	2				0	20	8				4	14	1				4	30	0
7:00	6	22	1				3	31	16				2	8	1				0	17	5
7:15	12	40	0				1	63	24				0	6	4				3	25	12
7:30	7	25	2				0	43	24				7	8	6				3	41	10
7:45	4	26	5				1	48	3				10	16	5				3	44	4
8:00	8	35	1				0	40	16				0	13	4				4	46	16
8:15	6	21	4				1	27	8				6	10	1				7	64	5
8:30	0	27	4				3	28	15				6	14	6				8	41	10
8:45	6	19	4				1	28	15				4	4	4				3	35	14
9:00	5	16	5				0	31	9				7	14	6				3	34	7
9:15	4	14	0				3	23	5				1	13	2				4	29	5
9:30	2	11	0				1	16	5				4	11	5				0	22	10
9:45	0	9	0				1	15	11				1	5	2				3	25	4
10:00																					
10:15																					
10:30																					
10:45																					
11:00																					
11:15																					
11:30																					
11:45																					
12:00																					
12:15																					
12:30																					
12:45																					
1:00																					
1:15																					
1:30																					
1:45																					
2:00	4	15	1				1	25	7				6	12	6				3	21	1
2:15	4	8	5				0	38	11				6	14	2				8	42	8
2:30	4	13	1				3	21	13				12	22	4				4	31	4
2:45	6	18	2				3	30	8				2	13	12				8	29	7
3:00	1	15	2				1	43	11				7	26	7				4	31	7
3:15	5	13	0				4	31	12				12	13	4				9	27	5
3:30	4	26	4				4	31	7				16	22	5				5	43	7
3:45	6	24	0				4	36	8				16	18	7				7	46	7
4:00	6	14	4				4	50	7				10	22	12				4	50	7
4:15	16	72	9				56	62	11				14	32	6				12	44	16
4:30	6	66	12				59	93	25				13	23	18				14	51	7
4:45	27	82	16				40	80	7				7	18	5				7	48	8
5:00	24	88	14				44	89	15				12	22	14				18	50	13
5:15	25	83	12				46	111	23				7	20	6				13	47	9
5:30	21	64	14				44	86	7				11	32	11				8	46	8
5:45	18	75	14				51	52	12				8	32	5				7	50	21
6:00																					
6:15																					
6:30																					
6:45																					
7:00																					
7:15																					
7:30																					
7:45																					
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9:00																					
9:15																					
9:30																					
9:45																					
10:00																					
10:15																					
10:30																					
10:45																					
11:00																					
11:15																					
11:30																					
11:45																					

Growth Rates	
Southbound	1.6%
Westbound	3.1%
Northbound	1.8%
Eastbound	2.8%
Collection Year	2023
Design Year	2034

Trip Distribution (Sheetz Development) - Distribution matches thePM Peak distribution used in the TIS volumes.

	2% Entry Southbound						Westbound						2% Exit Northbound		2% Exit				2% Entry Eastbound			960 - Super Convenience Market/Gas Station*		710 Weekday Entry/Exit
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left	Entry %	Exit %	2399
0:00																						1.2%	1.3%	
12:15																								
12:30																								
12:45																								
1:00																						0.8%	0.9%	
1:15																								
1:30																								
1:45																								
2:00																						0.6%	0.6%	
2:15																								
2:30																								
2:45																								
3:00																						0.8%	0.7%	
3:15																								
3:30																								
3:45																								
4:00																						1.6%	1.5%	
4:15																								
4:30																								
4:45																								
5:00																						3.1%	3.0%	
5:15																								
5:30																								
5:45																								
6:00		2												0	0					0		4.7%	4.5%	
6:15																								
6:30																								
6:45																								
7:00		3												0	0					0		6.0%	5.9%	
7:15																								
7:30																								
7:45																								
8:00		3												0	0					0		6.5%	6.4%	
8:15																								
8:30																								
8:45																								
9:00		3												0	0					0		5.6%	5.7%	
9:15																								
9:30																								
9:45																								
10:00																						5.3%	5.3%	
10:15																								
10:30																								
10:45																								
11:00																						5.8%	5.7%	
11:15																								
11:30																								
11:45																								
12:00																						6.6%	6.6%	
12:15																								
12:30																								
12:45																								
1:00																						6.2%	5.9%	
1:15																								
1:30																								
1:45																								
2:00		3												0	0					0		6.0%	6.2%	
2:15																								
2:30																								
2:45																								
3:00		3												0	0					0		6.8%	6.8%	
3:15																								
3:30																								
3:45																								
4:00		3												0	0					0		6.3%	6.5%	
4:15																								
4:30																								
4:45																								
5:00		3												0	0					0		6.7%	6.9%	
5:15																								
5:30																								
5:45																								
6:00																						5.3%	5.4%	
6:15																								
6:30																								
6:45																								
7:00																						3.9%	4.0%	
7:15																								
7:30																								
7:45																								
8:00																						3.4%	3.4%	
8:15																								
8:30																								
8:45																								
9:00																						2.8%	2.7%	
9:15																								
9:30																								
9:45																								
10:00																						2.1%	2.1%	
10:15																								
10:30																								
10:45																								
11:00																						1.9%	2.0%	
11:15																								
11:30																								
11:45																								

*No official hourly distribution exists for LUC - 960. Therefore, the hourly distribution for LUC - 945 Convenience Store/Gas Station was utilized.

Trip Distribution (Dunkin' Development) - Distribution matches thePM Peak distribution used in the TIS volumes.

	2% Entry Southbound						Westbound						2% Exit Northbound			2% Exit			2% Entry Eastbound			937 - Coffee/Donut Shop with Drive-Through Window		937 Weekday
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left	Entry %	Exit %	Entry/Exit
0:00																						0.1%	0.1%	667
12:15																								
12:30																								
12:45																								
1:00																						0.1%	0.1%	
1:15																								
1:30																								
1:45																								
2:00																						0.0%	0.1%	
2:15																								
2:30																								
2:45																								
3:00																						0.4%	0.1%	
3:15																								
3:30																								
3:45																								
4:00																						1.9%	1.5%	
4:15																								
4:30																								
4:45																								
5:00																						8.2%	6.8%	
5:15																								
5:30																								
5:45																								
6:00		1												0	0				0			10.0%	8.9%	
6:15																								
6:30																								
6:45																								
7:00		1												0	0				0			10.3%	9.8%	
7:15																								
7:30																								
7:45																								
8:00		1												0	0				0			10.0%	10.1%	
8:15																								
8:30																								
8:45																								
9:00		1												0	0				0			7.7%	8.5%	
9:15																								
9:30																								
9:45																								
10:00																						7.2%	7.6%	
10:15																								
10:30																								
10:45																								
11:00																						6.7%	7.2%	
11:15																								
11:30																								
11:45																								
12:00																						5.4%	6.1%	
12:15																								
12:30																								
12:45																								
1:00																						6.3%	5.7%	
1:15																								
1:30																								
1:45																								
2:00		1												0	0				0			5.2%	5.6%	
2:15																								
2:30																								
2:45																								
3:00		1												0	0				0			5.7%	5.3%	
3:15																								
3:30																								
3:45																								
4:00		1												0	0				0			4.6%	4.2%	
4:15																								
4:30																								
4:45																								
5:00		0												0	0				0			2.7%	3.4%	
5:15																								
5:30																								
5:45																								
6:00																						2.7%	3.0%	
6:15																								
6:30																								
6:45																								
7:00																						2.1%	2.2%	
7:15																								
7:30																								
7:45																								
8:00																						1.2%	1.9%	
8:15																								
8:30																								
8:45																								
9:00																						1.2%	1.2%	
9:15																								
9:30																								
9:45																								
10:00																						0.4%	0.6%	
10:15																								
10:30																								
10:45																								
11:00																						0.0%	0.1%	
11:15																								
11:30																								
11:45																								

Trip Distribution (Valvoline Development) - Distribution matches the PM Peak distribution used in the TIS volumes.

	2% Entry Southbound							Westbound						2% Exit Northbound		2% Exit			2% Entry Eastbound			941 - Quick Lubrication Vehicle Shop		941 Weekday Entry/Exit
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left	Entry %	Exit %	40
0:00																						0.0%	0.0%	
12:15																								
12:30																								
12:45																								
1:00																						0.0%	0.0%	
1:15																								
1:30																								
1:45																								
2:00																						0.0%	0.0%	
2:15																								
2:30																								
2:45																								
3:00																						0.0%	0.0%	
3:15																								
3:30																								
3:45																								
4:00																						0.0%	0.0%	
4:15																								
4:30																								
4:45																								
5:00																						0.0%	0.0%	
5:15																								
5:30																								
5:45																								
6:00		0												0	0				0			0.0%	0.0%	
6:15																								
6:30																								
6:45																								
7:00		0												0	0				0			0.0%	0.0%	
7:15																								
7:30																								
7:45																								
8:00		0												0	0				0			12.5%	4.2%	
8:15																								
8:30																								
8:45																								
9:00		0												0	0				0			10.4%	8.3%	
9:15																								
9:30																								
9:45																								
10:00																						12.5%	12.5%	
10:15																								
10:30																								
10:45																								
11:00																						10.4%	14.6%	
11:15																								
11:30																								
11:45																								
12:00																						6.3%	6.3%	
12:15																								
12:30																								
12:45																								
1:00																						8.3%	8.3%	
1:15																								
1:30																								
1:45																								
2:00		0												0	0				0			12.5%	6.3%	
2:15																								
2:30																								
2:45																								
3:00		0												0	0				0			12.5%	10.4%	
3:15																								
3:30																								
3:45																								
4:00		0												0	0				0			8.3%	14.6%	
4:15																								
4:30																								
4:45																								
5:00		0												0	0				0			6.3%	14.6%	
5:15																								
5:30																								
5:45																								
6:00																						0.0%	0.0%	
6:15																								
6:30																								
6:45																								
7:00																						0.0%	0.0%	
7:15																								
7:30																								
7:45																								
8:00																						0.0%	0.0%	
8:15																								
8:30																								
8:45																								
9:00																						0.0%	0.0%	
9:15																								
9:30																								
9:45																								
10:00																						0.0%	0.0%	
10:15																								
10:30																								
10:45																								
11:00																						0.0%	0.0%	
11:15																								
11:30																								
11:45																								

Trip Distribution (Dunkin' Development) - Distribution matches the PM Peak distribution used in the TIS volumes.

	2% Entry Southbound							Westbound						2% Exit Northbound						2% Exit Eastbound						850 - Supermarket		850 Weekday
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Entry %	Exit %	Entry/Exit
0:00																									0.0%	0.2%	1104
12:15																											
12:30																											
12:45																											
1:00																									0.0%	0.0%	
1:15																											
1:30																											
1:45																											
2:00																									0.0%	0.0%	
2:15																											
2:30																											
2:45																											
3:00																									0.0%	0.0%	
3:15																											
3:30																											
3:45																											
4:00																									0.2%	0.1%	
4:15																											
4:30																											
4:45																											
5:00																									0.5%	0.1%	
5:15																											
5:30																											
5:45																											
6:00		0												0	0				0						0.6%	0.0%	
6:15																											
6:30																											
6:45																											
7:00		0												0	0				0						1.5%	1.4%	
7:15																											
7:30																											
7:45																											
8:00		1												0	0				0						4.3%	3.3%	
8:15																											
8:30																											
8:45																											
9:00		1												0	0				0						5.1%	4.4%	
9:15																											
9:30																											
9:45																											
10:00																									6.4%	5.4%	
10:15																											
10:30																											
10:45																											
11:00																									7.4%	7.3%	
11:15																											
11:30																											
11:45																											
12:00																									9.3%	9.9%	
12:15																											
12:30																											
12:45																											
1:00																									8.7%	7.5%	
1:15																											
1:30																											
1:45																											
2:00		2												0	0				0						8.8%	9.2%	
2:15																											
2:30																											
2:45																											
3:00		2												0	0				0						8.9%	8.5%	
3:15																											
3:30																											
3:45																											
4:00		2												0	0				0						9.8%	9.7%	
4:15																											
4:30																											
4:45																											
5:00		2												0	0				0						9.5%	9.5%	
5:15																											
5:30																											
5:45																											
6:00																									7.8%	9.3%	
6:15																											
6:30																											
6:45																											
7:00																									5.6%	6.6%	
7:15																											
7:30																											
7:45																											
8:00																									3.8%	4.2%	
8:15																											
8:30																											
8:45																											
9:00																									1.9%	2.8%	
9:15																											
9:30																											
9:45																											
10:00																									0.0%	0.4%	
10:15																											
10:30																											
10:45																											
11:00																									0.0%	0.2%	
11:15																											
11:30																											
11:45																											

Trip Distribution (Site Traffic - Day Care Center) - Distribution matches the PM Peak distribution used in the TIS volumes.

	15% Entry Southbound						25% Entry Westbound						10% Exit 15% Exit 25% Exit Northbound						10% Entry Eastbound			565 - Day Care Center		565 Weekday Entry/Exit
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left	Entry %	Exit %	332
0:00																						0.0%	0.0%	
12:15																								
12:30																								
12:45																								
1:00																						0.0%	0.0%	
1:15																								
1:30																								
1:45																								
2:00																						0.0%	0.0%	
2:15																								
2:30																								
2:45																								
3:00																						0.0%	0.0%	
3:15																								
3:30																								
3:45																								
4:00																						0.0%	0.0%	
4:15																								
4:30																								
4:45																								
5:00																						1.0%	0.2%	
5:15																								
5:30																								
5:45																								
6:00		3							5				1	2	4				2			6.2%	4.3%	
6:15																								
6:30																								
6:45																								
7:00		10							16				5	8	14				6			19.5%	16.3%	
7:15																								
7:30																								
7:45																								
8:00		7							11				4	6	11				4			13.2%	12.8%	
8:15																								
8:30																								
8:45																								
9:00		3							4				2	2	4				2			5.4%	4.6%	
9:15																								
9:30																								
9:45																								
10:00																						2.6%	2.9%	
10:15																								
10:30																								
10:45																								
11:00																						2.6%	2.6%	
11:15																								
11:30																								
11:45																								
12:00																						2.1%	2.6%	
12:15																								
12:30																								
12:45																								
1:00																						3.0%	3.2%	
1:15																								
1:30																								
1:45																								
2:00		2							3				1	2	4				1			4.1%	4.5%	
2:15																								
2:30																								
2:45																								
3:00		4							6				2	3	6				2			7.5%	6.9%	
3:15																								
3:30																								
3:45																								
4:00		7							11				5	7	12				5			13.6%	14.0%	
4:15																								
4:30																								
4:45																								
5:00		8							14				6	9	16				6			16.7%	18.7%	
5:15																								
5:30																								
5:45																								
6:00																						2.4%	6.3%	
6:15																								
6:30																								
6:45																								
7:00																						0.0%	0.0%	
7:15																								
7:30																								
7:45																								
8:00																						0.0%	0.0%	
8:15																								
8:30																								
8:45																								
9:00																						0.0%	0.0%	
9:15																								
9:30																								
9:45																								
10:00																						0.0%	0.0%	
10:15																								
10:30																								
10:45																								
11:00																						0.0%	0.0%	
11:15																								
11:30																								
11:45																								

Trip Distribution (Site Development - Medical-Dental Office Building) - Distribution matches the PM Peak distribution used in the TIS volumes.

	15% Entry							25% Entry						10% Exit	15% Exit	25% Exit				10% Entry			720 - Medical-Dental Office Buildng		720 Weekday
	Southbound						Westbound						Northbound						Eastbound						
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left	Entry %	Exit %	Entry/Exit
0:00																						0.0%	0.0%	54
12:15																								
12:30																								
12:45																								
1:00																						0.0%	0.0%	
1:15																								
1:30																								
1:45																								
2:00																						0.0%	0.0%	
2:15																								
2:30																								
2:45																								
3:00																						0.3%	0.1%	
3:15																								
3:30																								
3:45																								
4:00																						1.4%	0.5%	
4:15																								
4:30																								
4:45																								
5:00																						0.7%	0.5%	
5:15																								
5:30																								
5:45																								
6:00		0							0				0	0	0				0			1.9%	0.5%	
6:15																								
6:30																								
6:45																								
7:00		1							1				0	0	0				0			6.8%	1.0%	
7:15																								
7:30																								
7:45																								
8:00		1							2				0	0	1				1			12.2%	5.9%	
8:15																								
8:30																								
8:45																								
9:00		1							2				0	1	1				1			11.4%	9.1%	
9:15																								
9:30																								
9:45																								
10:00																						10.6%	10.0%	
10:15																								
10:30																								
10:45																								
11:00																						7.7%	10.4%	
11:15																								
11:30																								
11:45																								
12:00																						6.8%	8.2%	
12:15																								
12:30																								
12:45																								
1:00																						10.4%	7.6%	
1:15																								
1:30																								
1:45																								
2:00		1							1				1	1	1				1			9.6%	9.9%	
2:15																								
2:30																								
2:45																								
3:00		1							1				1	1	1				0			9.0%	10.1%	
3:15																								
3:30																								
3:45																								
4:00		0							1				1	1	1				0			5.8%	10.1%	
4:15																								
4:30																								
4:45																								
5:00		0							0				0	1	1				0			2.8%	8.3%	
5:15																								
5:30																								
5:45																								
6:00																						1.2%	3.6%	
6:15																								
6:30																								
6:45																								
7:00																						1.1%	1.9%	
7:15																								
7:30																								
7:45																								
8:00																						0.2%	1.2%	
8:15																								
8:30																								
8:45																								
9:00																						0.1%	0.6%	
9:15																								
9:30																								
9:45																								
10:00																						0.1%	0.2%	
10:15																								
10:30																								
10:45																								
11:00																						0.0%	0.2%	
11:15																								
11:30																								
11:45																								

Trip Distribution (Dunkin' Development) - Distribution matches the PM Peak distribution used in the TIS volumes.

	15% Entry Southbound						25% Entry Westbound						10% Exit 15% Exit 25% Exit Northbound						10% Entry Eastbound			492 - Health/Fitness Club*	
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left	Entry %	Exit %
0:00																						0.0%	0.1%
12:15																							
12:30																							
12:45																							
1:00																						0.0%	0.1%
1:15																							
1:30																							
1:45																							
2:00																						0.0%	0.0%
2:15																							
2:30																							
2:45																							
3:00																						0.0%	0.0%
3:15																							
3:30																							
3:45																							
4:00																						1.3%	0.1%
4:15																							
4:30																							
4:45																							
5:00																						3.7%	1.0%
5:15																							
5:30																							
5:45																							
6:00		1							1				1	1	1				0			3.5%	4.2%
6:15																							
6:30																							
6:45																							
7:00		1							2				0	1	1				1			5.7%	3.5%
7:15																							
7:30																							
7:45																							
8:00		2							3				1	1	2				1			8.9%	4.8%
8:15																							
8:30																							
8:45																							
9:00		1							2				1	1	2				1			6.9%	6.3%
9:15																							
9:30																							
9:45																							
10:00																						6.2%	5.2%
10:15																							
10:30																							
10:45																							
11:00																						4.0%	6.4%
11:15																							
11:30																							
11:45																							
12:00																						4.9%	6.9%
12:15																							
12:30																							
12:45																							
1:00																						2.2%	2.9%
1:15																							
1:30																							
1:45																							
2:00		1							1				0	1	1				0			3.2%	3.0%
2:15																							
2:30																							
2:45																							
3:00		1							2				1	1	2				1			5.3%	6.4%
3:15																							
3:30																							
3:45																							
4:00		2							3				1	1	2				1			8.5%	6.0%
4:15																							
4:30																							
4:45																							
5:00		3							5				1	2	3				2			15.0%	9.6%
5:15																							
5:30																							
5:45																							
6:00																						8.4%	8.6%
6:15																							
6:30																							
6:45																							
7:00																						7.6%	12.2%
7:15																							
7:30																							
7:45																							
8:00																						3.2%	7.6%
8:15																							
8:30																							
8:45																							
9:00																						1.7%	4.3%
9:15																							
9:30																							
9:45																							
10:00																						0.0%	0.7%
10:15																							
10:30																							
10:45																							
11:00																						0.0%	0.1%
11:15																							
11:30																							
11:45																							

492 Weekday Entry/Exit
128

*No official hourly distribution exists for LUC - 492. Therefore, the hourly distribution for LUC - 495 Recreational Community Center was utilized.

Trip Distribution (Site Development - Small Office Building) - Distribution matches the PM Peak distribution used in the TIS volumes.

	15% Entry						25% Entry						10% Exit	15% Exit	25% Exit				10% Entry			712 - Small Office Building		712 Weekday
	Southbound						Westbound						Northbound						Eastbound					
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left	Entry %	Exit %	Entry/Exit
0:00																						0.0%	0.0%	54
12:15																								
12:30																								
12:45																								
1:00																						0.0%	0.0%	
1:15																								
1:30																								
1:45																								
2:00																						0.0%	0.0%	
2:15																								
2:30																								
2:45																								
3:00																						0.0%	0.0%	
3:15																								
3:30																								
3:45																								
4:00																						0.0%	0.0%	
4:15																								
4:30																								
4:45																								
5:00																						0.0%	0.0%	
5:15																								
5:30																								
5:45																								
6:00		0							0				0	0	0				0			0.0%	0.0%	
6:15																								
6:30																								
6:45																								
7:00		1							1				0	0	0				0			6.8%	0.4%	
7:15																								
7:30																								
7:45																								
8:00		1							2				0	0	1				1			15.0%	3.9%	
8:15																								
8:30																								
8:45																								
9:00		1							1				0	0	1				1			9.5%	4.3%	
9:15																								
9:30																								
9:45																								
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Appendix H
Sight Distance Exhibits

CARPENTER MARTY transportation

Appendix H

BEVELHYMER MIXED COMMERCIAL TIS

MODEL: Sheet | PAPERSIZE: 17x11 (In.) DATE: 4/13/2023 TIME: 8:51:27 AM USER: ccousins
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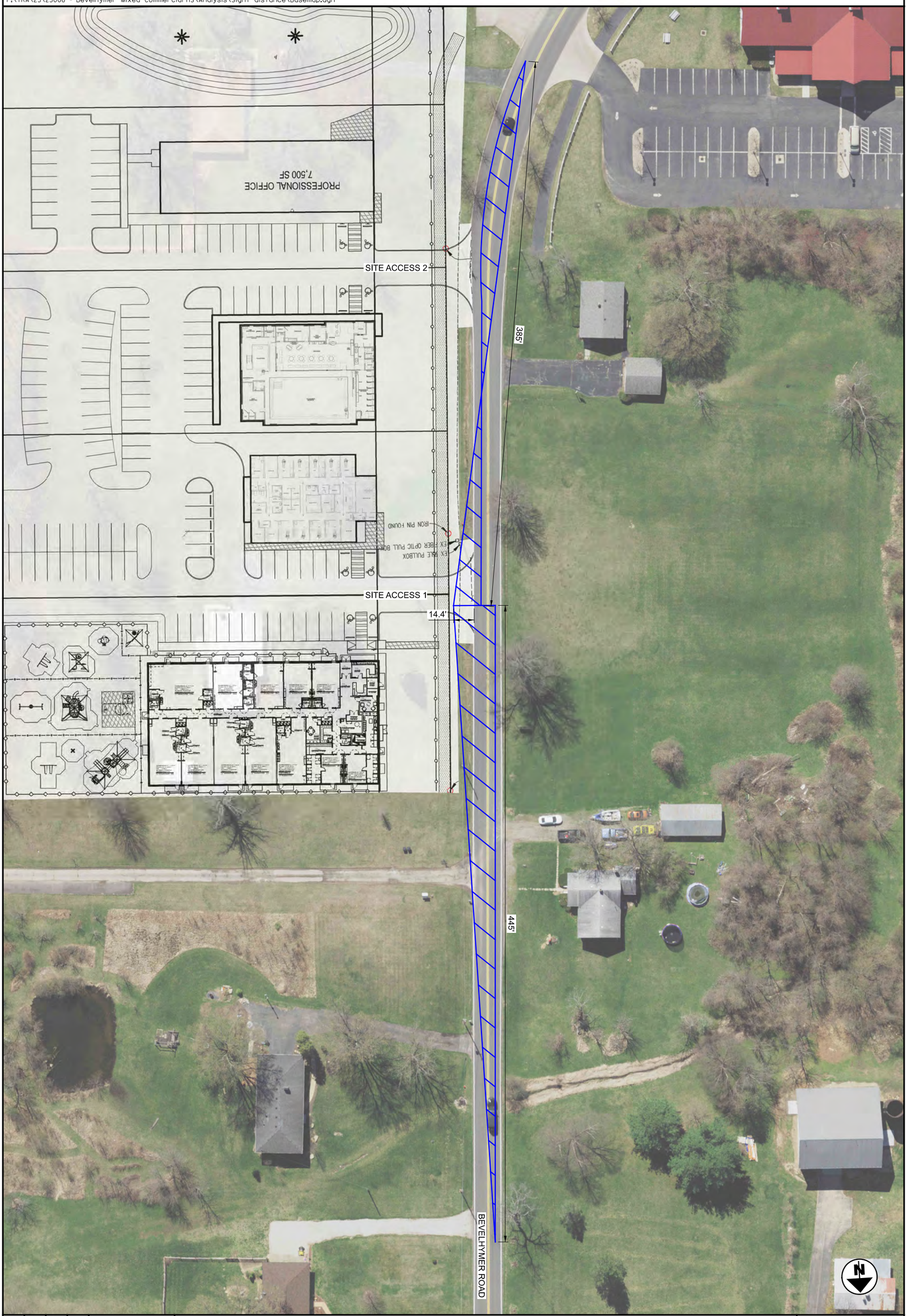

H2 of 3

SHEET P.1 | TOTAL 2	PROJECT ID 0	REVIEWER CMC 04-13-2023	DESIGNER LRY	CARPENTER MARTY transportation	DESIGN AGENCY

BEVELHYMER MIXED COMMERCIAL TIS
BEVELHYMER ROAD & SITE ACCESS 1 SIGHT DISTANCE EXHIBIT

HORIZONTAL SCALE IN FEET
0 30
15 60

BEVELHYMER MIXED COMMERCIAL TIS

MODEL: Sheet 2 PAPERSIZE: 17x11 (in.) DATE: 4/13/2023 TIME: 8:53:27 AM USER: ccousins
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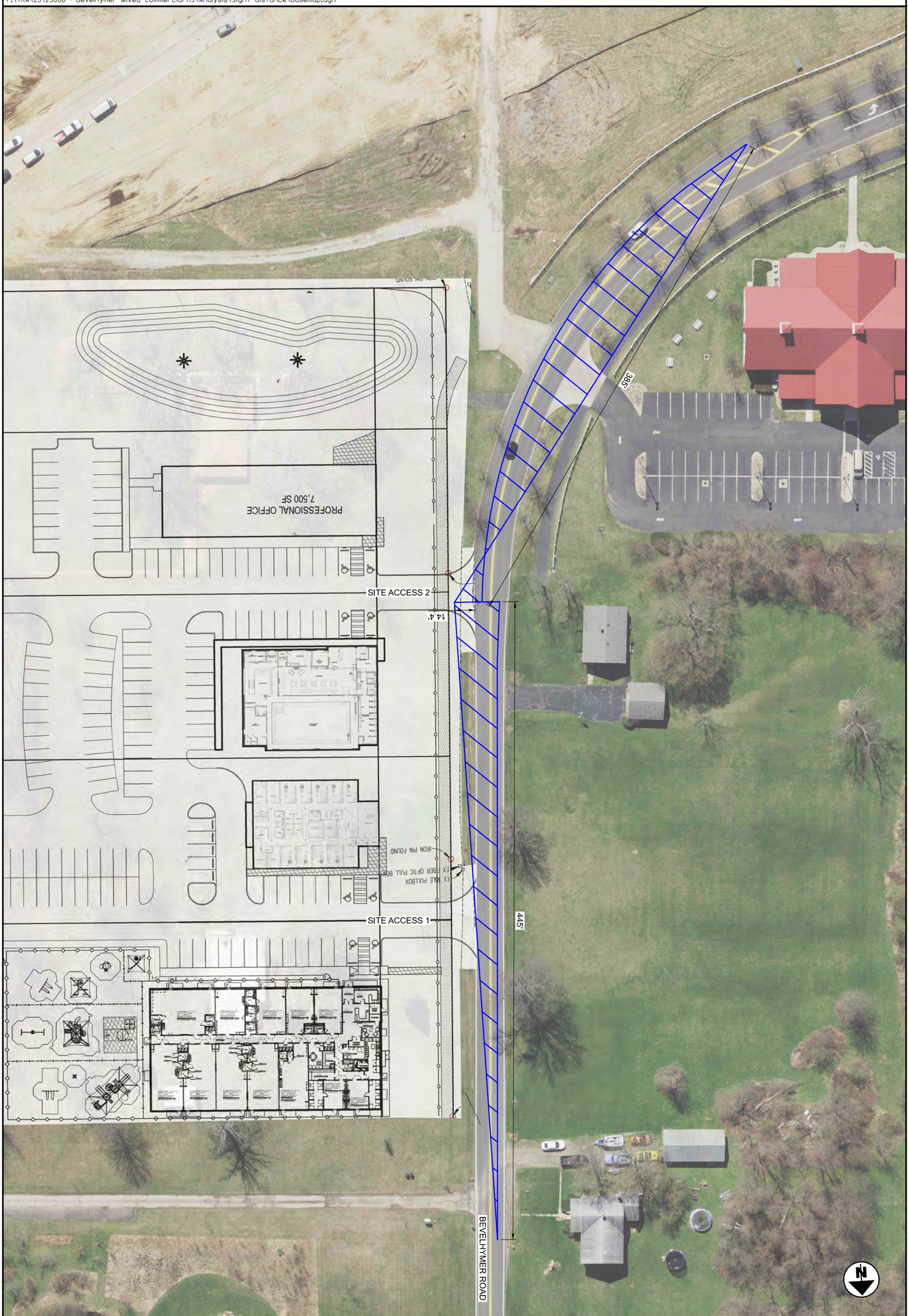

H3 of 3

SHEET	PROJECT ID	REVIEWER	DESIGNER	DESIGN AGENCY
P.2 TOTAL 2	0	CMC 04-13-2023	LRY	CARPENTER MARTY transportation

BEVELHYMER MIXED COMMERCIAL TIS
BEVELHYMER ROAD & SITE ACCESS 2 SIGHT DISTANCE EXHIBIT

HORIZONTAL SCALE IN FEET
0 30
15 60

Community Civil Engineers, LLC

STORM-WATER MANAGEMENT PLAN

FOR

Walton Farms

6734 - 6800 BEVELHYMER ROAD

LOCATED IN

NEW ALBANY

FRANKLIN COUNTY
OHIO

Contents

Appendices

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- OFF-SITE CN AND TC CALCULATIONS
- POST DEV. CN AND TC CALCULATIONS
- MASTER SUMMARY
- PRE-DEV. HYDROGRAPHS
- OFF-SITE HYDROGRAPHS
- POST-DEV, HYDROGRAPHS
- POND HYDROGRAPHS
- MINIMUM DRAIN TIME

INTRODUCTION

The project consists of 3 parcels zoned R-1 located at 6734 to 6800 Bevelhymer Road in New Albany, Franklin County, Ohio. The 5.2+/- acre development is currently used for single family and will be rezoned to I-PUD.

The property is bounded to the North by Residential, to the East vacant land zoned for residential use, South by Commercial uses and West commercial and residential.by Single Family residential. The site drains to the predominantly from East so west and southwest with moderate slopes.

There is an area of off-site drainage of 1.4+/- acres that drains on to the parcel from the East. This area will be captured and passed through the retention basin. It is proposed to re-plat the 3 lots into 4 commercial parcels and a common retention basin parcel. Storm run-off will be captured by a series of catch basins and routed to the common retention basin located on the south parcel. The retention pond will discharge to a proposed storm sewer connected to the city drainage system.

The development consists of 4 commercial lots with the buildings set 50-feet back from the proposed Bevelhymer Road right-of-way. A public connector road is proposed in the rear (East) of the development with a crowned section and curb inlets set to catch run-off and route to the retention basin.,

The retention basin is designed to capture 4.8 acres of the development and retain the flow to the New Albany standards. Each commercial parcel has a impervious allowance for development in the future. Parcel #1 is the northern property whereas Parcel #5 is the southern property. The allowance for impervious areas are as follows for the commercial lots;

Lot #1 - 55%
Lot#2 - 85%
Lot#3 - 65%
Lot#4 - 65%
Lot#5 is reserved for Retention.

The outlet structure is an ODOT 2-2 with an orifice plate bolted in the center. A water quality orifice of 1.8" diameter is set at an elevation of 1059.00 and the 11.0" Water Quantity orifice is set at an elevation of 1060.10. The top of the structure is set at 1060.25. The top of bank is set at 1064.00 where as the 100-year storm even reaches 1062.87.

To analyze and design the detention system Pondpack V8i is used.

SOILS

The overall site is comprised of two soil types

Symbol	Name	Soil Classification
BeB	Bennington silt loam, 2 to 6 percent slopes	C/D
Cen1B1	Centerburg silt loam, 2 to 6 percent slopes	C/D

PRE-DEVELOPED

Area-4.80 Ac
CN – 76
Tc- 0.292 hours
Run-off 0.50 inches

POST DEVELOPED

Area-4.80 Ac
CN- 89
Tc- 0.211 hours
Run-off 1.2 inches

CRITICAL STORM

0.50-1.2/0.50
((0.5 -1.2)/0.5)*100 = 140%
Therefore, the critical storm is the 25-Year Storm

WATER QUALITY VOLUME

The total disturbed area is 4.8 acres.

P = 0.9
Disturbed Area A=4.80

WQv = P* Rv*A/12

Rv_I= 0.05+0.9i
where i is the impervious ratio

i= 127,460/208,949 = 0.610

Rv= 0.05+0.9*0.399 = 0.599

Therefore WQv = 0.2156 Ac-f t= 9,393 cu.ft.

This volume is exceeded by the elevation of 1060.10, See table below

Pond Elevation MSL	Contour Area SF	Average Area SF	Elevation Difference LF	Incremental Volume CF	Cumulative Volume CF
1059	7716				
		8748	1	8748	
1060	9780				8748
		9886	0.1	988.6	
1060.1	9992				9737
		10968.5	0.9	9871.65	
1061	11945				19608
		13077.5	1	13077.5	
1062	14210				32686
		15592.5	1	15592.5	
1063	16975				48278
		17385.5	0.5	8692.75	
1063.5	17796				56971

WATER QUALITY ORIFICE SIZING

Water Quality Volume – 9,393 cu.ft
Draw Down Time = 24 Hours

WQV /(24HRS*3600 S)

= 9,393/86,400
=0.109 CFS

Orifice under standard pressure
Q = (A * 8.02 * K * h^0.5) / 144
d = ((27.86*Q / (K * h^0.5))^0.5

Where K=0.62
h = head = 2.3

Therefore d = 1.8 inches

RESULTS

Storm Event	Pre-developed Q (cfs)	Off-Site Q (cfs)	Post-Developed Q (cfs)	Allowable Release (cfs)	Actual Release (cfs)	Pond Elevation	Pond Volume Ac-ft
1	1.90	0.87	7.17	2.77	0.52	1060.47	0.312
2	3.20	1.38	9.43	3.28	1.25	1060.75	0.382
5	5.33	2.20	12.75	4.10	2.61	1061.19	0.501
10	7.24	2.92	15.50	4.82	3.30	1061.57	0.613
25	10.12	4.00	19.39	5.90	4.07	1062.11	0.787
50	12.66	4.94	22.69	17.60	5.68	1062.49	0.915
100	15.46	5.97	26.19	21.43	7.89	1062.87	1.056

CONCLUSION

The detention basin as designed meets the New Albany storm water regulations.

Seal

Stephen Butler
E-67164

Community Civil Engineers, LLC
2440 Dayton Xenia Road, Suite B
Beavercreek, Ohio 45434
Tel. 937.490.9460

APPENDICES

1. SITE/DRAINAGE MAP
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4. OFF-SITE TRIBUTARY MAP
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6. OFF-SITE CN AND TC CALCULATIONS
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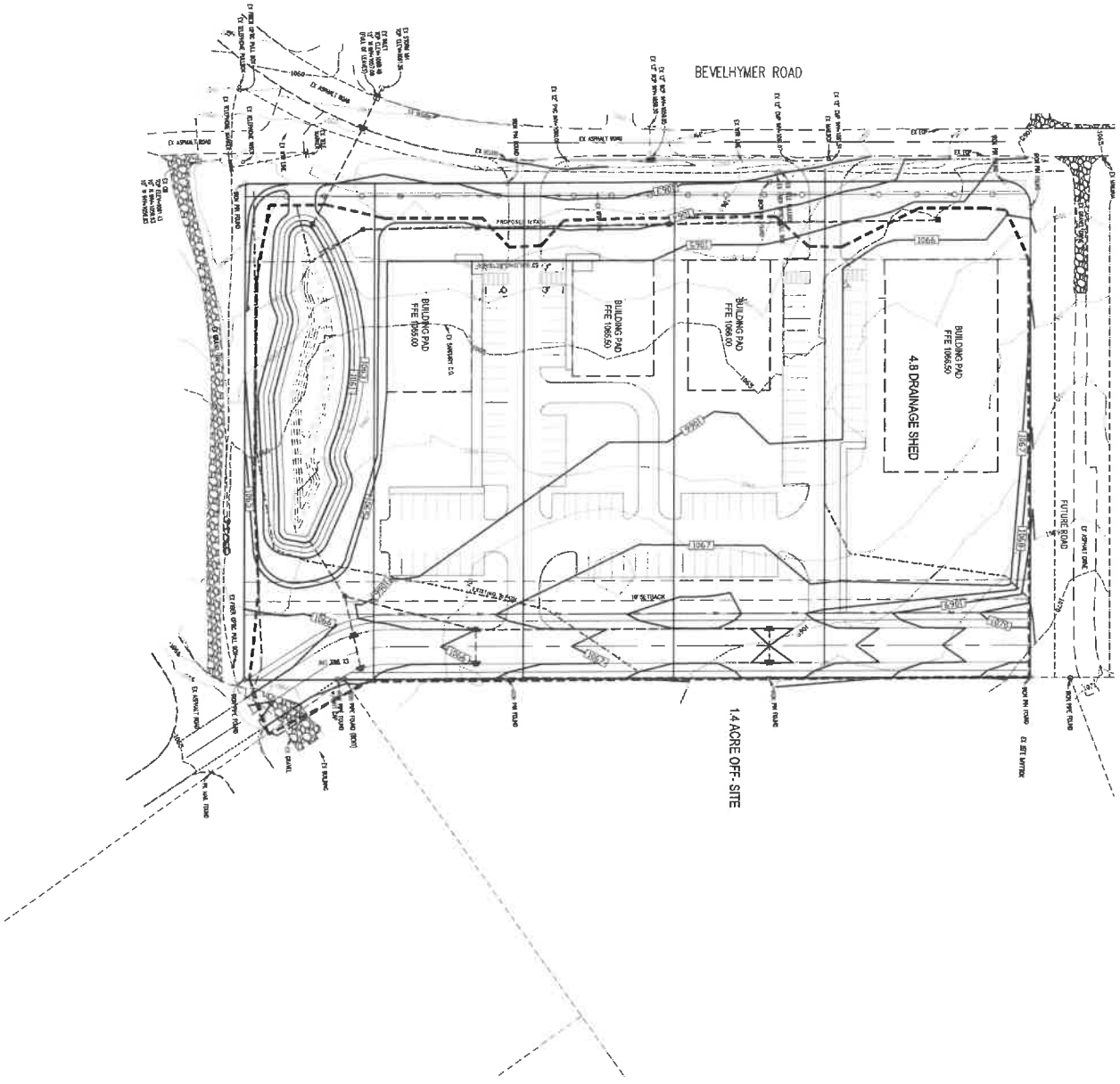
8. MASTER SUMMARY
9. PRE-DEV. HYDROGRAPHS
10. OFF-SITE HYDROGRAPHS
11. POST-DEV, HYDROGRAPHS
12. POND HYDROGRAPHS
13. MINIMUM DRAIN TIME

APPENDIX 1

Site Plan



DRAINAGE PLAN

PRIMROSE SCHOOL
NEW ALBANY
6734 BEVELHYMER ROAD
NEW ALBANY
FRANKLIN COUNTY, OHIO 43054

CCE
Community Civil Engineers, LLC
2440 DAYTON-XENIA ROAD, SUITE B
BEAVERCREEK, OHIO 45434
TEL 937 490 8490 FAX 937 426 8796

PREPARED FOR:

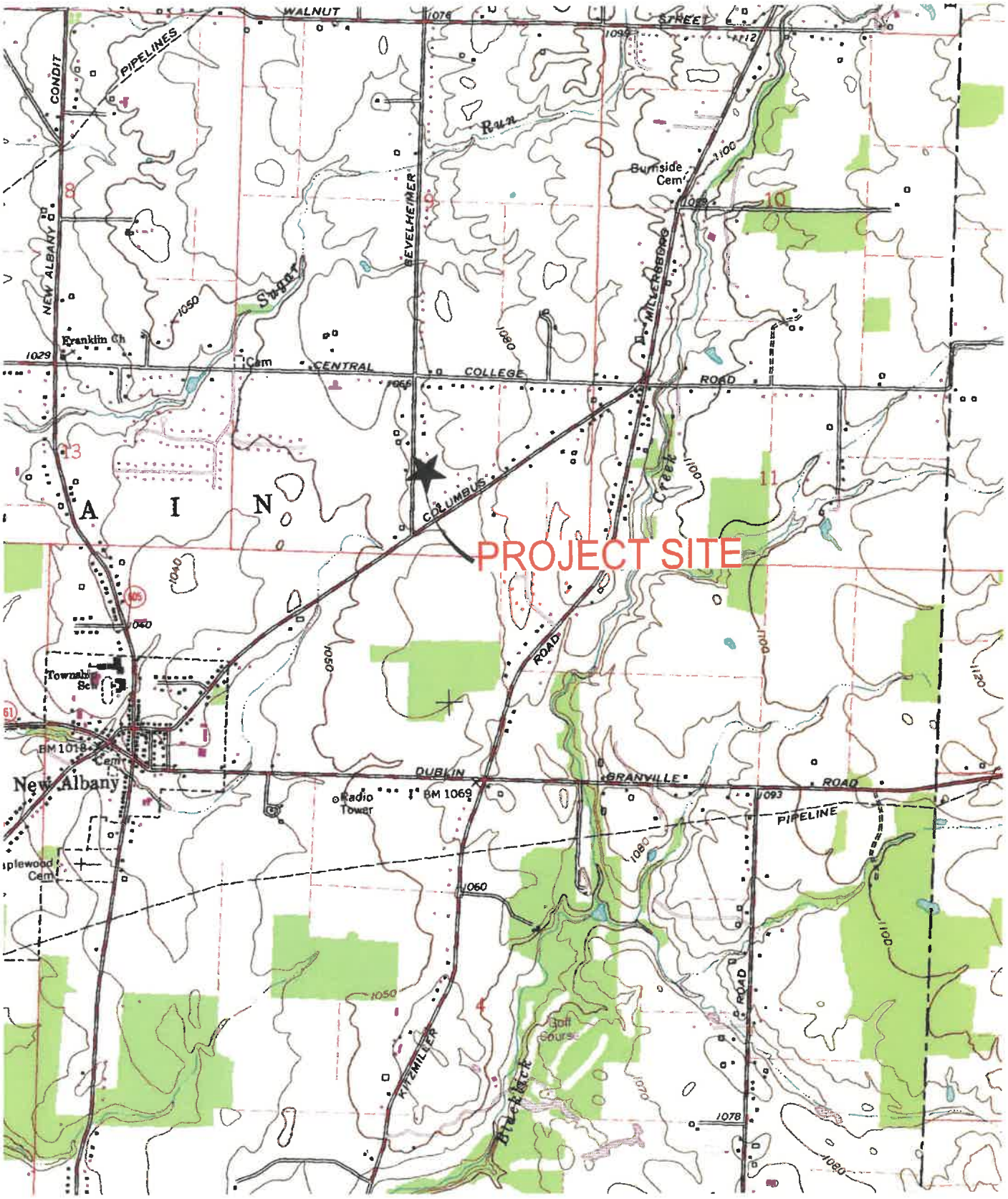
REVISIONS

C5

10/10/2023

APPENDIX 2

USGS MAP



NORTH

SCALE 0 2000 4000 6000

Community Civil Engineers, LLC
2440 DAYTON-XENIA ROAD, SUITE B
BEAVERCREEK, OHIO 45434
TEL. 937.490.9460 FAX 937.426.9798
www.communitycivilengineers.com

TOPOGRAPHIC LOCATION MAP

6734 BEVELHYMER ROAD

NEW ALBANY

DESIGN: SMB | DATE: 10/18/2023
DRAWN:
CHECK:
JOB #: 21-474

Fig.1

APPENDIX 3

SOILS MAP

Custom Soil Resource Report
Soil Map

Map Scale: 1:1,160 if printed on A portrait (8.5" x 11") sheet.

N

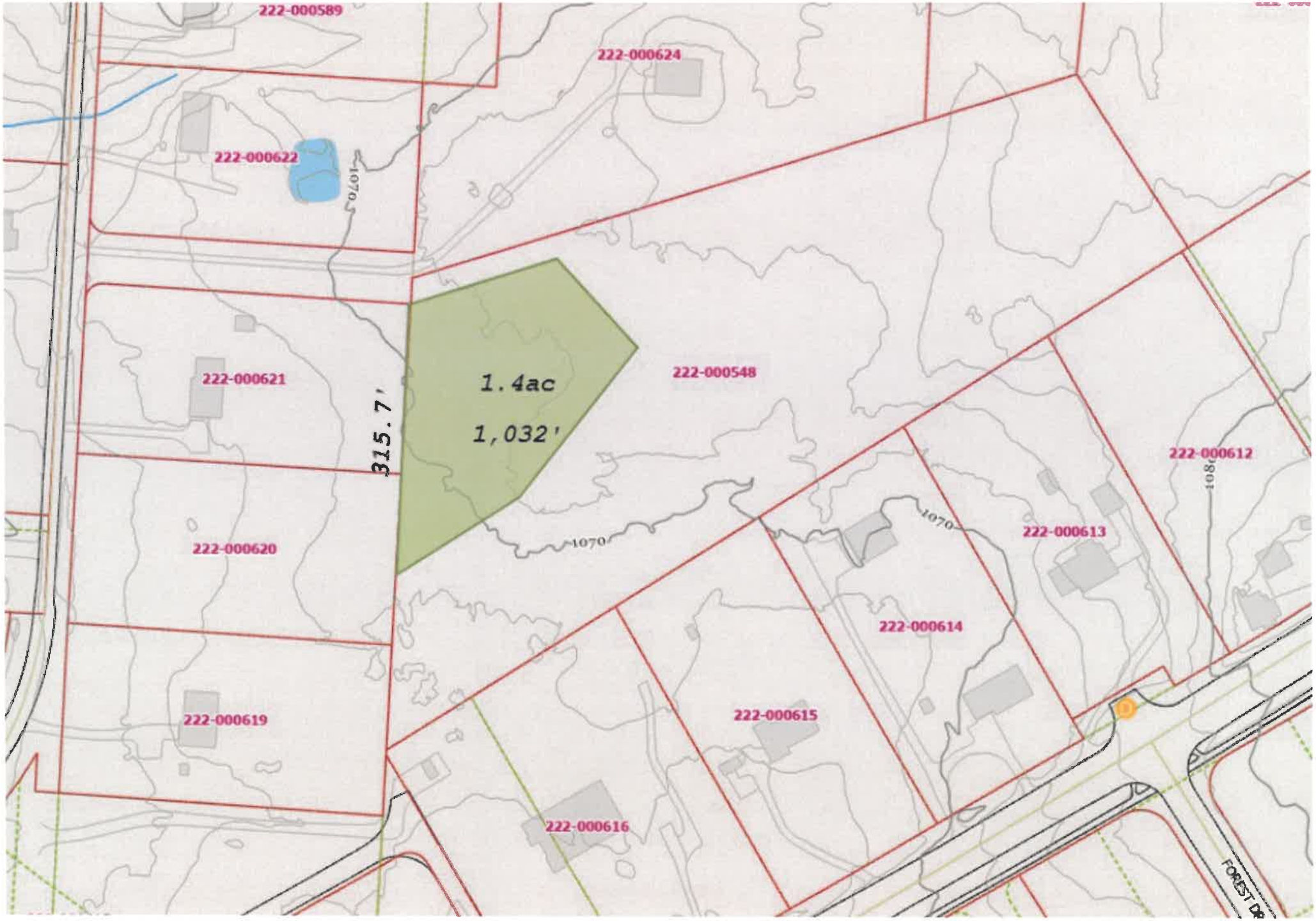
Meters
0 15 30 60 90

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

APPENDIX 4

OFF-SITE TRIBUTARY MAP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222-000624
222-000622
1070
222-000621
1.4ac
1,032'
315.7'
222-000548
222-000612
222-000620
1070
222-000613
222-000614
222-000619
222-000615
222-000616
FOREST

APPENDIX 5

PRE-DEV CN AND TC CALCULATIONS

Subsection: Time of Concentration Calculations
Label: On-Site
Scenario: Pre 1 year

Return Event: 1 years
Storm Event: 1-YEAR

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	85.00 ft
Manning's n	0.160
Slope	0.010 ft/ft
2 Year 24 Hour Depth	2.6 in
Average Velocity	0.11 ft/s
Segment Time of Concentration	0.221 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	210.00 ft
Is Paved?	False
Slope	0.010 ft/ft
Average Velocity	1.61 ft/s
Segment Time of Concentration	0.036 hours

Segment #3: TR-55 Shallow Concentrated Flow	
Hydraulic Length	275.00 ft
Is Paved?	False
Slope	0.018 ft/ft
Average Velocity	2.16 ft/s
Segment Time of Concentration	0.035 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.292 hours

Primrose New Albany

Subsection: Runoff CN-Area
Label: On-Site
Scenario: Pre 1 year

Return Event: 1 years
Storm Event: 1-YEAR

Runoff Curve Number Data

Soil/Surface Description	CN	Area (ft^2)	C (%)	UC (%)	Adjusted CN
Woods - grass combination - fair - Soil C	76.000	36,458.000	0.0	0.0	76.000
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil C	98.000	10,546.000	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil C	74.000	161,945.000	0.0	0.0	74.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	208,949.000	(N/A)	(N/A)	75.560

APPENDIX 6

OFF-SITE CN AND TC CALCULATIONS

Subsection: Time of Concentration Calculations
Label: Off-Site
Scenario: Post 1 year

Return Event: 1 years
Storm Event: 1-YEAR

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	50.00 ft
Manning's n	0.200
Slope	0.015 ft/ft
2 Year 24 Hour Depth	2.6 in
Average Velocity	0.09 ft/s
Segment Time of Concentration	0.147 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	160.00 ft
Is Paved?	False
Slope	0.012 ft/ft
Average Velocity	1.77 ft/s
Segment Time of Concentration	0.025 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.172 hours

APPENDIX 7

POST DEV. CN AND TC CALCULATIONS

Primrose New Albany

Subsection: Runoff CN-Area
Label: On-Site
Scenario: Post 1 year

Return Event: 1 years
Storm Event: 1-YEAR

Runoff Curve Number Data

Soil/Surface Description	CN	Area (ft^2)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil C	98.000	127,460.000	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil C	74.000	81,489.000	0.0	0.0	74.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	208,949.000	(N/A)	(N/A)	88.640

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	20.00 ft
Manning's n	0.240
Slope	0.330 ft/ft
2 Year 24 Hour Depth	2.6 in
Average Velocity	0.23 ft/s
Segment Time of Concentration	0.024 hours

Segment #2: TR-55 Sheet Flow	
Hydraulic Length	35.00 ft
Manning's n	0.200
Slope	0.010 ft/ft
2 Year 24 Hour Depth	2.6 in
Average Velocity	0.07 ft/s
Segment Time of Concentration	0.130 hours

Segment #3: TR-55 Shallow Concentrated Flow	
Hydraulic Length	105.00 ft
Is Paved?	False
Slope	0.010 ft/ft
Average Velocity	1.61 ft/s
Segment Time of Concentration	0.018 hours

Segment #4: Length and Velocity	
Hydraulic Length	705.00 ft
Velocity	5.00 ft/s
Segment Time of Concentration	0.039 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.211 hours

APPENDIX 8

MASTER SUMMARY

Primrose New Albany

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)
On-Site	Pre 1 year	1	0.202	12.000	1.90
On-Site	Pre 2 year	2	0.303	12.000	3.20
On-Site	Pre 5 year	5	0.467	12.000	5.33
On-Site	Pre 10 year	10	0.614	12.000	7.24
On-Site	Pre 25 year	25	0.836	12.000	10.12
On-Site	Pre 50year	50	1.034	12.000	12.66
On-Site	Pre 100 year	100	1.252	12.000	15.46
Off-Site	Pre 1 year	1	0.061	12.000	0.87
Off-Site	Pre 2 year	2	0.091	12.000	1.38
Off-Site	Pre 5 year	5	0.140	12.000	2.20
Off-Site	Pre 10 year	10	0.184	12.000	2.92
Off-Site	Pre 25 year	25	0.250	12.000	4.00
Off-Site	Pre 50year	50	0.309	12.000	4.94
Off-Site	Pre 100 year	100	0.373	12.000	5.97

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)
O-1	Pre 1 year	1	0.263	12.000	2.77
O-1	Pre 2 year	2	0.394	12.000	4.59
O-1	Pre 5 year	5	0.607	12.000	7.53
O-1	Pre 10 year	10	0.798	12.000	10.16
O-1	Pre 25 year	25	1.086	12.000	14.11
O-1	Pre 50year	50	1.343	12.000	17.61
O-1	Pre 100 year	100	1.626	12.000	21.43

Primrose New Albany

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)
On-Site	Post 1 year	1	0.476	12.000	7.17
On-Site	Post 2 year	2	0.626	12.000	9.43
On-Site	Post 5 year	5	0.852	12.000	12.75
On-Site	Post 10 year	10	1.042	12.000	15.50
On-Site	Post 25 year	25	1.315	12.000	19.39
On-Site	Post 50year	50	1.550	12.000	22.69
On-Site	Post 100 year	100	1.803	12.000	26.19
Off-Site	Post 1 year	1	0.061	12.000	0.87
Off-Site	Post 2 year	2	0.091	12.000	1.38
Off-Site	Post 5 year	5	0.140	12.000	2.20
Off-Site	Post 10 year	10	0.184	12.000	2.92
Off-Site	Post 25 year	25	0.250	12.000	4.00
Off-Site	Post 50year	50	0.309	12.000	4.94
Off-Site	Post 100 year	100	0.373	12.000	5.97

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)
O-1	Post 1 year	1	0.284	13.500	0.52
O-1	Post 2 year	2	0.457	12.750	1.25
O-1	Post 5 year	5	0.721	12.500	2.61
O-1	Post 10 year	10	0.949	12.500	3.30
O-1	Post 25 year	25	1.279	12.500	4.07
O-1	Post 50year	50	1.566	12.500	5.68
O-1	Post 100 year	100	1.878	12.250	7.89

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft^3/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
PO-2 (IN)	Post 1 year	1	0.537	12.000	8.04	(N/A)	(N/A)
PO-2 (OUT)	Post 1 year	1	0.284	13.500	0.52	1,060.47	0.312
PO-2 (IN)	Post 2 year	2	0.717	12.000	10.81	(N/A)	(N/A)
PO-2 (OUT)	Post 2 year	2	0.457	12.750	1.25	1,060.75	0.382
PO-2 (IN)	Post 5 year	5	0.991	12.000	14.94	(N/A)	(N/A)
PO-2 (OUT)	Post 5 year	5	0.721	12.500	2.61	1,061.19	0.501
PO-2 (IN)	Post 10 year	10	1.225	12.000	18.42	(N/A)	(N/A)
PO-2 (OUT)	Post 10 year	10	0.949	12.500	3.30	1,061.57	0.613
PO-2 (IN)	Post 25 year	25	1.565	12.000	23.39	(N/A)	(N/A)
PO-2 (OUT)	Post 25 year	25	1.279	12.500	4.07	1,062.11	0.787
PO-2 (IN)	Post 50year	50	1.859	12.000	27.63	(N/A)	(N/A)
PO-2 (OUT)	Post 50year	50	1.566	12.500	5.68	1,062.49	0.915
PO-2 (IN)	Post 100 year	100	2.176	12.000	32.16	(N/A)	(N/A)
PO-2 (OUT)	Post 100 year	100	1.878	12.250	7.89	1,062.87	1.056

APPENDIX 9

PRE-DEV HYDROGRAPHS

Storm Event	1-YEAR
Return Event	1 years
Duration	24.000 hours
Depth	2.2 in
Time of Concentration (Composite)	0.292 hours
Area (User Defined)	208,949.000 ft²
Computational Time Increment	0.039 hours
Time to Peak (Computed)	12.110 hours
Flow (Peak, Computed)	2.44 ft³/s
Output Increment	0.250 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	1.90 ft³/s
Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	208,949.000 ft²
Maximum Retention (Pervious)	3.2 in
Maximum Retention (Pervious, 20 percent)	0.6 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.5 in
Runoff Volume (Pervious)	0.204 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.202 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.292 hours
Computational Time Increment	0.039 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	18.61 ft³/s
Unit peak time, Tp	0.195 hours
Unit receding limb, Tr	0.779 hours
Total unit time, Tb	0.973 hours

Storm Event	2 YEAR
Return Event	2 years
Duration	24.000 hours
Depth	2.6 in
Time of Concentration (Composite)	0.292 hours
Area (User Defined)	208,949.000 ft²
Computational Time Increment	0.039 hours
Time to Peak (Computed)	12.071 hours
Flow (Peak, Computed)	3.90 ft³/s
Output Increment	0.250 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	3.20 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	208,949.000 ft²
Maximum Retention (Pervious)	3.2 in
Maximum Retention (Pervious, 20 percent)	0.6 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.8 in
Runoff Volume (Pervious)	0.305 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.303 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.292 hours
Computational Time Increment	0.039 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	18.61 ft³/s
Unit peak time, Tp	0.195 hours
Unit receding limb, Tr	0.779 hours
Total unit time, Tb	0.973 hours

Subsection: Unit Hydrograph Summary
Label: On-Site
Scenario: Pre 5 year

Return Event: 5 years
Storm Event: 5 YEAR

Storm Event	5 YEAR
Return Event	5 years
Duration	24.000 hours
Depth	3.2 in
Time of Concentration (Composite)	0.292 hours
Area (User Defined)	208,949.000 ft²
Computational Time Increment	0.039 hours
Time to Peak (Computed)	12.071 hours
Flow (Peak, Computed)	6.25 ft³/s
Output Increment	0.250 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	5.33 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	208,949.000 ft²
Maximum Retention (Pervious)	3.2 in
Maximum Retention (Pervious, 20 percent)	0.6 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.2 in
Runoff Volume (Pervious)	0.469 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.467 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.292 hours
Computational Time Increment	0.039 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	18.61 ft³/s
Unit peak time, Tp	0.195 hours
Unit receding limb, Tr	0.779 hours
Total unit time, Tb	0.973 hours

Storm Event	10 YEAR
Return Event	10 years
Duration	24.000 hours
Depth	3.7 in
Time of Concentration (Composite)	0.292 hours
Area (User Defined)	208,949.000 ft²
Computational Time Increment	0.039 hours
Time to Peak (Computed)	12.071 hours
Flow (Peak, Computed)	8.34 ft³/s
Output Increment	0.250 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	7.24 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	208,949.000 ft²
Maximum Retention (Pervious)	3.2 in
Maximum Retention (Pervious, 20 percent)	0.6 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.5 in
Runoff Volume (Pervious)	0.616 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.614 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.292 hours
Computational Time Increment	0.039 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	18.61 ft³/s
Unit peak time, Tp	0.195 hours
Unit receding limb, Tr	0.779 hours
Total unit time, Tb	0.973 hours

Subsection: Unit Hydrograph Summary
Label: On-Site
Scenario: Pre 25 year

Return Event: 25 years
Storm Event: 25 YEAR

Storm Event	25 YEAR
Return Event	25 years
Duration	24.000 hours
Depth	4.5 in
Time of Concentration (Composite)	0.292 hours
Area (User Defined)	208,949.000 ft²
Computational Time Increment	0.039 hours
Time to Peak (Computed)	12.071 hours
Flow (Peak, Computed)	11.46 ft³/s
Output Increment	0.250 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	10.12 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	208,949.000 ft²
Maximum Retention (Pervious)	3.2 in
Maximum Retention (Pervious, 20 percent)	0.6 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.1 in
Runoff Volume (Pervious)	0.839 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.836 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.292 hours
Computational Time Increment	0.039 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	18.61 ft³/s
Unit peak time, Tp	0.195 hours
Unit receding limb, Tr	0.779 hours
Total unit time, Tb	0.973 hours

Storm Event	50 YEAR
Return Event	50 years
Duration	24.000 hours
Depth	5.1 in
Time of Concentration (Composite)	0.292 hours
Area (User Defined)	208,949.000 ft²
Computational Time Increment	0.039 hours
Time to Peak (Computed)	12.071 hours
Flow (Peak, Computed)	14.20 ft³/s
Output Increment	0.250 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	12.66 ft³/s
Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	208,949.000 ft²
Maximum Retention (Pervious)	3.2 in
Maximum Retention (Pervious, 20 percent)	0.6 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.6 in
Runoff Volume (Pervious)	1.037 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.034 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.292 hours
Computational Time Increment	0.039 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	18.61 ft³/s
Unit peak time, Tp	0.195 hours
Unit receding limb, Tr	0.779 hours
Total unit time, Tb	0.973 hours

Storm Event	100 YEAR
Return Event	100 years
Duration	24.000 hours
Depth	5.7 in
Time of Concentration (Composite)	0.292 hours
Area (User Defined)	208,949.000 ft²
Computational Time Increment	0.039 hours
Time to Peak (Computed)	12.071 hours
Flow (Peak, Computed)	17.20 ft³/s
Output Increment	0.250 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	15.46 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	208,949.000 ft²
Maximum Retention (Pervious)	3.2 in
Maximum Retention (Pervious, 20 percent)	0.6 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.1 in
Runoff Volume (Pervious)	1.255 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.252 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.292 hours
Computational Time Increment	0.039 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	18.61 ft³/s
Unit peak time, Tp	0.195 hours
Unit receding limb, Tr	0.779 hours
Total unit time, Tb	0.973 hours

APPENDIX 10

OFF-SITE HYDROGRAPHS

Subsection: Unit Hydrograph Summary
Label: Off-Site
Scenario: Post 1 year

Return Event: 1 years
Storm Event: 1-YEAR

Storm Event	1-YEAR
Return Event	1 years
Duration	24.000 hours
Depth	2.2 in
Time of Concentration (Composite)	0.172 hours
Area (User Defined)	60,984.000 ft²
Computational Time Increment	0.023 hours
Time to Peak (Computed)	12.024 hours
Flow (Peak, Computed)	0.90 ft³/s
Output Increment	0.250 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	0.87 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	60,984.000 ft²
Maximum Retention (Pervious)	3.2 in
Maximum Retention (Pervious, 20 percent)	0.6 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.5 in
Runoff Volume (Pervious)	0.059 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.061 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.172 hours
Computational Time Increment	0.023 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.22 ft³/s
Unit peak time, Tp	0.115 hours
Unit receding limb, Tr	0.459 hours
Total unit time, Tb	0.574 hours

Storm Event	2 YEAR
Return Event	2 years
Duration	24.000 hours
Depth	2.6 in
Time of Concentration (Composite)	0.172 hours
Area (User Defined)	60,984.000 ft²
Computational Time Increment	0.023 hours
Time to Peak (Computed)	12.024 hours
Flow (Peak, Computed)	1.40 ft³/s
Output Increment	0.250 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	1.38 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	60,984.000 ft²
Maximum Retention (Pervious)	3.2 in
Maximum Retention (Pervious, 20 percent)	0.6 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.8 in
Runoff Volume (Pervious)	0.089 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.091 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.172 hours
Computational Time Increment	0.023 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.22 ft³/s
Unit peak time, Tp	0.115 hours
Unit receding limb, Tr	0.459 hours
Total unit time, Tb	0.574 hours

Storm Event	5 YEAR
Return Event	5 years
Duration	24.000 hours
Depth	3.2 in
Time of Concentration (Composite)	0.172 hours
Area (User Defined)	60,984.000 ft²
Computational Time Increment	0.023 hours
Time to Peak (Computed)	12.001 hours
Flow (Peak, Computed)	2.20 ft³/s
Output Increment	0.250 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	2.20 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	60,984.000 ft²
Maximum Retention (Pervious)	3.2 in
Maximum Retention (Pervious, 20 percent)	0.6 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.2 in
Runoff Volume (Pervious)	0.137 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.140 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.172 hours
Computational Time Increment	0.023 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.22 ft³/s
Unit peak time, Tp	0.115 hours
Unit receding limb, Tr	0.459 hours
Total unit time, Tb	0.574 hours

Storm Event	10 YEAR
Return Event	10 years
Duration	24.000 hours
Depth	3.7 in
Time of Concentration (Composite)	0.172 hours
Area (User Defined)	60,984.000 ft²
Computational Time Increment	0.023 hours
Time to Peak (Computed)	12.001 hours
Flow (Peak, Computed)	2.92 ft³/s
Output Increment	0.250 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	2.92 ft³/s
Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	60,984.000 ft²
Maximum Retention (Pervious)	3.2 in
Maximum Retention (Pervious, 20 percent)	0.6 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.5 in
Runoff Volume (Pervious)	0.180 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.184 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.172 hours
Computational Time Increment	0.023 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.22 ft³/s
Unit peak time, Tp	0.115 hours
Unit receding limb, Tr	0.459 hours
Total unit time, Tb	0.574 hours

Subsection: Unit Hydrograph Summary
Label: Off-Site
Scenario: Post 25 year

Return Event: 25 years
Storm Event: 25 YEAR

Storm Event	25 YEAR
Return Event	25 years
Duration	24.000 hours
Depth	4.5 in
Time of Concentration (Composite)	0.172 hours
Area (User Defined)	60,984.000 ft²
Computational Time Increment	0.023 hours
Time to Peak (Computed)	12.001 hours
Flow (Peak, Computed)	4.00 ft³/s
Output Increment	0.250 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	4.00 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	60,984.000 ft²
Maximum Retention (Pervious)	3.2 in
Maximum Retention (Pervious, 20 percent)	0.6 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.1 in
Runoff Volume (Pervious)	0.245 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.250 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.172 hours
Computational Time Increment	0.023 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.22 ft³/s
Unit peak time, Tp	0.115 hours
Unit receding limb, Tr	0.459 hours
Total unit time, Tb	0.574 hours

Storm Event	50 YEAR
Return Event	50 years
Duration	24.000 hours
Depth	5.1 in
Time of Concentration (Composite)	0.172 hours
Area (User Defined)	60,984.000 ft²
Computational Time Increment	0.023 hours
Time to Peak (Computed)	12.001 hours
Flow (Peak, Computed)	4.94 ft³/s
Output Increment	0.250 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	4.94 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	60,984.000 ft²
Maximum Retention (Pervious)	3.2 in
Maximum Retention (Pervious, 20 percent)	0.6 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.6 in
Runoff Volume (Pervious)	0.303 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.309 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.172 hours
Computational Time Increment	0.023 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.22 ft³/s
Unit peak time, Tp	0.115 hours
Unit receding limb, Tr	0.459 hours
Total unit time, Tb	0.574 hours

Subsection: Unit Hydrograph Summary
Label: Off-Site
Scenario: Post 100 year

Return Event: 100 years
Storm Event: 100 YEAR

Storm Event	100 YEAR
Return Event	100 years
Duration	24.000 hours
Depth	5.7 in
Time of Concentration (Composite)	0.172 hours
Area (User Defined)	60,984.000 ft²
Computational Time Increment	0.023 hours
Time to Peak (Computed)	12.001 hours
Flow (Peak, Computed)	5.97 ft³/s
Output Increment	0.250 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	5.97 ft³/s

Drainage Area	
SCS CN (Composite)	76.000
Area (User Defined)	60,984.000 ft²
Maximum Retention (Pervious)	3.2 in
Maximum Retention (Pervious, 20 percent)	0.6 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.1 in
Runoff Volume (Pervious)	0.366 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.373 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.172 hours
Computational Time Increment	0.023 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	9.22 ft³/s
Unit peak time, Tp	0.115 hours
Unit receding limb, Tr	0.459 hours
Total unit time, Tb	0.574 hours

APPENDIX 11

POST DEV. HYDROGRAPHS

Storm Event	1-YEAR
Return Event	1 years
Duration	24.000 hours
Depth	2.2 in
Time of Concentration (Composite)	0.211 hours
Area (User Defined)	208,949.000 ft²
Computational Time Increment	0.028 hours
Time to Peak (Computed)	12.007 hours
Flow (Peak, Computed)	7.24 ft³/s
Output Increment	0.250 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	7.17 ft³/s

Drainage Area	
SCS CN (Composite)	89.000
Area (User Defined)	208,949.000 ft²
Maximum Retention (Pervious)	1.2 in
Maximum Retention (Pervious, 20 percent)	0.2 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.2 in
Runoff Volume (Pervious)	0.471 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.476 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.211 hours
Computational Time Increment	0.028 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	25.77 ft³/s
Unit peak time, Tp	0.141 hours
Unit receding limb, Tr	0.562 hours
Total unit time, Tb	0.703 hours

Storm Event	2 YEAR
Return Event	2 years
Duration	24.000 hours
Depth	2.6 in
Time of Concentration (Composite)	0.211 hours
Area (User Defined)	208,949.000 ft²
Computational Time Increment	0.028 hours
Time to Peak (Computed)	12.007 hours
Flow (Peak, Computed)	9.52 ft³/s
Output Increment	0.250 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	9.43 ft³/s

Drainage Area	
SCS CN (Composite)	89.000
Area (User Defined)	208,949.000 ft²
Maximum Retention (Pervious)	1.2 in
Maximum Retention (Pervious, 20 percent)	0.2 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.6 in
Runoff Volume (Pervious)	0.620 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.626 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.211 hours
Computational Time Increment	0.028 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	25.77 ft³/s
Unit peak time, Tp	0.141 hours
Unit receding limb, Tr	0.562 hours
Total unit time, Tb	0.703 hours

Subsection: Unit Hydrograph Summary
Label: On-Site
Scenario: Post 5 year

Return Event: 5 years
Storm Event: 5 YEAR

Storm Event	5 YEAR
Return Event	5 years
Duration	24.000 hours
Depth	3.2 in
Time of Concentration (Composite)	0.211 hours
Area (User Defined)	208,949.000 ft²
Computational Time Increment	0.028 hours
Time to Peak (Computed)	12.007 hours
Flow (Peak, Computed)	12.85 ft³/s
Output Increment	0.250 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	12.75 ft³/s

Drainage Area	
SCS CN (Composite)	89.000
Area (User Defined)	208,949.000 ft²
Maximum Retention (Pervious)	1.2 in
Maximum Retention (Pervious, 20 percent)	0.2 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.1 in
Runoff Volume (Pervious)	0.843 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.852 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.211 hours
Computational Time Increment	0.028 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	25.77 ft³/s
Unit peak time, Tp	0.141 hours
Unit receding limb, Tr	0.562 hours
Total unit time, Tb	0.703 hours

Storm Event	10 YEAR
Return Event	10 years
Duration	24.000 hours
Depth	3.7 in
Time of Concentration (Composite)	0.211 hours
Area (User Defined)	208,949.000 ft²
Computational Time Increment	0.028 hours
Time to Peak (Computed)	12.007 hours
Flow (Peak, Computed)	15.62 ft³/s
Output Increment	0.250 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	15.50 ft³/s

Drainage Area	
SCS CN (Composite)	89.000
Area (User Defined)	208,949.000 ft²
Maximum Retention (Pervious)	1.2 in
Maximum Retention (Pervious, 20 percent)	0.2 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.6 in
Runoff Volume (Pervious)	1.031 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.042 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.211 hours
Computational Time Increment	0.028 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	25.77 ft³/s
Unit peak time, Tp	0.141 hours
Unit receding limb, Tr	0.562 hours
Total unit time, Tb	0.703 hours

Subsection: Unit Hydrograph Summary
Label: On-Site
Scenario: Post 25 year

Return Event: 25 years
Storm Event: 25 YEAR

Storm Event	25 YEAR
Return Event	25 years
Duration	24.000 hours
Depth	4.5 in
Time of Concentration (Composite)	0.211 hours
Area (User Defined)	208,949.000 ft²
Computational Time Increment	0.028 hours
Time to Peak (Computed)	12.007 hours
Flow (Peak, Computed)	19.53 ft³/s
Output Increment	0.250 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	19.39 ft³/s

Drainage Area	
SCS CN (Composite)	89.000
Area (User Defined)	208,949.000 ft²
Maximum Retention (Pervious)	1.2 in
Maximum Retention (Pervious, 20 percent)	0.2 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.3 in
Runoff Volume (Pervious)	1.302 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.315 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.211 hours
Computational Time Increment	0.028 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	25.77 ft³/s
Unit peak time, Tp	0.141 hours
Unit receding limb, Tr	0.562 hours
Total unit time, Tb	0.703 hours

Subsection: Unit Hydrograph Summary
Label: On-Site
Scenario: Post 50year

Return Event: 50 years
Storm Event: 50 YEAR

Storm Event	50 YEAR
Return Event	50 years
Duration	24.000 hours
Depth	5.1 in
Time of Concentration (Composite)	0.211 hours
Area (User Defined)	208,949.000 ft²
Computational Time Increment	0.028 hours
Time to Peak (Computed)	12.007 hours
Flow (Peak, Computed)	22.83 ft³/s
Output Increment	0.250 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	22.69 ft³/s

Drainage Area	
SCS CN (Composite)	89.000
Area (User Defined)	208,949.000 ft²
Maximum Retention (Pervious)	1.2 in
Maximum Retention (Pervious, 20 percent)	0.2 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.8 in
Runoff Volume (Pervious)	1.535 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.550 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.211 hours
Computational Time Increment	0.028 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	25.77 ft³/s
Unit peak time, Tp	0.141 hours
Unit receding limb, Tr	0.562 hours
Total unit time, Tb	0.703 hours

Subsection: Unit Hydrograph Summary
Label: On-Site
Scenario: Post 100 year

Return Event: 100 years
Storm Event: 100 YEAR

Storm Event	100 YEAR
Return Event	100 years
Duration	24.000 hours
Depth	5.7 in
Time of Concentration (Composite)	0.211 hours
Area (User Defined)	208,949.000 ft²
Computational Time Increment	0.028 hours
Time to Peak (Computed)	12.007 hours
Flow (Peak, Computed)	26.35 ft³/s
Output Increment	0.250 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	26.19 ft³/s

Drainage Area	
SCS CN (Composite)	89.000
Area (User Defined)	208,949.000 ft²
Maximum Retention (Pervious)	1.2 in
Maximum Retention (Pervious, 20 percent)	0.2 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.5 in
Runoff Volume (Pervious)	1.785 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.803 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.211 hours
Computational Time Increment	0.028 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	25.77 ft³/s
Unit peak time, Tp	0.141 hours
Unit receding limb, Tr	0.562 hours
Total unit time, Tb	0.703 hours

Requested Pond Water Surface Elevations	
Minimum (Headwater)	1,059.00 ft
Increment (Headwater)	0.10 ft
Maximum (Headwater)	1,063.50 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Orifice - 2	Forward	Culvert - 1	1,060.10	1,063.50
Stand Pipe	Riser - 1	Forward	Culvert - 1	1,062.25	1,063.50
Orifice-Circular	Orifice - 1	Forward	Culvert - 1	1,059.00	1,063.50
Culvert-Circular	Culvert - 1	Forward	TW	1,059.00	1,063.50
Tailwater Settings	Tailwater			(N/A)	(N/A)

APPENDIX 12

POND HYDROGRAPHS

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,059.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.250 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	8.04 ft³/s	Time to Peak (Flow, In)	12.000 hours
Flow (Peak Outlet)	0.52 ft³/s	Time to Peak (Flow, Outlet)	13.500 hours

Elevation (Water Surface, Peak)	1,060.47 ft
Volume (Peak)	0.312 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	0.537 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	0.284 ac-ft
Volume (Retained)	0.250 ac-ft
Volume (Unrouted)	-0.003 ac-ft
Error (Mass Balance)	0.5 %

Subsection: Level Pool Pond Routing Summary
Label: PO-2 (IN)
Scenario: Post 2 year

Return Event: 2 years
Storm Event: 2 YEAR

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,059.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.250 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	10.81 ft³/s	Time to Peak (Flow, In)	12.000 hours
Flow (Peak Outlet)	1.25 ft³/s	Time to Peak (Flow, Outlet)	12.750 hours

Elevation (Water Surface, Peak)	1,060.75 ft
Volume (Peak)	0.382 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	0.717 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	0.457 ac-ft
Volume (Retained)	0.257 ac-ft
Volume (Unrouted)	-0.004 ac-ft
Error (Mass Balance)	0.5 %

Subsection: Level Pool Pond Routing Summary
Label: PO-2 (IN)
Scenario: Post 5 year

Return Event: 5 years
Storm Event: 5 YEAR

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,059.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.250 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	14.94 ft³/s	Time to Peak (Flow, In)	12.000 hours
Flow (Peak Outlet)	2.61 ft³/s	Time to Peak (Flow, Outlet)	12.500 hours

Elevation (Water Surface, Peak)	1,061.19 ft
Volume (Peak)	0.501 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	0.991 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	0.721 ac-ft
Volume (Retained)	0.266 ac-ft
Volume (Unrouted)	-0.004 ac-ft
Error (Mass Balance)	0.4 %

Subsection: Level Pool Pond Routing Summary
Label: PO-2 (IN)
Scenario: Post 10 year

Return Event: 10 years
Storm Event: 10 YEAR

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,059.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.250 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	18.42 ft³/s	Time to Peak (Flow, In)	12.000 hours
Flow (Peak Outlet)	3.30 ft³/s	Time to Peak (Flow, Outlet)	12.500 hours

Elevation (Water Surface, Peak)	1,061.57 ft
Volume (Peak)	0.613 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	1.225 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	0.949 ac-ft
Volume (Retained)	0.272 ac-ft
Volume (Unrouted)	-0.005 ac-ft
Error (Mass Balance)	0.4 %

Subsection: Level Pool Pond Routing Summary
Label: PO-2 (IN)
Scenario: Post 25 year

Return Event: 25 years
Storm Event: 25 YEAR

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,059.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.250 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	23.39 ft³/s	Time to Peak (Flow, In)	12.000 hours
Flow (Peak Outlet)	4.07 ft³/s	Time to Peak (Flow, Outlet)	12.500 hours

Elevation (Water Surface, Peak)	1,062.11 ft
Volume (Peak)	0.787 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	1.565 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	1.279 ac-ft
Volume (Retained)	0.279 ac-ft
Volume (Unrouted)	-0.006 ac-ft
Error (Mass Balance)	0.4 %

Subsection: Level Pool Pond Routing Summary
Label: PO-2 (IN)
Scenario: Post 50year

Return Event: 50 years
Storm Event: 50 YEAR

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,059.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.250 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	27.63 ft³/s	Time to Peak (Flow, In)	12.000 hours
Flow (Peak Outlet)	5.68 ft³/s	Time to Peak (Flow, Outlet)	12.500 hours

Elevation (Water Surface, Peak)	1,062.49 ft
Volume (Peak)	0.915 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	1.859 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	1.566 ac-ft
Volume (Retained)	0.285 ac-ft
Volume (Unrouted)	-0.007 ac-ft
Error (Mass Balance)	0.4 %

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,059.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.250 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	32.16 ft³/s	Time to Peak (Flow, In)	12.000 hours
Flow (Peak Outlet)	7.89 ft³/s	Time to Peak (Flow, Outlet)	12.250 hours

Elevation (Water Surface, Peak)	1,062.87 ft
Volume (Peak)	1.056 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	2.176 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	1.878 ac-ft
Volume (Retained)	0.291 ac-ft
Volume (Unrouted)	-0.008 ac-ft
Error (Mass Balance)	0.4 %

APPENDIX 13

MINIMUM DRAIN TIME

Minimum Drain Time Detailed Report: Minimum Drain Time - 1

Subsection: Time vs. Elevation
Label: Minimum Drain Time - 1 (OUT)

Time vs. Elevation (ft)

Output Time increment = 0.500 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	1,060.10	1,060.08	1,060.07	1,060.05	1,060.04
2.500	1,060.02	1,060.01	1,060.00	1,059.98	1,059.97
5.000	1,059.95	1,059.94	1,059.92	1,059.91	1,059.89
7.500	1,059.88	1,059.87	1,059.85	1,059.84	1,059.82
10.000	1,059.81	1,059.80	1,059.78	1,059.77	1,059.76
12.500	1,059.74	1,059.73	1,059.72	1,059.71	1,059.69
15.000	1,059.68	1,059.67	1,059.65	1,059.64	1,059.63
17.500	1,059.62	1,059.61	1,059.59	1,059.58	1,059.57
20.000	1,059.56	1,059.55	1,059.53	1,059.52	1,059.51
22.500	1,059.50	1,059.49	1,059.48	1,059.47	(N/A)