



New Albany Planning Commission Agenda
Monday, June 21, 2021 7:00pm

NO PUBLIC IN-PERSON ATTENDANCE IS PERMITTED

Join this meeting on your computer, tablet or smartphone.

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I. Call To Order

II. Roll Call

III. Action of Minutes: May 17, 2021

IV. Additions or Corrections to Agenda

Swear in All Witnesses/Applicants/Staff whom plan to speak regarding an application on tonight's agenda. "Do you swear to tell the truth and nothing but the truth".

V. Hearing of Visitors for Items Not on Tonight's Agenda

VII. Cases:

FDP-49-2021 Final Development Plan

Final Development Plan for a 36-lot residential subdivision on 29.87 acres generally located south of Brandon Road, east and west of Lambton Park Road and north of Eryehall Pass (PID: 222-004458).

Applicant: The New Albany Company LLC c/o Aaron Underhill, Esq.

Motion of Acceptance of staff reports and related documents into the record for FDP-49-2021.

Motion of approval for application FDP-49-2021 based on the findings in the staff report with the conditions listed in the staff report, subject to staff approval.

FPL-61-2021 Final Plat

Final plat for a 36-lot residential subdivision on 29.87 acres generally located south of Brandon Road, east and west of Lambton Park Road and north of Eryehall Pass (PID: 222-004458).

Applicant: The New Albany Company LLC c/o Aaron Underhill, Esq.

Motion of Acceptance of staff reports and related documents into the record for FPL-61-2021.

Motion of approval for application FPL-61-2021 based on the findings in the staff report with the conditions listed in the staff report, subject to staff approval.

ZC-43-2021 Zoning Amendment

Rezoning of 30.6 +/- acres from R-1 to Infill-Planned Unit Development (I-PUD) generally located at the southwest and southeast corners of the New Albany Condit Road and Central College Road intersection for an area to be known as the “NoNA Zoning District.”

Applicant: NoNA Master Development LLC

Motion of Acceptance of staff reports and related documents into the record for ZC-43-2021.

Motion of approval for application ZC-43-2021 based on the findings in the staff report with the conditions listed in the staff report, subject to staff approval.

VIII. Other Business

IX. Poll members for comment

X. Adjournment


New Albany Planning Commission
May 17, 2021 DRAFT Minutes

Planning Commission met in regular session in the Council Chambers at Village Hall, 99 W. Main Street and was called to order by Planning Commission Chair Mr. Neil Kirby at 7:06 p.m.

Those answering roll call:

Mr. Neil Kirby, Chair	Present
Mr. Brad Shockey	Absent
Mr. David Wallace	Present
Mr. Hans Schell	Present
Ms. Andrea Wiltrout	Present
Mr. Matt Shull (Council liaison)	Present

(Mr. Kirby, Mr. Wallace, Mr. Schell, Ms. Wiltrout, and Mr. Shull present via Zoom.com).

Staff members present: Steven Mayer, Development Services Coordinator (via Zoom.com); Chris Christian, Planner; Mitch Banchefsky, City Attorney (via Zoom.com); and Josie Taylor, Clerk (via Zoom.com).

Moved by Mr. Wallace, seconded by Mr. Kirby to approve the April 19, 2021 meeting minutes. Mr. Wallace, yea; Mr. Kirby, yea; Mr. Schell, yea; Ms. Wiltrout, yea. Yea, 4; Nay, 0; Abstain, 0. Motion passed by a 4-0 vote.

Mr. Kirby asked if there were any additions or corrections to the Agenda.

Mr. Christian stated none from staff.

Mr. Wallace noted two applications from the prior month's meeting had been tabled until this evening's meeting but he did not see them on the Agenda.

Mr. Christian noted the applicant had withdrawn the previously tabled applications for CU-7-2021 and CU-9-2021.

Mr. Kirby swore all who would be speaking before the Planning Commission (hereafter, PC) this evening to tell the truth and nothing but the truth.

Mr. Underhill stated he swore to tell the truth and nothing but the truth.

Mr. Kirby asked if there were any persons wishing to speak on items not on tonight's Agenda. (No response.)

Mr. Christian reviewed the process on how to speak on the Zoom meeting if anyone wanted to participate.

TM-44-2021 Text Modification

Text modification to the Walton-62 Commerce District I-PUD zoning district to add standard provisions relating to the variance and appeals(PIDs: 222-000616and 222-000617).

Applicant: New Albany Company LLC, c/o Aaron Underhill, Esq.

Mr. Christian presented the staff report.

Mr. Kirby asked for confirmation there were no Engineering comments.

Mr. Christian stated there were not.

Mr. Kirby asked to hear from the applicant.

Mr. Aaron Underhill, attorney for the applicant, discussed the application.

Mr. Kirby asked if there were any questions or comments from the public. (No response.)

Mr. Wallace stated he had noticed a wording issue in Section 3 and was glad Mr. Christian had mentioned it in his presentation. Mr. Wallace stated he believed that Section 1B should use more gender neutral pronouns.

Mr. Underhill stated that was fine.

Mr. Wallace asked if this was standard language that would be in other PUD zoning text.

Mr. Christian stated yes.

Mr. Wallace asked if these types of variances were decided under the Duncan factors.

Mr. Christian stated they would be evaluated against the Duncan factors.

Mr. Banchevsky stated that was correct.

Mr. Wallace asked Mr. Banchevsky if the language in Section 2 changed the standard due from the Duncan factors.

Mr. Mayer stated it was boilerplate language from the city's codified ordinances and that the Duncan factors will continue to be used. Mr. Mayer stated the only change would be procedural in that now the PC, not the Board of Zoning Appeals, would hear the variances but the evaluation of variances would be under the Duncan factors.

Mr. Kirby asked if that answered the question.

Mr. Wallace asked if Section 2 was necessary.

Mr. Underhill stated he believed the language was from 1998 and had been used since then. Mr. Underhill said it had been interpreted as a recitation of code and there were numerous examples where the Duncan factors had been applied, as Mr. Mayer stated.

Mr. Wallace stated okay.

Mr. Schell stated that if the City was comfortable with the verbiage then he was too.

Moved by Mr. Kirby to accept the staff reports and related documents into the record for TM-44-2021, seconded by Ms. Wilttrout. Upon roll call vote: Mr. Kirby, yea; Ms. Wilttrout, yea; Mr. Schell, yea; Mr. Wallace, yea. Yea, 4; Nay, 0; Abstain, 0. Motion passed by a 4-0 vote.

Moved by Ms. Wilttrout to approve application TM-44-2021 based on the findings in the staff report, with the conditions listed in the staff report, subject to staff approval, seconded by Mr. Schell. Upon roll call: Ms. Wilttrout, yea; Mr. Schell, yea; Mr. Wallace, yea; Mr. Kirby, yea. Yea, 4; Nay, 0; Abstain, 0. Motion passed by a 4-0 vote.

Other Business

Mr. Kirby asked if there was any other business.

Mr. Christian stated no.

Mr. Mayer stated that another application for formal review would occur on June 7, 2021 and asked PC members to let staff know if they would be available for the meeting.

Ms. Wilttrout, Mr. Schell, Mr. Kirby, and Mr. Wallace stated they would be available.

Mr. Schell asked if the development would be age restricted.

Mr. Mayer stated some of it would be.

Poll Members for Comment

None.

Mr. Kirby adjourned the meeting at 7:23 p.m.

Submitted by Josie Taylor.

APPENDIX



Planning Commission Staff Report May 17, 2021 Meeting

WALTON-62 COMMERCE I-PUD ZONING TEXT AMENDMENT

LOCATION: Walton-62 Commerce District I-PUD zoning district at 9999 Johnstown Road and 9887 Johnstown Road (PIDs: 222-000616 and 222-000617).
APPLICANT: New Albany Company LLC, c/o Aaron Underhill, Esq.
REQUEST: PUD Text Amendment
ZONING: I-PUD Infill Planned Unit Development (Walton-62 Commerce District)
STRATEGIC PLAN: Retail
APPLICATION: TM-44-2021

Review based on: Application materials received April 23, 2021.

Staff report completed by Chris Christian, Planner.

I. REQUEST AND BACKGROUND

The applicant requests a modification to the Walton-62 Commerce District I-PUD zoning text to add standard provisions relating to the variance and appeals process within the zoning district. The entitlement process for properties within I-PUD zoning districts require a final development plan application to be reviewed and approved by the Planning Commission in most cases. Due to this, an additional provision is typically included in an I-PUD zoning text that allows the Planning Commission to review variance applications. This provision is currently absent in the text therefore variance applications are required to be heard by the Board of Zoning Appeals.

In order to create a streamlined entitlement process, the applicant and city staff propose to add the requirement in this text stating that variances and appeals are to be heard by the Planning Commission. There are no proposed changes to the permitted uses within the district or development standards.

The Planning Commission reviewed and recommended approval of the rezoning of this zoning district on April 24, 2019 (ZC-6-2019) and City Council approved the rezoning on May 7, 2019 (O-09-2019).

II. SITE DESCRIPTION & USE

The 12.47-acre zoning district is largely undeveloped currently. On March 16, 2020, the Planning Commission reviewed and approved a final development plan application for a Sheetz gas station and convenience store which is currently under construction in the zoning district (FDP-15-2020).

III. NEW ALBANY STRATEGIC PLAN

The zoning district is located within the Retail future land use district and the Engage New Albany Strategic Plan lists the following development standards for this land use:

- a) Parking areas should promote pedestrians by including walkways and landscaping to enhance visual aspects of the development.
- b) Combined curb cuts and cross-access easements are encouraged.
- c) Curb cuts on primary streets should be minimized and well-organized connections should be created within and between individual buildings.
- d) Retail building entrances should connect with pedestrian network and promote connectivity through the site.
- e) Integrate outdoor spaces for food related businesses.

IV. ASSESSMENT

Review is based on the city's Strategic Plan, existing zoning text, and planning, subdivision and zoning regulations, including the design standards. Primary concerns and issues have been indicated below, with needed action or recommended action in underlined text.

Per Codified Ordinance Chapter 1159.08 the basis for approval of an I-PUD shall be:

- a. *That the proposed development is consistent in all respects with the purpose, intent and applicable standards of the Zoning Code;*
- b. *That the proposed development is in general conformity with the Strategic Plan or portion thereof as it may apply;*
- c. *That the proposed development advances the general welfare of the Municipality;*
- d. *That the benefits, improved arrangement and design of the proposed development justify the deviation from standard development requirements included in the Zoning Ordinance;*
- e. *Various types of land or building proposed in the project;*
- f. *Where applicable, the relationship of buildings and structures to each other and to such other facilities as are appropriate with regard to land area; proposed density of dwelling units may not violate any contractual agreement contained in any utility contract then in effect;*
- g. *Traffic and circulation systems within the proposed project as well as its appropriateness to existing facilities in the surrounding area;*
- h. *Building heights of all structures with regard to their visual impact on adjacent facilities;*
- i. *Front, side and rear yard definitions and uses where they occur at the development periphery;*
- j. *Gross commercial building area;*
- k. *Area ratios and designation of the land surfaces to which they apply;*
- l. *Spaces between buildings and open areas;*
- m. *Width of streets in the project;*
- n. *Setbacks from streets;*
- o. *Off-street parking and loading standards;*
- p. *The order in which development will likely proceed in complex, multi-use, multi-phase developments;*
- q. *The potential impact of the proposed plan on the student population of the local school district(s);*
- r. *The Ohio Environmental Protection Agency's 401 permit, and/or isolated wetland permit (if required);*
- s. *The U.S. Army Corps of Engineers 404 permit, or nationwide permit (if required).*

Per Codified Ordinance Chapter 1111.06 in deciding on the change, the Planning Commission shall consider, among other things, the following elements of the case:

- (a) *Adjacent land use.*
- (b) *The relationship of topography to the use intended or to its implications.*
- (c) *Access, traffic flow.*
- (d) *Adjacent zoning.*
- (e) *The correctness of the application for the type of change requested.*
- (f) *The relationship of the use requested to the public health, safety, or general welfare.*

- (g) *The relationship of the area requested to the area to be used.*
- (h) *The impact of the proposed use on the local school district(s).*

V. EVALUATION

1. The applicant requests a modification to the Walton-62 Commerce District I-PUD zoning text to add standard provisions relating to the variance and appeals process for the district. City codified ordinance 1113 establishes that the Board of Zoning Appeals shall hear variances to the development standards contained in the city's zoning ordinance. The modifications allow variances within this specific zoning district to be heard by the Planning Commission. This is the typical I-PUD language present in the majority of PUD texts.
2. City staff and the applicant recently became aware of this standard language is missing. City staff believes the appeals and variance language was meant to be included during the original rezoning but was unintendedly left out.
3. There are no proposed changes to the permitted uses or development standards within the district.
4. The proposed appeals language is consistent with what already exists in city code. The modification clarifies appeals to the interpretation or administration of the zoning text will be heard by the Board of Zoning Appeals. Adding these requirements directly in the zoning text ensures that developers have all relevant information readily available in one zoning text document.
5. The entitlement process for properties within I-PUD zoning districts require a final development plan application to be reviewed and approved by the Planning Commission. Knowing speed to market is desirable by developers, the city and applicant historically have included language allowing variances to be heard by the Planning Commission as an economic development incentive. This provision is currently absent in the text therefore variance applications are required to be heard by the Board of Zoning Appeals by default, creating a longer entitlement process.
6. In order to create a streamlined entitlement process, the applicant proposes to add the requirement in this text stating that variances and appeals are to be heard by the Planning Commission. Through rezoning and final development plan applications, the Planning Commission becomes intimately familiar with the development standards established both in the strategic plan and zoning texts. For this reason, staff and the applicant believe that the Planning Commission is the most appropriate board to evaluate variance applications in this and other I-PUD zoning districts.

VI. RECOMMENDATION

Basis for Approval:

Staff recommends approval of the zoning text modification application. The applicant is not proposing to modify or add any new permitted uses or change any of the development standards. The application simplifies the entitlement process for new developers in this area and matches other approved PUD zoning texts. Due to the Planning Commissions intimate involvement in reviewing zoning change and final development plan applications within PUD zoning districts, staff believes that it is the most appropriate board to evaluate variance requests within this zoning district. This allows the Planning Commission to evaluate final development plans and variance comprehensively. Additionally, adding these provisions provides a streamlined entitlement process for new development by ensuring that one board meeting is necessary.

VII. ACTION

Suggested Motion for TM-44-2021:

Move to approve zoning text modification application TM-44-2021 (conditions of approval may be added).

Approximate site location:



Source: Google Earth



**Planning Commission Staff Report
June 21, 2021 Meeting**

**NEW ALBANY COUNTRY CLUB SECTION 30
FINAL DEVELOPMENT PLAN**

LOCATION: A portion of a property generally located north and west of Lambton Park and south of Brandon Road (PID: 222-004458).
APPLICANT: The New Albany Company LLC, c/o Aaron Underhill, Esq.
REQUEST: Final Development Plan
ZONING: 1998 NACO C-PUD; subarea 1.d
STRATEGIC PLAN: Residential District
APPLICATION: FDP-49-2021

Review based on: Application materials received May 21 and June 7, 2021.

Staff report completed by Chris Christian, Planner.

I. REQUEST AND BACKGROUND

The application is for a final development plan for Section 30 of the New Albany Country Club. This new section includes 36 residential lots and three new streets. The applicant also requests review and approval of a final plat application (FPL-61-2021) that is evaluated under a separate staff report.

The property is zoned C-PUD. C.O. 1159.03 states the process in a C-PUD shall consist of a Comprehensive Plan which shall constitute the rezoning of the property; a Preliminary Development Plan which shall consist of more detailed plans for a subarea or subareas of the Comprehensive Plan; and a Final Development Plan which shall consist of a detailed development and engineering plans for a subarea or portion of a subarea. On March 15, 2021, the Planning Commission approved a preliminary development plan for this same area with conditions (PDP-20-2021).

The Parks and Trails Advisory Board reviewed the application at their June 7, 2021 meeting and recommended approval to the Planning Commission.

II. SITE DESCRIPTION & USE

The 29.87+/- acre development area is part of a larger 105.34+/- acre property. A majority of the 105.34 acre property contains portions of the New Albany Country Club golf course as well as some undeveloped land where residential uses are permitted to be developed. The surrounding land uses include the golf course and residentially zoned and used land.

III. PLAN REVIEW

Staff's review is based on New Albany plans and studies, zoning text, and zoning regulations. Primary concerns and issues have been indicated below, with needed action or recommended action in underlined text. Planning Commission's review authority is found under Chapter 1159.

The Commission should consider, at a minimum, the following (per Section 1159.08):

- (a) *That the proposed development is consistent in all respects with the purpose, intent and applicable standards of the Zoning Code;*

- (b) *That the proposed development is in general conformity with the Strategic Plan/Rocky Fork-Blacklick Accord or portion thereof as it may apply;*
- (c) *That the proposed development advances the general welfare of the Municipality;*
- (d) *That the benefits, improved arrangement and design of the proposed development justify the deviation from standard development requirements included in the Zoning Ordinance;*
- (e) *Various types of land or building proposed in the project;*
- (f) *Where applicable, the relationship of buildings and structures to each other and to such other facilities as are appropriate with regard to land area; proposed density may not violate any contractual agreement contained in any utility contract then in effect;*
- (g) *Traffic and circulation systems within the proposed project as well as its appropriateness to existing facilities in the surrounding area;*
- (h) *Building heights of all structures with regard to their visual impact on adjacent facilities;*
- (i) *Front, side and rear yard definitions and uses where they occur at the development periphery;*
- (j) *Gross commercial building area;*
- (k) *Area ratios and designation of the land surfaces to which they apply;*
- (l) *Spaces between buildings and open areas;*
- (m) *Width of streets in the project;*
- (n) *Setbacks from streets;*
- (o) *Off-street parking and loading standards;*
- (p) *The order in which development will likely proceed in complex, multi-use, multi- phase developments;*
- (q) *The potential impact of the proposed plan on the student population of the local school district(s);*
- (r) *The Ohio Environmental Protection Agency's 401 permit, and/or isolated wetland permit (if required);*
- (s) *The U.S. Army Corps of Engineers 404 permit, or nationwide permit (if required).*

It is also important to evaluate the PUD portion based on the purpose and intent. Per Section 1159.02, PUD's are intended to:

- a. *Ensure that future growth and development occurs in general accordance with the Strategic Plan;*
- b. *Minimize adverse impacts of development on the environment by preserving native vegetation, wetlands and protected animal species to the greatest extent possible*
- c. *Increase and promote the use of pedestrian paths, bicycle routes and other non-vehicular modes of transportation;*
- d. *Result in a desirable environment with more amenities than would be possible through the strict application of the minimum commitment to standards of a standard zoning district;*
- e. *Provide for an efficient use of land, and public resources, resulting in co-location of harmonious uses to share facilities and services and a logical network of utilities and streets, thereby lowering public and private development costs;*
- f. *Foster the safe, efficient and economic use of land, transportation, public facilities and services;*
- g. *Encourage concentrated land use patterns which decrease the length of automobile travel, encourage public transportation, allow trip consolidation and encourage pedestrian circulation between land uses;*
- h. *Enhance the appearance of the land through preservation of natural features, the provision of underground utilities, where possible, and the provision of recreation areas and open space in excess of existing standards;*
- i. *Avoid the inappropriate development of lands and provide for adequate drainage and reduction of flood damage;*
- j. *Ensure a more rational and compatible relationship between residential and non-residential uses for the mutual benefit of all;*
- k. *Provide an environment of stable character compatible with surrounding areas; and*

- l. Provide for innovations in land development, especially for affordable housing and infill development.*

A. Engage New Albany Strategic Plan

The site is located within the Residential District future land use district. The Engage New Albany Strategic Plan lists the following development standards for the Residential District:

- Organically shaped stormwater management ponds and areas should be incorporated into the overall design as natural features and assets to the community.
- Houses should front onto public open spaces and not back onto public parks or streets.
- All or adequate amounts of open space and parkland is strongly encouraged to be provided on-site.
- A hierarchy of open spaces is encouraged. Each development should have at least one open space located near the center of the development. Typically, neighborhood parks range from a half an acre to 5 acres. Multiple greens may be necessary in large developments to provide centrally located greens.
- Adequate amounts of open space and parkland are encouraged to be provided on site.
- Rear or side loaded garages are encouraged. When a garage faces the street, the front façade of the garage should be set back from the front facade of the house.
- Any proposed residential development outside of the Village Center shall have a base density of 1 dwelling unit per gross acre in order to preserve and protect the community's natural resources and support the overall land conservation goals of the community. A transfer of residential density can be used to achieve a gross density of 1 dwelling unit per acre.
- Private streets are at odds with many of the community's planning principles such as: interconnectivity, a hierarchy of street typologies and a connected community. To achieve these principles, streets within residential developments must be public.

The Engage New Albany Strategic Plan recommends the following standards as prerequisites for all development proposals in New Albany:

- Development should meet setback recommendations contained in strategic plan.
- Streets must be public and not gated. Cul-de-sacs are strongly discouraged.
- Parks and open spaces should be provided, publicly dedicated and meet the quantity requirements established in the city's subdivision regulations (i.e. 20% gross open space and 2,400 sf of parkland dedication for each lot).
 - All or adequate amounts of open space and parkland is strongly encouraged to be provided on-site. If it cannot be provided on-site, purchasing and publicly dedicating land to expand the Rocky Fork Metro Park or park space for the Joint Parks District is an acceptable alternative.
- The New Albany Design Guidelines & Requirements for residential development must be met.
- Quality streetscape elements, including an amenity zone, street trees, and sidewalks or leisure
- trails, and should be provided on both sides of all public streets.
- Homes should front streets, parks and open spaces.
- A residential density of 1 dwelling unit (du) per acre is required for single-family residential and a density of 3 du per acre for age restricted housing.
 - Higher density may be allowed if additional land is purchased and deed restricted. This type of density "offset" ensures that the gross density of the community will not be greater than 1 unit per acre. Any land purchased for use as an offset, should be within the NAPLS district or within the metro park zone.
 - 3 du/acre is only acceptable if 100% age restricted. Otherwise, the federal regulations and criteria for subdivisions to qualify as age-restricted must be accounted for when calculating density (i.e. 80% age restricted and 20% non-age restricted).

- Age restriction must be recorded as a deed restriction and included as a requirement in the subdivision's zoning text.

B. Use, Site and Layout

1. The applicant proposes to create a new section of the New Albany Country Club, Section 30 within the 1.d subarea (Lambton Park Central Cluster) of the 1998 NACO C-PUD Comprehensive Plan.
2. Zoning text section 1d.01(1) permits a maximum of 88 single family cluster detached and attached housing types to be developed in the subarea. The applicant proposes to develop 36 units within the subarea and deposit the remaining 52 permitted units into the NACO PUD housing bank on record with the city.
3. Zoning text section 1d.01(8) requires all lots to have frontage and access on a public and/or private right-of-way and this requirement is being met.
4. Zoning text section 1d.01(3) states that the minimum lot width at the building line shall be 50 feet. All of the proposed lots are meeting this requirement.
5. Zoning text section 1d.01(9) states that reasonable and good faith efforts will be made to not back homes onto public rights-of-way and public parks. There are lots situated where homes may back onto the adjacent private, New Albany Country Club golf course and proposed privately owned reserve areas within the subdivision. As proposed, this requirement is being met as the lots are situated to allow homes to front onto public rights-of-way.
6. Zoning text section 1d.01(4) requires the following setbacks:

Perimeter Boundary	Required Setback
Front Yard	15 feet
Rear Yard	10 feet
Side Yard	10 feet for detached homes 0 feet for attached homes

All of the proposed lots are meeting the minimum required setbacks.

C. Access, Loading, Parking

1. As proposed, the site is serviced using a new street created using an existing stub of Baughman Grant and one new curb cut on Lambton Park Street that aligns with Head of Pond Road.
 - a. Zoning text section 1d.02(2)(a) requires cluster street to be 22 feet wide from curb to curb with 40 feet of right-of-way to be provided. In order to address comments and concerns expressed during the preliminary development plan hearing, the applicant proposes a 22-foot paved street at both entrances into this new section in order to deemphasize the street and force traffic to slow down when approaching these intersections. The remainder of the street will be 24 feet wide throughout the rest of the section and 50 feet of right-of-way is being provided for the entire street, meeting the zoning text requirement. For comparison, typical subdivision streets are 26 feet wide based on the city's subdivision regulations. The 22 and 24 foot street sections here appear to be appropriate.
2. The subdivision includes one cul-de-sac street on the northern portion of the site and a one-way loop street on the southeast portion of the site.
 - a. Zoning text section 1d.02(2)(a) requires this cul-de-sac street to be 22 feet wide from curb to curb with 40 feet of right-of-way to be provided. As proposed, the cluster street on the northern portion of the site is proposed to be 22 feet wide from face of curb to face of curb with 50 feet of right-of-way, meeting this requirement.
 - i. The city's subdivision regulations C.O. 1187.08(a)(5) states no cul-de-sac shall exceed six hundred (600) feet in length unless lot widths exceed one hundred (100) feet at building setback lines, then the maximum length shall not exceed one thousand (1,000) feet. This cul-de-sac is approximately 421+/- feet in length.

- b. The one way, loop street shown on the southeast portion of the site is proposed to be 20 feet wide from face of curb to face of curb with 34 feet of right of way.
 - i. The proposed street width matches the design of similar streets in the New Albany Country Club including Coldicott Leys in Ebrington which is a one-way street.
 - ii. The proposed street matches the city subdivision regulation requiring 20 feet of pavement for one-way streets.
3. Zoning text section 1d.02(4) states that on street parking is prohibited on pavement widths of 22 feet and on curvilinear sections of streets measuring 26 feet. The final development plan states that on street parking will be prohibited for all streets that are 22-23 feet wide, however the applicant did not provide the location of no parking signs on the plans. Staff recommends a condition of approval that on street parking be prohibited for all streets less than 24 feet in width and that the applicant provide the locations of no parking signs as part of the private site improvement plan during the permitting process, subject to staff approval.
4. The applicant provided a turn study analysis for larger emergency vehicles that demonstrates successful turn movements.
5. The city engineer has reviewed all proposed streets within the subdivision and is supportive of their design and locations. Additionally, the city engineer states that the new intersection at Lambton Park and Head of Pond Road does as design and submitted does not present any pedestrian safety concerns due to the traffic volumes in the area, sufficient sight distance for both pedestrians and motorists, and the design of the intersection.
 - a. The street network provided accomplishes an important objective contained in the Engage New Albany Strategic Plan by maximizing connectivity and safety of street networks in the city. The strategic plan recommends providing multiple connections to distribute traffic throughout streetway networks and to connect stub streets, like Baughman Grant and the existing Head of Pond stub, in order to improve connectivity and mobility between neighborhoods.
 - b. The applicant provided a memo stating that the final design of the Lambton Park Road and Head of Pond intersection was determined based on several items including the preservation of existing trees, site grading, safety of both pedestrians and motorists and pedestrian connectivity. To accomplish this, the applicant has narrowed the street with at this intersection to calm traffic, added granite cobbles similar to what has been employed in other sections of the country club and established a lower grade to ensure existing tree survivability. The city staff has reviewed the intersection and is supportive of its design.
6. The final development plan also illustrates that the applicant proposes to improve pedestrian connectivity at the new Head of Pond and Lambton Park Road intersection by adding two pedestrian crossings that will allow pedestrians to cross Lambton Park Road on both sides of the street.

D. Architectural Standards

1. The architectural standards for this section have been approved as part of the 1998 NACO C-PUD zoning text. This development will contain custom designed homes and the Community Development Department staff, including the city architect, will review zoning/building permits to enforce the architectural standards of the zoning text. The applicant submitted a memo stating that the existing, Tidewater Georgian architectural vocabulary that is employed throughout the New Albany Country Club will be utilized for this development. Additionally, the applicant states that the development will incorporate a more liberal interpretation of this style, much like what has developed in the Ealy Crossing neighborhood.
2. The existing zoning text contains the same high-quality architectural standards that have made the New Albany Country Club neighborhoods so successful. Many of these existing standards were used to develop the New Albany Design Guidelines and Requirements

- a. The text allows windows to be of traditional themes, requires simulated or true divided light in double hung windows.
- b. Brick, wood siding and composite material such as hardi-plank are permitted exterior building materials.
- c. The text prohibits double bay garage doors and individual garage doors cannot be wider than 9 feet.

E. Parkland, Buffering, Landscaping, Open Space, Screening

1. Per C.O. 1159.07, detailed landscaping plans must be provided for all areas of the final development plan. The landscape plan must include the proposed landscape for all reserve areas and street lawns. The applicant submitted a proposed street tree plan for the subdivision. Staff recommends a condition of approval that the landscape plan for the reserve areas, stormwater basin and entry features be subject to staff approval.
2. Section 1d.03(1)(3)(c) requires the developer to install a four-foot-wide sidewalk along both sides of all streets in the development within the right-of-way. The applicant is largely exceeding this requirement by providing a 5-foot sidewalk and 8-foot-wide leisure trail throughout the development. There is one section on the southwest side of the new Head of Pond intersection where there is no sidewalk present. The applicant states that the reasoning not including pedestrian connectivity along this short section is to maintain existing trees on the site as required by the Planning Commission at the time of rezoning. Staff recommends a condition of approval that the developer explore any possibilities of field locating a sidewalk or leisure trail within this area while being sensitive to existing trees, subject to staff approval.
3. The city subdivision regulations require parkland and open space to be provided as part of the construction of a new subdivision. Zoning text section 1d.04(2) states that land must be dedicated as parks and open space within the subarea.
4. C.O. 1187.15(a) requires 2,400 square feet of parkland to be dedicated per dwelling unit, as part of the development of a new subdivision. Additionally, C.O. 1187.16(a) requires 20% of the gross developed land area to be used as open space. The table below shows the required and proposed amounts of parkland and open space. As noted in the application materials, the applicant intends to offset their shortage of parkland by using the NACO parkland bank credits on record with the city. The amount of open space provided does not meet code requirements. The Parks and Trails Advisory board reviewed the application and recommended approval during their June 7, 2021 meeting. Staff recommends a condition of approval that the applicant use the parkland/open space bank credits to offset the shortage of open space and parkland dedication.

C.O. Requirement	Shown on FDP as	Required (acres)*	Provided (acres)	Difference	Meets Code?
1187.16 Open Space	Reserves	5.974	5.95	-0.024	No
1187.15 Parkland Dedication	Reserves	1.98	0.93	-1.05	No
Total		7.95	6.88	-1.07	No

*Calculations based on 29.87 acres and 36 lots.

5. The final development plan states that all open space and parkland will be owned and maintained by the city. In order to meet code requirements and to be consistent with recently approved subdivisions, staff recommends a condition of approval that:
 - a. Reserves A, B, C, E, F, and G be owned by the city and maintained by the HOA in perpetuity.
 - b. Reserve D be owned and maintained by the HOA in perpetuity. Reserve D contains a wetland and there is no opportunity to develop any amenities and/or

trails within in it in order to meet the environmental regulations of this space. Keeping this space privately owned, to match with its OEPA permits appears appropriate in this case.

6. The applicant does not propose to install any playground equipment within this section of the country club. Section 1d.04(2) of the zoning text states that parks and open spaces will be in the form of neighborhood parks to service the needs of the residents and that the goal is to have some open space area within 1,200 l.f. of all residential units. Additionally, the text states that the developer will use reasonable good faith efforts to accomplish this and if it cannot be achieved will demonstrate a reasonable hardship and what mitigating factors will be made. It appears that all of the homes are within 1,200 l.f. of open space areas. Adjacent sections of the country club include parks such as Lambton Park (1,000+/- feet away) and Tiverton (1,200 +/- feet away) that contain playground amenities.
7. Zoning text section 1d.04(3) states that street trees must be installed on both sides of internal streets at an average rate of one tree every 30 feet. The trees must have a caliper of 2.5 inches. The applicant is meeting this requirement.

F. Lighting & Signage

1. Zoning text section 1d.05(1)(b) requires the typical Village of New Albany gooseneck street lights to be utilized. Zoning text section 1d.06 requires the developer to use the standard city street and regulatory signage. The final development plan states that all regulatory signs will be in accordance with City of New Albany standards and consistent with existing country club communities.

G. Other Considerations

1. The Applicant proposes to erect brick piers at the northern and southern entrances into the subdivision. The pier height is approximately 10' and two of the piers at the northern entrance will be located within the right-of-way. These piers are similar to those approved by the Planning Commission for other sections of the country club.
2. The piers located within the right-of-way do not appear to be located at intersections, therefore should not pose any sight distance visibility conflicts. However, the city engineer and city attorney will have to review the proposal for safety and liability concerns. The city engineer and attorney will determine the appropriate legal mechanism that is necessary for the applicant and the city to execute in order to allow the piers to be located as proposed and staff recommends that this be a condition of approval.
3. The city will not be able to maintain the piers, fences and cobblestone within the right-of-way, therefore the applicant must commit to the maintenance, repair and replacement of these items through an agreement with the city. Similar agreements have been executed for the same items located in different sections of the country club.
4. The boundaries of the development plan conform to the boundaries of the subarea, meeting the intent of the zoning district.

IV. ENGINEER'S COMMENTS

The City Engineer has reviewed the referenced plan in accordance with the engineering related requirements of Code Section 1159.07(b)(3) and provided the following comments. Staff recommends a condition of approval that these comments be addressed, subject to staff approval.

1. Refer to Note E, sheet 1 of 8. Confirm that Reserves are to be maintained by the City.
2. Remove the note at the bottom of sheet 2 of 8 requiring City approval to utilize RCC pavement base.
3. Sheet 3 of 4 shows proposed R/W of 34' near Reserve A. Typical street sections shown on sheet 2 of 8 show no streets with proposed R/W of 34'. Please revise.
4. Sheet 3 and 4 of 8 of the FDP shows 20' pavement widths at the cul-de-sac. Typical street sections shown on sheet 2 of 8 show no pavement widths of 20'. Please revise.
5. We recommend that "No Parking Signs" be added along curved sections of streets.

6. We will evaluate storm water management, sanitary sewer collection and streetway construction related details once construction plans become available

V. RECOMMENDATION

Basis for Approval:

Staff is supportive of the final development plan as it is in conformity with the Residential land use recommendations of the Engage New Albany Strategic Plan. The site is unique as it is surrounded by the golf course on three sides and a wetland on the north side which warrant special design considerations. The applicant has designed this new development to be sensitive and complementary to the established character of the immediate area that provides connectivity for motorists and pedestrians.

There are two existing road stubs at Baughman Grant to the north and Head of Pond to the south. These road stubs were installed to provide connectivity and they should be utilized. Well-networked streets provide shorter, more direct routes between destinations. This increases the efficiency and reliability of the road network and allows for better traffic flow throughout the larger network. The intersections are designed to match other successful intersections within the county club community through the use of narrowed streets, granite cobbles, cross walks and handicapped ramps installed across Lambton Park Road to both east and west side of Head of Pond Road, and vehicular and pedestrian scaled signage to alert motorists and walkers.

Staff recommends approval provided that the Planning Commission finds the proposal meets sufficient basis for approval with the conditions of the approval listed below.

VI. ACTION

Suggested Motion for FDP-49-2021:

Move to approve preliminary development plan application FDP-49-2021 based on the findings in the staff report with the following conditions.

1. On street parking is prohibited for all streets less than 24 feet in width and the applicant must provide the locations of no parking signs as part of the private site improvement plan during the permitting process.
2. The landscape plan for the reserve areas, stormwater basin and entry features is subject to staff approval.
3. The developer must explore any possibilities of field locating a sidewalk or leisure trail along the southwest section of the new street while being sensitive to existing trees, subject to staff approval.
4. The applicant must deduct 1.07 +/- acres of parkland/open space bank credits to offset the shortage of open space and parkland dedication.
5. All open space and parkland, with the exception of reserve D, be owned by the city and maintained by the HOA in perpetuity.
6. The city engineer and attorney will determine the appropriate legal mechanism that is necessary for the applicant and the city to execute in order to allow the piers to be located as proposed.
7. The city engineer comments must be addressed, subject to staff approval.

Approximate Site Location:



Source: Google Earth

MEMORANDUM

Date: June 9, 2021

To: Mr. Chris Christian, Planner

From: Tom Rubey, New Albany Company

Re: New Albany Country Club Section 30

Dear Chris,

In preparation for our meeting with the Planning and Zoning Commission later this month, thought a quick letter to enumerate several items would be helpful.

Alignment and design of the Head of Pond Road extension has been determined, based on several items including; existing trees, site grading, safety of both pedestrians and motorists and pedestrian connectivity. To that end, our application includes a reduction in pavement width, modified material (granite cobbles), as well as pedestrian path connection limited to east side of the street only. Final grade of the road will be set once Engineering Plans have been completed. We anticipate lowering the grade / road within this area, approx. one foot to a foot and a half. Final grade will be established based on best practices to ensure existing tree survivability.

Finally, our goal is to landscape both sides of the road “heavily” with a mixture of large shade and ornamental trees in an effort to create an entrance that feels very private and reduced in scale. Our requests includes working closely with the City Landscape Architects and design team as we finalize these details.

After lengthy discussion about alternative architectural styles and materials, we have landed on continuing the existing architectural vocabulary for this neighborhood, as Tidewater Georgian. We will incorporate a more liberal interpretation of this style, much like what you see in the Ealy Crossing subdivision. This may include use of some stone, painted white or off-white brick homes, and cut stone or wood lintels.



Engineers, Surveyors, Planners, Scientists

June 1, 2021

Mr. Steve Mayer
City of New Albany
Development Department
99 West Main Street
New Albany, OH 43054

Subject: Country Club Section 30 – Environmental Compliance

Dear Mr. Mayer,

This letter serves to inform the City of New Albany of environmental conditions associated with the Country Club Section 30 project, located south of Baughman Grant Road, and west, east, and north of Lambton Park Road, in the City of New Albany, Franklin County, Ohio. The property consists of an agricultural field with a pond, wetlands, stream, and scattered trees.

The property was delineated for Waters of the U.S. in 2016 by the Environmental Department of EMH&T. The property contained an isolated wetland, three jurisdictional wetlands, a pond, and a stream. An Isolated Wetlands Permit was obtained from Ohio EPA in 2017 to impact the isolated wetland, and it was subsequently filled by the New Albany Company (NACO). A permit was also obtained from the U.S. Army Corps of Engineers (USACE) to extend a new road from Baughman Grant into the site and across a wetland and stream. These impacts have not been made by NACO. NACO has recently revised the USACE permit in order to increase the amount of requested impact to the stream and wetland. The permit was issued on April 28 and can be made available upon request.

If you have any questions regarding this information or require additional documentation, please do not hesitate to contact me at (614) 775-4515.

Sincerely,

EVANS, MECHWART, HAMBLETON & TILTON, INC.

Robert F. Milligan
Director of Environmental Services
Principal

Cc: Brian Quackenbush, EMH&T

NOTES

NOTE "A": No determination has been made by the City of New Albany, Ohio as to whether the area proposed to be platted contains area(s) that could be classified as Wetlands by the Army Corps of Engineers. It is the developer's responsibility to determine whether Wetlands exist on the area hereby platted. The City of New Albany, Ohio approval of this Final Development Plan of New Albany Country Club Section 30 does not imply any approval of the site as it may pertain to Wetlands.

NOTE "B": AGRICULTURAL RECOUPMENT: Grantor, being the duly authorized representative of the developer dedicating the property described in this plat, hereby agrees that grantor will indemnify the City of New Albany, Ohio, for and hold it harmless from any agricultural recoupments assessed or levied in the future against the property dedicated herein which result from grantor's conversion of the property from agricultural use.

NOTE "C": All of the area hereby platted are outside of the 0.2% annual chance floodplain as shown on Federal Emergency Management Agency Flood Insurance Rate Map for Franklin, County, Ohio and incorporated Areas, map numbered 39049C0212 K with effective date of June 17, 2008.

NOTE "D": VEHICULAR ACCESS: No vehicular access to be in effect until such time as the public right-of-way is extended by plat or deed.

NOTE "E": Reserves "A"–"F", as designated and delineated hereon, shall be owned and maintained by the City. Reserve "G" will be designated for Parkland use. Landscaping in all reserves shall not obstruct sight distance.

NOTE "F": No fire hydrants shall be located in a radius.

NOTE "G": Street parking shall be restricted to one side, opposite of fire hydrants, on 24' wide streets. Street parking is prohibited on 22' wide streets, either side.

NOTE "H": Design speed is 25 MPH.

NOTE "I": Regulatory signs shall be in accordance with the City of New Albany standards and consistent with existing Country Club Communities. All other signs shall be in accordance with the Landscape Plan.

NOTE "J": No sidewalk shall be located the inside of Reserve "B".

NOTE "K": Street lights and traffic control signage shall be in accordance with the City of New Albany standards and consistent with existing Country Club Communities.

NOTE "L": Any fence or entrance feature that will encroach into the right of way will require a code variance and a right a way permit. Such fences shall conform to a design and be located only at such locations as may be approved by the City of New Albany and the Design Review Committee of the New Albany Country Club Association, Inc. The City of New Albany or their designee shall have the right to remove such fences as necessary to perform any maintenance, repair or replacement of utilities or roadway within such rights-of-way. The City of New Albany or their designee shall have no liability to the owners of such lots for such removal. If the City of New Albany or their designee, so removes any such fences, the Homeowner's Association shall, promptly after completion of work by the City of New Albany or their designee, replace such fences.

NOTE "M" – STREAM/WETLAND PRESERVATION ZONE: The "Stream/Wetland Preservation Zone" shall forever be restricted from development with buildings, structures, and uses and the natural state of said zone shall remain undisturbed. It is also the intent and purpose of the Stream/Wetland Preservation Zone to restrict and forbid any activity or use which would as a natural consequence of such, impede or make more difficult the accomplishment of the purpose of which the said zone was created.

Additional restrictions include:

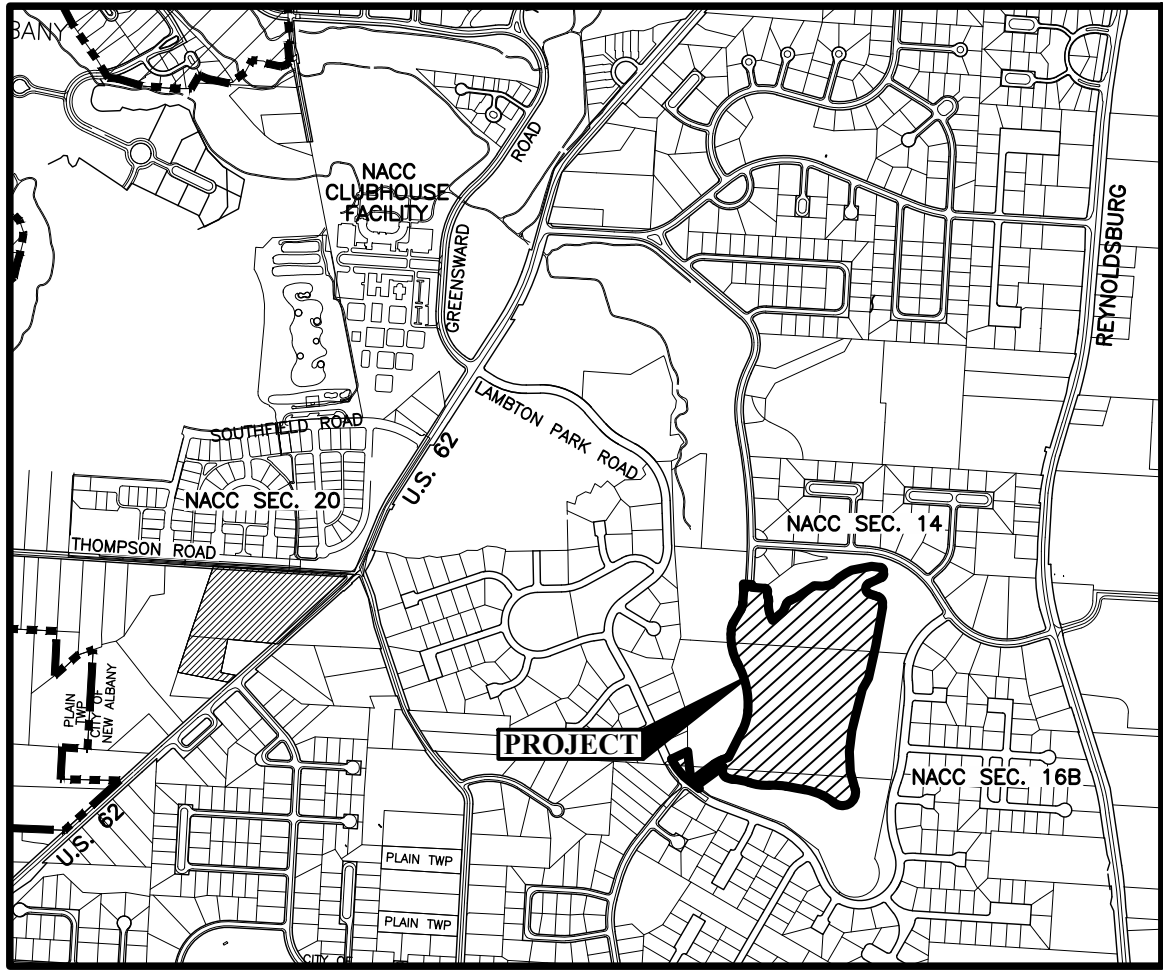
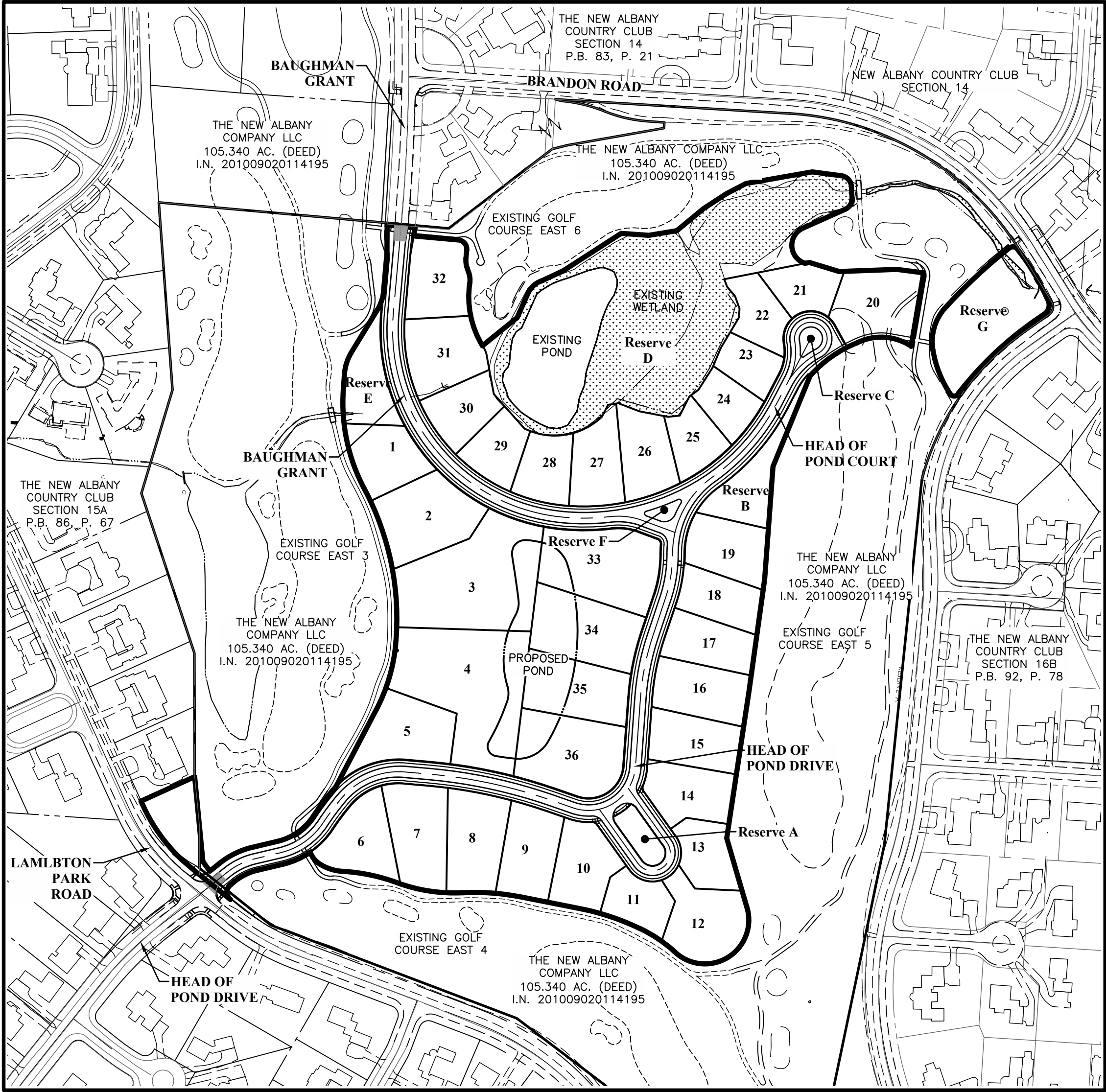
1. No dumping or burning of refuse.
2. No hunting or trapping.
3. Natural resources of the zones shall remain undisturbed and no topsoil, sand, gravel, or rock shall be excavated, removed or graded.
4. Nothing shall be permitted to occur on the premises which would contribute to the erosion of the land and no trees shall be cut or removed, except for the removal of such dead diseased, noxious, or decayed trees or vegetation which may be required for conservation or scenic purposes, or for reasons of public safety. Any and all alterations the the Stream/Wetland Preservation Zone require the approval of the city of New Albany Community Development Department.
5. No private encroachment, such as, but not limited to, dumping of trash or debris, or the installation of any type of recreation or other facility or convenience shall be permitted.

No roadway or any facility of any public utility other than existing roadways and public utility facilities or those outlined in the original plan shall be permitted to be constructed or installed in the premises.

NOTE "O" – DEPRESSED DRIVEWAYS: Depressed driveways are hereby prohibited on all lots in New Albany Country Club Section 28. Nothing herein, however, shall prohibit the construction and use of, if otherwise permitted, a driveway alongside or to the rear of a residential structure.

NOTE "P": Special permanent markers shall be placed along the edge of the "Stream Corridor Protection Zone". Maintenance of such markers shall be the responsibility of the Home Owners Association. The final design and location of the permanent markers shall be subject to staff approval.

CITY OF NEW ALBANY, FRANKLIN COUNTY OHIO
FINAL DEVELOPMENT PLAN
FOR
NEW ALBANY COUNTRY CLUB
SECTION 30
2021



LOCATION MAP
Not to Scale

SHEET INDEX

COVER SHEET	1
STREET TYPICAL SECTIONS	2
SITE PLAN	3-4
UTILITY PLAN	5-6
STREET TREE PLAN	7
TRUCK TURNING EXHIBIT	8

DEVELOPER/OWNER

The New Albany Company
8000 Walton Parkway, Suite 120
New Albany, Ohio 43054
Tel: (614) 939-8000
Fax: (614) 939-8325

Professional Engineer _____ Date _____

Professional Surveyor _____ Date _____

Planning Commission Chair _____ Date _____

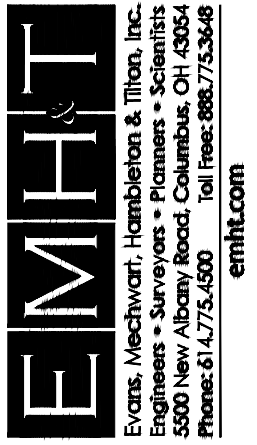
Vice Chair or Designee _____ Date _____

REVISIONS

MARK	DATE	DESCRIPTION



CITY OF NEW ALBANY, FRANKLIN COUNTY OHIO
FINAL DEVELOPMENT PLAN
FOR
NEW ALBANY COUNTRY CLUB
SECTION 30
COVER SHEET



DATE

JUNE 7, 2021

SCALE

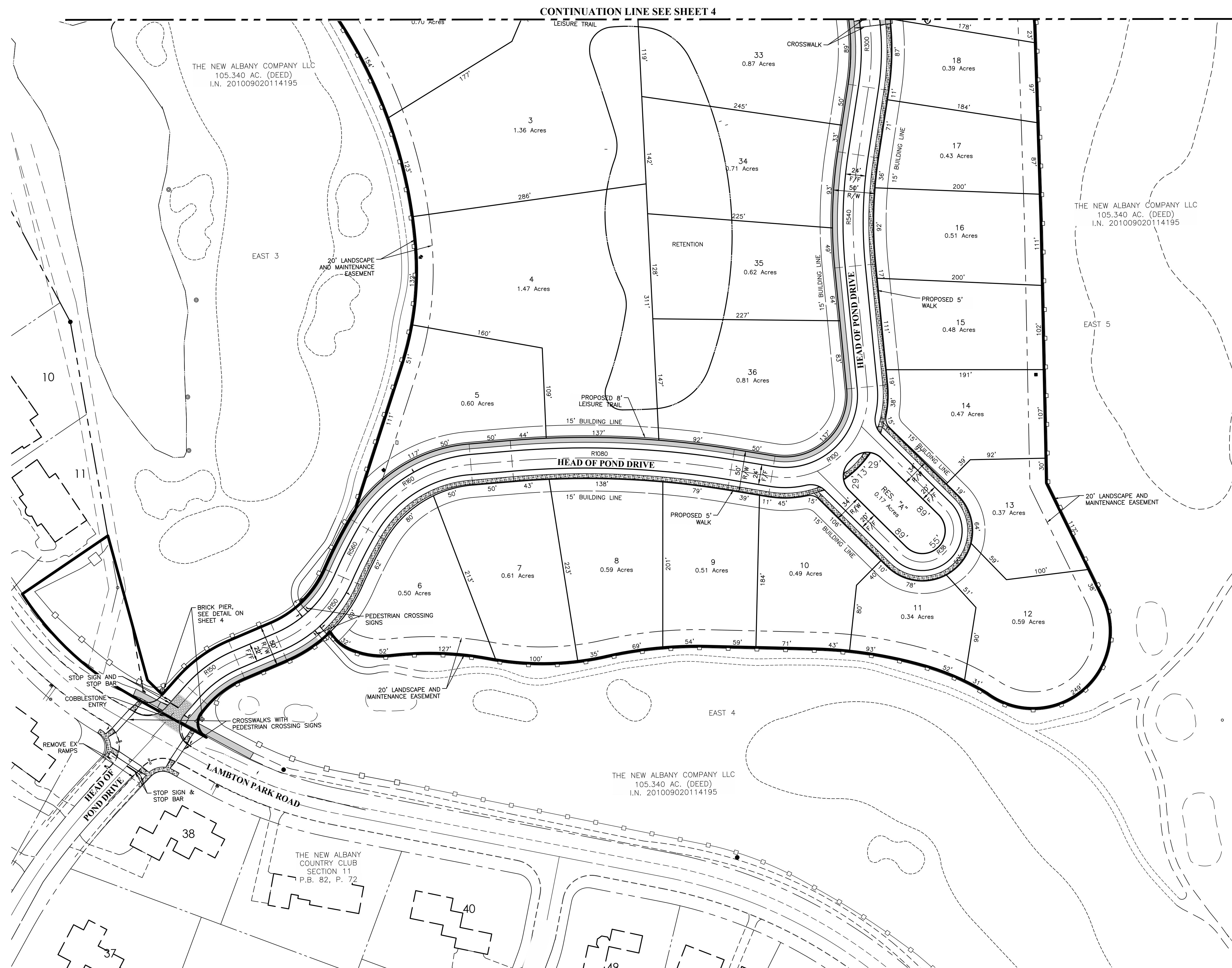
1" = 40'

JOB NO.

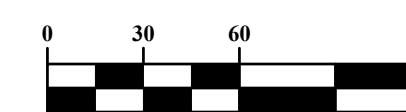
20201095

SHEET

1/8



GRAPHIC SCALE



1 inch = 60 feet

SITE STATISTICS:

TOTAL ACREAGE:	±29.87 ACRES
RIGHT-OF-WAY:	±4.1 ACRES
NET RESIDENTIAL ACREAGE:	±25.8 ACRES
NUMBER OF LOTS:	36
GROSS DENSITY:	11.21 DU/AC
NET DENSITY:	±1.40 DU/AC
PARKLAND DEDICATION REQUIRED: (2,400 S.F. PER UNIT)	±2.0 ACRES
SUBDIVISION COMMON OPEN SPACE REQUIRED: (20% OF GROSS SITE AREA ±29.87 ACRES)	±6.0 ACRES
TOTAL COMMON OPEN SPACE AND PARKLAND DEDICATION REQUIRED:	±8.0 ACRES
PROVIDED:	
RESERVE "A":	±0.17 ACRES
RESERVE "B":	±0.45 ACRES
RESERVE "C":	±0.05 ACRES
RESERVE "D":	±4.80 ACRES
RESERVE "E":	±0.43 ACRES
RESERVE "F":	±0.05 ACRES
RESERVE "G" (PARKLAND):	±0.93 ACRES
TOTAL OPEN SPACE PROVIDED:	±6.88 ACRES
ZONING:	CPUD

DEVELOPMENT STANDARDS:

SETBACKS	
FRONT YARD / BUILDING LINE:	15 FEET
SIDE YARD:	10 FEET (TOTAL OF 20 FEET)
REAR YARD:	10 FEET
MAXIMUM BUILDING HEIGHT:	40 FEET
MINIMUM PARKING SPACES:	2 OFF STREET
(GARAGES INCLUDED)	


NOTE:

NOTE "A": ON-STREET PARKING IS PROHIBITED FOR ALL STREETS THAT ARE 22 FEET WIDE FACE TO FACE OR 23 FEET BACK TO BACK.

NOTE "B": OPEN SPACE TO BE OWNED AND MAINTAINED BY THE CITY

NOTE "C": NEW ALBANY COUNTRY CLUB SECTION 30 WILL BE DESIGNED AND CONSTRUCTED WITH ONE PHASE OF DEVELOPMENT.

LEGEND



5' CONCRETE WALKWAY

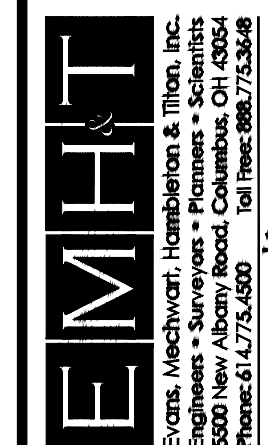
8' LEISURE PATH



THE NEW ALBANY COMPANY

CITY OF NEW ALBANY, FRANKLIN COUNTY, OHIO
FOR
FINAL DEVELOPMENT PLAN

NEW ALBANY COUNTRY CLUB
SECTION 30
SITE PLAN



DATE
JUNE 7, 2021

SCALE

1" = 60'

JOB NO.
20201095

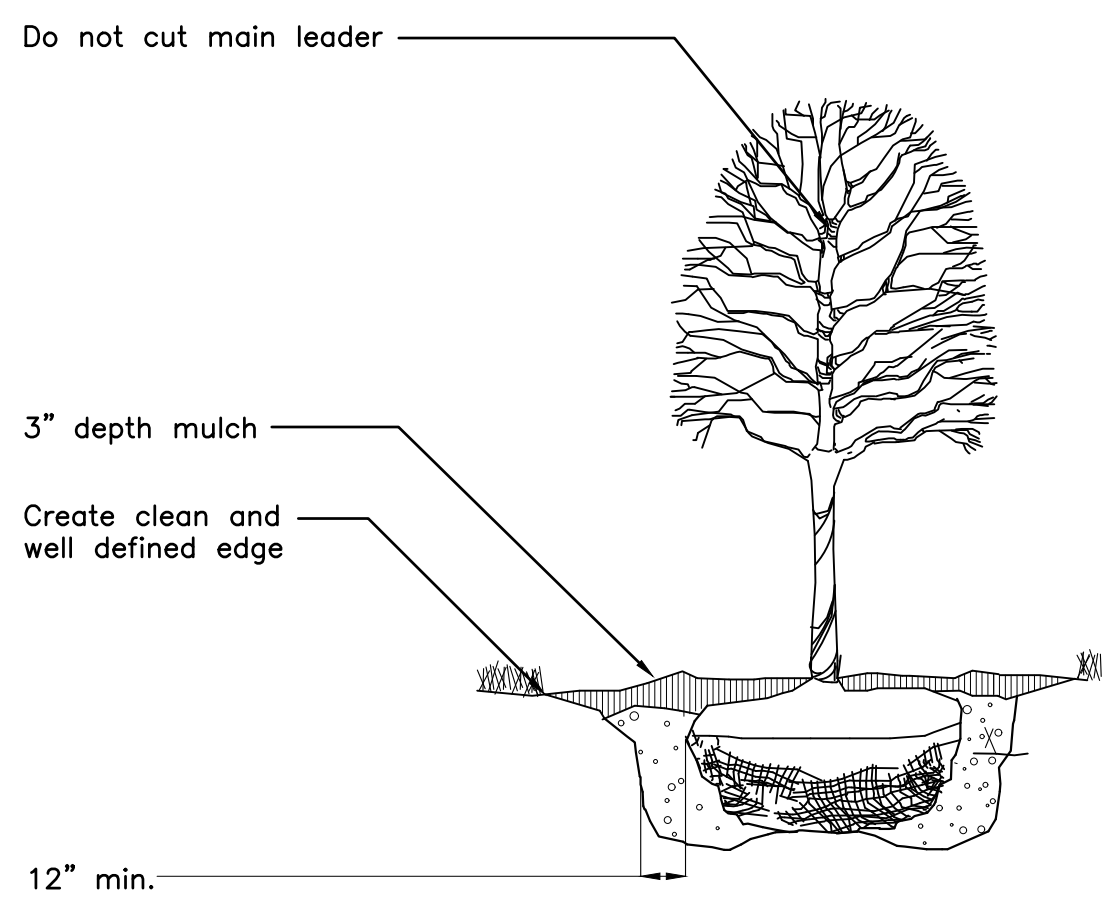
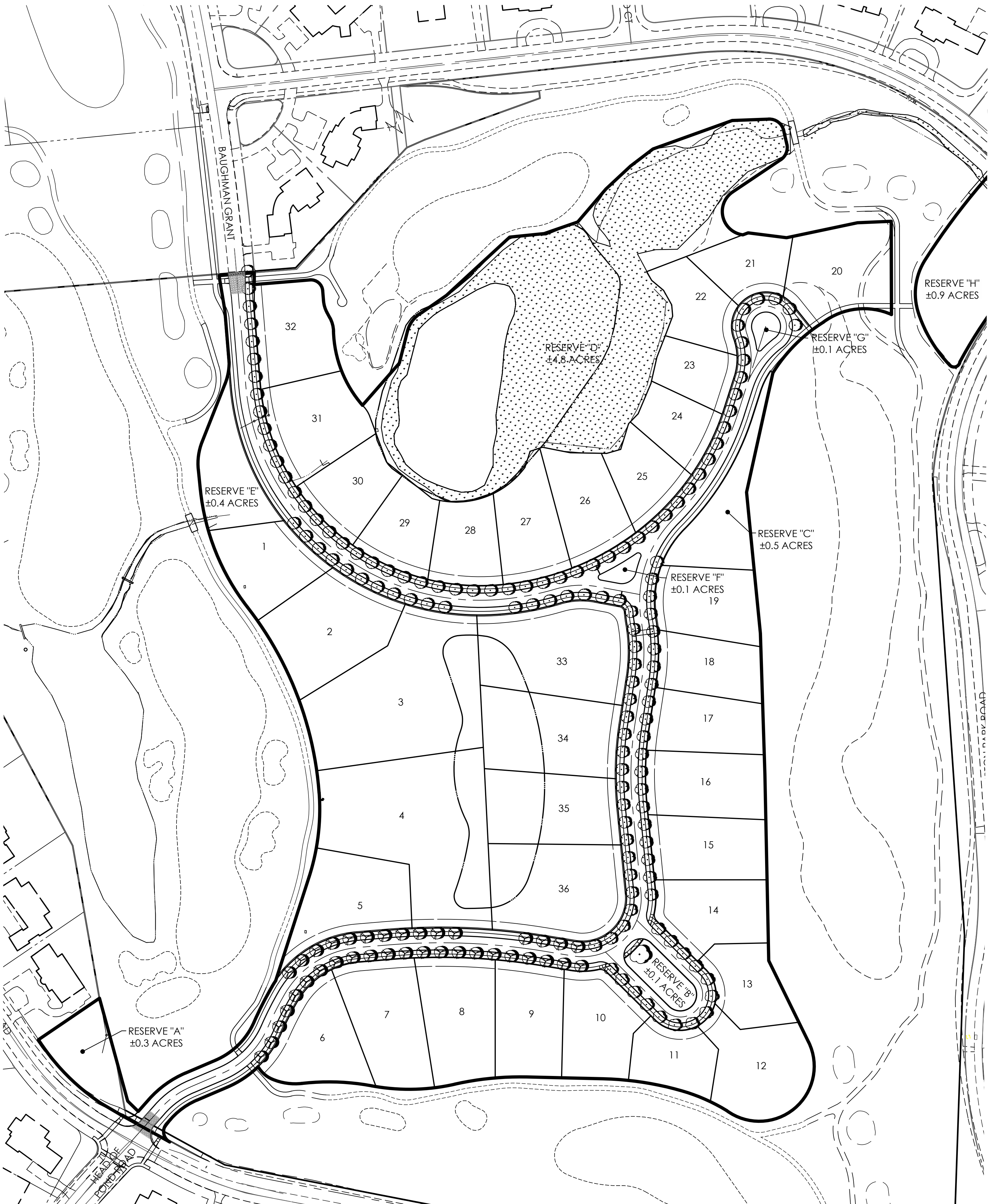
SHEET

3/8

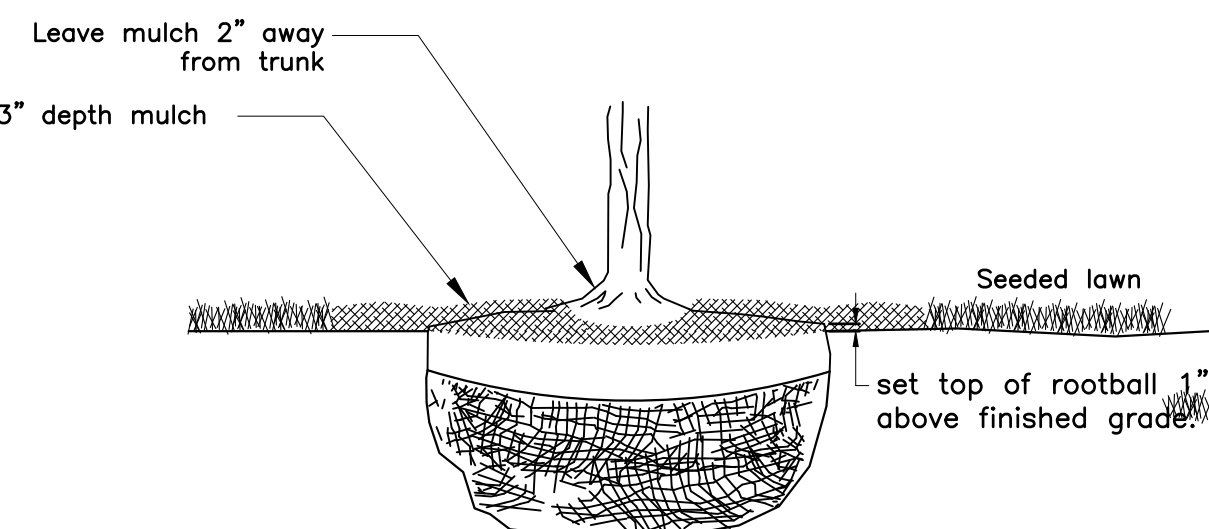
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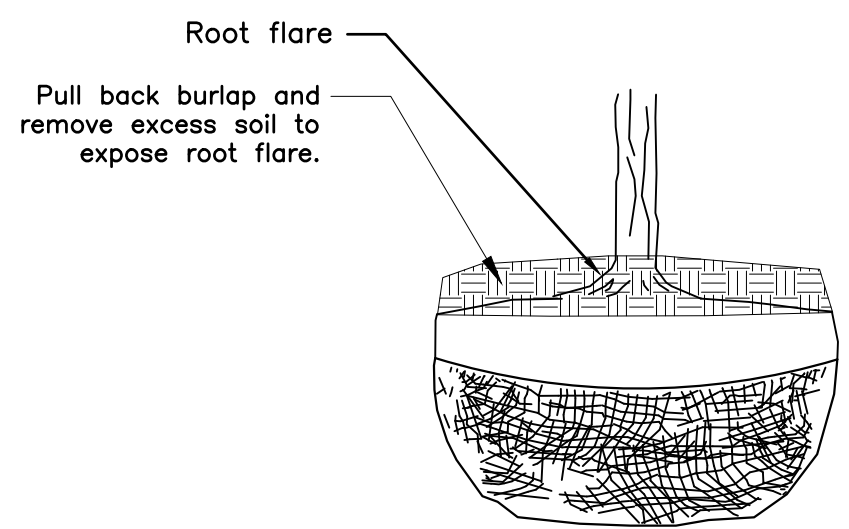
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Deciduous Tree Planting
No Scale



Rootball Setting
No Scale



Rootball Preparation
No Scale

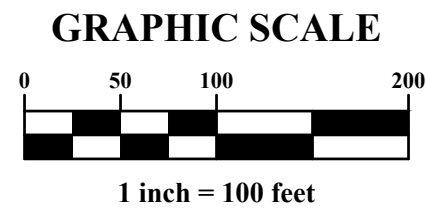
GENERAL NOTES

1. Prior to installation, the landscape contractor shall inspect the general site conditions and verify the subgrade, elevations, utility locations and topsoil provided by general contractor. The landscape contractor shall notify the general contractor of any unsatisfactory conditions and work shall not proceed until such conditions have been corrected and are acceptable to the landscape contractor.
2. All plants shall meet or exceed standards set in the American Standard for Nursery Stock, ANSI Z60.1, current edition. All plants shall equal or exceed the measurements and sizes specified in the schedule.
3. Substitutions shall only be permitted with notification and written approval from the Owner. Substituted material shall be equivalent or greater in size than the specified plant. Substituted plants shall have the same essential characteristics and growth habit of the specified plant.
4. Confirm location of all utilities and subsurface drain lines prior to plant installation.
5. A pre-installation conference shall be conducted prior to planting operations with Owner and Contractor present.
6. Contractor may slightly field adjust plant locations as necessary to avoid utilities. Finished planting beds shall be graded to provide positive drainage.
7. Irrigation system, if applicable, shall be complete and operational prior to landscape planting.
8. Contractor shall repair all lawn areas disturbed during construction with seed and warrant a healthy, weed free lawn prior to project acceptance.
9. Seed all areas within contract limits that are not covered by paving, buildings or planting beds unless otherwise noted. Seeding shall not begin until area has received topsoil and finished grade.
10. Mulch planting beds with shredded hardwood mulch of uniform dark brown color. It shall be free of twigs, leaves, disease, pest or other material unsightly or injurious to plants. Average applied thickness shall be 3" depth. Mulch hedges in a continuous bed.
11. Planting beds shall be covered with pre-emergent herbicide applied at product specified rate unless otherwise noted.
12. Bed edge shall be smooth, consistent, hand trenched 4" deep and "V" shaped unless otherwise noted. All excavated material shall be removed from the bed edge and planting bed.
13. All planting bed edges to be smooth flowing arcs or straight lines as shown on plan. Plant locations and layout of beds shall be located by Contractor and approved by Landscape Architect prior to planting.
14. Install all plants in accordance with planting details and specifications.
15. Parking lot and street trees shall have a clear canopy height of 6' min.
16. Trees shall be placed a minimum of 3' from sidewalks and curbs.
17. Planting Mix shall be blended, manufactured soil consisting of three (3) parts topsoil, one (1) part compost, one (1) part sand. Topsoil shall be per ASTM D5268, ph range of 5.5 to 7, min. 4 percent organic material, free of stones and soil clumps 3/4 inch and larger. Compost shall be yard waste compost from an EPA rated Class IV compost facility or Com-til compost from City of Columbus Department of Public Utilities. Sand shall be per Item ASTM C33. Proprietary manufactured Planting Mix such as Kurtz Bros. Professional Blend or Jones SuperSoil may be used. Submit product data for review by Owner. Place Planting Mix in settled 6 inch lifts.
18. Excavate planting beds to a depth of 6 inches, unless otherwise indicated. Incorporate a 6 inch lift of planting mix into subgrade. Place remaining Planting Mix in settled 6 inch lifts.
19. Planting beds, including mulch, shall be no higher than 6 inches above adjacent grade and shall not impede surface drainage.
20. All trees and shrubs shall be fertilized with controlled release tablets of 20-10-5 composition. Size and number of tablets shall be per manufacturer's instructions.
21. Composition and application rate of lawn fertilizer shall be sufficient to amend soil according to recommendations of a qualified soil testing agency. Submit soil test results and amendment recommendations to Owner. Lawn fertilizer shall be in a dry granular form.
22. Contractor to determine plant list quantities from the plan. Graphic representation on plan supersedes in case of discrepancy with quantities on schedule.
23. Any item or areas damaged during construction shall be repaired or replaced to its original condition at the contractor expense.
24. Contractor shall thoroughly water all plants at time of installation and as needed until project acceptance by owner. Contractor shall guarantee all plants installed (except annuals) for one full year from date of acceptance by the Owner. All plants shall be alive and at a vigorous rate of growth at the end of the guarantee period.
25. All annuals to be provided by Contractor from available seasonal stock.
26. Lawn seed mix shall proportioned by weight as follows: 10 percent NuBlue or Blue Chip Kentucky Bluegrass; 10 percent Caddieshack or GoalKeeper Perennial Ryegrass; 80 percent Quest, Inferno, Arid 3 and/or Pixie Tall Fescue (select 2). Sodded lawns shall match seeded lawns.
27. Lawn seed shall not have less than 95 percent germination, not less than 85 percent pure seed, and not more than 0.5 percent weed seed.

PLANT SCHEDULE STREET TREE

STREET TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
	AS	68	Acer miyabei 'State Street'	State Street Miyabei Maple	3" Cal.	B&B
	AR	58	Acer rubrum 'Autumn Blaze'	Autumn Blaze Red Maple	3" Cal.	B&B
	QR	35	Quercus rubra	Red Oak	3" Cal.	B&B
	TB	24	Tilia americana 'Boulevard'	Boulevard American Linden	3" Cal.	B&B
	TC	35	Tilia cordata 'Greenspire'	Greenspire Littleleaf Linden	3" Cal.	B&B

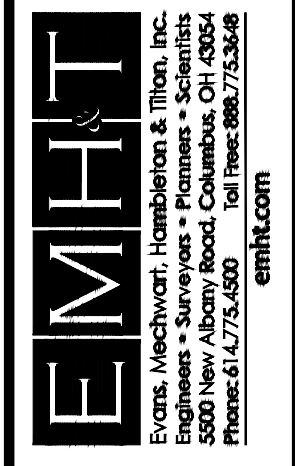
Note: Street Tree shall be planted 30' O.C. within the tree lawn. All street trees shall be planted a minimum of 15' from all fire hydrants and utility poles.
Street Tree size and type subject to change based on size, availability, etc.



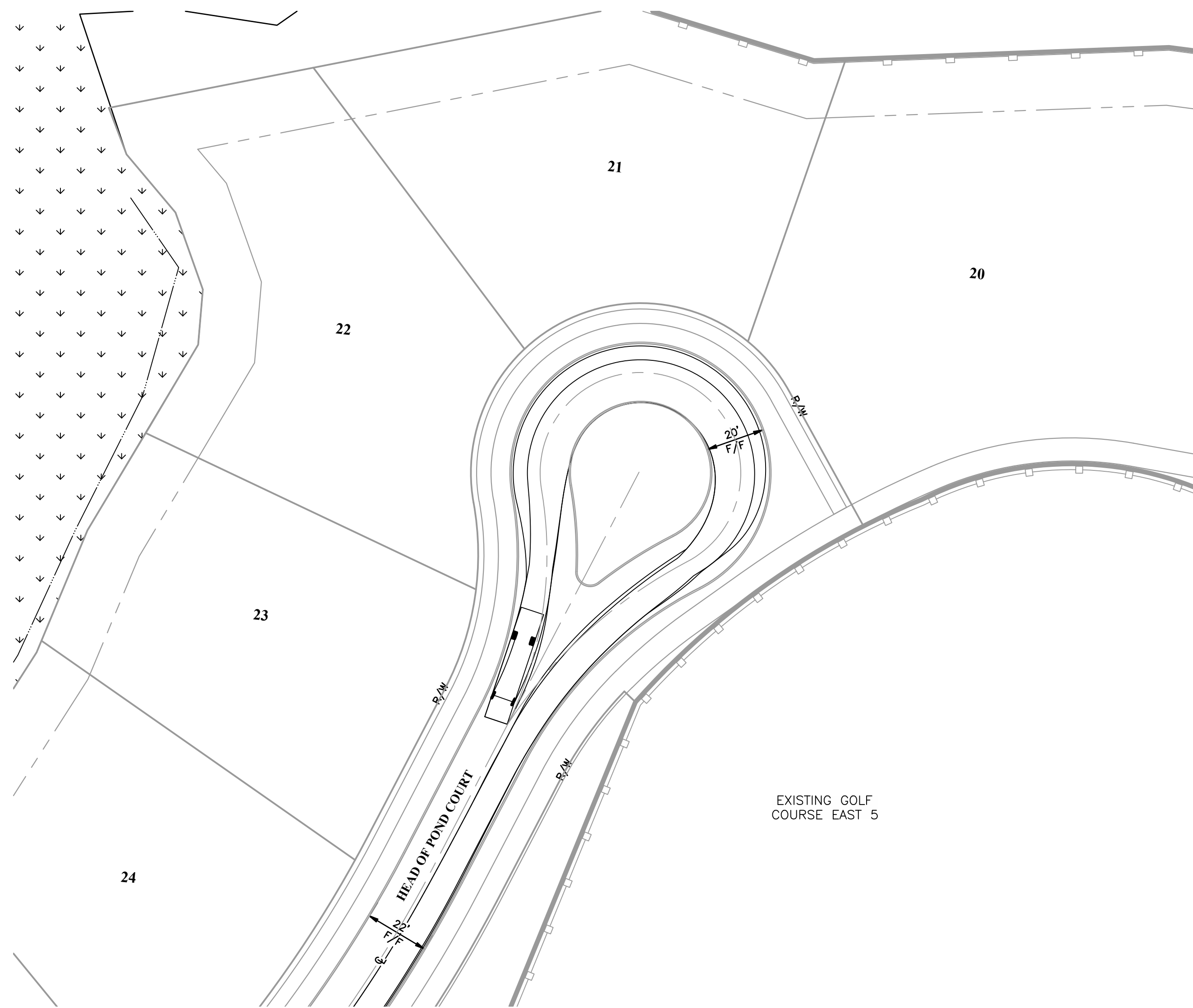
REVISIONS	
MARK	DATE



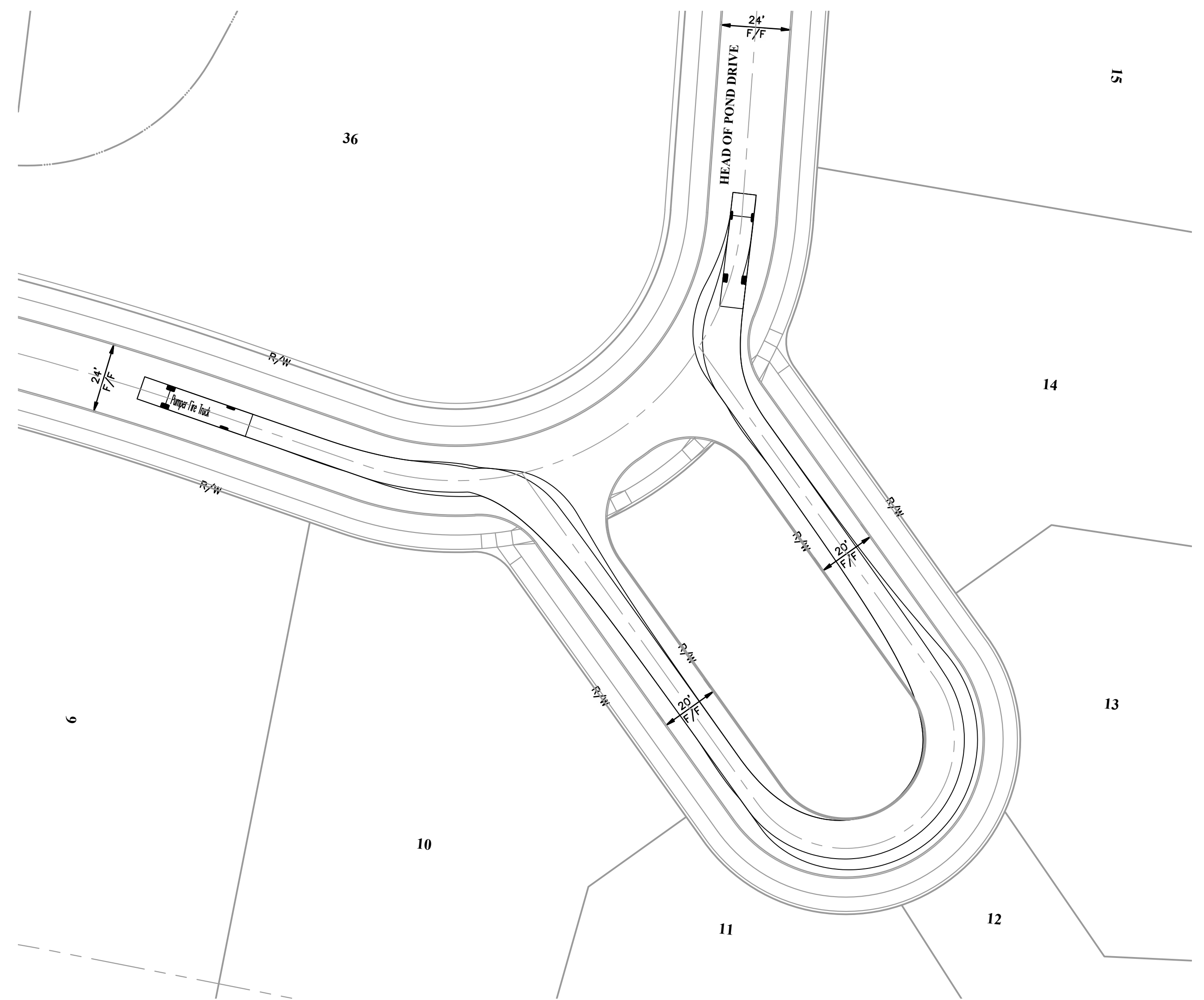
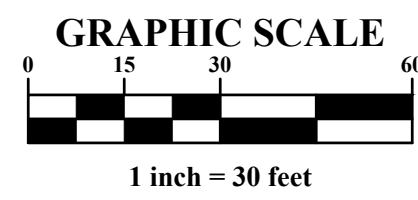
FINAL DEVELOPMENT PLAN
FOR
NEW ALBANY COUNTRY CLUB
SECTION 30
STREET TREE PLAN



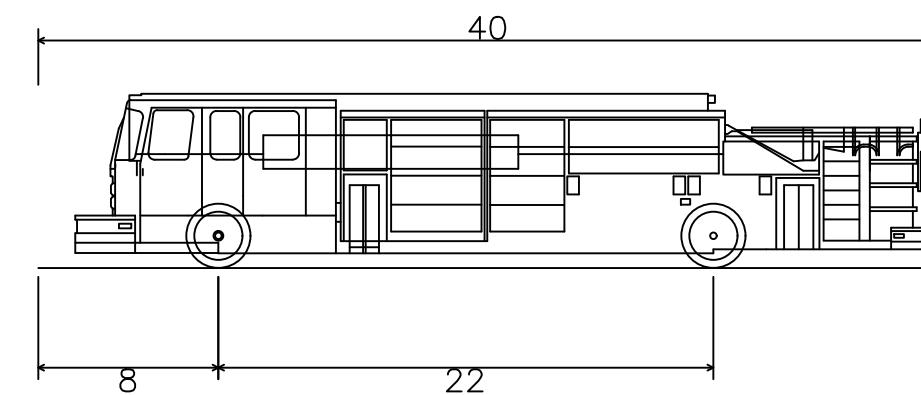
DATE
JUNE 7, 2021
SCALE
1" = 100'
JOB NO.
20201095
SHEET



TRUCK TURNING EXHIBIT
Scale: 1"=30'



TRUCK TURNING EXHIBIT
Scale: 1"=30'



Pumper Fire Truck	
Overall Length	40.000ft
Overall Width	8.167ft
Overall Body Height	7.745ft
Min Body Ground Clearance	0.656ft
Track Width	8.167ft
Lock-to-lock time	5.00s
Max Wheel Angle	45.00°

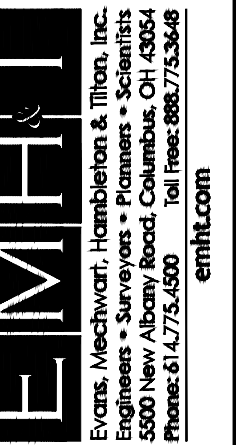
PRELIMINARY
.....
**NOT TO BE USED FOR
CONSTRUCTION**

PLAN SET DATE
JUNE 7, 2021

[illegible]

THE NEW ALBANY COMPANY

**CITY OF NEW ALBANY, FRANKLIN COUNTY OHIO
FINAL DEVELOPMENT PLAN
FOR
NEW ALBANY COUNTRY CLUB
SECTION 30
TRUCK TURNING EXHIBIT**



DATE
JUNE 7, 2021

SCALE
1" = 40'

JOB NO.
20201095

SHEET
8/8



Planning Commission Staff Report
June 21, 2021 Meeting

NEW ALBANY COUNTRY CLUB SECTION 30
FINAL PLAT

LOCATION: A portion of a property generally located north and west of Lambton Park and south of Brandon Road (PID: 222-004458).
APPLICANT: The New Albany Company LLC, c/o Aaron Underhill, Esq.
REQUEST: Final Plat
ZONING: 1998 NACO C-PUD; subarea 1.d
STRATEGIC PLAN: Residential District
APPLICATION: FPL-61-2021

Review based on: Application materials received February 16 and 26, 2021.

Staff report completed by Chris Christian, Planner.

I. REQUEST AND BACKGROUND

The application is for a final plat for Section 30 of the New Albany Country Club. The plat includes 36 residential lots, seven reserves and three new roads.

II. SITE DESCRIPTION & USE

The 29.87+/- acre development area is part of a larger 105.34+/- acre property. A majority of the 105.34 acre property contains portions of the New Albany Country Club golf course as well as some undeveloped land where residential uses are permitted to be developed. The surrounding land uses include the golf course and residentially zoned and used land.

III. PLAN REVIEW

Planning Commission's review authority of the preliminary plat is found under C.O. Section 1187. The applicant must return to the Planning Commission for review and approval of a final plat. Primary concerns and issues have been indicated below, with needed action or recommended action in underlined text.

- The final plat follows the proposed New Albany Country Club Section 30 final development plan. The plat shows 36 residential lots to be developed. The proposed lot layout and dimensions match what is shown on the final development plan and meets the requirements of the zoning text.
- This phase of the plat contains seven (7) reserve areas shown as reserves A, B, C, D, E, F and G on the plat with a total acreage of 6.28 +/- acres. According to the plat notes, all of the proposed reserve areas will be used as open space for the subdivision. The plat states that the City of New Albany will own and maintain all reserve areas. In order to meet code requirements and to be consistent with recently approved subdivisions, staff recommends a condition of approval that:
 - Reserves A, B, C, E, F and G totaling 1.48 +/- acres be owned by the city and maintained by the HOA in perpetuity.
 - Reserve D totaling 4.8 +/- acres be owned maintained by the HOA in perpetuity. Reserve D contains a wetland and there is no opportunity to develop any amenities and/or trails within in it in order to meet the environmental regulations of this space. C.O. 1187.16(b) states that all publicly and privately-owned parks and open space must be accessible by

- roadway or public access easement. Additionally, maintaining the ownership of the reserve by the HOA will ensure it makes the USACE and Ohio EPA issued permits.
- The plat will create three (3) new publicly dedicated streets totaling 4.27 +/- acres: .
 - Head of Pond Drive with 50 feet of right-of-way that connects to the Head of Pond Road intersection. An extension of the existing stub of Baughman Grant to a new curb cut on Lambton Park Road that aligns with Head of Pond Drive with 50 feet of right-of-way.
 - One new cluster public street on the north side of the development (Head of Pond Court) with 50 feet of right-of-way.
 - One new one-way loop public street as part of Head of Pond Drive on the southeast side of the development with a pavement width of 20 feet and 34 feet of right-of-way.
 - Proposed developer utility and proposed public utility easements are shown on the plans.
 - The final plat shows a 20 foot landscape and maintenance easement on the rear of the lots that back onto the private golf course. Staff recommends a condition of approval that a note be added to the plat to outline the intent and purpose of this private easement. Staff recommends a condition of approval this note be added, subject to staff approval.
 - Per the city's subdivision regulations, C.O. 1187.04, all new streets shall be named and shall be subject to the approval of the Planning Commission. The applicant proposes to continue the names of Baughman Grant and Head of Pond Drive. The new cluster street at the northeastern portion of the site will be named Head of Pond Court.
 - The text appropriately shows a 15 foot front yard setback along all the lots as required by the zoning text.
 - Zoning text section 1d.01(3) states that the minimum lot width at the building line shall be 50 feet. All of the proposed lots are meeting this requirement.
 - The city's subdivision regulations C.O. 1187.08(a)(5) states no cul-de-sac shall exceed six hundred (600) feet in length unless lot widths exceed one hundred (100) feet at building setback lines, then the maximum length shall not exceed one thousand (1,000) feet. This cul-de-sac is 421 feet in length.
 - C.O. 1187.04(d)(4) and (5) requires 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 and to the U.S. Army Corps of Engineers in compliance with Section 404 of the Clean Water Act. The applicant has submitted documentation that demonstrates the appropriate permits have been obtained.
 - The intersection of Lambton Parkway and Head of Pond Drive does not match the final development plan since the centerline of Head of Pond Drive and Head of Pond Road don't align. The roads must align to ensure safe and appropriate turning for vehicles. Staff recommends a condition of approval that the plat is revised to show the centerline of Head of Pond Drive and Head of Pond Road aligned subject to staff approval.

IV. ENGINEER'S COMMENTS

The City Engineer has reviewed the referenced plan in accordance with the engineering related requirements of Code Section 1159.07(b)(3) and provided the following comments. Staff recommends a condition of approval that these comments be addressed, subject to staff approval.

1. In accordance with code sections 1159.07 (b)(2) J and K, we recommend that the applicant provide documentation indicating that all OEPA and ACOE permitting requirements have been obtained.
2. We will evaluate storm water management, sanitary sewer collection and roadway construction related details once construction plans become available

V. RECOMMENDATION

Basis for Approval:

The final plat is generally consistent with the final development plan and meets code requirements.

VI. ACTION

Suggested Motion for FPL-61-2021:

Move to approve preliminary plat application FPL-61-2021 with the following conditions.

1. Reserves A, B, C, E, F and G totaling 1.48 +/- acres be owned by the city and maintained by the HOA in perpetuity.
2. Reserve D totaling 4.8 +/- acres be owned maintained by the HOA in perpetuity.
3. The plat is revised to show the centerline of Head of Pond Drive and Head of Pond Road be aligned subject to staff approval.
4. The city engineer comments must be addressed, subject to staff approval.
5. Approval of the final plat is contingent upon the approval of the final development plan for this development.
6. A note be added to the plat to outline the intent and purpose of the 20 foot landscape and maintenance private easement, subject to staff approval.

Approximate Site Location:



Source: Google Earth

NEW ALBANY COUNTRY CLUB SECTION 30

Situated in the State of Ohio, County of Franklin, City of New Albany, and in Quarter Township 3, Township 2, Range 16, United States Military Lands, containing 29.869 acres of land, more or less, said 29.869 acres being comprised of a resubdivision of Reserve "C" of the subdivision entitled "The New Albany Country Club Section 11", of record in Plat Book 82, Page 72, a resubdivision of Reserve "C" of the subdivision entitled "The New Albany Country Club Section 15A", of record in Plat Book 86, Page 67, said Reserves being conveyed to **THE NEW ALBANY COUNTRY CLUB COMMUNITY ASSOCIATION, INC.** by deed of record in Instrument Number 200406080131113, and part of that tract of land conveyed to **THE NEW ALBANY COMPANY LLC** by deed of record Instrument Number , Recorder's Office, Franklin County, Ohio.

The undersigned, **THE NEW ALBANY COUNTRY CLUB COMMUNITY ASSOCIATION, INC.**, an Ohio not-for-profit corporation, by **BRENT B. BRADBURY**, Treasurer, and **THE NEW ALBANY COMPANY LLC**, a Delaware limited liability company, by **BRENT B. BRADBURY**, Chief Financial Officer, owners of the lands platted herein, duly authorized in the premises, do hereby certify that this plat correctly represents their "**NEW ALBANY COUNTRY CLUB SECTION 30**", a subdivision containing Lots numbered 1 to 36, both inclusive, and areas designated as Reserve "A", Reserve "B", Reserve "C", Reserve "D", Reserve "E", Reserve "F" and Reserve "G", do hereby accept this plat of same and dedicate to public use, as such, all of Baughman Grant, Head of Pond Court and Head of Pond Drive.

Easements are hereby reserved in, over and under areas designated on this plat as "Easement" or Drainage Easement. Each of the aforementioned designated easements permit the construction, operation and maintenance of all public and quasi-public utilities above, beneath, and on the surface of the ground and, where necessary, for the construction, operation and maintenance of service connections to all adjacent lots and lands and for storm water drainage. No building shall be constructed in any area over which easements are hereby reserved. Within those areas designated "Drainage Easement" on this plat, an additional easement is hereby reserved for the purpose of constructing, operating and maintaining major storm water drainage swales and/or other above ground storm water drainage facilities. No above grade structures, dams or other obstructions to the flow of storm water runoff are permitted within Drainage Easement areas as delineated on this plat unless approved by the City of New Albany Engineer.

In Witness Whereof, **BRENT B. BRADBURY**, Treasurer of **THE NEW ALBANY COUNTRY CLUB COMMUNITY ASSOCIATION, INC.**, has hereunto set his hand this _____ day of _____, 20__.

Signed and Acknowledged
In the presence of: **THE NEW ALBANY COUNTRY CLUB COMMUNITY ASSOCIATION, INC**

By _____
BRENT B. BRADBURY,
Treasurer

STATE OF OHIO
COUNTY OF FRANKLIN ss:

Before me, a Notary Public in and for said State, personally appeared **BRENT B. BRADBURY**, Treasurer of **THE NEW ALBANY COUNTRY CLUB COMMUNITY ASSOCIATION, INC.**, who acknowledged the signing of the foregoing instrument to be his voluntary act and deed and the voluntary act and deed of said **THE NEW ALBANY COUNTRY CLUB COMMUNITY ASSOCIATION, INC.**, for the uses and purposes expressed herein.

In Witness Whereof, I have hereunto set my hand and affixed my official seal this _____ day of _____, 20__.

My commission expires _____
Notary Public, _____ State of Ohio

In Witness Whereof, **BRENT B. BRADBURY**, Chief Financial Officer of **THE NEW ALBANY COMPANY LLC**, has hereunto set his hand this _____ day of _____, 20__.

Signed and Acknowledged
In the presence of: **THE NEW ALBANY COMPANY LLC**

By _____
BRENT B. BRADBURY,
Chief Financial Officer

STATE OF OHIO
COUNTY OF FRANKLIN ss:

Before me, a Notary Public in and for said State, personally appeared **BRENT B. BRADBURY**, Chief Financial Officer of **THE NEW ALBANY COMPANY LLC**, who acknowledged the signing of the foregoing instrument to be his voluntary act and deed and the voluntary act and deed of said **THE NEW ALBANY COMPANY LLC** for the uses and purposes expressed herein.

In Witness Whereof, I have hereunto set my hand and affixed my official seal this _____ day of _____, 20__.

My commission expires _____
Notary Public, _____ State of Ohio

Approved this _____ Day of _____
20__

Mayor, _____ New Albany, Ohio

Approved this _____ Day of _____
20__

City Engineer, _____ New Albany, Ohio

Approved this _____ Day of _____
20__

Council Representative to Planning Commission, _____ New Albany, Ohio

Approved this _____ Day of _____
20__

Chairperson, Planning Commission, _____ New Albany, Ohio

Approved this _____ Day of _____
20__

Finance Director, _____ New Albany, Ohio

Approved and accepted by Resolution No. _____, passed _____, 20__, by the Council for the City of New Albany, Ohio. Approval of this plat shall become null and void unless recorded prior to _____, 20__.

Transferred this ____ day of _____,
20__.

Auditor, _____ Franklin County, Ohio

Deputy Auditor, _____ Franklin County, Ohio

Filed for record this ____ day of _____,
20__ at _____ M. Fee \$ _____

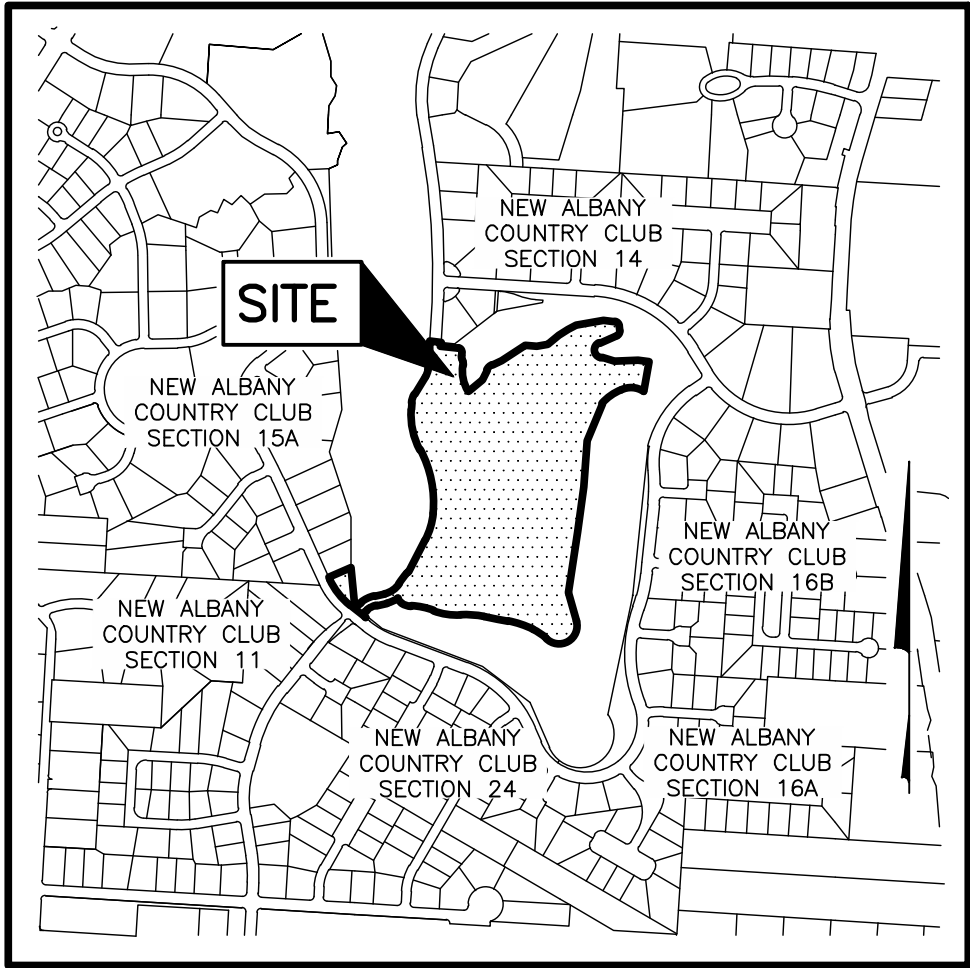
Recorder, _____ Franklin County, Ohio

File No. _____

Recorded this ____ day of _____,
20__.

Deputy Recorder, _____ Franklin County, Ohio

Plat Book _____, Pages _____



LOCATION MAP AND BACKGROUND DRAWING

NOT TO SCALE

SURVEY DATA:

BASIS OF BEARINGS: The bearings shown hereon are based on the same meridian as the bearings shown on the subdivision plat entitled "New Albany Country Club Section 6", of record in Plat Book 76, Pages 54 and 55, Recorders Office, Franklin County, Ohio. On said plat of record, a portion of the centerline of Yantis Drive is shown as having a bearing of North 12°54' 44" East.

SOURCE OF DATA: The sources of recorded survey data referenced in the plan and text of this plat are the records of the the Recorder's Office, Franklin County, Ohio.

IRON PINS: Iron pins, where indicated hereon, unless otherwise noted, are to be set and are iron pipes, thirteen-sixteenths inch inside diameter, thirty inches long with a plastic plug placed in the top end bearing the initials EMHT INC.

PERMANENT MARKERS: Permanent markers, where indicated hereon, are to be one-inch diameter, thirty-inch long, solid iron pins, are to be set to monument the points indicated and are to be set with the top end flush with the surface of the ground and then capped with an aluminum cap stamped EMHT INC. Once installed, the top of the cap shall be marked (punched) to record the actual location of the point. These markers shall be set following the completion of the construction/installation of the street pavement and utilities and prior to the City of New Albany, Ohio's acceptance of these infrastructure improvements. The New Albany, Ohio, Municipal Engineer shall be notified in writing when the markers are in place.

SURVEYED & PLATTED
BY



We do hereby certify that we have surveyed the above premises, prepared the attached plat, and that said plat is correct. All dimensions are in feet and decimal parts thereof.

- = Iron Pin (See Survey Data)
- = MAG Nail to be set
- ⊗ = Permanent Marker (See Survey Data)

By _____ Date _____
Professional Surveyor No. 7865

NEW ALBANY COUNTRY CLUB
SECTION 30

NOTE "A": No determination has been made by the City of New Albany, Ohio as to whether the area proposed to be platted contains areas that could be classified as wetlands by the Army Corps of Engineers. It is the developer's responsibility to determine whether wetlands exist on the area hereby platted. The City of New Albany, Ohio approval of this plat of "New Albany Country Club Section 30" does not imply any approval of the site as it may pertain to wetlands.

NOTE "B": At the time of platting, the land being platted as New Albany Country Club Section 30 is in Zone X (areas determined to be outside of the 0.2% annual chance floodplain). As said Zone is designated and delineated on the FEMA Flood insurance rate map for Franklin County, Ohio, and Incorporated areas map number 39049C0212K with effective date of June 17, 2008.

NOTE "C" - DEPRESSED DRIVEWAYS: Depressed driveways are hereby prohibited on all lots in New Albany Country Club Section 30. Nothing herein, however, shall prohibit the construction and use of, if otherwise permitted, a driveway alongside or to the rear of a residential structure.

NOTE "D" - AGRICULTURAL RECOUPMENT: Grantor, being the duly authorized representative of the developer dedicating the property described in this plat, hereby agrees to indemnify the City of New Albany for, and hold it harmless from, any agricultural recoupments assessed or levied in the future against the property dedicated herein, which result from grantor's conversion of the property from agricultural use.

NOTE "E" - ACREAGE BREAKDOWN: New Albany Country Club Section 30 is comprised of the following Franklin County Parcel Numbers:

222-001668	0.154 Ac.
222-002054	0.196 Ac.
222-004458	29.519Ac.

NOTE "F" - ACREAGE BREAKDOWN:

Total acreage:	29.869 Ac.
Acreage in right-of-way:	4.272 Ac.
Acreage in lots:	19.411 Ac.
Acreage in reserves:	6.186 Ac

NOTE "G": Reserves A-E as designated and delineated hereon, shall be owned and maintained by the City. Reserve "G" wo; be designated for Parkland use. Landscaping in all reserve shall not obstruct site distances.

NOTE "H" - WETLAND PRESERVATION ZONE: The "Wetland Preservation Zone" shall forever be restricted from development with buildings, structures, and uses and the natural state of said zone shall remain undisturbed. It is also the intent and purpose of the Stream/Wetland Preservation Zone to restrict and forbid any activity or use which would as a natural consequence of such, impede or make more difficult the accomplishment of the purpose of which the said zone was created.

Additional restrictions include:

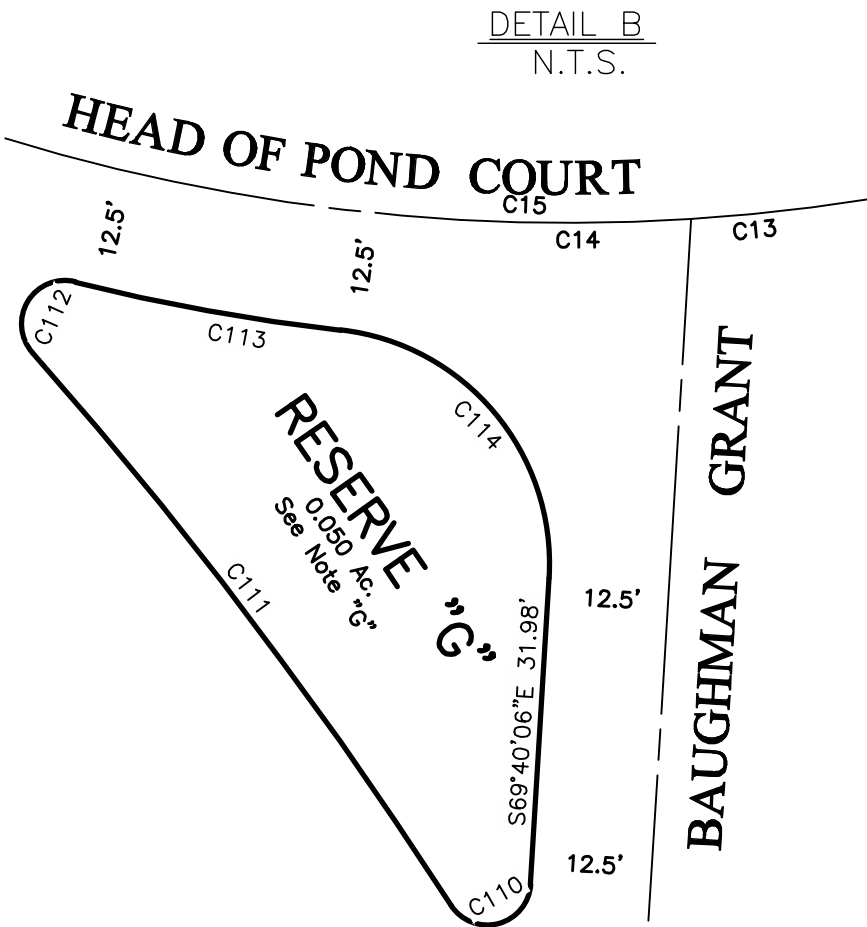
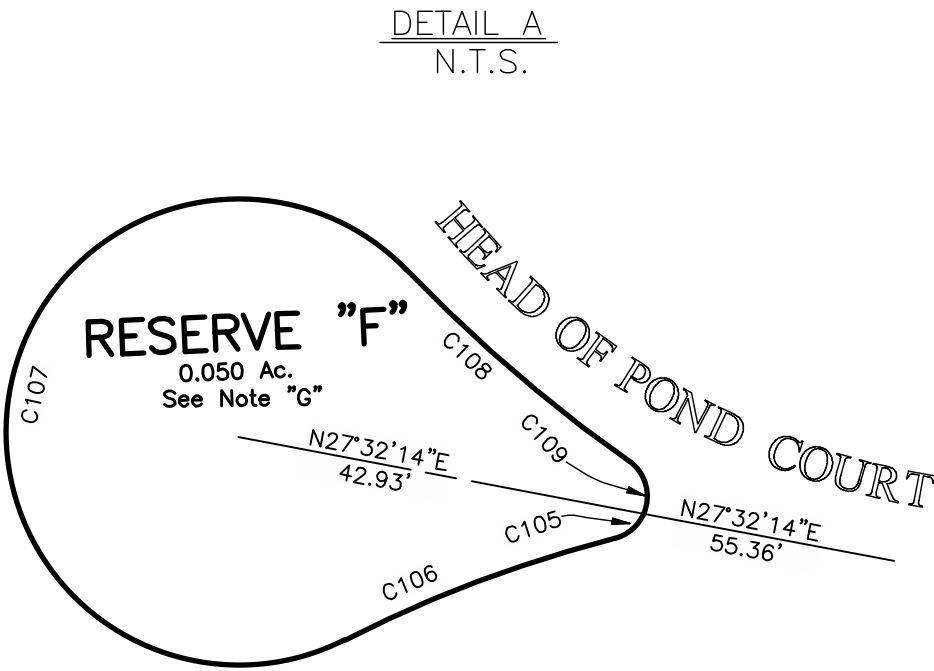
- No dumping or burning of refuse.
- No hunting or trapping.
- Natural resources of the zones shall remain undisturbed and no topsoil, sand, gravel, or rock shall be excavated, removed or graded.
- Nothing shall be permitted to occur within the Stream/Wetland Preservation Zone which would contribute to the erosion of the land and no trees shall be cut or removed, except for the removal of such dead diseased, noxious, or decayed trees or vegetation which may be required for conservation or scenic purposes, or for reasons of public safety. Any and all alterations to the Stream/Wetland Preservation Zone require the approval of the city of New Albany Community Development Department.
- No private encroachment, such as, but not limited to, dumping of trash or debris, or the installation of any type of recreation or other facility or convenience shall be permitted.

No roadway or any facility of any public utility other than existing roadways and public utility facilities or those outlined in the original plan shall be permitted to be constructed or installed in the premises.

NOTE "I": At the time of platting, electric, cable, and telephone service providers have not issued information required so that easement areas, in addition to those shown on this plat as deemed necessary by these providers for the installation and maintenance of all of their main line facilities, could conveniently be shown on this plat. Existing recorded easement information about New Albany Country Club Section 30 or any part thereof can be acquired by a competent examination of the then current public records, including those in the Recorder's Office, Franklin County, Ohio.

CURVE TABLE					
CURVE NO.	DELTA	RADIUS	LENGTH	CHORD BEARING	CHORD DISTANCE
C1	25°14'29"	150.00'	66.08'	S 64°02'28" W	65.55'
C2	43°14'24"	150.00'	113.20'	N 55°02'30" E	110.53'
C3	6°40'37"	560.00'	65.26'	S 36°45'36" W	65.22'
C4	54°54'43"	160.00'	153.34'	S 67°33'16" W	147.54'
C5	14°08'00"	1080.00'	266.41'	N 77°55'22" W	265.73'
C6	32°19'51"	100.00'	56.43'	S 87°01'18" E	55.68'
C7	44°40'03"	100.00'	77.96'	N 54°28'45" E	76.00'
C8	27°58'50"	100.00'	48.84'	N 18°09'19" E	48.35'
C9	104°58'44"	100.00'	183.22'	N 56°39'16" E	158.65'
C10	180°00'00"	38.00'	119.38'	N 54°28'46" E	76.00'
C11	14°19'39"	540.00'	135.03'	S 11°19'44" W	134.68'
C12	18°33'17"	300.00'	97.15'	N 09°13'56" E	96.73'
C13	13°15'00"	200.00'	46.25'	S 06°34'48" W	46.15'
C14	41°23'32"	200.00'	144.49'	S 33°54'04" W	141.36'
C15	54°38'32"	200.00'	190.74'	S 27°16'34" W	183.59'
C16	27°00'36"	450.00'	212.14'	N 41°05'32" E	210.18'
C17	27°01'32"	150.00'	70.75'	N 83°10'52" W	70.10'
C18	11°55'51"	477.00'	99.33'	N 89°16'18" E	99.15'
C19	89°52'40"	400.00'	627.47'	S 39°49'26" E	565.08'
C20	22°26'04"	175.00'	68.52'	N 44°38'20" E	68.08'
C21	6°40'37"	535.00'	62.35'	S 36°45'36" W	62.31'
C22	33°54'12"	135.00'	79.88'	S 57°03'01" W	78.72'
C23	21°00'31"	135.00'	49.50'	S 84°30'22" W	49.22'
C24	2°20'17"	1055.00'	43.05'	N 83°49'14" W	43.05'
C25	7°29'32"	1055.00'	137.95'	N 78°54'20" W	137.86'
C26	4°18'12"	1055.00'	79.24'	N 73°00'28" W	79.22'
C27	21°47'10"	125.00'	47.53'	S 81°44'57" E	47.24'
C28	57°07'18"	15.00'	14.95'	N 64°04'53" W	14.34'
C29	73°11'25"	61.00'	77.92'	S 72°06'57" E	72.73'
C30	47°01'11"	61.00'	50.06'	N 47°46'45" E	48.67'
C31	59°47'24"	61.00'	63.66'	N 05°37'32" W	60.81'
C32	57°07'18"	15.00'	14.95'	S 06°57'35" E	14.34'
C33	17°26'10"	125.00'	38.04'	N 12°52'59" E	37.89'
C34	10°16'36"	515.00'	92.37'	S 09°18'12" W	92.25'
C35	4°03'02"	515.00'	36.41'	S 16°28'01" W	36.40'
C36	15°20'32"	325.00'	87.03'	N 10°50'19" E	86.77'
C37	3°12'45"	325.00'	18.22'	N 01°33'40" E	18.22'
C38	30°28'30"	175.00'	93.08'	S 15°11'33" W	91.99'
C39	24°10'02"	175.00'	73.81'	S 42°30'49" W	73.27'
C40	27°00'36"	475.00'	223.92'	N 41°05'32" E	221.85'
C41	16°26'34"	136.00'	39.03'	S 35°46'34" W	38.90'
C42	21°56'05"	58.77'	22.50'	N 39°43'22" W	22.36'
C43	82°25'46"	58.77'	84.56'	S 88°05'42" W	77.45'
C44	56°59'09"	58.77'	58.46'	S 18°23'14" W	56.08'
C45	17°14'45"	100.21'	30.16'	N 01°37'43" W	30.05'
C46	20°33'27"	100.21'	35.95'	N 17°16'23" E	35.76'
C47	1°21'51"	425.00'	10.12'	N 28°16'09" E	10.12'
C48	15°37'11"	425.00'	115.86'	N 36°45'40" E	115.50'
C49	10°01'35"	425.00'	74.37'	N 49°35'02" E	74.28'
C50	8°02'01"	446.78'	62.65'	N 58°42'04" E	62.59'
C51	15°57'03"	446.78'	124.38'	N 70°41'36" E	123.98'

CURVE TABLE					
CURVE NO.	DELTA	RADIUS	LENGTH	CHORD BEARING	CHORD DISTANCE
C52	15°25'24"	446.78'	120.27'	N 86°22'50" E	119.91'
C53	1°12'04"	446.78'	9.37'	S 85°18'26" E	9.36'
C54	18°18'49"	375.00'	119.86'	S 75°36'22" E	119.35'
C55	21°33'32"	375.00'	141.10'	S 58°40'11" E	140.27'
C56	21°11'16"	375.00'	138.68'	S 34°17'47" E	137.89'
C57	27°09'15"	375.00'	177.72'	S 10°07'31" E	176.07'
C58	1°39'48"	375.00'	10.89'	S 04°17'00" W	10.89'
C59	51°31'54"	185.00'	166.39'	S 69°14'40" W	160.84'
C60	2°16'00"	1105.00'	43.71'	N 83°51'22" W	43.71'
C61	7°05'12"	1105.00'	136.67'	N 79°10'47" W	136.58'
C62	4°46'48"	1105.00'	92.19'	N 73°14'46" W	92.16'
C63	104°58'44"	75.00'	137.42'	N 56°39'16" E	118.99'
C64	4°55'45"	565.00'	48.61'	S 06°37'47" W	48.59'
C65	9°23'54"	565.00'	92.68'	S 13°47'36" W	92.57'
C67	18°33'17"	275.00'	89.06'	N 09°13'56" E	88.67'
C68	5°15'30"	225.00'	20.65'	S 02°35'03" W	20.64'
C69	74°52'54"	12.00'	15.68'	N 32°13'39" W	14.59'
C70	27°01'32"	125.00'	58.96'	N 83°10'52" W	58.42'
C71	11°55'51"	502.00'	104.53'	N 89°16'18" E	104.34'
C72	5°22'01"	425.00'	39.81'	S 82°04'46" E	39.80'
C73	16°34'19"	425.00'	122.92'	S 71°06'37" E	122.50'
C74	18°35'18"	425.00'	137.88'	S 53°31'48" E	137.28'
C75	15°32'30"	425.00'	115.28'	S 36°27'54" E	114.93'
C76	33°48'33"	425.00'	250.79'	S 11°47'23" E	247.16'
C77	4°46'25"	265.73'	22.14'	S 65°33'14" W	22.13'
C78	21°38'49"	265.73'	100.40'	S 52°20'38" W	99.80'
C79	5°48'34"	310.00'	31.43'	N 51°39'28" W	31.42'
C80	9°34'43"	310.00'	51.83'	N 59°21'06" W	51.76'
C81	10°01'37"	530.00'	92.75'	N 69°09'16" W	92.63'
C82	4°39'55"	530.00'	43.15'	N 76°30'03" W	43.14'
C83	6°10'58"	500.00'	53.96'	N 81°55'29" W	53.93'
C84	7°57'46"	500.00'	69.49'	N 88°59'51" W	69.43'
C85	5°43'04"	350.00'	34.93'	N 89°52'48" E	34.91'
C86	16°20'16"	350.00'	99.80'	S 79°05'32" E	99.46'
C87	1°14'29"	350.00'	7.58'	S 70°18'10" E	7.58'
C88	7°44'45"	375.00'	50.70'	N 23°45'52" E	50.66'
C89	14°25'07"	375.00'	94.37'	N 12°40'56" E	94.12'
C90	3°39'34"	585.00'	37.36'	N 03°38'36" E	37.36'
C91	12°04'43"	585.00'	123.33'	N 04°13'32" W	123.10'
C92	15°02'07"	585.00'	153.51'	N 17°46'58" W	153.07'
C93	2°46'38"	585.00'	28.36'	N 26°41'21" W	28.35'
C94	21°37'24"	390.00'	147.19'	S 17°15'58" E	146.31'
C95	10°22'31"	390.00'	70.62'	S 01°16'00" E	70.53'
C96	19°46'10"	200.00'	69.01'	S 01°40'59" E	68.67'
C97	20°52'52"	200.00'	72.89'	S 22°00'30" E	72.49'
C98	1°06'42"	200.00'	3.88'	S 31°53'35" E	3.88'
C99	21°53'42"	50.00'	19.11'	N 21°30'05" W	18.99'
C100	5°20'35"	145.00'	13.52'	S 66°18'16" E	13.52'
C101	36°52'12"	145.00'	93.31'	S 87°24'40" E	91.71'
C102	27°57'18"	145.00'	70.75'	N 60°10'36" E	70.05'
C103	70°10'04"	145.00'	177.58'	N 81°16'59" E	166.69'



A Δ=90°00'00" R=20.00'
Arc=31.42'
ChBrg=S39°53'08"E
Ch=28.28'

B Δ=23°52'01" R=50.00'
Arc=20.83'
ChBrg=S06°49'08"E
Ch=20.68'

C Δ=26°57'15" R=50.00'
Arc=23.52'
ChBrg=S05°16'31"E
Ch=23.31'

D Δ=39°32'20" R=200.00'
Arc=138.02'
ChBrg=S11°34'04"E
Ch=135.29'

E Δ=46°27'58" R=50.00'
Arc=40.55'
ChBrg=N47°15'41"E
Ch=39.45'

F Δ=79°13'06" R=25.00'
Arc=34.57'
ChBrg=N42°45'10"W
Ch=31.88'

G Δ=69°04'41" R=25.00'
Arc=30.14'
ChBrg=S31°23'43"W
Ch=28.35'

H Δ=139°07'55" R=40.00'
Arc=97.13'
ChBrg=S03°37'54"E
Ch=74.97'

I Δ=25°14'29" R=125.00'
Arc=55.07'
ChBrg=S64°02'28"W
Ch=54.62'

J S51°25'13"W
10.26'

K Δ=102°49'26" R=20.00'
Arc=35.89'
ChBrg=S00°00'30"W
Ch=31.27'

L Δ=43°14'24" R=125.00'
Arc=94.34'
ChBrg=N55°02'30"E
Ch=92.11'

M Δ=6°40'37" R=585.00'
Arc=68.17'
ChBrg=N36°45'36"E
Ch=68.13'

N Δ=3°22'48" R=185.00'
Arc=10.91'
ChBrg=N41°47'19"E
Ch=10.91'

[illegible]RESERVE "C"

0.00'

LAMBTON PARKWAY
(formerly Lower Brandon Road)

THE NEW ALBANY
COUNTRY CLUB
SECTION 11
P.B. 82, P. 72

HEAD OF
POND ROAD
R=370.00'

THE NEW ALBANY
COUNTRY CLUB
SECTION 15A
P.B. 86, P. 67

NEW ALBANY COUNTRY CLUB SECTION 30 20201095

J:\20201095\DWG\04SHEETS\PLAT\20201095-VS-COOR-SEC30.DWG plotted by MASTON, JOHN on 5/20/2021 3:05:40 PM last saved by JMASTON on 5/20/2021 2:46:55 PM
Xrefs: 87607475.DWG & 87607500.DWG & 87857475.DWG & 87857500.DWG & 88107475.DWG & 88107500.DWG & 20201095-CS-REFR-N.DWG & P1578.DWG & 100051BV1.DWG



**Planning Commission Staff Report
June 21, 2021 Meeting**

**NoNA ZONING DISTRICT
ZONING AMENDMENT**

LOCATION: 6495 Central College Road, 6501 Central College Road, 6527 Central College Road, 6545 Central College Road, 6557 Central College Road, 6571 Central College Road, 6589 Central College Road, 6945 Central College Road, 6944 New Albany Condit Road, 6922 New Albany Condit Road, 6941 New Albany Condit Road, 6939 New Albany Condit Road, 6911 New Albany Condit Road, 6873 New Albany Condit Road, 6857 New Albany Condit Road, 6841 New Albany Condit Road (PIDs: 222-000670, 222-000673, 222-000676, 222-000688, 222-000668, 222-000549, 222-000669, 222-000654, 222-000314, 222-000375, 222-000672, 222-000671, 222-000686, 222-000664, 222-000685 and 222-000675)

APPLICANT: NoNA Master Development LLC

REQUEST: Zoning Amendment

ZONING: R-1 to Infill-Planned Unit Development (I-PUD)

STRATEGIC PLAN: Employment Center and Hamlet Location

APPLICATION: ZC-43-2021

Review based on: Application materials received on May 7 2021

Staff report completed by Chris Christian, Planner.

I. REQUEST AND BACKGROUND

The applicant requests review and recommendation to City Council to rezone 30.6+/- acres from R-1 to Infill-Planned Unit Development (I-PUD). The proposed zoning will permit the development of a new mixed use, hamlet district envisioned in the Engage New Albany Strategic Plan. The zoning area will be known as the “NoNA Zoning District.”

During the Engage New Albany community outreach effort, residents expressed interest in creating small, walkable neighborhood retail/restaurant locations as well as adding some different housing types to help New Albany become a life span community with housing for young professionals and empty nesters. This feedback resulted in the recommendation of creating hamlets in the Engage New Albany Strategic Plan with development standards designed to meet this need. The concept of a hamlet identifies opportunities in the city to introduce walkable retail and commercial uses that are integrated with residential areas. The Engage New Albany Plan identifies this general site location and one other as locations for hamlets to be developed based on their location in the city and the existing development patterns and context. The Engage New Albany Strategic Plan was adopted endorsed by the Planning Commission and adopted by City Council earlier this year. The proposed rezoning is the hamlet concept brought to life in one of the locations identified in the plan. The proposed text permits a variety of commercial, residential (multi-family, attached and detached single family) and assisted living facility uses.

On May 20, 2021, the Rocky-Fork Blacklick Accord Panel recommended approval of the application. The application met 89% of the Accord Town Mixed Use land use district development standards.

Once the rezoning application has been approved by City Council, the application must return to the Planning Commission with a final development plan application due to the Infill-Planned Unit Development (I-PUD) zoning classification.

Chapter 1159 of the city's Codified Ordinances (Planned Unit Development District) permits the use of more flexible land use regulations and provides flexible design and development standards in order to facilitate the most advantageous land development techniques. Planned Unit Development zoning is often used to establish district designations for uses that are harmonious with the general area and the Strategic Plan. The objective of a Planned Unit Development zoning is to encourage ingenuity, imagination and design efforts to produce development that maintains the overall land use intensity and open space objectives of the city code and the Strategic Plan while departing from the strict application of dimensional standards found in traditional zoning districts.

II. SITE DESCRIPTION & USE

The 30.6+/- acre zoning area is located in Franklin County and is made up of 16 properties, some of which are vacant land and the others contain single family homes. This section of the Central College Road corridor and specifically this intersection serves as a transition between denser retail, residential and commercial development uses on the west side of 605 to more traditional residential land uses on the east side. Some examples of this include the original sections of the New Albany Business Park with the old discover building to the north, multi-family residential development to the west in Columbus and traditional single-family residential development to the east in New Albany.

III. PLAN REVIEW

Planning Commission's review authority of the zoning amendment application is found under C.O. Chapters 1107.02 and 1159.09. Upon review of the proposed amendment to the zoning map, the Commission is to make recommendation to City Council. Staff's review is based on city plans and studies, proposed zoning text, and the codified ordinances. Primary concerns and issues have been indicated below, with needed action or recommended action in underlined text.

Per Codified Ordinance Chapter 1111.06 in deciding on the change, the Planning Commission shall consider, among other things, the following elements of the case:

- (a) Adjacent land use.
- (b) The relationship of topography to the use intended or to its implications.
- (c) Access, traffic flow.
- (d) Adjacent zoning.
- (e) The correctness of the application for the type of change requested.
- (f) The relationship of the use requested to the public health, safety, or general welfare.
- (g) The relationship of the area requested to the area to be used.
- (h) The impact of the proposed use on the local school district(s).

Per Codified Ordinance Chapter 1159.08 the basis for approval of a Preliminary Development Plan in an I-PUD shall be:

- (a) That the proposed development is consistent in all respects with the purpose, intent and applicable standards of the Zoning Code;
- (b) That the proposed development is in general conformity with the Strategic Plan or portion thereof as it may apply;
- (c) That the proposed development advances the general welfare of the Municipality;

- (d) That the benefits, improved arrangement and design of the proposed development justify the deviation from standard development requirements included in the Zoning Ordinance;
- (e) Various types of land or building proposed in the project;
- (f) Where applicable, the relationship of buildings and structures to each other and to such other facilities as are appropriate with regard to land area; proposed density of dwelling units may not violate any contractual agreement contained in any utility contract then in effect;
- (g) Traffic and circulation systems within the proposed project as well as its appropriateness to existing facilities in the surrounding area;
- (h) Building heights of all structures with regard to their visual impact on adjacent facilities;
- (i) Front, side and rear yard definitions and uses where they occur at the development periphery;
- (j) Gross commercial building area;
- (k) Area ratios and designation of the land surfaces to which they apply;
- (l) Spaces between buildings and open areas;
- (m) Width of streets in the project;
- (n) Setbacks from streets;
- (o) Off-street parking and loading standards;
- (p) The order in which development will likely proceed in complex, multi-use, multi-phase developments;
- (q) The potential impact of the proposed plan on the student population of the local school district(s);
- (r) The Ohio Environmental Protection Agency's 401 permit, and/or isolated wetland permit (if required);
- (s) The U.S. Army Corps of Engineers 404 permit, or nationwide permit (if required).

A. Engage New Albany Strategic Plan

The site is located within the Employment Center base future land use district. In addition to providing strategic land use districts, the Engage New Albany Strategic Plan also includes focus areas to demonstrate how the recommendations outlined in the other sections of the strategic plan can be applied in the built environment. This hamlet area is included in a focus area and the strategic plan recommends the creation of a mixed-use node around the Central College Road and SR 605 intersection.

The Engage New Albany Strategic Plan also identifies this general location where a hamlet could located in the city. The hamlet concept identifies an opportunity to introduce walkable retail and commercial uses with residential areas. The creation of this concept in the plan is in response to the significant input received from residents during the public outreach process of the plan where residents identified the lack of local dining and retail options in the city as a weakness and providing more of these options as a top priority for the community. The plan lists the following development standards for hamlets.

- Street edges and streetscape treatments are reinforced. Alternate street typologies and reduced setbacks may be appropriate based on the pattern of development.
- Hamlets need to incorporate public spaces like pocket parks or pedestrian corridors. These are gathering spaces for office employees and residents of the area.
- Buildings may not be taller than three stories in height around the civic green, nor taller than two stories at the perimeter.
- Hamlets should have a balance of neighborhood retail, commercial office, and residential uses.
- All non-single-family development should front on the green.
- A hamlet does not necessarily have to include residential uses if it is located near an area with established residences and has strong pedestrian connections to those existing neighborhoods.
- Surface parking should be located to the rear of commercial and non-single-family uses.

- Drive locations should be kept to a minimum and the placement of buildings should encourage pedestrian activity.
- Development proposals for identified hamlets should submit an overall master plan for the area showing how it fits together appropriately in terms of mobility, site layout, uses, and aesthetics.
- Hamlet development is expected to go through the Planned Unit Development rezoning process.
- Hamlet development should be high quality and built with a high level of attention to site and building design.
- Hamlet development is expected to propose an architectural style that is both distinctive and complementary to New Albany's character and brand.

The Engage New Albany Strategic Plan recommends the following standards as prerequisites for all development proposals in New Albany:

- Development should meet setback recommendations contained in strategic plan.
- Streets must be public and not gated. Cul-de-sacs are strongly discouraged.
- Parks and open spaces should be provided, publicly dedicated and meet the quantity requirements established in the city's subdivision regulations (i.e. 20% gross open space and 2,400 sf of parkland dedication for each lot).
- All or adequate amounts of open space and parkland is strongly encouraged to be provided on-site. If it cannot be provided on-site, purchasing and publicly dedicating land to expand the Rocky Fork Metro Park or park space for the Joint Parks District is an acceptable alternative.
- The New Albany Design Guidelines & Requirements for residential development must be met.
- Quality streetscape elements, including an amenity zone, street trees, and sidewalks or leisure trails, and should be provided on both sides of all public streets.
- Homes should front streets, parks and open spaces.
- A residential density of 1 dwelling unit (du) per acre is required for all residential or a density of 3 du per acre for age restricted housing.
 - Higher density may be allowed if additional land is purchased and deed restricted. This type of density "offset" ensures that the gross density of the community will not be greater than 1 unit per acre. Any land purchased for use as an offset, should be within the NAPLS district or within the metro park zone.

B. Zoning Text Overview and Intent

The applicant's intent is to develop a hamlet as envisioned in the Engage New Albany Strategic Plan. To achieve this goal, the text commits to the principles of the master planning process and holistic design which is a crucial component of the strategic plan within the zoning text. This zoning text recognizes the intrinsic relationship between the public and private realm to ensure the following general principles of the zoning district and the intent of a hamlet are met:

- Providing a pedestrian friendly environment that places a high priority on walking and bicycling;
- Creation of interesting and convenient destinations;
- A commitment to respecting the natural environment; and
- Using high quality architecture and design that emphasizes beauty, human comfort and creating a sense of place.

To achieve these goals, the text commits to providing various master plans as part of the final development plan process including:

- Overall site planning and associated proposed uses;
- Cohesive streetscapes and perimeter landscaping;
- Vehicular access and shared parking solution;
- Bicycle access and shared parking solution;

- Lighting; and
- Signage (as needed).

Areas where the text is not meeting these development standards are underlined in the staff report. A very detailed purpose and intent statement for the district can be found on the first two pages of the zoning text.

C. Use, Site and Layout

1. The site is generally located at the southwest and southeast corners of the New Albany Condit Road and Central College Road intersection. These exact site boundaries are identified in the Engage New Albany Strategic Plan as a location for a hamlet/mixed use development pattern due to the transitional character of the general area.
2. The proposed zoning district is Infill-Planned Unit Development (I-PUD) that will permit the construction of a hamlet style of development which contains a variety of commercial, retail, assisted living facility and residential (multi-family as well as single family detached and attached) uses. These permitted uses are broken up into six different subareas in the zoning text and illustrated on the preliminary development plan. The epicenter of the zoning district will be located in subarea 3, with a diversity of uses centered around green space. The table below provides a high-level overview of the uses permitted in each subarea. All non-residential uses proposed in the text are only permitted to be located on the west side of New Albany Condit Road.

Subarea	Acreage	Permitted Uses	Conditional Uses	Notes
1	1.8+/- acres	General Business Commercial District Uses found in the C-2 General Business District (C.O. 1147.02) which permits office, general retail stores, personal service uses such as restaurants, banks, and beauty shops.	Conditional uses permitted in C.O. 1147.03	Prohibited uses include funeral services, self-service laundries, and gasoline service stations or retail convenience stores selling gasoline as an ancillary use.
2	5.4+/- acres	Max 280 multi-family Dwelling Units, private community center facility and home occupations		1, 2, and 3 bedroom units permitted provided no more than 40% of units can have 2 bedrooms and no more than 8 units can have 3 bedrooms
3	9.1+/- acres	Parks and open space, recreation facilities, 25 residential “whimsical” cottages and office, retail, restaurant, and outdoor performances area uses	None.	Includes outdoor performance space and a public 8.5-acre Sugar Run Park.
4	2.8+/- acres	Max 25 single family attached residences	One model home or leasing	

			office	
5	6.5+/- acres	Senior Living Facility Uses, supportive uses and office uses	Daycares and preschools	Includes assisted living facilities, memory care facilities, skilled nursing facilities, and independent living facilities.
6	5.4+/- acres	Max 35 single family attached and detached residences, one model home and home occupations	One model home or leasing office	

3. The Engage New Albany Strategic Plan recommends a gross density of 1 dwelling unit per acre or up to 3 units per acre if the development is 100% age restricted. The city of New Albany's codified ordinances does not define assisted/senior living facilities as a residential so city staff has not included it in the overall residential density calculations.
 - Between all subareas, the applicant proposes 365 residential units on 30.6 acres (gross acreage) resulting in a density of 11.93 units per acre (not including senior living facilities).
 - The Engage New Albany states that higher density may be allowed if additional land is purchased and deed restricted. This type of density "offset" ensures that the gross density of the community will not be greater than 1 unit per acre. Any land purchased for use as an offset, should be within the NAPLS district or within the metro park zone. The applicant states that there are currently no density credits available for purchase in the city and the applicant would be required to assemble a large amount of land to purchase in order to develop a hamlet as envisioned in the strategic plan. Further, the applicant states that in order to fully offset the density of the project they would have to purchase 335 acres of property in the school district which is more than what is currently available and they estimate that they would have to spend an additional \$35 million to offset the density if the land were available.
 - While the proposal is higher than the strategic plan's recommended density since it is not providing an "offset", city staff is supportive of the density since it is appropriate given the hamlet development pattern. The hamlet is located within a transitional area between Columbus and New Albany and the development pattern is consistent with the Central College corridor to the west.
4. A school impact statement was submitted with the application. The applicant provided different student ratios for each housing type based on data collected from other similar projects including some of their own similar projects. The ratios are consistent with historical student impact statements for other residential developments in New Albany. Based on this estimation, the applicant projects that this development will have a net positive financial impact on the school district.
5. The Engage New Albany Strategic Plan, hamlet development standards state that alternate street typologies and reduced setbacks may be appropriate based on the desired pattern of development. The text provides a 70 foot building and pavement setback from the centerline of Central College Road and New Albany Condit Road. Subarea 5 allows a zero-foot pavement setback and 25-foot primary building setback and 10-foot ancillary building setback from New Albany Condit Road right-of-way. The text contains a variety of other internal and perimeter boundary setbacks that take into consideration adjacent uses to provide an appropriate setback from those boundaries. There are minimal interior setbacks to ensure that a cohesive development is achieved where pedestrian connectivity

between subareas is encouraged. The proposed setbacks are appropriate based on the desired development pattern of a hamlet and provide appropriate screening from adjacent residential uses where they exist.

6. The zoning text states that all development within this area must be accessed from a public road. The text commits to providing right-of-way for Central College Road, New Albany Condit Road and all new roads in the development. Staff is supportive of the amounts provided as they ensure a proper streetscape with all typical amenities can be installed within them. The text commits to providing a master plan for all streetscape and perimeter landscaping plans as part of a future final development plan application.
7. The zoning text states contains varying lot coverage requirements between 35% and up to 90% based on each subarea. The lowest lot coverage amount is found in subarea 3 where a public park is proposed is permitted to be development and the highest is for the subarea where a multi-family building is permitted to be developed.

D. Access, Loading, Parking

1. The zoning district is located at the southwest and southeast corners of the Central College Road and State Route 605 intersection. As proposed, the zoning district will be accessed via 4 new curb cuts along these corridors. The applicant proposes to connect into an existing private drive in Columbus where several commercial users exist such as Huntington Bank and Taco Bell. The text requires some of the new roads to be dedicated as public roads but allows the alleys to be private. Staff recommends a condition of approval that the text be revised to require all new streets and alleys to be publicly dedicated per the recommendations of the Engage New Albany strategic plan.
2. A traffic impact study was completed and submitted by the developer. and the study recommends the following public street improvements:
 - Addition of northbound right turn lane on 605 at Central College;
 - Restriping Central College Road to add left turn lane into site for westbound traffic where it aligns with the Discover entrance.
 - Street widening to accommodate various left turns on 605 for north and southbound traffic at the one new entry point into the development and at the entrance to the Enclave subdivision (Snider Loop).
3. During the RFBA meeting, residents of the Enclave subdivision expressed concerns about making lefts out of their subdivision onto 605. The traffic impact study evaluated this and it does not advise alternative/additional improvements (i.e. roundabout or signal) at Snider Loop. The city traffic engineer has reviewed the traffic impact study's evaluation and agrees with the findings based on the traffic volumes and speeds. The city traffic engineer comments:
 - As part of this development a southbound left turn lane into Snider Loop will added which will increase safety for that turning movement in the Enclave subdivision.
 - The city traffic engineer recommends additional analysis of the design of the Snider Loop and 605 intersection. The design of the intersection should be revised so the centerlines of Snider Loop and new street align to ensure there is no overlapping left turn movements. Staff recommends this be a condition of approval subject to the review and approval of the city traffic engineer.
 - The current speed limit along this portion of State Route 605 where it intersects with Snider Loop is 45 mph. The city intends to work with the developer and ODOT to lower the posted speed limit to 35mph in conjunction with construction of the development. This will improve pedestrian safety and vehicle traffic turning left from Snider Loop onto State Route 605.
4. Based on the findings of the traffic impact study, staff will work with the applicant to study the extent of the street widening along 605 relating to the turn lanes needed for the development. Staff recommends this be a condition of approval subject to the review and approval of the city traffic engineer.

5. The text requires 8-foot-wide, asphalt leisure trails to be installed along both Central College Road and New Albany Condit Road. The text commits to providing additional leisure trail and sidewalk connections throughout the zoning district in order to place a high priority on walking and bicycling, meeting an important strategic plan recommendation for this development type. The text permits the development of a new public road in subarea 5, along the southern boundary of the zoning text that will allow the installation of a 5 foot sidewalk to be installed on the north side of it. In order to be consistent with the Engage New Albany Strategic Plan roadway character classifications, the Leisure Trail Master Plan and city code requirements, staff recommends a condition of approval that the text be revised to require leisure trail or sidewalk to be installed on both sides of this road.
6. The text commits to providing a comprehensive vehicle and bicycle parking plan as part of the first final development plan for the zoning district. The text states that the parking plan shall analyze peak uses and recommend the total number of parking spaces and their locations based on shared parking principles and ratios to provide adequate parking without “overparking” that would detract from the built environment and provide a comprehensive parking strategy for the zoning district.
 - The text does contain specific parking space ratios for subarea 2.
 - The text requires parking for the multi-family building in subarea 2 to be provided on the interior of the building with the following rates. The text permits a maximum of 8 three-bedroom units inside the multi-family building however parking requirements are not specified. Staff recommends a condition of approval that parking standards for three-bedroom units are added to the text or are included with the final development plan.
 - i. 1.05 parking spaces for each studio unit.
 - ii. 1.16 parking spaces for each one-bedroom unit
 - iii. 1.64 spaces per two-bedroom unit.
 - The text requires a minimum of one parking space for every 1,000 square feet contained in the community center/clubhouse in subarea 2.
 - The text requires homes within subarea 4 to have a minimum one car garage and shall be required to have a minimum of one off-street parking spaces on their driveways.
 - The text requires homes within subarea 6 to have a minimum one-car garage.

E. Architectural Standards

1. The hamlet development standards in the Engage New Albany Strategic Plan state that hamlets are expected to propose an architectural style that is both distinctive and complementary to New Albany’s character and brand. Additionally, the plan recommends that hamlet development be of high quality and that a high level of attention is paid to building and site design. The text contains many requirements, restrictions and allowances regarding architecture unique to each subarea that vastly meet the intent of the strategic plan recommendations.
2. The New Albany Design Guidelines and Requirements (DGRs) ensure residential and commercial development both sustain their quality and vibrancy over time. These guidelines have been developed by New Albany to ensure that the community enjoys the highest possible quality of architectural design that has made the community successful thus far. The text states that the DGRs will be applied to all subareas with the exception of subarea 3 due to the unique nature of that subarea and the fact that there are no governing DGR requirements for that development type. Subarea 3 is the epicenter of the development where the most activity is expected to take place and the text allows for the greatest amount of flexibility here to ensure a unique sense of place can be created.
3. For all subareas, the text commits to meeting or exceeding the architectural standards of New Albany while enabling creativity in defined locations. Additionally, the text commits to 360-degree design for all buildings in the zoning district, meeting an important goal of the city. Character images for the intended architectural design of the

- zoning district are included in the submittal. More detailed architectural designs/renderings will be reviewed and approved as part of future final development plan applications.
4. The hamlet development standards state that the maximum number of building stories, interior to the site is 3 and a maximum of two stories at the perimeter. The applicant is meeting this requirement for all subareas with the exception of subareas 2 and 6.
 - a. Subarea two is where a multi-family building is permitted to be developed and the text allows a maximum height of 53 feet and four stories.
 - b. Subarea 6 (located at southeast corner of 605 and Central College) permits a maximum of 3 stories.
 - c. The Central College Road corridor has seen a significant amount of development since the creation of the Accord Plan. There are many existing examples along this corridor where 3-3.5 story buildings have been constructed.
 - d. While taller than the strategic plan recommendations, there are other 3 and 4 story office buildings in the general area such as the Water's Edge structures to the south along Walton Parkway so the development does not appear to be out of character for the corridor. The buildings in these two subareas will be located at the southwest and southeast corners of the Central College Road and State Route 605 providing a strong architectural presence at these corners. The hamlet takes into consideration the surrounding heights of building by matching surrounding building heights along the edges and appropriately transitioning to the taller buildings at the corners and along public roads.
 5. The text permits the use of the following building materials and prohibits exposed concrete foundations.
 - a. Brick and brick veneer
 - b. Cementitious or composite siding
 - c. Vinyl is permitted on building exteriors that are not visible from any road and surrounded by building facades on all sides and within subarea 5 if the Planning Commission approves it as part of a final development plan application.
 - d. Metal panels, EIFS, wood and aluminum are permitted as trim or accent elements.
 6. The DGRs require active and operable doors to be installed along all public streets. The applicant is meeting this requirement with the exception of subarea 1 where single tenant buildings are not required to have one along Central College Road. The text does require building facades facing Central College Road to include an architectural feature that encourages pedestrian connectivity, meeting the spirit and intent of the DGR requirement.
 7. The text requires additional architectural details such as roof plans, garage door design/colors, dormer details, columns and cornice details to be submitted and reviewed as part of a final development plan application.
 8. The text requires rooftop screening for sight and sound for all subareas.

E. Parkland, Buffering, Landscaping, Open Space, Screening

1. The Engage New Albany Strategic Plan emphasizes the importance of providing greenspace and promoting sustainability by protecting, preserving and enhancing natural features in these mixed-use areas. The Engage New Albany Plan's Mixed Use (included with Hamlets) development standards state that an appropriate amount of open space to provide in hamlets is between 0.5 and 10 acres. The zoning district is bisected by the Sugar Run Creek. The applicant proposes to activate an 8.5-acre space around Sugar Run Creek as the center of the development and the text allows the applicant to install trails, benches and other amenities within this area to make it attraction for all of the New Albany community. This acreage amounts to 27% of the zoning district and is appropriate based on the mixed-use nature of the development of a hamlet.

2. The Codified Ordinances subdivision regulations contain requirements about the provision of open space and parkland dedication which only considers typical suburban single-family development. The table below shows the required and proposed amounts. It is clear in the amounts shown below that city code never contemplated this type of development and it would be unreasonable to apply these suburban residential standards in this case. The applicant states that if they were to meet this standard, 86% of the site would have to be dedicated as parkland and open space. Additionally, if they were required to pay a fee-in-lieu they estimate that it would cost as much as \$5.6 million which would completely destroy the economic viability of any Hamlet in the city.

C.O. Requirement	Shown on PDP as	Required (acres)*	Provided (acres)	Meets Code?
1187.16 Open Space	Open Space	6.12	See below	No
1189.15 Parkland Dedication	open Space	20.11	See below	No
Total		26.23	8.47	

*Calculation based on 30.6 acres and 365 units.

- The zoning text states that this 8.47 acre space around Sugar Run Creek will enhanced and cleaned to improve its health and sustainability and provide a defining feature for this zoning district, substantially meeting the parks and open space recommendations for hamlet areas. The text states that this area will be dedicated to the city or maintained as open space with public access determined as part of a final development plan application. The text suggests that this space will be maintained by the city if is publicly owned and privately if owned privately or the business association. Staff recommends a condition of approval that the text be clarified to state that this area will be owned by the city and maintained by a private owner or business association in perpetuity.
3. The text commits to and city code requires providing 3-inch caliper street trees along all public roads at an average rate of 30 feet on center. The applicant commits to providing a master perimeter and streetscape plan as part of a final development plan application. Additionally, the applicant will also be required to meet the minimum interior parking lot landscape requirements of city code and submit landscape plans with each final development plan application to be reviewed by the city landscape architect.
 4. The text contains screening requirements for dumpsters, loading and service areas that is consistent with city code.
 5. The zoning text exempts the applicant from providing the internal landscaping buffering requirements between dissimilar uses as required by C.O. 1171.05. Staff believes that this is appropriate due to the mixed-use development pattern of the zoning district.

F. Utilities, Lighting & Signage

1. The text requires all utilities to be installed underground.
2. The text states that all security lighting be motion sensor type.
3. The text states that street lighting shall not exceed 30 feet in height, that fully shielded cut off type fixtures be used and be consistent throughout the zoning district.
4. The text requires standard New Albany street regulatory signage to be used and that any entry feature signage be subject to review and approval at the time of a final development plan application.
5. The text requires a master sign plan to be submitted in conjunction with the first final development plan for the zoning district and where this sign plan is silent, the city sign code regulations will apply. Additionally, the text states that the intent for subarea 3 is to create a unique and creative sign package that will determine design, numbers and placement on buildings within the subarea.

IV. ENGINEER'S COMMENTS

The City Engineer has reviewed the referenced plan in accordance with the engineering related requirements of Code Section 1159.07(b)(3) and provided the following comments:

1. Sugar Run is a FEMA studied stream (Map No. 39049C0180). We recommend that the Stream Corridor Protection Zone (SCPZ) width be established in accordance with Chapter 1155 – Flood Damage Reduction.
2. We will evaluate storm water management, sanitary sewer collection and roadway construction related details once construction plans become available

V. RECOMMENDATION

Basis for Approval:

Staff recommends approval of the rezoning application. The Engage New Albany Strategic Plan envisions the concept of a hamlet which is the intent of this zoning district. This concept was revived in the strategic plan based on public feedback the city collected from residents during the recent strategic planning process. Residents cited a lack of local dining and retail options as the city's second greatest weakness and one of the top areas where the city should focus their efforts in the future. Additionally, residents expressed interest in adding a diversity of housing options to ensure that New Albany is a life-span community.

The proposal matches the city strategic plan's land use recommendation and meets 11 out of 12 hamlet development standards found in the Engage New Albany Strategic Plan. The Engage Plan recommends buildings not be taller than three stories in height around the civic green, nor taller than two stories at the perimeter. While a portion of this development exceeds the height recommendations, the height and number of stories appears appropriate since it takes into consideration the surrounding environment by transitioning heights from neighboring properties. Moreover, the site plan, architectural commitments and requirements, landscaping and strong emphasis on pedestrian experience and connectivity equates to a development that is very desirable from a site and building design and planning perspective.

The city's parkland and open space requirements account for a traditional single-family subdivision. While the subdivision regulations technically apply to this site since it is creating new residential sites, it does not account for this type of Hamlet mixed-use development pattern recently established and recommended by the Engage New Albany Strategic Plan. The development provides a substantial amount of passive open space by establishing Sugar Run Park and an active, central parkland where restaurants and performances will be located.

The strategic plan identifies this site as one of two locations in the city where this type of hamlet development is appropriate given its location and the surrounding development context. Overall, the proposed densities and uses are appropriate due to the location of the zoning district along the Central College Road corridor which serves as a transitional area between denser residential and commercial development to the west and north to the typical suburban residential development that exist on the east side of 605. While the proposed density exceeds the strategic plan recommendations since it is not proposing an offset, it is appropriate given the desired development pattern of a hamlet. Moreover, the zoning text accounts for this transition by permitting single family attached and detached uses on the east side of 605, providing an appropriate transition to the denser uses that are permitted on the west of 605.

Master planning and holistic design principles are crucial components of what has made the New Albany community so successful to date and the applicant commits to these principles. This plan and its design recognizes the intrinsic relationship between the public and private realms to ensure the following general principles of the zoning district are met:

- o Providing a pedestrian friendly environment that places a high priority on walking and bicycling;

- Creation of interesting and convenient destinations;
- A commitment to respecting the natural environment; and
- Using high quality architecture and design that emphasizes beauty, human comfort and creating a sense of place.

To achieve these goals, the applicant commits to providing various master plans as part of the final development plan process including a shared vehicular and bicycle parking, streetscape and perimeter landscaping, lighting and signage plans.

The proposed rezoning accomplishes the following city code considerations found in C.O. 1111.06:

1. The zoning amendment will result in a more comprehensive planned redevelopment of the area and will ensure compatibility between uses in the immediate area (1111.06(a)).
2. The proposed zoning classification permits consistent uses found within other adjacent zoning districts (1111.06(b)).
3. The zoning amendment application is an appropriate application for the request (1111.06(e)).
4. The overall effect of the development advances and benefits the general welfare of the community (1111.06(f)).

Staff recommends approval provided that the Planning Commission finds the proposal meets sufficient basis for approval.

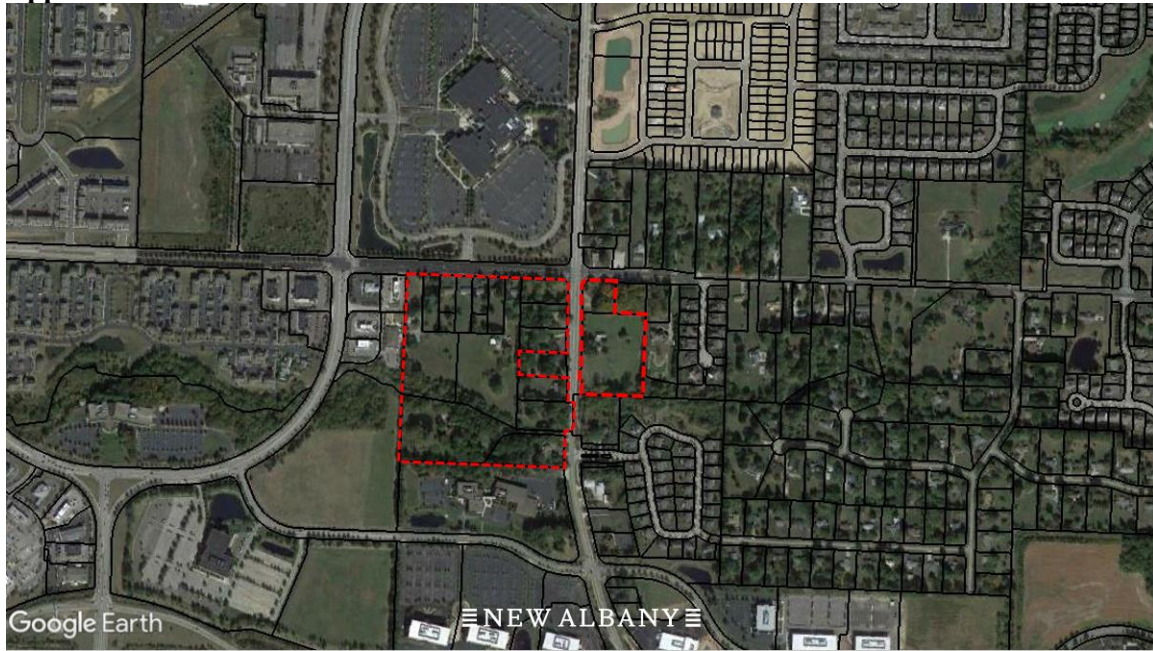
VI. ACTION

Suggested Motion for ZC-43-2021:

To recommend approval to city council of zoning amendment application ZC-43-2021 based on the findings in the staff report with the following conditions.

1. The text must be revised to require all new roads and alleys to be dedicated publicly.
2. The final design and geometry of proposed curb cut, aligning with Snider Loop, is subject to staff approval in order to ensure proper turn movements are achieved.
3. The text must be revised to require leisure trail or sidewalk to be installed on both sides of the proposed new public road within subarea 5.
4. Parking standards for three-bedroom units in subarea 2 must be added to the text or are included with the final development plan.
5. The text must be revised to state that the proposed Sugar Run Park will be owned by the city and maintained by a private owner or business association in perpetuity.
6. The final lengths of street widening and roadway design along State Route 605, geometrics/design of the Snider Loop/605 intersection, and extent of the right turn lane from State Route 605 onto Central College be subject to the city traffic engineer's review and approval.

Approximate Site Location:



Source: Google Earth

Permit # _____
Board _____
Mtg. Date _____



Community Development Planning Application

Project Information	Site Address <u>6945 Central College Road and others</u>			
	Parcel Numbers <u>See accompanying list</u>			
	Acres <u>30.33±</u> # of lots created _____			
Choose Application Type	Circle all Details that Apply			
	<input type="checkbox"/> Appeal <input type="checkbox"/> Certificate of Appropriateness <input type="checkbox"/> Conditional Use <input checked="" type="checkbox"/> Development Plan <input type="checkbox"/> Plat <input type="checkbox"/> Lot Changes <input type="checkbox"/> Minor Commercial Subdivision <input type="checkbox"/> Vacation <input type="checkbox"/> Variance <input type="checkbox"/> Extension Request <input checked="" type="checkbox"/> Zoning	<u>Preliminary</u> Preliminary Combination Easement <u>Amendment (rezoning)</u>	Final Final Split Street Text Modification	Comprehensive Adjustment
Description of Request:	<u>Rezoning and preliminary development plan review of a mixed-use "hamlet" development in accordance with the City's updated Strategic Plan.</u>			
Contacts	Property Owner's Name: <u>SNAI LLC and others (see accompanying list)</u>			
	Address: <u>c/o NoNA Master Development LLC, Attn: Yaromir Steiner and Bryan Stone</u> City, State, Zip: <u>4016 Townsfair Way, Suite 201, Columbus, OH 43219</u> Phone number: <u>(216) 831-4710</u> Fax: _____ Email: <u>bryan@axiomdev.com</u>			
Applicant's Name:	<u>NoNA Master Development LLC</u>			
	Address: <u>Same as above</u> City, State, Zip: _____ Phone number: _____ Fax: _____ Email: _____			
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 <u>By: Aaron L. Underhill</u> Signature of Applicant <u>By: Aaron L. Underhill</u>		Date: <u>4/20/21</u> Date: <u>4/20/21</u>	

Aaron L. Underhill
Attorney for owner(s) and applicant

NoNA Zoning District
Property Owners and Parcel Numbers

SNAI LLC

Attn: Yaromir Steiner and Bryan Stone

4016 Townsfair Way, Suite 201

Columbus, Ohio 43219

Parcel Numbers: 222-000675, 222-000685, and 222-000686

The New Albany Company

Attn: Thomas Rubey

8000 Walton Parkway, Suite 120

New Albany, Ohio 43054

Parcel Numbers: 222-000664, 222-000671, 222-000672, 222-000654, 222-000669, 222-000549, 222-000668, 222-001167, 222-000688, 222-000375, 222-000314, and 222-000673

Ralph W. Fallon, Trustee

7555 Zarley Street

New Albany, Ohio 43054

Parcel Numbers: 222-000676 and 222-000678

Kevin L. Komraus

6495 Central College Road

New Albany, Ohio 43054

Parcel Number: 222-000670

5.365 ACRES

Situated in the State of Ohio, County of Franklin, City of New Albany, in Section 13, Quarter Township 2, Township 2, Range 16, United States Military Lands, being comprised of all of those tracts of land conveyed to The New Albany Company, LLC by deeds of record in Instrument Numbers 200012080249008 and 200106250142592 (all references refer to the records of the Recorder's Office, Franklin County, Ohio) and more particularly bounded and described as follows:

BEGINNING at the northwesterly corner of that 1.015 acre tract conveyed to Robert E. Verst Jr. and Roseanne I. Verst as Tract One by deed of record in Instrument Number 201310180176801, in the southerly right of way line of Central College Road;

Thence the following courses and distances:

South 03° 28' 05" West, a distance of 198.03 feet to a point;

South 86° 11' 45" East, a distance of 188.14 feet to a point;

South 03° 33' 26" West, a distance of 508.47 feet to a point;

North 86° 11' 45" West, a distance of 373.35 feet to a point;

North 00° 03' 12" West, a distance of 139.91 feet to a point;

North 03° 28' 05" East, a distance of 179.94 feet to a point;

North 01° 58' 54" East, a distance of 336.97 feet to a point of curvature to the right;

With the arc of said curve, having a central angle of 90° 11' 37", a radius of 50.00 feet, an arc length of 78.71 feet, a chord bearing of North 48° 42' 36" East and chord distance of 70.83 feet to a point; and

South 86° 11' 45" East, a distance of 153.04 feet to the POINT OF BEGINNING, containing 5.365 acres of land, more or less.

25.168 ACRES

Situated in the State of Ohio, County of Franklin, City of New Albany, in Section 13, Quarter Township 2, Township 2, Range 16, United States Military Lands, being comprised of all of that tract of land conveyed to Kevin L. Komraus by deeds of record in Instrument Numbers 200209110224893 and 200209110224894, all of that tract of land conveyed to Ralph W. Fallon, Trustee by deed of record in Instrument Number 201012150170151, all of those tracts of land conveyed to SNAI. LLC by deeds of record in Instrument Numbers 201909170120440, 201909170120483, and 202006100081519, and all of those tracts of land conveyed to The New Albany Company, LLC by deeds of record in Official Records 14952J07 and 21256E01, and Instrument Numbers 200107120159281, 200110250246605, 201603170031803, 199804160090632, 199811122089607, 200007270148835, 199804160090633, 199911100282665, 201604080042971 (all references refer to the records of the Recorder's Office, Franklin County, Ohio) and more particularly bounded and described as follows:

BEGINNING at the northeasterly corner of that 0.824 acre tract conveyed to New Albany TB, LLC by deed of record in Instrument Number 201310180176797, in the southerly right of way line of Central College Road;

Thence the following courses and distances:

South 86° 08' 42" East, a distance of 984.78 feet to a point of curvature to the right;

With the arc of said curve, having a central angle of 15° 10' 39", a radius of 50.00 feet, an arc length of 13.24 feet, a chord bearing of South 41° 41' 11" East and chord distance of 13.21 feet to a point;

South 03° 27' 06" West, a distance of 430.75 feet to a point;

North 86° 08' 42" West, a distance of 290.00 feet to a point;

South 03° 27' 06" West, a distance of 150.00 feet to a point;

South 86° 08' 42" East, a distance of 300.00 feet to a point;

South 04° 26' 22" West, a distance of 552.82 feet to a point;

North 86° 29' 28" West, a distance of 241.57 feet to a point;

North 00° 51' 46" East, a distance of 5.40 feet to a point;

North 86° 20' 17" West, a distance of 757.51 feet to a point; and

North 03° 41' 21" East, a distance of 1141.40 feet to the POINT OF BEGINNING, containing 25.168 acres of land, more or less.



NoNA Master Development, LLC
4016 Townsfair Way, Suite 201
Columbus, Ohio 43219



The City of New Albany
Community Development Planning
99 West Main Street
New Albany, Ohio 43054

RE: Petition to Amend and Modify the “Code of Ordinances City of New Albany, Ohio” and the “Official Zoning Map” of the City of New Albany (as amended) to Create the “NoNA Zoning District”

City Staff & Leadership:

Pursuant to Chapter 1159 of the Code of Ordinances City of New Albany, Ohio (the “Code”) the undersigned owners and authorized representatives of the below referenced properties, individually and collectively petition the City Council and Planning Commission of the City of New Albany, Ohio (the “City”) to:

1. Amend the Code to enact the “NoNA Zoning District” substantially in the form of the New Albany Community Development Planning Application and associated materials submitted to the City by NoNA Master Developer, LLC on April 20, 2021 (the “Application”); and
2. Amend the “Official Zoning Map” of the City (as amended) to reflect the Application to the Property(ies).

Please reach out to Aaron Underhill of Underhill & Hodge, LLC at 614.335.9320 or aaron@uhlawfirm.com, if you have any questions regarding the above.

We appreciate your consideration of our application.

Sincerely,

Ralph Fallon Trustee
dotloop verified
04/30/21 7:30 PM EDT
DDD2-LOZT-SEYY-JY6M

Authorized Representative of

2 separate parcels. 676 is 6527 Central College Road and 678 is addressed as Central College Road with no numbers. Franklin County parcel numbers 222-000676-00 and 222-000678-00

Name: Ralph Fallon Trust
Its: Owner



NoNA Master Development, LLC
4016 Townsfair Way, Suite 201
Columbus, Ohio 43219



The City of New Albany
Community Development Planning
99 West Main Street
New Albany, Ohio 43054

RE: Petition to Amend and Modify the “Code of Ordinances City of New Albany, Ohio” and the “Official Zoning Map” of the City of New Albany (as amended) to Create the “NoNA Zoning District”

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Please reach out to Aaron Underhill of Underhill & Hodge, LLC at 614.335.9320 or aaron@uhlawfirm.com, if you have any questions regarding the above.

We appreciate your consideration of our application.

Sincerely,

 dotloop verified
05/04/21 5:15 PM EDT
CEV1-OSQU-AK6V-H7FI

Authorized Representative of

6495 Central College Road, New Albany OH 43054. Franklin County Parcel 222-000670-00

Name: Kevin L. Komraus
Its: Owner

NEW ALBANY

FOUNDED 1837

≈

May 5, 2021

Mr. Steve Mayer
The City of New Albany
Community Development Planning
99 West Main Street
New Albany, Ohio 43054

Via Email: smayer@newalbanyohio.org

RE: Petition by NoNA Master Development, LLC to Amend and Modify the "Code of Ordinances City of New Albany, Ohio" and the "Official Zoning Map" of the City of New Albany (as amended) to Create the "NoNA Zoning District"

Mr. Mayer:

This letter will serve to confirm that The New Albany Company LLC, as the owner of Franklin County Auditor's tax parcels 222-000673, 222-000688, 222-000668, 222-001167, 222-000549, 222-000669, 222-000654, 222-000672, 222-000671, 222-000664, 222-000314, and 222-000375 consents to NoNA Master Development, LLC's submittal of the application dated April 20, 2021 to modify the zoning applicable to such parcels.

Please contact me if you have any questions.

Sincerely,



Dick Roggenkamp
Director of Real Estate
The New Albany Company

cc: Laura Cooper Wedekind, NoNA Master Development, LLC
Tom Rubey, The New Albany Company
Molly Iams, The New Albany Company
Aaron Underhill, Underhill & Hodge



NoNA Master Development, LLC
4016 Townsfair Way, Suite 201
Columbus, Ohio 43219

April 20, 2021

The City of New Albany
Community Development Planning
99 West Main Street
New Albany, Ohio 43054

RE: Fulfilling the Vision of Engage New Albany

City Staff & Leadership:

The City of New Albany has spent more than one year working with residents, stakeholders, and industry professionals to adopt the Engage New Albany 2030 Strategic Plan. The Engage New Albany 2030 process defined a specific vision for the City that stays true to the ideals that has made it one of the nation's premier suburban communities while proactively adapting to important regional trends.

Central to that vision is the idea that the City will benefit from a limited number of focused mixed-use development areas designed to serve select neighborhoods located outside the City's Village Center (*See Engage New Albany 2030, p. 75*). These "Hamlets" were originally introduced in the original 1997 Rocky Fork Blacklick Accord and are intended to provide a well-designed, amenity-rich anchor to surrounding neighborhoods and have been proposed in three locations throughout the City.

The North New Albany Zoning District (the "NoNA Zoning District") will be the first proposed Hamlet zoning district introduced as a result of the Strategic Plan's recommendations. The proposed NoNA Zoning District has been specifically tailored to meet the needs and vision of the City of New Albany as defined by its officials, stakeholders, and residents through the Engage New Albany 2030 resident survey. It is situated in the location called out by the Strategic Plan for a Hamlet district to anchor the "Northwest Focus Area", includes world-class design and planning, and houses a wide range of community-focused amenities. Notwithstanding, several inconsistencies between the City's existing zoning policy and Engage New Albany 2030's stated objectives would make the development of any proposed Hamlet project impossible. As a result, the City will need to relax several of these policies in order realize its stated vision.

Density Transfer Policy

The City's unwritten "density transfer" policy is perhaps the best example of this problem. This custom has capped the permitted density of any development at one unit per acre where any of proposed dwelling units have not been age restricted through the use of zoning or a restrictive covenant. A would-be development can attempt to purchase "density credits" from a "density credit bank" if those credits are available. Alternatively, it requires a developer to purchase additional land within the school district and place a restrictive covenant limiting its residential density to 1 unit per gross acre.

Real-world application of the density transfer policy to the NoNA Zoning District demonstrates the problem. There are currently no density credits available for purchase in the City of New Albany. As a result, the developer of any Hamlet project would be required to assemble and purchase the requisite amount of property through an arms-length, market-rate sale, within the NAPLS district in order to offset the proposed number of residential units above the 1 unit per gross acre limit.

The NoNA Zoning District proposal includes 365 residences spread over 30.533 acres of property. In order to comply with the City's density transfer requirement, the development would be required to purchase 335 acres of property within the school district (i.e. 365 proposed residences, minus 30 permitted residences, equals 335 residences; thus requiring a 335 acre offset). This means that strict adherence to the "density transfer standard" would require the purchase of more land than is currently available within the school district. Indeed, it also means that if the required amount of property was to somehow become available for purchase and we were to assume a below market value of \$100,000 per acre, the developer would have to spend an additional \$35,000,000.

Open Space Requirements

A similarly impractical result can be seen in strict adherence to the City's current parkland and open space requirements. The City's Code mandates a dedication of parkland in the amount of 2,400 square feet per dwelling unit and the provision of an additional 20% of the total site area as open space. Alternatively, the City of New Albany provides a "fee-in-lieu" system whereby a developer can pay a fee equal to the average value per acre of the total gross site in order to offset any shortfall in a proposed project's dedicated open space.

The 365 residences being proposed would necessitate 20.11 out of a total of 30.533 acres of the NoNA Zoning District being dedicated as parkland. Because an additional 20% of the zoning district would need to be set aside as open space, as much as 86% of the site (20.11 out of 30.533 acres) would also need to remain undeveloped. Although the fee-in-lieu system is available because that fee would cover such a large percentage of the zoning district, a would-be developer would need to pay for the same property twice (for an approximate total of \$5,600,000 of additional land costs) which would completely destroy the economic viability of any Hamlet project proposed for the site.

School Impact Analysis

The City's density transfer standard and parkland dedication policies have largely been driven by the goal of protecting the finances and capacity of the New Albany Plain Local School District. However, the Hamlet concept formula and the NoNA Zoning District proposal turns these concerns on their heads.

The School Impact Analysis included in this application demonstrates that the NoNA Zoning District will yield a clear financial benefit for the schools. The development is projected to add approximately 25 new students to the NAPLSD for a total of approximately 59 students overall. These students will be spread over all 13 grades serviced by the NAPLSD. 25 additional students being spread over 13 grades will certainly consume some NAPLSD resources and capacity. However, it is very highly unlikely that any significant additional expenditures would be incurred or that new facilities, equipment, or personnel would be required and the revenue generated by the proposed project will create a windfall for the NAPLSD estimated at almost \$600,000 annually; well in excess of the cost educating these students.

If the City's hopes to remain consistent with the stated vision outlined by the Engage New Albany 2030 Strategic Plan, it will need to maintain principled flexibility in the way in which it views any proposed application. The City will need to give due consideration to the unique challenges brought by its density policy, parkland/open space requirements, and the design and planning criteria that have made it a gold-standard for community planning. The NoNA Zoning District must be reviewed on its own merits and free from policies that work well in traditional suburban communities but do not address the unique nature of this type of development. By recognizing that a Hamlet development requires the narrow application of new principles, the City and the applicant can work together to achieve the best result in accordance with the Strategic Plan.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Yaromir Steiner', with a horizontal line underneath.

Yaromir Steiner
Chief Executive Officer
Steiner + Associates



The City of New Albany
Community Development Planning
99 West Main Street
P.O. Box 188
New Albany, Ohio 43054
Phone: 614-939-2254

In association with the Community Development Planning Application, please find an anticipated timeline associated with the development of NoNA District located at 6945 Central College Road.

With the primary master planning element of the development being the preservation and enhancement of the Sugar Run Creek corridor, the creation of the new approximately 8.5 acre park will be the first site improvement that is undertaken. It is our intention to start site work late in Q1 of 2022. Once that public amenity has commenced construction, we will then transition to site grading, utility construction and the site work associated with the construction of the internal road network. It is anticipated that those site improvements could take up to 10 months to complete. Based on market conditions, construction of the vertical development within each of the sub areas will commence no sooner than the later of the approval an FDP for each subarea or four months after the start of underground utility construction.

Thanks.

Justin Leyda
Chief Development Strategist



April 19, 2021

Mr. Steve Mayer
City of New Albany
Development Department
99 West Main Street
New Albany, OH 43054

Subject: NoNA District – Environmental Compliance

Dear Mr. Mayer,

This letter serves to inform the City of New Albany of environmental conditions associated with the NoNA District project, located south of Central College Road, east and west of New Albany-Condit Road, and north of Walton Parkway, in the City of New Albany, Franklin County, Ohio. The property is approximately 30 acres in size and consists of a number of existing residential estate lots.

The property was recently delineated for Waters of the U.S. by the Environmental Department of EMH&T. The delineation report is currently under review at the U.S. Army Corps of Engineers (USACE). Assuming the USACE agrees with the delineation and issues an Approved Jurisdictional Determination (AJD), the property will contain perennial Sugar Run, a small wetland on the south side of Sugar Run on the parcel east of New Albany-Condit Road, and a nonjurisdictional pond.

The development concept does not appear to encroach upon any of the jurisdictional features. As a result, environmental permits will not be required from the USACE or Ohio EPA.

If you have any questions regarding this information or require additional documentation, please do not hesitate to contact me at (614) 775-4515.

Sincerely,

EVANS, MECHWART, HAMBLETON & TILTON, INC.

Robert F. Milligan
Director of Environmental Services
Principal

Cc: Brian Quackenbush, EMH&T



Engineers, Surveyors, Planners, Scientists

April 19, 2021

Mr. Justin Leyda
SNAI, LLC
4016 Townsfair Way
Suite 201
Columbus, Ohio 43219

Subject: NoNA District
Utility and Stormwater Feasibility

Dear Justin,

As requested, I have prepared this letter to summarize utility availability and feasibility for the NoNA District development that is being proposed on a 30.6 acre site located at the intersection of Central College Road and New Albany-Condit Road in New Albany, Ohio. A 5.4 acre portion of the site is located at the southeast corner and the remaining 25.2 acres is located at the southwest corner of this intersection. The development will include commercial space, single-family and multi-family residential, and senior housing. The existing utilities are more than adequate to service the development, and a detailed summary of connection points and requirements are as follows:

Sanitary Sewer

There is an existing public 24-inch sanitary sewer constructed with RP-10226 that runs from West to East through the site and generally parallels Sugar Run. The sewer has a depth of approximately 20-25 feet and lies within a twenty foot (20') easement. The sewer is located north of Sugar Run west of New Albany-Condit-Road and south of Sugar Run east of New Albany-Condit Road. A 12-inch sewer constructed with CC-11734 is also located along the west property line that will service the area south of Sugar, and an 8-inch sewer constructed with CC-14436 is stubbed to the area north of Sugar Run on the east side of New Albany-Condit Road. In order to service the site, a new public main will be extended and a CC-Sanitary Sewer plan will be submitted to the City of New Albany and the City of Columbus for review and approval. The plan will also require approval by the Ohio EPA for a Permit to Install (PTI) prior to construction. Services will be extended from the main to service the various buildings and residential units.

Water Service

An existing 16-inch public water main running along the south side of Central College Road, and an existing 12-inch public water main running under the east side of New Albany-Condit Road will provide domestic water service to the site. There are fire hydrants on these lines that will provide some fire protection for the proposed buildings, but private fire hydrants will likely be required to provide coverage necessary to meet Plain Township Fire Department regulations. If public streets are proposed with this project, a new 8-inch public main will be extended within the right-of-way to service the site and connect to Central College and New Albany-Condit Road. A new pressure test will be performed in the area to confirm the pressure and flow as needed to determine design

constraints for the proposed services. A separate water meter and corresponding water service plan will be required for each individual tax parcel to be served. The water service plans will be reviewed and approved by the City of New Albany and the City of Columbus Division of Water, who will also approve any new public mains along with the Ohio EPA. In order to tap into the public mains, the owner will pay water and sanitary capacity fees to both New Albany and Columbus. Credits towards the capacity fees will be provided for any previously paid capacity fees for water services to the existing houses.

Stormwater

The highest points of the site vary from 1020 at the west property line to 1028 at the east property line, and the entire site drains to Sugar Run, which has a normal water elevation flow line that varies from 1008 at the west property line to 1020 at the bridge under New Albany-Condit Road. A stormwater management system will be required that provides an adequate storage volume necessary to meet peak flow limitations set forth by the City of New Albany, and post construction water quality requirements within the Ohio EPA General Construction Permit. The volume will be provided by a variety of Best Management Practices such as a wet basin, permeable pavement, bio-retention or underground detention. All above grade storage basins will be required to meet City of New Albany requirements for aesthetics for items such as landscaping and a maximum 6:1 side slope.

Stream Corridor Protection Zone and Floodplain

Sugar Run runs through from west to east through the property and is located with a FEMA Zone AE Floodplain and Floodway. The floodplain elevation varies from 1010 at the west property line to 1025 just east of New Albany Condit Road. Any development within the floodplain will require compliance with City of New Albany Chapter 1155 for Flood Damage Reduction and a Floodplain Development permit will be required. Site planning will also need to accommodate a Stream Corridor Protection Zone (SCPZ). The width of the SCPZ is based on the drainage area, and a formula provided by the City of Columbus Stormwater Drainage Manual, and was determined to be 190 feet in total width.

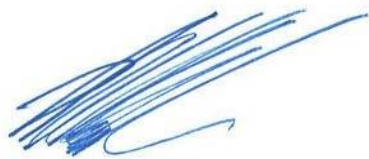
Electric and Telecommunications

All new electric and telecommunications utilities will be fed underground from existing overhead lines on either Central College Road or New Albany-Condit Road. Any existing overhead lines within the site will be removed, but the overhead lines along the existing public roads will remain.

If you need any additional information, please contact me at 614-775-4390.

Sincerely,

EVANS, MECHWART, HAMBLETON & TILTON, INC.



Brian Quackenbush, PE
Principal | Senior Project Manager

NoNA ZONING DISTRICT

INFILL PLANNED UNIT DEVELOPMENT (I-PUD) TEXT

May 13, 2021

I. GENERAL PURPOSE:

A. The primary purpose of the North New Albany (NoNA) Zoning District (the “Zoning District”) is to implement the general principles and stated objectives of the Engage New Albany 2021 Strategic Plan (the “Strategic Plan”) specifically relating to the creation of a select number of focused pockets of mixed-use development in strategic locations throughout the City that emphasize the preservation and creation of outstanding open spaces, the provision of a wide range of choices for housing, dining and entertainment, and a commitment to high-quality planning and design (a “Hamlet Zoning District”). The Strategic Plan specifically identifies the Zoning District as the location of a Hamlet to be developed according to the Strategic Plan’s vision and to anchor the neighborhoods and business that make up the Strategic Plan’s “Northwest Focus Area”.

B. The Zoning District is intended to energize and foster a highly-amenitized center of gravity for the North New Albany area, create a gateway to the City’s Village Center and International Business Districts, and serve as a model of best-practices of environmentally responsible design and placemaking. The Zoning District will focus on embracing the area’s natural settings, expanding the range of choices available to the City’s residents; and creating places that embody the City’s commitment to community.

C. Specific Purposes:

1. More specifically, the purpose of the Zoning District is to promote development that creates an energized neighborhood center within a walkable, mixed-use environment that will enhance the Northwest Focus Area and promote the City’s image as an exceptional location for high-quality business investment.

2. The Zoning District is further intended to create places that embody the City’s commitment to community through the encouragement of communal interaction, creation of “complete neighborhoods”, and fostering design that embraces placemaking and honors human-scale experience in its format and detailing. In addition, the Zoning District will be designed and maintained to serve as a center of community for current and future City residents.

D. Principles of Walkable Urbanism: To advance the purposes of the Zoning District as described in divisions (A) through (C) of this section, the following principles of “walkable urbanism” will serve as a guiding framework for the design and development of the Zoning District. Individual principles may not apply in all circumstances but should be used where

appropriate to ensure the requirements and standards of the Zoning District are applied in a manner that contributes to the creation of walkable, mixed use environments as envisioned by the Strategic Plan while providing for the creation of a safe and comfortable pedestrian-oriented development desired by the City and consistent with the principles of walkable urbanism.

1. General Principles. The designs of buildings, streets, and open spaces within the Zoning District should contribute to the creation of vibrant streetscapes, community gathering places, and a neighborhood pattern of development, characterized by:

- a. Quality architecture, master planning, and design emphasizing beauty, human comfort, and creating a “sense of place”;
- b. Pedestrian-friendly design that places a high priority on walking and bicycling;
- c. Creation of interesting and convenient destinations within walking distance for visitors as well as ordinary activities of daily living; and
- d. Respect for the natural environment.

2. Streets, Parking and Transit. Streets should be capable of accommodating multiple modes of transportation and should facilitate the creation of a public realm designed primarily for people, characterized by:

- a. Streets and blocks arranged to allow for comfortable walking distances, to disperse traffic and to reduce the length of automobile trips;
- b. A connection to and enhancement of the existing street network;
- c. A recognition of the role of buildings and landscaping that contributes to the physical definition of streets as civic places;
- d. On-street public parking where appropriate; and
- e. Shared parking and other strategies to reduce the size of surface parking lots and enable efficient and creative site design.

3. Commitment to Principles of Master Planning and Holistic Design. The physical form of development in the City affects the quality of the lives of its current and future residents. The principles of master planning and holistic design help to improve and protect this quality, whereas dogmatic application and strict adherence to traditional land use restrictions in a Hamlet development will lead to a less desirable outcome. While

traditional zoning ordinances typically emphasize land use regulation that separates uses, it is the intent in this Zoning District to instead stress high-quality physical form and design through the use of a “master planning” process. This approach recognizes the intrinsic relationship between public areas such as streets and sidewalks with the private realm of homes and buildings and is founded upon collaboration between the developer and the community. Use of a “master planning” review process for the following specific portions of a proposed development as part of an application for Final Development Plan Approval will include:

- a. Overall site planning and associated proposed uses;
- b. Cohesive streetscapes and perimeter landscaping;
- c. Vehicular access and shared parking solution;
- d. Bicycle access and shared parking solution;
- e. Lighting; and
- f. Signage (as needed).

II. ORGANIZATION OF ZONING DISTRICT; GENERALLY APPLICABLE STANDARDS:

A. Location and Subareas: This Zoning District consists of 30.33+/- acres located to the southwest and southeast of the intersection of Central College Road and New Albany-Condit Road (a.k.a. State Route 605). It includes an assemblage of various township-era single family parcels that historically have been under fractured ownership and have been used as owner-occupied/renter-occupied residences but are now owned or controlled by a single business entity, namely the applicant. The development proposal includes 6 subareas:

1. Subarea 1: Subarea 1 consists of 1.8 +/- acres located in the northwestern corner of the Zoning District. It is found to the south of and adjacent to Central College Road. Its western boundary is the corporation line separating New Albany and the City of Columbus. This subarea will accommodate restaurant, retail, service-oriented, office, and similar development.

2. Subarea 2: Subarea 2 consists of 5.4 +/- acres located to the southwest of, and adjacent, to the intersection of Central College Road and New Albany-Condit Road. This subarea will contain multi-family residential uses and related amenities.

3. Subarea 3: Subarea 3 contains 9.1 +/- acres. It is irregularly shaped to include the west-central portion of the Zoning District with an extension eastward to New

Albany-Condit Road to encompass Sugar Run Creek. This subarea is intended to be the epicenter of recreational and social activities to serve not only this Zoning District but also residents and visitors from throughout the City. It will contain a mix of unique uses, many of which are not currently found anywhere else in New Albany.

4. Subarea 4: Subarea 4 is found in the east-central portion of the site. Containing 2.8 +/- acres, it will provide for residential uses.

5. Subarea 5: Subarea 5 consists of 6.5 +/- acres and is the southern portion of the Zoning District. This subarea is intended to provide senior living opportunities with a limited mix of supporting uses.

6. Subarea 6: Subarea 6 consists of 5.4 +/- acres and is located to the southeast of and adjacent to the intersection of Central College Road and New Albany-Condit Road. This subarea is to be developed with single family residential and townhomes.

B. Development Standards – General Application: This text is intended to apply development standards and requirements that are particular to this Zoning District. Where it provides standards and/or requirements that conflict with those which are set forth in the Codified Ordinances, the provisions of this text shall govern. Where this text is silent on a particular standard or requirement and the Codified Ordinances address that item or standard, then development and operation of uses in this Zoning District shall comply with the relevant provisions of the Codified Ordinances. Development standards which are particular to each subarea are provided below. In addition, each subarea shall be subject to the generally applicable requirements of Section VIII.

C. Architectural Standards: Buildings that are constructed to accommodate certain uses are not contemplated by the City's Design Guidelines and Requirements (DGRs). In fact, the concept of Hamlets being developed in the City was introduced for the first time in the 2021 update to the Strategic Plan and therefore buildings associated with this development type are not addressed therein. Therefore, this Zoning District is not governed by the DRGs, as the document is silent on the type of development being proposed.

The goal for architectural design of the buildings and structures in this Zoning District is to meet or exceed the community standard while enabling creativity in defined locations to providing distinguishing features for this development. Architecture by its nature is a subjective medium, meaning that the adoption of strict objective standards in all instances may not provide the best means for achieving appropriate design. In recognition of this fact, the standards set forth herein provide guidelines and suggestions for designing buildings in an effort to set expectations for the quality of architecture that will be expected for these structures. On the other hand, these standards are meant to allow for flexibility to encourage innovative design provided that the spirit and intent of a "Hamlet" as contemplated in the Strategic Plan are met. The following requirements shall apply to architecture within this Zoning District:

1. Design Intent: Buildings and structures within Subareas 1, 2, 4, 5, and 6 shall be designed in a manner that substantially complies with relevant provisions of the DGRs as if they are being applied to the building or structure as a stand-alone project that is not part of a Hamlet. For example, the buildings in Subarea 1 shall apply the standards of Section 6 of the DGRs (Commercial Outside Village Center). Notwithstanding the foregoing, deviations from relevant provisions shall be permitted if (i) they enhance the compatibility or cohesiveness of a particular building or structure with other proposed or existing buildings in the Zoning District, or (ii) they improve the environmental sustainability and reduce the environmental impact of the building or structure while not materially and negatively impacting its aesthetics. Review of architecture shall be required for approval as part of a final development plan.

The City's Design Guidelines and Requirements (DGRs) shall not apply to Subarea 3. Architectural designs and requirements shall be reviewed as part of one or more final development plans for this subarea, and building shall be constructed in accordance with such approved plans. Given the isolated nature of Subarea 3, the intent is to allow for creative designs for buildings and structure to create a unique sense of place. Thematic, "folly", and eclectic architectural designs shall be encouraged in Subarea 3 in order to create vibrancy and a sense of a unique place. Proposed architecture for buildings in this subarea will take this into account while not diminishing the quality of architecture as a result. For "Cottages" within this subarea, an applicant need not have the design of each individual unit approved as part of a final development plan, but may present designs for several of them along with written architectural design standards to be applied to other Cottages which may be administratively applied by City staff.

Character images for the architecture that is anticipated for this Zoning District have been provided as part of the preliminary development plan application. Architecture is intended to further the design ideas that are provided in these images.

2. Four-Sided Design: Buildings shall be designed to be seen from 360 degrees, meaning that they shall be four-sided with a consistent level of design on all sides. The palette of exterior finishes and color shall be cohesive and harmonious with the materials on and character on all sides of a building. Building facades which face interior courtyards and are not visible from outside of these courtyards shall not be subject to this requirement. Unfinished rear facades of buildings shall be prohibited.

3. Height: Maximum building heights shall not exceed:

- a. 35 feet in Subareas 1 and 4.
- b. Four stories and 53 feet in Subarea 2;
- c. 42 feet in Subarea 3, with buildings permitted to be one, one and one-half, two, or two and one-half stories;
- d. 55 feet in Subarea 5; and
- e. 45 feet in Subarea 6, with homes required to be a minimum of 1.5 stories or 1.5 stories in appearance from the front elevation and a maximum of 3.0 stories or 3.0 stories in appearance from the front elevation.

Architectural elements such as monitors, chimneys, and cupolas may exceed the height limitations of this text as permitted by the Codified Ordinances.

4. Roofs: Roofs may be sloped or flat. Flat roofs shall incorporate detailed and decorated cornices in a manner that is consistent with existing examples of details on similar buildings in other areas of the City. Acceptable materials for sloped roofs include dimensional asphalt shingles, natural and synthetic slate, cedar shake, and standing seam metal and may incorporate “green” features (such as but not limited to vegetation).

5. Screening: 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. 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 on and character of the nearest primary building shall be required to achieve a minimum 75% opacity screening year round.

6. Wall Finish Materials: Brick, brick veneer, and cementitious/composite siding or equivalent, shall be permitted as primary and secondary exterior façade materials as well as for trim and accent elements. Vinyl shall be prohibited, except (a) on building facades interior to a courtyard that is surrounded by building facades on all sides and (b) within Subarea 5, where it shall be permitted only if the Planning Commission determines, as part of a final development plan, that the aesthetics, quality, durability, and ability to maintain a proposed vinyl product will meet or exceed the same characteristics as they are found in cementitious/composite siding. Metal panels, EIFS, wood, and aluminum also shall be permitted as trim or accent elements. 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, while reflective or mirrored glass shall be prohibited. Exposed concrete foundation walls are prohibited.

7. Fascias: When applicable, roof fascias shall be proportioned to the scale of the roof element.

8. 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.

9. 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.

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

11. Operable Doors: The requirement in the DGRs that an operable and active front door is to be provided along a public street shall apply in Subarea 1 along Central College Road only for multi-tenant buildings. Single-tenant buildings in Subarea 1 along Central College Road shall be exempt from this requirement, provided that such buildings have a pedestrian entrance on one or both sides and further provided that the façade of a building facing Central College Road instead shall include an architectural feature or other design element that encourages pedestrian activity. Where buildings in other subareas have frontages on two or more public streets, a primary pedestrian entrance shall be designated. Secondary pedestrian entrances shall appear to be operable but may have their access limited by key card, key pad, or similar means.

12. Architectural Details: Additional architectural details including roof plans; garage door design/colors; dormer details; entablature; and shutter specifications; columns, cornice and pediment details; window specifications; louver details, brick mould profile shall be provided at each final development plan for review by the Planning Commission as applicable. The extensive use of glass shall be encouraged on storefronts.

13. Provisions Specific to Subarea 2: There shall be no maximum building length in Subarea 2. Stairways (other than stoops) within Subarea 2 must be enclosed and shall not be visible from the exterior of a building.

14. Solar Panels: When used, solar panels shall be located where not visible to public streets whenever possible; however, if they need to be located such that they are visible in order to function (i.e., facing south), the panel array shall be arranged in an orderly, designed layout, incorporating required walkways if on the ground, and evenly distributed if on a roof, for a neat appearance. Wiring and components other than the panels shall not be visible.

D. Vehicular and Bicycle Parking. Given the integrated development program for this Zoning District, as part of the review and approval of the first final development plan in the Zoning District the applicant will complete and submit (a) a comprehensive shared vehicular parking master plan for the entire Zoning District (a “Vehicle Parking Plan”) and (b) a comprehensive bicycle parking plan (a “Bicycle Parking Plan”). The Vehicle Parking Plan shall analyze peak commercial, office, and residential uses and recommend the total number of vehicular parking spaces and their locations based on shared parking principles and ratios to provide adequate parking for the Zoning District without “overparking” that would detract from the built environment and provide for unnecessary excess pavement. The Bicycle Parking Plan shall provide for a number of bicycle parking places that is adequate to serve the needs of the Zoning District while being located for their efficient usage, but shall not require bicycle parking on each individual parcel. The Vehicle Parking Plan and the Bicycle Parking Plan that is approved as part

of a final development plan shall govern the provision of parking for vehicles and bicycles in this Zoning District unless otherwise approved as part of one or more additional or amended final development plans that are later filed for development within the Zoning District, and in Subarea 2 shall provide the required number of parking spaces as provided later in this text. Notwithstanding the foregoing, specific vehicular parking ratios and requirements for Subarea 2 and Subarea 5 are detailed later in this text and shall be applied to those subareas when preparing and reviewing the Vehicle Parking Plan.

III. SUBAREA 1: The provisions of this Section III shall apply to Subarea 1.

A. Permitted Uses: The permitted uses contained in the Codified Ordinances of the City of New Albany, C-2 General Business (Commercial) District, Section 1147.02, shall be permitted in Subarea 1. Conditional uses contained in Section 1147.03 of the Codified Ordinances shall be allowed in this subarea. Conditional uses shall comply and shall be reviewed in accordance with Chapter 1115 of the Codified Ordinances. Notwithstanding any of the foregoing, the following uses shall be prohibited in Subarea 1:

1. Funeral services.
2. Self-service laundries.
3. Gasoline service stations or retail convenience stores selling gasoline as an ancillary activity.

B. Lot and Setback Commitments:

1. Application of C-2 Development Standards: Except as otherwise expressly set forth in this subsection II.B, the development standards contained in Codified Ordinances Section 1147.04 shall apply to this subarea.

2. Central College Road: There shall be a minimum pavement setback and a minimum building setback of 70 feet as measured from the centerline of Central College Road. The setback from Central College Road shall be deemed to be the front yard setback in this subarea.

3. Perimeters: The following setbacks shall apply to perimeter boundaries of Subarea 1 which are not contiguous with the public street right-of-way of Central College Road:

a. A minimum pavement setback of 5 feet and a minimum building setback of 10 feet from the western perimeter boundary line.

b. There shall be a zero minimum pavement and building setback from the southern and eastern perimeter boundary lines.

5. Interior Boundaries: Setbacks along all internal property boundaries between adjoining parcels within this subarea shall be zero feet for pavement and for buildings.

6. Lot Coverage: The maximum lot coverage shall be 80%. Lot coverage shall be defined as the area covered by buildings and impervious surfaces. Lot coverage shall be measured across the entire subarea, meaning that individual parcels within this subarea may exceed the maximum lot coverage percentage as long as the entire subarea does not exceed the maximum and shall be documented by the developer. This documentation shall consist of a calculation being provided along with each final development plan in this subarea detailing the lot coverage within the proposed development that is the subject of the application and the total lot coverage that will exist in the subarea following the approval of the application by taking into account other improved portions of the subarea and other final development plans for the subarea which has been approved but pursuant to which development has not yet occurred.

C. Access: Vehicular access to and from Subarea 1 shall be provided from (a) one full movement access point on Central College Road that is located along or near the shared perimeter boundary line between Subarea 1 and Subarea 2, and (b) from a public street and public alley network that is generally consistent with that which is illustrated in the accompanying preliminary development plan and as approved in one or more final development plans for the Zoning District.

IV. SUBAREA 2: The provisions of this Section IV shall apply to Subarea 2.

A. Permitted Uses: Permitted uses in this subarea shall include:

1. Multi-family dwelling units.
2. Private community center/clubhouse facilities (with or without an outdoor pool) and other amenities that are customary when serving a multi-family residential development. Marketing and leasing offices for the multi-family within this subarea shall be permitted to be operated from this structure, as will coffee shops, cafes, fitness centers, community gathering spaces, co-working spaces for offices, and other similar uses in accordance with Section 1127.02(e) (Similar Uses) of the Codified Ordinances.
3. Home occupations, subject to the regulations of Codified Ordinances Section 1165.07.

B. Density, Unit, and Setback Requirements:

1. Number of Units: There shall be a maximum of 280 dwelling units in this subarea.
2. Types of Units: Dwellings shall consist of individual “flat” or “garden” units, meaning that each dwelling unit will be located on a single floor of the building in which it is located, and/or two story units with flats or gardens above or below them. Units

shall be located above a so-called “podium” parking area within the building and/or shall be wrapped around an interior parking area within the building. If parking underneath or within a building is visible from the exterior, then opaque screening shall be required using materials that are consistent with or complimentary to the exterior facades of the building.

3. Size and Configuration: The minimum gross floor area for each dwelling unit shall be 500 square feet. One, two, and three bedroom units will be permitted, provided that no more than 40% of the units will have two bedrooms and no more than 8 units shall have three bedrooms.

4. Lot Size: There shall be a minimum lot width of 100 feet and minimum lot area of 10,000 square feet in this subarea.

5. Lot Coverage. The maximum lot coverage shall be 90%. Lot coverage shall be defined as the area covered by buildings and impervious surfaces. Lot coverage shall be measured across the entire subarea, meaning that individual parcels within this subarea may exceed the maximum lot coverage percentage as long as the entire subarea does not exceed the maximum and shall be documented by the developer. This documentation shall consist of a calculation being provided along with each final development plan in this subarea detailing the lot coverage within the proposed development that is the subject of the application and the total lot coverage that will exist in the subarea following the approval of the application by taking into account other improved portions of the subarea and other final development plans for the subarea which has been approved but pursuant to which development has not yet occurred.

6. Setbacks. The following setback requirements shall apply to this subarea:

a. Central College Road. There shall be a minimum pavement setback and a minimum building setback of 70 feet from the centerline of Central College Road.

b. New Albany-Condit Road. There shall be a minimum pavement setback and a minimum building setback of 70 feet from the centerline of New Albany-Condit Road as it exists on the date that this text becomes legally effective.

c. Southern Perimeter Boundary. There shall be a zero minimum pavement and building setback from the right-of-way of the new public street that is to be constructed along or near the southern perimeter boundary line of this subarea.

d. Western Perimeter Boundary. There shall be a zero minimum pavement and building setback from the western boundary line of this subarea.

e. Minimum Separation. The minimum separation between buildings shall be 10 feet

C. Access and Parking:

1. Vehicular Access: Vehicular access to and from Subarea 2 shall be provided using a combination of a public street and a public alley system within the subarea and the Zoning District. Vehicular access shall be provided from a full service access point on Central College Road along or near the shared boundary line of this subarea with Central College Road. An east-west public street will be provided within or along the southern boundary of Subarea 2. This street shall have a minimum right-of-way width of 60 feet and a pavement width of 24 feet, measured from face-of-curb to face-of-curb and shall have full movement access at New Albany-Condit Road.

2. Off-Street Parking: Parking shall be provided within the interior of multi-family buildings at the minimum rate of 1.05 spaces per studio dwelling unit, 1.16 spaces per one bedroom unit, and 1.64 spaces per two bedroom unit. An exterior parking area shall be located near the permitted private community center/clubhouse with spaces to be provided at the minimum rate of 1 space per 1,000 square feet contained within the community center/clubhouse. This exterior parking area may be used for overflow parking from other uses or from events in this Zoning District, and visitor parking, drop-offs, deliveries, potential lessees, ride sharing, and food pickups. Direct vehicular access to and from interior and exterior parking areas shall be prohibited from Central College Road and New Albany-Condit Road.

3. On-Street Parking: On-street parking shall be permitted on at least one side of the public street that is near or along the southern boundary of this subarea.

4. Public Sidewalks: A public sidewalk shall be located within the right-of-way on both sides of the public street that is near or along the southern boundary of this subarea. Sidewalks shall be a minimum of 5 feet in width and shall be constructed of concrete.

D. Landscaping:

1. Street Trees: Street trees shall be required on both sides of public streets and public alleys. Trees shall be a minimum of 3 inches in caliper at installation and shall be spaced as required by applicable provisions of the Codified Ordinances. This requirement may be waived in areas where existing vegetation occurs, subject to the approval of the city landscape architect. Notwithstanding the foregoing, tree spacing may deviate from this requirement if necessary or appropriate to provide a desirable streetscape, as approved as part of a final development plan. Trees shall not obstruct sight distance or signage. Street tree and signage locations shall be shown on the final development plan for review and approval.

2. Landscaping Plan: A landscaping plan shall be provided with a final development plan application for this subarea for review and approval by the Planning

Commission. The landscaping plan shall provide specifications for required plantings on individual parcels and reserve areas and shall provide detailed requirements for landscaping along Central College Road and New Albany-Condit Road. It also shall include locations for public and private sidewalks. Public street and alley landscaping shall be coordinated and consistent throughout the Zoning District.

V. SUBAREA 3: The provisions of this Section V shall apply to Subarea 3.

A. Intent: Subarea 3 is intended to be the core of this Zoning District which is an amenity for the Hamlet and an attraction for the larger New Albany community. Using the Sugar Run Creek as the Zoning District's backbone, the goal will be to capitalize on its prominence by creating associated green space, leisure trails, and recreational, entertainment, and social opportunities. It will accommodate a variety of unique and inventive uses.

B. Permitted Uses: Permitted uses in this subarea shall include:

1. Parks/Open Space: Parks, open space, dog parks, public restrooms, and customary amenities and activities related thereto.
2. Recreation: Athletic fields, athletic courts, playgrounds, and similar uses.
3. Parking: Parking for uses within this subarea and for overflow from other subareas.
4. "Food Trucks", defined to mean "licensed and operable motor vehicles or trailers with a kitchen where food is prepared for purchase by walk-up customers."
5. "Food Huts", defined to mean "a restaurant with limited seating capacity located in a small space relative to traditional restaurants and which derives most of its sales from carryout orders".
6. "Seasonal Dining Spaces", defined to mean "dining and/or beverage consumption spaces located outside of a permanent structure which provide for outdoor seating opportunities during times of cold or otherwise inclement weather using inflatable bubbles or other means of shelter or separation and which utilize portable heating devices, as necessary."
7. "Office/Co-Working spaces", defined to mean "shared workspaces providing an office-like environment for multiple businesses and/or individuals to operate and work, for rent on a short-term but renewable basis."

8. “Cottages”, meaning “homes that are 850 square feet or less in size, detached from other structures. Cottages may be rented as VRBO, Airbnb, or in similar manners.”

9. “Outdoor entertainment stages” shall mean stages that are covered or uncovered but not completely enclosed and from which concerts, theatre productions, and other artistic performances are given.

10. Restaurants, with or without outdoor dining spaces. Drive-thrus are prohibited. For purposes of this subsection, a “drive-thru” shall be defined to mean one or more dedicated lanes from which food orders are placed and picked up. Temporary outdoor food concessions or providers shall be included within this definition.

11. “Ghost Kitchens”, defined to mean “professional food preparation and cooking facilities set up for the preparation of delivery-only meals. Delivery may be made to visitors of uses, places, or events within Subarea 3 or to locations elsewhere within and/or outside of the Zoning District.” A Ghost Kitchen need not be for a single restaurant and may contain kitchen space and facilities for more than one restaurant brand. It also may be permitted to be operated as part of or in conjunction with other permitted restaurants or permitted food concepts.

12. Special event venues such as, but not limited to, wedding venues, banquet facilities, and gathering venues for special occasions.

13. “Markets”, defined to mean “farmers markets, artisan and artist markets, craft markets, flea markets, antique markets, and similar markets. These permitted uses may be located indoors or outdoors. Markets may include Food Trucks and other temporary outdoor food preparation concessions or providers.”

14. Artisan and artist creative spaces and galleries.

15. Nano-breweries/pubs and beer gardens.

16. Multi-family dwelling units located within a building and above a first floor which contains one or more other permitted uses.

17. Retail sales, no greater than 2,500 square feet per tenant space.

C. Density: The following maximum densities shall apply to this subarea:

1. Residential. There shall be a maximum of 25 total residential units in this subarea.

2. Outdoor Entertainment Stages. A maximum of two permanent Outdoor Entertainment Stages shall be permitted.

D. Operational Requirements and Limitations: Given the unique nature of certain permitted uses in this subarea, certain operational requirements and limitations are being provided in order to ensure their appropriate operations:

1. Recreational Uses: Athletic fields, athletic courts, playgrounds, and similar uses may be lighted, provided that such lighting is turned off by 10:00 P.M.

2. Outdoor Entertainment Stages: Performances from Outdoor Entertainment Stages shall not begin before 9:00 A.M. and shall be completed by no later than 10:00 P.M., except that on Memorial Day, Independence Day, and Labor Day (and their associated weekends) performances shall be completed by 11:00 P.M.

3. Outdoor Markets: Outdoor Markets shall be permitted to be operated for no more than 96 hours in a row and shall be permitted to be operational only between 9:00 A.M. and 10:00 P.M. Permanently located restaurants and other food service providers shall be exempt from this provision.

4. Food Trucks:

a. Power Source: Food Trucks shall be powered using a permanent electric source provided within the Zoning District. Outdoor generators shall not be permitted to be used to power Food Trucks.

b. Signs: Signage shall be permitted on the exteriors of Food Trucks without a permit being necessary if (a) it is painted on or permanently affixed to the Food Truck, (b) it consists of a menu or advertisement meant to provide information to on-site customers, or (c) is of a an “A frame” or sandwich board type. In addition, other signage parameters and requirements for Food Trucks may be approved as part of a master sign plan.

c. Trash Receptacles: At least one trash can/receptacle shall be provided near each food truck in a location that is not visible from adjacent public streets. No liquid waste or grease shall be disposed into sanitary sewers or storm drains.

E. Lot Requirements:

1. Lots/Parcels: Multiple buildings and structures containing any mixture of permitted uses in this subarea may be located on a single lot or parcel, provided that the buildings and structures are under common ownership.

2. Dimensions: There shall be a minimum parcel width or depth requirements in this subarea. of 15 feet.

3. Street Frontage: At least one parcel in this subarea shall be required to have frontage on the east-west public street that is planned to be constructed in Subarea 2 and/or Subarea 4 and which will connect to New Albany-Condit Road. Other parcels in this subarea which do not have frontage on that street shall be permitted only if an easement agreement is recorded which provides the parcel with perpetual rights of access to and from the public street and public alley system within this Zoning District and that allows for direct or indirect vehicular and pedestrian access to Central College Road and/or New Albany-Condit Road. Such an easement agreement shall be required to be recorded with the Office of the Recorder of Franklin County, Ohio. A parcel within this subarea that is dedicated to the City as parkland may have its street frontage on New Albany-Condit Road even if vehicular access to and from the park is not provided from that street.

4. Lot Coverage. The maximum lot coverage across the subarea shall be 35% in the aggregate for this subarea. Lot coverage shall be defined as the area covered by buildings and impervious surfaces. Lot coverage shall be measured across the entire subarea, meaning that individual parcels within this subarea may exceed the maximum lot coverage percentage as long as the entire subarea does not exceed the maximum and shall be documented by the developer. This documentation shall consist of a calculation being provided along with each final development plan in this subarea detailing the lot coverage within the proposed development that is the subject of the application and the total lot coverage that will exist in the subarea following the approval of the application by taking into account other improved portions of the subarea and other final development plans for the subarea which has been approved but pursuant to which development has not yet occurred.

F. Minimum Setbacks:

1. New Albany-Condit Road: There shall be a minimum pavement and building setback of 70 feet from the centerline of New Albany-Condit Road.

2. Stream Corridor Protection Zone: A “Stream Corridor Protection Zone” shall be provided along Sugar Run Creek for a minimum width of 100 feet, provided that a minimum of 25 feet shall be provided to each side of the centerline of the creek. The amount of the Stream Corridor Protection Zone that is located on either side of the creek may vary, provided that the foregoing minimums are met. Within the Stream Corridor Protection Zone, buildings and structures shall be prohibited. Pavement shall be prohibited within the Stream Corridor Protection Zone except for leisure paths. Benches, trash receptacles, and pet waste stations shall be permitted within the Stream Corridor Protection Zone in locations which are approved as part of a final development plan.

3. Perimeter Boundaries: There shall be a zero minimum pavement and minimum building setback from all perimeter boundary lines of this subarea which are

located outside of the Stream Preservation Zone and which are not contiguous with a public right-of-way.

4. Interior Parcel Lines: There shall be a zero pavement and building setback from all interior parcel lines within this subarea, provided that all applicable building code requirements are met.

G. Access: Vehicular access to and from Subarea 3 shall be provided from an east-west public street which will be provided along or near the shared boundary line between Subarea 2 and Subarea 4, as well as an east-west public street which will be provided along or near the shared boundary lines between Subarea 3 and Subareas 1 and 2.

H. Landscaping Plan: A landscaping plan shall be provided with a final development plan application for this subarea for review and approval by the Planning Commission. The landscaping plan shall provide specifications for required plantings on individual parcels and reserve areas and shall provide detailed requirements for screening, buffering, and/or landscaping along New Albany-Condit Road. It also shall include locations for public and private sidewalks. The landscaping plan for the Trailhead Park may be submitted for review and approval separately from the landscaping plan for the balance of this subarea.

VI. SUBAREA 4: The provisions of this Section VI shall apply to Subarea 4.

A. Permitted Uses: Permitted uses in this subarea shall be as follows:

1. Single-family attached residences in buildings containing at least two and no more than five dwelling units within a building. Units may be owner-occupied or for rent.

2. One model home or leasing office shall be permitted in this subarea subject to the review and approval of the Planning Commission in accordance with Section 1133.04(d) of the Codified Ordinances of the City of New Albany. Notwithstanding anything to the contrary in the City's Codified Ordinances, upon approval of a final plat by the City the developer may commence construction of the building containing the model home or leasing office. Construction of the model home may occur in advance of, or in conjunction with, installation of public infrastructure for the subdivision. No occupancy or use of the model home shall be permitted until all relevant public infrastructure improvements serving the home are acted by the City.

3. Home occupations, subject to the regulations of Codified Ordinances Section 1165.09.

B. Number and Types of Units: There shall be a maximum of 25 dwelling units in this subarea.

C. Lot Requirements:

1. Individual Lots: Each dwelling unit that is owner-occupied shall be located on its own parcel.

2. Dimensions: For owner-occupied units, there shall be a minimum parcel width of 25 feet at the building line and a minimum parcel depth of 45 feet. For buildings containing rental units, there shall be a minimum parcel width at the building line of 100 feet and a minimum parcel depth of 45 feet.

3. Street Frontage: All parcels shall have access to a public alley which connects to a public street.

4. Lot Coverage: The maximum lot coverage shall be 70%. Lot coverage shall be defined as the area covered by buildings and impervious surfaces. Lot coverage shall be measured across the entire subarea, meaning that individual parcels within this subarea may exceed the maximum lot coverage percentage as long as the entire subarea does not exceed the maximum and shall be documented by the developer. This documentation shall consist of a calculation being provided along with each final development plan in this subarea detailing the lot coverage within the proposed development that is the subject of the application and the total lot coverage that will exist in the subarea following the approval of the application by taking into account other improved portions of the subarea and other final development plans for the subarea which has been approved but pursuant to which development has not yet occurred.

D. Minimum Setbacks:

1. New Albany-Condit Road: There shall be a minimum building setback of 70 feet from the centerline of State Route 605/New Albany-Condit Road as it exists on the date that this text becomes legally effective.

2. New Public Street: There shall be a minimum building setback of 10 feet from the right-of-way of the new public street that is to be constructed along or near the northern boundary line of this subarea.

3. Other Perimeter Boundaries: From perimeter boundary lines of this subarea which are not adjacent to a public right-of-way, the minimum building setback shall be 10 feet.

4. Front Yards: Except as otherwise required in the preceding subsections of this text, the minimum front yard setback shall be 5 feet from the edge of public alley pavement for each dwelling unit.

5. Side Yards: There shall be a zero setback requirement between attached units and their shared lot lines, where applicable. End units on buildings shall be located no less than 5 feet from the side parcel line.

6. Rear Yards: The minimum rear yard setback for each dwelling unit shall be 5 feet.

7. Encroachments – Front and Rear Yards: Stoops, steps, and covered porches shall be permitted to encroach a maximum of 4 feet within the minimum front yard setback. They shall not be permitted to encroach within easements. Decks, patios, and screened porches may encroach a maximum of 4 feet into the minimum rear yard setback.

E. Access and Parking:

1. Vehicular Access: A public street generally running east-west will be provided within or along the northern boundary of Subarea 4 and will have a full movement access point at New Albany-Condit Road. Vehicular access to and from Subarea 4 shall be provided using this new public street. This street shall have a minimum right-of-way width of 60 feet and a pavement width of 24 feet, measured from face-of-curb to face-of-curb. A public alley shall extend into the subarea from the east-west public street and shall have a pavement width of 24 feet, measured from face-of-curb to face-of-curb.

2. Off-Street Parking: All homes shall have a minimum one car garage and shall be required to have a minimum of one off-street parking spaces on their driveways.

3. On-Street Parking: On-street parking shall be permitted on public streets within this Zoning District in accordance with the City's Codified Ordinances.

4. Public Sidewalks: A public sidewalk shall be located within the right-of-way on both sides of public streets. Sidewalks shall be minimum 5 feet in width and shall be constructed of concrete.

F. Landscaping:

1. Street Trees: Street trees shall be required on both sides of public streets. Trees shall be a minimum of 3 inches in caliper at installation and shall be spaced as required by applicable provisions of the Codified Ordinances, except that along New Albany-Condit Road trees may be grouped, provided the quantity is equivalent to the Code-required amount of trees. This requirement may be waived in areas where existing vegetation occurs, subject to approval of the city landscape architect. Notwithstanding the foregoing, tree spacing on public streets may deviate from this spacing requirement if necessary or appropriate to provide a desirable streetscape, as approved as part of a final development plan. Trees shall not obstruct sight distance or signage. Street tree and signage locations shall be shown on the final development plan for review and approval.

2. Landscaping Plan: A landscaping plan shall be provided with a final development plan application for this subarea for review and approval by the Planning Commission. The landscaping plan shall provide specifications for required plantings on individual parcels and reserve areas and shall provide detailed requirements for screening, buffering, and/or landscaping along New Albany-Condit Road.

G. Porches: Front porches are encouraged on all homes. Screened porches are permitted on the rears of homes but shall not be permitted on the front or side. Detailing shall be traditional wood in appearance with a break in screening at rail height. All screened porch trim shall be painted or stained. Roof lines of screened porches shall conform to the architectural style of the home and blend into the massing of the home.

H. Garages:

1. Garages shall be attached and may front on a public alley. Each home shall provide a 1-car garage.

2. Individual bay doors or double wide garage doors that have the appearance of individual bay doors when closed shall be required. Notwithstanding the foregoing, individual bay doors shall be required on all garages which face the public street along the northern boundary of this subarea or New Albany-Condit Road. All garage doors shall contain decorative features and shall be of a color and style that is consistent with architecture of the home. The exterior color palates for each home shall be selected and designed in a manner which de-emphasizes the location and placement of the garage door. Garage doors that are white in color shall only be used in the circumstance when white is the primary exterior color of the individual home. All garage doors shall be solid paneled but may have windows provided that the interior of the garage cannot be viewed at a height of 6 feet when standing in the middle of the public street found in front of the garage. No glazing shall be permitted on garage doors unless they are consistent with the architectural theme.

3. Garage doors (Pedestrian): All pedestrian garage doors shall be solid paneled.

I. Miscellaneous Standards:

1. Graphics and Signage Commitments: This subarea shall utilize standard City of New Albany street regulatory signage. Entry feature signage at the public street entry into Subarea 4 shall be permitted with a design that is approved by the Planning Commission as part of a final development plan for this subarea. Other signage may be used subject to approval by the Planning Commission.

2. Swimming Pools/Spas: Swimming pools shall be prohibited in this subarea. Spas shall be permitted in the rear yard but must be completely screened from adjoining properties. Spas shall be flush with the top of surrounding paving or similar surfaces. Spas that are completely or partially flush with the top of surrounding paving or similar surfaces shall be enclosed by a wall or fence constructed so as to prevent uncontrolled access. Such wall or fence shall be of such design and construction as to effectively prevent a child from crawling or otherwise passing through or under such fence or barrier. Such wall or fence shall not be less than forty-eight (48) inches in height, maintained in good condition by the property owner, and affixed with an operable gate and lock.

3. Storage:

a. Storage Sheds: Storage sheds shall be prohibited.

b. Equipment Storage: Storage of all maintenance equipment shall be within garages or otherwise screened from off-site view. Such items should not be visible from streets, common open spaces, or adjacent lots or developments.

c. Vehicle Storage: All campers, off-road vehicles (i.e. box trucks), and boats, must be parked within an enclosed garage. No undrivable vehicles or parts of vehicles may be stored outside.

4. Mailboxes: Due to recently enacted federal postal rules and regulations, individual mailboxes are no longer permitted to be located to the front of each home. Instead, cluster mailbox units shall be utilized at a single location. This location and the design of the cluster mailbox units shall be reviewed and approved as part of a final development plan for this subarea.

5. Garbage Cans: All garbage cans and other waste containers shall be kept in garages or within approved screened areas that meet the requirements of Codified Ordinances Section 1171.05.

VII. SUBAREA 5: The provisions of this Section VII shall apply to Subarea 5.

A. Permitted Uses: Permitted uses in this subarea include the following:

1. Senior Living Uses: “Senior Living Uses” shall be defined to mean the development and operation of Assisted Living Facilities, Memory Care Facilities and Skilled Nursing Facilities, either individually or in some combination thereof, as well as any Independent Living Facility that is a component of a senior living community that includes an Assisted Living Facility. For purposes of this text, certain terms shall have the meanings provided below:

a. “Assisted Living Facilities” shall be defined to mean “facilities providing living accommodations for senior citizens, the elderly, and/or individuals with disabilities residing in individual units within a building that includes multiple living units and also provides assistance from on-site staff with respect to some activities of daily living such as, but not limited to, hygiene, dressing, provision of meals, dispensing and administration of medication, and mobility assistance.” Individual living units in such facilities may provide a living room, a kitchen, and one or more studio or self-contained bedrooms. These facilities may provide for common dining areas and meal preparation by on-site staff.

b. “Memory Care Facilities” shall be defined to mean “facilities providing for care of individuals living on-site who suffer from dementia or similar memory impairment conditions.” These facilities may include on-site nursing staff,

physicians and caregivers. These types of facilities may have special security measures in place for the protection and safety of residents. Memory Care Facilities will have some elements which are similar to Assisted Living Facilities but are distinguished from them based on the nature of residents' health and the elevated level of care that is necessary to be provided.

c. “Skilled Nursing Facilities” shall be defined to mean “facilities in a more institutional setting than Assisted Living or Independent Living Facilities, which require government-issued licenses in order to operate, and that customarily provide high and skilled levels of care due to residents’ complex medical problems, restrictions on mobility, and infirmities.” In these facilities, many residents generally require assistance with movement from one place to another, bathing, and other basic activities of daily living.

d. “Independent Living Facilities” shall be defined to mean “attached or detached residential units for senior residents aged 55 and over who largely have the ability to take care of their own basic needs.” These facilities have residents who are generally more active than in other senior living environments.

2. Senior Living Supporting Uses: Any uses ancillary to the operation of any Senior Living Use (“Senior Living Supporting Uses”) shall be permitted in association with the operation of a permitted Senior Living Use, provided that such uses are intended primarily for usage by residents and their families and guests and shall not be marketed (but will be open) to the general public. Examples of Senior Living Supporting Uses include, but are not limited to:

- a. Retail stores primarily engaged in selling merchandise for personal or household consumption;
- b. Cafes and restaurants with no drive-throughs;
- c. Coffee shops;
- d. Beauty salons, barber shops, nail salons, and spas;
- e. Pools
- f. Theaters;
- g. Fitness centers;
- h. Gymnasiums;
- i. Areas of worship; and
- j. Medical service facilities.

3. Offices: Administrative, business, professional, and medical offices as provided in Codified Ordinances Section 1143.02(a), (b), and (c); and

B. Conditional Uses: Daycares and preschools shall be conditional uses in this subarea, provided that the conditional uses comply with and are reviewed in accordance with Chapter 1115 of the Codified Ordinances:

C. Site Design Intent: The preliminary development plan for this subarea is intended to illustrate one site plan that conforms to the requirements of this zoning text. The final development plan for this subarea may differ from the preliminary development plan. Such differences shall be deemed to be permissible provided that the final development plan meets the requirements of this zoning text, subject to any variances that are approved by the Planning Commission as part of a final development plan.

D. Lot and Setback Commitments:

1. Lot Coverage: The maximum lot coverage shall be 70%. Lot coverage shall be defined as the area covered by buildings and impervious surfaces. Lot coverage shall be measured across the entire subarea, meaning that individual parcels within this subarea may exceed the maximum lot coverage percentage as long as the entire subarea does not exceed the maximum and shall be documented by the developer. This documentation shall consist of a calculation being provided along with each final development plan in this subarea detailing the lot coverage within the proposed development that is the subject of the application and the total lot coverage that will exist in the subarea following the approval of the application by taking into account other improved portions of the subarea and other final development plans for the subarea which has been approved but pursuant to which development has not yet occurred.

2. Setbacks:

a. New Albany-Condit Road: There shall be a minimum pavement setback of zero feet, a minimum primary building setback of 25 feet, and a minimum ancillary structure setback of 10 feet from the right-of-way of State Route 605/New Albany-Condit Road.

b. Western Perimeter Boundary: There shall be a minimum pavement setback of 10 feet and a minimum building setback of 20 feet from the western perimeter boundary of this subarea.

c. Northern Perimeter Boundary: There shall be a zero minimum pavement and building setback from the northern perimeter boundary of this subarea.

d. Southern Perimeter Boundary: As later contemplated herein, a public street will be constructed running east-west and generally parallel to the southern boundary line of this subarea. No buildings or pavement shall be

permitted to be located between this new street and the southern boundary line of this subarea. There shall be a minimum pavement setback of zero feet and a minimum building setback of 10 feet from this street.

f. Interior Parcel Lines: There shall be a zero minimum setback required for buildings and pavement from interior parcel lines within this subarea.

E. Access: Vehicular access to and from Subarea 5 shall be provided from one full movement access point on New Albany-Condit Road. A new public street will be constructed running east-west along the southern boundary of this subarea. It shall be constructed so that it is open for use prior to the issuance of the first temporary or permanent certificate of occupancy that is issued for a building in this subarea. The new public street shall have a minimum of 60 feet of right-of-way and a minimum of 24 feet of pavement measured face-of-curb to face-of-curb. It will be stubbed to the western boundary line of this subarea. A public sidewalk shall be provided along the north side of the new public street. This sidewalk shall be 5 feet in width and shall be constructed of concrete.

VIII. SUBAREA 6: The provisions of this Section VIII shall apply to Subarea 6.

A. Permitted Uses: Permitted uses in this zoning district shall be as follows:

1. Single-family attached residences within buildings containing at least two and no more than five dwelling units within a building. Units may be owner-occupied or for rent.

2. Single-family detached residences on reduced lots.

3. One model home per residential product type permitted in this subarea or leasing office shall be permitted in this subarea subject to the review and approval of the Planning Commission in accordance with Section 1133.04(d) of the Codified Ordinances of the City of New Albany. Notwithstanding anything to the contrary in the City's Codified Ordinances, upon approval of a final plat by the City the developer may commence construction of building containing the model home or leasing office. Construction of the model home may occur in advance of, or in conjunction with, installation of public infrastructure for the subdivision. No occupancy or use of the model home shall be permitted until all relevant public infrastructure improvements serving the home are acted by the City.

4. Home occupations, subject to the regulations of Codified Ordinances Section 1165.09.

B. Number of Units: There shall be a maximum of 35 dwelling units in this subarea.

C. Lot Requirements:

1. Individual Lots: Each dwelling unit that is owner-occupied shall be located on its own parcel. An individual building shall contain only owner-occupied dwelling units or rental units, but not both.

2. Dimensions: There shall be a minimum parcel width of 18 feet at the building line. Each parcel shall have a minimum depth of 40 feet.

3. Primary Street Frontage: No homes shall be permitted to back onto New Albany-Condit Road or Central College Road. Homes shall be served by a public alley system for vehicular traffic that provides access to the garage in the rear of a home.

4. Lot Coverage. The maximum lot coverage shall be 70%. Lot coverage shall be defined as the area covered by buildings and impervious surfaces. Lot coverage shall be measured across the entire subarea, meaning that individual parcels within this subarea may exceed the maximum lot coverage percentage as long as the entire subarea does not exceed the maximum and shall be documented by the developer. This documentation shall consist of a calculation being provided along with each final development plan in this subarea detailing the lot coverage within the proposed development that is the subject of the application and the total lot coverage that will exist in the subarea following the approval of the application by taking into account other improved portions of the subarea and other final development plans for the subarea which has been approved but pursuant to which development has not yet occurred.

D. Minimum Setbacks:

1. New Albany-Condit Road: There shall be a minimum building setback of 70 feet from the centerline of State Route 605/New Albany-Condit Road as it exists on the date that this text becomes legally effective.

2. Central College Road: There shall be a minimum building setback of 70 feet from the centerline of Central College Road as it exists on the date that this text becomes legally effective.

3. Eastern Perimeter Boundary: There shall be a minimum building setback of 10 feet from the eastern perimeter boundary line of this subarea..

4. Side Yards: There shall be a zero setback requirement between attached units and their shared lot lines, where applicable. End units on buildings shall be located no less than 5 feet from the side parcel line.

5. Rear Yards: The minimum rear yard setback for each dwelling unit shall be 18 feet to the edge of private alley pavement.

E. Access and Parking:

1. Vehicular Access: Vehicular access to and from Subarea 6 shall be provided using a public alley system with full turn movement access to and from New Albany-Condit Road. The access point at New Albany-Condit Road shall align with the proposed new public street that is planned in this Zoning District extending from the west side of New Albany-Condit Road. No vehicular access to and from Subarea 6 shall be provided along Central College Road. Public alleys shall have a minimum pavement width of 18 feet and a minimum right-of-way of 20 feet.

2. Off-Street Parking: All homes shall have a minimum one-car garage.

3. On-Street Parking: On-street parking shall be permitted on public streets within this zoning district in accordance with the City's Codified Ordinances.

4. Public Sidewalks: A public sidewalk shall be located on both sides of alleys. Sidewalks shall be minimum 5 feet in width and shall be constructed of concrete.

F. Landscaping:

1. Street Trees: Street trees shall be required on both sides of public streets. Trees shall be a minimum of 3 inches in caliper at installation and shall be spaced as required by applicable provisions of the Codified Ordinances, except that along New Albany-Condit Road trees may be grouped, provided the quantity is equivalent to the Cde-required amount of trees. This requirement may be waived in areas where existing vegetation occurs, subject to approval of the city landscape architect. Notwithstanding the foregoing, tree spacing on public streets may deviate from this spacing requirement if necessary or appropriate to provide a desirable streetscape, as approved as part of a final development plan. Trees shall not obstruct sight distance or signage, subject to staff approval. Street tree and signage locations shall be shown on the final development plan for review and approval.

2. Landscaping Plan: A landscaping plan shall be provided with a final development plan application for this subarea for review and approval by the Planning Commission. The landscaping plan shall provide specifications for required plantings on individual parcels and reserve areas and shall provide detailed requirements for screening, buffering, and/or landscaping along New Albany-Condit Road. In addition, it shall provide for a mound to be located near the eastern boundary of Subarea 6 which is shared with Franklin County Parcel Number 222-003916. Such mound shall be a minimum of 4 feet in height and shall include evergreen and deciduous trees and shrub plantings to provide additional screening and buffering. The slope of the mound shall be determined as part of the review and approval of the final development plan.

G. Porches: Front porches are encouraged on all homes. Screened porches are permitted on the rears of homes but shall not be permitted on the front or side. Detailing shall be

traditional wood in appearance with a break in screening at rail height. All screened porch trim shall be painted or stained. Roof lines of screened porches shall conform to the architectural style of the home and blend into the massing of the home.

H. Garages:

1. Garages shall be attached and may front on a public alley. Each home shall provide a minimum 1-car garage.

2. Garage doors (Vehicular): Individual bay doors or double wide garage doors that have the appearance of individual bay doors when closed shall be required. Notwithstanding the foregoing, individual bay doors shall be required on all garages which face the public street along the northern boundary of this subarea or New Albany-Condit Road. All garage doors shall contain decorative features and shall be of a color and style that is consistent with architecture of the home. The exterior color palates for each home shall be selected and designed in a manner which de-emphasizes the location and placement of the garage door. Garage doors that are white in color shall only be used in the circumstance when white is the primary exterior color of the individual home. All garage doors shall be solid paneled but may have windows provided that the interior of the garage cannot be viewed at a height of 6 feet when standing in the middle of the public street found in front of the garage. No glazing shall be permitted on garage doors unless they are consistent with the architectural theme.

3. Garage doors (Pedestrian): All pedestrian garage doors shall be solid paneled.

I. Miscellaneous Standards:

1. Swimming Pools/Spas: Swimming pools shall be prohibited in this subarea. Spas shall be permitted in the rear yard but must be completely screened from adjoining properties. Spas shall be flush with the top of surrounding paving or similar surfaces.

2. Storage:

a. Storage Sheds: Storage sheds shall be prohibited.

b. Equipment Storage: Storage of all maintenance equipment shall be within garages or otherwise screened from off-site view. Such items should not be visible from streets, common open spaces, or adjacent lots or developments.

c. Vehicle Storage: All campers, off-road vehicles (i.e. box trucks), and boats, must be parked within an enclosed garage. No undrivable vehicles or parts of vehicles may be stored outside.

3. Mailboxes: Due to recently enacted federal postal rules and regulations, individual mailboxes are no longer permitted to be located to the front of each home. Instead, cluster mailbox units shall be utilized at a single location. This location and the

design of the cluster mailbox units shall be reviewed and approved as part of a final development plan for this subarea.

4. Garbage Cans: All garbage cans and other waste containers shall be kept in garages or within approved screened areas.

IX. GENERALLY APPLICABLE STANDARDS AND PROCEDURES: The provisions of this Section IX shall apply to the entirety of the Zoning District unless otherwise expressly noted.

A. Parkland and Open Space: Parkland shall be dedicated to the City or maintained as open space with public access as determined at FDP from Subarea 3 and from Subarea 6 as generally shown in the preliminary development plan and with final dimensions and configurations which are approved as part of one or more final development plans. The intent of the dedicated parkland is to provide an amenity not only for the residents of the Zoning District but also for the New Albany community as a whole. The applicant will construct a trail and path system within the parkland that can be connected to other properties in the nearby vicinity and will provide valuable additions to the existing pedestrian trail network. The Sugar Run Creek will be enhanced and cleaned to improve its health and sustainability and provide a defining feature for this Zoning District. Where plantings are made within or near the creek, native plant species shall be used. Other open space areas to be privately owned and maintained and shall be specifically defined and approved with each final development plan for this Zoning District. Unless owned by a public entity, these open space areas shall be maintained by a forced and funded property owners' association or by other means as approved by the City that shall be created prior to the commencement of construction of any buildings within this Zoning District and may be owned by private owners or the association itself.

Based on the nature of the proposed uses in this Zoning District and the nature of this development being a "hamlet", the calculations as provided in the Codified Ordinances yield a result that makes it impossible to physically locate all of the required parkland and open space within the boundaries of this Zoning District. In addition, payment of a fee in lieu of the shortages in parkland or open space in accordance with the requirements and procedures of the Codified Ordinances will be cost prohibitive to the project. Therefore, the parkland and open space that is being shown in the preliminary development plan and which is later approved as part of one or more final development plans shall be deemed to satisfy parkland and open space requirements for this Zoning District.

B. Traffic Study: A traffic study has been filed along with the rezoning application for this Zoning District. Improvements to the interior and adjacent public street network shall be provided by the developer(s) of this Zoning District as required (and with timing recommended) by a traffic study which has been approved by the City Traffic Engineer.

C. Leisure Trails: An asphalt leisure trail that is 8 feet in width shall be constructed along the Zoning District's frontages on Central College Road and the west side of New Albany-Condit Road in locations which are reviewed and approved as part of a final development plan.

The locations and specifications for additional leisure trails shall be reviewed and approved as part of relevant final development plans.

D. Sizes of Plantings: Except as otherwise provided in other sections of this text, the minimum landscaping size at installation shall be 3 inches in caliper for deciduous trees and 6 feet high for evergreen trees.

E. Reciprocal Easements: A declaration of reciprocal easements or a reciprocal easement agreement shall be recorded against the real property within this Zoning District prior to the issuance of the first building permit in order to provide for perpetual vehicular and pedestrian cross access, cross utility, cross parking, and other easements which are necessary or desirable for the efficient development of the Zoning District. Maintenance of private drives and private sidewalks internal to this Zoning District shall be the responsibility of a forced and funded property owners' association which is created for this purpose or by individual property owners. 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.

F. Dedications of Rights-of-Way:

1. State Route 605/New Albany-Condit Road ROW: Prior to the issuance of the first building permit for any structure to be built in this Zoning District, the relevant property owners shall dedicate right-of-way to the City for a distance that extends 40 feet from the centerline of State Route 605/New Albany-Condit Road.

2. Central College Road: Prior to the issuance of the first building permit for any structure to be built in this Zoning District, relevant property owners shall dedicate right-of-way to the City for a distance that extends 50 feet from the centerline of State Route 605/New Albany-Condit Road.

G. Phasing of Improvements: The phasing of the development of this Zoning District is dependent upon market conditions. Each phase shall include an appropriate share of the proposed streets and circulation system, landscaping and outdoor spaces, screening and other site and architectural amenities of the entire project. The extent of these improvements shall be determined for each phase of a specific project at the time of the project's final development plan approval, and will not necessarily be based solely upon a proportional or equal share of the entire site. Requirements for a phased project may include off-site improvements.

H. Utilities: All new utilities shall be installed underground.

I. Lighting: Lighting shall be provided in accordance with the requirements of the Codified Ordinances except as otherwise provided in this subsection or as otherwise approved as part of a final development plan.

1. Parking Lot Lighting: All parking lot lighting shall utilize cut-off type fixtures and shall be down cast. Parking lot lighting shall be from a controlled source in order to minimize light spilling beyond the boundaries of the site. All parking lot lighting

shall be of the same light source type and style. All parking lot light poles shall be black or New Albany green and constructed of metal. Light poles shall not exceed 30 feet in height.

2. Prohibited Lighting. No permanent colored lights or neon lights shall be used on the exterior of any building. The prohibitions in this subsection shall not apply to Subarea 3.

3. Street Lights. Street lighting shall be provided at intersections between public alleys or public streets internal to this Zoning District and Central College Road and New Albany-Condit Road. Street lighting also shall be provided within the Zoning District where public streets intersect or and at other intersections of or with public alleys. Street lighting shall meet the City Standards and Specifications.

J. Service Areas and Dumpsters All loading areas, service areas and dumpsters shall be fully screened from all public streets and from adjacent properties located outside of this Zoning District at ground level with walls, fencing, landscaping, or some combination thereof. Walls shall be of the same materials used on nearby building walls and shall be complemented with landscaping. Exterior storage of materials, supplies, equipment, or products is prohibited.

K. Internal Buffering Exemption. The screening requirements of Codified Ordinances Section 1171.05 shall not apply to interior parcel or subarea boundaries in this Zoning District.

L. Graphics and Signage: Based on the various uses contained within the “hamlet” that is being created by and through this Zoning District, signage needs are unique and require flexibility, not in an effort to deviate from the community standard but instead to properly and adequately identify uses, users, and tenants, and to promote efficient wayfinding. A master sign plan shall be filed as part of the first final development plan for review and approval by the Planning Commission. In the event of a conflict between an approved master sign plan and a relevant provision of the Codified Ordinances, the approved master sign plan shall govern. Where any signage standard is not addressed in an approved master sign plan, the relevant provisions of the Codified Ordinances shall govern. For Subarea 3, it is the intent to encourage unique and creative signage in terms of their design, numbers, and placement, and therefore the master sign plan for Subarea 3 shall be reviewed accordingly.

M. Lighting.

1. Ground-Mounted Lighting. Landscape uplighting from a concealed source shall be permitted, provided that the total number of lumens consisting of uplighting will be limited to 2% of the total number of exterior fixture lumens emitted above 90 degrees or higher from nadir unless captured and shielded by a building or other permanent element.

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

3. Consistent Appearance: Exterior lighting fixtures shall be similar in appearance throughout each subarea. All exterior lighting mounted to a building shall be located on the first floor only.

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

N. Appeals and Waivers.

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 him, that by reason of facts stated in the application a stay would, in his 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.

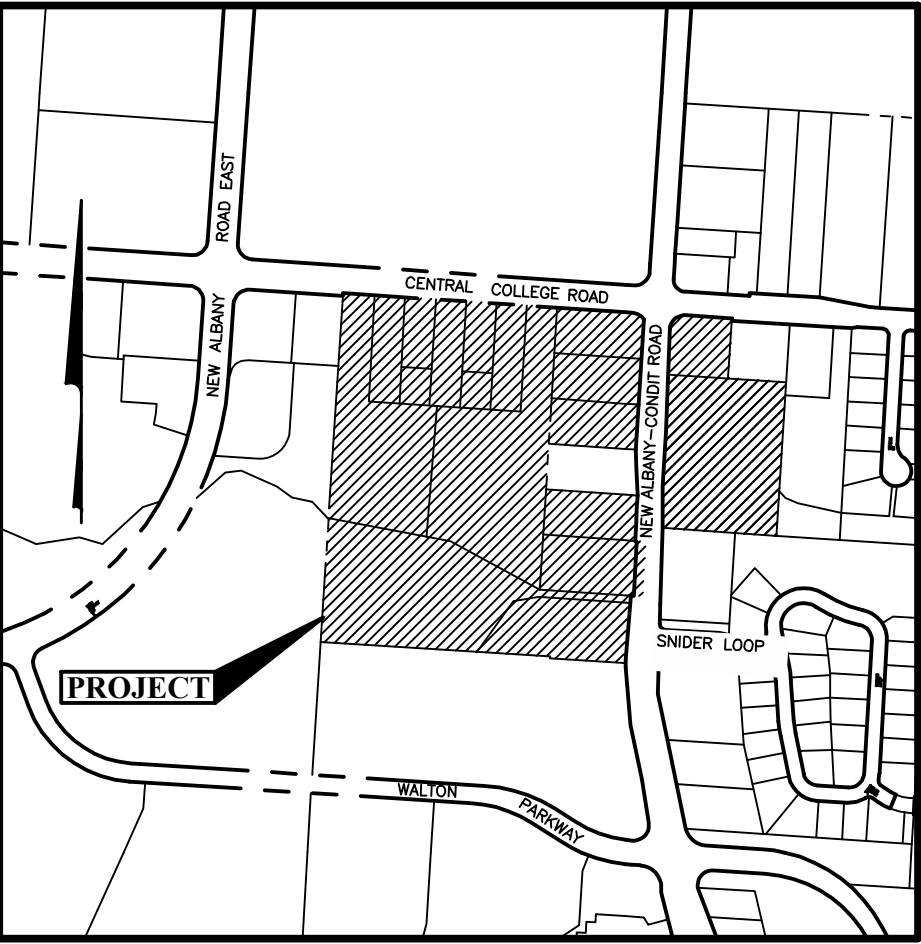
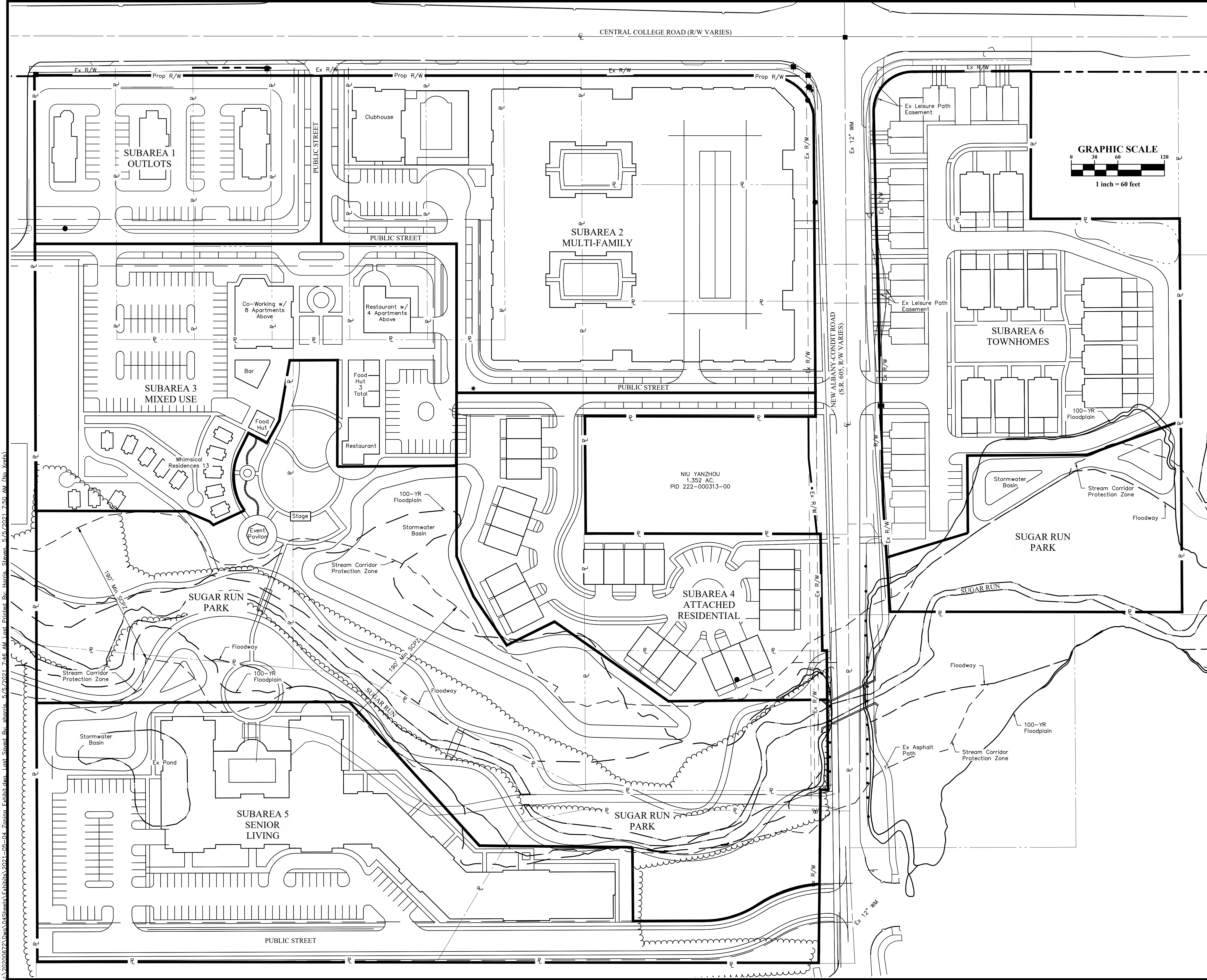
2. Waivers. Deviations from development standards in this text or in the Codified Ordinances are subject to the waiver process. A waiver to the standards may be approved by the Planning Commission (PC) upon the request of an applicant as part of a final development plan application. In considering a request for a waiver, the PC shall conduct a public meeting in conjunction with the requested application.

a. Application for Waiver. An applicant desiring to have a requirement of this zoning waived must apply to the PC for the waiver through city staff in conjunction with a final development plan application that will be reviewed by the Planning Commission. The applicant must indicate the nature of the waiver sought and provide a statement explaining why the waiver should be granted. Any drawings or other materials needed to support the application, as determined by city staff, shall be submitted with the waiver request.

b. Action by the Planning Commission. Along with its decision to approve, approve with conditions, or disapprove a final development plan application, Within the PC shall either approve, approve with supplementary conditions, or disapprove the request for a waiver. The PC shall only approve a waiver or approve a waiver with supplementary conditions if the PC finds that the waiver, if granted, would:

- i. Provide an appropriate design or pattern of development considering the context in which the development is proposed and the purpose of the particular standard. In evaluating the context as it is used in the criteria, the PC may consider the relationship of the proposed development with adjacent structures, the immediate neighborhood setting, or a broader vicinity to determine if the waiver is warranted;
- ii. Substantially meet the intent of the standard that the applicant is attempting to seek a waiver from, and fit within the goals of the preamble of this zoning text and the City's Strategic Plan;
- iii. Be necessary for reasons of fairness due to unusual site or building specific constraints; and
- iv. Not detrimentally affect the public health, safety or general welfare.

I:\2020\0672\Drawings\Exhibits\2021-05-04_Zoning_Exhibit.dwg, Last Saved: 5/5/2021 7:46 AM, Last Printed By: Harris, Steven, 5/5/2021 7:50 AM, (No Xrefs)



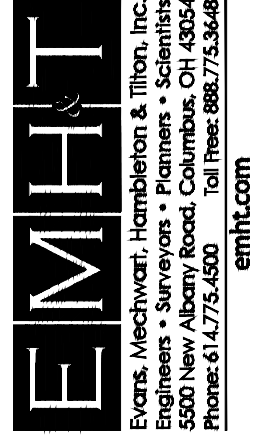
VICINITY MAP
Not to Scale

DISTRICT PROGRAM:	
MILLENNIAL APARTMENTS:	280 UNITS
ASSISTED LIVING COMMUNITY:	125 UNITS
SINGLE FAMILY HOMES:	12 LOTS
TOWNHOMES/DUPLEXES:	48 LOTS
WHIMSICAL RESIDENCES:	25 LOTS
TRAILHEAD COMMERCIAL SPACE:	14,450 SF
QUICK SERVE RESTAURANTS:	3 LOTS
SUGAR RUN PARK	8.47 ACRES*

*Excluding Off-Site Land & Improvements.

SUBAREA SUMMARY			
Subarea	Area	Units	Density
	Acres		(Units/Acre)
1	1.8	N/A	N/A
2	5.2	280	54
3	3.5	25	7
4	2.8	24	9
5	5.1	125	25
6	3.7	36	10
Park	8.5		
Total	30.6	490	16

CITY OF NEW ALBANY, FRANKLIN COUNTY, OHIO
Zoning Exhibit
FOR
NONA DISTRICT



DATE
May 5, 2021

SCALE
1" = 60'

JOB NO.
20200672

SHEET
1/1



DISTRICT PROGRAM

Millennial Apartments	280 Units
Assisted Living Community	125 Units
Single Family Homes	12 Lots
Townhomes/Duplexes	48 Lots
Whimsical Residences	25 Lots
Trailhead Commercial Space	14,450 SF
Quick Serve Restaurants	3 Lots
Sugar Run Park	8.47 Acres*

*Excluding Off-Site Land & Improvements



NoNA

NORTH NEW ALBANY



The Site



Our Approach

THE CONTEXT

- Consistent with Insight2050
- Consistent with Engage New Albany

OUR VISION

- Mixed-Use Neighborhood Center
- Sustainable Planning
- Timeless Design
- Creation of a Public Realm

THE IMPACT

- Economic
- Schools
- Traffic
- Enhanced Streets and Connections



A New Neighborhood Center

THE CONTEXT

- Consistent with Insight2050
- Consistent with Engage New Albany

OUR VISION

- Mixed-Use Neighborhood Center
- Sustainable Planning
- Timeless Design
- Creation of a Public Realm

THE IMPACT

- Economic
- Schools
- Traffic
- Enhanced Streets and Connections





Foundational Documents



THE COLUMBUS
FOUNDATION

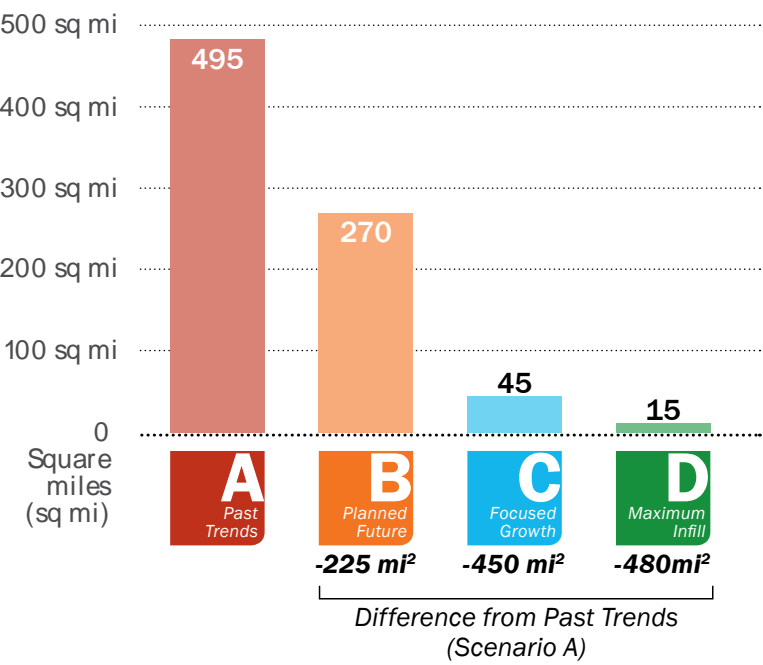


Scenario Analysis

HOW DOES CENTRAL OHIO PLAN FOR:

- 1M New Residents
- 300,000 New Jobs

CUMULATIVE NEW LAND CONSUMPTION



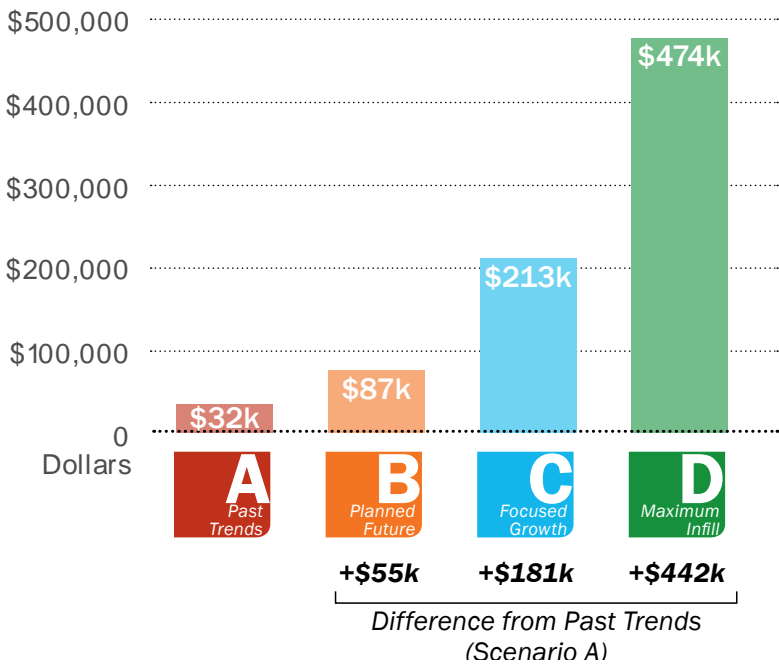
INSIGHT 2050:

Economic Impact

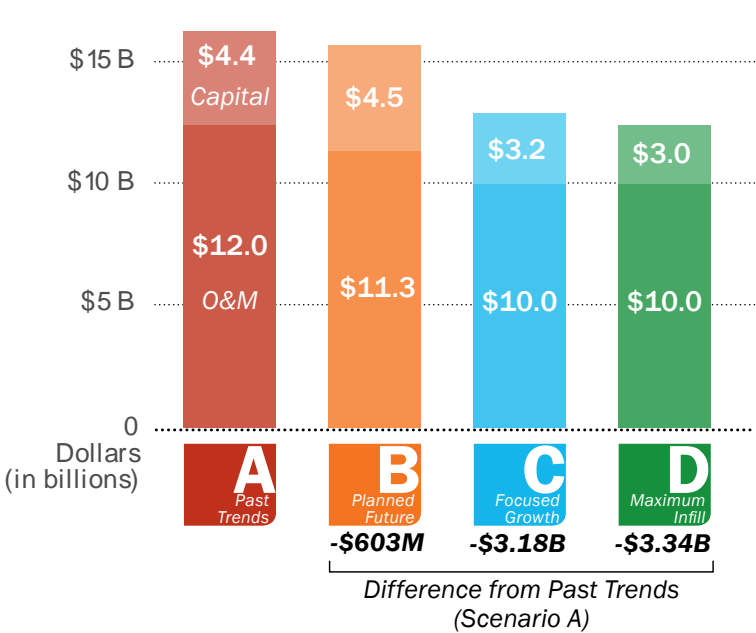


SCENARIO ANALYSIS RESULTS:

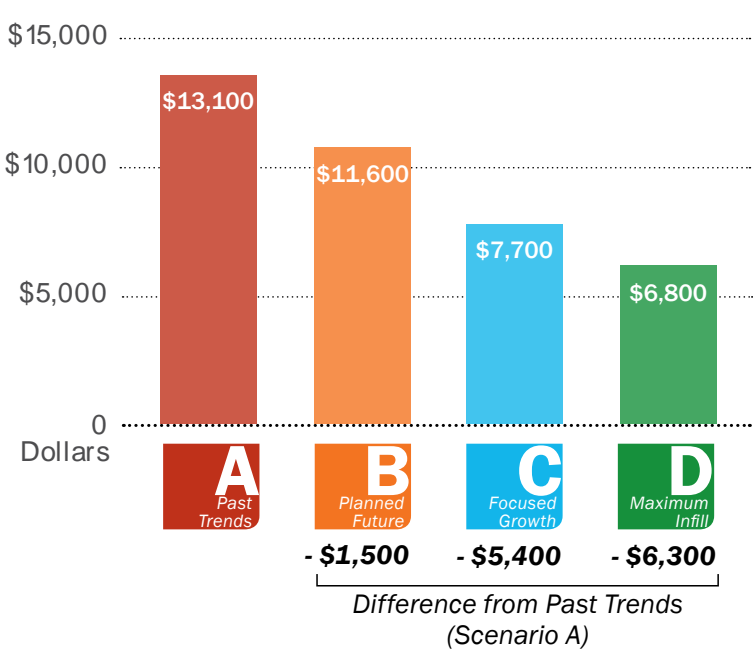
TAX REVENUE PER ACRE



INFRASTRUCTURE COSTS



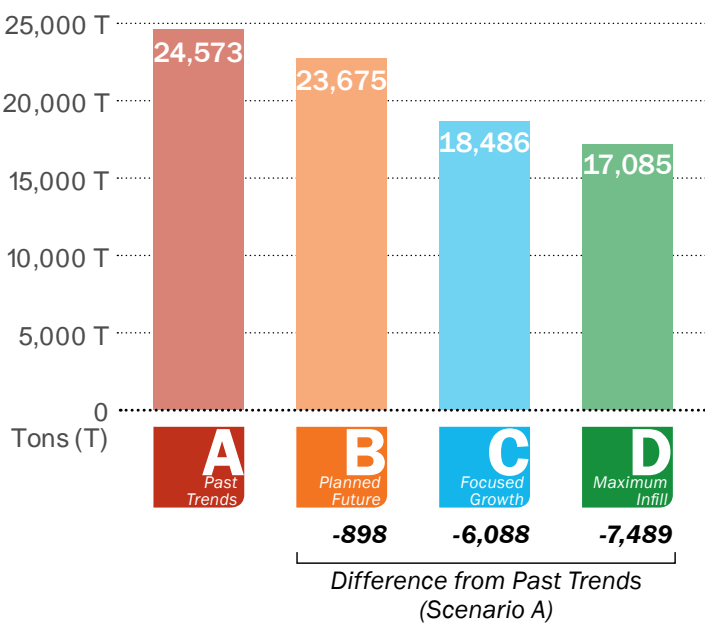
ANNUAL HOUSEHOLD COSTS



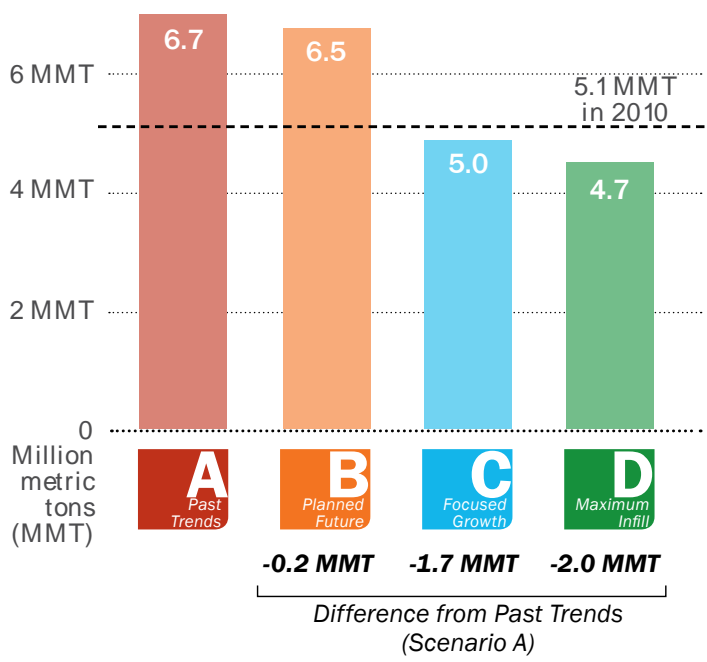
Environmental Impact

SCENARIO ANALYSIS RESULTS:

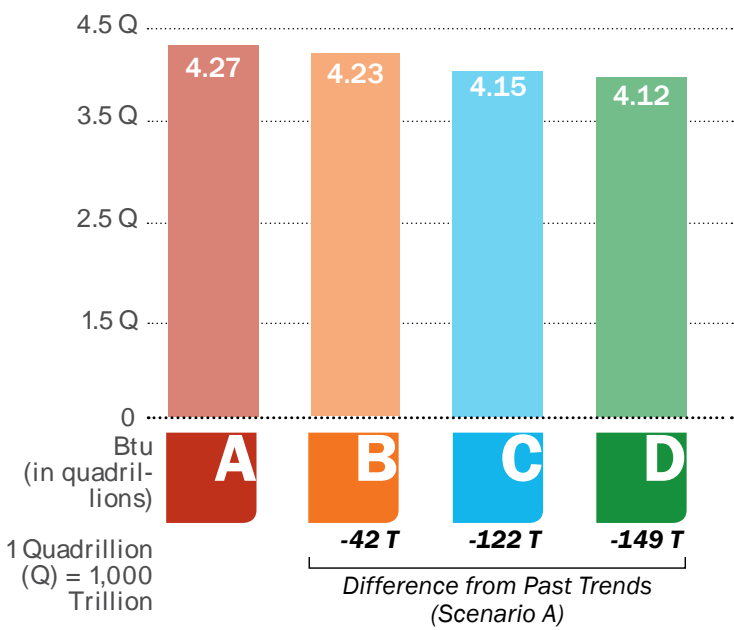
AUTO EMISSIONS



ANNUAL CO2 EMISSIONS



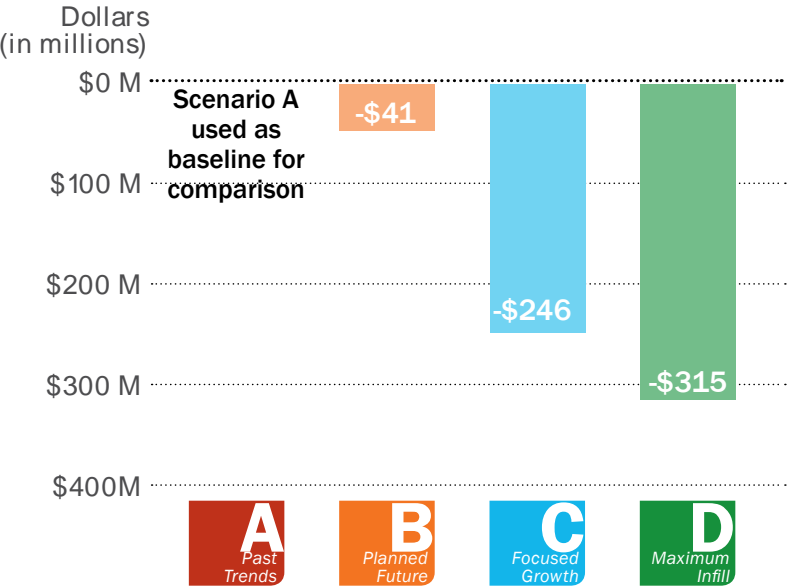
ANNUAL ENERGY CONSUMPTION



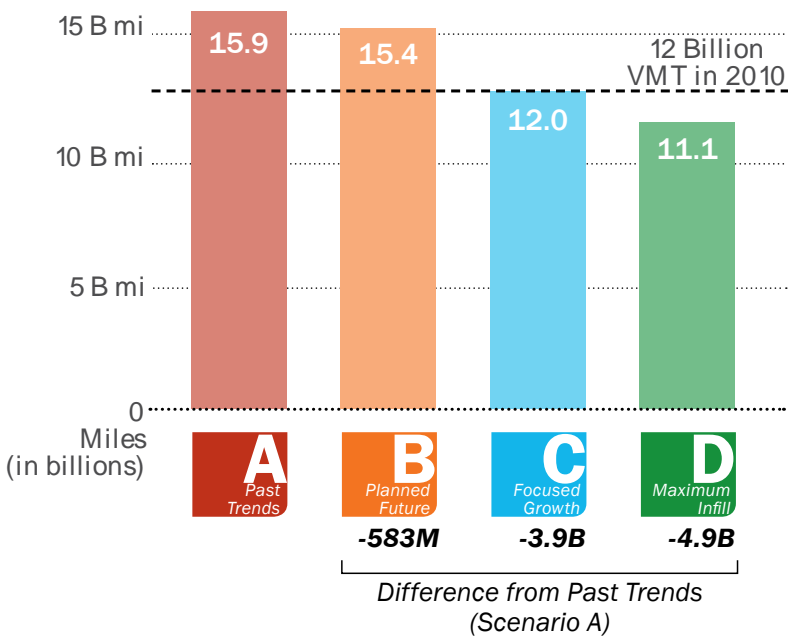
Quality of Life Impact

SCENARIO ANALYSIS RESULTS:

ANNUAL HEALTH COSTS



COMMUTE MILES



Benefits of Focused Growth

ECONOMIC IMPACT

- Increased Tax Revenue
- Decreased Infrastructure Costs
- Decreased Household Costs



ENVIRONMENTAL IMPACT

- Reduced Land Consumption
- Improved Air Quality
- Reduced Energy Consumption



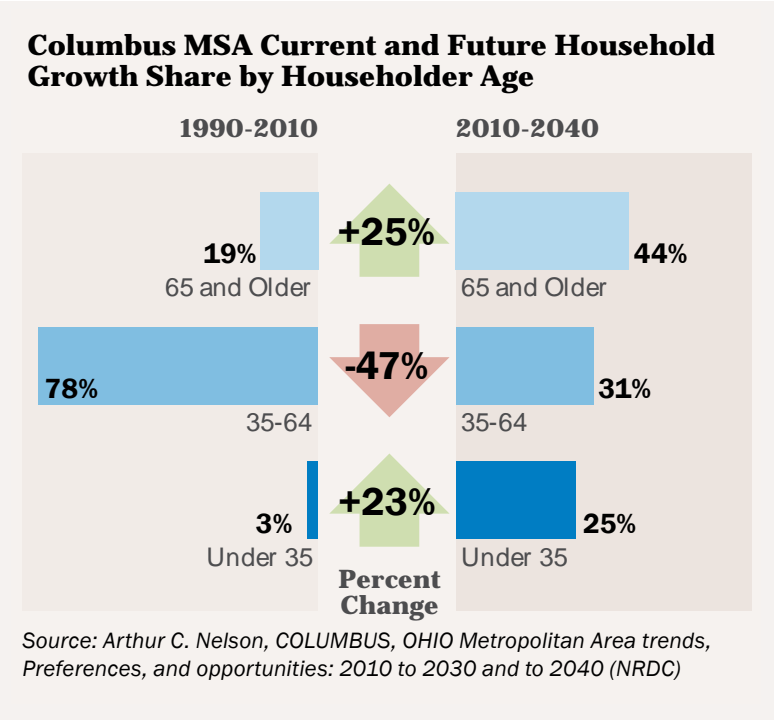
QUALITY OF LIFE IMPACT

- Decreased Health Costs
- Decreased Commute Times

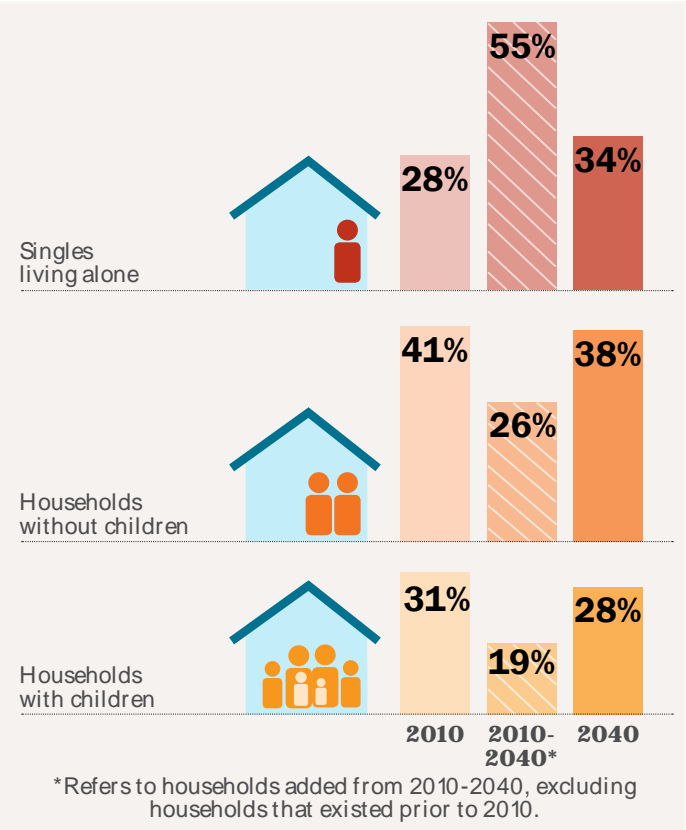


Housing Impact of Demographic Trends

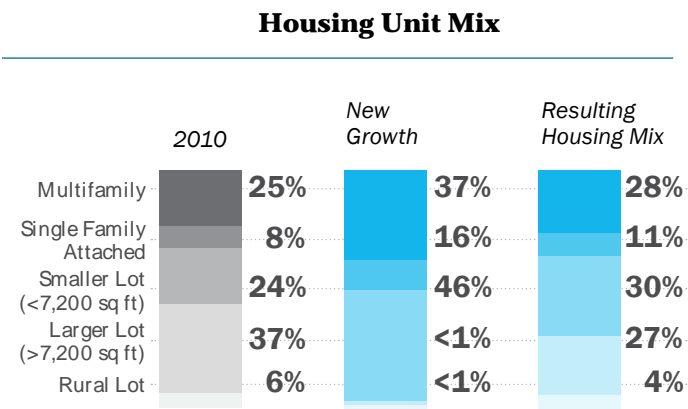
CHANGE OF HOUSEHOLDER AGES



CHANGE IN THE TYPE OF HOUSEHOLDS



CHANGE IN THE HOUSING TYPE MIX



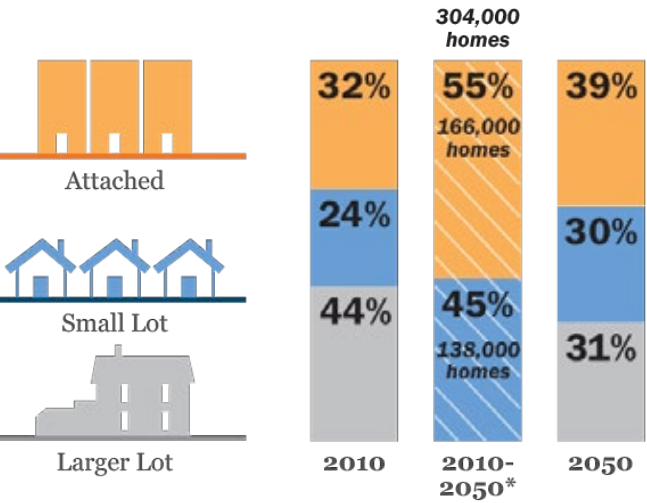
Future Residential Demand

CONSEQUENCES ON URBAN PLANNING


RESULTS:

- Less Large-Lot Single Family
- More Small-Lot Detached Single Family
- More Attached Single Family
- More Multifamily

HOUSING DEMAND FORECAST




ALIGNMENT: ENGAGE NEW ALBANY 2030 RECOMMENDS


**LAND USE - RESIDENTIAL**

ENGAGE
NEW ALBANY


- We recommend:
 - » Additional cluster neighborhoods like Ashton, Keswick, Ealy Crossing
 - » High quality stacked flats and townhomes in targeted areas of the community with proximate, walkable amenities - like the Village Center and other neighborhood-scale retail centers




Flats/Apartments




Townhomes



Richmond Square



Townhomes



Ealy Crossing

Engage New Albany 2030



+

MKSK

+

**1,200
RESIDENTS**

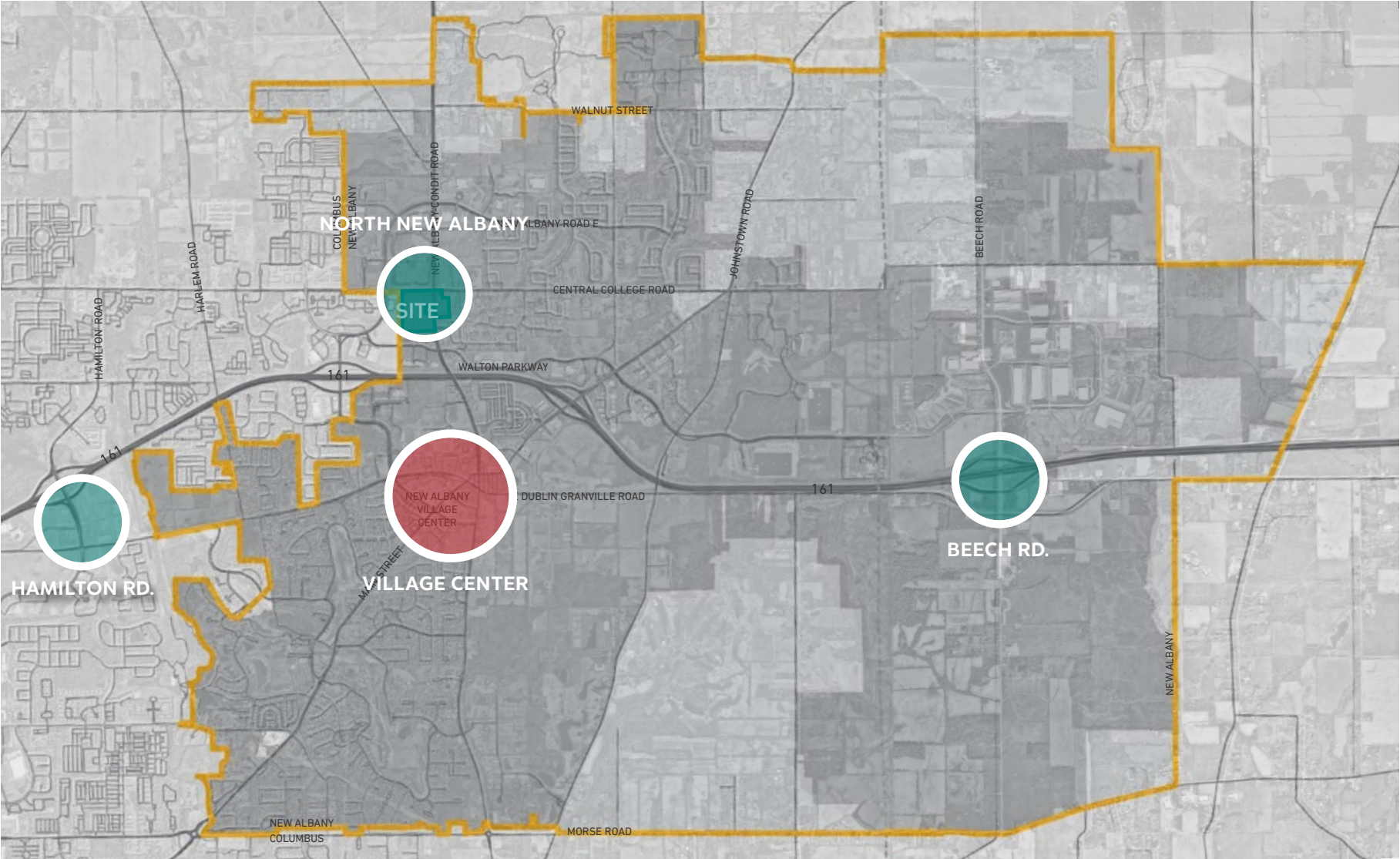


**ENGAGE
NEW ALBANY**



Planning for Multiple Neighborhoods

- One Community;
Multiple Neighborhoods
- Embracing the Differences
of Our Neighborhoods
- A Neighborhood Center
for North New Albany
- A Focused Development Area
("Hamlet") within New Albany



Diversity in Housing Types



LAND USE - RESIDENTIAL

ENGAGE
NEW ALBANY

- We recommend:
 - » Additional cluster neighborhoods like Ashton, Keswick, Ealy Crossing
 - » High quality stacked flats and townhomes in targeted areas of the community with proximate, walkable amenities - like the Village Center and other neighborhood-scale retail centers



A Lifespan Community

A TRUE NEIGHBORHOOD IS A LIFESPAN COMMUNITY

“Provides residents the opportunity to move at least twice throughout their lifetimes”

A NEIGHBORHOOD:

- Includes Varied Housing Types
- Is Connected, Accessible, Walkable
- Has a Housing Supply that is Responsive to Demographic Trends
- Is Anchored by Public Gathering Spaces



“You Spoke”

ENGAGE NEW ALBANY 2030 SURVEY

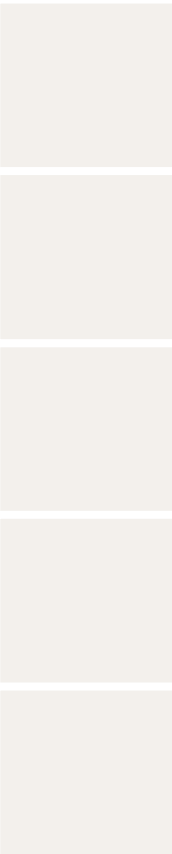
To Strive to be a “**Lifespan Community**”
(86% of Respondents)

New Retail Areas Within the City but Outside the Village Center Designed to Serve Adjoining Neighborhoods and Employment Centers (69% of Respondents)

Additional **Dining and Retail Options**
(48% of Respondents)

Additional **Parks, Recreation, and Open Space**
(32% of Respondents)

Additional Special Events **Programming** (58%)
Arts and Cultural Programming (47%) and
Family-oriented Programming (44%)



Our Response



NoNA

NORTH NEW ALBANY

Our Vision

THE CONTEXT

- Consistent with Insight 2050
- Consistent with Engage New Albany

OUR VISION

- Mixed-Use Neighborhood Center
- Sustainable Planning
- Timeless Design
- Creation of a Public Realm

THE IMPACT

- Economic
- Schools
- Traffic
- Enhanced Streets and Connections



Neighborhood Context



Use Plan

RESIDENTIAL

- Millennial/Active Adult Apts
- Senior Living Community
- Single Family Homes
- Townhomes/Duplexes
- Affordable Apartments (5%)
- Whimsical Residences

COMMERCIAL

- Office/Coworking
- Restaurants and Bar
- The Trailhead Park
 - Artisanal Eateries
 - Food Truck Haus
 - Community Stage

PARKS AND RECREATION

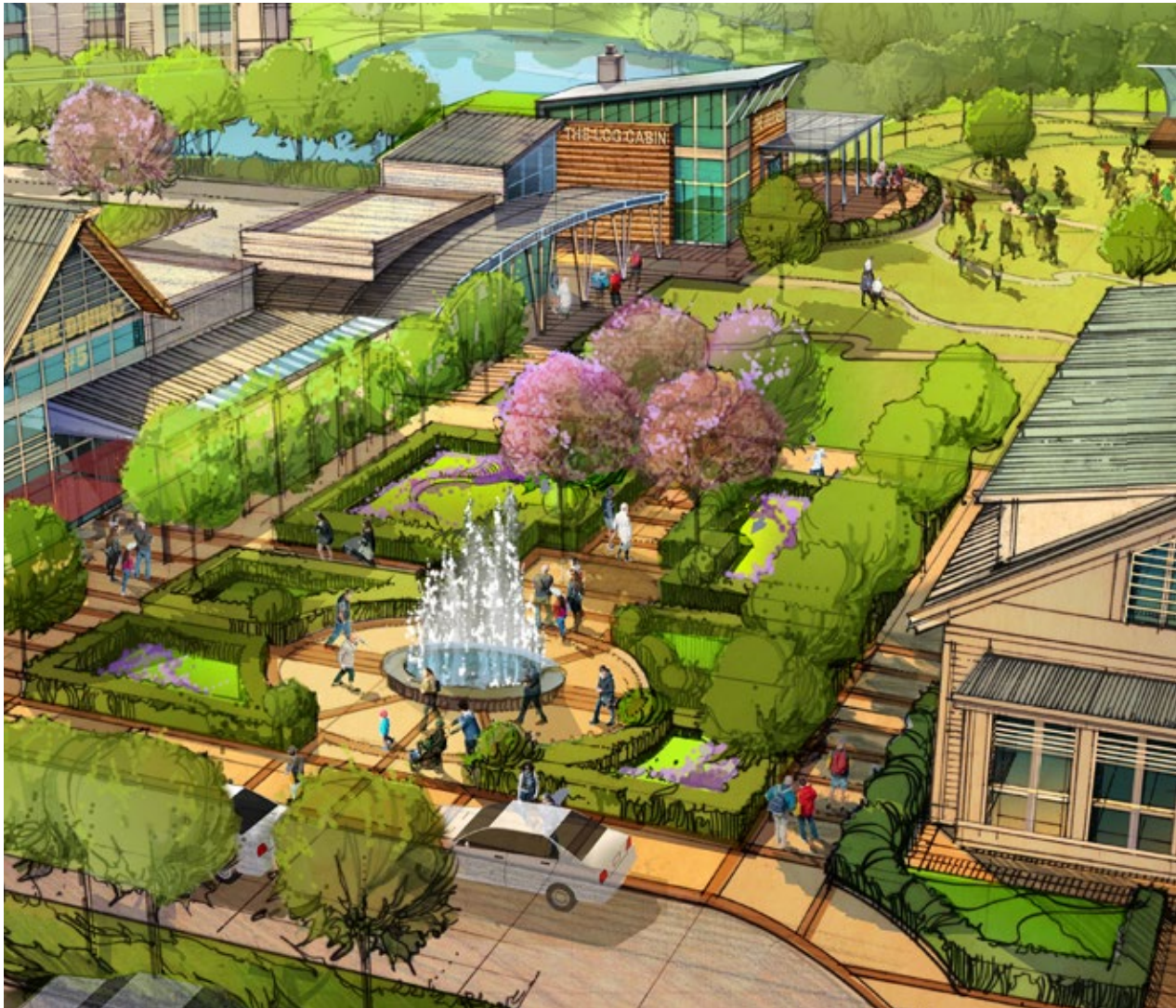
- Sugar Run Park
- Walking Paths/Trails
- Childrens’ Play Area
- Meditation Path
- English Garden



Lifespan Residential Offerings



Mixed Use District



Trailhead Park



Outdoor Amenities



Environmental Initiatives

GREEN INITIATIVES WILL INCLUDE:

- Sugar Run Streambank Repair
- Native Species Restoration
- Alternative Wetland Remediation Techniques
- Pollinator-Friendly Plantings
- Alternative Stormwater Retention



“You Spoke, We Listened”



ENGAGE NEW ALBANY 2030 SURVEY

To Strive to be a “**Lifespan Community**”
(86% of Respondents)

New Retail Areas Within the City but Outside the Village Center Designed to Serve Adjoining Neighborhoods and Employment Centers (69% of Respondents)

Additional **Dining and Retail Options**
(48% of Respondents)

Additional **Parks, Recreation, and Open Space**
(32% of Respondents)

Additional Special Events **Programming** (58%)
Arts and Cultural Programming (47%) and
Family-oriented Programming (44%)



PROPOSED NONA DISTRICT

NoNA District Will Be A Self-Contained
“**Lifespan Neighborhood**”

NoNA District Will Provide North New Albany with
Retail Options Outside the Village Center Designed
to Serve the North New Albany Area

The “Trailhead” **Provides New Dining and
Retail Options**

Sugar Run Park Provides **Parks, Recreation and Open
Space** (of the Same Scope/Scale as Rose Run Park)

- North New Albany will provide:
- Special Events **Programming**
 - Arts and Cultural Programming
 - Family-Oriented Programming
 - Wellness, Environmental Education and Continuing Education Programming

Impacts and Mitigation



NoNA

NORTH NEW ALBANY

Impact on New Albany

THE CONTEXT

- Consistent with Insight2050
- Consistent with Engage New Albany

OUR VISION

- Mixed-Use Neighborhood Center
- Sustainable Planning
- Timeless Design
- Creation of a Public Realm

THE IMPACT

- Economic
- Schools
- Traffic
- Enhanced Streets and Connections



Economic Impact

UTILIZED INSIGHT 2050
METHODOLOGY ON
OUR PROPERTY

COMPARES:

- Existing Conditions
- Base Zoning
 - What would be allowed under current zoning
- Development Scenario
 - The development project, as proposed



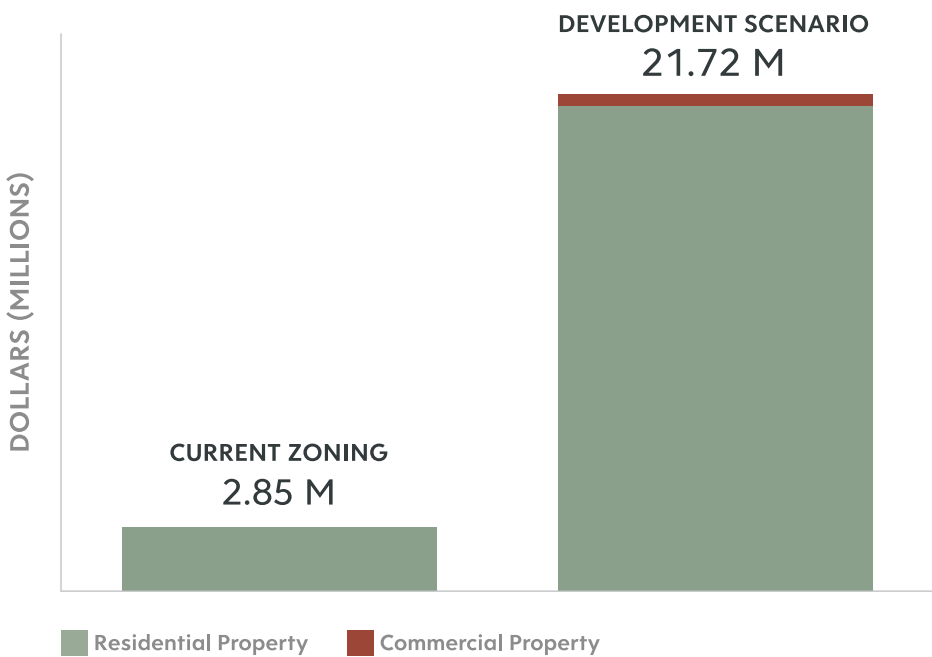
ARCHITECTS. ENGINEERS. PLANNERS.



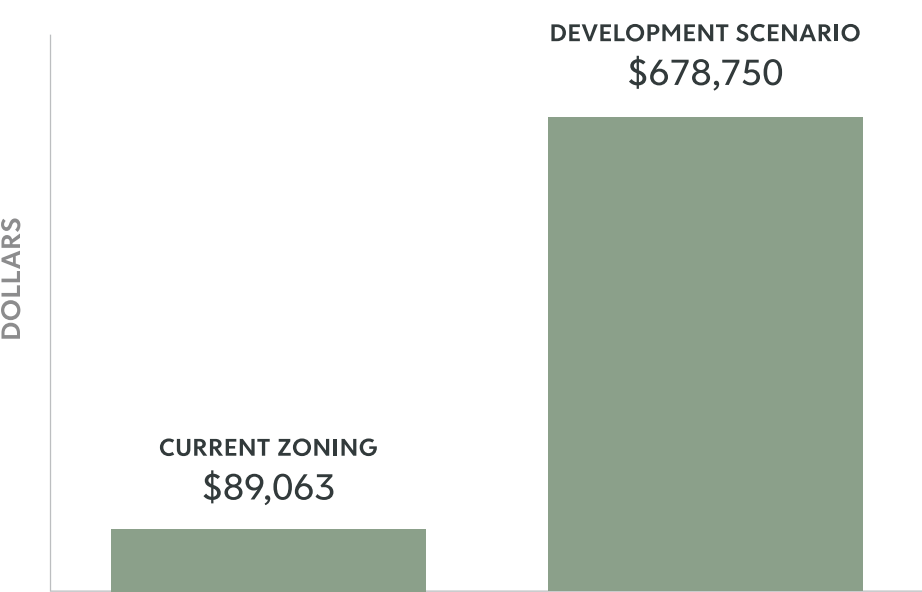
Economic Impact – Tax Revenue Analysis

Approximately \$14.63M Cumulative Tax Revenue Surplus

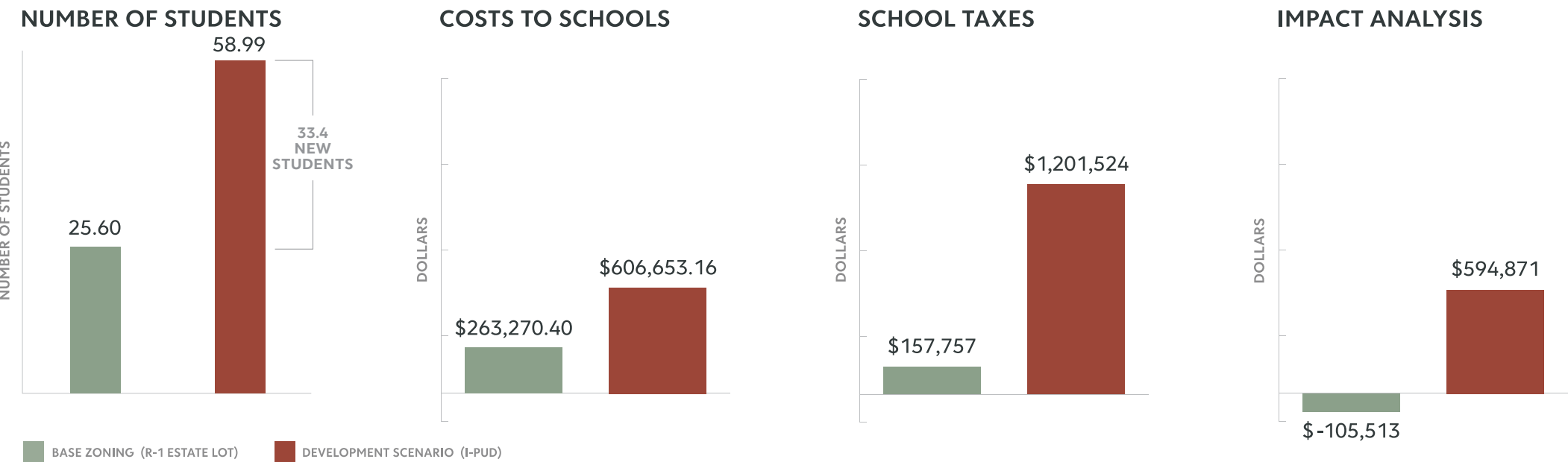
CUMULATIVE TAX REVENUE FROM NEW DEVELOPMENT



TAX REVENUE PER ACRE



School District Impact



COST ANALYSIS

BASE ZONING (R-1 ESTATE LOT)

NAPLSD	NUMBER OF RESIDENTIAL UNITS - CURRENT ZONING	LOAD FACTOR	NUMBER OF STUDENTS
\$10,284	32	0.8	25.60

DEVELOPMENT SCENARIO (I-PUD)

HOUSING TYPE	NUMBER OF RESIDENTIAL UNITS - DEVELOPMENT SCENARIO	LOAD FACTOR	NUMBER OF STUDENTS
Single Family Homes	12	0.8	9.60
Townhomes For-Sale	25	0.8	20.00
Townhomes For Rent	23	0.5	11.50
Millennial/Active Adult Apartments	266	0.04	10.64
Affordable Apartments	14	0.05	7.00
Whimsical Residential	25	0.01	0.25

IMPACTS AND MITIGATION:

Traffic Impact



- Will not conflict with Engage New Albany 2030’s Thoroughfare Plan
- Impact on Levels of Service will be negligible

LEVELS OF SERVICE (LOS)

- A** New Albany-Condit Road and Central College Road
 - AM Peak – LOS C / PM Peak – LOS D
- B** New Albany Road E and Central College Road
 - AM Peak – LOS C / PM Peak – LOS C

NEEDED IMPROVEMENTS

- 1** New Albany-Condit Road and Senior Living Access
 - Northbound Left Turn Lane
- 2** New Albany-Condit Road and North Access
 - Northbound Left Turn Lane
- 3** Central College Road and Site Access/ Discover Complex Access
 - 125’ Westbound Left Turn Lane (striped into existing pavement) Warranted
 - No improvements are required for any public road intersection



Impact on Street Design

INTEGRATE WITH AND IMPROVE THE SURROUNDING AREA

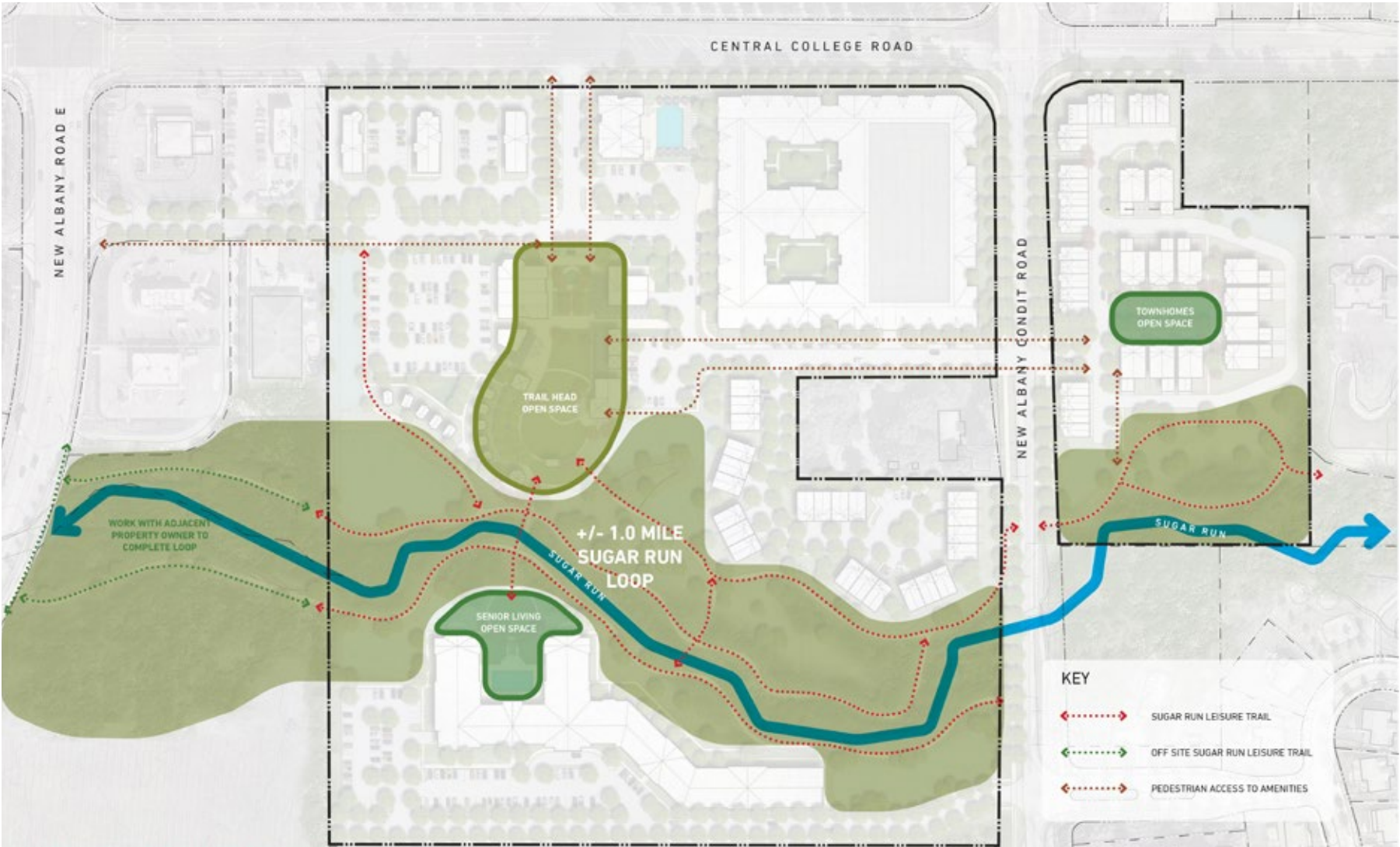
- Continuation of Existing Fabric
- Community Gateway
- Unified Pedestrian Experience
- Responsive to Engage New Albany Northwest Focus Area Development Scenario



Internal Connectivity

OPPORTUNITY FOR GREATER CONNECTIVITY

- Vehicular Connections
- Trails
- Walkability
- Greenspace Connectivity



Subject to owner approval

SUGAR RUN TRAIL

City-wide Connectivity

OPPORTUNITY FOR GREATER CONNECTIVITY

- Vehicular Connections
- Trails
- Walkability
- Greenspace Connectivity



SUGAR RUN TRAIL

Subject to owner approval

Once completed, the NoNA District will...



URBAN PLANNING

- Be Consistent with Regional Planning
- Be Consistent with Engage New Albany 2030
- Be the Center of Gravity for Neighborhood
- Be Consistent with Residential Demand
- Maintain and Expand Existing Community Fabric

ECONOMIC DEVELOPMENT

- Have a Positive Economic Impact on the City
- Have a Positive Economic Impact on the Schools

SUSTAINABILITY

- Provide New Parks and Greenspace
- Be Environmentally Friendly

QUALITY OF LIFE

- Be a Lifespan Neighborhood
- Provide New Retail and Entertainment Options
- Not Materially Effect Traffic





NoNA

NORTH NEW ALBANY

June 10, 2021

Daniel Moorhead, P.E., PTP
Division of Traffic Management
111 North Front Street
Columbus, OH 43215

RE: Disposition of Comments for the NMD Mixed Use TIS MOU dated May 4, 2021 and Traffic Impact Study dated April 20, 2021' Submittal Dated 5/25/2021

The 'NMD Mixed Use TIS MOU' and draft TIS were submitted to the City of Columbus on May 4, 2021. The City of Columbus provided comments on June 6, 2021. The comments are provided below, followed by the Carpenter Marty Transportation (CM) response in red.

1) Review of Traffic Study:

- Please note in the study the two intersections that are under City of Columbus jurisdiction.
CM Response: Complied.
- Please check the unconstrained internal capture rate for AM trip origins from residential to retail uses. OTISS Pro v2.1 appears to utilize 12%, but NCHRP 684 Table 7.1 appears to indicate 1% for this land use pair.
CM Response: This appears to be corrected with the revised trip generation analysis. Internal capture for the AM Peak is 7 entering vehicles and 7 exiting vehicles. Changes to the internal capture would not be expected to affect results.
- It would appear from the indicated growth forecast that a growth rate of 1.3% should be utilized for New Albany Road East at Walton Parkway and at Central College Road and that a growth rate of 3% should be utilized for Walton Parkway at New Albany Road East.
CM Response: Complied.
- Regarding the unsignalized capacity analysis for the intersection of New Albany Road East and Site Access 1, please utilize the appropriate methodology from the Highway Capacity Manual.
CM Response: Complied.

June 10, 2021

Mike Barker
City of New Albany
99 West Main Street
New Albany, Ohio 43054

RE: Disposition of Comments for the NMD Mixed Use TIS MOU dated May 4, 2021 and Traffic Impact Study dated April 20, 2021' Submittal Dated 5/25/2021

The 'NMD Mixed Use TIS MOU' and draft TIS were submitted to the City of New Albany on May 4, 2021. The City of New Albany provided comments on May 25, 2021. The comments are provided below, followed by the Carpenter Marty Transportation (CM) response in red.

1) Review of May 4 Memorandum of Understanding (MOU)

- As noted in the MOU, two of the Study intersections are within the City of Columbus corporate limits. New Albany will provide no formal review of those two intersections.

CM Response: Noted.

- MOU notes that traffic volume data will be estimated/generated for the Discover complex building and single-family development along Snider Loop. From more recent information, the Discover site is expected to be redeveloped. Future analysis by others may be needed of this intersection. Otherwise, no comment for this intersection.

CM Response: Noted.

- Any widenings along SR 605 for left turns into site drives will also need to consider left turn lanes for any non-site driveways opposite the site drives, including Snider Loop.

CM Response: Complied. Recommendations in the report include opposing left turn lanes for warranted turn lanes at proposed site access points.

- Overall, the above comments can be addressed with a Traffic Impact Study, and there does not appear to be any need to modify the MOU related to analysis of intersections within New Albany.

CM Response: Noted.

2) Review of April 20 Traffic Study

- Per May 4 email, the Study will be updated to reflect current site development information. Upon receipt of that Study, it is advised a discussion be held with the applicant to discuss changes if any to the Study recommendations in order to expedite further review.

CM Response: Noted. The only change to the analysis results is the recommendation to install a northbound right turn lane at New Albany-Condit Road & Central College Road (based on signal timing corrections) along with opposing left turn lanes described above.

- Update drive references for consistency, in various locations

CM Response: Figure 1 has been revised in the report for clarity. The intersection numbers refer to the study intersections in the TIS.

- For land use and intensity, it is understood a revised Study will be prepared and updated development traffic.

CM Response: Complied.

- Revise Study to note two intersections are in City of Columbus.

CM Response: Complied.

- Per email from traffic consultant, a revised Study will be prepared including an update of development traffic. It appears the revised development information may only have a nominal effect on trip generation estimates. We otherwise have no comments on site trip generation or site trip distribution.

CM Response: Noted.

- For Study Intersection 4, it appears half of the driveway traffic arrives from the east, the other half from the west, and results show acceptable traffic flow conditions. From recent information the Discover site is expected to be redeveloped. As a result, this intersection may need to be reevaluated by others upon that redevelopment. No further comment for this intersection or intersection analysis.

CM Response: Noted.

- The Horizon Year analysis shows the Snider Loop approach shows at a LOS E condition, whereas all other Build and No-Build scenarios show acceptable LOS D or C conditions for Snider Loop. A review of the analysis results show very low V/C ratio conditions, and indicates no additional improvements may be needed for Snider Loop.

CM Response: Noted. The TIS recommends no improvements for this intersection.

- We concur with the left turn recommendations along NA Condit Road with one exception. The exception is we advise providing a southbound left turn lane for turning into Snider Loop. This will orient left turns opposite each other, and given distance between drives 7 and 8 tapering back to two lanes may not be practical. It is instead advised the segment of NA Condit Road between Snider Loop and Site Drive 7 be widened to 3 lanes. Responsibility for this widening or portions of the widening needs to be discussed further.

CM Response: Complied.

- Regarding the northbound left turn lane at site drive 7 (at Sniders Loop), the driveway is immediately north of the CVG delivery driveway. Discussions needed between City and applicant's traffic engineer to verify no issues of CVG traffic at their driveway and traffic associated with the Senior Living component at site drive 8.

CM Response: Field observations showed minimal use of the CVG driveway and minimal traffic is expected to utilize Site Access 5 for the senior living facility based on the trip generation analysis. Thus, no operational issues are expected.

- The Study notes this 'development is not expected to add significant school peak hour traffic to the surrounding area...' If solely the residential units are considered we concur. However, the relationship between the City Schools and the proposed Recreational Community Center (or small-scale mixed-use space) is not known. Further discussion advised to determine if additional traffic assessment is needed.

CM Response: Noted. CM is open to further discussions, if necessary.

- Presently, the posted speed limit on NA Condit Road north of Walton Parkway is 45 MPH and is 35 MPH to the south of Walton Parkway. With the addition of driveways along NA Condit Road, this may represent a change in character of the roadway. This indicates the City may want to consider an assessment of the existing speed limit north of Walton Parkway.

CM Response: Noted. Discussion in the report regarding this potential change is included.

NMD Mixed-Use Development Traffic Impact Study

Prepared for: NoNA Master Development, LLC

June 10, 2021



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I. Executive Summary

Carpenter Marty Transportation was retained to complete a traffic impact study (TIS) for a proposed mixed-use development located along Central College Road, New Albany-Condit Road, and New Albany Road E. in New Albany, Ohio. The TIS evaluates all of the proposed site access points as well as the four, signalized intersections surrounding the proposed site. The development is expected to have an Opening Year of 2022.

The analysis finds the following turn lanes are warranted:

- 225' northbound left turn lane at the New Albany-Condit Road & Site Drive 3/Site Drive 4 intersection
- 225' southbound left turn lane at the New Albany-Condit Road & Site Drive 3/Site Drive 4 intersection
- 225' northbound left turn lane at the New Albany-Condit Road & Site Drive 5/Snider Loop intersection
- 225' southbound left turn lane at the New Albany-Condit Road & Site Drive 5/Snider Loop intersection
- 125' westbound left turn lane at the Central College Road & Discover Complex Access/Site Access 2 intersection

All turn lane improvements are Build improvements and are inclusive of a 50' diverging taper.

The analysis shows that all signalized intersections surrounding the proposed development have sufficient capacity for No Build and Build traffic volumes evaluated in this TIS with the exception of the New Albany-Condit Road & Central College Road intersection. This intersection requires the installation of a northbound right turn lane in the Horizon Year Build condition. The turn lane has a calculated length of 320' inclusive of a 50' diverging taper. This improvement is recommended with or without the proposed development.

There are surrounding area concerns regarding traffic during the afternoon peak of school departure. This occurs for a 15 to 30-minute period south along New Albany-Condit Road / N. High Street near Chatham Greene Drive and into the downtown area in the early afternoon. The developer has agreed to work with the City of New Albany on potential solutions to these existing issues. However, it should be noted that the proposed development is not expected to add significant school peak hour traffic to the surrounding area and the majority of site generated traffic will be expected during typical roadway AM and PM peak hours. Carpenter Marty Transportation completed field observations during school peak hours and determined that there was no definitive evidence that the traffic generated by New Albany Schools affects delay times at Snider Loop in either the morning or the afternoon.

II. Purpose of Report & Study Objectives

The purpose of this traffic analysis and report is to document the potential traffic impacts of the proposed mixed-use development located in the southwest corner of the intersection of Central College Road & New Albany-Condit Road in New Albany, Ohio. This analysis and report are being required by the City of New Albany as part of the development approval process.

III. Proposed Development

A. Off-Site Developments

The study area is bounded by Central College Road to the north, New Albany-Condit Road to the east, Walton Parkway to the south, and New Albany Road E. to the west. The surrounding area includes restaurants and retail development to the west, office buildings to the north and south, and residential development to the east.

B. On-Site Development

Location

The majority of the site is located on the south side of Central College Road and the west side of New Albany-Condit Road. A small portion of the site is located on the east side of New Albany-Condit Road. **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 (New Albany limits outlined in red)

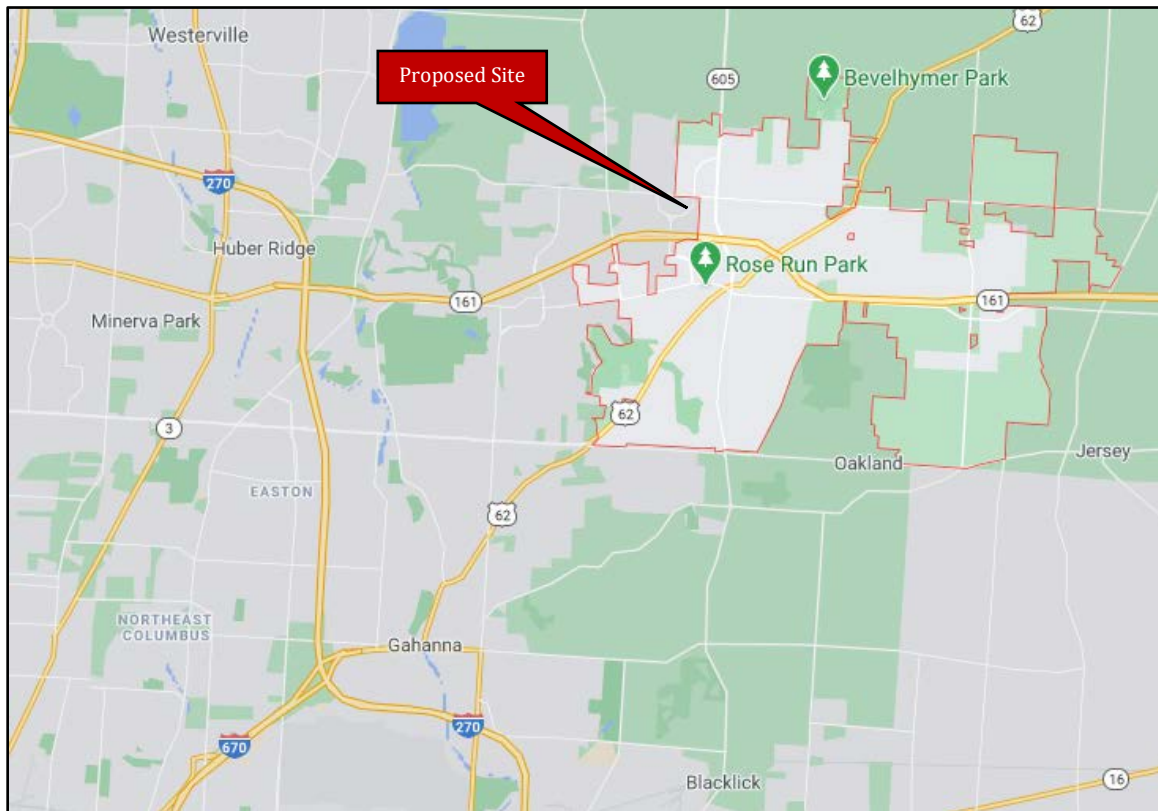


Figure 2 – Location of the Proposed Development (Yellow), Site Drives, and Study Intersections



Land Use & Intensity

The site is currently developed with several single-family homes. The site is proposed to develop as a mixed-use site with the following land uses and sizes:

- 12 single family units
- 51 townhomes
- 280 multifamily housing units
- 25 cottage homes
- 14,500 SF of retail
- 125 senior adult housing units (attached)
- 3 quick serve, micro restaurants
- 8.47 acres of public park

Five access points are proposed for the development:

- One existing right-in, right-out access on New Albany Road E. just south of the intersection with Central College Road
- One full access aligned with the existing Discover Complex Access intersection on Central College Road
- Two full access points on New Albany-Condit Road
 - One tying into the existing intersection with Snider Loop
 - One located between Central College Road and Snider Loop (accessing the development on both sides of New Albany-Condit Road)

The site plan is provided in **Appendix A**.

IV. Area Conditions

A. Area of Influence

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

1. New Albany Road E. & Walton Parkway
2. New Albany Road E. & Site Access 1
3. New Albany Road E. & Central College Road
4. Central College Road & Discover Complex Access/Site Access 2
5. New Albany-Condit Road & Central College Road
6. New Albany-Condit Road & Walton Parkway
7. New Albany-Condit Road & Site Access 3/Site Access 4
8. New Albany-Condit Road & Site Access 5/Snider Loop

B. Jurisdictions

The proposed site and most of the intersections are under City of New Albany jurisdiction. The exceptions are the intersections at New Albany Road E. & Walton Parkway and New Albany Road E. & Site Access 1 which are under City of Columbus jurisdiction.

C. Traffic Volumes & Conditions

AM and PM peak hour turning movement counts were collected or obtained for the following study intersections from previously completed traffic studies in New Albany or online resources (year of data collection shown in parentheses):

- New Albany Road E. & Walton Parkway (2017)
- New Albany Road E. & Central College Road (2019)
- New Albany-Condit Road & Central College Road (2019)
- New Albany-Condit Road & Walton Parkway (2020)

Due to impacts to traffic volumes and patterns caused by the COVID-19 pandemic, the above pre-pandemic traffic counts were utilized for this TIS in lieu of newly collected data. All count data can be found in **Appendix B**.

V. Projected Traffic

A. Background Traffic

For analysis, the Opening Year of the development is 2022 and the Design, or Horizon Year, is 2032. In order to project the count data to the Opening and Horizon Years, linear, annual growth rates from various sources were used. The Mid-Ohio Regional Planning Commission (MORPC) provided annual, linear growth rates for the intersection of New Albany-Condit Road and Central College Road for a previously completed traffic access study. All other growth rates were derived from a City of New Albany Transportation study completed by Carpenter Marty Transportation and were calculated based on the comparison of 2020 ADT count data to 2050 MORPC ADT data provided by the City of New Albany. **Table 1** below shows the growth rates utilized in the TIS.

Table 1 – Growth Rates

Location	Linear Annual Growth Rate
New Albany Road E. e/o Walton Parkway	1.3%
New Albany Road E. w/o Walton Parkway	1.3%
Walton Parkway s/o New Albany Road E.	3.0%
Central College Road e/o New Albany Road E.	1.3%
Central College Road w/o New Albany Road E.	1.1%
New Albany Road E. n/o Central College Road	1.3%
New Albany Road E. s/o Central College Road	1.3%
Central College Road e/o New Albany-Condit Road	1.3%
Central College Road w/o New Albany-Condit Road	1.1%
New Albany-Condit Road n/o Central College Road	1.7%
New Albany-Condit Road s/o Central College Road	1.3%
Walton Parkway e/o New Albany-Condit Road	3.0%
Walton Parkway w/o New Albany-Condit Road	3.0%
New Albany-Condit Road n/o Walton Parkway	1.2%
New Albany-Condit Road s/o Walton Parkway	1.8%

Growth rates were applied to the count data to develop Background traffic for the Opening and Horizon Years. All growth rate data can be found in **Appendix B**.

B. Site Traffic

Trip Generation

Trips for the proposed site development were generated using ITE practices and the *Trip Generation Manual*, 10th edition, via the OTISS program¹. Land use codes (LUC) 210 – Single-Family Detached Housing, 220 – Multifamily Housing (Low-Rise), 820 – Shopping Center, 926 – Food Cart Pod, 411- Public Park, and 252 – Senior Adult Housing were used to generate trips for the proposed development. ITE recommended internal capture and pass-by rates were applied. **Table 2** shows a summary of the trip generation for the proposed development. The full trip generation details can be found in **Appendix C**.

¹ Online Traffic Impact Study Software developed by ITE and Transoft Solutions.

Table 2 – Proposed Site Trip Generation Summary

Land Use	Size	AM Peak		PM Peak	
		Entry	Exit	Entry	Exit
210 – Single-Family Detached Housing	37 Dwelling Units	8	23	25	14
Internal		0	1	4	2
Pass-By		0	0	0	0
Non-Pass-By		8	22	21	16
220 – Multifamily Housing (Low-Rise)	331 Dwelling Units	34	115	108	63
Internal		0	5	6	2
Pass-By		0	0	0	0
Non-Pass-By		34	110	102	61
820 – Shopping Center	14,450 SF	99	60	62	68
Internal		7	0	11	18
Pass-By		0	0	17	17
Non-Pass-By		92	60	34	33
926 – Food Cart Pod	3 units	0	0	7	7
Internal		0	0	2	4
Pass-By		0	0	0	0
Non-Pass-By		0	0	5	3
411- Public Park	7,500 SF	0	0	13	10
Internal		0	0	4	2
Pass-By		0	0	0	0
Non-Pass-By		0	0	9	8
252 – Senior Adult Housing - Attached	125 Dwelling Units	9	16	18	15
Internal		0	1	3	2
Pass-By		0	0	0	0
Non-Pass-By		9	15	15	13
TOTAL		150	214	233	177
Internal		7	7	30	30
Pass-By		0	0	17	17
Non-Pass-By		143	207	186	130

The proposed development has two access points, Site Accesses 2 and 5, which will be directly aligned with existing developments. Trips were generated for said existing developments as count data was not available for them. The developments include the Discover Complex office building located north of Central College Road between New Albany Road E. and New Albany-Condit Road and the single-family home development located off Snider Loop. The City of New Albany has indicated that the Discover Complex Office is expected to be redeveloped in the future which will require its own traffic impact study. However, trips were still applied to the access to account for existing traffic generated by the site and produce conservative results. *LUC 710 – General Office Building* and *210 – Single-Family Detached Housing* were used to generate trips for the developments. It was assumed that 25% of the Discover Complex office building traffic utilizes the Central College Road access opposite of Site Access 2. It should also be noted that trips for these developments were only applied to their respective access points as the trips are already represented in the count data utilized for the study.

Table 3 below summarizes the trip generation for the above-described background developments. Existing development trip generation details can be found in **Appendix C**.

Table 3 – Background Development Trip Generation Summary

Land Use	Size	AM Peak		PM Peak	
		Entry	Exit	Entry	Exit
710 – General Office Building	333,200 SF	292	48	57	300
210 – Single-Family Detached Housing	50 Dwelling Units	10	30	33	19

Existing development traffic was added to Background traffic to produce No Build traffic. Site traffic was distributed to/from the site based on count data, existing traffic patterns in the area, and proximity to other land uses and major roadways/state routes. Site traffic was added to the No Build traffic to produce Build traffic for the Opening and Horizon Years. The full volume calculations can be found in **Appendix D**.

VI. Traffic Analysis

A. Turn Lane Warrant Analysis

Turn lane warrant analysis was conducted at all unsignalized intersections 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 the turn lane was included in the capacity analysis for Build scenarios, as described further in this report.

B. Capacity Analysis

The HCM 6th Edition module of Synchro Version 10 software was used to analyze capacity at all study intersections. LOS of D and E are typical for urbanized areas with high volumes of traffic where LOS of A, B, and C are more typical for lower volume, less dense areas. A minimum LOS of D for the overall intersection/approaches and LOS E for each individual movement during peak traffic hours is considered acceptable at each intersection based on both City of New Albany and City of Columbus criteria. If an intersection fell below these criteria, mitigation strategies were developed to bring each movement or intersection back to an acceptable LOS. **Table 4** below summarizes LOS/delay criteria for unsignalized and signalized intersections.

Table 4 – LOS Criteria

LOS	Signalized Intersection Delay (sec)	Unsignalized Intersection Delay (sec)
A	≤ 10	≤ 10
B	> 10 - 20	> 10 - 15
C	> 20 - 35	> 15 - 25
D	> 35 - 55	> 25 - 35
E	> 55 - 80	> 35 - 50
F	> 80	> 50

C. Queuing Analysis

The SimTraffic module of Synchro 11 was used to perform queuing analysis at all intersections. Queuing analysis results are based on an average of five simulation runs. If queuing issues were present, mitigation strategies were developed to reduce queuing.

D. Field Observations

Field observations were conducted between 7:20-8:00 AM and 2:00-3:00 PM on May 27, 2021 at the intersection of New Albany-Condit Road & Snider Loop based on school peak arrival/exit times based on comment/feedback from surrounding area residents. Observations recorded included the delay of left turning vehicles, the length of queues formed on both roads, and vehicles turning into the Commercial Vehicle Group (CVG) drive just south of the intersection to determine if the traffic generated by New Albany High School negatively impacted drivers attempting to pull in and out of Snider Loop.

VII. Results

A. Turn Lane Warrant Analysis

The below list summarizes the turn lanes which meet warrants at the various unsignalized study intersections. All turn lane lengths are inclusive of a 50' diverging taper. The full turn lane warrant analysis can be found in **Appendix E**.

- Central College Road & Discover Complex Access/Site Drive 2 – 125' westbound left
- New Albany-Condit Road & Site Access 3/Site Access 4 – 225' northbound left and 225' southbound left
- New Albany-Condit Road & Site Access 5/Snider Loop – 225' northbound left and 225' southbound left

B. Capacity Analysis

Results of the capacity analysis can be seen in **Table 5**. Baseline capacity analysis utilizes planning-level signal timings and assumes all warranted turn lanes are installed. The full capacity analysis can be found in **Appendix F**.

Table 5 – Baseline Capacity Analysis Summary

Intersection	Approach or Movement	Opening Year				Horizon Year			
		AM No Build	AM Build	PM No Build	PM Build	AM No Build	AM Build	PM No Build	PM Build
(1)* New Albany Road E. & Walton Parkway Signalized	EB	B/11.0	B/11.2	C/21.3	C/22.7	B/11.6	B/11.1	C/23.4	C/24.0
	WB	A/7.8	A/8.0	C/22.1	C/23.3	A/7.8	A/7.4	C/24.4	C/24.8
	NB	C/28.0	C/28.3	C/21.6	B/20.8	C/29.7	C/31.0	C/25.2	C/25.5
	SB	C/26.4	C/26.4	B/13.1	B/12.6	C/27.3	C/28.1	B/12.6	B/12.6
	TOTAL	B/11.1	B/11.4	C/21.3	C/22.1	B/11.7	B/11.4	C/23.8	C/24.3
(2) New Albany Road E. & Site Access 1 Unsignalized	WBR	---	A/9.9	---	A/9.4	---	B/10.2	---	A/9.5
(3) New Albany Road E. & Central College Road Signalized	EB	D/38.3	D/38.9	D/37.2	D/37.9	D/39.2	D/39.9	D/37.7	D/38.4
	WB	D/42.2	D/42.1	D/39.7	D/40.0	D/43.2	D/42.8	D/41.0	D/40.5
	NB	B/12.1	B/12.6	B/12.1	B/12.4	B/13.0	B/13.6	B/12.8	B/13.1
	SB	B/10.7	B/11.6	B/12.7	B/13.3	B/11.4	B/12.4	B/13.8	B/14.5
	TOTAL	C/20.8	C/21.8	C/21.1	C/21.9	C/21.6	C/22.7	C/22.1	C/22.7
(4) Central College Road & Discover Complex Access/Site Access 2 Unsignalized	EBL	A/8.3	A/8.3	A/8.3	A/8.3	A/8.4	A/8.4	A/8.5	A/8.5
	WBL	---	A/8.1	---	A/8.5	---	A/8.2	---	A/8.6
	NB	---	C/17.0	---	C/18.6	---	C/17.9	---	C/20.6
	SB	B/11.9	C/15.3	B/12.8	C/16.1	B/12.3	C/16.0	B/13.8	C/17.7
(5) New Albany-Condit Road & Central College Road Signalized	EB	C/27.0	C/27.5	C/34.7	D/36.3	C/27.5	C/28.0	D/37.9	D/39.9
	WB	C/29.5	C/30.8	C/29.6	C/29.3	C/31.4	C/33.1	C/29.8	C/29.6
	NB	C/21.3	C/23.1	C/30.4	D/37.6	C/23.6	C/25.9	D/50.3	E/66.4
	SB	C/20.4	C/20.8	B/19.4	C/20.8	C/22.0	C/22.4	C/21.8	C/23.1
	TOTAL	C/24.3	C/25.4	C/29.0	C/32.3	C/26.0	C/27.3	D/37.8	D/44.4
(6) New Albany-Condit Road & Walton Parkway Signalized	EB	D/39.2	D/39.8	D/36.2	D/36.3	D/42.2	D/42.9	D/35.3	D/36.3
	WB	D/40.2	D/43.7	C/34.8	D/35.3	D/44.4	D/48.5	C/32.4	C/33.7
	NB	A/6.6	A/7.1	A/7.1	A/7.4	A/9.8	B/10.6	B/10.4	B/10.9
	SB	A/6.3	A/6.9	A/7.7	A/8.2	A/8.9	A/9.7	B/11.6	B/12.3
	TOTAL	B/15.4	B/16.0	B/16.8	B/16.8	B/19.3	C/20.2	B/19.3	B/19.8
(7) New Albany-Condit Road & Site Access 3/ Site Access 4 Unsignalized	EB	---	C/24.2	---	C/24.7	---	D/31.2	---	D/32.2
	WB	---	D/26.5	---	D/27.8	---	D/33.9	---	E/35.5
	NBL	---	A/9.0	---	A/8.8	---	A/9.3	---	A/9.1
	SBL	---	A/8.6	---	A/9.1	---	A/8.8	---	A/9.5
(8) New Albany-Condit Road & Site Access 5 / Snider Loop Unsignalized	EB	---	C/22.7	---	C/23.4	---	D/28.0	---	D/29.1
	WB	C/20.2	D/28.1	C/21.9	D/29.9	C/24.4	E/36.5	D/27.0	E/39.1
	NBL	---	A/9.1	---	A/8.7	---	A/9.4	---	A/8.9
	SBL	A/8.5	A/8.6	A/9.1	A/9.3	A/8.8	A/8.9	A/9.5	A/9.7

*Numbers correspond to **Figure 2**

As seen above in **Table 5**, all intersections operate with acceptable LOS/delay with the exception of the New Albany-Condit Road intersection with Central College Road, Site Access 3/Site Access 4, and Site Access 5/Snider Loop. The delays for the New Albany-Condit Road & Site Access 3/Site Access 4 and New Albany-Condit Road & Site Access 5/Snider Loop were considered acceptable as the delays barely exceed acceptable criteria in the Horizon Year only, V/C ratios are far below 1.0, and there is not enough side street traffic to warrant additional improvements. The westbound approach of the New Albany-Condit Road & Site Access 3/Site Access 4 intersection only exceeds acceptable LOS/delay by 0.5 seconds in the Horizon Year PM scenario. Similarly, the westbound approach of the New Albany-Condit Road & Site Access 5/Snider Loop intersection only exceeds acceptable LOS/delay by 1.5 seconds and 4.1 seconds in the Horizon Year AM and PM Build scenarios, respectively. As

noted above, these delays were considered acceptable as the delays barely exceed acceptable criteria in the Horizon Year only and V/C ratios are well below 1.0.

A signal warrant analysis and roundabout analysis were conducted at the intersection of New Albany-Condit Road & Site Access 5/Snider Loop per the request of the City of New Albany to determine the capacity benefit of either improvement. The signal warrant analysis was conducted per the Ohio Manual of Uniform Traffic Control Devices and shows that a signal does not meet warrants at the intersection. Roundabout analysis was completed using HCS 7 software and assumes a single circulating roundabout with single lane approaches. The westbound approach of the New Albany-Condit Road & Central College Road exceeds acceptable LOS/delay by 11.4 seconds and warrants mitigation through roadway improvements. While signal warrants are not anticipated to be met, **Table 6** below shows the resulting capacity analysis results with signal and roundabout improvements installed for reference.

Table 6 - Capacity Analysis with Improvements Summary

Intersection	Approach or Movement	Horizon Year			
		AM No Build	AM Build	PM No Build	PM Build
(5) New Albany-Condit Road & Central College Road NB Right Turn Lane Installed	EB	C/27.5	C/28.0	D/37.9	D/39.9
	WB	C/31.4	C/33.1	C/29.8	C/29.6
	NB	C/21.9	C/22.6	C/28.7	C/32.0
	SB	C/21.9	C/22.3	C/21.5	C/22.8
	TOTAL	C/25.4	C/26.3	C/29.5	C/31.4
(8) New Albany-Condit Road & Site Access 5 / Snider Loop Single-Lane Roundabout	EB	----	A/6.6	----	A/5.6
	WB	A/5.6	A/6.0	A/6.6	A/7.1
	NB	A/7.4	A/8.0	B/10.2	B/11.4
	SB	A/8.9	B/10.1	A/7.5	A/8.2
	TOTAL	A/8.1	A/9.1	A/9.0	A/10.0
(8) New Albany-Condit Road & Site Access 5 / Snider Loop Signal	EB	----	C/33.0	----	C/34.1
	WB	D/41.9	C/33.5	D/52.3	C/34.5
	NB	A/0.8	A/3.8	A/2.7	A/4.3
	SB	A/3.1	A/4.5	A/1.9	A/3.1
	TOTAL	A/3.0	A/5.1	A/3.1	A/4.4

**Numbers correspond to Figure 2*

As seen above in **Table 6**, with the addition of a northbound right turn lane at the New Albany-Condit Road & Central College Road intersection results in acceptable LOS/delay in all Horizon Year scenarios. The recommended improvement for the New Albany-Condit Road & Central College Road intersection is installation of a northbound right turn lane. The New Albany-Condit Road & Site Access 5/Snider Loop intersection also demonstrates acceptable LOS/delay in all Horizon Year scenarios as a roundabout or a signal.

C. Queuing Analysis

Horizon Year queuing analysis can be seen in **Table 7**. Average and 95th percentile queues are shown for each lane of each study intersection along with the approximate available storage space. Queues which exceed available storage space are shown in red. The full queuing analysis reports, including the Opening Year queuing analysis, can be seen in **Appendix G**.

Table 7 – Horizon Year Queuing Analysis (Average/95th Percentile)

Intersection	Approach	Movement	Available Storage Space	AM No Build	AM Build	PM No Build	PM Build
(1)* New Albany Road E. & Walton Parkway	EB	L	160'	21'/71'	21'/60'	2'/8'	1'/8'
		T	490'	128'/306'	150'/395'	76'/175'	89'/202'
		T/R	410'	267'/436'	299'/509'	178'/275'	189'/311'
	WB	L	155'	109'/198'	99'/189'	29'/104'	29'/102'
		T	830'	153'/414'	130'/358'	195'/311'	197'/292'
		T/R	820'	140'/378'	117'/324'	211'/331'	214'/308'
	NB	L	290'	59'/108'	66'/121'	187'/270'	187'/274'
		T/R	285'	25'/57'	29'/63'	26'/59'	23'/78'
	SB	L	45'	0'/5'	1'/6'	5'/24'	3'/16'
		T/R	250'	2'/13'	2'/13'	27'/60'	24'/59'
(2) New Albany Road E. & Site Access 1	WB	R	300'	---	9'/32'	---	6'/26'
(3) New Albany Road E. & Central College Road	EB	L	305'	64'/121'	56'/104'	47'/91'	41'/77'
		T	2000'	72'/120'	80'/131'	58'/105'	65'/113'
		T/R	2000'	54'/96'	56'/113'	42'/82'	41'/88'
	WB	L	225'	71'/118'	77'/123'	98'/147'	95'/150'
		T	680'	53'/97'	50'/97'	62'/108'	58'/102'
		T/R	630'	67'/119'	71'/119'	69'/128'	65'/114'
	NB	L	420'	19'/47'	19'/46'	28'/64'	30'/64'
		T	510'	157'/227'	167'/228'	93'/148'	94'/149'
		R	500'	35'/70'	41'/80'	39'/73'	43'/86'
	SB	L	340'	26'/60'	30'/63'	49'/90'	50'/87'
		T	800'	117'/183'	119'/192'	148'/226'	148'/228'
		R	690'	15'/43'	12'/37'	25'/53'	28'/57'
(4) Central College Road & Discover Complex Access/ Site Drive 2	EB	L	245'	1'/11'	12'/35'	5'/22'	1'/10'
	WB	L	125'	---	6'/23'	---	11'/35'
	NB	L/T/R	N/A	---	45'/81'	---	36'/75'
	SB	L	150'	7'/27'	7'/27'	25'/54'	25'/57'
		R	145'	7'/27'	10'/34'	23'/52'	28'/57'
(5) New Albany-Condit Road & Central College Road	EB	L	380'	21'/53'	31'/68'	28'/58'	32'/92'
		T	560'	77'/136'	91'/164'	148'/251'	151'/257'
		R	560'	34'/73'	36'/80'	33'/75'	33'/72'
	WB	L	335'	52'/94'	57'/104'	33'/66'	42'/79'
		T	700'	92'/153'	107'/176'	81'/148'	86'/143'
		T/R	420'	75'/140'	78'/143'	54'/114'	50'/101'
	NB	L	320'	60'/131'	66'/148'	129'/332'	179'/404'
		T/R	1020'	135'/250'	171'/291'	362'/697'	399'/633'
	SB	L	340'	41'/76'	42'/77'	37'/71'	40'/90'
		T	600'	139'/237'	149'/251'	127'/210'	142'/241'
		R	420'	15'/40'	17'/42'	20'/48'	20'/46'
(6) New Albany-Condit Road & Walton Parkway	EB	L	110'	10'/53'	9'/40'	46'/100'	48'/120'
		T/R	1950'	111'/190'	108'/177'	113'/214'	126'/249'
	WB	L	110'	22'/63'	23'/66'	42'/96'	45'/99'
		T/R	2800'	97'/181'	122'/212'	112'/196'	116'/211'
	NB	L	130'	86'/150'	108'/170'	48'/106'	45'/107'
		T/R	1650'	109'/261'	182'/406'	134'/241'	149'/262'
	SB	L	340'	55'/97'	62'/127'	82'/157'	86'/158'
		T/R	640'	129'/227'	154'/279'	112'/211'	118'/211'
(7) New Albany-Condit Road & Site Access 3/ Site Access 4	EB	L/T/R	N/A	---	39'/72'	---	102'/315'
	WB	L/T/R	N/A	---	13'/37'	---	13'/39'
	NB	L	225'	---	14'/38'	---	28'/117'
	SB	L	225'	---	4'/19'	---	8'/30'
(8) New Albany-Condit Road & Site Access 5 / Snider Loop	EB	L/T/R	N/A	---	16'/44'	---	8'/30'
	WB	L/T/R	360'	21'/48'	16'/42'	16'/41'	12'/41'
	NB	L	650'	---	3'/17'	---	3'/18'
	SB	L/T/R	1050'	2'/17'	0'/6'	18'/78'	9'/31'

*Numbers correspond to **Figure 2**

As seen in **Table 7**, the majority of queue lengths are not anticipated to exceed available storage space in the Horizon Year. Queue lengths which do extend beyond available storage space are all 95th percentile queues that only exceed storage space by about 100 feet or less. No additional improvements are recommended based on the queuing analysis. **Table 8** below shows the queuing analysis results with the northbound right turn lane improvement at the New Albany-Condit Road & Central College Road intersection.

Table 8 – Horizon Year Queuing Analysis With Improvements (Average/95th Percentile)

Intersection	Approach	Movement	Available Storage Space	AM No Build	AM Build	PM No Build	PM Build
(5) New Albany-Condit Road & Central College Road	EB	L	380'	23'/54'	32'/70'	26'/58'	33'/67'
		T	560'	74'/137'	90'/159'	141'/245'	157'/258'
		R	560'	39'/83'	37'/80'	31'/69'	32'/69'
	WB	L	335'	42'/81'	51'/95'	29'/64'	37'/75'
		T	700'	87'/160'	105'/172'	72'/133'	82'/143'
		T/R	420'	64'/131'	74'/145'	39'/88'	41'/94'
	NB	L	320'	61'/135'	60'/123'	83'/207'	77'/195'
		T	1020'	133'/255'	142'/253'	220'/376'	211'/370'
		R	320'	11'/62'	15'/66'	36'/146'	44'/162'
	SB	L	340'	42'/109'	40'/78'	35'/63'	35'/67'
		T	600'	131'/226'	135'/228'	129'/216'	130'/214'
		R	420'	15'/40'	17'/44'	18'/44'	23'/50'

D. Field Observations

During the first observation period from 7:20-8:00 AM, 13 vehicles turned left out of Snider Loop to travel southbound on New Albany-Condit Road. Of these 13 vehicles, the shortest delay was two seconds and the longest was 30 seconds. The average delay was 10.9 seconds. There was also one vehicle turning right to travel northbound on New Albany-Condit Road which had a delay of 13 seconds. Throughout the observation period, no significant southbound queue formed at the intersection of New Albany-Condit Road and Walton Parkway that would impede vehicles turning left from Snider Loop. No vehicles were recorded to be turning into the CVG drive.

During the second observation period, from 2:00-3:00 PM, five vehicles turned left out of Snider Loop to travel southbound on New Albany-Condit Road. Of these five vehicles, the shortest delay was three seconds and the longest was 20 seconds. The average delay was 9.2 seconds. There was also one southbound vehicle turning left into Snider Loop that had a delay of three seconds. One vehicle turned into the CVG drive but immediately turned around as the vehicle seemed to have meant to turn into the house immediately north of the CVG drive. Other occurrences of note include the fleet of approximately 10 northbound school buses passing the intersection at 2:30 PM, a garbage truck stopping to pick up trash and traveling southbound at 2:40 PM, and two vehicles utilizing Snider Loop provide to complete U-turns to return northbound along New Albany Condit-Road.

Overall, observations did not show definitive evidence that the traffic generated by New Albany Schools affects delay times at Snider Loop in neither the morning nor the afternoon. Field notes from the observations can be found in **Appendix H**.

VIII. Recommendations and Conclusions

Based on the results of the turn lane warrant analysis, it is recommended that a 125' westbound left turn lane be installed at the Central College Road & Discover Complex Access/Site Drive 2 intersection. There is sufficient roadway width at this location and the improvement can be installed by restriping the existing pavement. It is recommended that 225' northbound and southbound left turn lanes be installed at the New Albany-Condit Road & Site Access 3/Site Access 4 intersection. It is also recommended that a 225' northbound and southbound left turn lanes be installed at the New Albany-Condit Road & Site Access 5/Snyder Loop intersection. Due to the proximity of the proposed access points and recommended turn lanes along New Albany-Condit Road, it may be necessary to install a two-way left turn lane in lieu of dedicated turn lanes in certain locations. This is expected to be determined during the design process. All turn lane lengths described above are inclusive of a 50' diverging taper.

It should be noted that there are ongoing discussions between the City of New Albany and the developer regarding a change of the roadway classification of New Albany-Condit Road and a potential reduction in speed limit due to the number of existing and proposed site development access points. Reducing the speed limit and design speed of the roadway would reduce the required lengths of the warranted turn lanes described above. It is recommended that the required turn lane lengths be reevaluated if a speed limit reduction is implemented. The above-described turn lanes are all Build improvements that will be the responsibility of the developer.

Based on the results of the capacity and queuing analysis, it is recommended that a northbound right turn lane be installed at the New Albany-Condit Road & Central College Road intersection. This is expected to alleviate unacceptable LOS/delay in the Horizon Year PM Build scenario and decrease northbound queues at the intersection. The calculated length of said turn lane is 320' inclusive of a 50' diverging taper. However, based on the queuing analysis, a shorter turn lane length may be sufficient for the intersection. The longest, average queue length for the northbound through lane with the right turn lane installed in the Horizon Year is 220'. Therefore, a turn lane length of 270', inclusive of a 50' diverging taper, is recommended to accommodate right turning vehicles with minimal through-queue blockage. This is considered a Build improvement based on the results of the analysis. However, the proposed development adds only a small number of vehicles to this turning movement. Development traffic represents 12.7% of the total right turning traffic for this movement in the Horizon Year PM Build scenario. Additionally, the shared northbound through-right lane is LOS E in the Horizon Year PM No Build condition with a V/C ratio of 1.0 which shows the lane is at capacity in the No Build condition. Acceptable LOS can be achieved by reducing the minimum green times for the eastbound/westbound approaches in lieu of a right turn lane installation. However, a right turn installation is expected to have a long-term benefit for the intersection and is recommended with or without the proposed development. No additional improvements are required or recommended based on the capacity and queuing analysis.

Based on the analysis herein, along with field observations, no improvements are recommended at the intersection of New Albany-Condit Road & Site Access 5/Snider Loop. Capacity analysis shows delays barely exceed acceptable thresholds in the Horizon Year only and V/C ratios are far below 1.0. Additionally, field observations show that the westbound approach of the intersection acts as de facto, separate left and right turn lanes for traffic turning onto New Albany-Condit Road. Thus, the results of the analysis in this study are expected to be conservative when compared to real-world operations. Lastly, a signal is not expected to meet warrants at the intersection and a roundabout does not provide significant capacity benefit relative to the cost and impacts of installing the improvement.

IX. Appendices

Appendix A – Site Plan

Appendix B – Count Data and Growth Rate Data

Appendix C – Trip Generation

Appendix D – Volume Calculations

Appendix E – Turn Lane Warrant Analysis

Appendix F – Capacity Analysis & Signal Warrant Analysis

Appendix G – Queuing Analysis

Appendix H – Field Observations Notes

Appendix A

Site Plan





NORTH NEW ALBANY

Appendix B

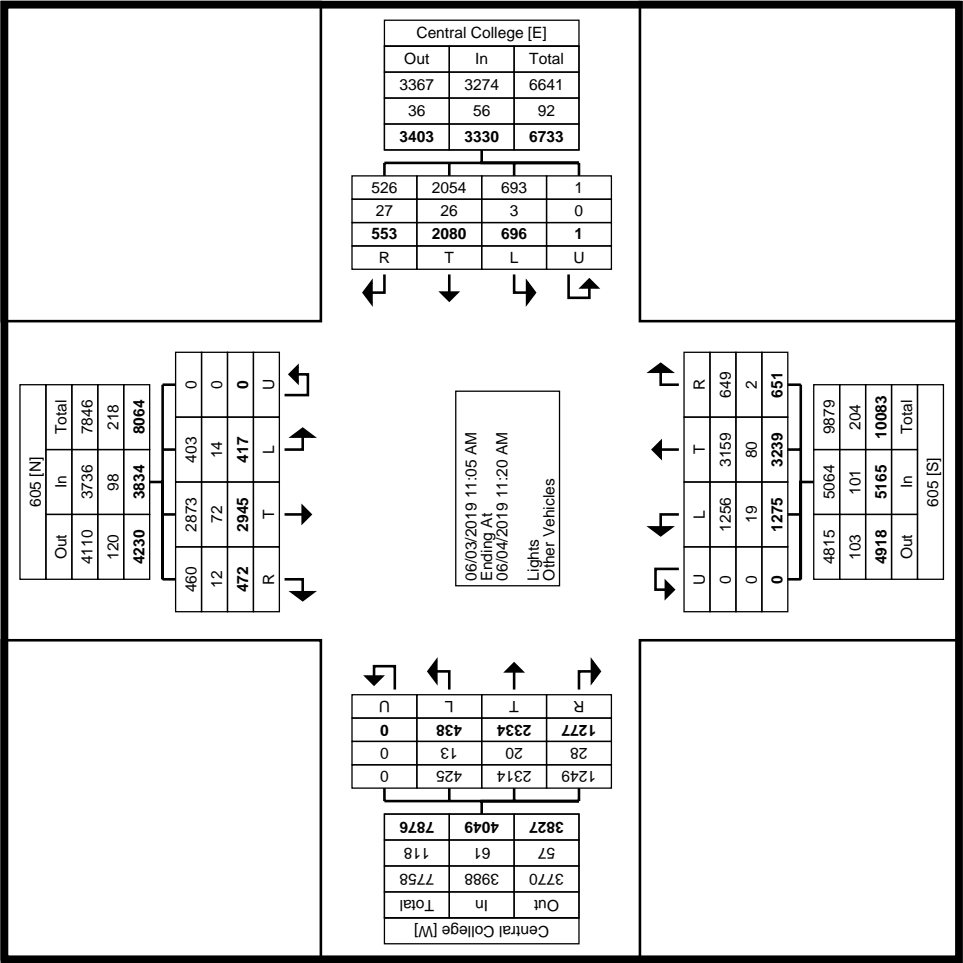
Count Data & Growth Rate Data

Turning Movement Data

Start Time	605 Southbound						Central College Westbound						605 Northbound						Central College Eastbound					
	Right	Thru	Left	U-Turn	App. Total		Right	Thru	Left	U-Turn	App. Total		Right	Thru	Left	U-Turn	App. Total		Right	Thru	Left	U-Turn	App. Total	Int. Total
11:05 AM	7	30	2	0	39		0	17	12	0	29		11	33	21	0	65		18	27	11	0	56	189
11:20 AM	5	34	7	0	46		8	28	8	0	44		11	33	16	0	60		15	32	5	0	52	202
11:35 AM	8	43	4	0	55		3	36	13	0	52		6	38	14	0	58		18	33	2	0	53	218
11:50 AM	8	34	3	0	45		4	38	11	0	53		11	44	31	0	86		29	38	11	0	78	262
Hourly Total	28	141	16	0	185		15	119	44	0	178		39	148	82	0	269		80	130	29	0	239	871
12:05 PM	8	25	5	0	38		5	38	13	0	56		13	38	25	0	76		16	36	6	0	58	228
12:20 PM	5	34	2	0	41		5	26	8	0	39		10	32	23	0	65		19	50	12	0	81	226
12:35 PM	6	30	2	0	38		6	28	7	0	41		12	26	24	0	62		22	27	10	0	59	200
12:50 PM	6	22	1	0	29		3	37	4	0	44		8	32	16	0	56		31	23	8	0	62	191
Hourly Total	25	111	10	0	146		19	129	32	0	180		43	128	88	0	259		88	136	36	0	260	845
1:05 PM	12	33	4	0	49		52	30	12	0	94		9	47	23	0	79		20	44	8	0	72	294
1:20 PM	7	24	3	0	34		6	29	13	0	48		6	36	26	0	68		19	41	13	0	73	223
1:35 PM	3	31	3	0	37		1	28	9	0	38		9	29	22	0	60		18	33	6	0	57	192
1:50 PM	6	28	6	0	40		7	24	12	0	43		6	38	25	0	69		23	42	5	0	70	222
Hourly Total	28	116	16	0	160		66	111	46	0	223		30	150	96	0	276		80	160	32	0	272	931
2:05 PM	11	28	4	0	43		3	24	8	0	35		9	39	10	0	58		13	28	6	0	47	183
2:20 PM	6	41	5	0	52		4	24	6	0	34		8	33	12	0	53		18	27	5	0	50	189
2:35 PM	8	34	1	0	43		1	29	10	0	40		9	46	12	0	67		17	34	3	0	54	204
2:50 PM	11	45	6	0	62		3	23	12	0	38		8	36	13	0	57		15	40	6	0	61	218
Hourly Total	36	148	16	0	200		11	100	36	0	147		34	154	47	0	235		63	129	20	0	212	794
3:05 PM	8	42	3	0	53		4	37	17	0	58		15	55	25	0	95		16	27	8	0	51	257
3:20 PM	9	39	3	0	51		4	15	14	0	33		10	63	13	0	86		26	40	6	0	72	242
3:35 PM	12	47	6	0	65		7	24	13	0	44		24	68	26	0	118		21	38	5	0	64	291
3:50 PM	9	39	6	0	54		10	32	10	0	52		12	50	25	0	87		23	48	5	0	76	269
Hourly Total	38	167	18	0	223		25	108	54	0	187		61	236	89	0	386		86	153	24	0	263	1059
4:05 PM	10	57	13	0	80		9	41	3	0	53		17	86	20	0	123		31	50	12	0	93	349
4:20 PM	11	75	18	0	104		2	35	9	0	46		19	86	23	0	128		44	47	5	0	96	374
4:35 PM	17	108	23	0	148		9	33	10	0	52		20	96	16	0	132		45	61	11	0	117	449
4:50 PM	6	60	12	0	78		16	25	9	0	50		18	91	27	0	136		35	74	6	0	115	379
Hourly Total	44	300	66	0	410		36	134	31	0	201		74	359	86	0	519		155	232	34	0	421	1551
5:05 PM	12	85	9	0	106		15	49	14	0	78		17	126	32	0	175		43	70	10	0	123	482
5:20 PM	13	63	10	0	86		28	52	7	0	87		18	134	39	0	191		32	59	12	0	103	467
5:35 PM	14	69	14	0	97		25	37	8	0	70		23	115	37	0	175		31	63	13	0	107	449
5:50 PM	8	55	17	0	80		18	33	13	0	64		18	107	23	0	148		19	69	10	0	98	390
Hourly Total	47	272	50	0	369		86	171	42	0	299		76	482	131	0	689		125	261	45	0	431	1788
6:05 PM	14	75	13	0	102		9	43	10	0	62		17	77	27	0	121		29	70	8	0	107	392
6:20 PM	6	46	4	0	56		11	39	13	0	63		10	53	17	0	80		20	58	8	0	86	285
6:35 PM	8	46	10	0	64		6	34	9	0	49		12	47	18	0	77		22	55	8	0	85	275
6:50 PM	7	28	2	0	37		7	31	9	1	48		4	44	18	0	66		11	41	2	0	54	205
Hourly Total	35	195	29	0	259		33	147	41	1	222		43	221	80	0	344		82	224	26	0	332	1157
7:05 PM	10	29	5	0	44		3	29	10	0	42		10	40	16	0	66		17	45	6	0	68	220

7:20 PM	6	22	8	0	36	2	24	6	0	32	7	26	10	0	43	8	33	2	0	43	154
7:35 PM	10	37	3	0	50	9	24	11	0	44	6	40	12	0	58	8	37	4	0	49	201
7:50 PM	7	36	1	0	44	6	36	10	0	52	8	29	11	0	48	8	28	3	0	39	183
Hourly Total	33	124	17	0	174	20	113	37	0	170	31	135	49	0	215	41	143	15	0	199	758
8:05 PM	13	27	8	0	48	4	27	8	0	39	12	24	11	0	47	11	35	8	0	54	188
8:20 PM	3	30	3	0	36	0	19	6	0	25	5	27	5	0	37	9	47	3	0	59	157
8:35 PM	5	34	2	0	41	6	16	4	0	26	13	24	9	0	46	11	32	3	0	46	159
8:50 PM	4	20	3	0	27	2	24	3	0	29	13	18	14	0	45	11	26	2	0	39	140
Hourly Total	25	111	16	0	152	12	86	21	0	119	43	93	39	0	175	42	140	16	0	198	644
9:05 PM	5	23	4	0	32	3	20	4	0	27	8	24	11	0	43	10	22	5	0	37	139
9:20 PM	4	15	1	0	20	3	11	3	0	17	7	15	8	0	30	8	22	3	0	33	100
9:35 PM	4	9	1	0	14	0	17	2	0	19	8	13	5	0	26	1	18	3	0	22	81
9:50 PM	5	15	1	0	21	3	9	2	0	14	6	12	3	0	21	3	15	3	0	21	77
Hourly Total	18	62	7	0	87	9	57	11	0	77	29	64	27	0	120	22	77	14	0	113	397
10:05 PM	9	17	5	0	31	0	9	1	0	10	6	14	4	0	24	6	16	1	0	23	88
10:20 PM	1	10	1	0	12	0	2	1	0	3	3	6	3	0	12	4	4	0	0	8	35
10:35 PM	4	6	0	0	10	2	5	2	0	9	1	7	4	0	12	0	3	2	0	5	36
10:50 PM	1	7	0	0	8	0	2	1	0	3	4	5	2	0	11	4	12	1	0	17	39
Hourly Total	15	40	6	0	61	2	18	5	0	25	14	32	13	0	59	14	35	4	0	53	198
11:05 PM	1	7	2	0	10	0	2	1	0	3	0	7	1	0	8	1	11	0	0	12	33
11:20 PM	1	9	0	0	10	0	4	2	0	6	2	1	3	0	6	2	1	0	0	3	25
11:35 PM	0	4	0	0	4	0	4	1	0	5	2	4	2	0	8	2	7	0	0	9	26
11:50 PM	4	2	0	0	6	0	2	2	0	4	0	1	5	0	6	0	5	1	0	6	22
Hourly Total	6	22	2	0	30	0	12	6	0	18	4	13	11	0	28	5	24	1	0	30	106
12:05 AM	1	3	0	0	4	1	3	0	0	4	1	7	1	0	9	7	3	0	0	10	27
12:20 AM	0	1	0	0	1	1	0	1	0	2	0	2	0	0	2	1	5	0	0	6	11
12:35 AM	0	2	0	0	2	0	1	0	0	1	0	1	1	0	2	1	2	0	0	3	8
12:50 AM	0	3	0	0	3	0	2	0	0	2	0	1	0	0	1	0	2	0	0	2	8
Hourly Total	1	9	0	0	10	2	6	1	0	9	1	11	2	0	14	9	12	0	0	21	54
1:05 AM	0	1	0	0	1	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	4
1:20 AM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	4
1:35 AM	1	1	0	0	2	0	0	1	0	1	0	1	1	0	2	1	2	1	0	4	9
1:50 AM	0	2	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	3
Hourly Total	1	6	0	0	7	0	2	1	0	3	0	4	2	0	6	1	2	1	0	4	20
2:05 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	3
2:20 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	2
2:35 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:50 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Hourly Total	0	1	1	0	2	0	1	1	0	2	0	1	0	0	1	1	0	1	0	2	7
3:05 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:20 AM	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	2
3:35 AM	0	4	0	0	4	0	2	0	0	2	0	1	1	0	2	3	0	0	0	3	11
3:50 AM	0	0	0	0	0	0	1	0	0	1	0	3	0	0	3	0	0	0	0	0	4
Hourly Total	0	4	0	0	4	0	4	1	0	5	0	5	1	0	6	3	0	0	0	3	18
4:05 AM	0	5	1	0	6	0	0	0	0	0	0	3	0	0	3	1	0	1	0	2	11
4:20 AM	0	4	0	0	4	0	1	0	0	1	0	2	0	0	2	2	1	0	0	3	10
4:35 AM	0	6	0	0	6	0	7	1	0	8	1	2	0	0	3	1	3	1	0	5	22
4:50 AM	1	6	1	0	8	0	6	2	0	8	0	2	0	0	2	2	2	1	0	5	23
Hourly Total	1	21	2	0	24	0	14	3	0	17	1	9	0	0	10	6	6	3	0	15	66
5:05 AM	0	9	0	0	9	0	6	7	0	13	0	2	1	0	3	4	2	1	0	7	32
5:20 AM	0	15	1	0	16	0	7	2	0	9	0	6	3	0	9	2	5	6	0	13	47
5:35 AM	1	24	1	0	26	1	7	10	0	18	1	14	5	0	20	5	6	2	0	13	77

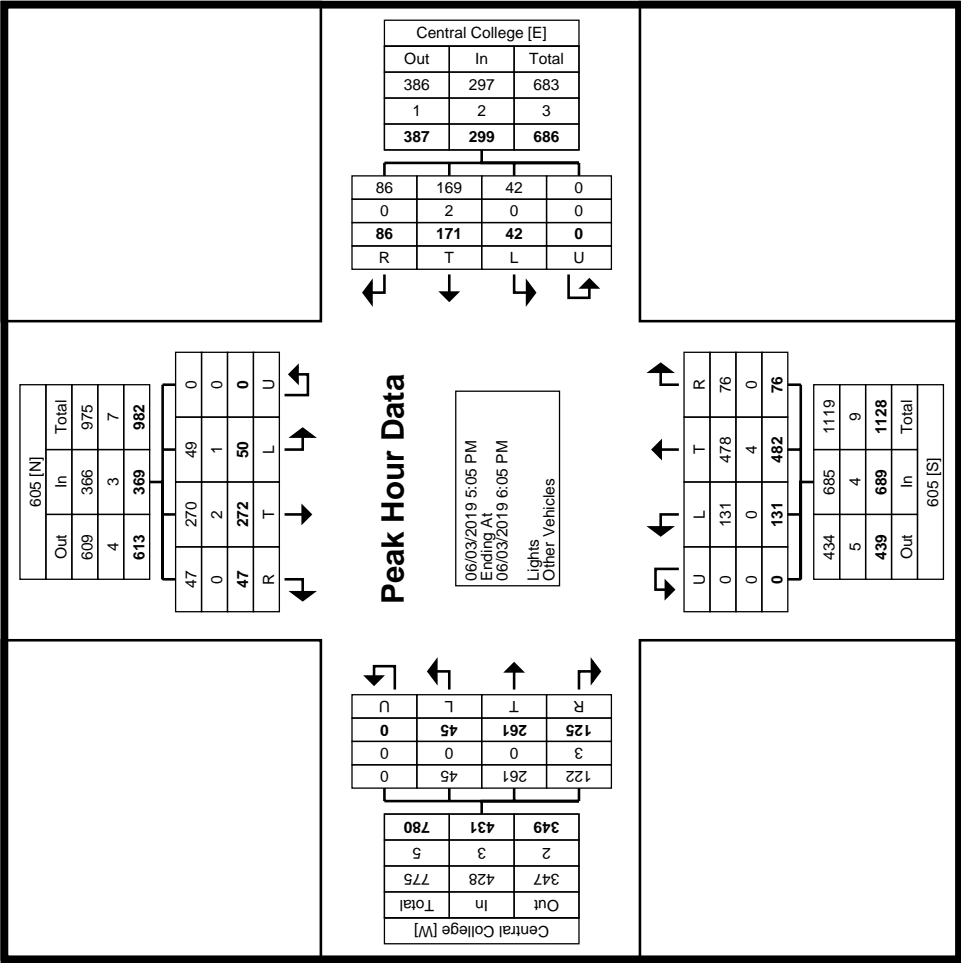
5:50 AM	1	26	2	0	0	29	4	10	8	0	0	22	3	9	7	0	19	3	4	3	0	10	80
Hourly Total	2	74	4	0	0	80	5	30	27	0	62	4	4	31	16	0	51	14	17	12	0	43	236
6:05 AM	1	27	2	0	0	30	3	13	4	0	20	1	1	21	3	0	25	0	4	1	0	5	80
6:20 AM	0	37	5	0	0	42	3	16	3	0	22	4	4	21	13	0	38	11	5	1	0	17	119
6:35 AM	1	51	5	0	0	57	8	23	8	0	39	3	3	29	9	0	41	10	10	3	0	23	160
6:50 AM	4	62	6	0	0	72	6	33	11	0	50	2	2	48	23	0	73	15	15	7	0	37	232
Hourly Total	6	177	18	0	0	201	20	85	26	0	131	10	10	119	48	0	177	36	34	12	0	82	591
7:05 AM	2	59	8	0	0	69	11	46	12	0	69	2	2	54	19	0	75	21	23	6	0	50	263
7:20 AM	3	77	6	0	0	86	23	65	17	0	105	0	0	61	37	0	98	22	22	4	0	48	337
7:35 AM	8	84	13	0	0	105	38	66	17	0	121	4	4	103	41	0	148	24	34	9	0	67	441
7:50 AM	8	76	23	0	0	107	31	74	20	0	125	9	9	87	31	0	127	35	31	12	0	78	437
Hourly Total	21	296	50	0	0	367	103	251	66	0	420	15	15	305	128	0	448	102	110	31	0	243	1478
8:05 AM	8	61	17	0	0	86	21	58	23	0	102	8	8	78	34	0	120	28	37	7	0	72	380
8:20 AM	8	70	16	0	0	94	17	59	16	0	92	4	4	74	21	0	99	32	29	6	0	67	352
8:35 AM	7	81	9	0	0	97	11	42	21	0	74	8	8	48	30	0	86	24	33	8	0	65	322
8:50 AM	1	52	5	0	0	58	7	37	31	0	75	10	10	68	30	0	108	25	33	11	0	69	310
Hourly Total	24	264	47	0	0	335	56	196	91	0	343	30	30	268	115	0	413	109	132	32	0	273	1364
9:05 AM	4	45	1	0	0	50	10	33	13	0	56	12	12	46	19	0	77	29	32	10	0	71	254
9:20 AM	1	29	7	0	0	37	7	27	7	0	41	13	13	39	20	0	72	10	25	9	0	44	194
9:35 AM	7	27	1	0	0	35	5	16	5	0	26	5	5	25	16	0	46	13	17	6	0	36	143
9:50 AM	5	39	1	0	0	45	3	32	11	0	46	6	6	36	10	0	52	7	19	6	0	32	175
Hourly Total	17	140	10	0	0	167	25	108	36	0	169	36	36	146	65	0	247	59	93	31	0	183	766
10:05 AM	4	33	2	0	0	39	1	21	4	0	26	5	5	27	11	0	43	12	14	1	0	27	135
10:20 AM	7	38	5	0	0	50	5	19	7	0	31	7	7	30	16	0	53	13	24	5	0	42	176
10:35 AM	6	27	4	0	0	37	2	20	7	0	29	9	9	29	14	0	52	16	25	8	0	49	167
10:50 AM	4	46	4	0	0	54	0	17	18	0	35	12	12	39	17	0	68	12	21	5	0	38	195
Hourly Total	21	144	15	0	0	180	8	77	36	0	121	33	33	125	58	0	216	53	84	19	0	156	673
11:05 AM	0	0	1	0	0	1	0	1	1	0	2	0	0	0	2	0	2	1	0	0	0	1	6
Grand Total	472	2945	417	0	0	3834	553	2080	696	1	3330	651	651	3239	1275	0	5165	1277	2334	438	0	4049	16378
Approach %	12.3	76.8	10.9	0.0	0.0	-	16.6	62.5	20.9	0.0	-	12.6	12.6	62.7	24.7	0.0	-	31.5	57.6	10.8	0.0	-	-
Total %	2.9	18.0	2.5	0.0	0.0	23.4	3.4	12.7	4.2	0.0	20.3	4.0	4.0	19.8	7.8	0.0	31.5	7.8	14.3	2.7	0.0	24.7	-
Lights	460	2873	403	0	0	3736	526	2054	693	1	3274	649	649	3159	1256	0	5064	1249	2314	425	0	3988	16062
% Lights	97.5	97.6	96.6	-	-	97.4	95.1	98.8	99.6	100.0	98.3	99.7	99.7	97.5	98.5	-	98.0	97.8	99.1	97.0	-	98.5	98.1
Other Vehicles	12	72	14	0	0	98	27	26	3	0	56	2	2	80	19	0	101	28	20	13	0	61	316
% Other Vehicles	2.5	2.4	3.4	-	-	2.6	4.9	1.3	0.4	0.0	1.7	0.3	0.3	2.5	1.5	-	2.0	2.2	0.9	3.0	-	1.5	1.9



Turning Movement Data Plot

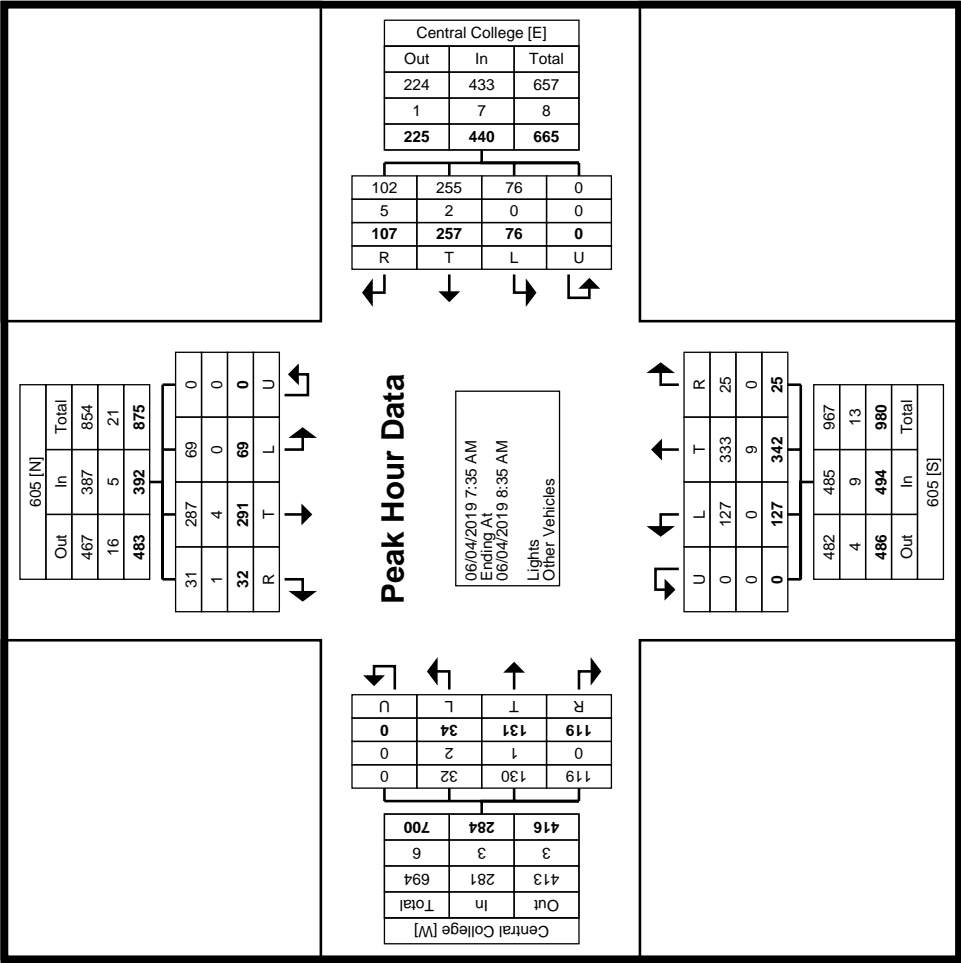
Turning Movement Peak Hour Data (5:05 PM)

Start Time	605 Southbound						Central College Westbound						605 Northbound						Central College Eastbound					
	Right	Thru	Left	U-Turn	App. Total		Right	Thru	Left	U-Turn	App. Total		Right	Thru	Left	U-Turn	App. Total		Right	Thru	Left	U-Turn	App. Total	Int. Total
5:05 PM	12	85	9	0	106		15	49	14	0	78		17	126	32	0	175		43	70	10	0	123	482
5:20 PM	13	63	10	0	86		28	52	7	0	87		18	134	39	0	191		32	59	12	0	103	467
5:35 PM	14	69	14	0	97		25	37	8	0	70		23	115	37	0	175		31	63	13	0	107	449
5:50 PM	8	55	17	0	80		18	33	13	0	64		18	107	23	0	148		19	69	10	0	98	390
Total	47	272	50	0	369		86	171	42	0	299		76	482	131	0	689		125	261	45	0	431	1788
Approach %	12.7	73.7	13.6	0.0	-		28.8	57.2	14.0	0.0	-		11.0	70.0	19.0	0.0	-		29.0	60.6	10.4	0.0	-	-
Total %	2.6	15.2	2.8	0.0	20.6		4.8	9.6	2.3	0.0	16.7		4.3	27.0	7.3	0.0	38.5		7.0	14.6	2.5	0.0	24.1	-
PHF	0.839	0.800	0.735	0.000	0.870		0.768	0.822	0.750	0.000	0.859		0.826	0.899	0.840	0.000	0.902		0.727	0.932	0.865	0.000	0.876	0.927
Lights	47	270	49	0	366		86	169	42	0	297		76	478	131	0	685		122	261	45	0	428	1776
% Lights	100.0	99.3	98.0	-	99.2		100.0	98.8	100.0	-	99.3		100.0	99.2	100.0	-	99.4		97.6	100.0	100.0	-	99.3	99.3
Other Vehicles	0	2	1	0	3		0	2	0	0	2		0	4	0	0	4		3	0	0	0	3	12
% Other Vehicles	0.0	0.7	2.0	-	0.8		0.0	1.2	0.0	-	0.7		0.0	0.8	0.0	-	0.6		2.4	0.0	0.0	-	0.7	0.7



Turning Movement Peak Hour Data (7:35 AM)

Start Time	605 Southbound						Central College Westbound						605 Northbound						Central College Eastbound						Int. Total
	Right	Thru	Left	U-Turn	App. Total		Right	Thru	Left	U-Turn	App. Total		Right	Thru	Left	U-Turn	App. Total		Right	Thru	Left	U-Turn	App. Total		
7:35 AM	8	84	13	0	105		38	66	17	0	121		4	103	41	0	148		24	34	9	0	67	441	
7:50 AM	8	76	23	0	107		31	74	20	0	125		9	87	31	0	127		35	31	12	0	78	437	
8:05 AM	8	61	17	0	86		21	58	23	0	102		8	78	34	0	120		28	37	7	0	72	380	
8:20 AM	8	70	16	0	94		17	59	16	0	92		4	74	21	0	99		32	29	6	0	67	352	
Total	32	291	69	0	392		107	257	76	0	440		25	342	127	0	494		119	131	34	0	284	1610	
Approach %	8.2	74.2	17.6	0.0	-		24.3	58.4	17.3	0.0	-		5.1	69.2	25.7	0.0	-		41.9	46.1	12.0	0.0	-	-	
Total %	2.0	18.1	4.3	0.0	24.3		6.6	16.0	4.7	0.0	27.3		1.6	21.2	7.9	0.0	30.7		7.4	8.1	2.1	0.0	17.6	-	
PHF	1.000	0.866	0.750	0.000	0.916		0.704	0.868	0.826	0.000	0.880		0.694	0.830	0.774	0.000	0.834		0.850	0.885	0.708	0.000	0.910	0.913	
Lights	31	287	69	0	387		102	255	76	0	433		25	333	127	0	485		119	130	32	0	281	1586	
% Lights	96.9	98.6	100.0	-	98.7		95.3	99.2	100.0	-	98.4		100.0	97.4	100.0	-	98.2		100.0	99.2	94.1	-	98.9	98.5	
Other Vehicles	1	4	0	0	5		5	2	0	0	7		0	9	0	0	9		0	1	2	0	3	24	
% Other Vehicles	3.1	1.4	0.0	-	1.3		4.7	0.8	0.0	-	1.6		0.0	2.6	0.0	-	1.8		0.0	0.8	5.9	-	1.1	1.5	



Turning Movement Peak Hour Data Plot (7:35 AM)

E.P. Ferris & Associates, Inc.
880 King Ave
Columbus, Ohio, United States 43212
614-299-2999 wsiegel@epferris.com

Count Name: Central College at 605
Site Code:
Start Date: 06/03/2019
Page No: 9



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Calculate Peak Hour for:

☐ Intersection

Turning Movement Count Data - 5373

Int ID: 5373
 Community: COLUMBUS
 Road 1: CENTRAL COLLEGE RD
 Road 2: NEW ALBANY RD EAST
 Corridor:
 Road 3:
 Road 4:

TMC Data

Display	Date	PHV	Peak Hour	Duration	TMC Owner
<input checked="" type="radio"/>	Wednesday, March 20, 2019	2152	7:30 AM	7:00 AM - 6:00 PM	morpc

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Notes

Note

Date

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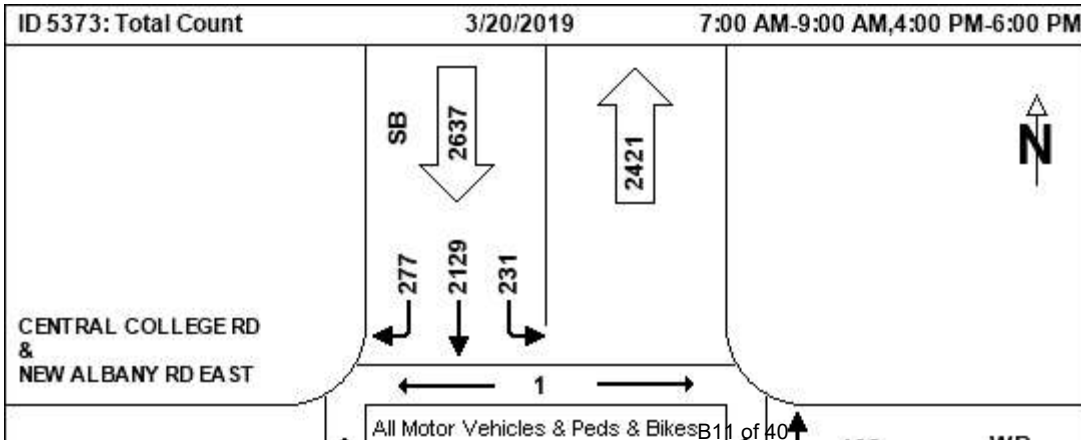
[Glossary](#)

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Vehicles

Start Time	Left	Thru	Right	Ped	Total
7:00 AM	16	23	2	0	41
7:15 AM	17	29	2	0	48
7:30 AM	25	44	5	0	74
7:45 AM	37	61	2	0	100
8:00 AM	26	48	5	0	79
8:15 AM	18	44	2	0	64
8:30 AM	13	45	1	0	59
8:45 AM	16	55	1	0	72
4:00 PM	18	30	1	0	49
4:15 PM	14	38	2	0	54
4:30 PM	15	26	4	0	45
4:45 PM	17	33	4	0	54
5:00 PM	21	44	11	1	76
5:15 PM	15	36	6	0	57
5:30 PM	24	51	3	0	78
5:45 PM	25	47	6	0	78
Total	317	654	57	1	1028
App %	30.84	63.62	5.54		
Total %	4.06	8.37	0.73		13.16

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes







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Calculate Peak Hour for:

☐ Intersection

Turning Movement Count Data - 5373

Int ID: 5373
 Community: COLUMBUS
 Road 1: CENTRAL COLLEGE RD
 Road 2: NEW ALBANY RD EAST
 Corridor:
 Road 3:
 Road 4:

TMC Data

Display	Date	PHV	Peak Hour	Duration	TMC Owner
<input checked="" type="radio"/>	Wednesday, March 20, 2019	2152	7:30 AM	7:00 AM - 6:00 PM	morpc

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Notes

Note

Date

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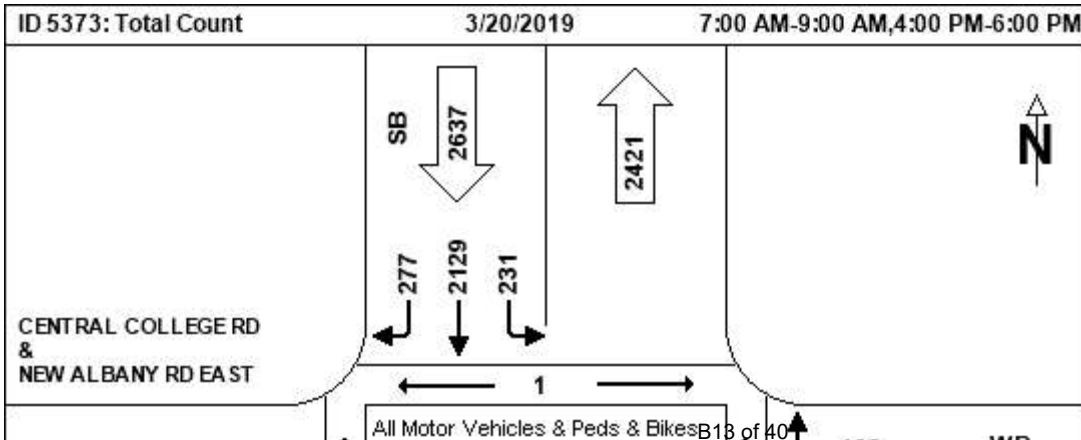
[Glossary](#)

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Vehicles

Start Time	Left	Thru	Right	Ped	Total
7:00 AM	2	89	23	0	114
7:15 AM	3	106	39	0	148
7:30 AM	9	165	32	0	206
7:45 AM	4	222	57	0	283
8:00 AM	7	147	31	0	185
8:15 AM	4	150	33	0	187
8:30 AM	9	139	29	0	177
8:45 AM	3	125	33	0	161
4:00 PM	8	87	28	0	123
4:15 PM	14	97	27	0	138
4:30 PM	9	102	34	0	145
4:45 PM	10	93	36	0	139
5:00 PM	7	91	37	0	135
5:15 PM	13	109	51	0	173
5:30 PM	13	123	43	0	179
5:45 PM	9	127	48	1	184
Total	124	1972	581	1	2677
App %	4.63	73.66	21.70		
Total %	1.59	25.24	7.44		34.27

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes







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Calculate Peak Hour for:

☐ Intersection

Turning Movement Count Data - 5373

Int ID: 5373
 Community: COLUMBUS
 Road 1: CENTRAL COLLEGE RD
 Road 2: NEW ALBANY RD EAST
 Corridor:
 Road 3:
 Road 4:

TMC Data

Display	Date	PHV	Peak Hour	Duration	TMC Owner
<input checked="" type="radio"/>	Wednesday, March 20, 2019	2152	7:30 AM	7:00 AM - 6:00 PM	morpc

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Notes

Note

Date

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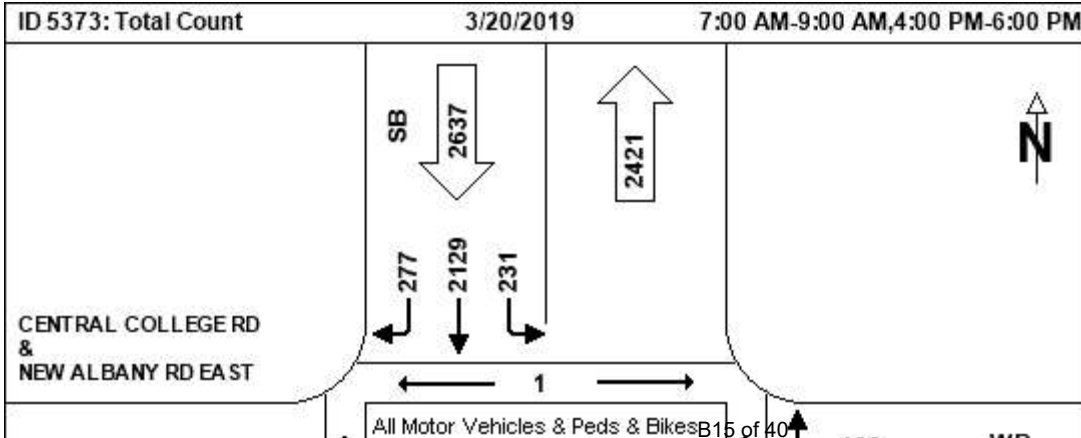
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Vehicles

Start Time	Left	Thru	Right	Ped	Total
7:00 AM	10	108	11	0	129
7:15 AM	5	137	12	1	154
7:30 AM	15	134	13	1	162
7:45 AM	14	155	9	0	178
8:00 AM	3	114	14	0	131
8:15 AM	11	107	10	0	128
8:30 AM	8	137	13	0	158
8:45 AM	12	97	7	0	116
4:00 PM	16	152	23	0	191
4:15 PM	14	138	16	0	168
4:30 PM	32	198	41	0	271
4:45 PM	17	126	19	0	162
5:00 PM	31	175	33	0	239
5:15 PM	15	116	24	0	155
5:30 PM	21	132	19	0	172
5:45 PM	7	103	13	2	123
Total	231	2129	277	4	2637
App %	8.76	80.74	10.50		
Total %	2.96	27.25	3.55		33.76

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes







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Calculate Peak Hour for:

☐ Intersection

Turning Movement Count Data - 5373

Int ID: 5373
 Community: COLUMBUS
 Road 1: CENTRAL COLLEGE RD
 Road 2: NEW ALBANY RD EAST
 Corridor:
 Road 3:
 Road 4:

TMC Data

Display	Date	PHV	Peak Hour	Duration	TMC Owner
<input checked="" type="radio"/>	Wednesday, March 20, 2019	2152	7:30 AM	7:00 AM - 6:00 PM	morpc

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Notes

Note

Date

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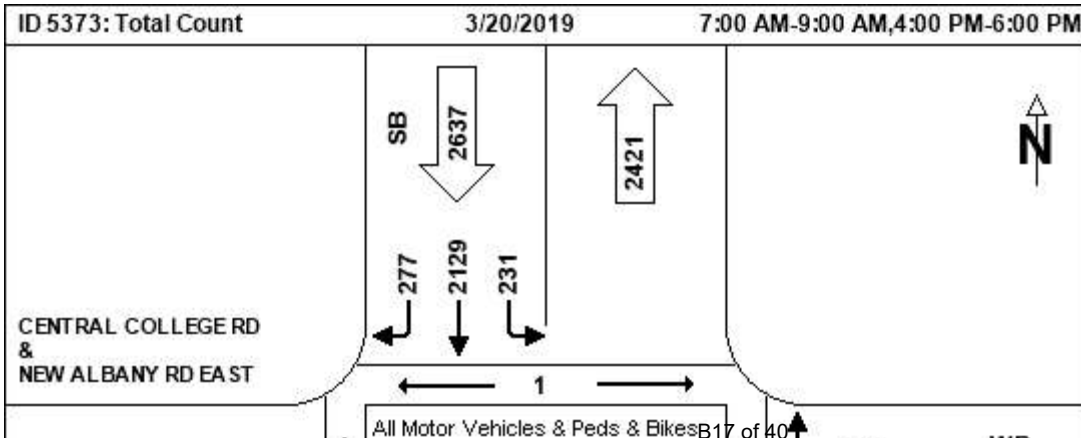
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Vehicles

Start Time	Left	Thru	Right	Ped	Total
7:00 AM	24	20	8	0	52
7:15 AM	40	35	12	0	87
7:30 AM	41	43	11	0	95
7:45 AM	50	49	12	0	111
8:00 AM	43	34	19	0	96
8:15 AM	30	32	11	0	73
8:30 AM	40	23	13	0	76
8:45 AM	24	28	5	0	57
4:00 PM	54	38	2	0	94
4:15 PM	33	50	6	0	89
4:30 PM	80	60	8	0	148
4:45 PM	42	45	6	0	93
5:00 PM	67	44	4	0	115
5:15 PM	49	53	5	1	107
5:30 PM	49	51	7	0	107
5:45 PM	29	38	3	0	70
Total	695	643	132	1	1470
App %	47.28	43.74	8.98		
Total %	8.90	8.23	1.69		18.82

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes







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Calculate Peak Hour for:

☐ Intersection ☐ Corridor: NA

Turning Movement Count Data - 1770

Int ID: 1770
Community: COLUMBUS
Road 1: EMH&T DRIVEWAY
Road 2: NEW ALBANY RD
Corridor: NA
Road 3:
Road 4:

TMC Data

Display	Date	PHV	Peak Hour	Duration	TMC Owner
<input checked="" type="radio"/>	Tuesday, January 24, 2017	1798	7:15 AM	6:00 AM - 6:00 PM	morpc

|<< < > >>| 1-1 of 1

Notes

Note	Date
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NB **EB** **SB** **WB**

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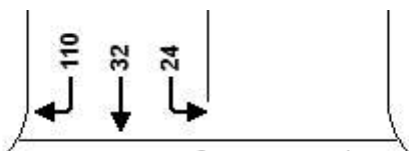
Vehicles

Start Time	Left	Thru	Right	Ped	Total
6:00 AM	1	35	8	0	44
6:15 AM	2	41	5	0	48
6:30 AM	4	67	22	0	93
6:45 AM	7	125	41	0	173
7:00 AM	17	96	37	0	150
7:15 AM	9	144	39	0	192
7:30 AM	11	216	64	0	291
7:45 AM	18	269	99	0	386
8:00 AM	15	181	91	0	287
8:15 AM	9	159	63	0	231
8:30 AM	3	134	61	0	198
8:45 AM	4	176	63	0	243
3:00 PM	2	73	19	0	94
3:15 PM	2	85	14	0	101
3:30 PM	1	93	60	0	154
3:45 PM	0	115	23	0	138
4:00 PM	0	116	11	0	127
4:15 PM	4	118	22	0	144
4:30 PM	0	108	23	0	131
4:45 PM	2	131	23	0	156
5:00 PM	0	125	15	0	140
5:15 PM	2	130	23	0	155
5:30 PM	0	157	30	0	187
5:45 PM	0	142	23	0	165
Total	113	3036	879	0	4028
App %	2.81	75.37	21.82		
Total %	1.36	36.44	10.55		48.34

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes

ID 1770: Total Count	1/24/2017	6:00 AM-9:00 AM,3:00 PM-6:00 PM
SB 166	183	N

EMH
&
NEW AT RAINY RD





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Calculate Peak Hour for:

☐ Intersection ☐ Corridor: NA

Turning Movement Count Data - 1770

Int ID: 1770
Community: COLUMBUS
Road 1: EMH&T DRIVEWAY
Road 2: NEW ALBANY RD
Corridor: NA
Road 3:
Road 4:

TMC Data

Display	Date	PHV	Peak Hour	Duration	TMC Owner
<input checked="" type="radio"/>	Tuesday, January 24, 2017	1798	7:15 AM	6:00 AM - 6:00 PM	morpc

|<< < > >>| 1-1 of 1

Notes

Note

Date

NB **EB** **SB** **WB**

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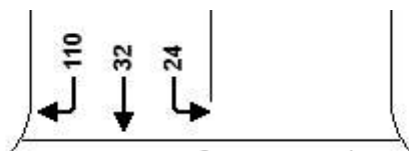
Vehicles

Start Time	Left	Thru	Right	Ped	Total
6:00 AM	4	1	0	0	5
6:15 AM	5	0	1	0	6
6:30 AM	7	2	0	0	9
6:45 AM	13	2	1	0	16
7:00 AM	10	3	1	0	14
7:15 AM	18	6	2	0	26
7:30 AM	8	3	6	0	17
7:45 AM	17	3	3	0	23
8:00 AM	28	2	6	0	36
8:15 AM	22	0	0	0	22
8:30 AM	21	2	0	0	23
8:45 AM	15	0	3	0	18
3:00 PM	45	2	5	0	52
3:15 PM	55	0	8	0	63
3:30 PM	37	0	1	0	38
3:45 PM	38	0	4	0	42
4:00 PM	48	1	8	0	57
4:15 PM	66	0	14	0	80
4:30 PM	94	2	8	0	104
4:45 PM	49	1	7	0	57
5:00 PM	95	1	14	0	110
5:15 PM	77	1	9	0	87
5:30 PM	65	0	18	0	83
5:45 PM	56	0	8	0	64
Total	893	32	127	0	1052
App %	84.89	3.04	12.07		
Total %	10.72	0.38	1.52		12.63

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes

ID 1770: Total Count	1/24/2017	6:00 AM-9:00 AM,3:00 PM-6:00 PM
SB 166	183	N

EMH
&
NEW AT RAINY RD





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Calculate Peak Hour for:

☐ Intersection ☐ Corridor: NA

Turning Movement Count Data - 1770

Int ID: 1770
Community: COLUMBUS
Road 1: EMH&T DRIVEWAY
Road 2: NEW ALBANY RD
Corridor: NA
Road 3:
Road 4:

TMC Data

Display	Date	PHV	Peak Hour	Duration	TMC Owner
<input checked="" type="radio"/>	Tuesday, January 24, 2017	1798	7:15 AM	6:00 AM - 6:00 PM	morpc

|<< < > >>| 1-1 of 1

Notes

Note

Date

NB **EB** **SB** **WB**

[Glossary](#)

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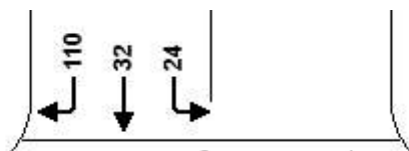
Vehicles

Start Time	Left	Thru	Right	Ped	Total
6:00 AM	0	0	0	0	0
6:15 AM	0	0	0	0	0
6:30 AM	0	0	0	0	0
6:45 AM	0	0	0	0	0
7:00 AM	0	1	0	0	1
7:15 AM	0	0	0	0	0
7:30 AM	1	0	1	0	2
7:45 AM	0	0	0	0	0
8:00 AM	1	0	1	0	2
8:15 AM	0	0	1	0	1
8:30 AM	0	0	3	0	3
8:45 AM	0	0	1	0	1
3:00 PM	1	0	3	0	4
3:15 PM	1	3	5	0	9
3:30 PM	0	2	3	0	5
3:45 PM	0	3	5	0	8
4:00 PM	2	1	7	0	10
4:15 PM	0	1	9	0	10
4:30 PM	1	6	18	0	25
4:45 PM	2	4	8	0	14
5:00 PM	4	5	20	0	29
5:15 PM	3	2	7	0	12
5:30 PM	5	1	9	0	15
5:45 PM	3	3	9	0	15
Total	24	32	110	0	166
App %	14.46	19.28	66.27		
Total %	0.29	0.38	1.32		1.99

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes

ID 1770: Total Count	1/24/2017	6:00 AM-9:00 AM,3:00 PM-6:00 PM
SB 166	183	N

EMH
&
NFW AT RAMP RD





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Calculate Peak Hour for:

☐ Intersection ☐ Corridor: NA

Turning Movement Count Data - 1770

Int ID: 1770
Community: COLUMBUS
Road 1: EMH&T DRIVEWAY
Road 2: NEW ALBANY RD
Corridor: NA
Road 3:
Road 4:

TMC Data

Display	Date	PHV	Peak Hour	Duration	TMC Owner
<input checked="" type="radio"/>	Tuesday, January 24, 2017	1798	7:15 AM	6:00 AM - 6:00 PM	morpc

|<< < > >>| 1-1 of 1

Notes

Note	Date
------	------

NB **EB** **SB** **WB**

[Glossary](#)

[Hide Diagram](#)

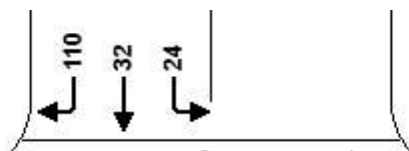
Vehicles

Start Time	Left	Thru	Right	Ped	Total
6:00 AM	2	54	0	0	56
6:15 AM	1	78	1	0	80
6:30 AM	3	92	5	0	100
6:45 AM	5	115	2	0	122
7:00 AM	5	109	3	0	117
7:15 AM	6	118	2	0	126
7:30 AM	7	131	3	0	141
7:45 AM	10	127	5	0	142
8:00 AM	8	111	8	0	127
8:15 AM	4	77	3	0	84
8:30 AM	6	99	2	0	107
8:45 AM	14	97	0	0	111
3:00 PM	4	115	0	0	119
3:15 PM	4	87	2	0	93
3:30 PM	2	122	0	0	124
3:45 PM	3	97	2	0	102
4:00 PM	2	148	0	0	150
4:15 PM	2	157	0	0	159
4:30 PM	6	223	0	0	229
4:45 PM	2	162	0	0	164
5:00 PM	6	194	0	0	200
5:15 PM	3	140	0	0	143
5:30 PM	5	165	0	0	170
5:45 PM	0	120	0	0	120
Total	110	2938	38	0	3086
App %	3.56	95.20	1.23		
Total %	1.32	35.26	0.46		37.04

☒ Cars ☒ Trucks ☒ Pedestrians ☒ Bikes

ID 1770: Total Count	1/24/2017	6:00 AM-9:00 AM, 3:00 PM-6:00 PM
SB 166	183	N

EMH
&
NEW AT RAINY RD



New Albany-Condit Road and Walton Parkway - TMC

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

Thu Jan 23, 2020

Full Length (12 AM-12 AM (+1))

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)

All Movements

ID: 743909, Location: 40.09303, -82.812182

Leg Direction	Walton Parkway Eastbound					Walton Parkway Westbound					New Albany-Condit Road Northbound					New Albany-Condit Road Southbound					
Time	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	Int
2020-01-23 12:00AM	0	0	1	0	1	0	0	2	0	2	0	1	0	0	1	0	4	0	0	4	8
12:15AM	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	1	1	0	0	2	5
12:30AM	0	0	1	0	1	1	0	0	0	1	0	2	1	0	3	0	2	0	0	2	7
12:45AM	0	1	1	0	2	1	0	0	0	1	0	3	0	0	3	0	2	0	0	2	8
Hourly Total	1	1	3	0	5	2	0	2	0	4	0	8	1	0	9	1	9	0	0	10	28
1:00AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
1:15AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	2	3
1:30AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
1:45AM	0	0	0	0	0	1	0	1	0	2	0	1	0	0	1	0	0	0	0	0	3
Hourly Total	0	0	0	0	0	1	0	1	0	2	0	2	1	0	3	0	3	0	0	3	8
2:00AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	2	0	0	3	4
2:15AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:45AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Hourly Total	0	0	1	0	1	0	0	0	0	0	0	2	0	0	2	1	2	0	0	3	6
3:00AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	2
3:15AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	1	4	0	0	5	7
3:30AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
3:45AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	1	7	0	0	8	12
4:00AM	0	0	1	0	1	0	1	1	0	2	0	1	0	0	1	0	2	0	0	2	6
4:15AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	0	0	7	7
4:30AM	0	1	1	0	2	0	1	0	0	1	0	2	1	0	3	1	8	0	0	9	15
4:45AM	0	1	0	0	1	0	0	1	0	1	0	2	0	0	2	3	10	0	0	13	17
Hourly Total	0	2	2	0	4	0	2	2	0	4	0	5	1	0	6	6	25	0	0	31	45
5:00AM	0	2	3	0	5	0	0	1	0	1	3	6	1	0	10	1	8	0	0	9	25
5:15AM	0	1	4	0	5	0	0	3	0	3	1	3	0	0	4	3	13	1	0	17	29
5:30AM	1	0	2	0	3	1	0	1	0	2	4	4	0	0	8	7	16	1	0	24	37
5:45AM	0	1	1	0	2	2	0	2	0	4	4	18	1	0	23	16	19	2	0	37	66
Hourly Total	1	4	10	0	15	3	0	7	0	10	12	31	2	0	45	27	56	4	0	87	157
6:00AM	0	3	4	0	7	0	4	1	0	5	3	16	1	0	20	9	23	0	0	32	64
6:15AM	0	1	2	0	3	0	1	8	0	9	7	17	1	0	25	6	33	6	0	45	82
6:30AM	0	5	5	0	10	4	9	3	0	16	10	36	0	0	46	11	39	2	0	52	124
6:45AM	0	9	9	0	18	0	10	19	0	29	22	51	0	0	73	20	59	6	0	85	205
Hourly Total	0	18	20	0	38	4	24	31	0	59	42	120	2	0	164	46	154	14	0	214	475
7:00AM	2	15	6	0	23	2	10	27	0	39	26	46	2	1	75	20	83	9	0	112	249
7:15AM	1	11	18	0	30	3	24	27	0	54	24	56	2	0	82	27	89	11	0	127	293
7:30AM	2	15	28	0	45	7	22	44	0	73	26	88	8	0	122	28	143	5	0	176	416
7:45AM	3	16	27	0	46	7	19	44	0	70	47	99	13	0	159	34	153	25	0	212	487
Hourly Total	8	57	79	0	144	19	75	142	0	236	123	289	25	1	438	109	468	50	0	627	1445
8:00AM	0	24	34	0	58	3	16	15	0	34	44	71	14	0	129	31	106	15	0	152	373
8:15AM	3	27	22	0	52	1	15	23	0	39	29	66	6	0	101	26	81	13	0	120	312
8:30AM	1	26	16	0	43	1	22	14	0	37	22	54	8	0	84	43	100	7	0	150	314
8:45AM	2	20	57	0	79	3	22	15	0	40	34	68	25	0	127	18	90	7	0	115	361
Hourly Total	6	97	129	0	232	8	75	67	0	150	129	259	53	0	441	118	377	42	0	537	1360
9:00AM	1	15	10	0	26	1	9	8	0	18	35	73	28	0	136	15	48	10	0	73	253
9:15AM	1	12	9	0	22	4	9	10	0	23	17	41	4	0	62	11	47	0	0	58	165
9:30AM	4	11	4	0	19	1	4	7	0	12	14	41	3	0	58	4	32	4	0	40	129
9:45AM	3	11	1	0	15	2	2	6	0	10	9	44	1	0	54	6	40	3	0	49	128

Leg Direction	Walton Parkway Eastbound					Walton Parkway Westbound					New Albany-Condit Road Northbound					New Albany-Condit Road 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	9	49	24	0	82	8	24	31	0	63	75	199	36	0	310	36	167	17	0	220	675
10:00AM	1	8	6	0	15	5	2	11	0	18	6	32	5	0	43	11	40	1	0	52	128
10:15AM	2	3	7	0	12	4	3	10	0	17	12	31	2	0	45	5	22	4	0	31	105
10:30AM	2	4	7	0	13	6	6	7	0	19	10	33	1	0	44	6	41	4	0	51	127
10:45AM	0	2	6	0	8	7	9	10	0	26	13	40	0	0	53	7	33	6	0	46	133
Hourly Total	5	17	26	0	48	22	20	38	0	80	41	136	8	0	185	29	136	15	0	180	493
11:00AM	2	10	13	0	25	6	16	5	0	27	12	28	3	0	43	1	32	3	0	36	131
11:15AM	7	8	8	0	23	3	24	9	0	36	19	41	2	0	62	7	43	6	0	56	177
11:30AM	7	15	9	0	31	7	11	7	0	25	10	49	4	0	63	6	34	5	0	45	164
11:45AM	1	15	9	0	25	1	24	10	0	35	19	43	1	0	63	4	56	8	0	68	191
Hourly Total	17	48	39	0	104	17	75	31	0	123	60	161	10	0	231	18	165	22	0	205	663
12:00PM	9	16	21	0	46	8	31	6	0	45	19	53	4	0	76	5	40	6	0	51	218
12:15PM	6	17	23	1	47	4	13	9	0	26	19	56	4	0	79	13	35	2	0	50	202
12:30PM	2	25	13	0	40	3	14	5	0	22	16	41	7	0	64	9	52	10	0	71	197
12:45PM	5	17	14	0	36	0	11	10	0	21	16	44	5	0	65	12	42	4	0	58	180
Hourly Total	22	75	71	1	169	15	69	30	0	114	70	194	20	0	284	39	169	22	0	230	797
1:00PM	11	14	18	0	43	2	16	6	0	24	11	45	3	0	59	9	43	4	0	56	182
1:15PM	7	9	13	0	29	1	6	6	0	13	22	69	9	0	100	5	61	1	0	67	209
1:30PM	1	11	21	0	33	3	8	9	0	20	19	41	9	0	69	8	56	3	0	67	189
1:45PM	3	11	12	0	26	6	13	9	0	28	18	40	2	0	60	8	38	4	1	51	165
Hourly Total	22	45	64	0	131	12	43	30	0	85	70	195	23	0	288	30	198	12	1	241	745
2:00PM	0	7	13	0	20	1	11	2	0	14	10	48	5	0	63	4	39	4	0	47	144
2:15PM	8	8	9	0	25	9	12	9	0	30	12	58	0	0	70	9	37	6	0	52	177
2:30PM	2	8	16	0	26	23	5	5	0	33	12	48	2	0	62	10	48	4	0	62	183
2:45PM	3	6	15	0	24	5	4	9	0	18	16	72	3	0	91	6	70	2	0	78	211
Hourly Total	13	29	53	0	95	38	32	25	0	95	50	226	10	0	286	29	194	16	0	239	715
3:00PM	3	13	13	0	29	4	9	4	0	17	28	88	5	0	121	10	48	5	0	63	230
3:15PM	8	16	27	0	51	4	3	19	0	26	13	73	1	0	87	15	56	3	0	74	238
3:30PM	7	9	48	0	64	4	11	13	0	28	22	72	7	0	101	17	74	1	0	92	285
3:45PM	4	12	11	0	27	6	11	10	0	27	54	108	10	0	172	15	46	7	0	68	294
Hourly Total	22	50	99	0	171	18	34	46	0	98	117	341	23	0	481	57	224	16	0	297	1047
4:00PM	6	14	26	1	47	1	19	23	0	43	23	78	6	0	107	16	97	6	0	119	316
4:15PM	9	21	31	0	61	8	18	15	0	41	15	96	5	0	116	21	61	2	0	84	302
4:30PM	14	31	38	0	83	10	17	27	0	54	18	91	1	0	110	47	108	1	0	156	403
4:45PM	7	22	25	0	54	2	16	16	0	34	18	106	4	0	128	27	92	3	0	122	338
Hourly Total	36	88	120	1	245	21	70	81	0	172	74	371	16	0	461	111	358	12	0	481	1359
5:00PM	16	37	36	0	89	14	25	37	0	76	16	104	2	0	122	29	106	7	0	142	429
5:15PM	5	13	28	0	46	10	30	26	0	66	12	114	5	0	131	39	76	7	0	122	365
5:30PM	5	15	27	0	47	10	31	46	0	87	10	107	4	0	121	18	95	4	0	117	372
5:45PM	9	12	19	0	40	7	21	26	0	54	16	99	2	0	117	10	77	1	0	88	299
Hourly Total	35	77	110	0	222	41	107	135	0	283	54	424	13	0	491	96	354	19	0	469	1465
6:00PM	5	16	26	0	47	4	17	17	0	38	16	79	1	0	96	15	71	1	0	87	268
6:15PM	3	10	14	0	27	6	16	18	0	40	11	82	2	0	95	10	81	3	0	94	256
6:30PM	1	2	39	0	42	4	14	8	0	26	12	54	1	0	67	8	76	4	0	88	223
6:45PM	2	7	27	0	36	8	5	3	0	16	11	42	2	0	55	3	55	5	0	63	170
Hourly Total	11	35	106	0	152	22	52	46	0	120	50	257	6	0	313	36	283	13	0	332	917
7:00PM	5	5	8	0	18	1	2	7	0	10	5	49	2	0	56	4	39	0	0	43	127
7:15PM	0	2	10	0	12	1	2	4	0	7	10	37	3	0	50	2	45	2	0	49	118
7:30PM	2	3	7	0	12	2	4	5	0	11	8	50	1	0	59	3	35	1	0	39	121
7:45PM	3	5	2	0	10	0	5	3	0	8	22	59	6	0	87	0	24	2	0	26	131
Hourly Total	10	15	27	0	52	4	13	19	0	36	45	195	12	0	252	9	143	5	0	157	497
8:00PM	5	4	11	0	20	0	2	4	0	6	21	73	8	0	102	2	27	2	0	31	159
8:15PM	1	2	8	0	11	2	5	2	0	9	6	45	3	0	54	4	20	0	0	24	98
8:30PM	1	0	1	0	2	2	1	1	0	4	3	32	0	0	35	0	21	1	0	22	63
8:45PM	1	2	4	0	7	0	0	6	0	6	5	25	1	0	31	3	29	2	0	34	78

Leg Direction	Walton Parkway Eastbound					Walton Parkway Westbound					New Albany-Condit Road Northbound					New Albany-Condit Road 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	8	8	24	0	40	4	8	13	0	25	35	175	12	0	222	9	97	5	0	111	398
9:00PM	2	0	3	0	5	1	1	5	0	7	2	37	1	0	40	1	24	2	0	27	79
9:15PM	3	1	3	0	7	0	0	0	0	0	1	28	1	0	30	0	20	0	0	20	57
9:30PM	1	1	2	0	4	0	0	0	0	0	4	11	0	0	15	1	18	2	0	21	40
9:45PM	2	0	2	0	4	1	1	1	0	3	2	15	1	0	18	1	9	0	0	10	35
Hourly Total	8	2	10	0	20	2	2	6	0	10	9	91	3	0	103	3	71	4	0	78	211
10:00PM	1	0	0	0	1	0	0	0	0	0	1	12	0	0	13	1	14	0	0	15	29
10:15PM	0	1	3	0	4	0	1	0	0	1	2	10	0	0	12	1	11	1	0	13	30
10:30PM	0	0	2	0	2	0	1	0	0	1	1	10	0	0	11	0	7	0	0	7	21
10:45PM	1	0	2	0	3	0	2	0	0	2	0	4	0	0	4	0	4	0	0	4	13
Hourly Total	2	1	7	0	10	0	4	0	0	4	4	36	0	0	40	2	36	1	0	39	93
11:00PM	0	0	1	0	1	0	2	0	0	2	0	3	0	0	3	2	9	0	0	11	17
11:15PM	0	2	0	0	2	0	0	1	0	1	0	8	1	0	9	0	4	0	0	4	16
11:30PM	0	0	0	0	0	0	2	1	0	3	1	6	0	0	7	0	2	0	0	2	12
11:45PM	0	1	1	0	2	1	0	3	0	4	0	4	0	0	4	0	1	0	0	1	11
Hourly Total	0	3	2	0	5	1	4	5	0	10	1	21	1	0	23	2	16	0	0	18	56
Total	236	721	1026	2	1985	262	733	788	0	1783	1061	3742	278	1	5082	815	3712	289	1	4817	13667
% Approach	11.9%	36.3%	51.7%	0.1%	-	14.7%	41.1%	44.2%	0%	-	20.9%	73.6%	5.5%	0%	-	16.9%	77.1%	6.0%	0%	-	-
% Total	1.7%	5.3%	7.5%	0%	14.5%	1.9%	5.4%	5.8%	0%	13.0%	7.8%	27.4%	2.0%	0%	37.2%	6.0%	27.2%	2.1%	0%	35.2%	-
Lights	233	709	942	2	1886	224	714	777	0	1715	1022	3652	224	1	4899	802	3631	285	1	4719	13219
% Lights	98.7%	98.3%	91.8%	100%	95.0%	85.5%	97.4%	98.6%	0%	96.2%	96.3%	97.6%	80.6%	100%	96.4%	98.4%	97.8%	98.6%	100%	98.0%	96.7%
Articulated Trucks	0	1	3	0	4	2	3	3	0	8	1	16	1	0	18	1	12	1	0	14	44
% Articulated Trucks	0%	0.1%	0.3%	0%	0.2%	0.8%	0.4%	0.4%	0%	0.4%	0.1%	0.4%	0.4%	0%	0.4%	0.1%	0.3%	0.3%	0%	0.3%	0.3%
Buses and Single-Unit Trucks	3	11	81	0	95	36	16	8	0	60	38	74	53	0	165	12	69	3	0	84	404
% Buses and Single-Unit Trucks	1.3%	1.5%	7.9%	0%	4.8%	13.7%	2.2%	1.0%	0%	3.4%	3.6%	2.0%	19.1%	0%	3.2%	1.5%	1.9%	1.0%	0%	1.7%	3.0%

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

New Albany-Condit Road and Walton Parkway - TMC

Thu Jan 23, 2020

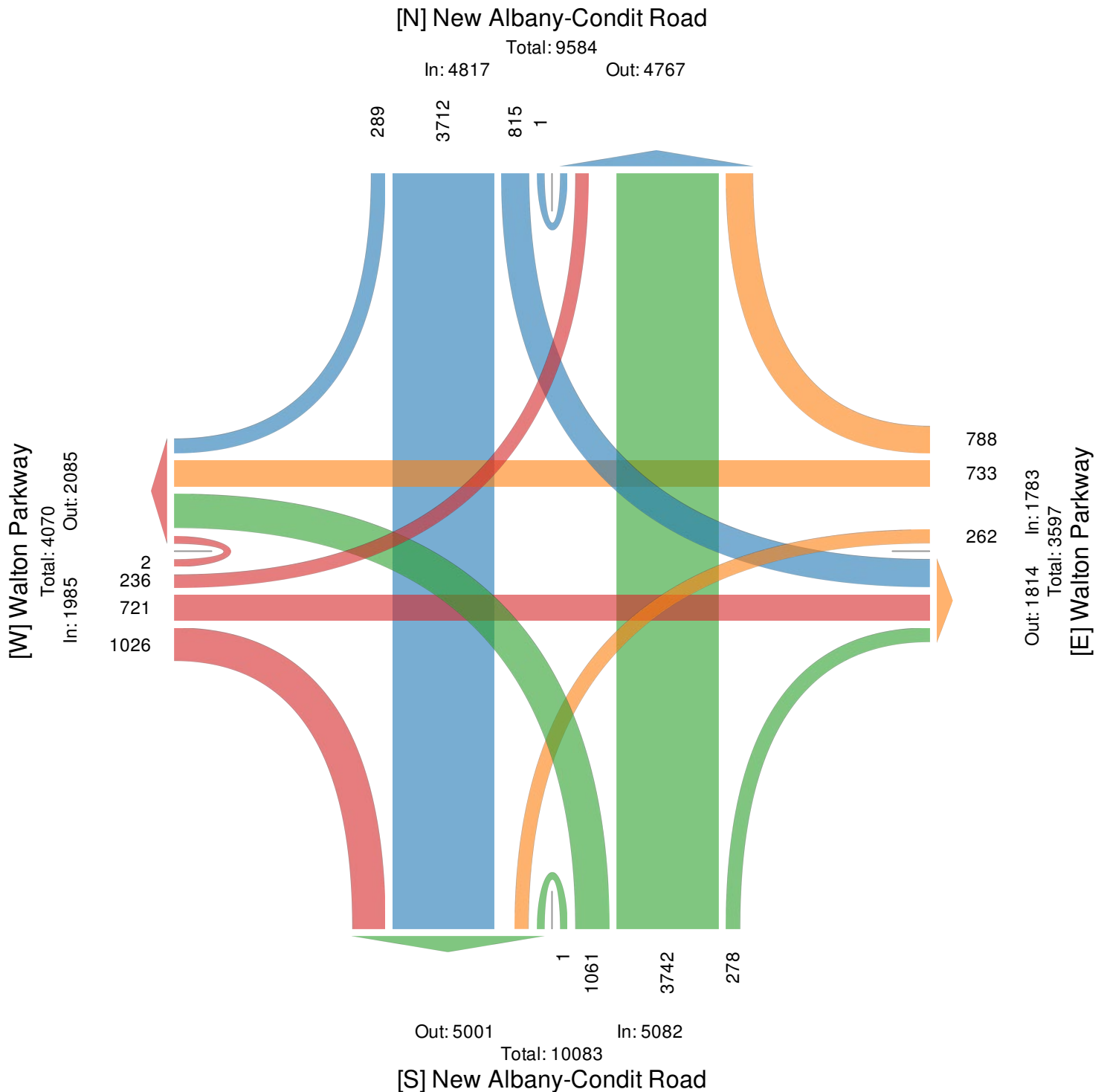
Full Length (12 AM-12 AM (+1))

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)

All Movements

ID: 743909, Location: 40.09303, -82.812182

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



New Albany-Condit Road and Walton Parkway - TMC

Thu Jan 23, 2020

AM Peak (7:30 AM - 8:30 AM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)

All Movements

ID: 743909, Location: 40.09303, -82.812182

Provided by: Carpenter Marty (CM) Transportation

Inc.

6612 Singletree Drive, Columbus, OH, 43229, US

Leg Direction	Walton Parkway Eastbound					Walton Parkway Westbound					New Albany-Condit Road Northbound					New Albany-Condit Road Southbound					
Time	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	Int
2020-01-23																					
7:30AM	2	15	28	0	45	7	22	44	0	73	26	88	8	0	122	28	143	5	0	176	416
7:45AM	3	16	27	0	46	7	19	44	0	70	47	99	13	0	159	34	153	25	0	212	487
8:00AM	0	24	34	0	58	3	16	15	0	34	44	71	14	0	129	31	106	15	0	152	373
8:15AM	3	27	22	0	52	1	15	23	0	39	29	66	6	0	101	26	81	13	0	120	312
Total	8	82	111	0	201	18	72	126	0	216	146	324	41	0	511	119	483	58	0	660	1588
% Approach	4.0%	40.8%	55.2%	0%	-	8.3%	33.3%	58.3%	0%	-	28.6%	63.4%	8.0%	0%	-	18.0%	73.2%	8.8%	0%	-	-
% Total	0.5%	5.2%	7.0%	0%	12.7%	1.1%	4.5%	7.9%	0%	13.6%	9.2%	20.4%	2.6%	0%	32.2%	7.5%	30.4%	3.7%	0%	41.6%	-
PHF	0.667	0.759	0.816	-	0.866	0.643	0.818	0.716	-	0.740	0.777	0.818	0.732	-	0.803	0.875	0.789	0.580	-	0.778	0.815
Lights	7	82	94	0	183	16	70	126	0	212	138	310	35	0	483	118	469	58	0	645	1523
% Lights	87.5%	100%	84.7%	0%	91.0%	88.9%	97.2%	100%	0%	98.1%	94.5%	95.7%	85.4%	0%	94.5%	99.2%	97.1%	100%	0%	97.7%	95.9%
Articulated Trucks	0	0	1	0	1	1	1	0	0	2	0	1	0	0	1	0	1	0	0	1	5
% Articulated Trucks	0%	0%	0.9%	0%	0.5%	5.6%	1.4%	0%	0%	0.9%	0%	0.3%	0%	0%	0.2%	0%	0.2%	0%	0%	0.2%	0.3%
Buses and Single-Unit Trucks	1	0	16	0	17	1	1	0	0	2	8	13	6	0	27	1	13	0	0	14	60
% Buses and Single-Unit Trucks	12.5%	0%	14.4%	0%	8.5%	5.6%	1.4%	0%	0%	0.9%	5.5%	4.0%	14.6%	0%	5.3%	0.8%	2.7%	0%	0%	2.1%	3.8%

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

New Albany-Condit Road and Walton Parkway - TMC

Thu Jan 23, 2020

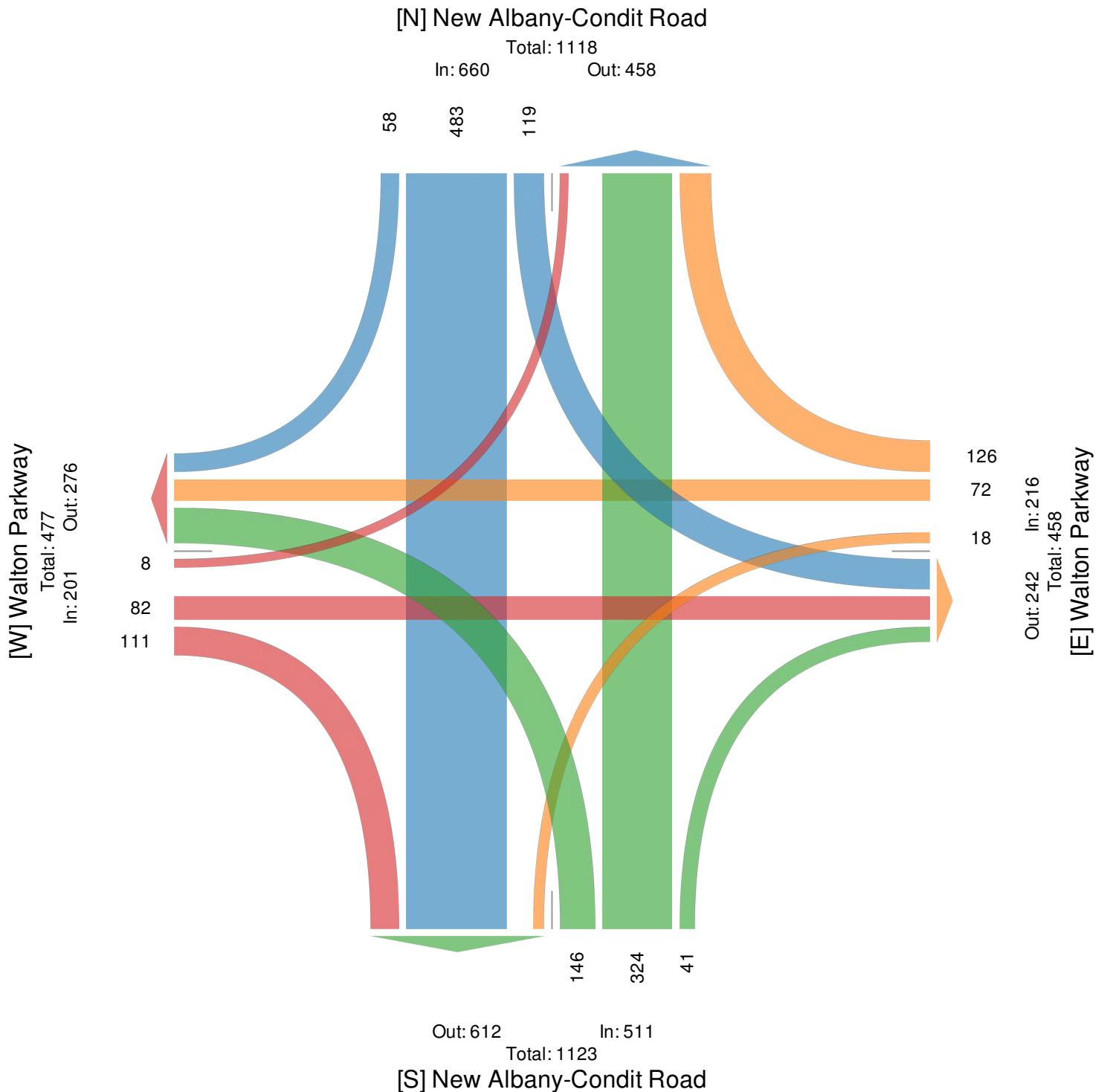
AM Peak (7:30 AM - 8:30 AM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)

All Movements

ID: 743909, Location: 40.09303, -82.812182

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



New Albany-Condit Road and Walton Parkway - TMC

Thu Jan 23, 2020

Midday Peak (11:45 AM - 12:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)

All Movements

ID: 743909, Location: 40.09303, -82.812182

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

Leg Direction	Walton Parkway Eastbound					Walton Parkway Westbound					New Albany-Condit Road Northbound					New Albany-Condit Road Southbound					
Time	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	Int
2020-01-23 11:45AM	1	15	9	0	25	1	24	10	0	35	19	43	1	0	63	4	56	8	0	68	191
12:00PM	9	16	21	0	46	8	31	6	0	45	19	53	4	0	76	5	40	6	0	51	218
12:15PM	6	17	23	1	47	4	13	9	0	26	19	56	4	0	79	13	35	2	0	50	202
12:30PM	2	25	13	0	40	3	14	5	0	22	16	41	7	0	64	9	52	10	0	71	197
Total	18	73	66	1	158	16	82	30	0	128	73	193	16	0	282	31	183	26	0	240	808
% Approach	11.4%	46.2%	41.8%	0.6%	-	12.5%	64.1%	23.4%	0%	-	25.9%	68.4%	5.7%	0%	-	12.9%	76.3%	10.8%	0%	-	-
% Total	2.2%	9.0%	8.2%	0.1%	19.6%	2.0%	10.1%	3.7%	0%	15.8%	9.0%	23.9%	2.0%	0%	34.9%	3.8%	22.6%	3.2%	0%	29.7%	-
PHF	0.500	0.730	0.717	0.250	0.840	0.500	0.661	0.750	-	0.711	0.961	0.862	0.571	-	0.892	0.596	0.817	0.650	-	0.845	0.927
Lights	18	73	66	1	158	16	82	30	0	128	71	187	16	0	274	31	178	25	0	234	794
% Lights	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	97.3%	96.9%	100%	0%	97.2%	100%	97.3%	96.2%	0%	97.5%	98.3%
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
% Articulated Trucks	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.5%	0%	0%	0.4%	0%	0%	0%	0%	0%	0.1%
Buses and Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	2	5	0	0	7	0	5	1	0	6	13
% Buses and Single-Unit Trucks	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2.7%	2.6%	0%	0%	2.5%	0%	2.7%	3.8%	0%	2.5%	1.6%

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

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

ID: 743909, Location: 40.09303, -82.812182



New Albany-Condit Road and Walton Parkway - TMC

Thu Jan 23, 2020

PM Peak (4:30 PM - 5:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)

All Movements

ID: 743909, Location: 40.09303, -82.812182

Provided by: Carpenter Marty (CM) Transportation Inc.

6612 Singletree Drive, Columbus, OH, 43229, US

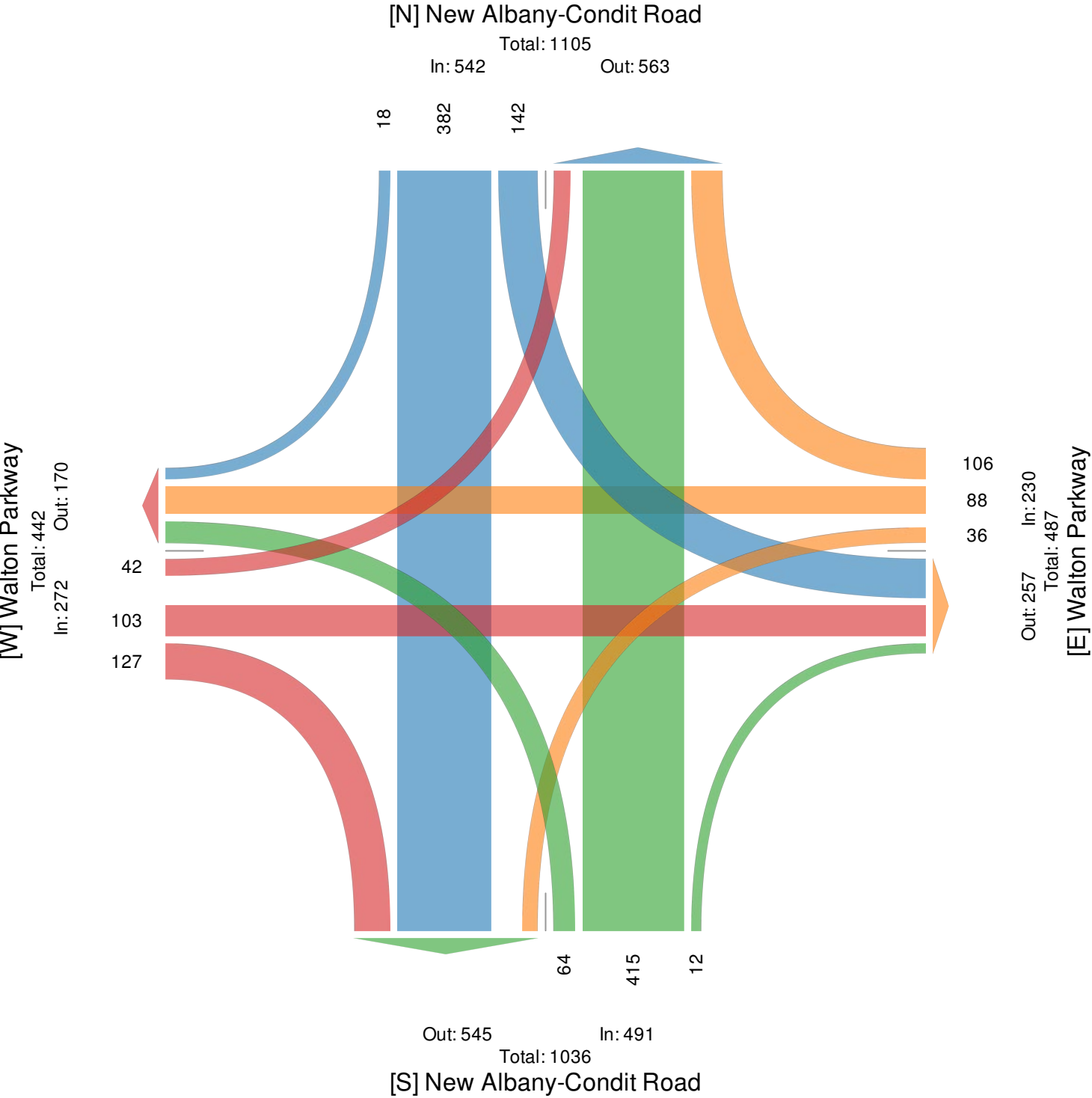
Leg Direction	Walton Parkway Eastbound					Walton Parkway Westbound					New Albany-Condit Road Northbound					New Albany-Condit Road Southbound					
Time	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	Int
2020-01-23																					
4:30PM	14	31	38	0	83	10	17	27	0	54	18	91	1	0	110	47	108	1	0	156	403
4:45PM	7	22	25	0	54	2	16	16	0	34	18	106	4	0	128	27	92	3	0	122	338
5:00PM	16	37	36	0	89	14	25	37	0	76	16	104	2	0	122	29	106	7	0	142	429
5:15PM	5	13	28	0	46	10	30	26	0	66	12	114	5	0	131	39	76	7	0	122	365
Total	42	103	127	0	272	36	88	106	0	230	64	415	12	0	491	142	382	18	0	542	1535
% Approach	15.4%	37.9%	46.7%	0%	-	15.7%	38.3%	46.1%	0%	-	13.0%	84.5%	2.4%	0%	-	26.2%	70.5%	3.3%	0%	-	-
% Total	2.7%	6.7%	8.3%	0%	17.7%	2.3%	5.7%	6.9%	0%	15.0%	4.2%	27.0%	0.8%	0%	32.0%	9.3%	24.9%	1.2%	0%	35.3%	-
PHF	0.656	0.696	0.836	-	0.764	0.643	0.733	0.716	-	0.757	0.889	0.910	0.600	-	0.937	0.755	0.884	0.643	-	0.869	0.895
Lights	42	101	127	0	270	35	86	105	0	226	60	412	12	0	484	142	380	18	0	540	1520
% Lights	100%	98.1%	100%	0%	99.3%	97.2%	97.7%	99.1%	0%	98.3%	93.8%	99.3%	100%	0%	98.6%	100%	99.5%	100%	0%	99.6%	99.0%
Articulated Trucks	0	0	0	0	0	0	1	1	0	2	1	1	0	0	2	0	0	0	0	0	4
% Articulated Trucks	0%	0%	0%	0%	0%	0%	1.1%	0.9%	0%	0.9%	1.6%	0.2%	0%	0%	0.4%	0%	0%	0%	0%	0%	0.3%
Buses and Single-Unit Trucks	0	2	0	0	2	1	1	0	0	2	3	2	0	0	5	0	2	0	0	2	11
% Buses and Single-Unit Trucks	0%	1.9%	0%	0%	0.7%	2.8%	1.1%	0%	0%	0.9%	4.7%	0.5%	0%	0%	1.0%	0%	0.5%	0%	0%	0.4%	0.7%

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

New Albany-Condit Road and Walton Parkway - TMC

Thu Jan 23, 2020
PM Peak (4:30 PM - 5:30 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 743909, Location: 40.09303, -82.812182

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



Chelsea Cousins

From: Hwashik Jang <hjang@morpc.org>
Sent: Friday, March 6, 2020 3:16 PM
To: Chelsea Cousins
Cc: Drew Laurent; Nick Gill; Zhuojun Jiang
Subject: RE: Growth Rate Request - New Albany Microbrewery

Chelsea,

We have completed processing growth rates for your study intersection.
Please use linear annual growth rates as summarized below.

<u>Location</u>	<u>Linear Annual Growth Rate</u>
Central College Rd e/o SR 605	1.30%
SR 605 n/o Central College Rd	1.70%
Central College Rd w/o SR 605	1.10%
SR 605 s/o Central College Rd	1.30%

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: Chelsea Cousins <ccousins@cmtran.com>
Sent: Monday, February 3, 2020 10:22 AM
To: Hwashik Jang <hjang@morpc.org>; Nick Gill <NGILL@morpc.org>; Zhuojun Jiang <zjiang@morpc.org>
Cc: Drew Laurent <dlaurent@cmtran.com>
Subject: Growth Rate Request - New Albany Microbrewery

All,

We would like to request growth rates for the intersection of New Albany-Condit Road & Central College Road in New Albany, OH. We are conducting a traffic study for a development in the northeast corner of the intersection. The site is proposed to develop as a microbrewery. The opening year will be 2020 with a 10 year horizon. The study will be reviewed by the City of New Albany. See the attached count and preliminary site plan for your use.

Thank you,

Chelsea Cousins, EIT

Project Engineer



614.656.2418 | www.cmtran.com

Segment	2020 Count ADT	2050 MORPC ADT	ADT Site Traffic Removed	2050 No Build ADT	Growth Rate
New Albany Road W- West of New Albany Rd	19100	21400	382	21018	1.00%
New Albany Road E- East of New Albany Rd	17900	24900	0	24900	1.30%
New Albany Road- New Albany Rd to SR-161 Westbound Ramps	30300	37400	382	37018	1.00%
New Albany Road- SR-161 Westbound Ramps to SR-161 Eastbound Ramps	22400	27300	3917	23383	1.00%
New Albany Road- SR-161 Eastbound Ramps to Fodor Rd	13900	17200	7452	9748	1.00%
SR-161 Eastbound Exit Ramp to New Albany Rd	12800	16000	3535	12465	1.00%
SR-161 Westbound Exit Ramp to New Albany Rd	3400	3300	0	3300	1.00%
Fodor Road- West of New Albany Rd	5700	5900	0	5900	1.00%
Fodor Road- New Albany Rd to Dublin Granville Road	9000	11200	7452	3748	1.00%
Swickard Woods Boulevard- North of Fodor Rd	900	1800	0	1800	3.00%
Dublin Granville Road- West of Fodor Rd/Market St	6800	13700	647	13053	3.00%
Dublin Granville Road- Fodor Rd/Market St to High St	3300	7900	2520	5380	2.10%
Dublin Granville Road- High St to Kitzmiller Rd	2800	5000	560	4440	1.95%
Dublin Granville Road- East of Kitzmiller Rd	3000	6800	0	6800	3.00%
Kitzmiller Road- North of Dublin Granville Rd	3900	10300	0	10300	3.00%
Kitzmiller Road- South of Dublin Granville Rd	2600	5400	0	5400	3.00%
Market Street- Dublin Granville Rd to Main St	9600	16000	4553	11447	1.00%
Market Street- Main St to High St	4000	7400	2515	4885	1.00%
Main Street- South of Market St to Thurston Hall Blvd/Theisen Rd	9200	14600	6145	8455	1.00%
Johnstown Road- Thurston Hall Blvd/Theisen Rd to SR-161 Eastbound Ramps	9500	16300	9758	6542	1.00%
Johnstown Road- SR-161 Eastbound Ramps to SR-161 Westbound Ramps	17600	25100	5526	19574	1.00%

Segment	2020 Count ADT	2050 MORPC ADT	ADT Site Traffic Removed	2050 No Build ADT	Growth Rate
Johnstown Road- SR-161 Westbound Ramps to Walton PkwY	26200	37700	1294	36406	1.30%
SR-161 Eastbound Exit Ramp to Johnstown Rd	10600	13100	348	12752	1.00%
SR-161 Westbound Exit Ramp to Johnstown Rd	2500	4600	3884	716	1.00%
High Street/New Albany-Condit Road- South of Market St to Walton PkwY	9000	15500	1781	13719	1.75%
New Albany-Condit Road- North of Walton PkwY	9600	14200	1105	13095	1.21%
Walton Parkway- New Albany Rd to East of New Albany-Condit Rd	3800	9100	0	9100	3.00%
3rd Street- Dublin Granville Rd to Main St	700	400	1492	-1092	1.00%

*If the calculated growth rate was less than 1%, a minimum of 1% was used. Likewise, if the calculated growth rate was greater than 3%, a maximum of 3% was used.

Appendix C

Trip Generation

Scenario - 1

Scenario Name: AM Peak

Dev. phase: 1

Analyst Note:

User Group:

No. of Years to Project

Traffic :

Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method		Entry		Exit		Total
					Rate/Equation		Split%		Split%		
210 - Single-Family Detached Housing	General Urban/Suburban	Dwelling Units	37	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LIN)		8		23		31
Data Source: Trip Gen Manual, 10th Ed +					T = 0.71(X) + 4.80		25%		75%		
220 - Multifamily Housing (Low-Rise)	General Urban/Suburban	Dwelling Units	331	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LOG)		34		115		149
Data Source: Trip Gen Manual, 10th Ed +					Ln(T) =0.95Ln(X) - 0.51		23%		77%		
820 - Shopping Center	General Urban/Suburban	1000 Sq. Ft. GLA	14.45	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LIN)		99		60		159
Data Source: Trip Gen Manual, 10th Ed +					T = 0.50(X) + 151.78		62%		38%		
252 - Senior Adult Housing - Attached	General Urban/Suburban	Dwelling Units	125	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LIN)		9		16		25
Data Source: Trip Gen Manual, 10th Ed +					T = 0.20(X) - 0.18		35%		65%		
411 - Public Park	General Urban/Suburban	Acres	8.47	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Average		0		0		0
Data Source: Trip Gen Manual, 10th Ed +					0.02		59%		41%		

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 (%)
210 - Single-Family Detached Housing	100	100	1	1	25	75
220 - Multifamily Housing (Low-Rise)	100	100	1	1	23	77
820 - Shopping Center	100	100	1	1	62	38
252 - Senior Adult Housing - Attached	100	100	1	1	35	65
411 - Public Park	100	100	1	1	59	41

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
210 - Single-Family Detached Housing	8	23	0	0	8	23
		31		0		31
220 - Multifamily Housing (Low-Rise)	34	115	0	0	34	115
		149		0		149
820 - Shopping Center	99	60	0	0	99	60
		159		0		159
252 - Senior Adult Housing - Attached	9	16	0	0	9	16
		25		0		25
411 - Public Park	0	0	0	0	0	0
		0		0		0

VEHICLE TRIPS AFTER MULTI-MODAL ADJUSTMENT

MODE SHARE:

Land Use	Personal Passenger Vehicle		Truck		Other Modes	
	Entry (%)	Exit (%)	Entry (%)	Exit (%)	Entry (%)	Exit (%)
210 - Single-Family Detached Housing	100%	100%	0%	0%	0%	0%
220 - Multifamily Housing (Low-Rise)	100%	100%	0%	0%	0%	0%
820 - Shopping Center	100%	100%	0%	0%	0%	0%
252 - Senior Adult Housing - Attached	100%	100%	0%	0%	0%	0%
411 - Public Park	100%	100%	0%	0%	0%	0%

OCCUPANCY:

Land Use	Vehicle			
	Entry		Exit	
210 - Single-Family Detached Housing	1.00		1.00	
220 - Multifamily Housing (Low-Rise)	1.00		1.00	
820 - Shopping Center	1.00		1.00	
252 - Senior Adult Housing - Attached	1.00		1.00	
411 - Public Park	1.00		1.00	

ADJUSTED VEHICLE TRIPS:

Land Use	Entry			Exit		
	Person Trips	Vehicle Mode Share (%)	Vehicle Occupancy	Vehical Trips	Person Trips	Vehicle Mode Share (%)
210 - Single-Family Detached Housing	8	100%	1.00	8	23	100%
220 - Multifamily Housing (Low-Rise)	34	100%	1.00	34	115	100%
820 - Shopping Center	99	100%	1.00	99	60	100%
252 - Senior Adult Housing - Attached	9	100%	1.00	9	16	100%
411 - Public Park	0	100%	1.00	0	0	100%

INTERNAL VEHICLE TRIP REDUCTION

LAND USE GROUP ASSIGNMENT:

Land Use	Land Use Group	
210 - Single-Family Detached Housing	Residential	
220 - Multifamily Housing (Low-Rise)	Residential	
820 - Shopping Center	Retail	
252 - Senior Adult Housing - Attached	Residential	
411 - Public Park	Cinema	

BALANCED PERSON TRIPS:

210 - Single-Family Detached Housing				220 - Multifamily Housing (Low-Rise)			
Persons Exit	PAF	UIPTC	Unconstrained Demand	====>>> BALANCED ==>>>>	Unconstrained Demand	UIPTC	Persons Entry
23	1	0	0	0	0	0	34
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	Persons Exit
8	1	0	0	0	0	0	115
210 - Single-Family Detached Housing				820 - Shopping Center			
Persons Exit	PAF	UIPTC	Unconstrained Demand	====>>> BALANCED ==>>>>	Unconstrained Demand	UIPTC	Persons Entry
23	1	4	1	1	6	5.666666666666667	99
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	Persons Exit
8	1	0.6666666666666666	0	0	3	4.666666666666667	60
210 - Single-Family Detached Housing				252 - Senior Adult Housing - Attached			
Persons Exit	PAF	UIPTC	Unconstrained Demand	====>>> BALANCED ==>>>>	Unconstrained Demand	UIPTC	Persons Entry
23	1	0	0	0	0	0	9
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	Persons Exit
8	1	0	0	0	0	0	16
210 - Single-Family Detached Housing				411 - Public Park			
Persons Exit	PAF	UIPTC	Unconstrained Demand	====>>> BALANCED ==>>>>	Unconstrained Demand	UIPTC	Persons Entry
23	1	0	0	0	0	0	0
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	Persons Exit
8	1	0	0	0	0	0	0

220 - Multifamily Housing (Low-Rise)				
Persons Exit	PAF	UIPTC	Unconstrained Demand	
115	1	4	5	
Persons Entry	PAF	UIPTC	Unconstrained Demand	
34	1	0.6666666666666666	0	

220 - Multifamily Housing (Low-Rise)				
Persons Exit	PAF	UIPTC	Unconstrained Demand	
115	1	0	0	
Persons Entry	PAF	UIPTC	Unconstrained Demand	
34	1	0	0	

220 - Multifamily Housing (Low-Rise)				
Persons Exit	PAF	UIPTC	Unconstrained Demand	
115	1	0	0	
Persons Entry	PAF	UIPTC	Unconstrained Demand	
34	1	0	0	

820 - Shopping Center				
Persons Exit	PAF	UIPTC	Unconstrained Demand	
60	1	4.666666666666667	3	
Persons Entry	PAF	UIPTC	Unconstrained Demand	
99	1	5.666666666666667	6	

820 - Shopping Center				
Persons Exit	PAF	UIPTC	Unconstrained Demand	
60	1	0	0	
Persons Entry	PAF	UIPTC	Unconstrained Demand	
99	1	0	0	

252 - Senior Adult Housing - Attached				
Persons Exit	PAF	UIPTC	Unconstrained Demand	
16	1	0	0	
Persons Entry	PAF	UIPTC	Unconstrained Demand	
9	1	0	0	

INTERNAL PERSON TRIPS:

210 - Single-Family Detached Housing				
Internal Person Trips From			Entry	Total
220 - Multifamily Housing (Low-Rise)			0	0
820 - Shopping Center			0	1
252 - Senior Adult Housing - Attached			0	0
411 - Public Park			0	0
Total Internal Person Trips			0	1

220 - Multifamily Housing (Low-Rise)				
Internal Person Trips From			Entry	Total
210 - Single-Family Detached Housing			0	0

820 - Shopping Center				
Unconstrained Demand			UIPTC	Persons Entry
			5.666666666666667	99
Unconstrained Demand			UIPTC	Persons Exit
			4.666666666666667	60

252 - Senior Adult Housing - Attached				
Unconstrained Demand			UIPTC	Persons Entry
			0	9
Unconstrained Demand			UIPTC	Persons Exit
			0	16

411 - Public Park				
Unconstrained Demand			UIPTC	Persons Entry
			0	0
Unconstrained Demand			UIPTC	Persons Exit
			0	0

252 - Senior Adult Housing - Attached				
Unconstrained Demand			UIPTC	Persons Entry
			0.6666666666666666	9
Unconstrained Demand			UIPTC	Persons Exit
			4	16

411 - Public Park				
Unconstrained Demand			UIPTC	Persons Entry
			0	0
Unconstrained Demand			UIPTC	Persons Exit
			0	0

411 - Public Park				
Unconstrained Demand			UIPTC	Persons Entry
			0	0
Unconstrained Demand			UIPTC	Persons Exit
			0	0

820 - Shopping Center		0	5	5	5
252 - Senior Adult Housing - Attached		0	0	0	0
411 - Public Park		0	0	0	0
Total Internal Person Trips		0	5		5

820 - Shopping Center					
Internal Person Trips From		Entry		Exit	Total
210 - Single-Family Detached Housing		1		0	1
220 - Multifamily Housing (Low-Rise)		5		0	5
252 - Senior Adult Housing - Attached		1		0	1
411 - Public Park		0		0	0
Total Internal Person Trips		7		0	7

252 - Senior Adult Housing - Attached					
Internal Person Trips From		Entry		Exit	Total
210 - Single-Family Detached Housing		0		0	0
220 - Multifamily Housing (Low-Rise)		0		0	0
820 - Shopping Center		0		1	1
411 - Public Park		0		0	0
Total Internal Person Trips		0		1	1

411 - Public Park					
Internal Person Trips From		Entry		Exit	Total
210 - Single-Family Detached Housing		0		0	0
220 - Multifamily Housing (Low-Rise)		0		0	0
820 - Shopping Center		0		0	0
252 - Senior Adult Housing - Attached		0		0	0
Total Internal Person Trips		0		0	0

INTERNAL VEHICLE TRIPS AND CAPTURE:
210 - Single-Family Detached Housing

Total Internal Person Trips	0	1	1
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	0	1	1
Total External Vehicle Trips	8	22	30
Internal Vehicle Trip Capture	0%	4%	3%

220 - Multifamily Housing (Low-Rise)

Total Internal Person Trips	0	5	5
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	0	5	5
Total External Vehicle Trips	34	110	144
Internal Vehicle Trip Capture	0%	4%	3%

820 - Shopping Center

Total Internal Person Trips	7	0	7
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	7	0	7
Total External Vehicle Trips	92	60	152
Internal Vehicle Trip Capture	7%	0%	4%

252 - Senior Adult Housing - Attached

Total Internal Person Trips	0	1	1
-----------------------------	---	---	---

Vehicle Mode Share		100%	100%	-
Vehicle Occupancy		1.00	1.00	-
Total Vehicle Internal Trips		0	1	1
Total External Vehicle Trips		9	15	24
Internal Vehicle Trip Capture		0%	6%	4%

411 - Public Park

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		0	0	0
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
210 - Single-Family Detached Housing	8	22	0.00%	0.00%	0	0
220 - Multifamily Housing (Low-Rise)	34	110	0.00%	0.00%	0	0
820 - Shopping Center	92	60	0.00%	0.00%	0	0
252 - Senior Adult Housing - Attached	9	15	0.00%	0.00%	0	0
411 - Public Park	0	0	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
210 - Single-Family Detached Housing	8	22	0.00%	0.00%	0	0
220 - Multifamily Housing (Low-Rise)	34	110	0.00%	0.00%	0	0
820 - Shopping Center	92	60	0.00%	0.00%	0	0
252 - Senior Adult Housing - Attached	9	15	0.00%	0.00%	0	0
411 - Public Park	0	0	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
210 - Single-Family Detached Housing	8	22	0.00%	0.00%	0	0
220 - Multifamily Housing (Low-Rise)	34	110	0.00%	0.00%	0	0
820 - Shopping Center	92	60	0.00%	0.00%	0	0
252 - Senior Adult Housing - Attached	9	15	0.00%	0.00%	0	0
411 - Public Park	0	0	0.00%	0.00%	0	0

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
210 - Single-Family Detached Housing	8	22	30
220 - Multifamily Housing (Low-Rise)	34	110	144
820 - Shopping Center	92	60	152
252 - Senior Adult Housing - Attached	9	15	24
411 - Public Park	0	0	0

Land Use	New Vehicle Trips (PPV)		
	Entry	Exit	Total
210 - Single-Family Detached Housing	8	22	30
220 - Multifamily Housing (Low-Rise)	34	110	144
820 - Shopping Center	92	60	152
252 - Senior Adult Housing - Attached	9	15	24

411 - Public Park		0	0	0	0
Land Use	New Vehicle Trips (Truck)				
	Entry	Exit			Total
	0	0			0
	0	0			0
	0	0			0
210 - Single-Family Detached Housing					
220 - Multifamily Housing (Low-Rise)					
820 - Shopping Center					
252 - Senior Adult Housing - Attached					
411 - Public Park	0		0	0	0

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	150	214	364
Vehicle Trips After Multi-modal Adjustment	150	214	364
Internal Vehicle Trips	7	7	14
External Vehicle Trips	143	207	350
Internal Vehicle Trip Capture	5%	3%	4%
Pass-by Vehicle Trips	0	0	0
Diverted Vehicle Trips	0	0	0
Extra Reduced Vehicle Trips	0	0	0
New Vehicle Trips	143	207	350
PPV	143	207	350
Truck	0	0	0
Person Trips by Other Modes	0	0	0

Scenario - 4

Scenario Name: PM Peak

Dev. phase: 1

Analyst Note:

User Group:

No. of Years to Project

Traffic :

Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method		Entry	Exit		Total
					Rate/Equation			Split%	Split%	
210 - Single-Family Detached Housing	General Urban/Suburban	Dwelling Units	37	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LOG)		25	14		39
Data Source: Trip Gen Manual, 10th Ed +					Ln(T) =0.96Ln(X) + 0.20		63%	37%		
220 - Multifamily Housing (Low-Rise)	General Urban/Suburban	Dwelling Units	331	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LOG)		108	63		171
Data Source: Trip Gen Manual, 10th Ed +					Ln(T) =0.89Ln(X) - 0.02		63%	37%		
820 - Shopping Center	General Urban/Suburban	1000 Sq. Ft. GLA	14.45	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LOG)		62	68		130
Data Source: Trip Gen Manual, 10th Ed +					Ln(T) =0.74Ln(X) + 2.89		48%	52%		
252 - Senior Adult Housing - Attached	General Urban/Suburban	Dwelling Units	125	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LIN)		18	15		33
Data Source: Trip Gen Manual, 10th Ed +					T = 0.24(X) + 2.26		55%	45%		
926 - Food Cart Pod	General Urban/Suburban	Food Carts	3	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LIN)		7	7		14
Data Source: Trip Gen Manual, 10th Ed +					T = 6.98(X) - 7.59		50%	50%		
411 - Public Park	General Urban/Suburban	Acres	8.47	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LIN)		13	10		23
Data Source: Trip Gen Manual, 10th Ed +					T = 0.06(X) + 22.60		55%	45%		

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 (%)
210 - Single-Family Detached Housing	100	100	1	1	63	37
220 - Multifamily Housing (Low-Rise)	100	100	1	1	63	37
820 - Shopping Center	100	100	1	1	48	52
252 - Senior Adult Housing - Attached	100	100	1	1	55	45
926 - Food Cart Pod	100	100	1	1	50	50
411 - Public Park	100	100	1	1	55	45

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
210 - Single-Family Detached Housing	25	14	0	0	25	14
		39	0			39
220 - Multifamily Housing (Low-Rise)	108	63	0	0	108	63
		171	0			171
820 - Shopping Center	62	68	0	0	62	68
		130	0			130
252 - Senior Adult Housing - Attached	18	15	0	0	18	15
		33	0			33
926 - Food Cart Pod	7	7	0	0	7	7
		14	0			14
411 - Public Park	13	10	0	0	13	10
		23	0			23

VEHICLE TRIPS AFTER MULTI-MODAL ADJUSTMENT

MODE SHARE:

Land Use	Personal Passenger Vehicle		Truck		Other Modes	
	Entry (%)	Exit (%)	Entry (%)	Exit (%)	Entry (%)	Exit (%)
210 - Single-Family Detached Housing	100%	100%	0%	0%	0%	0%

220 - Multifamily Housing (Low-Rise)		100%		100%		0%		0%		0%
820 - Shopping Center		100%		100%		0%		0%		0%
252 - Senior Adult Housing - Attached		100%		100%		0%		0%		0%
926 - Food Cart Pod		100%		100%		0%		0%		0%
411 - Public Park		100%		100%		0%		0%		0%

OCCUPANCY:

Land Use	Vehicle									
	Entry					Exit				
210 - Single-Family Detached Housing						1.00				1.00
220 - Multifamily Housing (Low-Rise)						1.00				1.00
820 - Shopping Center						1.00				1.00
252 - Senior Adult Housing - Attached						1.00				1.00
926 - Food Cart Pod						1.00				1.00
411 - Public Park						1.00				1.00

ADJUSTED VEHICLE TRIPS:

Land Use	Entry				Exit			
	Person Trips	Vehicle Mode Share (%)	Vehicle Occupancy	Vehicle Trips	Person Trips	Vehicle Mode Share (%)	Vehicle Occupancy	Vehicle Trips
210 - Single-Family Detached Housing	25	100%	1.00	25	14	100%	1.00	14
220 - Multifamily Housing (Low-Rise)	108	100%	1.00	108	63	100%	1.00	63
820 - Shopping Center	62	100%	1.00	62	68	100%	1.00	68
252 - Senior Adult Housing - Attached	18	100%	1.00	18	15	100%	1.00	15
926 - Food Cart Pod	7	100%	1.00	7	7	100%	1.00	7
411 - Public Park	13	100%	1.00	13	10	100%	1.00	10

INTERNAL VEHICLE TRIP REDUCTION

LAND USE GROUP ASSIGNMENT:

Land Use	Land Use Group									
210 - Single-Family Detached Housing										Residential
220 - Multifamily Housing (Low-Rise)										Residential
820 - Shopping Center										Retail
252 - Senior Adult Housing - Attached										Residential
926 - Food Cart Pod										Resturant
411 - Public Park										Cinema

BALANCED PERSON TRIPS:

210 - Single-Family Detached Housing										220 - Multifamily Housing (Low-Rise)									
Persons Exit	PAF	UIPTC	Unconstrained Demand	====>>> BALANCED ==>>>>	Unconstrained Demand	UIPTC	PAF	Unconstrained Demand	Persons Entry										
14	1	0	0	0	0	0	1	0	108										
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Unconstrained Demand	Persons Exit										
25	1	0	0	0	0	0	1	0	63										
210 - Single-Family Detached Housing										820 - Shopping Center									
Persons Exit	PAF	UIPTC	Unconstrained Demand	====>>> BALANCED ==>>>>	Unconstrained Demand	UIPTC	PAF	Unconstrained Demand	Persons Entry										
14	1	14	2	2	2	3.333333333333335	1	2	62										
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Unconstrained Demand	Persons Exit										
25	1	15.333333333333334	4	4	6	8.666666666666666	1	6	68										
210 - Single-Family Detached Housing										252 - Senior Adult Housing - Attached									
Persons Exit	PAF	UIPTC	Unconstrained Demand	====>>> BALANCED ==>>>>	Unconstrained Demand	UIPTC	PAF	Unconstrained Demand	Persons Entry										
14	1	0	0	0	0	0	1	0	18										
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<== BALANCED <<<==	Unconstrained Demand	UIPTC	PAF	Unconstrained Demand	Persons Exit										

25	1	0	0	0	1	15
210 - Single-Family Detached Housing						
Persons Exit	PAF	UIPTC	Unconstrained Demand		PAF	Persons Entry
14	1	7	1		1	7
Persons Entry	PAF	UIPTC	Unconstrained Demand		PAF	Persons Exit
25	1	5.33333333333333	1		1	7
210 - Single-Family Detached Housing						
Persons Exit	PAF	UIPTC	Unconstrained Demand		PAF	Persons Entry
14	1	0	0		1	13
Persons Entry	PAF	UIPTC	Unconstrained Demand		PAF	Persons Exit
25	1	1.33333333333333	0		1	10
220 - Multifamily Housing (Low-Rise)						
Persons Exit	PAF	UIPTC	Unconstrained Demand		PAF	Persons Entry
63	1	14	9		1	62
Persons Entry	PAF	UIPTC	Unconstrained Demand		PAF	Persons Exit
108	1	15.3333333333333	17		1	68
220 - Multifamily Housing (Low-Rise)						
Persons Exit	PAF	UIPTC	Unconstrained Demand		PAF	Persons Entry
63	1	0	0		1	18
Persons Entry	PAF	UIPTC	Unconstrained Demand		PAF	Persons Exit
108	1	0	0		1	15
220 - Multifamily Housing (Low-Rise)						
Persons Exit	PAF	UIPTC	Unconstrained Demand		PAF	Persons Entry
63	1	7	4		1	7
Persons Entry	PAF	UIPTC	Unconstrained Demand		PAF	Persons Exit
108	1	5.33333333333333	6		1	7
220 - Multifamily Housing (Low-Rise)						
Persons Exit	PAF	UIPTC	Unconstrained Demand		PAF	Persons Entry
63	1	0	0		1	13
Persons Entry	PAF	UIPTC	Unconstrained Demand		PAF	Persons Exit
108	1	1.33333333333333	1		1	10
820 - Shopping Center						
Persons Exit	PAF	UIPTC	Unconstrained Demand		PAF	Persons Entry
68	1	8.66666666666666	6		1	18
Persons Entry	PAF	UIPTC	Unconstrained Demand		PAF	Persons Exit
62	1	3.33333333333333	2		1	15
820 - Shopping Center						
Persons Exit	PAF	UIPTC	Unconstrained Demand		PAF	Persons Entry
68	1	29	20		1	7

Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<=== BALANCED <<<===	Unconstrained Demand	UIPTC	PAF	Persons Exit
62	1	50	31	3	3	41	1	7
820 - Shopping Center								
Persons Exit	PAF	UIPTC	Unconstrained Demand	====>> BALANCED ====>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
68	1	4	3	3	3	26	1	13
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<=== BALANCED <<<===	Unconstrained Demand	UIPTC	PAF	Persons Exit
62	1	4	2	2	2	21	1	10
252 - Senior Adult Housing - Attached								
Persons Exit	PAF	UIPTC	Unconstrained Demand	====>> BALANCED ====>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
15	1	7	1	0	0	4.666666666666667	1	7
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<=== BALANCED <<<===	Unconstrained Demand	UIPTC	PAF	Persons Exit
18	1	5.333333333333333	1	0	0	6	1	7
252 - Senior Adult Housing - Attached								
Persons Exit	PAF	UIPTC	Unconstrained Demand	====>> BALANCED ====>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
15	1	0	0	0	0	0	1	13
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<=== BALANCED <<<===	Unconstrained Demand	UIPTC	PAF	Persons Exit
18	1	1.3333333333333333	0	0	0	2.6666666666666665	1	10
926 - Food Cart Pod								
Persons Exit	PAF	UIPTC	Unconstrained Demand	====>> BALANCED ====>>	Unconstrained Demand	UIPTC	PAF	Persons Entry
7	1	8	1	1	4	32	1	13
Persons Entry	PAF	UIPTC	Unconstrained Demand	<<<=== BALANCED <<<===	Unconstrained Demand	UIPTC	PAF	Persons Exit
7	1	3	0	0	3	31	1	10
INTERNAL PERSON TRIPS:								
210 - Single-Family Detached Housing								
Internal Person Trips From						Entry	Exit	Total
220 - Multifamily Housing (Low-Rise)						0	0	0
820 - Shopping Center						4	2	6
252 - Senior Adult Housing - Attached						0	0	0
926 - Food Cart Pod						0	0	1
411 - Public Park						0	0	0
Total Internal Person Trips						4	2	6
220 - Multifamily Housing (Low-Rise)								
Internal Person Trips From						Entry	Exit	Total
210 - Single-Family Detached Housing						0	0	0
820 - Shopping Center						6	2	8
252 - Senior Adult Housing - Attached						0	0	0
926 - Food Cart Pod						0	0	1
411 - Public Park						0	0	0
Total Internal Person Trips						6	2	8
820 - Shopping Center								
Internal Person Trips From						Entry	Exit	Total
210 - Single-Family Detached Housing						2	4	6
220 - Multifamily Housing (Low-Rise)						2	6	8
252 - Senior Adult Housing - Attached						2	3	5
926 - Food Cart Pod						3	2	5

411 - Public Park		2	3	5
Total Internal Person Trips		11	18	29

252 - Senior Adult Housing - Attached

Internal Person Trips From		Entry	Exit	Total
210 - Single-Family Detached Housing		0	0	0
220 - Multifamily Housing (Low-Rise)		0	0	0
820 - Shopping Center		3	2	5
926 - Food Cart Pod		0	0	1
411 - Public Park		0	0	0
Total Internal Person Trips		3	2	5

926 - Food Cart Pod

Internal Person Trips From		Entry	Exit	Total
210 - Single-Family Detached Housing		0	0	1
220 - Multifamily Housing (Low-Rise)		0	0	1
820 - Shopping Center		2	3	5
252 - Senior Adult Housing - Attached		0	0	1
411 - Public Park		0	1	1
Total Internal Person Trips		2	4	6

411 - Public Park

Internal Person Trips From		Entry	Exit	Total
210 - Single-Family Detached Housing		0	0	0
220 - Multifamily Housing (Low-Rise)		0	0	0
820 - Shopping Center		3	2	5
252 - Senior Adult Housing - Attached		0	0	0
926 - Food Cart Pod		1	0	1
Total Internal Person Trips		4	2	6

INTERNAL VEHICLE TRIPS AND CAPTURE:

210 - Single-Family Detached Housing

Total Internal Person Trips		4	2	6
Vehicle Mode Share		100%	100%	-
Vehicle Occupancy		1.00	1.00	-
Total Vehicle Internal Trips		4	2	6
Total External Vehicle Trips		21	12	33
Internal Vehicle Trip Capture		16%	14%	15%

220 - Multifamily Housing (Low-Rise)

Total Internal Person Trips		6	2	8
Vehicle Mode Share		100%	100%	-
Vehicle Occupancy		1.00	1.00	-
Total Vehicle Internal Trips		6	2	8
Total External Vehicle Trips		102	61	163
Internal Vehicle Trip Capture		6%	3%	5%

820 - Shopping Center

Total Internal Person Trips		11	18	29
Vehicle Mode Share		100%	100%	-
Vehicle Occupancy		1.00	1.00	-
Total Vehicle Internal Trips		11	18	29
Total External Vehicle Trips		51	50	101
Internal Vehicle Trip Capture		18%	26%	22%

252 - Senior Adult Housing - Attached

Total Internal Person Trips		3	2	5
Vehicle Mode Share		100%	100%	-

Vehicle Occupancy		1.00	1.00	-
Total Vehicle Internal Trips		3	2	5
Total External Vehicle Trips		15	13	28
Internal Vehicle Trip Capture		17%	13%	15%

926 - Food Cart Pod

Total Internal Person Trips		2	4	6
Vehicle Mode Share		100%	100%	-
Vehicle Occupancy		1.00	1.00	-
Total Vehicle Internal Trips		2	4	6
Total External Vehicle Trips		5	3	8
Internal Vehicle Trip Capture		29%	57%	43%

411 - Public Park

Total Internal Person Trips		4	2	6
Vehicle Mode Share		100%	100%	-
Vehicle Occupancy		1.00	1.00	-
Total Vehicle Internal Trips		4	2	6
Total External Vehicle Trips		9	8	17
Internal Vehicle Trip Capture		31%	20%	26%

PASS-BY VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Pass-by Vehicle Trip %		Pass-by Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
210 - Single-Family Detached Housing	21	12	0.00%	0.00%	0	0
220 - Multifamily Housing (Low-Rise)	102	61	0.00%	0.00%	0	0
820 - Shopping Center	51	50	34.00%	34.00%	17	17
252 - Senior Adult Housing - Attached	15	13	0.00%	0.00%	0	0
926 - Food Cart Pod	5	3	0.00%	0.00%	0	0
411 - Public Park	9	8	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
210 - Single-Family Detached Housing	21	12	0.00%	0.00%	0	0
220 - Multifamily Housing (Low-Rise)	102	61	0.00%	0.00%	0	0
820 - Shopping Center	51	50	0.00%	0.00%	0	0
252 - Senior Adult Housing - Attached	15	13	0.00%	0.00%	0	0
926 - Food Cart Pod	5	3	0.00%	0.00%	0	0
411 - Public Park	9	8	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
210 - Single-Family Detached Housing	21	12	0.00%	0.00%	0	0
220 - Multifamily Housing (Low-Rise)	102	61	0.00%	0.00%	0	0
820 - Shopping Center	34	33	0.00%	0.00%	0	0
252 - Senior Adult Housing - Attached	15	13	0.00%	0.00%	0	0
926 - Food Cart Pod	5	3	0.00%	0.00%	0	0
411 - Public Park	9	8	0.00%	0.00%	0	0

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips	
	Entry	Exit
210 - Single-Family Detached Housing	21	12
		33

220 - Multifamily Housing (Low-Rise)	102	61	163
820 - Shopping Center	34	33	67
252 - Senior Adult Housing - Attached	15	13	28
926 - Food Cart Pod	5	3	8
411 - Public Park	9	8	17

Land Use	New Vehicle Trips (PPV)		
	Entry	Exit	Total
210 - Single-Family Detached Housing	21	12	33
220 - Multifamily Housing (Low-Rise)	102	61	163
820 - Shopping Center	34	33	67
252 - Senior Adult Housing - Attached	15	13	28
926 - Food Cart Pod	5	3	8
411 - Public Park	9	8	17

Land Use	New Vehicle Trips (Truck)		
	Entry	Exit	Total
210 - Single-Family Detached Housing	0	0	0
220 - Multifamily Housing (Low-Rise)	0	0	0
820 - Shopping Center	0	0	0
252 - Senior Adult Housing - Attached	0	0	0
926 - Food Cart Pod	0	0	0
411 - Public Park	0	0	0

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	233	177	410
Vehicle Trips After Multi-modal Adjustment	233	177	410
Internal Vehicle Trips	30	30	60
External Vehicle Trips	203	147	350
Internal Vehicle Trip Capture	13%	17%	15%
Pass-by Vehicle Trips	17	17	34
Diverted Vehicle Trips	0	0	0
Extra Reduced Vehicle Trips	0	0	0
New Vehicle Trips	186	130	316
PPV	186	130	316
Truck	0	0	0
Person Trips by Other Modes	0	0	0

Scenario - 2

Scenario Name: Background AM Peak

User Group:

Dev. phase: 1

No. of Years to Project

0

Analyst Note:

Warning:

VEHICLE TRIPS BEFORE REDUCTION									
Land Use & Data Source		Location	IV	Size	Time Period	Method	Entry	Exit	Total
						Rate/Equation	Split%	Split%	
710 - General Office Building Data Source: Trip Gen Manual, 10th Ed +	General Urban/Suburban		1000 Sq. Ft. GFA	333.2	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LIN)	292	48	340
	T = 0.94(X) + 26.49					86%	14%		
210 - Single-Family Detached Housing Data Source: Trip Gen Manual, 10th Ed +	General Urban/Suburban		Dwelling Units	50	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LIN)	10	30	40
	T = 0.71(X) + 4.80					25%	75%		

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 (%)	
710 - General Office Building	100	100		1	1		86	14	
210 - Single-Family Detached Housing	100	100		1	1		25	75	

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	
710 - General Office Building	292	48		0	0		292	48	
		340			0			340	
210 - Single-Family Detached Housing	10	30		0	0		10	30	
		40			0			40	

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
710 - General Office Building	292	48	340
210 - Single-Family Detached Housing	10	30	40

RESULTS

Site Totals		
Vehicle Trips Before Reduction	302	78
External Vehicle Trips	302	78
New Vehicle Trips	302	78

Scenario - 3

Scenario Name: Background PM Peak

User Group:

No. of Years to Project

0

Dev. phase: 1

Analyst Note:

Warning:

Traffic :

VEHICLE TRIPS BEFORE REDUCTION									
Land Use & Data Source		Location	IV	Size	Time Period	Method	Entry	Exit	Total
710 - General Office Building		General	1000 Sq. Ft. GFA	333.2	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Rate/Equation	Split%	Split%	
Data Source: Trip Gen Manual, 10th Ed +		Urban/Suburban				Best Fit (LOG)	57	300	357
210 - Single-Family Detached Housing		General	Dwelling Units	50	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Ln(T) =0.95Ln(X) + 0.36	16%	84%	
Data Source: Trip Gen Manual, 10th Ed +		Urban/Suburban				Best Fit (LOG)	33	19	52
						Ln(T) =0.96Ln(X) + 0.20	63%	37%	

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 (%)	
710 - General Office Building	100		100	1	1		16	84	
210 - Single-Family Detached Housing	100		100	1	1		63	37	

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	
710 - General Office Building	57		300	0	0		57	300	
		357			0			357	
210 - Single-Family Detached Housing	33		19	0	0		33	19	
		52			0			52	

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
710 - General Office Building	57	300	357
210 - Single-Family Detached Housing	33	19	52

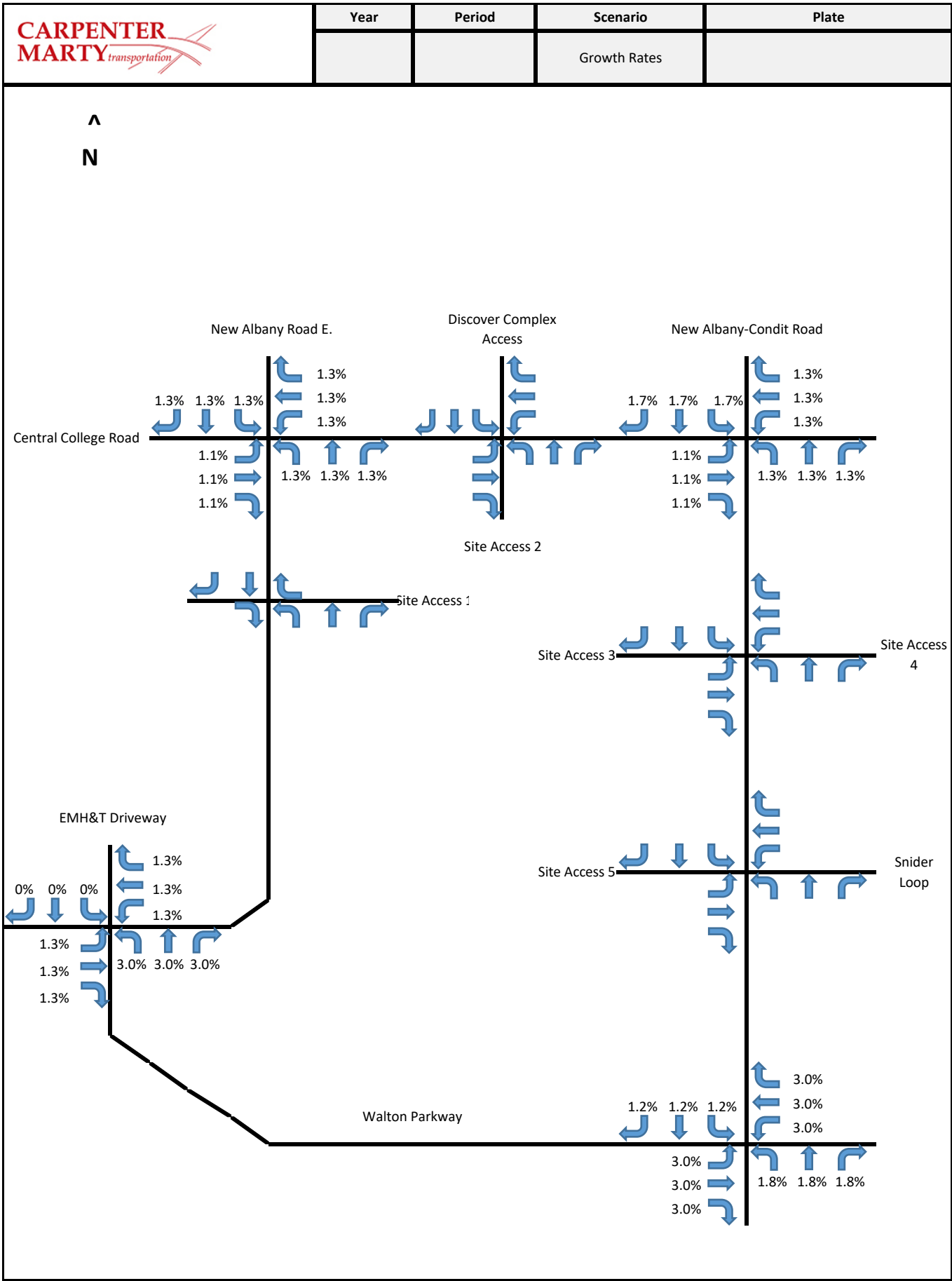
RESULTS

Site Totals		
Vehicle Trips Before Reduction	90	409
External Vehicle Trips	90	409
New Vehicle Trips	90	409

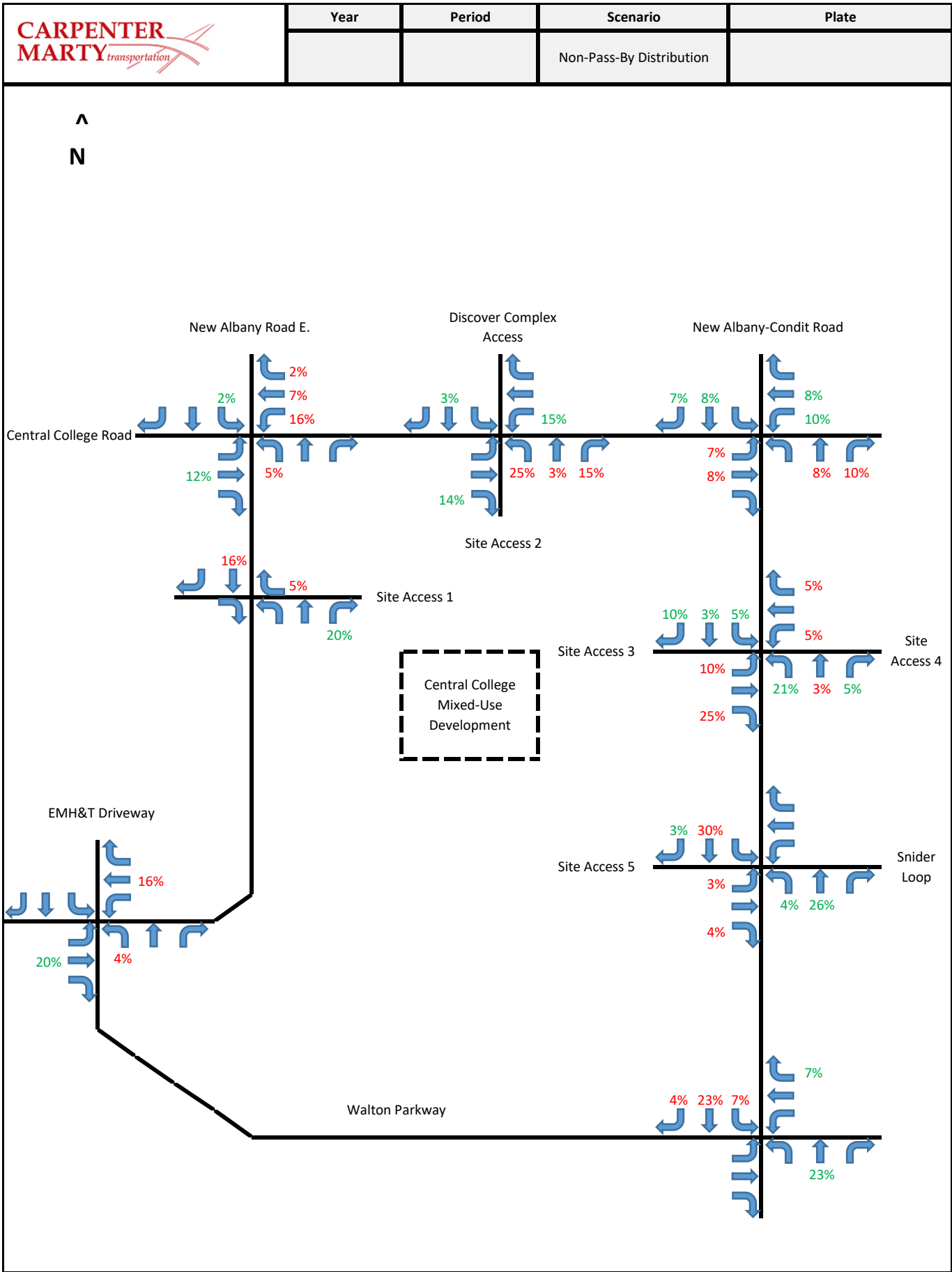
Appendix D

Volume Calculations

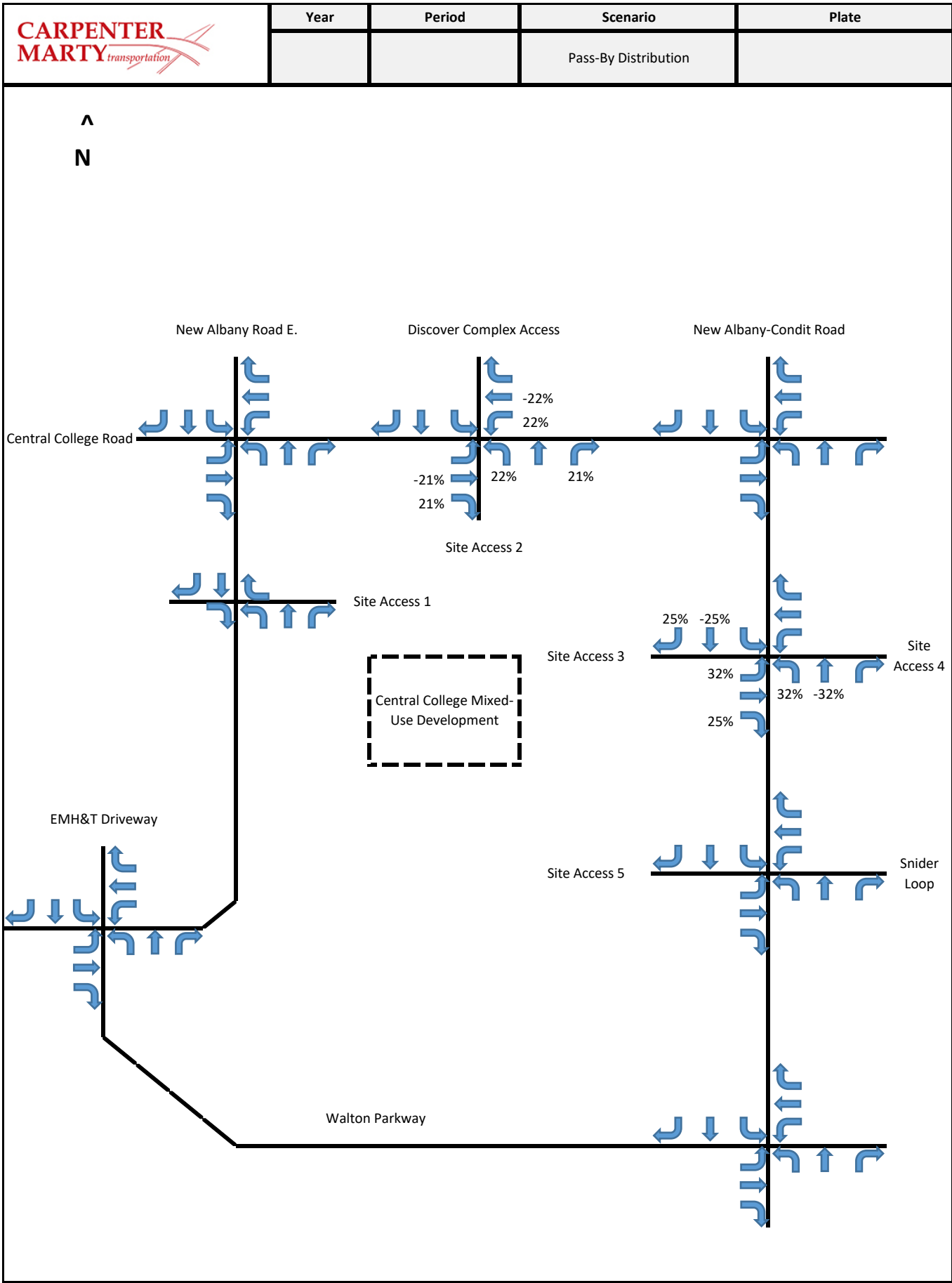
NMD Mixed-Use Development TIS
Traffic Volume Calculations



NMD Mixed-Use Development TIS
Traffic Volume Calculations

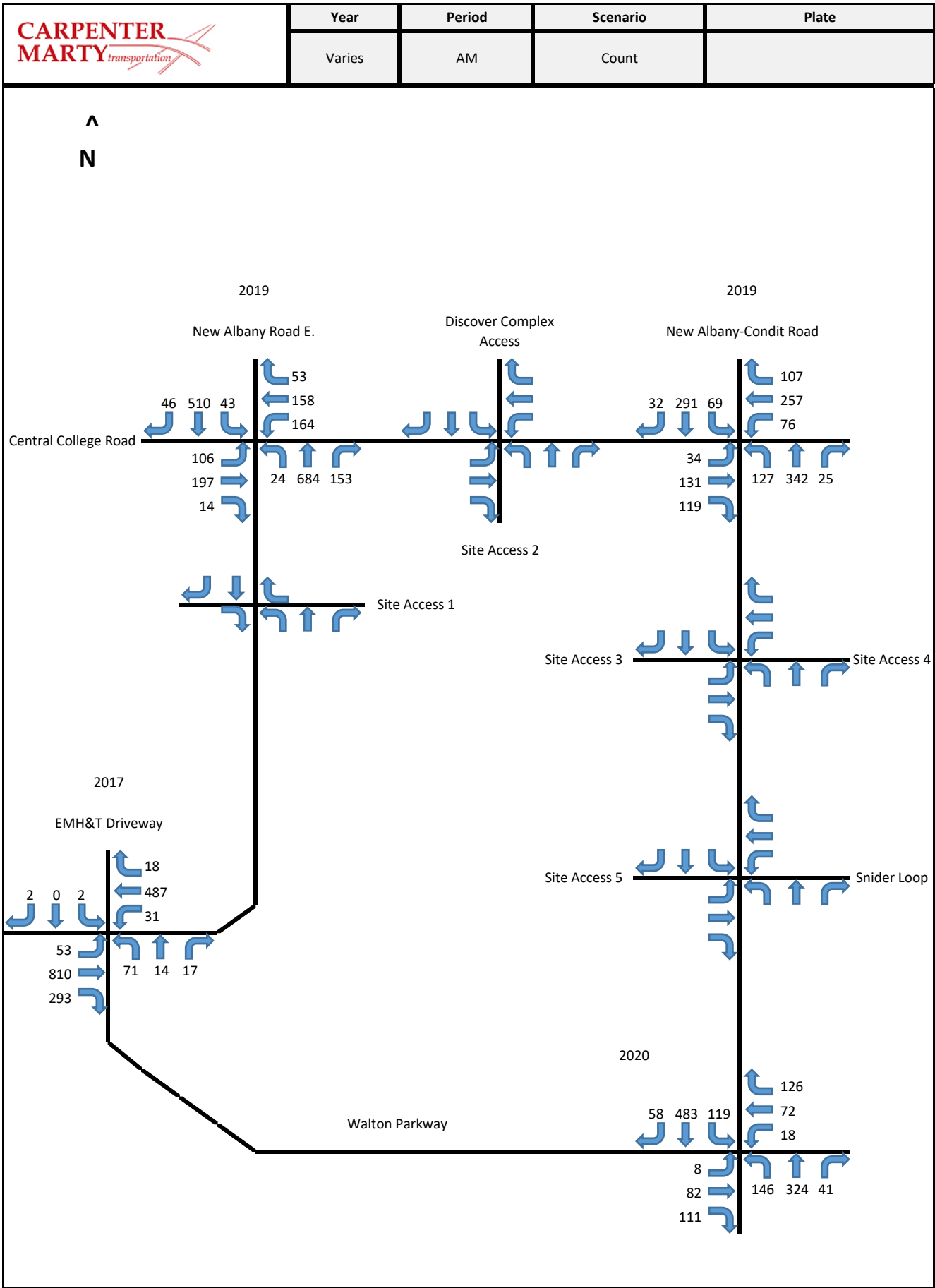


NMD Mixed-Use Development TIS
Traffic Volume Calculations

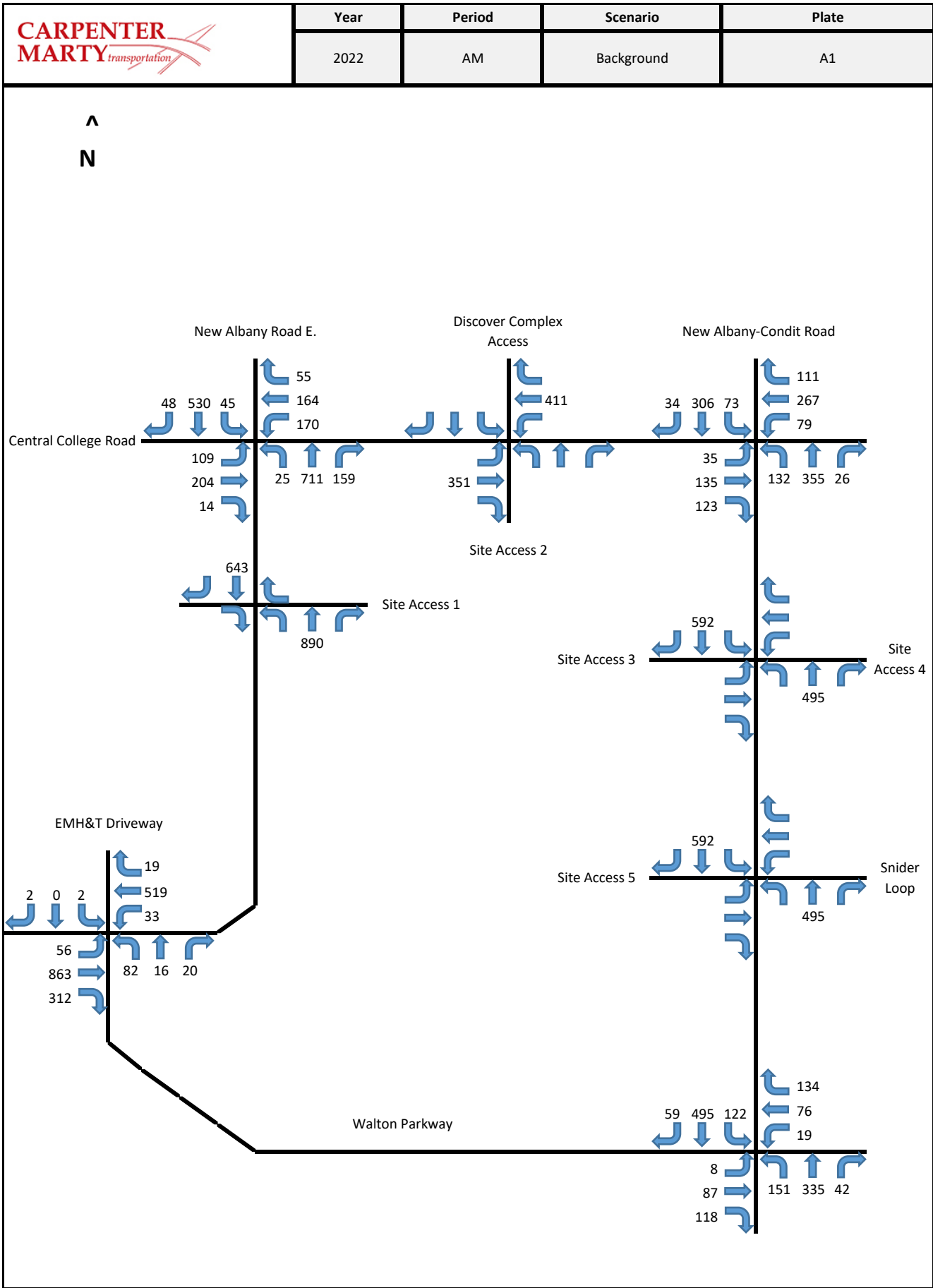


NMD Mixed-Use Development TIS

Traffic Volume Calculations



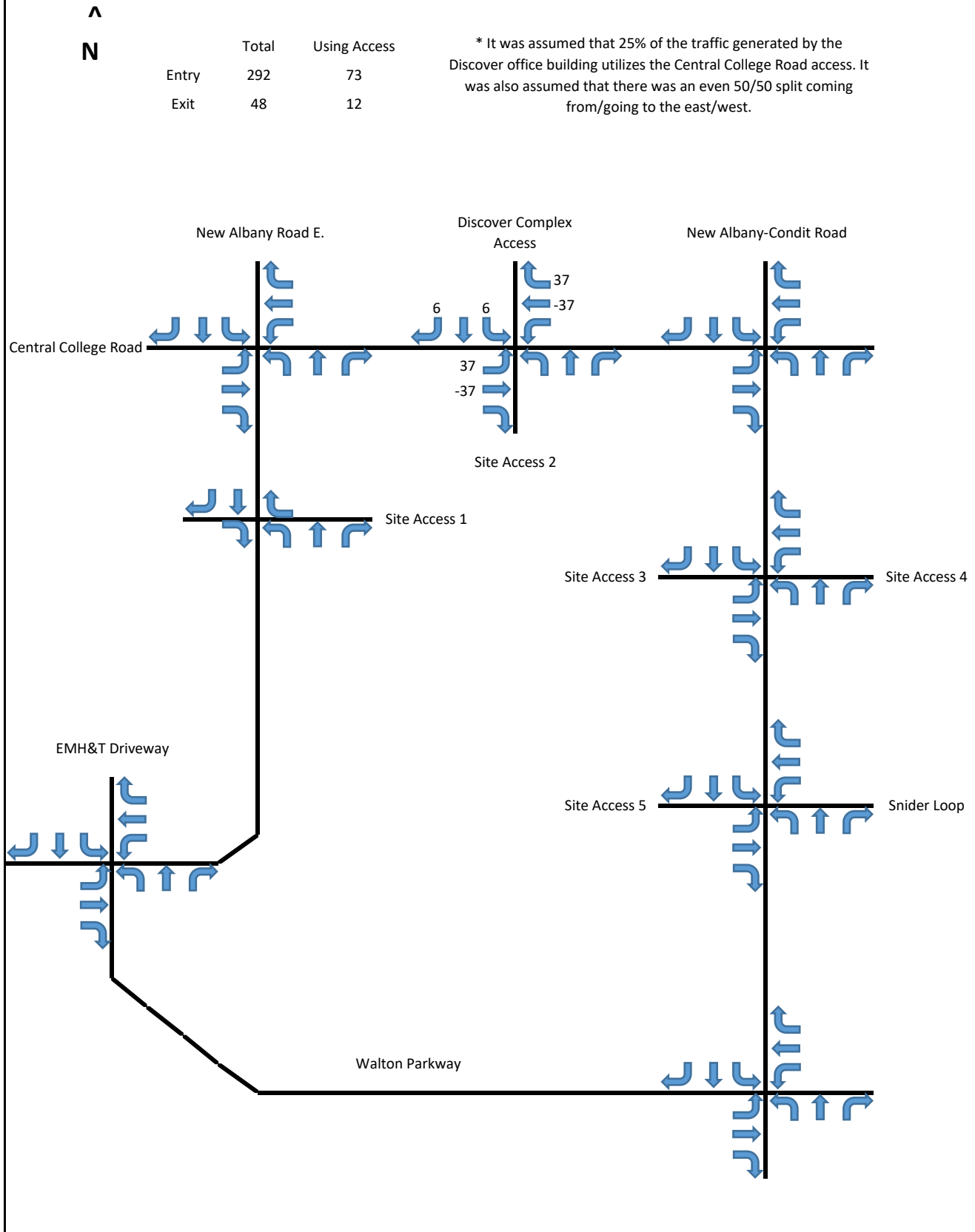
NMD Mixed-Use Development TIS
Traffic Volume Calculations



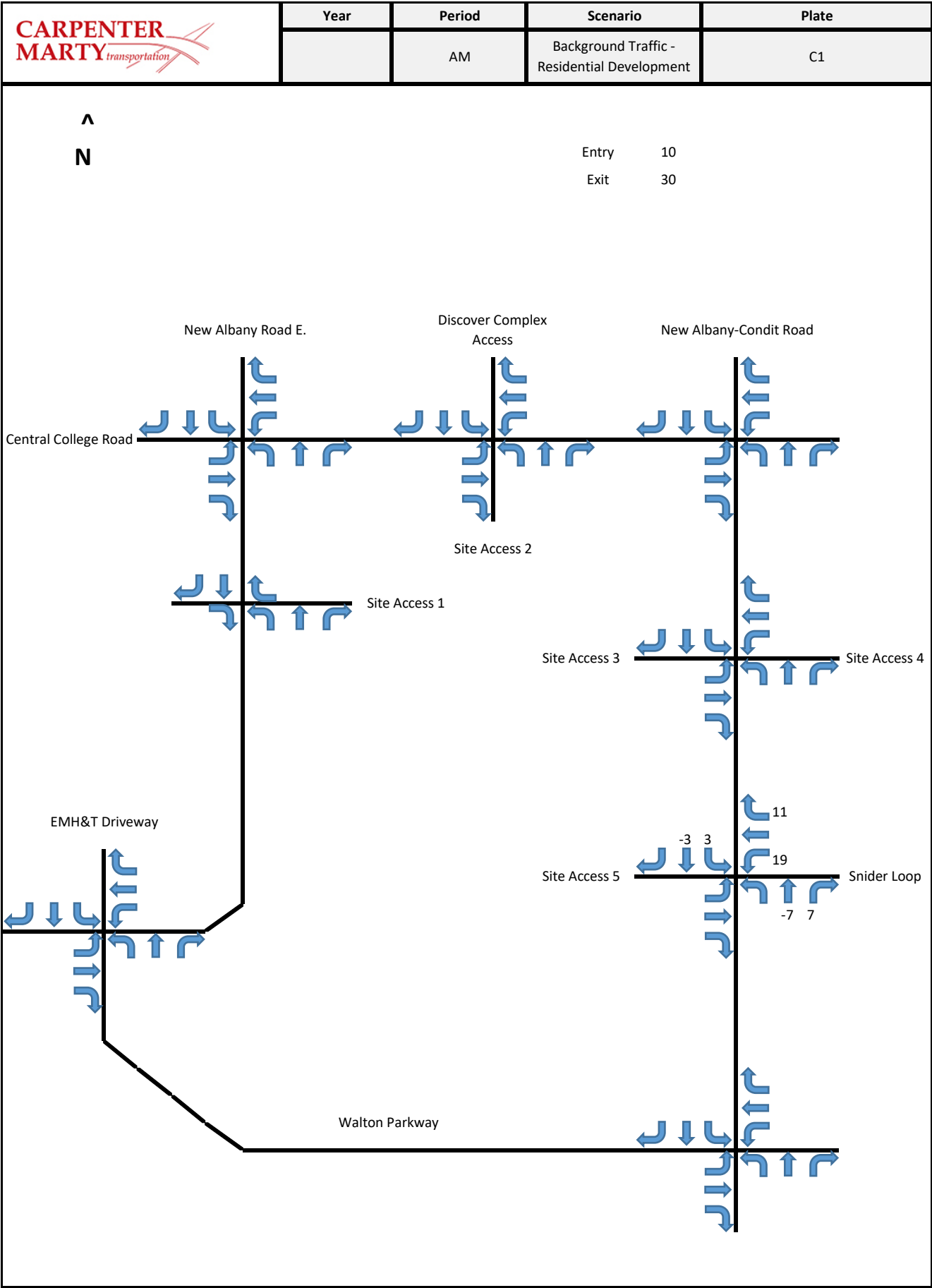
Traffic Volume Calculations

CARPENTER
MARTY *transportation*

Year	Period	Scenario	Plate
	AM	Background Traffic - Discover Office Building	B1



NMD Mixed-Use Development TIS
Traffic Volume Calculations

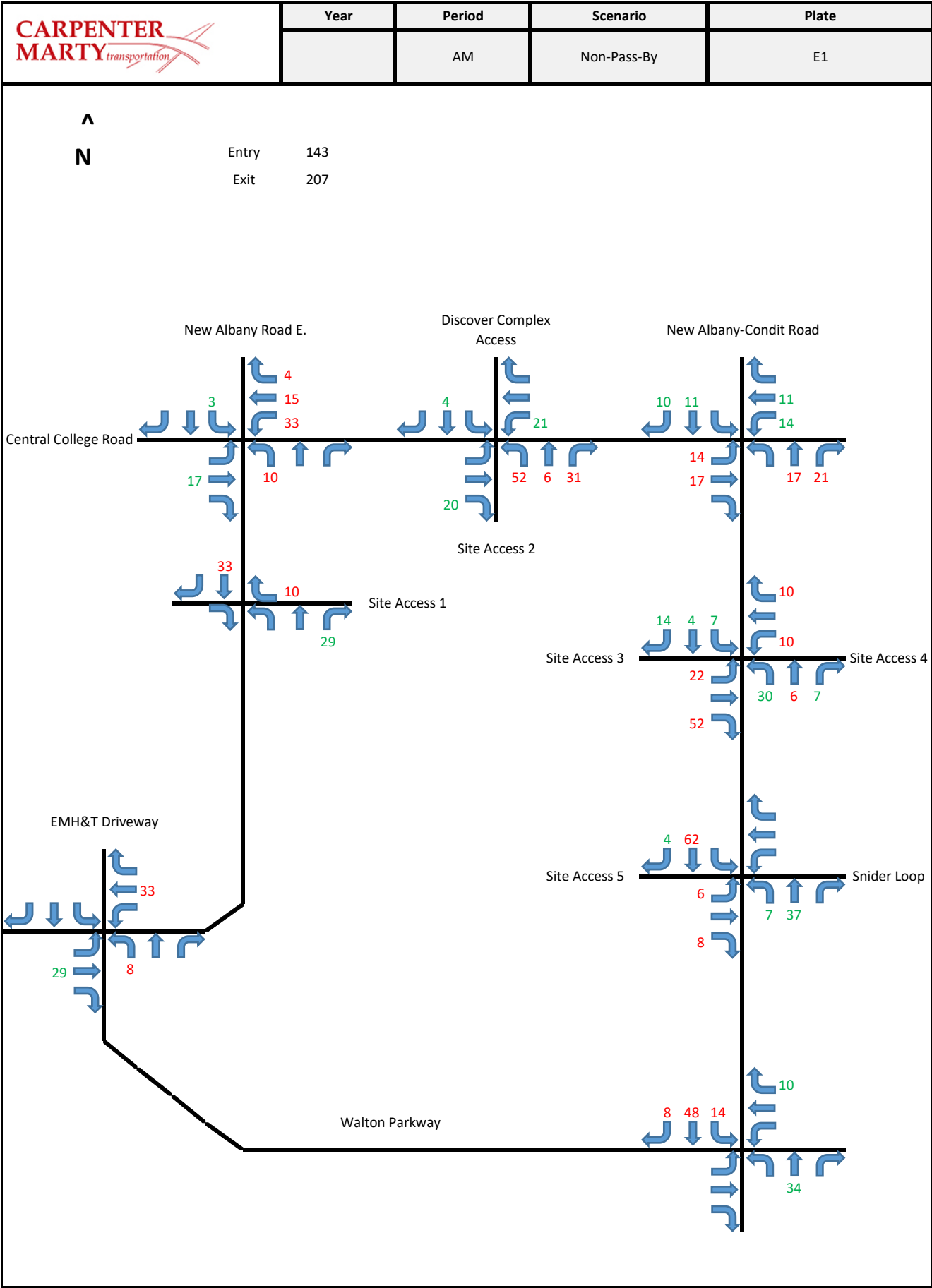


Traffic Volume Calculations

CARPENTER
MARTY *transportation*

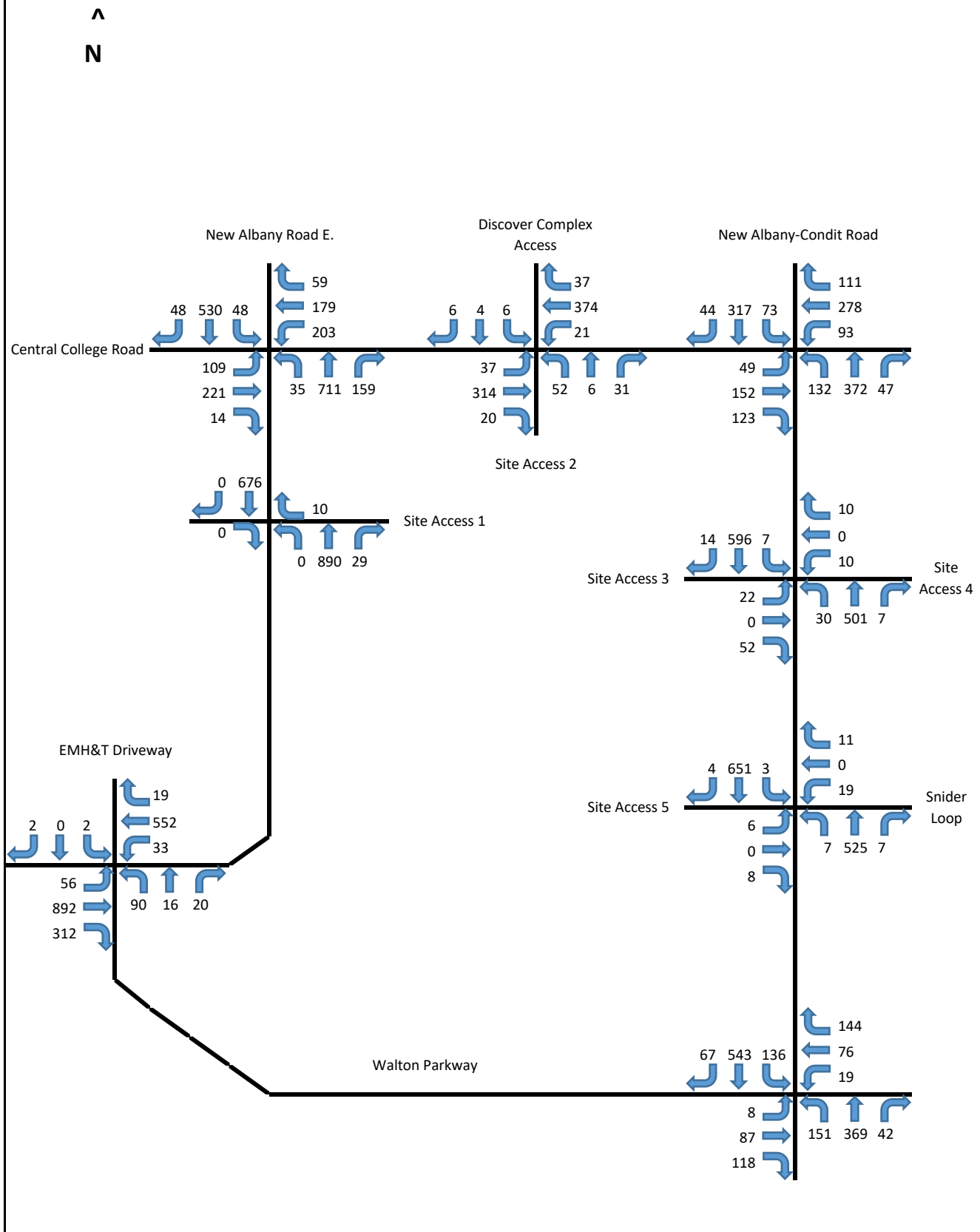


NMD Mixed-Use Development TIS
 Traffic Volume Calculations

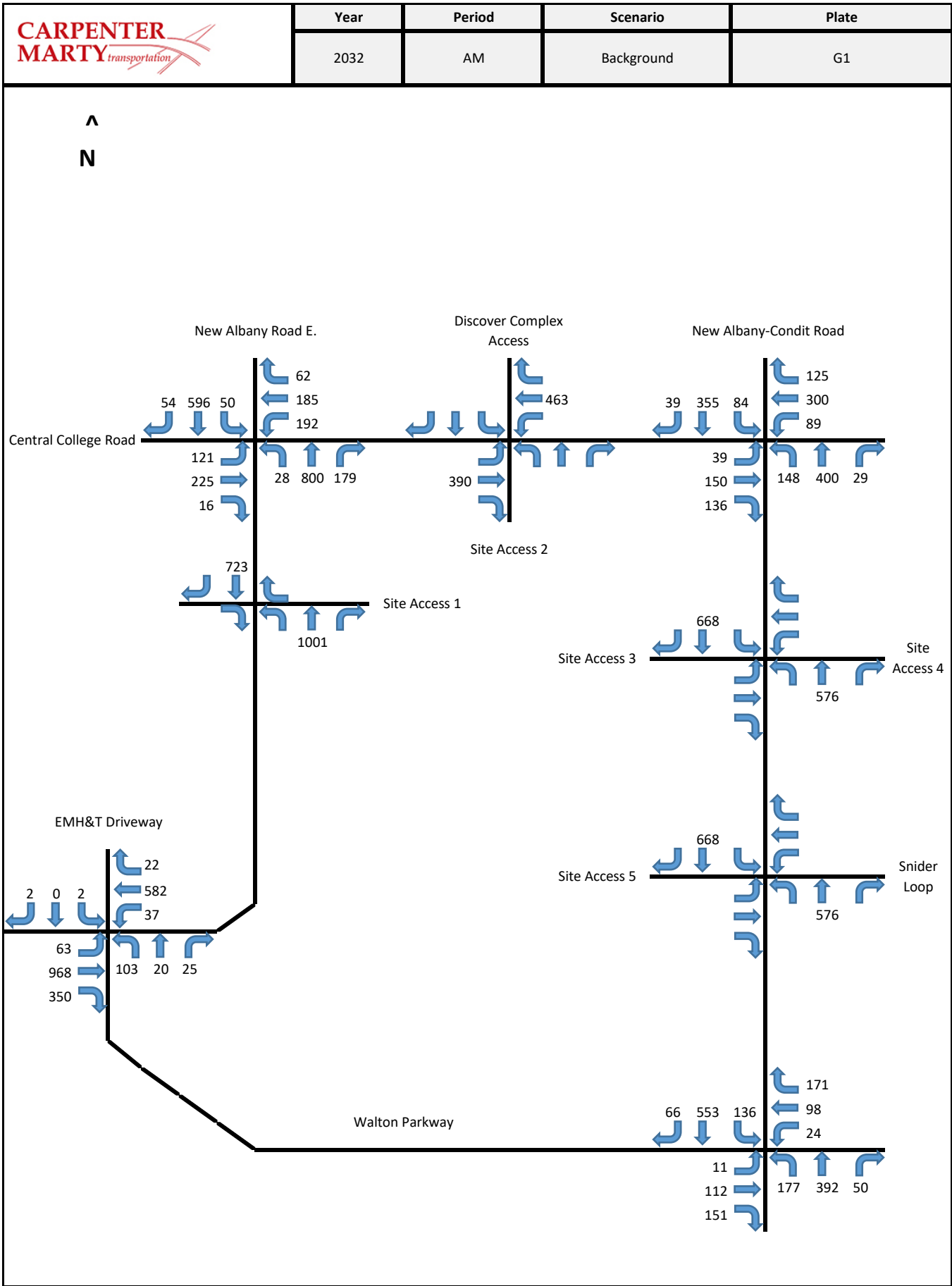


CARPENTER
MARTY *transportation*

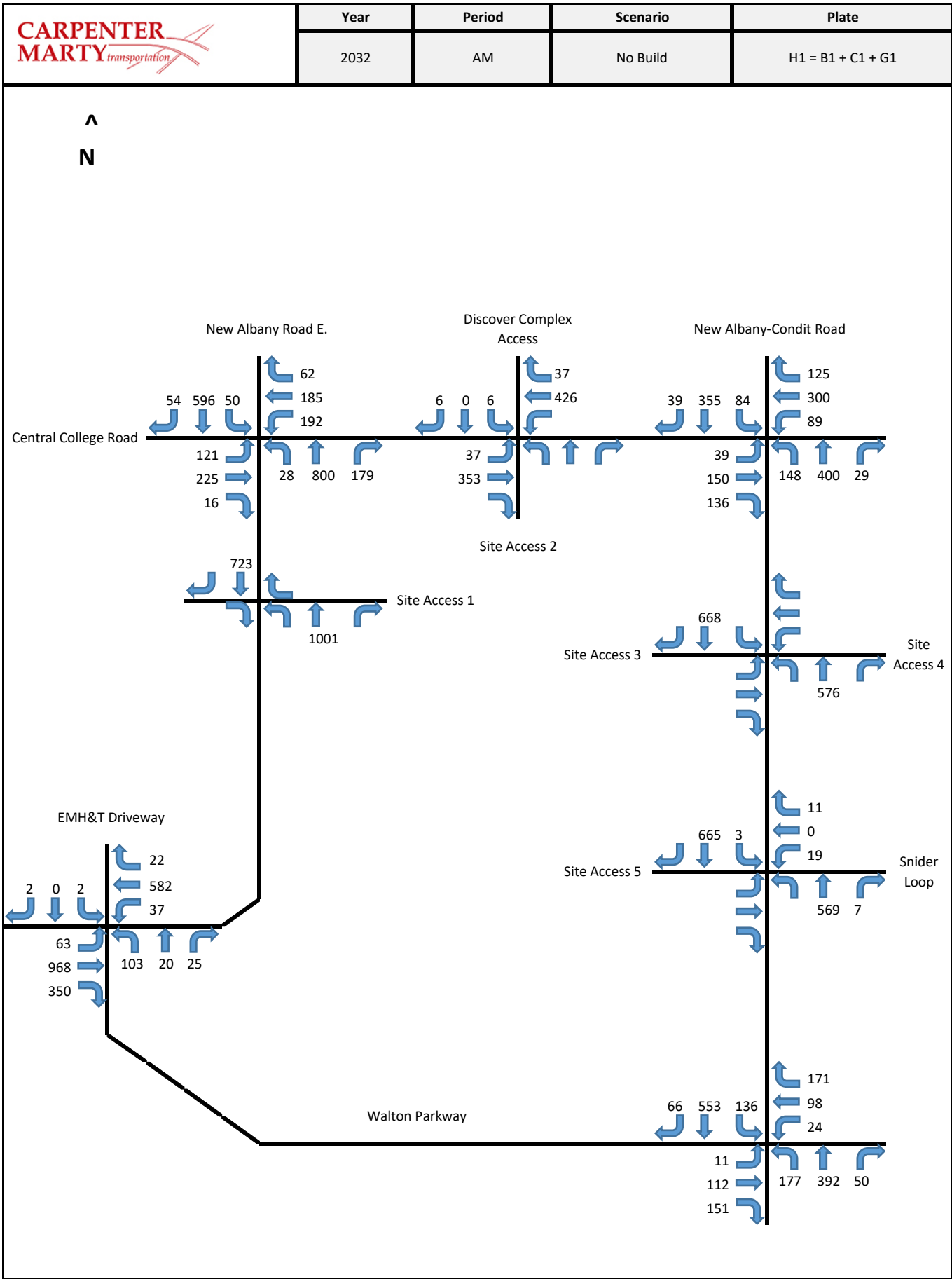
Year	Period	Scenario	Plate
2022	AM	Build	F1 = D1 + E1



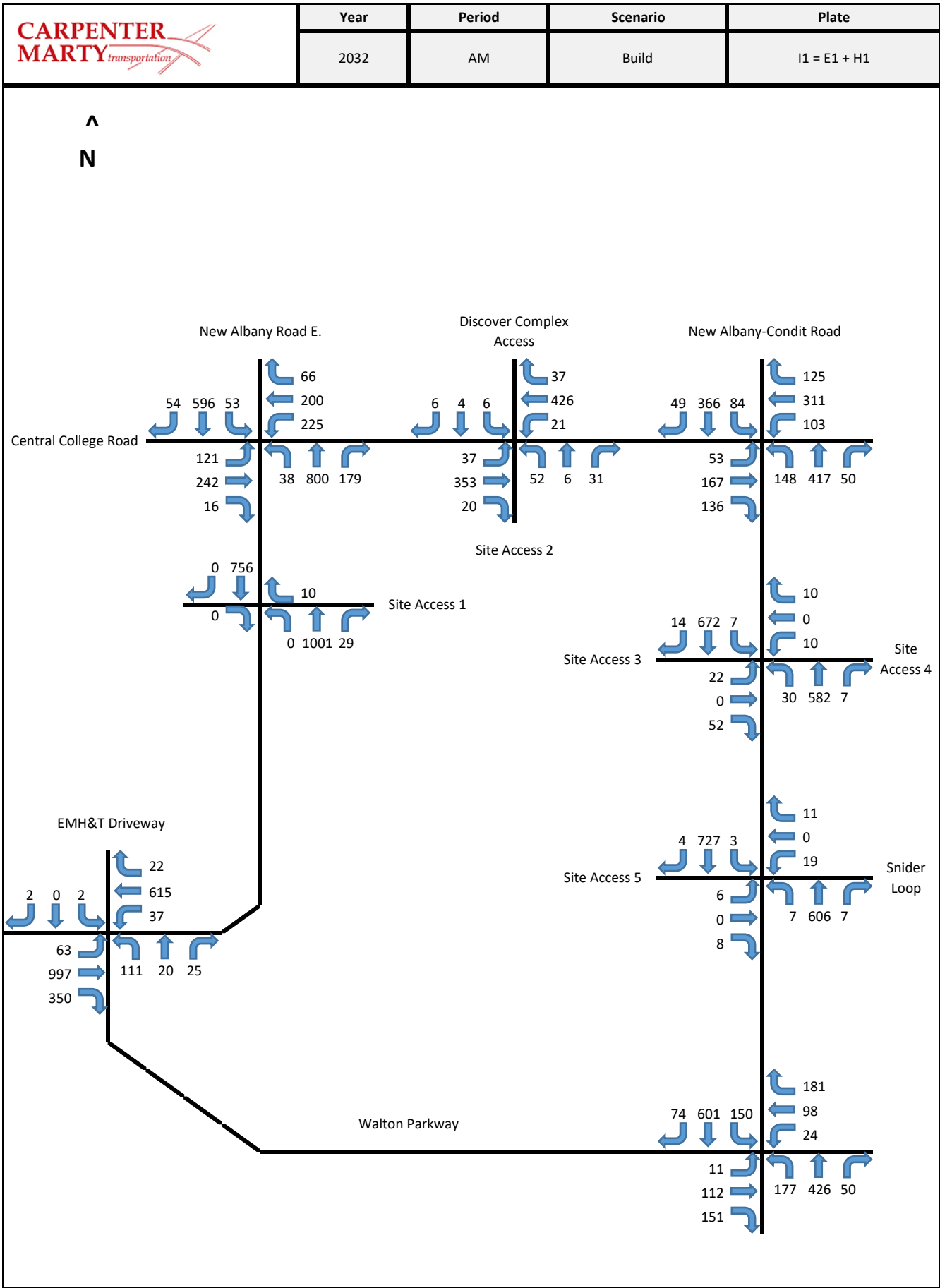
NMD Mixed-Use Development TIS
Traffic Volume Calculations



NMD Mixed-Use Development TIS
Traffic Volume Calculations

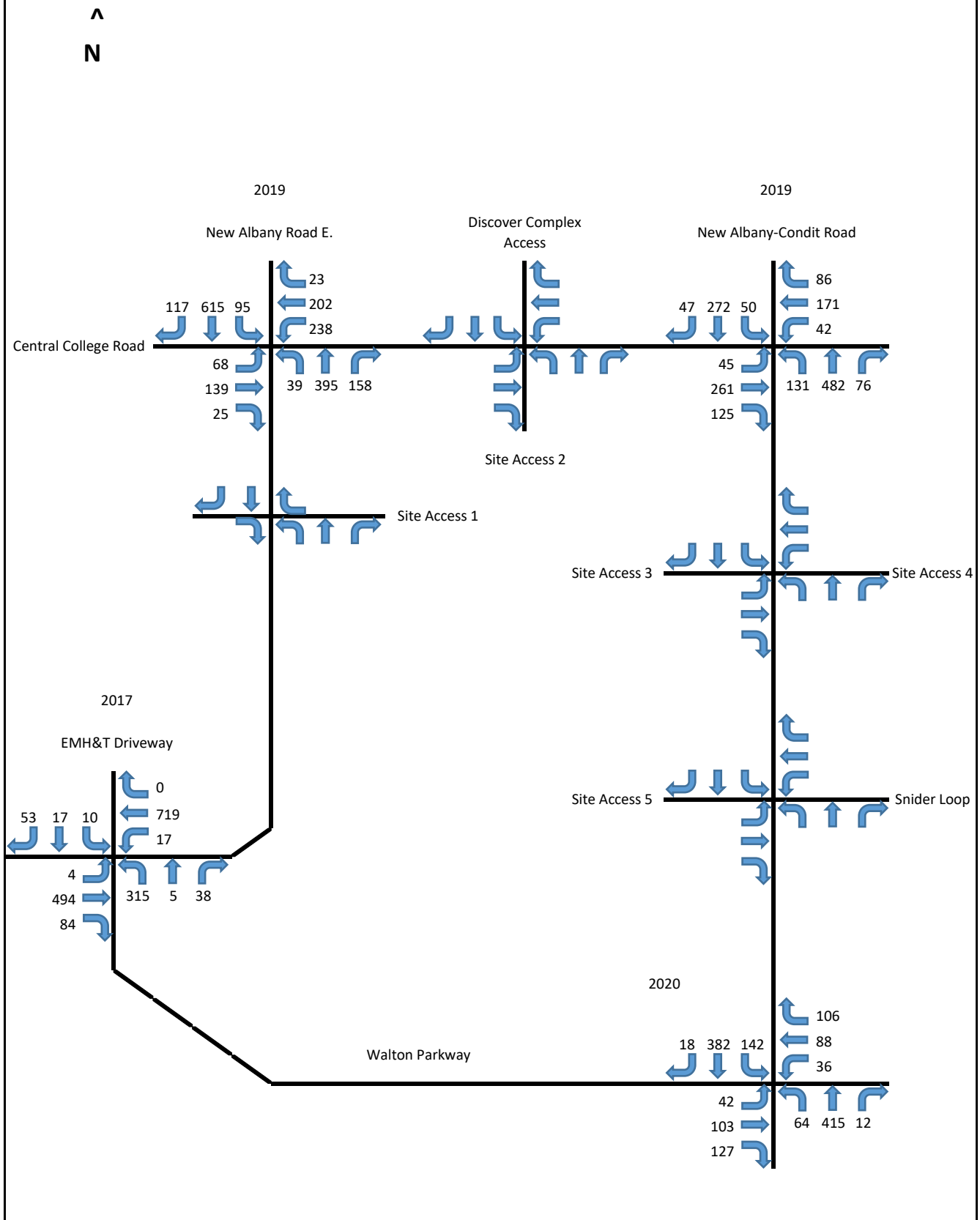


NMD Mixed-Use Development TIS
Traffic Volume Calculations




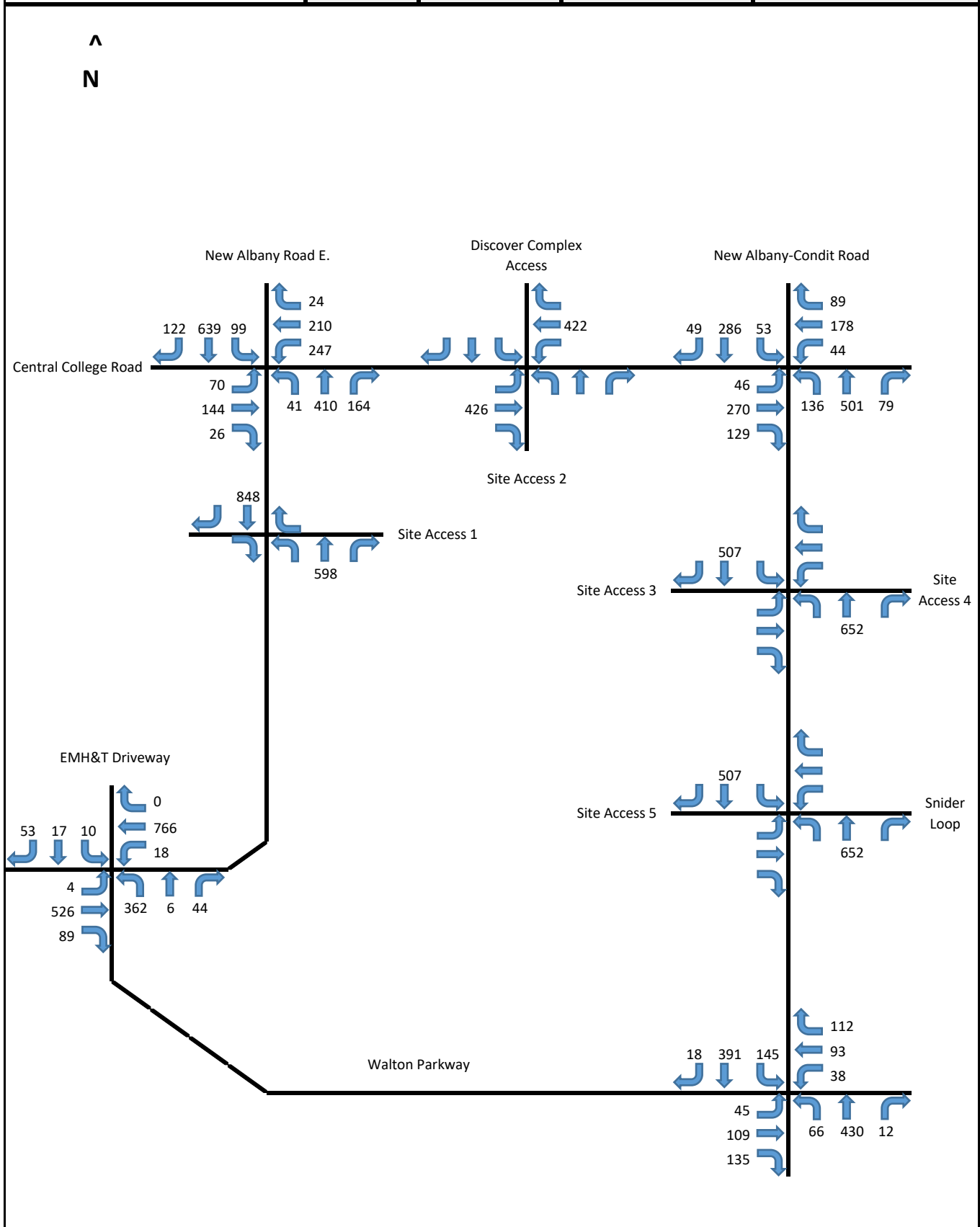
CARPENTER
MARTY *transportation*

Year	Period	Scenario	Plate
Varies	PM	Count	



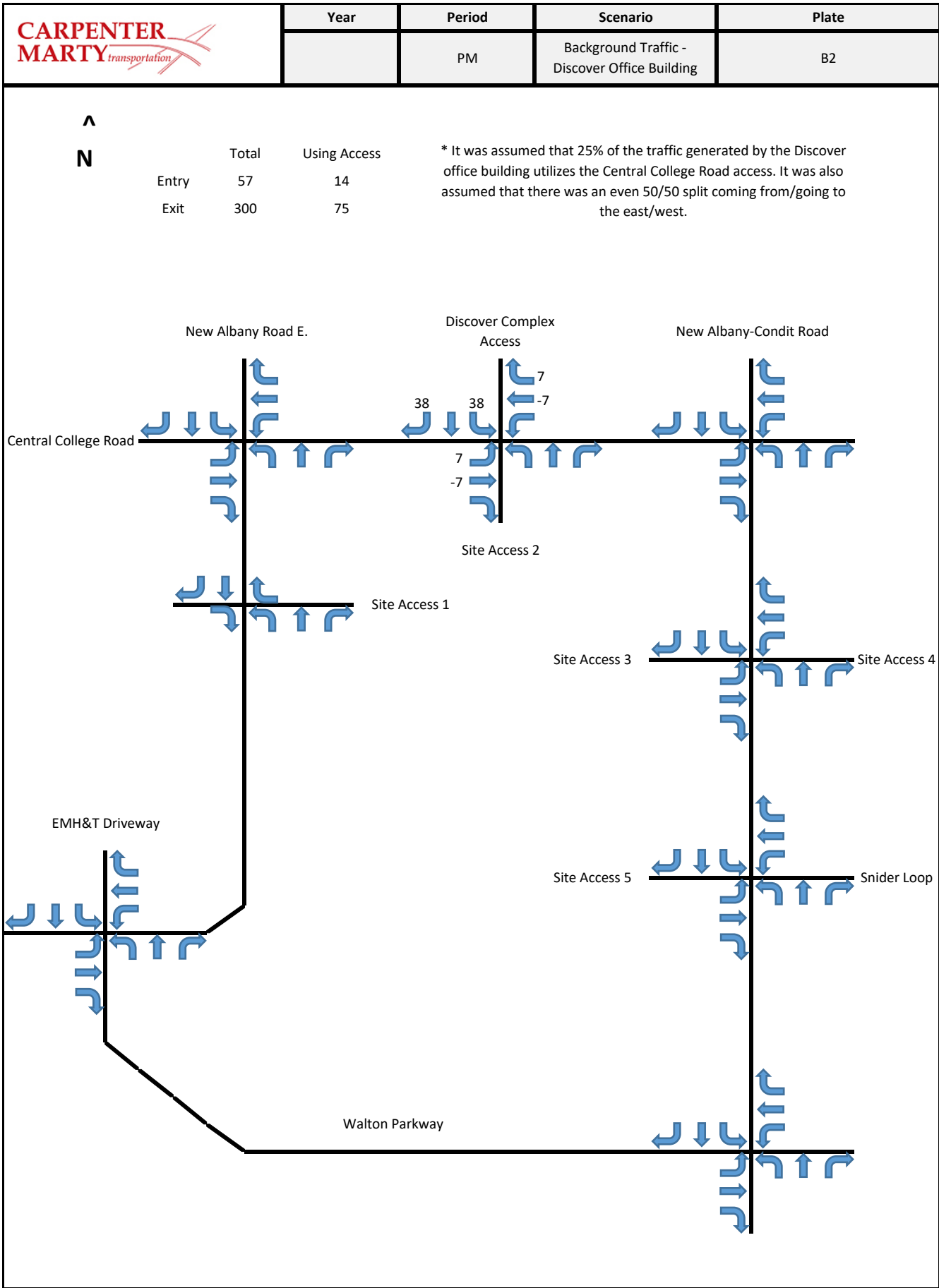
NMD Mixed-Use Development TIS Traffic Volume Calculations

	Year	Period	Scenario	Plate
	2022	PM	Background	A2




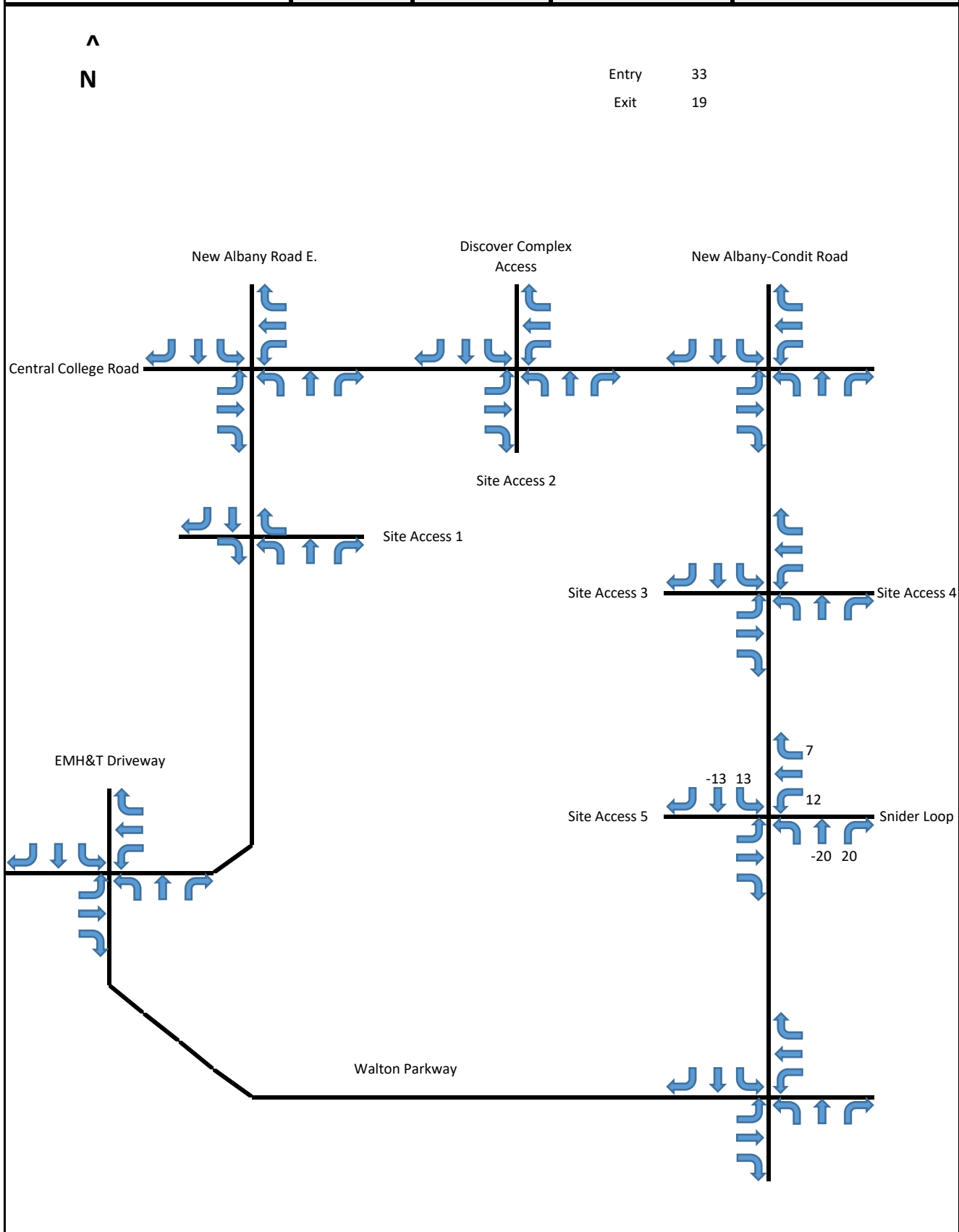
NMD Mixed-Use Development TIS

Traffic Volume Calculations



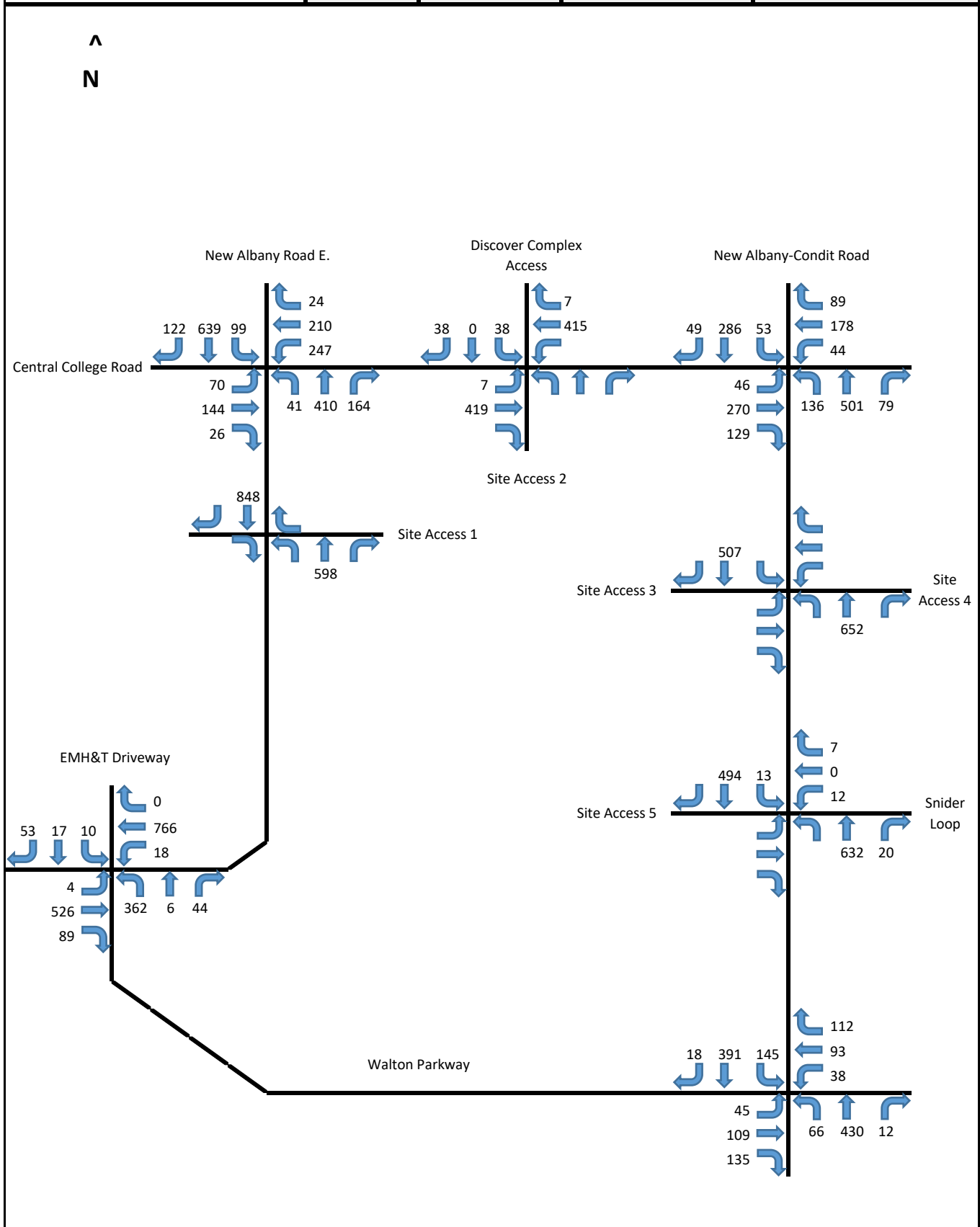
NMD Mixed-Use Development TIS Traffic Volume Calculations

	Year	Period	Scenario	Plate
		PM	Background Traffic - Residential Development	C2



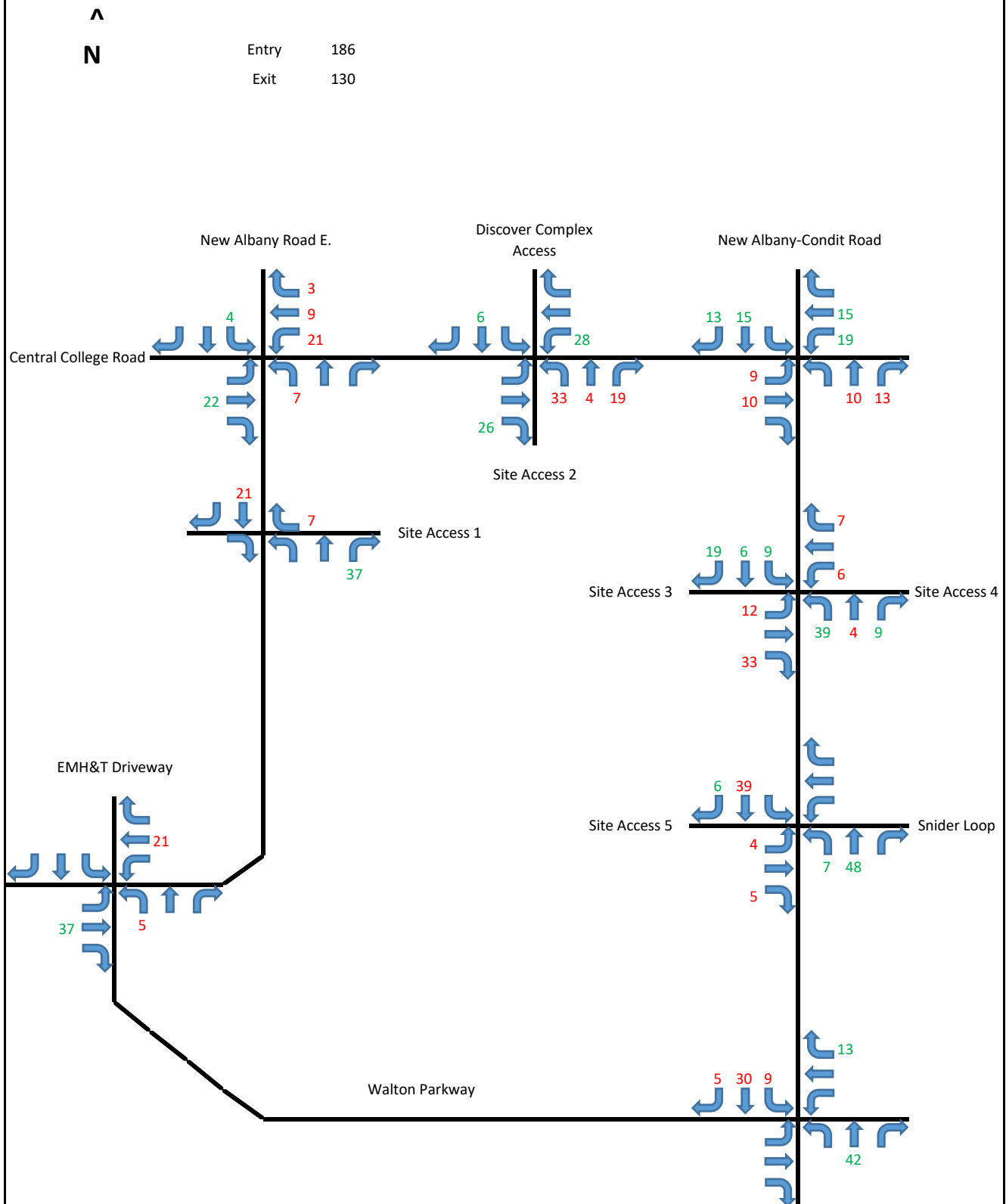
Traffic Volume Calculations

Year	Period	Scenario	Plate
2022	PM	No Build	D2 = A2 + B2 + C2

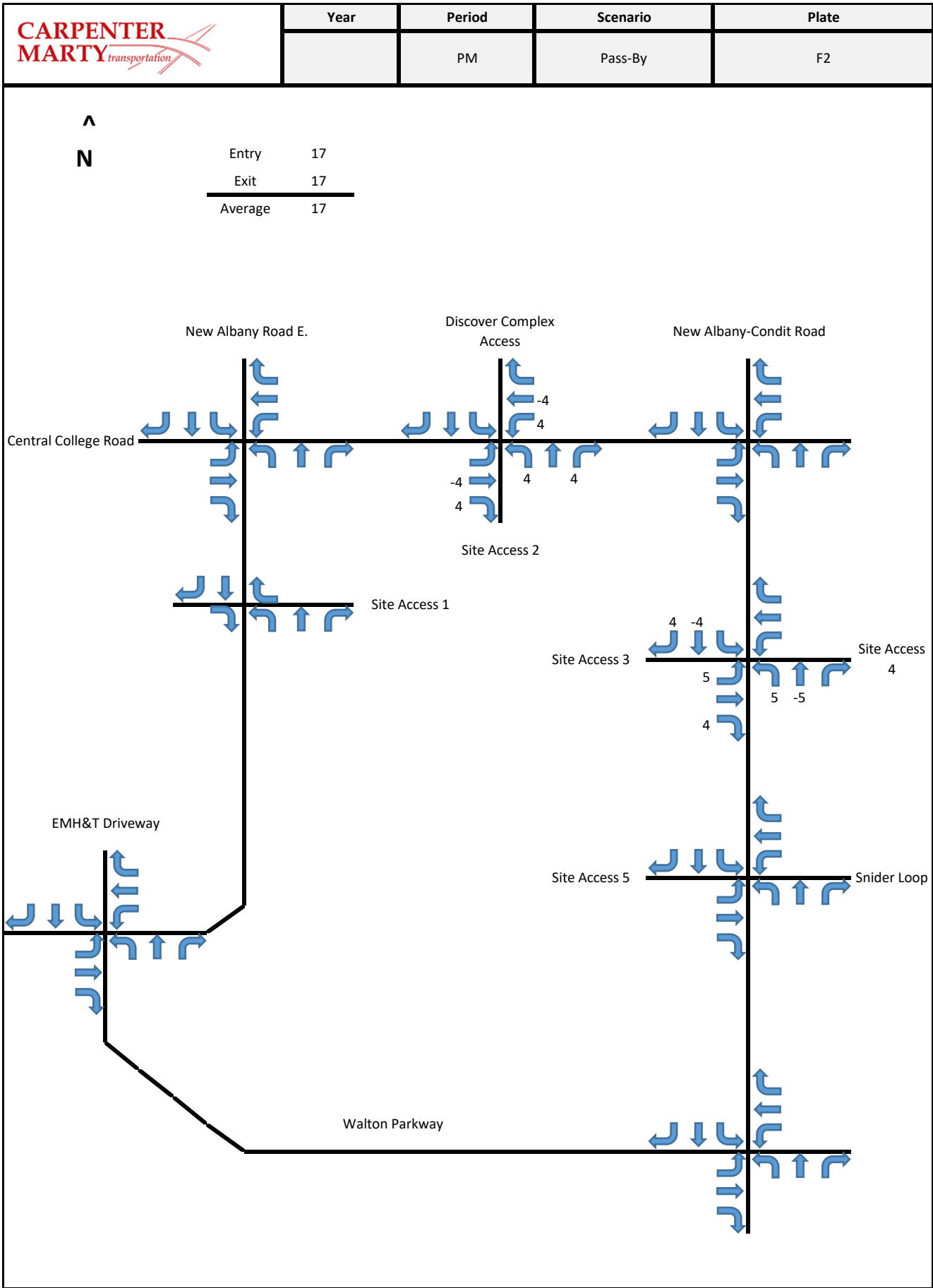


CARPENTER
MARTY *transportation*

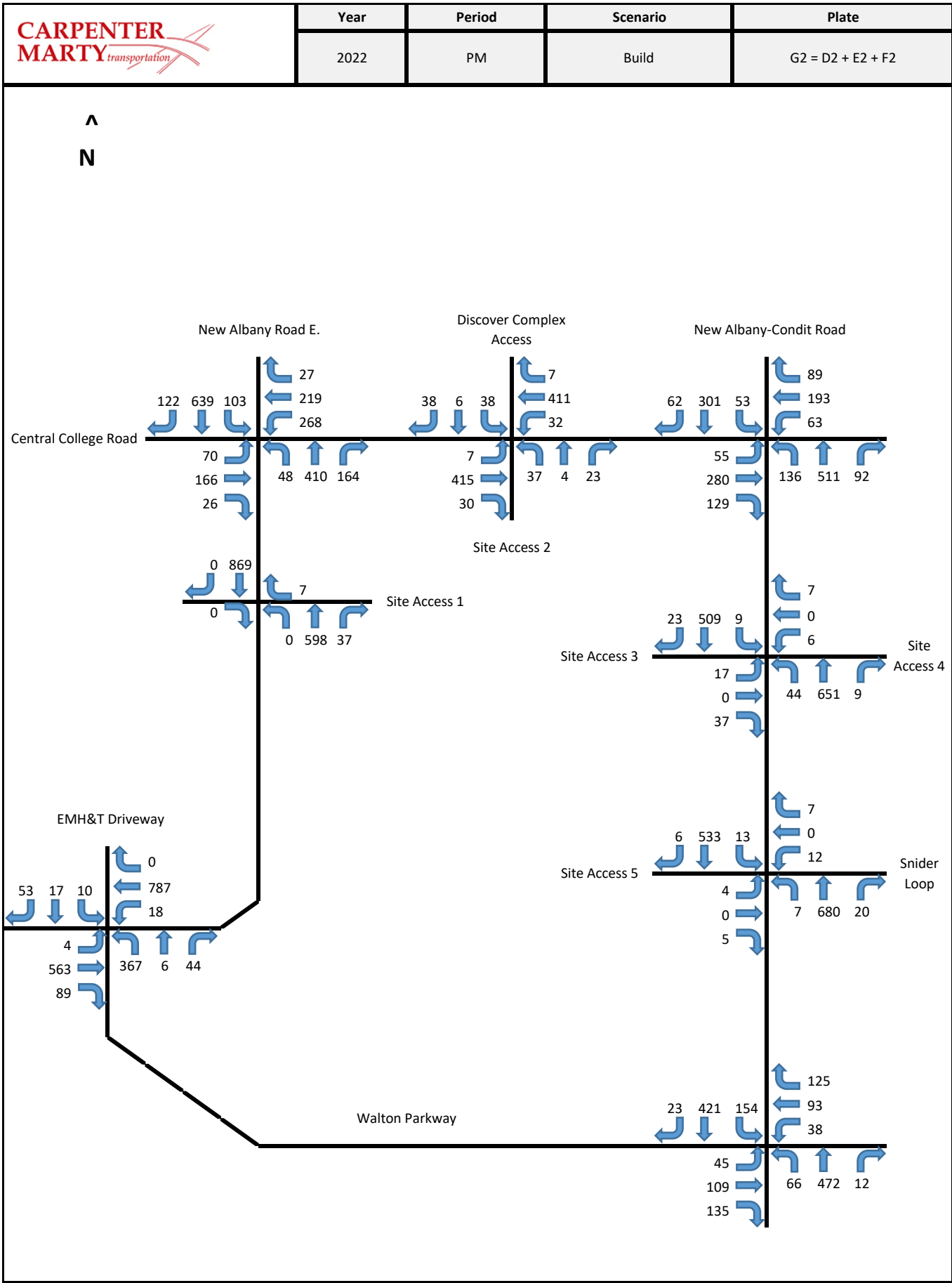
Year	Period	Scenario	Plate
	PM	Non-Pass-By	E2



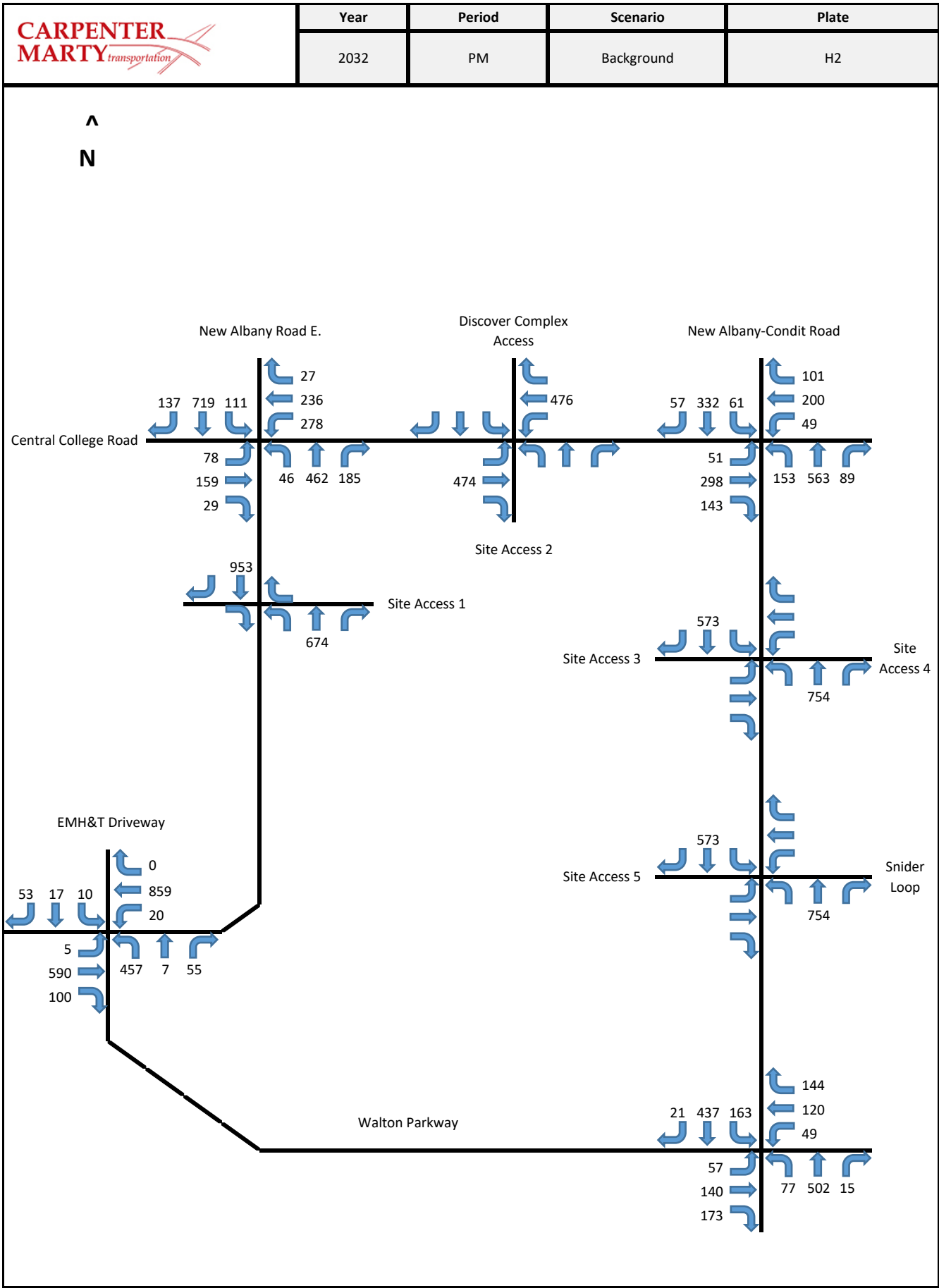
NMD Mixed-Use Development TIS
Traffic Volume Calculations




NMD Mixed-Use Development TIS
Traffic Volume Calculations

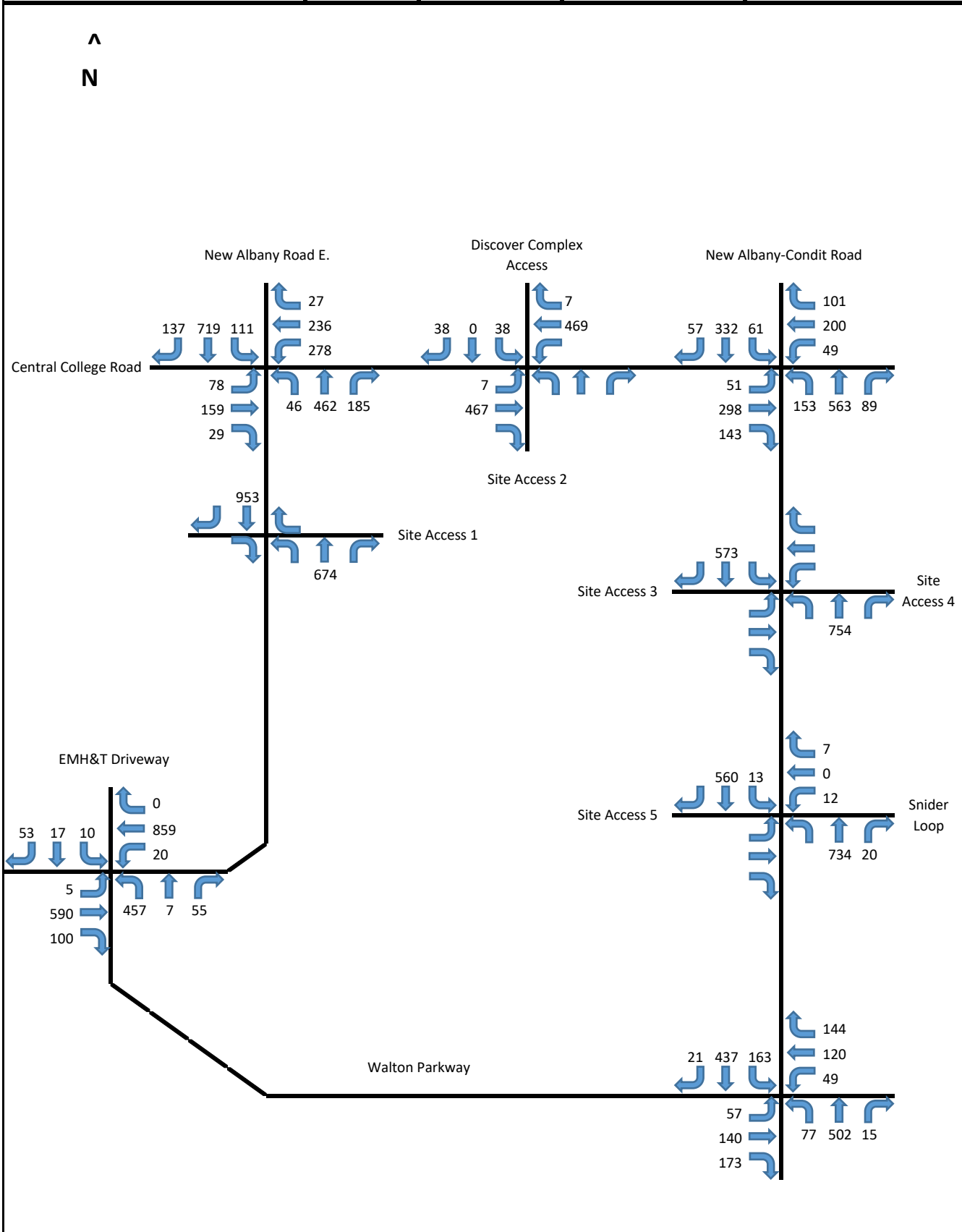


NMD Mixed-Use Development TIS
Traffic Volume Calculations

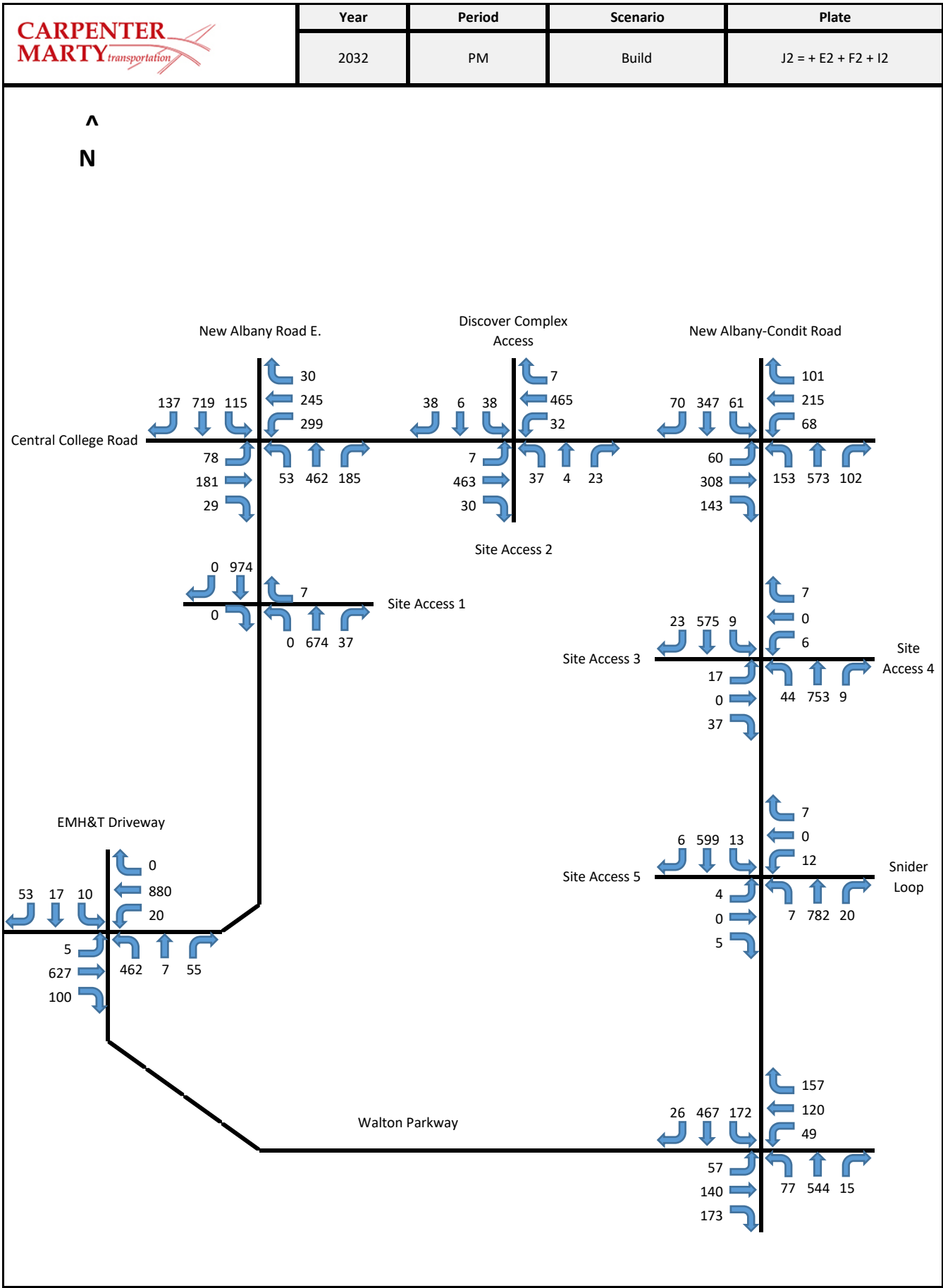


NMD Mixed-Use Development TIS Traffic Volume Calculations

	Year	Period	Scenario	Plate
	2032	PM	No Build	I2 = B2 + C2 + H2



NMD Mixed-Use Development TIS
Traffic Volume Calculations



Appendix E

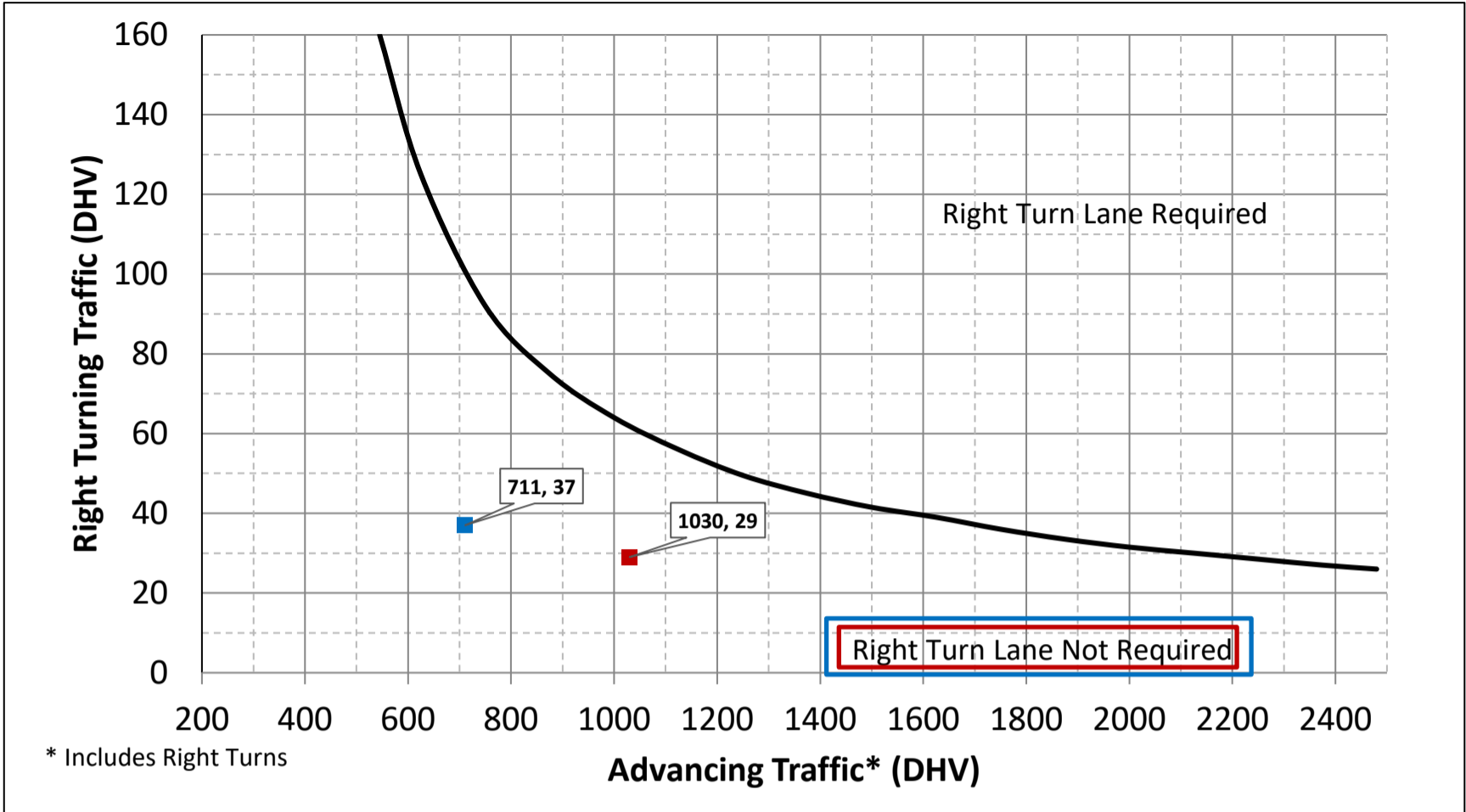
Turn Lane Warrant Analysis

Traffic Volume Calculations

Turn lane Warrant Results



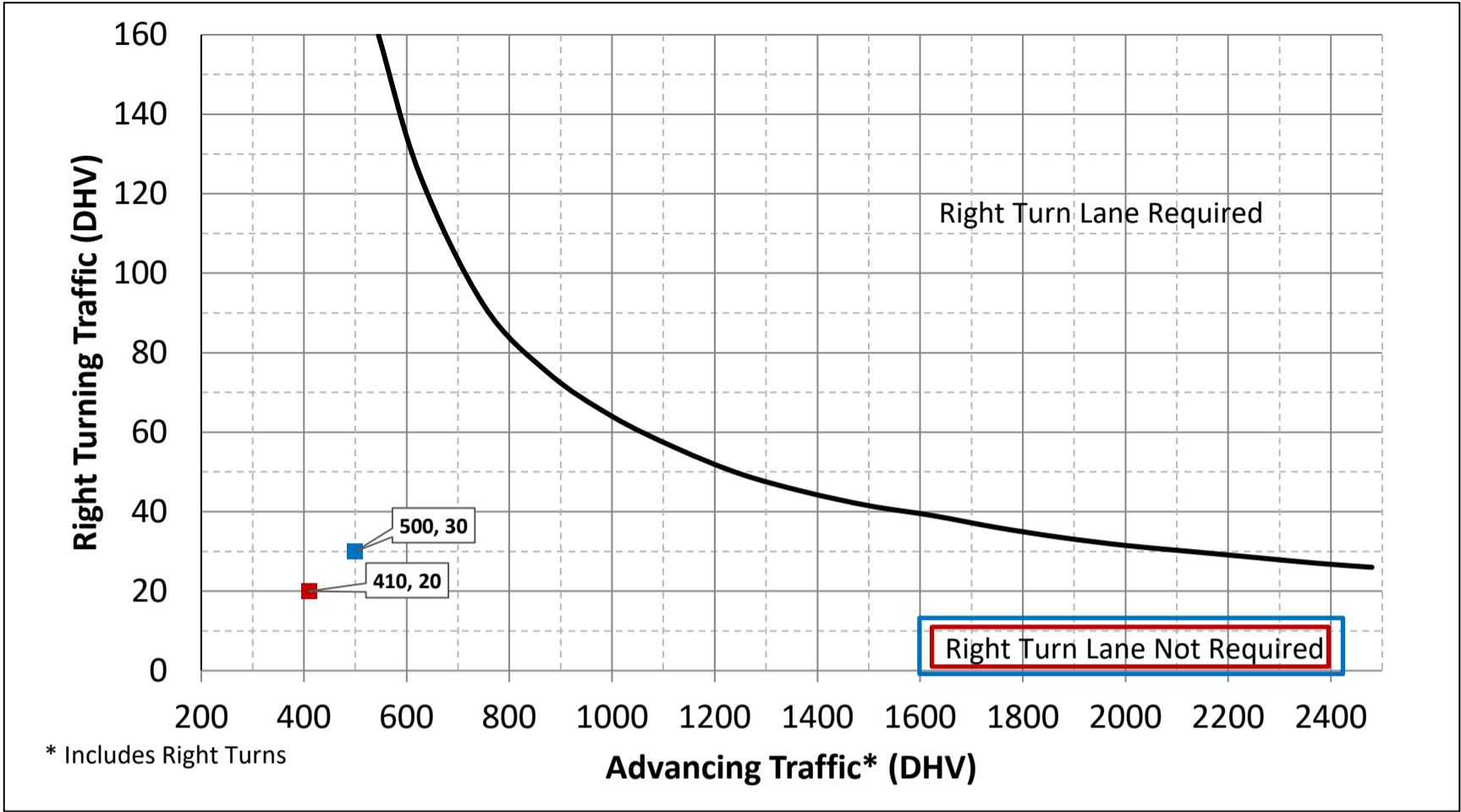
4-Lane Highway Right Turn Lane Warrant
(= < 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

AM Peak	Design Speed	40	mph	* Turn Lane Length includes 50 ft diverging taper
	Traffic Control	Unsignalized		
	Cycle Length	Unsignalized		
	Cycles Per Hour	60	Assume 60	
	Turn Lane Volume	29	VPH	
	Advancing Traffic	1030	VPH	
	Right Turn Percentage	3%		
	Location Type	Through Road		
	Condition	B		
	Vehicles/Cycle	1		
	Turn Lane Length	125		
PM Peak	Design Speed	40	mph	* Turn Lane Length includes 50 ft diverging taper
	Traffic Control	Unsignalized		
	Cycle Length	Unsignalized		
	Cycles Per Hour	60	Assume 60	
	Turn Lane Volume	37	VPH	
	Advancing Traffic	711	VPH	
	Right Turn Percentage	5%		
	Location Type	Through Road		
	Condition	B		
	Vehicles/Cycle	1		
	Turn Lane Length	125		
Is Right Turn Warrant Met		No	No Right Turn Lane Required	

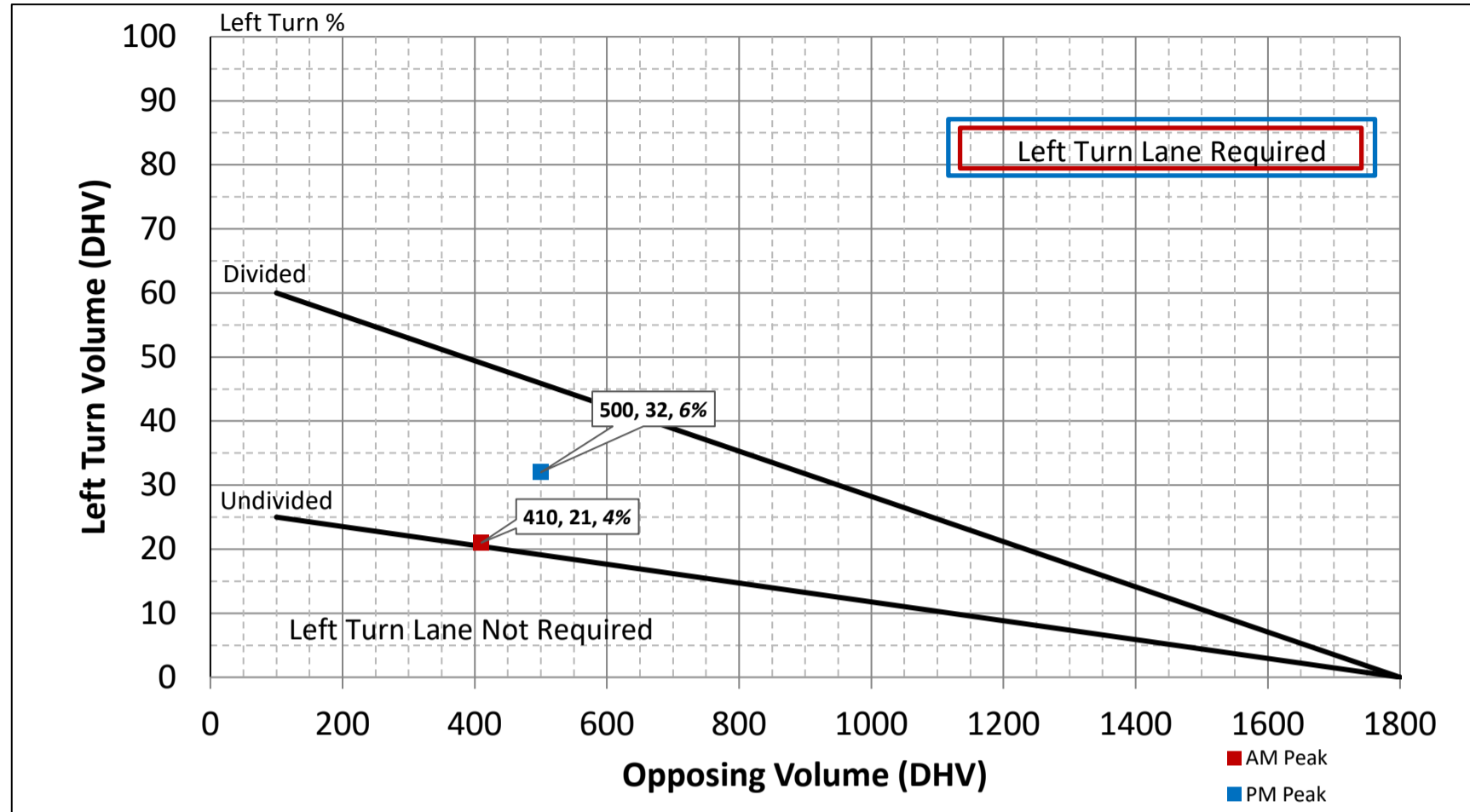
4-Lane Highway Right Turn Lane Warrant
(= < 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

AM Peak	Design Speed	40	mph	* Turn Lane Length includes 50 ft diverging taper
	Traffic Control	Unsignalized		
	Cycle Length	Unsignalized		
	Cycles Per Hour	60	Assume 60	
	Turn Lane Volume	20	VPH	
	Advancing Traffic	410	VPH	
	Right Turn Percentage	5%		
	Location Type	Through Road		
	Condition	B		
	Vehicles/Cycle	1		
	Turn Lane Length	125		
PM Peak	Design Speed	40	mph	* Turn Lane Length includes 50 ft diverging taper
	Traffic Control	Unsignalized		
	Cycle Length	Unsignalized		
	Cycles Per Hour	60	Assume 60	
	Turn Lane Volume	30	VPH	
	Advancing Traffic	500	VPH	
	Right Turn Percentage	6%		
	Location Type	Through Road		
	Condition	B		
	Vehicles/Cycle	1		
	Turn Lane Length	125		
Is Right Turn Warrant Met		No	No Right Turn Lane Required	

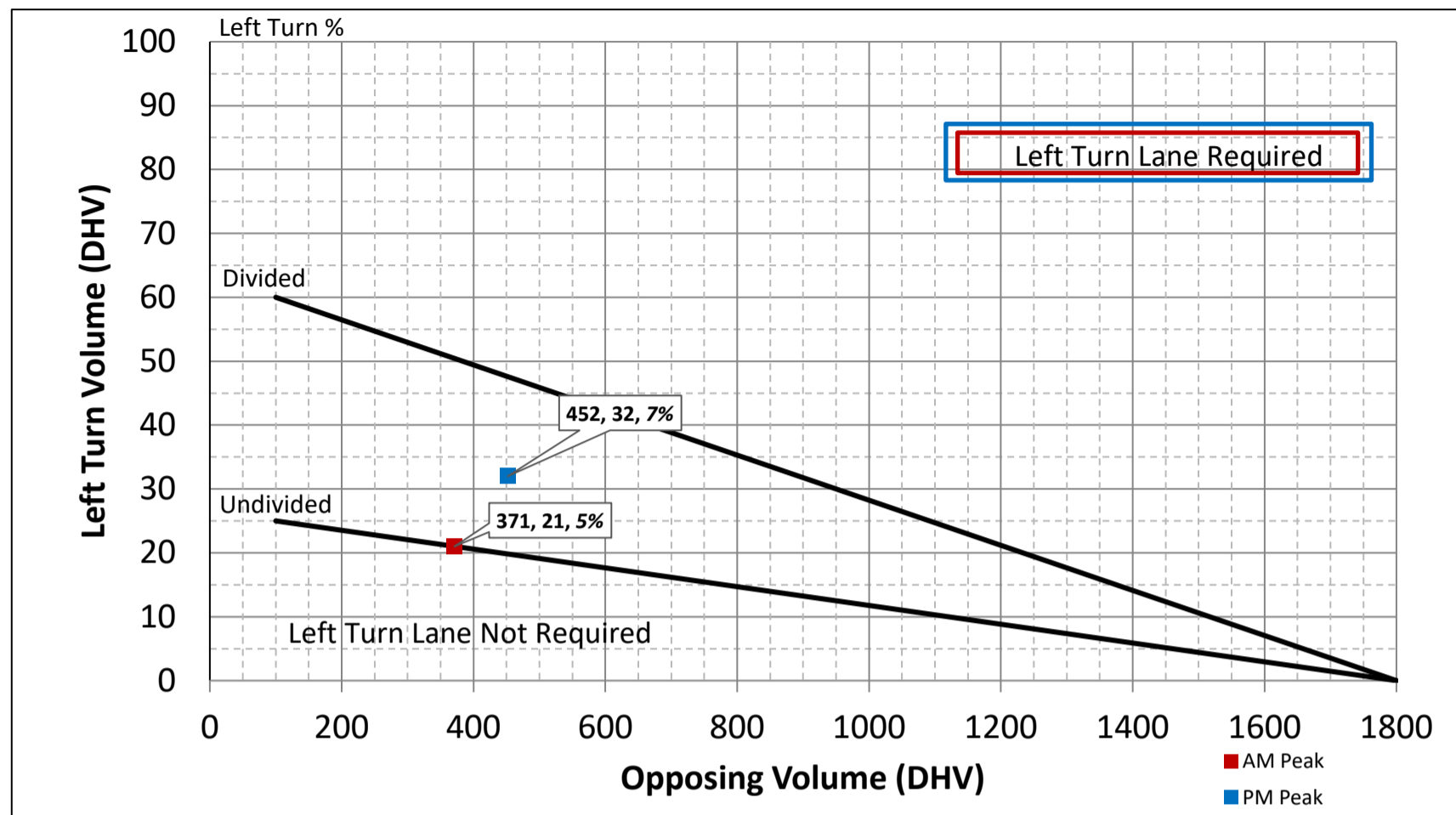
4-Lane Highway Left Turn Lane Warrant



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	21	VPH
	Advancing Traffic	484	VPH
	Opposing Volume	410	VPH
	Left Turn Percentage	4%	
	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	32	VPH
	Advancing Traffic	504	VPH
	Opposing Volume	500	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		Yes	See Above

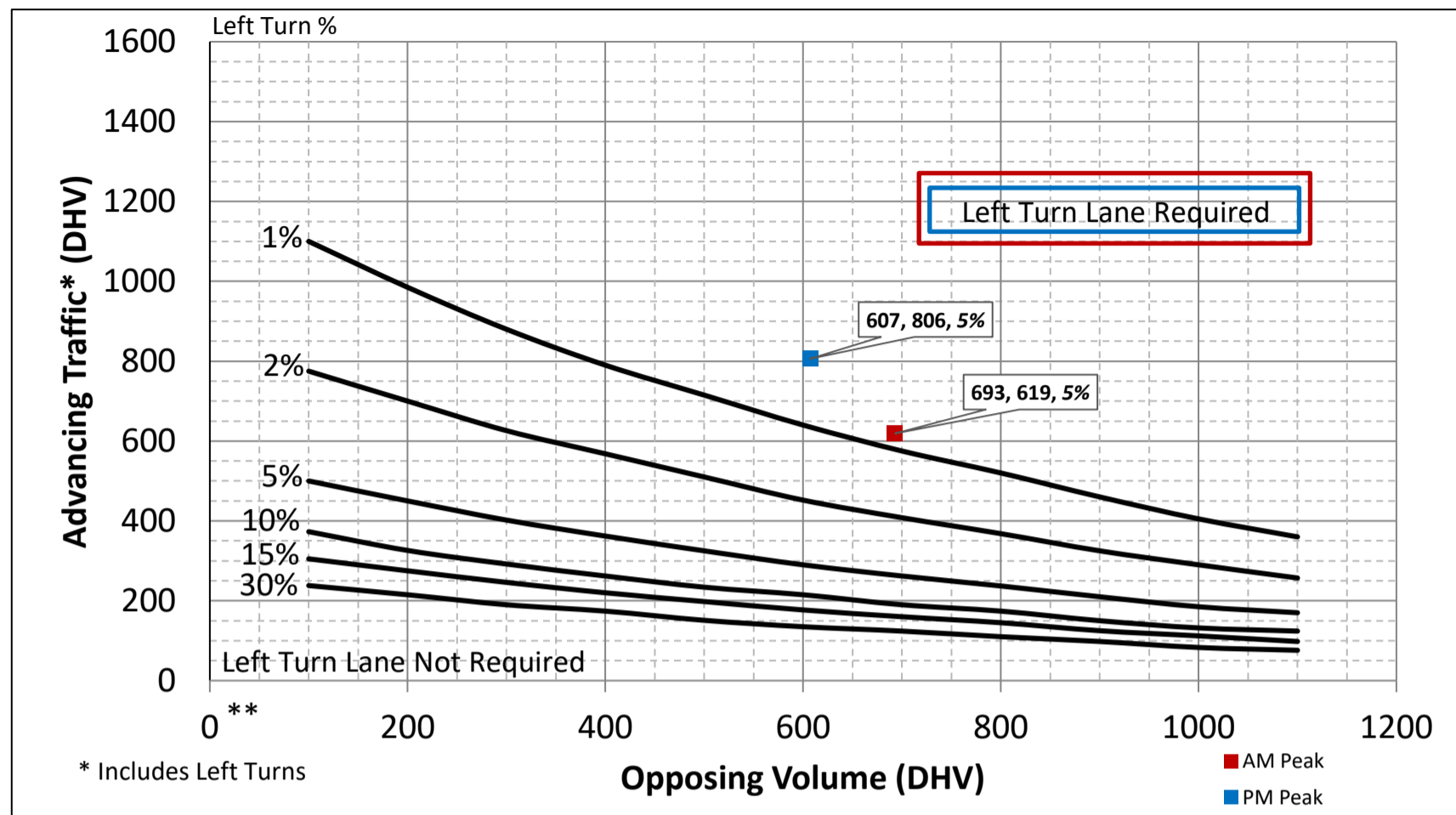
4-Lane Highway Left Turn Lane Warrant



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	21	VPH
	Advancing Traffic	432	VPH
	Opposing Volume	371	VPH
	Left Turn Percentage	5%	
	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	32	VPH
	Advancing Traffic	450	VPH
	Opposing Volume	452	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	
Is Left Turn Warrant Met		Yes	See Above

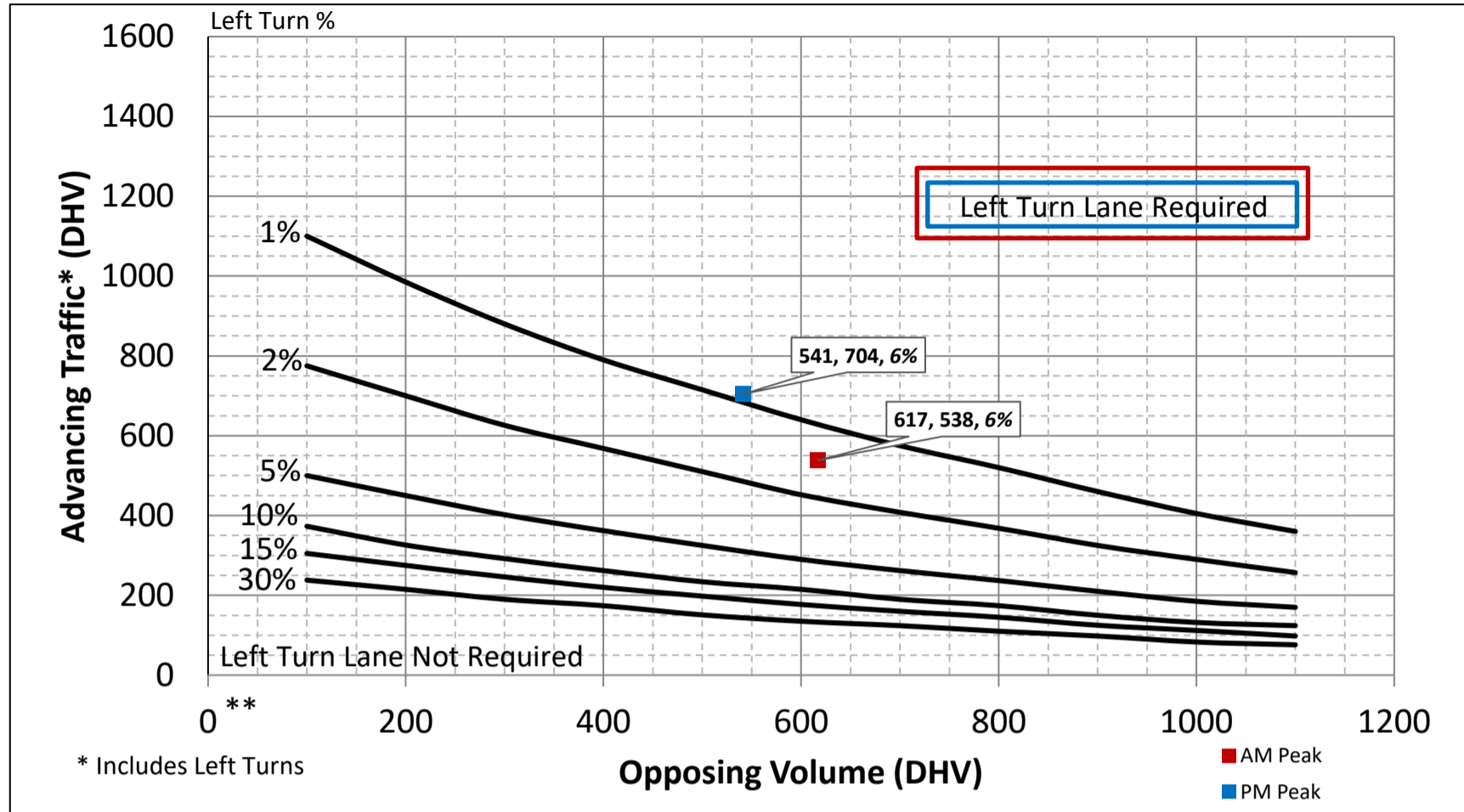
2-Lane Highway Left Turn Lane Warrant (> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

AM Peak	Design Speed	50	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	Assume 60
	Turn Lane Volume	30	VPH
	Advancing Traffic	619	VPH
	Opposing Volume	693	VPH
	Left Turn Percentage	5%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	225	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	600	
PM Peak	Design Speed	50	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	Assume 60
	Turn Lane Volume	44	VPH
	Advancing Traffic	806	VPH
	Opposing Volume	607	VPH
	Left Turn Percentage	5%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	225	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	600	
Is Left Turn Warrant Met		Yes	See Above

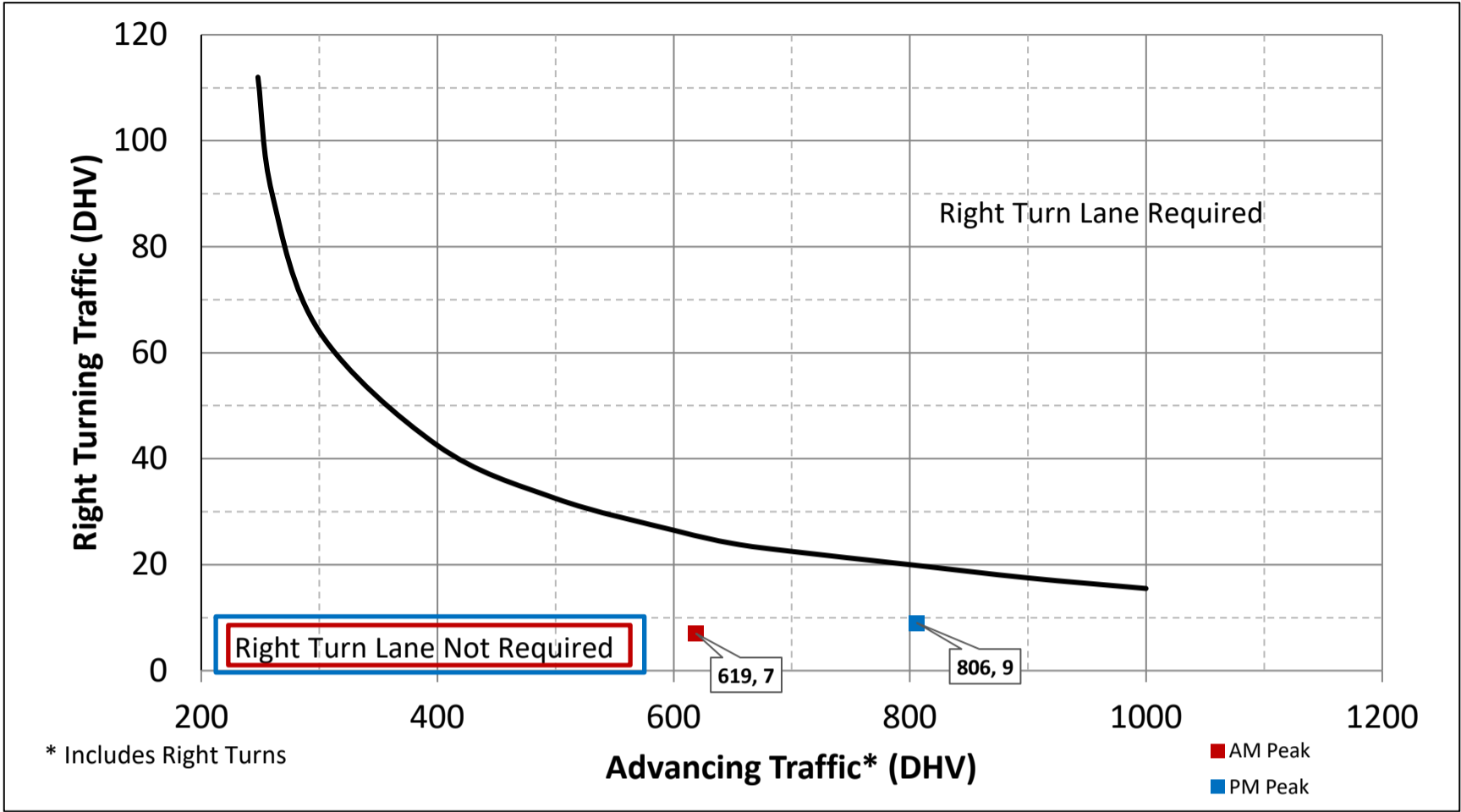
2-Lane Highway Left Turn Lane Warrant (> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

AM Peak	Design Speed	50	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	Assume 60
	Turn Lane Volume	30	VPH
	Advancing Traffic	538	VPH
	Opposing Volume	617	VPH
	Left Turn Percentage	6%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	225	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	600	
PM Peak	Design Speed	50	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	Assume 60
	Turn Lane Volume	44	VPH
	Advancing Traffic	704	VPH
	Opposing Volume	541	VPH
	Left Turn Percentage	6%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	225	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	600	
Is Left Turn Warrant Met		Yes	See Above

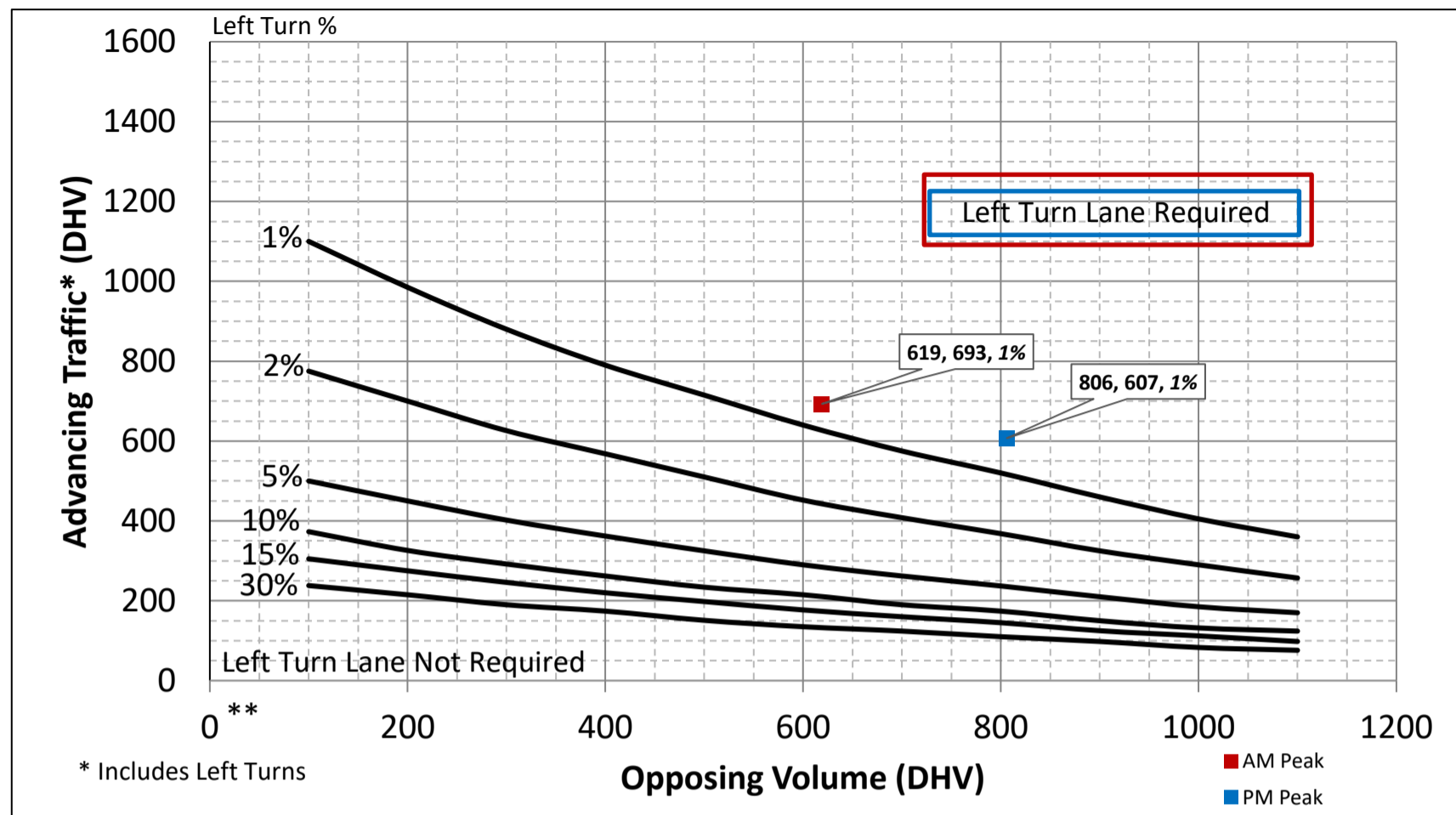
2-Lane Highway Right Turn Lane Warrant
(> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

AM Peak	Design Speed	50	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	Assume 60
	Turn Lane Volume	7	VPH
	Advancing Traffic	619	VPH
	Right Turn Percentage	1%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	225	
			* Turn Lane Length includes 50 ft diverging taper
PM Peak	Design Speed	50	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	Assume 60
	Turn Lane Volume	9	VPH
	Advancing Traffic	806	VPH
	Right Turn Percentage	1%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	225	
			* Turn Lane Length includes 50 ft diverging taper
Is Right Turn Warrant Met		No	No Right Turn Lane Required

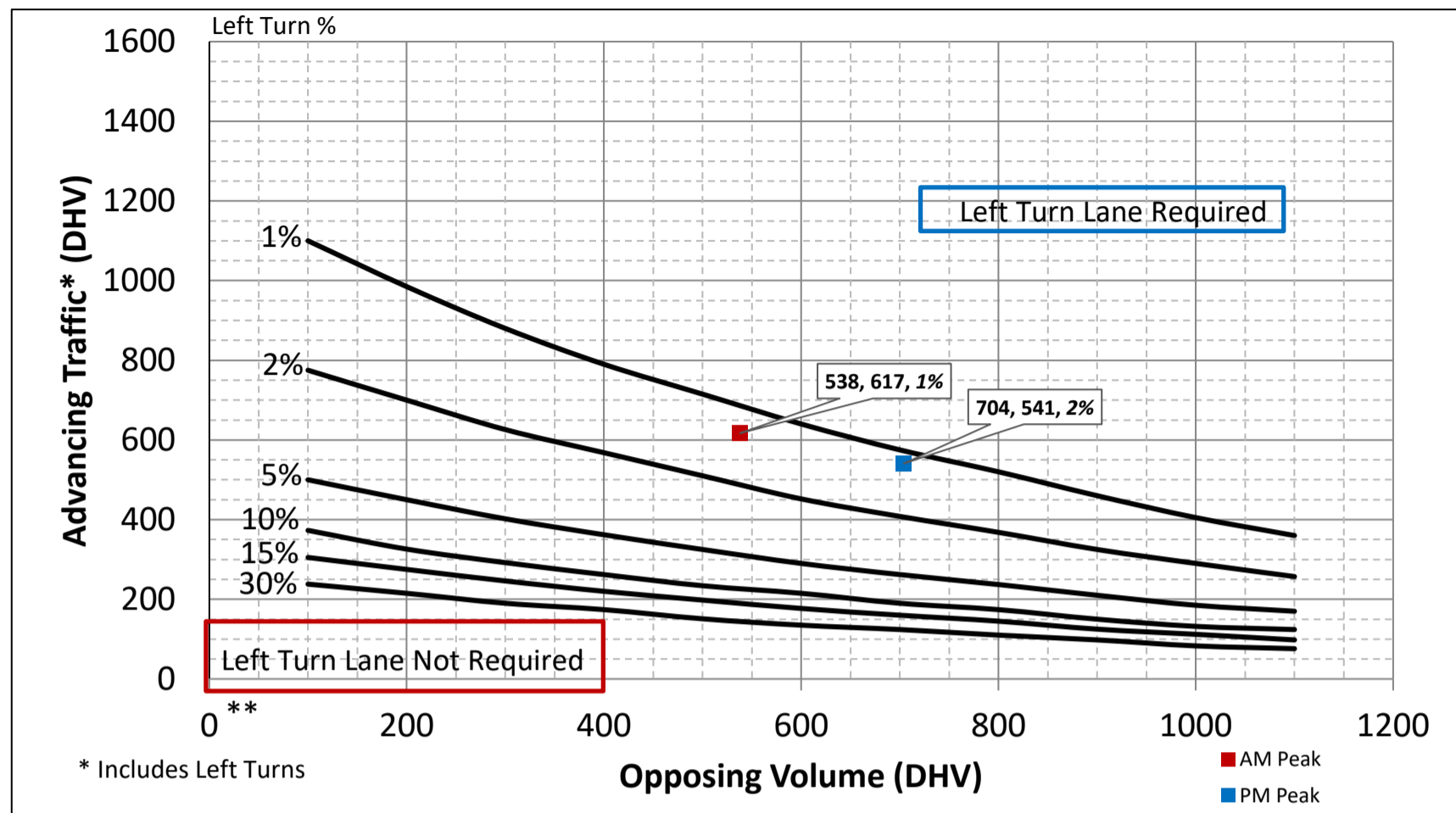
2-Lane Highway Left Turn Lane Warrant (> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

AM Peak	Design Speed	50	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	Assume 60
	Turn Lane Volume	7	VPH
	Advancing Traffic	693	VPH
	Opposing Volume	619	VPH
	Left Turn Percentage	1%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	225	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	600	
PM Peak	Design Speed	50	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	Assume 60
	Turn Lane Volume	9	VPH
	Advancing Traffic	607	VPH
	Opposing Volume	806	VPH
	Left Turn Percentage	1%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	225	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	600	
Is Left Turn Warrant Met		Yes	See Above

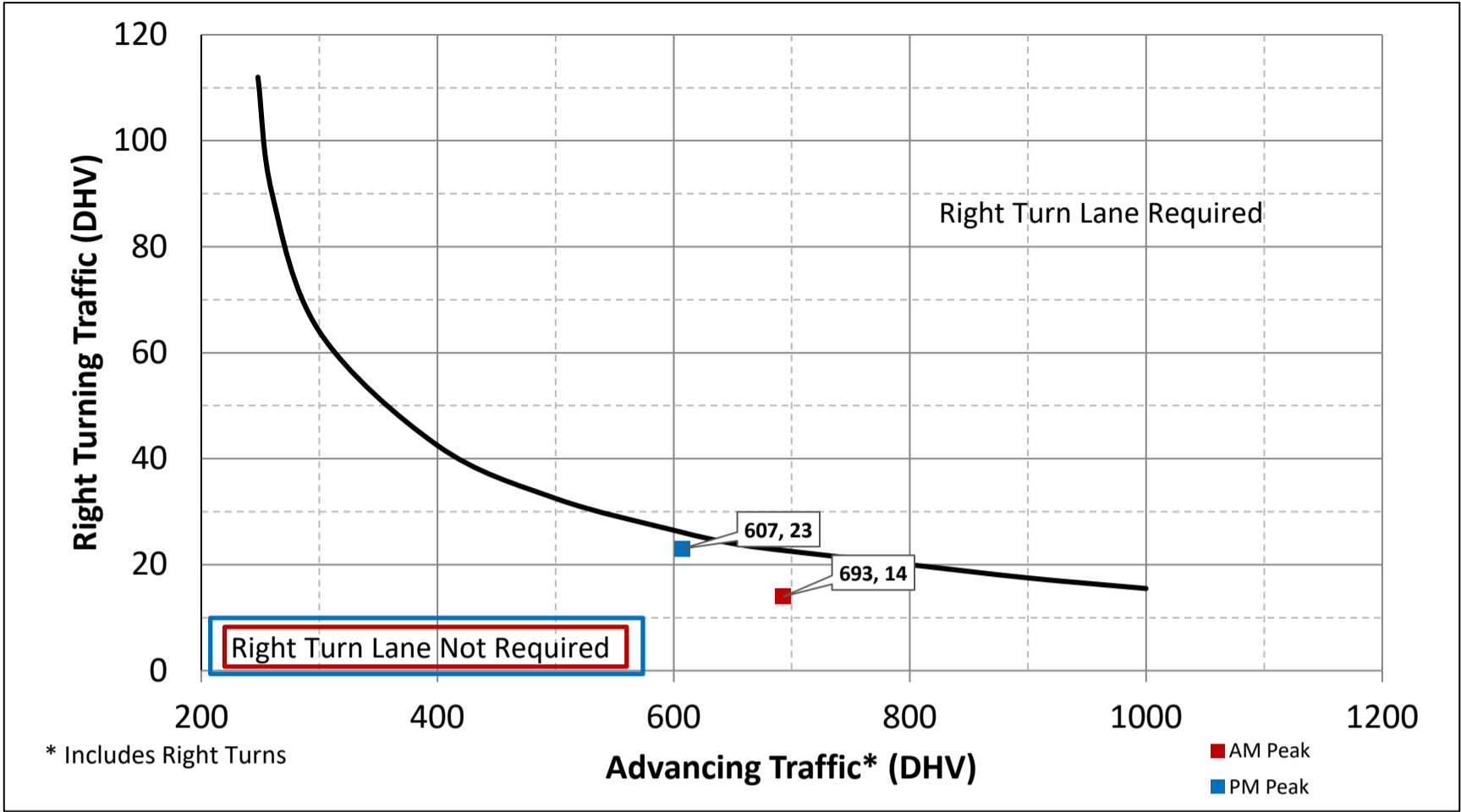
2-Lane Highway Left Turn Lane Warrant (> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

AM Peak	Design Speed	50	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	Assume 60
	Turn Lane Volume	7	VPH
	Advancing Traffic	617	VPH
	Opposing Volume	538	VPH
	Left Turn Percentage	1%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	225	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	600	
PM Peak	Design Speed	50	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	Assume 60
	Turn Lane Volume	9	VPH
	Advancing Traffic	541	VPH
	Opposing Volume	704	VPH
	Left Turn Percentage	2%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	225	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	600	
Is Left Turn Warrant Met		Yes	See Above

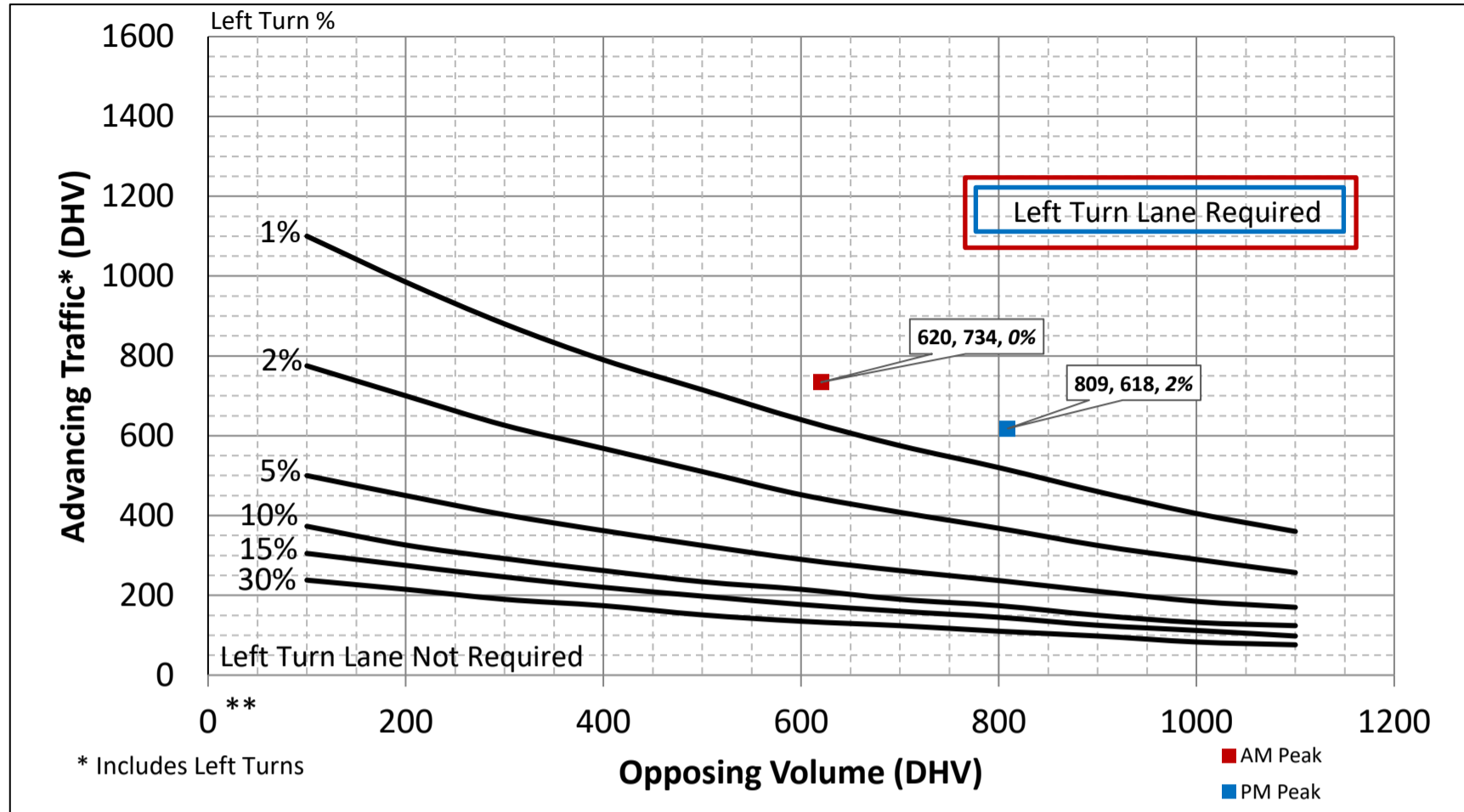
2-Lane Highway Right Turn Lane Warrant
(> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

AM Peak	Design Speed	50	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	Assume 60
	Turn Lane Volume	14	VPH
	Advancing Traffic	693	VPH
	Right Turn Percentage	2%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	225	
			* Turn Lane Length includes 50 ft diverging taper
PM Peak	Design Speed	50	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	Assume 60
	Turn Lane Volume	23	VPH
	Advancing Traffic	607	VPH
	Right Turn Percentage	4%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	225	
			* Turn Lane Length includes 50 ft diverging taper
Is Right Turn Warrant Met		No	No Right Turn Lane Required

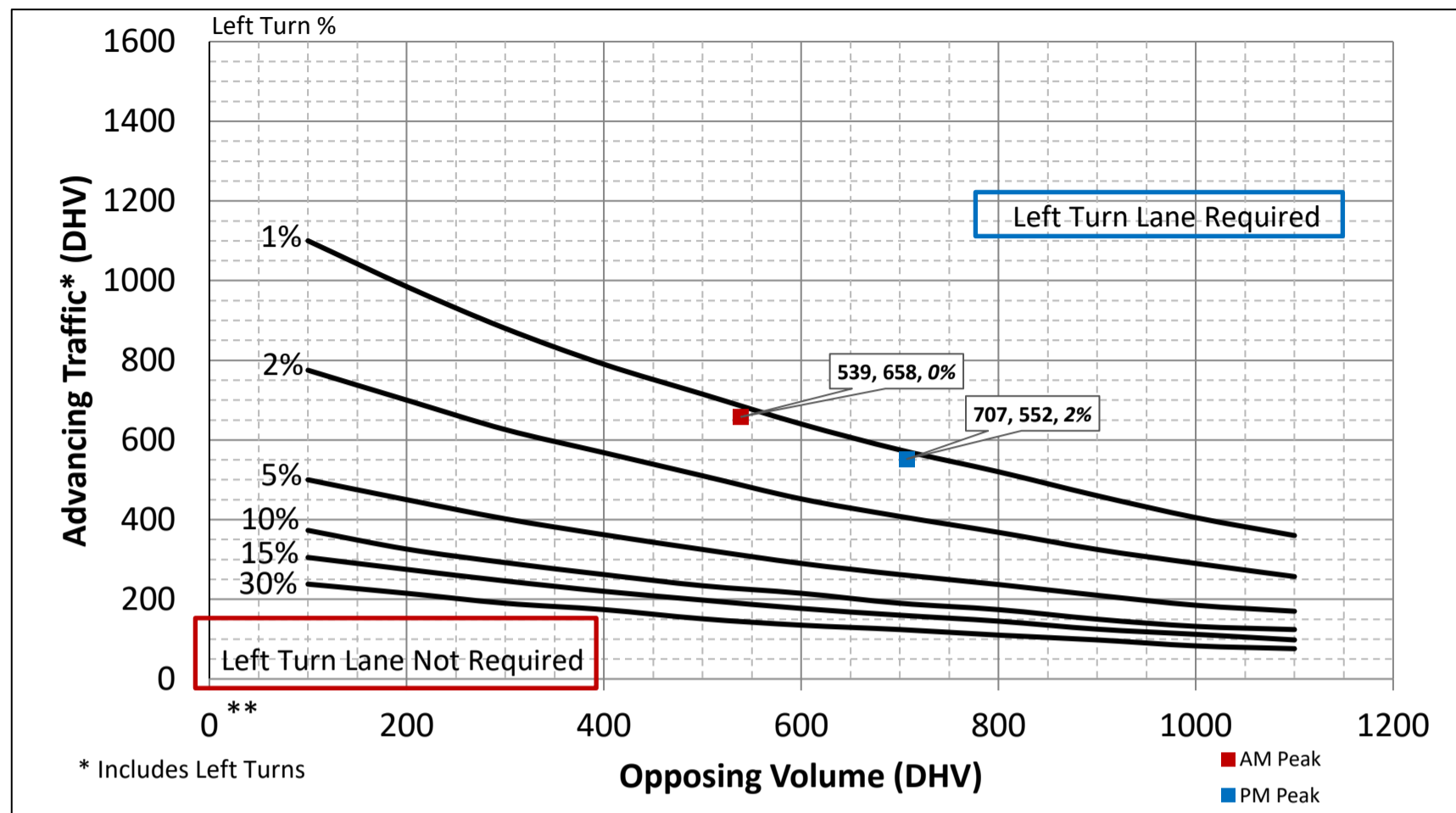
2-Lane Highway Left Turn Lane Warrant
(> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

AM Peak	Design Speed	50	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	Assume 60
	Turn Lane Volume	3	VPH
	Advancing Traffic	734	VPH
	Opposing Volume	620	VPH
	Left Turn Percentage	0%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	225	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	600	
PM Peak	Design Speed	50	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	Assume 60
	Turn Lane Volume	13	VPH
	Advancing Traffic	618	VPH
	Opposing Volume	809	VPH
	Left Turn Percentage	2%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	225	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	600	
Is Left Turn Warrant Met		Yes	See Above

2-Lane Highway Left Turn Lane Warrant (> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

AM Peak	Design Speed	50	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	Assume 60
	Turn Lane Volume	3	VPH
	Advancing Traffic	658	VPH
	Opposing Volume	539	VPH
	Left Turn Percentage	0%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	225	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	600	
PM Peak	Design Speed	50	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	Assume 60
	Turn Lane Volume	13	VPH
	Advancing Traffic	552	VPH
	Opposing Volume	707	VPH
	Left Turn Percentage	2%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	225	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	600	
Is Left Turn Warrant Met		Yes	See Above

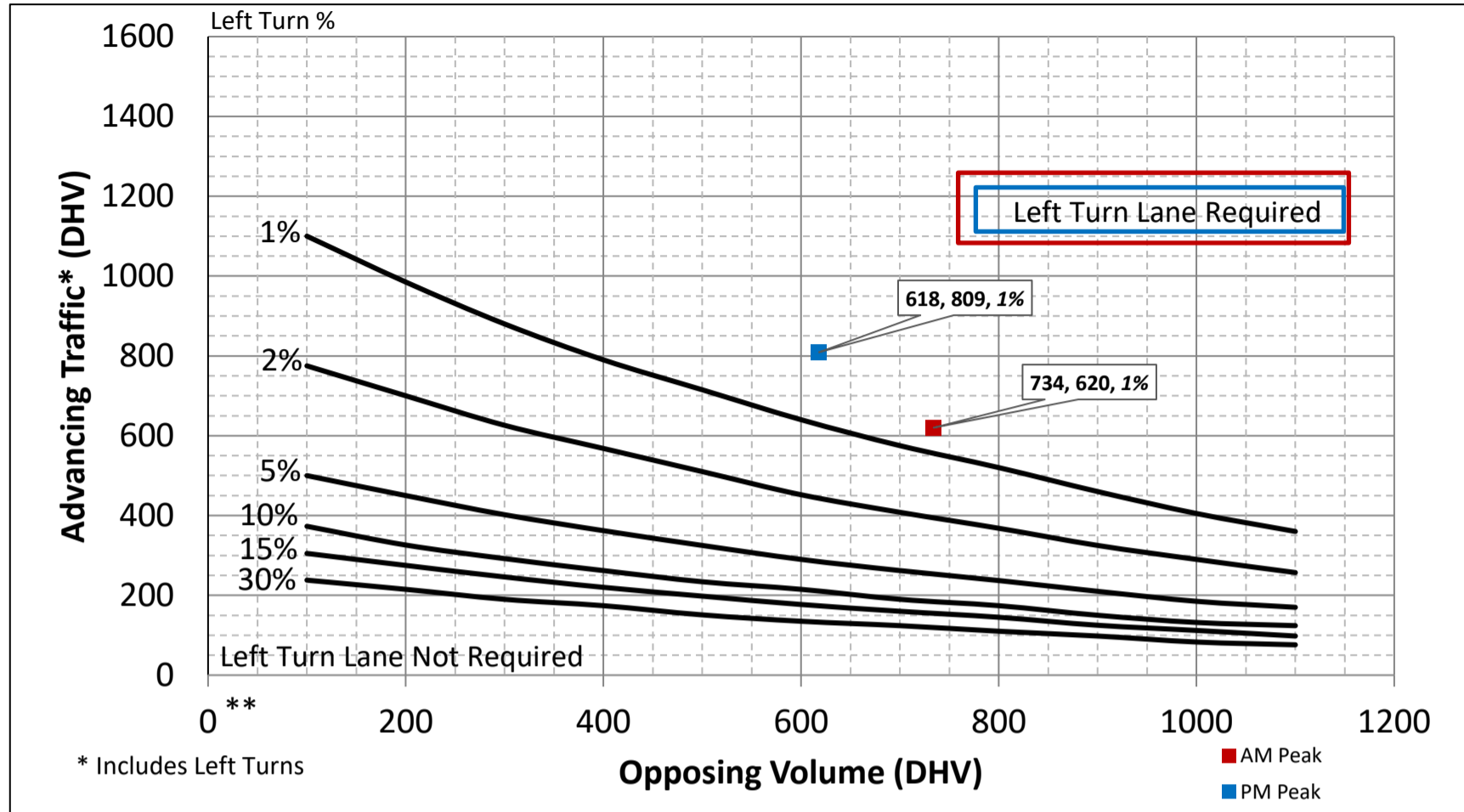
The graph illustrates the relationship between Advancing Traffic* (DHV) on the x-axis and Right Turning Traffic (DHV) on the y-axis. A curve separates the region where a Right Turn Lane is 'Not Required' (below the curve) from where it is 'Required' (above the curve). Two specific data points are highlighted: a PM Peak at (618, 6) and an AM Peak at (734, 4).

Advancing Traffic* (DHV)	Right Turning Traffic (DHV)	Peak Type
618	6	PM Peak
734	4	AM Peak

* Includes Right Turns

AM Peak	Design Speed	50	mph	* Turn Lane Length includes 50 ft diverging taper
	Traffic Control	Unsignalized		
	Cycle Length	Unsignalized		
	Cycles Per Hour	60	Assume 60	
	Turn Lane Volume	4	VPH	
	Advancing Traffic	734	VPH	
	Right Turn Percentage	1%		
	Location Type	Through Road		
	Condition	B		
	Vehicles/Cycle	1		
	Turn Lane Length	225		
PM Peak	Design Speed	50	mph	* Turn Lane Length includes 50 ft diverging taper
	Traffic Control	Unsignalized		
	Cycle Length	Unsignalized		
	Cycles Per Hour	60	Assume 60	
	Turn Lane Volume	6	VPH	
	Advancing Traffic	618	VPH	
	Right Turn Percentage	1%		
	Location Type	Through Road		
	Condition	B		
	Vehicles/Cycle	1		
	Turn Lane Length	225		
Is Right Turn Warrant Met		No	No Right Turn Lane Required	* Turn Lane Length includes 50 ft diverging taper

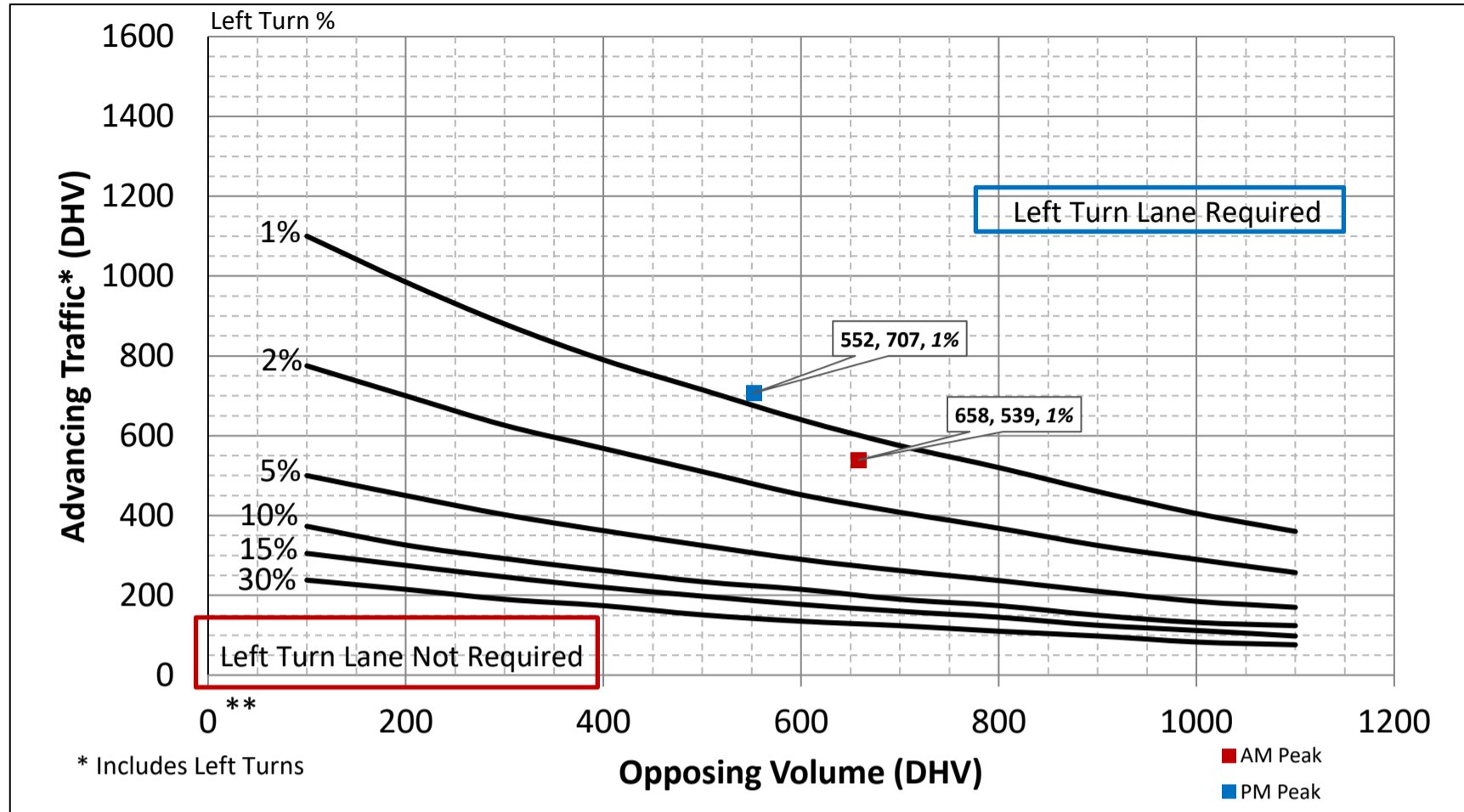
2-Lane Highway Left Turn Lane Warrant (> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

AM Peak	Design Speed	50	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	Assume 60
	Turn Lane Volume	7	VPH
	Advancing Traffic	620	VPH
	Opposing Volume	734	VPH
	Left Turn Percentage	1%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	225	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	600	
PM Peak	Design Speed	50	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	Assume 60
	Turn Lane Volume	7	VPH
	Advancing Traffic	809	VPH
	Opposing Volume	618	VPH
	Left Turn Percentage	1%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	225	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	600	
Is Left Turn Warrant Met		Yes	See Above

2-Lane Highway Left Turn Lane Warrant
(> 40 mph or 70 kph Posted Speed)



Turn Lane Length Calculations

AM Peak	Design Speed	50	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	Assume 60
	Turn Lane Volume	7	VPH
	Advancing Traffic	539	VPH
	Opposing Volume	658	VPH
	Left Turn Percentage	1%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	225	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	600	
PM Peak	Design Speed	50	mph
	Traffic Control	Unsignalized	
	Cycle Length	Unsignalized	
	Cycles Per Hour	60	Assume 60
	Turn Lane Volume	7	VPH
	Advancing Traffic	707	VPH
	Opposing Volume	552	VPH
	Left Turn Percentage	1%	
	Location Type	Through Road	
	Condition	B	
	Vehicles/Cycle	1	
	Turn Lane Length	225	* Turn Lane Length includes 50 ft diverging taper
	Offset Width	12	
	Approach Taper	600	
Is Left Turn Warrant Met		Yes	See Above

Right Turn Lane Length Calculations

AM Peak	Design Speed	50	mph
	Traffic Control	Signalized - 4 Phase	
	Cycle Length	Unknown	
	Cycles Per Hour	30	Assume 30
	Turn Lane Volume	50	VPH
	Advancing Traffic	615	VPH
	Right Turn Percentage	8%	
	Location Type	Intersection	
	Condition	B or C	
	Vehicles/Cycle	2	
	Turn Lane Length	See Column to Right	245
	Design Speed	50	mph
	Traffic Control	Signalized - 4 Phase	
PM Peak	Cycle Length	Unknown	
	Cycles Per Hour	30	Assume 30
	Turn Lane Volume	102	VPH
	Advancing Traffic	828	VPH
	Right Turn Percentage	12%	
	Location Type	Intersection	
	Condition	B or C	
	Vehicles/Cycle	4	
	Turn Lane Length	See Column to Right	320
	Design Speed	50	mph
	Traffic Control	Signalized - 4 Phase	
	Cycle Length	Unknown	
	Cycles Per Hour	30	Assume 30
	Turn Lane Volume	102	VPH
	Advancing Traffic	828	VPH
	Right Turn Percentage	12%	
	Location Type	Intersection	
	Condition	B or C	
	Vehicles/Cycle	4	
	Turn Lane Length	See Column to Right	320



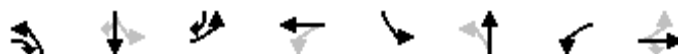
Appendix F

Capacity Analysis & Signal Warrant Analysis

Timing Report, Sorted By Phase

3: New Albany-Condit Road & Central College Road

06/04/2021



Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBTL	SBL	NBTL	WBL	EBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	15	36.4	15	23.6	15	36.4	15	23.6
Maximum Split (%)	16.7%	40.4%	16.7%	26.2%	16.7%	40.4%	16.7%	26.2%
Minimum Split (s)	15	26.7	15	23.6	15	26.4	15	23
Yellow Time (s)	3	4.7	3	3.6	3	4.4	3	3.6
All-Red Time (s)	1.8	1	1.4	1	1.8	1	1.4	1
Minimum Initial (s)	10	20	10	15	10	20	10	15
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)				7		7		
Flash Dont Walk (s)				11		11		
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	51.4	66.4	0	15	51.4	66.4
End Time (s)	15	51.4	66.4	0	15	51.4	66.4	0
Yield/Force Off (s)	10.2	45.7	62	85.4	10.2	46	62	85.4
Yield/Force Off 170(s)	10.2	45.7	62	74.4	10.2	35	62	85.4
Local Start Time (s)	75	0	36.4	51.4	75	0	36.4	51.4
Local Yield (s)	85.2	30.7	47	70.4	85.2	31	47	70.4
Local Yield 170(s)	85.2	30.7	47	59.4	85.2	20	47	70.4

Intersection Summary

Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	85

























Splits and Phases: 3: New Albany-Condit Road & Central College Road

Ø1	Ø2	Ø3	Ø4
15 s	36.4 s	15 s	23.6 s
Ø5	Ø6	Ø7	Ø8
15 s	36.4 s	15 s	23.6 s

HCM 6th Signalized Intersection Summary

3: New Albany-Condit Road & Central College Road

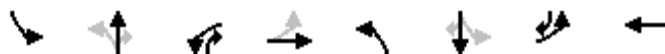
06/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	135	123	79	267	111	132	355	26	73	306	34
Future Volume (veh/h)	35	135	123	79	267	111	132	355	26	73	306	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	38	147	134	86	290	121	143	386	28	79	333	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	314	336	468	391	525	214	526	659	48	464	688	694
Arrive On Green	0.07	0.18	0.18	0.10	0.21	0.21	0.12	0.38	0.38	0.10	0.37	0.37
Sat Flow, veh/h	1781	1870	1585	1781	2463	1004	1781	1723	125	1781	1870	1585
Grp Volume(v), veh/h	38	147	134	86	207	204	143	0	414	79	333	37
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1690	1781	0	1848	1781	1870	1585
Q Serve(g_s), s	1.4	5.8	5.4	3.0	8.7	9.0	3.8	0.0	14.9	2.1	11.4	1.1
Cycle Q Clear(g_c), s	1.4	5.8	5.4	3.0	8.7	9.0	3.8	0.0	14.9	2.1	11.4	1.1
Prop In Lane	1.00		1.00	1.00		0.59	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	314	336	468	391	378	360	526	0	707	464	688	694
V/C Ratio(X)	0.12	0.44	0.29	0.22	0.55	0.57	0.27	0.00	0.59	0.17	0.48	0.05
Avail Cap(c_a), veh/h	415	426	544	433	404	385	538	0	707	503	688	694
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	30.5	22.7	22.5	29.3	29.4	13.0	0.0	20.5	13.6	20.3	13.5
Incr Delay (d2), s/veh	0.2	0.9	0.3	0.3	1.3	1.7	0.3	0.0	3.5	0.2	2.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.6	2.0	1.2	3.6	3.6	1.3	0.0	6.4	0.7	4.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.4	31.4	23.0	22.8	30.6	31.1	13.3	0.0	24.0	13.7	22.7	13.6
LnGrp LOS	C	C	C	C	C	C	B	A	C	B	C	B
Approach Vol, veh/h		319			497			557			449	
Approach Delay, s/veh		27.0			29.5			21.3			20.4	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.4	36.4	10.3	22.4	13.2	37.6	13.0	19.6				
Change Period (Y+Rc), s	* 4.8	5.7	* 4.4	4.6	* 4.8	* 5.7	* 4.4	4.6				
Max Green Setting (Gmax), s	* 10	30.7	* 11	19.0	* 10	* 31	* 11	19.0				
Max Q Clear Time (g_c+I1), s	5.8	13.4	3.4	11.0	4.1	16.9	5.0	7.8				
Green Ext Time (p_c), s	0.1	1.6	0.0	1.4	0.1	1.9	0.1	0.9				
Intersection Summary												
HCM 6th Ctrl Delay			24.3									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timing Report, Sorted By Phase

6: New Albany Road E & Central College Road

06/04/2021

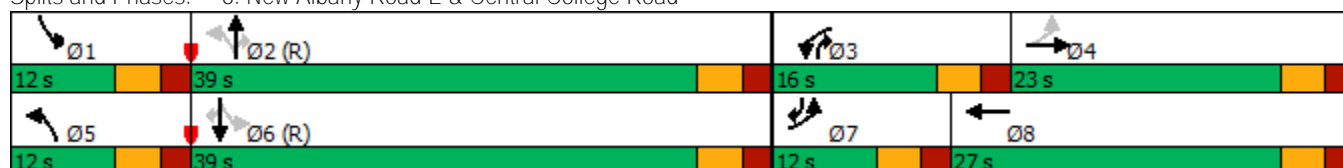


Phase Number	1	2	3	4	5	6	7	8
Movement	SBL	NBTL	WBL	EBTL	NBL	SBTL	EBL	WBT
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	12	39	16	23	12	39	12	27
Maximum Split (%)	13.3%	43.3%	17.8%	25.6%	13.3%	43.3%	13.3%	30.0%
Minimum Split (s)	12	23	12	23	12	23	12	23
Yellow Time (s)	3	3	3	3	3	3	3	3
All-Red Time (s)	2	2	2	2	2	2	2	2
Minimum Initial (s)	7	10	7	10	7	10	7	10
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	12	51	67	0	12	51	63
End Time (s)	12	51	67	0	12	51	63	0
Yield/Force Off (s)	7	46	62	85	7	46	58	85
Yield/Force Off 170(s)	7	35	62	74	7	35	58	74
Local Start Time (s)	78	0	39	55	78	0	39	51
Local Yield (s)	85	34	50	73	85	34	46	73
Local Yield 170(s)	85	23	50	62	85	23	46	62

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	70
Offset: 12 (13%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	























Splits and Phases: 6: New Albany Road E & Central College Road



HCM 6th Signalized Intersection Summary

6: New Albany Road E & Central College Road

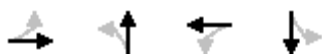
06/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	204	14	170	164	55	25	711	159	45	530	48
Future Volume (veh/h)	109	204	14	170	164	55	25	711	159	45	530	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	118	222	15	185	178	60	27	773	173	49	576	52
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	267	376	25	266	296	97	519	1900	970	418	1960	994
Arrive On Green	0.08	0.11	0.11	0.08	0.11	0.11	0.04	0.53	0.53	0.05	0.55	0.55
Sat Flow, veh/h	1781	3380	227	3456	2633	859	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	118	116	121	185	118	120	27	773	173	49	576	52
Grp Sat Flow(s),veh/h/ln	1781	1777	1830	1728	1777	1716	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	5.2	5.6	5.7	4.7	5.7	6.0	0.6	11.6	4.3	1.0	7.8	1.1
Cycle Q Clear(g_c), s	5.2	5.6	5.7	4.7	5.7	6.0	0.6	11.6	4.3	1.0	7.8	1.1
Prop In Lane	1.00		0.12	1.00		0.50	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	267	197	203	266	200	193	519	1900	970	418	1960	994
V/C Ratio(X)	0.44	0.59	0.60	0.70	0.59	0.62	0.05	0.41	0.18	0.12	0.29	0.05
Avail Cap(c_a), veh/h	271	355	366	422	434	419	589	1900	970	459	1960	994
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	38.0	38.1	40.5	38.0	38.1	8.6	12.4	7.6	8.6	10.8	6.5
Incr Delay (d2), s/veh	1.1	2.8	2.8	3.3	2.8	3.2	0.0	0.6	0.4	0.1	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.5	2.6	2.1	2.6	2.6	0.2	4.4	1.4	0.4	2.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.2	40.8	40.8	43.8	40.8	41.4	8.6	13.1	8.0	8.7	11.2	6.6
LnGrp LOS	C	D	D	D	D	D	A	B	A	A	B	A
Approach Vol, veh/h	355			423			973			677		
Approach Delay, s/veh	38.3			42.2			12.1			10.7		
Approach LOS	D			D			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.9	53.1	11.9	15.0	8.4	54.6	11.8	15.1				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	7.0	34.0	11.0	18.0	7.0	34.0	7.0	22.0				
Max Q Clear Time (g_c+I1), s	3.0	13.6	6.7	7.7	2.6	9.8	7.2	8.0				
Green Ext Time (p_c), s	0.0	5.8	0.2	0.8	0.0	4.1	0.0	1.0				
Intersection Summary												
HCM 6th Ctrl Delay	20.8											
HCM 6th LOS	C											

Timing Report, Sorted By Phase

8: Walton Parkway/EMH&T Driveway & New Albany Road E

06/04/2021

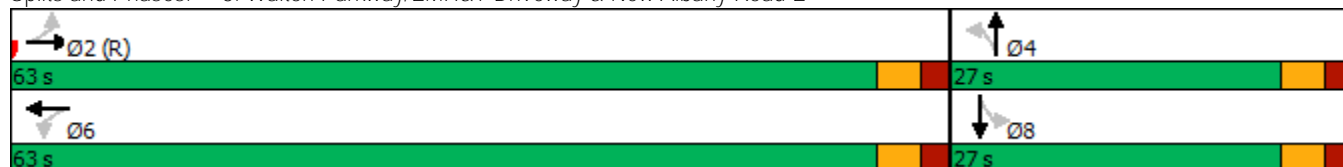


Phase Number	2	4	6	8
Movement	EBTL	NBTL	WBTL	SBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Max	Max	Max	Max
Maximum Split (s)	63	27	63	27
Maximum Split (%)	70.0%	30.0%	70.0%	30.0%
Minimum Split (s)	23	23	23	23
Yellow Time (s)	3	3	3	3
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	10	10	10	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	63	0	63
End Time (s)	63	0	63	0
Yield/Force Off (s)	58	85	58	85
Yield/Force Off 170(s)	47	74	47	74
Local Start Time (s)	0	63	0	63
Local Yield (s)	58	85	58	85
Local Yield 170(s)	47	74	47	74

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	55
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green	





















Splits and Phases: 8: Walton Parkway/EMH&T Driveway & New Albany Road E



HCM 6th Signalized Intersection Summary

8: Walton Parkway/EMH&T Driveway & New Albany Road E

06/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	863	312	33	519	19	82	16	20	2	0	2
Future Volume (veh/h)	56	863	312	33	519	19	82	16	20	2	0	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	61	938	339	36	564	21	89	17	22	2	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	558	1651	593	269	2252	84	425	181	234	390	0	387
Arrive On Green	0.64	0.64	0.64	0.64	0.64	0.64	0.24	0.24	0.24	0.24	0.00	0.24
Sat Flow, veh/h	830	2561	920	433	3494	130	1415	740	958	1368	0	1585
Grp Volume(v), veh/h	61	649	628	36	287	298	89	0	39	2	0	2
Grp Sat Flow(s),veh/h/ln	830	1777	1705	433	1777	1847	1415	0	1698	1368	0	1585
Q Serve(g_s), s	3.0	18.4	18.7	4.6	6.2	6.2	4.6	0.0	1.6	0.1	0.0	0.1
Cycle Q Clear(g_c), s	9.2	18.4	18.7	23.3	6.2	6.2	4.7	0.0	1.6	1.7	0.0	0.1
Prop In Lane	1.00		0.54	1.00		0.07	1.00		0.56	1.00		1.00
Lane Grp Cap(c), veh/h	558	1145	1099	269	1145	1190	425	0	415	390	0	387
V/C Ratio(X)	0.11	0.57	0.57	0.13	0.25	0.25	0.21	0.00	0.09	0.01	0.00	0.01
Avail Cap(c_a), veh/h	558	1145	1099	269	1145	1190	425	0	415	390	0	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.7	9.0	9.0	15.6	6.8	6.8	27.5	0.0	26.3	27.0	0.0	25.7
Incr Delay (d2), s/veh	0.4	2.0	2.2	1.0	0.5	0.5	1.1	0.0	0.4	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	6.5	6.4	0.5	2.1	2.2	1.6	0.0	0.7	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.1	11.0	11.2	16.6	7.3	7.3	28.6	0.0	26.7	27.0	0.0	25.7
LnGrp LOS	A	B	B	B	A	A	C	A	C	C	A	C
Approach Vol, veh/h	1338			621			128			4		
Approach Delay, s/veh	11.0			7.8			28.0			26.4		
Approach LOS	B			A			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	63.0			27.0			63.0			27.0		
Change Period (Y+Rc), s	5.0			5.0			5.0			5.0		
Max Green Setting (Gmax), s	58.0			22.0			58.0			22.0		
Max Q Clear Time (g_c+I1), s	20.7			6.7			25.3			3.7		
Green Ext Time (p_c), s	12.0			0.3			4.3			0.0		
Intersection Summary												
HCM 6th Ctrl Delay	11.1											
HCM 6th LOS	B											

Timing Report, Sorted By Phase

12: New Albany-Condit Road & Walton Parkway

06/04/2021

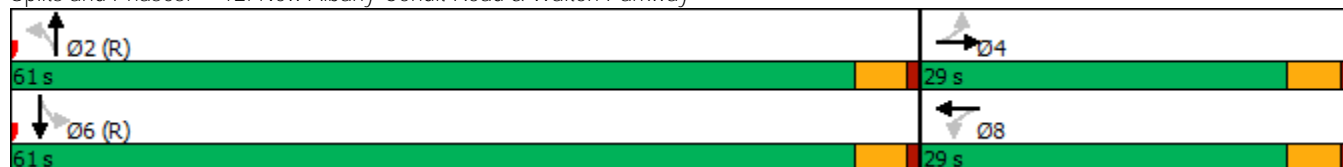


Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Max	None	C-Max	None
Maximum Split (s)	61	29	61	29
Maximum Split (%)	67.8%	32.2%	67.8%	32.2%
Minimum Split (s)	22.5	22.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	61	0	61
End Time (s)	61	0	61	0
Yield/Force Off (s)	56.5	85.5	56.5	85.5
Yield/Force Off 170(s)	45.5	74.5	45.5	74.5
Local Start Time (s)	0	61	0	61
Local Yield (s)	56.5	85.5	56.5	85.5
Local Yield 170(s)	45.5	74.5	45.5	74.5

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	60
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	





















Splits and Phases: 12: New Albany-Condit Road & Walton Parkway



HCM 6th Signalized Intersection Summary

12: New Albany-Condit Road & Walton Parkway

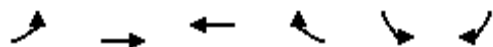
06/04/2021






												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	87	118	19	76	134	151	335	42	122	495	59
Future Volume (veh/h)	8	87	118	19	76	134	151	335	42	122	495	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	95	128	21	83	146	164	364	46	133	538	64
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	131	126	170	138	106	187	563	1180	149	710	1189	141
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.73	0.73	0.73	0.73	0.73	0.73
Sat Flow, veh/h	1152	722	973	1158	608	1070	817	1628	206	976	1640	195
Grp Volume(v), veh/h	9	0	223	21	0	229	164	0	410	133	0	602
Grp Sat Flow(s),veh/h/ln	1152	0	1695	1158	0	1678	817	0	1833	976	0	1835
Q Serve(g_s), s	0.7	0.0	11.2	1.6	0.0	11.7	9.2	0.0	7.1	5.0	0.0	12.1
Cycle Q Clear(g_c), s	12.4	0.0	11.2	12.8	0.0	11.7	21.3	0.0	7.1	12.2	0.0	12.1
Prop In Lane	1.00		0.57	1.00		0.64	1.00		0.11	1.00		0.11
Lane Grp Cap(c), veh/h	131	0	297	138	0	294	563	0	1329	710	0	1331
V/C Ratio(X)	0.07	0.00	0.75	0.15	0.00	0.78	0.29	0.00	0.31	0.19	0.00	0.45
Avail Cap(c_a), veh/h	243	0	461	251	0	457	563	0	1329	710	0	1331
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.4	0.0	35.3	41.4	0.0	35.5	9.4	0.0	4.4	6.5	0.0	5.1
Incr Delay (d2), s/veh	0.2	0.0	3.8	0.5	0.0	4.5	1.3	0.0	0.6	0.6	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	4.8	0.5	0.0	5.0	1.7	0.0	2.2	0.9	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.6	0.0	39.1	41.9	0.0	40.0	10.7	0.0	5.0	7.1	0.0	6.2
LnGrp LOS	D	A	D	D	A	D	B	A	A	A	A	A
Approach Vol, veh/h	232			250			574			735		
Approach Delay, s/veh	39.2			40.2			6.6			6.3		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	69.8			20.2			69.8			20.2		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	56.5			24.5			56.5			24.5		
Max Q Clear Time (g_c+I1), s	23.3			14.4			14.2			14.8		
Green Ext Time (p_c), s	3.9			0.9			4.9			0.9		
Intersection Summary												
HCM 6th Ctrl Delay	15.4											
HCM 6th LOS	B											

HCM Unsignalized Intersection Capacity Analysis

16: Central College Road & Discover Complex Access

06/04/2021






Movement	EBL	EBT	WBT	WBR	SBL	SBR			
Lane Configurations									
Traffic Volume (veh/h)	37	314	374	37	6	6			
Future Volume (Veh/h)	37	314	374	37	6	6			
Sign Control		Free	Free		Stop				
Grade		0%	0%		0%				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92			
Hourly flow rate (vph)	40	341	407	40	7	7			
Pedestrians									
Lane Width (ft)									
Walking Speed (ft/s)									
Percent Blockage									
Right turn flare (veh)									
Median type		None	None						
Median storage (veh)									
Upstream signal (ft)		791	679						
pX, platoon unblocked	0.98				0.98	0.98			
vC, conflicting volume	447				678	224			
vC1, stage 1 conf vol									
vC2, stage 2 conf vol									
vCu, unblocked vol	403				637	176			
tC, single (s)	4.1				6.8	6.9			
tC, 2 stage (s)									
tF (s)	2.2				3.5	3.3			
p0 queue free %	96				98	99			
cM capacity (veh/h)	1133				388	823			
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	SB 1	SB 2	SB 3
Volume Total	20	20	170	170	271	176	7	4	4
Volume Left	20	20	0	0	0	0	7	0	0
Volume Right	0	0	0	0	0	40	0	4	4
cSH	1133	1133	1700	1700	1700	1700	388	823	823
Volume to Capacity	0.04	0.04	0.10	0.10	0.16	0.10	0.02	0.00	0.00
Queue Length 95th (ft)	3	3	0	0	0	0	1	0	0
Control Delay (s)	8.3	8.3	0.0	0.0	0.0	0.0	14.4	9.4	9.4
Lane LOS	A	A					B	A	A
Approach Delay (s)	0.9				0.0		11.9		
Approach LOS							B		
Intersection Summary									
Average Delay			0.6						
Intersection Capacity Utilization			25.8%		ICU Level of Service			A	
Analysis Period (min)			15						

HCM 6th TWSC

21: New Albany-Condit Road & Snider Loop

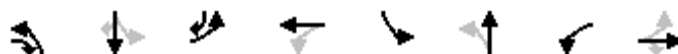
06/04/2021

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	11	488	7	3	589
Future Vol, veh/h	19	11	488	7	3	589
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	12	530	8	3	640
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1180	534	0	0	538	0
Stage 1	534	-	-	-	-	-
Stage 2	646	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	210	546	-	-	1030	-
Stage 1	588	-	-	-	-	-
Stage 2	522	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	209	546	-	-	1030	-
Mov Cap-2 Maneuver	209	-	-	-	-	-
Stage 1	588	-	-	-	-	-
Stage 2	519	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	20.2	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	270	1030	-	
HCM Lane V/C Ratio	-	-	0.121	0.003	-	
HCM Control Delay (s)	-	-	20.2	8.5	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.4	0	-	

Timing Report, Sorted By Phase

3: New Albany-Condit Road & Central College Road

06/04/2021



Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBTL	SBL	NBTL	WBL	EBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	15	36.4	15	23.6	15	36.4	15	23.6
Maximum Split (%)	16.7%	40.4%	16.7%	26.2%	16.7%	40.4%	16.7%	26.2%
Minimum Split (s)	15	26.7	15	23.6	15	26.4	15	23
Yellow Time (s)	3	4.7	3	3.6	3	4.4	3	3.6
All-Red Time (s)	1.8	1	1.4	1	1.8	1	1.4	1
Minimum Initial (s)	10	20	10	15	10	20	10	15
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)				7		7		
Flash Dont Walk (s)				11		11		
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	51.4	66.4	0	15	51.4	66.4
End Time (s)	15	51.4	66.4	0	15	51.4	66.4	0
Yield/Force Off (s)	10.2	45.7	62	85.4	10.2	46	62	85.4
Yield/Force Off 170(s)	10.2	45.7	62	74.4	10.2	35	62	85.4
Local Start Time (s)	75	0	36.4	51.4	75	0	36.4	51.4
Local Yield (s)	85.2	30.7	47	70.4	85.2	31	47	70.4
Local Yield 170(s)	85.2	30.7	47	59.4	85.2	20	47	70.4

Intersection Summary

Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	85

























Splits and Phases: 3: New Albany-Condit Road & Central College Road

Ø1	Ø2	Ø3	Ø4
15 s	36.4 s	15 s	23.6 s
Ø5	Ø6	Ø7	Ø8
15 s	36.4 s	15 s	23.6 s

HCM 6th Signalized Intersection Summary

3: New Albany-Condit Road & Central College Road

06/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	152	123	93	278	111	132	372	47	73	317	44
Future Volume (veh/h)	49	152	123	93	278	111	132	372	47	73	317	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	53	165	134	101	302	121	143	404	51	79	345	48
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	323	334	466	385	504	198	511	620	78	429	684	714
Arrive On Green	0.08	0.18	0.18	0.11	0.20	0.20	0.11	0.38	0.38	0.10	0.37	0.37
Sat Flow, veh/h	1781	1870	1585	1781	2494	978	1781	1628	205	1781	1870	1585
Grp Volume(v), veh/h	53	165	134	101	213	210	143	0	455	79	345	48
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1694	1781	0	1833	1781	1870	1585
Q Serve(g_s), s	1.9	6.7	5.5	3.6	9.1	9.5	3.8	0.0	17.2	2.1	12.0	1.4
Cycle Q Clear(g_c), s	1.9	6.7	5.5	3.6	9.1	9.5	3.8	0.0	17.2	2.1	12.0	1.4
Prop In Lane	1.00		1.00	1.00		0.58	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	323	334	466	385	359	342	511	0	698	429	684	714
V/C Ratio(X)	0.16	0.49	0.29	0.26	0.59	0.61	0.28	0.00	0.65	0.18	0.50	0.07
Avail Cap(c_a), veh/h	397	424	541	418	402	384	523	0	698	467	684	714
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.8	31.0	22.9	22.9	30.3	30.5	13.3	0.0	21.4	14.2	20.7	13.1
Incr Delay (d2), s/veh	0.2	1.1	0.3	0.4	1.9	2.4	0.3	0.0	4.7	0.2	2.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.0	2.0	1.4	3.8	3.8	1.4	0.0	7.5	0.7	5.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.1	32.2	23.2	23.3	32.3	32.8	13.6	0.0	26.1	14.4	23.3	13.2
LnGrp LOS	C	C	C	C	C	C	B	A	C	B	C	B
Approach Vol, veh/h	352			524			598			472		
Approach Delay, s/veh	27.5			30.8			23.1			20.8		
Approach LOS	C			C			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.4	36.4	11.5	21.6	13.2	37.6	13.4	19.6				
Change Period (Y+Rc), s	* 4.8	5.7	* 4.4	4.6	* 4.8	* 5.7	* 4.4	4.6				
Max Green Setting (Gmax), s	* 10	30.7	* 11	19.0	* 10	* 31	* 11	19.0				
Max Q Clear Time (g_c+I1), s	5.8	14.0	3.9	11.5	4.1	19.2	5.6	8.7				
Green Ext Time (p_c), s	0.1	1.7	0.0	1.3	0.1	2.0	0.1	0.9				
Intersection Summary												
HCM 6th Ctrl Delay	25.4											
HCM 6th LOS	C											
Notes												

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timing Report, Sorted By Phase

6: New Albany Road E & Central College Road

06/04/2021

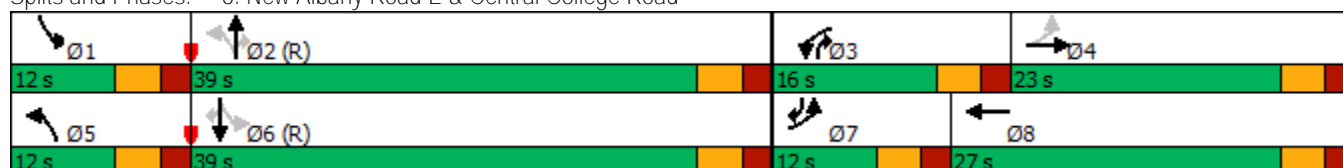


Phase Number	1	2	3	4	5	6	7	8
Movement	SBL	NBTL	WBL	EBTL	NBL	SBTL	EBL	WBT
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	12	39	16	23	12	39	12	27
Maximum Split (%)	13.3%	43.3%	17.8%	25.6%	13.3%	43.3%	13.3%	30.0%
Minimum Split (s)	12	23	12	23	12	23	12	23
Yellow Time (s)	3	3	3	3	3	3	3	3
All-Red Time (s)	2	2	2	2	2	2	2	2
Minimum Initial (s)	7	10	7	10	7	10	7	10
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	12	51	67	0	12	51	63
End Time (s)	12	51	67	0	12	51	63	0
Yield/Force Off (s)	7	46	62	85	7	46	58	85
Yield/Force Off 170(s)	7	35	62	74	7	35	58	74
Local Start Time (s)	78	0	39	55	78	0	39	51
Local Yield (s)	85	34	50	73	85	34	46	73
Local Yield 170(s)	85	23	50	62	85	23	46	62

Intersection Summary

Cycle Length 90
Control Type Actuated-Coordinated
Natural Cycle 70
Offset: 12 (13%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green























Splits and Phases: 6: New Albany Road E & Central College Road



HCM 6th Signalized Intersection Summary

6: New Albany Road E & Central College Road

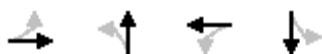
06/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	221	14	203	179	59	35	711	159	48	530	48
Future Volume (veh/h)	109	221	14	203	179	59	35	711	159	48	530	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	118	240	15	221	195	64	38	773	173	52	576	52
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	271	378	23	300	324	103	517	1860	967	412	1891	964
Arrive On Green	0.08	0.11	0.11	0.09	0.12	0.12	0.05	0.52	0.52	0.06	0.53	0.53
Sat Flow, veh/h	1781	3398	211	3456	2651	844	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	118	125	130	221	129	130	38	773	173	52	576	52
Grp Sat Flow(s),veh/h/ln	1781	1777	1832	1728	1777	1718	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	5.2	6.0	6.1	5.6	6.2	6.5	0.8	11.9	4.3	1.1	8.1	1.2
Cycle Q Clear(g_c), s	5.2	6.0	6.1	5.6	6.2	6.5	0.8	11.9	4.3	1.1	8.1	1.2
Prop In Lane	1.00		0.12	1.00		0.49	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	271	197	204	300	217	210	517	1860	967	412	1891	964
V/C Ratio(X)	0.44	0.63	0.64	0.74	0.59	0.62	0.07	0.42	0.18	0.13	0.30	0.05
Avail Cap(c_a), veh/h	275	355	366	422	434	420	571	1860	967	450	1891	964
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	38.2	38.3	40.1	37.4	37.5	8.8	13.1	7.7	9.0	11.8	7.2
Incr Delay (d2), s/veh	1.1	3.3	3.3	4.1	2.6	3.0	0.1	0.7	0.4	0.1	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.7	2.9	2.5	2.8	2.8	0.3	4.5	1.4	0.4	3.1	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.2	41.6	41.6	44.2	40.0	40.5	8.8	13.8	8.1	9.2	12.2	7.3
LnGrp LOS	C	D	D	D	D	D	A	B	A	A	B	A
Approach Vol, veh/h		373			480			984			680	
Approach Delay, s/veh		38.9			42.1			12.6			11.6	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.1	52.1	12.8	15.0	9.3	52.9	11.8	16.0				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	7.0	34.0	11.0	18.0	7.0	34.0	7.0	22.0				
Max Q Clear Time (g_c+I1), s	3.1	13.9	7.6	8.1	2.8	10.1	7.2	8.5				
Green Ext Time (p_c), s	0.0	5.8	0.2	0.9	0.0	4.1	0.0	1.1				
Intersection Summary												
HCM 6th Ctrl Delay			21.8									
HCM 6th LOS			C									

Timing Report, Sorted By Phase

8: Walton Parkway/EMH&T Driveway & New Albany Road E

06/04/2021

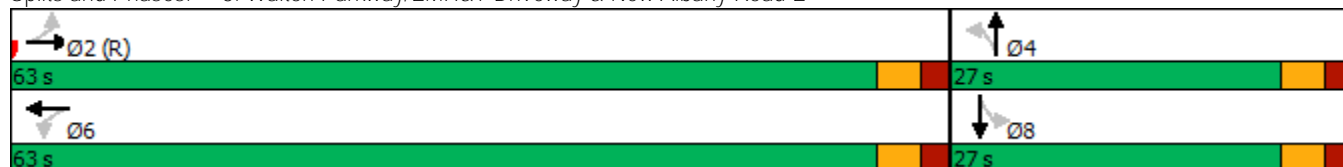


Phase Number	2	4	6	8
Movement	EBTL	NBTL	WBTL	SBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Max	Max	Max	Max
Maximum Split (s)	63	27	63	27
Maximum Split (%)	70.0%	30.0%	70.0%	30.0%
Minimum Split (s)	23	23	23	23
Yellow Time (s)	3	3	3	3
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	10	10	10	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	63	0	63
End Time (s)	63	0	63	0
Yield/Force Off (s)	58	85	58	85
Yield/Force Off 170(s)	47	74	47	74
Local Start Time (s)	0	63	0	63
Local Yield (s)	58	85	58	85
Local Yield 170(s)	47	74	47	74

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	60
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green	





















Splits and Phases: 8: Walton Parkway/EMH&T Driveway & New Albany Road E



HCM 6th Signalized Intersection Summary

8: Walton Parkway/EMH&T Driveway & New Albany Road E

06/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	892	312	33	552	19	90	16	20	2	0	2
Future Volume (veh/h)	56	892	312	33	552	19	90	16	20	2	0	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	61	970	339	36	600	21	98	17	22	2	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	538	1668	579	260	2257	79	425	181	234	390	0	387
Arrive On Green	0.64	0.64	0.64	0.64	0.64	0.64	0.24	0.24	0.24	0.24	0.00	0.24
Sat Flow, veh/h	803	2588	898	420	3503	122	1415	740	958	1368	0	1585
Grp Volume(v), veh/h	61	664	645	36	304	317	98	0	39	2	0	2
Grp Sat Flow(s),veh/h/ln	803	1777	1709	420	1777	1848	1415	0	1698	1368	0	1585
Q Serve(g_s), s	3.2	19.1	19.4	4.8	6.6	6.6	5.1	0.0	1.6	0.1	0.0	0.1
Cycle Q Clear(g_c), s	9.8	19.1	19.4	24.2	6.6	6.6	5.2	0.0	1.6	1.7	0.0	0.1
Prop In Lane	1.00		0.53	1.00		0.07	1.00		0.56	1.00		1.00
Lane Grp Cap(c), veh/h	538	1145	1101	260	1145	1191	425	0	415	390	0	387
V/C Ratio(X)	0.11	0.58	0.59	0.14	0.27	0.27	0.23	0.00	0.09	0.01	0.00	0.01
Avail Cap(c_a), veh/h	538	1145	1101	260	1145	1191	425	0	415	390	0	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.0	9.1	9.1	16.1	6.9	6.9	27.7	0.0	26.3	27.0	0.0	25.7
Incr Delay (d2), s/veh	0.4	2.1	2.3	1.1	0.6	0.5	1.3	0.0	0.4	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	6.8	6.7	0.5	2.3	2.4	1.8	0.0	0.7	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.4	11.2	11.4	17.2	7.4	7.4	28.9	0.0	26.7	27.0	0.0	25.7
LnGrp LOS	A	B	B	B	A	A	C	A	C	C	A	C
Approach Vol, veh/h	1370			657			137			4		
Approach Delay, s/veh	11.2			8.0			28.3			26.4		
Approach LOS	B			A			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	63.0			27.0			63.0			27.0		
Change Period (Y+Rc), s	5.0			5.0			5.0			5.0		
Max Green Setting (Gmax), s	58.0			22.0			58.0			22.0		
Max Q Clear Time (g_c+I1), s	21.4			7.2			26.2			3.7		
Green Ext Time (p_c), s	12.4			0.3			4.6			0.0		
Intersection Summary												
HCM 6th Ctrl Delay	11.4											
HCM 6th LOS	B											

Timing Report, Sorted By Phase

12: New Albany-Condit Road & Walton Parkway

06/04/2021

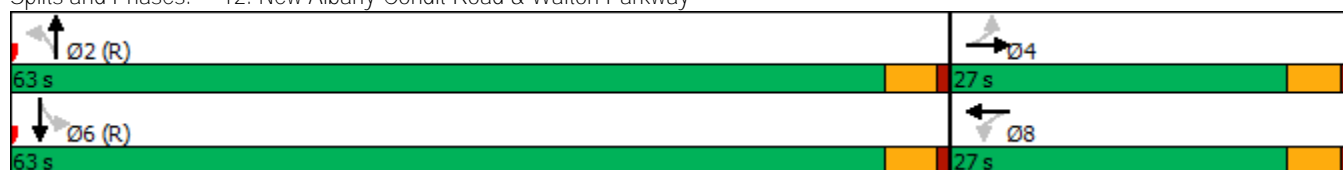


Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Max	None	C-Max	None
Maximum Split (s)	63	27	63	27
Maximum Split (%)	70.0%	30.0%	70.0%	30.0%
Minimum Split (s)	22.5	22.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	63	0	63
End Time (s)	63	0	63	0
Yield/Force Off (s)	58.5	85.5	58.5	85.5
Yield/Force Off 170(s)	47.5	74.5	47.5	74.5
Local Start Time (s)	0	63	0	63
Local Yield (s)	58.5	85.5	58.5	85.5
Local Yield 170(s)	47.5	74.5	47.5	74.5

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	60
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	





















Splits and Phases: 12: New Albany-Condit Road & Walton Parkway



HCM 6th Signalized Intersection Summary

12: New Albany-Condit Road & Walton Parkway

06/04/2021




												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	87	118	19	76	144	151	369	42	136	543	67
Future Volume (veh/h)	8	87	118	19	76	144	151	369	42	136	543	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	95	128	21	83	157	164	401	46	148	590	73
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	127	171	139	102	192	519	1193	137	679	1182	146
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.72	0.72	0.72	0.72	0.72	0.72
Sat Flow, veh/h	1140	722	973	1158	579	1095	772	1647	189	943	1632	202
Grp Volume(v), veh/h	9	0	223	21	0	240	164	0	447	148	0	663
Grp Sat Flow(s),veh/h/ln	1140	0	1695	1158	0	1673	772	0	1836	943	0	1834
Q Serve(g_s), s	0.7	0.0	11.2	1.6	0.0	12.4	10.5	0.0	8.0	6.1	0.0	14.1
Cycle Q Clear(g_c), s	13.1	0.0	11.2	12.8	0.0	12.4	24.5	0.0	8.0	14.1	0.0	14.1
Prop In Lane	1.00		0.57	1.00		0.65	1.00		0.10	1.00		0.11
Lane Grp Cap(c), veh/h	123	0	298	139	0	294	519	0	1330	679	0	1328
V/C Ratio(X)	0.07	0.00	0.75	0.15	0.00	0.82	0.32	0.00	0.34	0.22	0.00	0.50
Avail Cap(c_a), veh/h	208	0	424	225	0	418	519	0	1330	679	0	1328
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.0	0.0	35.2	41.3	0.0	35.7	10.7	0.0	4.5	7.1	0.0	5.4
Incr Delay (d2), s/veh	0.2	0.0	4.4	0.5	0.0	8.2	1.6	0.0	0.7	0.7	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	4.9	0.5	0.0	5.6	1.8	0.0	2.5	1.1	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.2	0.0	39.7	41.8	0.0	43.9	12.3	0.0	5.2	7.8	0.0	6.7
LnGrp LOS	D	A	D	D	A	D	B	A	A	A	A	A
Approach Vol, veh/h	232			261			611			811		
Approach Delay, s/veh	39.8			43.7			7.1			6.9		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	69.7			20.3			69.7			20.3		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	58.5			22.5			58.5			22.5		
Max Q Clear Time (g_c+I1), s	26.5			15.1			16.1			14.8		
Green Ext Time (p_c), s	4.3			0.7			5.7			0.8		
Intersection Summary												
HCM 6th Ctrl Delay	16.0											
HCM 6th LOS	B											

HCM Unsignalized Intersection Capacity Analysis

14: New Albany Road E & Site Access 1

06/04/2021























Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Traffic Volume (veh/h)	0	10	890	29	0	676	
Future Volume (Veh/h)	0	10	890	29	0	676	
Sign Control	Stop		Free			Free	
Grade	0%		0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	0	11	967	32	0	735	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type			None			None	
Median storage veh)							
Upstream signal (ft)						270	
pX, platoon unblocked	0.91						
vC, conflicting volume	1350	258			999		
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	1182	258			999		
tC, single (s)	6.8	6.9			4.1		
tC, 2 stage (s)							
tF (s)	3.5	3.3			2.2		
p0 queue free %	100	99			100		
cM capacity (veh/h)	166	741			689		
Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	11	276	276	276	170	368	368
Volume Left	0	0	0	0	0	0	0
Volume Right	11	0	0	0	32	0	0
cSH	741	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.01	0.16	0.16	0.16	0.10	0.22	0.22
Queue Length 95th (ft)	1	0	0	0	0	0	0
Control Delay (s)	9.9	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	9.9	0.0				0.0	
Approach LOS	A						
Intersection Summary							
Average Delay			0.1				
Intersection Capacity Utilization			23.4%		ICU Level of Service		A
Analysis Period (min)			15				

HCM Unsignalized Intersection Capacity Analysis

16: Site Access 2/Discover Complex Access & Central College Road







06/04/2021

																		
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR						
Lane Configurations																		
Traffic Volume (veh/h)	37	314	20	21	374	37	52	6	31	6	4	6						
Future Volume (Veh/h)	37	314	20	21	374	37	52	6	31	6	4	6						
Sign Control	Free			Free			Stop			Stop								
Grade	0%			0%			0%			0%								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92						
Hourly flow rate (vph)	40	341	22	23	407	40	57	7	34	7	4	7						
Pedestrians																		
Lane Width (ft)																		
Walking Speed (ft/s)																		
Percent Blockage																		
Right turn flare (veh)	5																	
Median type	None			None														
Median storage (veh)																		
Upstream signal (ft)	791			679														
pX, platoon unblocked	0.99							0.99	0.99	0.99	0.99	0.99						
vC, conflicting volume	447				363				684	925	182	761						
vC1, stage 1 conf vol																		
vC2, stage 2 conf vol																		
vCu, unblocked vol	433				363				671	914	182	749						
tC, single (s)	4.1				4.1				7.5	6.5	6.9	7.5						
tC, 2 stage (s)																		
tF (s)	2.2				2.2				3.5	4.0	3.3	3.5						
p0 queue free %	96				98				82	97	96	97						
cM capacity (veh/h)	1117				1192				319	255	830	269						
											259	793						
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2								
Volume Total	20	20	227	136	23	271	176	98	7	11								
Volume Left	20	20	0	0	23	0	0	57	7	0								
Volume Right	0	0	0	22	0	0	40	34	0	7								
cSH	1117	1117	1700	1700	1192	1700	1700	397	269	711								
Volume to Capacity	0.04	0.04	0.13	0.08	0.02	0.16	0.10	0.25	0.03	0.02								
Queue Length 95th (ft)	3	3	0	0	1	0	0	24	2	1								
Control Delay (s)	8.3	8.3	0.0	0.0	8.1	0.0	0.0	17.0	18.7	13.1								
Lane LOS	A	A			A			C	C	B								
Approach Delay (s)	0.8				0.4				17.0	15.3								
Approach LOS							C			C								
Intersection Summary																		
Average Delay	2.5																	
Intersection Capacity Utilization	35.9%			ICU Level of Service			A											
Analysis Period (min)	15																	

HCM 6th TWSC

19: New Albany-Condit Road & Site Access 3/Site Access 4

06/04/2021

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	0	52	10	0	10	30	501	7	7	596	14
Future Vol, veh/h	22	0	52	10	0	10	30	501	7	7	596	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	225	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	0	57	11	0	11	33	545	8	8	648	15
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	1293	1291	656	1315	1294	549	663	0	0	553	0	0
Stage 1	672	672	-	615	615	-	-	-	-	-	-	-
Stage 2	621	619	-	700	679	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	140	163	465	135	163	535	926	-	-	1017	-	-
Stage 1	445	454	-	479	482	-	-	-	-	-	-	-
Stage 2	475	480	-	430	451	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	133	156	465	115	156	535	926	-	-	1017	-	-
Mov Cap-2 Maneuver	133	156	-	115	156	-	-	-	-	-	-	-
Stage 1	429	450	-	462	465	-	-	-	-	-	-	-
Stage 2	449	463	-	375	447	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	24.2		26.5			0.5			0.1			
HCM LOS	C		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	926	-	-	267	189	1017	-	-				
HCM Lane V/C Ratio	0.035	-	-	0.301	0.115	0.007	-	-				
HCM Control Delay (s)	9	-	-	24.2	26.5	8.6	-	-				
HCM Lane LOS	A	-	-	C	D	A	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	1.2	0.4	0	-	-				

HCM 6th TWSC

21: New Albany-Condit Road & Site Access 5/Snider Loop

06/04/2021

Intersection

Int Delay, s/veh 1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Traffic Vol, veh/h	6	0	8	19	0	11	7	525	7	3	651	4
Future Vol, veh/h	6	0	8	19	0	11	7	525	7	3	651	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	225	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	0	9	21	0	12	8	571	8	3	708	4

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1313	1311	710	1312	1309	575	712	0	0	579	0	0
Stage 1	716	716	-	591	591	-	-	-	-	-	-	-
Stage 2	597	595	-	721	718	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	135	159	434	136	159	518	888	-	-	995	-	-
Stage 1	421	434	-	493	494	-	-	-	-	-	-	-
Stage 2	490	492	-	419	433	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	131	157	434	132	157	518	888	-	-	995	-	-
Mov Cap-2 Maneuver	131	157	-	132	157	-	-	-	-	-	-	-
Stage 1	417	433	-	489	490	-	-	-	-	-	-	-
Stage 2	474	488	-	409	432	-	-	-	-	-	-	-

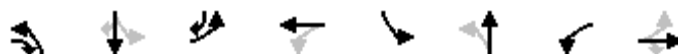
Approach	EB	WB	NB	SB
HCM Control Delay, s	22.7	28.1	0.1	0
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	888	-	-	218	132	518	995
HCM Lane V/C Ratio	0.009	-	-	0.07	0.156	0.023	0.003
HCM Control Delay (s)	9.1	-	-	22.7	37.3	12.1	8.6
HCM Lane LOS	A	-	-	C	E	B	A
HCM 95th %tile Q(veh)	0	-	-	0.2	0.5	0.1	0

Timing Report, Sorted By Phase

3: New Albany-Condit Road & Central College Road

06/04/2021



Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBTL	SBL	NBTL	WBL	EBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	15	36.2	15	23.8	15	36.2	15	23.8
Maximum Split (%)	16.7%	40.2%	16.7%	26.4%	16.7%	40.2%	16.7%	26.4%
Minimum Split (s)	15	26.7	15	23.6	15	26.4	15	23
Yellow Time (s)	3	4.7	3	3.6	3	4.4	3	3.6
All-Red Time (s)	1.8	1	1.4	1	1.8	1	1.4	1
Minimum Initial (s)	10	20	10	15	10	20	10	15
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)				7		7		
Flash Dont Walk (s)				11		11		
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	51.2	66.2	0	15	51.2	66.2
End Time (s)	15	51.2	66.2	0	15	51.2	66.2	0
Yield/Force Off (s)	10.2	45.5	61.8	85.4	10.2	45.8	61.8	85.4
Yield/Force Off 170(s)	10.2	45.5	61.8	74.4	10.2	34.8	61.8	85.4
Local Start Time (s)	75	0	36.2	51.2	75	0	36.2	51.2
Local Yield (s)	85.2	30.5	46.8	70.4	85.2	30.8	46.8	70.4
Local Yield 170(s)	85.2	30.5	46.8	59.4	85.2	19.8	46.8	70.4

Intersection Summary

Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	85























Splits and Phases: 3: New Albany-Condit Road & Central College Road

Ø1	Ø2	Ø3	Ø4
15 s	36.2 s	15 s	23.8 s
Ø5	Ø6	Ø7	Ø8
15 s	36.2 s	15 s	23.8 s

HCM 6th Signalized Intersection Summary

3: New Albany-Condit Road & Central College Road

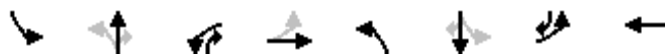
06/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	270	129	44	178	89	136	501	79	53	286	49
Future Volume (veh/h)	46	270	129	44	178	89	136	501	79	53	286	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	50	293	140	48	193	97	148	545	86	58	311	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	354	350	484	268	431	208	553	635	100	317	700	725
Arrive On Green	0.08	0.19	0.19	0.08	0.19	0.19	0.12	0.40	0.40	0.09	0.37	0.37
Sat Flow, veh/h	1781	1870	1585	1781	2325	1121	1781	1577	249	1781	1870	1585
Grp Volume(v), veh/h	50	293	140	48	146	144	148	0	631	58	311	53
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1669	1781	0	1826	1781	1870	1585
Q Serve(g_s), s	1.7	12.3	5.5	1.7	5.9	6.3	3.8	0.0	25.7	1.5	10.2	1.5
Cycle Q Clear(g_c), s	1.7	12.3	5.5	1.7	5.9	6.3	3.8	0.0	25.7	1.5	10.2	1.5
Prop In Lane	1.00		1.00	1.00		0.67	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	354	350	484	268	329	309	553	0	735	317	700	725
V/C Ratio(X)	0.14	0.84	0.29	0.18	0.44	0.47	0.27	0.00	0.86	0.18	0.44	0.07
Avail Cap(c_a), veh/h	438	440	561	354	418	393	565	0	735	381	700	725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	31.9	21.6	23.5	29.5	29.6	12.2	0.0	22.2	15.7	19.2	12.4
Incr Delay (d2), s/veh	0.2	10.9	0.3	0.3	0.9	1.1	0.3	0.0	12.4	0.3	2.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	6.4	2.0	0.7	2.4	2.4	1.3	0.0	12.1	0.5	4.3	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.9	42.9	21.9	23.8	30.4	30.7	12.5	0.0	34.6	16.0	21.2	12.6
LnGrp LOS	C	D	C	C	C	C	B	A	C	B	C	B
Approach Vol, veh/h	483				338				779			
Approach Delay, s/veh	34.7				29.6				30.4			
Approach LOS	C				C				C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.4	36.2	11.2	19.7	12.1	38.5	11.0	19.9				
Change Period (Y+Rc), s	* 4.8	5.7	* 4.4	4.6	* 4.8	* 5.7	* 4.4	4.6				
Max Green Setting (Gmax), s	* 10	30.5	* 11	19.2	* 10	* 31	* 11	19.2				
Max Q Clear Time (g_c+I1), s	5.8	12.2	3.7	8.3	3.5	27.7	3.7	14.3				
Green Ext Time (p_c), s	0.1	1.6	0.0	1.1	0.0	1.1	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay	29.0											
HCM 6th LOS	C											
Notes												

Timing Report, Sorted By Phase

6: New Albany Road E & Central College Road

06/04/2021

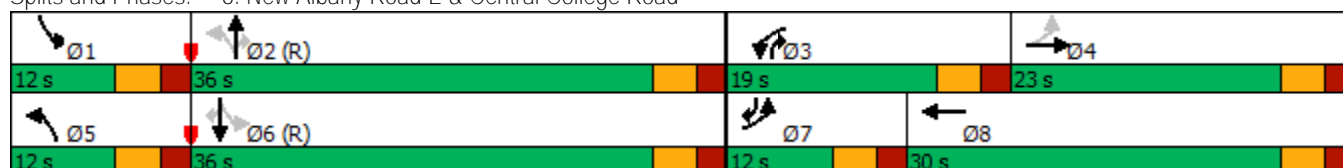


Phase Number	1	2	3	4	5	6	7	8
Movement	SBL	NBTL	WBL	EBTL	NBL	SBTL	EBL	WBT
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	12	36	19	23	12	36	12	30
Maximum Split (%)	13.3%	40.0%	21.1%	25.6%	13.3%	40.0%	13.3%	33.3%
Minimum Split (s)	12	23	12	23	12	23	12	23
Yellow Time (s)	3	3	3	3	3	3	3	3
All-Red Time (s)	2	2	2	2	2	2	2	2
Minimum Initial (s)	7	10	7	10	7	10	7	10
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	12	48	67	0	12	48	60
End Time (s)	12	48	67	0	12	48	60	0
Yield/Force Off (s)	7	43	62	85	7	43	55	85
Yield/Force Off 170(s)	7	32	62	74	7	32	55	74
Local Start Time (s)	78	0	36	55	78	0	36	48
Local Yield (s)	85	31	50	73	85	31	43	73
Local Yield 170(s)	85	20	50	62	85	20	43	62

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	70
Offset: 12 (13%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	























Splits and Phases: 6: New Albany Road E & Central College Road



HCM 6th Signalized Intersection Summary

6: New Albany Road E & Central College Road

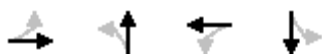
06/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	144	26	247	210	24	41	410	164	99	639	122
Future Volume (veh/h)	70	144	26	247	210	24	41	410	164	99	639	122
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	76	157	28	268	228	26	45	446	178	108	695	133
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	289	336	59	353	474	53	434	1748	942	545	1819	916
Arrive On Green	0.07	0.11	0.11	0.10	0.15	0.15	0.05	0.49	0.49	0.07	0.51	0.51
Sat Flow, veh/h	1781	3023	529	3456	3219	363	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	76	91	94	268	125	129	45	446	178	108	695	133
Grp Sat Flow(s),veh/h/ln	1781	1777	1775	1728	1777	1805	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	3.3	4.3	4.5	6.8	5.8	5.9	1.1	6.6	4.6	2.5	10.7	3.5
Cycle Q Clear(g_c), s	3.3	4.3	4.5	6.8	5.8	5.9	1.1	6.6	4.6	2.5	10.7	3.5
Prop In Lane	1.00		0.30	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	289	197	197	353	261	266	434	1748	942	545	1819	916
V/C Ratio(X)	0.26	0.46	0.48	0.76	0.48	0.49	0.10	0.26	0.19	0.20	0.38	0.15
Avail Cap(c_a), veh/h	310	355	355	538	494	501	479	1748	942	554	1819	916
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	37.5	37.5	39.3	35.2	35.3	10.0	13.3	8.4	9.4	13.3	8.7
Incr Delay (d2), s/veh	0.5	1.7	1.8	3.4	1.4	1.4	0.1	0.4	0.4	0.2	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.9	2.0	3.0	2.5	2.6	0.4	2.5	1.5	0.9	4.1	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.3	39.1	39.3	42.7	36.6	36.6	10.2	13.6	8.8	9.5	13.9	9.1
LnGrp LOS	C	D	D	D	D	D	B	B	A	A	B	A
Approach Vol, veh/h		261			522			669			936	
Approach Delay, s/veh		37.2			39.7			12.1			12.7	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.5	49.3	14.2	15.0	9.7	51.1	11.0	18.2				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	7.0	31.0	14.0	18.0	7.0	31.0	7.0	25.0				
Max Q Clear Time (g_c+I1), s	4.5	8.6	8.8	6.5	3.1	12.7	5.3	7.9				
Green Ext Time (p_c), s	0.1	3.5	0.4	0.7	0.0	4.9	0.0	1.2				
Intersection Summary												
HCM 6th Ctrl Delay			21.1									
HCM 6th LOS			C									

Timing Report, Sorted By Phase

8: Walton Parkway/EMH&T Driveway & New Albany Road E

06/04/2021

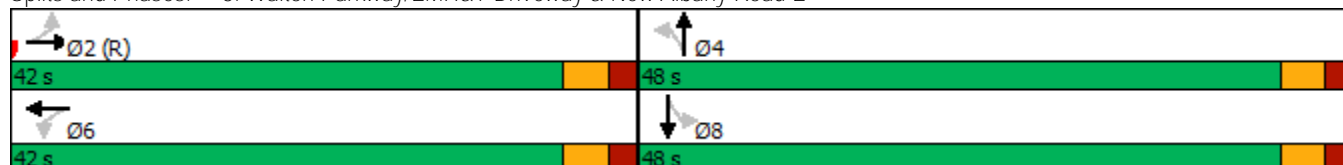


Phase Number	2	4	6	8
Movement	EBTL	NBTL	WBTL	SBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Max	Max	Max	Max
Maximum Split (s)	42	48	42	48
Maximum Split (%)	46.7%	53.3%	46.7%	53.3%
Minimum Split (s)	23	23	23	23
Yellow Time (s)	3	3	3	3
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	10	10	10	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	42	0	42
End Time (s)	42	0	42	0
Yield/Force Off (s)	37	85	37	85
Yield/Force Off 170(s)	26	74	26	74
Local Start Time (s)	0	42	0	42
Local Yield (s)	37	85	37	85
Local Yield 170(s)	26	74	26	74

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	50
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green	





















Splits and Phases: 8: Walton Parkway/EMH&T Driveway & New Albany Road E



HCM 6th Signalized Intersection Summary

8: Walton Parkway/EMH&T Driveway & New Albany Road E

06/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	526	89	18	766	0	362	6	44	10	17	53
Future Volume (veh/h)	4	526	89	18	766	0	362	6	44	10	17	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	572	97	20	833	0	393	7	48	11	18	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	232	1250	211	291	1461	0	679	98	674	700	186	600
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.00	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	659	3040	514	768	3647	0	1323	206	1411	1349	389	1255
Grp Volume(v), veh/h	4	334	335	20	833	0	393	0	55	11	0	76
Grp Sat Flow(s),veh/h/ln	659	1777	1778	768	1777	0	1323	0	1616	1349	0	1644
Q Serve(g_s), s	0.4	12.3	12.3	1.7	16.2	0.0	20.8	0.0	1.7	0.4	0.0	2.3
Cycle Q Clear(g_c), s	16.6	12.3	12.3	14.1	16.2	0.0	23.1	0.0	1.7	2.1	0.0	2.3
Prop In Lane	1.00		0.29	1.00		0.00	1.00		0.87	1.00		0.76
Lane Grp Cap(c), veh/h	232	730	731	291	1461	0	679	0	772	700	0	786
V/C Ratio(X)	0.02	0.46	0.46	0.07	0.57	0.00	0.58	0.00	0.07	0.02	0.00	0.10
Avail Cap(c_a), veh/h	232	730	731	291	1461	0	679	0	772	700	0	786
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.8	19.2	19.2	24.3	20.4	0.0	19.2	0.0	12.7	13.3	0.0	12.9
Incr Delay (d2), s/veh	0.1	2.1	2.1	0.5	1.6	0.0	3.6	0.0	0.2	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	5.2	5.2	0.3	6.6	0.0	6.6	0.0	0.6	0.1	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.9	21.3	21.3	24.8	22.0	0.0	22.8	0.0	12.9	13.3	0.0	13.1
LnGrp LOS	C	C	C	C	C	A	C	A	B	B	A	B
Approach Vol, veh/h	673			853			448			87		
Approach Delay, s/veh	21.3			22.1			21.6			13.1		
Approach LOS	C			C			C			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	42.0			48.0			42.0			48.0		
Change Period (Y+Rc), s	5.0			5.0			5.0			5.0		
Max Green Setting (Gmax), s	37.0			43.0			37.0			43.0		
Max Q Clear Time (g_c+I1), s	18.6			25.1			18.2			4.3		
Green Ext Time (p_c), s	3.9			1.5			5.7			0.5		
Intersection Summary												
HCM 6th Ctrl Delay	21.3											
HCM 6th LOS	C											

Timing Report, Sorted By Phase

12: New Albany-Condit Road & Walton Parkway

06/04/2021

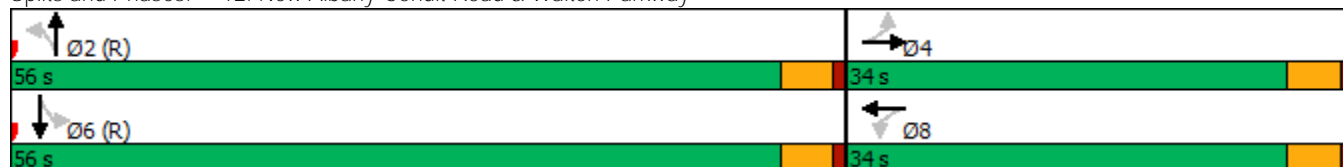


Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Max	None	C-Max	None
Maximum Split (s)	56	34	56	34
Maximum Split (%)	62.2%	37.8%	62.2%	37.8%
Minimum Split (s)	22.5	22.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	56	0	56
End Time (s)	56	0	56	0
Yield/Force Off (s)	51.5	85.5	51.5	85.5
Yield/Force Off 170(s)	40.5	74.5	40.5	74.5
Local Start Time (s)	0	56	0	56
Local Yield (s)	51.5	85.5	51.5	85.5
Local Yield 170(s)	40.5	74.5	40.5	74.5

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	50
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	





















Splits and Phases: 12: New Albany-Condit Road & Walton Parkway



HCM 6th Signalized Intersection Summary

12: New Albany-Condit Road & Walton Parkway

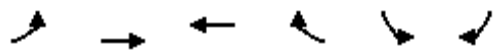
06/04/2021






												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	109	135	38	93	112	66	430	12	145	391	18
Future Volume (veh/h)	45	109	135	38	93	112	66	430	12	145	391	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	49	118	147	41	101	122	72	467	13	158	425	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	191	162	202	157	165	200	634	1242	35	607	1215	57
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.69	0.69	0.69	0.69	0.69	0.69
Sat Flow, veh/h	1158	757	943	1114	771	932	945	1811	50	915	1772	83
Grp Volume(v), veh/h	49	0	265	41	0	223	72	0	480	158	0	445
Grp Sat Flow(s),veh/h/ln	1158	0	1701	1114	0	1703	945	0	1861	915	0	1855
Q Serve(g_s), s	3.6	0.0	13.1	3.2	0.0	10.7	3.1	0.0	9.8	8.0	0.0	8.9
Cycle Q Clear(g_c), s	14.3	0.0	13.1	16.3	0.0	10.7	12.0	0.0	9.8	17.8	0.0	8.9
Prop In Lane	1.00		0.55	1.00		0.55	1.00		0.03	1.00		0.04
Lane Grp Cap(c), veh/h	191	0	365	157	0	365	634	0	1276	607	0	1272
V/C Ratio(X)	0.26	0.00	0.73	0.26	0.00	0.61	0.11	0.00	0.38	0.26	0.00	0.35
Avail Cap(c_a), veh/h	322	0	557	284	0	558	634	0	1276	607	0	1272
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.4	0.0	32.9	40.5	0.0	32.0	8.3	0.0	6.0	9.8	0.0	5.9
Incr Delay (d2), s/veh	0.7	0.0	2.8	0.9	0.0	1.7	0.4	0.0	0.8	1.0	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	5.5	0.9	0.0	4.4	0.6	0.0	3.4	1.5	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.1	0.0	35.7	41.3	0.0	33.6	8.7	0.0	6.8	10.8	0.0	6.6
LnGrp LOS	D	A	D	D	A	C	A	A	A	B	A	A
Approach Vol, veh/h	314			264			552			603		
Approach Delay, s/veh	36.2			34.8			7.1			7.7		
Approach LOS	D			C			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	66.2			23.8			66.2			23.8		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	51.5			29.5			51.5			29.5		
Max Q Clear Time (g_c+I1), s	14.0			16.3			19.8			18.3		
Green Ext Time (p_c), s	3.7			1.4			3.6			1.0		
Intersection Summary												
HCM 6th Ctrl Delay	16.8											
HCM 6th LOS	B											

HCM Unsignalized Intersection Capacity Analysis

16: Central College Road & Discover Complex Access

06/04/2021






Movement	EBL	EBT	WBT	WBR	SBL	SBR			
Lane Configurations									
Traffic Volume (veh/h)	7	419	415	7	38	38			
Future Volume (Veh/h)	7	419	415	7	38	38			
Sign Control		Free	Free		Stop				
Grade		0%	0%		0%				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92			
Hourly flow rate (vph)	8	455	451	8	41	41			
Pedestrians									
Lane Width (ft)									
Walking Speed (ft/s)									
Percent Blockage									
Right turn flare (veh)									
Median type		None	None						
Median storage (veh)									
Upstream signal (ft)		791	679						
pX, platoon unblocked									
vC, conflicting volume	459				698	230			
vC1, stage 1 conf vol									
vC2, stage 2 conf vol									
vCu, unblocked vol	459				698	230			
tC, single (s)	4.1				6.8	6.9			
tC, 2 stage (s)									
tF (s)	2.2				3.5	3.3			
p0 queue free %	99				89	95			
cM capacity (veh/h)	1098				372	773			
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	SB 1	SB 2	SB 3
Volume Total	4	4	228	228	301	158	41	20	20
Volume Left	4	4	0	0	0	0	41	0	0
Volume Right	0	0	0	0	0	8	0	20	20
cSH	1098	1098	1700	1700	1700	1700	372	773	773
Volume to Capacity	0.01	0.01	0.13	0.13	0.18	0.09	0.11	0.03	0.03
Queue Length 95th (ft)	1	1	0	0	0	0	9	2	2
Control Delay (s)	8.3	8.3	0.0	0.0	0.0	0.0	15.9	9.8	9.8
Lane LOS	A	A					C	A	A
Approach Delay (s)	0.1				0.0		12.8		
Approach LOS							B		
Intersection Summary									
Average Delay			1.1						
Intersection Capacity Utilization			21.7%		ICU Level of Service			A	
Analysis Period (min)			15						

HCM 6th TWSC

21: New Albany-Condit Road & Snider Loop

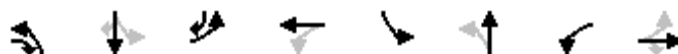
06/04/2021

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	7	632	20	13	494
Future Vol, veh/h	12	7	632	20	13	494
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	8	687	22	14	537
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1263	698	0	0	709	0
Stage 1	698	-	-	-	-	-
Stage 2	565	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	187	440	-	-	890	-
Stage 1	494	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	183	440	-	-	890	-
Mov Cap-2 Maneuver	183	-	-	-	-	-
Stage 1	494	-	-	-	-	-
Stage 2	556	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	21.9	0	0.2			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	233	890	-	
HCM Lane V/C Ratio	-	-	0.089	0.016	-	
HCM Control Delay (s)	-	-	21.9	9.1	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.3	0	-	

Timing Report, Sorted By Phase

3: New Albany-Condit Road & Central College Road

06/04/2021



Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBTL	SBL	NBTL	WBL	EBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	15	36.1	15	23.9	15	36.1	15	23.9
Maximum Split (%)	16.7%	40.1%	16.7%	26.6%	16.7%	40.1%	16.7%	26.6%
Minimum Split (s)	15	26.7	15	23.6	15	26.4	15	23
Yellow Time (s)	3	4.7	3	3.6	3	4.4	3	3.6
All-Red Time (s)	1.8	1	1.4	1	1.8	1	1.4	1
Minimum Initial (s)	10	20	10	15	10	20	10	15
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)				7		7		
Flash Dont Walk (s)				11		11		
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	51.1	66.1	0	15	51.1	66.1
End Time (s)	15	51.1	66.1	0	15	51.1	66.1	0
Yield/Force Off (s)	10.2	45.4	61.7	85.4	10.2	45.7	61.7	85.4
Yield/Force Off 170(s)	10.2	45.4	61.7	74.4	10.2	34.7	61.7	85.4
Local Start Time (s)	75	0	36.1	51.1	75	0	36.1	51.1
Local Yield (s)	85.2	30.4	46.7	70.4	85.2	30.7	46.7	70.4
Local Yield 170(s)	85.2	30.4	46.7	59.4	85.2	19.7	46.7	70.4

Intersection Summary

Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	85

























Splits and Phases: 3: New Albany-Condit Road & Central College Road

Ø1	Ø2	Ø3	Ø4
15 s	36.1 s	15 s	23.9 s
Ø5	Ø6	Ø7	Ø8
15 s	36.1 s	15 s	23.9 s

HCM 6th Signalized Intersection Summary

3: New Albany-Condit Road & Central College Road

06/04/2021

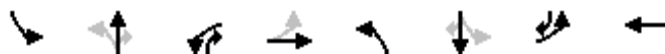
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	280	129	63	193	89	136	511	92	53	301	62
Future Volume (veh/h)	55	280	129	63	193	89	136	511	92	53	301	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	60	304	140	68	210	97	148	555	100	58	327	67
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	371	358	487	288	469	209	520	604	109	282	681	720
Arrive On Green	0.09	0.19	0.19	0.10	0.20	0.20	0.12	0.39	0.39	0.09	0.36	0.36
Sat Flow, veh/h	1781	1870	1585	1781	2391	1065	1781	1542	278	1781	1870	1585
Grp Volume(v), veh/h	60	304	140	68	154	153	148	0	655	58	327	67
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1679	1781	0	1820	1781	1870	1585
Q Serve(g_s), s	2.1	13.1	5.6	2.4	6.4	6.7	3.9	0.0	28.6	1.5	11.2	2.0
Cycle Q Clear(g_c), s	2.1	13.1	5.6	2.4	6.4	6.7	3.9	0.0	28.6	1.5	11.2	2.0
Prop In Lane	1.00		1.00	1.00		0.63	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	371	358	487	288	349	330	520	0	713	282	681	720
V/C Ratio(X)	0.16	0.85	0.29	0.24	0.44	0.46	0.28	0.00	0.92	0.21	0.48	0.09
Avail Cap(c_a), veh/h	437	432	550	345	411	388	531	0	713	342	681	720
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	32.6	22.0	23.2	29.5	29.7	13.2	0.0	24.1	17.4	20.5	13.0
Incr Delay (d2), s/veh	0.2	12.8	0.3	0.4	0.9	1.0	0.3	0.0	18.9	0.4	2.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	7.0	2.0	0.9	2.6	2.6	1.4	0.0	14.6	0.6	4.8	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.8	45.4	22.3	23.6	30.4	30.7	13.5	0.0	43.0	17.7	22.9	13.2
LnGrp LOS	C	D	C	C	C	C	B	A	D	B	C	B
Approach Vol, veh/h	504			375			803			452		
Approach Delay, s/veh	36.3			29.3			37.6			20.8		
Approach LOS	D			C			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.5	36.1	11.9	21.0	12.2	38.4	12.3	20.6				
Change Period (Y+Rc), s	* 4.8	5.7	* 4.4	4.6	* 4.8	* 5.7	* 4.4	4.6				
Max Green Setting (Gmax), s	* 10	30.4	* 11	19.3	* 10	* 31	* 11	19.3				
Max Q Clear Time (g_c+I1), s	5.9	13.2	4.1	8.7	3.5	30.6	4.4	15.1				
Green Ext Time (p_c), s	0.1	1.7	0.0	1.1	0.0	0.1	0.1	0.9				
Intersection Summary												
HCM 6th Ctrl Delay	32.3											
HCM 6th LOS	C											
Notes												

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timing Report, Sorted By Phase

6: New Albany Road E & Central College Road

06/04/2021

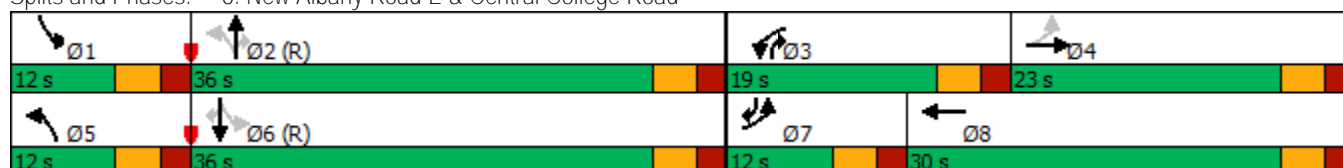


Phase Number	1	2	3	4	5	6	7	8
Movement	SBL	NBTL	WBL	EBTL	NBL	SBTL	EBL	WBT
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	12	36	19	23	12	36	12	30
Maximum Split (%)	13.3%	40.0%	21.1%	25.6%	13.3%	40.0%	13.3%	33.3%
Minimum Split (s)	12	23	12	23	12	23	12	23
Yellow Time (s)	3	3	3	3	3	3	3	3
All-Red Time (s)	2	2	2	2	2	2	2	2
Minimum Initial (s)	7	10	7	10	7	10	7	10
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	12	48	67	0	12	48	60
End Time (s)	12	48	67	0	12	48	60	0
Yield/Force Off (s)	7	43	62	85	7	43	55	85
Yield/Force Off 170(s)	7	32	62	74	7	32	55	74
Local Start Time (s)	78	0	36	55	78	0	36	48
Local Yield (s)	85	31	50	73	85	31	43	73
Local Yield 170(s)	85	20	50	62	85	20	43	62

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	70
Offset: 12 (13%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	























Splits and Phases: 6: New Albany Road E & Central College Road



HCM 6th Signalized Intersection Summary

6: New Albany Road E & Central College Road

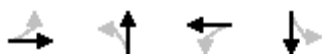
06/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	166	26	268	219	27	48	410	164	103	639	122
Future Volume (veh/h)	70	166	26	268	219	27	48	410	164	103	639	122
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	76	180	28	291	238	29	52	446	178	112	695	133
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	292	343	53	376	491	59	432	1723	941	539	1781	899
Arrive On Green	0.07	0.11	0.11	0.11	0.15	0.15	0.06	0.48	0.48	0.07	0.50	0.50
Sat Flow, veh/h	1781	3089	473	3456	3193	385	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	76	102	106	291	131	136	52	446	178	112	695	133
Grp Sat Flow(s),veh/h/ln	1781	1777	1785	1728	1777	1801	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	3.3	4.9	5.0	7.4	6.1	6.2	1.2	6.7	4.6	2.7	10.9	3.6
Cycle Q Clear(g_c), s	3.3	4.9	5.0	7.4	6.1	6.2	1.2	6.7	4.6	2.7	10.9	3.6
Prop In Lane	1.00		0.26	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	292	197	198	376	273	277	432	1723	941	539	1781	899
V/C Ratio(X)	0.26	0.52	0.53	0.77	0.48	0.49	0.12	0.26	0.19	0.21	0.39	0.15
Avail Cap(c_a), veh/h	313	355	357	538	494	500	470	1723	941	548	1781	899
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	37.7	37.8	39.0	34.8	34.9	10.3	13.7	8.4	9.7	13.9	9.2
Incr Delay (d2), s/veh	0.5	2.1	2.2	4.4	1.3	1.3	0.1	0.4	0.4	0.2	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	2.2	2.3	3.3	2.7	2.7	0.5	2.6	1.5	1.0	4.2	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.3	39.8	40.0	43.4	36.1	36.2	10.4	14.0	8.8	9.9	14.6	9.5
LnGrp LOS	C	D	D	D	D	D	B	B	A	A	B	A
Approach Vol, veh/h		284			558			676			940	
Approach Delay, s/veh		37.9			40.0			12.4			13.3	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.6	48.6	14.8	15.0	10.1	50.1	11.0	18.8				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	7.0	31.0	14.0	18.0	7.0	31.0	7.0	25.0				
Max Q Clear Time (g_c+I1), s	4.7	8.7	9.4	7.0	3.2	12.9	5.3	8.2				
Green Ext Time (p_c), s	0.1	3.5	0.4	0.7	0.0	4.9	0.0	1.3				
Intersection Summary												
HCM 6th Ctrl Delay			21.9									
HCM 6th LOS			C									

Timing Report, Sorted By Phase

8: Walton Parkway/EMH&T Driveway & New Albany Road E

06/04/2021

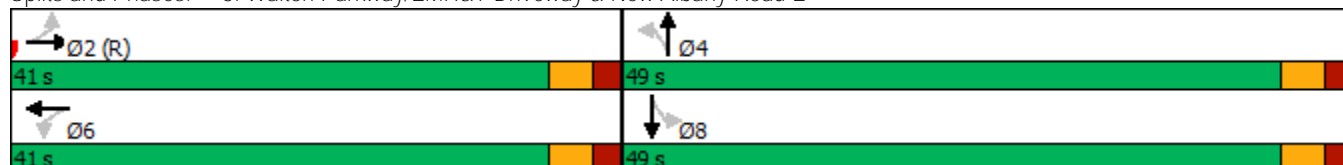


Phase Number	2	4	6	8
Movement	EBTL	NBTL	WBTL	SBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Max	Max	Max	Max
Maximum Split (s)	41	49	41	49
Maximum Split (%)	45.6%	54.4%	45.6%	54.4%
Minimum Split (s)	23	23	23	23
Yellow Time (s)	3	3	3	3
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	10	10	10	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	41	0	41
End Time (s)	41	0	41	0
Yield/Force Off (s)	36	85	36	85
Yield/Force Off 170(s)	25	74	25	74
Local Start Time (s)	0	41	0	41
Local Yield (s)	36	85	36	85
Local Yield 170(s)	25	74	25	74

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	50
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green	





















Splits and Phases: 8: Walton Parkway/EMH&T Driveway & New Albany Road E



HCM 6th Signalized Intersection Summary

8: Walton Parkway/EMH&T Driveway & New Albany Road E

06/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	563	89	18	787	0	367	6	44	10	17	53
Future Volume (veh/h)	4	563	89	18	787	0	367	6	44	10	17	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	612	97	20	855	0	399	7	48	11	18	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	216	1229	194	265	1421	0	694	101	690	715	190	614
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.00	0.49	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	646	3074	486	740	3647	0	1323	206	1411	1349	389	1255
Grp Volume(v), veh/h	4	353	356	20	855	0	399	0	55	11	0	76
Grp Sat Flow(s),veh/h/ln	646	1777	1783	740	1777	0	1323	0	1616	1349	0	1644
Q Serve(g_s), s	0.4	13.4	13.5	1.9	17.1	0.0	20.8	0.0	1.6	0.4	0.0	2.2
Cycle Q Clear(g_c), s	17.6	13.4	13.5	15.3	17.1	0.0	23.0	0.0	1.6	2.0	0.0	2.2
Prop In Lane	1.00		0.27	1.00		0.00	1.00		0.87	1.00		0.76
Lane Grp Cap(c), veh/h	216	711	713	265	1421	0	694	0	790	715	0	804
V/C Ratio(X)	0.02	0.50	0.50	0.08	0.60	0.00	0.57	0.00	0.07	0.02	0.00	0.09
Avail Cap(c_a), veh/h	216	711	713	265	1421	0	694	0	790	715	0	804
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.3	20.2	20.2	26.0	21.3	0.0	18.5	0.0	12.2	12.7	0.0	12.3
Incr Delay (d2), s/veh	0.2	2.5	2.5	0.6	1.9	0.0	3.4	0.0	0.2	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	5.7	5.8	0.4	7.1	0.0	6.5	0.0	0.6	0.1	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.4	22.7	22.7	26.5	23.2	0.0	21.9	0.0	12.3	12.7	0.0	12.6
LnGrp LOS	C	C	C	C	C	A	C	A	B	B	A	B
Approach Vol, veh/h	713			875			454			87		
Approach Delay, s/veh	22.7			23.3			20.8			12.6		
Approach LOS	C			C			C			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	41.0			49.0			41.0			49.0		
Change Period (Y+Rc), s	5.0			5.0			5.0			5.0		
Max Green Setting (Gmax), s	36.0			44.0			36.0			44.0		
Max Q Clear Time (g_c+I1), s	19.6			25.0			19.1			4.2		
Green Ext Time (p_c), s	4.0			1.6			5.6			0.5		
Intersection Summary												
HCM 6th Ctrl Delay	22.1											
HCM 6th LOS	C											

Timing Report, Sorted By Phase

12: New Albany-Condit Road & Walton Parkway

06/04/2021

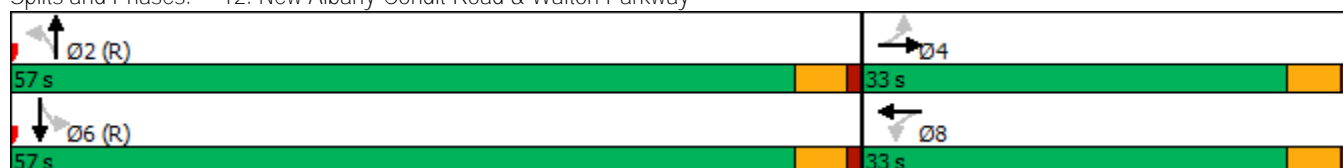


Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Max	None	C-Max	None
Maximum Split (s)	57	33	57	33
Maximum Split (%)	63.3%	36.7%	63.3%	36.7%
Minimum Split (s)	22.5	22.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	57	0	57
End Time (s)	57	0	57	0
Yield/Force Off (s)	52.5	85.5	52.5	85.5
Yield/Force Off 170(s)	41.5	74.5	41.5	74.5
Local Start Time (s)	0	57	0	57
Local Yield (s)	52.5	85.5	52.5	85.5
Local Yield 170(s)	41.5	74.5	41.5	74.5

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	55
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	





















Splits and Phases: 12: New Albany-Condit Road & Walton Parkway



HCM 6th Signalized Intersection Summary

12: New Albany-Condit Road & Walton Parkway

06/04/2021




												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	109	135	38	93	125	66	472	12	154	421	23
Future Volume (veh/h)	45	109	135	38	93	125	66	472	12	154	421	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	49	118	147	41	101	136	72	513	13	167	458	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	179	162	202	158	155	209	604	1245	32	572	1204	66
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.69	0.69	0.69	0.69	0.69	0.69
Sat Flow, veh/h	1143	757	943	1114	722	973	912	1816	46	877	1757	96
Grp Volume(v), veh/h	49	0	265	41	0	237	72	0	526	167	0	483
Grp Sat Flow(s),veh/h/ln	1143	0	1701	1114	0	1695	912	0	1862	877	0	1853
Q Serve(g_s), s	3.7	0.0	13.0	3.2	0.0	11.5	3.3	0.0	11.1	9.3	0.0	10.0
Cycle Q Clear(g_c), s	15.2	0.0	13.0	16.2	0.0	11.5	13.3	0.0	11.1	20.4	0.0	10.0
Prop In Lane	1.00		0.55	1.00		0.57	1.00		0.02	1.00		0.05
Lane Grp Cap(c), veh/h	179	0	365	158	0	364	604	0	1276	572	0	1270
V/C Ratio(X)	0.27	0.00	0.73	0.26	0.00	0.65	0.12	0.00	0.41	0.29	0.00	0.38
Avail Cap(c_a), veh/h	296	0	539	271	0	537	604	0	1276	572	0	1270
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.2	0.0	32.9	40.4	0.0	32.3	8.8	0.0	6.2	10.7	0.0	6.0
Incr Delay (d2), s/veh	0.8	0.0	2.8	0.9	0.0	2.0	0.4	0.0	1.0	1.3	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	5.5	0.9	0.0	4.7	0.7	0.0	3.8	1.7	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.0	0.0	35.7	41.3	0.0	34.2	9.2	0.0	7.2	12.0	0.0	6.9
LnGrp LOS	D	A	D	D	A	C	A	A	A	B	A	A
Approach Vol, veh/h	314			278			598			650		
Approach Delay, s/veh	36.3			35.3			7.4			8.2		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	66.2			23.8			66.2			23.8		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	52.5			28.5			52.5			28.5		
Max Q Clear Time (g_c+I1), s	15.3			17.2			22.4			18.2		
Green Ext Time (p_c), s	4.1			1.3			4.0			1.1		
Intersection Summary												
HCM 6th Ctrl Delay	16.8											
HCM 6th LOS	B											

HCM Unsignalized Intersection Capacity Analysis

14: New Albany Road E & Site Access 1

06/04/2021





























Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Traffic Volume (veh/h)	0	7	598	37	0	869	
Future Volume (Veh/h)	0	7	598	37	0	869	
Sign Control	Stop		Free			Free	
Grade	0%		0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	0	8	650	40	0	945	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type			None			None	
Median storage veh)							
Upstream signal (ft)						270	
pX, platoon unblocked	0.88						
vC, conflicting volume	1142	182			690		
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	878	182			690		
tC, single (s)	6.8	6.9			4.1		
tC, 2 stage (s)							
tF (s)	3.5	3.3			2.2		
p0 queue free %	100	99			100		
cM capacity (veh/h)	251	829			900		
Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	8	186	186	186	133	472	472
Volume Left	0	0	0	0	0	0	0
Volume Right	8	0	0	0	40	0	0
cSH	829	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.01	0.11	0.11	0.11	0.08	0.28	0.28
Queue Length 95th (ft)	1	0	0	0	0	0	0
Control Delay (s)	9.4	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	9.4	0.0				0.0	
Approach LOS	A						
Intersection Summary							
Average Delay			0.0				
Intersection Capacity Utilization			27.4%		ICU Level of Service		A
Analysis Period (min)			15				

HCM Unsignalized Intersection Capacity Analysis

16: Site Access 2/Discover Complex Access & Central College Road

06/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	415	30	32	411	7	37	4	23	38	6	38
Future Volume (Veh/h)	7	415	30	32	411	7	37	4	23	38	6	38
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	451	33	35	447	8	40	4	25	41	7	41
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)	5											
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)	791			679								
pX, platoon unblocked												
vC, conflicting volume	455			484			780	1008	242	790	1021	228
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	455			484			780	1008	242	790	1021	228
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			84	98	97	84	97	95
cM capacity (veh/h)	1102			1075			256	229	759	260	226	775
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2		
Volume Total	4	4	301	183	35	298	157	69	41	48		
Volume Left	4	4	0	0	35	0	0	40	41	0		
Volume Right	0	0	0	33	0	0	8	25	0	41		
cSH	1102	1102	1700	1700	1075	1700	1700	334	260	908		
Volume to Capacity	0.01	0.01	0.18	0.11	0.03	0.18	0.09	0.21	0.16	0.05		
Queue Length 95th (ft)	1	1	0	0	3	0	0	19	14	4		
Control Delay (s)	8.3	8.3	0.0	0.0	8.5	0.0	0.0	18.6	21.4	11.6		
Lane LOS	A	A			A			C	C	B		
Approach Delay (s)	0.1				0.6			18.6	16.1			
Approach LOS								C	C			
Intersection Summary												
Average Delay	2.7											
Intersection Capacity Utilization	36.1%			ICU Level of Service						A		
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	0	37	6	0	7	44	651	9	9	509	23
Future Vol, veh/h	17	0	37	6	0	7	44	651	9	9	509	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	225	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	0	40	7	0	8	48	708	10	10	553	25
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1399	1400	566	1415	1407	713	578	0	0	718	0	0
Stage 1	586	586	-	809	809	-	-	-	-	-	-	-
Stage 2	813	814	-	606	598	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	118	140	524	115	139	432	996	-	-	883	-	-
Stage 1	496	497	-	374	394	-	-	-	-	-	-	-
Stage 2	372	391	-	484	491	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	111	132	524	101	131	432	996	-	-	883	-	-
Mov Cap-2 Maneuver	111	132	-	101	131	-	-	-	-	-	-	-
Stage 1	472	492	-	356	375	-	-	-	-	-	-	-
Stage 2	348	372	-	442	486	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	24.7		27.8		0.5		0.2					
HCM LOS	C		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	996	-	-	241	172	883	-	-				
HCM Lane V/C Ratio	0.048	-	-	0.244	0.082	0.011	-	-				
HCM Control Delay (s)	8.8	-	-	24.7	27.8	9.1	-	-				
HCM Lane LOS	A	-	-	C	D	A	-	-				
HCM 95th %tile Q(veh)	0.2	-	-	0.9	0.3	0	-	-				

HCM 6th TWSC

21: New Albany-Condit Road & Site Access 5/Snider Loop

06/04/2021

Intersection

Int Delay, s/veh 0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Traffic Vol, veh/h	4	0	5	12	0	7	7	680	20	13	533	6
Future Vol, veh/h	4	0	5	12	0	7	7	680	20	13	533	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	225	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	5	13	0	8	8	739	22	14	579	7

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1381	1388	583	1379	1380	750	586	0	0	761	0	0
Stage 1	611	611	-	766	766	-	-	-	-	-	-	-
Stage 2	770	777	-	613	614	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	121	143	512	122	144	411	989	-	-	851	-	-
Stage 1	481	484	-	395	412	-	-	-	-	-	-	-
Stage 2	393	407	-	480	483	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	117	140	512	118	141	411	989	-	-	851	-	-
Mov Cap-2 Maneuver	117	140	-	118	141	-	-	-	-	-	-	-
Stage 1	477	476	-	392	409	-	-	-	-	-	-	-
Stage 2	383	404	-	467	475	-	-	-	-	-	-	-

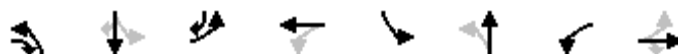
Approach	EB		WB		NB		SB	
HCM Control Delay, s	23.4		29.9		0.1		0.2	
HCM LOS	C		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	989	-	-	205	118	411	851
HCM Lane V/C Ratio	0.008	-	-	0.048	0.111	0.019	0.017
HCM Control Delay (s)	8.7	-	-	23.4	39.3	13.9	9.3
HCM Lane LOS	A	-	-	C	E	B	A
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0.1	0.1

Timing Report, Sorted By Phase

3: New Albany-Condit Road & Central College Road

06/04/2021



Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBTL	SBL	NBTL	WBL	EBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	15	36.4	15	23.6	15	36.4	15	23.6
Maximum Split (%)	16.7%	40.4%	16.7%	26.2%	16.7%	40.4%	16.7%	26.2%
Minimum Split (s)	15	26.7	15	23.6	15	26.4	15	23
Yellow Time (s)	3	4.7	3	3.6	3	4.4	3	3.6
All-Red Time (s)	1.8	1	1.4	1	1.8	1	1.4	1
Minimum Initial (s)	10	20	10	15	10	20	10	15
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)				7		7		
Flash Dont Walk (s)				11		11		
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	51.4	66.4	0	15	51.4	66.4
End Time (s)	15	51.4	66.4	0	15	51.4	66.4	0
Yield/Force Off (s)	10.2	45.7	62	85.4	10.2	46	62	85.4
Yield/Force Off 170(s)	10.2	45.7	62	74.4	10.2	35	62	85.4
Local Start Time (s)	75	0	36.4	51.4	75	0	36.4	51.4
Local Yield (s)	85.2	30.7	47	70.4	85.2	31	47	70.4
Local Yield 170(s)	85.2	30.7	47	59.4	85.2	20	47	70.4

Intersection Summary

Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	85

























Splits and Phases: 3: New Albany-Condit Road & Central College Road

Ø1	Ø2	Ø3	Ø4
15 s	36.4 s	15 s	23.6 s
Ø5	Ø6	Ø7	Ø8
15 s	36.4 s	15 s	23.6 s

HCM 6th Signalized Intersection Summary

3: New Albany-Condit Road & Central College Road

06/04/2021

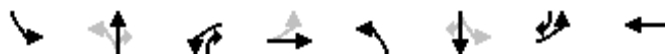
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	150	136	89	300	125	148	400	29	84	355	39
Future Volume (veh/h)	39	150	136	89	300	125	148	400	29	84	355	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	42	163	148	97	326	136	161	435	32	91	386	42
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	300	334	468	383	519	212	486	649	48	427	684	698
Arrive On Green	0.07	0.18	0.18	0.11	0.21	0.21	0.12	0.38	0.38	0.10	0.37	0.37
Sat Flow, veh/h	1781	1870	1585	1781	2460	1006	1781	1721	127	1781	1870	1585
Grp Volume(v), veh/h	42	163	148	97	234	228	161	0	467	91	386	42
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1689	1781	0	1848	1781	1870	1585
Q Serve(g_s), s	1.5	6.6	6.1	3.4	10.0	10.3	4.3	0.0	17.7	2.4	13.8	1.3
Cycle Q Clear(g_c), s	1.5	6.6	6.1	3.4	10.0	10.3	4.3	0.0	17.7	2.4	13.8	1.3
Prop In Lane	1.00		1.00	1.00		0.60	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	300	334	468	383	375	357	486	0	697	427	684	698
V/C Ratio(X)	0.14	0.49	0.32	0.25	0.62	0.64	0.33	0.00	0.67	0.21	0.56	0.06
Avail Cap(c_a), veh/h	392	423	543	418	402	382	495	0	697	457	684	698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	31.0	23.0	22.7	30.1	30.2	13.7	0.0	21.8	14.2	21.3	13.5
Incr Delay (d2), s/veh	0.2	1.1	0.4	0.3	2.7	3.2	0.4	0.0	5.1	0.2	3.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.0	2.2	1.4	4.3	4.2	1.6	0.0	7.8	0.8	6.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.5	32.1	23.4	23.1	32.8	33.4	14.1	0.0	26.8	14.5	24.6	13.7
LnGrp LOS	C	C	C	C	C	C	B	A	C	B	C	B
Approach Vol, veh/h	353			559			628			519		
Approach Delay, s/veh	27.5			31.4			23.6			22.0		
Approach LOS	C			C			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.6	36.4	10.6	22.3	13.6	37.4	13.4	19.6				
Change Period (Y+Rc), s	* 4.8	5.7	* 4.4	4.6	* 4.8	* 5.7	* 4.4	4.6				
Max Green Setting (Gmax), s	* 10	30.7	* 11	19.0	* 10	* 31	* 11	19.0				
Max Q Clear Time (g_c+I1), s	6.3	15.8	3.5	12.3	4.4	19.7	5.4	8.6				
Green Ext Time (p_c), s	0.1	1.9	0.0	1.4	0.1	2.0	0.1	1.0				
Intersection Summary												
HCM 6th Ctrl Delay			26.0									
HCM 6th LOS			C									
Notes												

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timing Report, Sorted By Phase

6: New Albany Road E & Central College Road

06/04/2021

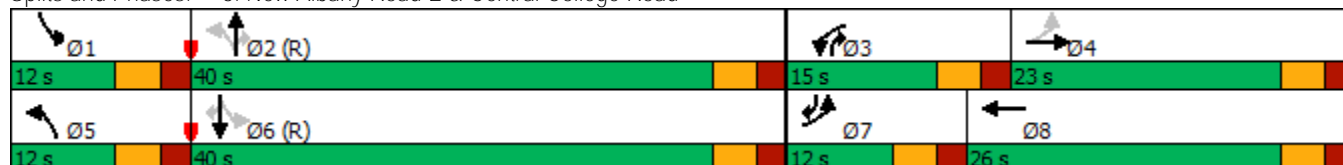


Phase Number	1	2	3	4	5	6	7	8
Movement	SBL	NBTL	WBL	EBTL	NBL	SBTL	EBL	WBT
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	12	40	15	23	12	40	12	26
Maximum Split (%)	13.3%	44.4%	16.7%	25.6%	13.3%	44.4%	13.3%	28.9%
Minimum Split (s)	12	23	12	23	12	23	12	23
Yellow Time (s)	3	3	3	3	3	3	3	3
All-Red Time (s)	2	2	2	2	2	2	2	2
Minimum Initial (s)	7	10	7	10	7	10	7	10
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	12	52	67	0	12	52	64
End Time (s)	12	52	67	0	12	52	64	0
Yield/Force Off (s)	7	47	62	85	7	47	59	85
Yield/Force Off 170(s)	7	36	62	74	7	36	59	74
Local Start Time (s)	78	0	40	55	78	0	40	52
Local Yield (s)	85	35	50	73	85	35	47	73
Local Yield 170(s)	85	24	50	62	85	24	47	62

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	70
Offset: 12 (13%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	























Splits and Phases: 6: New Albany Road E & Central College Road



HCM 6th Signalized Intersection Summary

6: New Albany Road E & Central College Road

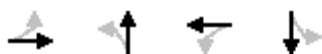
06/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	225	16	192	185	62	28	800	179	50	596	54
Future Volume (veh/h)	121	225	16	192	185	62	28	800	179	50	596	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	132	245	17	209	201	67	30	870	195	54	648	59
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	264	375	26	286	306	99	480	1870	965	380	1929	984
Arrive On Green	0.08	0.11	0.11	0.08	0.12	0.12	0.04	0.53	0.53	0.06	0.54	0.54
Sat Flow, veh/h	1781	3373	233	3456	2639	854	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	132	128	134	209	133	135	30	870	195	54	648	59
Grp Sat Flow(s),veh/h/ln	1781	1777	1828	1728	1777	1717	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	5.8	6.2	6.3	5.3	6.5	6.8	0.7	13.8	4.9	1.2	9.2	1.3
Cycle Q Clear(g_c), s	5.8	6.2	6.3	5.3	6.5	6.8	0.7	13.8	4.9	1.2	9.2	1.3
Prop In Lane	1.00		0.13	1.00		0.50	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	264	197	203	286	206	199	480	1870	965	380	1929	984
V/C Ratio(X)	0.50	0.65	0.66	0.73	0.65	0.68	0.06	0.47	0.20	0.14	0.34	0.06
Avail Cap(c_a), veh/h	264	355	366	384	415	401	545	1870	965	416	1929	984
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	38.3	38.4	40.3	38.0	38.2	8.9	13.4	7.8	9.2	11.5	6.7
Incr Delay (d2), s/veh	1.5	3.6	3.6	4.7	3.4	4.0	0.1	0.8	0.5	0.2	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	2.8	3.0	2.4	2.9	3.0	0.2	5.3	1.6	0.4	3.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.7	41.9	42.0	45.0	41.4	42.1	9.0	14.2	8.3	9.4	12.0	6.8
LnGrp LOS	C	D	D	D	D	D	A	B	A	A	B	A
Approach Vol, veh/h		394			477			1095			761	
Approach Delay, s/veh		39.2			43.2			13.0			11.4	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.2	52.4	12.4	15.0	8.7	53.9	12.0	15.4				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	7.0	35.0	10.0	18.0	7.0	35.0	7.0	21.0				
Max Q Clear Time (g_c+I1), s	3.2	15.8	7.3	8.3	2.7	11.2	7.8	8.8				
Green Ext Time (p_c), s	0.0	6.6	0.2	0.9	0.0	4.7	0.0	1.1				
Intersection Summary												
HCM 6th Ctrl Delay			21.6									
HCM 6th LOS			C									

Timing Report, Sorted By Phase

8: Walton Parkway/EMH&T Driveway & New Albany Road E

06/04/2021

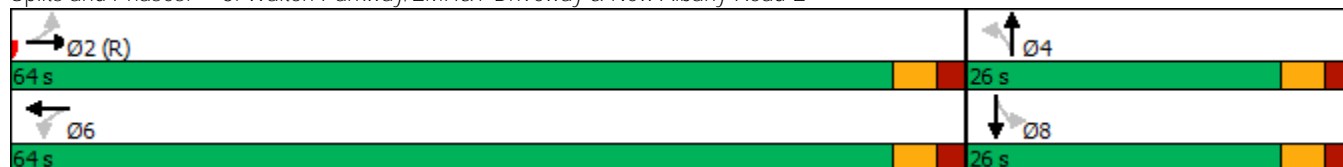


Phase Number	2	4	6	8
Movement	EBTL	NBTL	WBTL	SBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Max	Max	Max	Max
Maximum Split (s)	64	26	64	26
Maximum Split (%)	71.1%	28.9%	71.1%	28.9%
Minimum Split (s)	23	23	23	23
Yellow Time (s)	3	3	3	3
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	10	10	10	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	64	0	64
End Time (s)	64	0	64	0
Yield/Force Off (s)	59	85	59	85
Yield/Force Off 170(s)	48	74	48	74
Local Start Time (s)	0	64	0	64
Local Yield (s)	59	85	59	85
Local Yield 170(s)	48	74	48	74

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	60
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green	





















Splits and Phases: 8: Walton Parkway/EMH&T Driveway & New Albany Road E



HCM 6th Signalized Intersection Summary

8: Walton Parkway/EMH&T Driveway & New Albany Road E

06/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	968	350	37	582	22	103	20	25	2	0	2
Future Volume (veh/h)	63	968	350	37	582	22	103	20	25	2	0	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	1052	380	40	633	24	112	22	27	2	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	530	1683	600	233	2289	87	409	178	219	366	0	370
Arrive On Green	0.66	0.66	0.66	0.66	0.66	0.66	0.23	0.23	0.23	0.23	0.00	0.23
Sat Flow, veh/h	777	2568	915	374	3491	132	1415	764	938	1356	0	1585
Grp Volume(v), veh/h	68	724	708	40	322	335	112	0	49	2	0	2
Grp Sat Flow(s),veh/h/ln	777	1777	1706	374	1777	1847	1415	0	1702	1356	0	1585
Q Serve(g_s), s	3.6	21.3	22.0	6.4	6.9	6.9	5.9	0.0	2.0	0.1	0.0	0.1
Cycle Q Clear(g_c), s	10.5	21.3	22.0	28.4	6.9	6.9	6.0	0.0	2.0	2.2	0.0	0.1
Prop In Lane	1.00		0.54	1.00		0.07	1.00		0.55	1.00		1.00
Lane Grp Cap(c), veh/h	530	1165	1118	233	1165	1211	409	0	397	366	0	370
V/C Ratio(X)	0.13	0.62	0.63	0.17	0.28	0.28	0.27	0.00	0.12	0.01	0.00	0.01
Avail Cap(c_a), veh/h	530	1165	1118	233	1165	1211	409	0	397	366	0	370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.7	9.0	9.1	17.5	6.5	6.5	28.8	0.0	27.2	28.1	0.0	26.5
Incr Delay (d2), s/veh	0.5	2.5	2.7	1.6	0.6	0.6	1.7	0.0	0.6	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	7.5	7.5	0.6	2.3	2.4	2.1	0.0	0.9	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.2	11.5	11.9	19.1	7.1	7.1	30.4	0.0	27.9	28.1	0.0	26.5
LnGrp LOS	A	B	B	B	A	A	C	A	C	C	A	C
Approach Vol, veh/h	1500			697			161			4		
Approach Delay, s/veh	11.6			7.8			29.7			27.3		
Approach LOS	B			A			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	64.0			26.0			64.0			26.0		
Change Period (Y+Rc), s	5.0			5.0			5.0			5.0		
Max Green Setting (Gmax), s	59.0			21.0			59.0			21.0		
Max Q Clear Time (g_c+I1), s	24.0			8.0			30.4			4.2		
Green Ext Time (p_c), s	14.2			0.4			5.0			0.0		
Intersection Summary												
HCM 6th Ctrl Delay	11.7											
HCM 6th LOS	B											

Timing Report, Sorted By Phase

12: New Albany-Condit Road & Walton Parkway

06/04/2021

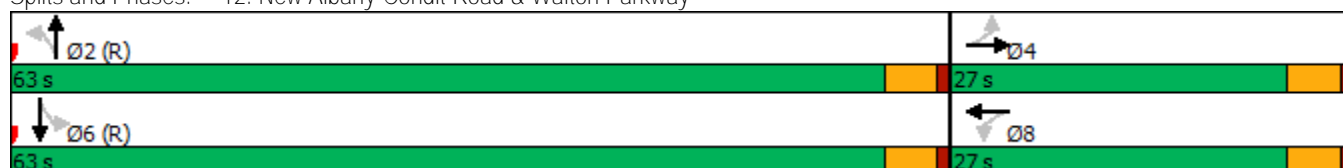


Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Max	None	C-Max	None
Maximum Split (s)	63	27	63	27
Maximum Split (%)	70.0%	30.0%	70.0%	30.0%
Minimum Split (s)	22.5	22.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	63	0	63
End Time (s)	63	0	63	0
Yield/Force Off (s)	58.5	85.5	58.5	85.5
Yield/Force Off 170(s)	47.5	74.5	47.5	74.5
Local Start Time (s)	0	63	0	63
Local Yield (s)	58.5	85.5	58.5	85.5
Local Yield 170(s)	47.5	74.5	47.5	74.5

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	60
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	





















Splits and Phases: 12: New Albany-Condit Road & Walton Parkway



HCM 6th Signalized Intersection Summary

12: New Albany-Condit Road & Walton Parkway

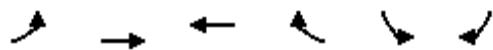
06/04/2021






												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	112	151	24	98	171	177	392	50	136	553	66
Future Volume (veh/h)	11	112	151	24	98	171	177	392	50	136	553	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	12	122	164	26	107	186	192	426	54	148	601	72
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	130	154	207	138	130	226	468	1119	142	608	1127	135
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.69	0.69	0.69	0.69	0.69	0.69
Sat Flow, veh/h	1086	723	972	1093	613	1066	765	1627	206	915	1639	196
Grp Volume(v), veh/h	12	0	286	26	0	293	192	0	480	148	0	673
Grp Sat Flow(s),veh/h/ln	1086	0	1695	1093	0	1679	765	0	1833	915	0	1835
Q Serve(g_s), s	1.0	0.0	14.4	2.1	0.0	15.0	14.9	0.0	10.0	7.4	0.0	16.3
Cycle Q Clear(g_c), s	15.9	0.0	14.4	16.5	0.0	15.0	31.2	0.0	10.0	17.3	0.0	16.3
Prop In Lane	1.00		0.57	1.00		0.63	1.00		0.11	1.00		0.11
Lane Grp Cap(c), veh/h	130	0	360	138	0	357	468	0	1260	608	0	1262
V/C Ratio(X)	0.09	0.00	0.79	0.19	0.00	0.82	0.41	0.00	0.38	0.24	0.00	0.53
Avail Cap(c_a), veh/h	171	0	424	179	0	420	468	0	1260	608	0	1262
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.4	0.0	33.6	41.4	0.0	33.8	14.6	0.0	6.0	9.6	0.0	6.9
Incr Delay (d2), s/veh	0.3	0.0	8.6	0.7	0.0	10.8	2.7	0.0	0.9	1.0	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	6.6	0.6	0.0	7.0	2.7	0.0	3.4	1.4	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.7	0.0	42.2	42.0	0.0	44.6	17.3	0.0	6.8	10.6	0.0	8.6
LnGrp LOS	D	A	D	D	A	D	B	A	A	B	A	A
Approach Vol, veh/h	298			319			672			821		
Approach Delay, s/veh	42.2			44.4			9.8			8.9		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	66.4			23.6			66.4			23.6		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	58.5			22.5			58.5			22.5		
Max Q Clear Time (g_c+I1), s	33.2			17.9			19.3			18.5		
Green Ext Time (p_c), s	4.7			0.7			5.8			0.7		
Intersection Summary												
HCM 6th Ctrl Delay	19.3											
HCM 6th LOS	B											

HCM Unsignalized Intersection Capacity Analysis

16: Central College Road & Discover Complex Access

06/04/2021






Movement	EBL	EBT	WBT	WBR	SBL	SBR			
Lane Configurations									
Traffic Volume (veh/h)	37	353	426	37	6	6			
Future Volume (Veh/h)	37	353	426	37	6	6			
Sign Control		Free	Free		Stop				
Grade		0%	0%		0%				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92			
Hourly flow rate (vph)	40	384	463	40	7	7			
Pedestrians									
Lane Width (ft)									
Walking Speed (ft/s)									
Percent Blockage									
Right turn flare (veh)									
Median type		None	None						
Median storage veh)									
Upstream signal (ft)		791	679						
pX, platoon unblocked	0.97				0.97	0.97			
vC, conflicting volume	503				755	252			
vC1, stage 1 conf vol									
vC2, stage 2 conf vol									
vCu, unblocked vol	414				675	153			
tC, single (s)	4.1				6.8	6.9			
tC, 2 stage (s)									
tF (s)	2.2				3.5	3.3			
p0 queue free %	96				98	99			
cM capacity (veh/h)	1102				361	836			
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	SB 1	SB 2	SB 3
Volume Total	20	20	192	192	309	194	7	4	4
Volume Left	20	20	0	0	0	0	7	0	0
Volume Right	0	0	0	0	0	40	0	4	4
cSH	1102	1102	1700	1700	1700	1700	361	836	836
Volume to Capacity	0.04	0.04	0.11	0.11	0.18	0.11	0.02	0.00	0.00
Queue Length 95th (ft)	3	3	0	0	0	0	1	0	0
Control Delay (s)	8.4	8.4	0.0	0.0	0.0	0.0	15.2	9.3	9.3
Lane LOS	A	A					C	A	A
Approach Delay (s)	0.8				0.0		12.3		
Approach LOS							B		
Intersection Summary									
Average Delay			0.5						
Intersection Capacity Utilization			25.8%		ICU Level of Service			A	
Analysis Period (min)			15						

HCM 6th TWSC

21: New Albany-Condit Road & Snider Loop

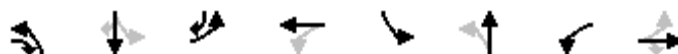
06/04/2021

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	11	569	7	3	665
Future Vol, veh/h	19	11	569	7	3	665
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	12	618	8	3	723
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1351	622	0	0	626	0
Stage 1	622	-	-	-	-	-
Stage 2	729	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	166	487	-	-	956	-
Stage 1	535	-	-	-	-	-
Stage 2	477	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	165	487	-	-	956	-
Mov Cap-2 Maneuver	165	-	-	-	-	-
Stage 1	535	-	-	-	-	-
Stage 2	475	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	24.4		0		0	
HCM LOS	C					
Minor Lane/Major Mvmt		NBT	NBRWBLn1	SBL	SBT	
Capacity (veh/h)		-	-	218	956	-
HCM Lane V/C Ratio		-	-	0.15	0.003	-
HCM Control Delay (s)		-	-	24.4	8.8	0
HCM Lane LOS		-	-	C	A	A
HCM 95th %tile Q(veh)		-	-	0.5	0	-

Timing Report, Sorted By Phase

3: New Albany-Condit Road & Central College Road

06/04/2021



Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBTL	SBL	NBTL	WBL	EBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	15	36.4	15	23.6	15	36.4	15	23.6
Maximum Split (%)	16.7%	40.4%	16.7%	26.2%	16.7%	40.4%	16.7%	26.2%
Minimum Split (s)	15	26.7	15	23.6	15	26.4	15	23
Yellow Time (s)	3	4.7	3	3.6	3	4.4	3	3.6
All-Red Time (s)	1.8	1	1.4	1	1.8	1	1.4	1
Minimum Initial (s)	10	20	10	15	10	20	10	15
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)				7		7		
Flash Dont Walk (s)				11		11		
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	51.4	66.4	0	15	51.4	66.4
End Time (s)	15	51.4	66.4	0	15	51.4	66.4	0
Yield/Force Off (s)	10.2	45.7	62	85.4	10.2	46	62	85.4
Yield/Force Off 170(s)	10.2	45.7	62	74.4	10.2	35	62	85.4
Local Start Time (s)	75	0	36.4	51.4	75	0	36.4	51.4
Local Yield (s)	85.2	30.7	47	70.4	85.2	31	47	70.4
Local Yield 170(s)	85.2	30.7	47	59.4	85.2	20	47	70.4

Intersection Summary

Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	85























Splits and Phases: 3: New Albany-Condit Road & Central College Road

Ø1	Ø2	Ø3	Ø4
15 s	36.4 s	15 s	23.6 s
Ø5	Ø6	Ø7	Ø8
15 s	36.4 s	15 s	23.6 s

HCM 6th Signalized Intersection Summary

3: New Albany-Condit Road & Central College Road

06/04/2021

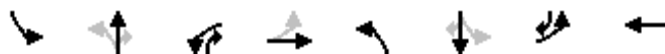
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	167	136	103	311	125	148	417	50	84	366	49
Future Volume (veh/h)	53	167	136	103	311	125	148	417	50	84	366	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	182	148	112	338	136	161	453	54	91	398	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	308	333	466	375	497	197	473	616	73	394	682	717
Arrive On Green	0.09	0.18	0.18	0.11	0.20	0.20	0.12	0.38	0.38	0.10	0.36	0.36
Sat Flow, veh/h	1781	1870	1585	1781	2487	983	1781	1640	195	1781	1870	1585
Grp Volume(v), veh/h	58	182	148	112	240	234	161	0	507	91	398	53
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1693	1781	0	1835	1781	1870	1585
Q Serve(g_s), s	2.1	7.5	6.1	4.0	10.5	10.8	4.3	0.0	20.1	2.4	14.5	1.6
Cycle Q Clear(g_c), s	2.1	7.5	6.1	4.0	10.5	10.8	4.3	0.0	20.1	2.4	14.5	1.6
Prop In Lane	1.00		1.00	1.00		0.58	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	308	333	466	375	355	339	473	0	690	394	682	717
V/C Ratio(X)	0.19	0.55	0.32	0.30	0.67	0.69	0.34	0.00	0.74	0.23	0.58	0.07
Avail Cap(c_a), veh/h	375	422	541	404	401	382	482	0	690	424	682	717
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	31.5	23.2	23.1	31.2	31.3	14.0	0.0	22.7	14.9	21.6	13.1
Incr Delay (d2), s/veh	0.3	1.4	0.4	0.4	3.8	4.6	0.4	0.0	6.9	0.3	3.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.4	2.2	1.6	4.6	4.5	1.6	0.0	9.0	0.9	6.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.2	32.9	23.5	23.6	35.0	35.8	14.4	0.0	29.5	15.2	25.2	13.3
LnGrp LOS	C	C	C	C	C	D	B	A	C	B	C	B
Approach Vol, veh/h		388			586			668			542	
Approach Delay, s/veh		28.0			33.1			25.9			22.4	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.6	36.4	11.8	21.4	13.6	37.4	13.7	19.6				
Change Period (Y+Rc), s	* 4.8	5.7	* 4.4	4.6	* 4.8	* 5.7	* 4.4	4.6				
Max Green Setting (Gmax), s	* 10	30.7	* 11	19.0	* 10	* 31	* 11	19.0				
Max Q Clear Time (g_c+I1), s	6.3	16.5	4.1	12.8	4.4	22.1	6.0	9.5				
Green Ext Time (p_c), s	0.1	1.9	0.0	1.3	0.1	2.0	0.1	1.0				
Intersection Summary												
HCM 6th Ctrl Delay			27.3									
HCM 6th LOS			C									
Notes												

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timing Report, Sorted By Phase

6: New Albany Road E & Central College Road

06/04/2021



Phase Number	1	2	3	4	5	6	7	8
Movement	SBL	NBTL	WBL	EBTL	NBL	SBTL	EBL	WBT
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	12	39	16	23	12	39	12	27
Maximum Split (%)	13.3%	43.3%	17.8%	25.6%	13.3%	43.3%	13.3%	30.0%
Minimum Split (s)	12	23	12	23	12	23	12	23
Yellow Time (s)	3	3	3	3	3	3	3	3
All-Red Time (s)	2	2	2	2	2	2	2	2
Minimum Initial (s)	7	10	7	10	7	10	7	10
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	12	51	67	0	12	51	63
End Time (s)	12	51	67	0	12	51	63	0
Yield/Force Off (s)	7	46	62	85	7	46	58	85
Yield/Force Off 170(s)	7	35	62	74	7	35	58	74
Local Start Time (s)	78	0	39	55	78	0	39	51
Local Yield (s)	85	34	50	73	85	34	46	73
Local Yield 170(s)	85	23	50	62	85	23	46	62

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	70
Offset: 12 (13%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	























Splits and Phases: 6: New Albany Road E & Central College Road



HCM 6th Signalized Intersection Summary

6: New Albany Road E & Central College Road

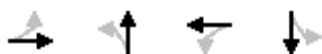
06/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	242	16	225	200	66	38	800	179	53	596	52
Future Volume (veh/h)	121	242	16	225	200	66	38	800	179	53	596	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	132	263	17	245	217	72	41	870	195	58	648	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	269	377	24	324	335	108	478	1825	962	375	1859	953
Arrive On Green	0.08	0.11	0.11	0.09	0.13	0.13	0.05	0.51	0.51	0.06	0.52	0.52
Sat Flow, veh/h	1781	3390	218	3456	2641	852	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	132	137	143	245	144	145	41	870	195	58	648	57
Grp Sat Flow(s),veh/h/ln	1781	1777	1831	1728	1777	1717	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	5.8	6.7	6.8	6.2	6.9	7.2	0.9	14.2	5.0	1.3	9.6	1.3
Cycle Q Clear(g_c), s	5.8	6.7	6.8	6.2	6.9	7.2	0.9	14.2	5.0	1.3	9.6	1.3
Prop In Lane	1.00		0.12	1.00		0.50	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	269	197	203	324	226	218	478	1825	962	375	1859	953
V/C Ratio(X)	0.49	0.69	0.70	0.76	0.64	0.67	0.09	0.48	0.20	0.15	0.35	0.06
Avail Cap(c_a), veh/h	269	355	366	422	434	420	528	1825	962	407	1859	953
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	38.5	38.6	39.8	37.3	37.5	9.2	14.1	7.9	9.7	12.5	7.4
Incr Delay (d2), s/veh	1.4	4.3	4.4	5.6	3.0	3.5	0.1	0.9	0.5	0.2	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	3.1	3.2	2.8	3.1	3.2	0.3	5.4	1.6	0.5	3.6	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.6	42.9	42.9	45.4	40.3	40.9	9.3	15.0	8.4	9.9	13.0	7.6
LnGrp LOS	C	D	D	D	D	D	A	B	A	A	B	A
Approach Vol, veh/h		412			534			1106			763	
Approach Delay, s/veh		39.9			42.8			13.6			12.4	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.4	51.2	13.4	15.0	9.5	52.1	12.0	16.4				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	7.0	34.0	11.0	18.0	7.0	34.0	7.0	22.0				
Max Q Clear Time (g_c+I1), s	3.3	16.2	8.2	8.8	2.9	11.6	7.8	9.2				
Green Ext Time (p_c), s	0.0	6.3	0.2	1.0	0.0	4.6	0.0	1.2				
Intersection Summary												
HCM 6th Ctrl Delay			22.7									
HCM 6th LOS			C									

Timing Report, Sorted By Phase

8: Walton Parkway/EMH&T Driveway & New Albany Road E

06/04/2021



Phase Number	2	4	6	8
Movement	EBTL	NBTL	WBTL	SBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Max	Max	Max	Max
Maximum Split (s)	65	25	65	25
Maximum Split (%)	72.2%	27.8%	72.2%	27.8%
Minimum Split (s)	23	23	23	23
Yellow Time (s)	3	3	3	3
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	10	10	10	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	65	0	65
End Time (s)	65	0	65	0
Yield/Force Off (s)	60	85	60	85
Yield/Force Off 170(s)	49	74	49	74
Local Start Time (s)	0	65	0	65
Local Yield (s)	60	85	60	85
Local Yield 170(s)	49	74	49	74

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	60
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green	

























Splits and Phases: 8: Walton Parkway/EMH&T Driveway & New Albany Road E



HCM 6th Signalized Intersection Summary

8: Walton Parkway/EMH&T Driveway & New Albany Road E

06/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	63	997	350	37	615	22	111	20	25	2	0	2
Future Volume (veh/h)	63	997	350	37	615	22	111	20	25	2	0	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	1084	380	40	668	24	121	22	27	2	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	522	1728	597	232	2333	84	393	170	208	350	0	352
Arrive On Green	0.67	0.67	0.67	0.67	0.67	0.67	0.22	0.22	0.22	0.22	0.00	0.22
Sat Flow, veh/h	752	2591	895	362	3499	126	1415	764	938	1356	0	1585
Grp Volume(v), veh/h	68	738	726	40	339	353	121	0	49	2	0	2
Grp Sat Flow(s),veh/h/ln	752	1777	1709	362	1777	1848	1415	0	1702	1356	0	1585
Q Serve(g_s), s	3.7	21.3	22.1	6.5	7.1	7.1	6.6	0.0	2.1	0.1	0.0	0.1
Cycle Q Clear(g_c), s	10.8	21.3	22.1	28.6	7.1	7.1	6.6	0.0	2.1	2.2	0.0	0.1
Prop In Lane	1.00		0.52	1.00		0.07	1.00		0.55	1.00		1.00
Lane Grp Cap(c), veh/h	522	1185	1140	232	1185	1232	393	0	378	350	0	352
V/C Ratio(X)	0.13	0.62	0.64	0.17	0.29	0.29	0.31	0.00	0.13	0.01	0.00	0.01
Avail Cap(c_a), veh/h	522	1185	1140	232	1185	1232	393	0	378	350	0	352
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.4	8.6	8.7	17.0	6.2	6.2	29.8	0.0	28.0	28.9	0.0	27.3
Incr Delay (d2), s/veh	0.5	2.5	2.7	1.6	0.6	0.6	2.0	0.0	0.7	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	7.4	7.4	0.6	2.4	2.5	2.4	0.0	0.9	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.9	11.0	11.4	18.6	6.8	6.8	31.9	0.0	28.7	28.9	0.0	27.3
LnGrp LOS	A	B	B	B	A	A	C	A	C	C	A	C
Approach Vol, veh/h	1532				732				170			
Approach Delay, s/veh	11.1				7.4				31.0			
Approach LOS	B				A				C			
Timer - Assigned Phs	2				4				6			
Phs Duration (G+Y+Rc), s	65.0				25.0				65.0			
Change Period (Y+Rc), s	5.0				5.0				5.0			
Max Green Setting (Gmax), s	60.0				20.0				60.0			
Max Q Clear Time (g_c+I1), s	24.1				8.6				30.6			
Green Ext Time (p_c), s	14.9				0.4				5.4			
Intersection Summary												
HCM 6th Ctrl Delay	11.4											
HCM 6th LOS	B											

Timing Report, Sorted By Phase

12: New Albany-Condit Road & Walton Parkway

06/04/2021

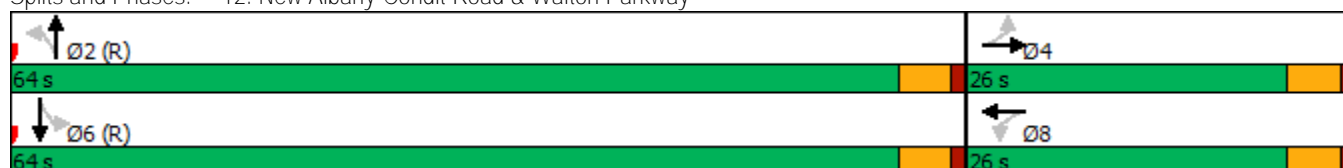


Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Max	None	C-Max	None
Maximum Split (s)	64	26	64	26
Maximum Split (%)	71.1%	28.9%	71.1%	28.9%
Minimum Split (s)	22.5	22.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	64	0	64
End Time (s)	64	0	64	0
Yield/Force Off (s)	59.5	85.5	59.5	85.5
Yield/Force Off 170(s)	48.5	74.5	48.5	74.5
Local Start Time (s)	0	64	0	64
Local Yield (s)	59.5	85.5	59.5	85.5
Local Yield 170(s)	48.5	74.5	48.5	74.5

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	60
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	





















Splits and Phases: 12: New Albany-Condit Road & Walton Parkway



HCM 6th Signalized Intersection Summary

12: New Albany-Condit Road & Walton Parkway

06/04/2021




												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	112	151	24	98	181	177	426	50	150	601	74
Future Volume (veh/h)	11	112	151	24	98	181	177	426	50	150	601	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	12	122	164	26	107	197	192	463	54	163	653	80
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	121	154	207	138	125	231	427	1130	132	579	1123	138
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.69	0.69	0.69	0.69	0.69	0.69
Sat Flow, veh/h	1075	723	972	1093	590	1085	724	1644	192	884	1634	200
Grp Volume(v), veh/h	12	0	286	26	0	304	192	0	517	163	0	733
Grp Sat Flow(s),veh/h/ln	1075	0	1695	1093	0	1675	724	0	1836	884	0	1834
Q Serve(g_s), s	1.0	0.0	14.4	2.1	0.0	15.7	16.9	0.0	11.0	8.9	0.0	18.7
Cycle Q Clear(g_c), s	16.7	0.0	14.4	16.5	0.0	15.7	35.7	0.0	11.0	19.9	0.0	18.7
Prop In Lane	1.00		0.57	1.00		0.65	1.00		0.10	1.00		0.11
Lane Grp Cap(c), veh/h	121	0	361	138	0	356	427	0	1262	579	0	1261
V/C Ratio(X)	0.10	0.00	0.79	0.19	0.00	0.85	0.45	0.00	0.41	0.28	0.00	0.58
Avail Cap(c_a), veh/h	149	0	405	166	0	400	427	0	1262	579	0	1261
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.1	0.0	33.6	41.3	0.0	34.1	16.6	0.0	6.1	10.5	0.0	7.3
Incr Delay (d2), s/veh	0.4	0.0	9.4	0.7	0.0	14.9	3.4	0.0	1.0	1.2	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	6.6	0.6	0.0	7.6	3.0	0.0	3.7	1.7	0.0	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.5	0.0	42.9	42.0	0.0	49.0	20.0	0.0	7.1	11.7	0.0	9.3
LnGrp LOS	D	A	D	D	A	D	C	A	A	B	A	A
Approach Vol, veh/h	298			330			709			896		
Approach Delay, s/veh	42.9			48.5			10.6			9.7		
Approach LOS	D			D			B			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	66.4			23.6			66.4			23.6		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	59.5			21.5			59.5			21.5		
Max Q Clear Time (g_c+I1), s	37.7			18.7			21.9			18.5		
Green Ext Time (p_c), s	4.9			0.5			6.7			0.6		
Intersection Summary												
HCM 6th Ctrl Delay	20.2											
HCM 6th LOS	C											

HCM Unsignalized Intersection Capacity Analysis

14: New Albany Road E & Site Access 1

06/04/2021























Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Traffic Volume (veh/h)	0	10	1001	29	0	756	
Future Volume (Veh/h)	0	10	1001	29	0	756	
Sign Control	Stop		Free			Free	
Grade	0%		0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	0	11	1088	32	0	822	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type			None			None	
Median storage veh)							
Upstream signal (ft)						270	
pX, platoon unblocked	0.89						
vC, conflicting volume	1515	288			1120		
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	1331	288			1120		
tC, single (s)	6.8	6.9			4.1		
tC, 2 stage (s)							
tF (s)	3.5	3.3			2.2		
p0 queue free %	100	98			100		
cM capacity (veh/h)	130	709			619		
Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	11	311	311	311	187	411	411
Volume Left	0	0	0	0	0	0	0
Volume Right	11	0	0	0	32	0	0
cSH	709	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.02	0.18	0.18	0.18	0.11	0.24	0.24
Queue Length 95th (ft)	1	0	0	0	0	0	0
Control Delay (s)	10.2	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	10.2	0.0				0.0	
Approach LOS	B						
Intersection Summary							
Average Delay			0.1				
Intersection Capacity Utilization			25.0%		ICU Level of Service		A
Analysis Period (min)			15				

HCM Unsignalized Intersection Capacity Analysis

16: Site Access 2/Discover Complex Access & Central College Road



















06/04/2021







												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	353	20	21	426	37	52	6	31	6	4	6
Future Volume (Veh/h)	37	353	20	21	426	37	52	6	31	6	4	6
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	40	384	22	23	463	40	57	7	34	7	4	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)	5											
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)	791			679								
pX, platoon unblocked	0.98			1.00			0.98	0.98	1.00	0.98	0.98	0.98
vC, conflicting volume	503			406			754	1024	203	838	1015	252
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	440			402			692	968	199	778	959	182
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			98			81	97	96	97	98	99
cM capacity (veh/h)	1089			1151			302	233	808	250	235	809
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2		
Volume Total	20	20	256	150	23	309	194	98	7	11		
Volume Left	20	20	0	0	23	0	0	57	7	0		
Volume Right	0	0	0	22	0	0	40	34	0	7		
cSH	1089	1089	1700	1700	1151	1700	1700	376	250	648		
Volume to Capacity	0.04	0.04	0.15	0.09	0.02	0.18	0.11	0.26	0.03	0.02		
Queue Length 95th (ft)	3	3	0	0	2	0	0	26	2	1		
Control Delay (s)	8.4	8.4	0.0	0.0	8.2	0.0	0.0	17.9	19.8	13.5		
Lane LOS	A	A			A			C	C	B		
Approach Delay (s)	0.8				0.4			17.9	16.0			
Approach LOS								C	C			
Intersection Summary												
Average Delay	2.4											
Intersection Capacity Utilization	35.9%			ICU Level of Service					A			
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis

19: New Albany-Condit Road & Site Access 3/Site Access 4

06/04/2021




















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	0	52	10	0	10	30	582	7	7	672	14
Future Volume (Veh/h)	22	0	52	10	0	10	30	582	7	7	672	14
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	24	0	57	11	0	11	33	633	8	8	730	15
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)							1230			602		
pX, platoon unblocked	0.82	0.82	0.79	0.82	0.82	0.94	0.79				0.94	
vC, conflicting volume	1464	1460	738	1506	1464	637	745				641	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1280	1276	535	1331	1280	578	544				582	
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1				4.1	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2				2.2	
p0 queue free %	78	100	87	88	100	98	96				99	
cM capacity (veh/h)	110	130	431	90	129	483	809				928	
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	81	22	33	641	8	745						
Volume Left	24	11	33	0	8	0						
Volume Right	57	11	0	8	0	15						
cSH	232	152	809	1700	928	1700						
Volume to Capacity	0.35	0.14	0.04	0.38	0.01	0.44						
Queue Length 95th (ft)	37	12	3	0	1	0						
Control Delay (s)	28.7	32.6	9.6	0.0	8.9	0.0						
Lane LOS	D	D	A		A							
Approach Delay (s)	28.7	32.6	0.5		0.1							
Approach LOS	D	D										
Intersection Summary												
Average Delay				2.2								
Intersection Capacity Utilization				47.7%	ICU Level of Service				A			
Analysis Period (min)				15								

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	0	52	10	0	10	30	582	7	7	672	14
Future Vol, veh/h	22	0	52	10	0	10	30	582	7	7	672	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	225	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	0	57	11	0	11	33	633	8	8	730	15
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1463	1461	738	1485	1464	637	745	0	0	641	0	0
Stage 1	754	754	-	703	703	-	-	-	-	-	-	-
Stage 2	709	707	-	782	761	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	107	129	418	103	128	477	863	-	-	943	-	-
Stage 1	401	417	-	428	440	-	-	-	-	-	-	-
Stage 2	425	438	-	387	414	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	101	123	418	86	122	477	863	-	-	943	-	-
Mov Cap-2 Maneuver	101	123	-	86	122	-	-	-	-	-	-	-
Stage 1	386	414	-	412	423	-	-	-	-	-	-	-
Stage 2	399	421	-	332	411	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	31.2		33.9		0.5		0.1					
HCM LOS	D		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	863	-	-	216	146	943	-	-				
HCM Lane V/C Ratio	0.038	-	-	0.372	0.149	0.008	-	-				
HCM Control Delay (s)	9.3	-	-	31.2	33.9	8.8	-	-				
HCM Lane LOS	A	-	-	D	D	A	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	1.6	0.5	0	-	-				

HCM Unsignalized Intersection Capacity Analysis

21: New Albany-Condit Road & Site Access 5/Snider Loop








06/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	8	19	0	11	7	606	7	3	727	4
Future Volume (Veh/h)	6	0	8	19	0	11	7	606	7	3	727	4
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	0	9	21	0	12	8	659	8	3	790	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)							709			1123		
pX, platoon unblocked	0.88	0.88	0.83	0.88	0.88	0.90	0.83				0.90	
vC, conflicting volume	1485	1481	792	1484	1479	663	794				667	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1229	1224	651	1228	1222	570	653				575	
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1				4.1	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2				2.2	
p0 queue free %	95	100	98	84	100	97	99				100	
cM capacity (veh/h)	132	156	391	132	156	469	778				899	
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2					
Volume Total	16	21	12	8	667	3	794					
Volume Left	7	21	0	8	0	3	0					
Volume Right	9	0	12	0	8	0	4					
cSH	210	132	469	778	1700	899	1700					
Volume to Capacity	0.08	0.16	0.03	0.01	0.39	0.00	0.47					
Queue Length 95th (ft)	6	14	2	1	0	0	0					
Control Delay (s)	23.5	37.2	12.9	9.7	0.0	9.0	0.0					
Lane LOS	C	E	B	A		A						
Approach Delay (s)	23.5	28.4		0.1		0.0						
Approach LOS	C	D										
Intersection Summary												
Average Delay				0.9								
Intersection Capacity Utilization				51.5%	ICU Level of Service				A			
Analysis Period (min)				15								

HCM 6th TWSC

21: New Albany-Condit Road & Site Access 5/Snider Loop

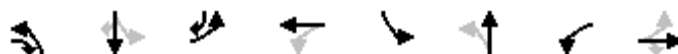
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Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	8	19	0	11	7	606	7	3	727	4
Future Vol, veh/h	6	0	8	19	0	11	7	606	7	3	727	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	225	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	0	9	21	0	12	8	659	8	3	790	4
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1483	1481	792	1482	1479	663	794	0	0	667	0	0
Stage 1	798	798	-	679	679	-	-	-	-	-	-	-
Stage 2	685	683	-	803	800	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	103	125	389	103	126	461	827	-	-	923	-	-
Stage 1	380	398	-	441	451	-	-	-	-	-	-	-
Stage 2	438	449	-	377	397	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	99	123	389	100	124	461	827	-	-	923	-	-
Mov Cap-2 Maneuver	99	123	-	100	124	-	-	-	-	-	-	-
Stage 1	376	397	-	437	446	-	-	-	-	-	-	-
Stage 2	423	445	-	367	396	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	28		36.5		0.1		0					
HCM LOS	D		E									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR					
Capacity (veh/h)	827	-	-	172	100	461	923	-	-			
HCM Lane V/C Ratio	0.009	-	-	0.088	0.207	0.026	0.004	-	-			
HCM Control Delay (s)	9.4	-	-	28	50.1	13	8.9	-	-			
HCM Lane LOS	A	-	-	D	F	B	A	-	-			
HCM 95th %tile Q(veh)	0	-	-	0.3	0.7	0.1	0	-	-			

Timing Report, Sorted By Phase

3: New Albany-Condit Road & Central College Road

06/04/2021



Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBTL	SBL	NBTL	WBL	EBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	15	36.4	15	23.6	15	36.4	15	23.6
Maximum Split (%)	16.7%	40.4%	16.7%	26.2%	16.7%	40.4%	16.7%	26.2%
Minimum Split (s)	15	26.7	15	23.6	15	26.4	15	23
Yellow Time (s)	3	4.7	3	3.6	3	4.4	3	3.6
All-Red Time (s)	1.8	1	1.4	1	1.8	1	1.4	1
Minimum Initial (s)	10	20	10	15	10	20	10	15
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)				7		7		
Flash Dont Walk (s)				11		11		
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	51.4	66.4	0	15	51.4	66.4
End Time (s)	15	51.4	66.4	0	15	51.4	66.4	0
Yield/Force Off (s)	10.2	45.7	62	85.4	10.2	46	62	85.4
Yield/Force Off 170(s)	10.2	45.7	62	74.4	10.2	35	62	85.4
Local Start Time (s)	75	0	36.4	51.4	75	0	36.4	51.4
Local Yield (s)	85.2	30.7	47	70.4	85.2	31	47	70.4
Local Yield 170(s)	85.2	30.7	47	59.4	85.2	20	47	70.4

Intersection Summary

Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	95

























Splits and Phases: 3: New Albany-Condit Road & Central College Road

Ø1	Ø2	Ø3	Ø4
15 s	36.4 s	15 s	23.6 s
Ø5	Ø6	Ø7	Ø8
15 s	36.4 s	15 s	23.6 s

HCM 6th Signalized Intersection Summary

3: New Albany-Condit Road & Central College Road

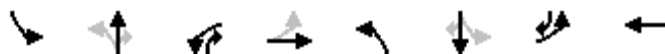
06/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	298	143	49	200	101	153	563	89	61	332	57
Future Volume (veh/h)	51	298	143	49	200	101	153	563	89	61	332	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	55	324	155	53	217	110	166	612	97	66	361	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	357	374	502	266	459	224	501	613	97	254	685	717
Arrive On Green	0.09	0.20	0.20	0.08	0.20	0.20	0.12	0.39	0.39	0.09	0.37	0.37
Sat Flow, veh/h	1781	1870	1585	1781	2314	1130	1781	1576	250	1781	1870	1585
Grp Volume(v), veh/h	55	324	155	53	165	162	166	0	709	66	361	62
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1667	1781	0	1825	1781	1870	1585
Q Serve(g_s), s	1.9	14.1	6.2	1.8	6.9	7.2	4.5	0.0	32.5	1.7	12.7	1.9
Cycle Q Clear(g_c), s	1.9	14.1	6.2	1.8	6.9	7.2	4.5	0.0	32.5	1.7	12.7	1.9
Prop In Lane	1.00		1.00	1.00		0.68	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	357	374	502	266	353	331	501	0	711	254	685	717
V/C Ratio(X)	0.15	0.87	0.31	0.20	0.47	0.49	0.33	0.00	1.00	0.26	0.53	0.09
Avail Cap(c_a), veh/h	429	424	544	341	403	378	509	0	711	304	685	717
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.5	32.5	21.7	23.4	29.7	29.8	13.5	0.0	25.6	18.3	20.9	13.1
Incr Delay (d2), s/veh	0.2	15.6	0.3	0.4	1.0	1.1	0.4	0.0	33.2	0.5	2.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	7.7	2.2	0.7	2.8	2.8	1.6	0.0	18.9	0.6	5.5	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.7	48.1	22.0	23.8	30.7	31.0	13.9	0.0	58.8	18.9	23.8	13.3
LnGrp LOS	C	D	C	C	C	C	B	A	E	B	C	B
Approach Vol, veh/h		534			380			875			489	
Approach Delay, s/veh		37.9			29.8			50.3			21.8	
Approach LOS		D			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.6	36.4	11.6	21.2	12.7	38.3	11.5	21.4				
Change Period (Y+Rc), s	* 4.8	5.7	* 4.4	4.6	* 4.8	* 5.7	* 4.4	4.6				
Max Green Setting (Gmax), s	* 10	30.7	* 11	19.0	* 10	* 31	* 11	19.0				
Max Q Clear Time (g_c+I1), s	6.5	14.7	3.9	9.2	3.7	34.5	3.8	16.1				
Green Ext Time (p_c), s	0.1	1.8	0.0	1.2	0.1	0.0	0.0	0.7				
Intersection Summary												
HCM 6th Ctrl Delay			37.8									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timing Report, Sorted By Phase

6: New Albany Road E & Central College Road

06/04/2021

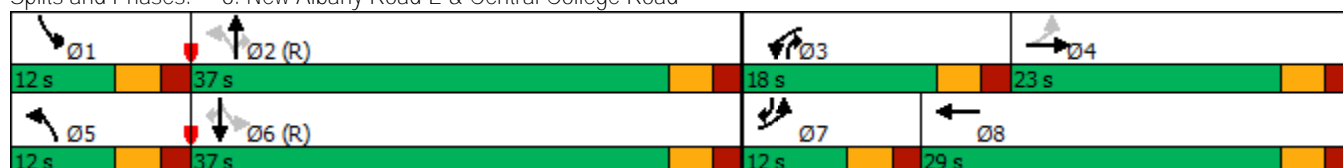


Phase Number	1	2	3	4	5	6	7	8
Movement	SBL	NBTL	WBL	EBTL	NBL	SBTL	EBL	WBT
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	12	37	18	23	12	37	12	29
Maximum Split (%)	13.3%	41.1%	20.0%	25.6%	13.3%	41.1%	13.3%	32.2%
Minimum Split (s)	12	23	12	23	12	23	12	23
Yellow Time (s)	3	3	3	3	3	3	3	3
All-Red Time (s)	2	2	2	2	2	2	2	2
Minimum Initial (s)	7	10	7	10	7	10	7	10
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	12	49	67	0	12	49	61
End Time (s)	12	49	67	0	12	49	61	0
Yield/Force Off (s)	7	44	62	85	7	44	56	85
Yield/Force Off 170(s)	7	33	62	74	7	33	56	74
Local Start Time (s)	78	0	37	55	78	0	37	49
Local Yield (s)	85	32	50	73	85	32	44	73
Local Yield 170(s)	85	21	50	62	85	21	44	62

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	70
Offset: 12 (13%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	























Splits and Phases: 6: New Albany Road E & Central College Road



HCM 6th Signalized Intersection Summary

6: New Albany Road E & Central College Road

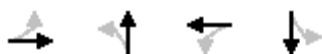
06/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	159	29	278	236	27	46	462	185	111	719	137
Future Volume (veh/h)	78	159	29	278	236	27	46	462	185	111	719	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	85	173	32	302	257	29	50	502	201	121	782	149
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	289	334	61	384	495	55	395	1711	939	507	1777	901
Arrive On Green	0.07	0.11	0.11	0.11	0.15	0.15	0.06	0.48	0.48	0.07	0.50	0.50
Sat Flow, veh/h	1781	3004	545	3456	3222	360	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	85	101	104	302	141	145	50	502	201	121	782	149
Grp Sat Flow(s),veh/h/ln	1781	1777	1772	1728	1777	1806	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	3.7	4.8	5.0	7.7	6.5	6.7	1.2	7.7	5.3	2.9	12.7	4.0
Cycle Q Clear(g_c), s	3.7	4.8	5.0	7.7	6.5	6.7	1.2	7.7	5.3	2.9	12.7	4.0
Prop In Lane	1.00		0.31	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	289	197	197	384	273	278	395	1711	939	507	1777	901
V/C Ratio(X)	0.29	0.51	0.53	0.79	0.51	0.52	0.13	0.29	0.21	0.24	0.44	0.17
Avail Cap(c_a), veh/h	306	355	354	499	474	481	434	1711	939	513	1777	901
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	37.7	37.8	39.0	35.0	35.1	10.7	14.1	8.6	9.9	14.4	9.2
Incr Delay (d2), s/veh	0.6	2.0	2.2	6.2	1.5	1.5	0.1	0.4	0.5	0.2	0.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	2.2	2.2	3.5	2.9	3.0	0.4	3.0	1.8	1.1	4.9	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.4	39.7	40.0	45.1	36.5	36.6	10.8	14.5	9.1	10.2	15.2	9.6
LnGrp LOS	C	D	D	D	D	D	B	B	A	B	B	A
Approach Vol, veh/h		290			588			753			1052	
Approach Delay, s/veh		37.7			41.0			12.8			13.8	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	48.3	15.0	15.0	10.0	50.0	11.2	18.8				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	7.0	32.0	13.0	18.0	7.0	32.0	7.0	24.0				
Max Q Clear Time (g_c+I1), s	4.9	9.7	9.7	7.0	3.2	14.7	5.7	8.7				
Green Ext Time (p_c), s	0.1	4.0	0.3	0.7	0.0	5.4	0.0	1.3				
Intersection Summary												
HCM 6th Ctrl Delay			22.1									
HCM 6th LOS			C									

Timing Report, Sorted By Phase

8: Walton Parkway/EMH&T Driveway & New Albany Road E

06/04/2021

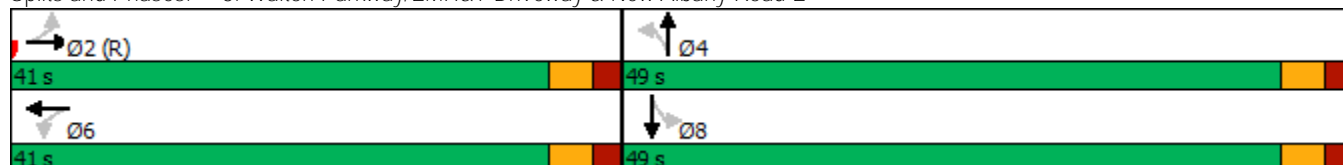


Phase Number	2	4	6	8
Movement	EBTL	NBTL	WBTL	SBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Max	Max	Max	Max
Maximum Split (s)	41	49	41	49
Maximum Split (%)	45.6%	54.4%	45.6%	54.4%
Minimum Split (s)	23	23	23	23
Yellow Time (s)	3	3	3	3
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	10	10	10	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	41	0	41
End Time (s)	41	0	41	0
Yield/Force Off (s)	36	85	36	85
Yield/Force Off 170(s)	25	74	25	74
Local Start Time (s)	0	41	0	41
Local Yield (s)	36	85	36	85
Local Yield 170(s)	25	74	25	74

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	50
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green	





















Splits and Phases: 8: Walton Parkway/EMH&T Driveway & New Albany Road E



HCM 6th Signalized Intersection Summary

8: Walton Parkway/EMH&T Driveway & New Albany Road E

06/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	590	100	20	859	0	457	7	55	10	17	53
Future Volume (veh/h)	5	590	100	20	859	0	457	7	55	10	17	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	5	641	109	22	934	0	497	8	60	11	18	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	192	1215	206	250	1421	0	694	93	696	702	190	614
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.00	0.49	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	599	3038	516	712	3647	0	1323	190	1424	1333	389	1255
Grp Volume(v), veh/h	5	374	376	22	934	0	497	0	68	11	0	76
Grp Sat Flow(s),veh/h/ln	599	1777	1777	712	1777	0	1323	0	1614	1333	0	1644
Q Serve(g_s), s	0.6	14.4	14.5	2.2	19.3	0.0	29.0	0.0	2.0	0.4	0.0	2.2
Cycle Q Clear(g_c), s	19.9	14.4	14.5	16.6	19.3	0.0	31.2	0.0	2.0	2.4	0.0	2.2
Prop In Lane	1.00		0.29	1.00		0.00	1.00		0.88	1.00		0.76
Lane Grp Cap(c), veh/h	192	711	711	250	1421	0	694	0	789	702	0	804
V/C Ratio(X)	0.03	0.53	0.53	0.09	0.66	0.00	0.72	0.00	0.09	0.02	0.00	0.09
Avail Cap(c_a), veh/h	192	711	711	250	1421	0	694	0	789	702	0	804
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.1	20.5	20.5	26.9	22.0	0.0	20.7	0.0	12.3	12.9	0.0	12.3
Incr Delay (d2), s/veh	0.3	2.8	2.8	0.7	2.4	0.0	6.2	0.0	0.2	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	6.2	6.2	0.4	8.0	0.0	9.4	0.0	0.7	0.1	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.3	23.3	23.3	27.6	24.4	0.0	26.9	0.0	12.5	13.0	0.0	12.6
LnGrp LOS	C	C	C	C	C	A	C	A	B	B	A	B
Approach Vol, veh/h	755			956			565			87		
Approach Delay, s/veh	23.4			24.4			25.2			12.6		
Approach LOS	C			C			C			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	41.0			49.0			41.0			49.0		
Change Period (Y+Rc), s	5.0			5.0			5.0			5.0		
Max Green Setting (Gmax), s	36.0			44.0			36.0			44.0		
Max Q Clear Time (g_c+I1), s	21.9			33.2			21.3			4.4		
Green Ext Time (p_c), s	4.0			1.7			5.7			0.5		
Intersection Summary												
HCM 6th Ctrl Delay	23.8											
HCM 6th LOS	C											

Timing Report, Sorted By Phase

12: New Albany-Condit Road & Walton Parkway

06/04/2021

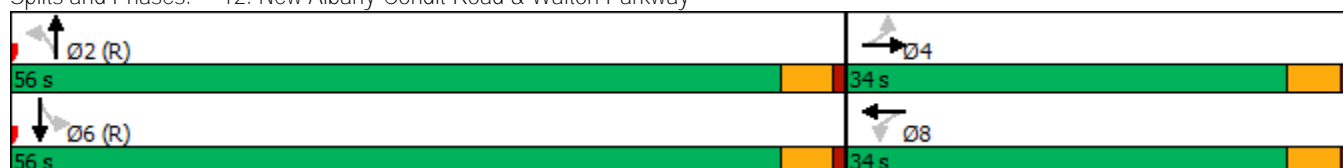


Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Max	None	C-Max	None
Maximum Split (s)	56	34	56	34
Maximum Split (%)	62.2%	37.8%	62.2%	37.8%
Minimum Split (s)	22.5	22.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	56	0	56
End Time (s)	56	0	56	0
Yield/Force Off (s)	51.5	85.5	51.5	85.5
Yield/Force Off 170(s)	40.5	74.5	40.5	74.5
Local Start Time (s)	0	56	0	56
Local Yield (s)	51.5	85.5	51.5	85.5
Local Yield 170(s)	40.5	74.5	40.5	74.5

Intersection Summary





















Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	55
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	

Splits and Phases: 12: New Albany-Condit Road & Walton Parkway



HCM 6th Signalized Intersection Summary 12: New Albany-Condit Road & Walton Parkway

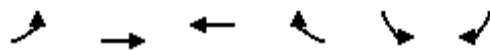
06/04/2021






												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	140	173	49	120	144	77	502	15	163	437	21
Future Volume (veh/h)	57	140	173	49	120	144	77	502	15	163	437	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	62	152	188	53	130	157	84	546	16	177	475	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	208	202	250	166	205	248	529	1146	34	483	1121	54
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.63	0.63	0.63	0.63	0.63	0.63
Sat Flow, veh/h	1092	760	941	1040	771	931	900	1808	53	848	1769	86
Grp Volume(v), veh/h	62	0	340	53	0	287	84	0	562	177	0	498
Grp Sat Flow(s),veh/h/ln	1092	0	1701	1040	0	1703	900	0	1861	848	0	1855
Q Serve(g_s), s	4.8	0.0	16.5	4.4	0.0	13.4	4.6	0.0	14.3	12.5	0.0	12.1
Cycle Q Clear(g_c), s	18.2	0.0	16.5	20.9	0.0	13.4	16.7	0.0	14.3	26.7	0.0	12.1
Prop In Lane	1.00		0.55	1.00		0.55	1.00		0.03	1.00		0.05
Lane Grp Cap(c), veh/h	208	0	453	166	0	453	529	0	1179	483	0	1176
V/C Ratio(X)	0.30	0.00	0.75	0.32	0.00	0.63	0.16	0.00	0.48	0.37	0.00	0.42
Avail Cap(c_a), veh/h	276	0	558	230	0	558	529	0	1179	483	0	1176
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.2	0.0	30.3	39.9	0.0	29.1	12.4	0.0	8.6	15.7	0.0	8.2
Incr Delay (d2), s/veh	0.8	0.0	4.5	1.1	0.0	1.6	0.6	0.0	1.4	2.1	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	7.0	1.2	0.0	5.5	1.0	0.0	5.3	2.4	0.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.0	0.0	34.8	41.0	0.0	30.8	13.1	0.0	10.0	17.8	0.0	9.4
LnGrp LOS	D	A	C	D	A	C	B	A	B	B	A	A
Approach Vol, veh/h	402			340			646			675		
Approach Delay, s/veh	35.3			32.4			10.4			11.6		
Approach LOS	D			C			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	61.5			28.5			61.5			28.5		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	51.5			29.5			51.5			29.5		
Max Q Clear Time (g_c+I1), s	18.7			20.2			28.7			22.9		
Green Ext Time (p_c), s	4.5			1.6			4.0			1.0		
Intersection Summary												
HCM 6th Ctrl Delay	19.3											
HCM 6th LOS	B											

HCM Unsignalized Intersection Capacity Analysis

16: Central College Road & Discover Complex Access

06/04/2021






Movement	EBL	EBT	WBT	WBR	SBL	SBR			
Lane Configurations									
Traffic Volume (veh/h)	7	467	469	7	38	38			
Future Volume (Veh/h)	7	467	469	7	38	38			
Sign Control		Free	Free		Stop				
Grade		0%	0%		0%				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92			
Hourly flow rate (vph)	8	508	510	8	41	41			
Pedestrians									
Lane Width (ft)									
Walking Speed (ft/s)									
Percent Blockage									
Right turn flare (veh)									
Median type		None	None						
Median storage (veh)									
Upstream signal (ft)		791	679						
pX, platoon unblocked									
vC, conflicting volume	518				784	259			
vC1, stage 1 conf vol									
vC2, stage 2 conf vol									
vCu, unblocked vol	518				784	259			
tC, single (s)	4.1				6.8	6.9			
tC, 2 stage (s)									
tF (s)	2.2				3.5	3.3			
p0 queue free %	99				87	94			
cM capacity (veh/h)	1044				328	740			
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	SB 1	SB 2	SB 3
Volume Total	4	4	254	254	340	178	41	20	20
Volume Left	4	4	0	0	0	0	41	0	0
Volume Right	0	0	0	0	0	8	0	20	20
cSH	1044	1044	1700	1700	1700	1700	328	740	740
Volume to Capacity	0.01	0.01	0.15	0.15	0.20	0.10	0.13	0.03	0.03
Queue Length 95th (ft)	1	1	0	0	0	0	11	2	2
Control Delay (s)	8.5	8.5	0.0	0.0	0.0	0.0	17.6	10.0	10.0
Lane LOS	A	A					C	B	B
Approach Delay (s)	0.1				0.0		13.8		
Approach LOS							B		
Intersection Summary									
Average Delay			1.1						
Intersection Capacity Utilization			23.2%		ICU Level of Service			A	
Analysis Period (min)			15						

HCM 6th TWSC

21: New Albany-Condit Road & Snider Loop

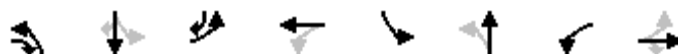
06/04/2021

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	7	734	20	13	560
Future Vol, veh/h	12	7	734	20	13	560
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	8	798	22	14	609
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1446	809	0	0	820	0
Stage 1	809	-	-	-	-	-
Stage 2	637	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	145	380	-	-	809	-
Stage 1	438	-	-	-	-	-
Stage 2	527	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	141	380	-	-	809	-
Mov Cap-2 Maneuver	141	-	-	-	-	-
Stage 1	438	-	-	-	-	-
Stage 2	513	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	27	0		0.2		
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	184	809	-	
HCM Lane V/C Ratio	-	-	0.112	0.017	-	
HCM Control Delay (s)	-	-	27	9.5	0	
HCM Lane LOS	-	-	D	A	A	
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-	

Timing Report, Sorted By Phase

3: New Albany-Condit Road & Central College Road

06/04/2021



Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBTL	SBL	NBTL	WBL	EBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	15	36.4	15	23.6	15	36.4	15	23.6
Maximum Split (%)	16.7%	40.4%	16.7%	26.2%	16.7%	40.4%	16.7%	26.2%
Minimum Split (s)	15	26.7	15	23.6	15	26.4	15	23
Yellow Time (s)	3	4.7	3	3.6	3	4.4	3	3.6
All-Red Time (s)	1.8	1	1.4	1	1.8	1	1.4	1
Minimum Initial (s)	10	20	10	15	10	20	10	15
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)				7		7		
Flash Dont Walk (s)				11		11		
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	51.4	66.4	0	15	51.4	66.4
End Time (s)	15	51.4	66.4	0	15	51.4	66.4	0
Yield/Force Off (s)	10.2	45.7	62	85.4	10.2	46	62	85.4
Yield/Force Off 170(s)	10.2	45.7	62	74.4	10.2	35	62	85.4
Local Start Time (s)	75	0	36.4	51.4	75	0	36.4	51.4
Local Yield (s)	85.2	30.7	47	70.4	85.2	31	47	70.4
Local Yield 170(s)	85.2	30.7	47	59.4	85.2	20	47	70.4

Intersection Summary

Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	95























Splits and Phases: 3: New Albany-Condit Road & Central College Road

Ø1	Ø2	Ø3	Ø4
15 s	36.4 s	15 s	23.6 s
Ø5	Ø6	Ø7	Ø8
15 s	36.4 s	15 s	23.6 s

HCM 6th Signalized Intersection Summary

3: New Albany-Condit Road & Central College Road

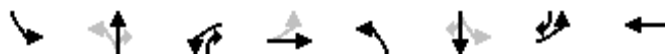
06/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	308	143	68	215	101	153	573	102	61	347	70
Future Volume (veh/h)	60	308	143	68	215	101	153	573	102	61	347	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	335	155	74	234	110	166	623	111	66	377	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	381	504	283	494	225	472	587	105	249	670	713
Arrive On Green	0.09	0.20	0.20	0.10	0.21	0.21	0.11	0.38	0.38	0.09	0.36	0.36
Sat Flow, veh/h	1781	1870	1585	1781	2373	1079	1781	1545	275	1781	1870	1585
Grp Volume(v), veh/h	65	335	155	74	173	171	166	0	734	66	377	76
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1676	1781	0	1821	1781	1870	1585
Q Serve(g_s), s	2.3	14.9	6.3	2.6	7.3	7.7	4.6	0.0	32.6	1.8	13.9	2.4
Cycle Q Clear(g_c), s	2.3	14.9	6.3	2.6	7.3	7.7	4.6	0.0	32.6	1.8	13.9	2.4
Prop In Lane	1.00		1.00	1.00		0.64	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	370	381	504	283	370	349	472	0	692	249	670	713
V/C Ratio(X)	0.18	0.88	0.31	0.26	0.47	0.49	0.35	0.00	1.06	0.27	0.56	0.11
Avail Cap(c_a), veh/h	427	414	533	331	394	371	480	0	692	296	670	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.4	33.1	22.1	23.3	29.8	29.9	14.5	0.0	26.6	18.9	22.1	13.6
Incr Delay (d2), s/veh	0.2	18.2	0.3	0.5	0.9	1.1	0.4	0.0	51.5	0.6	3.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	8.4	2.3	1.0	3.0	3.0	1.7	0.0	22.4	0.7	6.1	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.6	51.3	22.5	23.8	30.7	31.0	15.0	0.0	78.0	19.5	25.5	13.9
LnGrp LOS	C	D	C	C	C	C	B	A	F	B	C	B
Approach Vol, veh/h		555			418			900			519	
Approach Delay, s/veh		39.9			29.6			66.4			23.1	
Approach LOS		D			C			E			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.6	36.4	12.3	22.5	12.7	38.3	12.7	22.0				
Change Period (Y+Rc), s	* 4.8	5.7	* 4.4	4.6	* 4.8	* 5.7	* 4.4	4.6				
Max Green Setting (Gmax), s	* 10	30.7	* 11	19.0	* 10	* 31	* 11	19.0				
Max Q Clear Time (g_c+I1), s	6.6	15.9	4.3	9.7	3.8	34.6	4.6	16.9				
Green Ext Time (p_c), s	0.1	1.9	0.1	1.2	0.1	0.0	0.1	0.5				
Intersection Summary												
HCM 6th Ctrl Delay			44.4									
HCM 6th LOS			D									
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timing Report, Sorted By Phase

6: New Albany Road E & Central College Road

06/04/2021

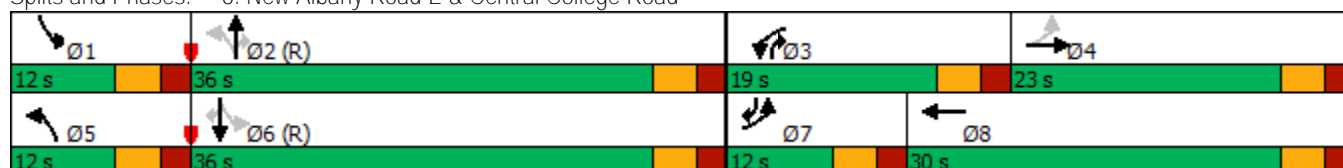


Phase Number	1	2	3	4	5	6	7	8
Movement	SBL	NBTL	WBL	EBTL	NBL	SBTL	EBL	WBT
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	12	36	19	23	12	36	12	30
Maximum Split (%)	13.3%	40.0%	21.1%	25.6%	13.3%	40.0%	13.3%	33.3%
Minimum Split (s)	12	23	12	23	12	23	12	23
Yellow Time (s)	3	3	3	3	3	3	3	3
All-Red Time (s)	2	2	2	2	2	2	2	2
Minimum Initial (s)	7	10	7	10	7	10	7	10
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	12	48	67	0	12	48	60
End Time (s)	12	48	67	0	12	48	60	0
Yield/Force Off (s)	7	43	62	85	7	43	55	85
Yield/Force Off 170(s)	7	32	62	74	7	32	55	74
Local Start Time (s)	78	0	36	55	78	0	36	48
Local Yield (s)	85	31	50	73	85	31	43	73
Local Yield 170(s)	85	20	50	62	85	20	43	62

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	70
Offset: 12 (13%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	























Splits and Phases: 6: New Albany Road E & Central College Road



HCM 6th Signalized Intersection Summary

6: New Albany Road E & Central College Road

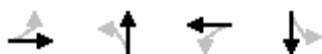
06/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	181	29	299	245	30	53	462	185	115	719	137
Future Volume (veh/h)	78	181	29	299	245	30	53	462	185	115	719	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	85	197	32	325	266	33	58	502	201	125	782	149
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	292	341	54	409	513	63	393	1684	939	501	1737	883
Arrive On Green	0.07	0.11	0.11	0.12	0.16	0.16	0.06	0.47	0.47	0.07	0.49	0.49
Sat Flow, veh/h	1781	3068	490	3456	3186	391	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	85	113	116	325	147	152	58	502	201	125	782	149
Grp Sat Flow(s),veh/h/ln	1781	1777	1782	1728	1777	1800	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	3.7	5.4	5.6	8.2	6.8	7.0	1.4	7.8	5.3	3.1	13.0	4.1
Cycle Q Clear(g_c), s	3.7	5.4	5.6	8.2	6.8	7.0	1.4	7.8	5.3	3.1	13.0	4.1
Prop In Lane	1.00		0.28	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	292	197	198	409	286	290	393	1684	939	501	1737	883
V/C Ratio(X)	0.29	0.57	0.59	0.79	0.51	0.52	0.15	0.30	0.21	0.25	0.45	0.17
Avail Cap(c_a), veh/h	309	355	356	538	494	500	426	1684	939	507	1737	883
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	38.0	38.0	38.6	34.5	34.6	11.0	14.5	8.6	10.3	15.1	9.7
Incr Delay (d2), s/veh	0.5	2.6	2.8	6.1	1.4	1.5	0.2	0.5	0.5	0.3	0.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	2.4	2.5	3.7	3.0	3.1	0.5	3.0	1.8	1.1	5.1	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.4	40.6	40.8	44.7	36.0	36.1	11.1	15.0	9.1	10.5	15.9	10.1
LnGrp LOS	C	D	D	D	D	D	B	B	A	B	B	B
Approach Vol, veh/h		314			624			761			1056	
Approach Delay, s/veh		38.4			40.5			13.1			14.5	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	47.7	15.7	15.0	10.4	49.0	11.2	19.5				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	7.0	31.0	14.0	18.0	7.0	31.0	7.0	25.0				
Max Q Clear Time (g_c+I1), s	5.1	9.8	10.2	7.6	3.4	15.0	5.7	9.0				
Green Ext Time (p_c), s	0.1	3.9	0.4	0.8	0.0	5.3	0.0	1.4				
Intersection Summary												
HCM 6th Ctrl Delay			22.7									
HCM 6th LOS			C									

Timing Report, Sorted By Phase

8: Walton Parkway/EMH&T Driveway & New Albany Road E

06/04/2021

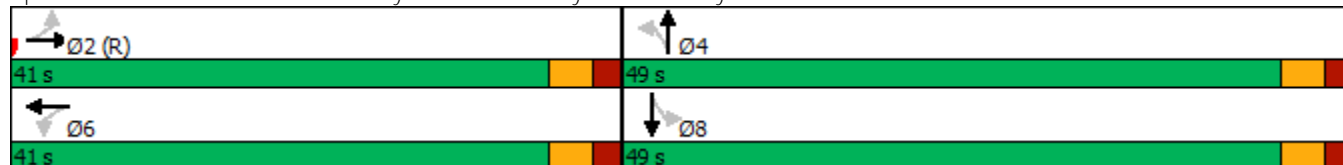


Phase Number	2	4	6	8
Movement	EBTL	NBTL	WBTL	SBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Max	Max	Max	Max
Maximum Split (s)	41	49	41	49
Maximum Split (%)	45.6%	54.4%	45.6%	54.4%
Minimum Split (s)	23	23	23	23
Yellow Time (s)	3	3	3	3
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	10	10	10	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	41	0	41
End Time (s)	41	0	41	0
Yield/Force Off (s)	36	85	36	85
Yield/Force Off 170(s)	25	74	25	74
Local Start Time (s)	0	41	0	41
Local Yield (s)	36	85	36	85
Local Yield 170(s)	25	74	25	74

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	50
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green	





















Splits and Phases: 8: Walton Parkway/EMH&T Driveway & New Albany Road E



HCM 6th Signalized Intersection Summary

8: Walton Parkway/EMH&T Driveway & New Albany Road E

06/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	627	100	20	880	0	462	7	55	10	17	53
Future Volume (veh/h)	5	627	100	20	880	0	462	7	55	10	17	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	5	682	109	22	957	0	502	8	60	11	18	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	1228	196	237	1421	0	694	93	696	702	190	614
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.00	0.49	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	587	3069	490	685	3647	0	1323	190	1424	1333	389	1255
Grp Volume(v), veh/h	5	395	396	22	957	0	502	0	68	11	0	76
Grp Sat Flow(s),veh/h/ln	587	1777	1782	685	1777	0	1323	0	1614	1333	0	1644
Q Serve(g_s), s	0.6	15.4	15.4	2.3	19.9	0.0	29.5	0.0	2.0	0.4	0.0	2.2
Cycle Q Clear(g_c), s	20.5	15.4	15.4	17.8	19.9	0.0	31.7	0.0	2.0	2.4	0.0	2.2
Prop In Lane	1.00		0.27	1.00		0.00	1.00		0.88	1.00		0.76
Lane Grp Cap(c), veh/h	185	711	713	237	1421	0	694	0	789	702	0	804
V/C Ratio(X)	0.03	0.56	0.56	0.09	0.67	0.00	0.72	0.00	0.09	0.02	0.00	0.09
Avail Cap(c_a), veh/h	185	711	713	237	1421	0	694	0	789	702	0	804
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.6	20.8	20.8	27.7	22.2	0.0	20.8	0.0	12.3	12.9	0.0	12.3
Incr Delay (d2), s/veh	0.3	3.1	3.1	0.8	2.6	0.0	6.4	0.0	0.2	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	6.6	6.7	0.4	8.3	0.0	9.6	0.0	0.7	0.1	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.9	23.9	23.9	28.5	24.7	0.0	27.3	0.0	12.5	13.0	0.0	12.6
LnGrp LOS	C	C	C	C	C	A	C	A	B	B	A	B
Approach Vol, veh/h	796			979			570			87		
Approach Delay, s/veh	24.0			24.8			25.5			12.6		
Approach LOS	C			C			C			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	41.0			49.0			41.0			49.0		
Change Period (Y+Rc), s	5.0			5.0			5.0			5.0		
Max Green Setting (Gmax), s	36.0			44.0			36.0			44.0		
Max Q Clear Time (g_c+I1), s	22.5			33.7			21.9			4.4		
Green Ext Time (p_c), s	4.1			1.7			5.8			0.5		
Intersection Summary												
HCM 6th Ctrl Delay	24.3											
HCM 6th LOS	C											

Timing Report, Sorted By Phase

12: New Albany-Condit Road & Walton Parkway

06/04/2021

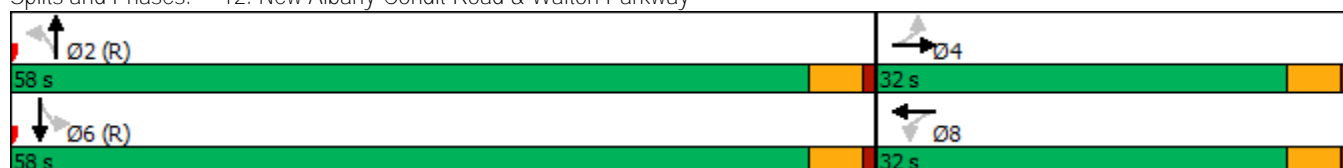


Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Max	None	C-Max	None
Maximum Split (s)	58	32	58	32
Maximum Split (%)	64.4%	35.6%	64.4%	35.6%
Minimum Split (s)	22.5	22.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	58	0	58
End Time (s)	58	0	58	0
Yield/Force Off (s)	53.5	85.5	53.5	85.5
Yield/Force Off 170(s)	42.5	74.5	42.5	74.5
Local Start Time (s)	0	58	0	58
Local Yield (s)	53.5	85.5	53.5	85.5
Local Yield 170(s)	42.5	74.5	42.5	74.5

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	60
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	





















Splits and Phases: 12: New Albany-Condit Road & Walton Parkway



HCM 6th Signalized Intersection Summary

12: New Albany-Condit Road & Walton Parkway

06/04/2021




												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	140	173	49	120	157	77	544	15	172	467	26
Future Volume (veh/h)	57	140	173	49	120	157	77	544	15	172	467	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	62	152	188	53	130	171	84	591	16	187	508	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	194	201	249	164	194	255	503	1152	31	454	1116	62
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.64	0.64	0.64	0.64	0.64	0.64
Sat Flow, veh/h	1078	760	941	1040	733	964	869	1812	49	813	1756	97
Grp Volume(v), veh/h	62	0	340	53	0	301	84	0	607	187	0	536
Grp Sat Flow(s),veh/h/ln	1078	0	1701	1040	0	1697	869	0	1862	813	0	1853
Q Serve(g_s), s	4.9	0.0	16.5	4.4	0.0	14.3	4.9	0.0	15.9	14.5	0.0	13.3
Cycle Q Clear(g_c), s	19.2	0.0	16.5	21.0	0.0	14.3	18.3	0.0	15.9	30.4	0.0	13.3
Prop In Lane	1.00		0.55	1.00		0.57	1.00		0.03	1.00		0.05
Lane Grp Cap(c), veh/h	194	0	450	164	0	449	503	0	1183	454	0	1178
V/C Ratio(X)	0.32	0.00	0.76	0.32	0.00	0.67	0.17	0.00	0.51	0.41	0.00	0.46
Avail Cap(c_a), veh/h	238	0	520	207	0	518	503	0	1183	454	0	1178
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.2	0.0	30.4	40.1	0.0	29.6	13.1	0.0	8.9	17.1	0.0	8.4
Incr Delay (d2), s/veh	0.9	0.0	5.4	1.1	0.0	2.7	0.7	0.0	1.6	2.8	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	7.2	1.2	0.0	5.9	1.0	0.0	5.9	2.8	0.0	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.1	0.0	35.8	41.2	0.0	32.4	13.8	0.0	10.5	19.8	0.0	9.7
LnGrp LOS	D	A	D	D	A	C	B	A	B	B	A	A
Approach Vol, veh/h	402			354			691			723		
Approach Delay, s/veh	36.3			33.7			10.9			12.3		
Approach LOS	D			C			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	61.7			28.3			61.7			28.3		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	53.5			27.5			53.5			27.5		
Max Q Clear Time (g_c+I1), s	20.3			21.2			32.4			23.0		
Green Ext Time (p_c), s	5.0			1.2			4.4			0.8		
Intersection Summary												
HCM 6th Ctrl Delay	19.8											
HCM 6th LOS	B											

HCM Unsignalized Intersection Capacity Analysis

14: New Albany Road E & Site Access 1

06/04/2021





























Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Traffic Volume (veh/h)	0	7	674	37	0	974	
Future Volume (Veh/h)	0	7	674	37	0	974	
Sign Control	Stop		Free			Free	
Grade	0%		0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	0	8	733	40	0	1059	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type			None			None	
Median storage veh							
Upstream signal (ft)						270	
pX, platoon unblocked	0.85						
vC, conflicting volume	1282	203			773		
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	971	203			773		
tC, single (s)	6.8	6.9			4.1		
tC, 2 stage (s)							
tF (s)	3.5	3.3			2.2		
p0 queue free %	100	99			100		
cM capacity (veh/h)	212	804			838		
Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	8	209	209	209	145	530	530
Volume Left	0	0	0	0	0	0	0
Volume Right	8	0	0	0	40	0	0
cSH	804	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.01	0.12	0.12	0.12	0.09	0.31	0.31
Queue Length 95th (ft)	1	0	0	0	0	0	0
Control Delay (s)	9.5	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	9.5	0.0				0.0	
Approach LOS	A						
Intersection Summary							
Average Delay			0.0				
Intersection Capacity Utilization			30.3%		ICU Level of Service		A
Analysis Period (min)			15				

HCM Unsignalized Intersection Capacity Analysis

16: Site Access 2/Discover Complex Access & Central College Road

06/04/2021








												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	463	30	32	465	7	37	4	23	38	6	38
Future Volume (Veh/h)	7	463	30	32	465	7	37	4	23	38	6	38
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	503	33	35	505	8	40	4	25	41	7	41
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)	5											
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)	791			679								
pX, platoon unblocked				0.99				0.99	0.99	0.99	0.99	0.99
vC, conflicting volume	513				536				862	1118	268	874
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	513				518				846	1104	248	858
tC, single (s)	4.1				4.1				7.5	6.5	6.9	7.5
tC, 2 stage (s)												
tF (s)	2.2				2.2				3.5	4.0	3.3	3.5
p0 queue free %	99				97				82	98	97	82
cM capacity (veh/h)	1049				1037				226	199	747	229
										196	743	
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2		
Volume Total	4	4	335	201	35	337	176	69	41	48		
Volume Left	4	4	0	0	35	0	0	40	41	0		
Volume Right	0	0	0	33	0	0	8	25	0	41		
cSH	1049	1049	1700	1700	1037	1700	1700	299	229	869		
Volume to Capacity	0.01	0.01	0.20	0.12	0.03	0.20	0.10	0.23	0.18	0.06		
Queue Length 95th (ft)	1	1	0	0	3	0	0	22	16	4		
Control Delay (s)	8.5	8.5	0.0	0.0	8.6	0.0	0.0	20.6	24.1	12.2		
Lane LOS	A	A			A			C	C	B		
Approach Delay (s)	0.1				0.5				20.6	17.7		
Approach LOS							C			C		
Intersection Summary												
Average Delay				2.7								
Intersection Capacity Utilization				37.4%	ICU Level of Service			A				
Analysis Period (min)				15								

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	0	37	6	0	7	44	753	9	9	575	23
Future Vol, veh/h	17	0	37	6	0	7	44	753	9	9	575	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	225	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	0	40	7	0	8	48	818	10	10	625	25
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1581	1582	638	1597	1589	823	650	0	0	828	0	0
Stage 1	658	658	-	919	919	-	-	-	-	-	-	-
Stage 2	923	924	-	678	670	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	88	109	477	86	108	373	936	-	-	803	-	-
Stage 1	453	461	-	325	350	-	-	-	-	-	-	-
Stage 2	323	348	-	442	455	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	82	102	477	75	101	373	936	-	-	803	-	-
Mov Cap-2 Maneuver	82	102	-	75	101	-	-	-	-	-	-	-
Stage 1	430	455	-	308	332	-	-	-	-	-	-	-
Stage 2	300	330	-	400	450	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	32.2		35.5		0.5		0.1					
HCM LOS	D		E									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	936	-	-	190	132	803	-	-				
HCM Lane V/C Ratio	0.051	-	-	0.309	0.107	0.012	-	-				
HCM Control Delay (s)	9.1	-	-	32.2	35.5	9.5	-	-				
HCM Lane LOS	A	-	-	D	E	A	-	-				
HCM 95th %tile Q(veh)	0.2	-	-	1.2	0.4	0	-	-				

HCM 6th TWSC

21: New Albany-Condit Road & Site Access 5/Snider Loop

06/04/2021

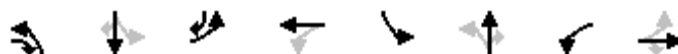
Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	0	5	12	0	7	7	782	20	13	599	6
Future Vol, veh/h	4	0	5	12	0	7	7	782	20	13	599	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	225	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	5	13	0	8	8	850	22	14	651	7
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	1564	1571	655	1562	1563	861	658	0	0	872	0	0
Stage 1	683	683	-	877	877	-	-	-	-	-	-	-
Stage 2	881	888	-	685	686	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	91	110	466	91	112	355	930	-	-	773	-	-
Stage 1	439	449	-	343	366	-	-	-	-	-	-	-
Stage 2	341	362	-	438	448	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	87	107	466	88	109	355	930	-	-	773	-	-
Mov Cap-2 Maneuver	87	107	-	88	109	-	-	-	-	-	-	-
Stage 1	435	441	-	340	363	-	-	-	-	-	-	-
Stage 2	331	359	-	425	440	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	29.1		39.1			0.1			0.2			
HCM LOS	D		E									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR					
Capacity (veh/h)	930	-	-	159	88	355	773	-	-			
HCM Lane V/C Ratio	0.008	-	-	0.062	0.148	0.021	0.018	-	-			
HCM Control Delay (s)	8.9	-	-	29.1	52.9	15.4	9.7	-	-			
HCM Lane LOS	A	-	-	D	F	C	A	-	-			
HCM 95th %tile Q(veh)	0	-	-	0.2	0.5	0.1	0.1	-	-			

With Improvements

Timing Report, Sorted By Phase

3: New Albany-Condit Road & Central College Road

06/03/2021



Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBTL	SBL	NBTL	WBL	EBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	15	36.4	15	23.6	15	36.4	15	23.6
Maximum Split (%)	16.7%	40.4%	16.7%	26.2%	16.7%	40.4%	16.7%	26.2%
Minimum Split (s)	15	26.7	15	23.6	15	26.4	15	23
Yellow Time (s)	3	4.7	3	3.6	3	4.4	3	3.6
All-Red Time (s)	1.8	1	1.4	1	1.8	1	1.4	1
Minimum Initial (s)	10	20	10	15	10	20	10	15
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)				7		7		
Flash Dont Walk (s)				11		11		
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	51.4	66.4	0	15	51.4	66.4
End Time (s)	15	51.4	66.4	0	15	51.4	66.4	0
Yield/Force Off (s)	10.2	45.7	62	85.4	10.2	46	62	85.4
Yield/Force Off 170(s)	10.2	45.7	62	74.4	10.2	35	62	85.4
Local Start Time (s)	75	0	36.4	51.4	75	0	36.4	51.4
Local Yield (s)	85.2	30.7	47	70.4	85.2	31	47	70.4
Local Yield 170(s)	85.2	30.7	47	59.4	85.2	20	47	70.4

Intersection Summary

Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	85
























Splits and Phases: 3: New Albany-Condit Road & Central College Road

Ø1	Ø2	Ø3	Ø4
15 s	36.4 s	15 s	23.6 s
Ø5	Ø6	Ø7	Ø8
15 s	36.4 s	15 s	23.6 s

HCM 6th Signalized Intersection Summary

3: New Albany-Condit Road & Central College Road

06/03/2021

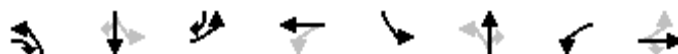
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	150	136	89	300	125	148	400	29	84	355	39
Future Volume (veh/h)	39	150	136	89	300	125	148	400	29	84	355	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	42	163	148	97	326	136	161	435	32	91	386	42
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	300	334	468	383	519	212	486	706	598	447	684	698
Arrive On Green	0.07	0.18	0.18	0.11	0.21	0.21	0.12	0.38	0.38	0.10	0.37	0.37
Sat Flow, veh/h	1781	1870	1585	1781	2460	1006	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	42	163	148	97	234	228	161	435	32	91	386	42
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1689	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.5	6.6	6.1	3.4	10.0	10.3	4.3	15.8	1.1	2.4	13.8	1.3
Cycle Q Clear(g_c), s	1.5	6.6	6.1	3.4	10.0	10.3	4.3	15.8	1.1	2.4	13.8	1.3
Prop In Lane	1.00		1.00	1.00		0.60	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	300	334	468	383	375	357	486	706	598	447	684	698
V/C Ratio(X)	0.14	0.49	0.32	0.25	0.62	0.64	0.33	0.62	0.05	0.20	0.56	0.06
Avail Cap(c_a), veh/h	392	423	543	418	402	382	495	706	598	477	684	698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	31.0	23.0	22.7	30.1	30.2	13.7	21.2	16.6	13.9	21.3	13.5
Incr Delay (d2), s/veh	0.2	1.1	0.4	0.3	2.7	3.2	0.4	4.0	0.2	0.2	3.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.0	2.2	1.4	4.3	4.2	1.6	7.0	0.4	0.8	6.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.5	32.1	23.4	23.1	32.8	33.4	14.1	25.2	16.8	14.1	24.6	13.7
LnGrp LOS	C	C	C	C	C	C	B	C	B	B	C	B
Approach Vol, veh/h	353			559			628			519		
Approach Delay, s/veh	27.5			31.4			21.9			21.9		
Approach LOS	C			C			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.6	36.4	10.6	22.3	13.6	37.4	13.4	19.6				
Change Period (Y+Rc), s	* 4.8	5.7	* 4.4	4.6	* 4.8	* 5.7	* 4.4	4.6				
Max Green Setting (Gmax), s	* 10	30.7	* 11	19.0	* 10	* 31	* 11	19.0				
Max Q Clear Time (g_c+I1), s	6.3	15.8	3.5	12.3	4.4	17.8	5.4	8.6				
Green Ext Time (p_c), s	0.1	1.9	0.0	1.4	0.1	2.1	0.1	1.0				
Intersection Summary												
HCM 6th Ctrl Delay	25.4											
HCM 6th LOS	C											
Notes												

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timing Report, Sorted By Phase

3: New Albany-Condit Road & Central College Road

06/03/2021



Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBTL	SBL	NBTL	WBL	EBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	15	36.4	15	23.6	15	36.4	15	23.6
Maximum Split (%)	16.7%	40.4%	16.7%	26.2%	16.7%	40.4%	16.7%	26.2%
Minimum Split (s)	15	26.7	15	23.6	15	26.4	15	23
Yellow Time (s)	3	4.7	3	3.6	3	4.4	3	3.6
All-Red Time (s)	1.8	1	1.4	1	1.8	1	1.4	1
Minimum Initial (s)	10	20	10	15	10	20	10	15
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)				7		7		
Flash Dont Walk (s)				11		11		
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	51.4	66.4	0	15	51.4	66.4
End Time (s)	15	51.4	66.4	0	15	51.4	66.4	0
Yield/Force Off (s)	10.2	45.7	62	85.4	10.2	46	62	85.4
Yield/Force Off 170(s)	10.2	45.7	62	74.4	10.2	35	62	85.4
Local Start Time (s)	75	0	36.4	51.4	75	0	36.4	51.4
Local Yield (s)	85.2	30.7	47	70.4	85.2	31	47	70.4
Local Yield 170(s)	85.2	30.7	47	59.4	85.2	20	47	70.4

Intersection Summary

Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	85
























Splits and Phases: 3: New Albany-Condit Road & Central College Road

Ø1	Ø2	Ø3	Ø4
15 s	36.4 s	15 s	23.6 s
Ø5	Ø6	Ø7	Ø8
15 s	36.4 s	15 s	23.6 s

HCM 6th Signalized Intersection Summary

3: New Albany-Condit Road & Central College Road

06/03/2021

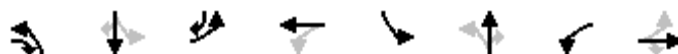
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	167	136	103	311	125	148	417	50	84	366	49
Future Volume (veh/h)	53	167	136	103	311	125	148	417	50	84	366	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	182	148	112	338	136	161	453	54	91	398	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	308	333	466	375	497	197	473	703	596	429	682	717
Arrive On Green	0.09	0.18	0.18	0.11	0.20	0.20	0.12	0.38	0.38	0.10	0.36	0.36
Sat Flow, veh/h	1781	1870	1585	1781	2487	983	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	58	182	148	112	240	234	161	453	54	91	398	53
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1693	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	2.1	7.5	6.1	4.0	10.5	10.8	4.3	16.8	1.9	2.4	14.5	1.6
Cycle Q Clear(g_c), s	2.1	7.5	6.1	4.0	10.5	10.8	4.3	16.8	1.9	2.4	14.5	1.6
Prop In Lane	1.00		1.00	1.00		0.58	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	308	333	466	375	355	339	473	703	596	429	682	717
V/C Ratio(X)	0.19	0.55	0.32	0.30	0.67	0.69	0.34	0.64	0.09	0.21	0.58	0.07
Avail Cap(c_a), veh/h	375	422	541	404	401	382	482	703	596	458	682	717
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	31.5	23.2	23.1	31.2	31.3	14.0	21.7	17.0	14.2	21.6	13.1
Incr Delay (d2), s/veh	0.3	1.4	0.4	0.4	3.8	4.6	0.4	4.5	0.3	0.2	3.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.4	2.2	1.6	4.6	4.5	1.6	7.5	0.7	0.9	6.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.2	32.9	23.5	23.6	35.0	35.8	14.4	26.2	17.3	14.4	25.2	13.3
LnGrp LOS	C	C	C	C	C	D	B	C	B	B	C	B
Approach Vol, veh/h	388			586			668			542		
Approach Delay, s/veh	28.0			33.1			22.6			22.3		
Approach LOS	C			C			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.6	36.4	11.8	21.4	13.6	37.4	13.7	19.6				
Change Period (Y+Rc), s	* 4.8	5.7	* 4.4	4.6	* 4.8	* 5.7	* 4.4	4.6				
Max Green Setting (Gmax), s	* 10	30.7	* 11	19.0	* 10	* 31	* 11	19.0				
Max Q Clear Time (g_c+I1), s	6.3	16.5	4.1	12.8	4.4	18.8	6.0	9.5				
Green Ext Time (p_c), s	0.1	1.9	0.0	1.3	0.1	2.2	0.1	1.0				
Intersection Summary												
HCM 6th Ctrl Delay			26.3									
HCM 6th LOS			C									
Notes												

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timing Report, Sorted By Phase

3: New Albany-Condit Road & Central College Road

06/03/2021



Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBTL	SBL	NBTL	WBL	EBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	15	36.4	15	23.6	15	36.4	15	23.6
Maximum Split (%)	16.7%	40.4%	16.7%	26.2%	16.7%	40.4%	16.7%	26.2%
Minimum Split (s)	15	26.7	15	23.6	15	26.4	15	23
Yellow Time (s)	3	4.7	3	3.6	3	4.4	3	3.6
All-Red Time (s)	1.8	1	1.4	1	1.8	1	1.4	1
Minimum Initial (s)	10	20	10	15	10	20	10	15
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)				7		7		
Flash Dont Walk (s)				11		11		
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	51.4	66.4	0	15	51.4	66.4
End Time (s)	15	51.4	66.4	0	15	51.4	66.4	0
Yield/Force Off (s)	10.2	45.7	62	85.4	10.2	46	62	85.4
Yield/Force Off 170(s)	10.2	45.7	62	74.4	10.2	35	62	85.4
Local Start Time (s)	75	0	36.4	51.4	75	0	36.4	51.4
Local Yield (s)	85.2	30.7	47	70.4	85.2	31	47	70.4
Local Yield 170(s)	85.2	30.7	47	59.4	85.2	20	47	70.4

Intersection Summary

Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	85
























Splits and Phases: 3: New Albany-Condit Road & Central College Road

Ø1	Ø2	Ø3	Ø4
15 s	36.4 s	15 s	23.6 s
Ø5	Ø6	Ø7	Ø8
15 s	36.4 s	15 s	23.6 s

HCM 6th Signalized Intersection Summary

3: New Albany-Condit Road & Central College Road

06/03/2021

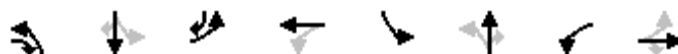
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	298	143	49	200	101	153	563	89	61	332	57
Future Volume (veh/h)	51	298	143	49	200	101	153	563	89	61	332	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	55	324	155	53	217	110	166	612	97	66	361	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	357	374	502	266	459	224	501	728	617	321	685	717
Arrive On Green	0.09	0.20	0.20	0.08	0.20	0.20	0.12	0.39	0.39	0.09	0.37	0.37
Sat Flow, veh/h	1781	1870	1585	1781	2314	1130	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	55	324	155	53	165	162	166	612	97	66	361	62
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1667	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.9	14.1	6.2	1.8	6.9	7.2	4.5	24.9	3.3	1.7	12.7	1.9
Cycle Q Clear(g_c), s	1.9	14.1	6.2	1.8	6.9	7.2	4.5	24.9	3.3	1.7	12.7	1.9
Prop In Lane	1.00		1.00	1.00		0.68	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	357	374	502	266	353	331	501	728	617	321	685	717
V/C Ratio(X)	0.15	0.87	0.31	0.20	0.47	0.49	0.33	0.84	0.16	0.21	0.53	0.09
Avail Cap(c_a), veh/h	429	424	544	341	403	378	509	728	617	371	685	717
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.5	32.5	21.7	23.4	29.7	29.8	13.5	23.2	16.7	16.2	20.9	13.1
Incr Delay (d2), s/veh	0.2	15.6	0.3	0.4	1.0	1.1	0.4	11.3	0.5	0.3	2.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	7.7	2.2	0.7	2.8	2.8	1.6	12.0	1.2	0.6	5.5	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.7	48.1	22.0	23.8	30.7	31.0	13.9	34.5	17.2	16.5	23.8	13.3
LnGrp LOS	C	D	C	C	C	C	B	C	B	B	C	B
Approach Vol, veh/h		534			380			875			489	
Approach Delay, s/veh		37.9			29.8			28.7			21.5	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.6	36.4	11.6	21.2	12.7	38.3	11.5	21.4				
Change Period (Y+Rc), s	* 4.8	5.7	* 4.4	4.6	* 4.8	* 5.7	* 4.4	4.6				
Max Green Setting (Gmax), s	* 10	30.7	* 11	19.0	* 10	* 31	* 11	19.0				
Max Q Clear Time (g_c+I1), s	6.5	14.7	3.9	9.2	3.7	26.9	3.8	16.1				
Green Ext Time (p_c), s	0.1	1.8	0.0	1.2	0.1	1.5	0.0	0.7				
Intersection Summary												
HCM 6th Ctrl Delay			29.5									
HCM 6th LOS			C									
Notes												

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timing Report, Sorted By Phase

3: New Albany-Condit Road & Central College Road

06/03/2021



Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBTL	SBL	NBTL	WBL	EBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	15	36.4	15	23.6	15	36.4	15	23.6
Maximum Split (%)	16.7%	40.4%	16.7%	26.2%	16.7%	40.4%	16.7%	26.2%
Minimum Split (s)	15	26.7	15	23.6	15	26.4	15	23
Yellow Time (s)	3	4.7	3	3.6	3	4.4	3	3.6
All-Red Time (s)	1.8	1	1.4	1	1.8	1	1.4	1
Minimum Initial (s)	10	20	10	15	10	20	10	15
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)				7		7		
Flash Dont Walk (s)				11		11		
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	15	51.4	66.4	0	15	51.4	66.4
End Time (s)	15	51.4	66.4	0	15	51.4	66.4	0
Yield/Force Off (s)	10.2	45.7	62	85.4	10.2	46	62	85.4
Yield/Force Off 170(s)	10.2	45.7	62	74.4	10.2	35	62	85.4
Local Start Time (s)	75	0	36.4	51.4	75	0	36.4	51.4
Local Yield (s)	85.2	30.7	47	70.4	85.2	31	47	70.4
Local Yield 170(s)	85.2	30.7	47	59.4	85.2	20	47	70.4

Intersection Summary

Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	85
























Splits and Phases: 3: New Albany-Condit Road & Central College Road

Ø1	Ø2	Ø3	Ø4
15 s	36.4 s	15 s	23.6 s
Ø5	Ø6	Ø7	Ø8
15 s	36.4 s	15 s	23.6 s

HCM 6th Signalized Intersection Summary

3: New Albany-Condit Road & Central College Road

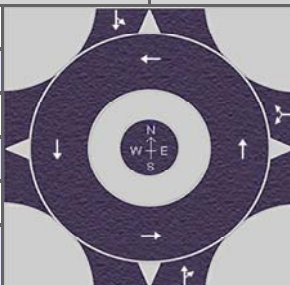
06/03/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	308	143	68	215	101	153	573	102	61	347	70
Future Volume (veh/h)	60	308	143	68	215	101	153	573	102	61	347	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	335	155	74	234	110	166	623	111	66	377	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	381	504	283	494	225	472	711	602	299	670	713
Arrive On Green	0.09	0.20	0.20	0.10	0.21	0.21	0.11	0.38	0.38	0.09	0.36	0.36
Sat Flow, veh/h	1781	1870	1585	1781	2373	1079	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	65	335	155	74	173	171	166	623	111	66	377	76
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1676	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	2.3	14.9	6.3	2.6	7.3	7.7	4.6	26.5	4.0	1.8	13.9	2.4
Cycle Q Clear(g_c), s	2.3	14.9	6.3	2.6	7.3	7.7	4.6	26.5	4.0	1.8	13.9	2.4
Prop In Lane	1.00		1.00	1.00		0.64	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	370	381	504	283	370	349	472	711	602	299	670	713
V/C Ratio(X)	0.18	0.88	0.31	0.26	0.47	0.49	0.35	0.88	0.18	0.22	0.56	0.11
Avail Cap(c_a), veh/h	427	414	533	331	394	371	480	711	602	347	670	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.4	33.1	22.1	23.3	29.8	29.9	14.5	24.7	17.7	17.3	22.1	13.6
Incr Delay (d2), s/veh	0.2	18.2	0.3	0.5	0.9	1.1	0.4	14.3	0.7	0.4	3.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	8.4	2.3	1.0	3.0	3.0	1.7	13.3	1.5	0.7	6.1	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.6	51.3	22.5	23.8	30.7	31.0	15.0	39.0	18.4	17.7	25.5	13.9
LnGrp LOS	C	D	C	C	C	C	B	D	B	B	C	B
Approach Vol, veh/h	555			418			900			519		
Approach Delay, s/veh	39.9			29.6			32.0			22.8		
Approach LOS	D			C			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.6	36.4	12.3	22.5	12.7	38.3	12.7	22.0				
Change Period (Y+Rc), s	* 4.8	5.7	* 4.4	4.6	* 4.8	* 5.7	* 4.4	4.6				
Max Green Setting (Gmax), s	* 10	30.7	* 11	19.0	* 10	* 31	* 11	19.0				
Max Q Clear Time (g_c+I1), s	6.6	15.9	4.3	9.7	3.8	28.5	4.6	16.9				
Green Ext Time (p_c), s	0.1	1.9	0.1	1.2	0.1	1.0	0.1	0.5				
Intersection Summary												
HCM 6th Ctrl Delay				31.4								
HCM 6th LOS				C								
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCS7 Roundabouts Report

General Information

Analyst	LRV
Agency or Co.	CMTran
Date Performed	
Analysis Year	2032
Time Analyzed	HY AM No Build
Project Description	NMD Mixed-Use Developme...



Site Information

Intersection	Condit Rd & Snider Loop
E/W Street Name	Snider Loop
N/S Street Name	New Albany-Condit Road
Analysis Time Period (hrs)	0.25
Peak Hour Factor	0.92
Jurisdiction	New Albany

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment							LR				TR				LT	
Volume (V), veh/h					0	19		11	0		569	7	0	3	665	
Percent Heavy Vehicles, %					3	3		3	3		3	3	3	3	3	
Flow Rate (V_{PCE}), pc/h					0	21		12	0		637	8	0	3	745	
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes					1				1				1			
Pedestrians Crossing, p/h					0				0				0			

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (s)					4.9763			4.9763			4.9763	
Follow-Up Headway (s)					2.6087			2.6087			2.6087	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h					33			645			748	
Entry Volume, veh/h					32			626			726	
Circulating Flow (v_c), pc/h	769			637			3			21		
Exiting Flow (v_{ex}), pc/h	11			0			649			766		
Capacity (C_{PCE}), pc/h					721			1376			1351	
Capacity (c), veh/h					700			1336			1311	
v/c Ratio (x)					0.05			0.47			0.55	

Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh					5.6			7.4			8.9	
Lane LOS					A			A			A	
95% Queue, veh					0.1			2.6			3.6	
Approach Delay, s/veh				5.6			7.4			8.9		
Approach LOS				A			A			A		
Intersection Delay, s/veh LOS	8.1						A					

HCS7 Roundabouts Report

General Information

Analyst	LRV
Agency or Co.	CMTran
Date Performed	
Analysis Year	2032
Time Analyzed	HY AM Build
Project Description	NMD Mixed-Use Developme...



Site Information

Intersection	Condit Rd & Snider Loop
E/W Street Name	Snider Loop/Site Access 5
N/S Street Name	New Albany-Condit Road
Analysis Time Period (hrs)	0.25
Peak Hour Factor	0.92
Jurisdiction	New Albany

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment	LTR				LTR				LTR				LTR			
Volume (V), veh/h	0	6	0	8	0	19	0	11	0	7	606	7	0	3	727	4
Percent Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Flow Rate (V_{PCE}), pc/h	0	7	0	9	0	21	0	12	0	8	678	8	0	3	814	4
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				0			

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (s)		4.9763			4.9763			4.9763			4.9763	
Follow-Up Headway (s)		2.6087			2.6087			2.6087			2.6087	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h		16			33			694			821	
Entry Volume, veh/h		16			32			674			797	
Circulating Flow (v_c), pc/h	838			693			10			29		
Exiting Flow (v_{ex}), pc/h	11			12			697			844		
Capacity (C_{PCE}), pc/h		587			681			1366			1340	
Capacity (c), veh/h		570			661			1326			1301	
v/c Ratio (x)		0.03			0.05			0.51			0.61	

Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		6.6			6.0			8.0			10.1	
Lane LOS		A			A			A			B	
95% Queue, veh		0.1			0.2			3.0			4.4	
Approach Delay, s/veh	6.6			6.0			8.0			10.1		
Approach LOS	A			A			A			B		
Intersection Delay, s/veh LOS	9.1						A					

HCS7 Roundabouts Report

General Information

Analyst	LRV
Agency or Co.	CMTran
Date Performed	
Analysis Year	2032
Time Analyzed	HY PM No Build
Project Description	NMD Mixed-Use Developme...



Site Information

Intersection	Condit Rd & Snider Loop
E/W Street Name	Snider Loop
N/S Street Name	New Albany-Condit Road
Analysis Time Period (hrs)	0.25
Peak Hour Factor	0.92
Jurisdiction	New Albany

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment							LR				TR				LT	
Volume (V), veh/h					0	12		7	0		734	20	0	13	560	
Percent Heavy Vehicles, %					3	3		3	3		3	3	3	3	3	
Flow Rate (V_{PCE}), pc/h					0	13		8	0		822	22	0	15	627	
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes					1				1				1			
Pedestrians Crossing, p/h					0				0				0			

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (s)					4.9763			4.9763			4.9763	
Follow-Up Headway (s)					2.6087			2.6087			2.6087	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h					21			844			642	
Entry Volume, veh/h					20			819			623	
Circulating Flow (v_c), pc/h	655			822			15			13		
Exiting Flow (v_{ex}), pc/h	37			0			830			640		
Capacity (C_{PCE}), pc/h					597			1359			1362	
Capacity (c), veh/h					579			1319			1322	
v/c Ratio (x)					0.04			0.62			0.47	

Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh					6.6			10.2			7.5	
Lane LOS					A			B			A	
95% Queue, veh					0.1			4.6			2.6	
Approach Delay, s/veh				6.6			10.2			7.5		
Approach LOS				A			B			A		
Intersection Delay, s/veh LOS	9.0						A					

HCS7 Roundabouts Report

General Information

Analyst	LRV
Agency or Co.	CMTran
Date Performed	
Analysis Year	2032
Time Analyzed	HY PM Build
Project Description	NMD Mixed-Use Developme...



Site Information

Intersection	Condit Rd & Snider Loop
E/W Street Name	Snider Loop/Site Access 5
N/S Street Name	New Albany-Condit Road
Analysis Time Period (hrs)	0.25
Peak Hour Factor	0.92
Jurisdiction	New Albany

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment	LTR				LTR				LTR				LTR			
Volume (V), veh/h	0	4	0	5	0	12	0	7	0	7	782	20	0	13	599	6
Percent Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Flow Rate (V_{PCE}), pc/h	0	4	0	6	0	13	0	8	0	8	876	22	0	15	671	7
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				0			

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (s)		4.9763			4.9763			4.9763			4.9763	
Follow-Up Headway (s)		2.6087			2.6087			2.6087			2.6087	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h		10			21			906			693	
Entry Volume, veh/h		10			20			880			673	
Circulating Flow (v_c), pc/h	699			888			19			21		
Exiting Flow (v_{ex}), pc/h	37			15			888			690		
Capacity (C_{PCE}), pc/h		676			558			1354			1351	
Capacity (c), veh/h		657			542			1314			1311	
v/c Ratio (x)		0.01			0.04			0.67			0.51	

Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		5.6			7.1			11.4			8.2	
Lane LOS		A			A			B			A	
95% Queue, veh		0.0			0.1			5.5			3.0	
Approach Delay, s/veh	5.6			7.1			11.4			8.2		
Approach LOS	A			A			B			A		
Intersection Delay, s/veh LOS	10.0						A					

Timing Report, Sorted By Phase

21: New Albany-Condit Road & Snider Loop

06/08/2021



Phase Number	2	3	6
Movement	NBT	WBL	SBTL
Lead/Lag			
Lead-Lag Optimize			
Recall Mode	C-Max	None	C-Max
Maximum Split (s)	74	16	74
Maximum Split (%)	82.2%	17.8%	82.2%
Minimum Split (s)	23	15	23
Yellow Time (s)	3	3	3
All-Red Time (s)	2	2	2
Minimum Initial (s)	10	10	10
Vehicle Extension (s)	3	3	3
Minimum Gap (s)	3	3	3
Time Before Reduce (s)	0	0	0
Time To Reduce (s)	0	0	0
Walk Time (s)	7		7
Flash Dont Walk (s)	11		11
Dual Entry	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes
Start Time (s)	0	74	0
End Time (s)	74	0	74
Yield/Force Off (s)	69	85	69
Yield/Force Off 170(s)	58	85	58
Local Start Time (s)	0	74	0
Local Yield (s)	69	85	69
Local Yield 170(s)	58	85	58

Intersection Summary

Cycle Length	90
Control Type	Actuated-Coordinated
Natural Cycle	45
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	

Splits and Phases: 21: New Albany-Condit Road & Snider Loop






HCM 6th Signalized Intersection Summary

21: New Albany-Condit Road & Snider Loop

06/08/2021



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	19	11	569	7	3	665
Future Volume (veh/h)	19	11	569	7	3	665
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	12	618	8	3	723
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	67	38	1520	20	41	1541
Arrive On Green	0.06	0.06	1.00	1.00	0.83	0.83
Sat Flow, veh/h	1056	603	1842	24	1	1867
Grp Volume(v), veh/h	34	0	0	626	726	0
Grp Sat Flow(s),veh/h/ln	1709	0	0	1866	1868	0
Q Serve(g_s), s	1.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.7	0.0	0.0	0.0	10.0	0.0
Prop In Lane	0.62	0.35		0.01	0.00	
Lane Grp Cap(c), veh/h	109	0	0	1540	1582	0
V/C Ratio(X)	0.31	0.00	0.00	0.41	0.46	0.00
Avail Cap(c_a), veh/h	209	0	0	1540	1582	0
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	0.94	0.90	0.00
Uniform Delay (d), s/veh	40.3	0.0	0.0	0.0	2.2	0.0
Incr Delay (d2), s/veh	1.6	0.0	0.0	0.8	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	0.3	1.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.9	0.0	0.0	0.8	3.1	0.0
LnGrp LOS	D	A	A	A	A	A
Approach Vol, veh/h	34		626		726	
Approach Delay, s/veh	41.9		0.8		3.1	
Approach LOS	D		A		A	
Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	79.3		79.3		10.7	
Change Period (Y+Rc), s	5.0		5.0		5.0	
Max Green Setting (Gmax), s	69.0		69.0		11.0	
Max Q Clear Time (g_c+I1), s	2.0		12.0		3.7	
Green Ext Time (p_c), s	4.3		5.4		0.0	
Intersection Summary						
HCM 6th Ctrl Delay			3.0			
HCM 6th LOS			A			
Notes						

Timing Report, Sorted By Phase

21: New Albany-Condit Road & Site Access 5/Snider Loop

06/08/2021



Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	Max	None	Max	None
Maximum Split (s)	66	24	66	24
Maximum Split (%)	73.3%	26.7%	73.3%	26.7%
Minimum Split (s)	23	23	23	23.5
Yellow Time (s)	3	3	3	3
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	10	10	10	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	66	0	66
End Time (s)	66	0	66	0
Yield/Force Off (s)	61	85	61	85
Yield/Force Off 170(s)	50	74	50	74
Local Start Time (s)	0	66	0	66
Local Yield (s)	61	85	61	85
Local Yield 170(s)	50	74	50	74

Intersection Summary

Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	60

Splits and Phases: 21: New Albany-Condit Road & Site Access 5/Snider Loop



HCM 6th Signalized Intersection Summary

21: New Albany-Condit Road & Site Access 5/Snider Loop

06/08/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↗	↘		↗	↘	
Traffic Volume (veh/h)	6	0	8	19	0	11	7	606	7	3	727	4
Future Volume (veh/h)	6	0	8	19	0	11	7	606	7	3	727	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	0	9	21	0	12	8	659	8	3	790	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	103	21	74	141	16	46	523	1451	18	607	1463	7
Arrive On Green	0.08	0.00	0.08	0.08	0.00	0.08	0.79	0.79	0.79	0.79	0.79	0.79
Sat Flow, veh/h	437	248	881	776	189	551	684	1844	22	769	1859	9
Grp Volume(v), veh/h	16	0	0	33	0	0	8	0	667	3	0	794
Grp Sat Flow(s),veh/h/ln	1566	0	0	1515	0	0	684	0	1866	769	0	1869
Q Serve(g_s), s	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.0	9.2	0.1	0.0	12.2
Cycle Q Clear(g_c), s	0.7	0.0	0.0	1.4	0.0	0.0	12.5	0.0	9.2	9.3	0.0	12.2
Prop In Lane	0.44		0.56	0.64		0.36	1.00		0.01	1.00		0.01
Lane Grp Cap(c), veh/h	198	0	0	203	0	0	523	0	1469	607	0	1470
V/C Ratio(X)	0.08	0.00	0.00	0.16	0.00	0.00	0.02	0.00	0.45	0.00	0.00	0.54
Avail Cap(c_a), veh/h	440	0	0	439	0	0	523	0	1469	607	0	1470
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.8	0.0	0.0	33.1	0.0	0.0	5.4	0.0	2.7	4.3	0.0	3.1
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.4	0.0	0.0	0.1	0.0	1.0	0.0	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.6	0.0	0.0	0.0	0.0	1.5	0.0	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.0	0.0	0.0	33.5	0.0	0.0	5.4	0.0	3.8	4.3	0.0	4.5
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		16			33			675			797	
Approach Delay, s/veh		33.0			33.5			3.8			4.5	
Approach LOS		C			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		66.0		11.5		66.0		11.5				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		61.0		19.0		61.0		19.0				
Max Q Clear Time (g_c+I1), s		14.5		2.7		14.2		3.4				
Green Ext Time (p_c), s		4.8		0.0		6.2		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			5.1									
HCM 6th LOS			A									

Timing Report, Sorted By Phase

21: New Albany-Condit Road & Snider Loop

06/08/2021

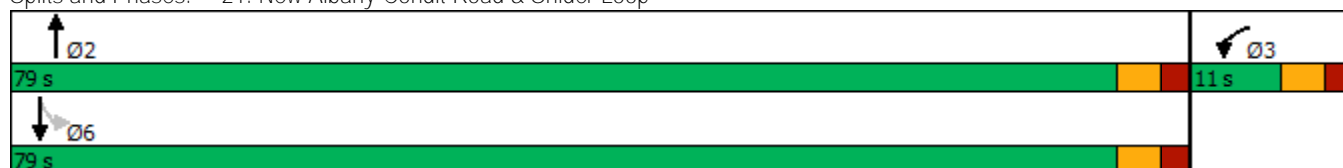


Phase Number	2	3	6
Movement	NBT	WBL	SBTL
Lead/Lag			
Lead-Lag Optimize			
Recall Mode	Max	None	Max
Maximum Split (s)	79	11	79
Maximum Split (%)	87.8%	12.2%	87.8%
Minimum Split (s)	23	10	23
Yellow Time (s)	3	3	3
All-Red Time (s)	2	2	2
Minimum Initial (s)	10	5	10
Vehicle Extension (s)	3	3	3
Minimum Gap (s)	3	3	3
Time Before Reduce (s)	0	0	0
Time To Reduce (s)	0	0	0
Walk Time (s)	7		7
Flash Dont Walk (s)	11		11
Dual Entry	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes
Start Time (s)	0	79	0
End Time (s)	79	0	79
Yield/Force Off (s)	74	85	74
Yield/Force Off 170(s)	63	85	63
Local Start Time (s)	0	79	0
Local Yield (s)	74	85	74
Local Yield 170(s)	63	85	63

Intersection Summary

Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	40

Splits and Phases: 21: New Albany-Condit Road & Snider Loop






HCM 6th Signalized Intersection Summary

21: New Albany-Condit Road & Snider Loop

06/08/2021



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	12	7	734	20	13	560
Future Volume (veh/h)	12	7	734	20	13	560
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	13	8	798	22	14	609
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	24	15	1558	43	56	1572
Arrive On Green	0.02	0.02	0.86	0.86	0.86	0.86
Sat Flow, veh/h	1009	621	1811	50	15	1828
Grp Volume(v), veh/h	22	0	0	820	623	0
Grp Sat Flow(s),veh/h/ln	1708	0	0	1861	1843	0
Q Serve(g_s), s	1.1	0.0	0.0	9.5	0.0	0.0
Cycle Q Clear(g_c), s	1.1	0.0	0.0	9.5	6.0	0.0
Prop In Lane	0.59	0.36		0.03	0.02	
Lane Grp Cap(c), veh/h	41	0	0	1601	1628	0
V/C Ratio(X)	0.54	0.00	0.00	0.51	0.38	0.00
Avail Cap(c_a), veh/h	119	0	0	1601	1628	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	41.5	0.0	0.0	1.5	1.3	0.0
Incr Delay (d2), s/veh	10.8	0.0	0.0	1.2	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	0.5	0.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	52.3	0.0	0.0	2.7	1.9	0.0
LnGrp LOS	D	A	A	A	A	A
Approach Vol, veh/h	22		820		623	
Approach Delay, s/veh	52.3		2.7		1.9	
Approach LOS	D		A		A	
Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	79.0		79.0		7.0	
Change Period (Y+Rc), s	5.0		5.0		5.0	
Max Green Setting (Gmax), s	74.0		74.0		6.0	
Max Q Clear Time (g_c+I1), s	11.5		8.0		3.1	
Green Ext Time (p_c), s	6.7		4.4		0.0	
Intersection Summary						
HCM 6th Ctrl Delay			3.1			
HCM 6th LOS			A			
Notes						

Timing Report, Sorted By Phase

21: New Albany-Condit Road & Site Access 5/Snider Loop

06/08/2021



Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTl
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	Max	None	Max	None
Maximum Split (s)	67	23	67	23
Maximum Split (%)	74.4%	25.6%	74.4%	25.6%
Minimum Split (s)	23	23	23	23
Yellow Time (s)	3	3	3	3
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	10	10	10	10
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	67	0	67
End Time (s)	67	0	67	0
Yield/Force Off (s)	62	85	62	85
Yield/Force Off 170(s)	51	74	51	74
Local Start Time (s)	0	67	0	67
Local Yield (s)	62	85	62	85
Local Yield 170(s)	51	74	51	74

Intersection Summary

Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	60



















Splits and Phases: 21: New Albany-Condit Road & Site Access 5/Snider Loop



HCM 6th Signalized Intersection Summary

21: New Albany-Condit Road & Site Access 5/Snider Loop

06/08/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	0	5	12	0	7	7	782	20	13	599	6
Future Volume (veh/h)	4	0	5	12	0	7	7	782	20	13	599	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	0	5	13	0	8	8	850	22	14	651	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	93	18	54	119	16	36	640	1467	38	500	1492	16
Arrive On Green	0.06	0.00	0.06	0.06	0.00	0.06	0.81	0.81	0.81	0.81	0.81	0.81
Sat Flow, veh/h	402	300	878	698	253	586	776	1815	47	635	1847	20
Grp Volume(v), veh/h	9	0	0	21	0	0	8	0	872	14	0	658
Grp Sat Flow(s),veh/h/ln	1580	0	0	1538	0	0	776	0	1862	635	0	1867
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	13.0	0.6	0.0	8.0
Cycle Q Clear(g_c), s	0.4	0.0	0.0	0.9	0.0	0.0	8.3	0.0	13.0	13.6	0.0	8.0
Prop In Lane	0.44		0.56	0.62		0.38	1.00		0.03	1.00		0.01
Lane Grp Cap(c), veh/h	165	0	0	171	0	0	640	0	1505	500	0	1509
V/C Ratio(X)	0.05	0.00	0.00	0.12	0.00	0.00	0.01	0.00	0.58	0.03	0.00	0.44
Avail Cap(c_a), veh/h	425	0	0	425	0	0	640	0	1505	500	0	1509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.0	0.0	0.0	34.2	0.0	0.0	3.4	0.0	2.7	5.1	0.0	2.2
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.3	0.0	0.0	0.0	0.0	1.6	0.1	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.4	0.0	0.0	0.0	0.0	1.6	0.1	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.1	0.0	0.0	34.5	0.0	0.0	3.4	0.0	4.3	5.2	0.0	3.1
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h	9			21			880			672		
Approach Delay, s/veh	34.1			34.5			4.3			3.1		
Approach LOS	C			C			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	67.0			9.7			67.0			9.7		
Change Period (Y+Rc), s	5.0			5.0			5.0			5.0		
Max Green Setting (Gmax), s	62.0			18.0			62.0			18.0		
Max Q Clear Time (g_c+I1), s	15.0			2.4			15.6			2.9		
Green Ext Time (p_c), s	7.4			0.0			4.8			0.0		
Intersection Summary												
HCM 6th Ctrl Delay	4.4											
HCM 6th LOS	A											

Signal Warrant Analysis

Municipality:

City of New Albany

County:

Franklin

ODOT Engineering District:

6

Traffic Volumes Obtained By:

CMTTran

Analysis Date:

Agency/ Company Name Performing Warrant Analysis:

CMTTran

Analysis Information

Data Collection Date:

Day of the Week:

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:

New Albany-Condit Road

Major Street Approach Direction:

N-Bound

S-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:

Snider Loop

Minor Street Approach Configuration:

1

E-Bound

1

W-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.

Warrant

Applicable?

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

No

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:

Do Not Install New Traffic Signal

Notes:

2032 Build - Right Turn Reductions Applied

Input & Findings
F114 of 129

Start Time	Southbound Approach						Westbound Approach						Northbound Approach						Eastbound Approach						NOTES:
	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	11	0			11	0	0	0			0	1	9	0			10	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	1	0			1	0	0	0			0	0	2	0			2	0	0	0			0	
12:30 AM	0	1	0			1	0	0	0			0	0	1	0			1	0	0	0			0	
12:45 AM	0	1	0			1	0	0	0			0	0	2	0			2	0	0	0			0	
Hourly Total	0	14	0	0	0	14	0	0	0	0	0	0	1	14	0	0	0	15	0	0	0	0	0	0	
1:00 AM	0	1	0			1	0	0	0			0	0	2	0			2	0	0	0			0	
1:15 AM	0	1	0			1	0	0	0			0	0	1	0			1	0	0	0			0	
1:30 AM	0	1	0			1	0	0	0			0	0	0	0			0	0	0	0			0	
1:45 AM	0	0	0			0	0	0	0			0	0	1	0			1	0	0	0			0	
Hourly Total	0	3	0	0	0	3	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	
2:00 AM	0	3	0			3	0	0	0			0	0	2	0			2	0	0	0			0	
2:15 AM	0	0	0			0	0	0	0			0	0	0	0			0	0	0	0			0	
2:30 AM	0	0	0			0	0	0	0			0	0	0	0			0	0	0	0			0	
2:45 AM	0	0	0			0	0	0	0			0	0	1	0			1	0	0	0			0	
Hourly Total	0	3	0	0	0	3	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	
3:00 AM	0	2	0			2	0	0	0			0	0	2	0			2	0	0	0			0	
3:15 AM	0	3	0			3	0	0	0			0	0	1	0			1	0	0	0			0	
3:30 AM	0	1	0			1	0	0	0			0	0	0	0			0	0	0	0			0	
3:45 AM	0	0	0			0	0	0	0			0	0	1	0			1	0	0	0			0	
Hourly Total	0	6	0	0	0	6	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	
4:00 AM	0	9	0			9	1	0	1			2	1	4	0			5	0	0	0			0	
4:15 AM	0	4	0			4	0	0	0			0	0	0	0			0	0	0	0			0	
4:30 AM	0	5	0			5	0	0	0			0	0	1	0			1	0	0	0			0	
4:45 AM	0	7	0			7	0	0	0			0	0	2	0			2	0	0	0			0	
Hourly Total	0	25	0	0	0	25	1	0	1	0	0	2	1	7	0	0	0	8	0	0	0	0	0	0	
5:00 AM	0	30	0			30	2	0	4			6	1	7	0			8	1	0	1			2	
5:15 AM	0	10	0			10	0	0	0			0	0	4	0			4	0	0	0			0	
5:30 AM	0	14	0			14	0	0	0			0	0	4	0			4	0	0	0			0	
5:45 AM	0	21	0			21	0	0	0			0	0	13	0			13	0	0	0			0	
Hourly Total	0	75	0	0	0	75	2	0	4	0	0	6	1	28	0	0	0	29	1	0	1	0	0	2	
6:00 AM	0	64	2			66	6	0	10			16	3	33	1			37	3	0	2			5	
6:15 AM	0	26	0			26	0	0	0			0	0	16	0			16	0	0	0			0	
6:30 AM	0	30	0			30	0	0	0			0	0	24	0			24	0	0	0			0	
6:45 AM	0	49	0			49	0	0	0			0	0	44	0			44	0	0	0			0	
Hourly Total	0	169	2	0	0	171	6	0	10	0	0	16	3	117	1	0	0	121	3	0	2	0	0	5	
7:00 AM	1	179	3			183	10	0	18			28	6	107	1			114	7	0	6			13	
7:15 AM	0	73	0			73	0	0	0			0	0	53	0			53	0	0	0			0	
7:30 AM	0	101	0			101	0	0	0			0	0	85	0			85	0	0	0			0	
7:45 AM	0	122	0			122	0	0	0			0	0	92	0			92	0	0	0			0	
Hourly Total	1	475	3	0	0	479	10	0	18	0	0	28	6	337	1	0	0	344	7	0	6	0	0	13	
8:00 AM	2	202	4			208	9	0	15			24	7	147	3			157	6	0	4			10	
8:15 AM	0	69	0			69	0	0	0			0	0	58	0			58	0	0	0			0	
8:30 AM	0	86	0			86	0	0	0			0	0	43	0			43	0	0	0			0	
8:45 AM	0	66	0			66	0	0	0			0	0	53	0			53	0	0	0			0	
Hourly Total	2	423	4	0	0	429	9	0	15	0	0	24	7	301	3	0	0	311	6	0	4	0	0	10	
9:00 AM	2	135	3			140	5	0	10			15	6	125	4			135	6	0	4			10	
9:15 AM	0	34	0			34	0	0	0			0	0	33	0			33	0	0	0			0	
9:30 AM	0	24	0			24	0	0	0			0	0	33	0			33	0	0	0			0	
9:45 AM	0	28	0			28	0	0	0			0	0	33	0			33	0	0	0			0	
Hourly Total	2	221	3	0	0	226	5	0	10	0	0	15	6	224	4	0	0	234	6	0	4	0	0	10	
10:00 AM	3	98	4			105	5	0	10			15	7	88	5			100	4	0	4			8	
10:15 AM	0	18	0			18	0	0	0			0	0	28	0			28	0	0	0			0	
10:30 AM	0	30	0			30	0	0	0			0	0	27	0			27	0	0	0			0	
10:45 AM	0	27	0			27	0	0	0			0	0	32	0			32	0	0	0			0	
Hourly Total	3	173	4	0	0	180	5	0	10	0	0	15	7	175	5	0	0	187	4	0	4	0	0	8	
11:00 AM	4	103	5			112	5	0	9			14	10	105	6			121	6	0	4			10	
11:15 AM	0	32	0			32	0	0	0			0	0	36	0			36	0	0	0			0	
11:30 AM	0	26	0			26	0	0	0			0	0	40	0			40	0	0	0			0	
11:45 AM	0	39	0			39	0	0	0			0	0	34	0			34	0	0	0			0	
Hourly Total	4	200	5	0	0	209	5	0	9	0	0	14	10	215	6	0	0	231	6	0	4	0	0	10	
12:00 PM	6	115	5			126	6	0	10			16	10	135	7			152	7	0	5			12	
12:15 PM	0	29	0			29	0	0	0			0	0	44	0			44	0	0	0			0	
12:30 PM	0	40	0			40	0	0	0			0	0	30	0			30	0	0	0			0	
12:45 PM	0	34	0			34	0	0	0			0	0	38	0			38							

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)*

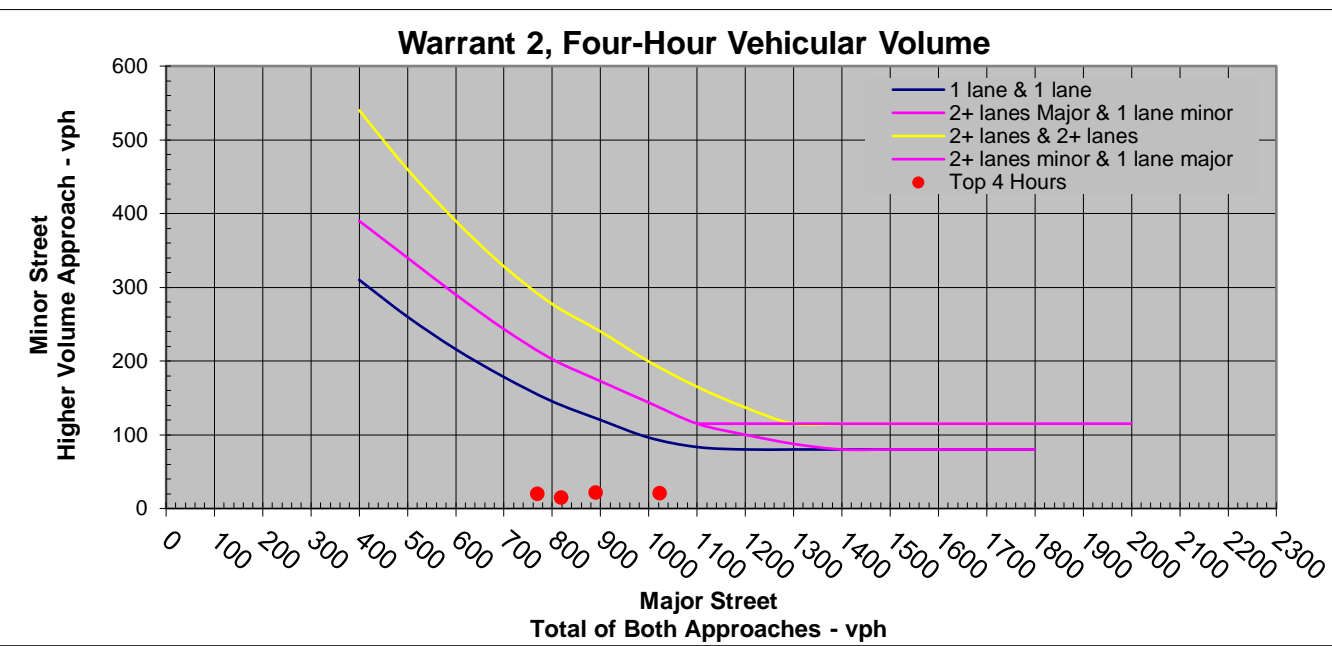
Lanes Major/ Minor	Adjusted Volumes		Condition A				Condition B				Combination A/B*							
			100%		70%		100%		70%		Cond. A		Cond. B		Cond. A		Cond. B	
	Major	Minor	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.
1 / 1	X		500	150	350	105	750	75	525	53	400	120	600	60	280	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	29	0																
12:15 AM	11	0																
12:30 AM	10	0																
12:45 AM	9	0																
1:00 AM	7	0																
1:15 AM	9	0																
1:30 AM	7	0																
1:45 AM	6	0																
2:00 AM	6	0																
2:15 AM	5	0																
2:30 AM	9	0																
2:45 AM	10	0																
3:00 AM	10	0																
3:15 AM	20	2																
3:30 AM	20	2																
3:45 AM	25	2																
4:00 AM	33	2																
4:15 AM	57	6																
4:30 AM	67	6																
4:45 AM	79	6																
5:00 AM	104	6																
5:15 AM	169	14																
5:30 AM	197	14																
5:45 AM	233	14																
6:00 AM	292	14													1			
6:15 AM	486	24			1						1						1	
6:30 AM	570	24	1						1									
6:45 AM	702	24											1					
7:00 AM	823	24					1								1			
7:15 AM	891	21			1						1						1	
7:30 AM	892	21	1						1									
7:45 AM	835	21											1					
8:00 AM	740	21													1			
8:15 AM	650	14			1						1						1	
8:30 AM	590	14	1						1									
8:45 AM	518	14																
9:00 AM	460	14													1			
9:15 AM	390	14			1													
9:30 AM	369	14																
9:45 AM	369	14																
10:00 AM	367	14													1			
10:15 AM	395	12			1													
10:30 AM	417	12									1							
10:45 AM	426	12															1	
11:00 AM	440	12													1			
11:15 AM	485	14			1													
11:30 AM	490	14									1							
11:45 AM	494	14															1	
12:00 PM	493	14													1			
12:15 PM	495	14			1													
12:30 PM	512	14	1								1							
12:45 PM	512	14															1	
1:00 PM	502	14													1			
1:15 PM	479	15			1													
1:30 PM	466	15									1							
1:45 PM	466	15															1	
2:00 PM	501	15	1												1			
2:15 PM	584	15			1				1									
2:30 PM	612	15									1		1					
2:45 PM	653	15															1	
3:00 PM	670	15	1												1			
3:15 PM	753	19			1		1		1									
3:30 PM	771	19									1		1					
3:45 PM	834	19															1	
4:00 PM	871	19	1												1			
4:15 PM	986	20			1		1		1									
4:30 PM	1024	20									1		1					
4:45 PM	1018	20															1	
5:00 PM	1001	20	1												1			
5:15 PM	863	14			1		1		1									
5:30 PM	820	14									1		1					
5:45 PM	742	14															1	
6:00 PM	673	14	1												1			
6:15 PM	518	12			1													
6:30 PM	453	12									1							
6:45 PM	421	12															1	
7:00 PM	411	12													1			
7:15 PM	377	7			1													
7:30 PM	368	7																
7:45 PM	344	7																
8:00 PM	328	7													1			
8:15 PM	264	6																
8:30 PM	251	6																
8:45 PM	236	6																
9:00 PM	214	6																
9:15 PM	143	3																
9:30 PM	126	3																
9:45 PM	117	3																
HOURS MET			9	0	14	0	4	0	7	0	12	0	6	0	15	0	12	0
WARRANT SATISFIED?			NO		NO		NO		NO		NO				NO			

Warrant Met:

No

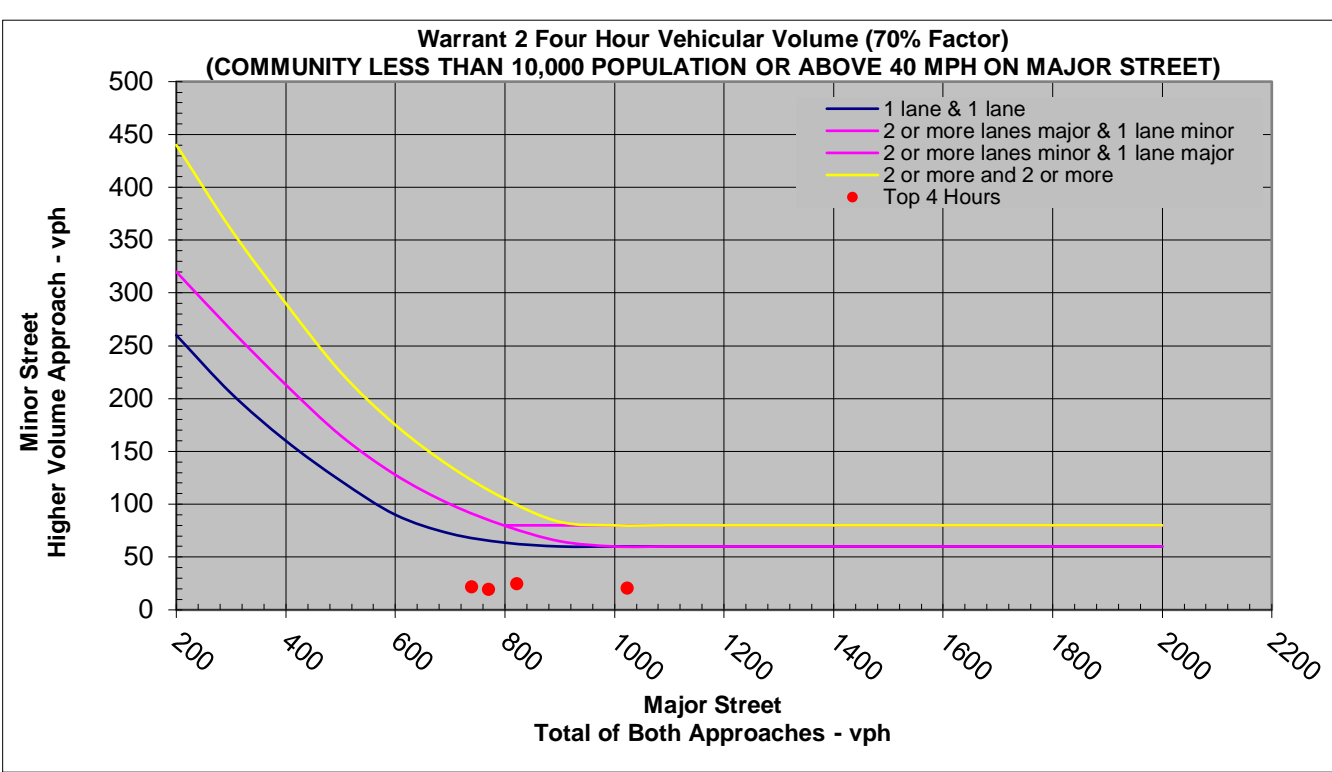
Notes:

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				0	
Major street: 1 Lane			Total Number of Unique Hours Met on Figure 4C-2 (70% Factor)				0	
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)
	Major - New Albany-Condit Road		Minor - Snider Loop					
	N-Bound	S-Bound	W-Bound	E-Bound				
6:00 AM	121	171	14	4	292	14		
6:15 AM	198	288	24	11	486	24		
6:30 AM	235	335	24	11	570	24		
6:45 AM	296	406	24	11	702	24		
7:00 AM	344	479	24	11	823	24		
7:15 AM	387	504	21	9	891	21		
7:30 AM	392	500	21	8	892	21		
7:45 AM	350	485	21	8	835	21		
8:00 AM	311	429	21	8	740	21		
8:15 AM	289	361	14	8	650	14		
8:30 AM	264	326	14	8	590	14		
8:45 AM	254	264	14	8	518	14		
9:00 AM	234	226	14	8	460	14		
9:15 AM	199	191	14	7	390	14		
9:30 AM	194	175	14	7	369	14		
9:45 AM	188	181	14	7	369	14		
10:00 AM	187	180	14	7	367	14		
10:15 AM	208	187	12	8	395	12		
10:30 AM	216	201	12	8	417	12		
10:45 AM	229	197	12	8	426	12		
11:00 AM	231	209	12	8	440	12		
11:15 AM	262	223	14	10	485	14		
11:30 AM	270	220	14	10	490	14		
11:45 AM	260	234	14	10	494	14		
12:00 PM	264	229	14	10	493	14		
12:15 PM	258	237	14	9	495	14		
12:30 PM	265	247	14	9	512	14		
12:45 PM	267	245	14	9	512	14		
1:00 PM	262	240	14	9	502	14		
1:15 PM	250	229	15	9	479	15		
1:30 PM	246	220	15	9	466	15		
1:45 PM	248	218	15	9	466	15		
2:00 PM	267	234	15	9	501	15		
2:15 PM	327	257	15	9	584	15		
2:30 PM	343	269	15	9	612	15		
2:45 PM	367	286	15	9	653	15		
3:00 PM	390	280	15	9	670	15		
3:15 PM	425	328	19	9	753	19		
3:30 PM	437	334	19	9	771	19		
3:45 PM	463	371	19	9	834	19		
4:00 PM	469	402	19	9	871	19		
4:15 PM	536	450	20	10	986	20		
4:30 PM	552	472	20	10	1024	20		
4:45 PM	568	450	20	10	1018	20		
5:00 PM	571	430	20	10	1001	20		
5:15 PM	488	375	14	8	863	14		
5:30 PM	461	359	14	8	820	14		
5:45 PM	400	342	14	8	742	14		
6:00 PM	345	328	14	8	673	14		
6:15 PM	269	249	12	7	518	12		
6:30 PM	230	223	12	7	453	12		
6:45 PM	227	194	12	7	421	12		
7:00 PM	238	173	12	7	411	12		
7:15 PM	226	151	7	5	377	7		
7:30 PM	231	137	7	5	368	7		
7:45 PM	216	128	7	5	344	7		
8:00 PM	196	132	7	5	328	7		



Top Hours for Figure 4C-1		Start Time	End Time	Major Street	Minor Street
Top Hour		4:30 PM	5:30 PM	1024	20
2nd Highest Hour		7:30 AM	8:30 AM	892	21
3rd Highest Hour		5:30 PM	6:30 PM	820	14
4th Highest Hour		3:30 PM	4:30 PM	771	19

Top Hours for Figure 4C-2		Start Time	End Time	Major Street	Minor Street
Top Hour		7:00 AM	8:00 AM	823	24
2nd Highest Hour		8:00 AM	9:00 AM	740	21
3rd Highest Hour		4:30 PM	5:30 PM	1024	20
4th Highest Hour		3:30 PM	4:30 PM	771	19



Are the requirements for Warrant 2 met?:

OMUTCD WARRANT 3, PEAK HOUR				Hour Vehicular Volume					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		
Number of Lanes for Moving Traffic on Each Approach		Peak Hour Start time	4:30 PM	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						
Major Street:	1 Lane	Peak Hour End Time	5:30 PM	6:00 AM	292	14	306	310	1024	20	159.22382	84.881018		
Minor Street:	1 Lane			6:15 AM	486	24	510	521						
Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street?				6:30 AM	570	24	594	605						
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?				6:45 AM	702	24	726	737						
				7:00 AM	823	24	847	858						
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*				7:15 AM	891	21	912	921						
				7:30 AM	892	21	913	921						
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?				7:45 AM	835	21	856	864						
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?				8:00 AM	740	21	761	769						
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?				8:15 AM	650	14	664	672						
				8:30 AM	590	14	604	612						
*If applicable, attach all supporting calculations and documentation.				8:45 AM	518	14	532	540						
				9:00 AM	460	14	474	482						
				9:15 AM	390	14	404	411						
				9:30 AM	369	14	383	390						
				9:45 AM	369	14	383	390						
				10:00 AM	367	14	381	388						
				10:15 AM	395	12	407	415						
				10:30 AM	417	12	429	437						
				10:45 AM	426	12	438	446						
				11:00 AM	440	12	452	460						
				11:15 AM	485	14	499	509						
				11:30 AM	490	14	504	514						
				11:45 AM	494	14	508	518						
				12:00 PM	493	14	507	517						
				12:15 PM	495	14	509	518						
				12:30 PM	512	14	526	535						
				12:45 PM	512	14	526	535						
				1:00 PM	502	14	516	525						
				1:15 PM	479	15	494	503						
				1:30 PM	466	15	481	490						
				1:45 PM	466	15	481	490						
				2:00 PM	501	15	516	525						
				2:15 PM	584	15	599	608						
				2:30 PM	612	15	627	636						
				2:45 PM	653	15	668	677						
				3:00 PM	670	15	685	694						
				3:15 PM	753	19	772	781						
				3:30 PM	771	19	790	799						
				3:45 PM	834	19	853	862						
				4:00 PM	871	19	890	899						
				4:15 PM	986	20	1006	1016						
				4:30 PM	1024	20	1044	1054						
				4:45 PM	1018	20	1038	1048						
				5:00 PM	1001	20	1021	1031						
				5:15 PM	863	14	877	885						
				5:30 PM	820	14	834	842						
				5:45 PM	742	14	756	764						
				6:00 PM	673	14	687	695						
				6:15 PM	518	12	530	537						
				6:30 PM	453	12	465	472						
				6:45 PM	421	12	433	440						
				7:00 PM	411	12	423	430						
				7:15 PM	377	7	384	389						
				7:30 PM	368	7	375	380						
				7:45 PM	344	7	351	356						
				8:00 PM	328	7	335	340						

Are the requirements for Warrant 3 met?:

No

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)

Entering and Exiting Movements To/From New Albany-Condit Road at the New Albany-Condit Road & Central College Road Intersection

	Southbound								Westbound								Northbound								Eastbound				
	Right	Thru	Left						Right	Thru	Left						Right	Thru	Left						Right	Thru	Left		
0:00		1	3	0						Right	1	3	0						1	7	1					Right	7	3	0
12:15		0	1	0							1	0	1						0	2	0						1	5	0
12:30		0	2	0							0	1	0						0	1	1						1	2	0
12:45		0	3	0							0	2	0						0	1	0						0	2	0
1:00		0	1	0							0	1	0						0	2	0						0	0	0
1:15		0	2	0							0	1	0						0	1	0						0	0	0
1:30		1	1	0							0	0	1						0	1	1						1	2	1
1:45		0	2	0							0	0	0						0	0	1						0	0	0
2:00		0	0	1							0	0	1						0	0	0						0	0	1
2:15		0	0	0							0	1	0						0	0	0						1	0	0
2:30		0	1	0							0	0	0						0	0	0						0	0	0
2:45		0	0	0							0	0	0						0	1	0						0	0	0
3:00		0	0	0							0	1	0						0	0	0						0	0	0
3:15		0	0	0							0	0	1						0	1	0						0	0	0
3:30		0	4	0							0	2	0						0	1	1						3	0	0
3:45		0	0	0							0	1	0						0	3	0						0	0	0
4:00		0	5	1							0	0	0						0	3	0						1	0	1
4:15		0	4	0							0	1	0						0	2	0						2	1	0
4:30		0	6	0							0	7	1						1	2	0						1	3	1
4:45		1	6	1							0	6	2						0	2	0						2	2	1
5:00		0	9	0							0	6	7						0	2	1						4	2	1
5:15		0	15	1							0	7	2						0	6	3						2	5	6
5:30		1	24	1							1	7	10						1	14	5						5	6	2
5:45		1	26	2							4	10	8						3	9	7						3	4	3
6:00		1	27	2							3	13	4						1	21	3						0	4	1
6:15		0	37	5							3	16	3						4	21	13						11	5	1
6:30		1	51	5							8	23	8						3	29	9						10	10	3
6:45		4	62	6							6	33	11						2	48	23						15	15	7
7:00		2	59	8							11	46	12						2	54	19						21	23	6
7:15		3	77	6							23	65	17						0	61	37						22	22	4
7:30		8	84	13							38	66	17						4	103	41						24	34	9
7:45		8	76	23							31	74	20						9	87	31						35	31	12
8:00		8	61	17							21	58	23						8	78	34						28	37	7
8:15		8	70	16							17	59	16						4	74	21						32	29	6
8:30		7	81	9							11	42	21						8	48	30						24	33	8
8:45		1	52	5							7	37	31						10	68	30						25	33	11
9:00		4	45	1							10	33	13						12	46	19						29	32	10
9:15		1	29	7							7	27	7						13	39	20						10	25	9
9:30		7	27	1							5	16	5						5	25	16						13	17	6
9:45		5	39	1							3	32	11						6	36	10						7	19	6
10:00		4	33	2							1	21	4						5	27	11						12	14	1
10:15		7	38	5							5	19	7						7	30	16						13	24	5
10:30		6	27	4							2	20	7						9	29	14						16	25	8
10:45		4	46	4							0	17	18						12	39	17						12	21	5
11:00		7	30	2							0	17	12						11	33	21						18	27	11
11:15		5	34	7							8	28	8						11	33	16						15	32	5
11:30		8	43	4							3	36	13						6	38	14						18	33	2
11:45		8	34	3							4	38	11						11	44	31						29	38	11
12:00		8	25	5							5	38	13						13	38	25						16	36	6
12:15		5	34	2							5	26	8						10	32	23						19	50	12
12:30		6	30	2							6	28	7						12	26	24						22	27	10
12:45		6	22	1							3	37	4						8	32	16						31	23	8
1:00		12																											

New Albany-Condit Road & Central College Road Intersection Count Data Grown

	Southbound						Westbound						Northbound						Eastbound			
	Right	Thru	Left				Right	Thru	Left				Right	Thru	Left				Right	Thru	Left	
0:00			4						0					1	8	1				8		
12:15																						
12:30																						
12:45																						
1:00			1						0					0	2	0				0		
1:15																						
1:30																						
1:45																						
2:00			0						1					0	0	0				0		
2:15																						
2:30																						
2:45																						
3:00			0						0					0	0	0				0		
3:15																						
3:30																						
3:45																						
4:00			6						0					0	4	0				1		
4:15																						
4:30																						
4:45																						
5:00			11						8					0	2	1				5		
5:15																						
5:30																						
5:45																						
6:00			33						5					1	25	4				0		
6:15																						
6:30																						
6:45																						
7:00			72						14					2	63	22				24		
7:15																						
7:30																						
7:45																						
8:00			74						27					9	91	40				32		
8:15																						
8:30																						
8:45																						
9:00			55						15					14	54	22				33		
9:15																						
9:30																						
9:45																						
10:00			40						5					6	32	13				14		
10:15																						
10:30																						
10:45																						
11:00			37						14					13	39	25				21		
11:15																						
11:30																						
11:45																						
12:00			31						15					15	44	29				18		
12:15																						
12:30																						
12:45																						
1:00			40						14					11	55	27				23		
1:15																						
1:30																						
1:45																						
2:00			34						9					11	46	12				15		
2:15																						
2:30																						
2:45																						
3:00			51						20					18	64	29				18		
3:15																						
3:30																						
3:45																						
4:00			70						4					20	101	23				35		
4:15																						
4:30																						
4:45																						
5:00			104						16					20	147	37				49		
5:15																						
5:30																						
5:45																						
6:00			92						12					20	90	32				33		
6:15																						
6:30																						
6:45																						
7:00			35						12					12	47	19				19		
7:15																						
7:30																						
7:45																						
8:00			33						9					14	28	13				13		
8:15																						
8:30																						
8:45																						
9:00			28						5					9	28	13				11		
9:15																						
9:30																						
9:45																						
10:00			21						1					7	16	5				7		
10:15																						
10:30																						
10:45																						
11:00			9						1					0	8	1				1		
11:15																						
11:30																						
11:45																						

Growth Rates	
New Albany-Condit Road SB	1.7%
Central College Road WB	1.3%
New Albany-Condit Road NB	1.3%
Central College Road EB	1.1%
Collection Year	2019
Design Year	2032

Entering and Exiting Movements To/From New Albany-Condit Road at the New Albany-Condit Road & Walton Parkway Intersection

	Southbound								Westbound								Northbound								Eastbound			
	Right	Thru	Left						Right	Thru	Left						Right	Thru	Left						Right	Thru	Left	
0:00	0	4	0					2	0	0						0	1	0					1	0	0			
12:15	0	1	1					0	0	0						0	2	0					0	0	1			
12:30	0	2	0					0	0	1						1	2	0					1	0	0			
12:45	0	2	0					0	0	1						0	3	0					1	1	0			
1:00	0	0	0					0	0	0						1	0	0					0	0	0			
1:15	0	2	0					0	0	0						0	1	0					0	0	0			
1:30	0	1	0					0	0	0						0	0	0					0	0	0			
1:45	0	0	0					1	0	1						0	1	0					0	0	0			
2:00	0	2	1					0	0	0						0	1	0					0	0	0			
2:15	0	0	0					0	0	0						0	0	0					0	0	0			
2:30	0	0	0					0	0	0						0	0	0					1	0	0			
2:45	0	0	0					0	0	0						0	1	0					0	0	0			
3:00	0	1	0					0	0	0						0	1	0					0	0	0			
3:15	0	4	1					0	0	0						0	2	0					0	0	0			
3:30	0	2	0					0	0	0						0	0	0					0	0	0			
3:45	0	0	0					0	0	0						0	1	0					0	0	0			
4:00	0	2	0					1	1	0						0	1	0					1	0	0			
4:15	0	5	2					0	0	0						0	0	0					0	0	0			
4:30	0	8	1					0	1	0						1	2	0					1	1	0			
4:45	0	10	3					1	0	0						0	2	0					0	1	0			
5:00	0	8	1					1	0	0						1	6	3					3	2	0			
5:15	1	13	3					3	0	0						0	3	1					4	1	0			
5:30	1	16	7					1	0	1						0	4	4					2	0	1			
5:45	2	19	16					2	0	2						1	18	4					1	1	0			
6:00	0	23	9					1	4	0						1	16	3					4	3	0			
6:15	6	33	6					8	1	0						1	17	7					2	1	0			
6:30	2	39	11					3	9	4						0	36	10					5	5	0			
6:45	6	59	20					19	10	0						0	51	22					9	9	0			
7:00	9	83	20					27	10	2						2	46	26					6	15	2			
7:15	11	89	27					27	24	3						2	56	24					18	11	1			
7:30	5	143	28					44	22	7						8	88	26					28	15	2			
7:45	25	153	34					44	19	7						13	99	47					27	16	3			
8:00	15	106	31					15	16	3						14	71	44					34	24	0			
8:15	13	81	26					23	15	1						6	66	29					22	27	3			
8:30	7	100	43					14	22	1						8	54	22					16	26	1			
8:45	7	90	18					15	22	3						25	68	34					57	20	2			
9:00	10	48	15					8	9	1						28	73	35					10	15	1			
9:15	0	47	11					10	9	4						4	41	17					9	12	1			
9:30	4	32	4					7	4	1						3	41	14					4	11	4			
9:45	3	40	6					6	2	2						1	44	9					1	11	3			
10:00	1	40	11					11	2	5						5	32	6					6	8	1			
10:15	4	22	5					10	3	4						2	31	12					7	3	2			
10:30	4	41	6					7	6	6						1	33	10					7	4	2			
10:45	6	33	7					10	9	7						0	40	13					6	2	0			
11:00	3	32	1					5	16	6						3	28	12					13	10	2			
11:15	6	43	7					9	24	3						2	41	19					8	8	7			
11:30	5	34	6					7	11	7						4	49	10					9	15	7			
11:45	8	56	4					10	24	1						1	43	19					9	15	1			
12:00	6	40	5					6	31	8						4	53	19					21	16	9			
12:15	2	35	13					9	13	4						4	56	19					23	17	6			
12:30	10	52	9					5	14	3						7	41	16					13	25	2			
12:45	4	42	12					10	11	0						5	44	16					14	17	5			
1:00	4	43	9					6	16	2						3	45	11					18	14	11			
1:15	1	61	5					6	6	1						9	69	22					13	9	7			
1:30	3	56	8					9	8	3						9	41	19					21					

New Albany-Condit Road & Walton Parkway Intersection Count Data Grown

	Southbound							Westbound								Northbound							Eastbound			
	Right	Thru	Left					Right	Thru	Left						Right	Thru	Left					Right	Thru	Left	
0:00		0	5	0						3							1								0	
12:15		0	1	1						0							2								1	
12:30		0	2	0						0							2								0	
12:45		0	2	0						0							4								0	
1:00		0	0	0						0							0								0	
1:15		0	2	0						0							1								0	
1:30		0	1	0													0								0	
1:45		0	0	0						1							1								0	
2:00		0	2	1						0							1								0	
2:15		0	0	0						0							0								0	
2:30		0	0	0						0							0								0	
2:45		0	0	0						0							1								0	
3:00		0	1	0						0							1								0	
3:15		0	5	1						0							2								0	
3:30		0	2	0						0							0								0	
3:45		0	0	0						0							1								0	
4:00		0	2	0						1							1								0	
4:15		0	6	2						0							0								0	
4:30		0	9	1						0							2								0	
4:45		0	11	3						1							2								0	
5:00		0	9	1						1							7								0	
5:15		1	15	3						4							4								0	
5:30		1	18	8						1							5								1	
5:45		2	22	18						3							22								0	
6:00		0	26	10						1							19								0	
6:15		7	38	7						11							21								0	
6:30		2	45	13						4							44								0	
6:45		7	67	23						26							62								0	
7:00		10	95	23						37							56								3	
7:15		13	102	31						37							68								1	
7:30		6	164	32						60							107								3	
7:45		29	175	39						60							120								4	
8:00		17	121	35						20							86								0	
8:15		15	93	30						31							80								4	
8:30		8	114	49						19							66								1	
8:45		8	103	21						20							83								3	
9:00		11	55	17						11							89								1	
9:15		0	54	13						14							50								1	
9:30		5	37	5						10							50								5	
9:45		3	46	7						8							54								4	
10:00		1	46	13						15							39								1	
10:15		5	25	6						14							38								3	
10:30		5	47	7						10							40								3	
10:45		7	38	8						14							49								0	
11:00		3	37	1						7							34								3	
11:15		7	49	8						12							50								10	
11:30		6	39	7						10							60								10	
11:45		9	64	5						14							52								1	
12:00		7	46	6						8							64								12	
12:15		2	40	15						12							68								8	
12:30		11	59	10						7							50								3	
12:45		5	48	14						14							54								7	
1:00		5	49	10						8							55								15	
1:15		1	70	6						8							84								10	
1:30		3	64	9						12							50								1	
1:45		5	43	9						12							49								4	
2:00		5	45	5						3							58								0	
2:15		7	42	10						12							71								11	
2:30		5	55	11						7							58								3	
2:45		2	80	7						12							88								4	
3:00		6	55	11						5							107								4	
3:15		3	64	17						26							89								11	
3:30		1	85	19						18							88								10	
3:45		8	53	17						14							131								5	
4:00		7	111	18						31							95								8	
4:15		2	70	24						20							117								12	
4:30		1	124	54						37							111								19	
4:45		3	105	31						22							129								10	
5:00		8	121	33						50							126								22	
5:15		8	87	45						35							139								7	
5:30		5	109	21						63							130								7	
5:45		1	88	11						35							120								12	
6:00		1	81	17						23							96								7	
6:15		3	93	11						24							100								4	
6:30		5	87	9						11							66								1	
6:45		6	63	3						4							51								3	
7:00		0	45	5						10							60								7	
7:15		2	51	2						5							45								0	
7:30		1	40	3						7							61								3	

Growth Rates

Growth Rates	
New Albany-Condit Road SB	1.2%
Walton Parkway WB	3.0%
New Albany-Condit Road NB	1.8%
Walton Parkway EB	3.0%

Collection Year	2020
Design Year	2032

New Albany-Condit Road Thru Data at the New Albany-Condit Road & Snider Loop Intersection (Average of Entering/Exit Movements From the Two Adjacent Intersections)

	Southbound							Westbound						Northbound						Eastbound		
	Right	Thru	Left	Right				Thru	Left	Right				Thru	Left	Right				Thru	Left	
0:00			9												7							
12:15			1												2							
12:30			1												1							
12:45			1												2							
1:00			1												1							
1:15			1												1							
1:30			1												0							
1:45			0												1							
2:00			2												1							
2:15			0												0							
2:30			0												0							
2:45			0												1							
3:00			1												1							
3:15			3												1							
3:30			1												0							
3:45			0												1							
4:00			5												3							
4:15			4												0							
4:30			5												1							
4:45			7												2							
5:00			17												6							
5:15			10												4							
5:30			14												4							
5:45			21												13							
6:00			37												25							
6:15			26												16							
6:30			30												24							
6:45			49												44							
7:00			119												92							
7:15			73												53							
7:30			101												85							
7:45			122												92							
8:00			153												123							
8:15			69												58							
8:30			86												43							
8:45			66												53							
9:00			93												96							
9:15			34												33							
9:30			24												33							
9:45			28												33							
10:00			60												53							
10:15			18												28							
10:30			30												27							
10:45			27												32							
11:00			57												61							
11:15			32												36							
11:30			26												40							
11:45			39												34							
12:00			62												86							
12:15			29												44							
12:30			40												30							
12:45			34												38							
1:00			71												86							
1:15			39												51							
1:30			38												32							
1:45			29												33							
2:00			57												65							
2:15			30												47							
2:30			36												34							
2:45			45												52							
3:00			81												114							
3:15			42												63							
3:30			53												58							
3:45			39												75							
4:00			123												139							
4:15			48												75							
4:30			90												84							
4:45			70												81							
5:00			166												201							
5:15			70												91							
5:30			68												100							
5:45			50												84							
6:00			118												134							
6:15			54												64							
6:30			51												39							
6:45			36												29							
7:00			58												78							
7:15			28												25							
7:30			22												36							
7:45			15												40							
8:00			45												78							
8:15			14												30							
8:30			13												21							
8:45			19												20							
9:00			37												53							
9:15			12												19							
9:30			12												7							
9:45			6												11							
10:00			23												22							
10:15			8												6							
10:30			4												6							
10:45			3												3							
11:00			12												7							
11:15			3												6							
11:30			1												4							
11:45			1												5							

Trip Distribution (Snider Loop) - Distribution matches the distribution used in the TIS volumes.																							
36% Entry						36% Exit						64% Exit						64% Entry					
Southbound						Westbound						Northbound						Eastbound					
	Right	Thru	Left				Right	Thru	Left					Right	Thru	Left					Right	Thru	Left
0:00			0					0		0					1								
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					1		1					1								
4:15																							
4:30																							
4:45																							
5:00			0					2		4					1								
5:15																							
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6:00			2					6		10					3								
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7:00			3					10		18					6								
7:15																							
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8:00			4					9		15					7								
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10:00			4					5		10					7								
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2:00			7					6		11					12								
2:15																							
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6:00			9					6		10					15								
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6:30																							
6:45																							
7:00			6					4		8					11								
7:15																							
7:30																							
7:45																							
8:00			6					3		5					11								
8:15																							
8:30																							
8:45																							
9:00			4					2		4					8								
9:15																							
9:30																							
9:45																							
10:00			2					1		2					4								
10:15																							
10:30																							
10:45																							
11:00			1					1		1					2								
11:15																							
11:30																							
11:45																							

210 - Single-Family Detached Housing

Entry % Exit %

0.5% 0.2%

210 Weekday Entry/Exit 275

210 - Single-Family
Detached Housing
Entry % Exit %
0.5% 0.2%

210 Weekday
Entry/Exit
275

0.2% 0.2%

0.2% 0.0%

0.2% 0.2%

0.3% 0.8%

0.5% 2.0%

1.6% 5.9%

3.2% 10.2%

3.7% 8.6%

3.2% 5.4%

4.2% 5.4%

5.4% 5.1%

5.5% 5.6%

6.0% 5.9%

7.0% 6.2%

8.5% 6.0%

10.5% 7.5%

10.3% 7.4%

8.6% 5.9%

6.2% 4.3%

6.3% 3.1%

4.5% 2.4%

2.2% 1.1%

1.3% 0.7%

210 - Single-Family Detached Housing		210 Weekday
Entry %	Exit %	Entry/Exit
0.5%	0.2%	208

210 - Single-Family Detached Housing		210 Weekday
Entry %	Exit %	Entry/Exit
0.5%	0.2%	208

Trip Distribution (Site Traffic) - Distribution matches the distribution used in the TIS volumes

220 - Multifamily Housing (Low-Rise)		220 Weekday
Entry %	Exit %	Entry/Exit
0.7%	0.3%	1231

Trip Distribution (Site Traffic) - Distribution matches the distribution used in the TIS volumes

[illegible]

252 - Senior Adult Housing - Attached	Entry %	Exit %
	0.3%	0.4%

252 Weekday
Entry/Exit
239

Trip Distribution (Site Traffic) - Distribution matches the distribution used in the TIS volumes

411 - Public Park		411 Weekday
Entry %	Exit %	Entry/Exit
0.0%	0.4%	47

Trip Distribution (Site Traffic) - Distribution matches the distribution used in the TIS volumes

[illegible]

Appendix G

Queuing Analysis

Intersection: 3: New Albany-Condit Road & Central College Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	TR	L	TR	L	T	R
Maximum Queue (ft)	66	157	87	119	169	157	109	261	85	244	55
Average Queue (ft)	23	72	35	46	88	64	50	120	36	120	13
95th Queue (ft)	54	134	72	92	143	118	94	212	73	202	39
Link Distance (ft)		584	584		788			1056		338	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	355			310		390	310		330		390
Storage Blk Time (%)								0			
Queuing Penalty (veh)								0			

Intersection: 6: New Albany Road E & Central College Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	120	154	121	111	141	106	133	42	217	243	86	69
Average Queue (ft)	58	67	50	47	71	44	58	16	123	144	34	28
95th Queue (ft)	107	117	98	94	114	84	103	42	194	212	68	62
Link Distance (ft)		1314	1314			690	690	934	934	934	934	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	290			325	325							305
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 6: New Albany Road E & Central College Road

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	187	151	46
Average Queue (ft)	99	49	12
95th Queue (ft)	164	114	37
Link Distance (ft)	715	715	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			645
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Walton Parkway/EMH&T Driveway & New Albany Road E

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	TR	L	TR
Maximum Queue (ft)	95	365	456	108	124	133	113	60	16	22
Average Queue (ft)	19	104	230	48	50	51	52	18	1	1
95th Queue (ft)	57	282	398	120	118	123	98	50	6	11
Link Distance (ft)		519	519		500	500		418		193
Upstream Blk Time (%)		0	1							
Queuing Penalty (veh)		0	0							
Storage Bay Dist (ft)	105			140			265		40	
Storage Blk Time (%)		2		7					0	0
Queuing Penalty (veh)		1		18					0	0

Intersection: 12: New Albany-Condit Road & Walton Parkway

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	63	145	106	220	143	277	116	267
Average Queue (ft)	10	80	18	87	70	85	43	118
95th Queue (ft)	45	133	55	166	125	193	87	224
Link Distance (ft)		1751		696		446		635
Upstream Blk Time (%)						0		
Queuing Penalty (veh)						0		
Storage Bay Dist (ft)	95		95		120		330	
Storage Blk Time (%)		10		10	2	2		
Queuing Penalty (veh)		1		2	6	3		

Intersection: 16: Central College Road & Discover Complex Access

Movement	EB	EB	WB	SB	SB	SB
Directions Served	L	L	TR	L	R	R
Maximum Queue (ft)	29	52	13	31	31	24
Average Queue (ft)	2	13	1	6	6	1
95th Queue (ft)	12	41	6	26	25	9
Link Distance (ft)			584		159	159
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	355	355		135		
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 21: New Albany-Condit Road & Snider Loop

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	50	30
Average Queue (ft)	21	2
95th Queue (ft)	45	19
Link Distance (ft)	474	1056
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 31

Intersection: 3: New Albany-Condit Road & Central College Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	TR	L	TR	L	T	R
Maximum Queue (ft)	76	180	78	107	178	152	112	287	88	293	51
Average Queue (ft)	26	81	29	46	95	70	50	140	39	131	15
95th Queue (ft)	56	151	62	86	155	129	91	236	74	231	40
Link Distance (ft)		584	584		788			526		338	
Upstream Blk Time (%)										0	
Queuing Penalty (veh)										0	
Storage Bay Dist (ft)	355			310		390	310		330		390
Storage Blk Time (%)								0		0	
Queuing Penalty (veh)								0		0	

Intersection: 6: New Albany Road E & Central College Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	119	138	116	124	134	109	153	55	212	204	95	70
Average Queue (ft)	51	70	50	50	73	47	68	20	124	143	39	27
95th Queue (ft)	95	124	95	101	116	87	120	48	188	203	71	60
Link Distance (ft)		1314	1314			685	685	194	194	194	194	
Upstream Blk Time (%)									1	1		
Queuing Penalty (veh)									1	3		
Storage Bay Dist (ft)	290			325	325							305
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 6: New Albany Road E & Central College Road

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	200	150	38
Average Queue (ft)	107	56	10
95th Queue (ft)	178	127	34
Link Distance (ft)	715	715	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			645
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Walton Parkway/EMH&T Driveway & New Albany Road E

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	TR	L	TR
Maximum Queue (ft)	70	451	502	136	132	138	124	60	20	22
Average Queue (ft)	12	108	245	47	51	57	53	22	1	1
95th Queue (ft)	40	298	406	118	119	117	99	53	11	10
Link Distance (ft)		519	519		501	501		418		193
Upstream Blk Time (%)		0	1							
Queuing Penalty (veh)		0	0							
Storage Bay Dist (ft)	105			140			265		40	
Storage Blk Time (%)		1		7					0	0
Queuing Penalty (veh)		1		20					0	0

Intersection: 12: New Albany-Condit Road & Walton Parkway

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	59	179	87	232	141	225	134	253
Average Queue (ft)	8	85	16	92	68	89	52	114
95th Queue (ft)	33	150	54	175	126	183	104	212
Link Distance (ft)		1751		696		446		635
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	95		95		120		330	
Storage Blk Time (%)		12	0	11	3	2		
Queuing Penalty (veh)		1	0	2	14	4		

Intersection: 14: New Albany Road E & Site Access 1

Movement	WB	NB	NB
Directions Served	R	T	T
Maximum Queue (ft)	35	11	38
Average Queue (ft)	8	1	2
95th Queue (ft)	30	9	17
Link Distance (ft)	550	693	693
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 16: Site Access 2/Discover Complex Access & Central College Road

Movement	EB	EB	EB	WB	WB	NB	SB	SB	SB
Directions Served	L	L	TR	L	TR	LTR	L	TR	R
Maximum Queue (ft)	38	38	2	33	8	91	31	31	18
Average Queue (ft)	2	10	0	6	0	41	7	9	2
95th Queue (ft)	16	31	2	24	4	75	27	32	14
Link Distance (ft)			685		584	246		159	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	355	355		125			135		135
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 19: New Albany-Condit Road & Site Access 3/Site Access 4

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	L
Maximum Queue (ft)	80	39	43	29
Average Queue (ft)	37	15	10	4
95th Queue (ft)	65	40	34	19
Link Distance (ft)	549	363		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			200	225
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 21: New Albany-Condit Road & Site Access 5/Snider Loop

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	L	L
Maximum Queue (ft)	49	43	38	28	22
Average Queue (ft)	13	15	8	4	2
95th Queue (ft)	40	41	30	20	13
Link Distance (ft)	566	474	474		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				225	200
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 46

Intersection: 3: New Albany-Condit Road & Central College Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	TR	L	TR	L	T	R
Maximum Queue (ft)	74	262	60	72	147	93	288	524	63	212	45
Average Queue (ft)	25	129	27	30	71	43	78	233	32	106	16
95th Queue (ft)	57	219	54	64	122	84	215	458	60	183	42
Link Distance (ft)		584	584		788			1056		338	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	355			310		390	310		330		390
Storage Blk Time (%)							0	5			
Queuing Penalty (veh)							0	7			

Intersection: 6: New Albany Road E & Central College Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	100	130	111	135	138	108	124	95	153	198	94	108
Average Queue (ft)	40	58	41	63	85	56	62	26	76	89	30	42
95th Queue (ft)	79	107	85	115	128	95	106	66	130	159	66	81
Link Distance (ft)		1314	1314			690	690	934	934	934	934	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	290			325	325							305
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 6: New Albany Road E & Central College Road

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	225	181	72
Average Queue (ft)	126	85	28
95th Queue (ft)	200	166	55
Link Distance (ft)	715	715	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			645
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Walton Parkway/EMH&T Driveway & New Albany Road E

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	TR	L	TR
Maximum Queue (ft)	16	200	262	145	295	301	246	78	30	79
Average Queue (ft)	1	51	145	22	165	179	145	25	5	27
95th Queue (ft)	8	129	244	81	260	274	231	62	21	63
Link Distance (ft)		519	519		500	500		418		193
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	105			140			265		40	
Storage Blk Time (%)		1		0	11		0		0	4
Queuing Penalty (veh)		0		0	2		0		0	0

Intersection: 12: New Albany-Condit Road & Walton Parkway

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	113	209	119	193	92	234	142	203
Average Queue (ft)	36	97	30	90	29	98	61	91
95th Queue (ft)	85	174	75	161	66	191	113	171
Link Distance (ft)		1751		696		446		635
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	95		95		120		330	
Storage Blk Time (%)	1	13	0	9	0	4		
Queuing Penalty (veh)	2	6	1	3	0	2		

Intersection: 16: Central College Road & Discover Complex Access

Movement	EB	EB	SB	SB	SB
Directions Served	L	L	L	R	R
Maximum Queue (ft)	6	36	76	59	28
Average Queue (ft)	0	4	25	23	3
95th Queue (ft)	4	21	59	51	19
Link Distance (ft)				159	159
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	355	355	135		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 21: New Albany-Condit Road & Snider Loop

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	43	75
Average Queue (ft)	13	8
95th Queue (ft)	40	41
Link Distance (ft)	474	1056
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 24

Intersection: 3: New Albany-Condit Road & Central College Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	TR	L	TR	L	T	R
Maximum Queue (ft)	67	288	81	104	154	134	335	515	65	243	62
Average Queue (ft)	27	135	30	36	79	48	101	262	33	120	19
95th Queue (ft)	61	231	64	79	134	97	281	483	64	204	48
Link Distance (ft)		584	584		788			526		338	
Upstream Blk Time (%)								2		0	
Queuing Penalty (veh)								11		0	
Storage Bay Dist (ft)	355			310		390	310		330		390
Storage Blk Time (%)		0					0	11		0	
Queuing Penalty (veh)		0					0	16		0	

Intersection: 6: New Albany Road E & Central College Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	86	133	119	150	173	152	147	71	116	148	104	95
Average Queue (ft)	35	62	46	68	92	53	60	25	72	84	39	44
95th Queue (ft)	70	115	98	127	140	107	116	59	111	135	79	83
Link Distance (ft)		1314	1314				685	685	194	194	194	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	290			325	325							305
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 6: New Albany Road E & Central College Road

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	238	195	65
Average Queue (ft)	131	91	25
95th Queue (ft)	205	170	55
Link Distance (ft)	715	715	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			645
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Walton Parkway/EMH&T Driveway & New Albany Road E

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	TR	L	TR
Maximum Queue (ft)	12	244	334	141	328	331	245	72	38	81
Average Queue (ft)	1	59	168	23	184	198	143	24	4	28
95th Queue (ft)	6	159	276	85	297	309	234	58	21	62
Link Distance (ft)		519	519		501	501		418		193
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	105			140			265		40	
Storage Blk Time (%)		0		0	13		0		0	4
Queuing Penalty (veh)		0		0	2		0		0	0

Intersection: 12: New Albany-Condit Road & Walton Parkway

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	110	224	119	239	113	267	169	216
Average Queue (ft)	32	98	34	97	31	110	69	100
95th Queue (ft)	79	180	85	192	73	216	132	187
Link Distance (ft)		1751		696		446		635
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	95		95		120		330	
Storage Blk Time (%)	0	14	1	11		5		
Queuing Penalty (veh)	0	6	1	4		3		

Intersection: 14: New Albany Road E & Site Access 1

Movement	WB
Directions Served	R
Maximum Queue (ft)	35
Average Queue (ft)	6
95th Queue (ft)	27
Link Distance (ft)	550
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 16: Site Access 2/Discover Complex Access & Central College Road

Movement	EB	EB	EB	WB	NB	SB	SB	SB
Directions Served	L	L	TR	L	LTR	L	TR	R
Maximum Queue (ft)	5	24	8	47	87	58	62	34
Average Queue (ft)	0	3	0	10	37	24	28	3
95th Queue (ft)	3	14	5	34	72	51	57	17
Link Distance (ft)			685		246		159	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	355	355		125		135		135
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 19: New Albany-Condit Road & Site Access 3/Site Access 4

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	L
Maximum Queue (ft)	81	39	60	129	34
Average Queue (ft)	33	12	16	11	5
95th Queue (ft)	64	37	43	88	22
Link Distance (ft)	549	363		457	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			200		225
Storage Blk Time (%)				0	
Queuing Penalty (veh)				0	

Intersection: 21: New Albany-Condit Road & Site Access 5/Snider Loop

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	L	L
Maximum Queue (ft)	39	38	34	27	29
Average Queue (ft)	8	12	7	2	4
95th Queue (ft)	31	36	28	14	19
Link Distance (ft)	566	474	474		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				225	200
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 47

Intersection: 3: New Albany-Condit Road & Central College Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	TR	L	TR	L	T	R
Maximum Queue (ft)	74	170	93	119	181	171	195	296	89	282	48
Average Queue (ft)	21	77	34	52	92	75	60	135	41	139	15
95th Queue (ft)	53	136	73	94	153	140	131	250	76	237	40
Link Distance (ft)		584	584		788			1056		338	
Upstream Blk Time (%)										0	
Queuing Penalty (veh)										0	
Storage Bay Dist (ft)	355			310		390	310		330		390
Storage Blk Time (%)								0		0	
Queuing Penalty (veh)								0		0	

Intersection: 6: New Albany Road E & Central College Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	159	144	108	121	130	114	135	58	215	238	93	72
Average Queue (ft)	64	72	54	52	71	53	67	19	133	157	35	26
95th Queue (ft)	121	120	96	100	118	97	119	47	206	227	70	60
Link Distance (ft)		1314	1314			690	690	934	934	934	934	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	290			325	325							305
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 6: New Albany Road E & Central College Road

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	196	167	56
Average Queue (ft)	117	63	15
95th Queue (ft)	183	138	43
Link Distance (ft)	715	715	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			645
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Walton Parkway/EMH&T Driveway & New Albany Road E

Movement	EB	EB	EB	WB	WB	WB	B25	B25	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	T	T	L	TR	L	TR
Maximum Queue (ft)	125	434	519	164	443	422	26	10	126	82	8	27
Average Queue (ft)	21	128	267	109	153	140	1	1	59	25	0	2
95th Queue (ft)	71	306	436	198	414	378	12	9	108	57	5	13
Link Distance (ft)		519	519		500	500	934	934		418		193
Upstream Blk Time (%)		0	0		2	0						
Queuing Penalty (veh)		0	0		8	1						
Storage Bay Dist (ft)	105			140					265		40	
Storage Blk Time (%)	0	3		45	0							0
Queuing Penalty (veh)	0	2		130	0							0

Intersection: 12: New Albany-Condit Road & Walton Parkway

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	101	233	81	229	144	391	110	246
Average Queue (ft)	10	111	22	97	86	109	55	129
95th Queue (ft)	53	190	63	181	150	261	97	227
Link Distance (ft)		1751		696		446		635
Upstream Blk Time (%)						1		
Queuing Penalty (veh)						0		
Storage Bay Dist (ft)	95		95		120		330	
Storage Blk Time (%)		21		11	7	3		
Queuing Penalty (veh)		2		3	33	5		

Intersection: 16: Central College Road & Discover Complex Access

Movement	EB	EB	WB	SB	SB	SB
Directions Served	L	L	TR	L	R	R
Maximum Queue (ft)	18	46	4	31	31	18
Average Queue (ft)	1	12	0	7	7	1
95th Queue (ft)	11	39	3	27	27	9
Link Distance (ft)			584		159	159
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	355	355		135		
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 21: New Albany-Condit Road & Snider Loop

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	52	32
Average Queue (ft)	21	2
95th Queue (ft)	48	17
Link Distance (ft)	474	1056
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 184

Intersection: 3: New Albany-Condit Road & Central College Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	TR	L	TR	L	T	R
Maximum Queue (ft)	94	188	99	136	194	164	197	325	110	286	52
Average Queue (ft)	31	91	36	57	107	78	66	171	42	149	17
95th Queue (ft)	68	164	80	104	176	143	148	291	77	251	42
Link Distance (ft)		584	584		788			526		338	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	355			310		390	310		330		390
Storage Blk Time (%)								1			
Queuing Penalty (veh)								1			

Intersection: 6: New Albany Road E & Central College Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	120	156	142	133	140	127	152	51	218	229	97	73
Average Queue (ft)	56	80	56	54	77	50	71	19	147	167	41	30
95th Queue (ft)	104	131	113	104	123	97	119	46	215	228	80	63
Link Distance (ft)		1314	1314			685	685	194	194	194	194	
Upstream Blk Time (%)									1	3		
Queuing Penalty (veh)									4	8		
Storage Bay Dist (ft)	290			325	325							305
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 6: New Albany Road E & Central College Road

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	208	178	46
Average Queue (ft)	119	67	12
95th Queue (ft)	192	143	37
Link Distance (ft)	715	715	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			645
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Walton Parkway/EMH&T Driveway & New Albany Road E

Movement	EB	EB	EB	WB	WB	WB	B25	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	T	L	TR	L	TR
Maximum Queue (ft)	106	464	540	157	358	337	13	144	90	12	22
Average Queue (ft)	21	150	299	99	130	117	0	66	29	1	2
95th Queue (ft)	60	395	509	189	358	324	10	121	63	6	13
Link Distance (ft)		519	519		501	501	693		418		193
Upstream Blk Time (%)		0	2		1	0					
Queuing Penalty (veh)		0	0		4	0					
Storage Bay Dist (ft)	105			140				265		40	
Storage Blk Time (%)	0	2		39	0					0	0
Queuing Penalty (veh)	0	1		118	0					0	0

Intersection: 12: New Albany-Condit Road & Walton Parkway

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	65	198	92	233	145	450	179	343
Average Queue (ft)	9	108	23	122	108	182	62	154
95th Queue (ft)	40	177	66	212	170	406	127	279
Link Distance (ft)		1751		696		446		635
Upstream Blk Time (%)						4		
Queuing Penalty (veh)						0		
Storage Bay Dist (ft)	95		95		120		330	
Storage Blk Time (%)		19	0	18	20	5		0
Queuing Penalty (veh)		2	0	4	96	9		0

Intersection: 14: New Albany Road E & Site Access 1

Movement	WB	NB	NB	B25
Directions Served	R	T	T	T
Maximum Queue (ft)	35	67	95	6
Average Queue (ft)	9	3	9	0
95th Queue (ft)	32	27	48	5
Link Distance (ft)	550	693	693	501
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 16: Site Access 2/Discover Complex Access & Central College Road

Movement	EB	EB	WB	WB	WB	NB	SB	SB	SB
Directions Served	L	L	L	T	TR	LTR	L	TR	R
Maximum Queue (ft)	10	49	29	11	4	92	31	35	6
Average Queue (ft)	1	12	6	0	0	45	7	10	1
95th Queue (ft)	8	35	23	6	3	81	27	34	7
Link Distance (ft)				584	584	246		159	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	355	355	125				135		135
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 19: New Albany-Condit Road & Site Access 3/Site Access 4

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	L
Maximum Queue (ft)	92	35	44	30
Average Queue (ft)	39	13	14	4
95th Queue (ft)	72	37	38	19
Link Distance (ft)	549	363		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			200	225
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 21: New Albany-Condit Road & Site Access 5/Snider Loop

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	L	L
Maximum Queue (ft)	45	42	29	27	11
Average Queue (ft)	16	16	9	3	0
95th Queue (ft)	44	42	30	17	6
Link Distance (ft)	566	474	474		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				225	200
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 249

Intersection: 3: New Albany-Condit Road & Central College Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	TR	L	TR	L	T	R
Maximum Queue (ft)	66	285	102	82	184	151	334	744	91	258	55
Average Queue (ft)	28	148	33	33	81	54	129	362	37	127	20
95th Queue (ft)	58	251	75	66	148	114	332	697	71	210	48
Link Distance (ft)		584	584		788			1056		338	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	355			310		390	310		330		390
Storage Blk Time (%)		0					0	16			
Queuing Penalty (veh)		0					0	25			

Intersection: 6: New Albany Road E & Central College Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	110	121	98	162	177	135	152	80	160	169	87	111
Average Queue (ft)	47	58	42	76	98	62	69	28	85	93	39	49
95th Queue (ft)	91	105	82	135	147	108	128	64	143	148	73	90
Link Distance (ft)		1314	1314			690	690	934	934	934	934	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	290			325	325							305
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 6: New Albany Road E & Central College Road

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	258	204	74
Average Queue (ft)	148	104	25
95th Queue (ft)	226	185	53
Link Distance (ft)	715	715	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			645
Storage Blk Time (%)	0		
Queuing Penalty (veh)	0		

Intersection: 8: Walton Parkway/EMH&T Driveway & New Albany Road E

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	TR	L	TR
Maximum Queue (ft)	13	238	301	164	359	383	274	69	50	78
Average Queue (ft)	2	76	178	29	195	211	187	26	5	27
95th Queue (ft)	8	175	275	104	311	331	270	59	24	60
Link Distance (ft)		519	519		500	500		418		193
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	105			140			265		40	
Storage Blk Time (%)		1		0	18		0		0	3
Queuing Penalty (veh)		0		0	4		0		0	0

Intersection: 12: New Albany-Condit Road & Walton Parkway

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	119	272	120	271	144	277	193	241
Average Queue (ft)	46	113	42	112	48	134	82	112
95th Queue (ft)	100	214	96	196	106	241	157	211
Link Distance (ft)		1751		696		446		635
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	95		95		120		330	
Storage Blk Time (%)	1	16	1	14	0	8		
Queuing Penalty (veh)	4	9	1	7	0	6		

Intersection: 16: Central College Road & Discover Complex Access

Movement	EB	EB	SB	SB	SB
Directions Served	L	L	L	R	R
Maximum Queue (ft)	6	31	56	55	35
Average Queue (ft)	0	5	25	23	3
95th Queue (ft)	4	22	54	52	20
Link Distance (ft)				159	159
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	355	355	135		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 21: New Albany-Condit Road & Snider Loop

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	51	134
Average Queue (ft)	16	18
95th Queue (ft)	41	78
Link Distance (ft)	474	1056
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 56

Intersection: 3: New Albany-Condit Road & Central College Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	TR	L	TR	L	T	R
Maximum Queue (ft)	146	323	94	86	166	134	335	543	129	258	61
Average Queue (ft)	32	151	33	42	86	50	179	399	40	142	20
95th Queue (ft)	92	257	72	79	143	101	404	633	90	241	46
Link Distance (ft)		584	584		788			526		338	
Upstream Blk Time (%)								10		0	
Queuing Penalty (veh)								77		0	
Storage Bay Dist (ft)	355			310		390	310		330		390
Storage Blk Time (%)		0					0	29		0	
Queuing Penalty (veh)		0					2	45		0	

Intersection: 6: New Albany Road E & Central College Road

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	TR	L	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	94	137	113	155	168	126	138	84	148	167	104	104
Average Queue (ft)	41	65	41	73	95	58	65	30	81	94	43	50
95th Queue (ft)	77	113	88	131	150	102	114	64	128	149	86	87
Link Distance (ft)		1314	1314			685	685	194	194	194	194	
Upstream Blk Time (%)										0		
Queuing Penalty (veh)										0		
Storage Bay Dist (ft)	290			325	325							305
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 6: New Albany Road E & Central College Road

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	236	200	74
Average Queue (ft)	148	107	28
95th Queue (ft)	228	187	57
Link Distance (ft)	715	715	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			645
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Walton Parkway/EMH&T Driveway & New Albany Road E

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	TR	L	TR
Maximum Queue (ft)	13	276	363	164	305	319	269	122	29	73
Average Queue (ft)	1	89	189	29	197	214	187	23	3	24
95th Queue (ft)	8	202	311	102	292	308	274	78	16	59
Link Distance (ft)		519	519		501	501		418		193
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	105			140			265		40	
Storage Blk Time (%)		1			18		1		0	3
Queuing Penalty (veh)		0			4		0		0	0

Intersection: 12: New Albany-Condit Road & Walton Parkway

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	120	327	119	247	129	306	195	239
Average Queue (ft)	48	126	45	116	45	149	86	118
95th Queue (ft)	106	249	99	211	107	262	158	211
Link Distance (ft)		1751		696		446		635
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	95		95		120		330	
Storage Blk Time (%)	3	18	2	17	0	10		
Queuing Penalty (veh)	10	11	6	8	1	8		

Intersection: 14: New Albany Road E & Site Access 1

Movement	WB
Directions Served	R
Maximum Queue (ft)	35
Average Queue (ft)	6
95th Queue (ft)	26
Link Distance (ft)	550
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 16: Site Access 2/Discover Complex Access & Central College Road

Movement	EB	EB	WB	NB	SB	SB	SB
Directions Served	L	TR	L	LTR	L	TR	R
Maximum Queue (ft)	19	7	43	96	65	62	33
Average Queue (ft)	1	0	11	36	25	28	2
95th Queue (ft)	10	3	35	75	57	57	16
Link Distance (ft)		685		246		159	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	355		125		135		135
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 19: New Albany-Condit Road & Site Access 3/Site Access 4

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	255	43	155	305	39	4
Average Queue (ft)	102	13	28	101	8	0
95th Queue (ft)	315	39	117	362	30	3
Link Distance (ft)	549	363		457		526
Upstream Blk Time (%)	0			2		
Queuing Penalty (veh)	0			17		
Storage Bay Dist (ft)			200		225	
Storage Blk Time (%)			0	10		
Queuing Penalty (veh)			0	4		

Intersection: 21: New Albany-Condit Road & Site Access 5/Snider Loop

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	L	TR	L	TR	L
Maximum Queue (ft)	35	60	38	22	178	34
Average Queue (ft)	8	12	6	3	49	9
95th Queue (ft)	30	41	26	18	308	31
Link Distance (ft)	566	474	474		635	
Upstream Blk Time (%)					1	
Queuing Penalty (veh)					4	
Storage Bay Dist (ft)				225		200
Storage Blk Time (%)					5	
Queuing Penalty (veh)					0	

Network Summary

Network wide Queuing Penalty: 198

With Improvements

Queuing and Blocking Report

06/08/2021

Intersection: 3: New Albany-Condit Road & Central College Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	65	144	102	103	201	167	183	317	106	134	266	48
Average Queue (ft)	23	74	39	42	87	64	61	133	11	42	131	15
95th Queue (ft)	54	137	83	81	160	131	135	255	62	109	226	40
Link Distance (ft)		584	584		775			1057			338	
Upstream Blk Time (%)										0	0	
Queuing Penalty (veh)										0	0	
Storage Bay Dist (ft)	355			310		390	310		320	330		390
Storage Blk Time (%)								1		0	0	
Queuing Penalty (veh)								1		0	0	

Queuing and Blocking Report

06/08/2021

Intersection: 3: New Albany-Condit Road & Central College Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	92	191	103	119	207	165	170	295	112	90	276	53
Average Queue (ft)	32	90	37	51	105	74	60	142	15	40	135	17
95th Queue (ft)	70	159	80	95	172	145	123	253	66	78	228	44
Link Distance (ft)		584	584		775			526			338	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	355			310		390	310		320	330		390
Storage Blk Time (%)								0				
Queuing Penalty (veh)								1				

Queuing and Blocking Report

06/08/2021

Intersection: 3: New Albany-Condit Road & Central College Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	70	271	91	68	160	130	298	443	287	76	269	54
Average Queue (ft)	26	141	31	29	72	39	83	220	36	35	129	18
95th Queue (ft)	58	245	69	64	133	88	207	376	146	63	216	44
Link Distance (ft)		584	584		775			1057			338	
Upstream Blk Time (%)												0
Queuing Penalty (veh)												0
Storage Bay Dist (ft)	355			310		390	310		320	330		390
Storage Blk Time (%)							0	2	0		0	
Queuing Penalty (veh)							0	5	0		0	

Queuing and Blocking Report

06/08/2021

Intersection: 3: New Albany-Condit Road & Central College Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	88	288	95	104	168	133	254	402	190	77	236	60
Average Queue (ft)	33	157	32	37	82	41	77	211	44	35	130	23
95th Queue (ft)	67	258	69	75	143	94	195	370	162	67	214	50
Link Distance (ft)		584	584		775			526			338	
Upstream Blk Time (%)								0				
Queuing Penalty (veh)								2				
Storage Bay Dist (ft)	355			310		390	310		320	330		390
Storage Blk Time (%)		0						3	0			
Queuing Penalty (veh)		0						8	0			

Appendix H

Field Observation Notes

7:20-8:00 AM Observation

Snider Loop Obs

5/27/20
Leiana Yates

Rainy + Wet

Pedestrians: 1 kid on bike, 1 kid on bike on street, bike kid on road then sidewalk

Queue of Vehicles: None that backed up significantly to affect traffic

Wait time @ Snider: 12 sec, 2 sec, 10 sec, 6 sec, 13 sec (right), 15 sec, 4 sec, 2 sec ↑, 3 sec ↑, 21 sec, 8 sec, 30 sec, 2 sec, 27 sec

Sight distance bad, see pictures

Between 7:30 - 8:00, plenty of time for left turns, no queuing back to Snider, platoons seem to occur together definitely utilizing Snider as 2-lane

2:00-3:00 PM observation

Sunny

Pedestrians: kid on bike on sidewalk, kid bike sidewalk, 1 man on bike on sidewalk

Queue: longest queue had 5 vehicles

Wait time @ Snider: 3 sec, 3 sec (into), 10 sec, 20 sec, 5 sec, 7 sec,

UG: 1 which then immediately left (20 sec) looks like it wants to turn right into north of UG

2:30 fleet of boxes arrive

2:40 garbage truck goes through causing some slowdown

Of note: 2 uses of U turns into entryway of Snider.