Planning Commission
Regular Meeting
February 3, 2026, 6:00 PM
Council Chambers, La Plata Town Hall

Agenda

1. Call to Order

   1.1. Attendees, please use meeting courtesy. Virtual attendees are asked to mute microphones when joining the meeting. Participants may be muted by the Town Clerk and meetings will be recorded.

   In accordance with the Open Meetings Act, the public has the right to view/listen to the discussion only. At their discretion, the Planning Commission may allow participants to voice questions or provide comments on the topics under discussion. Written comments may be submitted via e-mail to Legislative@townoflaplata.org. Members of the public wishing to address the Planning Commission in person may sign up in advance via the town webpage or upon arrival at the Council Chamber.

   Join the meeting now
   Meeting ID: 228 255 787 294 15
   Passcode: t729yv36
   (Calendar Year 2026)

   1.2. Call to Order

2. Roll Call and Quorum Verification

3. Pledge of Allegiance

4. Ex Parte Disclosure

5. Approval of Meeting Agenda

6. Approval of Minutes

   6.1. Approval of minutes from meeting on January 6, 2026.

7. Planning Commission Elections

7.1. Election of Planning Commission Chair and Vice Chair

8. Public Hearing - Continued from January 06, 2026

8.1. Zoning Text Amendment (ZTA) 01-2026 – Adequate Public Facilities
Applicant: Town of La Plata, Maryland
Owner: N/A
Project Location: Town-wide
Request: To add Article X (Adequate Public Facilities Requirements) to Chapter 191 (Zoning) of the La Plata Municipal Code for the purpose of providing regulatory provisions to require adequate water, sewage, roads, and school seating capacity for new development in the Town of La Plata. Zoning Text Amendment (ZTA) 01-2026 also proposes to amend Chapter 173 (Subdivision and Land Development) in Article IX (School Seat Allocation Policy) of the La Plata Municipal Code pertaining to regulations for adequate school seating capacity for new development.

8.2. Review of Purpose and Procedures for Public Hearing (Town Clerk)

8.3. Call to Order (Presiding Officer/ Chair)

8.4. Presentation by Staff

8.5. Planning Commission Questions and Comments

8.6. Public Comment

- Speakers (signed up) are called on by the presiding officer.
- Those wishing to provide in-person testimony may sign up in advance no later than 3:00 PM on the day of the public hearing via the town webpage, or upon arrival at the Council Chambers via sign-up sheet.
- Speakers who register in advance will be recognized prior to speakers who register upon arrival at the public hearing.
- In-person registration to speak will end when the relevant public hearing is opened.
- At the discretion of the presiding officer, time may be limited to 3 minutes and may not be yielded.

8.7. Applicant Rebuttal

8.8. Planning Commission Discussion

8.9. Applicant Closing Statements

8.10. Closing of Public Hearing

When the hearing is concluded, the Board will not hear further comments or questions during the meeting.

9. Matters of Review and Approval

9.1. Major Site Plan (MJSP) 0656-2023 La Plata Library
Applicant: Charles County Government
Owner: Town of La Plata, Maryland
Project Location: 208 Washington Avenue, La Plata, Maryland
Request: Charles County Government is requesting to construct a new 27,799 square foot two-story county library facility.

10. Public Comment

11. Matters of Information

11.1. Staff Report

11.2. Town Council Report

12. Adjourn

12.1. Adjournment

TOWN OF LA PLATA
Planning Commission Minutes
January 6, 2026, 6:00 PM
Regular Meeting
Council Chambers, La Plata Town Hall

PRESENT:	Councilman Paul Guttenberg Kyle Miller Emily Whale
ABSENT:	Chair Dawn Banks Vice Chair Jill Hudnell
TOWN STAFF:	Chuck Stevens, Town Manager Don Dooley, Director of Planning Kelly Phipps, Director of Legislative Services Shelby E. Pritchett, Town Clerk
GUESTS:	Mayor Jeannine James (virtual) Councilman Gregory Sampson, Jr. Councilman Tyjon Johnson

1. Call to Order

1.1. Attendees, please use meeting courtesy. Virtual attendees are asked to mute microphones when joining the meeting. Participants may be muted by the Town Clerk and meetings will be recorded.

In accordance with the Open Meetings Act, the public has the right to view/listen to the discussion only. At their discretion, the Planning Commission may allow participants to voice questions or provide comments on the topics under discussion. Written comments may be submitted via e-mail to Legislative@townoflaplata.org. Members of the public wishing to address the Planning Commission in person may sign up in advance via the town webpage or upon arrival at the Council Chamber.

Join the meeting now
Meeting ID: 228 255 787 294 15
Passcode: t729yv36
(Calendar Year 2026)

In the absence of Chair Banks and Vice Chair Hudnell, Councilman Paul Guttenberg announced for this meeting that he would assume the role of Chair for the meeting in accordance with La Plata Planning Commission Rules of Procedure.

1.2. Call to Order

Chair Guttenberg called the meeting to order at 6:00 PM.

2. Roll Call and Quorum Verification

The Town Clerk conducted Roll Call. Chair Banks, Vice Chair Hudnell were absent. The Planning Commission achieved a quorum with three of the five voting members present.

3. Pledge of Allegiance

Chair Guttenberg led all assembled in the Pledge of Allegiance.

4. Ex Parte Disclosure

Chair Guttenberg called for Commission members to make applicable ex parte disclosures. All Planning Commission members stated that they did not have any ex parte disclosures.

5. Approval of Meeting Agenda

Commissioner Whale moved to approve the meeting agenda.
Moved By: Emily Whale, seconded by Kyle Miller.

Passed Unanimously

6. Approval of Minutes

6.1. Approval of minutes from meeting on November 4, 2025.

Commissioner Whale moved to approve the minutes from the meeting on November 4, 2025.
Moved By: Emily Whale, seconded by Kyle Miller.

Passed Unanimously

7. Planning Commission Elections

7.1. Election of Planning Commission Chair and Vice Chair

Commissioner Whale moved to table the Planning Commission Elections until the February 3, 2026, regular meeting.
Moved By: Emily Whale, seconded by Kyle Miller.

Passed Unanimously

8. Matters of Review and Approval

8.1. Major Site Plan (MJSP) 0656-2023 La Plata Library
Applicant: Charles County Government
Owner: Town of La Plata, Maryland
Project Location: 208 Washington Avenue, La Plata, Maryland
Request: Charles County Government is requesting to construct a new 27,799 square foot two-story county library facility.

Commissioner Miller moved to table the review and approval of the Major Site Plan (MJSP) 0656-2023 La Plata Library project until the February 3, 2026, meeting.
Moved By: Kyle Miller, seconded by Emily Whale.

Passed Unanimously

9. Public Hearing

9.1. Zoning Text Amendment (ZTA) 01-2026 – Adequate Public Facilities
Applicant: Town of La Plata, Maryland
Owner: N/A
Project Location: Town-wide
Request: To add Article X (Adequate Public Facilities Requirements) to Chapter 191 (Zoning) of the La Plata Municipal Code for the purpose of providing regulatory provisions to require adequate water, sewage, roads, and school seating capacity for new development in the Town of La Plata. Zoning Text Amendment (ZTA) 01-2026 also proposes to amend Chapter 173 (Subdivision and Land Development) in Article IX (School Seat Allocation Policy) of the La Plata Municipal Code pertaining to regulations for adequate school seating capacity for new development.

Chair Guttenberg read verbatim the request section for the Zoning Text Amendment (ZTA) 01-2026- Adequate Public Facilities prior to the start of the Public Hearing.

9.2. Review of Purpose and Procedures for Public Hearing (Town Clerk)

The Town Clerk read the Public Hearing Purpose and Procedures verbatim.

9.3. Call to Order (Presiding Officer/ Chair)

Chair Guttenberg called the public hearing to order at 6:09 PM.

9.4. Review of Public Notices (Town Clerk)

The Town Clerk advised the Planning Commission that the public hearing was advertised in the Southern Maryland newspaper on December 19 and 26, 2025. Certificates of Publication were attached to the published meeting agenda packet, and a public hearing notice was posted on the public portal of the town's meeting management platform.

9.5. Review of Sign-In Sheets (Town Clerk)

Director Phipps provided Chair Guttenberg with the sign-up sheet for public comment. There were two requestors to make public comment.

9.6. Presentation by Staff

Director Dooley gave a presentation on Zoning Text Amendment (ZTA) 01-2026 to add Article X (Adequate Public Facilities Requirements) to Chapter 191 of the La Plata Municipal Code and to amend Chapter 173 in Article IX.

9.7. Planning Commission Questions and Comments

Director Dooley and the Town Manager addressed questions from the commission on each item included in the Zoning Text Amendment.

9.8. Public Comment

- Speakers (signed up) are called on by the presiding officer.
- Those wishing to provide in-person testimony may sign up in advance no later than 3:00 PM on the day of the public hearing via the town webpage, or upon arrival at the Council Chambers via sign-up sheet.
- Speakers who register in advance will be recognized prior to speakers who register upon arrival at the public hearing.
- In-person registration to speak will end when the relevant public hearing is opened.
- At the discretion of the presiding officer, time may be limited to 3 minutes and may not be yielded.

Danielle Conrow, Chapter Chair for the Charles County Chapter of the Maryland Builders Industry Association, and Rick Barnas, President of Barnas Engineering, individually gave public comment on the Zoning Text Amendment (ZTA) 01-2026. The Town Clerk advised Chair Guttenberg that no written statements were received. Director Phipps advised Chair Guttenberg that public comment was administered out of order and occurred immediately before the start of section 9.6, Presentation by Staff, on the agenda.

9.9. Applicant Rebuttal

No rebuttal was given.

9.10. Planning Commission Discussion

The Planning Commission held no further discussion.

9.11. Applicant Closing Statements

The applicant (Town of La Plata Staff) had no further statements for closing.

9.12. Closing of Public Hearing

When the hearing is concluded, the Board will not hear further comments or questions during the meeting.

Commissioner Miller moved to hold the public record open until the next Planning Commission meeting on February 3, 2026.
Moved By: Kyle Miller, seconded by Emily Whale.

Passed Unanimously

10. Public Comment

No further public comment.

11. Matters of Information

11.1. Staff Report

Director Dooley stated nothing further to report.

11.2. Town Council Report

Chair Guttenberg stated there was no Council report.

12. Adjourn

12.1. Adjournment

Chair Guttenberg adjourned the meeting at 8:06 PM.

Submitted by:

_____

Shelby Pritchett, Town Clerk

TOWN OF LA PLATA
305 Queen Anne Street
Post Office Box 2268
La Plata, Maryland 20646

PLANNING COMMISSION STAFF REPORT

DATE: February 3, 2026

TO: Honorable Chair and Members of the Planning Commission

FROM: Don Dooley, Planning Director

PREPARED BY: Don Dooley, Planning Director

APPLICATON NO.: **Zoning Text Amendment (ZTA) 01-2026 – Adequate Public Facilities**

APPLICANT: Town of La Plata, Maryland

OWNER: N/A

PROJECT LOCATION: Town-wide

REQUEST: To add Article X (Adequate Public Facilities Requirements) to Chapter 191 (Zoning) of the La Plata Municipal Code for the purpose of providing regulatory provisions to require adequate water, sewage, roads, and school seating capacity for new development in the Town of La Plata. Zoning Text Amendment (ZTA) 01-2026 also proposes to amend Chapter 173 (Subdivision and Land Development) in Article IX (School Seat Allocation Policy) of the La Plata Municipal Code pertaining to regulations for adequate school seating capacity for new development.

BACKGROUND

The La Plata Town Council expressed interest in creating requirements for new development to ensure adequate public infrastructure and services are in place to support new construction in Town so as not to dimmish the quality of life for residents, businesses and visitors to La Plata. The Council is particularly interested in developing and retaining minimum public infrastructure standards pertaining to roads, water, sewage and school seating capacity. This will ensure new development does not impact minimum infrastructure thresholds set by the Town. These goals are not uncommon in other communities throughout Maryland which have adopted their own adequate public facilities ordinance (“APFO”) under one, cohesive, code or as a series of separate codes. By doing so, communities are creating a regulatory tool that promotes smart growth management so new development does not outpace a community’s ability to support it.

While such ordinances may slow or defer some development, adequate public facility ordinances are not, inherently, designed to discourage new development, only manage it. This is critical for growing communities, like La Plata, that are experiencing a significant influx of new development.

Based on Council direction, staff is proposing, under Zoning Text Amendment (ZTA) 01-2026, the addition of Article X (Adequate Public Facilities Requirements) to Chapter 191 (Zoning) of the La Plata Municipal Code for the purpose of providing regulatory provisions to require adequate water, sewage, roads, and school seating capacity for new development in La Plata. Zoning Text Amendment (ZTA) 01-2026 also proposes to amend Chapter 173 (Subdivision and Land Development) in Article IX (School Seat Allocation Policy) of the La Plata Municipal Code pertaining to regulations for adequate school seating capacity for new development.

As discussed above, Zoning Text Amendment (ZTA) 01-2026 does not propose to codify minimum infrastructure standards for roads, water, sewage and school seating capacity under a single ordinance. This is because school seating capacity is already addressed in Chapter 173 (Subdivision and Land Development) of the La Plata Zoning Code. Therefore, Zoning Text Amendment (ZTA) 01-2026 would, in part, modify this ordinance in conjunction with the development of a separate (new) ordinance to combine the topics of roads, water, and sewage capacity under a single ordinance through the proposed addition of Article X (Adequate Public Facilities Requirements) to Chapter 191 (Zoning) of the La Plata Municipal Code. Article X also proposes to cross-reference school seating capacity under Chapter 173.

For technical accuracy and clarity, it is worth noting that references to Zoning Text Amendment 01-2026 as the Town's "Adequate Public Facilities Ordinance (APFO)" is not accurate. It is really two separate ordinances (one existing and one proposed) under the administrative processing umbrella of Zoning Text Amendment (ZTA) 01-2026.

DISCUSSION

Planning Commission Meeting of January 6, 2026

At the Planning Commission Meeting of January 6, 2026, Zoning Text Amendment (ZTA) 01-2026 was introduced to the Planning Commission and the public hearing on the matter was opened for public comment.

During the meeting, the Commission asked several, clarifying, questions concerning the proposed text changes to Chapter 173 (Subdivision and Land Development) for school seating capacity in conjunction with the proposed additions to Chapter 191 (Zoning) of the La Plata Municipal Code concerning roads, water and sewage capacity under proposed Article X. Although no Commission changes to the draft language in ZTA 01-2026 were directed to be made during the meeting, the Commission did discuss the following, potential, changes to ZTA 01-2026:

- Incorporate language requiring the Town to specify the formula to be used to identify

how 80% water and sewage capacity for the Town is calculated to enable the development community to have awareness for planning future development in La Plata;
- The Town should incorporate reporting requirements in proposed Article X in which water and sewage capacity updates are provided to the community every six months. By doing so, it will provide an accurate and reliable number for developers to use when evaluating the impact of their development on the community under an Adequate Public Facilities Study (APFS).
- Align the expiration date for allocated water, sewage, and school seating capacity for internal consistency within the Town's Municipal Code for new development.
- Develop a single APFO fee to cover the evaluations for road, water, sewage and school seating capacity under an Adequate Public Facilities Study (APFS).
- Consider revising ZTA 01-2026 to encourage creative mitigation measures within the design of a new development to lessen potential impacts to water, sewage and roads.

Public Comments

There were two speakers who addressed the Planning Commission during the public hearing on January 6, 2026, with the following comments on ZTA 01-2026:

- There should be provisions to "grandfather" in projects that have already been submitted to the Town for approval without being required to following the requirements within proposed ZTA 01-2026. [Staff response: This comment has already been incorporated within proposed Section 191.92 (Water, sewage and school capacity allocations)]
- There should be provisions to permit exceptions to the proposed Level of Service (LOS) "C" for street intersections when existing road capacity already exceeds LOS C and there are no feasible mitigation measures to improve road capacity to LOS C that can be accomplished by a single development.
- The Town should align with the County concerning school seating capacity provisions and regulations. [Staff response: This comment is consistent with the draft revisions for school seating capacity allocation within Chapter 173].
- The public should have additional opportunity to review and address the Commission on ZTA 01-2026. [Staff response: The public hearing for ZTA 01-2026 was continued to February 3, 2026].

As both the Commission and the public wanted additional time to review the proposed text for ZTA 01-2026, the public hearing on this item was continued to the next regularly scheduled Planning Commission Meeting of February 3, 2026.

Town Council Meeting of January 13, 2026

During the Town Council Meeting of January 13, 2026, the Council wanted the opportunity to discuss the draft APFO with staff to better under the proposed ordinance modifications and provide its initial feedback prior to the Planning Commission making its recommendations to the Town Council. During the meeting, the Council expressed its general support for the tenor of the proposed text within ZTA 01-2026. The Council

seemed particularly interested in having proposed Article X (in Chapter 191) require the Town to regularly report on existing water and sewage capacity allocations and the remaining allocations available for new development.

Although this was not a Town Council public hearing on ZTA 01-2026, the Council will conduct its own, de novo, public hearing on ZTA 01-2026 once the Planning Commission makes its formal recommendation(s) to the Town Council.

Public Feedback

Subsequent to the Planning Commission meeting of January 6, 2026, staff met with the local building/development community, local attorneys, and traffic engineers to obtain their feedback on the draft Adequate Public Facility Ordinances within ZTA 01-2026. Their comments have been provided in Attachment No. 6 for the Commission's consideration.

The new Town Attorney for La Plata will also provide feedback on the proposed ordinance changes within ZTA 01-2026 for the Commission's future consideration.

The community feedback received by staff on ZTA 01-2026 is essential, so new and proposed text changes consider multiple perspectives to ensure well-crafted ordinance language to achieve effective APFO implementation goals.

Draft Public Facilities Standards

Since no changes were directed to be made to the ordinances within ZTA 01-2026 at this time and because staff has written a comprehensive evaluation/explanation for the proposed (draft) adequate public facilities standards pertaining to roads, water, sewage, and public-school seating capacity (under Attachment No. 1), no additional comments are provided within this staff report. However, based on anticipated Planning Commission direction, staff will revise the text within ZTA 01-2026 for the Commission's review at its regularly scheduled meeting of March 3, 2026.

RECOMMENDATION

Staff recommends the Planning Commission provide feedback on Zoning Text Amendment (ZTA) 01-2026 and continue the public hearing for the project to the next regularly scheduled Planning Commission Meeting of March 3, 2026, to facilitate additional public feedback.

ATTACHMENT(S)

1) Agenda Item Summary Document
2) Draft Text Amendment Chapter 173 (Article IX. - School Seat Allocation Policy)
3) Draft Text Amendments to Chapter 191 (New Article X. - Adequate Public Facilities Requirements)
4) Planning Commission Comments from: 1) Chair Banks, 2) Commissioner Miller, 3) Council member Guttenberg, 4) Vice-Chair Hudnell, 5) Commissioner Whale
5) Planning Commission Staff Report for January 6, 2026.

6) Written Public Comments on ZTA 01-2026
7) Power Point Presentation to Planning Commission on January 6, 2026.

-End of Report-

FOR LEGISLATIVE USE ONLY

Item Number: Agenda Item #

Date of Meeting: Jan 06, 2026

Agenda Item Summary

MEETING GROUP:	Planning Commission
STAFF RESOURCE:	Chuck Stevens, Town Manager
DEPARTMENT:	Executive
TYPE:	Informational
SUBJECT:	Proposed Amendments to Chapter 191 and Chapter 173

BACKGROUND:

The Town of La Plata is a designated growth area within Charles County and represents approximately six percent (6%) of the population in the County's growth area. Residential growth in the Town has accelerated significantly in recent years, placing increased demand on public infrastructure, particularly the Charles County public school system.

The Town has no role in planning, approving, or funding new public schools—this responsibility rests with the Charles County Board of Education and County Commissioners. However, the Town does have regulatory authority over the rate of residential development through an Adequate Public Facilities Ordinance (APFO) and its School Seat Allocation Policy.

The current School Seat Allocation Policy (Chapter 173) guarantees a minimum of 100 school seat allocations annually and allows the Chief Executive Officer to establish 'particularized student generation rates' through Town-specific surveys. Staff have identified several concerns with the current system:

1. The guaranteed minimum of 100 allocations per year does not account for actual school capacity constraints
2. Discrepancies exist between Town-calculated student generation rates and County-published Student Yield Factors
3. The process for incorporating capacity from Capital Improvement Program (CIP) school construction projects is undefined
4. No separate process exists for Major Development Projects (100+ units) that have long-term impacts on school enrollment
5. The policy lacks transparency in how allocations are calculated

Staff have worked extensively with the Charles County Board of Education and Charles County Planning & Growth Department to develop proposed code language and amendments that address these concerns while aligning with the Charles County methodology and maintaining coordination on school capacity planning.

Key stakeholders: Town Council, Planning Commission, Charles County Board of Education, Charles County Public Schools, Charles County Planning & Growth Management, residential developers, existing property owners, and Town residents.

FISCAL IMPACT:

These amendments have no direct fiscal impact on the Town's budget. The proposed changes affect development review processes and do not require additional staffing, equipment, or operational expenses.

Indirect fiscal considerations:

Revenue Impact: The capacity-based allocation system may result in fewer residential building permits issued during periods when schools are at or near capacity. This could temporarily reduce revenues from permit fees, impact fees, and future property taxes. However, this impact would be offset when school capacity is restored through new construction.

Long-term Financial Sustainability: The amendments support the Town's long-term fiscal sustainability by ensuring that residential growth aligns with infrastructure capacity, avoiding the potential costs associated with overcrowded schools and stressed public facilities.

Administrative Efficiency: Using standardized County Student Yield Factors eliminates the need for Town staff to conduct biennial surveys, reducing staff time spent on data collection and analysis.

STRATEGIC PLAN ALIGNMENT:

These amendments directly support multiple goals in the Town's 2022 Strategic Plan:

Goal #1 - Good Governance

"We will serve as responsible stewards of community trust in making decisions to maximize public service value to our residents."

The amendments ensure fair and transparent decision-making processes by replacing subjective determinations with clear mathematical formulas using publicly available data. This enhances accountability and builds community trust.

Goal #2 - Operational Excellence

"Retain professional staff with the appropriate education, facilities, equipment, tools, and technology to efficiently provide quality work with a sense of pride."

By adopting standardized County data and clear formulas, staff can process applications more efficiently and with greater confidence. The policy reduces disputes over subjective rate determinations and streamlines coordination with County agencies.

Goal #3 - Economic Prosperity

"Develop an economic base in La Plata that offers desirable careers and supports high standards of living for residents now and into the future."

Quality schools are essential to attracting and retaining residents and businesses. These amendments protect school capacity while providing clear rules for developers, supporting sustainable economic growth.

Goal #5 - Public Service Readiness

"Plan and develop the systems and infrastructure needed to meet growing demand, while supporting the health, safety, and wellness of residents and natural resources."

The amendments directly address infrastructure planning by ensuring residential development aligns with school capacity. The provisions for counting CIP projects and requiring Development Agreements for Major Development Projects enable better long-term infrastructure planning.

Additional Plan Alignments:

Comprehensive Plan: Supports managed growth policies and coordination with Charles County for provision of adequate public facilities

- Capital Improvement Plan: Creates a mechanism for incorporating planned school construction into development allocation decisions

SUSTAINABILITY CONSIDERATIONS:

These amendments support community sustainability across social, economic, and environmental dimensions:

Social Sustainability:

- Protecting school capacity ensures quality education for current and future residents
- Prevents overcrowding that can negatively impact student learning outcomes
- Promotes equity by ensuring all students have access to adequate school facilities

Economic Sustainability:

- Supports long-term property values by maintaining quality school capacity
- Provides clear, predictable rules for development community
- Enables better coordination of school construction with residential development timing

Environmental Sustainability:

- Manages growth rate to align with infrastructure capacity, reducing sprawl pressure
- Supports compact, walkable development patterns by coordinating residential growth with existing school locations

ADA CONSIDERATIONS:

These are policy amendments that establish administrative procedures and do not involve physical facilities, programs, or services that would trigger ADA compliance requirements. All Town meetings where these amendments are discussed will be held in ADA-accessible facilities with accommodations available upon request in accordance with Town policy.

RECOMMENDED ACTION:

Staff recommend that the Planning Commission review the proposed code language within Chapter 191 (Adequate Public Facilities Ordinance) and amendments to Chapter 173 (School Seat Allocation Policy) and provide feedback, comments, and recommendations to the Town Council.

ATTACHMENTS

1. Proposed Chapter 191 (APFO)

2. Redline Version of Proposed Chapter 173 (School Seat Allocation Policy) Amendments

EXTENDED STAFF REPORT

Proposed Chapter 191 (APFO) and Chapter 173 (School Seat Allocation Policy) Amendments

EXECUTIVE SUMMARY

This extended report provides a comprehensive overview of two related but distinct sections of the Town Code that work together to manage growth and ensure adequate public infrastructure:

- Chapter 191 - Adequate Public Facilities Ordinance Requirements (APFO): Ensures that new development does not overwhelm the Town's infrastructure for water, sewer, roads, and schools.
- Chapter 173 - School Seat Allocation Policy: Specifically manages the rate of residential development to align with available school capacity.

Key Changes Being Proposed

- Elimination of the guaranteed minimum of 100 school seat allocations per year
- Introduction of a capacity-based system that can deny allocations when schools are overcrowded
- Use of standardized County student generation rates instead of Town-specific surveys
- Creation of a 6% proportional cap on annual allocations
- New requirements for large subdivision projects (100+ units)

PART 1: CHAPTER 191 - ADEQUATE PUBLIC FACILITIES ORDINANCE (APFO)

What is the APFO?

The APFO is the Town's primary tool for ensuring that new development pays its fair share and doesn't negatively impact existing residents' quality of life. Think of it as a quality control checkpoint that every major development must pass before approval.

How Does It Work?

When a developer wants to build a new subdivision or commercial project, they must prove that:

- The Town's water and sewer systems can handle the additional demand
- Roads can accommodate the additional traffic
- Schools have adequate capacity for new students

If any of these systems were to be overwhelmed, the developer must either scale back the project or fund improvements to bring the systems up to standard.

Section-by-Section Explanation

Code Section	Plain English Explanation and Staff Intent
§ 191.86 Purpose	What It Means: This section explains why the APFO exists. Plain English: New development should not make things worse for people who already live here. If a new subdivision will overwhelm our water system, clog our roads, or overcrowd our schools, the developer must fix those problems before building.
§ 191.87 Adequate Public Facilities Required	What It Means: This is the basic rule: you can't get approval for a major development unless you prove the infrastructure can handle it. Plain English: Before the Planning Commission can approve a preliminary plat or site plan, the developer must demonstrate that adequate water, sewer, roads, and school capacity exist. Exemptions: Small projects (minor subdivisions, small site plans, and non-residential buildings under 1,200 square feet) don't have to go through this process unless the Planning Director determines there's a special concern.
§ 191.88 Roads	What It Means: New development cannot make traffic worse than a Level of Service (LOS) 'C' standard. Plain English: Think of Level of Service as a report card for traffic flow: LOS A = Excellent (free-flowing), LOS B = Good, LOS C = Acceptable (this is our minimum standard), LOS D = Poor, LOS E = Very poor, LOS F = Failing (gridlock).

Code Section	Plain English Explanation and Staff Intent
	Key Requirements: Minimum LOS for all Town roads is 'C'. If a road already operates below LOS 'C', it's considered inadequate. Developers must either improve roads to meet the standard or scale back their project. Exemption: Projects generating fewer than 35 peak-hour vehicle trips per day.
§ 191.89 Schools	What It Means: This section simply refers you to Chapter 173 for school requirements. Plain English: School capacity is so important and complex that it has its own entire chapter of regulations (see Part 2 of this report).
§ 191.90 Sewage System	What It Means: The Town's wastewater treatment plant must have sufficient capacity to handle new development. Plain English: The standard is clear: The treatment plant cannot operate above 80% of its maximum permitted capacity due to new development. If the plant is at 750,000 gallons/day and permitted for 1 million gallons/day, a new development can only add 50,000 gallons/day (to reach the 80% threshold of 800,000).
§ 191.91 Water Supply System	What It Means: The Town's water supply must be sufficient to serve new development. Plain English: Just like the sewer system, the water system has an 80% rule: The Town cannot exceed 80% of its maximum permitted

Code Section	Plain English Explanation and Staff Intent
	water authorization from the State of Maryland due to new development. Same calculation applies as sewage.
§ 191.92 Water, Sewage, and School Capacity Allocations	What It Means: This section explains how long an approved project's allocation is valid. For New Approvals: Water and sewer allocations are guaranteed for 3 years. You must get a building permit and start construction within those 3 years or your allocation expires. For Old Approvals: Projects with preliminary approval before this ordinance get priority. Town distributes allocations starting with oldest approvals first. These also have 3 years to use allocations once granted.
§ 191.93 Adequate Public Facilities Study	What It Means: Developers must hire qualified professionals to prepare a detailed study proving that adequate infrastructure exists. Plain English: You can't just promise that your development won't overwhelm our systems—you have to prove it with a professional study that includes: background information, impact analysis (trips, students, water/sewer needs), infrastructure assessment, road details, and a mitigation plan if impacts are anticipated.
§ 191.94 Mitigation	What It Means: If infrastructure is inadequate, the developer must fix it or the project gets denied.

Code Section	Plain English Explanation and Staff Intent
	Plain English: The Planning Commission has two options: (1) Deny the project, OR (2) Require mitigation—make the developer fix the problem through a legally binding agreement that includes funding improvements, building new facilities, phasing the project over time, or any combination. The agreement must be approved by the Town Attorney, recorded with the County Clerk, and secured by bonding.
§ 191.95 Bonding or Surety	What It Means: Developers must put up money (a bond) to guarantee they'll complete required improvements. Plain English: Talk is cheap. If a developer promises to widen a road or upgrade a water main, they must put up a cash bond first. If they fail to complete the work, the Town takes the bond money and does the work itself.
§ 191.96 Standards, Criteria and Procedures	What It Means: This section provides additional guidance and references. Plain English: The Town can reference the Charles County APF Manual as needed for consistency. The Planning Commission can recommend updates which the Town Council must approve. The Town is the sole provider of water/sewer; developers must fund, construct, bond, and dedicate all new facilities to the Town as determined by the Director of Public Works.

PART 2: CHAPTER 173 - SCHOOL SEAT ALLOCATION POLICY

What is the School Seat Allocation Policy?

This policy specifically manages how many new homes can be built each year based on available school capacity. Unlike the APFO (which covers all infrastructure), this chapter focuses exclusively on schools.

Why Do We Need This?

The Core Problem:

- The Town is growing rapidly
- The County Board of Education and County Commissioners plan and fund schools—not the Town
- School construction can't keep up with residential growth
- Result: Potential for overcrowded schools

What This Policy Does: Since the Town can't build schools, it controls the one thing it CAN control: the rate of residential development. This gives the school system time to catch up.

Important to Understand: The Town has no role in planning, approving, or funding schools. That's entirely up to the Charles County Board of Education and County Commissioners (with State funding). The Town's only tool is to manage residential growth when schools are overcrowded.

Section-by-Section Explanation of Major Changes

The following table summarizes the key provisions of Chapter 173 and highlights where changes are proposed:

Code Section	Current/New Language	Intended Accomplishment
§ 173-93 Allocatable School Capacity (Definition)	NEW LANGUAGE: If any school level (Elementary, Middle, High) has zero or negative capacity, the Allocatable School Capacity = ZERO. ALSO: Allocation is the lesser of (a) local aggregate capacity OR (b) 6% of County-wide capacity excess.	Clarifies what happens when schools are overcrowded and establishes the 6% proportional cap to ensure La Plata doesn't use more than its fair share of County capacity.
§ 173-94 Student Generation Rates	~~OLD: CEO conducts Town-specific surveys and determines 'particularized' rates for each project.~~ NEW: Town must use standardized County Student Yield Factors published by County Commissioners and Board of Education. No more custom rates.	Eliminates discrepancies between Town and County rates. Ensures consistency, simplicity, and eliminates disputes over custom rates. Reduces staff time on surveys.
§ 173-95A Annual Allocation Determination	~~OLD: Minimum 100 seats guaranteed annually. Based on overall County capacity.~~ NEW: No minimum. Capacity = lowest aggregate among Elementary, Middle, High schools serving La Plata. Uses 110% formula. Can incorporate CIP	Major shift to capacity-based system. Transparent formula everyone can calculate. Aligns with County methodology. Prevents allocations when capacity doesn't exist. Proportional cap ensures fairness.

Code Section	Current/New Language	Intended Accomplishment
	projects within 18 months. Capped at 6% of County total.	
§ 173-102 Major Development Projects (NEW SECTION)	ENTIRELY NEW: Large projects (100+ units) must enter into a Development Agreement with Town, County, and with CCPS consultation. Must include Build-Out Schedule. Exempt from normal allocation process if in compliance.	Creates formal process for large subdivisions with long-term impacts. Enables school system to plan for phased development. Provides certainty for developers while protecting capacity.

How the New Allocation Formula Works

The proposed amendments replace the subjective, minimum-guarantee system with a transparent, capacity-based formula. Here's how it works step-by-step:

Step 1: Identify Catchment Schools

Each year, the Town Council (with CCPS) identifies which elementary, middle, and high schools serve La Plata's attendance zones.

Step 2: Get Annual Capacity Data from BOE

The County Board of Education publishes annual enrollment and capacity data for every school. This becomes our data source.

Step 3: Calculate Individual School Capacity

For each school: Available Capacity = (State Rated Capacity × 1.10) - Current Enrollment

Example: La Plata High has a State-Rated Capacity of 1,200. 110% = 1,320. Current enrollment = 1,250. Available capacity = 70 seats.

Step 4: Calculate Aggregate Capacity by Level

Add up all capacity at each level:

High Schools: La Plata HS (70) + McDonough HS (150) = 220 seats

Middle Schools: Somers MS (100) + Piccowaxen MS (200) = 300 seats

Elementary Schools: Craik (50) + Matula (80) + Mitchell (60) + Thornton (100) = 290 seats

Step 5: Use the Lowest Aggregate

The lowest of the three levels becomes the base allocation. In this example, High Schools at 220 seats is the limiting factor.

Step 6: Apply the 6% Cap

Calculate 6% of County-wide Total Net Capacity Excess. If County-wide excess = 4,280 seats, then 6% = 257 seats.

Compare: Local aggregate (220) vs. 6% cap (257). Use the lower number. Final allocation = 220 seats.

Critical Rule: If ANY level (Elementary, Middle, OR High) has negative capacity, the allocation is ZERO—even if other levels have capacity.

IMPLICATIONS OF THE PROPOSED CHANGES

What These Changes Mean for Different Stakeholders

For Developers:

More Predictable: Clear mathematical formulas, no subjective determinations, published data everyone can see.

More Restrictive: No guaranteed minimum 100 seats. Can be zero if schools are overcrowded. 6% cap limits total allocations.

New Opportunity: Large projects (100+ homes) can get Development Agreements providing certainty and streamlined process.

For Existing Lot Owners:

More Fair: Same Student Yield Factors for everyone. No developer gets better rates than others.

Still Protected: Still get 20% minimum of annual allocation. Safety valve: 6-year wait cap.

For the School System:

Better Coordination: Town uses same data as County. Consultation required for large projects. Can plan for CIP projects 18 months in advance.

More Realistic: Allocations actually match capacity. No arbitrary minimums.

For the Community:

Better Protection: Schools won't be overcrowded due to unlimited allocations. Growth tied to actual capacity.

More Transparency: Anyone can calculate allocations using public data. Less discretionary decision-making.

Potential Concerns and Staff Responses

CONCERN: "This will stop all development."

RESPONSE: Only if schools are genuinely overcrowded. Current FY2025 data shows 218 seats available (High Schools are the limiting factor), with a 6% cap of 257 seats. Result: 218 seats available—more than double the old guaranteed minimum of 100.

CONCERN: "What if capacity drops to zero?"

RESPONSE:

1. This would signal a genuine crisis requiring County action
2. Better to acknowledge reality than pretend capacity exists
3. Projects could still pursue County special allocations
4. Would force County to prioritize school construction
5. Protects students from overcrowding

CONCERN: "The 6% cap is arbitrary."

RESPONSE:

1. Based on La Plata's proportion of County's growth area population
2. Prevents La Plata from using disproportionate share of County capacity
3. In practice, local school capacity will usually be the limiting factor, not the cap
4. Ensures regional fairness

CONCERN: "This is too complicated."

RESPONSE: The formulas are actually simpler than the old discretionary system. Old way: CEO determines particularized rates (black box). New way: Look up published Student Yield Factors and capacity data (transparent).

STAFF RECOMMENDATIONS

Staff Recommends Approval with Discussion

Staff believe these amendments represent a significant improvement over the current system for the following reasons:

- Transparency and Objectivity: Replaces subjective determinations with clear mathematical formulas using publicly available data
- Coordination with County: Aligns with County methodology and uses same Student Yield Factors and capacity data
- Realism: Acknowledges that capacity constraints are real and provides honest assessment
- Fairness: Proportional cap ensures La Plata doesn't over-consume County capacity
- Planning Value: CIP provision allows planning for new schools; MDP process enables long-term coordination

CONCLUSION

These amendments represent a comprehensive update to the Town's growth management tools. They provide:

- Clarity where there was discretion
- Objectivity where there was subjectivity
- Realism where there were artificial guarantees
- Coordination where there was potential conflict

While the changes may initially seem restrictive, they actually provide a more honest and workable system that:

- Protects students from overcrowding
- Provides developers with clear, predictable rules
- Coordinates Town and County planning
- Ensures infrastructure matches growth

Staff believe these amendments serve the public interest and recommend that the Planning Commission provide favorable feedback to the Town Council.

Article IX. School Seat Allocation Policy [Adopted 2-8-05 by Ord. No. 05-1]

173-92 Statement of policy and intent.

A. Residential growth rates in Southern Maryland, Charles County and the Town of La Plata are among the highest in Maryland. The town is a designated growth area within the county and represents approximately ten percent (~~10~~6%) of the population in the growth area of Charles County. ~~In the 1990's, La Plata issued between forty-five (45) and sixty (60) building residential permits each year. In 2003, the town issued two hundred three (203) building permits for residential development. Estimates predict that the current rate of residential growth in the town will continue.~~

B. The rate of growth in Charles County and the Town of La Plata is outpacing the ability of the Charles County Board of Education and the Charles County Commissioners to develop and fund the construction of new schools in Charles County to accommodate the growing student population in La Plata and the county at large. ~~This has resulted in~~Unchecked growth has potential to result in school overcrowding that is contrary to the interests of students attending those schools and the public at large. ~~While one new high school is under construction and other schools are planned for construction in Charles County, the rate of growth is outpacing the Board of Education's ability to provide sufficient school seats to meet increasing demands.~~

C. The Town of La Plata has no role in the planning, approval or funding of new public schools. The construction of new public elementary schools, middle schools and high schools in Charles County is the responsibility of the Charles County Board of Education with funding provided primarily by the Charles County Commissioners and the State of Maryland. The Charles County Commissioners impose an excise tax to generate revenues for new school construction. This excise tax is imposed and collected by the County Commissioners on new development that takes place within the Town of La Plata and in the remainder of the county.

D. Since the Town of La Plata cannot control the supply of seats or school capacity available to accommodate the growing student population, the Town Council has determined that it is in the interest of the public health, safety and welfare, and a proper exercise of the town's police powers, to responsibly regulate the rate of development in the town so as to:

(1) Not exacerbate school overcrowding;

(2) Provide the Charles County Board of Education and the Charles County Commissioners with a reasonable time to make adequate school capacity available to meet the demands created by new growth in the Town of La Plata; and

(3) Provide for a reasonable rate of growth within the town to meet the town's fiscal and economic needs.

E. It is the intent of this Article to establish a methodology and a process for determining and allocating available school seats in the Charles County public schools and to accomplish this objective based upon historical student generation from residential development exclusively within the Town of La Plata.

173-93 Definitions.

For purposes of this Article, the following terms shall have the meanings set forth in this section:

ALLOCATABLE SCHOOL CAPACITY – The discrete amount of public-school capacity available for allocation to new residential development, restricted to the lowest positive number derived from the aggregate capacity

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calculation across the three specified school levels (Elementary, Middle, and High School) serving the Town of La Plata. In the event that the aggregate capacity calculation for any of the three school levels results in zero or a negative number (Shortage), the Allocatable School Capacity for that school attendance zone shall be deemed zero.

~~ALLOCATABLE SCHOOL CAPACITY – The lesser of (a) the lowest positive number derived from the aggregate capacity calculation across the three specified school levels or (b) 6% of the total net capacity excess of the entire Charles County public school system.~~

ALLOCATION POOL OR SUB-POOL—A pool or sub-pool established by the Town Council pursuant to § 173-95B for the allocation of available school seat capacity.

AVAILABLE SCHOOL SEAT CAPACITY—The amount of school seat capacity that the Town Council determines is available for new development pursuant to § 173-95.

DWELLING—A structure that contains one (1) or more dwelling units.

~~PARTICULARIZED STUDENT GENERATION RATE—A student generation rate determined for a proposed subdivision or an existing lot or parcel of land in accordance with § 173-94.~~

PRIORITY LIST—A list of persons awaiting a school seat allocation ranked chronologically in the order that each person became eligible for the list.

SCHOOL SEAT ALLOCATION—An allocation of available school seat capacity from an allocation pool or sub-pool pursuant to § 173-98.

STUDENT GENERATION RATE—The average number of public elementary school, middle school and high school students generated by a dwelling unit in each development and neighborhood of the Town of La Plata as determined in accordance with § 173-94.

173-94 Establishment of student generation rates.

A. A. The Town Council shall annually adopt and utilize the current Student Yield Factors established and published by the Charles County Commissioners and the Charles County Board of Education. The Student Yield Factors shall be used to determine the average number of public elementary school, middle school, and high school students generated by a dwelling unit for each type of residential development.

B. The Chief Executive Officer shall cease using particularized student generation rates for lots in proposed subdivisions or existing lots of record. The determination of the number of required development units shall be made by applying the Student Yield Factors to the specific dwelling unit type for the corresponding school level.

~~The Town Chief Executive Officer shall establish student generation rates from residential development in the town. After establishing initial student generation rates, the Chief Executive Officer shall review and modify the student generation rates not less frequently than every two (2) years.~~

~~B. The Chief Executive Officer shall establish student generation rates for elementary schools, middle schools and high schools. In determining and establishing student generation rates, the Chief Executive Officer shall conduct a survey to determine the number of students from each development and neighborhood in the town who attend public elementary schools, middle schools and high schools in the county and the total number of dwelling units in each development and neighborhood. In conducting this survey, the Chief Executive Officer may rely upon data maintained by the Charles County Board of Education and the town and such other data and information as the Chief Executive Officer reasonably deems relevant.~~

~~C. When an applicant for approval of a final subdivision plat or a building permit requests an allocation of school seat capacity, the Chief Executive Officer shall determine a particularized student generation rate for~~

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~~each lot in the proposed subdivision or for the existing lot or parcel of land. In determining a particularized student generation rate for an existing lot or parcel or for a lot in a proposed subdivision, the Chief Executive Officer shall consider the student generation rates of similar residential developments or neighborhoods in the town, the known target demographics that the lot, parcel or proposed lots will be marketed to, and other facts and data that the Chief Executive Officer deems relevant.~~

173-95 Establishment of school seat allocation and allocation pools.

~~A.~~ A. The Town Council annually shall determine the number of school seats that the town will make available for allocation for new residential development in the town during the town's ensuing fiscal year. This determination shall be based on the Allocatable School Capacity established for the school attendance zones encompassing the Town of La Plata. The Town Council, in conjunction with Charles County Public Schools (CCPS), shall annually identify the current public elementary, middle, and high schools serving the Town of La Plata attendance zones (the Catchment Schools). The calculations required by this section shall rely upon the annual capacity data provided by the Charles County Board of Education (BOE) for these annually identified Catchment Schools.

This capacity data shall include any capacity provided by Capital Improvement Program (CIP) projects that are scheduled for completion prior or concurrent to the upcoming allocation cycle. When capacity is programmed to exist through an approved CIP project, allocations may be granted within the eighteen (18) month period prior to the opening of the new school facility.

Capacity of individual schools shall be determined by subtracting the enrollment from one hundred ten percent (110%) of the state rated capacity. The Allocatable School Capacity for new residential development shall be restricted to the lowest aggregate capacity calculated among the three (3) school levels (Elementary, Middle, and High School) within the specified school attendance zones. If capacity at any required school level (Elementary, Middle, or High) does not exist, allocations shall not be granted in that school attendance zone. School capacity must exist at all three school levels within the current school district attendance boundaries for which the Board of Education has determined the students from the project will attend. In making this annual determination, the Council shall consider data and recommendations, if any, from the Charles County Board of Education as to the number of available school seats in the public school system in these specific attendance zones. Furthermore, to restrict annual allocation consistent with the Town's proportional share of available capacity within the Charles County Public School System, the total number of school seats allocated by the Town shall not exceed six percent (6%) of the Total Net Capacity Excess reported annually by the Charles County Board of Education for all schools in the public school system. This calculation shall only be used to establish a maximum cap on allocations and shall not supersede the lower allocation derived from the aggregate capacity calculation for the specific school attendance zones listed above.~~The Town Council annually shall determine the number of school seats that the town will make available for allocation for new residential development in the town during the town's ensuing fiscal year, except that in no event shall the number of school seats available for allocation in each fiscal year be less than one hundred (100). In making this annual determination, the Council shall consider the number of available school seats in the entire Charles County public school system and the ratio of the town's population to the population of the county as a whole. In addition to other factors that the Town Council deems relevant, the Council shall consider data and recommendations, if any, from the Charles County Board of Education as to the number of available school seats in the public school system and the number of seats that the town should allocate for new residential development.~~

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B. After the Town Council has determined the number of school seats available for allocation in the ensuing fiscal year, the Council, by resolution, shall divide the total number of seats available for allocation into such reasonable pools and sub-pools as the Council may create. These pools shall attempt to provide a reasonable apportionment of available school seats among competing development interests. Sub-pools may consist of

specific subdivisions or proposed subdivisions. The pools shall include, but necessarily be limited to, the following:

(1) Proposed subdivisions consisting of at least fifty (50) lots that have received preliminary plat approval and for which application has been made for final plat approval;

(2) Proposed subdivisions consisting of less than fifty (50) lots that have received preliminary plat approval and for which application has been made for final plat approval;

(3) Lots in recorded subdivisions that have fifty (50) or more remaining vacant lots for residential development. This pool shall contain not less than twenty percent (20%) of the school seat capacity available for allocation;

(4) Other existing recorded lots and parcels of land that could be developed for residential uses. This pool shall contain not less than twenty percent (20%) of the school seat capacity available for allocation.

C. In the fourth quarter of each fiscal year, the Town Council may reevaluate the number of school seats remaining unallocated in each pool and sub-pool. If the Council determines that all of the school seats in any pool or sub-pool are not likely to be allocated before June 30 of that year, the Council, by resolution, may reallocate such school seats into one (1) or more other pools or sub-pools where a demand for school seat allocation exists.

D. If any school seats in any pool or sub-pool remain unallocated on June 30 of any year, the Town Council, by resolution, ~~shall~~ may divide the unallocated seats into the pools and sub-pools for the ensuing fiscal year in such manner as the Council reasonably shall determine.

E. Not later than January of each year, the Chief Executive Officer shall consult with the Board of Education to determine whether any changes in school enrollment during the school year have resulted in additional available school capacity for that year. If the Chief Executive Officer determines that additional capacity does exist, the Chief Executive Officer shall so advise the Town Council. The Town Council, by resolution, may make such additions of school seat capacity to the respective allocation pools or sub-pools for that fiscal year as the Council determines appropriate.

173-96 Allocation required.

Except as provided in §§ 173-97 and 173-98, until the town has made an allocation of school seat capacity to a proposed subdivision, lot or parcel of land:

A. The Planning Commission may not approve a final plat of subdivision for a subdivision of land for the purpose of residential development; and

B. The town may not approve or issue a building permit for the development and construction of any residential dwelling or dwelling unit on an existing lot or parcel.

173-97 Exemptions.

The requirements of § 173-96 do not apply to:

A. The approval of a final plat for the subdivision of land for a development in which dwelling units will be restricted to occupancy by persons fifty-five (55) years of age and older;

B. The development and construction of dwelling units in a subdivision where occupancy of dwelling units is restricted to persons fifty-five (55) years of age or older;

C. Nursing homes;

D. Assisted living facilities;

E. Any other type of residential construction that will not generate additional school age population;

F. **[Amended 4-22-08 by Ord. No. 08-5]** The approval of a final plat of subdivision of land, or portion of a final plat of subdivision, for a development to the extent that the developer has entered into an agreement with the town and the County Commissioners of Charles County by which:

(1) The developer agrees, in addition to the payment of any applicable school excise taxes and school impact fees, to make one (1) or more financial payments to the County Commissioners in an amount or amounts determined by the County Commissioners to be sufficient to enable the County Commissioners to provide to the town for the exclusive benefit of the developer's development a sufficient number of special school seat allocations from the county's allotment of school seat allocations which, combined with such school seat allocations as the developer may obtain from the town pursuant to this Article IX, will be sufficient to accommodate the projected student population from the subdivision, or portion of the subdivision, shown on the final plat, and

(2) In exchange for such financial payment from the developer, the County Commissioners agree to provide to the town, for the exclusive benefit of the developer's development, an agreed number of special school seat allocations from the county's allotment of school seat allocations.

Where the developer has entered into such an agreement with the town and the Charles County Commissioners, the town shall not issue a building permit for any lot shown on the approved final plat for which a special school seat allocation is required until the County Commissioners have provided such special school seat allocation to the town.

173-98 Process for allocation.

A. This section regulates the allocation of available school seat capacity to proposed lots in subdivisions that are seeking final plat approval and to existing individual lots or parcels of land.

B. (1) When a request is made for final subdivision plat approval, the Chief Executive Officer shall determine the student generation rate by applying the Student Yield Factors adopted pursuant to § 173-94A for each lot shown on the proposed final plat and then shall multiply that rate...~~When a request is made for final subdivision plat approval, the Chief Executive Officer shall determine a particularized student generation rate for each lot shown on the proposed final plat and then shall multiply that rate~~ by the total number of lots on the final plat to determine the total number of school seats required for all lots shown on the plat.

(2) If sufficient unallocated school seats in the applicable allocation pool or sub-pool are available to provide a school seat allocation for all of the lots depicted on the final plat, subject to the limitation in § 173-98F, a school seat allocation shall be made for all lots and, provided that the final plat satisfies all other applicable requirements, the Planning Commission shall approve the final subdivision plat.

(3) If sufficient unallocated school seats in the applicable allocation pool or sub-pool are not available to provide a school seat allocation for any of the lots depicted on the final plat, the applicant may elect to do one (1) of the following:

(a) Request that approval of the final plat be deferred and that the entire final plat be placed on the applicable subdivision priority list for allocation of available school seat capacity as such capacity becomes available;

(b) Withdraw the request for final plat approval.

(4) If sufficient unallocated school seats in the applicable allocation pool or sub-pool are available to provide a school seat allocation for some, but not all, of the lots depicted on the final plat, the applicant may elect to do one (1) of the following:

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(a) [1] Accept a school seat allocation for as many lots as allocations are available for that proposed subdivision and designate each remaining lot as not buildable until a future allocation of school seat capacity is made for that lot. A school seat allocation shall be accepted by paying a school seat allocation reservation fee for each lot for which an allocation is to be made. The amount of the allocation reservation fee is twenty percent (20%) of the then applicable school excise tax for each lot. The allocation reservation fee shall be paid to the town prior to approval of the final subdivision plat. The allocation reservation fee for each lot shall be applied against the school excise tax payable for that lot if a building permit for that lot is applied for and issued by the town within one (1) year after final plat approval. However, if a building permit is not applied for and issued by the town within one (1) year after final plat approval, the school seat allocation and allocation reservation fee for that lot are forfeited and, for purposes of future school seat allocation, the lot shall be treated as an existing lot. Upon payment of the allocation reservation fee, the Planning Commission may approve the final subdivision plat,

[2] Any future allocation of school seat capacity for each lot for which a school seat allocation was not made when the final plat was approved, or for which an allocation was made but forfeited because a building permit was not applied for within one (1) year and issued within eighteen (18) months from the date of final plat approval, shall be made from the pool of school seats available for allocation to existing recorded lots at the time that a building permit application is approved for that lot. The future allocation of school seat capacity for a lot shall be based upon the student generation rate derived from the Student Yield Factors adopted pursuant to § 173-94A for that lot determined by the Chief Executive Officer prior to approval of the application for a building permit for that lot;~~The future allocation of school seat capacity for a lot shall be based upon a particularized school seat generation rate for that lot determined by the Chief Executive Officer prior to approval of the application for a building permit for that lot;~~

(b) Request that approval of the final plat be deferred and that the entire final plat be placed on the applicable subdivision priority list for allocation of available school seat capacity as such capacity becomes available. If the applicant elects to have the final plat placed on the priority list, all available school seat capacity allocable to that subdivision be reserved for that proposed subdivision, without cost to the applicant, until school seat capacity is available in the pool or sub-pool for allocation to all remaining lots depicted on the final plat;

(c) Reconfigure and resubmit the final plat to depict only those lots for which an allocation of school seat capacity can then be made;

(d) Withdraw the request for final plat approval.

(5) Each approved final subdivision plat shall contain notes or graphic representations that clearly delineate which lots have received an allocation of school seat capacity and the terms and conditions of such allocation, and which lots are not buildable until a future allocation of available school seat capacity is made at such time as an application for a building permit is approved.

C. When an application is made for approval of a building permit for development and construction of a dwelling or dwelling unit on an existing lot or parcel of land, the Chief Executive Officer shall determine the student generation rate by applying the Student Yield Factors adopted pursuant to § 173-94A for that lot or parcel. The Chief Executive Officer shall allocate available school seat capacity to that lot or parcel based upon the student generation rate for that lot or parcel ~~When an application is made for approval of a building permit for development and construction of a dwelling or dwelling unit on an existing lot or parcel of land, the Chief Executive Officer shall determine a particularized student generation rate for that lot or parcel. The Chief Executive Officer shall allocate available school seat capacity to that lot or parcel~~ based upon the particularized student generation rate for that lot or parcel, if school seat capacity is available in

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the existing lot allocation pool. If available school seat capacity is not then available, the lot will be placed on a priority list for future allocation of school seat capacity.

D. When an application for final subdivision plat approval or for the issuance of a building permit involves one (1) or more dwellings that contain more than one (1) dwelling unit per dwelling, such as single-family attached dwellings, townhouses, multiple-family dwellings and two-family dwellings, a school seat allocation may not be made for any dwelling unit in a dwelling unless sufficient school seat capacity is available for allocation to all dwelling units in that dwelling.

E. Each allocation of available school seat capacity is made to a particular lot, proposed lot, or parcel of land. Once an allocation of school seat capacity has been made to a particular lot, proposed lot or parcel of land, the allocation is not transferable or assignable to another lot, proposed lot or parcel of land.

F. Unless there are no proposed subdivisions awaiting final plat approval or existing lots or parcels of land on a priority list established pursuant to § 173-99, not more than twenty-five (25) seats of available school capacity may be allocated in any fiscal year to any one (1) proposed subdivision or to, or for the benefit of, any existing lots or parcels of land that were held in the same ownership on the first day of the fiscal year.

173-99 School seat allocation priority lists.

A. The town's Chief Executive Officer shall establish and maintain priority lists of applications for final subdivision plat approval, and for building permits for the development and construction of dwelling units on existing lots or parcels of land, for which school seat capacity is not available.

B. A proposed subdivision for which an applicant has requested placement on a subdivision priority list pursuant to § 191-98B and an existing lot or parcel of land for which a building permit application has been submitted to the town shall be placed on the applicable priority list as of such date and time when all requirements for final subdivision plat approval or issuance of a building permit have been satisfied except for the availability of school seat capacity.

C. When school seat capacity becomes available in the applicable subdivision allocation pool or sub-pool, the Chief Executive Officer shall provide written notice to the next applicant on the priority list that school seat capacity is available for allocation to some or all of the lots as depicted on the applicant's proposed final subdivision plat. The notice shall be sent to the address of the applicant as shown on the final subdivision plat application or to such other address as the applicant has designated in writing to the Chief Executive Officer. The notice shall give the applicant a period of thirty (30) days to notify the Chief Executive Officer in writing that the applicant accepts or rejects the allocation. An allocation shall be accepted in the manner specified in § 173-98B(4)(a)[1].

   (1) If the applicant accepts the allocation in writing within such thirty-day period, and if such allocation provides a school seat allocation for all lots depicted on the final plat, the final plat shall be approved.

   (2) If the applicant accepts the allocation in writing within such thirty-day period, and if such allocation provides an allocation of available school seat capacity for some, but not all of the lots depicted on the final plat, the applicant shall elect to proceed in accordance with § 173-98B(4)(a) or (b).

   (3) If, within thirty (30) days after notice of the availability of a school seat allocation, an applicant affirmatively rejects an allocation of available school seat capacity, the applicant may request in writing that the application for final plat approval be kept active and that the lots depicted on the final plat be maintained on the priority list. If the applicant does make such a request, the final plat shall maintain its place on the priority list and shall be offered the next available school seat allocation. If the applicant does not affirmatively accept the school seat allocation the next time it is offered, the final plat shall be removed from the priority list, the application for final plat approval shall be deemed

withdrawn, and any available school seat capacity previously allocated to lots on the final plat shall be returned to the applicable allocation pool or sub-pool.

(4) If, within thirty (30) days after notice of the availability of a school seat allocation, an applicant affirmatively rejects an allocation of available school seat capacity and does not request in writing that the application for final plat approval be kept active and that the final plat be maintained on the priority list, the final plat shall be removed from the priority list, the application for final plat approval shall be deemed withdrawn, and any available school seat capacity previously allocated to lots on the final plat shall be returned to the applicable allocation pool or sub-pool.

(5) If, within thirty (30) days after notice of the availability of a school seat allocation, an applicant neither rejects nor affirmatively accepts the allocation in writing, the lots on the proposed final subdivision plat shall be removed from the priority list, the application for final plat approval shall be deemed to have been withdrawn by the applicant, and any previous allocation of school seat capacity for lots on the final plat shall be returned to the applicable allocation pool or sub-pool.

D. When school seat capacity becomes available in the existing lot allocation pool or sub-pool, the Chief Executive Officer shall provide written notice to the next applicant on the existing lot priority list that school seat capacity is available for allocation to the applicant's lot or parcel of land. The notice shall be sent to the address of the applicant as shown on the building permit application or to such other address as the applicant has designated in writing to the Chief Executive Officer. The notice shall give the applicant a period of thirty (30) days to notify the Chief Executive Officer in writing that the applicant accepts or rejects the allocation.

(1) If the applicant accepts the allocation within such thirty-day period, the building permit shall be issued as long the application continues to comply with all applicable laws. If the building permit application no longer complies with all applicable laws, the application shall be deemed rejected, but the school seat allocation shall be reserved for the lot or parcel of land for a period of ninety (90) days, within which the applicant must submit for approval by the town a revised permit application that complies with all applicable laws. If a conforming building permit application is submitted within ninety (90) days and approved by the town, the school seat allocation for the lot or parcel of land shall be made and the permit issued. If a conforming building permit application is not submitted within ninety (90) days or is not approved by the town, the school seat capacity shall be placed back in the pool and the lot or parcel of land removed from the priority list.

(2) If, within thirty (30) days after notice of the availability of a school seat allocation, an applicant neither rejects nor affirmatively accepts the allocation in writing, the lot or parcel of land shall be removed from the priority list and the building permit application for that lot or parcel of land shall be deemed to have been withdrawn by the applicant.

(3) If, within thirty (30) days after notice of the availability of a school seat allocation, an applicant affirmatively rejects an allocation of available school seat capacity, the applicant may request in writing that the building permit application be kept active and that the lot or parcel of land be maintained on the priority list. If the applicant makes such a request, the lot or parcel shall maintain its place on the priority list and shall be offered the next available school seat allocation. If the applicant does not affirmatively accept the school seat allocation the next time it is offered, the school seat capacity shall be placed back in the allocation pool or sub-pool and the lot or parcel of land shall be removed from the priority list.

(4) If, within thirty (30) days after notice of the availability of a school seat allocation, an applicant affirmatively rejects an allocation of available school seat capacity and does not request in writing that the building permit application be kept active and that the lot or parcel of land be maintained on the priority list, the school seat capacity shall be placed back in the allocation pool or sub-pool and the lot or parcel of land shall be removed from the priority list.

E. Notwithstanding any other provision of this Article, any lot or parcel of land on the existing lot priority list that has not received an allocation of school seat capacity within six (6) years from the date that lot or parcel was placed on the priority list shall be issued a building permit as long as the building permit application continues to comply with all applicable laws. If the building permit application no longer complies with all applicable laws, the applicant must submit for approval by the town a revised building permit application that complies with all applicable laws. If a conforming building permit application is submitted within ninety (90) days and approved by the town, the building permit may be issued even though available school seat capacity may not exist in the applicable allocation pool or sub-pool. If a conforming building permit application is not submitted within ninety (90) days or is not approved by the town, a building permit may not be issued for the lot or parcel of land until a new allocation of school seat capacity is made to the lot or parcel. Any building permits issued pursuant to this section shall not count against or reduce the available school seat capacity that otherwise is available for allocation in that fiscal year.

173-100 Duration and effect of expiration of allocation.

A. This section provides for the expiration of an allocation of school seat capacity and the effect of such an expiration.

B. (1) This subsection regulates the expiration of a school seat allocation for a lot that was made as part of the approval of a final subdivision plat.

(2) A school seat allocation that has been made as part of the approval of a final subdivision plat is valid for a period of one (1) year from the date of approval of the final plat. The allocation for a lot in the subdivision expires if a building permit to construct a dwelling unit on that lot has not been issued within one (1) year from the date of approval of the final plat, or if the building permit to construct a dwelling unit on that lot expires or is revoked before a certificate of occupancy is issued.

(3) As long as a school seat allocation has not expired, a building permit may be issued for the lot for which the allocation has been made. A building permit may not be issued for any lot for which an allocation has expired until the lot has received a new school seat allocation. After expiration of an allocation, a lot shall be treated as an existing recorded lot and placed at the end of the existing lot priority list.

C. (1) This subsection regulates the expiration of an allocation of school seat capacity for a lot that was made as part of the issuance of a building permit.

(2) An allocation of school seat capacity for a lot that has been made as part of the issuance of a building permit is valid for the duration of the building permit. The school seat allocation expires if the building permit to construct a dwelling unit on that lot expires or is revoked before a certificate of occupancy is issued.

(3) If a school seat allocation expires, the existing building permit shall not be reinstated or renewed, or a new building permit issued, for that lot until the lot has received a new school seat allocation. After a school seat allocation expires, a lot shall be placed at the end of an existing lot priority list for a new school seat allocation.

173-101 Appeals.

A. Any person aggrieved by a decision of the town's Chief Executive Officer in determining the student generation rate for a specific lot or parcel or in approving or refusing to approve an allocation~~Any person aggrieved by a decision of the town's Chief Executive Officer in determining a particularized student generation rate or in approving or refusing to approve an allocation~~ of school seat capacity may appeal the decision to the Town Board of Appeals created under § 191-53 of this Code. Except to the extent inconsistent

with this section, proceedings of the Board shall be governed by §§ 191-53C and D of this Code and the Board's rules of procedure.

B. An appeal pursuant to Subsection A of this section may be based only on one (1) or more of the following grounds:

(1) The decision is contrary to law or illegal.

(2) The decision is arbitrary or capricious.

An appeal may not challenge or be based upon error in the determinations of the Chief Executive Officer in determining general student generation rates or of Town Council regarding the establishment of allocation pools pursuant to § 173-95.

C. An appeal shall be initiated by the filing of a notice of appeal with the Town Board of Appeals. The notice of appeal shall be filed within ten (10) days from the date of the decision being appealed from. The appeal shall be filed on forms prescribed by the Chief Executive Officer consistent with this section, and shall be accompanied by such appeal fee as may be established by resolution of the Town Council from time to time.

D. Each notice of appeal must contain at least the following:

(1) The name and address of the appellant;

(2) A statement identifying the decision that is being appealed;

(3) A statement describing how the appellant is aggrieved or affected by the decision that is being appealed;

(4) A detailed narrative explanation of the grounds of the appeal;

(5) A statement describing with specificity the manner in which the decision from which the appeal is taken is contrary to law, illegal, arbitrary or capricious. The notice of appeal shall contain specific references to all statutes, ordinances and regulations alleged to be violated by the decision; and

(6) A statement of the relief requested by the appellant.

The Board of Appeals shall dismiss any notice of appeal that does not contain the information required by this Subsection D.

E. Hearings and proceedings on an appeal to the Board of Appeals shall be based exclusively on the grounds of appeal, issues and matters presented in the notice of appeal. The Board may not consider any ground of appeal, matter or issue that has not been presented with specificity in the notice of appeal. The Board of Appeals may take such testimony and evidence as the Board deems necessary or desirable to assist it in considering an appeal.

F. The decision of the Chief Executive Officer is presumed to be correct, made in accordance with law and legal. The burden is on the person who appeals a decision to demonstrate that:

(1) The decision is contrary to law or illegal;

(2) The decision is arbitrary or capricious.

G. The Board shall affirm the decision appealed from unless the Board finds that:

(1) The decision appealed from is contrary to law or illegal;

(2) The decision appealed from is arbitrary or capricious.

If the Board makes any such finding, the Board may reverse the decision of the Chief Executive Officer in whole or in part, or may modify the decision, condition or requirement appealed from and make such decision, conditions or requirements as could have been made by the Chief Executive Officer. The Board also may remand

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the matter to the Chief Executive Officer for such further proceedings or determinations as the Board of Appeals determines to be appropriate.

H. Any person or persons jointly or severally aggrieved by a decision of the Board of Appeals under this section, or any officer, department, board or bureau of the town, may appeal the decision of the Board of Appeals to the Circuit Court for Charles County. Such an appeal to the Circuit Court shall be filed within thirty (30) days from the decision of the Board.

I. A school seat allocation is not effective until the earlier to occur of:

(1) Ten (10) days from the date of the allocation if no appeal is filed under this section; or

(2) If an appeal is filed, until a final decision has been rendered and the time for all further appeals has expired.

§ 173-102 Process for Major Development Projects.

A. Intent and Applicability. This section establishes regulations for Major Development Projects (MDP), defined as subdivisions proposing **one hundred (100) or more lots or dwelling units**. This process is intended to address the significant and long-term impacts of such projects on the public school system.

B. Requirements. A Major Development Project (MDP) seeking school seat allocation shall be required to enter into a **Development Agreement** with the **Town of La Plata and the Charles County Commissioners**. This Agreement shall be prepared **in consultation with Charles County Public Schools (CCPS)** to ensure coordination regarding long-term planning, capacity management, and build-out scheduling. The executed Agreement shall include a **Build-Out Schedule** detailing the unit type and unit count for each phase of development.

C. Allocation of School Seats. Allocations granted to an MDP shall be contingent upon adherence to the executed Development Agreement and the approved Build-Out Schedule. The allocation of school seats shall be utilized consistent with the approved Build-Out Schedule, and the grant of allocation may be conditioned upon the commencement of construction milestones within the project.

D. Exemption. Development projects approved under this section may be exempt from the general provisions of § 173-98 (Process for allocation) and § 173-99 (School seat allocation priority lists), provided they remain in compliance with their approved Development Agreement.

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Chapter 191 - Zoning Regulations

Article XI. - Adequate Public Facilities Requirements

§ 191.86. Purpose.

The purpose of adequate public facilities review is to:

A. Require developers to provide new, additional, or upgraded public facilities for water, sewage, roads and school seating capacity, when necessary, to ensure the Town's ability to provide adequate public facility levels to serve new developments without impacting the existing community.

B. Ensure that all proposed development will not adversely affect the public health, safety and welfare; and,

C. Encourage new development to occur in areas of the Town where public facilities are being provided.

§ 191.87. Adequate public facilities required.

A. Unless stated otherwise within this Ordinance, no preliminary plat maps or site plans shall be approved by the Town unless it can be demonstrated that the development will not impact the adequacy of the Town's public facilities to provide the water, sewage, roads and school seating capacity to serve the development and its environs, as specified in this Ordinance.

B. This Ordinance does not apply to minor residential subdivisions, minor site plans and non-residential developments containing less than 1,200 square feet of gross floor area unless determined necessary by the Planning Director due to unique or unusual circumstances associated with the development and/or the surrounding environs of the development.

C. Unless exempted within this Ordinance, all preliminary plat maps and site plans submitted to the Town for approval shall be accompanied with an Adequate Public Facilities Study pursuant to Section 191.93

§191.88. Roads.

A. The traffic generated by a proposed development shall not reduce the level of service (LOS) at intersections or along roads below the standards established in this section.

B. This section does not apply to any development project that generates fewer than 35 peak-hour vehicular trips per day.

C. Roads shall be considered adequate to accommodate the projected vehicular traffic to be generated by a proposed development if:

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(1) All existing traffic, the anticipated traffic for new development, and the cumulative traffic anticipated for previously approved developments within the environs of a new development can meet or can be adequately mitigated to meet the minimum Level of Service required for the roadways impacted by the new development. Traffic service levels at all intersections in the immediate vicinity of the project, as designated by the Planning Director, shall be defined by the Critical Lane Methodology or current edition of the Highway Capacity Manual published by the Transportation Research Board; or

(2) The Town, County, or State has programmed for construction, in a capital improvements plan or a similar plan, additional roads or road improvements, in combination with existing roads and intersections, to comply with the standards specified in this Ordinance. The programmed improvements must be scheduled to be completed at the time the proposed development will generate new vehicular trips.

(3) A sufficient public right-of-way width is provided to serve the volume of pedestrian and vehicular traffic to accommodate the development, including adequate road widths to facilitate vehicular mobility, maneuverability and on-street parking.

D. Levels of service.

(1) The established minimum level of service (LOS) for all roads and intersections in the Town of La Plata shall be LOS "C."

(2) If the existing LOS of any road is less than LOS "C," the roadway will be considered inadequate..

(a) To meet the minimum roadway Level of Service requirement, mitigation shall be applied by the developer to all affected roads serving the development, as determined by the Planning Director. Alternatively, the Planning Commission may require a proposed development to be scaled back so all impacted roadways meet the minimum required level of service (LOS "C"). The Planning Commission shall deny any development if inadequate roadway mitigation measures are not sufficient to comply with this Ordinance.

E. The determination of the Level of Service for a road shall consider the effects of existing traffic and traffic projected to be generated from new developments in the environs, as determined by the Planning Director, for which final subdivision plats and site plans have been approved as well as increases in through traffic and all traffic projected to be generated from the proposed development for a specified development completion year.

F. Unless exempted within this Ordinance, the project developer shall submit with their preliminary plat map or site plan, a preliminary Adequate Public Facilities Study (APFS) which indicates the development's anticipated vehicular trip generation rates, a list of existing roads and intersections that will be impacted by traffic to and from the development and the anticipated completion date of the proposed development. The Planning Director shall review the APFS to determine if it satisfies the standards adopted herein for the proposed development and shall add or delete roads or intersections necessary to evaluate the impact of the development.

§191.89. Schools.

See Section 173-92 under Article IX (School Seat Allocation Policy) of the La Plata Subdivision and Land Development Ordinance.

§191.90. Sewage system.

A. It is the intent of this chapter that new and/or expanded sewer systems serving new residential and non-residential developments shall not adversely impact the Town's ability to support it. Therefore, no new sewer system serving any development in the Town of La Plata shall be approved unless there is sufficient sewer infrastructure capacity to accommodate and support it by the Town.

B. Standard for Adequacy. The sewage system shall be considered inadequate, and the development shall be deemed to create an adverse impact on the Town's ability to support the system, if the capacity required by the proposed development will cause the Town's wastewater treatment plant infrastructure to operate at a level higher than eighty percent (80%) of the plant's maximum currently permitted capacity as authorized by the State of Maryland. If this standard is exceeded, the project shall not be approved unless adequate mitigation is provided in accordance with § 191.94 (Mitigation).

§191.91. Water supply system.

A. No preliminary plat map and no site plan for any new or expanded development requiring water allocation from the Town of La Plata shall be approved unless there is sufficient water supply to support the development. It is the intent of this chapter that water supplies serving existing residential and non-residential users shall not be adversely affected by the water use from new development.

B. Standard for Adequacy. The water supply system shall be considered inadequate, and the development shall be deemed to adversely affect the Town's ability to provide sufficient water, if the water demand projected to be generated by the proposed development will cause the Town to exceed eighty percent (80%) of its maximum permitted water authorization granted by the State of Maryland. If this standard is exceeded, the development shall not be approved unless adequate mitigation is provided in accordance with § 191.94 (Mitigation).

§ 191.92. Water, sewage, and school capacity allocations

A. Water and sewer capacity allocation shall be guaranteed to any approved preliminary plat map or site plan requiring such allocation for a period of three years after its original approval by the Town. Failure, for any reason, to obtain a building permit within three years to begin construction for new buildings under an approved preliminary plat map or for a new development, under an approved site plan, shall render the water and sewer allocation null and void.

B. For preliminary plat maps and site plans that have been previously approved without water and sewer allocations prior to the adoption of this Ordinance, water and sewer allocations shall be based on the following allocation methodology:

(1) All preliminary plat maps and site plans that have been approved and are still valid as of the date of the adoption of this Ordinance shall be exempt from Section 191.92(A) unless the approved preliminary plat map or site plan is allowed to expire for any reason. Water and sewer allocations for previously approved and legally valid preliminary plat maps and site plans shall have priority over any preliminary plat maps and site plans not approved by the Town as of the date of the adoption of this Ordinance. Water and sewer allocations for unexpired preliminary plat maps and site plans under this code provision shall be allocated as follows:

(a) Each year, the Town of La Plata shall identify the maximum water and sewer capacity allocations to be devoted to previously approved preliminary plat maps and site plans that are valid.

(b) Water and sewer allocations shall be distributed by the Town to each previously approved preliminary plat map or site plan beginning with the oldest to the most recent until all such water and sewer allocations have been distributed by the Town of La Plata for each calendar year.
(c) Failure to begin using authorized water and sewer allocations within three years shall render the water and sewer allocations under this provision of the Ordinance null and void.

C. Once all previously approved preliminary plat maps and site plans have received their necessary water and sewer allocations under Section 191.92(B), water and sewer allocations required for the approval of new preliminary plat maps and site plans may be granted by the Town as provided in this Ordinance.

D. School capacity allocations shall be granted pursuant to Article IX (School Seat Allocation Policy) of the La Plata Municipal Code.

§ 191.93. Adequate public facilities study.

A. An Adequate Public Facilities Study (APFS) shall be prepared by qualified, independent, third parties, in conformance with the requirements of this Ordinance, and submitted as part of any preliminary plat map or site plan submittal to the Town for approval.

B. An APFS shall contain the following information:

(1) Background information that describes the proposed development, its location and the conditions of all surrounding public facilities that are regulated by this Ordinance.

(2) Project generation information that identifies the peak, daily, vehicle trips and number of students generated by the project.

(3) Analyses and identification of all anticipated project impacts and facility needs for water, sewer, roads and school seating capacity to serve the proposed development and its environs.

(4) Identification of all proposed road classifications serving the proposed development including the public rights-of-way and vehicular road widths to demonstrate there will be sufficient vehicular mobility and maneuverability to accommodate the volume of pedestrian and vehicular traffic, including the allowance for on-street parking.

(5) As necessary, a proposed mitigation program to eliminate all anticipated environmental impacts caused by the development to enable the Town to provide the minimum, required, public facilitty levels for water, sewage, roads and school seating capacity to serve the proposed development and its environs.

C. An APFS required for roads shall include a traffic impact study, including traffic flow studies of the roads and intersections as approved by the Planning Director. The traffic flow studies shall determine, at a minimum, existing traffic, traffic projected to be generated from other proposed developments in the environs for which a site plan or preliminary plat map approval has been granted, projected increases in through traffic at the time of completion of the proposed development and traffic projected to be generated from the proposed development. The study shall comply with these standards or the Transportation Research Boards' standards for traffic impact studies. In addition, the APFS shall propose, as necessary, all traffic mitigation improvements that will achieve the required level of service for all roadways impacted by the proposed development.

D. An APFS must address the incremental and cumulative impacts of a project that is to be developed in phases, including all incremental mitigation measures.

E. The Planning Commission shall review the APFS and other information submitted by the project developer to determine if the level of public infrastructure exists or will exist to meet the standards of

this Ordinance and whether the approval of the proposed development will be in the public interest.

§ 191.94. Mitigation.

Upon determination by the Planning Commission that one or more public facilities associated with water, sewage, roads, or school seating capacity are not adequate, the Planning Commission shall deny the project or require development mitigation as follows:

A. Mitigation by the project developer is required to eliminate all environmental impact(s) on water, sewer, roads and school seating capacity to enable the Town to provide sufficient public facilitates to support the developer's project and comply with all applicable provisions of the Town's Municipal Code.

B. The Planning Commission shall review and have final approval of the proposed mitigation program for a proposed subdivision or site plan. A mitigation program shall include the type(s) of mitigation, the methods of mitigation and time schedules, including project phasing, if applicable, for the successful implementation of the mitigation program.

C. A mitigation program shall be contained in a legally binding adequate public facilities agreement between the project developer and the Town of La Plata, in a legal form approved by the Town Attorney.

D. A mitigation program shall run with the land. The deed or title for a property shall contain references to the mitigation program and be recorded with the County Clerk to the satisfaction of the Planning Director.

§ 191.95. Bonding or surety.

A. The Planning Commission shall require bonding or surety as appropriate to cover the costs of the facilities and lands not under the project developer's ownership that are part of a mitigation program.

B. Upon default, the Town of La Plata has the authority to redeem the bonds or surety in addition to any other remedy provided by law.

§ 191.96. Standards, criteria and procedures for adequate public facilities studies.

A. Except as may be stated elsewhere in this Ordinance, the Charles County Adequate Public Facilities Manual may be referenced and used, as needed, to help support the successful implementation of this Ordinance.

B. Upon recommendation by the Planning Commission, the Town Council shall consider, for approval, any revisions to the adopted standards, criteria and procedures for adequate public facilities.

C. The Town of La Plata shall be the sole provider all water and sewer facilities for new and existing developments in Town. The Town will require developers to fund, construct, and provide bonding for all new or upgraded facilities deemed necessary for mitigation under this Ordinance. All new water and sewer facilities shall be dedicated by the project developer to the Town of La Pata consistent with all applicable provisions of the Town's Municipal Code as determined by the Director of Public Works.

-End-

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Happy Saturday All - Providing some thoughts on the two proposed draft chapters (173 and 191):

Chapter 173 - ...School Seat Allocations...

Overall:

- It appears to give the Town leverage it otherwise would not have, but it may come with administrative complexity that can slow development when school capacity is tight.
- From a planning standpoint, it is a **strong but restrictive tool** to be used carefully and reviewed periodically to ensure it still reflects town/community priorities and school realities.

Pros:

- Protects schools from overcrowding
- Treats developers fairly through a transparent allocation system
- Prevents theoretical approves without infrastructure
- Gives smaller projects a chance through reserved pools
- Strong legal appeal
- Encourages orderly, phased growth

Cons:

- Can slow development (housing)
- Adds complexity and administrative burden
- May frustrate property owners waiting years for allocation
- Requires constant coordination with County school data
- Could limit redevelopment if seats are scarce

Chapter 191 - Zoning Regulations

Overall: APFO appears to be generally strong and protective of Town services.

Pros:

- Provides clear and enforceable capacity thresholds (LOS D, 80% water/sewer standards)
- Requires independent studies improving reliability of analysis
- Strong mitigation and bonding provisions protects the town financially
- Ensures development occurs in areas with adequate public services
- Prioritizes previously approved projects

Cons:

- The strict LOS requirement may be difficult to achieve in older or constrained road networks and may unintentionally inhibit redevelopment
- Water and sewer capacity limits could unintentionally create a de facto development moratorium if the town's available capacity declines without planned improvements
- Three-year allocation expiration may be short for multi-phase or complex projects
- APFO may benefit from guidance on alternative mitigation (e.g., different modes improvements, fee-in-lieu)

Wishing everyone happy and safe holidays!
Dawn

Director Dooley,

Thank you for the opportunity to review.

1. Water & Sewer (The "Immediate Crisis" Risk)

- **The 80% Threshold:** The draft sets the standard for adequacy at 80% of permitted capacity, but the Town is arguably already operating near or at 90% of its water allocation. Does passing this ordinance place the Town in a legal moratorium on *all* new approvals because we are already in violation of the new 80% standard? Does the ordinance include a transition plan to manage this?

2. Roads & Street Design

- **Level of Service (LOS) "C" vs. Traffic Calming:** Can we add a "Performance Path" clause here? We should allow exceptions to LOS "C" if a developer demonstrates that a lower LOS supports pedestrian safety and traffic calming without compromising emergency access.

3. School Seat Allocation (Chapter 173)

- **The "6% Cap" Logic:** Limiting allocations to 6% of the *County's* total excess capacity. If La Plata schools have open seats, would this mean development would still be capped?

4. Process & Transparency

- **Defining "Significant Modification":** Should developers need one consistent standard (e.g., >10% unit increase) for when a grandfathered plan loses its status and triggers a new review.

Best,

Kyle J. Miller

Councilman Guttenberg's Draft APFO Feedback for Infrastructure Capacity: Water, Sewer, Traffic, and School Seats

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Water Infrastructure Capacity

1. Defining the Water Capacity Standard (Clarity of § 191.91)

Technical precision and future proofing of the “80% adequacy threshold” established in the proposed ordinance.

1.1. Clarifying the Adequate Water Capacity Measurement Metric Contained in (§ 191.91(B))

Issue: The proposed limit is based on *“eighty percent (80%) of its maximum permitted water authorization granted by the State of Maryland."* My opinion is this phrasing may lack necessary time based context (i.e. monthly volume). This will be an especially important distinction when the Town has more than 1 water source. Today “*permitted water authorization*” works because our single source of water capacity is regulated by the states MDE permit, in the future the Town will likely have other sources not subjected to the MDE groundwater permit monthly limits.

Recommendation for Updated Language: Amend §191.91(B) to more explicitly define and state the water delivery system metric. The language should be changed to: "...will cause the Town to exceed eighty percent (80%) of its water delivery systems reported maximum monthly capacity." *(also see my recommendation in 1.3 below which refines the definition of “systems reported maximum monthly capacity)*

In my opinion: This would prevent inconsistent interpretation and ensures the standard is durable regardless of the Town's future water system source mix.

1.2. Requiring Technical Justification for the 80% Water System Capacity Threshold

Issue: The origin of the 80% threshold lacks a technical basis within the draft code, making it vulnerable to challenge if viewed as arbitrary. My concern is the 80% reference *“...maximum permitted water authorization granted by the State of Maryland."* refers to the calculated aquafer depth management trigger used by Maryland Department of the Environment (MDE) for regulating permitted groundwater withdrawals by the Town of La Plata’s wells.

Recommendation for Staff Action: The Town Manager/Public Works should document in the proposed code the justification for the 80% APFO water adequacy threshold. This justification should link the chosen reserve margin operational requirements, such as expected peak to low usage swings (i.e. monthly 10% or 15% seasonal variances), system wide “Real Loss” estimates or measures for leakage from distribution mains and service connections or other necessary technical capacity reserves to protect the system during maintenance and other emergencies as staff determines appropriate.

In my opinion: Linking the water system capacity adequacy threshold to defined operational needs strengthens the legal defensibility of the entire ordinance, given the core purpose of the APFO is to serve as an enforceable adequacy checkpoint by planners to protect existing water service levels and ensure appropriate drinking water infrastructure readiness for growth.

1.3. Formalizing Total Water System Capacity Calculation in Consideration of Likely Future System Resources

Issue: The ordinance must pre-emptively define how water system capacity will be calculated if/when the Town incorporates external water sources (e.g., a potential Charles County water system interconnection).

Recommendation for Inclusion: The ordinance must include a formula defining how Total System Capacity is determined for the purpose of the "80%" adequacy threshold calculation, explicitly stating that it equals the systems combination of all secure, quantifiable drinking water sources:

> Simplified version is essentially (groundwater monthly capacity + interconnect pipe monthly capacity) = total system monthly capacity

In my opinion: This establishes a clear, objective view for applicants regarding the expansion capacity relative to drinking water available for new Adequate Public Facilities Study (APFS) reviews.

2. Water Capacity Operational Transparency and Process Integrity

Enhancement to transparency and formalize the use of objective data reducing potential confusion and unnecessary administrative complexity.

2.1. Mandate For Town to Publish a Water Capacity Report

Issue: The proposed process currently requires the applicant to prove adequacy, but the necessary data (current capacity usage and committed capacity) is opaque. Town water system capacity is not well understood by residents, applicants, nor policy makers and stakeholders at the Town, County and State levels.

Recommendation for Update: Mandate the Town's Chief Executive Officer (CEO) to regularly publish (i.e. bi-annually) a Water System Capacity Report. This report is needed in my view as the single authoritative source for APFS evaluations. This is in addition to, or aligned with, other regulatory reporting requirements for municipal water systems the Town may be subjected to by State and Federal regulations.

Required "Water System Capacity Report" Content: Must clearly detail all components necessary to assess the current adequacy status against the total water system APFO adequacy threshold (i.e. 80%):

- Total System Capacity: Baseline of water System Infrastructure Capacity. This is the baseline number the § 191.91(B) percentage APFO water adequacy threshold is applied against.
- Assigned Water Capacity: Monthly draw allocations for all existing residential and commercial structures.
- Reserved Water Capacity: Monthly draw allocations recorded for all approved plats or permitted structures prior to construction (explicitly including the expiration date as per the three-year guarantee period under § 191.92.
- Available Unassigned Water Capacity: The remaining monthly draw allocation available for new APFS approvals.
- Water Capacity Performance Metrics: Aggregate metrics for actual water system delivery (actual usage vs. permitted draw). Inclusive of standardized formats for regular reporting of the operational elements used to justify the water adequacy threshold.

2.2. Formalizing the Use of Water Capacity Data for APFO Compliance Approvals

Issue: To reduce ambiguity and by building on the recommendation to regularly publish a standardized Town Water Capacity Report it should be clear what data is to be used to assess adequacy of public water facilities.

Recommendation for Ordinance Mandate: The ordinance should explicitly mandate that the most recently published Water System Capacity Report shall serve as the exclusive and authoritative basis for Town Staff, Planning Commission or relevant approving body when evaluating whether an applicant's proposed development complies with the adequacy standard defined in § 191.91 (B).

2.3. Reinforcing Water System User Protection While Ensuring Capacity for Approved Growth

Issue: The primary policy intent § 191.91is to ensure water supplies serving existing residential and business users are not adversely affected in service of the towns growth needs in alignment with the Towns Comprehensive Plan goals

Recommendation for Reinforcement: Recommend explicitly incorporating language within the Standard for Adequacy § 191.91(B) that frames the adequacy threshold (i.e. 80%) as the mechanism designed to safeguard the Town's ability to provide service to its existing user base (residential and commercial) before new demand for growth is approved. Large development applicants subject to this ordinance and the requirement for an APFS is intended to ensure the Town and property owners/developers enter into agreements that are supported with clear

capital improvement plans to reduce risk to all parties, residents, businesses, the Town, and applicants who are all making significant investments in our community.

In my opinion: It is important for future Town staff, Planning Commissions, and Town Councils to be compelled by code to address needs for infrastructure planning and investments to best serve the public good.

3. Water Policy Alignment and Mitigation Mandates

Alignment to the Charles County Adequate Public Facilities Manual

3.1. Clarifying the Mitigation Mandate for Physical Capacity

Issue: If the water capacity limit is exceeded, § 191.94 mandates denial or mitigation via a legally binding agreement.

The proposed ordinance language focuses exclusively on supply side mitigations which *"fund, construct, and provide bonding for all new or upgraded facilities."* The current language prevents a large site developer from proposing potentially superior, on-site, "demand-side" solutions that conserve water and effectively reduce the necessary APFO capacity allocation for that applicants' project.

Recommendation To Discuss Merits of Demand Side Innovations to Allowable Mitigations Section of Code: The rigid mitigation language of §191.96 (C) defining mitigation solely as the construction or upgrading of Town dedicated physical facilities may create an unintended disincentive for innovative water conservation designs in future large developments.

I also acknowledge this could put the Towns capacity at risk if an applicants innovation for reduced allocations does not perform as expected or is not maintained in practice following construction.

This recommendation also assumes the MDE would allow for assessment or these proposed demand side mitigations and allow changes to the State permitted allowable allotments by housing unit type (i.e. 250gal/day for a single family home). Our APFO could, for large project plans, recognize demand side capacity mitigation solutions like advanced greywater recycling, rainwater harvesting, or other low impact development techniques that demonstrably and verifiably reduce a project's required water capacity allocation. The ordinance would need to explicitly clarify that verifiable, permanent capacity reduction achieved through onsite, engineered conservation is an equally valid and desirable form of mitigation, subject to technical review by Public Works, the Planning Department and gain concurrence by State agencies regarding adjusted drinking water capacity allocations for a specific project and housing type.

3.2. Water Policy Alignment Between the County APFM and La Plata's APFO

Issue: The proposed APFO explicitly states "*The Town of La Plata shall be the sole provider of all water and sewer facilities for new and existing developments".* The Charles County Adequate Public Facilities Manual contains requirements for addressing water supply to developments in the county creating a potential for misunderstanding and unnecessary complexity for applicants and planning commissions and other governing bodies when evaluating proposed development.

Recommendation for Clarity on Policy Alignment with Charles County: Since the Town is established as the "sole provider" of all water facilities, clarify in the ordinance that the Charles County Adequate Public Facilities Manual section on water does not apply to applicants within the Towns municipal boundaries. Furthermore, it should be made clear in the Town ordinance that the La Plata APFO prevails as the sole public facilities adequacy compliance regulation that is applicable within the boundaries of the Town regarding water capacity. I recommend we gain the Counties concurrence including language updates that align to this recommendation within a future County APF-Manual update.

4. Addressing APFO Adoption Gaps and Legacy Projects

(New APFO Section, With "Sunsetting" Feature)

4.1. Create, In Code, A Temporary Mitigation Pathway for Pre-Existing Plat Approvals

Issue: Projects, in La Plata, that received Preliminary Plat or Site Plan Approval prior to the effective date of this APFO would be exempt from the new adequacy review process, yet they are simultaneously blocked from final permits due to the very water capacity shortfall that necessitates this ordinance. Without a specific mechanism, these "legacy" projects are effectively halted, risking litigation and hindering approved planned growth, which will eventually if not addressed result in a variety of negative impacts to the Town, its residents, and it's businesses.

Recommendation for Inclusion: Add a temporary, dedicated section to the APFO (§191.99, or similar) to create an "Application For Mitigation Only" (AFMO) process for these legacy projects. This section would be governed by a Sunset Clause to ensure it expires once the current capacity crisis is resolved or the transition period for legacy projects ends.

Proposed Language for Staff to Consider as a Concept for §191.99 – APFO Transitional Provisions for Pre-Existing Capacity Shortfalls:

A. Eligibility and Term: This transitional section should apply exclusively to project applicants that have received a valid Preliminary Plat or Site Plan Approval from La Plata's Planning Commission prior to the adoption date of Towns APFO. This section shall automatically be repealed and removed from the Town Code one (1) year after the effective date of this Ordinance, or upon the Town Manager's determination that the water capacity shortfall for legacy projects as identified in the required APFO Water System Capacity Report has been fully resolved, whichever is later.

B. Application For Mitigation Only (AFMO): Eligible applicants may submit an AFMO for capacity assignment. The AFMO shall not require a full Adequate Public Facilities Study (APFS) but must demonstrate that the applicant will work with the Town to mitigate 100% of the currently lacking capacity allocation needed to unblock their final plat or construction permits.

C. Mitigation Requirements and Fees: The AFMO shall propose a mitigation strategy (Supply-Side or Demand-Side) consistent with the standards defined in §191.96 (C) and §191.94. The AFMO shall be subject to a special, one-time Mitigation Only Application Review Fee, which shall cover the administrative and technical review costs incurred by the Town.

D. Capacity Assignment and Sequencing: Upon approval of the AFMO and the applicant securing a legally binding Adequate Public Facilities Agreement (APFA) and required bonding, the necessary capacity shall be permanently assigned to the project and guaranteed for three years, consistent with §191.92. All funds collected via the AFMO process (including Fee-in-Lieu payments) shall be segregated and dedicated solely to priority water capacity projects to resolve the current system shortfall.

Sewage Treatment Infrastructure Capacity

1. Defining the Sewer Capacity Standard (Clarity of § 191.90)

This section focuses on ensuring the core adequacy standard for the sewage system is clear and technically precise.

1.1. Clarifying the Adequate Sewage Capacity Measurement Metric Contained in (§ 191.90(B))

Issue: The core regulatory standard relies on *"eighty percent (80%) of the plant's maximum currently permitted capacity"* (§ 191.90(B)). As I have come to understand it wastewater treatment capacity is typically defined by system

throughput flow. If there are other capacity throughput metrics that are decision points for staff and policy makers those should be identified.

Recommendation for Updated Language: I recommend amending § 191.90(B) to specify the primary metric of measurement for "maximum currently permitted capacity" as the maximum permitted flow (measured in Million Gallons per Day or MGD), as defined by the State of Maryland. Defining the 80% benchmark by the most common limiting factor (MGD flow capacity) removes technical ambiguity, preventing misunderstanding over the adequacy determination.

In my opinion: Relying solely on the generic term "capacity" introduces technical ambiguity regarding the actual capacity standard being used to assess and regulate the adequacy determination of the Towns wastewater treatment plant.

1.2. Requiring Technical Justification for the 80% Sewer System Capacity Threshold

Issue: The origin of the 80% sewer capacity threshold standard lacks a technical basis within the draft code, making it vulnerable to challenge if viewed as arbitrary. My understanding from previous briefings on the sewage plant is the 80% threshold is sound. My belief is we should codify that basis in code as I recommended within the water system capacity APFO section.

Recommendation for Staff Action: The Town Manager/Public Works should document the technical justification for the 80% APFO sewage treatment capacity for adequacy threshold. This justification should link the chosen reserve margin to documented industry best practices and take into account issues like I&I or other capacity risk factors to protect the system during maintenance or other emergencies.

In my opinion: Linking the sewer system capacity adequacy threshold to objective operational data strengthens the legal defensibility of the entire ordinance, given the core purpose of the APFO is to serve as an enforceable adequacy checkpoint to protect existing sewer service levels and ensure appropriate wastewater infrastructure readiness for growth.

2. Sewer Capacity Operational Transparency and Process Integrity

This section addresses the need to increase transparency to reduce administrative complexity.

2.1. Mandate For Town to Publish a Sewage Capacity Report

Issue: The lack of a transparent, shared data source for sewage treatment plant capacity forces residents, applicants, town staff, and policy makers to rely on assumptions or other nonstandard information to make adequacy assessments.

Recommendation for Amendment: Mandate the Town's Chief Executive Officer (CEO) to regularly publish (i.e. bi-annually) a sewage treatment System Capacity Report.

Required Report Content: This report must clearly detail all components necessary to assess the current adequacy status against the total sewage treatment system APFO adequacy threshold (i.e. 80%):

- Total maximum capacity: As a monthly or daily metric as deemed appropriate by staff.
- Assigned: Sewage treatment capacity for existing structures
- Reserved: Capacity for approved projects including the three-year allocation guarantee expiration date as per § 191.92 (A).
- Available: Unassigned capacity calculated against the 80% threshold.

2.2. Formalizing the Use of Sewage Treatment Infrastructure Capacity Data for APFO Compliance Approvals

Issue: To ensure fair and consistent capacity analysis, the Town must explicitly define which metrics are authoritative for all planning decisions and specifically the APFS reqquirment. To reduce ambiguity and by building on the recommendation to regularly publish a standardized Town Sewage System Capacity Report it should be clear what data is to be used to assess adequacy of sewage treatment facilities.

Recommendation for Ordinance Mandate: The ordinance should explicitly mandate that the most recently published Sewage System Capacity Report shall serve as the sole, authoritative basis for approving Adequate Public Facilities Studies (APFS). It may be practical for the CEO to consolidate the Capacity Reports for water and sewage systems because of the strong linkage of requirements for these municipal service systems.

3. Sewer Policy Alignment and Mitigation Mandates

3.1. Clarifying the Mitigation Mandate for Physical Capacity

Issue: The rigidity of §191.96 (C), which mandates that developers must construct mitigation facilities, could compromise the Town's ability to use public financing (State/Federal loans/grants) for major capital projects in the future, because those funding paths often requires the Town to manage construction under strict public procurement protocols.

Recommendation for Flexibility: Amend §191.96 (C) to provide the Town with the flexibility to accept mitigations from applicants via one of two methods, with the choice resting solely with the Town Manager/Planning Department Director:

1. Developer Construction and Dedication (as currently defined): For smaller, localized capacity upgrades. *(i.e. a neighborhood return pump station)*
2. Fee-in-Lieu of Mitigation: For major, system-wide mitigation projects, the Town shall have the option to accept a payment equivalent to the applicant's pro-rata share of the total estimated cost of the required mitigation project.

Fee-in-Lieu Requirements: This fee should be based on a third party engineer's estimate, deposited into a dedicated segregated fund, and strictly used by the Town for the construction of the specific mitigation project. This gives the Town flexibility to be compliant with State and Federal funding requirements if the applicants fee in lieu is being used as a proportional contribution to a larger infrastructure capital improvement project where outside funding is being sought. Upon payment, the developer's required capacity will be assigned and guaranteed.

In my view: Providing the Town with this Fee in Lieu of Mitigation option is critical for effective capital project management and ensures that major sewer capacity improvements are executed through the most compliant and fiscally responsible mechanism available.

Traffic Infrastructure Capacity *(Town Streets)*

1. Defining the Traffic Adequacy Standard (Clarity of § 191.88)

Technical precision and administrative predictability regarding the required Traffic Impact Study (TIS) methodology and scope.

1.1. Clarifying and Aligning the Required Traffic Study Methodology with County Standards (§ 191.96 (A))

Issue: The proposed Town APFO code creates a conflict/ambiguity by listing the Critical Lane Volume (CLV) "or" the Highway Capacity Manual (HCM) as acceptable standards for use by applicants. Additionally, this is not aligned with the Charles County Adequate Public Facilities Manual (APFM) which mandates a specific tiered approach.

In the County APFM, CLV is used as an initial screening tool and HCM is only required and adopted as the main analysis method when CLV thresholds are exceeded. Because in previous public testimony during my tenure on the Planning Commission applicants have indicated to me they have to use the County manual even inside La Plata's incorporated boundaries, to me it seems that without

adopting the County's specific application hierarchy, the Town's code invites inconsistent analysis and potential applicant challenges regarding which method is authoritative within the Town.

My understanding of the County APFM Standard for Traffic Studies: The County APFM dictates a two tiered analytical process for intersections:

1. Initial Screen: All intersections subject to the County APFM must be analyzed using the Critical Lane Volume (CLV) analysis.
2. Main Analysis Trigger: For intersections with signals, the analysis must escalate to the latest edition of the Highway Capacity Manual (HCM) if the CLV exceeds 1,300 VPH (Vehicles Per Hour). Once the HCM analysis is triggered, it becomes the main method of analysis for the County APFM required traffic study.
    - Trip Generation Standard: All trip generation must use the latest edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual.

Recommendation for Update to Proposed La Plata APFO: In order to reduce complexity for applicants and interjurisdictional coordination on road impacts between the Town, County, and State I believe we must align our standards for traffic studies. The Town's proposed APFO should abandon the "CLV *or* HCM" language in favor of standards that are aligned to the county APFM related to Traffic.

a. Use of CLV as a Screening Tool: Specify that all intersections must first be analyzed using CLV to determine if the Traffic Impact Study (TIS) requires a deeper HCM analysis.
b. Mandatory HCM Trigger: Adopt the County's specific threshold: "If the Critical Lane Volume (CLV) exceeds 1,300 VPH, or for all unsignalized intersections, the analysis must be performed using the latest edition of the Highway Capacity Manual (HCM), which shall serve as the main method of analysis for the Traffic Impact Study (TIS) included in the Adequate Public Facilities Study (APFS)."
c. Mandatory ITE Trip Generation: Explicitly require all trip generation figures to be derived from the latest edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual for consistency with the County.

In my view: Direct adoption of the County's precise methodology strengthens the legal defensibility of the Town's APFO, ensures full compatibility with the County's data and enforcement practices, and eliminates the conflicting methodology interpretations present in the current draft APFO. This creates a single, predictable, and technically rigorous standard for all applicants and I believe will help plan mitigation strategies that may involve coordination between

an applicant, the Town, County, and State SHA to understand an identified impact within their current analysis and engineering processes.

1.2. Defining the Traffic Study Area "Environs" for Predictability

Issue: The adequacy determination and the Traffic Impact Study (TIS) requirements in the proposed APFO frequently use the term "environs" to define the required study area. However, without a firm definition (e.g., a specific radius or zone list), the developer is forced to rely entirely on the Planning Director's initial determination. In my experience to date as the Council Liaison to the Planning Commission questions about the scope of traffic studies has come up several times. Within the proposed APFO the absence of an explicit traffic baseline study scope undermines my impression of this being a clear, predictable APFO requirement and in my opinion could lead to misalignment of expectations, scope creep or unexpected administrative burden causing delays, undue costs, and overall frustration with the process.

Recommendation for Inclusion: As a recommendation for staff our ordinance could include language defining a minimum, predictable scope for the TIS that must accompany the APFS. This scope should require the study to include all adjacent signalized intersections and the next two principal arterial connections from the site entrance, while explicitly reserving the Planning Director's right to expand the scope based on the project's demonstrated trip generation or unique circumstances.

In my view: Establishing a clear baseline for the study area provides a needed element of understanding for policy makers and predictability for applicants in their cost and time estimates, which I hope ultimately strengthens the integrity and consistency of the Adequate Public Facility Study process.

1.3. Streamlining Mitigation Mandate Language and Focus

Issue: Section 191.88 (D) (2) (a) presents the Planning Commission with two primary options if the LOS 'C' standard is not met: (1) Require developer mitigation OR (2) require the project to be "scaled back." The direct reference to "scaling back" introduces a subjective, discretionary element of denial that appears to contradict the objective, predictable framework established by the detailed mitigation procedures in § 191.94.

Recommendation for Amendment: Simplify language in § 191.88 (D) (2) (a) by removing the explicit reference to the "scaled back" option and instead solely direct the applicant to the detailed, legally binding mitigation procedures defined in § 191.94, which requires an Adequate Public Facilities Agreement and secure bonding for all necessary physical improvements. It is my assumption that because the standards for public facilities adequacy will be clearly defined, applicants won't propose to proceed seeking approval by the Planning

Commission or other appropriate body with projects that don't meet their own assessment of being able to meet the adequacy standard based on our clear assessment factors, therefore "scaling back" is an implied action they will make if their project is likely to not pass the adequacy test making language in the new code to that effect unnecessary.

In my opinion: A core purpose of the APFO is to compel future applicants to fund and or construct necessary public infrastructure to protect existing service levels as growth occurs. Focusing the language on a secured mitigation path in § 191.94 strengthens the policy's objective foundation and reduces the appearance of arbitrary denial criteria.

2. Process Transparency and Integrity

Enhancement to transparency and formalize the use of objective data reducing unnecessary administrative complexity.

2.1. Formalizing the Use of Data for APFO Compliance Approvals

Issue: To ensure fair and consistent traffic study results, Town staff should not have to verify proprietary or unverified traffic count data provided by an applicant. All adequacy evaluations must start from a common, sanctioned baseline identified in code.

Recommendation for Ordinance Mandate: The ordinance should explicitly mandate that all Traffic Impact Studies (TIS) submitted by an applicant for an APFS must use the standards and formats prescribed.

In my opinion: Requiring the use of standardized baseline data ensures process integrity, reduces the administrative burden of verifying input data from multiple sources, and prevents the risks to the town and the applicants expected processing timelines associated with traffic studies that rely on non-standard traffic count methodologies.

2.2. Reinforcing Financial Transparency and the Need for a Consolidated APFS Review Fee

Issue: While the existing Fee Schedule Ordinance (provides clear, tiered fees for the Traffic Impact Study (TIS) Review, it does not currently account for the staff review of the proposed Adequate Public Facilities Study (APFS). The APFS is a necessary, overarching report that requires Town Staff review across multiple domains (Traffic, Water, Sewer, and Schools). The lack of a defined fee for the APFS creates a gap and risks administrative complexity by requiring developers to pay for three or four separate review fees for what is fundamentally a single more comprehensive report.

Recommendation for Amendment/Inclusion: I recommend staff consider a new APFS Review Fee be designed as a single, consolidated fee that replaces the need for applicants to pay separate fees for Traffic TIS reviews and also avoids additional separate fees for Water, Sewer, and Schools technical reviews when an APFS is required.

Potential Language Concept for Inclusion (to be used by Staff in future Fee Schedule update): *In cases where a comprehensive Adequate Public Facilities Study (APFS) is required, the applicant shall pay a consolidated APFS Review Fee. This single fee shall cover all associated technical reviews for Traffic, Water, Sewer, and School Public Facility Adequacy, and shall expressly exempt the developer from paying the separate, individual review fees for Traffic Impact Studies (TIS), Water Adequacy Studies, and Sewer Adequacy Studies.*

In my view: This reinforces the Town's commitment to transparent and predictable administrative costs while avoiding unnecessarily complex fee schedules. Consolidating the review fees also ensures the cost structure is aligned with the required APFS document, simplifying compliance and administrative tracking.

3. Policy Alignment and Technical Inconsistency

Alignment of the Town's APFO with its status as a state designated Preferred Development Area (PDA) to reduce regulatory layering and conflicts in code.

3.1. Tiered Traffic Standards for System Wide Consistency & Avoidance of Unintended Regulatory Burden

Issue: The current draft code creates unnecessary requirement layering and potential rework cost due to two primary conflicts:

- **Methodology Conflict:** The Town's code is vague (CLV *OR* HCM), while the County APFM has a specific, tiered analysis structure.
- **Classification Conflict:** The County APFM effectively misclassifies in County APFM Appendix B, the Town of La Plata (a State designated PDA/growth area) under the, lower-threshold "rural" standard (1,150 VPH CLV), rather than the appropriate Urban/Sub-urban standard (1,300 VPH CLV) used in all other PDA growth areas in Charles County. My reading of the County APFM especially Appendix B forces a difference in the application of county standards on projects within the Town of La Plata when compared to other areas of the County with similar zoning and state priority funding designations. In my view this is potentially problematic because it conflicts with the Town's actual PDA designation that has been in place for several decades. It makes me wonder if there is an impact from this difference

in classification of how La Plata is evaluated for targeted funding of transportation projects at least at the county level.

Recommendation for Updated language: The Town's APFO should adopt an approach in § 191.96(A) to unify the methodology across all road types (Town, County, and State) while enforcing the correct (Urban/Sub-urban) classification for the TIS trigger. Additionally, we will need to establish an authoritative source for an index of Town Streets vs County or State Roads. *(for example counterintuitively to some, Washington Ave is a County road and our code should offer the authoritative source to applicants and stake holders of what those designations are as this code impacts how standards are applied based on common understanding of road type.)*

Proposed Ordinance Language Concept for Update to Proposed §191.96(A):

§ 191.96(A) Standards for Traffic Studies – Consistency and Authority.

"All Traffic Impact Studies (TIS) submitted as part of an Adequate Public Facilities Study (APFS) shall be conducted in accordance with the following criteria to ensure consistency across jurisdictions and prevent conflicting standards:

1. Methodology Alignment (County and State Roads): The methodology for TIS analysis affecting County roads and State Highways shall conform to the latest edition of the Charles County Adequate Public Facilities Manual and the ITE Trip Generation Manual.
2. Town Roads and Minimum LOS: For roads under the Town's sole jurisdiction, the standard for adequacy shall remain Level of Service (LOS) 'C' for all affected segments and intersections. The technical analysis for these Town roads shall utilize the ITE and HCM methodologies as described below in alignment with County APFM.
3. TIS Trigger Threshold (Corrected Classification): For the purpose of triggering a comprehensive Highway Capacity Manual (HCM) analysis on all affected road networks (Town, County, and State), the Town shall exclusively utilize the Urban/Sub-urban Critical Lane Volume (CLV) threshold of 1,300 VPH. This standard reflects the Town's status as a designated growth center and shall prevail over any conflicting tiered classifications within the Charles County Adequate Public Facilities Manual including Appendix B."

In my Opinion: This proposal resolves the inherent conflicts identified by creating a unified, predictable TIS process for applicants. Applicants conduct one

study using one common methodology (aligned to the County's), but they use the Urban/Sub-urban CLV threshold (1,300 VPH) as the trigger for complex analysis across the entire study area, thereby reducing the administrative and financial burden associated by multiple jurisdictional standards while preserving the Town's authority over its internal LOS standards. My hope and intent is that by using common standards applicants can engage with Town, County and State highway authorities to address mitigations at all levels of the complex road jurisdictions that converge within the municipal boundaries of La Plata.

County School Seats Capacity

1. Harmonizing Conflicting Regulatory Timelines for Allocations

This section addresses the inherent structural conflict between the expiration of utility allocations and the potential wait times for school capacity.

1.1. Resolving A Capacity Allocation Timing Trap (§ 191.92 vs. Chapter 173)

Issue: Current APFO language creates an administrative timing trap for some projects. Water and sewer allocations expire in 36 months, but mandatory school seat deferrals can legally block a project for up to 72 months.

EXAMPLE - The 30 Month Status Conflict:

Consider a project that secures its water/sewer allocations at preliminary plat (establishing a 36-month vesting window) but fails the school adequacy test prior to final plat and permits. Under Chapter 173, that project is placed on a mandatory deferral list for up to six years.

- At Month 30: The developer is legally prohibited from obtaining a building permit due to school seat constraints.
- At Month 36: The "Regulatory Cliff" hits. The utility allocations expire and are forfeited, even though the developer was legally barred from using them.

If school seats finally open in year four or five, the applicant is forced to restart the entire utility APF Study from scratch. This isn't a failure of the developer to progress; it is a synchronization failure between Town and County regulations. One clock runs out while another requirement stops the applicant's ability to act.

In my view: Our APFO must reconcile this mismatch. We cannot have a vicious cycle where an applicant is penalized by having to restart parts of the process for a delay mandated by the Town and County. This introduces severe financial risk for entities acting in good faith to meet La Plata's Comprehensive Plan goals and comply with the Maryland Land Use Article and Town Code.

A Note on State School Funding Priorities: We must also recognize that school construction funding in Maryland is not based solely on overcrowding. The state uses a complex set of State Rated Capacity (SRC) factors, including building condition, number of trailer classrooms, health and poverty levels. I believe if we adopt this into code, we must commit to coordinate closely with Charles County to ensure our local APFO doesn't unintentionally lower the funding priority for County schools that serve La Plata families.

An Example for Consideration, Annapolis: The City of Annapolis provides an interesting policy model for aligning APFO regulatory expectations with municipal government performance:

- Six-Year Achievability: Annapolis code states that APFO adequacy standards should be achievable within a six year timeframe.
- CIP Alignment: Annapolis City code requires the annual Capital Improvement Program (CIP) to be based on a plan that ensures deficiencies are corrected within that same six year timeframe.

In my view: La Plata over the past several decades has approved growth in line with its Comprehensive Plan but has at times failed to follow through with the infrastructure investments to support it.

I would like to see us consider the implications of using the "Annapolis Model" for CIP planning in La Plata. This places the accountability on the Towns elected leaders *(through budgets)* and municipal planners *(through engineering)* ensure our infrastructure supports our residents, businesses, and our Towns strategic goals.

Pros and Cons – Draft APFO and School Seat Allocation Amendments

PROS

- Strengthens protection of existing infrastructure by tying approvals to actual water, sewer, road, and school capacity.
- Improves transparency and defensibility by using standardized County student yield data instead of subjective calculations.
- Protects existing residents from overcrowded schools and degraded public services.
- Shifts infrastructure costs to developers through clear mitigation and bonding requirements.
- Creates predictable, formula-based decision-making that reduces disputes and appeals.
- Improves coordination with County capital improvement planning and school construction timelines.
- Supports long-term fiscal sustainability by preventing growth that outpaces infrastructure capacity.
- Provides a structured path for large developments (100+ units) through Development Agreements.

CONS / RISKS

- Elimination of the guaranteed minimum school seat allocations may significantly slow residential growth during constrained years.
- Zero-allocation years could disproportionately affect small builders and individual lot owners despite wait-list protections.
- The 6% proportional cap may be viewed as overly restrictive for a designated growth area.
- Increased developer costs may translate into higher housing prices or reduced housing supply.
- Heavy reliance on County data and CIP schedules limits Town flexibility if projects are delayed.
- Added administrative complexity requires consistent annual coordination and verification.
- Potential political and stakeholder pressure from the development community.

Dr. Jill A. Hudnell, DNP

Hi Don,

Thanks for the reminder! I meant to send it over this weekend but had some Internet connectivity issues that derailed my entire family- as I'm sure you could imagine :)

Overall, I find the APFO documents provided for review to be conceptually strong with the best interest of town services at the forefront. I do agree with Chair Banks' thought that sewer and water capacity limits may pose potential issues down the line; however, I think that's something that we're all in tune with at the present moment.

One thing that I anticipate as a request for public clarity would be if this applies to development pending PC review or if it's just newly submitted development.

All in all, I appreciate the creativity and work that went into this document/project and think it's well suited for the Town's current position. I don't have any pressing concerns or considerations.

Have a nice holiday!

Emily Whale

TOWN OF LA PLATA
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PLANNING COMMISSION STAFF REPORT

DATE: January 6, 2026

TO: Honorable Chair and Members of the Planning Commission

FROM: Don Dooley, Planning Director

PREPARED BY: Don Dooley, Planning Director

APPLICATON NO.: **Zoning Text Amendment (ZTA) 01-2026 – Adequate Public Facilities**

APPLICANT: Town of La Plata, Maryland

OWNER: N/A

PROJECT LOCATION: Town-wide

REQUEST: To add Article X (Adequate Public Facilities Requirements) to Chapter 191 (Zoning) of the La Plata Municipal Code for the purpose of providing regulatory provisions to require adequate water, sewage, roads, and school seating capacity for new development in the Town of La Plata. Zoning Text Amendment (ZTA) 01-2026 also proposes to amend Chapter 173 (Subdivision and Land Development) in Article IX (School Seat Allocation Policy) of the La Plata Municipal Code pertaining to regulations for adequate school seating capacity for new development.

BACKGROUND

The La Plata Town Council has expressed interest in creating requirements for new development to ensure adequate public infrastructure and services are in place to support new construction in Town so as not to dimmish the quality of life for residents, businesses and visitors to La Plata. The Council is particularly interested in developing and retaining minimum public infrastructure standards pertaining to roads, water, sewage and school seating capacity. This will ensure new development does not impact minimum infrastructure thresholds set by the Town. These goals are not uncommon in other communities throughout Maryland which have adopted their own adequate public facilities ordinance (“APFO”) under one, cohesive, code or as a series of separate codes. By doing so, communities are creating a regulatory tool that promotes smart growth management so new development does not outpace a community’s ability to support it.

While such ordinances may slow or defer some development, adequate public facility ordinances are not, inherently, designed to discourage development, only manage it. This is critical for growing communities, like La Plata, that are experiencing a significant influx of new development.

Based on Council direction, staff is proposing, under Zoning Text Amendment (ZTA) 01-2026, to add Article X (Adequate Public Facilities Requirements) to Chapter 191 (Zoning) of the La Plata Municipal Code for the purpose of providing regulatory provisions to require adequate water, sewage, roads, and school seating capacity for new development in the Town of La Plata. Zoning Text Amendment (ZTA) 01-2026 also proposes to amend Chapter 173 (Subdivision and Land Development) in Article IX (School Seat Allocation Policy) of the La Plata Municipal Code pertaining to regulations for adequate school seating capacity for new development.

As discussed above, Zoning Text Amendment (ZTA) 01-2026 does not propose to codify minimum infrastructure standards for roads, water, sewage and school seating capacity under a single ordinance. This is because school seating capacity is already addressed in Chapter 173 (Subdivision and Land Development) of the La Plata Zoning Code. Therefore, Zoning Text Amendment (ZTA) 01-2026 would, in part, modify this ordinance in conjunction with the development a separate (new) ordinance to combine the topics of roads, water, and sewage under a single ordinance through the proposed addition of Article X (Adequate Public Facilities Requirements) to Chapter 191 (Zoning) of the La Plata Municipal Code. Article X also proposes to cross-reference school seating capacity under Chapter 173.

For technical accuracy and clarity, it is worth noting that references to Zoning Text Amendment 01-2026 as being the Town's "Adequate Public Facilities Ordinance (APFO)" is not accurate. It is really two separate ordinances (one existing and one proposed) under the administrative processing umbrella of Zoning Text Amendment (ZTA) 01-2026.

DISCUSSION

Draft Public Facilities Standards

Since staff has written a comprehensive evaluation/explanation for the proposed (draft) adequate public facilities standards pertaining to roads, water, sewage, and public school seating capacity (under Attachment No. 1), no additional comments are provided for the proposed text amendments herein.

Public Hearing

All proposed additions, modifications, and deletions to the Town's Municipal Code require a noticed public hearing. Therefore, Zoning Text Amendment (ZTA) 01-2026 has been advertised, as required by State Law, to provide the opportunity for the public to comment on the proposed changes being considered to the La Plata Municipal Code under Chapter 173 (Subdivision and Land Development) and Chapter 191 (Zoning). Therefore, during

the Planning Commission Meeting of January 6, 2026, the Commission must open the public hearing to receive public comments on Zoning Text Amendment (ZTA) 01-2026. However, staff recommends that the public hearing not be closed during the January 6, 2026, Planning Commission Meeting, even if no one speaks. Instead, staff recommends the public hearing be carried over to the next regularly scheduled Planning Commission Meeting of February 3, 2026. The purpose of doing so is to ensure the public has adequate time to evaluate the proposed text changes, under Zoning Text Amendment (ZTA) 01-2026, to address the Commission as the holidays may be an impediment to some public participation. It will also provide the public with an opportunity to read and comment on potential changes the Commission may direct staff to make on Chapters 173 and 191 after the January 6, 2026, Planning Commission Meeting.

Planning Commission Comments

To facilitate Planning Commission analysis and discussion on the proposed text changes to the La Plata Municipal Code, under Zoning Text Amendment (ZTA) 01-2026, Commissioner comments have been received by staff and are incorporated within Attachment No. 4 to this report.

Town Council Meeting

For public and Planning Commission awareness, the Town Council is tentatively scheduled to place on their January 13, 2026, Agenda a discussion concerning adequate public facilities for roads, water, sewage and school seating capacity. However, this is not a Town Council Public Hearing on Zoning Text Amendment (ZTA) 01-2026 and no Council action will occur. However, staff will provide a timely summary of Council comments for the Planning Commission's edification in preparation of its regularly scheduled meeting on February 3, 2026.

Once the Planning Commission makes a formal recommendation to the Town Council on Zoning Text Amendment (ZTA) 01-2026, the Council will hold its own, de novo, public hearing on the matter and take final action on Zoning Text Amendment (ZTA) 01-2026.

RECOMMENDATION

Staff recommends the Planning Commission provide feedback on Zoning Text Amendment (ZTA) 01-2026 and continue the public hearing for the project to the next regularly scheduled Planning Commission Meeting of February 3, 2026, to facilitate additional public feedback.

ATTACHMENT(S)

1) Agenda Item Summary Document
2) Draft Text Amendment Chapter 173 (Article IX. - School Seat Allocation Policy)
3) Draft Text Amendments to Chapter 191 (New Article X. - Adequate Public Facilities Requirements)

4) Planning Commission Comments from: 1) Chair Banks, 2) Commissioner Miller, 3) Council member Guttenberg, 4) Vice-Chair Hudnell

-End of Report-

CHARLES COUNTY GOVERNMENT FEEDBACK ON DRAFT TOWN OF LA PLATA APFO

From: Jason R. Groth <GrothJ@charlescountymd.gov>
Sent: Sunday, February 1, 2026 8:55 PM
To: Chuck Stevens <cstevens@townoflaplata.org>
Cc: Melissa Hively <HivelyM@charlescountymd.gov>; Heather N. Kelley <KelleyH@charlescountymd.gov>; Hunter Zinn <ZinnH@charlescountymd.gov>; Charles R. Rice <RiceC@charlescountymd.gov>
Subject: Re: Town Of La Plata Code Chapter 173 Section 9 Redlines: School Seat Allocations

CAUTION: This email originated from OUTSIDE of the Town of La Plata email system. If the senders name displayed is a Town user, it is NOT legitimate and should be deleted immediately. Do not click links or open attachments unless you are certain this is a legitimate message.

Chuck,

I had forgotten to pass along the following comments from our team, as I had them lingering in my "drafts" folder. I do apologize. They provided the following:

Chapter 173 Notes:

- 173-92A says “ten percent (6%)”
- We have some concern with the Town utilizing the available county-wide capacity within the school system rather than just the schools serving La Plata. This creates a potential challenge in adequately addressing capacity in the La Plata area, where there are currently significant capacity issues. We recognize that the Town is limiting its apportionment to 6%. The question is if the approach is proportional to the impact to the affected school area.
- For clarity, does this presuppose that the County will reserve 6% of the total available before the County *completes its* allocation process? The concern is that there may be double dipping into the available capacity.
- Please clarify if 173-96B is how the Town proposes to address multifamily residential development allocations? In our practice, we address allocation at Site Development Plan and/or Development Services Permit. The building permit stage seems pretty far into the process for a multifamily development. Can you clarify when the multifamily projects go on your “priority list”?
- There doesn’t appear to be a bulk allocation policy, or something equivalent for small lot developments (like our minor subdivisions). We see the Town adopted our exemptions for APF, but the policy doesn’t include what happens with those developments. Can you clarify?

Chapter 191 Notes:

- LOS C for all roads and intersections in the Town is conservative; especially for roads of higher congestion such US 301, MD 6, MD 225, and Rosewick Road, etc. The County

utilizes a "transportation district" that allows LOS D in areas where higher congestion is considered reasonable. That seems appropriate for US 301 and MD 6 as an example.

- I'm glad they're including pedestrian traffic in their APFS. I do wonder how they'll measure that (we don't even have standards for pedestrian APF).
- This section states: "the APFS shall propose, as necessary, all traffic mitigation improvements that will achieve the required level of service for all roadways impacted by the proposed development." We note that it may be very difficult for projects to be able to bring some of their intersections *up* to a C. Due to this challenge, the County focuses on mitigating *the project's impact* versus bringing the intersection up to the desired LOS.
- Also, the proposed language requires the mitigation to "eliminate" impacts, or else the Planning Commission *shall* deny the project. This may not be feasible for a single project to achieve unless it is of considerable scale.

Again, my apologies for the lateness of these comments, but please feel free to reach out to us with any questions.

Best Regards,

Jason

01/28/26

Don,

Below is the information shared that I had prepared. I hope this is helpful as the Town continues to develop your new APF. I understand that the Town's location within Maryland, priorities and vision for development may substantially differ in some aspects from other jurisdictions, so I offer the following for your general consideration and look forward to seeing what the Town ultimately passes for APF. I would be happy to talk more or participate further if at all needed/desired. Feel free to reach out any time.

A few examples around Maryland that have policies you may want to review:

- Howard County - regarding LOS thresholds and having different requirements for different facilities:
  - https://www.howardcountymd.gov/public-works/resource/howard-county-design-manual-volume-iii
    - Section 4.2
      - Level of Service The intersection level of service (LOS) standard for this evaluation for County-controlled intersections is LOS D and the standard for State-controlled intersections is LOS E. The LOS evaluation shall be for the overall intersection.
- Montgomery County - regarding LOS thresholds and having context sensitive requirements in different areas:
  - Breaks the county out into policy areas with different LOS thresholds for adequacy
    - More urban dense areas allow higher levels of congestions
      - In these areas, walkability and lower reliance on vehicles is desired
      - Infrastructure goals focus on pedestrian bike and transit, not adding lanes to reduce vehicle delay
      - https://apps.montgomerycountymd.gov/ccllims/DownloadFilePage?FileName=12341_1_25989_Resolution_20-651_Adopted_20241112.pdf#page=12
        - More rural policy areas, delays limited to as low as 41 seconds per vehicle
          - Vehicle travel is primary and likely only option with long travel distances – delays should stay low
        - More urban areas, delays allowed up to 80 seconds per vehicle (LOS F)
          - Alternative modes available, trips are generally shorter too. Delays may be allowed at higher levels.

        - Transit areas - no vehicle test. It is acknowledged that intersections currently fail and there is not a desire to widen roads for more capacity, nor could development realistically pay to do so.
- Frederick County - regarding mitigation
    - When larger improvements are identified, you determine how much of the capacity the improvement creates is used by the development. If it's a small portion, then the development pays their pro-rata share based on an analysis. Then every development that comes through in that area pays their share until it reaches a certain level and then gets triggered for construction. Even developments that don't trigger a traffic study still have to contribute their share.
        - This could be a good way of establishing large improvements on the books that are needed but not necessarily feasible for one specific development.
        - It also ensures that when you have a lot of small pad uses that may not trigger studies, they are all contributing based on their incremental impact to traffic. You may need multiple properties to develop to realistically fix a corridor, but you will have a hard time getting any single development to move forward if the first developer is on the hook for it all.

Review of ZTA Text: ZTA 01-2026

General clarifications & recommendations

- The APF should detail if changes in use of an existing building are also considered development and subject to the requirements. Typically it is treated the same. A change in use that results in an increase in trips would be evaluated for APF.
- The APF should specify that the trip threshold is based on new trips, which is the trip generation for the proposed development minus the trip generation for the existing development or approved development for which APF has been satisfied (think modification to an existing development that wants to change Phase 2 or 3, etc.)
- Will any trip reduction factors be allowed when determining new trips to determine if study is required?
    - Typically the answer is no, although some jurisdictions do allow for pass-by trip reductions at the scoping stage.
- Define how the study area will be established
    - Some jurisdictions do tiered system:
        - Montgomery County: <250 new peak hour trips = 1 tier = go out 1 significant intersection in each direction. 250-749 new peak hour = 2 tier = go out 1 in each direction, then go out from each of those 1 in each direction. And so on
        - City of Frederick: Study area goes out to any intersection where 50 trips travel through to the development, limited to 1 mile

        - Calvert County: Go out to the first intersection of an arterial with a collector or higher in each direction, limited to 2 road miles in each direction
- Clarify when Saturday or other conditions will be required
    - Retail sites typically subject to Saturday conditions
        - Recommend limiting this when the weekday traffic is higher than Saturday to reduce unnecessary analyses
    - Schools typically need to study the afternoon school peak between 2-4pm
- Many jurisdictions require evaluations of driveway and on-site queueing requirements
    - Even when a site is below threshold for a study, the driveway may need to be reviewed for adequacy
    - On-site queueing can be a critical element impacting roads that wont show up in an LOS based review
        - Examples are schools, drive-thru restaurants, carwashes
        - School pick-up/drop-off management
- Mitigation should be different when an intersection is already over capacity
    - It is not the developments responsibility to mitigate other developments' traffic, only their own. If requirements are disproportionate to a developments impact, then the Town risks facing legal challenges and stifling development where it is desired. When alternatively, impact based mitigation may promote a volume of multiple developments that can cumulatively provide funds to complete necessary improvements.
    - City of Rockville allows developments to increase the v/c at an intersection by up to 0.10 (10%) if it's not failing already. This prevents one development from using up all road capacity without having to provide improvements.
        - If the intersection is already failing, the development can only increase by 0.01 (1%) before mitigation is required. They are then required to mitigate a certain percentage of their impact only, or mitigate to get back to where it was without the development.
            - This allows a very small portion of traffic to go through a failing intersection without mitigation as the impact is ultimately negligible.
    - Any mitigation requirement involving MD SHA ROW should be caveated with, "Subject to SHA Approval". Otherwise, improvement requirements may not be feasible and stall a development where SHA will not approve the required construction.

Section 191.88: LOS C or Better is required – D is failing

- The code should clarify if LOS is based on movement, approach or intersection
    - For signalized intersections:
        - If based on Overall Intersection, then mainline traffic can be prioritized over low volume side streets. Rather than adding more average delay for say 1,000 vehicles just to get to LOS C for a side

street with say 10 vehicles, you allow the side street to be above the threshold but require the overall intersection (weighted average of all approaches) to need to be adequate.

- Since the APF will set a requirement for all intersection in the Town, regardless of who controls the intersection (County, Town or SHA), you should identify different thresholds or default to the County or SHA for adequacy for their facilities.
    - If you have a blanket LOS C requirement, that would mean the Town could not approve a development if a study intersection on Crain Highway were at LOS D, even though you do not control the ROW itself.
- Exempt if 35 or fewer peak hour trips per day
    - This should be clarified as Peak hour or daily
        - 35 trips per hour is a fairly standard requirement, with 50 being the most common in my experience
        - 35 trips per day is not unheard of as a trigger, but it would be extremely harsh and nearly all development would require a traffic study

Section 191.87

- (B): 1,200 SF exempt
    - Uses such as small fast food restaurants and drive-thru coffee shops may fall into this category but be above 35 peak hour trips. The clause leaving it to the Town to still require in some cases would take care of this, but it is nice for applicants to have predictability during the due diligence stage where we might not yet be able to approach the Town to confirm.

- (C) Clarification needed, is it 35 peak hour trips or 35 daily trips?
    - Same as described previously. 35 peak hour trips would be a fair requirement. 35 daily trips would be very harsh and trigger for nearly all development.

- (C)(1): CLV or HCM
    - Specify which is to be used.
        - HCM is industry standard and CLV is being phased out in Maryland.
        - You could require HCM for adequacy and CLVs for informational purposes as SHA does currently still want to see CLVs.

- (C)(3): Add language, "When applicable"
    - Not all components will be desired for all locations. For example, you will not always need on-street parking.

    - (D)(2)(a): There should be other options for mitigating. Otherwise, the Town may be forced to deny development that is in its best interest and could pay its fair share but not fix a problem that is well beyond its proportional impact.

- Pro-Rata share contributions to improvement projects can provide option for mitigating impact and moving development forward where constraints exist that are not caused by the development itself.
- Pay based on impact, other developers do the same. Town, County or SHA could use funds to construct the improvements
    - See Frederick County for example of Escrow Account mitigation method
        - Even developments generating less than 35 trips and exempt from study still have to pay pro-rata share for impact at nearby intersections where improvements have previously been identified

Section 191.93

- (D): Recommend calling out piecemeal development
    - Some jurisdictions specifically call out that project trips at the same development constructed recently, within say 5 to 6 years, must also be accounted for.
        - This prevents smaller additions via separate applications that cumulatively have a larger impact but are never studied for adequacy.
        - City of Rockville has the following provision within their transportation guidelines: "Circumventing the threshold by submitting piecemeal development applications is not permitted. If the applicant submits a new Site Plan Application, at the same location, within a five-year period, the applicant will be required to include all trips generated by both applications in a new study."

Will Zeid, PE **(MD, DC, VA, DE)**
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ZONING TEXT AMENDMENT (ZTA) 01-2026

January 6, 2026

BACKGROUND

- In 2025, the Town Council expressed concern about maintaining minimum quality of life standards for residents as the Town continues to grow.
- The Council recognizes that limited resources and public infrastructure must be appropriately managed to support growth and new development.
- In the fall of 2025, the Town Council directed staff to initiate a zoning text amendment to identify and maintain minimum public infrastructure requirements for roads, water, sewage, and school seating capacity when new development is proposed.

BACKGROUND

- Many towns, cities, and counties throughout Maryland (including Charles County) have already adopted their own “Adequate Public Facility Ordinance(s).”
- Adequate public facility ordinances are an effective way to promote “smart growth” management to ensure new development does not out pace a community’s ability to support it.
- While adequate public facility requirements may slow or defer some development, such ordinances are not designed to discourage development…. only manage it!

BACKGROUND

- Adequate public facility ordinances may be drafted as a single, comprehensive, ordinance or as a series of ordinances.

- At present, the only codified adequate public facility ordinance in the La Plata Municipal Code pertains to “School Seat Allocation Policy” contained in Chapter 173 (Subdivision and Land Development), Article IX.

- Under Zoning Text Amendment (ZTA) 01-2026, staff is proposing to:

  1) Amend & update Chapter 173, Article IX (School Seat Allocation Policy)

  2) Amend Chapter 191 (Zoning) to add Article X (Adequate Public Facilities Requirements) to the La Plata Zoning Code to address water, sewage, and roads.

DISCUSSION

As proposed, Chapter 173, Article IX (School Seat Allocation Policy) is proposed to amend the following Sections:

- 173-92 (Statement of policy and intent);

Deletion of outdated information.

- 179-93 (Definitions);

Definition for “Allocatable School Capacity” revised and “Particularized Student Generation Rate” deleted.

- 173-94 (Establishment of student generation rates);

Section deleted.

- 173-95 (Establishment of school seat allocation and allocation pools);

Revision to text proposed.

- 173-98 (Process for allocation);

Revisions to text for student allocation methodology.

- 173-101 (Appeals);

Minor revision to text for reader clarification.

- The addition of Section 173-102 (Process for Major Development Projects)

Proposes regulations on major development projects (subdivisions) that consist of 100 lots or more to mitigate long-term impacts on the public school system.

DISCUSSION

The proposed addition of Article X (Adequate Public Facilities Requirements), in Chapter 191 (Zoning), is proposed to address minimum requirements for water, sewage, and roads. Some of the key provisions in this draft ordinance include:

- 191-87 (Adequate public facilities required)

Requires major subdivisions and major site plans to demonstrate they will not impact the adequacy of the Town's water, sewage, roads, and school seating capacity. The Ordinance exempts minor subdivisions (four lots or less) and non-residential developments under 1,200 square feet.

- 191-88 (Roads)

Sets the minimum level of service (LOS) for all roadways/intersections in the Town to be maintained at LOS "C." LOS "C" represents a stable flow of traffic, but freedom to maneuver a vehicle. However, drivers may experience moderate delays in travel from time to time.

This Section does not apply to development projects generating less than 35 peak-hour vehicular trips per day.

DISCUSSION

- 191-90 (Sewage system)

There must be adequate sewer capacity to serve new development. Additionally, if the capacity required by a development will cause the Town's wastewater treatment plant infrastructure to operate at a level higher than 80% of the plant's maximum capacity, the project shall not be approved unless adequate mitigation is provided.

- 191-91(Water)

No preliminary plat map, site plan or expanded development requiring water allocation shall be approved by the Town unless there is sufficient water to support the project. Adequate water supply will be judged on whether or not the development causes the Town to exceed 80% of its State water allocation permit.

DISCUSSION

- 191-92 (Water, sewage, and school capacity allocations)

Water and sewer capacity allocation shall be guaranteed to any approved preliminary plat map or site plan requiring such allocation for a period of three years, if the approval is still valid.

Previously approved (and valid) preliminary plat maps and site plans without water and sewer allocation shall be exempt from this Chapter. Such developments shall have priority allocation over projects approved after the adoption of this Ordinance.

- 191-93(Adequate public facilities study)

Unless exempted in proposed Section 191-87, an adequate public facilities study (APFS) shall be prepared as part of any preliminary subdivision or site plan submittal to the Town. The Study will determine the anticipated impact of a new development and any mitigation measures needed to ensure public facility thresholds, as set by the Town, are not exceeded.

DISCUSSION

- 191-94 (Mitigation)

Section 191-94 authorizes the Planning Commission to deny projects when the impact(s) of a development will not comply with adopted public facility thresholds for water, sewage, roads, and school seating capacity without appropriate mitigation.

The Chapter also identifies mitigation processes and procedures.

NEXT STEPS For Zoning Text Amendment (ZTA) 01-2026

- Conduct a public hearing (tonight) on Zoning Text Amendment 01-2026.
- Continue the public hearing on Zoning Text Amendment 01-2026 to the next regularly scheduled Planning Commission Meeting of February 3, 2026, to permit additional public comment.
- Consider Planning Commissioner comments attached to the staff report for Zoning Text Amendment 01-2026.
- Provide feedback to Staff on the initial draft of Zoning Text Amendment 01-2026.

QUESTIONS AND DISCUSSION

TOWN OF LA PLATA

305 Queen Anne Street
Post Office Box 2268
La Plata, Maryland 20646

PLANNING COMMISSION STAFF REPORT

DATE: February 3, 2026

TO: Honorable Chair and Members of the Planning Commission

FROM: Don Dooley, Planning Director

PREPARED BY: Celia Craze, AICP, Planning Consultant

APPLICATON: MAJOR SITE PLAN (MJSP) 0656-2023 LA PLATA LIBRARY

APPLICANT: Charles County Government

OWNER: Town of La Plata, Maryland

PROJECT LOCATION: 208 Washington Avenue, La Plata, Maryland

REQUEST: Charles County Government is requesting to construct a new 27,799 square-foot, two-story, County library facility.

SITE INFORMATION

Tax Map, Block, Parcel	Tax Map 0113, Parcel Nos. 0086-0088 and 0063-0064
Existing Project Zoning	The development has two zoning classifications. The project site is zoned "Residential 8,000 s.f. (R8)" (north of the Talbot Road Extension) where the library building is being constructed. The Commercial Business (CB) Zone classification for the development is located south of the Talbot Road Extension and west of the North Maple Avenue Road extension where the southern parking lot is sited.
Existing Land Use	Residential. There are three extant (vacant) single-family homes) on the project site to be demolished.

Location	Land-Use	Zoning
North	Single-Family Residential	Residential 8,000 (R8)
South	Offices (Maredith Building)	Commercial Business (CB)
East	Rentals and Hardware (La Plata Mill)	Industrial Low (IL) and Commercial Business (CB)

West	Charles County Government Offices	Commercial Business (CB) south of the existing Talbot Road and the Central Business Transition (CBT) - north of Talbot Road.

Setbacks & Development Standards for Cultural Institutions in R8 Zone1 (i.e., Library Building)	**Minimum/Maximum Permitted**	**Proposed**
Front Setback	10 feet (min.)	487 feet (From Washington Avenue)
Side Yard (North) Setback	10 feet (min.)	65 feet
Side Yard (South) Setback (adjacent to the Talbot Street Road extension)	10 feet (min.)	22 feet
Rear Setback	20 feet (min.)	40 feet
Building Height	50 feet (max.)	45 feet

BACKGROUND

Prior to 2020, Charles County Government ("County") identified the need for additional library space since their existing library facility, located at 2 Garrett Avenue will not accommodate the County's spatial needs. For purposes of partnering with the County to aide in their development of a new (larger) library facility, the Town of La Plata purchased three parcels immediately to the east of the "T" intersection of Talbot Road and Washington Avenue (Parcel Nos. 086, 087 and 088). These parcels were identified by the County and Town as a suitable location for a new library. Particularly as the property is located across the street from the Charles County Government Offices, The County subsequently entered into a 99-year lease agreement with the Town for the use and development of the property. In addition to the library site, the Town also partnered with the County for the development of a supplemental parking lot located immediately to the south of the proposed library location. Consisting of two parcels (Parcels 063 and 064), these lots are also being leased to the County for 99 years to provide the required parking for the library. Overall, the five parcels that compose this development consist of 6.14 acres.

1 Although the proposed library building is located on a parcel in the Residential 8,000 (R8) Zone, it considered a "cultural institution" for land-use and zoning purposes. Therefore, Section 191-28 (Residential zoning regulations) of the La Plata Zoning Code provides unique development standards for such a land-use in the R8 Zone. These standards are being applied to this development.

DISCUSSION

Streets and Sidewalks

As presented on the site plan, Talbot Street will be extended east of its existing terminus at Washington Avenue. Additionally, North Maple Drive will be extended north from its current location to intersect with the Talbot Street extension, immediately to the south of the proposed library building. In doing so, these road extensions will provide a new road connection between Charles Street and Washington Avenue. Both streets will be designed with a 60-foot-wide public right-of-way to accommodate two-way vehicular travel, with a 26-foot-wide roadway. The street extensions will also provide vehicular and pedestrian access to the proposed parking lots for the new library.

As referenced on the site plan, there will be a continuous curb, gutter, and sidewalk along the north side of the Talbot Road extension and along the west side of the North Maple Road extension. Staff has included a condition of approval requiring the County to comply with all applicable development requirements for streets and sidewalks pursuant to Chapter 170 (Streets and sidewalks) of the La Plata Municipal Code.

As the library project also abuts Washington Avenue, which is currently unimproved with curb, gutter and sidewalk, staff has included a condition of approval requiring full-street improvements along the entire project frontage of Washington Avenue. It should be noted that since Washington Avenue is a County road, these street improvements will be developed to County road standards. However, a minimum five-foot wide sidewalk will be constructed along Washington Avenue, as detailed on Sheet C-201 of the project plans.

Since the County will be providing full street improvements along the extension of North Maple Avenue, staff believes it would be appropriate to extend the new public sidewalk south to Charles Street to provide additional public mobility to the library. While the Town cannot condition the County to make this improvement, staff believes it is an important piece of public infrastructure that will benefit the community. Therefore, staff will propose a future Capital Improvement Project (CIP) for the Town to complete the sidewalk extension concurrently with the County's construction of the North Maple Avenue extension improvements for the library. For Commission's consideration, staff has incorporated in the draft Planning Resolution for MJSP 0656-2023 a finding of Planning Commission support for such a capital improvement project to be completed by the time the library is finished. Moreover, staff believes the conceptual CIP aligns with the Town's Comprehensive Plan to facilitate public mobility.

Parking

The proposed library will be located immediately to the north of the intersection of the Talbot Street and North Maple Avenue road extensions. Immediately to the west of the library entrance will be one of two (detached) parking lots serving the facility. The western parking lot consists of 81 parking stalls, and the southern parking lot (south of the new Talbot Road extension) consists of 76 parking stalls. In total, there will be 157 parking spaces provided for the library.

Pursuant to Table No. 9 in Section 191-44 (Parking requirements) of the La Plata Parking Ordinance "Cultural Institutions" (such as public libraries) require one parking space for each 3 persons at its maximum capacity. For this project, the County has identified that the maximum capacity for the library will be 471-persons. Therefore, the project will meet the minimum 157 required parking spaces for the project (471-persons (maximum occupancy) divided by 3-persons (under a maximum occupancy of 471 persons) = 157 spaces).

While it is a common zoning requirement that parking for any land-use be on the same property with the development it serves, Section 191-44(E) of the La Plata Zoning Ordinance allows required parking to be located off-site. However, the parking must be located within 400 feet from the property being developed, and the off-site*…" parking spaces must be held in fee simple by the owner of the use requiring such parking, or the parking spaces shall be leased or rented through a written agreement satisfactory to the Town Attorney."* In this instance, the Town of La Plata is leasing all of the property required for the development of the library to the County. Therefore, the parking spaces within the two (non-contiguous) parking lots may be counted together to meet the library's minimum, off-street, parking requirements.

Bike Racks

Although not required in the Town's Zoning Code, staff believes that the project should incorporate bike racks into the project site plan to accommodate library visitors of all ages and support other forms of transportation to the library, other than cars. Therefore, staff has suggested a condition of approval requiring the applicant to incorporate a minimum of ten bike rack spaces into the project design to the satisfaction of the Director of Planning prior to the issuance of building permits for the project.

Demolition of On-Site Houses

The project requires the demolition of three extant houses located at 206, 206A and 208 Washington Avenue and a storage building situated at the current terminus of North Maple Avenue (see Sheet C-100). The Maryland Historic Trust has previously reviewed the subject properties and determined the buildings were not listed or deemed of interest to determine their eligibility for listing as a historic resource under the State and national landmark designation criteria. Additionally, none of the properties are designated as local historic landmarks. Therefore, the Town of La Plata has previously authorized demolition permits for the buildings, subject to the permit remaining valid. At this time, these demolition permits have expired and will require re-application by the County for the demolition of the buildings. Such demolition permits do not require the approval of the Historic Preservation Commission or any other Board or Commission.

Design Review Board Approval

Since the project lies in the Commercial Business (CB) zone, all new construction is required to be reviewed and approved by the Design Review Board ("Board"). The Board is responsible for reviewing all new building architecture, roof design,

materials, and other architectural characteristics for consistency with La Plata's Community Design Guidelines that were adopted in January 2022.

The County's proposed library design was previously reviewed and approved by the Board on November 9, 2022, under DRB-630-2022. The library design is included in the project plans for the Commission edification for context in reviewing the proposed site plan for the library. However, the Commission may not condition design changes to the building.

Lot Consolidations/Reconfiguration

As noted above, the new library is being developed on five different parcels consisting of 6.14- acres in conjunction with the construction of two public street extensions from Talbot Street and North Maple Avenue to facilitate vehicular circulation and pedestrian access into and around the library. In an effort to eliminate undesirable/unnecessary property lines to create a more congruent development, staff has suggested a condition of approval requiring the County to work with the Town of La Plata to determine the feasibility of consolidating the lots involved with the physical development of the library grounds (Parcels 063, 086, 087 and 088) as well as to consolidate the two parcels that will create the parking lot along the south side of the Talbot Road extension. If feasible, the County would be required to work with the Town to make the lot consolidations or adjustments to any extant property lines prior to the issuance of a use and occupancy permit for the library facility and the parking lot south of the Talbot Street road extension.

General Site Development Comments

To help facilitate the processing of the County library project, Town staff and its technical consultants began reviewing the project for compliance with various local and State requirements. Although there are still technical, plan check, corrections to be made to the final plans for the library project, such technical corrections or comments are a normal part of the development review process. Nevertheless, staff has suggested a condition of approval requiring the County to appropriately address all State and local technical and development compliance issues for the project to satisfaction of the Director of Planning prior to the issuance of grading or building permits for the project, as may be applicable.

Sensitive Habitat

There is no identified sensitive habitat or wildlife resources present on the property being developed for the new library. This is based on the Maryland Department of Resources letter of determination, dated September 21, 2021, and the letter of correspondence from the U.S. Department of Fish and Wildlife Services dated August 17, 2021. Should any such habit or wildlife resources be identified prior to or during on-site grading or construction, on-site work shall cease until it can be properly accessed by the Maryland Department of Resources and the U.S. Department of Fish and Wildlife Services on how to proceed. A condition of approval has been suggested to memorialize this mitigation.

Water and Sewer Demands for La Plata Library

Water and Sewer connections for the project must be provided in compliance with Chapter 186 of the La Plata Municipal Code. As the Commission is aware, the Town will not authorize building permits for any new development requiring new or expanded water and sewage capacity until such time as the La Plata as adequate water and sewerage capacity to serve new developments. Therefore, staff memorialized this policy as a condition of approval for proposed project.

Open Space/Recreational Amenities

As this project is not a subdivision, there is no open space or recreational amenities required for the project.

Traffic Impact Study

Upon evaluating the scope of the proposed project, a traffic impact study (TIS) was required by the Planning Department for the County Library Project. To ensure impartiality in developing the scope of work required in the TIS, the Town retained Brudis & Associates, Inc. (BAI), to prepare the scope of work and review the technical findings of the TIS on behalf of the Town. The County prepared the TIS under contract with their own consultant, Lenhart Traffic Consulting, Inc. ("LTC"). The TIS was completed on January 16, 2026, by LTC and reviewed by BAI for technical accuracy and consistency with the TIS scope of work in addition to the rational of the project findings.

The LTC findings and recommendations are memorialized on Pages 4 through 7 in the completed traffic study (see Attachment No. 3). BAI's professional review of the LTC traffic study and its technical conclusions have been memorialized in their memorandum dated January 27, 2026 (see Attachment No.4). The memorandum states that,

"The study's conclusions [in the LTC traffic study] indicate that most intersections should function well, maintaining an acceptable Level of Service of "D" or better, once the library is open. However, there are some intersections—like US 301 at MD 225, US 301 at MD 6/Port Tobacco Road, and MD 6 at Washington Avenue—that may experience higher traffic congestion. To help manage these traffic impacts, we [BAI] recommend updating the traffic signal timings and road markings on US 301. Additionally, there may be a need to extend the left-turn lane to eastbound MD 6 (Charles Street) to prevent traffic queues from overflowing at Washington Avenue/Willis Street."

While the LTC and BAI traffic study recommendations are appropriate, the Town of La Plata does not have jurisdictional/governmental control of these street intersections, as they belong to the State. Therefore, staff cannot require these traffic improvements to be completed. Nevertheless, staff has suggested a condition of approval that the County collaborate with the Town of La Plata to request the Maryland State Highway Authority (SHA) to consider implementing the traffic improvements suggested in the LTC traffic study which is supported by BAI. Although the Town and County cannot mandate SHA action, a partnership with the Town may demonstrate to SHA that there is a mutual, multi-

jurisdictional, desire to have SHA consider implementing the traffic mitigation measures on its State roads as they impact the Town and County.

The LTC Traffic Study also addresses staff's desire for traffic calming measures for the extension of Talbot Street and North Maple Avenue. Staff previously expressed concern that these road extensions may encourage, new, cut-through traffic between Charles Street and Washington Avenue. Staff believes drivers may try to avoid the existing vehicular queuing to make a right turn from Charles Street onto Washington Avenue in addition to the traffic signal at this intersection. Although the traffic study predicts that any cut-through traffic will be minimal, a traffic calming schematic was developed by LTC and is shown in Appendix "G" of the traffic study (see Sheet C-201 or last page). The traffic calming measures include stop signs at the sharp bend where the extensions of Talbot Street and North Maple Avenue converge, pedestrian crossing signs, and "*stop for pedestrian*" signage within the proposed crosswalks along Talbot Street. The LTC study concludes that further traffic calming can be considered in the future if excessive, cut-through, traffic should develop.

BAI's review of the traffic calming measures, in their memorandum of January 27, 2026, suggest conditions of approval for the project concerning the traffic calming measures. However, the recommendations have been amended by staff and BAI as follows:

• Install a stop sign at the ~~Overflow~~ [Southern] Parking Lot entrance on North Maple Avenue Extension.
• Construct a raised ~~median with a cut-through~~ walkway at the pedestrian crosswalk connecting the ~~overflow~~ [southern] parking [lot] and the library. This will help make the crosswalk more visible and alert drivers.
• Remove the centerline marking along Talbot Avenue and North Maple Extensions.

Based on the traffic calming measures in Appendix "G" of the January 16, 2026, Traffic Impact Study by LTC and the recommended conditions of approval suggested by BAI, staff has incorporated the tenor of these suggestions into the proposed conditions of approval for the project for the Commission's consideration and adoption.

RECOMMENDATION

Staff recommend the Planning Commission adopt the attached, draft, Planning Commission Resolution approving Major Site Plan (MJSP) 0656-2023, with the suggested conditions of approval incorporated within the draft Resolution.

ATTACHMENT(S)

1) Draft Planning Commission Resolution with Attachment "A" (Suggested Conditions of Approval).
2) Applicant's Project Plans for New Library.
2A) – DRB Approved Library Elevations for New Library.

3) Completed Traffic Impact Study by Lenhart Traffic Consulting, LLC. dated January 16, 2026, with Memorandum of responses to the BAI comments on the draft Traffic Impact Study also dated January 6, 2026.
4) BAI, Inc Memorandum to Don Dooley, Planning Director, dated January 27, 2026.
5) Location Map.

-End of Report-

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TOWN OF LA PLATA, MARYLAND
PLANNING COMMISSION RESOLUTION NO. 2026-01

A RESOLUTION OF THE PLANNING COMMISSION OF THE TOWN OF LA PLATA, MARYLAND APPROVING MAJOR SITE PLAN (MJSP) 0656-2023 TO CONSTRUCT A NEW PUBLIC LIBRARY AT 208 WASHINGTON STREET IN THE TOWN OF LA PLATA, MARYLAND

WHEREAS, an application for Major Site Plan 0656-2023 was submitted by Charles County Government to the Town of La Plata for the purpose of constructing a new, 28,800-square foot, two-story, county library facility at 208 Washington Avenue; and

WHEREAS, the project site is zoned Residential 8,000 (R8) on Parcels 086, 087, 088 and Commercial Business (CB) on Parcels 063 and 064; and

WHEREAS, the new library is classified as a "Cultural Institution" which is a permitted land-use in the Residential 8,000 (R8) and Commercial Business (CB) Zones in the Town of La Plata under Section 191-10 (Table of permitted uses), Table No. 1, Use No. 13 of the La Plata Zoning Ordinance; and

WHEREAS, Charles County Government has identified on their approved plans that the maximum permitted capacity for the new library (totaling 27,799 square feet) will not exceed 471 persons in order to meet their minimum off-street parking requirements for the facility which is 157 parking spaces using the Town's parking requirement of one space for each three persons based on its maximum building capacity or occupancy for a cultural institution under Table No. 9, Use No. 13, of Section 191-44 (Parking requirements) of the La Plata Zoning Ordinance; and

WHEREAS, as new construction and development in the Commercial Business (CB) Zone requires the review and approval of the La Plata Design Review Board (DRB) which obligates the building design for new library to be subject to the review and approval of the La Plata Design Review Board; and

WHEREAS, the Design Review Board considered DRB Application No. 0630-2022 for the new Charles County library and subsequently approved the County's application on November 9, 2022; and

WHEREAS, an application for Major Site Plan (MJSP) 0656-2023 was submitted to the Town of La Plata by Charles County Government for the approval of the detailed site plan for the construction of their new County library facility; and

WHEREAS, after holding a public meeting on Major Site Plan (MJSP) 0656-2023 on February 3, 2026, and considering the project plans, the project staff report, and

evaluating all other information presented to the La Plata Planning Commission, including the traffic study for the project prepared on January 16, 2026 by Lenhart Traffic Consulting, Inc, the Commission makes the following Comprehensive Plan findings, subject to the conditions of approval adopted for the project in Attachment "A" to this Resolution, to wit:

1) GOAL #1: La Plata will maintain and enforce its plans and policies to strengthen the downtown core and maintain its small-town character in that; the project site is appropriately zoned for the development of a new library, under the land-use designation of "cultural institution," in the Residential 8,000 (R8) and Commercial Business (CB) Zones in compliance with the land-use element of the Comprehensive Plan.
2) GOAL 2: The new development will reflect the principles of walkability, sustainability and environmental protection in that, the project applicant, Charles County Government, has shown they are implementing the principles of walkability and environmental protection, to the greatest extent possible, while ensuring quality development for the community in compliance with all State and local development regulations with the implementation of the conditions of approval in Attachment "A" to this Resolution and incorporated herein by reference.
3) GOAL #6: Protect sensitive environmental areas through resource conservation and other natural resource management tools in that, Charles County Government (project applicant) has considered all potential, sensitive, areas throughout the development to ensure compliance with all State and local development requirements.
4) GOAL #16: Continue to make La Plata a very walkable community in that, the proposed development will provide sidewalks and walkways throughout the project to promote pedestrian mobility; and,

WHEREAS, the Planning Commission supports and recommends that the Town of La Plata implement a Capital Improvements Project ("CIP") to provide sidewalks/street improvements along the entire, extant, length of North Maple Avenue to connect with the new sidewalk and street improvements being constructed for the North Maple Avenue extension as part of the Charles County Government's new library facility. Such a CIP would facilitate greater public mobility and access to the new library. Moreover, the Planning finds that such a CIP project would be consistent with La Plata's current Comprehensive Plan.

NOW, THEREFORE, BE IT RESOLVED that the La Plata Planning Commission hereby approves Major Site Plan (MJSP) 0656-2023 with the adopted conditions of approval for the project in Attachment "A" to this Resolution and incorporated herein by reference.

PASSED AND ADOPTED BY THE LA PLATA PLANNING COMMISSION on February 3, 2026, by the following vote:

Yes:
No:
Abstain:
Absent:

_____
Dawn Banks, Planning Commission Chair

Attest:

_____
Don Dooley, Director of Planning

Attachments: (A) Conditions of Approval for MJSP 0656- 2023 – LaPlata Library

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ATTACHMENT "A"

ADOPTED CONDITIONS OF APPROVAL UNDER PLANNING COMMISSION RESOLUTION NO. 2026-01 FOR MAJOR SITE PLAN (MJSP) 0656-2023.
APPLICANT: CHARLES COUNTY GOVERNMENT

Standard Conditions of Approval

1) Pursuant to § 191-13(B) (Expiration) of the La Plata Zoning Ordinance, the approval of Major Site Plan (MJSP) 0656-2023 shall expire two (2) years after the date of Planning Commission approval unless building permits have been obtained for construction in accordance therewith. A single, one (1) year, extension may be given by the Planning Commission upon written request by the applicant to be made within thirty (30) days before the expiration of the site plan.
2) The applicant's approved project shall comply with all applicable Town, County, State, and Federal regulations. Should any conflict arise, the most stringent requirement shall apply in all cases, as determined by the Director of Planning.
3) All Town of La Plata development plan-check comments and corrections for the project plans shall be appropriately addressed and resolved to the satisfaction of the Director of Planning. The Director of Planning and the applicant shall cooperatively work together to resolve any/all issues that may arise.
4) The applicant's development plans for the project shall satisfy all Building Code, Fire Code, and Americans with Disabilities Act (ADA) requirements, as authorized by Federal, State, and Local Ordinances, regulations or statutory authority.
5) The applicant acknowledges that no building permits for Major Site Plan (MJSP) 0656-2023 to construct the new library facility shall be issued by the Town of La Plata until such time as the Town has adequate water and sewage capacity to support the new development.
6) The project applicant shall consent, in writing, to these conditions of approval for Major Site Plan (MJSP) 0656-2023 within 45 days after their adoption by the Planning Commission.

Special Conditions of Approval

General

7) Major Site Plan (MJSP) 0656-2023 is approved for the development of a 27,799-square-foot, two-story, library facility at 208 Washington Avenue with a maximum building occupancy of 471 persons and 157 parking stalls to support the development pursuant to Table No. 9 in Section 191-44 (Parking requirements) of the La Plata Parking Ordinance for "Cultural Institutions." Any significant modifications to the

approved project may require re-review and approval by the Planning Commission, if determined necessary by the Director of Planning.

8) The applicant shall resolve all plan check comments for their project to the satisfaction of the Director of Planning prior to the issuance of building and/or grading permits for the project, as may be applicable.

Talbot Street and North Maple Avenue Road Extensions

9) The Talbot Street and North Maple Road extensions shall be developed in accordance with all applicable development standards contained in Chapter 170 (Streets and Sidewalks) of the La Plata Municipal Code to the satisfaction of the Director of Planning and the Director of Public Works.
10) Except as may be modified herein by these conditions of approval for Major Site Plan (MJSP) 0656-2023, the applicant shall be responsible for designing, constructing and implementing the street calming improvements identified in Appendix "G" of the Traffic Impact Study prepared by Lenhard Traffic Consulting, Inc. on January 16, 2026, for the extension of Talbot Street and North Maple Avenue to the satisfaction of the Director of Planning prior to the issuance of a Use and of Occupancy for the new library building.
11) The proposed street centerline marking shown in Appendix "G" of the Traffic Impact Study prepared by Lenhard Traffic Consulting, Inc. on January 16, 2026, for the extension of Talbot Street and North Maple Avenue shall be removed on the final street improvement plans for the project to the satisfaction of the Director of Planning.
12) The applicant shall install a stop sign at the southern parking lot entrance along the North Maple Avenue road extension to the satisfaction of the Director of Planning prior to the issuance of a Use and Occupancy Permit for the new library.
13) The applicant shall design and identify the construction of a raised walkway at the pedestrian crosswalk along the Talbot Street Road extension on their final street improvement plans for the Talbot Street road extension to the satisfaction of the Director of Planning and Director of Public Works prior to the issuance of building permits for the new library.
14) All street striping and road signage plans for the Talbot Street and North Maple Avenue road extensions shall be submitted for the final review and approval of the Director of Planning and the Director of Public Works prior to the issuance of building permits for the new library building.
15) The Talbot Street and North Maple Avenue Road extensions shall be designed and constructed to the satisfaction of the Director of Planning and the Director of Public Works to provide sufficient vehicular access and maneuverability along the roadways for all public service vehicles (i.e., fire trucks, trash trucks, utility trucks, etc.) prior to the issuance of building permits for the new library.
16) Talbot Street and North Maple Road extensions shall be dedicated to the Town of La Plata as public streets to the satisfaction of the Director of Public Works, prior to the

issuance of a Use and Occupancy Permit for the new library site and parking lots serving the new library.

Washington Street Right-of-Way Improvements

17) The applicant shall improve the entire street frontage of the project site, abutting Washington Avenue, with curb, gutter, and sidewalk under Charles County Government development standards. These improvements shall be completed and finaled by Charles County Government prior to the issuance of a Use and Occupancy Permit for the new library.

Forest Stand Delineation and Forest Conservation Plan

18) The applicant's Forest Stand Delineation and Forest Conservation Plan shall be reviewed and approved to the satisfaction of the Town's consultant (Holly Oak Consultant, LLC.) and the Director of Planning prior to the issuance of grading permits for the project.

Habitat

19) Should any rare, threaten, or endangered wildlife or its habit be identified prior to or during on site-grading or construction, on-site work shall cease until it can be properly accessed by the Maryland Department of Resources and the U.S. Department of Fish and Wildlife Services on how to proceed to the satisfaction of the Director of Planning.

Landscaping and Tree Preservation

20) The final landscape plans for the project shall be in compliance with the town of La Plata's Municipal Code. The landscape plans shall be reviewed and approved to the satisfaction of the Planning Director prior to the issuance of building permits for the library.
21) All on-site landscaping for the project site shall be installed and maintained in good condition at all times. Any dead or dying on-site trees, vegetation or ground cover shall be replaced by the applicant within 45 days of discovery or upon notification by the Town of La Plata.
22) The applicant shall engage an independent, qualified, arborist to prepare a report identifying the existing health condition(s) and best practices to preserve, protect and maintain the 20-inch Magnolia Tree, 38-inch Maple Tree and 40-inch Maple Tree on the project site (Parcel 0088) during and after all grading and construction activity. The arborist report shall be reviewed and approved by the Director of Planning prior to the issuance of any grading permits for the project involving Parcel 0088, the location of the subject trees. The Planning Director shall have the authority to accept, reject or modify any recommended arborist recommendations.

Easements

23) The applicant shall obtain, relocate or modify any/all necessary easements for the development and use of the project site to the satisfaction of the Director of Public Works and the Director of Planning prior to the issuance of a Use and Occupancy Permit for the new library.

Trash Enclosures

24) An on-site trash container/bin, suitable to accommodate the needs of the new library facility, shall be provided on-site, substantially screened from public view, and enclosed in a durable trash enclosure material. The use of wood and chain-link fencing may not be used for enclosing the trash enclosure, including the trash enclosure gates. The location and design of the trash enclosure details shall be shown on the applicant's final, approved, plans and be reviewed and approved to the satisfaction of the Director of Planning prior to the issuance of building permits for the new library.

Outdoor Storage

25) There shall be no outdoor storage of materials (including the use of storage containers) around the library property and within parking lots serving the new library at any time.

On-site Lighting

26) A detailed lighting and photometric plan for the project shall be provided with the applicant's final, approved, plans for the library and parking lots to demonstrate compliance will all applicable, on-site, lighting requirements pursuant to Section 191-41 (Lighting standards) of the La Plata Municipal to the satisfaction of the Director of Planning prior to the issuance of building permits for the library.
27) To the greatest extent possible, all on-site lighting for the project site (including the parking lots) shall be shielded and/or minimized to mitigate off-site light and glare upon the adjacent properties to the satisfaction of the Director of Planning prior to the issuance of a use and occupancy permit for the library and parking lots.

Fencing. Gates and Walls

28) All proposed fencing, walls and gates to be used in conjunction with the development of the project site shall be in compliance with the La Plata Municipal Code and shall be identified on the final, approved, plans for the library and parking lots to the satisfaction of the Director of Planning prior to the issuance of building permits for the project.
29) The final design and materials for the proposed retaining wall along the North Maple Avenue road extension shall be reviewed and approved to the satisfaction of the

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Director of Planning and shown on the applicant's final, approved, plans prior to its construction.

Mechanical Equipment Screening

30) The applicant shall screen all roof mounted and ground mounted mechanical equipment from the public right-of-way. These details shall be shown on the final, approved, plans for project and reviewed and approved to the satisfaction of the Director of Planning prior to the issuance of building permits for the project.

Demolition of On-Site Buildings and Structures

31) Demolition of the on-site buildings and structures on the project site for the development of the new library shall be subject to the issuance of a demolition permit by the Town of La Plata prior to any on-site demolition activity. Within 30 days of demolition to any on-site building(s) and structure(s), the applicant shall employ a professional pest control service to eradicate potential, on-site, vermin and other pests inhabiting the extant buildings and structures. The applicant shall provide the Town of La Plata with documentation (or a receipt) demonstrating compliance.

Lot Consolidation

32) The applicant shall work with the Town of La Plata to determine the feasibility and/or appropriateness to consolidate the lots involved with the physical development of the library grounds (Parcels 063, 086, 087 and 088) as well as to consolidate the two parcels that will create the parking lot along the south side of the Talbot Road extension. If deemed feasible, the applicant shall make the lot consolidations in collaboration with the Town of La Plata prior to the issuance of a Use and Occupancy for the library and the parking lot to the south of Talbot Street. This condition may be waved (in writing to the applicant) at any time by the Town of La Plata.

Traffic Mitigation

33) The applicant shall share all communication with the Maryland State Highway Administration (SHA) regarding the recommended changes and mitigation measures to the traffic signals and road markings along US 301 (Crain Highway) and MD 6 (Charles Street) with the Town of La Plata in addition to all other findings and recommendations made in the Traffic Impact Study prepared by Lenhard Traffic Consulting, Inc. dated January 16, 2026, to the satisfaction of the Director of Planning. This shall be accomplished within 60 days following the Planning Commission approval of Major Site Plan (MJSP) 0656-2023.

34) The applicant (Charles County Government) shall partner and collaborate with the Town of La Plata to request that the Maryland State Highway Authority (SHA) accept and execute the traffic mitigations (pertaining to their jurisdictional street/roadway authority), as outlined in the Lenhart Traffic Consulting, LLC. TIS, dated January 16,

2026. Charles County Government shall not be responsible for the final decision(s) of the Maryland SHA pertaining to any recommended traffic mitigation measures in the Lenhart Traffic Consulting, LLC. TIS, dated January 16, 2026.

Bike Racks

35) The applicant shall provide bike racks as part of site design for the new library. A minimum of ten bike rack spaces shall be shown on the final, approved, site plan for the project to the satisfaction of the Director of Planning prior to the issuance of building permits for the new library.

Stormwater

36) The applicant shall obtain all necessary erosion and sediment control approvals from the Charles Soils Conservation District for the project prior to the issuance of any grading permits for the project. Any new imperious surface coverage proposed for the project, by the applicant, may require re-review and approval.
37) Any changes to grading, alterations in the amount and location of impervious surface coverage, including changes to stormwater infrastructure within pipes, inlets, ditches, BMPs, etc. shall require supplemental stormwater management review and approval prior to the issuance of grading permits for the project.

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LA PLATA LIBRARY

MAJOR SITE PLAN

TOWN OF LA PLATA
CHARLES COUNTY, MARYLAND

SITE DATA

OWNER
TOWN OF LA PLATA
305 QUEEN ANNE ST
LA PLATA, MARYLAND 20646
PH (301) 934-8421

ENGINEER/SURVEYOR
VISTA DESIGN, INC.
11634 WORCESTER HIGHWAY
SHOWELL, MARYLAND 21862
PH: (410) 352-3874
CONTACT: RICHARD POLK, PE

WETLAND/FOREST STAND:
ENVIRONMENTAL RESOURCES, INC.
36173 DUPONT BLVD
SELBYVILLE, DE 19975
PH: (302) 236-3871
CONTACT: EDWARD LAUNAY, PWS

PROJECT PROPOSED BY:
CHARLES COUNTY GOVERNMENT
C/O DEPT. OF PUBLIC WORKS
CAPITAL SERVICES DIVISION
10430 AUDIE LANE
LA PLATA, MD 20646
CONTACT: CANDIS STRETCHER
PHONE: (240) 320-6986

SITE LOCATION
MAP 0113 GRID 0001 PARCEL 0088 (2.76 AC) ZONE R-8
MAP 0113 GRID 0001 PARCEL 0087 (0.59 AC) ZONE CB
MAP 0113 GRID 0001 PARCEL 0086 (0.34 AC) ZONE CB
MAP 0113 GRID 0001 PARCEL 0063 (0.73 AC) ZONE CB
MAP 0113 GRID 0001 PARCEL 0064 (1.00 AC) ZONE CB

FLOOD ZONE
THIS PROJECT IS LOCATED WITHIN FLOOD ZONE "X", OUTSIDE OF THE 100 AND 500 YEAR FLOOD ZONES PER FIRM MAP #24017C0186 C DATED SEPTEMBER 4, 2013

NON-TIDAL WETLANDS
NO JURISDICTIONAL NON-TIDAL WETLANDS HAVE BEEN IDENTIFIED WITHIN THE PROPOSED WORK SITE PER ERI INVESTIGATION, JULY 2021.

TOPOGRAPHY/EXISTING CONDITIONS
AREAS OF THE SITE PROPOSED FOR DISTURBANCE WERE SURVEYED BY VISTA DESIGN, INC IN JULY 2021. ALL OTHER EXISTING CONDITIONS SHOWN ARE FROM CHARLES COUNTY AND TOWN OF LA PLATA G.I.S. DATA.

HORIZONTAL & VERTICAL CONTROL
HORIZONTAL: NAD 83 MARYLAND STATE PLANE, US FEET
VERTICAL: NAVD 88

PROPOSED SITE SETBACKS
CB ALL OTHER USES
FRONT 10', SIDES NONE, REAR 25'

R8 CULTURAL INSTITUTIONS
FRONT 10' (TALBOT ST), FRONT 10' (WASHINGTON), SIDE 10', REAR 20'

PARKING CALCULATIONS
MAXIMUM LIBRARY CAPACITY: 471 PERSONS
FOR CULTURAL INSTITUTION ZONING 1 PARKING SPACE / 3 OCCUPANTS = 157 SPACES (6 HANDICAP)
PEAK PARKING GENERATED (ITE PARKING MANUAL, 5TH GENERATION) = 65 (WEEKDAY), 51 (SUNDAY)
PARKING PROVIDED ONSITE = 157 (6 HANDICAP)

GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST CHARLES COUNTY DEPARTMENT OF PLANNING AND GROWTH MANAGEMENT SPECIFICATIONS MANUAL, THE LATEST CHARLES COUNTY DETAIL MANUAL AND IN ACCORDANCE WITH ALL OTHER APPLICABLE LOCAL, COUNTY, AND STATE ORDINANCES.
2. CONTRACTOR IS RESPONSIBLE FOR CONTACTING "MISS UTILITY" AT 1-800-257-7777, 48 HOURS PRIOR TO ANY EXCAVATION WORK TO LOCATE ALL UTILITIES IN THE WORK AREA. ANY CONFLICTS MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
3. THE CONTRACTOR IS RESPONSIBLE TO HOLD A "PRECONSTRUCTION" MEETING TO INCLUDE THE CONTRACTOR, TOWN OF LA PLATA, CHARLES COUNTY, AND STATE OF MARYLAND INSPECTION PERSONNEL, PUBLIC UTILITIES, AND ANY LOCAL, STATE OR FEDERAL AGENCIES AS REQUIRED PRIOR TO THE START OF CONSTRUCTION.
4. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE CHARLES COUNTY CAPITAL SERVICES AND THE TOWN OF LA PLATA (301-934-8421) 48 HOURS PRIOR TO THE START OF ALL CONSTRUCTION IN ACCORDANCE TO ALL PERMITS ISSUED.
5. MAXIMUM SLOPES SHALL BE NOT GREATER THAN ALLOWED PER TOWN OF LA PLATA CODE OF ORDINANCES, CHAPTER 173.
6. CERTIFIED COMPACTION TESTS ARE REQUIRED FOR ALL TRENCH/FILL WORK IN ACCORDANCE WITH THE TOWN OF LA PLATA ORDINANCES. FINAL REPORTS AND CERTIFICATIONS SHALL BE PROVIDED PRIOR TO PRE-FINAL INSPECTIONS.
7. CERTIFIED COMPACTION TESTS AND GEOTECHNICAL REPORTS SHALL BE SUBMITTED ON A BIWEEKLY BASIS THROUGHOUT THE COURSE OF CONSTRUCTION AS REQUIRED BY THE SPECIFICATIONS MANUAL.
8. AS-BUILT PLANS SHALL BE SUBMITTED PRIOR TO FINAL INSPECTIONS.
9. WITH APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR, ALL EROSION AND SEDIMENT CONTROL STRUCTURES MUST BE REMOVED PRIOR TO RECEIPT OF FINAL APPROVAL AND RELEASE OF BONDS.
10. THE CONTRACTOR SHALL NOTIFY THE SEDIMENT CONTROL INSPECTOR, FIVE (5) DAYS PRIOR TO THE START OF WORK, AND UPON COMPLETION OF EACH ITEM OF WORK THAT REQUIRES THEIR APPROVAL PER THE APPLICABLE ORDINANCE.
11. ALL STORM DRAINS MUST HAVE A MINIMUM 12" VERTICAL COVER BETWEEN ALL OTHER UTILITIES.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD LOCATING AND VERIFYING ALL SERVICE LATERALS PRIOR TO THE START OF CONSTRUCTION IN PROPOSED DISTURBANCE AREAS.
13. CONTRACTOR TO IMMEDIATELY NOTIFY CHARLES COUNTY CAPITAL SERVICES, THE TOWN OF LA PLATA, AND DESIGN ENGINEER IF FIELD CONDITIONS DIFFER FROM THOSE SHOWN ON PLANS. DESIGN ENGINEER WILL REVIEW CURRENT CONDITIONS AND ADVISE ON HOW TO PROCEED.
14. THE DEVELOPER OR CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING TO CHARLES COUNTY CAPITAL SERVICES A LETTER OF MATERIAL CERTIFICATION FROM THE SUPPLIERS FOR ALL PRECAST STRUCTURES RELATED TO STORM DRAIN SYSTEMS AND STORMWATER MANAGEMENT FACILITIES IN THE FOLLOWING FORMAT:
    - 14.1. CONTRACTOR'S NAME AND ADDRESS.
    - 14.2. PROJECT NAME AND STRUCTURE NUMBER.
    - 14.3. MANUFACTURERS' PRODUCT CERTIFICATION.
    - 14.4. TYPE AND QUALITY OF PRODUCT.
    - 14.5. SHOP DRAWINGS SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MARYLAND.
15. THE DEVELOPER OR HIS AGENT WILL NOTIFY CAPITAL SERVICES AND THE TOWN OF LA PLATA FOR FINAL INSPECTION AFTER THE COMPLETION OF PERMITTED WORK PER APPROVED PLANS. THEY WILL REQUIRE THE FOLLOWING FOR THEIR FILES:
    - 15.1. AN "AS BUILT" REPRODUCIBLE PLAN AND SURVEY BY A PROFESSIONAL LAND SURVEYOR AND/OR PROFESSIONAL ENGINEER AT THE SAME SCALE AS THE ORIGINAL PLAN AND SHOWING ALL IMPROVEMENTS AND FINAL GRADES.
    - 15.2. CERTIFICATION BY THE CONTRACTOR THAT ALL GRADING, DRAINAGE, EROSION CONTROL MEASURES, AND PERMANENT FACILITIES AND VEGETATIVE MEASURES HAVE BEEN COMPLETED IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.
    - 15.3. A REPORT SUMMARIZING THE INSPECTION REPORTS AND TEST RESULTS AS PER THE CHARLES COUNTY STORMWATER ORDINANCE AND CHAPTER 167 OF THE TOWN OF LA PLATA CODE.
16. THE CONTRACTOR SHALL SUBMIT TO CAPITAL SERVICE AND THE TOWN OF LA PLATA CONCRETE CYLINDER BREAK REPORTS CERTIFIED BY A PROFESSIONAL ENGINEER FOR ALL CAST-IN-PLACE STRUCTURES USED FOR STORM DRAIN SYSTEMS AND/OR STORMWATER MANAGEMENT FACILITIES.
17. ALL SEDIMENT CONTROL DEVICES SHALL BE CONSTRUCTED, MAINTAINED, AND REMOVED IN ACCORDANCE WITH THE SPECIFICATIONS AND STANDARD DETAILS GIVEN IN M.D.E.'S "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL."
18. ALL SEDIMENT CONTROL MEASURES WILL BE CONSTRUCTED AND PLACED IN OPERATION BEFORE EXCAVATION IS STARTED. THE CONTRACTOR SHALL ADJUST THE SEDIMENT CONTROL DEVICES AS NECESSARY TO MEET FIELD CONDITIONS, AND KEEP THEM CLEAN AND IN WORKING ORDER DURING CONSTRUCTION. NO SEDIMENT CONTROL DEVICE SHALL BE REMOVED UNTIL THE ENTIRE AREA DRAINING TO IT HAS BEEN PERMANENTLY STABILIZED, INSPECTED AND APPROVED BY SEDIMENT CONTROL INSPECTOR.
19. THE CONTRACTOR SHALL TAKE WHATEVER MEASURES ARE NECESSARY TO KEEP MUD AND DEBRIS FROM BEING TRACKED ONTO PUBLIC ROADS.
20. APPROVAL OF SEDIMENT CONTROL INSPECTOR SHALL BE REQUESTED BY THE CONTRACTOR UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
21. EROSION AND SEDIMENT PRACTICES, AND SITE IN GENERAL, MUST BE INSPECTED WEEKLY AND AFTER EACH RAINFALL EVENT, BY THE CONTRACTOR OR OTHER RESPONSIBLE PERSON, AND ANY NEEDED MAINTENANCE PERFORMED IMMEDIATELY.
22. SEDIMENT AND EROSION CONTROLS CANNOT BE REMOVED UNTIL THE SITE HAS ADEQUATE STABILIZATION. ONCE VEGETATION IS ESTABLISHED, THE SITE SHALL HAVE 95% GROUND COVER TO BE CONSIDERED ADEQUATELY STABILIZED AND THE SEDIMENT CONTROL INSPECTOR HAS APPROVED SUCH REMOVAL.
23. PRIOR TO BOND RELEASE ALL OUTFALLS SHALL BE INSPECTED AND APPROVED BY THE TOWN.

PROJECT NOTES

1. THIS PROJECT PROPOSES TO CONSTRUCT A NEW LIBRARY IN THE TOWN OF LA PLATA AND ASSOCIATED PARKING.
2. STORMWATER REQUIREMENTS ARE TO BE SATISFIED USING ON-SITE BIOSWALE FACILITIES IN COMBINATION WITH THE THE EXISTING DOWNSTREAM STORMWATER DETENTION BASIN WHICH WAS CONSTRUCTED UNDER PLANS ENTITLED ROAD CONSTRUCTION TALBOT STREET WEST BY BEN DYER ASSOCIATES INC., (SED# 126-05).
3. AFTER CONSTRUCTION IS COMPLETE THE AREA IS TO BE STABILIZED, AND PLANTINGS AND VEGETATION ARE TO BE INSTALLED ACCORDING TO LANDSCAPING PLANS.
4. IN ORDER FOR THE BIOSWALE TO WORK CORRECTLY, VEGETATION MUST BE HEALTHY AND STABILIZED. THEREFORE, ANNUAL INSPECTIONS MUST BE PERFORMED FOR THE FIRST THREE YEARS TO GUARANTEE SUCCESSFUL PLANT GROWTH. ANY VEGETATION FOUND TO BE DEAD, DYING, OR DISEASED MUST BE REPLACED.
5. CONSTRUCTION OF THESE FACILITIES MUST BE PERFORMED UNDER THE CLOSE SUPERVISION OF TOWN OF LA PLATA, CHARLES COUNTY AND CONSERVATION DISTRICT INSPECTORS.
6. POST CONSTRUCTION MAINTENANCE OF THE SITE WILL BE THE RESPONSIBILITY OF CHARLES COUNTY GOVERNMENT.
7. WASHINGTON AVENUE ACCESS IS SUBJECT TO FURTHER COUNTY REVIEW AND APPROVAL. FRONTAGE IMPROVEMENTS SHOWN MAY CHANGE BASED ON THE FUTURE COUNTY REVIEW.

SITE DATA

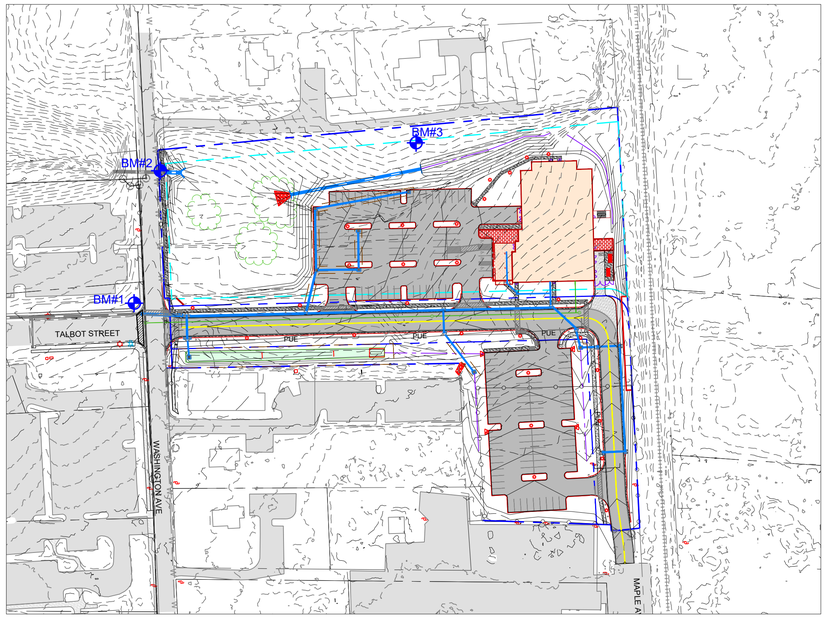
GROSS PROJECT ACREAGE	6.14 AC
PROPOSED ROW	1.24 AC
PROPOSED OPEN SPACE	2.04 AC
FLOODPLAIN AREAS	0.00 AC
NET PROJECT ACREAGE	2.86 AC
PR GROSS FLOOR AREA	27,799 SF (0.64 AC)
PR FLOOR TO AREA RATIO	22.3%
MAXIMUM BUILDING HEIGHT	45 FT (2 STORIES)

TRANSPORTATION NOTES

1. ALL WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE LATEST VERSION OF THE MARYLAND STATE HIGHWAY ADMINISTRATION'S (MSHA) BOOK OF STANDARDS, THE FEDERAL HIGHWAY ADMINISTRATION'S (FHWA) MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AND MSHA'S MARYLAND SUPPLEMENT TO THE MUTCD.
2. IN ACCORDANCE WITH SECTION 5.6.C OF THE COUNTY ROAD ORDINANCE, AN EVALUATION OF THE PROPOSED ROADWAY PAVEMENT SECTIONS BASED UPON EXISTING SUBSURFACE AND SUB-GRADE SOIL CONDITIONS AND WORST CASE SCENARIO FOR TRAFFIC VOLUMES (EAL'S) IS REQUIRED TO BE SUBMITTED BY A LICENSED GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF THE SUB-BASE MATERIALS. THE SUBGRADE MUST HAVE A MINIMUM CBR VALUE OF 7.
3. ALL SIGNS SHALL CONFORM TO THE LATEST VERSION OF MSHA'S STANDARD SIGN BOOK AND FHWA'S MUTCD. ALL TEMPORARY SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH MSHA STD. NO. MO 104.01-17A.
4. ALL SIGNS SHALL BE MOUNTED ON GALVANIZED CHANNEL POSTS.
5. SIGNS SHALL BE INSTALLED PRIOR TO SUBSTANTIAL COMPLETION ACCEPTANCE.
6. APPLY TACK COAT AND BITUMINOUS JOINT SEALER AT ALL VERTICAL JOINTS BETWEEN EXISTING PAVEMENT AND PROPOSED ASPHALT WIDENING.
7. THE CONTRACTOR SHALL REMOVE AND RESTRIPE ANY PAVEMENT MARKINGS THAT ARE DAMAGED DURING CONSTRUCTION.
8. ALL PAVEMENT MARKINGS SHALL BE PAINTED AND INSTALLED PER MSHA STANDARDS
9. STANDARD HOURS FOR WORK WITHIN THE PUBLIC ROAD RIGHT-OF-WAY ARE FROM 9AM TO 3PM ON WEEKDAYS, EXCLUDING HOLIDAY PERIODS.

SHEET INDEX

C 001	COVER (SHEET 1 OF 38)
C 100	EXISTING CONDITIONS PLAN (SHEET 2 OF 38)
C 200	SITE PLAN INDEX AND STORMWATER MANAGEMENT (SHEET 3 OF 38)
C 201	SITE PLAN NORTHERN SECTION (SHEET 4 OF 38)
C 202	SITE PLAN SOUTHERN SECTION (SHEET 5 OF 38)
C 203	TALBOT STREET EXTENSION ROAD GEOMETRY PLAN (SHEET 6 OF 38)
C 204	NORTH MAPLE AVE. EXTENSION ROAD GEOMETRY PLAN (SHEET 7 OF 38)
C 210	UTILITY LAYOUT PLAN (SHEET 8 OF 38)
C 211	SANITARY SEWER PLAN AND PROFILE (SHEET 9 OF 38)
C 212	WATER MAIN EXTENSION PLAN (SHEET 10 OF 38)
C 213	WASHINGTON AVE WATER MAIN CONNECTION PLAN (SHEET 11 OF 38)
C 214	STORM DRAIN PLAN (SHEET 12 OF 38)
C 220	GRADING PLAN INDEX SHEET (SHEET 13 OF 38)
C 221	GRADING PLAN NORTHERN SECTION (SHEET 14 OF 38)
C 222	GRADING PLAN SOUTHERN SECTION (SHEET 15 OF 38)
C 230	ROAD CENTERLINE PROFILE (SHEET 16 OF 38)
C 231	WATER EXTENSION PROFILE (SHEET 17 OF 38)
C 232	STORM DRAIN PROFILES (SHEET 18 OF 38)
C 240	SIGNAGE AND STRIPING PLAN (SHEET 19 OF 38)
C 250	SITE PLAN DETAIL SHEET (SHEET 20 OF 38)
C 251	SITE PLAN DETAIL SHEET (SHEET 21 OF 38)
C 252	BLOCK WALL DETAIL SHEET (SHEET 22 OF 38)
C 253	SANITARY SEWER DETAILS (SHEET 23 OF 38)
C 254	WATER MAIN DETAILS (SHEET 24 OF 38)
C 255	WATER MAIN DETAILS (SHEET 25 OF 38)
C 256	STORM DRAIN DETAILS (SHEET 26 OF 38)
C 260	BIOSWALE DETAIL SHEET (SHEET 27 OF 38)
C 400	EROSION AND SEDIMENT CONTROL PLAN PH 1 (SHEET 28 OF 38)
C 401	EROSION AND SEDIMENT CONTROL PLAN PH 2 (SHEET 29 OF 38)
C 402	EROSION AND SEDIMENT CONTROL PLAN PH 3 (SHEET 30 OF 38)
C 403	EROSION AND SEDIMENT CONTROL PLAN PH 4 (SHEET 31 OF 38)
C 404	EROSION AND SEDIMENT CONTROL PLAN PH 5 (SHEET 32 OF 38)
C 410	EROSION AND SEDIMENT CONTROL DETAIL SHEET (SHEET 33 OF 38)
C 411	EROSION AND SEDIMENT CONTROL DETAIL SHEET (SHEET 34 OF 38)
L 100	LANDSCAPE PLAN (SHEET 35 OF 38)
L 101	LANDSCAPE PLAN DETAILS AND NOTES (SHEET 36 OF 38)
EL 300	ELECTRICAL LIGHTING SITE PLAN (SHEET 37 OF 38)
EL 301	ELECTRICAL SITE LIGHTING PHOTOMETRIC CALCULATION (SHEET 38 OF 38)



SITE BENCHMARKS

NAME	TYPE	NORTHING	EASTING	ELEV
BM#1	SET CAPPED REBAR	315285.66	1318540.81	177.93
BM#2	SET CAPPED REBAR	315471.95	1318577.22	171.43
BM#3	SET CAPPED REBAR	315510.98	1318933.99	178.17

NOTE: ALL SITE BENCHMARKS ARE IN NAD83/NAVD88 MARYLAND STATE PLANE COORDINATES

SITE DATA TABLE

TOTAL SITE AREA	DISTURBED AREA	EXISTING IMPERVIOUS AREA	NEW IMPERVIOUS AREA	TOTAL IMPERVIOUS LOT COVERAGE	ESTIMATED CUT	ESTIMATED FILL	NET
6.14 AC	5.52 AC	0.36 AC	2.59 AC	2.59 AC	9400 CY*	11,750 CY*	±2,350 CY FILL*

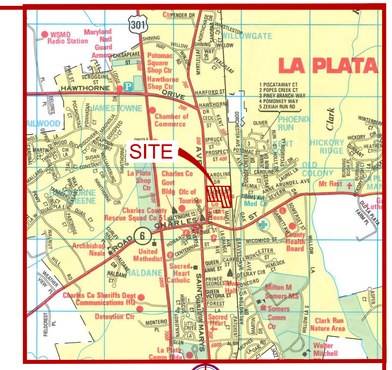
*THE EARTHWORK QUANTITIES SHOWN HEREON ARE FOR INFORMATION PURPOSES ONLY. VISTA DESIGN, INC. MAKES NO GUARANTEES OF THE ACCURACY OF QUANTITIES OR BALANCE OF SITE. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY OF ACTUAL EARTHWORK QUANTITIES ENCOUNTERED DURING CONSTRUCTION.

PROFESSIONAL CERTIFICATION:

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO: 36310 , EXPIRATION DATE: 11/17/2026 .

REFERENCED COUNTY DETAILS

ROAD DETAILS	
R-2.16	LOCAL ROAD SECTION
R 2.22	COMBINATION CURB AND GUTTER
R 2.23	STANDARD CURB
R 2.24	CURB INSTALLATION
R 2.26	CONCRETE CURB AND GUTTER TRANSITION
R 2.26.1	CONCRETE CURB AND GUTTER TRANSITIONS PLAN VIEW
R 2.28	CONCRETE SIDEWALK
R 2.29.1	PEDESTRIAN RAMP
R 2.29.2	PEDESTRIAN RAMP SIDEWALK ABUTS CURB
R 2.32	CONCRETE APRONS
R 2.48	REPAIRING PAVEMENT OPENINGS FOR UTILITY TRENCHES
M 5.00	METHOD OF CUTTING AND REPAIRING ROADWAYS
SEWER DETAILS	
S 1.00	PRECAST CONCRETE MANHOLE
S 1.07	KOR-N-SEAL
S 1.09	PRECAST CONCRETE MANHOLE BUILT OVER EXISTING SEWER TYPE II
S 3.00	STANDARD TRAFFIC FRAME AND COVER
S3.03	RISER RING STANDARD FRAME AND COVER
S 3.06	PRECAST CONCRETE MANHOLE ADJUSTING GRADE RING
S 3.07	PRECAST CONCRETE MANHOLE SLOPED ADJUSTING GRADE RING
S 4.01	TYPE 'B' 6" CONNECTION TO SEWER MAIN
M 2.04	BEDDING, EMBEDMENT, AND MAXIMUM COVER PVC PIPE
M2.01	MINIMUM CLEARANCE OF WATER PARALLEL TO SEWER
WATER DETAILS	
W 1.00	METHOD OF TESTING WATER MAINS
W 2.03	4" THRU 12" WATER CONNECTION INSIDE METER SETTINGS
W 3.00	DETAIL OF GATE VALVE AND BOX
W 3.10	TRACER WIRE SAMPLE WATER PLAN
W 3.11	TRACER WIRE WATER SERVICE DETAIL
W 3.12	TRACER WIRE HYDRANT DETAIL
W 5.00	FIRE HYDRANT
W 5.00-A	FIRE HYDRANT ADJUSTMENT (S-BEND)
W 6.05	3" & LARGER INDOOR METER INSTALLATIONS
W 6.07	INDOOR FM METER INSTALLATIONS
W 6.09	INDOOR DETECTOR CHECK METER INSTALLATIONS
M 2.03	TRENCH WIDTHS FOR DUCTILE IRON MAIN
M 2.05	CONCRETE ENCASEMENT AND CRADLE DETAILS
B 1.00	THRUST BLOCK FOR HORIZONTAL BENDS
B 1.01	THRUST BLOCKS FOR TEES AND TAPPING ASSEMBLIES
B 1.05	ANCHORAGE FOR UPPER VERTICAL BENDS
B 1.06	BUTTRESSES FOR LOWER VERTICAL BENDS
B 2.00	METHOD OF STRAPPING VALVE TO MAIN
B 2.01	METHODS OF STRAPPING FIRE HYDRANT TO MAIN
B 2.04	MECHANICAL JOINT RETAINER GLAND
STORMWATER DETAILS	
MD 352.01	STANDARD HEADWALL
MD 354.01	STANDARD TYPE C ENDWALL
MD 374.03	STANDARD WR & WRM INLET FRAME AND GRATE
MD 374.23	STANDARDS PRECAST WR INLET
MD 374.62	PRECAST OR CAST IN PLACE COG INLETS
MD 374.63	PRECAST OR CAST IN PLACE COS INLETS
MD 381.01	STANDARD YARD INLETS



VICINITY MAP
SCALE 1" =2000'
NORTH

LEGEND

SITE PROPERTY LINES
ADJACENT PROPERTY LINES
PR. BUILDING SETBACKS
EX. BUILDINGS
EX. PAVEMENT
EX. SIDEWALK
EX. TREELINE
EX. TREE OUTSIDE OF FOREST STAND
EX. SANITARY SEWER
EX. STORM SEWER
EX. WATER MAIN
EX. 1X CONTOUR (24)
EX. 5X CONTOUR (25)
EX. FENCE
EX. UTIL POLE
PR. BUILDING RESTRICTION LINE
PR STORM SEWER
PR. TREELINE LOCATION
PR LIBRARY LOCATION
PR PAVERSTONE
PR SIDEWALK
PR CURB
PR PAVEMENT
PR WATERMAIN EXTENSION
PR SANITARY SEWER
PR LIMITS OF DISTURBANCE (LOD)
PR BLOCK RETAINING WALL
PR 1X CONTOUR (24)
PR 5X CONTOUR (25)
PR SWALE CENTERLINE
PR BIOSWALE
PR LIGHT
PR PUBLIC UTILITY EASEMENT (PUE)

PERMIT INFORMATION

PERMIT NAME	NUMBER	DATE APPROVED	DATE EXPIRES
CHARLES SOIL CONSERVATION DISTRICT	32-23	2/11/2025	4/30/2027
TOWN OF LA PLATA	00562-2021		
MD DEPT OF ENVIRONMENT NOTICE OF INTENT			

0 50 100 200 300
SCALE: 1" = 100'

ENGINEER'S CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN MEETS OR EXCEEDS THE REQUIREMENTS OF THE STORMWATER MANAGEMENT & STORM DRAINAGE ORDINANCE, FLOODPLAIN MANAGEMENT ORDINANCE, GRADING ORDINANCE, ROAD ORDINANCE, WATER & SEWER ORDINANCE, THE 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I & II, ALL STATE AND FEDERAL CODES, THE CHARLES COUNTY STANDARDS AND SPECIFICATIONS FOR CONSTRUCTION MANUAL, THE CHARLES COUNTY DETAILS MANUAL, THE APPROVED SITE PLAN OR PRELIMINARY PLAN, OTHER PGM ORDINANCES AND REGULATIONS AND ANY CONDITIONS IMPOSED BY CHARLES COUNTY.

MARYLAND REGISTERED PROFESSIONAL ENGINEER

1-15-26 — DATE
36310 — LICENSE NUMBER

CONSULTANTS CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH THE 2011 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL OR CURRENT REVISIONS THEREOF, AND DEPARTMENT OF THE ENVIRONMENT STORMWATER MANAGEMENT REGULATIONS.

MD P.E. LICENSE # 36310
MD LAND SURVEYOR LICENSE # N/A
MD LANDSCAPE ARCHITECT # N/A
NAME RICHARD F. POLK
FIRM NAME VISTA DESIGN, INC
STREET ADDRESS 11634 WORCESTER HWY SHOWELL, MD 21862

OWNER'S/DEVELOPERS CERTIFICATION

I/WE HEREBY CERTIFY THAT ALL CONSTRUCTION INCLUDING AND NOT LIMITED DRAINAGE, GRADING, STORMWATER MANAGEMENT, ROADS, AND WATER & SEWER WILL BE DONE PURSUANT TO THIS PLAN, ALL LOCAL, STATE AND FEDERAL CODES AND REQUIREMENTS, CHARLES COUNTY STANDARDS AND SPECIFICATIONS FOR CONSTRUCTION MANUAL, CHARLES COUNTY DETAILS, APPROVED SITE AND/OR PRELIMINARY PLANS, OTHER TOWN ORDINANCES & REGULATIONS AND ANY OTHER REQUIREMENTS IMPOSED BY CHARLES COUNTY. I/WE HEREBY AUTHORIZE A RIGHT-OF-ENTRY TO ANY CHARLES COUNTY, LOCAL, STATE OF FEDERAL PERSONNEL FOR THE PURPOSE OF INSPECTION, EVALUATION, OR OBSERVATION OF ANY CONSTRUCTION ACTIVITY RELATED TO THE PROJECT.

OWNER/DEVELOPER SIGNATURE & DATE: Britta Hertling

PRINTED NAME AND TITLE: BRITTA HERTLING - CHIEF OF CAPITAL SERVICES

OWNER'S/DEVELOPERS CERTIFICATION

"I/WE HEREBY CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION, VEGETATIVE STABILIZATION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE (★) AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT BEFORE BEGINNING THE PROJECT. I HEREBY AUTHORIZE THE RIGHT TO ENTRY FOR PERIODIC ON-SITE EVALUATION BY STATE OF MARYLAND, DEPARTMENT OF THE ENVIRONMENT, COMPLIANCE INSPECTORS, CHARLES COUNTY INSPECTORS, AND THE REPRESENTATIVE OF THE CHARLES SOIL CONSERVATION DISTRICT."

OWNER/DEVELOPER SIGNATURE & DATA: Britta Hertling

PRINTED NAME AND TITLE: BRITTA HERTLING - CHIEF OF CAPITAL SERVICES

TELEPHONE NUMBER: (301) 645-0641

ADDRESS: 10430 AUDIE LANE LAPLATA MD, 20646-2150

CANDIS STRETCHER RPC 027926
PRINTED NAME AND CARD NUMBER (★) OF ON-SITE RESPONSIBLE PERSONNEL.

CHARLES SOIL CONSERVATION DISTRICT APPROVAL

SEDIMENT AND EROSION CONTROL PLAN APPROVAL NUMBER_____

SMALL POND APPROVAL FOR _____

Sediment and Erosion Control Plan Approval and Small Pond Approval (if applicable) is hereby granted by the Charles Soil Conservation District.

Approval Signature / Date _____

Approval expiration date: _____

(Requests exclusively for extension of the approval expiration date noted above and not involving any plan modifications to these approved plan sheets, must be submitted to the Charles Soil Conservation District in writing. The Charles Soil Conservation District, at its discretion, may approve the expiration date extension to the approved plan via separate approval letter.)

NOTE:
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NOTE:
This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.

LIC 36310 EXP 11/17/26

VISTA DESIGN, INC.
Engineers • Architects • Surveyors • Landscape Architects
Land Planning Consultants • GIS Services
11634 Worcester Hwy, Showell, MD 21862
Ph. 410-352-3874 • Fax 410-352-3875 • www.vistadesigninc.com

ToLP PERMIT #00562-2021
LA PLATA LIBRARY

CONSTRUCTION PLANS
COVER SHEET

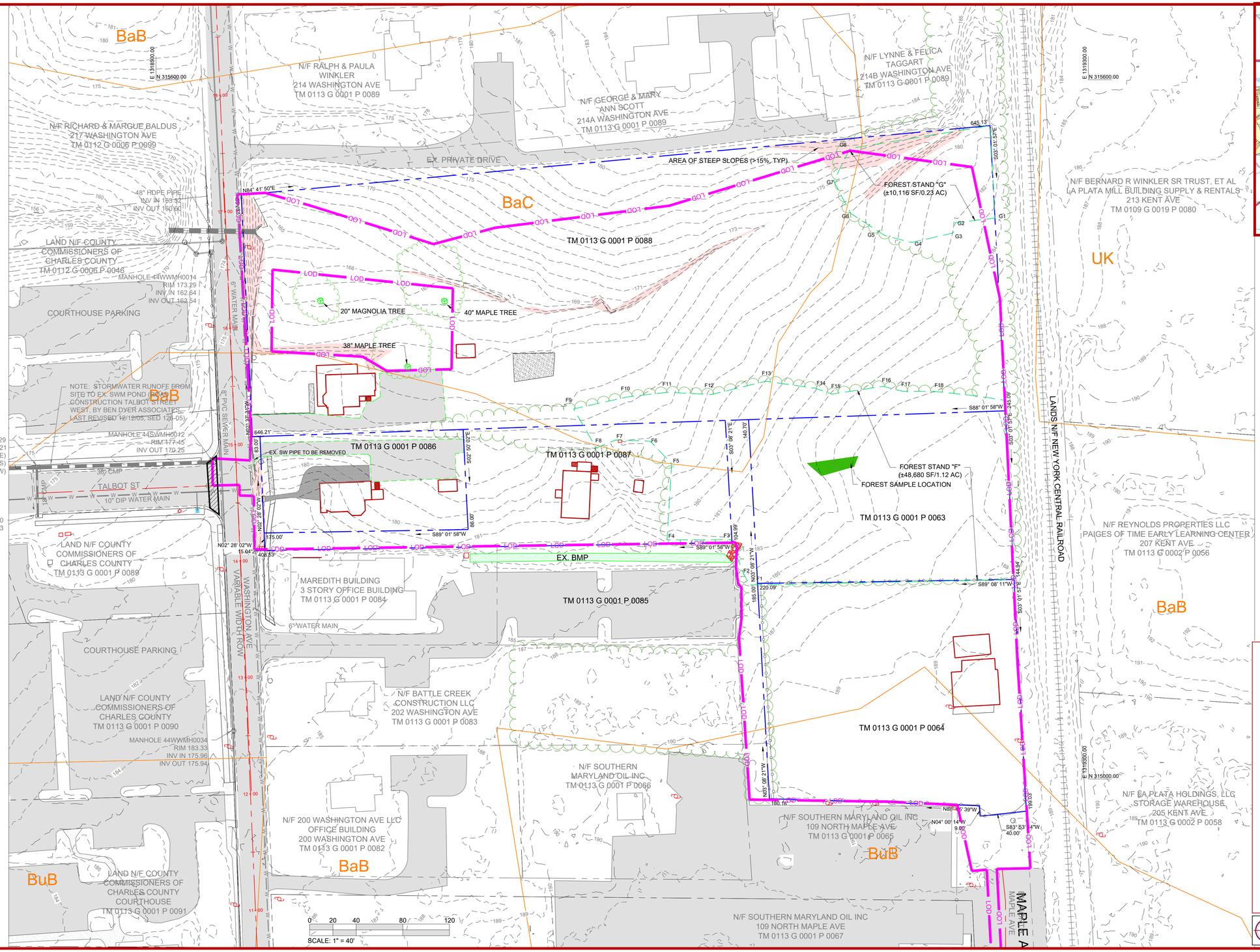
PROJECT DATA

Tax Map: 0113	Parcel: SEVERAL
LA PLATA, MD	
Drawn By: WCS	Checked By: WCS
Date: 2/12/25	
Scale: 1" = 100'	

REVISIONS

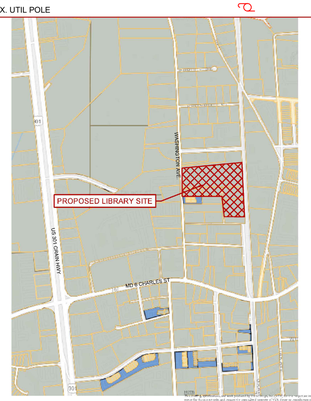
1. 5/19/23 PER LA PLATA COMMENTS
2. 1/16/25 PER LA PLATA COMMENTS
3. 1/16/25 PER CHARLES COUNTY SCD COMMENTS
4. 2/10/25 PER CHARLES COUNTY SCD COMMENTS
5. 7/22/25 PER TOWN COMMENTS
6. 1/16/26 PER TOWN REQUEST

Project No.: 21-093
File Name: jan2026CE011525.dwg
Sheet No.: C-001





VICINITY MAP
SCALE 1" =2000'
NORTH



SITE DATA

MAP 0113 GRID 0001 PARCEL 0088 (2.76 AC) ZONE R-8
MAP 0113 GRID 0001 PARCEL 0087 (0.59 AC) ZONE CB
MAP 0113 GRID 0001 PARCEL 0086 (0.34 AC) ZONE CB
MAP 0113 GRID 0001 PARCEL 0063 (0.73 AC) ZONE CB
MAP 0113 GRID 0001 PARCEL 0064 (1.00 AC) ZONE CB

PROPERTY OWNER

TOWN OF LA PLATA
305 QUEEN ANNE STREET
LA PLATA, MD 20646
PH 301-932-8421

HORIZONTAL & VERTICAL CONTROL

HORIZONTAL: NAD 83 MARYLAND STATE PLANE, US FEET
VERTICAL: NAVD 88
FIELD SURVEY DATA COLLECTED BY VISTA DESIGN, JULY 2021

SOILS DATA TABLE

SYMBOL	DESCRIPTION	HSG	Kw	HYDRIC
BaB	Beltsville Silt Loam, 2-5%	C	0.37	No
BaC	Beltsville Silt Loam, 5-10%	C	0.43*	No
BuB	Beltsville Urban Land Complex, 2-5%	C	0.37	No
UK	Urban Land	D	--	No

* SOILS WITH "K" > 0.40 ARE OFTEN CLASSIFIED AS HIGHLY ERODIBLE

LEGEND

SITE PROPERTY LINES
ADJACENT PROPERTY LINES
PR. BUILDING SETBACKS
EX. BUILDINGS
EX. PAVEMENT
EX. SIDEWALK
EX. TREELINE
EX. TREE OUTSIDE OF FOREST STAND
EX. SANITARY SEWER
EX. STORM SEWER
EX. WATER MAIN
EX. 1X CONTOUR
EX. 5X CONTOUR
EX. FENCE
EX. UTIL POLE

	LA PLATA LIBRARY TOPL-00526-2021	TAX ASSESSMENT MAP EXHIBIT	VISTA DESIGN, INC.

PROJECT DATA
Tax Map: 0113 Parcel: SEVERAL
LA PLATA, MD
Drawn By: WCS Checked By: WCS
Date: 2/12/25
Scale: 1" = 40'

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NOTE:
This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.

STATE OF MARYLAND · STEPHEN C. WARD · LICENSE #32... · PROFESSIONAL ENGINEER
LIC 36310 EXP 11/17/26

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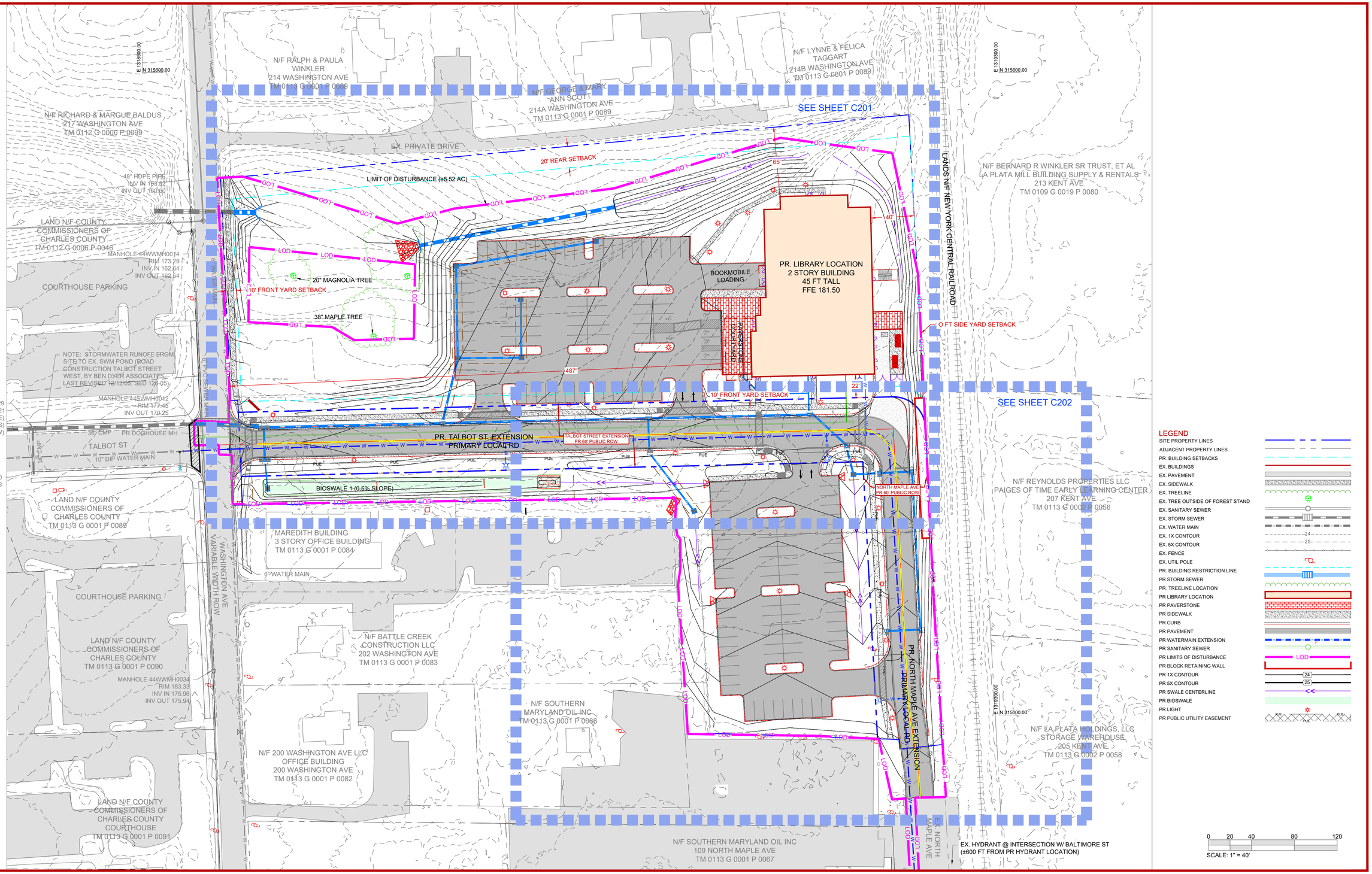
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EXISTING CONDITIONS PLAN

REVISIONS

1. 5/19/23 PER LA PLATA COMMENTS
2. 1/16/25 PER LA PLATA COMMENTS
3. 1/16/25 PER CHARLES COUNTY SCD COMMENTS
4. 2/10/25 PER CHARLES COUNTY SCD COMMENTS
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Project No.: 21-093
File Name: jan2026CE011525.dwg
Sheet No.: C-100



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NOTE:
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STATE OF MARYLAND — WILLIAM C. SCHMIDT — REG. NO. 36310 — PROFESSIONAL ENGINEER
LIC 36310 EXP 11/17/26

VISTA DESIGN, INC.
Engineers • Architects • Surveyors • Landscape Architects
Land Planning Consultants • GIS Services
11634 Worcester Hwy, Showell, MD 21862
Ph. 410-352-3874 • Fax 410-352-3875 • www.vistadesigninc.com

ToLP PERMIT #00562-2021
LA PLATA LIBRARY

SITE PLAN INDEX AND STORMWATER MANAGEMENT/STORM DRAIN EASEMENTS SHEET

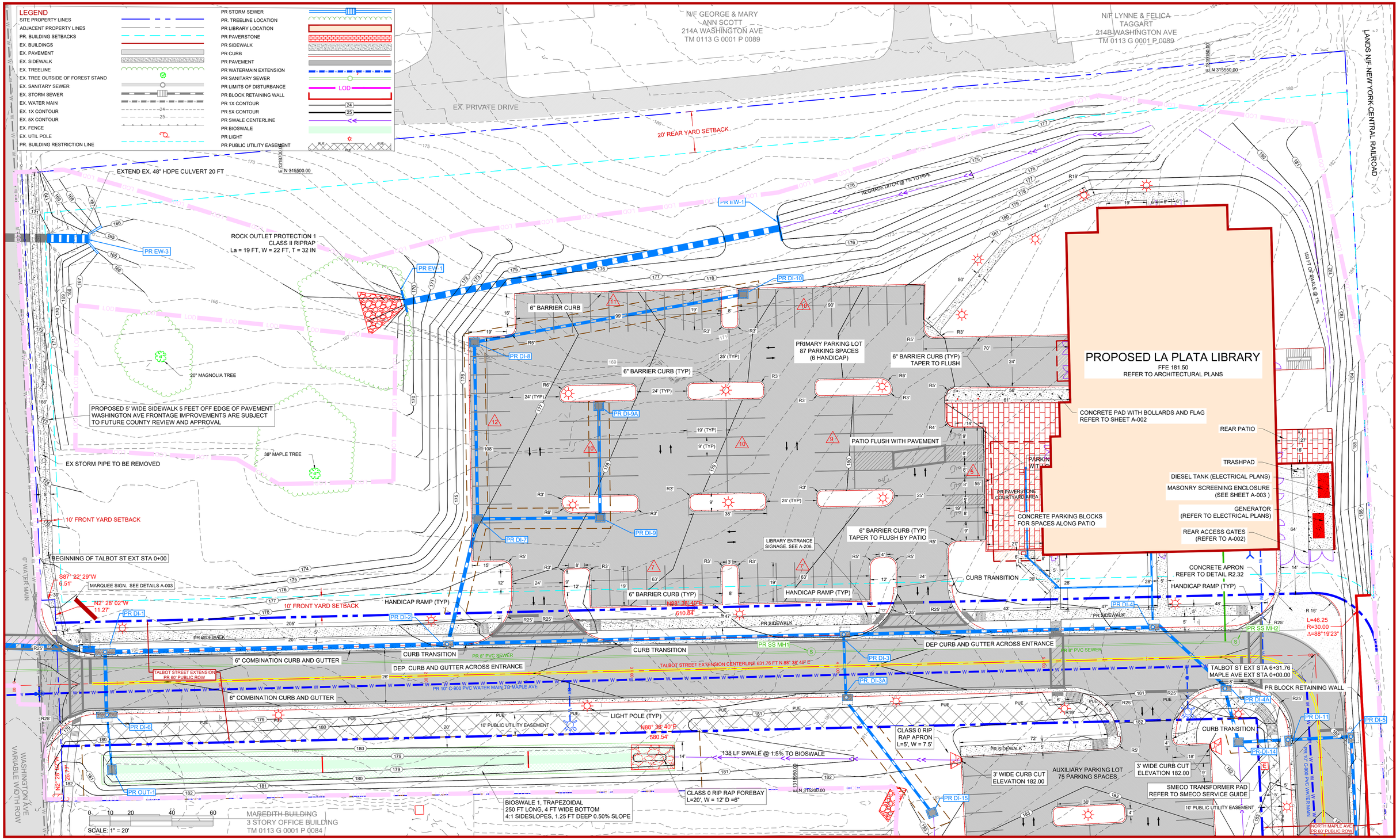
PROJECT DATA

Tax Map:	0113	Parcel:	SEVERAL
LA PLATA, MD			
Drawn By:	WCS	Checked By:	WCS
Date:	2/12/25		
Scale:	1" = 40'		

REVISIONS

1.	5/19/23 PER LA PLATA COMMENTS
2.	1/16/25 PER LA PLATA COMMENTS
3.	1/16/25 PER CHARLES COUNTY SCD COMMENTS
4.	2/12/25 ISSUED FOR TEAM REVIEW
5.	7/22/25 PER TOWN COMMENTS
6.	1/16/26 PER TOWN REQUEST

Project No.: 21-093
File Name: 071425BF.dwg
Sheet No.: C-200



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CLAIBORNE P. FOLK
LICENSE #32
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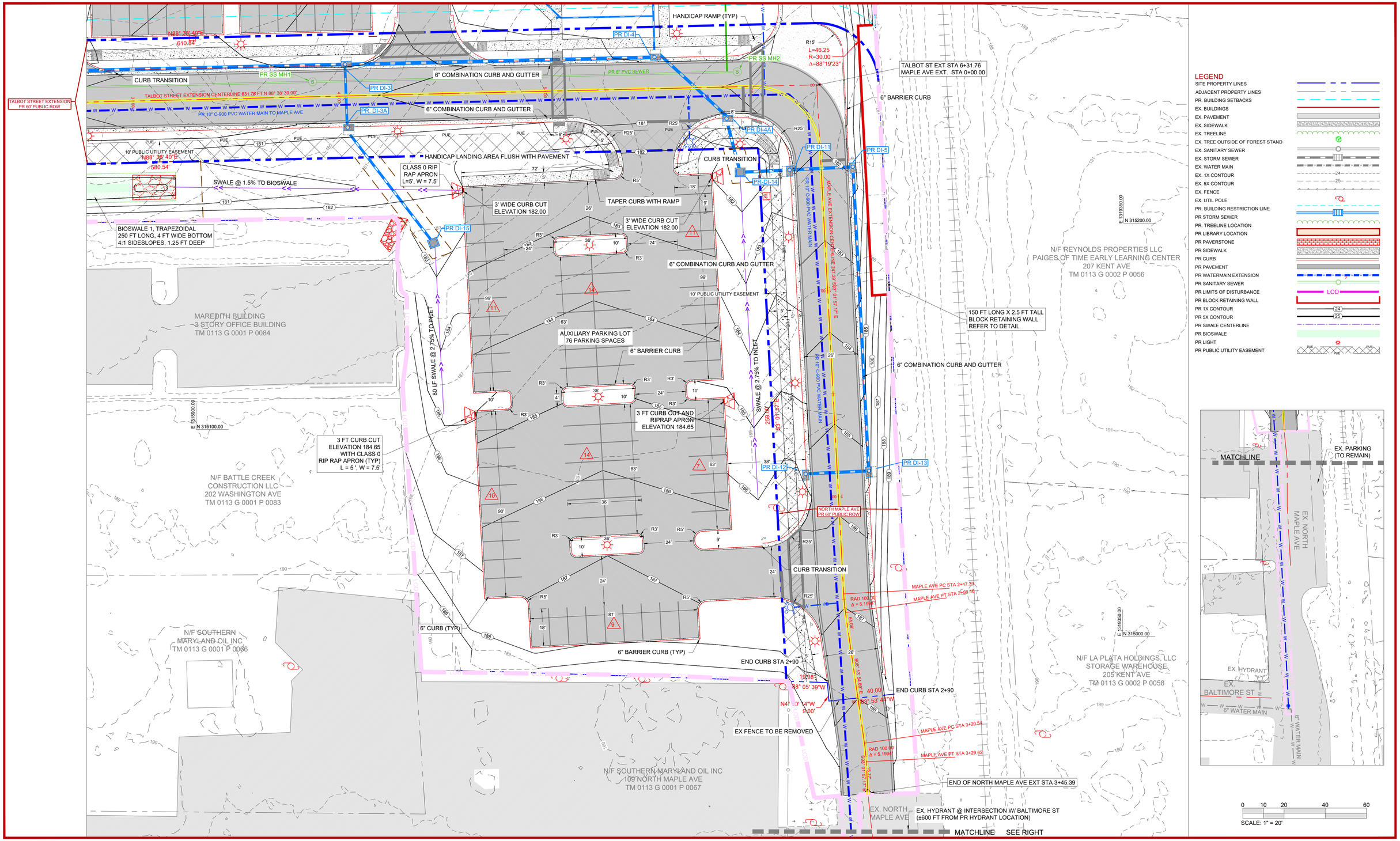
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SITE PLAN
NORTHERN SECTION

PROJECT DATA			
Tax Map:	0113	Parcel:	SEVERAL
LA PLATA, MD			
Drawn By:	WCS	Checked By:	WCS
Date:	2/12/25		
Scale:	1" = 20'		

REVISIONS
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2. 1/16/25 PER LA PLATA COMMENTS
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Project No.: 21-093
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STANLEY C. POLLACK
PROFESSIONAL ENGINEER
LICENSE #32410
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SITE PLAN
SOUTHERN SECTION

PROJECT DATA

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LA PLATA, MD			
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Project No.: 21-093
File Name: 071425BF.dwg
Sheet No.: C-202

LEGEND

SITE PROPERTY LINES
ADJACENT PROPERTY LINES
PR. BUILDING SETBACKS
SWM/SD EASEMENT
EX. BUILDINGS
EX. PAVEMENT
EX. SIDEWALK
EX. TREELINE
EX. TREE OUTSIDE OF FOREST STAND
EX. SANITARY SEWER
EX. STORM SEWER
EX. WATER MAIN
EX. 1X CONTOUR
EX. 5X CONTOUR
EX. FENCE
EX. UTIL POLE
PR. BUILDING RESTRICTION LINE
PR STORM SEWER
PR. TREELINE LOCATION
PR LIBRARY LOCATION
PR PAVERSTONE
PR SIDEWALK
PR CURB
PR PAVEMENT
PR WATERMAIN EXTENSION
PR SANITARY SEWER
PR LIMITS OF DISTURBANCE
PR BLOCK RETAINING WALL
PR 1X CONTOUR
PR 5X CONTOUR
PR SWALE CENTERLINE
PR BIOSWALE
PR LIGHT
PR PUBLIC UTILITY EASEMENT

TALBOT STREET ROAD BASELINE

SEGMENT	START STATION	START POINT	DISTANCE	BEARING	END STATION	END POINT
1	0+00.00	N 315252.293, E 1318569.508	631.76 Ft	N88° 38' 40"E	6+31.76	N 315267.239, E 1319201.093

TALBOT STREET ROAD STRIPING SCHEDULE

ITEM	START STATION	OFFSET	END STATION	END OFFSET	TYPE	NOTES
SOLID DOUBLE YELLOW	0+37.59	0	5+99.71	0	5" WIDE YELLOW PAINT	
SOLID DOUBLE YELLOW	5+99.71	0	6+31.76	RIGHT 32.05	5" WIDE YELLOW PAINT	33' CL RADIUS
SOLID WHITE LINE	0+10.60	LEFT 44.30	0+36.76	LEFT 12.00	5" WIDE WHITE PAINT	26' RADIUS
SOLID WHITE LINE	0+36.76	LEFT 12.00	2+20.00	LEFT 12.00	5" WIDE WHITE PAINT	
SOLID WHITE LINE	2+88.04	LEFT 12.00	4+05.13	LEFT 12.00	5" WIDE WHITE PAINT	
SOLID WHITE LINE	4+75.13	LEFT 12.00	5+99.71	LEFT 12.00	5" WIDE WHITE PAINT	
SOLID WHITE LINE	5+99.71	LEFT 12.00	6+43.76	RIGHT 27.19	5" WIDE WHITE PAINT	40' RADIUS
SOLID WHITE LINE	0+12.68	RIGHT 38.65	0+36.75	RIGHT 12.00	5" WIDE WHITE PAINT	26' RADIUS
SOLID WHITE LINE	0+36.75	RIGHT 12.00	5+13.34	RIGHT 12.00	5" WIDE WHITE PAINT	
SOLID WHITE LINE	5+83.34	RIGHT 12.00	5+94.86	RIGHT 12.00	5" WIDE WHITE PAINT	
SOLID WHITE LINE	5+94.86	RIGHT 12.00	6+20.85	RIGHT 37.24	5" WIDE WHITE PAINT	26' RADIUS

TALBOT STREET ROAD MARKING SCHEDULE

ITEM	START STATION	OFFSET	END STATION	END OFFSET	TYPE
CROSSWALK	0+26.92	RIGHT 15.61 TO LEFT 15.61	0+32.92	RIGHT 13.49 TO LEFT 13.94	THERMOPLASTIC
STOP BAR	0+36.92	CENTER TO LEFT 12.00			THERMOPLASTIC
CROSSWALK	5+03.37	RIGHT 13.00 TO LEFT 13.00	5+09.37	RIGHT 13.00 TO LEFT 13.00	THERMOPLASTIC
CROSSWALK	5+86.04	RIGHT 13.00 TO LEFT 13.00	5+92.04	RIGHT 13.00 TO LEFT 13.00	THERMOPLASTIC
STOP BAR	5+96.04	CENTER TO LEFT 12.00			THERMOPLASTIC

TALBOT STREET STORM SEWER SCHEDULE

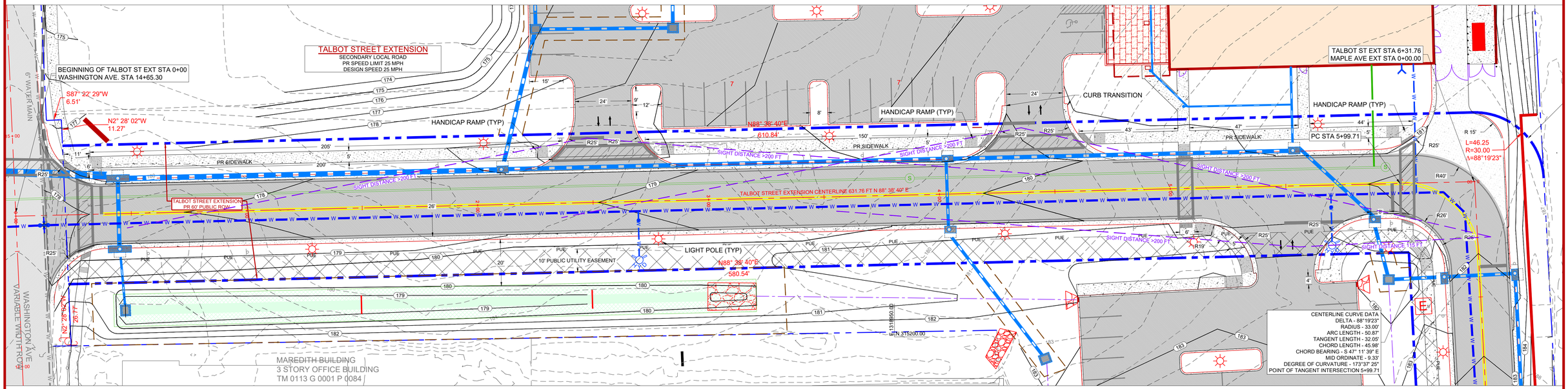
INLET	TYPE	STATION	OFFSET	RIM
DI-1	10' COS (MD 374.63)	0+44.52	LEFT 13.00	177.70
DI-6	10' COS (MD 374.63)	0+44.52	RIGHT 13.00	177.70
DI-2	5' COG (MD374.62)	2+10.60	LEFT 13.00	178.49
DI-3	5' COG (MD374.62)	4+03.27	LEFT 13.00	179.65
DI-3A	5' COG (MD374.62)	4+03.27	RIGHT 13.00	179.65
DI-4	5' COG (MD374.62)	5+53.37	LEFT 13.00	180.55
DI-4A	5' COG (MD374.62)	5+87.71	RIGHT 13.00	180.70

TALBOT STREET SANITARY SEWER SCHEDULE

ITEM	DETAIL	STATION	OFFSET	RIM
SSMH-1	CC S 1.00	3+87.31	LEFT 7.25	179.67
8" LATERAL	CC S 4.01	5+88.36	LEFT 7.25	
SSMH-2	CC S 1.00	5+93.36	LEFT 7.25	180.90

TALBOT STREET CURBING SCHEDULE

TYPE	DETAIL	START STATION	OFFSET	END STATION	OFFSET	NOTES
6" COMB. CURB & GUTTER	CC R2.22	0+12.31	LEFT 37.11	0+17.38	LEFT 26.49	23.00' BOC RADIUS
6" COMB. CURB & GUTTER	CC R2.22	0+17.38	LEFT 26.49	0+19.04	LEFT 24.00	TAPER
6" COMB. CURB & GUTTER	CC R2.22	0+19.04	LEFT 24.00	0+32.14	LEFT 15.57	DEPRESSED
6" COMB. CURB & GUTTER	CC R2.22	0+32.14	LEFT 15.57	0+35.09	LEFT 15.10	TAPER
6" COMB. CURB & GUTTER	CC R2.22	0+35.09	LEFT 15.10	2+20.96	LEFT 15.00	
6" COMB. CURB & GUTTER	CC R2.22	2+20.96	LEFT 15.00	2+88.02	LEFT 15.00	DEPRESSED
6" COMB. CURB & GUTTER	CC R2.22	2+88.02	LEFT 15.00	4+05.04	LEFT 15.00	
6" COMB. CURB & GUTTER	CC R2.22	4+05.04	LEFT 15.00	4+77.26	LEFT 15.00	DEPRESSED
6" COMB. CURB & GUTTER	CC R2.22	4+77.26	LEFT 15.00	5+00.50	LEFT 15.00	
6" COMB. CURB & GUTTER	CC R2.22	5+00.50	LEFT 15.00	5+03.50	LEFT 15.00	TAPER
6" COMB. CURB & GUTTER	CC R2.22	5+03.50	LEFT 15.00	5+08.50	LEFT 15.00	DEPRESSED
6" COMB. CURB & GUTTER	CC R2.22	5+08.50	LEFT 15.00	5+11.50	LEFT 15.00	TAPER
6" COMB. CURB & GUTTER	CC R2.22	5+11.50	LEFT 15.00	5+91.13	LEFT 15.00	
6" COMB. CURB & GUTTER	CC R2.22	5+91.13	LEFT 15.00	6+14.13	LEFT 37.99	23.00' BOC RADIUS
6" COMB. CURB & GUTTER	CC R2.22	0+15.76	RIGHT 37.79	0+25.37	RIGHT 19.29	23.00' BOC RADIUS
6" COMB. CURB & GUTTER	CC R2.22	0+25.37	RIGHT 19.29	0+27.92	RIGHT 17.71	TAPER
6" COMB. CURB & GUTTER	CC R2.22	0+27.92	RIGHT 17.71	0+32.14	RIGHT 15.97	DEPRESSED
6" COMB. CURB & GUTTER	CC R2.22	0+32.14	RIGHT 15.97	0+35.06	RIGHT 15.29	TAPER
6" COMB. CURB & GUTTER	CC R2.22	0+35.06	RIGHT 15.29	5+00.50	RIGHT 15.00	
6" COMB. CURB & GUTTER	CC R2.22	5+00.50	RIGHT 15.00	5+03.50	RIGHT 15.00	TAPER
6" COMB. CURB & GUTTER	CC R2.22	5+03.50	RIGHT 15.00	5+08.50	RIGHT 15.00	DEPRESSED
6" COMB. CURB & GUTTER	CC R2.22	5+08.50	RIGHT 15.00	5+18.62	RIGHT 15.66	TAPER
6" COMB. CURB & GUTTER	CC R2.22	5+46.71	RIGHT 30.00	5+86.32	RIGHT 15.00	23.00' BOC RADIUS
6" COMB. CURB & GUTTER	CC R2.22	5+86.32	RIGHT 15.00	5+94.32	RIGHT 15.00	
6" COMB. CURB & GUTTER	CC R2.22	5+94.32	RIGHT 15.00	6+13.66	RIGHT 30.00	23.00' BOC RADIUS



0 10 20 40 60
SCALE: 1" = 20'

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TALBOT STREET EXTENSION
GEOMETRY PLAN

PROJECT DATA

Tax Map:	0113	Parcel:	SEVERAL
LA PLATA, MD			
Drawn By:	WCS	Checked By:	WCS
Date:	2/12/25		
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1. 5/19/23 PER LA PLATA COMMENTS
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Project No.: 21-093
File Name: jan2026CE011525.dwg
Sheet No.: C-203

NORTH MAPLE AVE ROAD BASELINE

SEGMENT	START STATION	START POINT	LENGTH	BEARING	RADIUS	DELTA	END STATION	END POINT
1	0+00.00	N 315267.239, E 1319201.093	247.39'	S03° 01' 57"E			2+47.39	N 315020.196, E 1319214.181
2	2+47.39	N 315020.196, E 1319214.181	9.07"		100.00'	5°11'58"	2+56.46	N 315011.168, E 1319215.071
3	2+56.46	N 315011.168, E 1319215.071	64.08	S08° 13' 55"E			3+20.54	N 314947.751, E 1319224.246
4	3+20.54	N 314947.751, E 1319224.246	9.07"		100.00'	5°11'58"	3+29.62	N 314938.723, E 1319225.136
5	3+29.62	N 314938.723, E 1319225.136	15.77'	S03° 01' 57"E			3+45.39	N 314922.971, E 1319225.971

NORTH MAPLE AVE. ROAD STRIPING SCHEDULE

ITEM	START STATION	OFFSET	END STATION	END OFFSET	TYPE	NOTES
SOLID DOUBLE YELLOW	0+00.00	RIGHT 32.05	0+32.05	0	5" WIDE YELLOW PAINT	33' CL RADIUS
SOLID DOUBLE YELLOW	0+32.05	0	3+45.39	0	5" WIDE YELLOW PAINT	
SOLID WHITE LINE	-0+12.00	RIGHT 32.05	0+27.19	LEFT 12.00	5" WIDE WHITE PAINT	40' RADIUS
SOLID WHITE LINE	0+27.19	LEFT 12	3+45.39	LEFT 12.00	5" WIDE WHITE PAINT	
SOLID WHITE LINE	0+10.91	RIGHT 37.24	0+27.19	RIGHT 12.00	5" WIDE WHITE PAINT	26' RADIUS
SOLID WHITE LINE	0+27.19	RIGHT 12.00	3+45.39	RIGHT 12.00	5" WIDE WHITE PAINT	

NORTH MAPLE AVE. ROAD MARKING SCHEDULE

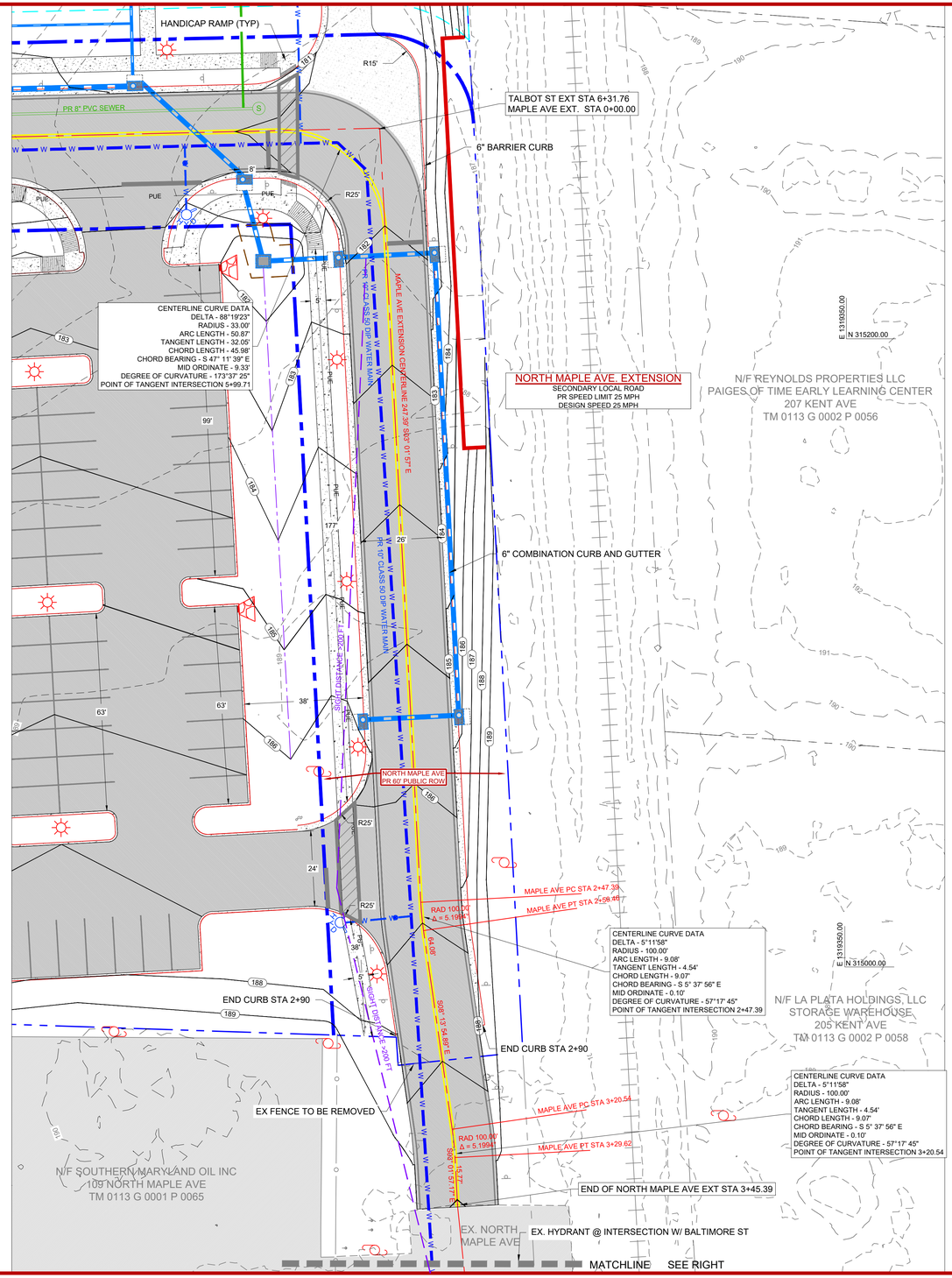
ITEM	START STATION	OFFSET	END STATION	END OFFSET	TYPE
STOP BAR	0+36.91	CENTER TO LEFT 12.00			THERMOPLASTIC

NORTH MAPLE AVE CURBING SCHEDULE

TYPE	DETAIL	START STATION	OFFSET	END STATION	OFFSET	NOTES
6" BARRIER CURB	CC R2.23	0+00.00	LEFT 13.50	0+20.50	LEFT 13.50	
6" COMB. CURB & GUTTER	CC R2.22	0+20.50	LEFT 15.00	2+90.00	LEFT 15.00	
6" COMB. CURB & GUTTER	CC R2.22	0+13.95	RIGHT 37.37	0+36+91	RIGHT 15.00	23.00' BOC RADIUS
6" COMB. CURB & GUTTER	CC R2.22	0+36+91	RIGHT 15.00	1+97.78	RIGHT 15.00	
6" BARRIER CURB	CC R2.23	2+68.39	RIGHT 13.50	2+90.00	RIGHT 15.00	

NORTH MAPLE AVE. STORM SEWER SCHEDULE

INLET	TYPE	STATION	OFFSET	RIM
DI-5	5' COG (MD374.62)	0+40.52	RIGHT 13.00	181.96
DI-11	5' COG (MD374.62)	0+40.52	LEFT 13.00	181.96
DI-12	5' COG (MD374.62)	1+88.27	RIGHT 13.00	185.26
DI-13	5' COG (MD374.62)	1+88.27	LEFT 13.00	185.26



LEGEND

- SITE PROPERTY LINES
- ADJACENT PROPERTY LINES
- PR. BUILDING SETBACKS
- SWM/SD EASEMENT
- EX. BUILDINGS
- EX. PAVEMENT
- EX. SIDEWALK
- EX. TREELINE
- EX. TREE OUTSIDE OF FOREST STAND
- EX. SANITARY SEWER
- EX. STORM SEWER
- EX. WATER MAIN
- EX. 1X CONTOUR
- EX. 5X CONTOUR
- EX. FENCE
- EX. UTIL POLE
- PR. BUILDING RESTRICTION LINE
- PR STORM SEWER
- PR. TREELINE LOCATION
- PR LIBRARY LOCATION
- PR PAVERSTONE
- PR SIDEWALK
- PR CURB
- PR PAVEMENT
- PR WATERMAIN EXTENSION
- PR SANITARY SEWER
- PR LIMITS OF DISTURBANCE
- PR BLOCK RETAINING WALL
- PR 1X CONTOUR
- PR 5X CONTOUR
- PR SWALE CENTERLINE
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NORTH MAPLE AVE
GEOMETRY PLAN

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Project No.: 21-093
File Name: jan2026CE011525.dwg
Sheet No.: C-204

N/F RALPH & PAULA WINKLER
214 WASHINGTON AVE
TM 0113 G 0001 P 0089

N/F GEORGE & MARY ANN SCOTT
214A WASHINGTON AVE
TM 0113 G 0001 P 0089

N/F LYNNE & FELICA TAGGART
214B WASHINGTON AVE
TM 0113 G 0001 P 0089

N/F RICHARD & MARGUE BALDUS
217 WASHINGTON AVE
TM 0112 G 0005 P 0099

EX. PRIVATE DRIVE

E 1318500.00
N 315600.00

E 1319300.00
N 315600.00

48" RDPE PIPE
INV IN 163.32
INV OUT 160.00

LAND N/F COUNTY COMMISSIONERS OF CHARLES COUNTY
TM 0112 G 0006 P 0046

MANHOLE 44WWMH0014
RIM 173.29
INV IN 162.64
INV OUT 162.54

COURTHOUSE PARKING

20" MAGNOLIA TREE

38" MAPLE TREE

6" WATER MAIN

8" PVC SEWER MAIN

NOTE: STORMWATER RUNOFF FROM SITE TO EX. SWM POND (ROAD CONSTRUCTION TALBOT STREET WEST, BY BEN DYER ASSOCIATES, LAST REVISED 12/12/05, SED 12A-05)

MANHOLE 44SWMH0012
RIM 177.45
INV OUT 170.25

INLET 44CB0029
RIM 174.21
INV IN 169.13(E)
INV IN 170.77(S)
INV OUT 168.83(W)

PR DOGHOUSE MH

36" CMP

TALBOT ST

10" DIP WATER MAIN

INLET 44CB0030
THROAT 174.53

18" CMP

LAND N/F COUNTY COMMISSIONERS OF CHARLES COUNTY
TM 0113 G 0001 P 0088

WASHINGTON AVE
VARIABLE WIDTH ROW

MAREDITH BUILDING
3 STORY OFFICE BUILDING
TM 0113 G 0001 P 0084

6" WATER MAIN

COURTHOUSE PARKING

LAND N/F COUNTY COMMISSIONERS OF CHARLES COUNTY
TM 0113 G 0001 P 0090

MANHOLE 44WWMH0034
RIM 183.33
INV IN 175.96
INV OUT 175.94

N/F BATTLE CREEK CONSTRUCTION LLC
202 WASHINGTON AVE
TM 0113 G 0001 P 0083

N/F SOUTHERN MARYLAND OIL INC
TM 0113 G 0001 P 0066

N/F 200 WASHINGTON AVE LLC
OFFICE BUILDING
200 WASHINGTON AVE
TM 0113 G 0001 P 0082

LAND N/F COUNTY COMMISSIONERS OF CHARLES COUNTY COURTHOUSE
TM 0113 G 0001 P 0091

N/F SOUTHERN MARYLAND OIL INC
109 NORTH MAPLE AVE
TM 0113 G 0001 P 0067

MATCHLINE SEE RIGHT

MAPLE AVE
NORTH MAPLE AVE

EX. HYDRANT @ INTERSECTION W/ BALTIMORE ST
(±600 FT FROM PR HYDRANT LOCATION)

N/F BERNARD R WINKLER SR TRUST, ET AL
LA PLATA MILL BUILDING SUPPLY & RENTALS
213 KENT AVE
TM 0109 G 0019 P 0080

LANDS N/F NEW YORK CENTRAL RAILROAD

N/F REYNOLDS PROPERTIES LLC
PAIGES OF TIME EARLY LEARNING CENTER
207 KENT AVE
TM 0113 G 0002 P 0056

N/F LA PLATA HOLDINGS, LLC
STORAGE WAREHOUSE
205 KENT AVE
TM 0113 G 0002 P 0058

PR DI-1
PR DI-2
PR DI-3
PR DI-3A
PR DI-4
PR DI-4A
PR DI-5
PR DI-6
PR DI-7
PR DI-8
PR DI-9
PR DI-9A
PR DI-10
PR DI-11
PR DI-12
PR DI-13
PR DI-14
PR DI-15
PR OUT-1
PR SS MH1
PR SS MH2

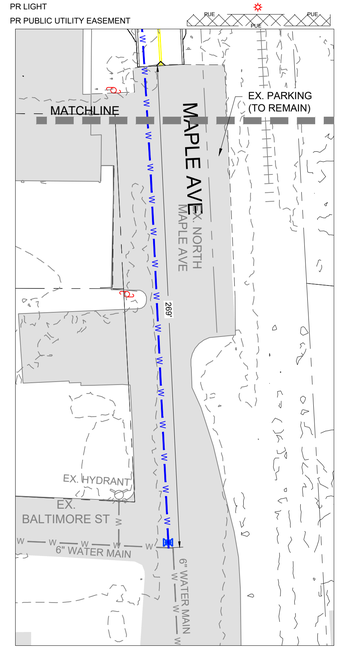
13'
23'

PUE

R=28.00
L=43.21
CHB N 37°49'21" W
CHD 38.92

LEGEND

- SITE PROPERTY LINES
- ADJACENT PROPERTY LINES
- PR. BUILDING SETBACKS
- EX. BUILDINGS
- EX. PAVEMENT
- EX. SIDEWALK
- EX. TREELINE
- EX. TREE OUTSIDE OF FOREST STAND
- EX. SANITARY SEWER
- EX. STORM SEWER
- EX. WATER MAIN
- EX. 1X CONTOUR
- EX. 5X CONTOUR
- EX. FENCE
- EX. UTIL POLE
- PR. BUILDING RESTRICTION LINE
- PR STORM SEWER
- PR. TREELINE LOCATION
- PR LIBRARY LOCATION
- PR PAVERSTONE
- PR SIDEWALK
- PR CURB
- PR PAVEMENT
- PR WATERMAIN EXTENSION
- PR SANITARY SEWER
- PR LIMITS OF DISTURBANCE
- PR BLOCK RETAINING WALL
- PR 1X CONTOUR
- PR 5X CONTOUR
- PR SWALE CENTERLINE
- PR BIOSWALE
- PR LIGHT
- PR PUBLIC UTILITY EASEMENT



0 20 40 80 120
SCALE: 1" = 40'

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UTILITY
LAYOUT PLAN

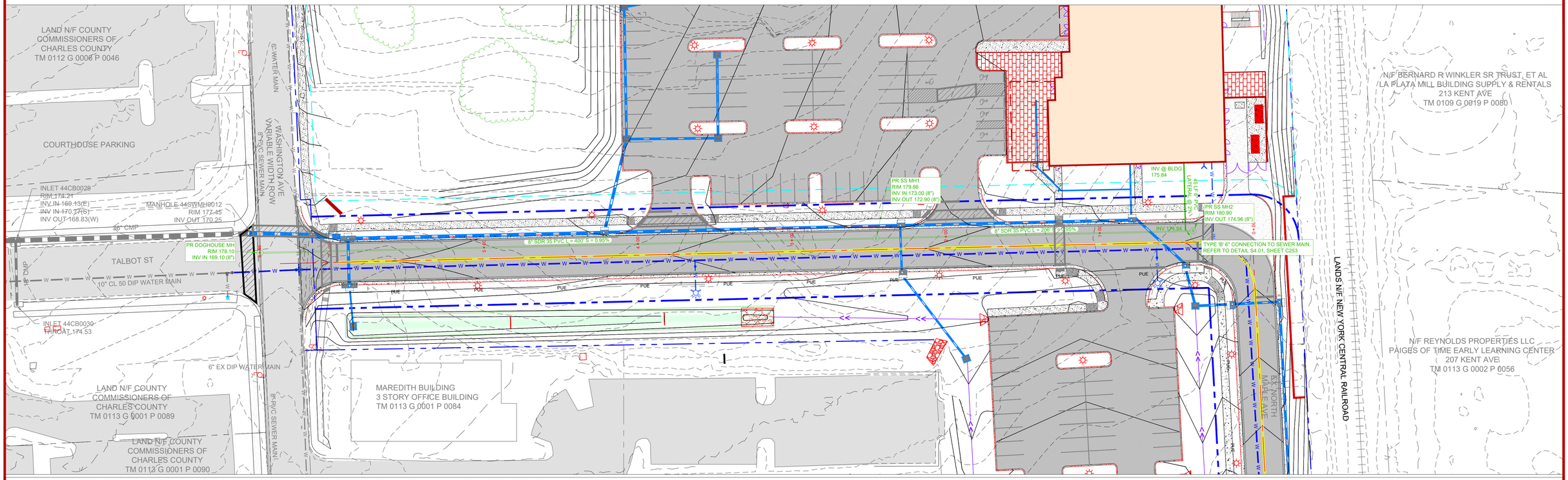
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Drawn By:	WCS	Checked By:	WCS
Date:	2/12/25		
Scale:	1" = 40'		

REVISIONS

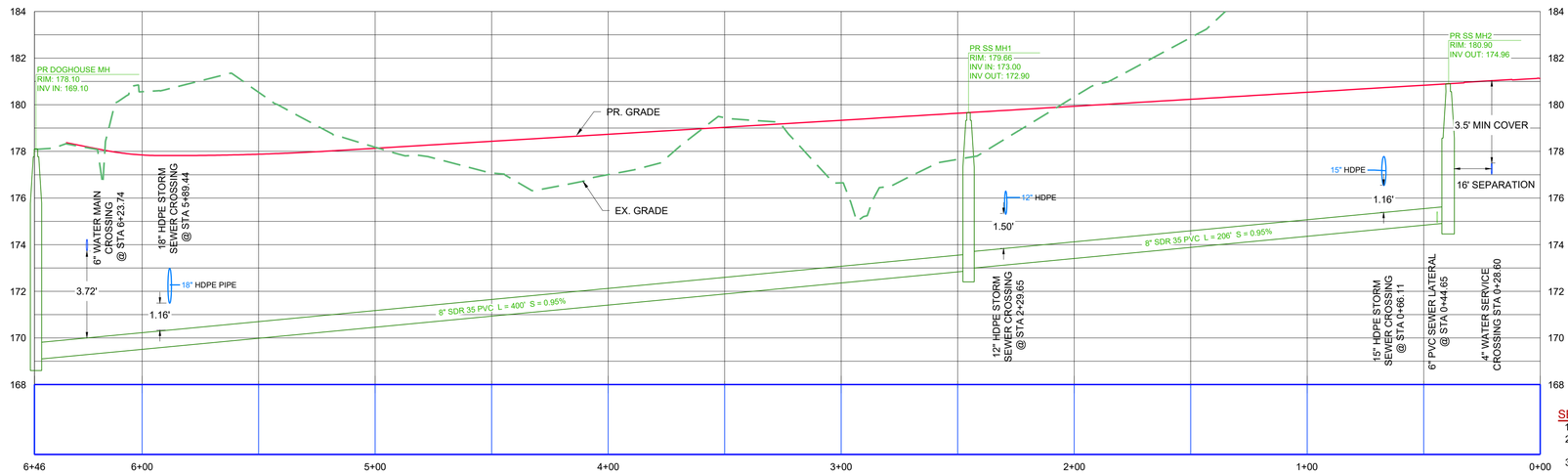
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2.	1/16/25	PER LA PLATA COMMENTS
3.	1/16/25	PER CHARLES COUNTY SCD COMMENTS
4.	2/10/25	PER CHARLES COUNTY SCD COMMENTS
5.	7/22/25	PER TOWN COMMENTS
6.	1/16/26	PER TOWN REQUEST

Project No.: 21-093
File Name: jan2026CE011525.dwg
Sheet No.: C-210



LEGEND

- SITE PROPERTY LINES
- ADJACENT PROPERTY LINES
- PR. BUILDING SETBACKS
- EX. BUILDINGS
- EX. PAVEMENT
- EX. SIDEWALK
- EX. TREELINE
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- EX. STORM SEWER
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- PR BLOCK RETAINING WALL
- PR 1X CONTOUR
- PR 5X CONTOUR
- PR SWALE CENTERLINE
- PR BIOSWALE
- PR LIGHT



Sewer Extention Profile

HORIZONTAL: 1" = 30 FT
VERTICAL: 1" = 3 FT

SEWER NOTES:

1. CONTRACTOR TO EXTEND SEWER ALONG PROPOSED TALBOT STREET EXTENSION
2. CONTRACTOR TO CONNECT TO EXISTING MAIN UNDER WASHINGTON AVE VIA DOGHOUSE MANHOLE.
3. CONTRACTOR TO USE KOR-N-SEAL OR COUNTY APPROVED EQUIVALENT CONNECTORS.

0 15 30 60 90

SCALE: 1" = 30'

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SANITARY SEWER PLAN AND PROFILE

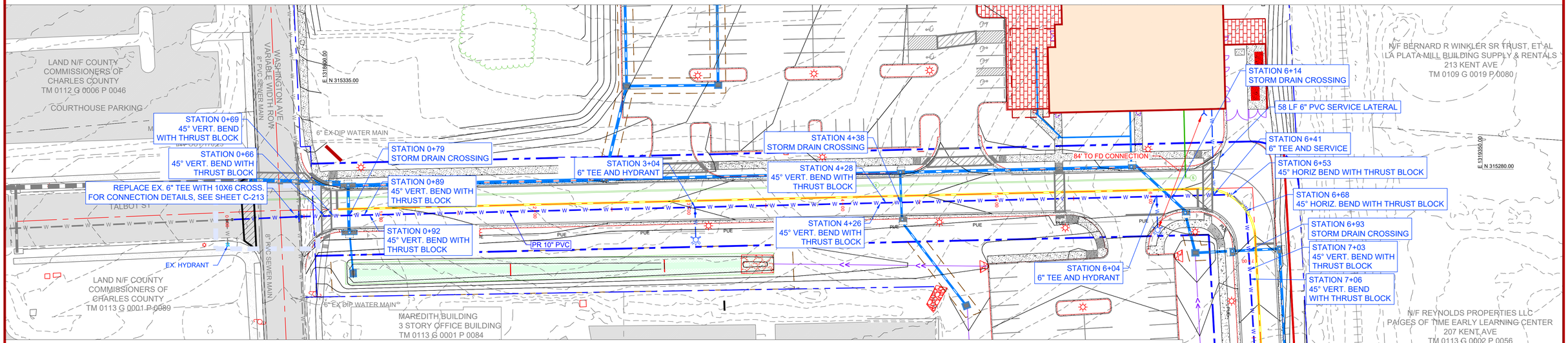
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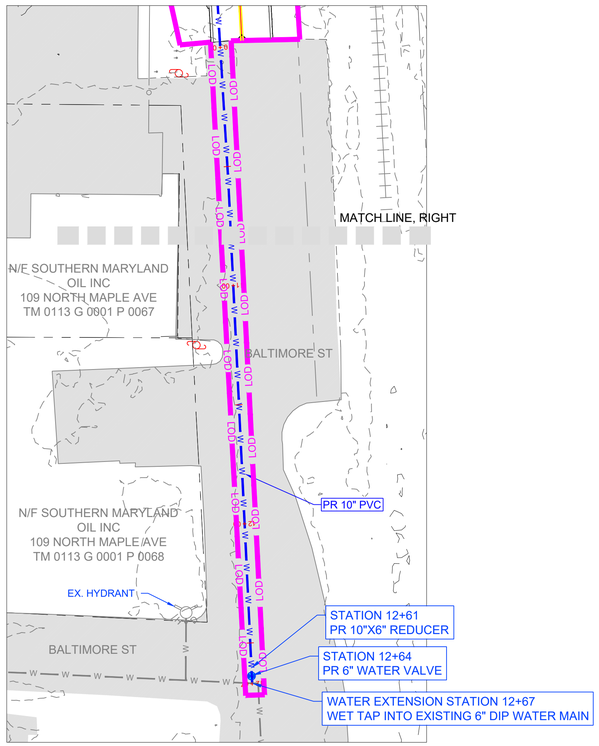
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LA PLATA, MD			
Drawn By:	WCS	Checked By:	WCS
Date:	2/12/25		
Scale:	1" = 30'		

REVISIONS

1. 5/19/23 PER LA PLATA COMMENTS
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Project No.: 21-093
File Name: 071425BF.dwg
Sheet No.: C-211





WATER MAIN NOTES

1. CONTRACTOR EXTEND WATER MAIN FROM THE INTERSECTION OF TALBOT ST AND WASHINGTON AVE TO THE INTERSECTION OF NORTH MAPLE AVE AND BALTIMORE ST.
2. CONTRACTOR MUST CONTACT CHARLES COUNTY DEPARTMENT OF PUBLIC WORKS NORTHERN AREA OPERATIONS SUPERINTENDENT TIM GILES (PH 301-609-5647, EMAIL GILEST@CHARLESCOUNTYMD.GOV) AND TOWN OF LA PLATA DIRECTOR OF OPERATIONS ROBERT STAHL (PH 301-934-8421, EMAIL BSHAHL@TOWNOFLAPLATA.ORG) AT LEAST 48 HOURS PRIOR TO INSTALLATION OF INSERTION VALVES, 48 HOURS PRIOR TO TURNING OFF WATER, AND 48 HOURS PRIOR TO TURNING WATER BACK ON.
3. THIS WATER MAIN RELOCATION IS TO COMPLY WITH THE 10 STATE STANDARDS AND ENSURE THERE IS ADEQUATE CLEARANCE TO ALLOW THE CULVERT REPLACEMENT PROJECT.THE WATER MAIN MAY ONLY BE DEFLECTED AT EACH JOINT WITHIN ONE HALF THE MANUFACTURERS LIMITS.
4. PROPOSED TAPPING VALVE IS A MECHANICAL JOINT, DUCTILE IRON, RATED 250 PSI. RESTRAIN ADEQUATELY FOR TESTING PRESSURES.
5. PIPE AND VALVES TO BE DOUBLE POLYWRAPPED.
6. ALL PROPOSED TEE'S, CROSSES, AND GATE VALVES TO BE SECURED WITH MECHANICALLY RESTRAINED JOINTS
7. NO. 67 CRUSHED OR WASHED STONE TO BE USED AS BEDDING AROUND PIPE TO A MINIMUM OF 12 INCHES ABOVE THE TOP OF THE PIPE.

SEQUENCE OF CONSTRUCTION

1. CALL MISS UTILITY (1-800-257-7777) A MINIMUM OF 48 HOURS PRIOR TO COMMENCEMENT OF EXCAVATION. PROJECT CANNOT BEGIN PRIOR TO ALL UTILITIES BEING MARKED. CONTRACTOR IS TO INFORM ADJACENT HOMEOWNERS OF DATE OF PIPE REPLACEMENT AND ANTICIPATED END DATE. IF THE PIPES NEED FLUSHING AT ANY POINT, HOMEOWNERS ARE TO BE GIVEN MINIMUM 48 HOURS ADVANCE NOTICE.
2. WITH PRE-APPROVAL FROM THE TOWN, CLOSE EXISTING WATER VALVES NORTH(AT WASHINGTON AND CAROLINE), SOUTH OF (±270 FT SOUTH, IN FRONT OF 200 WASHINGTON) AND WEST (ALONG TALBOT ST) OF THE WASHINGTON STREET INTERSECTION TO ISOLATE WORK AREA.
3. CONTRACTOR MUST MILL AND CUT BACK EXISTING ROAD ASPHALT IN ORDER TO STAGER BASE AND SURFACE COURSE PAVEMENT JOINTS AND FOR PROPER TIE-IN AND TRANSITION OF THE ROADWAY EXTENSION. CONTRACTOR IS TO ENSURE CLEAN EDGE OF PAVEMENT.
4. BEGIN EXCAVATION. CONTRACTOR IS TO DEMONSTRATE NECESSARY CARE TO ENSURE UTILITIES REMAIN UNDAMAGED BY THE EXCAVATION.
5. REMOVE EXISTING PIPES AS SHOWN. SAW CUT NORTHERLY AND SOUTHERLY 6" DIP AT LOCATION TO ENSURE HYMAX CONNECTOR CAN BE INSTALLED WITHOUT RAISED LETTERING INTERFERING WITH SEAL. REMOVE WESTERLY (TALBOT ST) 6" DIP PIPE AND 6"X10" REDUCER AT THE 10" VALVE AS SHOWN. REPLACE 6" TEE WITH 10"X6" CROSS. ATTACH 4 VALVES (2 - 10" VALVES AND 2 - 6" VALVES) DIRECTLY TO THE 10"X6" CROSS. REPLACE WESTERLY 6" DIP WITH 10" HDPE, CONNECTING TO EXISTING 10" VALVE AS SHOWN. CONNECT NORTH/SOUTH 6" PVC PIPES TO EX. DIP PIPES USING CONNECTOR.
6. PREPARE THE EXISTING PIPE ON BALTIMORE/NORTH MAPLE FOR TAPPING. CLEAN PIPE PRIOR TO PLACING SADDLE AND PROCEED WITH TAPPING PER MANUFACTURER'S RECOMMENDED METHODOLOGY.
7. INSTALL PROPOSED WATER MAIN PIPE, BENDS, AND OTHER APPURTENANCES AS SHOWN.
8. CONTACT THE COUNTY DPW (301-609-7400) AND SCHEDULE INSPECTION OF WATER MAIN. DO NOT PROCEED TO THE NEXT STEP UNTIL APPROVAL BY COUNTY INSPECTOR.
9. INSTALL THRUST BLOCKS.
10. PARTIALLY BACKFILL IN 8 INCH LIFTS. ENSURE 95% COMPACTION PER MODIFIED PROCTOR (ASTM D-1557) FOR EACH LIFT. PERFORM HYDROSTATIC TESTING PER COUNTY CONSTRUCTION MANUAL, SECTION 02551. ONCE COMPLETED, FLUSH AND DISINFECT THE PIPE PER COUNTY STANDARD, SECTION 02551.
11. ONCE COMPLETED, COMPLETE BACKFILL IN 8 INCH LIFTS. CONTRACTOR TO INSTALL DETECTABLE WARNING TAPE, PER COUNTY SPECIFICATIONS.
12. COMPLETE OTHER IMPROVEMENTS PER PLAN. AFTER WATER MAIN INSTALLATION IS APPROVED BY THE TOWN AND COUNTY, OPEN VALVES.

LEGEND

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- PR LIGHT

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WATERMAIN EXTENSION PLAN

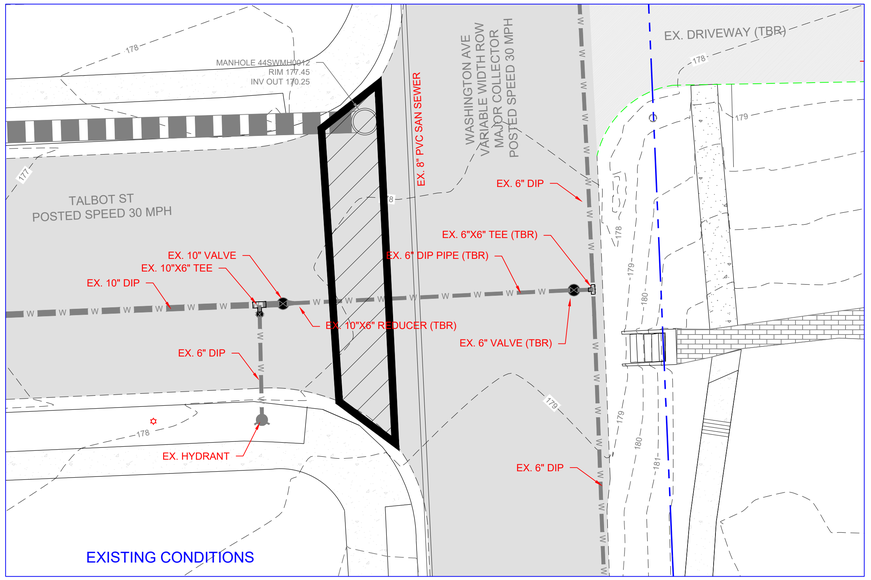
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REVISIONS

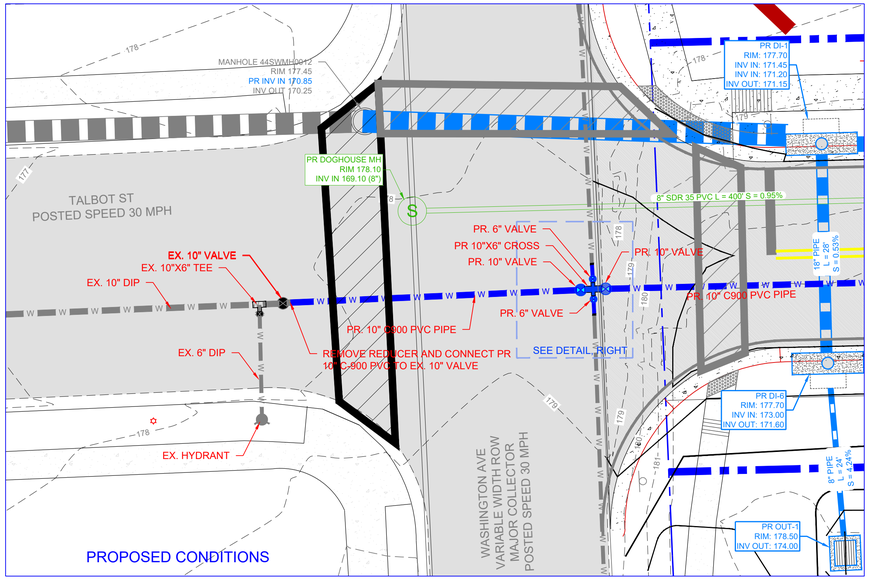
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3.	1/16/25 PER CHARLES COUNTY SCD COMMENTS
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5.	7/22/25 PER TOWN COMMENTS
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Project No.: 21-093
File Name: 071425BF.dwg
Sheet No.: C-212



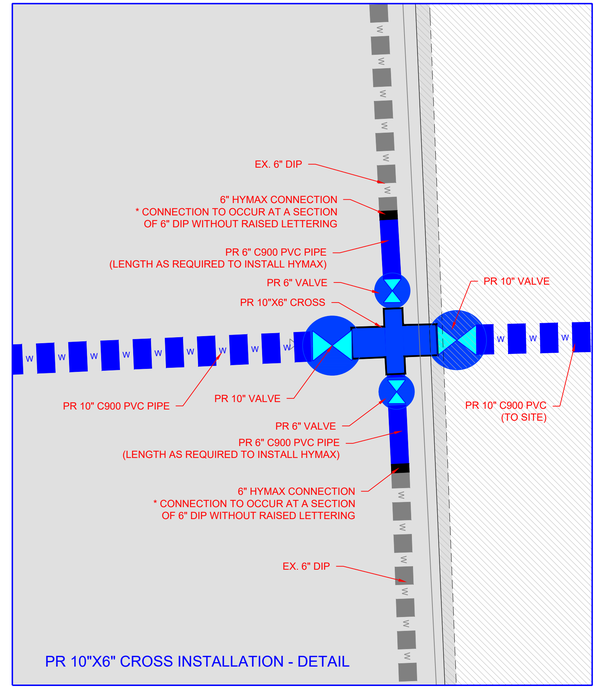
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SCALE: 1" = 30'



0 15 30 60 90

SCALE: 1" = 30'



0 1 2 4 6

SCALE: 1" = 2'

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WASHINGTON AVENUE
WATER MAIN
CONNECTION PLAN

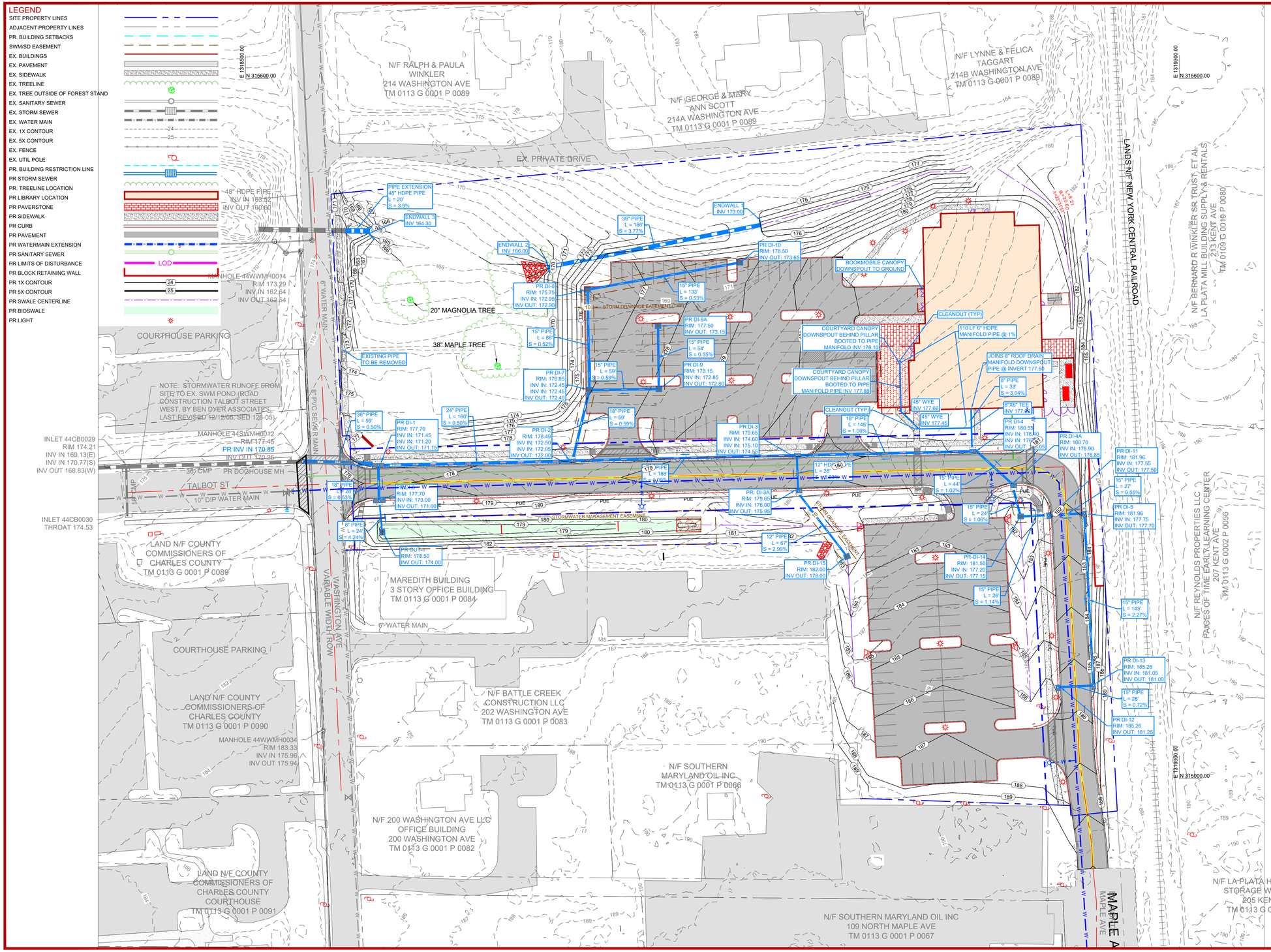
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Drawn By:	WCS	Checked By:	WCS
Date:	2/12/25		
Scale:	VARIES		

REVISIONS

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Project No.: 21-093
File Name: 071425BF.dwg
Sheet No.: C-213



STORM STRUCTURE SCHEDULE

NAME	TYPE	RIM	INV(S) IN	INV OUT
PR DI-1	10' COS (MD 374.63)	177.70	171.45 (DI-6) 171.20 (DI-2)	171.15 (EX MH)
PR DI-2	5' COG (MD 374.62)	178.49	172.05 (DI-7) 172.50 (DI-3)	172.00 (DI-1)
PR DI-3	5' COG (MD 374.62)	179.65	174.60 (DI-4) 175.10 (DI-3A)	174.55 (DI-2)
PR DI-3A	5' COG (MD 374.62)	179.65	176.00 (DI-15)	175.95 (DI-3)
PR DI-4	5' COG (MD 374.62)	180.55	176.40 (DI-4A) 176.50 (ROOF)	176.05 (DI-3)
PR DI-4A	5' COS (MD 374.63)	180.70	176.90 (DI-14)	176.85 (DI-4)
PR DI-5	5' COG (MD 374.62)	181.96	177.75 (DI-13)	177.70 (DI-11)
PR DI-6	10' COS (MD 374.63)	177.70	173.00 (OUT-1)	171.60 (DI-1)
PR DI-7	WR INLET (MD 374.23)	176.85	172.45 (DI-8) 172.45 (DI-9)	172.40 (DI-2)
PR DI-8	WR INLET (MD 374.23)	175.75	172.95 (DI-10)	172.90 (DI-7)
PR DI-9	WR INLET (MD 374.23)	178.15	172.85 (DI-9A)	172.80 (DI-7)
PR DI-9A	WR INLET (MD 374.23)	177.50	---	173.15 (DI-9)
PR DI-10	WR INLET (MD 374.23)	178.50	---	173.65 (DI-8)
PR DI-11	5' COG (MD 374.62)	181.96	177.55 (DI-5)	177.50 (DI-14)
PR DI-12	5' COG (MD 374.62)	185.26	---	181.25 (DI-13)
PR DI-13	5' COG (MD 374.62)	185.26	181.05 (DI-12)	181.00 (DI-5)
PR DI-14	YARD DRAIN (MD 381.01)	181.50	177.20 (DI-11)	177.15 (DI-4A)
PR DI-15	YARD DRAIN (MD 381.01)	182.00	---	178.00 (DI-3A)
PR OUT-1	YARD DRAIN (MD 381.01)	178.50	---	174.00 (DI-6)
PR-ENDWALL-1	STD ENDWALL (MD 354.01)		173.00	---
PR-ENDWALL-2	STD ENDWALL (MD 354.01)		---	167.00
PR-ENDWALL-3	STD ENDWALL (MD 352.01)		164.30	---

STORM PIPE SCHEDULE

UPSTREAM STRUCTURE	UPSTREAM INVERT	DOWNSTREAM STRUCTURE	DOWNSTREAM INVERT	LENGTH	SLOPE	DIAMETER	MATERIAL
PR DI-1	171.15	EX MH	170.85	59'	0.50%	36"	HDPE
PR DI-2	172.00	PR DI-1	171.20	160'	0.50%	24"	HDPE
PR DI-6	171.60	PR DI-1	171.45	28'	0.53%	18"	HDPE
PR DI-3	174.60	PR DI-2	172.50	188'	1.09%	18"	HDPE
PR DI-7	172.40	PR DI-2	172.05	59'	0.59%	18"	HDPE
PR DI-3A	175.95	PR DI-3	175.10	28'	3.03%	12"	HDPE
PR DI-4	176.05	PR DI-3	174.60	145'	1.00%	18"	HDPE
PR DI-15	178.00	PR DI-3A	176.00	67'	2.99%	12"	HDPE
PR DI-4A	176.85	PR DI-4	176.40	44'	1.02%	15"	HDPE
ROOF	177.50	PR DI-4	176.50	33'	3.04%	8"	HDPE
PR DI-14	177.15	PR DI-4A	176.90	24'	1.02%	15"	HDPE
PR DI-13	181.00	PR DI-5	177.75	143'	2.27%	15"	HDPE
PR OUT-1	174.00	PR DI-6	173.00	24'	4.24%	8"	HDPE
PR DI-8	172.90	PR DI-7	172.45	86'	0.52%	15"	HDPE
PR DI-9	172.80	PR DI-7	172.45	59'	0.59%	15"	HDPE
PR DI-10	173.65	PR DI-8	172.95	133'	0.53%	15"	HDPE
PR DI-9A	173.15	PR DI-9	172.85	54'	0.55%	15"	HDPE
PR DI-5	177.70	PR DI-11	177.55	27'	0.55%	15"	HDPE
PR DI-12	181.25	PR DI-13	181.05	28'	0.72%	15"	HDPE
PR-DI-11	177.50	PR-DI-14	177.20	26'	1.14%	15"	HDPE
ENDWALL 1	173.00	ENDWALL 2	166.00	186'	3.77%	36"	HDPE
ENDWALL 3	164.30	EX 48" HDPE PIPE	163.52	20'	3.9%	48"	HDPE

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STORM DRAIN PLAN

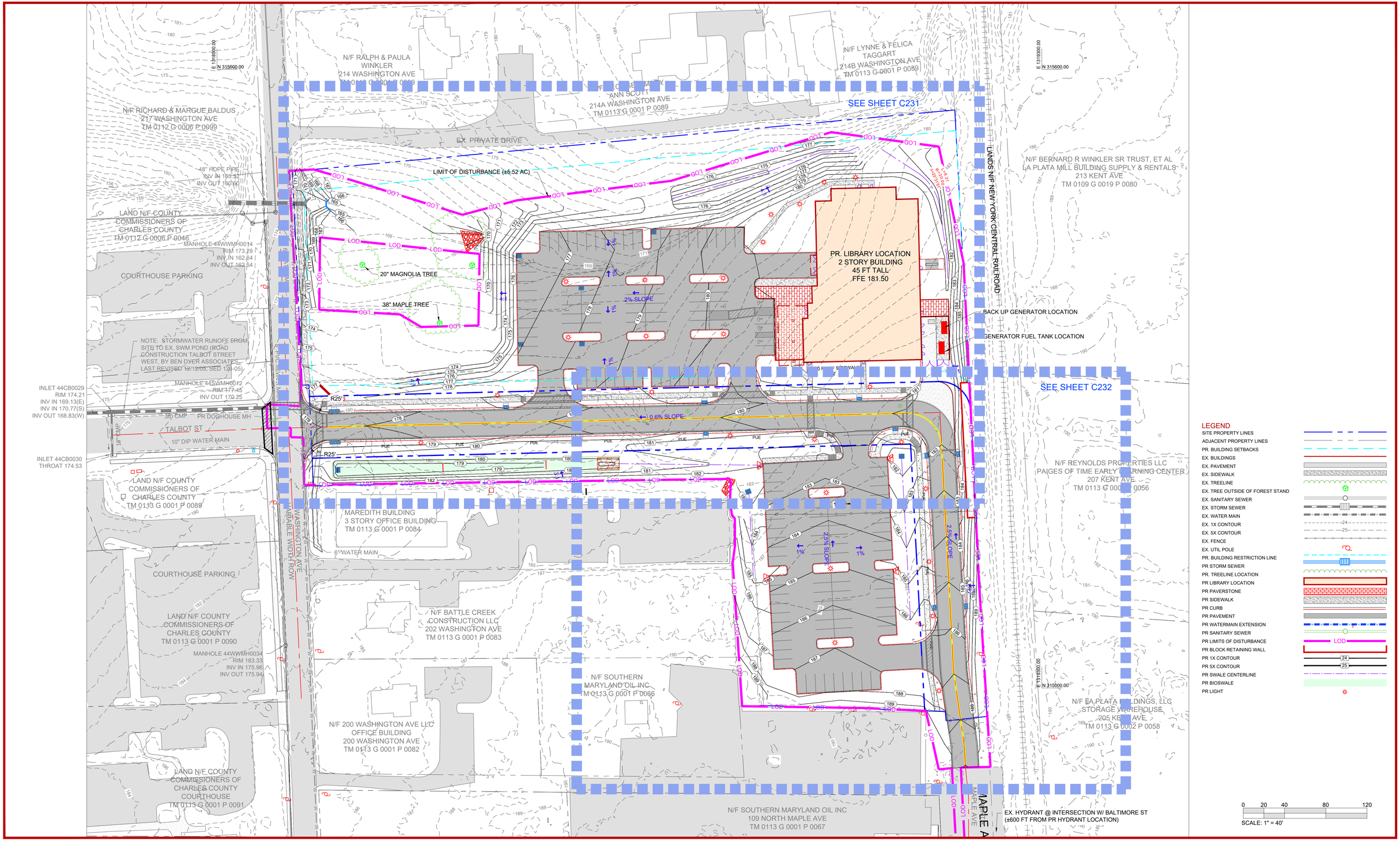
PROJECT DATA

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Project No.: 21-093
File Name: jan2026CE011525.dwg
Sheet No.: C-214



LEGEND

- SITE PROPERTY LINES
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- PR. BUILDING SETBACKS
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- PR. BUILDING RESTRICTION LINE
- PR STORM SEWER
- PR. TREELINE LOCATION
- PR LIBRARY LOCATION
- PR PAVERSTONE
- PR SIDEWALK
- PR CURB
- PR PAVEMENT
- PR WATERMAIN EXTENSION
- PR SANITARY SEWER
- PR LIMITS OF DISTURBANCE
- PR BLOCK RETAINING WALL
- PR 1X CONTOUR
- PR 5X CONTOUR
- PR SWALE CENTERLINE
- PR BIOSWALE
- PR LIGHT

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GRADING PLAN
INDEX SHEET

PROJECT DATA

Tax Map:	0113	Parcel:	SEVERAL
LA PLATA, MD			
Drawn By:	WCS	Checked By:	WCS
Date:	2/12/25		
Scale:	1" = 40'		

REVISIONS

1. 5/19/23 PER LA PLATA COMMENTS
2. 1/16/25 PER LA PLATA COMMENTS
3. 1/16/25 PER CHARLES COUNTY SCD COMMENTS
4. 2/10/25 PER CHARLES COUNTY SCD COMMENTS
5. 7/22/25 PER TOWN COMMENTS
6. 1/16/26 PER TOWN REQUEST

Project No.: 21-093
File Name: jan2026CE011525.dwg
Sheet No.: C-220

ROCK OUTLET PROTECTION 1
CLASS II RIPRAP
La = 19 FT, W = 22 FT, T = 32 IN

REGRADE DITCH @ 1% TO PIPE

150 FT SWALE @ 1%

SWALE @ 1.5% TO BIOSWALE

FALSE BERM
182.85

PR DI-1 RIM: 177.70
PR DI-2 RIM: 178.49
PR DI-3 RIM: 179.65
PR DI-3A RIM: 179.65
PR DI-4 RIM: 180.55
PR DI-4A RIM: 180.70
PR DI-5 RIM: 181.96
PR DI-6 RIM: 177.70
PR DI-7 RIM: 176.85
PR DI-8 RIM: 175.75
PR DI-9 RIM: 178.15
PR DI-9A RIM: 177.50
PR DI-10 RIM: 178.50
PR DI-11 RIM: 181.96
PR DI-14 RIM: 181.50
PR DI-15 RIM: 182.00
PR OUT-1 RIM: 178.50

SCALE: 1" = 20'

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GRADING PLAN
NORTHERN SECTION

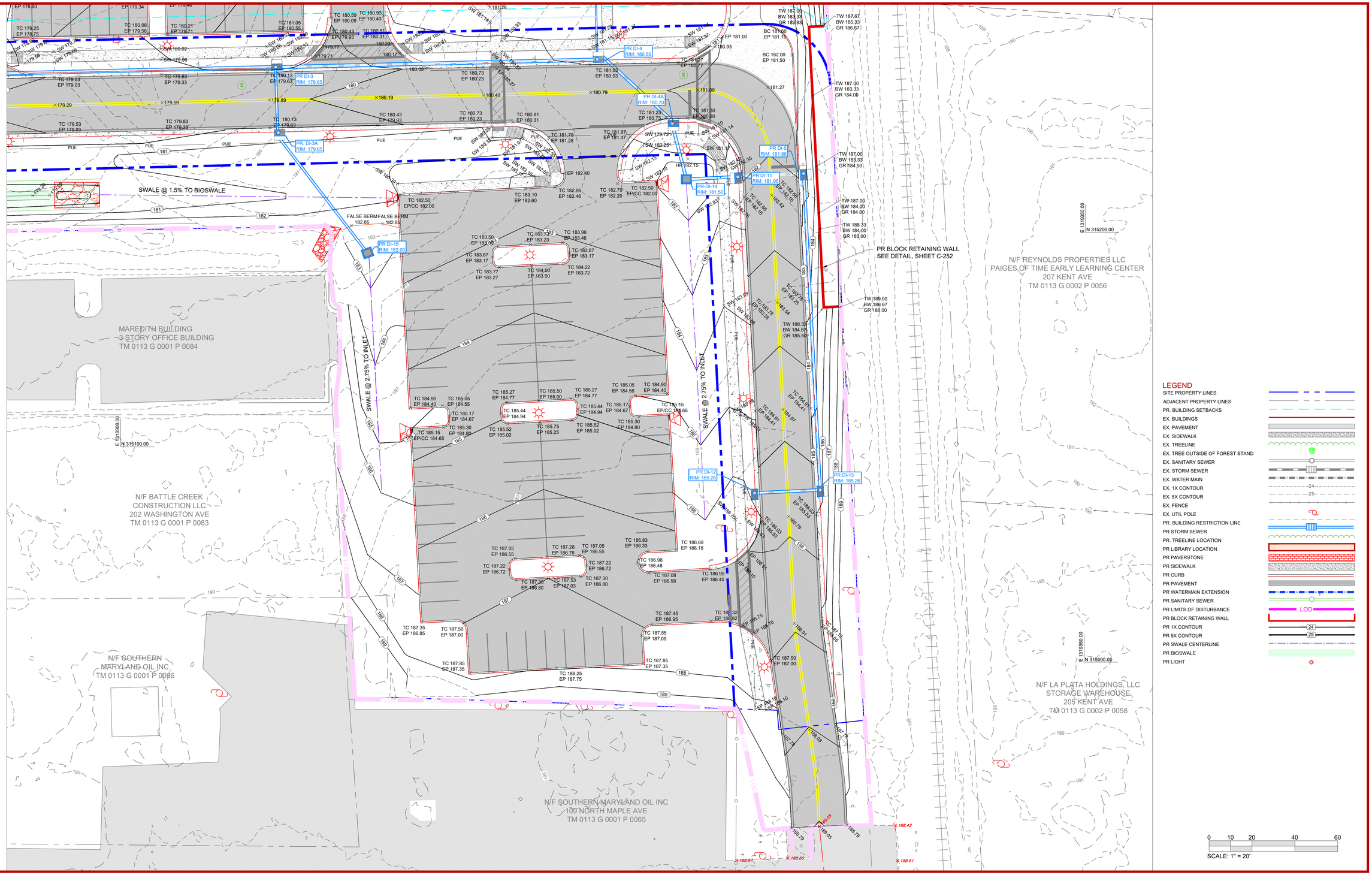
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LA PLATA, MD			
Drawn By:	WCS	Checked By:	WCS
Date:	2/12/25		
Scale:	1" = 20'		

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Project No.: 21-093
File Name: jan2026CE011525.dwg
Sheet No.: C-221



LEGEND

- SITE PROPERTY LINES
- ADJACENT PROPERTY LINES
- PR. BUILDING SETBACKS
- EX. BUILDINGS
- EX. PAVEMENT
- EX. SIDEWALK
- EX. TREELINE
- EX. TREE OUTSIDE OF FOREST STAND
- EX. SANITARY SEWER
- EX. STORM SEWER
- EX. WATER MAIN
- EX. 1X CONTOUR
- EX. 5X CONTOUR
- EX. FENCE
- EX. UTIL POLE
- PR. BUILDING RESTRICTION LINE
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- PR LIBRARY LOCATION
- PR PAVERSTONE
- PR SIDEWALK
- PR CURB
- PR PAVEMENT
- PR WATERMAIN EXTENSION
- PR SANITARY SEWER
- PR LIMITS OF DISTURBANCE
- PR BLOCK RETAINING WALL
- PR 1X CONTOUR
- PR 5X CONTOUR
- PR SWALE CENTERLINE
- PR BIOSWALE
- PR LIGHT

0 10 20 40 60

SCALE: 1" = 20'

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GRADING PLAN
SOUTHERN SECTION

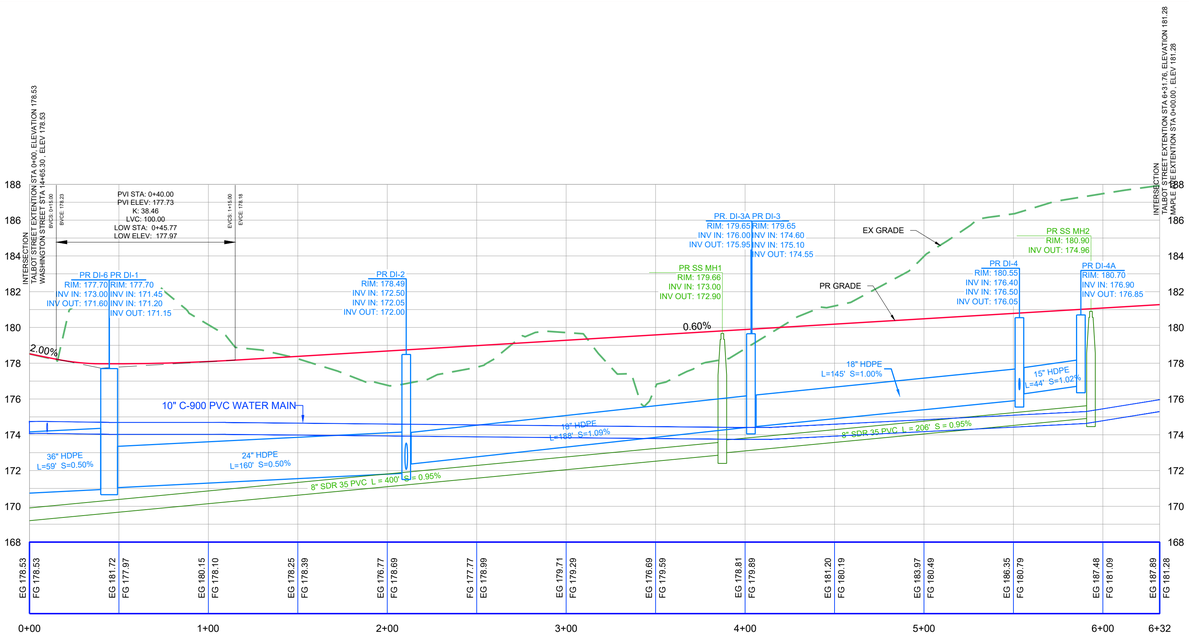
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Drawn By:	WCS	Checked By:	WCS
Date:	2/12/25		
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REVISIONS

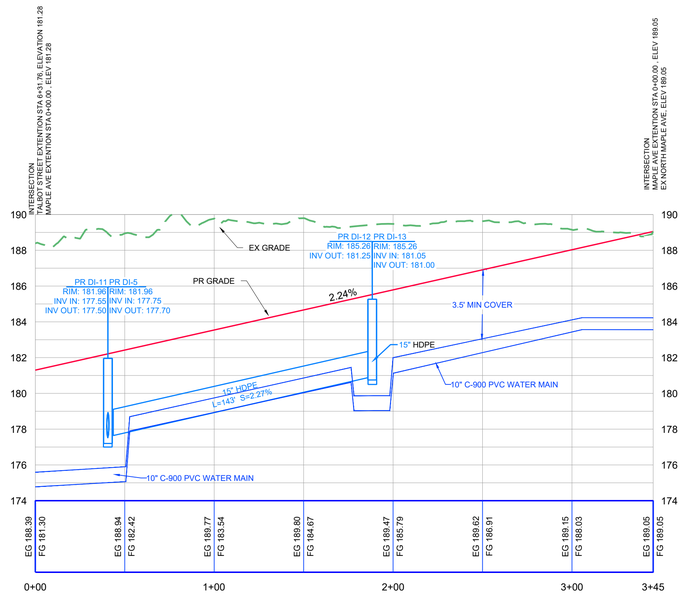
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Project No.: 21-093
File Name: jan2026CE011525.dwg
Sheet No.: C-222



TALBOT STREET EXTENTION

HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'



MAPLE STREET EXTENTION

HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'

0 20 40 80 120
SCALE: 1" = 40'

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ROAD CENTERLINE PROFILES

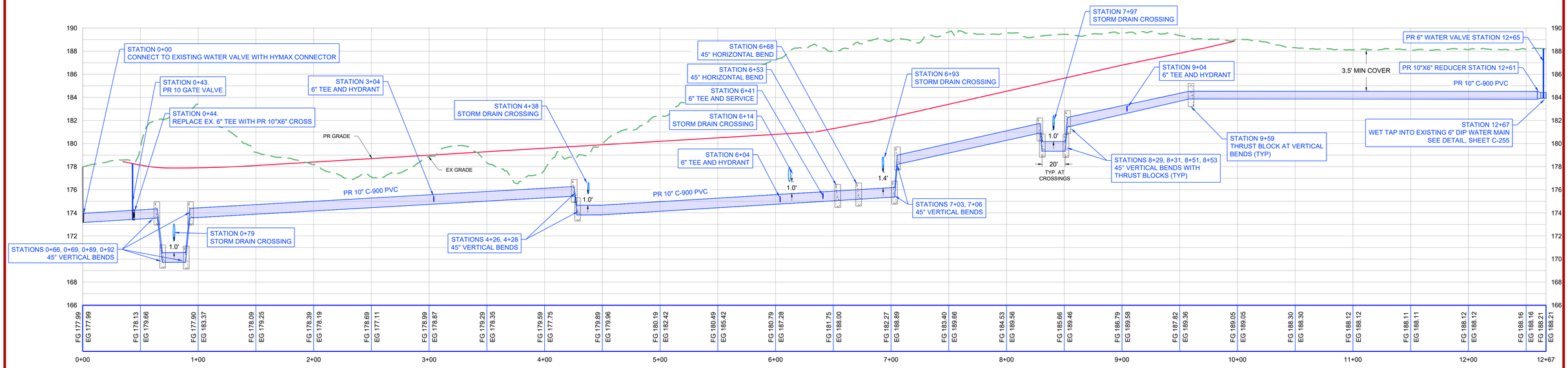
PROJECT DATA

Tax Map:	0113	Parcel:	NUMEROUS
LA PLATA, MD			
Drawn By:	WCS	Checked By:	WCS
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File Name: 071425BF.dwg
Sheet No.: C-230



WATER MAIN

HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'

0 20 40 80 120

SCALE: 1" = 40'

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WATERMAIN EXTENSION
PROFILE

PROJECT DATA

Tax Map:	0113	Parcel:	SEVERAL
LA PLATA, MD			
Drawn By:	WCS	Checked By:	WCS
Date:	2/12/25		
Scale:	1" = 40'		

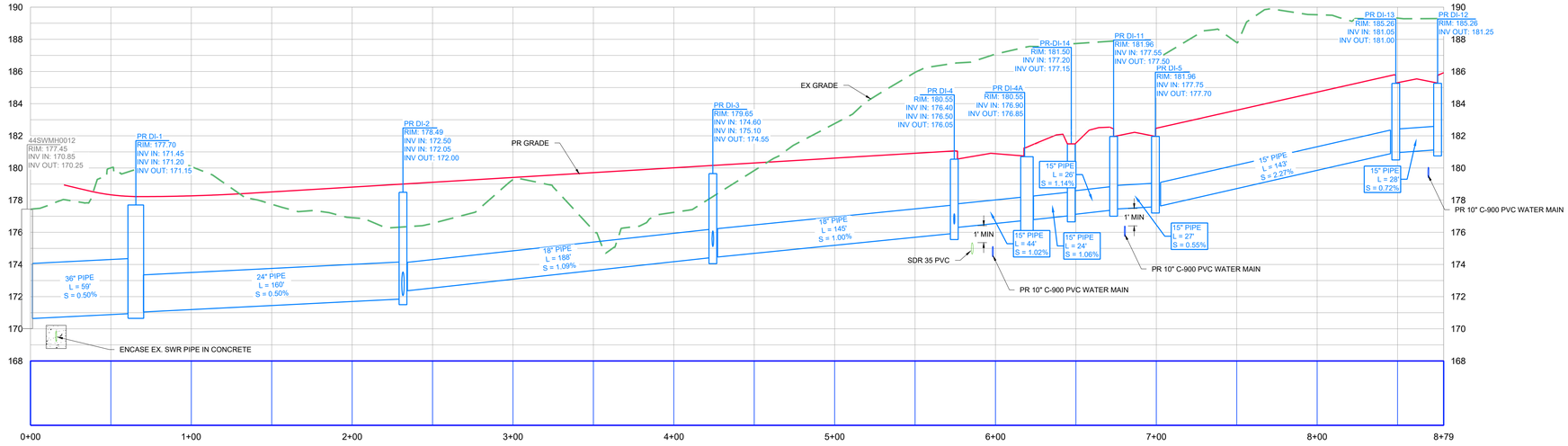
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Project No.: 21-093

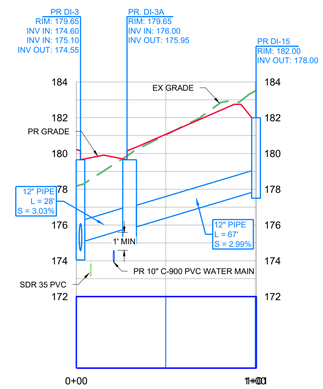
File Name: 071425BF.dwg

Sheet No.: C-231



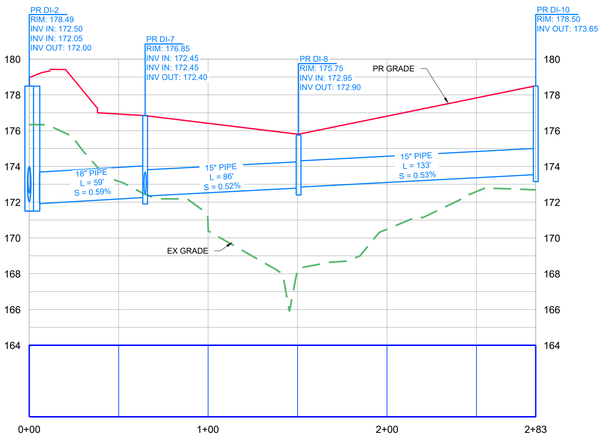
DI 12 TO OUTFALL

HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'



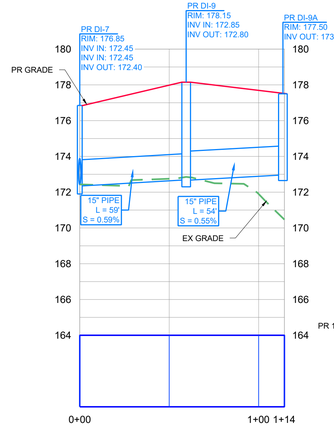
DI-15 TO DI-3

HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'



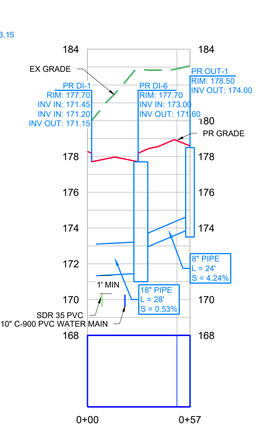
DI-10 TO DI-2

HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'



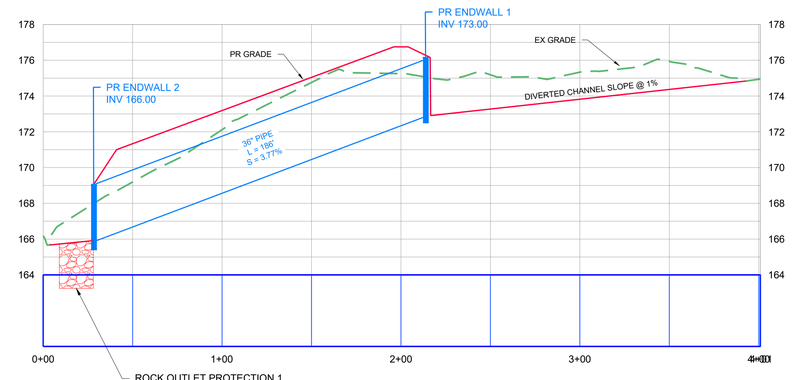
DI-9A TO DI-7

HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'



BMP OUTFALL TO DI-1

HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'



ROCK OUTLET PROTECTION 1
CLASS II RIPRAP
La = 19 FT, W = 22 FT, T = 32 IN

BYPASS PIPE

HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'

0 20 40 80 120
SCALE: 1" = 40'

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STORM DRAIN PROFILES

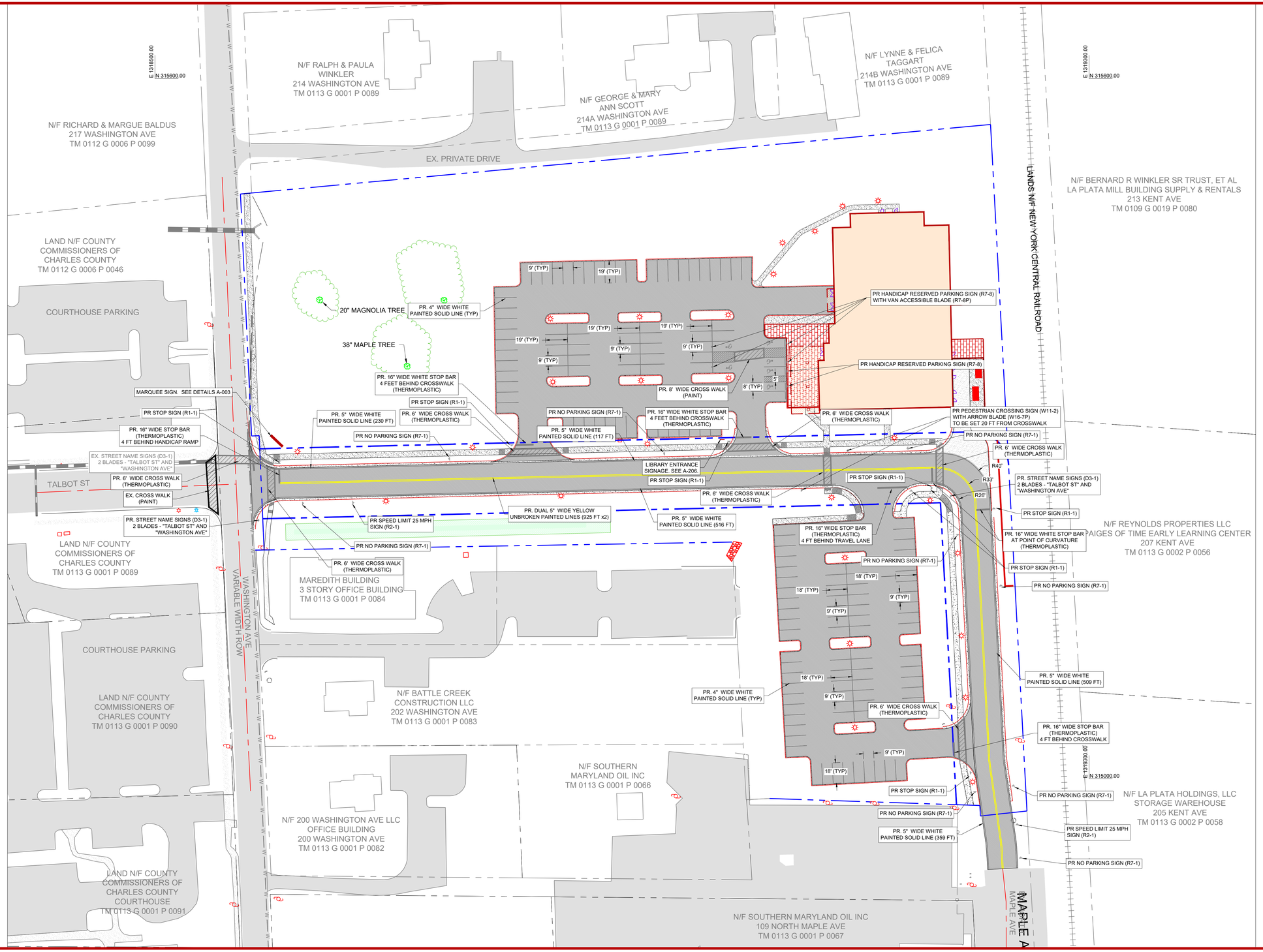
PROJECT DATA

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5.	7/22/25 PER TOWN COMMENTS

Project No.: 21-093
File Name: 071425BF.dwg
Sheet No.: C-232



MUTCD SIGN SCHEDULE

MUTCD	TYPE	SIZE	MATERIAL	QUANTITY
D3-1	STREET SIGN BLADE	VARIES	0.80 GAUGE ALUMINUM	4
R1-1	STOP SIGN	30" X 30"	0.80 GAUGE ALUMINUM	7
R2-1	SPEED LIMIT 25 MPH	24" X 30"	0.80 GAUGE ALUMINUM	2
R7-1	NO PARKING SIGN	18" X 12"	0.80 GAUGE ALUMINUM	2
R7-8	HANDICAP PARKING SIGN	18" X 12"	0.80 GAUGE ALUMINUM	6
R7-8B	VAN ACCESSIBLE BLADE	12" X 6"	0.80 GAUGE ALUMINUM	4
W11-2	PEDESTRIAN CROSSING SIGN	30" X 30"	0.80 GAUGE ALUMINUM	2
W16-7P	DOWNWARD DIAGONAL ARROW BLADE	24" x 12"	0.80 GAUGE ALUMINUM	2

LEGEND

- SITE PROPERTY LINES
- ADJACENT PROPERTY LINES
- PR. BUILDING SETBACKS
- EX. BUILDINGS
- EX. PAVEMENT
- EX. SIDEWALK
- EX. TREELINE
- EX. TREE OUTSIDE OF FOREST STAND
- EX. SANITARY SEWER
- EX. STORM SEWER
- EX. WATER MAIN
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- EX. 5X CONTOUR
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SIGNAGE AND STRIPING PLAN

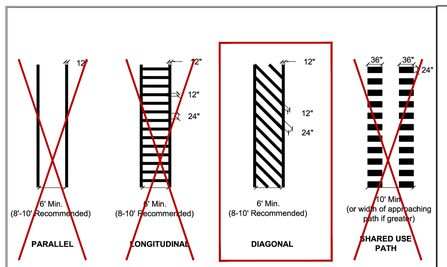
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Project No.: 21-093
File Name: jan2026CE011525.dwg
Sheet No.: C-240



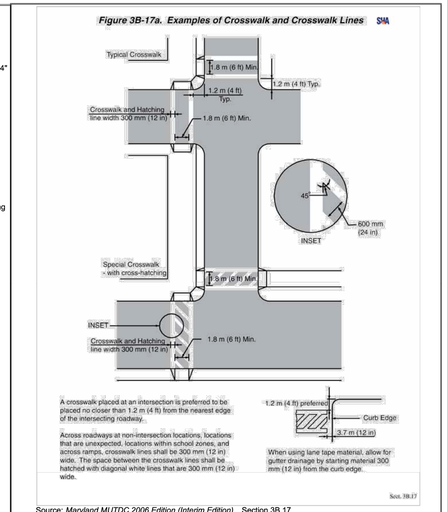
TYPES OF CROSSWALK MARKINGS:
Parallel Crosswalk Markings: The standard crosswalk striping treatment for low-volume pedestrian crossing locations.

Longitudinal Crosswalk Markings: May be used to provide added visibility for a crosswalk.

Diagonal Crosswalk Markings: "Across roadways at non-intersection locations, locations that are unexpected, locations within school zones and across ramps" diagonal markings shall be used (Maryland MUTCD Section 3B.17).

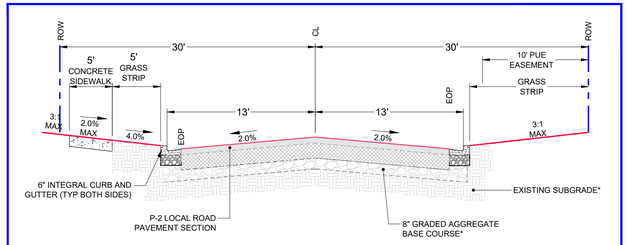
Shared Use Path Markings: In locations where a shared use path intersects a roadway.

Figure 10.5 - Crosswalk Marking Types
(Sheet 1 of 3)



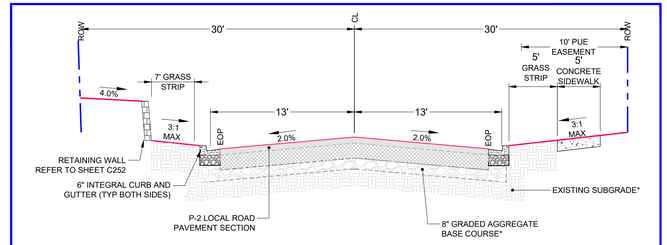
Source: *Maryland MUTDC 2006 Edition (Interim Edition),* Section 3B.17

Figure 10.5 - Crosswalk Marking Types
(Sheet 3 of 3)



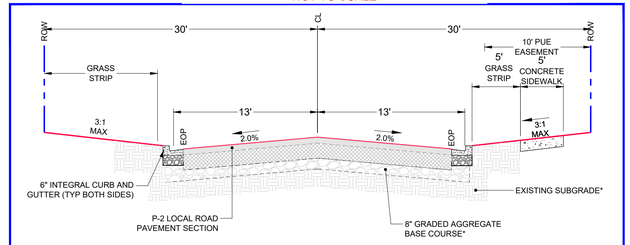
NOTE:
*SUBBASE AND SUBGRADE SHALL BE COMPACTED TO 95% OF ASTM D1557, MODIFIED PROCTOR METHOD

TYPICAL TALBOT AVE EXTENSION
CROSS SECTION - 60' ROW
NOT TO SCALE



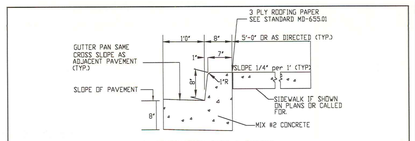
NOTE:
*SUBBASE AND SUBGRADE SHALL BE COMPACTED TO 95% OF ASTM D1557, MODIFIED PROCTOR METHOD

TYPICAL NORTH MAPLE AVE EXTENSION
CROSS SECTION - 60' ROW
STATION 0+00 TO 1+03
NOT TO SCALE



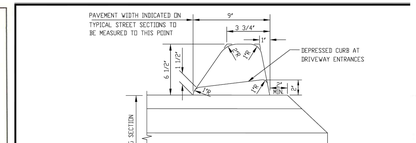
NOTE:
*SUBBASE AND SUBGRADE SHALL BE COMPACTED TO 95% OF ASTM D1557, MODIFIED PROCTOR METHOD

TYPICAL NORTH MAPLE AVE EXTENSION
CROSS SECTION - 60' ROW
STATION 1+03 TO 3+45
NOT TO SCALE



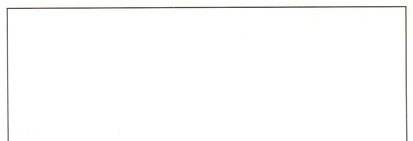
NOTES:
1. MAX JOINT SPACING FOR CONCRETE CURB AND COMBINATION CURB & GUTTER - 10'
2. SEE SPECIFICATIONS FOR LOCATION AND DESCRIPTION OF TREATMENT FOR THE TYPES OF JOINTS USED.
3. 6" AND MODIFIED COMBINATION CURB AND GUTTER TO BE USED ONLY ON LOCAL ROADS OR MINOR COLLECTOR ROADS.

CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	R
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT	COMBINATION CURB & GUTTER		2.22
APPROVED: CHIEF OF DEVELOPMENT & CAPITAL SERVICES DATE 11/19/99; HIGHWAY ENGINEER DATE 11/19/99			



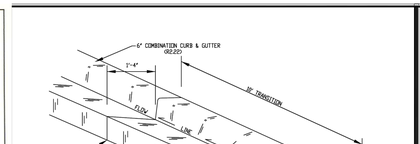
NOTES:
1. MAX JOINT SPACING FOR STANDARD CURB - 10'
2. SEE SPECIFICATIONS FOR LOCATION AND DESCRIPTION OF TREATMENT FOR THE TYPES OF JOINTS USED.

CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	R
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT	STANDARD CURBS	8/24/2015	2.2
APPROVED: CHIEF OF DEVELOPMENT & CAPITAL SERVICES DATE 8/24/15; HIGHWAY ENGINEER DATE 8/24/15			



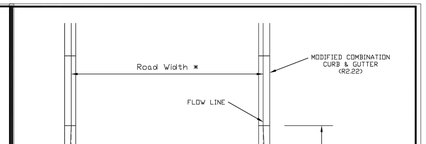
MATERIAL DESCRIPTIONS:
1. ASPHALT CONCRETE BASE AND TOP COURSE
2. SUBBASE COURSE
3. STANDARD CONCRETE CURB AND GUTTER (REF. DETAIL R/2.22)
4. TOPSOIL AND SEEDING 12" DEPTH

CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	R
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT	CURB INSTALLATION		2.24
APPROVED: CHIEF OF DEVELOPMENT & CAPITAL SERVICES DATE 11/19/99; HIGHWAY ENGINEER DATE 11/19/99			



NOTE: NO DRIVEWAY ENTRANCE PERMITTED WITHIN TRANSITION

CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	R
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT	CONCRETE CURB AND GUTTER TRANSITION	MARCH 2017	2.26
APPROVED: CHIEF OF DEVELOPMENT & CAPITAL SERVICES DATE 3/06/17; HIGHWAY ENGINEER DATE 3/06/17			



NOTE:
* REFER TO ROAD ORDINANCE TABLES 2.01.01 & 2.01.02 FOR PAVEMENT WIDTH
** REFER TO R/2.26 FOR CURB TRANSITION DETAIL
NO DRIVEWAY ENTRANCE PERMITTED WITHIN TRANSITION

CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	R
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT	CONCRETE CURB AND GUTTER TRANSITION PLAN VIEW		2.26.1
APPROVED: CHIEF OF DEVELOPMENT & CAPITAL SERVICES DATE 3/06/17; HIGHWAY ENGINEER DATE 3/06/17			

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NOTE:
This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.

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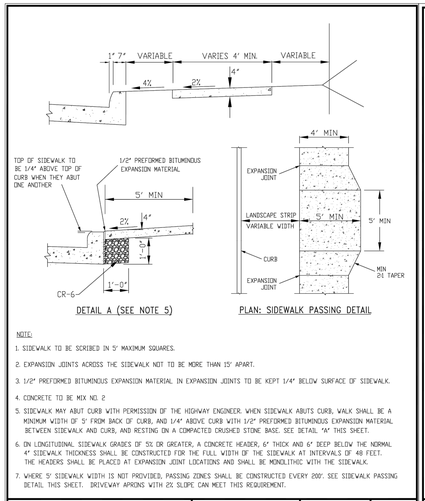
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SITE DETAILS PAGE

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LA PLATA, MD			
Drawn By: WCS	Checked By: WCS		
Date: 2/12/25			
Scale: N/A			

REVISIONS
1. 5/19/23 PER LA PLATA COMMENTS
2. 1/16/25 PER LA PLATA COMMENTS
3. 1/16/25 PER CHARLES COUNTY SCD COMMENTS
4. 2/10/25 PER CHARLES COUNTY SCD COMMENTS
5. 7/22/25 PER TOWN COMMENTS

Project No.: 21-093
File Name: jan2026CE011525.dwg
Sheet No.: C-250

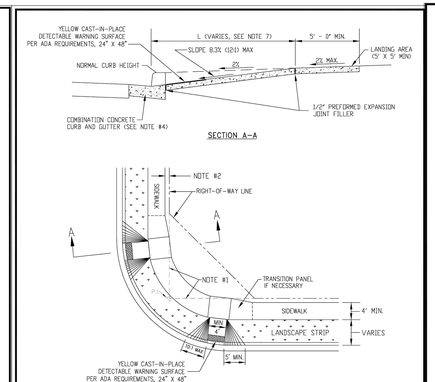


DETAIL A (SEE NOTE 5) PLAN: SIDEWALK PASSING DETAIL

NOTE:

1. SIDEWALK TO BE SCRIBED IN 5' MAXIMUM SQUARES.
2. EXPANSION JOINTS ACROSS THE SIDEWALK NOT TO BE MORE THAN 15' APART.
3. 1/2" PREFORMED BITUMINOUS EXPANSION MATERIAL IN EXPANSION JOINTS TO BE KEPT 1/4" BELOW SURFACE OF SIDEWALK.
4. CONCRETE TO BE MIX NO. 2
5. SIDEWALK MAY ABUT CURB WITH PERMISSION OF THE HIGHWAY ENGINEER. WHEN SIDEWALK ABUTS CURB, WALK SHALL BE A MINIMUM WIDTH OF 5' FROM BACK OF CURB, AND 1/4" ABOVE CURB WITH 1/2" PREFORMED BITUMINOUS EXPANSION MATERIAL BETWEEN SIDEWALK AND CURB, AND RESTING ON A COMPACTED CRUSHED STONE BASE. SEE DETAIL "A" THIS SHEET.
6. ON LONGITUDINAL SIDEWALK GRADES OF 5% OR GREATER, A CONCRETE HEADER, 6" THICK AND 6" DEEP BELOW THE NORMAL 4" SIDEWALK THICKNESS SHALL BE CONSTRUCTED FOR THE FULL WIDTH OF THE SIDEWALK AT INTERVALS OF 40 FEET. THE HEADERS SHALL BE PLACED AT EXPANSION JOINT LOCATIONS AND SHALL BE MONOLITHIC WITH THE SIDEWALK.
7. WHERE 5' SIDEWALK WIDTH IS NOT PROVIDED, PASSING ZONES SHALL BE CONSTRUCTED EVERY 200'. SEE SIDEWALK PASSING DETAIL THIS SHEET. DRIVEWAY APRONS WITH 2% SLOPE CAN MEET THIS REQUIREMENT.

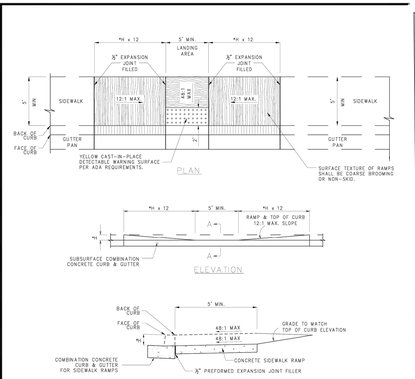
CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT	CONCRETE SIDEWALK	8/24/2015	R 2.28
APPROVED: CHIEF OF CODES, PERMITS, & INSPECTION SERVICES 8/24/15 DATE; HIGHWAY ENGINEER 8/24/15 DATE			



NOTES:

1. RIGHT-OF-WAY TRUNCATION TO BE SET 20' FROM P.I. ALONG EACH OF THE INTERSECTING LINES.
2. MINIMUM DISTANCE BETWEEN BACK OF SIDEWALK AND RIGHT-OF-WAY LINE SHALL BE ONE FOOT.
3. SURFACE TEXTURE OF CONCRETE RAMP & FLARES SHALL BE COURSE BROOMING OR OTHER NON-SKID TYPE SURFACE.
4. STANDARD COMBINATION CURB AND GUTTER IS SHOWN. DETAILS TO BE SIMILAR FOR MODIFIED CURB & GUTTER EXCEPT THAT FLOW LINE LIP IS TO BE OMITTED.
5. THIS DETAIL CANNOT BE USED WHERE SIDEWALK IS ADJACENT TO CURB.
6. AT LEAST ONE PEDESTRIAN RAMP SHALL BE PROVIDED ACROSS FROM T-INTERSECTIONS WHERE THERE IS A RECEIVING SIDEWALK.
7. MINIMUM LENGTH OF RAMP; L = 5' FOR MODIFIED CURB, L = 8' FOR 6" CURB, AND L = 11' FOR 8" CURB.
8. SIDEWALK TRANSITIONS TO PROVIDE 5' X 5' MINIMUM LANDING AREA.
9. TRANSITION PANELS TO TIE INTO EXISTING SIDEWALK MUST BE A MINIMUM OF 5' IN LENGTH.
10. RAMP AND SIDEWALK SHALL MEET ADA REQUIREMENTS.

CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT	PEDESTRIAN RAMP	8/24/2015	R 2.29.1
APPROVED: CHIEF OF CODES, PERMITS, & INSPECTION SERVICES 8/24/15 DATE; HIGHWAY ENGINEER 8/24/15 DATE			

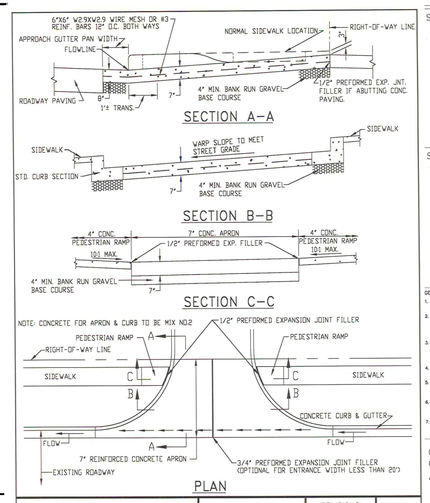


*H = HEIGHT OF CURB

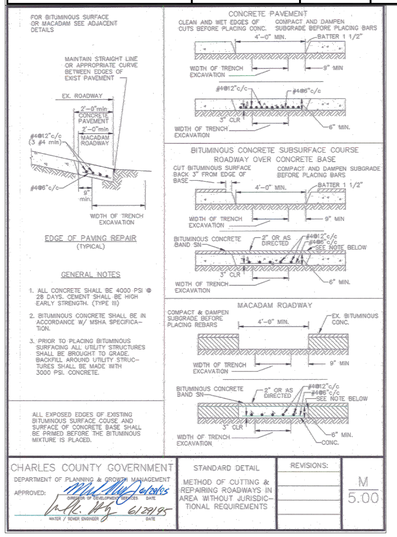
NOTES:

1. TO BE USED WHERE SIDEWALK ABUTS THE CURB. THIS STANDARD MAY BE MODIFIED TO SUIT A PARTICULAR LOCATION.
2. NO TRAVERSABLE SLOPE ON THE RAMP OR SIDEWALK SHALL EXCEED 12:1 IN THE DIRECTION OF PEDESTRIAN TRAVEL, OR 48:1 PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAVEL. THE CROSS-SLOPE OF THE LANDING AREA CANNOT EXCEED GRADE OF ROADWAY

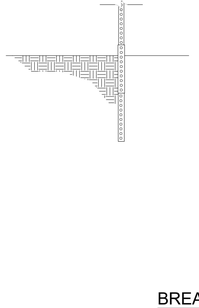
CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT	PEDESTRIAN RAMP SIDEWALK ABUTS CURB		R 2.29.2
APPROVED: CHIEF OF CODES, PERMITS, & INSPECTION SERVICES 8/24/15 DATE; HIGHWAY ENGINEER 8/24/15 DATE			



CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT	CONCRETE APRON FOR COMMERCIAL-INDUSTRIAL-APARTMENT ENTRANCE		R 2.32
APPROVED: CHIEF OF DEVELOPMENT & CAPITAL SERVICES 11/19/99 DATE; HIGHWAY ENGINEER DATE			



CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT	METHOD OF CUTTING & REPAIRING ROADWAYS IN AREA WITHOUT JURISDICTIONAL REQUIREMENTS		M 5.00
APPROVED: WATER & SEWER ENGINEER 6/20/95 DATE; HIGHWAY ENGINEER DATE			



NOTES:

1. SQUARE TUBES ARE TO BE FORMED FROM GALVANIZED SHEET STRUCTURAL (PHYSICAL) QUALITY, ASTM A 446, GRADE A, COATING DESIGNATION G 90, REGULAR SPANGLE, OR HOT ROLLED CARBON SHEET STEEL STRUCTURAL (PHYSICAL) QUALITY, ASTM A 570, GRADE 33.

   A. NOMINAL OUTSIDE DIMENSION (INCHES)
   2 x 2 ±.008
   2½ x 2½ ±.010
   2½ x 2½ ±.010

   B. ALL FOUR SIDES ARE TO HAVE EVENLY SPACED 3/16" DIAMETER HOLES ON 1" CENTERS THE ENTIRE LENGTH OF THE TUBE.

   C. TOLERANCE ON HOLE SIZE IS ±1/64". TOLERANCE ON HOLE SPACING IS ±1/8" IN 20 FEET.

   D. STANDARD CORNER RADIUS SHALL BE 5/32" ± 1/64".

   E. THE FASTNERS TO BE SUPPLIED UNDER THIS SPECIFICATION SHALL BE 5/16" GRADE 5 UNC CORNER BOLTS WITH CADIUM OR ZINC PLATING, INSTALLATION OF SIGNS SHALL BE WITH 3/8"x2¼" BOLT WITH LOCKNUT AND WASHER.

2. THE CONTRACTOR SHALL PROVIDE AND INSTALL PVC (POLYVINYL CHLORIDED SLEEVES (4" INSIDE DIAMETER MINIMUM, 6" INSIDE DIAMETER MAXIMUM IN PROPOSED CONCRETE SIDEWALKS, ISLANDS, AND MEDIANS FOR FUTURE TRAFFIC SIGN POSTS AS DIRECTED BY THE ENGINEER. THE LOWER END OF THE SLEEVE SHALL BE SET ON THE TOP OF THE SOIL.

3. DEVELOPMENT SIGNS THAT ARE GREATER THAN 36' WIDE SHALL BE DISPLAYED ON TWO POSTS.
   A. DEVELOPMENT SIGN FACE BACKGROUNDS SHALL BE GREEN LEGENDS SHALL BE SILVER TINTED.
   B. LEGEND SHALL BE 5" SERIES "C" LETTERS.
   C. NO BORDER ON DEVELOPMENT SIGN PANELS.
   D. DEVELOPMENT SIGNS SHALL BE INSTALLED WITHIN THE RIGHT-OF-WAY OF THE HIGHWAY ON WHICH THE ENTRANCES IS (ARE) LOCATED. THE SIGNS SHALL BE PLACED WITHIN 750 FEET OF THE CENTERLINE OF THE ENTRANCES.

4. FOR SINGLE SIGN POSTS WITH BENDING OR YIELDING CHARACTERISTICS, SIGN PANELS SHALL BE ADEQUATELY BOLTED TO THE POST WITH OVERSIZED WASHERS TO PREVENT THE PANEL FROM SEPARATING ON IMPACT AND PENETRATING A WINDSHIELD. THE BOTTOM OF THE SIGN PANEL SHALL BE A MINIMUM OF 7 FEET ABOVE THE GROUND AND THE TOP OF THE PANEL SHALL BE A MINIMUM OF 9 FEET ABOVE THE GROUND TO MINIMIZE THE POSSIBILITY OF THE SIGN PANEL AND POST ROTATING ON IMPACT AND STRIKING THE WINDSHIELD OF A VEHICLE.

5. SIGN FACES SHALL BE FABRICATED OF TYPE "I" ENCLOSED LENS (ENGINEER GRADE) REFLECTIVE SHEETING FOR DEVELOPMENT SIGNS AND ENCAPSULATED LENS (HIGH INTENSITY) REFLECTIVE SHEETING FOR ALL OTHER SIGNS AND SHALL BE APPLIED TO SIGN GRADE ALUMINUM SHEET MINIMUM THICKNESS ±0.080".

BREAK-AWAY ASSEMBLY POST DETAIL

SCALE: 1"=2'

TABLE 2.07

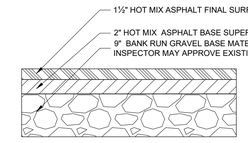
PAVEMENT DETAIL

SECT. NO.		PAVEMENT MATERIAL	ROAD CLASSIFICATION
P-1	9"	Bank Run Gravel	Commercial/Industrial:
	2"	Hot Mix Asphalt Base Superpave 12.5 mm, PG64-22	Parking Areas,
	1 ½"	Hot Mix Asphalt Final Surface Superpave 9.5 mm, PG64-22	Drive Aisles and Alleys
P-2	8"	Bank Run Gravel	Local Road, Mobile Home
	2"	Hot Mix Asphalt Base Superpave 12.5 mm, PG64-22	Parks, Single Family Attached,
	1"	Hot Mix Asphalt Intermediate Surface Superpave 9.5 mm, PG64-22	Townhouse, Residential Alleys
	1 ½"	Hot Mix Asphalt Final Surface Superpave 9.5 mm, PG64-22	
P-3	8"	Bank Run Gravel	Minor Collector
	3"	Hot Mix Asphalt Base Superpave 19 mm, PG64-22	(Residential Zones)
	1"	Hot Mix Asphalt Intermediate Surface Superpave 9.5 mm, PG64-22	
	1 ½"	Hot Mix Asphalt Final Surface Superpave 9.5 mm, PG64-22	
P-4	8"	Bank Run Gravel	Minor Collector
	4"	Hot Mix Asphalt Base Superpave 12.5 mm, PG64-22 (two lifts)	(Commercial Industrial Zones),
	1"	Hot Mix Asphalt Intermediate Surface Superpave 9.5 mm, PG64-22	Major Collector
	1 ½"	Hot Mix Asphalt Final Surface Superpave 9.5 mm, PG70-22	
P-5	10"	Bank Run Gravel	Minor Arterial
	4 ½"	Hot Mix Asphalt Base Superpave 12.5 mm, PG64-22 (two lifts)	
	1"	Hot Mix Asphalt Intermediate Surface Superpave 9.5 mm, PG64-22	
	1 ½"	Hot Mix Asphalt Final Surface Superpave 9.5 mm, PG70-22	
P-6	10"	Bank Run Gravel	Intermediate Arterial
	5 ½"	Hot Mix Asphalt Base Superpave 19 mm, PG64-22 (two lifts)	
	1"	Hot Mix Asphalt Intermediate Surface Superpave 9.5 mm, PG64-22	
	1 ½"	Hot Mix Asphalt Final Surface Superpave 9.5 mm, PG70-22	
SHOULDER SECTION			
P-7	3"	Hot Mix Asphalt Surface Superpave 19 mm, PG64-22	For all Roads (refer Sec. 3.4.E)
		Bank Run Gravel (see Note #2)	

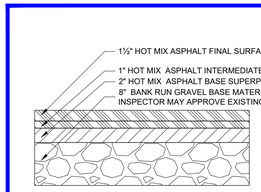
Notes:

1. Special asphalt equivalent sections may be substituted pending written request and review/approval by the County Engineering staff.
2. The bottom of bank run gravel for shoulder shall be in line and grade with roadway subbase.
3. The intermediate surface course layer must be placed within two weeks of the placement of the base course. The placement of intermediate surface course is required prior to substantial completion inspection and auto bond reduction.
4. Prior to placement of the asphalt, all manholes and utility valve boxes located in the roadway must be set at finished grade. At time of placement, the intermediate surface course layer must be ramped up to the tops of the structures to provide for a smooth transition. Immediately prior to final surface course paving, the intermediate surface asphalt ramped around the structures must be removed to allow for the placement of the full 1 ½" thickness required.
5. In lieu of placing the 1-inch intermediate surface course layer for Commercial/Industrial entrance aprons within the County right-of-way where auxiliary lanes are not required, the one inch of pavement can be added to the required thickness of the base asphalt layer.
6. Asphalt layers shall be placed in appropriate lift thicknesses. Single lift thickness not to exceed three and one-half inches.

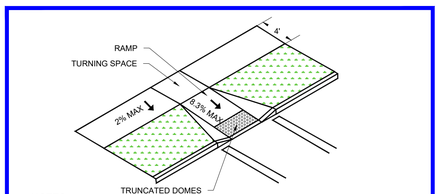
ROAD ORDINANCE – JANUARY 2017



P-1 PAVING SECTION FOR PARKING AREAS
CLASSIFICATION PER CHARLES COUNTY, MARYLAND
ORDINANCE CHAPTER 276, TABLE 2.07



P-2 PAVING SECTION FOR LOCAL ROADS
CLASSIFICATION PER CHARLES COUNTY, MARYLAND
ORDINANCE CHAPTER 276, TABLE 2.07



NOTES:
1. RAMP AND SIDEWALK SHALL MEET ADA REQUIREMENTS.
2. SURFACE TEXTURE OF CONCRETE RAMP AND FLARES SHALL BE COURSE BROOM FINISH OR OTHER NON-SKID TYPE SURFACE.

MID BLOCK CROSSWALK
RAMP DETAIL

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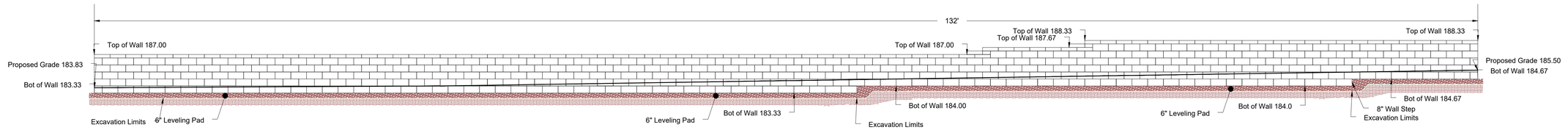
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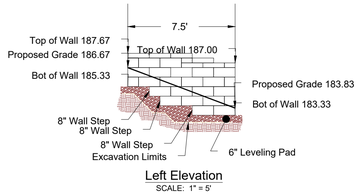
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Drawn By: WCS	Checked By: WCS		
Date: 2/12/25			
Scale: N/A			

REVISIONS
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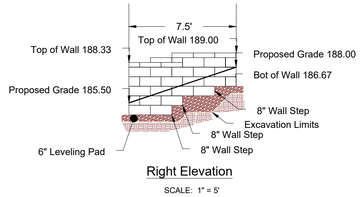
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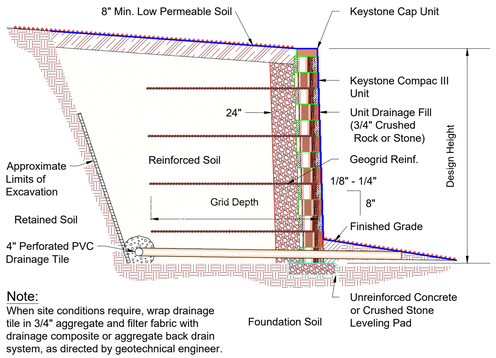
Front Elevation
SCALE: 1" = 5'



Left Elevation
SCALE: 1" = 5'

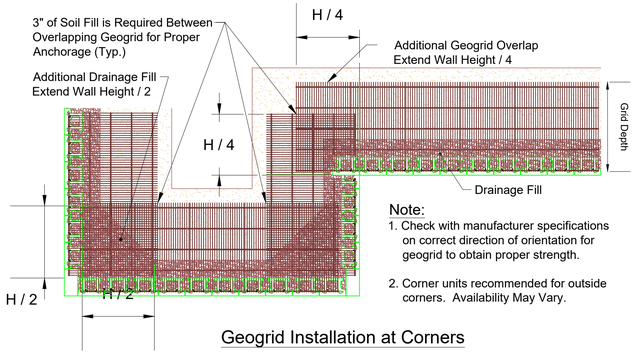


Right Elevation
SCALE: 1" = 5'



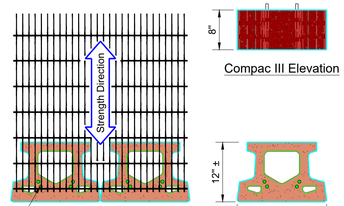
Note:
When site conditions require, wrap drainage tile in 3/4" aggregate and filter fabric with drainage composite or aggregate back drain system, as directed by geotechnical engineer.

Typical Reinforced Wall Section
Compac III Unit - Near Vertical Setback



Note:
1. Check with manufacturer specifications on correct direction of orientation for geogrid to obtain proper strength.
2. Corner units recommended for outside corners. Availability May Vary.

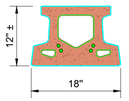
Geogrid Installation at Corners



Geogrid is to be Placed on Level Backfill and Extended Over the Fiberglass Pins. Place Next Unit. Pull Grid Taught and Backfill. Stake as required.

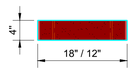
Grid & Pin Connection

Compac III Elevation

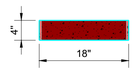


Compac III Plan

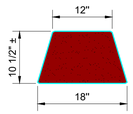
Compac III Unit
* Dimensions May Vary by Region



Cap Unit Elevation

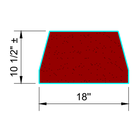


Cap Unit Elevation



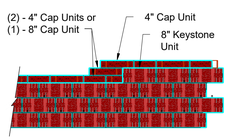
Cap Unit Plan

Universal Cap Unit Option
* Dimensions & Availability Will Vary by Region



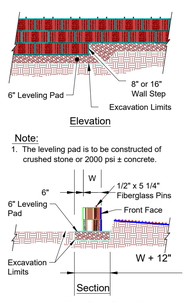
Cap Unit Plan

Straight Split Cap Unit Option
* Dimensions & Availability Will Vary by Region



Note:
1. Secure all cap units with Keystone Kapseal or equal.

Top of Wall Steps



Leveling Pad Detail

NOTE: GRID DEPTH FOR THIS PROJECT IS 6.0'

NOTE:
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NOTE:
This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.

LIC 36310 EXP 11/17/26

VISTA DESIGN, INC.
Engineers • Architects • Surveyors • Landscape Architects
Land Planning Consultants • GIS Services
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Ph. 410-352-3874 • Fax 410-352-3875 • www.vistadesigninc.com

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LA PLATA LIBRARY

BLOCK RETAINING WALL DETAILS

PROJECT DATA

Tax Map:	0113	Parcel:	SEVERAL
LA PLATA, MD			
Drawn By:	WCS	Checked By:	WCS
Date:	2/12/25		
Scale:	AS SHOWN		

REVISIONS

1.	5/19/23 PER LA PLATA COMMENTS
2.	1/16/25 PER LA PLATA COMMENTS
3.	1/16/25 PER CHARLES COUNTY SCD COMMENTS
4.	2/10/25 PER CHARLES COUNTY SCD COMMENTS
5.	7/22/25 PER TOWN COMMENTS

Project No.: 21-093
File Name: jan2026CE011525.dwg
Sheet No.: C-252

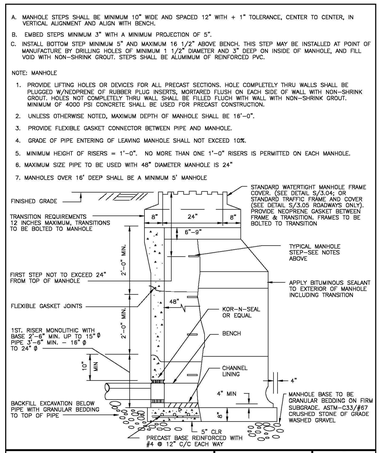
A. MANHOLE STEPS SHALL BE MINIMUM 10" WIDE AND SPACED 12" WITH + 1" TOLERANCE, CENTER TO CENTER, IN VERTICAL ALIGNMENT AND ALIGN WITH BENCH.

B. EMBED STEPS MINIMUM 3" WITH A MINIMUM PROJECTION OF 5".

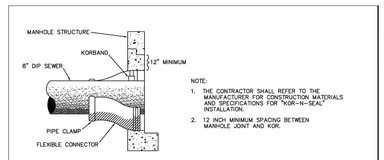
C. INSTALL BOTTOM STEP MINIMUM 5" AND MAXIMUM 16 1/2" ABOVE BENCH. THIS STEP MAY BE INSTALLED AT POINT OF MANUFACTURE BY DRILLING HOLES OF MINIMUM 1 1/2" DIAMETER AND 3" DEEP ON INSIDE OF MANHOLE, AND FILL VOID WITH NON-SHRINK GROUT. STEPS SHALL BE ALUMIMUM OF REINFORCED PVC.

NOTE: MANHOLE

1. PROVIDE LIFTING HOLES OR DEVICES FOR ALL PRECAST SECTIONS. HOLE COMPLETELY THRU WALLS SHALL BE PLUGGED W/NEOPRENE OF RUBBER PLUG INSERTS, MORTARED FLUSH ON EACH SIDE OF WALL WITH NON-SHRINK GROUT. HOLES NOT COMPLETELY THRU WALL SHALL BE FILLED FLUCH WITH WALL WITH NON-SHRINK GROUT. MINIMUM OF 4000 PSI CONCRETE SHALL BE USED FOR PRECAST CONSTRUCTION.
2. UNLESS OTHERWISE NOTED, MAXIMUM DEPTH OF MANHOLE SHALL BE 16'-0".
3. PROVIDE FLEXIBLE GASKET CONNECTOR BETWEEN PIPE AND MANHOLE.
4. GRADE OF PIPE ENTERING OF LEAVING MANHOLE SHALL NOT EXCEED 10%.
5. MINIMUM HEIGHT OF RISERS = 1'-0". NO MORE THAN ONE 1'-0" RISERS IS PERMITTED ON EACH MANHOLE.
6. MAXIMUM SIZE PIPE TO BE USED WITH 48" DIAMETER MANHOLE IS 24"
7. MANHOLES OVER 16' DEEP SHALL BE A MINIMUM 5' MANHOLE



CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	S 1.00
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT APPROVED: Raymond N. Duemmler, Jr. Aug 8, 2023 CHIEF OF CODES, PERMITS, & INSPECTION SERVICES DATE Aug 8, 2023 PROFESSIONAL ENGINEER DATE	PRECAST CONCRETE MANHOLE DETAIL, 48" DIAMETER	REVISIONS: DECEMBER 2022

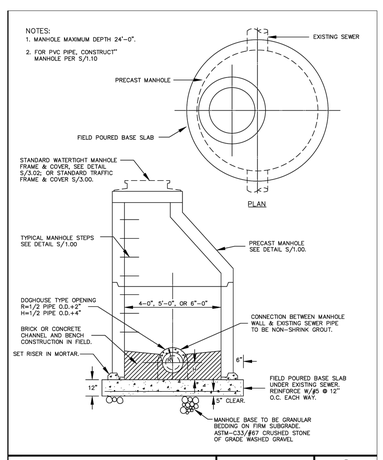


NOTE:
1. THE CONTRACTOR SHALL REFER TO THE MANUFACTURER FOR CONSTRUCTION MATERIALS AND SPECIFICATIONS FOR "KOR-N-SEAL" INSTALLATION.
2. 12 INCH MINIMUM SPACING BETWEEN MANHOLE JOINT AND KOR.

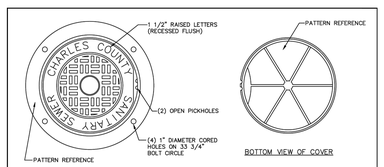
Connector P/N	Suggested Pipe O.D. Range (in inches)	Hole/Connector Dimensions (in inches) A	B	C	D	Pipe Clamp P/N
S106-7	3.50 to 4.50	7	6.125	4.500	6	M-80
S406-10 1/2A S406-10 1/2	6.00 to 6.75 7.50 to 9.00	10.5 10.5	9.375 9.375	6.500 8.500	6 6	M-128 M-180
S106-12B S106-12A S106-12	5.75 to 7.00 7.00 to 8.50 8.25 to 9.75	12 12 12	10.875 10.875 10.875	6.500 8.000 9.250	8 8 8	M-128 M-180 M-180
S406-12C S406-12B S406-12A S406-12	6.00 to 7.00 6.25 to 7.50 7.50 to 9.00 9.00 to 10.50	12 12 12 12	10.875 10.875 10.875 10.875	6.500 7.000 8.500 10.000	6 6 6 6	M-128 M-128 M-180 M-180
S106-16B S106-16A S106-16	9.50 to 11.25 11.25 to 13.00 13.00 to 14.50	16 16 16	14.875 14.875 14.875	10.500 12.250 14.000	8 8 8	M-192 M-240 M-240

CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	S 1.07
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT APPROVED: Raymond N. Duemmler, Jr. Aug 8, 2023 CHIEF OF CODES, PERMITS, & INSPECTION SERVICES DATE Aug 8, 2023 PROFESSIONAL ENGINEER DATE	KOR-N-SEAL	REVISIONS:

NOTES:
1. MANHOLE MAXIMUM DEPTH 24'-0".
2. FOR PVC PIPE, CONSTRUCT MANHOLE PER S/1.10



CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	S 1.09
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT APPROVED: Raymond N. Duemmler, Jr. Aug 8, 2023 CHIEF OF CODES, PERMITS, & INSPECTION SERVICES DATE Aug 8, 2023 PROFESSIONAL ENGINEER DATE	PRECAST CONCRETE MANHOLE BUILT OVER EXISTING SEWER TYPE II	REVISIONS: DECEMBER 2022



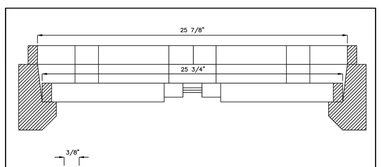
LOAD RATING
HEAVY DUTY

MATERIAL SPECIFICATIONS
COVER-GRAY IRON ASTM A48 CL30
FRAME-GRAY IRON ASTM A48 CL30

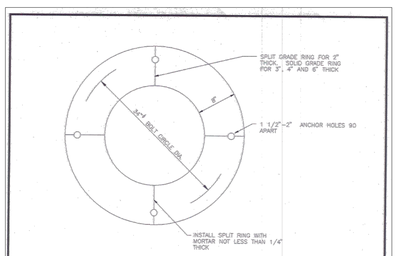
ESTIMATED WEIGHT
COVER: 150 LBS.
FRAME: 280 LBS.
UNIT: 430 LBS.

NOTES
1. FOR USE IN TRAFFIC AREAS THAT DO NOT REQUIRE A WATER TIGHT SEAL.
2. MANHOLES THAT ARE NOT BOLT DOWN REQUIRE A MANHOLE INSERT.
3. USE A HOPE MANHOLE INSERT MEETING THE REQUIREMENTS OF ASTM D1248, CLASS A, CATEGORY 5 WHEN REQUIRED.
4. USE NEVER-SEIZE LUBE ON SCREWS AND BOLTS.
5. ALL FRAME AND COVERS MUST BE FACTORY COATED.
6. MANUFACTURER'S NAME MUST APPEAR ON FRAME AND COVER.
7. MACHINE SURFACE.
8. ALL FRAME AND COVERS MUST BE PER CHARLES COUNTY SPECIFICATIONS. THE COVER SHOULD READ "CHARLES COUNTY WATER" FOR WATER USE AND "CHARLES COUNTY RECLAIMED WATER" FOR RECLAIMED WATER USE.

CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	S 3.00
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT APPROVED: CHIEF OF CODES, PERMITS, & INSPECTION SERVICES DATE PROFESSIONAL ENGINEER DATE	STANDARD TRAFFIC FRAME & COVER	REVISIONS: DECEMBER 2022

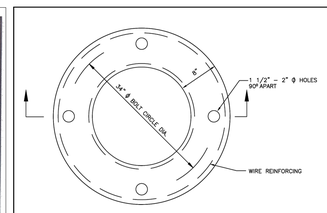


CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	S 3.03
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT APPROVED: Raymond N. Duemmler, Jr. Aug 8, 2023 CHIEF OF CODES, PERMITS, & INSPECTION SERVICES DATE Aug 8, 2023 PROFESSIONAL ENGINEER DATE	RISER RING STANDARD FRAME & COVER	REVISIONS:



NOTES:
1. PRECAST CONCRETE f'c = 5000 PSI @ 28 DAYS.
2. REINFORCEMENT SHALL CONFORM TO ASTM C-478.
3. CAST LIFT LUGS ARE REQUIRED FOR 4' AND 6' RINGS.
4. INSTALL MORTAR NOT LESS THAN 1/4 INCH THICK BETWEEN RINGS.RED FOR 4" AND 6" RINGS.

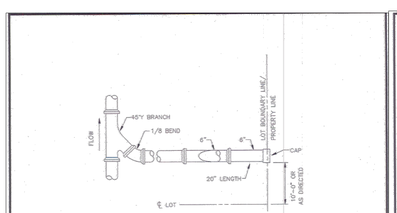
CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	S 3.06
APPROVED: 6/29/95	24" PRECAST CONC. MANHOLE ADJUSTING GRADE RING		



NOTES:
1. PRECAST CONCRETE f'c = 5000 PSI @ 28 DAYS.
2. REINFORCEMENT CONFORMS TO ASTM C-478.
3. INSTALL MORTAR NOT LESS THAN 1/4 INCH THICK BETWEEN RING.

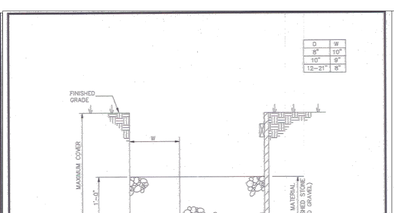
ADJUSTING GRADE RING SIZE	
2"	x 3"
2 1/2"	x 3 1/2"
3"	x 4"

CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	S 3.07
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT APPROVED: Raymond N. Duemmler, Jr. Aug 8, 2023 CHIEF OF CODES, PERMITS, & INSPECTION SERVICES DATE Aug 8, 2023 PROFESSIONAL ENGINEER DATE	24" PRECAST CONCRETE MANHOLE SLOPED ADJUSTING GRADE RING	REVISIONS:



NOTES:
1. Set 2"x8"x8" marker boards at C.O. / Property line. Board should be exposed 4 ft. above grade and painted GREEN.
2. Use proper bedding requirements per county detail M2.04.

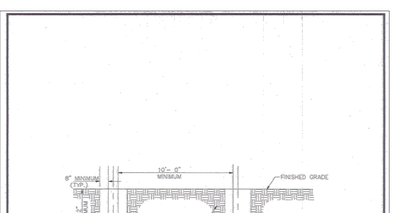
CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	S 4.01
APPROVED: 6/29/95	TYPE 'B' 6" HOUSE CONNECTION TO SEWER MAIN		



D	W
8"	1'0"
10"	9"
12–21"	8"

NOTES:
1. WHERE TRENCH WALLS BELOW TOP OF PIPE ARE UNSTABLE AND REQUIRE SUPPORT TO MAINTAIN TRENCH DIMENSION, THE SUPPORT SHALL BE LEFT IN PLACE.
2. MAXIMUM COVER = 15'-0".
3. DETAIL APPLIES TO PVC PIPE.
4. IF SUBGRADE IS NOT STABLE, UTILIZE ASTM C33 #2 OR #3 CRUSHED STONE STABILIZE AND TRANSMIT GROUNDWATER. ORIGINAL BEDDING DETAIL TO BE UTILIZED OVER THE SUBGRADE STONE STABILIZATION.

CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	M 2.04
APPROVED: 6/29/95	BEDDING, EMBEDMENT AND MAXIMUM COVER PVC PIPE		



TYPICAL SECTION
(SEPARATE TRENCH)

NOTES:
1. FOR WATER HOUSE CONNECTION WATER SHALL BE INSTALLED TO THE LEFT OF THE SEWER LINE LOOKING AT THE PROPERTY UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
2. FOR DETECTOR TAPE INSTALLATION, SEE SPECIFICATIONS.

CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	M 2.01
APPROVED: 6/29/95	MINIMUM CLEARANCE OF WATER PARALLEL TO SEWER		

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NOTE:
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STATE OF MARYLAND
CHRISTOPHER S.D. FOLK
LICENSE #30360
PROFESSIONAL ENGINEER
LIC 36310 EXP 11/17/26

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Engineers • Architects • Surveyors • Landscape Architects
Land Planning Consultants • GIS Services
11634 Worcester Hwy, Showell, MD 21862
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SANITARY SEWER DETAILS

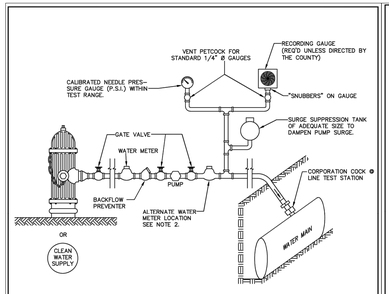
PROJECT DATA

Tax Map:	0113	Parcel:	SEVERAL
LA PLATA, MD			
Drawn By:	WCS	Checked By:	WCS
Date:	2/12/25		
Scale:	N/A		

REVISIONS

1.	5/19/23 PER LA PLATA COMMENTS
2.	1/16/25 PER LA PLATA COMMENTS
3.	1/16/25 PER CHARLES COUNTY SCD COMMENTS
4.	2/10/25 PER CHARLES COUNTY SCD COMMENTS
5.	7/22/25 PER TOWN COMMENTS
6.	1/16/26 PER TOWN REQUEST

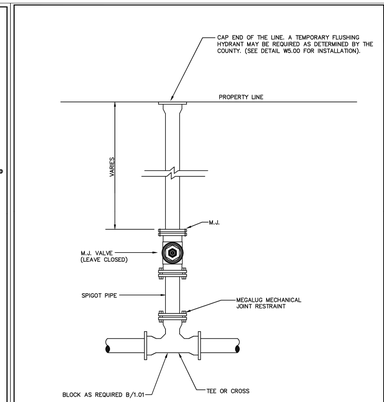
Project No.: 21-093
File Name: jan2026CE011525.dwg
Sheet No.: C-253



NOTES:
1. ALL LINES, FITTINGS AND TEST APPURTENANCES SHALL BE CAPABLE OF WITHSTANDING MAXIMUM TEST PRESSURE.
2. WHEN TEST PRESSURE IS LESS THAN PRESSURE RANGE OF METER, INSTALL METER AT ALTERNATE LOCATION SHOWN.
3. PROVIDE ADEQUATE PROTECTION TO ALL LINES, FITTINGS AND TEST APPURTENANCES WHEN TESTING DURING FREEZING WEATHER.
4. PUMP MUST BE CAPABLE OF PRESSURE WITHIN TEST RANGE (PROVIDE FOR PRESSURE RELIEF ON PUMP).
5. TEST CORPORATION COCK TO BE UTILIZED AS A SERVICE CONNECTION AFTER TESTING.
6. COUNTY METER REQUIRED WHEN USING COUNTY WATER FOR TESTING, FLUSHING, OR OTHER CONSTRUCTION NEEDS.
7. REFER TO CHARLES COUNTY WATER SPECIFICATIONS FOR SPECIFIC TESTING CRITERIA.
8. BACKFLOW PREVENTER SHALL BE ASSE 1013.
9. ELEVATION OF TEST GAUGES MUST BE KNOWN.

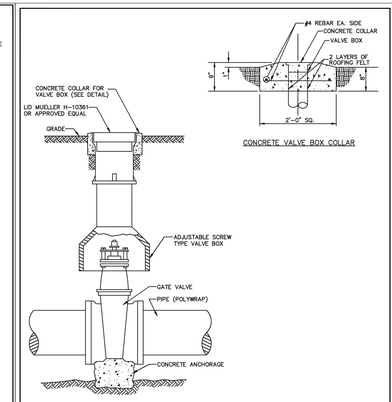
CHARLES COUNTY GOVERNMENT
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT
APPROVED: Raymond A. Duemmler, Jr. Oct 5, 2022 — CHIEF OF CODES, PERMITS, & INSPECTION SERVICES — DATE
Oct 5, 2022 — PROFESSIONAL ENGINEER — DATE

STANDARD DETAIL: METHOD OF TESTING WATER MAINS
W 1.00
REVISIONS: JUNE 1995, SEPTEMBER 2022



CHARLES COUNTY GOVERNMENT
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT
APPROVED: Raymond A. Duemmler, Jr. Oct 5, 2022 — CHIEF OF CODES, PERMITS, & INSPECTION SERVICES — DATE
Oct 5, 2022 — PROFESSIONAL ENGINEER — DATE

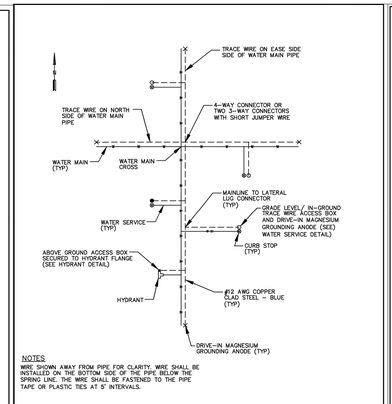
STANDARD DETAIL: 4" THRU 12" WATER CONNECTION INSIDE METER SETTINGS
W 2.03
REVISIONS: JUNE 1995, SEPTEMBER 2022



NOTES:
(1) ALL VALVES SHALL BE RESILIENT WEDGE AWWA C-509 AND AWWA C-515.
(2) PROVIDE CONCRETE COLLAR FOR VALVE BOXES IN UNPAVED AREAS.

CHARLES COUNTY GOVERNMENT
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT
APPROVED: Raymond A. Duemmler, Jr. Oct 5, 2022 — CHIEF OF CODES, PERMITS, & INSPECTION SERVICES — DATE
Oct 5, 2022 — PROFESSIONAL ENGINEER — DATE

STANDARD DETAIL: DETAIL OF GATE VALVE & BOX 16" & BELOW
W 3.00
REVISIONS: JUNE 1995, SEPTEMBER 2022

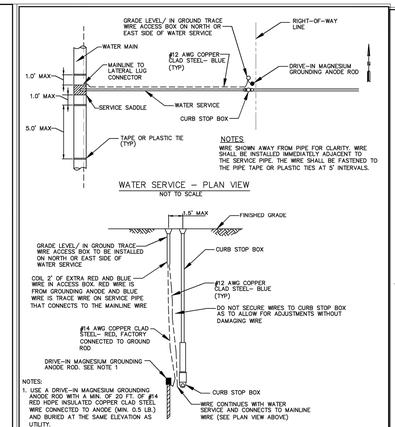


NOTES
WIRE SHOWN AWAY FROM PIPE FOR CLARITY. WIRE SHALL BE INSTALLED ON THE BOTTOM SIDE OF THE PIPE BELOW THE SPRING LINE. THE WIRE SHALL BE FASTENED TO THE PIPE TAPE OR PLASTIC TIES AT 5' INTERVALS.

TRACER WIRE PLAN (WATER)
NOT TO SCALE

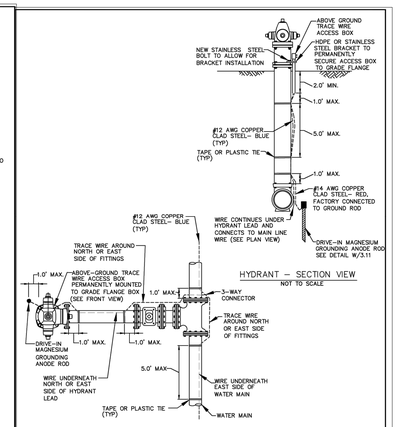
CHARLES COUNTY GOVERNMENT
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT
APPROVED: Raymond A. Duemmler, Jr. Oct 5, 2022 — CHIEF OF CODES, PERMITS, & INSPECTION SERVICES — DATE
Oct 5, 2022 — PROFESSIONAL ENGINEER — DATE

STANDARD DETAIL: TRACER WIRE SAMPLE WATER PLAN
W 3.10
REVISIONS:



CHARLES COUNTY GOVERNMENT
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT
APPROVED: Raymond A. Duemmler, Jr. Oct 5, 2022 — CHIEF OF CODES, PERMITS, & INSPECTION SERVICES — DATE
Oct 5, 2022 — PROFESSIONAL ENGINEER — DATE

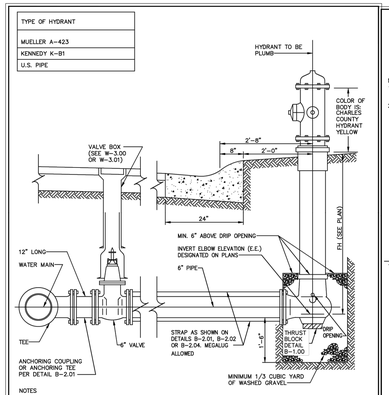
STANDARD DETAIL: TRACER WIRE WATER SERVICE DETAIL
W 3.11
REVISIONS:



CHARLES COUNTY GOVERNMENT
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT
APPROVED: Raymond A. Duemmler, Jr. Oct 5, 2022 — CHIEF OF CODES, PERMITS, & INSPECTION SERVICES — DATE
Oct 5, 2022 — PROFESSIONAL ENGINEER — DATE

STANDARD DETAIL: TRACER WIRE HYDRANT DETAIL
W 3.12
REVISIONS:

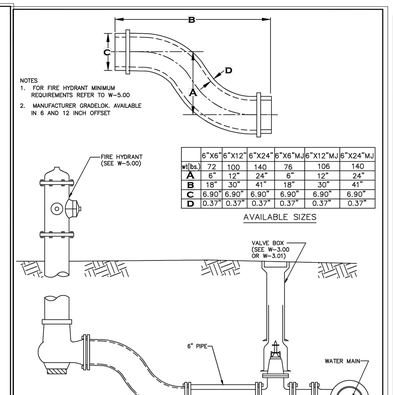
TYPE OF HYDRANT
MUELLER A-423
KENNEDY K-81
U.S. PIPE



NOTES
1. ALL VALVES SHALL BE RESILIENT WEDGE ONLY. APPROVED VALVES ARE: U.S. PIPE METROSEAL 250-4-16 INCH, KENNEDY KEN-SEAL II – 4 12 INCH, WATEROUS SERIES 500 – 4 12 INCH AND MUELLER SERIES A-2360 – 4 12 INCH
2. IN RURAL AREAS, PLACE HYDRANTS 2 FEET OFF OF SHOULDER.
3. FIRE HYDRANT NO MORE THAN 10 FEET BEHIND CURB.
4. ALL THREAD & ASSOCIATED HARDWARE MUST BE STAINLESS STEEL.
5. ADJUST FIRE HYDRANT TO MANUFACTURER'S SUGGESTED GRADE. REFER TO DETAIL 5.00-A FOR FIRE HYDRANT ADJUSTMENT S-BEND.
6. HYDRANTS BEING PLACED IN THE SERVICE SHOULD HAVE THE REFLECTIVE WHITE TAPE AROUND THE BOTTOM.

CHARLES COUNTY GOVERNMENT
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT
APPROVED: Raymond A. Duemmler, Jr. Oct 5, 2022 — CHIEF OF CODES, PERMITS, & INSPECTION SERVICES — DATE
Oct 5, 2022 — PROFESSIONAL ENGINEER — DATE

STANDARD DETAIL: FIRE HYDRANT
W 5.00
REVISIONS: JUNE 1995, SEPTEMBER 2022



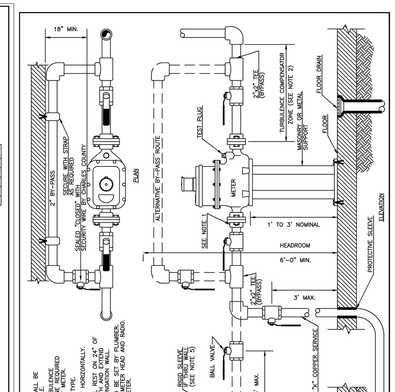
NOTES
1. FOR FIRE HYDRANT MINIMUM REQUIREMENTS REFER TO W-5.00
2. MANUFACTURER GRADELOK, AVAILABLE IN 6 AND 12 INCH OFFSET

	6"X6"	6"X12"	6"X24"	6"X6" MJ	6"X12" MJ	6"X24" MJ
#(lbs.)	72	100	140	76	106	140
A	6"	12"	24"	6"	12"	24"
B	18"	30"	41"	18"	30"	41"
C	6.90"	6.90"	6.90"	6.90"	6.90"	6.90"
D	0.37"	0.37"	0.37"	0.37"	0.37"	0.37"

AVAILABLE SIZES

CHARLES COUNTY GOVERNMENT
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT
APPROVED: Raymond A. Duemmler, Jr. Oct 5, 2022 — CHIEF OF CODES, PERMITS, & INSPECTION SERVICES — DATE
Oct 5, 2022 — PROFESSIONAL ENGINEER — DATE

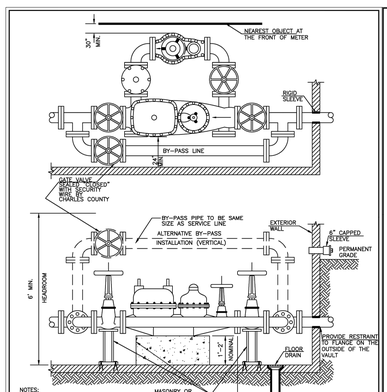
STANDARD DETAIL: FIRE HYDRANT ADJUSTMENT (S – BEND)
W 5.00–A
REVISIONS:



NOTES:
1. CLEANOUT BOLTS SHALL BE READILY ACCESSIBLE.
2. MAINTAIN 12" CLEARANCE FROM COMPRESSION ZONE RECESSED IN FLOOR.
3. ALL VALVES BALL TYPE.
4. METER TO BE SET HORIZONTALLY.
5. ROD SLIDE MUST BE UNRESTRAINED WITH NUT AND EXTEND 1/2" TO 1" ABOVE FLOOR.
6. METER BOTTOM TO BE SET BY PLUMBER. COUNTY WILL SET METER HEAD AND RADIO. COUNTY ISSUES METER.

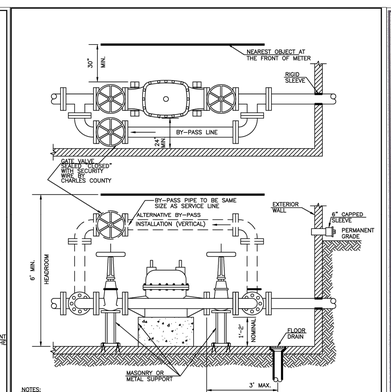
CHARLES COUNTY GOVERNMENT
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT
APPROVED: Raymond A. Duemmler, Jr. Oct 5, 2022 — CHIEF OF CODES, PERMITS, & INSPECTION SERVICES — DATE
Oct 5, 2022 — PROFESSIONAL ENGINEER — DATE

STANDARD DETAIL: INSIDE WATER METER SETTING 2"
W 6.04
REVISIONS: JUNE 1995, SEPTEMBER 2022



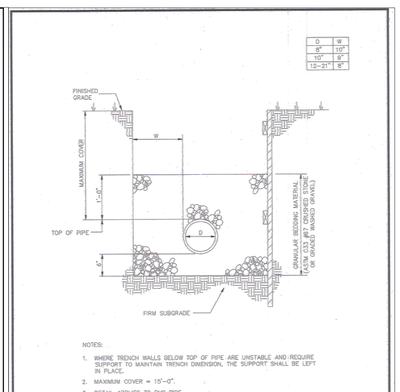
CHARLES COUNTY GOVERNMENT
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT
APPROVED: Raymond A. Duemmler, Jr. Oct 5, 2022 — CHIEF OF CODES, PERMITS, & INSPECTION SERVICES — DATE
Oct 5, 2022 — PROFESSIONAL ENGINEER — DATE

STANDARD DETAIL: INDOOR F.M. METER INSTALLATIONS
W 6.07
REVISIONS: JUNE 1995, SEPTEMBER 2022



CHARLES COUNTY GOVERNMENT
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT
APPROVED: Raymond A. Duemmler, Jr. Oct 5, 2022 — CHIEF OF CODES, PERMITS, & INSPECTION SERVICES — DATE
Oct 5, 2022 — PROFESSIONAL ENGINEER — DATE

STANDARD DETAIL: INDOOR DETECTOR CHECK METER INSTALLATIONS
W 6.09
REVISIONS: JUNE 1995, SEPTEMBER 2022



NOTES:
1. WHERE TRENCH WALLS BELOW TOP OF PIPE ARE UNSTABLE AND REQUIRE SUPPORT TO MAINTAIN TRENCH DIMENSION, THE SUPPORT SHALL BE LEFT IN PLACE.
2. MAXIMUM COVER = 15'-0".
3. DETAIL APPLIES TO PVC PIPE.
4. IF SUBGRADE IS NOT STABLE, UTILIZE ASTM C33 #2 OR #3 CRUSHED STONE STABILIZE AND TRENCHIT GROUNDWATER. ORIGINAL BEDDING DETAIL TO BE UTILIZED OVER THE SUBGRADE STONE STABILIZATION.

CHARLES COUNTY GOVERNMENT
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT
APPROVED: Mitchell Galotas, DIRECTOR OF PUBLIC WORKS — DATE 6/24/25
WATER / SEWER DIVISION

STANDARD DETAIL: BEDDING, EMBEDMENT AND MAXIMUM COVER PVC PIPE
REVISIONS:
M 2.04

NOTE:
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NOTE:
This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.

STATE OF MARYLAND — RICHARD F. CONNELLY — PROFESSIONAL ENGINEER
LIC 36310 EXP 11/17/26

VISTA DESIGN, INC.
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WATERMAIN DETAILS

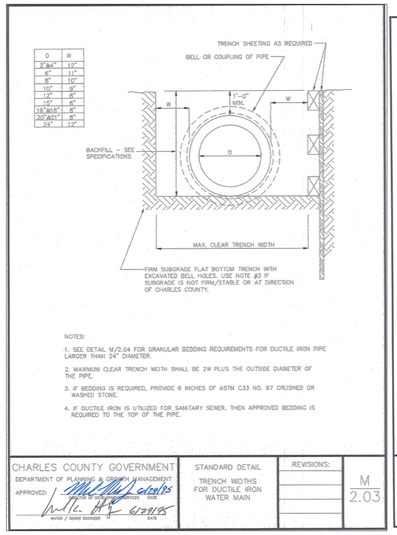
PROJECT DATA

Tax Map:	0113	Parcel:	SEVERAL
LA PLATA, MD			
Drawn By:	WCS	Checked By:	WCS
Date:	2/12/25		
Scale:	N/A		

REVISIONS

1.	5/19/23 PER LA PLATA COMMENTS
2.	1/16/25 PER LA PLATA COMMENTS
3.	1/16/25 PER CHARLES COUNTY SCD COMMENTS
4.	2/10/25 PER CHARLES COUNTY SCD COMMENTS
5.	7/22/25 PER TOWN COMMENTS

Project No.: 21-093
File Name: jan2026CE011525.dwg
Sheet No.: C-254



D	W
3"&4"	12"
6"	1'0"
8"	1'0"
10"	9"
12"	8"
15"	8"
16"&18"	8"
20"&21"	8"
24"	12"

NOTES:

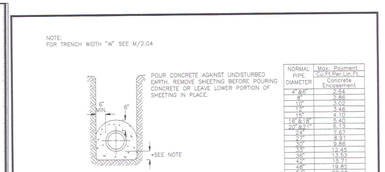
1. SEE DETAIL M/2.04 FOR GRANULAR BEDDING REQUIREMENTS FOR DUCTILE IRON PIPE LARGER THAN 24" DIAMETER.
2. MAXIMUM CLEAR TRENCH WIDTH SHALL BE 2'#! PLUS THE OUTSIDE DIAMETER OF THE PIPE.
3. IF BEDDING IS REQUIRED, PROVIDE 6 INCHES OF ASTM C33 NO. 67 CRUSHED OR WASHED STONE.
4. IF DUCTILE IRON IS UTILIZED FOR SANITARY SEWER, THEN APPROVED BEDDING IS REQUIRED TO THE TOP OF THE PIPE.

CHARLES COUNTY GOVERNMENT
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT
APPROVED: [signature] 6/23/25
WATER / SEWER ENGINEER — DATE

STANDARD DETAIL: TRENCH WIDTHS FOR DUCTILE IRON WATER MAIN

REVISIONS:

M 2.03



NORMAL PIPE DIAMETER	Max. Pavement Width Per Joint Concrete Encasement
3" &4"	2.50
6"	2.83
8"	3.08
10"	3.46
12"	3.77
15" & 16"	4.23
18" & 20"	4.69
21"	5.15
24"	5.61
27"	6.07
30"	6.53
33"	6.99
36"	7.45
42"	8.37
48"	9.29
54"	10.21
60"	11.13
66"	12.05
72"	12.97

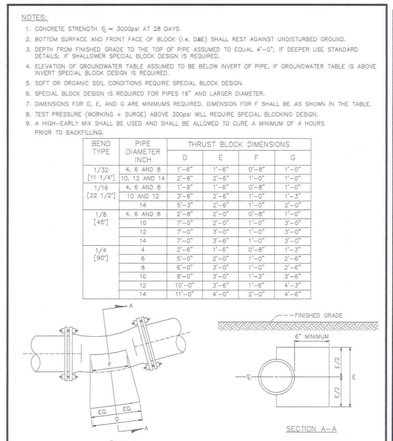
NORMAL PIPE DIAMETER	Max. Pavement Width Per Joint Cradle	Low Cradle
3" &4"	1.79	1.96
6"	1.93	2.10
8"	1.99	2.20
10"	2.23	2.44
12" & 15"	3.10	3.28
16" & 18"	3.56	3.74
20" & 21"	4.32	4.58
24"	5.63	5.81
27"	6.22	6.72
30"	6.68	7.18
33"	7.14	7.64
36"	10.01	10.63
42"	12.29	13.13
48"	14.13	15.43
54"	15.97	17.27
60"	17.81	19.11
66"	23.32	19.55
72"	25.16	19.99

CHARLES COUNTY GOVERNMENT
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT
APPROVED: [signature] 6/23/25
WATER / SEWER ENGINEER — DATE

STANDARD DETAIL: CONCRETE ENCASEMENT & CRADLE DETAILS

REVISIONS:

M 2.05



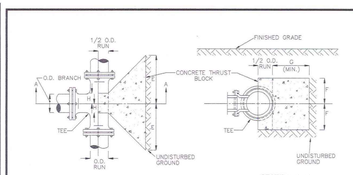
BEND TYPE	PIPE DIAMETER INCH	THRUST BLOCK DIMENSIONS D	E	F	G
1/32 [11 1/4°]	4, 6 AND 8	1'-6"	1'-6"	0'-8"	1'-0"
	10, 12 AND 14	2'-6"	2'-6"	1'-0"	1'-0"
1/16 [22 1/2°]	4, 6 AND 8	1'-9"	1'-6"	0'-8"	1'-0"
	10 AND 12	3'-6"	2'-6"	1'-0"	1'-3"
	14	5'-3"	2'-6"	1'-0"	2'-0"
1/8 [45°]	4, 6 AND 8	2'-8"	2'-0"	0'-8"	1'-0"
	10	7'-0"	2'-0"	1'-0"	3'-0"
	12	7'-0"	3'-0"	1'-0"	3'-0"
	14	7'-0"	3'-6"	1'-0"	3'-0"
1/4 [90°]	4	2'-6"	1'-6"	0'-8"	1'-3"
	6	5'-0"	2'-0"	1'-0"	2'-6"
	8	6'-0"	3'-0"	1'-0"	2'-6"
	10	8'-0"	3'-0"	1'-3"	3'-6"
	12	10'-0"	3'-6"	1'-6"	4'-3"
	14	11'-0"	4'-0"	2'-0"	4'-6"

CHARLES COUNTY GOVERNMENT
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT
APPROVED: [signature] 6/23/25
WATER / SEWER ENGINEER — DATE

STANDARD DETAIL: THRUST BLOCKS FOR HORIZONTAL BENDS

REVISIONS:

B 1.00



	NOMINAL DIAMETER OF BRANCH 3"	4"	6"	8"	10"	12"	14"
E	8"	10"	1'-6"	2'-0"	2'-9"	3'-0"	4'-3"
F	8"	10"	1'-6"	1'-9"	2'-0"	2'-6"	2'-6"
G	1'-0"	1'-0"	1'-3"	1'-9"	2'-6"	2'-9"	3'-6"
H	3"	3"	5"	5"	7"	8"	9"

NOTES:

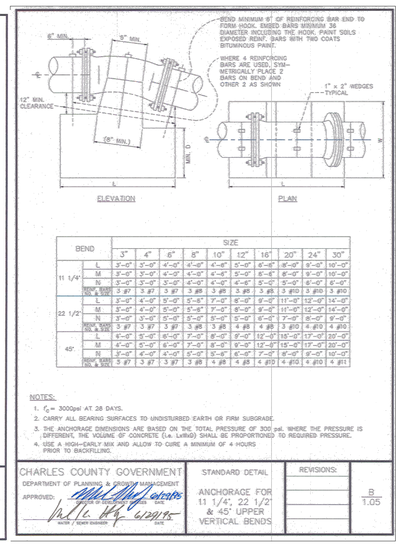
1. CONCRETE STRENGTH f'c = 3000 PSI AT 28 DAYS.
2. BOTTOM SURFACE AND FRONT FACE OF BLOCK (ie. 2E & 2F) SHALL REST AGAINST UNDISTURBED GROUND.
3. DEPTH FROM FINISHED GRADE TO TOP OF TEE ASSUMED TO EQUAL 4'-0"; IF DEEPER USE STANDARD DETAILS; IF SHALLOWER SPECIAL BLOCK DESIGN IS REQUIRED.
4. ELEVATION OF GROUNDWATER TABLE ASSUMED TO BE BELOW INVERT OF TEE. IF GROUNDWATER TABLE IS ABOVE TEE INVERT SPECIAL BLOCK DESIGN IS REQUIRED.
5. SOFT OR ORGANIC SOIL CONDITIONS REQUIRE SPECIAL BLOCK DESIGN.
6. SPECIAL BLOCK DESIGN IS REQUIRED FOR TEES WITH BRANCH DIAMETER OF 16" AND LARGER.
7. DIMENSIONS FOR E,F, AND G ARE MINIMUMS REQUIRED. DIMENSION FOR H SHALL BE AS SHOWN. DESIGN TO ALLOW FOR ADEQUATE MAINTAIN CLEARANCE BETWEEN CONCRETE AND MECHANICAL JOINT TO ALLOW FOR BOLT REMOVAL.
8. TEST PRESSURES (WORKING & SURGE) ABOVE 300 PSI WILL REQUIRE SPECIAL BLOCKING DESIGN.

CHARLES COUNTY GOVERNMENT
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT
APPROVED: [signature] 6/23/25
WATER / SEWER ENGINEER — DATE

STANDARD DETAIL: THRUST BLOCKS FOR TEES & TAPPING ASSEMBLIES

REVISIONS:

B 1.01



BEND		SIZE 3"	4"	6"	8"	10"	12"	16"	20"	24"	30"
11 1/4°	L	3'-0"	3'-0"	4'-0"	4'-0"	4'-8"	5'-0"	6'-0"	8'-0"	9'-0"	10'-0"
	M	3'-0"	3'-0"	4'-0"	4'-6"	5'-0"	5'-6"	6'-6"	8'-0"	9'-0"	10'-0"
	N	3'-0"	3'-0"	4'-0"	4'-6"	5'-0"	5'-6"	6'-6"	8'-0"	9'-0"	10'-0"
	BEND W/DIA. & SIZE	3 #7	3 #7	3 #7	3 #8	3 #8	3 #8	3 #10	3 #10	3 #10	3 #10
22 1/2°	L	3'-0"	4'-0"	5'-0"	5'-6"	7'-0"	8'-0"	11'-0"	12'-0"	14'-0"	
	M	3'-0"	4'-0"	5'-0"	5'-6"	7'-0"	8'-0"	11'-0"	12'-0"	14'-0"	
	N	3'-0"	3'-0"	5'-0"	5'-0"	5'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"
	BEND W/DIA. & SIZE	3 #7	3 #7	3 #7	3 #8	4 #8	4 #8	3 #10	4 #10	4 #10	
45°	L	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	12'-0"	15'-0"	17'-0"	20'-0"
	M	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	12'-0"	15'-0"	17'-0"	20'-0"
	N	3'-0"	4'-0"	5'-0"	5'-0"	5'-8"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"
	BEND W/DIA. & SIZE	3 #7	3 #7	3 #7	3 #8	4 #8	4 #8	4 #10	4 #10	4 #10	5 #10

NOTES:

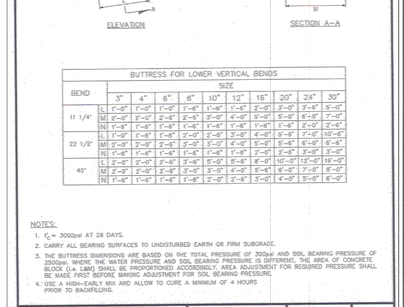
1. f'_c = 3000psi AT 28 DAYS.
2. CARRY ALL BEARING SURFACES TO UNDISTURBED EARTH OR FIRM SUBGRADE.
3. THE ANCHORAGE DIMENSIONS ARE BASED ON THE TOTAL PRESSURE OF 300 psi. WHERE THE PRESSURE IS DIFFERENT, THE VOLUME OF CONCRETE (i.e. LxWxD) SHALL BE PROPORTIONED TO REQUIRED PRESSURE.
4. USE A HIGH-EARLY MIX AND ALLOW TO CURE A MINIMUM OF 4 HOURS PRIOR TO BACKFILLING.

CHARLES COUNTY GOVERNMENT
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT
APPROVED: [signature] 6/23/25
WATER / SEWER ENGINEER — DATE

STANDARD DETAIL: ANCHORAGE FOR 11 1/4°, 22 1/2° & 45° UPPER VERTICAL BENDS

REVISIONS:

B 1.05



BUTTRESS FOR LOWER VERTICAL BENDS BEND		SIZE 3"	4"	6"	8"	10"	12"	16"	20"	24"	30"
11 1/4°	L	1'-0"	1'-0"	1'-0"	1'-6"	1'-6"	1'-6"	2'-0"	3'-0"	3'-6"	5'-0"
	M	1'-0"	1'-0"	1'-0"	2'-6"	3'-0"	4'-0"	5'-0"	5'-0"	6'-6"	7'-0"
	N	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	2'-0"	2'-6"
22 1/2°	L	1'-0"	1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	4'-0"	5'-6"	7'-0"	10'-6"
	M	2'-0"	2'-0"	2'-6"	3'-0"	3'-0"	4'-0"	5'-0"	5'-6"	6'-0"	8'-6"
	N	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	2'-0"	3'-6"	3'-6"	3'-0"
45°	L	2'-0"	2'-0"	3'-6"	3'-6"	5'-0"	5'-6"	8'-0"	10'-0"	12'-0"	16'-0"
	M	2'-0"	2'-0"	3'-6"	3'-0"	4'-0"	5'-6"	6'-0"	7'-0"	8'-0"	9'-0"
	N	1'-6"	1'-6"	1'-6"	1'-6"	2'-0"	2'-6"	3'-0"	4'-0"	5'-0"	6'-0"

NOTES:

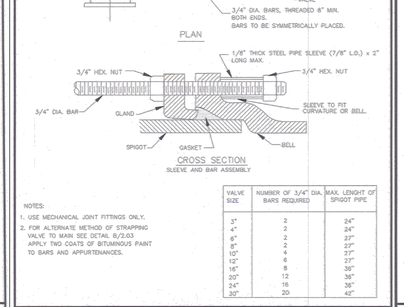
1. f'_c = 3000psi AT 28 DAYS.
2. CARRY ALL BEARING SURFACES TO UNDISTURBED EARTH OR FIRM SUBGRADE.
3. THE BUTTRESS DIMENSIONS ARE BASED ON THE TOTAL PRESSURE OF 300psi AND SOIL BEARING PRESSURE OF 2500psi. WHERE THE WATER PRESSURE AND SOIL BEARING PRESSURE IS DIFFERENT, THE AREA OF CONCRETE BLOCK (i.e. LxWxD) SHALL BE PROPORTIONED ACCORDINGLY. AREA ADJUSTMENT FOR REQUIRED PRESSURE SHALL BE MADE FIRST BEFORE MAKING ADJUSTMENT FOR SOIL BEARING PRESSURE.
4. USE A HIGH-EARLY MIX AND ALLOW TO CURE A MINIMUM OF 4 HOURS PRIOR TO BACKFILLING.

CHARLES COUNTY GOVERNMENT
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT
APPROVED: [signature] 6/23/25
WATER / SEWER ENGINEER — DATE

STANDARD DETAIL: BUTTRESSES FOR 11 1/4°, 22 1/2° & 45° LOWER VERTICAL BENDS

REVISIONS:

B 1.06



VALVE SIZE	NUMBER OF 3/4" DIA. BARS REQUIRED	MAX. LENGHT OF SPIGOT PIPE
3"	2	24"
4"	2	24"
6"	2	27"
8"	2	27"
10"	4	27"
12"	6	27"
16"	8	36"
20"	12	36"
24"	16	36"
30"	20	42"

NOTES:

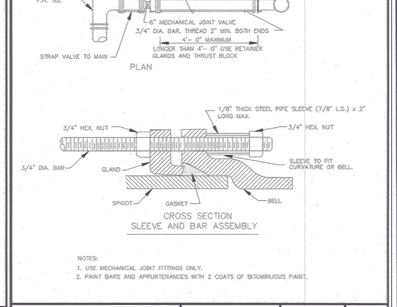
1. USE MECHANICAL JOINT FITTINGS ONLY.
2. FOR ALTERNATE METHOD OF STRAPPING VALVE TO MAIN SEE DETAIL B/3.03 APPLY TWO COATS OF BITUMINOUS PAINT TO BARS AND APPURTENANCES.

CHARLES COUNTY GOVERNMENT
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT
APPROVED: [signature] 6/23/25
WATER / SEWER ENGINEER — DATE

STANDARD DETAIL: METHOD OF STRAPPING VALVE TO MAIN

REVISIONS:

B 2.00



NOTES:

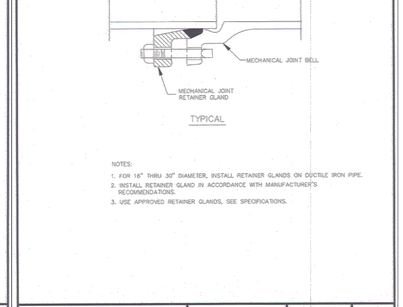
1. USE MECHANICAL JOINT FITTINGS ONLY.
2. PAINT BARS AND APPURTENANCES WITH 2 COATS OF BITUMINUOUS PAINT.

CHARLES COUNTY GOVERNMENT
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT
APPROVED: [signature] 6/23/25
WATER / SEWER ENGINEER — DATE

STANDARD DETAIL: METHODS OF STRAPPING FIRE HYDRANT TO MAIN

REVISIONS:

B 2.01



NOTES:

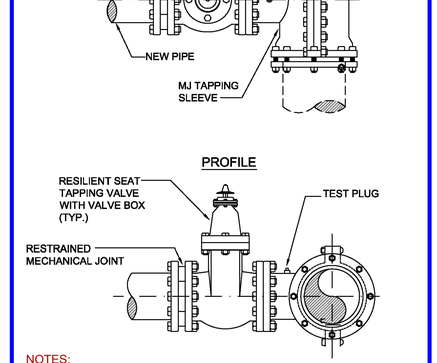
1. FOR 16" THRU 30" DIAMETER, INSTALL RETAINER GLANDS ON DUCTILE IRON PIPE.
2. INSTALL RETAINER GLAND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
3. USE APPROVED RETAINER GLANDS, SEE SPECIFICATIONS.

CHARLES COUNTY GOVERNMENT
DEPARTMENT OF PLANNING & GROWTH MANAGEMENT
APPROVED: [signature] 6/23/25
WATER / SEWER ENGINEER — DATE

STANDARD DETAIL: MECHANICAL JOINT RETAINER GLAND

REVISIONS:

B 2.04



NOTES:

1. BEFORE INSTALLING TAPPING SADDLE, CONTRACTOR TO THOROUGHLY CLEAN PIPE TO REMOVE ALL DIRT, ROCKS, AND OTHER FOREIGN MATERIAL FROM PIPE WHERE SADDLE WILL BE INSTALLED.
2. SADDLE BOLTS SHALL BE TORQUED TO MANUFACTURER'S SPECIFICATIONS.
3. CONTRACTOR TO ENSURE GASKET IS PROPERLY ALIGNED AND FREE OF FOREIGN MATERIAL PRIOR TO TIGHTENING SADDLE.
4. CONTRACTOR TO AIR TEST SADDLE TO 40 PSI PRIOR TO TAPPING.
5. CONTRACTOR TO FLUSH AND PRESSURE TEST VALVE PRIOR TO BACKFILLING.
6. TAPPING SLEEVE TO BE APPROVED BY TOWN OF LA PLATA PRIOR TO USE.
7. CONTRACTOR TO WRAP TAPPING SADDLE AND VALVE WITH 3 LAYERS OF 3 MIL PVC PRIOR TO POURING THRUST BLOCK AND BACKFILLING. EXTEND PVC 6" MINIMUM BEYOND SADDLE AND VALVE AND SECURE TO PIPE WITH DUCT TAPE.
8. STAINLESS STEEL TAPPING SADDLE WITH GASKET AND FLANGED CONNECTION.
9. JOINTS ON BRANCH PIPE SHALL BE FULLY MECHANICALLY RESTRAINED.

TAPPING DETAIL

NOTE:
This drawing, specifications, and work produced by Vista Design, Inc. (VDI) for this project are instruments of service for this project only, and remains the copyrighted property of VDI. Reuse or reproduction of any of the instruments of service of VDI by the Client or assignees without the written permission of VDI will be at the Clients risk and be a violation of the copyright laws of the United States of America and the respective state within which the work was completed.

NOTE:
This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.

STATE OF MARYLAND — DONALD F. CUNNINGHAM, JR. — PROFESSIONAL ENGINEER
LIC 36310 EXP 11/17/26

VISTA DESIGN, INC.
Engineers • Architects • Surveyors • Landscape Architects
Land Planning Consultants • GIS Services
11634 Worcester Hwy, Showell, MD 21862
Ph. 410-352-3874 • Fax 410-352-3875 • www.vistadesigninc.com

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WATERMAIN DETAILS

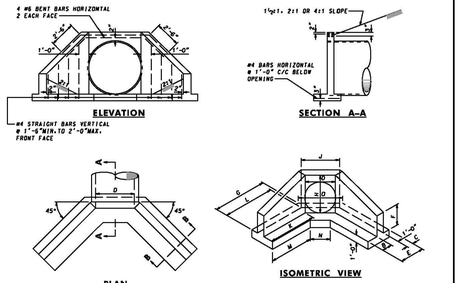
PROJECT DATA

Tax Map: 0113	Parcel: SEVERAL
LA PLATA, MD	
Drawn By: WCS	Checked By: WCS
Date: 2/12/25	
Scale: N/A	

REVISIONS

1.	5/19/23 PER LA PLATA COMMENTS
2.	1/16/25 PER LA PLATA COMMENTS
3.	1/16/25 PER CHARLES COUNTY SCD COMMENTS
4.	2/10/25 PER CHARLES COUNTY SCD COMMENTS
5.	7/22/25 PER TOWN COMMENTS
6.	1/16/26 PER TOWN REQUEST

Project No.: 21-093
File Name: jan2026CE011525.dwg
Sheet No.: C-255



DISPOSITION OF BARS DETAIL

NOTES

SPECIFICATIONS: LATEST S.H.A.
CONCRETE SHALL BE MIX NO.2
REINFORCING: DEFORMED STEEL BARS #4 & #6
CHAMFER: ALL EXPOSED EDGES 1"x1" OR AS DIRECTED

OPENING		DIMENSIONS											VOL. CONC. C.Y.	STEEL LBS.
D INCHES	AREA SQ.FT.	B	C	E	F	G	H	J	K	L	W	N	O		
48	12.57	1'-4"	10"	3'-2"	2'-8"	7'-08⅝"	5'-0"	4'-10"	6'-3⅝"	6'-8⅝"	5'-8"	2'-10⅝"	5'-6"	4.3	262
54	15.9	1'-6"	1'-0"	3'-8"	3'-0"	7'-8⅝"	5'-6"	5'-4"	6'-10⅝"	7'-3⅝"	6'-3⅝"	3'-1⅛"	6'-0"	5.3	301
60	19.64	1'-8"	1'-0"	3'-8"	3'-3"	8'-5"	6'-0"	5'-10"	7'-7⅛"	8'-0⅛"	6'-11"	3'-2⅝"	6'-8"	6.0	361

QUANTITIES IN TABLE TO BE USED FOR ESTIMATING ONLY

SPECIFICATION	CATEGORY CODE ITEMS
305	

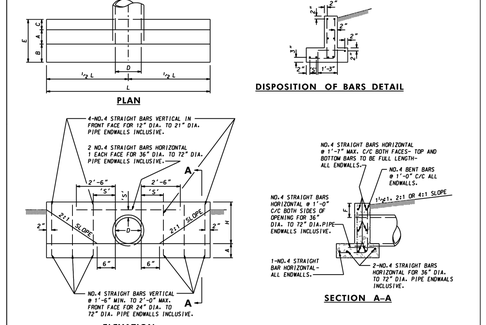
APPROVED Kirk G. McCall
DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT

SHA State Highway Administration	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
	APPROVAL 3-3-59	APPROVAL 3-15-60
	REVISED 10-1-01	REVISED 8-1-84
	REVISED	REVISED
	REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

STANDARD HEADWALLS
B-48 B-54 B-60

STANDARD NO. MD 352.01



DISPOSITION OF BARS DETAIL

'S' DISTANCES

4" FOR 12" DIA. TO 21" DIA. PIPES INCLUSIVE.
6" FOR 24" DIA. TO 36" DIA. PIPES INCLUSIVE.
8" FOR 42" DIA. TO 72" DIA. PIPES INCLUSIVE.

GENERAL NOTES

SPECIFICATIONS: LATEST S.H.A.
CONCRETE SHALL BE MIX NO.2
REINFORCING: DEFORMED STEEL BARS-NO.4
CHAMFER: ALL EXPOSED EDGES 1"x1" OR AS DIRECTED

QUANTITIES FOR ESTIMATING PURPOSES ONLY

OPENING		DIMENSIONS						QUANTITIES	
D INCHES	AREA SQ.FT.	A	B	C	E	F	H	L	CONC. C.Y.	STEEL LBS.
12	0.79	9"	6"	6"	1'-9"	9"	1'-9"	6'-6"	0.61	41
15	1.23	9"	6"	6"	1'-9"	9"	2'-0"	7'-0"	0.77	47
18	1.77	9"	6"	6"	1'-9"	9"	2'-3"	7'-6"	0.95	54
21	2.40	9"	6"	6"	1'-9"	9"	2'-6"	10'-3"	1.14	70
24	3.14	9"	14"	6"	2'-5"	9"	2'-9"	11'-6"	1.56	80
27	3.98	9"	14"	6"	2'-5"	9"	3'-0"	12'-0"	1.82	88
30	4.91	9"	14"	6"	2'-5"	12"	3'-6"	14'-3"	2.22	98
33	5.94	9"	14"	6"	2'-5"	12"	3'-9"	15'-5"	2.48	105
36	7.07	12"	16"	10"	3'-2"	12"	4'-0"	16'-8"	4.16	182
42	9.62	12"	16"	10"	3'-2"	12"	4'-6"	19'-2"	5.07	206
48	12.57	12"	16"	10"	3'-2"	12"	5'-0"	21'-8"	6.09	244
54	15.90	12"	20"	12"	3'-8"	12"	5'-6"	24'-2"	7.03	275
60	19.64	12"	20"	12"	3'-8"	12"	6'-0"	26'-8"	8.82	304
72	28.27	12"	20"	12"	3'-8"	12"	7'-0"	31'-8"	11.46	377

SPECIFICATION	CATEGORY CODE ITEMS
305	

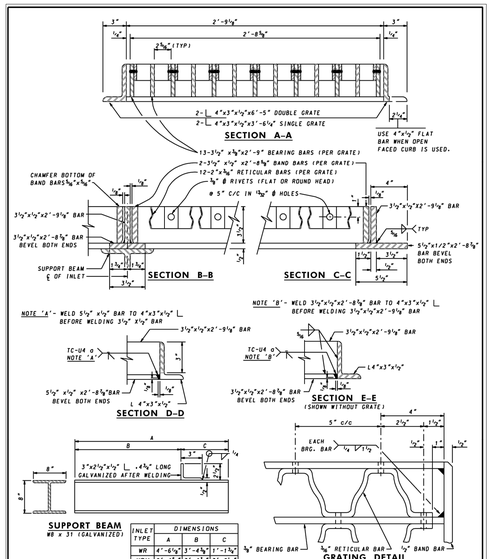
APPROVED Kirk G. McCall
DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT

SHA State Highway Administration	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
	APPROVAL 8-28-86	APPROVAL 12-12-86
	REVISED 10-1-01	REVISED
	REVISED	REVISED
	REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

STANDARD TYPE C ENDWALL
METAL OR CONCRETE ROUND PIPE

STANDARD NO. MD 354.01



SPECIFICATION	CATEGORY CODE ITEMS
305	

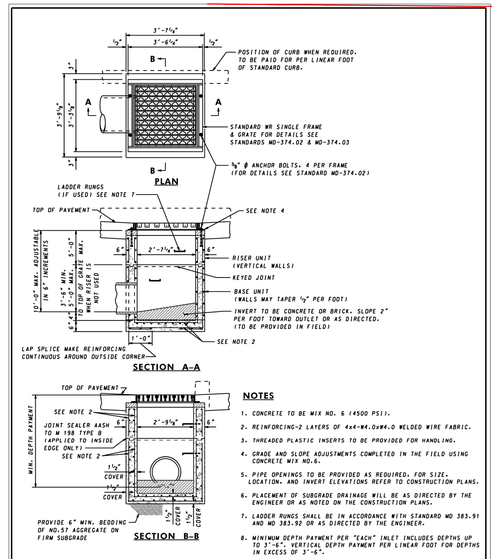
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SHA State Highway Administration	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
	APPROVAL 3-28-75	APPROVAL 1-14-75
	REVISED 10-1-01	REVISED 9-21-87
	REVISED	REVISED
	REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

STANDARD WR & WRM INLET
FRAME & GRATE

STANDARD NO. MD 374.03



NOTES

1. CONCRETE TO BE MIX NO. 6 (4500 PSI).
2. REINFORCING-2 LAYERS OF 4x4-W4.0xW4.0 WELDED WIRE FABRIC.
3. THREADED PLASTIC INSERTS TO BE PROVIDED FOR HANDLING.
4. GRADE AND SLOPE ADJUSTMENTS COMPLETED IN THE FIELD USING CONCRETE MIX NO.6.
5. PIPE OPENINGS TO BE PROVIDED AS REQUIRED. FOR SIZE, LOCATION, AND INVERT ELEVATIONS REFER TO CONSTRUCTION PLANS.
6. PLACEMENT OF SUBGRADE DRAINAGE WILL BE AS DIRECTED BY THE ENGINEER OR AS NOTED ON THE CONSTRUCTION PLANS.
7. LADDER RUNGS SHALL BE IN ACCORDANCE WITH STANDARD MD 383.91 AND MD 383.92 OR AS DIRECTED BY THE ENGINEER.
8. MINIMUM DEPTH PAYMENT PER "EACH" INLET INCLUDES DEPTHS UP TO 3'-6". VERTICAL DEPTH PAYMENT PER LINEAR FOOT FOR DEPTHS IN EXCESS OF 3'-6".

SPECIFICATION	CATEGORY CODE ITEMS
305	

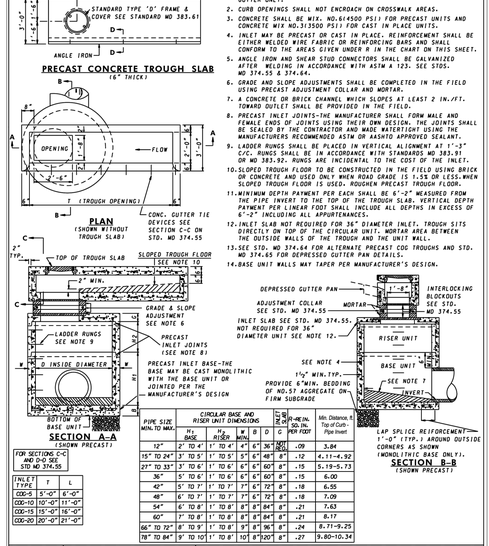
APPROVED Kirk G. McCall
DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT

SHA State Highway Administration	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
	APPROVAL 6-4-84	APPROVAL 8-1-84
	REVISED 10-1-01	REVISED 3-25-87
	REVISED	REVISED
	REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

PRECAST SINGLE WR INLET

STANDARD NO. MD 374.23



NOTES

1. THIS STANDARD TO BE USED WITH TYPE A COMBINATION CURB AND GUTTER ONLY.
2. CURB OPENINGS SHALL NOT ENCROACH ON CROSSWALK AREAS.
3. CONCRETE SHALL BE MIX. NO.6(4500 PSI) FOR PRECAST UNITS AND CONCRETE MIX NO.3 (3500 PSI) FOR CAST IN PLACE UNITS.
4. INLET MAY BE PRECAST OR CAST IN PLACE. REINFORCEMENT SHALL BE EITHER WELDED WIRE FABRIC OR REINFORCING BARS AND SHALL CONFORM TO THE AREAS GIVEN UNDER B IN THE CHART ON THIS SHEET.
5. ANGLE IRON AND SHEAR STUD CONNECTORS SHALL BE GALVANIZED AFTER WELDING IN ACCORDANCE WITH ASTM A 123. SEE STDS. NO 374.55 & 374.64.
6. GRADE AND SLOPE ADJUSTMENTS SHALL BE COMPLETED IN THE FIELD USING PRECAST ADJUSTMENT COLLAR AND MORTAR.
7. A CONCRETE OR BRICK CHANNEL WHICH SLOPES AT LEAST 2 IN./FT. TOWARD OUTLET SHALL BE PROVIDED IN THE FIELD.
8. PRECAST INLET JOINTS-THE MANUFACTURER SHALL FORM MALE AND FEMALE ENDS OF JOINTS USING THEIR OWN DESIGN. THE JOINTS SHALL BE SEALED BY THE CONTRACTOR AND MADE WATERTIGHT USING THE MANUFACTURERS RECOMMENDED ASTM OR AASHTO APPROVED SEALANT.
9. LADDER RUNGS SHALL BE PLACED IN VERTICAL ALIGNMENT AT 1'-3" C/C. RUNGS SHALL BE IN ACCORDANCE WITH STANDARDS MD 383.91 OR MD 383.92. RUNGS ARE INCIDENTAL TO THE COST OF THE INLET.
10. SLOPED TROUGH FLOOR TO BE CONSTRUCTED IN THE FIELD USING BRICK OR CONCRETE AND USED ONLY WHEN ROAD GRADE IS 1.5% OR LESS. WHEN SLOPED TROUGH FLOOR IS USED. ROUGHEN PRECAST TROUGH FLOOR.
11. MINIMUM DEPTH PAYMENT PER EACH SHALL BE 6'-0" MEASURED FROM THE PIPE INVERT TO THE TOP OF THE TROUGH SLAB. VERTICAL DEPTH PAYMENT PER LINEAR FOOT SHALL INCLUDE ALL DEPTHS IN EXCESS OF 6'-2" INCLUDING ALL APPURTENANCES.
12. INLET SLAB NOT REQUIRED FOR 36" DIAMETER INLET. TROUGH SITS DIRECTLY ON TOP OF THE CIRCULAR UNIT. MORTAR AREA BETWEEN THE OUTSIDE WALLS OF THE TROUGH AND THE UNIT WALL.
13. SEE STD. NO 374.64 FOR ALTERNATE PRECAST COS TROUGHS AND STD. NO 374.65 FOR DEPRESSED GUTTER PAN DETAILS.
14. BASE UNIT WALLS MAY TAPER PER MANUFACTURER'S DESIGN.

PIPE SIZE MIN. TO MAX.	CIRCULAR BASE AND RISER UNIT DIMENSIONS H1 BASE	H2 RISER MIN.	W	D	O	G	R-AREA IN SQ. IN. PER FOOT	Min. Distance, R Top of Curb - Pipe Invert
12"	2' 10 4"	1' 10 4"	4"	6"	36"	8"	.09	3.84
15" TO 24"	3' 10 5"	1' 10 5"	5"	6"	48"	8"	.12	4.11-4.92
27" TO 33"	5' 10 6"	1' 10 6"	6"	6"	60"	8"	.15	5.19-5.73
36"	5' 10 6"	1' 10 6"	6"	6"	60"	8"	.15	6.00
42"	5' 10 7"	1' 10 7"	7"	6"	72"	8"	.18	6.55
48"	6' 10 7"	1' 10 7"	7"	6"	72"	8"	.18	7.09
54"	6' 10 8"	1' 10 8"	8"	8"	84"	8"	.21	7.63
60"	7' 10 8"	1' 10 8"	8"	8"	84"	8"	.21	8.17
66" TO 72"	8' 10 9"	1' 10 8"	9"	8"	96"	8"	.24	8.71-9.25
78" TO 84"	9' 10 10"	1' 10 8"	10"	8"	120"	8"	.27	9.80-10.34

INLET TYPE	T	L
COD-5	5'-0"	6'-0"
COD-10	10'-0"	11'-0"
COD-15	15'-0"	16'-0"
COD-20	20'-0"	21'-0"

FOR SECTIONS C-C AND D-D SEE STD NO 374.55

SPECIFICATION	CATEGORY CODE ITEMS
305	

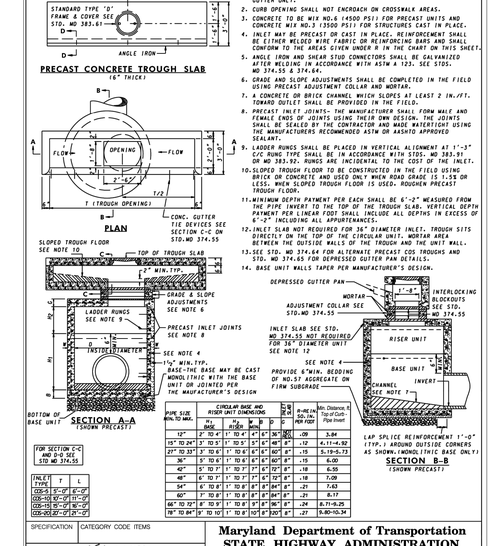
APPROVED Kirk G. McCall
DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT

SHA State Highway Administration	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
	APPROVAL 3-23-91	APPROVAL 1-3-91
	REVISED 10-1-01	REVISED 8-16-91
	REVISED 08-03-10	REVISED 07-26-10
	REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

PRECAST OR CAST
IN PLACE CIRCULAR COG INLETS
5', 10', 15', & 20'

STANDARD NO. MD 374.62



NOTES

1. THIS STANDARD TO BE USED WITH TYPE A COMBINATION CURB AND GUTTER ONLY.
2. CURB OPENING SHALL NOT ENCROACH ON CROSSWALK AREAS.
3. CONCRETE TO BE MIX NO.6 (4500 PSI) FOR PRECAST UNITS AND CONCRETE MIX NO.3 (3500 PSI) FOR STRUCTURES CAST IN PLACE.
4. INLET MAY BE PRECAST OR CAST IN PLACE. REINFORCEMENT SHALL BE EITHER WELDED WIRE FABRIC OR REINFORCING BARS AND SHALL CONFORM TO THE AREAS GIVEN UNDER B IN THE CHART ON THIS SHEET.
5. ANGLE IRON AND SHEAR STUD CONNECTORS SHALL BE GALVANIZED AFTER WELDING IN ACCORDANCE WITH ASTM A 123. SEE STDS. NO 374.55 & 374.64.
6. GRADE AND SLOPE ADJUSTMENTS SHALL BE COMPLETED IN THE FIELD USING PRECAST ADJUSTMENT COLLAR AND MORTAR.
7. A CONCRETE OR BRICK CHANNEL WHICH SLOPES AT LEAST 2 IN./FT. TOWARD OUTLET SHALL BE PROVIDED IN THE FIELD.
8. PRECAST INLET JOINTS- THE MANUFACTURER SHALL FORM MALE AND FEMALE ENDS OF JOINTS USING THEIR OWN DESIGN. THE JOINTS SHALL BE SEALED BY THE CONTRACTOR AND MADE WATERTIGHT USING THE MANUFACTURERS RECOMMENDED ASTM OR AASHTO APPROVED SEALANT.
9. LADDER RUNGS SHALL BE PLACED IN VERTICAL ALIGNMENT AT 1'-3" C/C RUNG TYPE SHALL BE IN ACCORDANCE WITH STDS. NO 383.91 OR NO 383.92. RUNGS ARE INCIDENTAL TO THE COST OF THE INLET.
10. SLOPED TROUGH FLOOR TO BE CONSTRUCTED IN THE FIELD USING BRICK OR CONCRETE AND USED ONLY WHEN ROAD GRADE IS 1.5% OR LESS. WHEN SLOPED TROUGH FLOOR IS USED. ROUGHEN PRECAST TROUGH FLOOR.
11. MINIMUM DEPTH PAYMENT PER EACH SHALL BE 6'-2" MEASURED FROM THE PIPE INVERT TO THE TOP OF THE TROUGH SLAB. VERTICAL DEPTH PAYMENT PER LINEAR FOOT SHALL INCLUDE ALL DEPTHS IN EXCESS OF 6'-2" INCLUDING ALL APPURTENANCES.
12. INLET SLAB NOT REQUIRED FOR 36" DIAMETER INLET. TROUGH SITS DIRECTLY ON THE TOP OF THE CIRCULAR UNIT. MORTAR AREA BETWEEN THE OUTSIDE WALLS OF THE TROUGH AND THE UNIT WALL.
13. SEE STD. NO 374.64 FOR ALTERNATE PRECAST COS TROUGHS AND STD. NO 374.65 FOR DEPRESSED GUTTER PAN DETAILS.
14. BASE UNIT WALLS TAPER PER MANUFACTURER'S DESIGN.

PIPE SIZE MIN. TO MAX.	CIRCULAR BASE AND RISER UNIT DIMENSIONS H1 BASE	H2 RISER MIN.	W	D	O	G	R-AREA IN SQ. IN. PER FOOT	Min. Distance, R Top of Curb - Pipe Invert
12"	2' 10 4"	1' 10 4"	4"	6"	36"	8"	.09	3.84
15" TO 24"	3' 10 5"	1' 10 5"	5"	6"	48"	8"	.12	4.11-4.92
27" TO 33"	5' 10 6"	1' 10 6"	6"	6"	60"	8"	.15	5.19-5.73
36"	5' 10 6"	1' 10 6"	6"	6"	60"	8"	.15	6.00
42"	5' 10 7"	1' 10 7"	7"	6"	72"	8"	.18	6.55
48"	6' 10 7"	1' 10 7"	7"	6"	72"	8"	.18	7.09
54"	6' 10 8"	1' 10 8"	8"	8"	84"	8"	.21	7.63
60"	7' 10 8"	1' 10 8"	8"	8"	84"	8"	.21	8.17
66" TO 72"	8' 10 9"	1' 10 8"	9"	8"	96"	8"	.24	8.71-9.25
78" TO 84"	9' 10 10"	1' 10 8"	10"	8"	120"	8"	.27	9.80-10.34

INLET TYPE	T	L
COD-5	5'-0"	6'-0"
COD-10	10'-0"	11'-0"
COD-15	15'-0"	16'-0"
COD-20	20'-0"	21'-0"

FOR SECTION C-C AND D-D SEE STD NO 374.55

SPECIFICATION	CATEGORY CODE ITEMS
305	

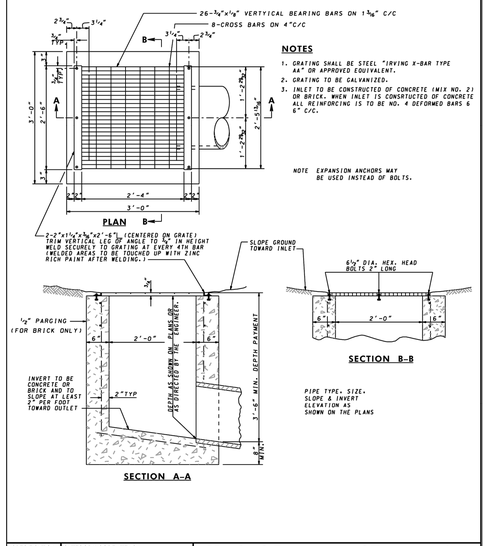
APPROVED Kirk G. McCall
DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT

SHA State Highway Administration	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
	APPROVAL 3-23-91	APPROVAL 1-3-91
	REVISED 08-03-10	REVISED 07-26-10
	REVISED	REVISED
	REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

PRECAST OR CAST IN PLACE
CIRCULAR COS INLETS
5', 10', 15, & 20'

STANDARD NO. MD 374.63



NOTES

1. GRATING SHALL BE STEEL "IRVING X-BAR TYPE AA" OR APPROVED EQUIVALENT.
2. GRATING TO BE GALVANIZED.
3. INLET TO BE CONSTRUCTED OF CONCRETE (MIX NO. 2) OR BRICK. WHEN INLET IS CONSTRUCTED OF CONCRETE ALL REINFORCING IS TO BE NO. 4 DEFORMED BARS 6" C/C.

SPECIFICATION	CATEGORY CODE ITEMS
305	

APPROVED Kirk G. McCall
DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT

SHA State Highway Administration	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
	APPROVAL 8-7-73	APPROVAL 8-4-73
	REVISED 10-1-01	REVISED 6-23-87
	REVISED	REVISED
	REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

STANDARD YARD INLET

STANDARD NO. MD 381.01

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NOTE:
This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.

STATE OF MARYLAND — STANDARD PROFESSIONAL ENGINEER SEAL — LICENSE #36310
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Ph. 410-352-3874 • Fax 410-352-3875 • www.vistadesigninc.com

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STORM DRAIN DETAILS

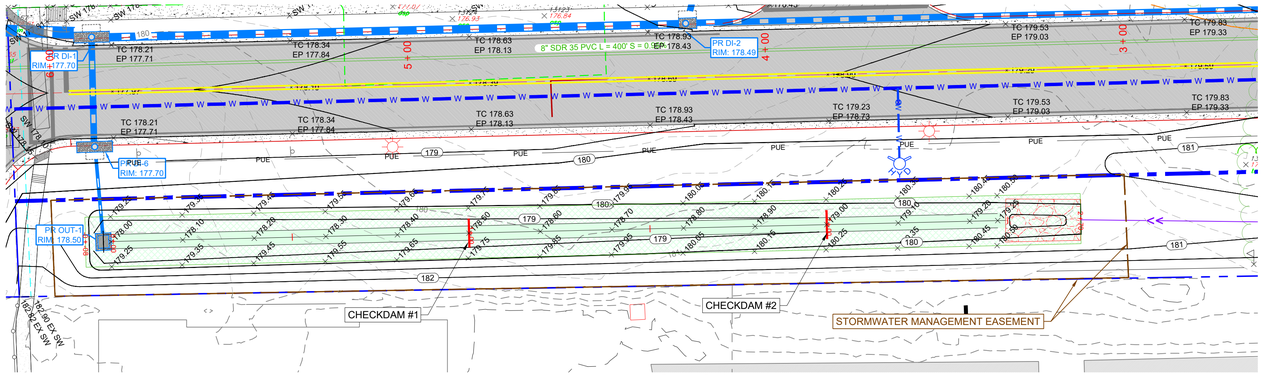
PROJECT DATA

Tax Map:	0113	Parcel:	SEVERAL
LA PLATA, MD			
Drawn By:	WCS	Checked By:	WCS
Date:	2/12/25		
Scale:	N/A		

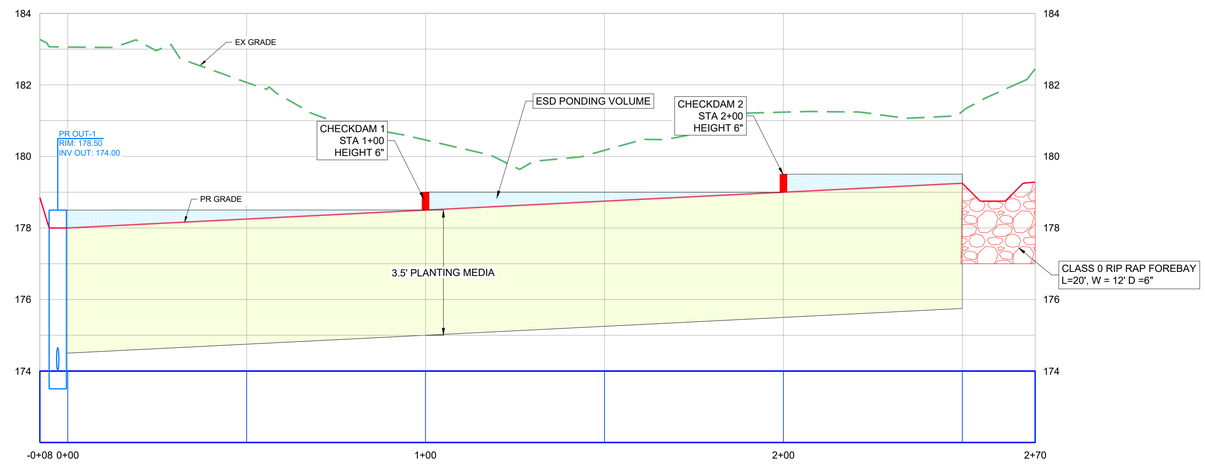
REVISIONS

1. 5/19/23 PER LA PLATA COMMENTS
2. 1/16/25 PER LA PLATA COMMENTS
3. 1/16/25 PER CHARLES COUNTY SCD COMMENTS
4. 2/10/25 PER CHARLES COUNTY SCD COMMENTS
5. 7/22/25 PER TOWN COMMENTS

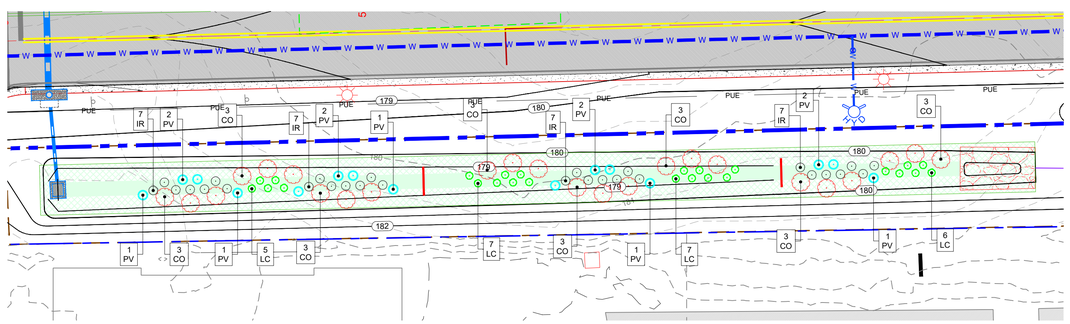
Project No.: 21-093
File Name: jan2026CE011525.dwg
Sheet No.: C-256



BIOSWALE GEOMETRIC LAYOUT
SCALE: 1" = 20'



BIOSWALE PROFILE
HORIZONTAL: 1" = 20'
VERTICAL: 1" = 2'



BIOSWALE LANDSCAPING
SCALE: 1" = 20'

SITE DATA TABLE

SITE AREA	6.14 AC
EX IMPERVIOUS	0.36 AC
PR IMPERVIOUS	2.59 AC
PR IMPERVIOUS %	42.2%
TARGET PE	1.80 IN
ESDv REQUIRED	17,236 CF

TREATMENT CREDITS TABLE

BIOSWALE 1	1,771 CF
EX TALBOT POND	15,497 CF
TOTAL PROVIDED	17,268 CF
TOTAL REQUIRED	16,236 CF

BIOSWALE #1 DATA TABLE

DRAINAGE AREA	42,486 SF
IMPERVIOUS AREA	7,554 SF*
IMPERVIOUS %	18%
ESDv RECEIVED	2,008 CF
ESDv TREATED	1,771 CF

* IMPERVIOUS SURFACES FROM MAREDITH BLDG ARE TREATED WITH EX. BMP AND THEREFORE NOT CONSIDERED IMPERVOIUS FOR PURPOSES OF ESDv LOADING

BIOSWALE CONSTRUCTION INSPECTION CRITERIA:

REGULAR INSPECTIONS SHALL BE MADE BY THE TOWN OF LA PLATA DURING THE FOLLOWING STAGES OF CONSTRUCTION:

1. DURING EXCAVATION TO SUBGRADE:
2. DURING PLACEMENT OF FILTER MEDIA:
3. DURING CONSTRUCTION OF APPURTENANT CONVEYANCE SYSTEMS.
4. DURING INSTALLATION OF DIAPHRAGMS, CHECK DAMS, OR WEIRS; AND
5. UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION.

PLANT LIST
BIOSWALE BMP

SYMBOL	ABBREV.	QUANTITY	BOTANICAL NAME	COMMON NAME	MINIMUM SIZE REQUIRED	MATURE SIZE
	CO	24	CEPHALANTHUS OCCIDENTALIS	BUTTONBUSH	18" MIN	H: 5'-8' S: 4'-8'
	IR	28	IRIS VERSICOLOR	BLUE FLAG IRIS	1 QUART CONT.	H: 2'-2.5' S: 2'-3'
	LC	25	LOBELIA CARDINALIS	CARDINAL FLOWER	1 QUART CONT.	H: 2'-4' S: 1'-2'
	PV	15	PANICUM VIRGATUM	SWITCHGRASS	18" MIN	H: 3'-6' S: 2'-3'

BIOSWALE SPECIFICATIONS

NAME	LENGTH	SLOPE	BOTTOM WIDTH(BW)	SIDE SLOPE (Z)	SWALE HEIGHT (H)	MEDIA DEPTH (D)	ESDv
BIOSWALE 1	250 Ft	0.50%	4 Ft	4:1	1.25 Ft	3.50 Ft	1,771 CF

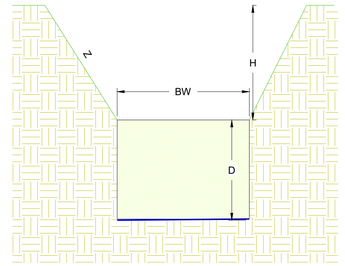
SEQUENCE OF CONSTRUCTION

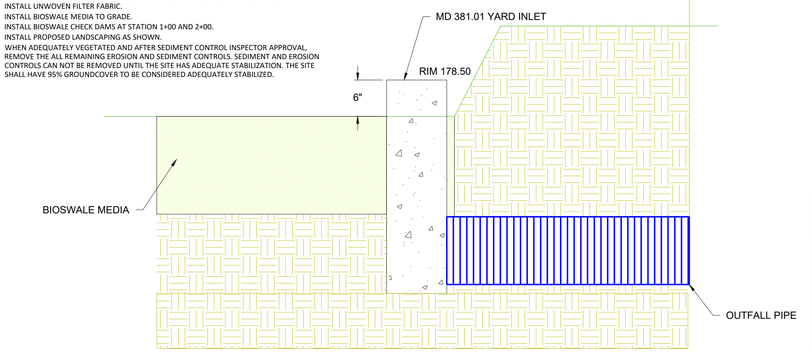
GENERAL - INITIAL

1. CONTRACTOR MUST NOTIFY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT, 410-537-3000, 5 DAYS PRIOR TO CONSTRUCTION TO SCHEDULE A PRE-CONSTRUCTION MEETING AND INSPECTION OF EROSION AND SEDIMENT CONTROL IMPLEMENTATION PLAN.
2. UPON SEDIMENT CONTROL INSPECTOR APPROVAL, AND WITH 95% OF THE UPSTREAM AREA STABILIZED, CLEAR AND GRUB FOR THE INSTALLATION OF PERIMETER SEDIMENT CONTROL DEVICES PRIOR TO ANY EARTH DISTURBING ACTIVITY. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED SAME DAY. ONCE VEGETATION IS ESTABLISHED, THE SITE SHALL HAVE 95% VEGETATIVE GROUND COVER TO BE CONSIDERED ADEQUATELY STABILIZED.
3. THE CONTRACTOR MUST CONTACT MISS UTILITY AT LEAST 3 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES. CONSTRUCTION MAY NOT BEGIN PRIOR TO MARKING EXISTING UTILITIES.
4. CONTRACTOR TO REFER TO THE LATEST EDITION OF THE CHARLES COUNTY GOVERNMENT STORM DRAINAGE AND STORMWATER MANAGEMENT ORDINANCES FOR CONSTRUCTION SPECIFICATIONS AND TOWN CODE CHAPTER 167 (STORMWATER MANAGEMENT) THROUGHOUT CONSTRUCTION OF THE PROJECT.
5. ALL EXCESS MATERIAL MUST BE DISPOSED OF AT AN APPROVED OFF-SITE LOCATION WITH AN ACTIVE AND APPROVED PLAN. THE OFFSITE LOCATION SITE & SEDIMENT #'S ARE TO BE PROVIDED TO THE EROSION CONTROL INSPECTOR AT THE PRE-CONSTRUCTION MEETING.

BIOSWALES SEQUENCE OF CONSTRUCTION

1. CONTRACTOR TO ONLY BEGIN WORK THAT CAN BE COMPLETED AND STABILIZED WITH EROSION CONTROL MATTING AND SEED OR SOD PRIOR TO THE END OF THE WORK DAY.
2. EXCAVATE TO SWALE BOTTOM. CONTRACTOR TO ENSURE BOTTOM OF SWALE IS NOT SUBJECT TO EXCESSIVE COMPACTION.
3. INSTALL OUTFALL STRUCTURE. CONNECT OUTFALL PIPE TO STORMWATER SYSTEM
4. INSTALL UNWOVEN FILTER FABRIC.
5. INSTALL BIOSWALE MEDIA TO GRADE.
6. INSTALL BIOSWALE CHECK DAMS AT STATION 1+00 AND 2+00.
7. INSTALL PROPOSED LANDSCAPING AS SHOWN.
8. WHEN ADEQUATELY VEGETATED AND AFTER SEDIMENT CONTROL INSPECTOR APPROVAL, REMOVE THE ALL REMAINING EROSION AND SEDIMENT CONTROLS. SEDIMENT AND EROSION CONTROLS CAN NOT BE REMOVED UNTIL THE SITE HAS ADEQUATE STABILIZATION. THE SITE SHALL HAVE 95% GROUNDCOVER TO BE CONSIDERED ADEQUATELY STABILIZED.

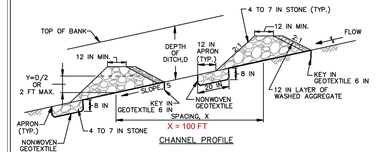


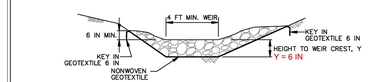


BIOSWALE DETAILS

DETAIL D-2 STONE CHECK DAM

STANDARD SYMBOL: CD





CONSTRUCTION SPECIFICATIONS

1. PREPARE SWALES IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS DESCRIBED IN SECTION C-2, STANDARDS AND SPECIFICATIONS FOR TEMPORARY SWALE, OR AS SPECIFIED ON PLAN.
2. PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND SIDES OF THE DAM PRIOR TO PLACEMENT OF STONE. CONSTRUCT THE CHECK DAM WITH WASHED 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) WITH SIDE SLOPES OF 2:1 OR FLATTER AND A MINIMUM TOP WIDTH OF 12 INCHES. PLACE THE STONE SO THAT IT COMPLETELY COVERS THE WIDTH OF THE CHANNEL AND CHANNEL BANKS. FORM THE WEIR SO THAT TOP OF THE OUTLET CREST IS APPROXIMATELY 6 INCHES LOWER THAN THE OUTER EDGES. LINE THE UPSTREAM FACE OF THE DAM WITH A 1 FOOT THICK LAYER OF WASHED AGGREGATE (¾ TO 1½ INCH).
3. SET THE HEIGHT FOR THE WEIR CREST EQUAL TO ONE-HALF THE DEPTH OF THE CHANNEL OR DITCH. TO AVOID SCOUR THE MAXIMUM HEIGHT OF THE WEIR CREST MUST NOT EXCEED 2.0 FEET.
4. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES ONE-HALF OF THE HEIGHT OF THE WEIR CREST. MAINTAIN LINE, GRADE, AND CROSS SECTION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

D.8

BIOSWALE MAINTENANCE SCHEDULE

STORMWATER MAINTENANCE SCHEDULE
BIO-SWALE

MONTHLY INSPECTION

Inspection Item	Inspection Requirements	Remedial Action
Debris and Trash	Check for trash and debris in facility including inlets, outlets, conveyance systems, and area around facility.	Remove all trash and debris and dispose in an acceptable manner. Unclog all openings.
Plant Composition and Health	Compare plant composition with approved plans. Check for invasive species or weeds. Check for dead or dying vegetation.	Remove invasive species and weeds. Replace dead plants in accordance with approved landscaping plan.
Vegetative Cover	Check for channelizing, erosion, and bare spots. Check for vegetation blocking inlets, weirs, and outlet.	Remove or cut back vegetation around inlet, weirs, and outlet structures. Mow side slopes when grass exceeds 12 inches in height, but do not mow filter bed. Remove grass clippings. Re-seed or re-plant in accordance with approved landscaping plans.

SEASONAL INSPECTION AND AFTER A MAJOR STORM

Inspection Item	Inspection Requirements	Remedial Action
Dewatering	Check ponding levels. Surface storage must dewater within 48 hours of rainfall. Noticeable odors, stained water on the filter surface or at the outlet, or the presence of algae or aquatic vegetation are indicators of anaerobic conditions and inadequate dewatering of the facility.	Remove and replace top few inches of media. Follow up inspections must confirm adequate dewatering. If the facility does not function as intended after the above action, the entire system including the underdrain may need refurbishing.
Erosion	Check inlets, filter bed, outlets, and side slopes for erosion, rills, gullies, and runoff channelization.	Re-grading may be required when concentrated flow causes rills or gullying through the facility. Grade, vegetate, and/or armor to provide stable conveyance in accordance with approved plans.
Check Dams	Check for evidence of flow cutting around edges of structure and evidence of erosion at the downstream toe.	Re-grade and repair with topsoil, seed and matting. Provide stone at downstream toe.
Sediment Accumulation	Check for accumulated sediment in conveyance systems and on filter bed. Check for clogged openings.	When sediment accumulates to 1 inch depth, remove sediment. Remove sediment from clogged openings. Dispose of all sediment in an acceptable location.
Blockages	Check overflow inlet (riser), piping, and underdrain for blockages. Check observation wells for water level.	Clear out any blockages.

ANNUAL INSPECTION

Inspection Item	Inspection Requirements	Remedial Action
Maintenance Access	Check for accessibility to facility.	Prevent excessive vegetative growth, erosion, and obstructions on access way.
Flow Conveyance System	Check overflow inlet, piping, and bypass for misalignments, breakage, and blockage.	Repair any broken or faulty piping. Clear out any blockages.
Structural Components	Check for evidence of structural deterioration, spalling, or cracking. Inlet and outlet structures as well as riprap outfalls must be in good condition.	Repair to good condition according to specifications on the approved plans.
Overall Function of Facility	Check that practice is functioning as designed.	Repair to good condition according to specifications on the approved plans.

NOTE:
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NOTE:
This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.

STATE OF MARYLAND — RICHARD F. CONTE — PROFESSIONAL ENGINEER
LIC 36310 EXP 11/17/26

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BIOSWALE
DETAIL SHEET

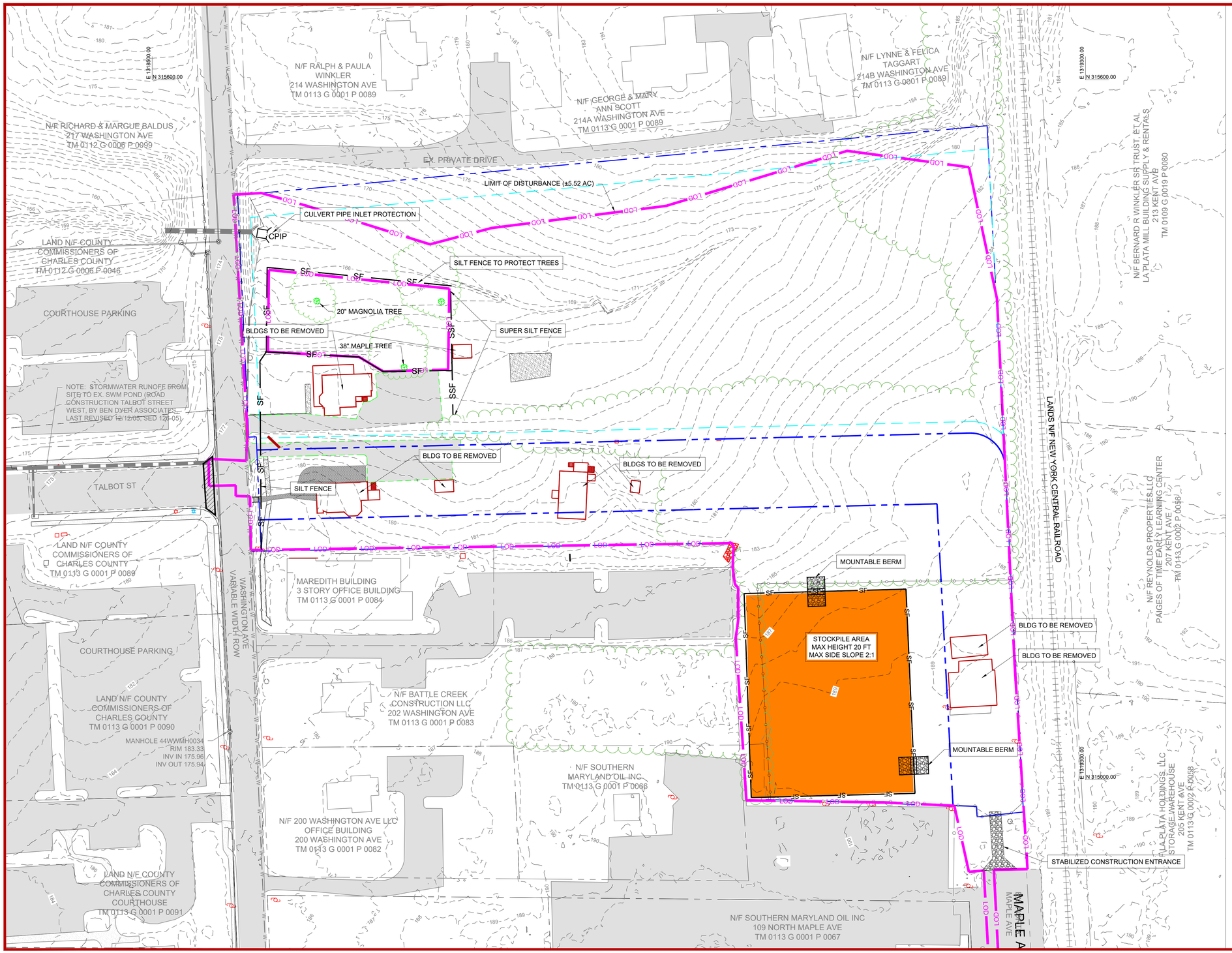
PROJECT DATA

Tax Map:	0113	Parcel:	SEVERAL
LA PLATA, MD			
Drawn By:	WCS	Checked By:	WCS
Date:	2/12/25		
Scale:	1" = 20'		

REVISIONS

1. 5/19/23 PER LA PLATA COMMENTS
2. 1/16/25 PER LA PLATA COMMENTS
3. 1/16/25 PER CHARLES COUNTY SCD COMMENTS
4. 2/12/25 ISSUED FOR TEAM REVIEW
5. 7/22/25 PER TOWN COMMENTS

Project No.: 21-093
File Name: 071425BF.dwg
Sheet No.: C-260



STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, SEEDING FOR PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECTS SITE NOT UNDER ACTIVE GRADING. ONCE VEGETATION IS ESTABLISHED, THE SITE SHALL HAVE 95% GROUNDCOVER TO BE CONSIDERED ADEQUATELY STABILIZED.

SEQUENCE OF CONSTRUCTION

GENERAL - INITIAL

1. CONTRACTOR/DEVELOPER MUST NOTIFY THE COMPLIANCE PROGRAM, WATER MANAGEMENT ADMINISTRATION, MARYLAND DEPARTMENT OF THE ENVIRONMENT, (410) 537-3510, 5 DAYS PRIOR TO COMMENCING WORK.
2. THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR IS REQUIRED UPON INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
3. UPON SEDIMENT CONTROL INSPECTOR APPROVAL, CLEAR AND GRUB FOR THE INSTALLATION OF PERIMETER SEDIMENT CONTROL DEVICES PRIOR TO ANY EARTH DISTURBING ACTIVITY. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN: THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING. ONCE VEGETATION IS ESTABLISHED, THE SITE SHALL HAVE 95% VEGETATIVE GROUND COVER TO BE CONSIDERED ADEQUATELY STABILIZED.
4. THE CONTRACTOR MUST CONTACT MISS UTILITY AT LEAST THREE DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES. CONSTRUCTION MAY NOT BEGIN PRIOR TO THE MARKING OF EXISTING UTILITIES.
5. ALL PROPOSED STRUCTURES, LOCATIONS AND ELEVATIONS, MUST BE STAKED OUT FOR PROPER INSTALLATION.
6. ALL EXCESS MATERIAL MUST BE DISPOSED OF AT AN APPROVED OFF-SITE LOCATION WITH AN ACTIVE AND APPROVED SEDIMENT CONTROL PLAN. THE OFFSITE LOCATION SITE & SEDIMENT CONTROL PERMIT NUMBERS ARE TO BE PROVIDED TO THE EROSION CONTROL INSPECTOR AT THE PRE-CONSTRUCTION MEETING.
7. EROSION AND SEDIMENT CONTROL PRACTICES, AND SITE IN GENERAL, MUST BE INSPECTED WEEKLY AND AFTER EACH RAIN FALL EVENT, BY THE CONTRACTOR OR OTHER RESPONSIBLE PERSON, AND ANY NEEDED MAINTENANCE PERFORMED IMMEDIATELY.
8. EROSION AND SEDIMENT PRACTICES, AND SITE IN GENERAL, MUST BE INSPECTED WEEKLY AND AFTER EACH RAIN FALL EVENT, BY THE CONTACTOR OR OTHER RESPONSIBLE PERSON, AND ANY NEEDED MAINTENANCE PERFOMED IMMEDIATELY.
9. SEDIMENT AND EROSION CONTROLS CANNOT BE REMOVED UNTIL THE SITE HAS ADEQUATE STABILIZATION. ONCE VEGATATION IS ESTABLISHED, THE SITE SHALL HAVE 95% GROUNDCOVER TO BE CONSIDERED ADEQUATELY STABILIZED AND THE SEDIMENT CONTROL INSPECTOR HAS APPROVED SUCH REMOVAL.
10. SITE MUST BE GRADED IN SUCH A MANNER THAT THE APPROVED DRAINAGE DIVIDES ARE MAINTAINED THROUGHOUT SITE CONSTRUCTION.
11. ADDITIONAL INLET PROTECTION MAY BE PERMITTED BY THE SEDIMENT AND EROSION CONTROL INSPECTOR IF THE DRAINAGE AREA TO SAID INLET DRAINS TO AN APPROVED SEDIMENT AND EROSION CONTROL PRACTICE.
12. CONTRACTOR IS ADVISED THAT THE STRUCTURES TO BE REMOVED HAVE NOT BEEN INVESTIGATED BY CHARLES COUNTY, THE TOWN OF LA PLATA, OR VISTA DESIGN AND MAY CONTAIN HAZARDOUS MATERIALS THAT REQUIRE SPECIAL METHODS OR PRACTICES TO SAFELY REMOVE. CONTACTOR TO SAFELY AND PROPERLY DISPOSE OF ALL MATERIALS FOUND AT NO ADDITIONAL COST.

SEQUENCE OF CONSTRUCTION

PHASE 1- DEMOLITION

1 DAY 1. INSTALL PERIMETER CONTROLS INCLUDING STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, SUPER SILT FENCE AND CULVERT INLET PROTECTION.
1 DAY 2. INSTALL 3 CONSTRUCTION WARNING SIGNS ALONG THE FENCELINE. INSTALL 2 ADDITIONAL CONSTRUCTION WARNING SIGNS AT THE MAPLE AVE ENTRANCE.
20 DAYS 3. COORDINATE UTILITY (ELECTRIC, SEWER, WATER, TELECOMM) DISCONNECTION. PROCEED ONLY AFTER ALL ARE ABANDONED.
30 DAYS 4. REMOVE EXISTING BUILDINGS MARKED FOR REMOVAL AND ASSOCIATED APPURTENANCES. ENSURE ALL COMPONENTS OF THE STRUCTURES ARE REMOVED AND DISPOSED OF AT AN APPROVED SITE.
5 DAYS 5. INSTALL STOCKPILE AREA AS SHOWN. REMOVE EX FENCING AROUND TO THE WEST, NORTH, AND EAST OF INDIAN HEAD IRON WORKS WHILE MAINTAINING FENCE ADJACENT TO OIL COMPANY.
30 DAYS 6. BEGINNING AT THE FOREST NEAR THE INDIAN HEAD IRON WORKS SITE, CLEAR AND GRUB REMAINDER OF SITE, INCLUDING THE ART SCHOOL (206 WASHINGTON) AND ONE STORY RESIDENTIAL HOUSE (206A WASHINGTON). CONTRACTOR TO ENSURE MATERIALS FROM STRUCTURES ARE DISPOSED OF PROPERLY, AT AN APPROVED SITE. TREES REQUIRED TO BE REMOVED FROM SITE MAY BE CHIPPED AND REMOVED, IF CONTRACTOR DESIRES. TOPSOIL MAY BE STOCKPILED ONSITE FOR LATER RE-USE.
30 DAYS 7. ROUGH GRADE THE FORMER IRON WORKS, WINKLER HOUSE, ART SCHOOL, ONE FLOOR RESIDENTIAL PROPERTY AND FORMERLY WOODED LOT. IF MATERIAL IS APPROVED BY GEO-TECHNICAL ENGINEER, STORE EXCESS WITHIN STOCKPILE FOR LATER USE. ANY UNSUITABLE MATERIAL IS TO BE HAULED OFFSITE TO AN APPROVED LOCATION WITH ACTIVE E&S PLAN.

PHASE 2 - RELOCATE INTERMITTENT STREAM

1. INSTALL CULVERT INLET PROTECTION IN FRONT OF EX. 48" HDPE CULVERT THAT GOES UNDER WASHINGTON AVE.
2. CLEAR AND GRUB ONLY THE AREA NEEDED TO INSTALL BYPASS PIPE.
3. WHEN NO RAINFALL IS FORECAST FOR THE DURATION OF THE PHASE, EXCAVATE THE NEW CHANNEL. INSTALL BYPASS PIPE AND END WALLS.
4. BACKFILL OVER PIPE AND ABANDONED PORTIONS OF THE EPHEMERAL CHANNEL.
5. SOD AREAS WITHIN CHANNEL TO ENSURE SAME DAY STABILIZATION. TOPSOIL, SEED, AND STRAW MULCH REMAINING AREAS DISTURBED BY THE RELOCATION.
6. ONCE STABILIZED, REMOVE REINFORCED SUPER SILT FENCE AND PROCEED TO THE NEXT PHASE.

PHASE 3 - BUILD LIBRARY

1. INSTALL SILT FENCE BETWEEN LIBRARY SITE AND STABILIZED RELOCATED CHANNEL. AFTER SILT FENCE IN INSTALLED, THE DOWNSTREAM CULVERT PIPE INLET PROTECTION MAY BE REMOVED IF AREAS NORTH OF SILT FENCE ARE AT LEAST 95% STABILIZED AND THE REMOVAL IS APPROVED BY THE EROSION AND SEDIMENT CONTROL INSPECTOR.
2. CLEAR AND GRUB ANY REMAINING AREAS WITHIN LOD, IF NECESSARY.
3. STRIP ALL TOPSOIL, AND ORGANIC MATTER, AND STOCKPILE ONSITE FOR REUSE.
4. INSTALL STRUCTURAL FILL FOR LIBRARY AND PARKING LOT IN 8 INCH LIFTS, ENSURING A MINIMUM OF 95% MAXIMUM COMPACTION FOR EACH LIFT OR AS OTHERWISE DETERMINED APPROPRIATE BY INSPECTING GEOTECHNICAL ENGINEER.
5. INSTALL RETAINING WALL.
6. ROUGH GRADE THE TALBOT STREET AND MAPLE AVE EXTENSIONS. INSTALL ANY FILL IN 8 INCH LIFTS AND ENSURE A MINIMUM OF 95% MAXIMUM COMPACTION UNDER GUIDANCE OF GEOTECHNICAL ENGINEER.
7. BUILD LIBRARY. OTHER PHASES MAY RUN SIMULTANEOUSLY WITH INTERNAL CONSTRUCTION OF LIBRARY.

PHASE 4 - UTILITY INSTALLATION

1. CONTACT MISS UTILITY TO MARK ALL EXISTING UTILITIES WITHIN WASHINGTON AVE/TALBOT STREET INTERSECTION AND PORTION OF MAPLE AVE BETWEEN IRON WORKS BALTIMORE ST AT LEAST 3 WORK DAYS PRIOR TO COMMENCING PHASE. CONSTRUCTION MAY NOT PROCEED UNTIL ALL UTILITIES ARE MARKED.
2. CONTRACTOR TO CONTACT BOB STAHL, TOWN OF LA PLATA DIRECTOR OF OPERATIONS, 1 WEEK PRIOR TO PHASE BEGINNING TO COORDINATE TOWN SUPERVISION OF CONSTRUCTION.
3. CONTRACTOR TO ARRANGE WITH TOWN TO IMPLEMENT TRAFFIC CONTROL WHEN WASHINGTON AVENUE AND NORTH MAPLE AVENUE WILL BE CUT FOR UTILITY CONNECTIONS.
4. SAW CUT ROADWAYS AS SHOWN.
5. EXCAVATE INTERSECTION TO ACCESS SEWER MAIN, WATER MAIN, AND EX. STORMWATER MANHOLE.
6. INSTALL DOGHOUSE SEWER MANHOLE AND INSTALL SEWER EXTENSION.
7. TAP INTO EXISTING WATER MAIN VIA WET TAP AND INSTALL NEW WATER MAIN. CONNECT TO EX. WATER MAIN AT INTERSECTION OF MAPLE AVE AND BALTIMORE ST.
8. CONNECT INTO EX. STORMWATER MANHOLE AND EXTEND STUB PIPE BEYOND RIGHT OF WAY.
9. BACKFILL ALL PIPES AND INSTALL HOT MIX PATCH PER TOWN STANDARDS.

PHASE 5 - FINISH SITE

1. INSTALL CURBING, SIDEWALKS, LIGHTS, ETC FOR ROAD EXTENSIONS AND PARKING LOT.
2. INSTALL BIOSWALE. REFER TO SEQUENCE OF CONSTRUCTION ON SWM PLANS.
3. PAVE PARKING LOTS AND ROAD EXTENSIONS.
4. INSTALL LANDSCAPING.
5. TOPSOIL, SEED, AND MULCH ANY REMAINING DISTURBED AREAS.
6. ONCE STABILIZED, AND WITH APPROVAL OF E&S INSPECTOR, REMOVE ANY REMAINING E&S FIXTURES.

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STATE OF MARYLAND · STEPHEN R. POWELL · LICENSE #32499 · PROFESSIONAL ENGINEER
LIC 36310 EXP 11/17/26

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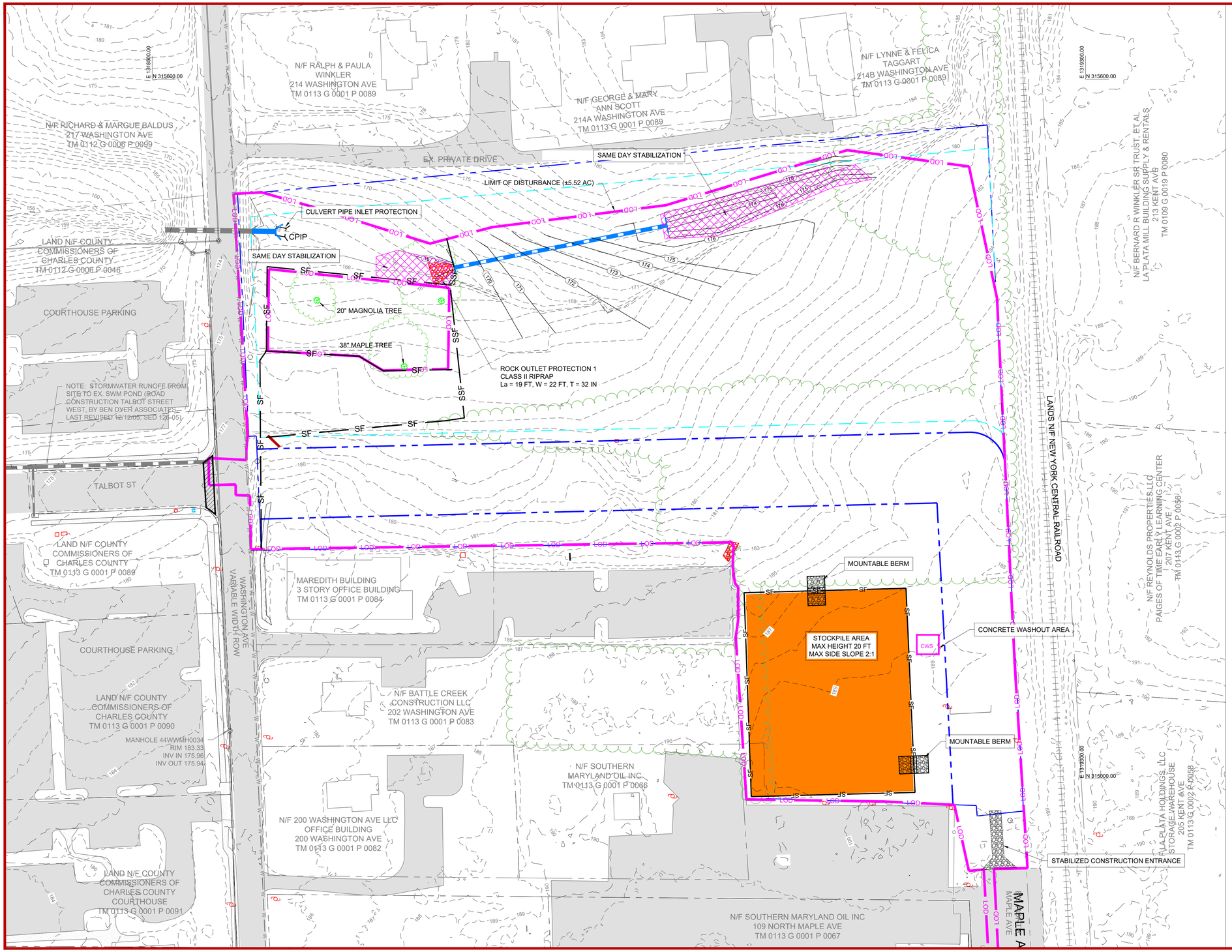
ToLP PERMIT #00562-2021
LA PLATA LIBRARY

EROSION AND SEDIMENT CONTROL PLAN
PHASE I

PROJECT DATA			
Tax Map:	0113	Parcel:	SEVERAL
LA PLATA, MD			
Drawn By:	WCS	Checked By:	WCS
Date:	2/12/25		
Scale:	1" = 40'		

REVISIONS
1. 5/19/23 PER LA PLATA COMMENTS
2. 1/16/25 PER LA PLATA COMMENTS
3. 1/16/25 PER CHARLES COUNTY SCD COMMENTS
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Project No.: 21-093
File Name: jan2026CE011525.dwg
Sheet No.: C-400



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1. CONTRACTOR/DEVELOPER MUST NOTIFY THE COMPLIANCE PROGRAM, WATER MANAGEMENT ADMINISTRATION, MARYLAND DEPARTMENT OF THE ENVIRONMENT, (410) 537-3510, 5 DAYS PRIOR TO COMMENCING WORK.
2. THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR IS REQUIRED UPON INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
3. UPON SEDIMENT CONTROL INSPECTOR APPROVAL, CLEAR AND GRUB FOR THE INSTALLATION OF PERIMETER SEDIMENT CONTROL DEVICES PRIOR TO ANY EARTH DISTURBING ACTIVITY. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN: THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING. ONCE VEGETATION IS ESTABLISHED, THE SITE SHALL HAVE 95% VEGETATIVE GROUND COVER TO BE CONSIDERED ADEQUATELY STABILIZED.
4. THE CONTRACTOR MUST CONTACT MISS UTILITY AT LEAST THREE DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES. CONSTRUCTION MAY NOT BEGIN PRIOR TO THE MARKING OF EXISTING UTILITIES.
5. ALL PROPOSED STRUCTURES, LOCATIONS AND ELEVATIONS, MUST BE STAKED OUT FOR PROPER INSTALLATION.
6. ALL EXCESS MATERIAL MUST BE DISPOSED OF AT AN APPROVED OFF-SITE LOCATION WITH AN ACTIVE AND APPROVED SEDIMENT CONTROL PLAN. THE OFFSITE LOCATION SITE & SEDIMENT CONTROL PERMIT NUMBERS ARE TO BE PROVIDED TO THE EROSION CONTROL INSPECTOR AT THE PRE-CONSTRUCTION MEETING.
7. EROSION AND SEDIMENT CONTROL PRACTICES, AND SITE IN GENERAL, MUST BE INSPECTED WEEKLY AND AFTER EACH RAIN FALL EVENT, BY THE CONTRACTOR OR OTHER RESPONSIBLE PERSON, AND ANY NEEDED MAINTENANCE PERFORMED IMMEDIATELY.
8. EROSION AND SEDIMENT PRACTICES, AND SITE IN GENERAL, MUST BE INSPECTED WEEKLY AND AFTER EACH RAIN FALL EVENT, BY THE CONTACTOR OR OTHER RESPONSIBLE PERSON, AND ANY NEEDED MAINTENANCE PERFOMED IMMEDIATELY.
9. SEDIMENT AND EROSION CONTROLS CANNOT BE REMOVED UNTIL THE SITE HAS ADEQUATE STABILIZATION. ONCE VEGATATION IS ESTABLISHED, THE SITE SHALL HAVE 95% GROUNDCOVER TO BE CONSIDERED ADEQUATELY STABILIZED AND THE SEDIMENT CONTROL INSPECTOR HAS APPROVED SUCH REMOVAL.
10. SITE MUST BE GRADED IN SUCH A MANNER THAT THE APPROVED DRAINAGE DIVIDES ARE MAINTAINED THROUGHOUT SITE CONSTRUCTION.
11. ADDITIONAL INLET PROTECTION MAY BE PERMITTED BY THE SEDIMENT AND EROSION CONTROL INSPECTOR IF THE DRAINAGE AREA TO SAID INLET DRAINS TO AN APPROVED SEDIMENT AND EROSION CONTROL PRACTICE.
12. CONTRACTOR IS ADVISED THAT THE STRUCTURES TO BE REMOVED HAVE NOT BEEN INVESTIGATED BY CHARLES COUNTY, THE TOWN OF LA PLATA, OR VISTA DESIGN AND MAY CONTAIN HAZARDOUS MATERIALS THAT REQUIRE SPECIAL METHODS OR PRACTICES TO SAFELY REMOVE. CONTACTOR TO SAFELY AND PROPERLY DISPOSE OF ALL MATERIALS FOUND AT NO ADDITIONAL COST.

SEQUENCE OF CONSTRUCTION

PHASE 1- DEMOLITION

1. INSTALL PERIMETER CONTROLS INCLUDING STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, SUPER SILT FENCE AND CULVERT INLET PROTECTION.
2. INSTALL 3 CONSTRUCTION WARNING SIGNS ALONG THE FENCELINE. INSTALL 2 ADDITIONAL CONSTRUCTION WARNING SIGNS AT THE MAPLE AVE ENTRANCE.
3. COORDINATE UTILITY (ELECTRIC, SEWER, WATER, TELECOMM) DISCONNECTION. PROCEED ONLY AFTER ALL ARE ABANDONED.
4. REMOVE EXISTING BUILDINGS MARKED FOR REMOVAL AND ASSOCIATED APPURTENANCES. ENSURE ALL COMPONENTS OF THE STRUCTURES ARE REMOVED AND DISPOSED OF AT AN APPROVED SITE.
5. INSTALL STOCKPILE AREA AS SHOWN. REMOVE EX FENCING AROUND TO THE WEST, NORTH, AND EAST OF INDIAN HEAD IRON WORKS WHILE MAINTAINING FENCE ADJACENT TO OIL COMPANY.
6. BEGINNING AT THE FOREST NEAR THE INDIAN HEAD IRON WORKS SITE, CLEAR AND GRUB REMAINDER OF SITE, INCLUDING THE ART SCHOOL (206 WASHINGTON) AND ONE STORY RESIDENTIAL HOUSE (206A WASHINGTON). CONTRACTOR TO ENSURE MATERIALS FROM STRUCTURES ARE DISPOSED OF PROPERLY, AT AN APPROVED SITE. TREES REQUIRED TO BE REMOVED FROM SITE MAY BE CHIPPED AND REMOVED, IF CONTRACTOR DESIRES. TOPSOIL MAY BE STOCKPILED ONSITE FOR LATER RE-USE.
7. ROUGH GRADE THE FORMER IRON WORKS, WINKLER HOUSE, ART SCHOOL, ONE FLOOR RESIDENTIAL PROPERTY AND FORMERLY WOODED LOT. IF MATERIAL IS APPROVED BY GEO-TECHNICAL ENGINEER, STORE EXCESS WITHIN STOCKPILE FOR LATER USE. ANY UNSUITABLE MATERIAL IS TO BE HAULED OFFSITE TO AN APPROVED LOCATION WITH ACTIVE E&S PLAN.

PHASE 2 - RELOCATE INTERMITTENT STREAM

1 DAY 1. INSTALL CULVERT INLET PROTECTION IN FRONT OF EX. 48" HDPE CULVERT THAT GOES UNDER WASHINGTON AVE.
1 DAY 2. CLEAR AND GRUB ONLY THE AREA NEEDED TO INSTALL BYPASS PIPE.
20 DAYS 3. WHEN NO RAINFALL IS FORECAST FOR THE DURATION OF THE PHASE, EXCAVATE THE NEW CHANNEL. INSTALL BYPASS PIPE AND END WALLS.
5 DAYS 4. BACKFILL OVER PIPE AND ABANDONED PORTIONS OF THE EPHEMERAL CHANNEL.
2 DAYS 5. SOD AREAS WITHIN CHANNEL TO ENSURE SAME DAY STABILIZATION. TOPSOIL, SEED, AND STRAW MULCH REMAINING AREAS DISTURBED BY THE RELOCATION.
1 DAY 6. ONCE STABILIZED, REMOVE REINFORCED SUPER SILT FENCE AND PROCEED TO THE NEXT PHASE.

PHASE 3 - BUILD LIBRARY

1. INSTALL SILT FENCE BETWEEN LIBRARY SITE AND STABILIZED RELOCATED CHANNEL. AFTER SILT FENCE IN INSTALLED, THE DOWNSTREAM CULVERT PIPE INLET PROTECTION MAY BE REMOVED IF AREAS NORTH OF SILT FENCE ARE AT LEAST 95% STABILIZED AND THE REMOVAL IS APPROVED BY THE EROSION AND SEDIMENT CONTROL INSPECTOR.
2. CLEAR AND GRUB ANY REMAINING AREAS WITHIN LOD, IF NECESSARY.
3. STRIP ALL TOPSOIL, AND ORGANIC MATTER, AND STOCKPILE ONSITE FOR REUSE.
4. INSTALL STRUCTURAL FILL FOR LIBRARY AND PARKING LOT IN 8 INCH LIFTS, ENSURING A MINIMUM OF 95% MAXIMUM COMPACTION FOR EACH LIFT OR AS OTHERWISE DETERMINED APPROPRIATE BY INSPECTING GEOTECHNICAL ENGINEER.
5. INSTALL RETAINING WALL.
6. ROUGH GRADE THE TALBOT STREET AND MAPLE AVE EXTENSIONS. INSTALL ANY FILL IN 8 INCH LIFTS AND ENSURE A MINIMUM OF 95% MAXIMUM COMPACTION UNDER GUIDANCE OF GEOTECHNICAL ENGINEER.
7. BUILD LIBRARY. OTHER PHASES MAY RUN SIMULTANEOUSLY WITH INTERNAL CONSTRUCTION OF LIBRARY.

PHASE 4 - UTILITY INSTALLATION

1. CONTACT MISS UTILITY TO MARK ALL EXISTING UTILITIES WITHIN WASHINGTON AVE/TALBOT STREET INTERSECTION AND PORTION OF MAPLE AVE BETWEEN IRON WORKS BALTIMORE ST AT LEAST 3 WORK DAYS PRIOR TO COMMENCING PHASE. CONSTRUCTION MAY NOT PROCEED UNTIL ALL UTILITIES ARE MARKED.
2. CONTRACTOR TO CONTACT BOB STAHL, TOWN OF LA PLATA DIRECTOR OF OPERATIONS, 1 WEEK PRIOR TO PHASE BEGINNING TO COORDINATE TOWN SUPERVISION OF CONSTRUCTION.
3. CONTRACTOR TO ARRANGE WITH TOWN TO IMPLEMENT TRAFFIC CONTROL WHEN WASHINGTON AVENUE AND NORTH MAPLE AVENUE WILL BE CUT FOR UTILITY CONNECTIONS.
4. SAW CUT ROADWAYS AS SHOWN.
5. EXCAVATE INTERSECTION TO ACCESS SEWER MAIN, WATER MAIN, AND EX. STORMWATER MANHOLE.
6. INSTALL DOGHOUSE SEWER MANHOLE AND INSTALL SEWER EXTENSION.
7. TAP INTO EXISTING WATER MAIN VIA WET TAP AND INSTALL NEW WATER MAIN. CONNECT TO EX. WATER MAIN AT INTERSECTION OF MAPLE AVE AND BALTIMORE ST.
8. CONNECT INTO EX. STORMWATER MANHOLE AND EXTEND STUB PIPE BEYOND RIGHT OF WAY.
9. BACKFILL ALL PIPES AND INSTALL HOT MIX PATCH PER TOWN STANDARDS.

PHASE 5 - FINISH SITE

1. INSTALL CURBING, SIDEWALKS, LIGHTS, ETC FOR ROAD EXTENSIONS AND PARKING LOT.
2. INSTALL BIOSWALE. REFER TO SEQUENCE OF CONSTRUCTION ON SWM PLANS.
3. PAVE PARKING LOTS AND ROAD EXTENSIONS.
4. INSTALL LANDSCAPING.
5. TOPSOIL, SEED, AND MULCH ANY REMAINING DISTURBED AREAS.
6. ONCE STABILIZED, AND WITH APPROVAL OF E&S INSPECTOR, REMOVE ANY REMAINING E&S FIXTURES.

0 20 40 80 120
SCALE: 1" = 40'

NOTE:
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NOTE:
This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.

STATE OF MARYLAND · STANLEY C. KOLP · LICENSE #21401 · PROFESSIONAL ENGINEER
LIC 36310 EXP 11/17/26

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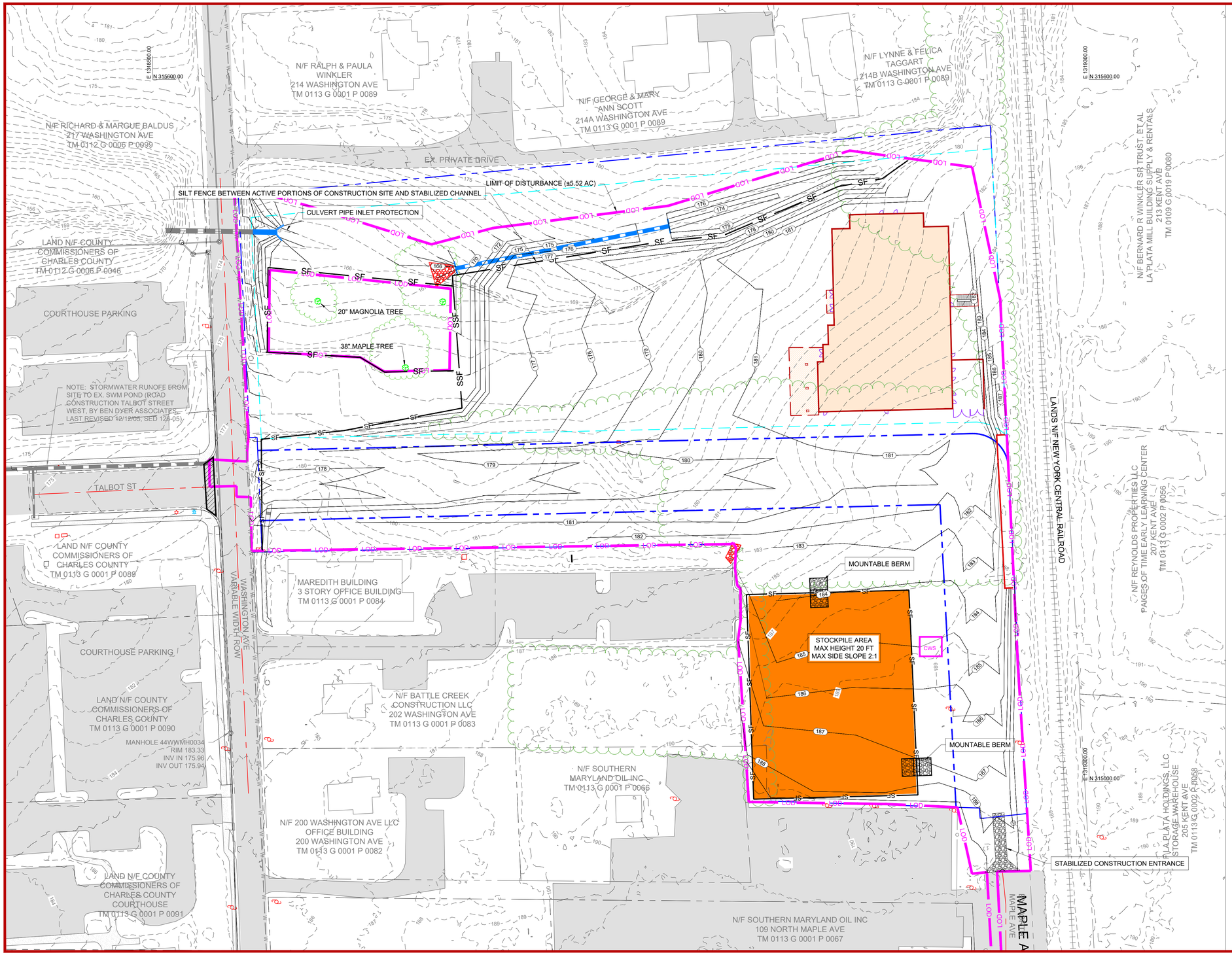
ToLP PERMIT #00562-2021
LA PLATA LIBRARY

EROSION AND SEDIMENT CONTROL PLAN
PHASE 2

PROJECT DATA			
Tax Map:	0113	Parcel:	SEVERAL
LA PLATA, MD			
Drawn By:	WCS	Checked By:	WCS
Date:	2/12/25		
Scale:	1" = 40'		

REVISIONS	
1.	5/19/23 PER LA PLATA COMMENTS
2.	1/16/25 PER LA PLATA COMMENTS
3.	1/16/25 PER CHARLES COUNTY SCD COMMENTS
4.	2/10/25 PER CHARLES COUNTY SCD COMMENTS
5.	7/22/25 PER TOWN COMMENTS

Project No.: 21-093
File Name: jan2026CE011525.dwg
Sheet No.: C-401



STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, SEEDING FOR PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECTS SITE NOT UNDER ACTIVE GRADING. ONCE VEGETATION IS ESTABLISHED, THE SITE SHALL HAVE 95% GROUNDCOVER TO BE CONSIDERED ADEQUATELY STABILIZED.

SEQUENCE OF CONSTRUCTION

GENERAL - INITIAL

1. CONTRACTOR/DEVELOPER MUST NOTIFY THE COMPLIANCE PROGRAM, WATER MANAGEMENT ADMINISTRATION, MARYLAND DEPARTMENT OF THE ENVIRONMENT, (410) 537-3510, 5 DAYS PRIOR TO COMMENCING WORK.
2. THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR IS REQUIRED UPON INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
3. UPON SEDIMENT CONTROL INSPECTOR APPROVAL, CLEAR AND GRUB FOR THE INSTALLATION OF PERIMETER SEDIMENT CONTROL DEVICES PRIOR TO ANY EARTH DISTURBING ACTIVITY. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN: THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING. ONCE VEGETATION IS ESTABLISHED, THE SITE SHALL HAVE 95% VEGETATIVE GROUND COVER TO BE CONSIDERED ADEQUATELY STABILIZED.
4. THE CONTRACTOR MUST CONTACT MISS UTILITY AT LEAST THREE DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES. CONSTRUCTION MAY NOT BEGIN PRIOR TO THE MARKING OF EXISTING UTILITIES.
5. ALL PROPOSED STRUCTURES, LOCATIONS AND ELEVATIONS, MUST BE STAKED OUT FOR PROPER INSTALLATION.
6. ALL EXCESS MATERIAL MUST BE DISPOSED OF AT AN APPROVED OFF-SITE LOCATION WITH AN ACTIVE AND APPROVED SEDIMENT CONTROL PLAN. THE OFFSITE LOCATION SITE & SEDIMENT CONTROL PERMIT NUMBERS ARE TO BE PROVIDED TO THE EROSION CONTROL INSPECTOR AT THE PRE-CONSTRUCTION MEETING.
7. EROSION AND SEDIMENT CONTROL PRACTICES, AND SITE IN GENERAL, MUST BE INSPECTED WEEKLY AND AFTER EACH RAIN FALL EVENT, BY THE CONTRACTOR OR OTHER RESPONSIBLE PERSON, AND ANY NEEDED MAINTENANCE PERFORMED IMMEDIATELY.
8. EROSION AND SEDIMENT PRACTICES, AND SITE IN GENERAL, MUST BE INSPECTED WEEKLY AND AFTER EACH RAIN FALL EVENT, BY THE CONTACTOR OR OTHER RESPONSIBLE PERSON, AND ANY NEEDED MAINTENANCE PERFOMED IMMEDIATELY.
9. SEDIMENT AND EROSION CONTROLS CANNOT BE REMOVED UNTIL THE SITE HAS ADEQUATE STABILIZATION. ONCE VEGATATION IS ESTABLISHED, THE SITE SHALL HAVE 95% GROUNDCOVER TO BE CONSIDERED ADEQUATELY STABILIZED AND THE SEDIMENT CONTROL INSPECTOR HAS APPROVED SUCH REMOVAL.
10. SITE MUST BE GRADED IN SUCH A MANNER THAT THE APPROVED DRAINAGE DIVIDES ARE MAINTAINED THROUGHOUT SITE CONSTRUCTION.
11. ADDITIONAL INLET PROTECTION MAY BE PERMITTED BY THE SEDIMENT AND EROSION CONTROL INSPECTOR IF THE DRAINAGE AREA TO SAID INLET DRAINS TO AN APPROVED SEDIMENT AND EROSION CONTROL PRACTICE.
12. CONTRACTOR IS ADVISED THAT THE STRUCTURES TO BE REMOVED HAVE NOT BEEN INVESTIGATED BY CHARLES COUNTY, THE TOWN OF LA PLATA, OR VISTA DESIGN AND MAY CONTAIN HAZARDOUS MATERIALS THAT REQUIRE SPECIAL METHODS OR PRACTICES TO SAFELY REMOVE. CONTACTOR TO SAFELY AND PROPERLY DISPOSE OF ALL MATERIALS FOUND AT NO ADDITIONAL COST.

SEQUENCE OF CONSTRUCTION

PHASE 1- DEMOLITION

1. INSTALL PERIMETER CONTROLS INCLUDING STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, SUPER SILT FENCE AND CULVERT INLET PROTECTION.
2. INSTALL 3 CONSTRUCTION WARNING SIGNS ALONG THE FENCELINE. INSTALL 2 ADDITIONAL CONSTRUCTION WARNING SIGNS AT THE MAPLE AVE ENTRANCE.
3. COORDINATE UTILITY (ELECTRIC, SEWER, WATER, TELECOMM) DISCONNECTION. PROCEED ONLY AFTER ALL ARE ABANDONED.
4. REMOVE EXISTING BUILDINGS MARKED FOR REMOVAL AND ASSOCIATED APPURTENANCES. ENSURE ALL COMPONENTS OF THE STRUCTURES ARE REMOVED AND DISPOSED OF AT AN APPROVED SITE.
5. INSTALL STOCKPILE AREA AS SHOWN. REMOVE EX FENCING AROUND TO THE WEST, NORTH, AND EAST OF INDIAN HEAD IRON WORKS WHILE MAINTAINING FENCE ADJACENT TO OIL COMPANY.
6. BEGINNING AT THE FOREST NEAR THE INDIAN HEAD IRON WORKS SITE, CLEAR AND GRUB REMAINDER OF SITE, INCLUDING THE ART SCHOOL (206 WASHINGTON) AND ONE STORY RESIDENTIAL HOUSE (206A WASHINGTON). CONTRACTOR TO ENSURE MATERIALS FROM STRUCTURES ARE DISPOSED OF PROPERLY, AT AN APPROVED SITE. TREES REQUIRED TO BE REMOVED FROM SITE MAY BE CHIPPED AND REMOVED, IF CONTRACTOR DESIRES. TOPSOIL MAY BE STOCKPILED ONSITE FOR LATER RE-USE.
7. ROUGH GRADE THE FORMER IRON WORKS, WINKLER HOUSE, ART SCHOOL, ONE FLOOR RESIDENTIAL PROPERTY AND FORMERLY WOODED LOT. IF MATERIAL IS APPROVED BY GEO-TECHNICAL ENGINEER, STORE EXCESS WITHIN STOCKPILE FOR LATER USE. ANY UNSUITABLE MATERIAL IS TO BE HAULED OFFSITE TO AN APPROVED LOCATION WITH ACTIVE E&S PLAN.

PHASE 2 - RELOCATE INTERMITTENT STREAM

1. INSTALL CULVERT INLET PROTECTION IN FRONT OF EX. 48" HDPE CULVERT THAT GOES UNDER WASHINGTON AVE.
2. CLEAR AND GRUB ONLY THE AREA NEEDED TO INSTALL BYPASS PIPE.
3. WHEN NO RAINFALL IS FORECAST FOR THE DURATION OF THE PHASE, EXCAVATE THE NEW CHANNEL. INSTALL BYPASS PIPE AND END WALLS.
4. BACKFILL OVER PIPE AND ABANDONED PORTIONS OF THE EPHEMERAL CHANNEL.
5. SOD AREAS WITHIN CHANNEL TO ENSURE SAME DAY STABILIZATION. TOPSOIL, SEED, AND STRAW MULCH REMAINING AREAS DISTURBED BY THE RELOCATION.
6. ONCE STABILIZED, REMOVE REINFORCED SUPER SILT FENCE AND PROCEED TO THE NEXT PHASE.

PHASE 3 - BUILD LIBRARY

1 DAY	1. INSTALL SILT FENCE BETWEEN LIBRARY SITE AND STABILIZED RELOCATED CHANNEL. AFTER SILT FENCE IN INSTALLED, THE DOWNSTREAM CULVERT PIPE INLET PROTECTION MAY BE REMOVED IF AREAS NORTH OF SILT FENCE ARE AT LEAST 95% STABILIZED AND THE REMOVAL IS APPROVED BY THE EROSION AND SEDIMENT CONTROL INSPECTOR.
3 DAYS	2. CLEAR AND GRUB ANY REMAINING AREAS WITHIN LOD, IF NECESSARY.
3 DAYS	3. STRIP ALL TOPSOIL, AND ORGANIC MATTER, AND STOCKPILE ONSITE FOR REUSE.
15 DAYS	4. INSTALL STRUCTURAL FILL FOR LIBRARY AND PARKING LOT IN 8 INCH LIFTS, ENSURING A MINIMUM OF 95% MAXIMUM COMPACTION FOR EACH LIFT OR AS OTHERWISE DETERMINED APPROPRIATE BY INSPECTING GEOTECHNICAL ENGINEER.
3 DAYS	5. INSTALL RETAINING WALL.
10 DAYS	6. ROUGH GRADE THE TALBOT STREET AND MAPLE AVE EXTENSIONS. INSTALL ANY FILL IN 8 INCH LIFTS AND ENSURE A MINIMUM OF 95% MAXIMUM COMPACTION UNDER GUIDANCE OF GEOTECHNICAL ENGINEER.
180 DAYS	7. BUILD LIBRARY. OTHER PHASES MAY RUN SIMULTANEOUSLY WITH INTERNAL CONSTRUCTION OF LIBRARY.

PHASE 4 - UTILITY INSTALLATION

1. CONTACT MISS UTILITY TO MARK ALL EXISTING UTILITIES WITHIN WASHINGTON AVE/TALBOT STREET INTERSECTION AND PORTION OF MAPLE AVE BETWEEN IRON WORKS BALTIMORE ST AT LEAST 3 WORK DAYS PRIOR TO COMMENCING PHASE. CONSTRUCTION MAY NOT PROCEED UNTIL ALL UTILITIES ARE MARKED.
2. CONTRACTOR TO CONTACT BOB STAHL, TOWN OF LA PLATA DIRECTOR OF OPERATIONS, 1 WEEK PRIOR TO PHASE BEGINNING TO COORDINATE TOWN SUPERVISION OF CONSTRUCTION.
3. CONTRACTOR TO ARRANGE WITH TOWN TO IMPLEMENT TRAFFIC CONTROL WHEN WASHINGTON AVENUE AND NORTH MAPLE AVENUE WILL BE CUT FOR UTILITY CONNECTIONS.
4. SAW CUT ROADWAYS AS SHOWN.
5. EXCAVATE INTERSECTION TO ACCESS SEWER MAIN, WATER MAIN, AND EX. STORMWATER MANHOLE.
6. INSTALL DOGHOUSE SEWER MANHOLE AND INSTALL SEWER EXTENSION.
7. TAP INTO EXISTING WATER MAIN VIA WET TAP AND INSTALL NEW WATER MAIN. CONNECT TO EX. WATER MAIN AT INTERSECTION OF MAPLE AVE AND BALTIMORE ST.
8. CONNECT INTO EX. STORMWATER MANHOLE AND EXTEND STUB PIPE BEYOND RIGHT OF WAY.
9. BACKFILL ALL PIPES AND INSTALL HOT MIX PATCH PER TOWN STANDARDS.

PHASE 5 - FINISH SITE

1. INSTALL CURBING, SIDEWALKS, LIGHTS, ETC FOR ROAD EXTENSIONS AND PARKING LOT.
2. INSTALL BIOSWALE. REFER TO SEQUENCE OF CONSTRUCTION ON SWM PLANS.
3. PAVE PARKING LOTS AND ROAD EXTENSIONS.
4. INSTALL LANDSCAPING.
5. TOPSOIL, SEED, AND MULCH ANY REMAINING DISTURBED AREAS.
6. ONCE STABILIZED, AND WITH APPROVAL OF E&S INSPECTOR, REMOVE ANY REMAINING E&S FIXTURES.

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STATE OF MARYLAND — CHARLES R. D. FOX — LICENSE #32... — PROFESSIONAL ENGINEER
LIC 36310 EXP 11/17/26

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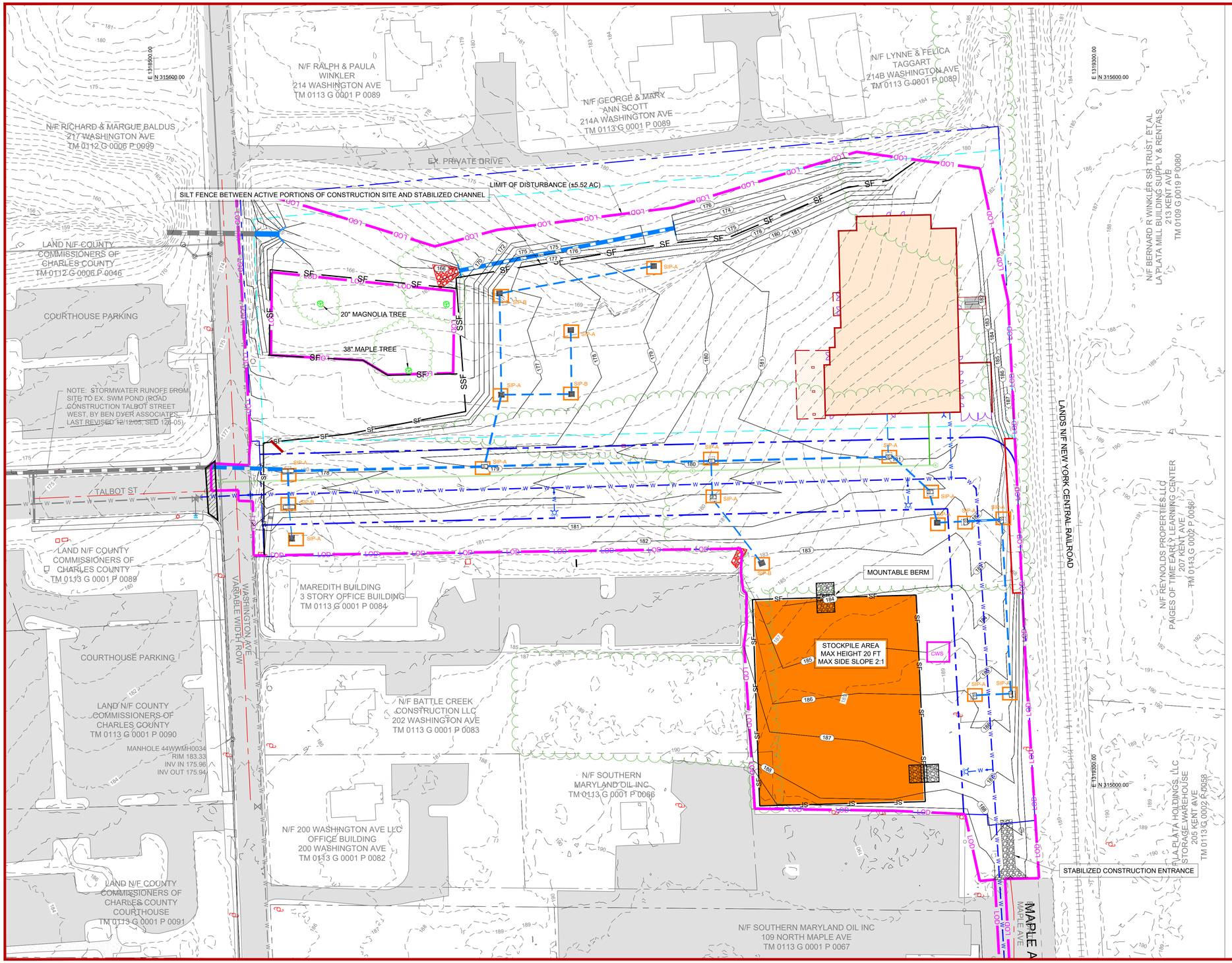
ToLP PERMIT #00562-2021
LA PLATA LIBRARY

EROSION AND SEDIMENT CONTROL PLAN
PHASE 3

PROJECT DATA			
Tax Map:	0113	Parcel:	SEVERAL
LA PLATA, MD			
Drawn By:	WCS	Checked By:	WCS
Date:	2/12/25		
Scale:	1" = 40'		

REVISIONS
1. 5/19/23 PER LA PLATA COMMENTS
2. 1/16/25 PER LA PLATA COMMENTS
3. 1/16/25 PER CHARLES COUNTY SCD COMMENTS
4. 2/10/25 PER CHARLES COUNTY SCD COMMENTS
5. 7/22/25 PER TOWN COMMENTS

Project No.: 21-093
File Name: jan2026CE011525.dwg
Sheet No.: C-402



STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, SEEDING FOR PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECTS SITE NOT UNDER ACTIVE GRADING. ONCE VEGETATION IS ESTABLISHED, THE SITE SHALL HAVE 95% GROUNDCOVER TO BE CONSIDERED ADEQUATELY STABILIZED.

SEQUENCE OF CONSTRUCTION

GENERAL - INITIAL

1. CONTRACTOR/DEVELOPER MUST NOTIFY THE COMPLIANCE PROGRAM, WATER MANAGEMENT ADMINISTRATION, MARYLAND DEPARTMENT OF THE ENVIRONMENT, (410) 537-3510, 5 DAYS PRIOR TO COMMENCING WORK.
2. THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR IS REQUIRED UPON INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
3. UPON SEDIMENT CONTROL INSPECTOR APPROVAL, CLEAR AND GRUB FOR THE INSTALLATION OF PERIMETER SEDIMENT CONTROL DEVICES PRIOR TO ANY EARTH DISTURBING ACTIVITY. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN: THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING. ONCE VEGETATION IS ESTABLISHED, THE SITE SHALL HAVE 95% VEGETATIVE GROUND COVER TO BE CONSIDERED ADEQUATELY STABILIZED.
4. THE CONTRACTOR MUST CONTACT MISS UTILITY AT LEAST THREE DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES. CONSTRUCTION MAY NOT BEGIN PRIOR TO THE MARKING OF EXISTING UTILITIES.
5. ALL PROPOSED STRUCTURES, LOCATIONS AND ELEVATIONS, MUST BE STAKED OUT FOR PROPER INSTALLATION.
6. ALL EXCESS MATERIAL MUST BE DISPOSED OF AT AN APPROVED OFF-SITE LOCATION WITH AN ACTIVE AND APPROVED SEDIMENT CONTROL PLAN. THE OFFSITE LOCATION SITE & SEDIMENT CONTROL PERMIT NUMBERS ARE TO BE PROVIDED TO THE EROSION CONTROL INSPECTOR AT THE PRE-CONSTRUCTION MEETING.
7. EROSION AND SEDIMENT CONTROL PRACTICES, AND SITE IN GENERAL, MUST BE INSPECTED WEEKLY AND AFTER EACH RAIN FALL EVENT, BY THE CONTRACTOR OR OTHER RESPONSIBLE PERSON, AND ANY NEEDED MAINTENANCE PERFORMED IMMEDIATELY.
8. EROSION AND SEDIMENT PRACTICES, AND SITE IN GENERAL, MUST BE INSPECTED WEEKLY AND AFTER EACH RAIN FALL EVENT, BY THE CONTACTOR OR OTHER RESPONSIBLE PERSON, AND ANY NEEDED MAINTENANCE PERFOMED IMMEDIATELY.
9. SEDIMENT AND EROSION CONTROLS CANNOT BE REMOVED UNTIL THE SITE HAS ADEQUATE STABILIZATION. ONCE VEGATATION IS ESTABLISHED, THE SITE SHALL HAVE 95% GROUNDCOVER TO BE CONSIDERED ADEQUATELY STABILIZED AND THE SEDIMENT CONTROL INSPECTOR HAS APPROVED SUCH REMOVAL.
10. SITE MUST BE GRADED IN SUCH A MANNER THAT THE APPROVED DRAINAGE DIVIDES ARE MAINTAINED THROUGHOUT SITE CONSTRUCTION.
11. ADDITIONAL INLET PROTECTION MAY BE PERMITTED BY THE SEDIMENT AND EROSION CONTROL INSPECTOR IF THE DRAINAGE AREA TO SAID INLET DRAINS TO AN APPROVED SEDIMENT AND EROSION CONTROL PRACTICE.
12. CONTRACTOR IS ADVISED THAT THE STRUCTURES TO BE REMOVED HAVE NOT BEEN INVESTIGATED BY CHARLES COUNTY, THE TOWN OF LA PLATA, OR VISTA DESIGN AND MAY CONTAIN HAZARDOUS MATERIALS THAT REQUIRE SPECIAL METHODS OR PRACTICES TO SAFELY REMOVE. CONTACTOR TO SAFELY AND PROPERLY DISPOSE OF ALL MATERIALS FOUND AT NO ADDITIONAL COST.

SEQUENCE OF CONSTRUCTION

PHASE 1- DEMOLITION

1. INSTALL PERIMETER CONTROLS INCLUDING STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, SUPER SILT FENCE AND CULVERT INLET PROTECTION.
2. INSTALL 3 CONSTRUCTION WARNING SIGNS ALONG THE FENCELINE. INSTALL 2 ADDITIONAL CONSTRUCTION WARNING SIGNS AT THE MAPLE AVE ENTRANCE.
3. COORDINATE UTILITY (ELECTRIC, SEWER, WATER, TELECOMM) DISCONNECTION. PROCEED ONLY AFTER ALL ARE ABANDONED.
4. REMOVE EXISTING BUILDINGS MARKED FOR REMOVAL AND ASSOCIATED APPURTENANCES. ENSURE ALL COMPONENTS OF THE STRUCTURES ARE REMOVED AND DISPOSED OF AT AN APPROVED SITE.
5. INSTALL STOCKPILE AREA AS SHOWN. REMOVE EX FENCING AROUND TO THE WEST, NORTH, AND EAST OF INDIAN HEAD IRON WORKS WHILE MAINTAINING FENCE ADJACENT TO OIL COMPANY.
6. BEGINNING AT THE FOREST NEAR THE INDIAN HEAD IRON WORKS SITE, CLEAR AND GRUB REMAINDER OF SITE, INCLUDING THE ART SCHOOL (206 WASHINGTON) AND ONE STORY RESIDENTIAL HOUSE (206A WASHINGTON). CONTRACTOR TO ENSURE MATERIALS FROM STRUCTURES ARE DISPOSED OF PROPERLY, AT AN APPROVED SITE. TREES REQUIRED TO BE REMOVED FROM SITE MAY BE CHIPPED AND REMOVED, IF CONTRACTOR DESIRES. TOPSOIL MAY BE STOCKPILED ONSITE FOR LATER RE-USE.
7. ROUGH GRADE THE FORMER IRON WORKS, WINKLER HOUSE, ART SCHOOL, ONE FLOOR RESIDENTIAL PROPERTY AND FORMERLY WOODED LOT. IF MATERIAL IS APPROVED BY GEO-TECHNICAL ENGINEER, STORE EXCESS WITHIN STOCKPILE FOR LATER USE. ANY UNSUITABLE MATERIAL IS TO BE HAULED OFFSITE TO AN APPROVED LOCATION WITH ACTIVE E&S PLAN.

PHASE 2 - RELOCATE INTERMITTENT STREAM

1. INSTALL CULVERT INLET PROTECTION IN FRONT OF EX. 48" HDPE CULVERT THAT GOES UNDER WASHINGTON AVE.
2. CLEAR AND GRUB ONLY THE AREA NEEDED TO INSTALL BYPASS PIPE.
3. WHEN NO RAINFALL IS FORECAST FOR THE DURATION OF THE PHASE, EXCAVATE THE NEW CHANNEL. INSTALL BYPASS PIPE AND END WALLS.
4. BACKFILL OVER PIPE AND ABANDONED PORTIONS OF THE EPHEMERAL CHANNEL.
5. SOD AREAS WITHIN CHANNEL TO ENSURE SAME DAY STABILIZATION. TOPSOIL, SEED, AND STRAW MULCH REMAINING AREAS DISTURBED BY THE RELOCATION.
6. ONCE STABILIZED, REMOVE REINFORCED SUPER SILT FENCE AND PROCEED TO THE NEXT PHASE.

PHASE 3 - BUILD LIBRARY

1. INSTALL SILT FENCE BETWEEN LIBRARY SITE AND STABILIZED RELOCATED CHANNEL. AFTER SILT FENCE IN INSTALLED, THE DOWNSTREAM CULVERT PIPE INLET PROTECTION MAY BE REMOVED IF AREAS NORTH OF SILT FENCE ARE AT LEAST 95% STABILIZED AND THE REMOVAL IS APPROVED BY THE EROSION AND SEDIMENT CONTROL INSPECTOR.
2. CLEAR AND GRUB ANY REMAINING AREAS WITHIN LOD, IF NECESSARY.
3. STRIP ALL TOPSOIL, AND ORGANIC MATTER, AND STOCKPILE ONSITE FOR REUSE.
4. INSTALL STRUCTURAL FILL FOR LIBRARY AND PARKING LOT IN 8 INCH LIFTS, ENSURING A MINIMUM OF 95% MAXIMUM COMPACTION FOR EACH LIFT OR AS OTHERWISE DETERMINED APPROPRIATE BY INSPECTING GEOTECHNICAL ENGINEER.
5. INSTALL RETAINING WALL.
6. ROUGH GRADE THE TALBOT STREET AND MAPLE AVE EXTENSIONS. INSTALL ANY FILL IN 8 INCH LIFTS AND ENSURE A MINIMUM OF 95% MAXIMUM COMPACTION UNDER GUIDANCE OF GEOTECHNICAL ENGINEER.
7. BUILD LIBRARY. OTHER PHASES MAY RUN SIMULTANEOUSLY WITH INTERNAL CONSTRUCTION OF LIBRARY.

PHASE 4 - UTILITY INSTALLATION

3 DAYS 1. CONTACT MISS UTILITY TO MARK ALL EXISTING UTILITIES WITHIN WASHINGTON AVE/TALBOT STREET INTERSECTION AND PORTION OF MAPLE AVE BETWEEN IRON WORKS BALTIMORE ST AT LEAST 3 WORK DAYS PRIOR TO COMMENCING PHASE. CONSTRUCTION MAY NOT PROCEED UNTIL ALL UTILITIES ARE MARKED.
1 DAY 2. CONTRACTOR TO CONTACT BOB STAHL, TOWN OF LA PLATA DIRECTOR OF OPERATIONS, 1 WEEK PRIOR TO PHASE BEGINNING TO COORDINATE TOWN SUPERVISION OF CONSTRUCTION.
1 DAY 3. CONTRACTOR TO ARRANGE WITH TOWN TO IMPLEMENT TRAFFIC CONTROL WHEN WASHINGTON AVENUE AND NORTH MAPLE AVENUE WILL BE CUT FOR UTILITY CONNECTIONS.
1 DAY 4. SAW CUT ROADWAYS AS SHOWN.
1 DAY 5. EXCAVATE INTERSECTION TO ACCESS SEWER MAIN, WATER MAIN, AND EX. STORMWATER MANHOLE.
5 DAYS 6. INSTALL DOGHOUSE SEWER MANHOLE AND INSTALL SEWER EXTENSION.
2 DAYS 7. TAP INTO EXISTING WATER MAIN VIA WET TAP AND INSTALL NEW WATER MAIN. CONNECT TO EX. WATER MAIN AT INTERSECTION OF MAPLE AVE AND BALTIMORE ST.
2 DAYS 8. CONNECT INTO EX. STORMWATER MANHOLE AND EXTEND STUB PIPE BEYOND RIGHT OF WAY.
5 DAYS 9. BACKFILL ALL PIPES AND INSTALL HOT MIX PATCH PER TOWN STANDARDS.

PHASE 5 - FINISH SITE

1. INSTALL CURBING, SIDEWALKS, LIGHTS, ETC FOR ROAD EXTENSIONS AND PARKING LOT.
2. INSTALL BIOSWALE. REFER TO SEQUENCE OF CONSTRUCTION ON SWM PLANS.
3. PAVE PARKING LOTS AND ROAD EXTENSIONS.
4. INSTALL LANDSCAPING.
5. TOPSOIL, SEED, AND MULCH ANY REMAINING DISTURBED AREAS.
6. ONCE STABILIZED, AND WITH APPROVAL OF E&S INSPECTOR, REMOVE ANY REMAINING E&S FIXTURES.

NOTE:
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NOTE:
This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.

STATE OF MARYLAND — STANLEY C. LOPATA — PROFESSIONAL ENGINEER — LICENSE # 36310
LIC 36310 EXP 11/17/26

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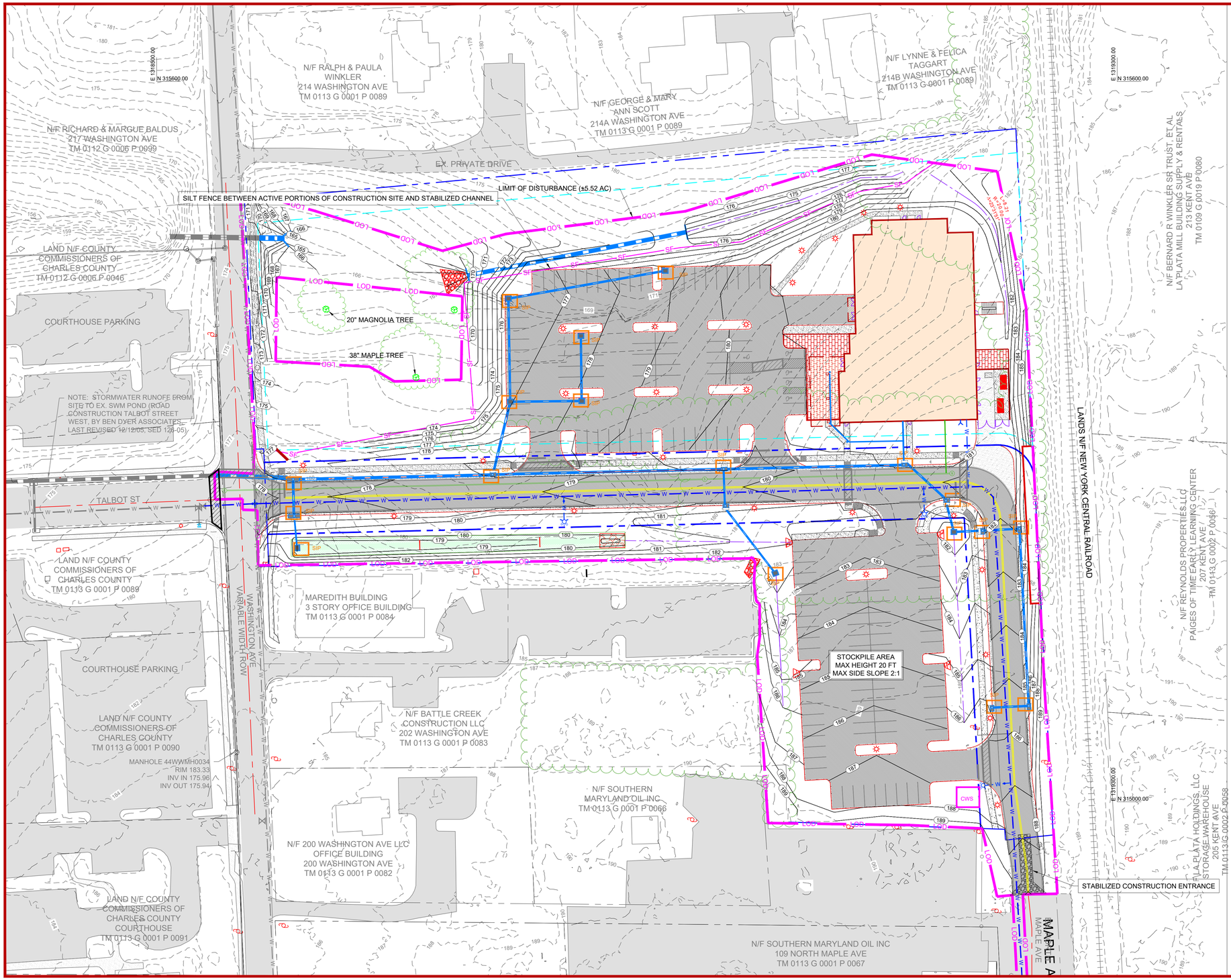
ToLP PERMIT #00562-2021
LA PLATA LIBRARY

EROSION AND SEDIMENT CONTROL PLAN
PHASE 4

PROJECT DATA			
Tax Map:	0113	Parcel:	SEVERAL
LA PLATA, MD			
Drawn By:	WCS	Checked By:	WCS
Date:	2/12/25		
Scale:	1" = 40'		

REVISIONS	
1.	5/19/23 PER LA PLATA COMMENTS
2.	1/16/25 PER LA PLATA COMMENTS
3.	1/16/25 PER CHARLES COUNTY SCD COMMENTS
4.	2/10/25 PER CHARLES COUNTY SCD COMMENTS
5.	7/22/25 PER TOWN COMMENTS

Project No.: 21-093
File Name: jan2026CE011525.dwg
Sheet No.: C-403



STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, SEEDING FOR PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECTS SITE NOT UNDER ACTIVE GRADING. ONCE VEGETATION IS ESTABLISHED, THE SITE SHALL HAVE 95% GROUNDCOVER TO BE CONSIDERED ADEQUATELY STABILIZED.

SEQUENCE OF CONSTRUCTION

GENERAL - INITIAL

1. CONTRACTOR/DEVELOPER MUST NOTIFY THE COMPLIANCE PROGRAM, WATER MANAGEMENT ADMINISTRATION, MARYLAND DEPARTMENT OF THE ENVIRONMENT, (410) 537-3510, 5 DAYS PRIOR TO COMMENCING WORK.
2. THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR IS REQUIRED UPON INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
3. UPON SEDIMENT CONTROL INSPECTOR APPROVAL, CLEAR AND GRUB FOR THE INSTALLATION OF PERIMETER SEDIMENT CONTROL DEVICES PRIOR TO ANY EARTH DISTURBING ACTIVITY. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN: THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING. ONCE VEGETATION IS ESTABLISHED, THE SITE SHALL HAVE 95% VEGETATIVE GROUND COVER TO BE CONSIDERED ADEQUATELY STABILIZED.
4. THE CONTRACTOR MUST CONTACT MISS UTILITY AT LEAST THREE DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES. CONSTRUCTION MAY NOT BEGIN PRIOR TO THE MARKING OF EXISTING UTILITIES.
5. ALL PROPOSED STRUCTURES, LOCATIONS AND ELEVATIONS, MUST BE STAKED OUT FOR PROPER INSTALLATION.
6. ALL EXCESS MATERIAL MUST BE DISPOSED OF AT AN APPROVED OFF-SITE LOCATION WITH AN ACTIVE AND APPROVED SEDIMENT CONTROL PLAN. THE OFFSITE LOCATION SITE & SEDIMENT CONTROL PERMIT NUMBERS ARE TO BE PROVIDED TO THE EROSION CONTROL INSPECTOR AT THE PRE-CONSTRUCTION MEETING.
7. EROSION AND SEDIMENT CONTROL PRACTICES, AND SITE IN GENERAL, MUST BE INSPECTED WEEKLY AND AFTER EACH RAIN FALL EVENT, BY THE CONTRACTOR OR OTHER RESPONSIBLE PERSON, AND ANY NEEDED MAINTENANCE PERFORMED IMMEDIATELY.
8. EROSION AND SEDIMENT PRACTICES, AND SITE IN GENERAL, MUST BE INSPECTED WEEKLY AND AFTER EACH RAIN FALL EVENT, BY THE CONTACTOR OR OTHER RESPONSIBLE PERSON, AND ANY NEEDED MAINTENANCE PERFOMED IMMEDIATELY.
9. SEDIMENT AND EROSION CONTROLS CANNOT BE REMOVED UNTIL THE SITE HAS ADEQUATE STABILIZATION. ONCE VEGATATION IS ESTABLISHED, THE SITE SHALL HAVE 95% GROUNDCOVER TO BE CONSIDERED ADEQUATELY STABILIZED AND THE SEDIMENT CONTROL INSPECTOR HAS APPROVED SUCH REMOVAL.
10. SITE MUST BE GRADED IN SUCH A MANNER THAT THE APPROVED DRAINAGE DIVIDES ARE MAINTAINED THROUGHOUT SITE CONSTRUCTION.
11. ADDITIONAL INLET PROTECTION MAY BE PERMITTED BY THE SEDIMENT AND EROSION CONTROL INSPECTOR IF THE DRAINAGE AREA TO SAID INLET DRAINS TO AN APPROVED SEDIMENT AND EROSION CONTROL PRACTICE.
12. CONTRACTOR IS ADVISED THAT THE STRUCTURES TO BE REMOVED HAVE NOT BEEN INVESTIGATED BY CHARLES COUNTY, THE TOWN OF LA PLATA, OR VISTA DESIGN AND MAY CONTAIN HAZARDOUS MATERIALS THAT REQUIRE SPECIAL METHODS OR PRACTICES TO SAFELY REMOVE. CONTACTOR TO SAFELY AND PROPERLY DISPOSE OF ALL MATERIALS FOUND AT NO ADDITIONAL COST.

SEQUENCE OF CONSTRUCTION

PHASE 1- DEMOLITION

1. INSTALL PERIMETER CONTROLS INCLUDING STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, SUPER SILT FENCE AND CULVERT INLET PROTECTION.
2. INSTALL 3 CONSTRUCTION WARNING SIGNS ALONG THE FENCELINE. INSTALL 2 ADDITIONAL CONSTRUCTION WARNING SIGNS AT THE MAPLE AVE ENTRANCE.
3. COORDINATE UTILITY (ELECTRIC, SEWER, WATER, TELECOMM) DISCONNECTION. PROCEED ONLY AFTER ALL ARE ABANDONED.
4. REMOVE EXISTING BUILDINGS MARKED FOR REMOVAL AND ASSOCIATED APPURTENANCES. ENSURE ALL COMPONENTS OF THE STRUCTURES ARE REMOVED AND DISPOSED OF AT AN APPROVED SITE.
5. INSTALL STOCKPILE AREA AS SHOWN. REMOVE EX FENCING AROUND TO THE WEST, NORTH, AND EAST OF INDIAN HEAD IRON WORKS WHILE MAINTAINING FENCE ADJACENT TO OIL COMPANY.
6. BEGINNING AT THE FOREST NEAR THE INDIAN HEAD IRON WORKS SITE, CLEAR AND GRUB REMAINDER OF SITE, INCLUDING THE ART SCHOOL (206 WASHINGTON) AND ONE STORY RESIDENTIAL HOUSE (206A WASHINGTON). CONTRACTOR TO ENSURE MATERIALS FROM STRUCTURES ARE DISPOSED OF PROPERLY, AT AN APPROVED SITE. TREES REQUIRED TO BE REMOVED FROM SITE MAY BE CHIPPED AND REMOVED, IF CONTRACTOR DESIRES. TOPSOIL MAY BE STOCKPILED ONSITE FOR LATER RE-USE.
7. ROUGH GRADE THE FORMER IRON WORKS, WINKLER HOUSE, ART SCHOOL, ONE FLOOR RESIDENTIAL PROPERTY AND FORMERLY WOODED LOT. IF MATERIAL IS APPROVED BY GEO-TECHNICAL ENGINEER, STORE EXCESS WITHIN STOCKPILE FOR LATER USE. ANY UNSUITABLE MATERIAL IS TO BE HAULED OFFSITE TO AN APPROVED LOCATION WITH ACTIVE E&S PLAN.

PHASE 2 - RELOCATE INTERMITTENT STREAM

1. INSTALL CULVERT INLET PROTECTION IN FRONT OF EX. 48" HDPE CULVERT THAT GOES UNDER WASHINGTON AVE.
2. CLEAR AND GRUB ONLY THE AREA NEEDED TO INSTALL BYPASS PIPE.
3. WHEN NO RAINFALL IS FORECAST FOR THE DURATION OF THE PHASE, EXCAVATE THE NEW CHANNEL. INSTALL BYPASS PIPE AND END WALLS.
4. BACKFILL OVER PIPE AND ABANDONED PORTIONS OF THE EPHEMERAL CHANNEL.
5. SOD AREAS WITHIN CHANNEL TO ENSURE SAME DAY STABILIZATION. TOPSOIL, SEED, AND STRAW MULCH REMAINING AREAS DISTURBED BY THE RELOCATION.
6. ONCE STABILIZED, REMOVE REINFORCED SUPER SILT FENCE AND PROCEED TO THE NEXT PHASE.

PHASE 3 - BUILD LIBRARY

1. INSTALL SILT FENCE BETWEEN LIBRARY SITE AND STABILIZED RELOCATED CHANNEL. AFTER SILT FENCE IN INSTALLED, THE DOWNSTREAM CULVERT PIPE INLET PROTECTION MAY BE REMOVED IF AREAS NORTH OF SILT FENCE ARE AT LEAST 95% STABILIZED AND THE REMOVAL IS APPROVED BY THE EROSION AND SEDIMENT CONTROL INSPECTOR.
2. CLEAR AND GRUB ANY REMAINING AREAS WITHIN LOD, IF NECESSARY.
3. STRIP ALL TOPSOIL, AND ORGANIC MATTER, AND STOCKPILE ONSITE FOR REUSE.
4. INSTALL STRUCTURAL FILL FOR LIBRARY AND PARKING LOT IN 8 INCH LIFTS, ENSURING A MINIMUM OF 95% MAXIMUM COMPACTION FOR EACH LIFT OR AS OTHERWISE DETERMINED APPROPRIATE BY INSPECTING GEOTECHNICAL ENGINEER.
5. INSTALL RETAINING WALL.
6. ROUGH GRADE THE TALBOT STREET AND MAPLE AVE EXTENSIONS. INSTALL ANY FILL IN 8 INCH LIFTS AND ENSURE A MINIMUM OF 95% MAXIMUM COMPACTION UNDER GUIDANCE OF GEOTECHNICAL ENGINEER.
7. BUILD LIBRARY. OTHER PHASES MAY RUN SIMULTANEOUSLY WITH INTERNAL CONSTRUCTION OF LIBRARY.

PHASE 4 - UTILITY INSTALLATION

1. CONTACT MISS UTILITY TO MARK ALL EXISTING UTILITIES WITHIN WASHINGTON AVE/TALBOT STREET INTERSECTION AND PORTION OF MAPLE AVE BETWEEN IRON WORKS BALTIMORE ST AT LEAST 3 WORK DAYS PRIOR TO COMMENCING PHASE. CONSTRUCTION MAY NOT PROCEED UNTIL ALL UTILITIES ARE MARKED.
2. CONTRACTOR TO CONTACT BOB STAHL, TOWN OF LA PLATA DIRECTOR OF OPERATIONS, 1 WEEK PRIOR TO PHASE BEGINNING TO COORDINATE TOWN SUPERVISION OF CONSTRUCTION.
3. CONTRACTOR TO ARRANGE WITH TOWN TO IMPLEMENT TRAFFIC CONTROL WHEN WASHINGTON AVENUE AND NORTH MAPLE AVENUE WILL BE CUT FOR UTILITY CONNECTIONS.
4. SAW CUT ROADWAYS AS SHOWN.
5. EXCAVATE INTERSECTION TO ACCESS SEWER MAIN, WATER MAIN, AND EX. STORMWATER MANHOLE.
6. INSTALL DOGHOUSE SEWER MANHOLE AND INSTALL SEWER EXTENSION.
7. TAP INTO EXISTING WATER MAIN VIA WET TAP AND INSTALL NEW WATER MAIN. CONNECT TO EX. WATER MAIN AT INTERSECTION OF MAPLE AVE AND BALTIMORE ST.
8. CONNECT INTO EX. STORMWATER MANHOLE AND EXTEND STUB PIPE BEYOND RIGHT OF WAY.
9. BACKFILL ALL PIPES AND INSTALL HOT MIX PATCH PER TOWN STANDARDS.

PHASE 5 - FINISH SITE

20 DAYS 1. INSTALL CURBING, SIDEWALKS, LIGHTS, ETC FOR ROAD EXTENSIONS AND PARKING LOT.
5 DAYS 2. INSTALL BIOSWALE. REFER TO SEQUENCE OF CONSTRUCTION ON SWM PLANS.
10 DAYS 3. PAVE PARKING LOTS AND ROAD EXTENSIONS.
5 DAYS 4. INSTALL LANDSCAPING.
5 DAYS 5. TOPSOIL, SEED, AND MULCH ANY REMAINING DISTURBED AREAS.
6. ONCE STABILIZED, AND WITH APPROVAL OF E&S INSPECTOR, REMOVE ANY REMAINING E&S FIXTURES.

NOTE:
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NOTE:
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STATE OF MARYLAND
WILLIAM R. POPE
LICENSE #32
PROFESSIONAL ENGINEER
LIC 36310 EXP 11/17/26

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ToLP PERMIT #00562-2021
LA PLATA LIBRARY

EROSION AND SEDIMENT CONTROL PLAN
PHASE 5

PROJECT DATA			
Tax Map:	0113	Parcel:	SEVERAL
LA PLATA, MD			
Drawn By:	WCS	Checked By:	WCS
Date:	2/12/25		
Scale:	1" = 40'		

REVISIONS
1. 5/19/23 PER LA PLATA COMMENTS
2. 1/16/25 PER LA PLATA COMMENTS
3. 1/16/25 PER CHARLES COUNTY SCD COMMENTS
4. 2/10/25 PER CHARLES COUNTY SCD COMMENTS
5. 7/22/25 PER TOWN COMMENTS
6. 1/16/26 PER TOWN REQUEST

Project No.: 21-093
File Name: jan2026CE011525.dwg
Sheet No.: C-404

CHARLES SOIL CONSERVATION DISTRICT
DETAILS AND SPECIFICATIONS FOR VEGETATIVE ESTABLISHMENT

STANDARD STABILIZATION NOTE: Following initial soil disturbance or re-disturbance, seeding for permanent or temporary stabilization shall be completed within three (3) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes greater than 3 horizontal to 1 vertical (3:1); and seven (7) calendar days as to all other disturbed or graded areas on the project site not under active grading. Once vegetation is established, the site shall have 95% groundcover to be considered adequately stabilized.

1. Permanent Seeding:

Permanent Seeding Summary

Hardiness Zone (from Figure B.3): Zone 7a Seed Mixture (from Table B.3): 8					Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P_2O_5	K_2O	
	Tall Fescue	100	2/15-4/30; 8/15-11/30	1/4-1/2 in	45 lb/ac (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2.5 tons/ac (100 lb/ 1000 sf)

A. Soil Tests: Lime and fertilizer will be applied per soil tests results for sites greater than 5 acres. Soil tests will be done at completion of initial rough grading or as recommended by the sediment control inspector. Rates and analyses will be provided to the grading inspector as well as the contractor. The minimum soil conditions required for permanent vegetative establishment are:
   a. Soil pH shall be between 6.0 and 7.0.
   b. Soluble salts shall be less than 500 parts per million (ppm).
   c. The soil shall contain less than 40% clay but enough fine grained material (> 30% silt plus clay) to provide the capacity to hold moderate amount of moisture. An exception is if lovegrass or sereicia lespedeza is to be planted, then a sandy soil (< 30% silt plus clay) would be acceptable.
   d. Soil shall contain 1.5% minimum organic matter by weight.
   e. Soil must contain sufficient pore space to permit adequate root penetration.
   f. If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section B-4-2 titled Standards and Specifications for Soil Preparation, Topsoil, and Soil Amendments as found in the 2011 Maryland Standards and Specifications for Erosion and Sediment Control.

B. Seedbed Preparation: Area to be seeded shall be loose and friable to a depth of at least 3 to 5 inches. The top layer shall be loosened by raking, disking or other acceptable means before seeding occurs. For sites less than 5 acres, apply 100 pounds dolomitic limestone, hydrated or burnt lime may be substituted except when hydro seeding, and 10 pounds of 10-20-20 fertilizer per 1,000 square feet. Harrow or disk lime and fertilizer into the soil to a depth of at least 3 to 5 inches on slopes flatter than 3:1.

C. Seeding: Apply 5-6 pounds per 1,000 square feet of tall fescue between February 15 and April 30 or between August 15 and October 31. Apply seed uniformly on a moist firm seedbed with a cyclone seeder, cultipacker seeder or hydroseeder (slurry includes seeds and fertilizer, recommended on steep slopes only). Maximum seed depth should be ½ inch in clayey soils and ½ inch in sandy soils when using other than the hydroseeder method. Irrigate where necessary to support adequate growth until vegetation is firmly established. If other seed mixes are to be used, said selections must meet the 2011 Standards and Specifications for Soil Erosion and Sediment Control.

D. Mulching: Mulch shall be applied to all seeded areas immediately after seeding as per Section B-4-3 entitled Standards and Specifications for Seeding and Mulching as found in the 2011 Standards and Specifications for Soil Erosion and Sediment Control. During the time periods when seeding is not permitted, mulch shall be applied immediately after grading and maintained until seeding can be performed.

   Mulch shall be unrotted, unchopped, small grain straw applied at a rate of 2 tons per acre or 90 pounds per 1,000 square feet (2 bales). If a mulch-anchoring tool is used, apply 2.5 tons per acre. Mulch materials shall be relatively free of all kinds of weeds and shall be completely free of prohibited noxious weeds. Spread mulch uniformly, mechanically or by hand, to a depth of 1-2 inches.

E. Securing Straw Mulch: Straw mulch shall be secured immediately following mulch application to minimize movement by wind or water. The following methods are permitted:

   (i) Use a mulch-anchoring tool which is designed to punch and anchor mulch into the soil surface to a minimum depth of 2 inches. This is the most effective method for securing mulch, however, it is limited to relatively flat areas where equipment can operate safely. If a mulch-anchoring tool is used, apply 2.5 tons per acre.

   (ii) Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. If mixed with water, use 50 pounds of wood cellulose fiber per 100 gallons of water.

   (iii) Liquid binders may be used. Apply at higher rates at the edges where wind catches mulch, such as in valleys and on crests of slopes. The remainder of the area should appear uniform after binder application. Binders listed in the 2011 Standards and Specifications for Soil Erosion and Sediment Control or approved equal shall be applied at rates recommended by the manufacturers.

   (iv) Lightweight plastic netting may be used to secure mulch. The netting will be stapled to the ground according to manufacturer's recommendations.

F. Irrigation: In the absence of adequate rainfall, irrigation should be performed to ensure adequate vegetative establishment.

2. Temporary Seeding:

Temporary Seeding Summary

Hardiness Zone (from Figure B.3): Zone 7a Seed Mixture (from Table B.1): 8					Fertilizer Rate (10-20-20)	Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths		
	Barley	96	2/15-4/30; 8/15-11/30	1"	436 lb/ac (10 lb/1000 sf)	2.5 tons/ac (100 lb/1000 sf)
	Oats	72	2/15-4/30; 8/15-11/30	1"		
	Cereal Rye	112	2/15-4/30; 8/15-12/15	1"		
	Foxtail Millet	30	5/1-8/14	0.5"		

Lime: 100 pounds of dolomitic limestone per 1,000 square feet.
Fertilizer: 10 pounds of 10-20-20 per 1,000 square feet.

Seed: Annual Ryegrass - 1 pound per 1,000 square feet (February 15 through April 1 30 or August 15 through November 30).
Millet - 1 pound per 1,000 square feet (May 1 through August 15).

Mulch: Same as 1 D and E above.

3. No fills may be placed on frozen ground. All fill to be placed in approximately horizontal layers each layer having a loose thickness of not more than 8 inches. All fill in roadways and parking areas are to be classified as per Charles County requirements. Any fill within the building area is to be compacted to a minimum of 95% density. Fills for pond embankments shall be compacted as per MD-378 Construction Specifications. All other fills shall be compacted sufficiently so as to be stable and prevent erosion and slippage.

4. Permanent Sod:

   Installation of sod should follow permanent seeding dates. Seedbed preparation for sod shall be as noted in section (B) above. Permanent sod is to be tall fescue, state approved sod; lime and fertilizer per permanent seeding specifications and lightly irrigate sod prior to laying sod. Sod is to be laid on the contour with all ends tightly abutting. Joints are to be staggered between rows. Water and roll or tamp sod to insure positive root contact with the soil. All slopes steeper than 3:1, as shown, are to be permanently sodded or protected with an approved erosion control netting. Additional watering for establishment may be required. Sod is not to be installed on frozen ground. Sod shall not be transplanted when moisture content (dry or wet) and/or extreme temperature may adversely affect its survival. In the absence of adequate rainfall, irrigation should be performed to ensure establishment of sod.

5. Mining Operations:

   Sediment control plans for mining operations must include the following seeding dates and mixtures:
   For seeding dates of February 1 through April 30 and August 15 through October 31, use seed mixture of tall fescue at the rate of 2 pounds per 1,000 square feet and sericia lespedeza at the minimum rate of 0.5 pounds per 1,000 square feet.

6. Topsoil shall be applied as per the Standard and Specifications for Topsoil from the current 2011 Maryland Standards and Specifications for Erosion and Sediment Control.

NOTE: Use of this information does not preclude meeting all of the requirements of the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control.

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

Definition
The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose
To provide a suitable soil medium for vegetative growth.
Conditions Where Practice Applies
Where vegetative stabilization is to be established.

Criteria
A. Soil Preparation

1. Temporary Stabilization
   a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment; such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
   b. Apply fertilizer and lime as prescribed on the plans.
   c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.

2. Permanent Stabilization
   a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
      i. Soil pH between 6.0 and 7.0.
      ii. Soluble salts less than 500 parts per million (ppm).
      iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
      iv. Soil contains 1.5 percent minimum organic matter by weight.
      v. Soil contains sufficient pore space to permit adequate root penetration.
   b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
   c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.
   d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
   e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

B. Topsoiling

1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
   a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
   b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
   c. The original soil to be vegetated contains material toxic to plant growth.
   d. The soil is so acidic that treatment with limestone is not feasible.
4. Areas having slopes steeper than 2:1 require special consideration and design.
5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
   a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½ inches in diameter.
   b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
   c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
6. Topsoil Application
   a. Erosion and sediment control practices must be maintained when applying topsoil.
   b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
   c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)

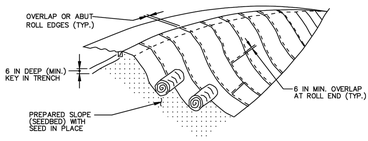
1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

Table B.6: Maintenance Fertilization for Permanent Seeding

Seeding Mixture	Type	lb/ac	lb/1000 sf	Time	Mowing
Tall fescue makes up 70 percent or more of cover.	10-10-10 or 30-10-10	500 400	11.5 9.2	Yearly or as needed, Fall	Not closer than 3 inches, if occasional mowing is desired.
Birdsfoot Trefoil.	0-20-0	400	9.2	Spring, the year following establishment, and every 4 to 5 years, thereafter.	Mow no closer than 2 inches.
Fairly uniform stand of tall fescue or birdsfoot trefoil.	5-10-10	500	11.5	Fall, the year following establishment, and every 4 to 5 years, thereafter.	Not required, no closer than 4 inches in the fall after seed has matured.
Weeping lovegrass fairly uniform plant distribution.	5-10-10	500	11.5	Spring, the year following establishment, and every 3 to 4 years, thereafter.	Not required, not closer than 4 inches in fall after seed has matured.
Red & chewings fescue, Kentucky bluegrass, hard fescue mixtures.	20-10-10	250 100	5.8 2.3	September, 30 days later. December, May 20, June 30, if needed.	Mow no closer than 2 inches for red fescue and Kentucky bluegrass, 3 inches for fescue.

DETAIL B-4-6-B TEMPORARY SOIL STABILIZATION MATTING SLOPE APPLICATION

STANDARD SYMBOL
TSSMS – * lb/ft² (* INCLUDE SHEAR STRESS)



ISOMETRIC VIEW

CONSTRUCTION SPECIFICATIONS

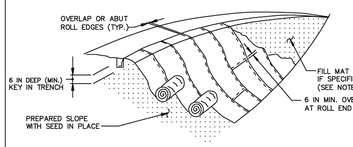
1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN-MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 4 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION & SEDIMENT CONTROL PLAN.
5. UNROLL MATTING DOWNSLOPE. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. OVERLAP OR ABUT ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSLOPE MAT OVERLAPPING ON TOP OF THE DOWNSLOPE MAT.
7. KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL B-4-6-D PERMANENT SOIL STABILIZATION MATTING SLOPE APPLICATION

STANDARD SYMBOL
PSSMS – * lb/ft² (* INCLUDE SHEAR STRESS)



ISOMETRIC VIEW

CONSTRUCTION SPECIFICATIONS

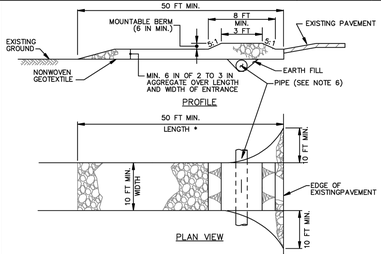
1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
5. UNROLL MATTING DOWN SLOPE. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE DOWNSLOPE MAT.
7. KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYED AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
10. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL
SCE



CONSTRUCTION SPECIFICATIONS

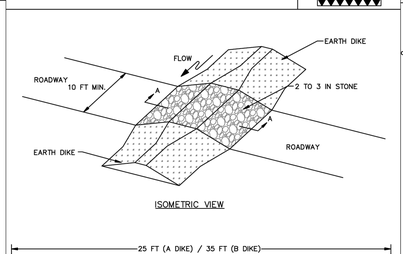
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*50 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL C-8 MOUNTABLE BERM

STANDARD SYMBOL
MB



CONSTRUCTION SPECIFICATIONS

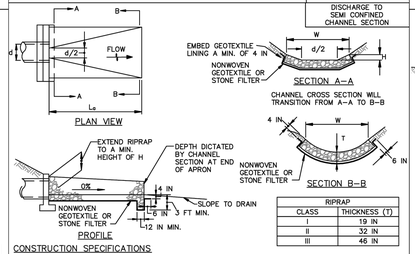
1. USE MINIMUM WIDTH OF 10 FEET TO ALLOW FOR VEHICULAR PASSAGE.
2. PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE EARTH MOUND PRIOR TO PLACING STONE.
3. PLACE 2 TO 3 INCH STONE OR EQUIVALENT RECYCLED CONCRETE AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE MOUNTABLE BERM.
4. MAINTAIN LINE, GRADE, AND CROSS SECTION. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN SPECIFIED DIMENSIONS. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL D-4-1-A ROCK OUTLET PROTECTION I

STANDARD SYMBOL
ROP1
DISCHARGE TO SEMI CONFINED CHANNEL SECTION



RIPRAP	
CLASS	THICKNESS (T)
I	19 IN
II	32 IN
III	46 IN

CONSTRUCTION SPECIFICATIONS

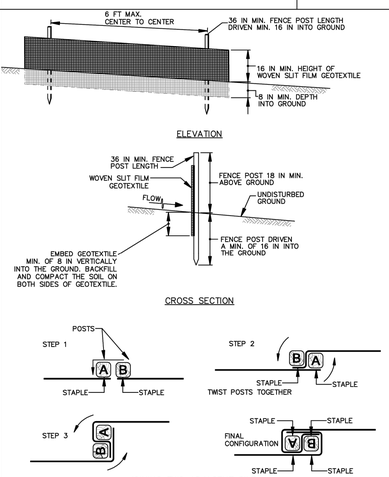
1. RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
3. PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (⅜ TO 1½ INCH STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF THE RIPRAP.
5. CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE STONE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
7. CONSTRUCT APRON WITH 0% SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
8. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

STANDARD SYMBOL
SF



1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

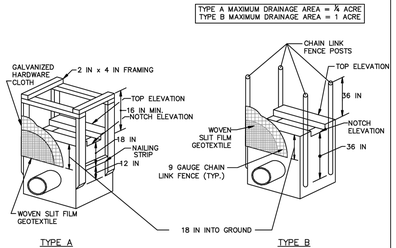
STANDARD SYMBOL
SF

CONSTRUCTION SPECIFICATIONS

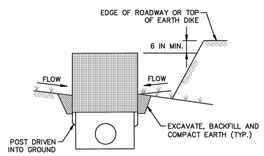
1. USE WOOD POSTS 1¾ X 1¾ ± 1/8 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1

DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP



ISOMETRIC VIEW



SECTION FOR TYPE A AND B

1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

CONSTRUCTION SPECIFICATIONS

1. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
2. EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
3. FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2X4 FRAME AS SHOWN. STRETCH ½ INCH GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.

   FOR TYPE B, USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND 6 FOOT LENGTH, DRIVEN A MINIMUM OF 36 INCHES BELOW THE WEIR CREST AT EACH CORNER OF THE STRUCTURE. FASTEN 9 GAUGE OR HEAVIER CHAIN LINK FENCE, 42 INCHES IN HEIGHT, SECURELY TO THE FENCE POSTS WITH WIRE TIES. FASTEN GEOTEXTILE SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 18 INCHES BELOW THE WEIR CREST.
4. BACKFILL AROUND THE INLET IN LOOSE 4 INCH LIFTS AND COMPACT UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
5. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

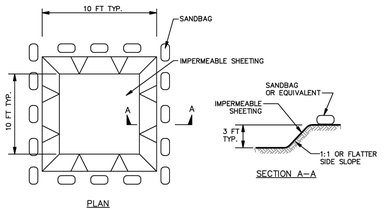
2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

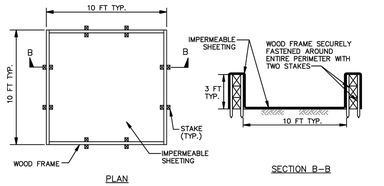
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL H-6 ONSITE CONCRETE WASHOUT STRUCTURE

STANDARD SYMBOL: CWS



EXCAVATED WASHOUT STRUCTURE



WASHOUT STRUCTURE WITH WOOD PLANKS

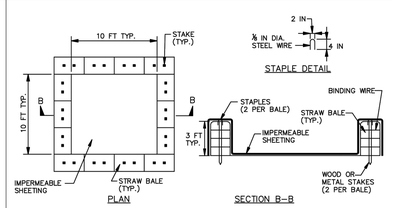
1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL H-6 ONSITE CONCRETE WASHOUT STRUCTURE

STANDARD SYMBOL: CWS



NOTE: CAN BE TWO STACKED BALES OR PARTIALLY EXCAVATED TO REACH 3 FT DEPTH

WASHOUT STRUCTURE WITH STRAW BALES

CONSTRUCTION SPECIFICATIONS

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED), EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET–VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

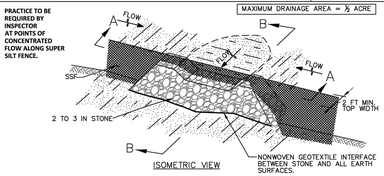
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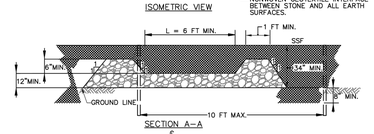
REINFORCEMENT OF SUPER SILT FENCE
(FOR USE IN CHARLES COUNTY)

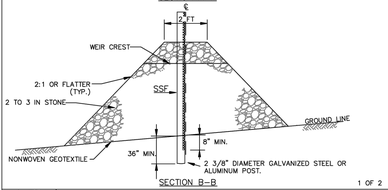
STANDARD SYMBOL: RSSF

PRACTICE TO BE REQUIRED BY INSPECTOR AT POINTS OF CONCENTRATED FLOW ALONG SUPER SILT FENCE.

MAXIMUM DRAINAGE AREA = ½ ACRE







1 OF 2

CHARLES SOIL CONSERVATION DISTRICT

OCTOBER 2015

REINFORCEMENT OF SUPER SILT FENCE
(FOR USE IN CHARLES COUNTY)

STANDARD SYMBOL: RSSF

CONSTRUCTION SPECIFICATIONS

1. PROVIDE STORAGE VOLUME AS REQUIRED BY SEDIMENT AND EROSION CONTROL INSPECTOR.
2. USE NONWOVEN GEOTEXTILE ON INTERFACE BETWEEN GROUND AND STONE.
3. SUPER SILT FENCE MUST BE INSTALLED AS PER THE APPROVED PLANS.
4. USE CLEAN 2 TO 3 INCH STONE OR EQUIVALENT RECYCLED CONCRETE. PLACE WOVEN MONOFILAMENT GEOTEXTILE ON UPSTREAM FACE AND COVER WITH A MINIMUM OF 6 INCHES OF ADDITIONAL STONE.
5. USE NONWOVEN AND WOVEN MONOFILAMENT GEOTEXTILES AS SPECIFIED IN SECTION H–1 MATERIALS SECTION OF THE 2011 MD STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.
6. SET WEIR CREST OF STONE 12 INCHES LOWER THAN THE TOP OF SSF. USE MINIMUM LENGTH OF 6 FEET FOR WEIR CREST.
7. REMOVE SEDIMENT WHEN IT HAS ACCUMULATED TO WITHIN 6 INCHES OF WEIR CREST. REPLACE GEOTEXTILE AND STONE FACING WHEN STRUCTURE CEASES TO DRAIN, MAINTAIN LINE, GRADE, AND CROSS SECTION.
8. UPON REMOVAL OF STONE , GRADE AREA FLUSH WITH EXISTING GROUND. WITHIN 24 HOURS STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED ON APPROVED PLAN.

2 OF 2

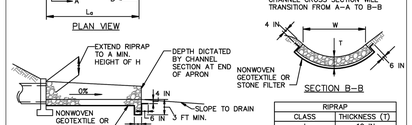
CHARLES SOIL CONSERVATION DISTRICT

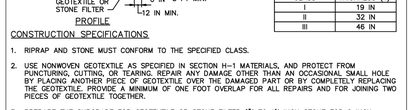
OCTOBER 2015

DETAIL D-4-1-A ROCK OUTLET PROTECTION I

STANDARD SYMBOL: ROP1

DISCHARGE TO SEMI CONFINED CHANNEL SECTION





RIPRAP	
CLASS	THICKNESS (T)
I	19 IN
II	32 IN
III	46 IN

CONSTRUCTION SPECIFICATIONS

1. RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
3. PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (⅜ TO 1½ INCH STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF THE RIPRAP.
5. CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE STONE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
7. CONSTRUCT APRON WITH 0% SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
8. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

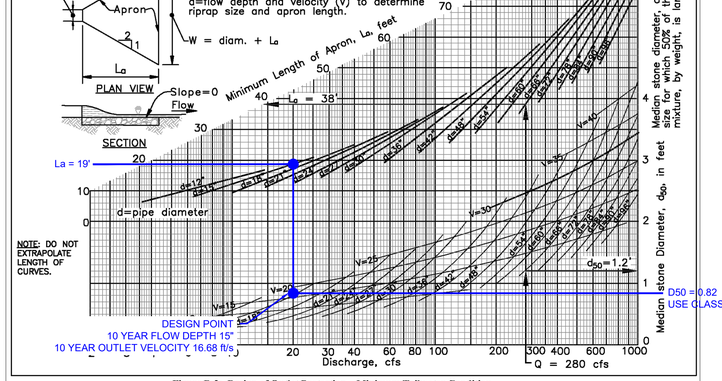
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DESIGN OF OUTLET PROTECTION

MINIMUM TAILWATER CONDITION (T_W < 0.5 diam.)

For full flow, use d=pipe diameter and discharge (Q) to determine riprap size and apron length.

For partial flow or open channels, use d=flow depth and velocity (V) to determine riprap size and apron length.



NOTE: DO NOT EXTRAPOLATE LENGTH OF CURVES.

Figure D.2: Design of Outlet Protection – Minimum Tailwater Condition

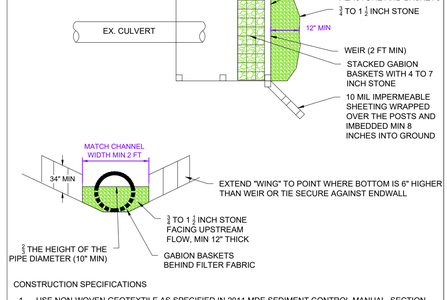
36" HDPE BYPASS PIPE

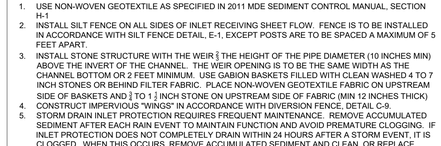
D.18

CULVERT PIPE INLET PROTECTION

STANDARD SYMBOL: CPIP

VISTA CPIP DESIGN





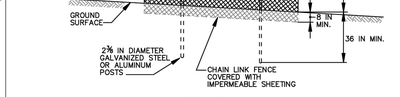
CONSTRUCTION SPECIFICATIONS

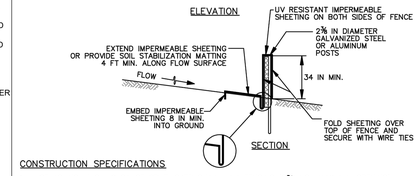
1. USE NON-WOVEN GEOTEXTILE AS SPECIFIED IN 2011 MDE SEDIMENT CONTROL MANUAL, SECTION H-1
2. INSTALL SILT FENCE ON ALL SIDES OF INLET RECEIVING SHEET FLOW. FENCE IS TO BE INSTALLED IN ACCORDANCE WITH SILT FENCE DETAIL, E-1, EXCEPT POSTS ARE TO BE SPACED A MAXIMUM OF 5 FEET APART.
3. INSTALL STONE STRUCTURE WITH THE WEIR ¾ THE HEIGHT OF THE PIPE DIAMETER (10 INCHES MIN) ABOVE THE INVERT OF THE CHANNEL. THE WEIR OPENING IS TO BE THE SAME WIDTH AS THE CHANNEL BOTTOM OR 2 FEET MINIMUM. USE GABION BASKETS FILLED WITH CLEAN WASHED 4 TO 7 INCH STONES OR BEHIND FILTER FABRIC. PLACE NON-WOVEN GEOTEXTILE FABRIC ON UPSTREAM SIDE OF BASKETS AND ¾ TO 1 ½ INCH STONE ON UPSTREAM SIDE OF FABRIC (MIN 12 INCHES THICK)
4. CONSTRUCT IMPERVIOUS "WINGS" IN ACCORDANCE WITH DIVERSION FENCE, DETAIL C-9.
5. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.
6. CULVERT MUST BE INSPECTED AND BE IN WORKING CONDITION.

DETAIL C-9 DIVERSION FENCE

STANDARD SYMBOL: DF

MAXIMUM DRAINAGE AREA = 2 ACRES





CONSTRUCTION SPECIFICATIONS

1. USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2⅜ INCH MAXIMUM OPENING).
2. USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
3. FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
4. SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
5. EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
6. WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNGRADE.
7. KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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NOTE:
This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.

LIC 36310 EXP 11/17/26

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EROSION AND SEDIMENT CONTROL PLAN DETAILS SHEET

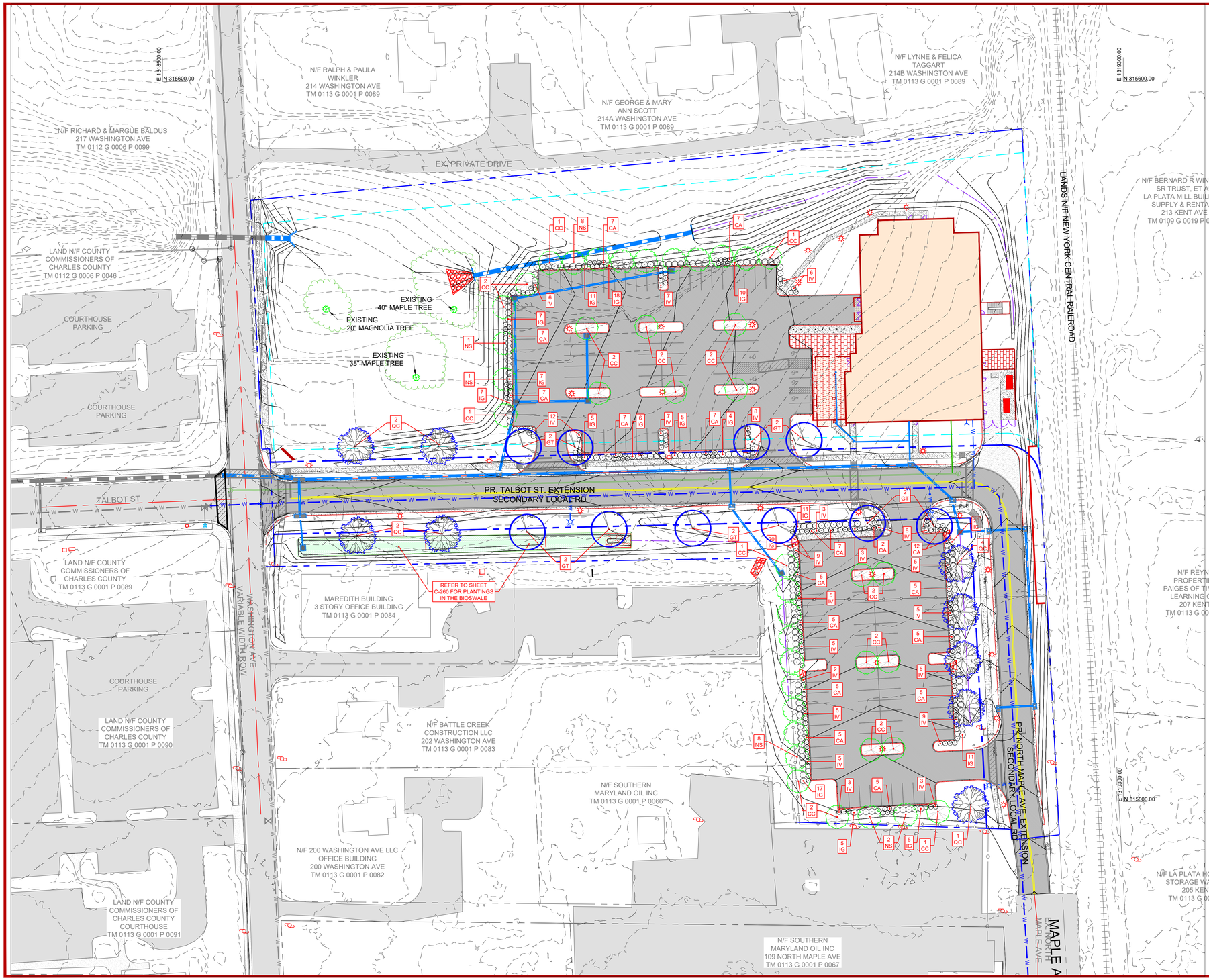
PROJECT DATA

Tax Map: 0113 Parcel: SEVERAL
LA PLATA, MD
Drawn By: WCS Checked By: WCS
Date: 2/12/25
Scale: N/A

REVISIONS

1. 5/19/23 PER LA PLATA COMMENTS
2. 1/16/25 PER LA PLATA COMMENTS
3. 1/16/25 PER CHARLES COUNTY SCD COMMENTS
4. 2/10/25 PER CHARLES COUNTY SCD COMMENTS
5. 7/22/25 PER TOWN COMMENTS
6. 1/16/26 PER TOWN REQUEST

Project No.: 21-093
File Name: jan2026CE011525.dwg
Sheet No.: C-411



PLANT LIST

SYMBOL	ABBREV.	QUANTITY	BOTANICAL NAME	COMMON NAME	MINIMUM SIZE REQUIRED	MATURE SIZE	SPACING
	GT	10	GLEDITSIA TRIACANTHOS INERMIS 'SHADEMASTER'	THORNLESS HONEY LOCUST	2 ½" - 3" CALIPER	H: 30'-70' S: 30'-70'	MIN: 40' O.C.
	QC	9	QUERCUS COCCINEA	SCARLET OAK	2 ½" - 3" CALIPER	H: 50'-70' S: 40'-50'	MIN: 40' O.C.
	NS	20	NYSSA SYLVATICA	BLACK GUM	2 ½" CALIPER	H: 30'-50' S: 20'-30'	MIN: 20' O.C. MAX: 30' O.C.
	CC	21	CERCIS CANADENSIS	EASTERN REDBUD	2 ½" CALIPER	H: 20'-35' S: 20'-35'	MIN: 20' O.C. MAX: 30' O.C.
	CA	103	CEANOTHUS AMERICANUS	NEW JERSEY TEA	1 GAL CONT.	H: 3'-4' S: 3'-5'	4' O.C.
	IG	169	ILEX GLABRA	INKBERRY	1 GAL CONT.	H: 5'-8' S: 5'-8'	5' O.C.
	IV	121	ITEA VIRGINICA	VIRGINIA SWEETSPIRE	1 GAL CONT.	H: 3'-5' S: 3'-5'	4' O.C.

MAINTENANCE NOTES:

1. THE OWNER OF THE PROPERTY SHALL BE RESPONSIBLE FOR PROPER MAINTENANCE OF THE LANDSCAPE.
2. AS USED IN THIS SECTION, "MAINTENANCE" INCLUDES: WATERING; FERTILIZING; LITTER REMOVAL; WEEDING; PRUNING; TRIMMING; INSECT, DISEASE, RODENT AND WEED CONTROL; AND REPLACEMENT OF PLANT MATERIALS AS NEEDED TO PRESERVE THE HEALTH AND APPEARANCE OF THE PLANTINGS.
3. PLANT MATERIALS SHOWING SIGNS OF INSECT OR DISEASE INFESTATION OR OTHER DAMAGE SHALL BE APPROPRIATELY TREATED TO RESTORE THE HEALTH OF THE PLANT MATERIALS AND DEAD PLANT MATERIAL REMOVED AND REPLACED.

LANDSCAPING REQUIREMENT CALCULATION

SECONDARY PARKING LOT
- TOTAL PARKING PROVIDED: 81
- INTERIOR PARKING SPACES: 29
  - MIN LANDSCAPING REQUIRED: 5%
  - TREES REQUIRED: 6 CLASS B

PERIMETER PARKING
- FRONTING TALBOT EXT: 150 FT
  - TREES REQUIRED: 4 CLASS A
  - SHRUBS REQUIRED: 56
- ALL OTHER PERIMETER AREAS: 300 FT
  - TREES REQUIRED: 15 CLASS B
  - SHRUBS REQUIRED: 113

AUXILIARY PARKING LOT
- TOTAL PARKING PROVIDED: 76
- INTERIOR PARKING SPACES: 28
  - MIN LANDSCAPING REQUIRED: 5%
  - TREES REQUIRED: 6 CLASS B

PERIMETER PARKING
- FRONTING TALBOT EXT: 120 FT
  - TREES REQUIRED: 3 CLASS A
  - SHRUBS REQUIRED: 45
- FRONTING MAPLE EXT: 200 FT
  - TREES REQUIRED: 5 CLASS A
  - SHRUBS REQUIRED: 75
- ALL OTHER PERIMETER AREAS: 280 FT
  - TREES REQUIRED: 14 CLASS B
  - SHRUBS REQUIRED: 105

LEGEND

- SITE PROPERTY LINES
- ADJACENT PROPERTY LINES
- PR. BUILDING SETBACKS
- EX. BUILDINGS
- EX. PAVEMENT
- EX. SIDEWALK
- EX. TREE TREELINE
- EX. TREE OUTSIDE OF FOREST STAND
- EX. SANITARY SEWER
- EX. STORM SEWER
- EX. WATER MAIN
- EX. 1X CONTOUR
- EX. 5X CONTOUR
- EX. FENCE
- EX. UTIL POLE
- PR. RIGHT OF WAY
- PR. BUILDING RESTRICTION LINE
- PR STORM SEWER
- PR. TREELINE LOCATION
- PR LIBRARY LOCATION

0 20 40 80 120

SCALE: 1" = 40'

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LANDSCAPE ARCHITECT LICENSE # 2017 STEVEN D. ENGLAND STATE OF MARYLAND

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LANDSCAPING PLAN

PROJECT DATA

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LA PLATA, MD			
Drawn By:	WCS	Checked By:	WCS
Date:			
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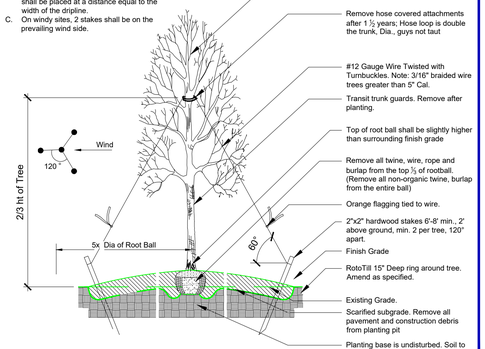
REVISIONS

1.	5/19/23 PER LA PLATA COMMENTS
2.	6/23/23 PER LA PLATA SWM COMMENTS
3.	6/23/23 PER CHARLES COUNTY SCD E&S COMMENTS

Project No.: 21-093
File Name: jan2026CE011525.dwg
Sheet No.: L-100

NOTE
A. Do not fertilize until late spring of 2nd year following planting.
B. Planting soil mix & mulch specified. Mulch shall be placed at a distance equal to the width of the dripline.
C. On windy sites, 2 stakes shall be on the prevailing wind side.

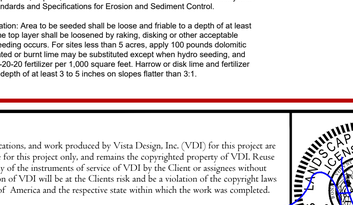
N.T.S.



1
L-101

DECIDUOUS TREE PLANTING

N.T.S.



NOTE
A. Do not fertilize until late spring of 2nd year following planting.
B. Planting soil mix & mulch specified.

2
L-101

SHRUB PLANTING

PLANTING SPECIFICATIONS

REFERENCES AND QUALITY CONTROL
A. All planting material shall conform to the latest edition of the American Standard for Nursery Stock as published by the American Association of Nurserymen. All trees shall be balled and burlapped, nursery-grown, not "collected stock".
B. All plants shall be nursery grown within a U.S.D.A. plant hardiness zone which is the same as, or colder than, the zone in which the project is located.
C. Do not make substitutions: If specified material is unavailable, landscape architect requires proof of non-availability and specifications for proposed equivalent materials. Landscape architect will make final selection of substitutions.
D. Size: Provide trees and shrubs of sizes shown or specified. Trees and shrubs of larger size may be used if acceptable to the landscape architect.
E. Inspection: Landscape architect reserves the right to inspect trees and shrubs before planting, either at place of growth or at site, compliance with requirements of name, variety, size and quality. Landscape architect has right to reject any plant material for any reason, including, but not limited to those listed above. All rejected plant material shall be immediately removed from the site.
F. All planting to be completed by November 15th; or as directed by the landscape architect.

PRODUCTS
Mulch:
Material shall be well aged, finely shredded hardwood bark, dark brown in color, or approved equal. Material shall be mulching grade: uniform in size and free of foreign matter and weed seeds.
Leaf Mold:
Composted for one year. Composed of leaves from mixed hardwoods.
Sewerage Sludge:
Composted wood mulch containing organic matter. Obtained from Sewer Treatment Plant.
Soil Mix:
A thorough mixture of 1 part Leaf Mold to 3 parts topsoil & mycorrhizal fungi at specified rate by manufacturer.
Anti-desiccant:
"Wilt-Pruf" NCF as manufactured by Nursery Specialty Products of New York or approved equal.
Pre-emergence Weed Killer:
shall be Treflan or approved equivalent.
Transit Trunk Guard:
waxed corrugated cardboard or approved equal.
Guying Materials:
Double reinforced rubber hose and 10 gauge metal wire.
Mycorrhizal Fungi:
Broadcast type product, use as an inoculant for trees, shrubs, ground covers, perennials, and turf.
MYCORTREE
Plant Health Care Inc.
440 William Pitt Way
Pittsburgh, PA 15233
1-800-421-9051
Or equivalent.

FERTILIZER
For new plant material provide packet, tablet or pellet forms of slow release fertilizers conforming to Fed. Spec. O-F-241, bearing the manufacturer's guaranteed statement of analysis. Slow release fertilizers shall contain a minimum percentage by weight of five nitrogen (of which 50% will be organic), 10 available phosphoric acid and five potash.

For bed preparation and existing trees, provide granular fertilizer conforming to Fed. Spec. O-F-241, Type 1, Class 2 which shall bear the manufacturer's guaranteed statement of analysis. Granular fertilizer shall contain a minimum percentage by weight of 10 nitrogen (of which 50% shall be organic), six available phosphoric acid and four potash

SOIL EXCAVATIONS
A. The excavation must not be less than 12 inches wider or deeper than necessary to accommodate the ball of the plant.
B. When conditions detrimental to plant growth are encountered; such as rubble fill or adverse drainage conditions, notify landscape architect before proceeding with planting operations.
C. Upon completion of planting of trees, cultivate a ring five times the diameter of the ball or 48", which ever is greater, 15" deep around tree; or as directed by landscape architect. Restore disturbed areas.

PREPARATION OF PLANTING AREAS
A. All planting areas shall be brought to proposed grade using topsoil mix as specified.
B. The planting bed shall be loosened prior to planting by one of the following methods: roto-tilling or with pick and shovel. Soil shall be loosened to a depth of 8" to 10".
C. Organic matter shall be spread over the bed to a depth of 2" for leaf mold and other organics, or 1" deep for sludge, (2 cubic yards of composed sludge/1000 square feet), after the soil has been loosened. The organic matter shall then be worked into the bed with a roto-tiller or other approved method.
D. Fertilizer shall be incorporated into the top 4-6" of bed at manufacturer's specified rate.
E. The entire bed shall be mulched to minimum depth of 4" with mulch as specified.
F. Soil shall be tested for Ph and amended as required to maintain an optimum Ph of 6.5 to 7.0 or as directed.

PLANTING PROCEDURES FOR TREES AND SHRUBS
A. Trees and shrubs shall bear same relationship to grade as they did in the nursery row.
B. Before placing shrubs in pits, place a 6" layer of soil mix material into bottom of pit and tamp.
C. All trees shall be placed directly on the scarified subgrade.
D. The plant pit shall be filled with soil mix material as specified and placed in 6" layers around the ball. Each layer shall be carefully tamped in place in a manner to avoid injury to the roots or ball, or disturbing the position of the plant. When approximately two-thirds (2/3) of the plant has been back-filled, the pit shall be filled with water and the soil allowed to settle around the roots. B&B plants shall have all the twine , wire and burlap cut away or folded back from the top 1/3 of the ball and trunks before applying water. After the water has been absorbed, the plant hole shall be filled with soil mix and tamped lightly to grade.
E. All containerized stock shall be removed from containers and the root mass should either be physically loosened or sliced to prevent strangulation.
F. Failure to comply with planting procedures outlined above is basis for rejection of plant material by landscape architect.
G. Transit trunk guard shall be removed only after inspection at site by landscape architect.

PRUNING
A. Trees and shrubs shall be pruned to remove broken branches only and/ or to preserve their natural character and shape. Pruning shall be restricted in general to the secondary branches and soft, sucker growth. Never cut a leader. Honor branch collar, do not leave stubs & do not use wound dressing paint.
B. ALL PLANTS DISFIGURED BY POOR PRUNING PRACTICES WILL BE REJECTED BY THE LANDSCAPE ARCHITECTS.

MULCHING
A. All planting beds shown on the plans shall be mulched with 4" of mulch over entire area.
B. Before mulch is installed, apply pre-emergence weed killer and incorporate into soil according to manufacturer's directions.
C. All surfaces to receive mulch shall be raked smooth and be free of all rocks, debris and large bark pieces. Mulch shall not be mounded up around base of tree.
D. Mulch shall be replenished within one year to eighteen months of initial installation.

STAKING AND GUYING
A. All trees to be staked and guyed within 48 hours of planting.
B. Methods and materials for staking and guying are illustrated in individual planting details.
C. Neatly flag all guy wires with rot resistant yellow tree marking ribbon.
D. Staking may not be required dependent on plant location as directed by landscape architect.
E. Brace plants upright in position by guy wires and rubber hose protection and stakes:

Tree Caliper	Tree Support Method
1 - 3 inches	2 guy wires (2 strand wire)
3 - 6 inches	3 guy wires (2 strand wire)
over 6 inches	4 guy wires (4 strand wire)

PLANTING PROCEDURE FOR GROUNDCOVERS, PERENNIALS AND ANNUALS
A. All planting holes shall be excavated through the mulch with hand trowel or shovel.
B. Before planting, biodegradable pots and non-biodegradable pots shall be removed.
C. The perennials shall be planted as follows:
1. Roots of the plant shall be surrounded by soil below the mulch. The plants shall be set so that the top of the root system is even with existing soil grade.
2. At and equal distance apart (plans and specifications specify the distance on center, (O.C.) for the perennials.
D. The entire bed shall be edged per detail.
E. Treat the mulched and planted perennial bed with soil applied, pre-emergent herbicide appropriate for use with the plant material specified.
F. The entire perennial bed shall be thoroughly watered to a depth of 6-8".

REMOVAL AND CLEANUP
A. Removal of debris is required. The property must be left in a neat and orderly condition in accordance with good and accepted planting practices.
B. Protect all Finished surfaces during planting operations.
C. Repair and restore all damaged or disturbed surfaces related to planting procedures.

SUBSTANTIAL COMPLETION
The point when plant materials have been installed and the Landscape Architect completes a punch list.

FINAL ACCEPTANCE
After all items on the punch list have been completed to the Landscape Architect's satisfaction.

GUARANTEE & GUARANTEE PERIOD
A. Guarantee Period commences after final acceptance.
B. Plant materials shall be guaranteed for two growing seasons from date of acceptance by the owner or his representative. The trees are to be alive and in satisfactory growing condition as determined by the owner or his representative during final inspection at the end of the guarantee period
C. Replacement will be made according to these same specifications and during the normal planting period. Replacements shall be subject to the same guarantee and replacement as the original material. The replacements shall be made within 60 days following written notification from the owner or his representative.
D. In the event of questions regarding the condition and satisfactory establishment of a rejected plant, the contractor may, if approved by the owner, allow such a plant to remain through another growing season at which time the rejected plant, if found to be dead or in an unhealthy or badly impaired condition, shall be replaced.
E. The contractor is not responsible for theft or damage to plants by non-contractor vehicles or vandalism once plants are installed and approved.
F. Remove all guys and stakes from trees after one year.

LAWN AND GRASS PLANTING SPECIFICATIONS

WORK INCLUDED
A. Preparation of subgrade to receive topsoil.
B. Spreading topsoil, raking and leveling
C. Sod Placement
D. Maintaining seeded and sodded areas until acceptance

REFERENCES
A. FS-O-F-241 - Fertilizers, Mixed, commercial
B. ASPA (American Sod Producers Association) - Guideline Specifications to Sodding

QUALITY ASSURANCE
A. Testing of topsoil when required, will be performed by an independent testing laboratory appointed and paid for by the owner. Testing will be performed to ascertain N, P, K, Mg, soluble salt contents, organic matter content and pH value.
B. Submit minimum 10 oz sample of topsoil proposed to be used. Forward sample to appointed testing laboratory in sealed containers to prevent contamination.

DELIVERY, STORAGE AND HANDLING
A. Deliver fertilizer in waterproof bags showing weight, chemical analysis and name of manufacturer.

EXISTING CONDITIONS
A. Beginning work means acceptance of existing conditions.

GROWING MEDIA
A. Imported Topsoil: natural, fertile, agricultural soil typical of locality, capable of sustaining vigorous plant growth, from well drained site, free of flooding, not in frozen or muddy condition, not less than 6% organic matter and pH value of 5.9 to 7.0. Soil shall be free from subsoil, slag, clay, stones, lumps, live plants, roots, sticks, crabgrass, couch grass, noxious weeds and foreign matter.
B. Existing Topsoil: Natural, fertile agricultural soil capable of sustaining vigorous plant growth, not frozen or muddy condition, containing not less than 6% organic matter, and corrected to pH value of 5.9 to 7.0. Free from subsoil, slag, clay, stones, lumps, live plants, roots, sticks, crabgrass, couch grass, noxious weeds and foreign matter.
C. Sand: Hard, granular natural beach sand, washed, free of impurities, chemical or organic matter.
D. Limestone: Dolomitic limestone with minimum 85% carbonates and 50% calcium oxides. Bags shall show weights and analysis.
E. Fertilizer: Commercial type conforming to FS O-F-241, Type 1, Grade A recommended for grass, with 50% of the elements derived from organic sources; of proportion necessary to eliminate and deficiencies of topsoil as indicated in analysis to the following proportions: nitrogen 10%, phosphoric acid 6%, soluble potash 4%.

SOD
A. Certified field cultivated grass sod; of type indicated on Plant List or on Drawings; with strong fibrous root system; free from stones and burned or bare spots.

ACCESSORIES
A. Mulching Material: Oat or wheat straw, reasonably free from weeds, foreign matter detrimental to plant life, and in dry condition. Hay or chopped cornstalks is not acceptable.
B. Mulching Material / Tack Coat: Wood or wood cellulose fiber, free of growth or germination inhibiting ingredients.
C. Weed Killer: "Weed B Gone" or equal.
D. Establishment Blanket: Uniform, open weave jute matting.
E. Wooden Pegs: Of sufficient size and length to ensure satisfactory anchorage of sod on slope in excess of 2:1.
F. Water: Clean, fresh and free of substances or matter which would inhibit vigorous growth of grass.

PREPARATION
A. Protect existing underground improvements from damage.
B. Remove foreign materials, plants, roots, stones and debris from site. DO NOT BURY FOREIGN MATERIAL.
C. Remove contaminated subsoil in adherence to State and Federal Regulations.
D. Cultivate area to receive subsoil to depth of 3 inches. Repeat cultivation in areas where equipment has compacted subgrade.

SPREADING TOPSOIL
A. Spread topsoil to minimum depth of 6 inches over area to be sodded or seeded. Place during dry weather, and on dry, unfrozen subgrade.
B. Cultivate topsoil to a minimum depth of 6 inches with mechanical tiller. Cultivate inaccessible areas by hand.
C. Remove from site ANY FOREIGN MATERIALS collected during cultivation in adherence to State and Federal Regulations.
D. Amend soil with Limestone, Fertilizer, or Sand according to results of soil testing.
E. Grade to eliminate rough spots and low areas where ponding may occur. Maintain smooth, uniform grade.
F. Assure positive drainage away from buildings.
G. Finish grade after placement of topsoil shall be even and sufficiently firm to prevent irregular settling when irrigations is applied.

CUTTING SOD
A. Cut sod using an approved method, in accordance with local governing American Sod Producers Association. Cut sod in pieces not exceeding 1 square yard, with minimum 12" width and maximum 1 inch thick soil portion.

APPLY FERTILIZER AND LIMESTONE IN QUANTITIES REQUIRED BY SOIL ANALYSIS
A. Apply ground limestone at rate of 50 lbs. per 1,000 sq.ft. unless soil tests or Landscape Architect indicates otherwise.
B. Apply after fine grading and mix thoroughly into upper 4 inches of topsoil.

LAYING SOD
A. Lay sod as soon as possible after delivery to prevent deterioration.
B. Lay sod closely knit together with no open joints visible and pieces not overlapped. Lay smooth and flush with adjoining grass areas paving and top surfaces of curbs.
C. On slopes, staple outside edges at 36 inch intervals
D. Lightly dress slopes with topsoil to ensure close contact between sod and soil.
E. Immediately after sodding, the area shall be rolled with a roller not to exceed 120 lbs. to remove minor irregularities.

SODDED AREAS
A. Mow grass at regular intervals as required to maintain at a maximum height of 2½ inches. Do not cut more than ½ of the grass blades at any one mowing. Neatly trim edges and hand clip where necessary. Immediately remove clippings after mowing and trimming.
B. Water when required and in sufficient quantities to prevent any underlying soil from drying out.
C. Control growth of weeds. When using herbicides, apply in accordance with manufacturer's recommendations. Remedy damage resulting from negligent or improper use of herbicides.
D. Immediately repair or replace any areas which show deterioration or bare spots.
E. Protect sodded areas with warning signs during maintenance period.

RESTORATION
A. Restore all surfaces, pavement, concrete, grassed areas, planted areas and structures damaged during execution or work related to this section.

WARRANTY
A. After final acceptance, provide warranty, in writing from Subcontractor that lawn areas will be good, vigorous and thriving condition for a 1 year period. Replace seeding and sod not in good, vigorous growth after 1 year at no additional cost to Owner. Subcontractor shall be responsible to inform and instruct Owner on means by which lawn should be maintained after MAINTENANCE PERIOD; Subcontractor shall have free access to site during WARRANTY PERIOD to assure himself that the Owner is providing proper lawn care.

INSPECTION AND ACCEPTANCE
A. Inspection: Inspection of work will be made by Landscape Architect at conclusion of maintenance period to determine if proper completion and maintenance has been effected. Sub-contractor shall give written notice to Architect requesting such inspection at least ten days prior to anticipated date. Condition of work will be noted and determination made by Landscape Architect whether maintenance shall continue.
B. Acceptance: After inspection, Subcontractor will be notified in writing by Landscape Architect of acceptance of work, or if there are any deficiencies or requirement s for completion of work. Maintenance or other work remaining to be done shall be subject to re-inspection prior to final acceptance.

CHARLES SOIL CONSERVATION DISTRICT DETAILS AND SPECIFICATIONS FOR VEGETATIVE ESTABLISHMENT

STANDARD STABILIZATION NOTE: Following initial soil disturbance or re-disturbance, seeding for permanent or temporary stabilization shall be completed within three (3) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes greater than 3 horizontal to 1 vertical (3:1); and seven (7) calendar days as to all other disturbed or graded areas on the project site not under active grading. Once vegetation is established, the site shall have 95% groundcover to be considered adequately stabilized.

1. Permanent Seeding:

Permanent Seeding Summary

Hardiness Zone (from Figure B.3): Zone 7a Seed Mixture (from Table B.3): ___8					Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P_2O_5	K_2O	
	Tall Fescue	100	2/15-4/30; 8/15-11/30	1/4-1/2 in	45 lb/ac (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2.5 tons/ac (100 lb/ 1000 sf)

A. Soil Tests: Lime and fertilizer will be applied per soil tests results for sites greater than 5 acres. Soil tests will be done at completion of initial rough grading or as recommended by the sediment control inspector. Rates and analyses will be provided to the grading inspector as well as the contractor. The minimum soil conditions required for permanent vegetative establishment are:
a. Soil pH shall be between 6.0 and 7.0.
b. Soluble salts shall be less than 500 parts per million (ppm).
c. The soil shall contain less than 40% clay but enough fine grained material (> 30% silt plus clay) to provide the capacity to hold moderate amount of moisture. An exception is if lovegrass or sericia lespedeza is to be planted, then a sandy soil (< 30% silt plus clay) would be acceptable.
d. Soil shall contain 1.5% minimum organic matter by weight.
e. Soil must contain sufficient pore space to permit adequate root penetration.
f. If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section B-4-2 titled Standards and Specifications for Soil Preparation, Topsoil, and Soil Amendments as found in the 2011 Maryland Standards and Specifications for Erosion and Sediment Control.

B. Seedbed Preparation: Area to be seeded shall be loose and friable to a depth of at least 3 to 5 inches. The top layer shall be loosened by raking, disking or other acceptable means before seeding occurs. For sites less than 5 acres, apply 100 pounds dolomitic limestone, hydrated or burnt lime may be substituted except when hydro seeding, and 10 pounds of 10-20-20 fertilizer per 1,000 square feet. Harrow or disk lime and fertilizer into the soil to a depth of at least 3 to 5 inches on slopes flatter than 3:1.

C. Seeding: Apply 5-6 pounds per 1,000 square feet of tall fescue between February 15 and April 30 or between August 15 and October 31. Apply seed uniformly on a moist firm seedbed with a cyclone seeder, cultipacker seeder or hydroseeder (slurry includes seeds and fertilizer, recommended on steep slopes only). Maximum seed depth should be ¼ inch in clayey soils and ½ inch in sandy soils when using other than the hydroseeder method. Irrigate where necessary to support adequate growth until vegetation is firmly established. If other seed mixes are to be used, said selections must meet the 2011 Standards and Specifications for Soil Erosion and Sediment Control.

D. Mulching: Mulch shall be applied to all seeded areas immediately after seeding as per Section B-4-3 entitled Standards and Specifications for Seeding and Mulching as found in the 2011 Standards and Specifications for Soil Erosion and Sediment Control. During the time periods when seeding is not permitted, mulch shall be applied immediately after grading and maintained until seeding can be performed.

Mulch shall be unrotted, unchopped, small grain straw applied at a rate of 2 tons per acre or 90 pounds per 1,000 square feet (2 bales). If a mulch-anchoring tool is used, apply 2.5 tons per acre. Mulch materials shall be relatively free of all kinds of weeds and shall be completely free of prohibited noxious weeds. Spread mulch uniformly, mechanically or by hand, to a depth of 1-2 inches.

E. Securing Straw Mulch: Straw mulch shall be secured immediately following mulch application to minimize movement by wind or water. The following methods are permitted:

(i) Use a mulch-anchoring tool which is designed to punch and anchor mulch into the soil surface to a minimum depth of 2 inches. This is the most effective method for securing mulch, however, it is limited to relatively flat areas where equipment can operate safely. If a mulch-anchoring tool is used, apply 2.5 tons per acre.

(ii) Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. If mixed with water, use 50 pounds of wood cellulose fiber per 100 gallons of water.

(iii) Liquid binders may be used. Apply at higher rates at the edges where wind catches mulch, such as in valleys and on crests of slopes. The remainder of the area should appear uniform after binder application. Binders listed in the 2011 Standards and Specifications for Soil Erosion and Sediment Control or approved equal shall be applied at rates recommended by the manufacturers.

(iv) Lightweight plastic netting may be used to secure mulch. The netting will be stapled to the ground according to manufacturer's recommendations.

F. Irrigation: In the absence of adequate rainfall, irrigation should be performed to ensure adequate vegetative establishment.

2. Temporary Seeding:

Temporary Seeding Summary

Hardiness Zone (from Figure B.3): Zone 7a Seed Mixture (from Table B.1): ___8					Fertilizer Rate (10-20-20)	Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths		
	Barley	96	2/15-4/30; 8/15-11/30	1"	436 lb/ac (10 lb/1000 sf)	2.5 tons/ac (100 lb/1000 sf)
	Oats	72	2/15-4/30; 8/15-11/30	1"		
	Cereal Rye	112	2/15-4/30; 8/15-12/15	1"		
	Foxtail Millet	30	5/1-8/14	0.5"		

Lime: 100 pounds of dolomitic limestone per 1,000 square feet.
Fertilizer: 10 pounds of 10-20-20 per 1,000 square feet.
Seed: Annual Ryegrass - 1 pound per 1,000 square feet (February 15 through April 1 30 or August 15 through November 30).
Millet - 1 pound per 1,000 square feet (May 1 through August 15).
Mulch: Same as 1 D and E above.

3. No fills may be placed on frozen ground. All fill to be placed in approximately horizontal layers each layer having a loose thickness of not more than 8 inches. All fill in roadways and parking areas are to be classified as per Charles County requirements. Any fill within the building area is to be compacted to a minimum of 95% density. Fills for pond embankments shall be compacted as per MD-378 Construction Specifications. All other fills shall be compacted sufficiently so as to be stable and prevent erosion and slippage.

4. Permanent Sod:

Installation of sod should follow permanent seeding dates. Seedbed preparation for sod shall be as noted in section (B) above. Permanent sod is to be tall fescue, state approved sod; lime and fertilizer per permanent seeding specifications and lightly irrigate soil prior to laying sod. Sod is to be laid on the contour with all ends tightly abutting. Joints are to be staggered between rows. Water and roll or tamp sod to insure positive root contact with the soil. All slopes steeper than 3:1, as shown, are to be permanently sodded or protected with an approved erosion control netting. Additional watering for establishment may be required. Sod is not to be installed on frozen ground. Sod shall not be transplanted when moisture content (dry or wet) and/or extreme temperature may adversely affect its survival. In the absence of adequate rainfall, irrigation should be performed to ensure establishment of sod.

5. Mining Operations:
Sediment control plans for mining operations must include the following seeding dates and mixtures:
For seeding dates of February 1 through April 30 and August 15 through October 31, use seed mixture of tall fescue at the rate of 2 pounds per 1,000 square feet and serecia lespedeza at the minimum rate of 0.5 pounds per 1,000 square feet.

6. Topsoil shall be applied as per the Standard and Specifications for Topsoil from the current 2011 Maryland Standards and Specifications for Erosion and Sediment Control.

NOTE: Use of this information does not preclude meeting all of the requirements of the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control.

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

Definition
The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose
To provide a suitable soil medium for vegetative growth.
Conditions Where Practice Applies
Where vegetative stabilization is to be established.

Criteria
A. Soil Preparation

1. Temporary Stabilization
a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
b. Apply fertilizer and lime as prescribed on the plans.
c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.

2. Permanent Stabilization
a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
i. Soil pH between 6.0 and 7.0.
ii. Soluble salts less than 500 parts per million (ppm).
iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
iv. Soil contains 1.5 percent minimum organic matter by weight.
v. Soil contains sufficient pore space to permit adequate root penetration.
b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.
d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

B. Topsoiling

1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
c. The original soil to be vegetated contains material toxic to plant growth.
d. The soil is so acidic that treatment with limestone is not feasible.
4. Areas having slopes steeper than 2:1 require special consideration and design.
5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½ inches in diameter.
b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
6. Topsoil Application
a. Erosion and sediment control practices must be maintained when applying topsoil.
b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)

1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

Table B.6: Maintenance Fertilization for Permanent Seeding

Seeding Mixture	Type	lb/ac	lb/1000 sf	Time	Mowing
Tall fescue makes up 70 percent or more of cover.	10-10-10 or 30-10-10	500 400	11.5 9.2	Yearly or as needed. Fall	Not closer than 3 inches, if occasional mowing is desired.
Birdsfoot Trefoil.	0-20-0	400	9.2	Spring, the year following establishment, and every 4 to 5 years, thereafter.	Mow no closer than 2 inches.
Fairly uniform stand of tall fescue or birdsfoot trefoil.	5-10-10	500	11.5	Fall, the year following establishment, and every 4 to 5 years, thereafter.	Not required, no closer than 4 inches in the fall after seed has matured.
Weeping lovegrass fairly uniform plant distribution.	5-10-10	500	11.5	Spring, the year following establishment, and every 3 to 4 years, thereafter.	Not required, not closer than 4 inches in fall after seed has matured.
Red & chewings fescue, Kentucky bluegrass, hard fescue mixtures.	20-10-10	250 100	5.8 2.3	September, 30 days later. December, May 20, June 30, if needed.	Mow no closer than 2 inches for red fescue and Kentucky bluegrass, 3 inches for fescue.

NOTE:
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NOTE:
This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.

LANDSCAPE ARCHITECT
STATE OF MARYLAND
STEVEN D. ENGLAND
No. 1001

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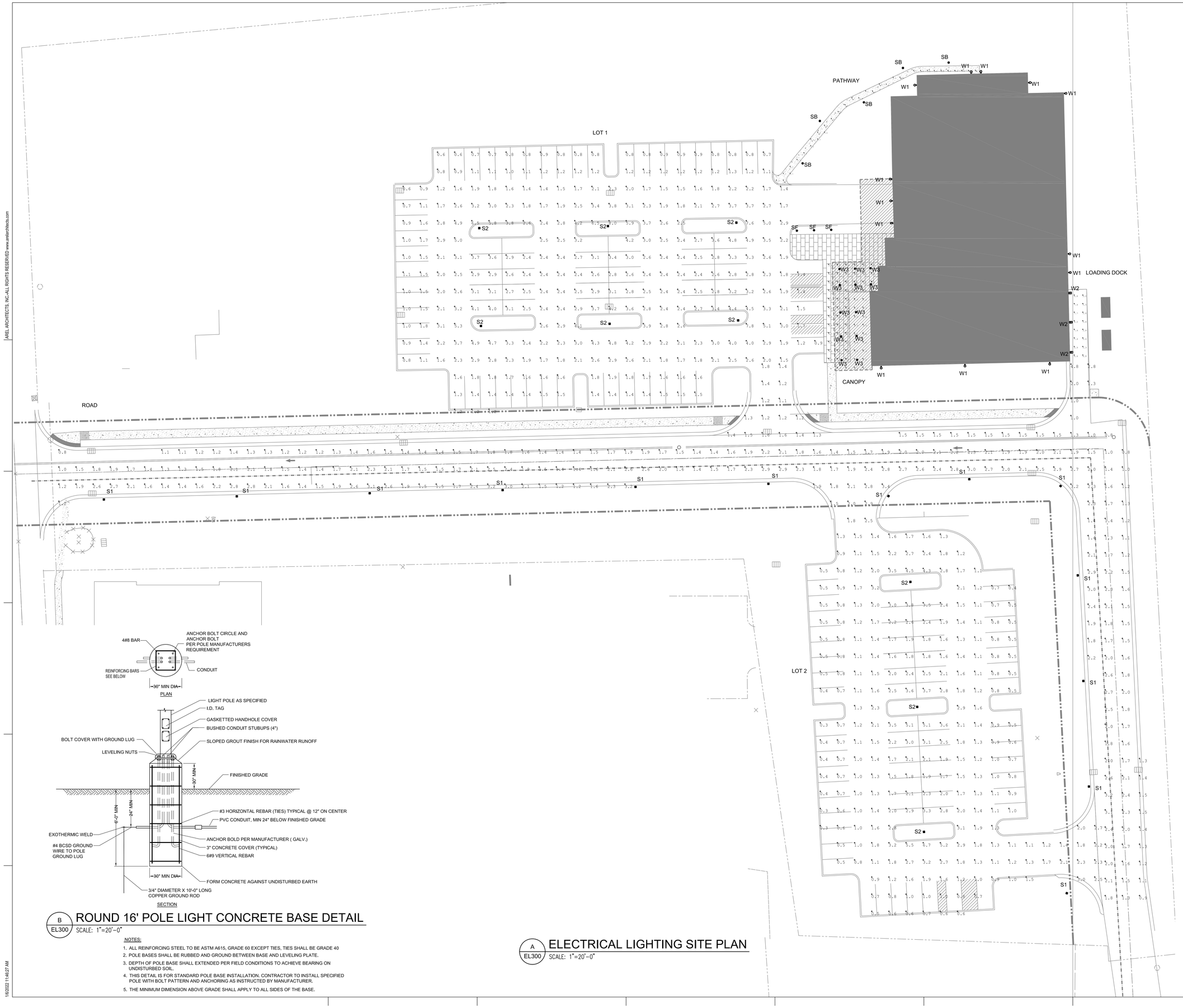
LANDSCAPING PLAN
DETAILS AND NOTES

PROJECT DATA
Tax Map: 0113 Parcel: SEVERAL
LA PLATA, MD
Drawn By: WCS Checked By: WCS
Date:
Scale: 1" = 40'

REVISIONS
1. 5/19/23 PER LA PLATA COMMENTS
2. 6/23/23 PER LA PLATA SWM COMMENTS
3. 6/23/23 PER CHARLES COUNTY SCD E&S COMMENTS

Project No.: 21-093
File Name: jan2026CE011525.dwg
Sheet No.: L-101

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B / EL300 ROUND 16' POLE LIGHT CONCRETE BASE DETAIL

SCALE: 1"=20'-0"

NOTES:

1. ALL REINFORCING STEEL TO BE ASTM A615, GRADE 60 EXCEPT TIES, TIES SHALL BE GRADE 40
2. POLE BASES SHALL BE RUBBED AND GROUND BETWEEN BASE AND LEVELING PLATE.
3. DEPTH OF POLE BASE SHALL EXTENDED PER FIELD CONDITIONS TO ACHIEVE BEARING ON UNDISTURBED SOIL.
4. THIS DETAIL IS FOR STANDARD POLE BASE INSTALLATION. CONTRACTOR TO INSTALL SPECIFIED POLE WITH BOLT PATTERN AND ANCHORING AS INSTRUCTED BY MANUFACTURER.
5. THE MINIMUM DIMENSION ABOVE GRADE SHALL APPLY TO ALL SIDES OF THE BASE.

A / EL300 ELECTRICAL LIGHTING SITE PLAN

SCALE: 1"=20'-0"

1/6/2022 11:46:27 AM

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WEIGAND ASSOCIATES, INC.
20270 GOLDENROD LANE
GERMANTOWN, MD 20876
TEL 301-540-9060

CLIENT / PROJECT

La Plata Library

208 WASHINGTON AVE.
LA PLATA, MD 20646

ISSUED FOR	REV	DATE

KEYPLAN

PROJECT NORTH

PROJECT NO. 2.128

DRAWING TITLE

ELECTRICAL SITE LIGHTING

SCALE:

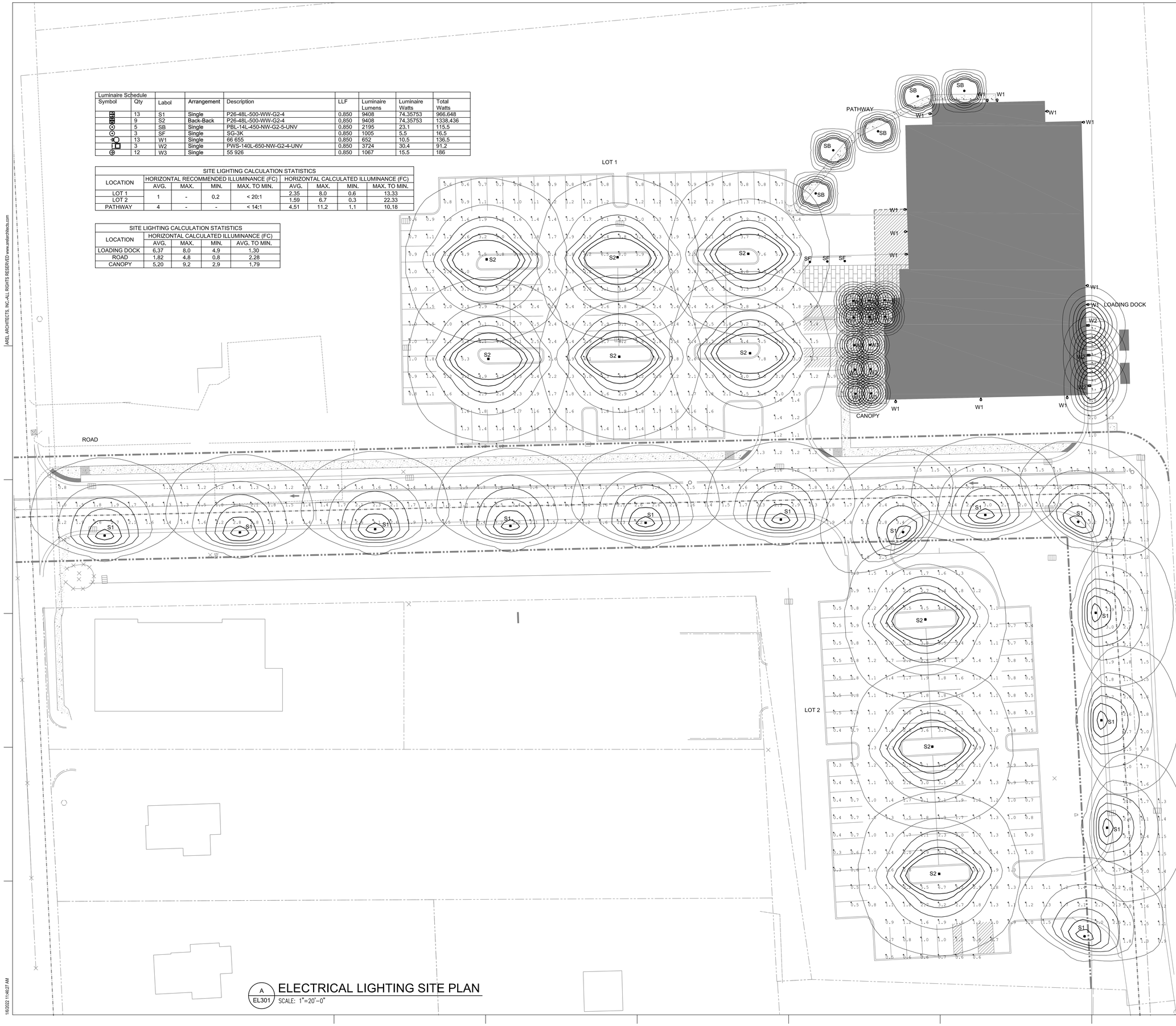
SHEET NUMBER

EL-300

Luminaire Schedule								
Symbol	Qty	Labol	Arrangement	Description	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
	13	S1	Single	P26-48L-500-WW-G2-4	0.850	9408	74.35753	966.648
	9	S2	Back-Back	P26-48L-500-WW-G2-4	0.850	9408	74.35753	1338.436
	5	SB	Single	PBL-14L-450-NW-G2-5-UNV	0.850	2195	23.1	115.5
	3	SF	Single	SG-3K	0.850	1005	5.5	16.5
	13	W1	Single	66 655	0.850	652	10.5	136.5
	3	W2	Single	PWS-140L-650-NW-G2-4-UNV	0.850	3724	30.4	91.2
	12	W3	Single	55 926	0.850	1067	15.5	186

SITE LIGHTING CALCULATION STATISTICS								
LOCATION	HORIZONTAL RECOMMENDED ILLUMINANCE (FC)				HORIZONTAL CALCULATED ILLUMINANCE (FC)			
	AVG.	MAX.	MIN.	MAX. TO MIN.	AVG.	MAX.	MIN.	MAX. TO MIN.
LOT 1	1	-	0.2	< 20:1	2.35	8.0	0.6	13.33
LOT 2					1.59	6.7	0.3	22.33
PATHWAY	4	-	-	< 14:1	4.51	11.2	1.1	10.18

SITE LIGHTING CALCULATION STATISTICS				
LOCATION	HORIZONTAL CALCULATED ILLUMINANCE (FC)			
	AVG.	MAX.	MIN.	AVG. TO MIN.
LOADING DOCK	6.37	8.0	4.9	1.30
ROAD	1.82	4.8	0.8	2.28
CANOPY	5.20	9.2	2.9	1.79



A EL301 ELECTRICAL LIGHTING SITE PLAN
SCALE: 1"=20'-0"

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CLIENT / PROJECT

La Plata Library

208 WASHINGTON AVE.
LA PLATA, MD 20646

ISSUED FOR	REV	DATE

KEYPLAN

PROJECT NORTH

PROJECT NO. 2.128

DRAWING TITLE

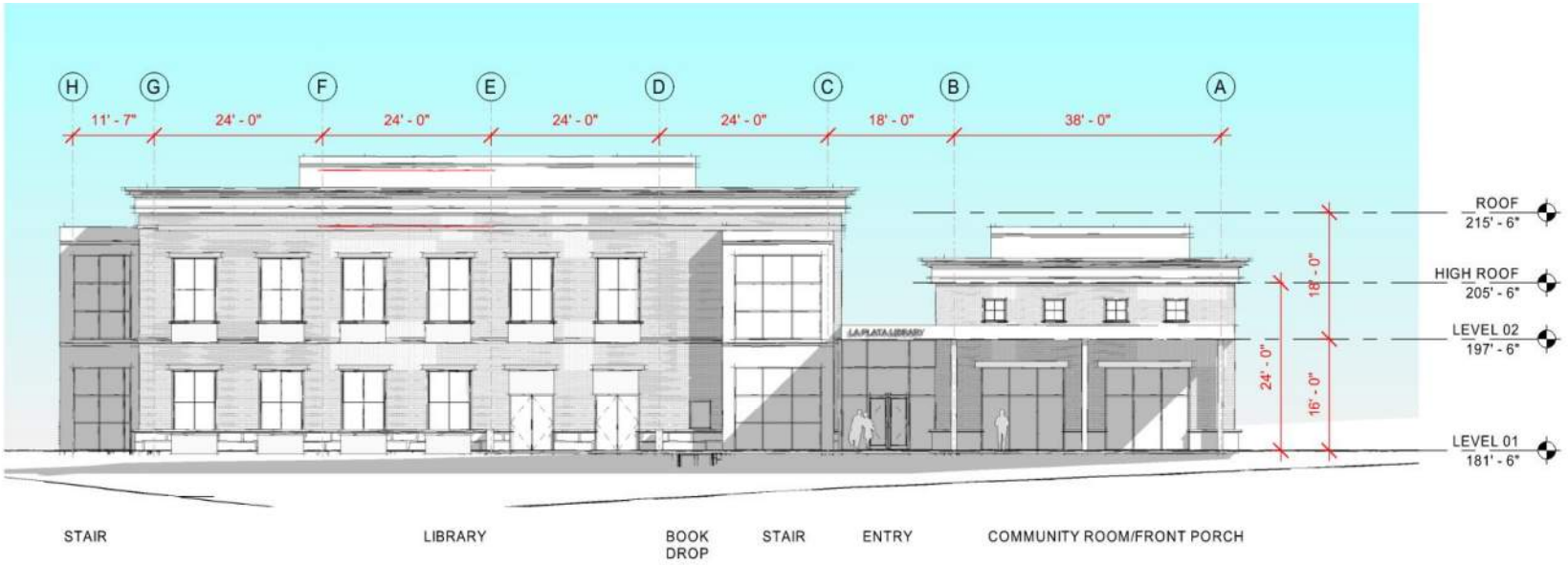
ELECTRICAL SITE LIGHTING PHOTOMETRIC CALCULATION

SCALE:

SHEET NUMBER

EL-301

Massing | 01 West Elevation Traditional "A"



1 / 17 WEST ELEVATION
1/16" = 1'-0"



Exterior Schemes

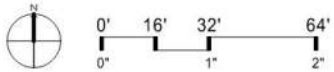
Plans

1st Floor Plan

COMMUNITY
New Color Scheme Entry
LIBRARY FLOOR
LOBBY
NON-PUBLIC ADMINISTRATION
PUBLIC ADMINISTRATION
SUPPORT

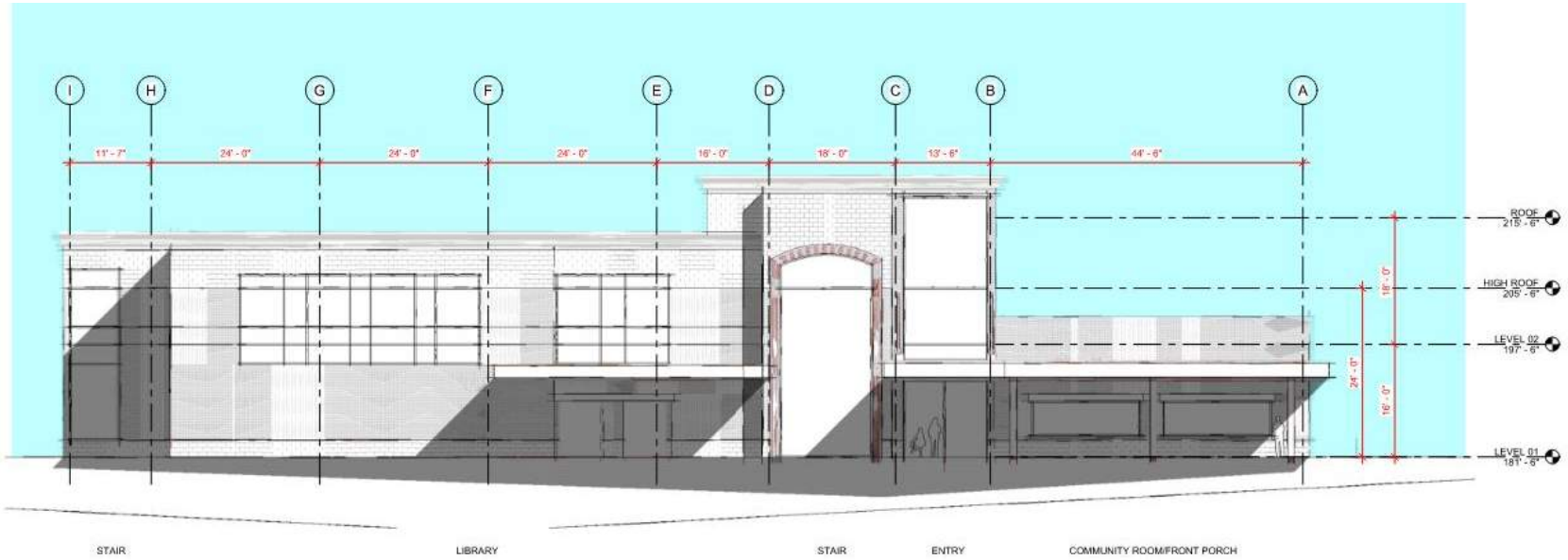
1ST FLR = 16,800 SF
2ND FLR = 10,700 SF
TOTAL = 27,500 SF







Massing | 02 West Elevation "B"



1/17 WEST ELEVATION



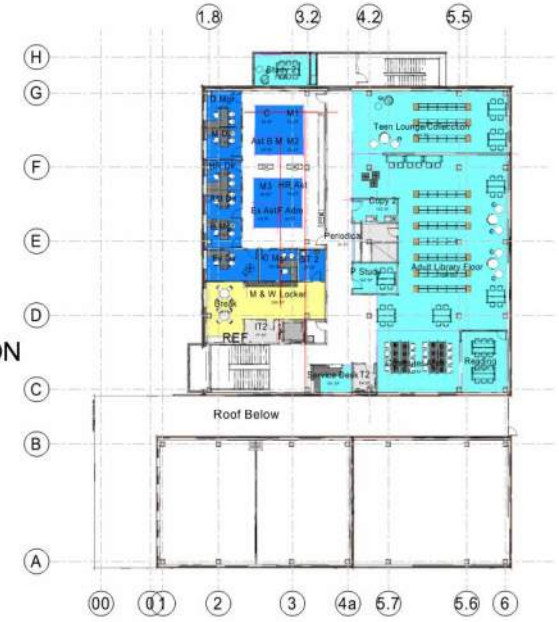


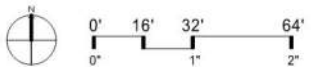
Exterior Schemes

Plans

2nd Floor Plan

- COMMUNITY
- New Color Scheme Entry
- LIBRARY FLOOR
- LOBBY
- NON-PUBLIC ADMINISTRATION
- PUBLIC ADMINISTRATION
- SUPPORT





Massing | 02 Southwest Axon "B"





Massing | 02 West Elevation "B"





TRAFFIC IMPACT ANALYSIS

FOR

LA PLATA LIBRARY

Prepared by:

LENHART TRAFFIC CONSULTING, INC.

TRAFFIC ENGINEERING & TRANSPORTATION PLANNING



December 23, 2025

Revised: January 16, 2026

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Section 1 Introduction

1.1 Project Description

This Traffic Impact Analysis (TIA) has been prepared to support the proposed La Plata Library development. The subject site, located on the northeast quadrant of Washington Avenue & Talbot Street, in the Town of La Plata, is shown on **Exhibit 1a**. The site is currently undeveloped and is proposed to be developed with 27,799 square foot public library

Access to the site is proposed along planned extensions of Talbot Street and Maple Avenue. Two access points are proposed for the main library parking lot, to be located on the north side of the Talbot Street extension, and two access points are proposed for the auxiliary parking lot, to be located south of the Talbot Street extension.

A concept plan is provided in Appendix A that shows the proposed library and the extensions of Talbot Street and Maple Avenue.

1.2 Scope of Study

A scope of study was provided by the Town of La Plata, and has been provided in Appendix A. The intersections required to be evaluated in this TIA are shown on **Exhibits 1a and 1b.**

The scope of study is consistent with the requirements of Charles County and the Maryland Department of Transportation State Highway Administration (MDOT SHA). It should be noted, however, that the Town of La Plata does not have approved Adequate Public Facilities requirements at this time.

1.3 Executive Summary

Based on the analyses contained in this report:

- All study intersections will operate at LOS "D" or better, with the exception of US 301 & MD 225, US 301 & MD 6, and MD 6 & Washington Avenue. The following improvements will mitigate the impact of the proposed development:
    - US 301 & MD 225: Traffic signal adjustment to give additional green time to the southbound through and eastbound phases.
    - US 301 & MD 6: Traffic signal adjustment to give additional green time to the north- and southbound through phases.
    - MD 6 & Washington Avenue: Traffic signal adjustment nearly

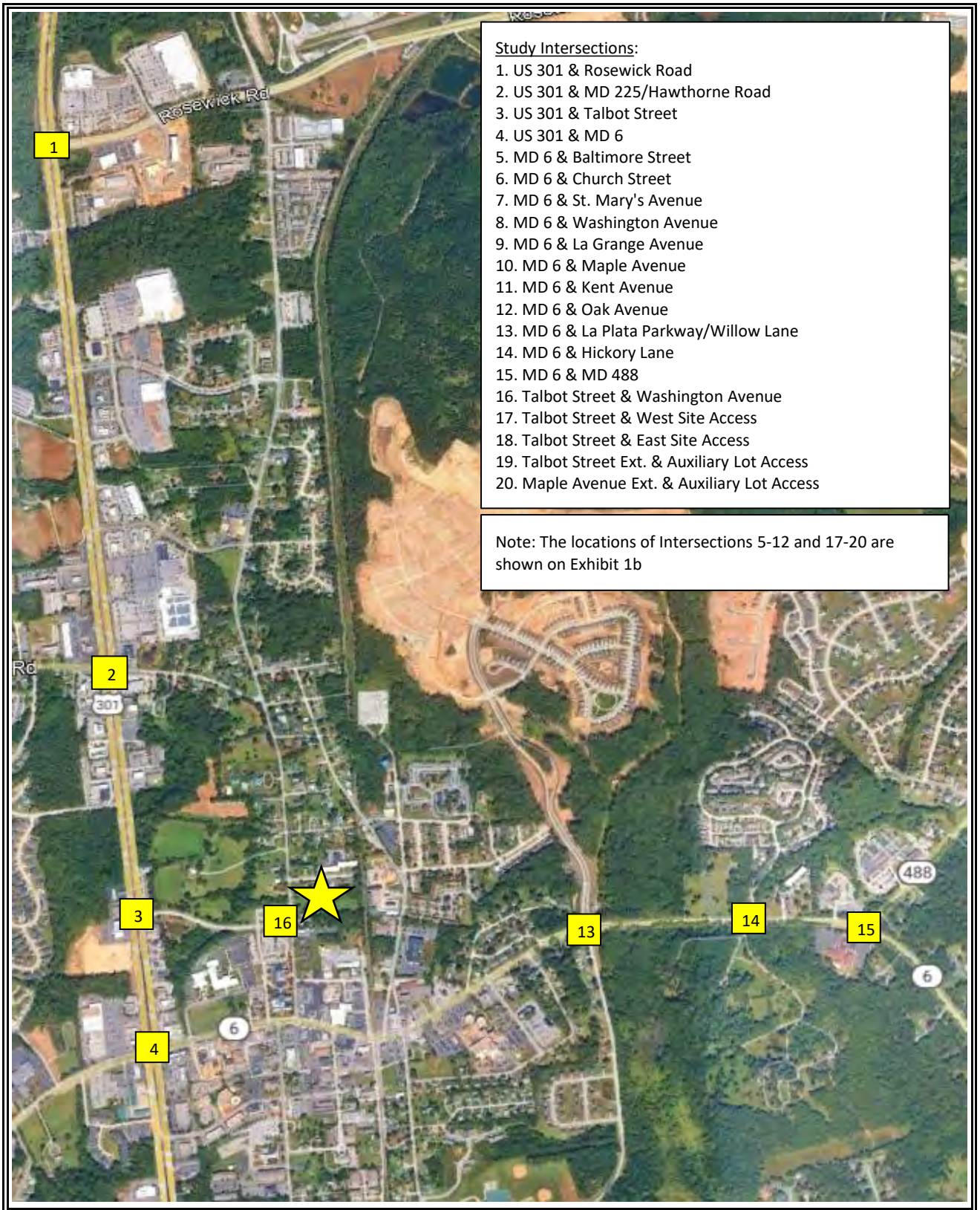
mitigates the full impact of the developments. The westbound approach along MD 6 can be restriped as a left, through, and shared through/right-turn lanes to fully mitigate the impact. The eastbound left should be extended and tied into the improvement being constructed by the Pinegrove development at the intersection of US 301 & MD 6, which will provide a 2nd southbound left-turn lane, and a second receiving lane along eastbound MD 6, currently planned to terminate at Calvert Street. With the Pinegrove improvement and the recommended improvement in this TIA, the resulting improvement consists of two eastbound lanes along MD 6 between US 301 and Washington Avenue. The innermost lane will tie directly into the existing left-turn lane at Washington Avenue. This will allow for sufficient left-turn storage for queues at MD 6 & Washington Avenue. A concept plan of the recommended improvements is provided in Appendix F.

- MDOT SHA is in the design stage of a Capital Improvement Project (CIP) to provide streetscape improvements along MD 6. However, it appears the MD 6 Project will have a negative impact on vehicular operations along MD 6 and will not accommodate the previously approved and recommended improvements along MD 6 as part of the Pinegrove development and this TIA. It is recommended that the Town of La Plata and MDOT SHA coordinate to discuss the prioritization of pedestrian improvements at the expense of vehicular operations to ensure that both parties are in agreement with the direction of the project. Specific details of the vehicular impacts are provided below.
    - The MD 6 Project proposes a road diet between US 301 and Washington Avenue, reducing the travel lanes to one in each direction with a textured pavement median. This conflicts with the findings and recommendations of this TIA, which recommends a 4-lane section (two in each direction) along MD 6 between US 301 and Washington Avenue in order to adequately accommodate traffic volumes and queues on this section of MD 6. With the current design of the SHA MD 6 Project, left-turn queues along MD 6 at US 301 and Washington Avenue will exceed the available storage space and spill back into the mainline traffic flow during the PM peak hour, thus increasing congestion and impairing mainline vehicular operations along MD 6. The MDOT SHA MD 6 Project plan should be revised to include a 4-lane section between US 301 and MD 6, as recommended in this TIA.
    - MD 6 is marked with a two-way left-turn lane between La Grange Avenue and Severn Drive. This road marking allows vehicles making

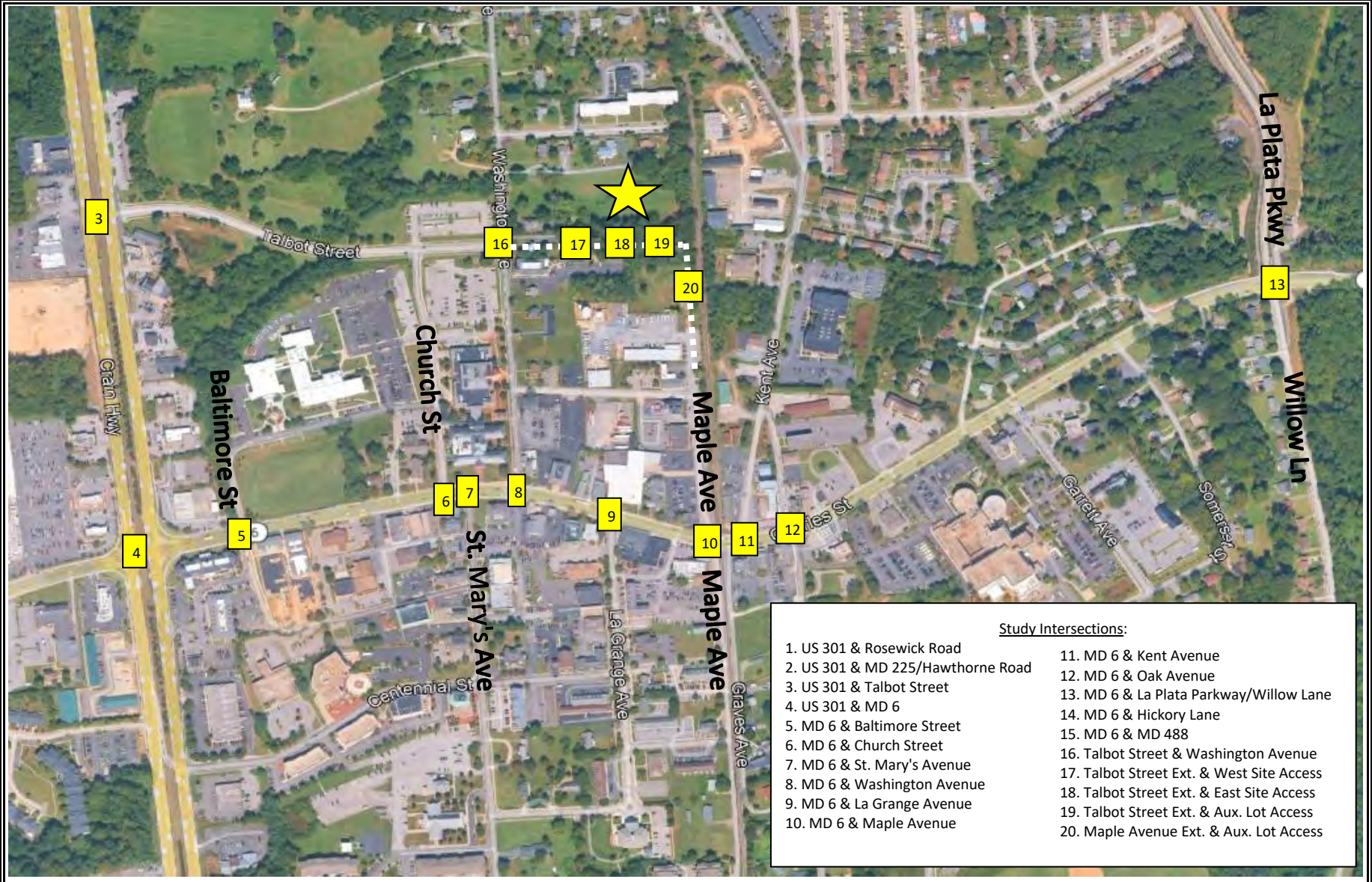
left-turns from the minor street roads and driveways to make a 2-stage movement into the two-way left-turn lane before merging into mainline traffic. It appears the MDOT SHA MD 6 Project proposes to remove the two-way left-turn marking for several sections of MD 6, replacing the markings with textured pavement. Removing the striped two-way left-turn lane will no longer allow vehicles to make 2-stage movements from the minor streets, thus making these movements more difficult and increasing delay. This will impact the intersections of MD 6 with La Grange Avenue, Anne Arundel Avenue, Somerset Street, Severn Drive, and numerous driveways. It is recommended that the Town of La Plata and MDOT SHA coordinate to discuss the impacts of removing the two-way left-turn lane on vehicular operations

- The extensions of Talbot Street and Maple Avenue will create a new connection between MD 6 and Washington Avenue that will potentially allow vehicles to bypass the signalized intersection of MD 6 & Washington Avenue. It should be noted, however, that there is a similar, existing, connection between MD 6 and Washington Avenue via Maple Avenue and Baltimore Street. Existing traffic volumes at the intersection of MD 6 & Maple Avenue indicate that there is minimal existing cut-through traffic, with only 12, 23, and 12 vehicles making right-turn movements from MD 6 to Maple Avenue during the morning, evening, and Saturday peak hours, respectively, and even fewer making left-turn movements from Maple Avenue to MD 6. It is unlikely that any significant amount of traffic will divert from current travel patterns along MD 6 and Washington Avenue to utilize a longer travel route to the extensions of Maple Avenue and Talbot Street. To further discourage cut through traffic between MD 6 and Washington Avenue, however, visual traffic calming measures in the form of signage and pavement markings are recommended along the Talbot Street and Maple Avenue extensions, as depicted on the concept plan in Appendix G. This includes stop-control at the sharp bend in the road (this was included in the road concept provided by Charles County for the development of the library), pedestrian crossing signs, and stop for pedestrian signs within the proposed crosswalks on this roadway. While significant cut-through traffic is not expected along the road extensions, these traffic calming features in conjunction with the sharp turn in the roadway will slow down drivers, increase travel time along the extended roadways, and thus discourage any additional cut-through traffic while also enhancing pedestrian safety. Further traffic calming can be considered in the future if excessive cut-through traffic should develop with the completion of these roads, however, we do not anticipate this to be needed at this time. Additional features could

include physical traffic calming such as chicanes, medians, or speed humps, but those types of improvements would have negative impacts on emergency response vehicles and should only be considered in coordination with emergency services to ensure emergency vehicles will have no issues accessing the proposed library.



Traffic Impact Analysis	Site Location Map and Study Intersections	**Exhibit 1a**
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning		



Traffic Impact Analysis	Site Location Map and Study Intersections	**Exhibit 1b**
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	along MD 6 (Charles Street)	

Section 2 Existing Conditions

2.1 Description of Road Network

The key roads in the study area are:

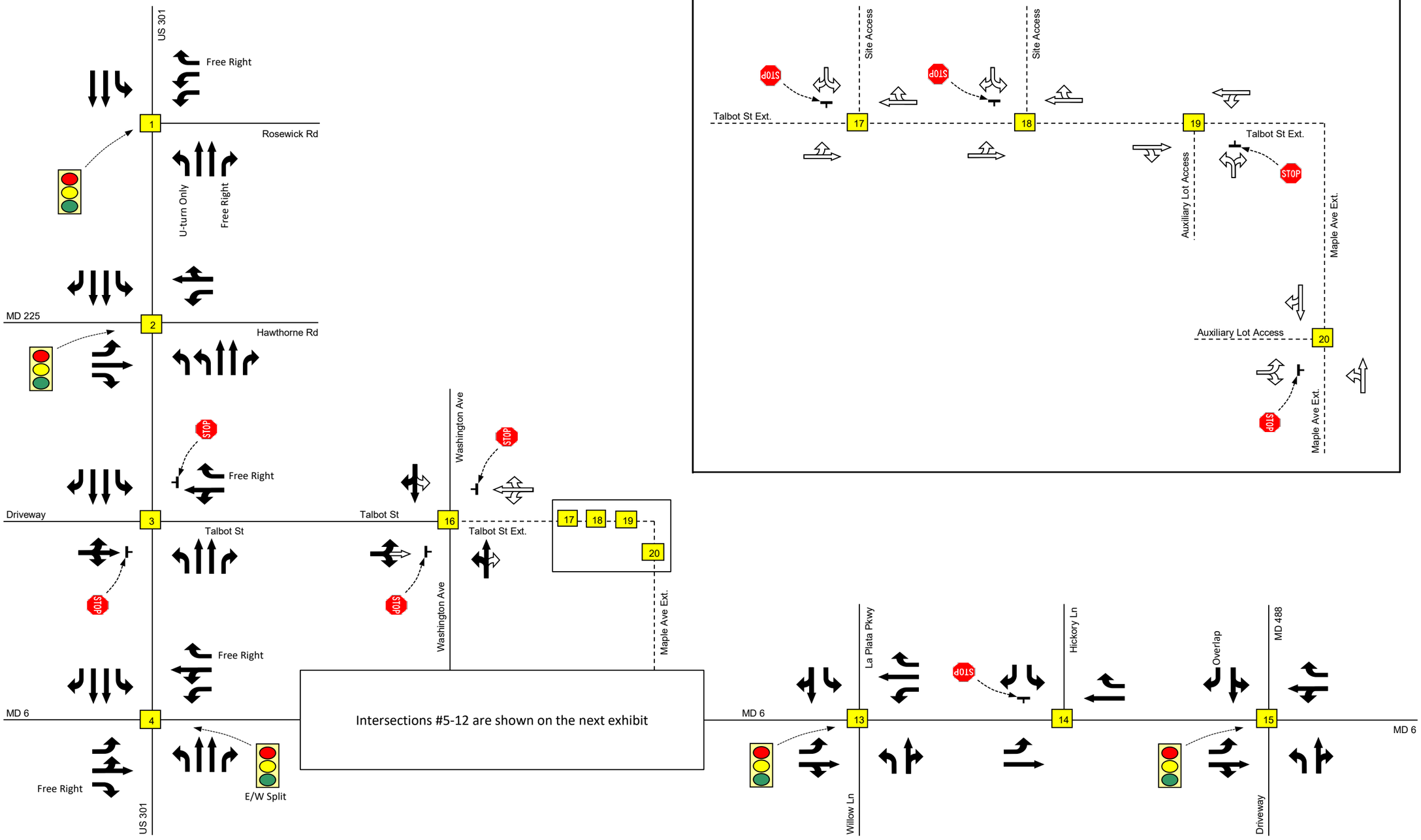
- US 301 is a four-lane roadway (two in each direction) classified as a principal arterial. The posted speed limit is 55 mph.
- MD 6 is a two-lane roadway (one in each direction) classified as a minor arterial. The posted speed limit is 30 MPH.
- Washington Avenue is a two-lane roadway (one in each direction) classified as a major collector. The posted speed limit is 30 MPH.

2.2 Existing Lane Configurations

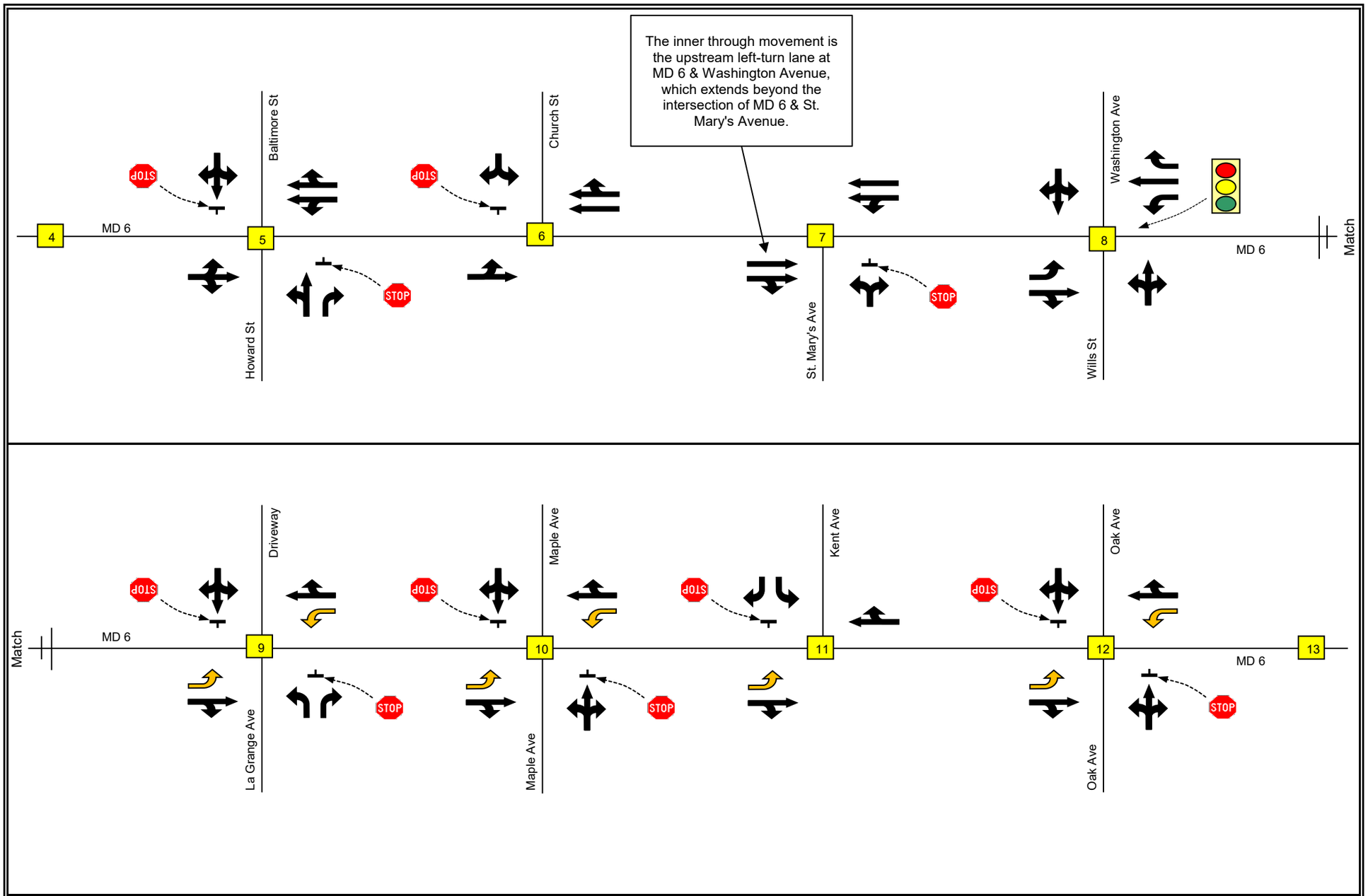
The Lane Use & Traffic Control Devices are shown on **Exhibits 2a and 2b**.

2.3 Existing Traffic Counts

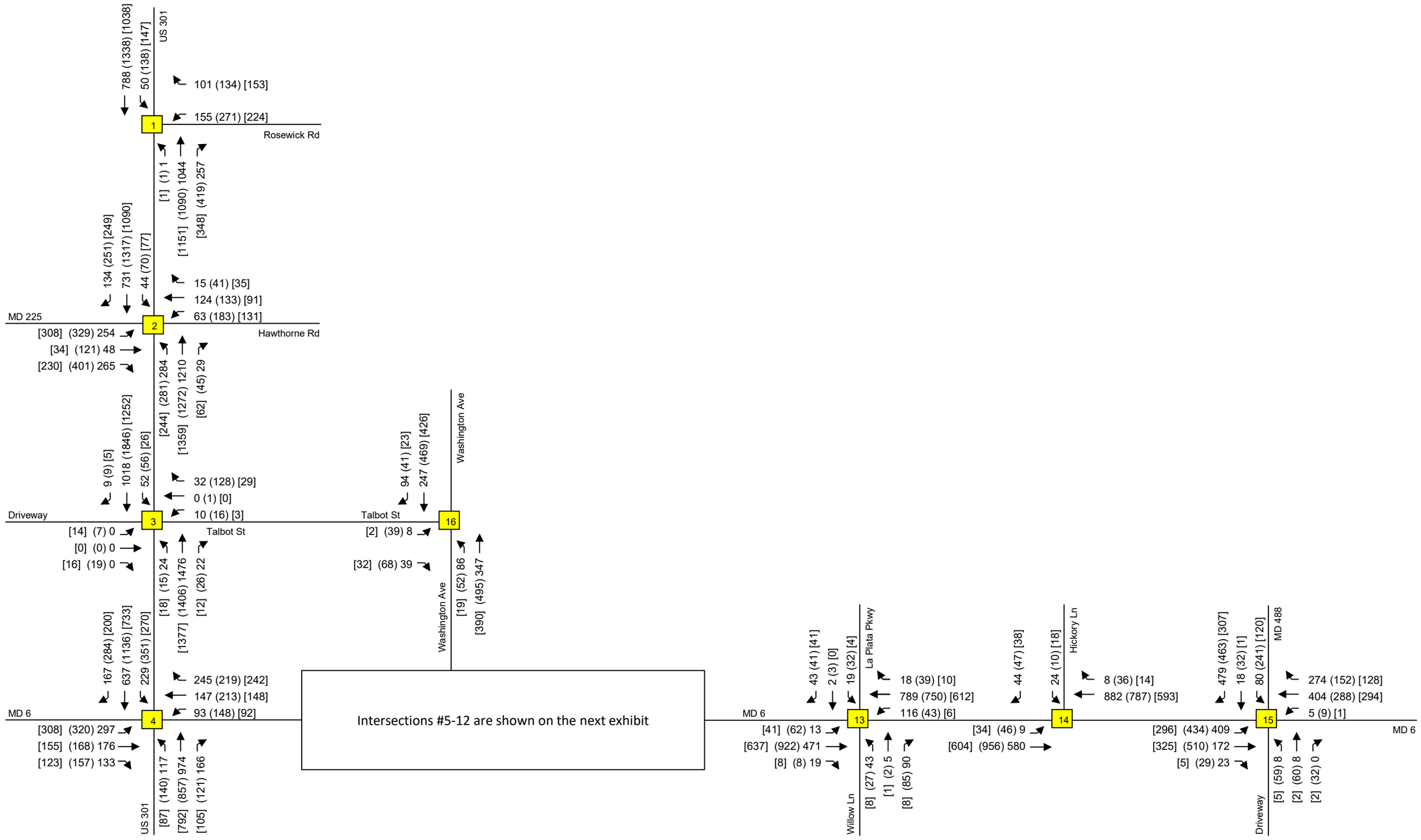
Peak hour turning movement counts were conducted and are shown on **Exhibit 3a and 3b.**



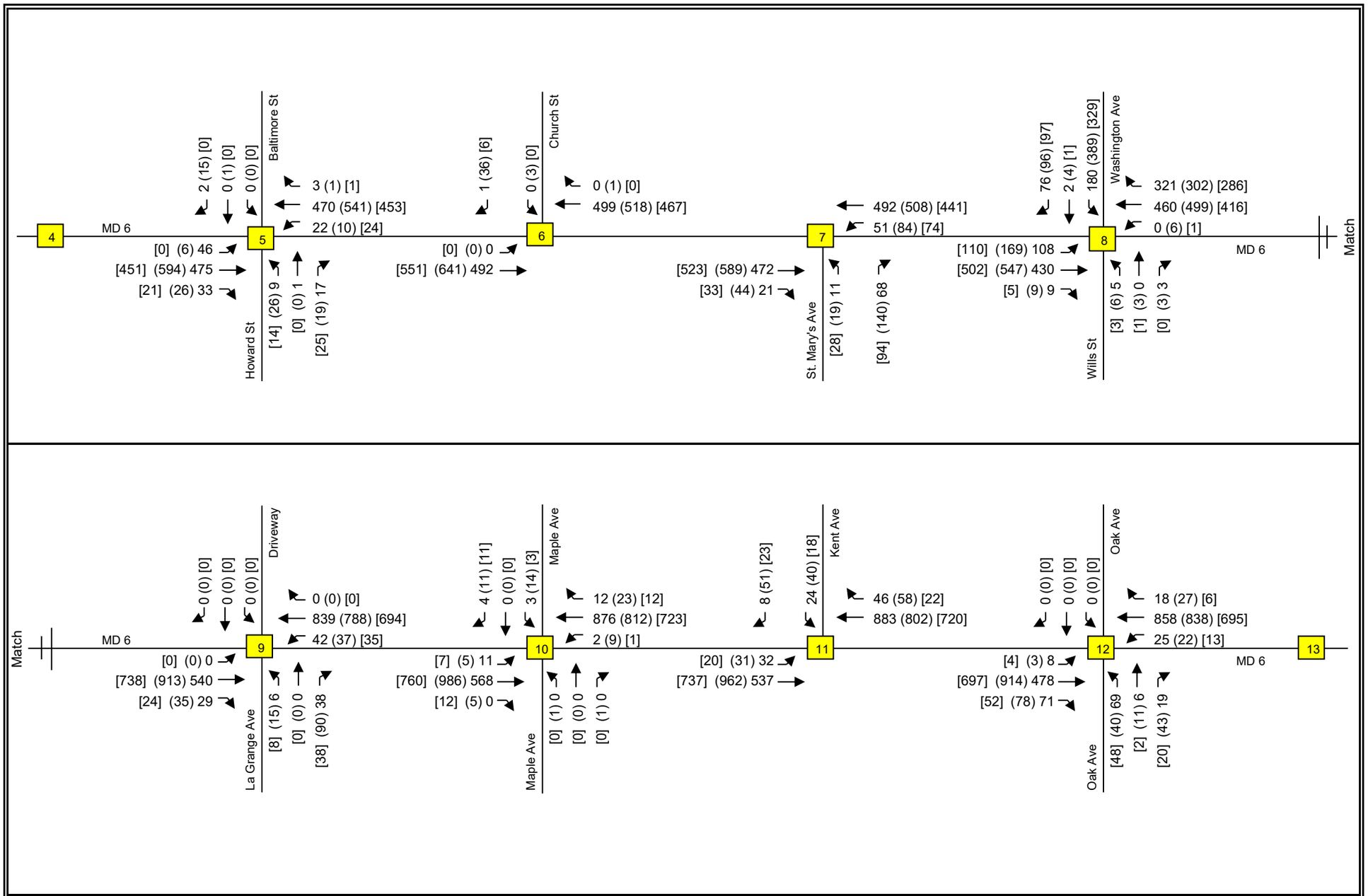
Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Lane Use & Traffic Control Devices - Existing - Proposed	**Exhibit 3a**



Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Lane Use & Traffic Control Devices - Left from Two-Way Left-Turn Lane	**Exhibit 2b**



Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Existing Peak Hour Volumes Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit 3a**



Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Existing Peak Hour Volumes Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit 3b**

Section 3 Background Conditions

3.1 Annual Growth

ADT data from MDOT SHA was analyzed along US 301, north of Washington Avenue, over the previous 10 years. The data shows negative growth over this period. However, to provide a conservative analysis a 1% growth rate was applied to the existing volumes to obtain the base peak hour volumes shown on **Exhibits 4a and 4b**. The ADT analysis is provided in Appendix A.

3.2 Approved Background Developments

The following background developments were included in the scope of study:

1. Pinegrove
2. Villages of Rosewick
3. Schultz Property
4. Rosewick Corner
5. Rosewick II Apartments
6. Sagepoint
7. Stagecoach Crossing
8. Villages of Steeplechase
9. Agricopia Development
10. La Plata Business Park

The trip generation and assignments for the background developments have been provided as Appendix C. The combined background development trips are shown on Exhibits C-17a and C-17b.

3.3 Background Peak Hour Volumes

The background peak hour volumes are shown on **Exhibit 5**. These volumes were obtained by combining the base peak hour volumes (Exhibits 4a and 4b) with the trips generated by the background developments (Exhibits C-17a and C-17b).

3.4 Background Projects – Pinegrove Improvements

The following road improvements have been approved as part of the Pinegrove development:

- US 301 & MD 225: Construct an additional eastbound left-turn lane along MD 225. The east- and westbound approaches will be converted to split phasing.
- US 301 & MD 6: Construct an additional southbound left-turn lane. Two receiving lanes will be striped along eastbound MD 6 between US 301 and Calvert Street, where the outer lane will be striped as right-turn only at Calvert Street and a single through lane will continue eastbound.

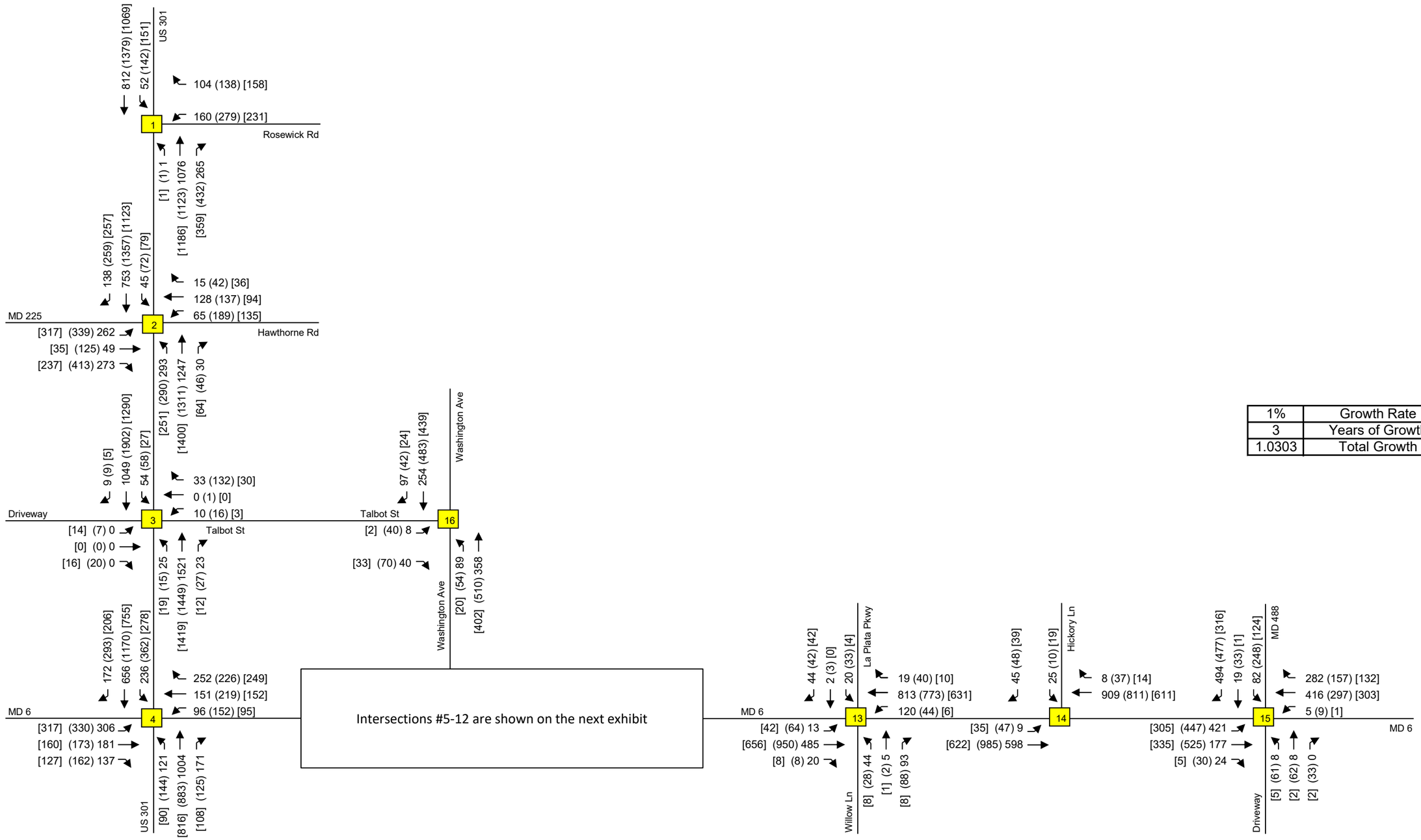
As these improvements have been designed and bonded with MDOT SHA, the

improvements have been included in the analyses of the background and total conditions.

3.5 Background Projects – MDOT SHA MD 6 Project

MDOT SHA is currently in the design phase of a streetscape project along MD 6 between US 301 and Willow Lane. The MD 6 project proposes to improve pedestrian accessibility, connectivity, and safety.

Neither the approved FY25-FY30 Consolidated Transportation Program (CTP) or the DRAFT FY26-FY31 CTP include funding for construction for this project. Based on these resources, the project is only funded for design at this time. As such, the road improvements proposed in the 65% design plan for this project were not formally evaluated in this TIA. However, discussion of potential impacts this project may have on road conditions are discussed in Section 4.5 of this report.



1%	Growth Rate
3	Years of Growth
1.0303	Total Growth

Traffic Impact Analysis

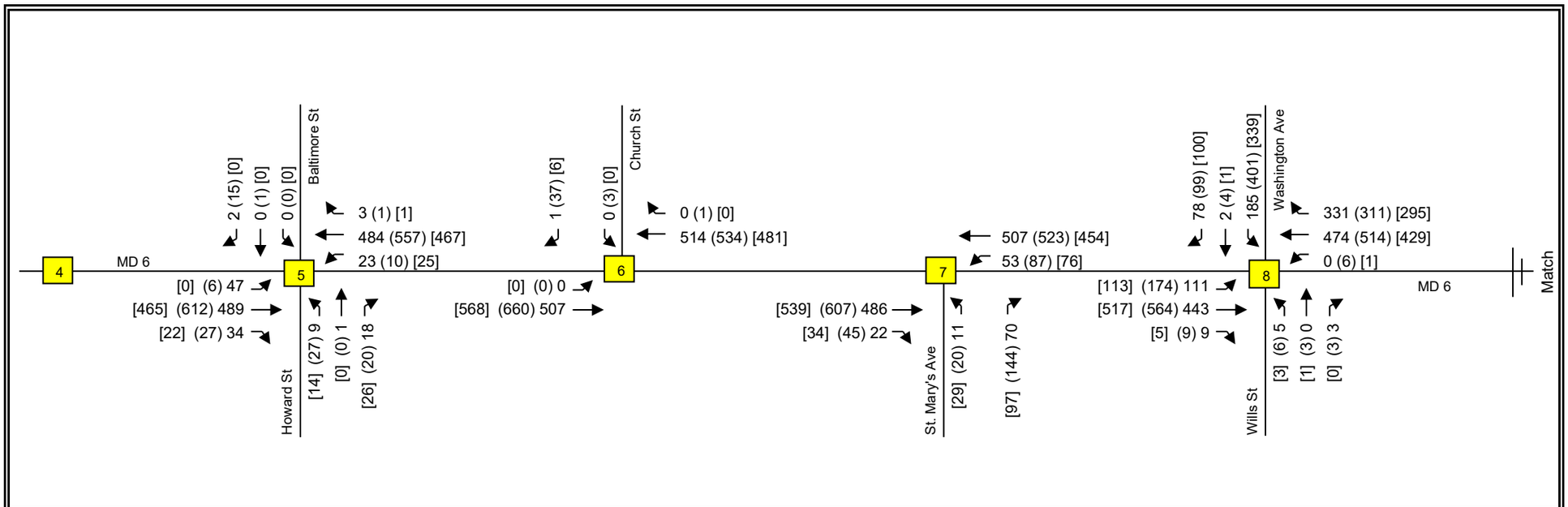
Lenhart Traffic Consulting, Inc.

Traffic Engineering & Transportation Planning

Base
Peak Hour Volumes

Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak

Exhibit 4a



1%	Growth Rate
3	Years of Growth
1.0303	Total Growth

Traffic Impact Analysis

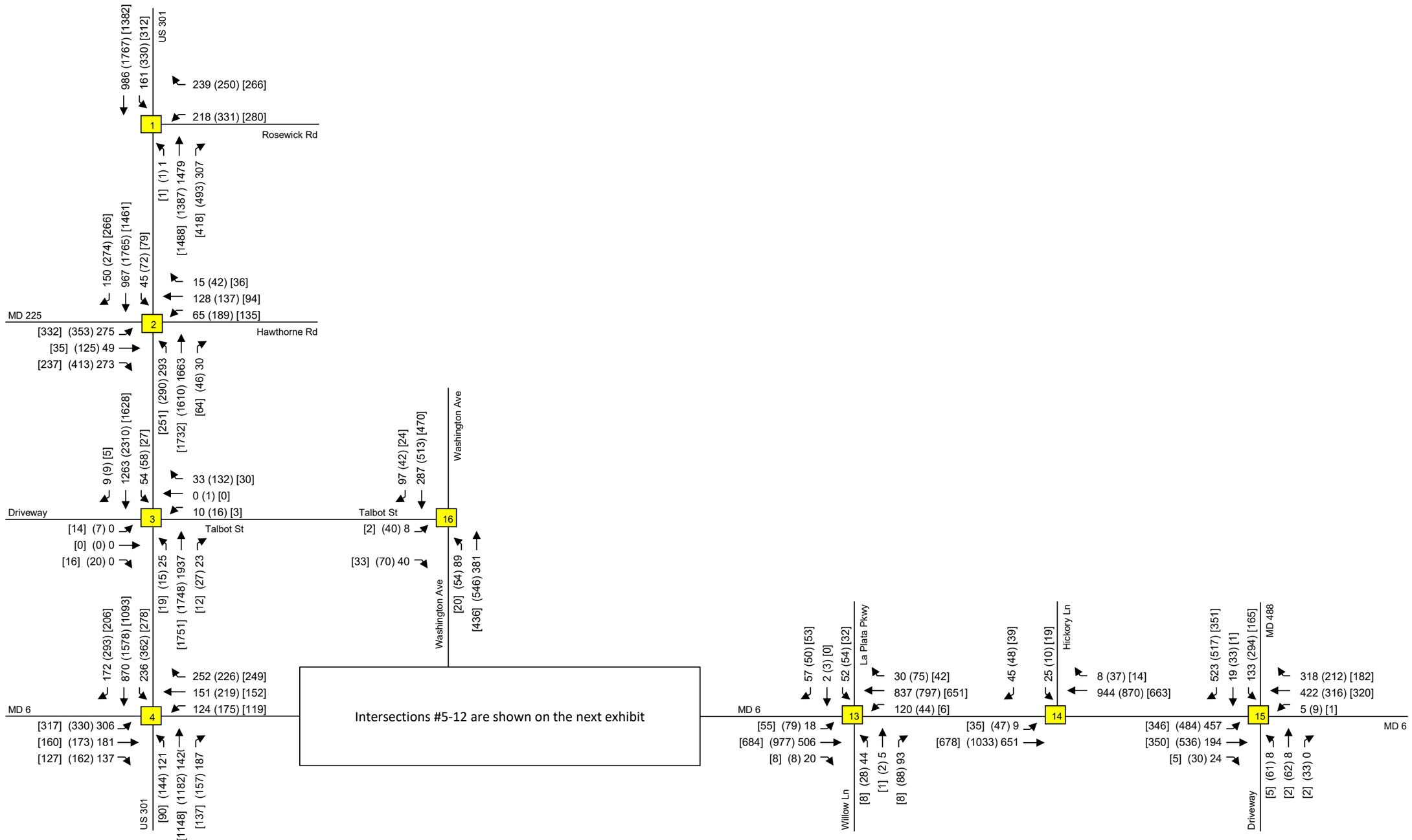
Lenhart Traffic Consulting, Inc.

Traffic Engineering & Transportation Planning

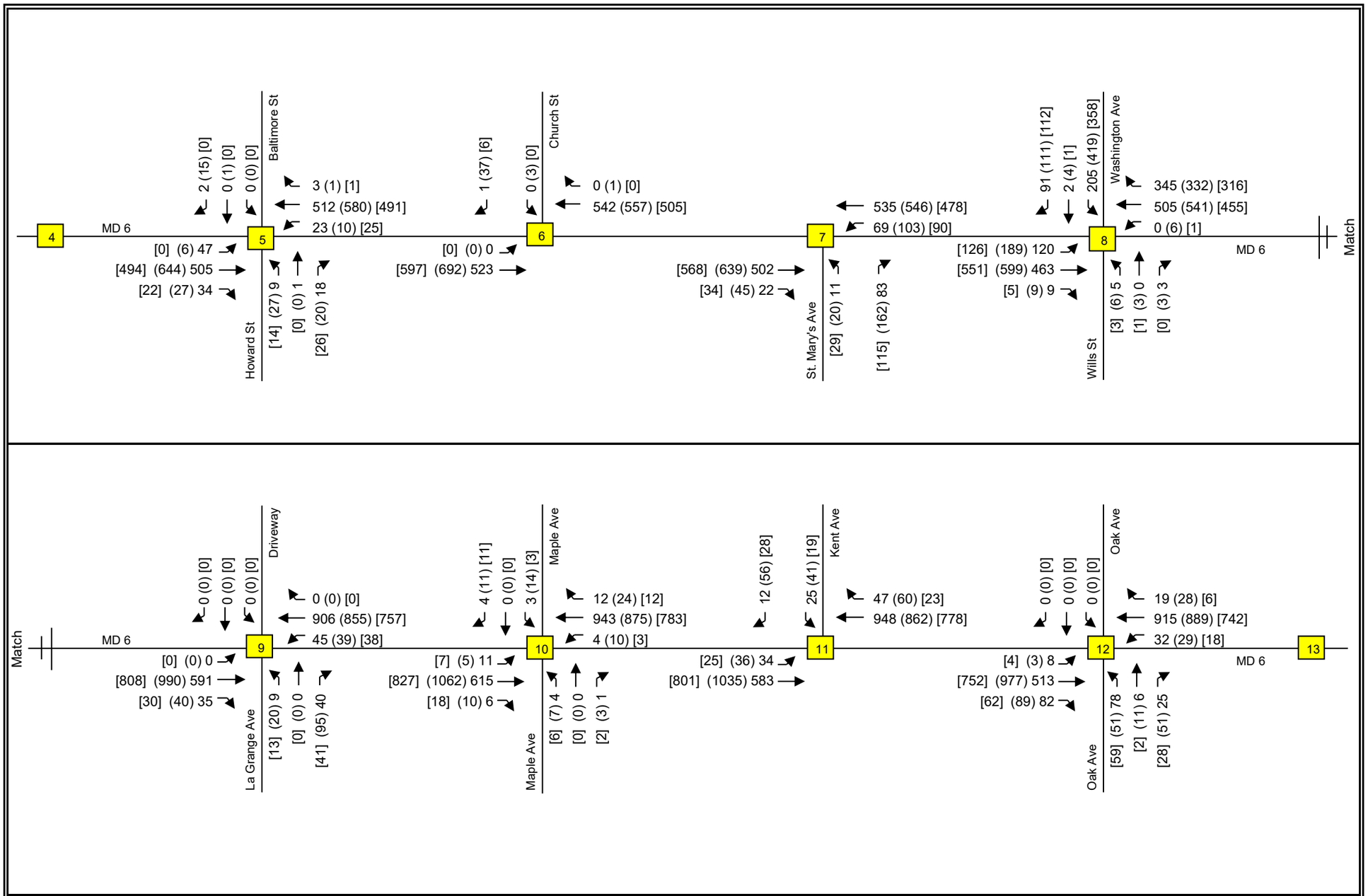
Base
Peak Hour Volumes

Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak

Exhibit 4b



Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Background Peak Hour Volumes Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit 5a**



Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Background Peak Hour Volumes Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit 5b**

Section 4 Projected Conditions with Site

4.1 Site Trip Generation

The site is proposed to be developed with a 27,799 square foot public library. Trip generation for the proposed development is detailed on **Exhibit 6**. Trip generation rates were obtained from the ITE Trip Generation Manual, 12th Edition.

4.2 Site Trip Distribution & Trip Assignment

The inbound trip assignment for the site is shown on **Exhibits 7a and 7b**. The outbound trip assignment for the site is shown on **Exhibits 8a and 8b.**

4.3 Total Peak Hour Volumes

The total peak hour volumes shown on **Exhibit 9.**

4.4 Projected Level of Service

The existing, background, and total peak hour traffic volumes were evaluated using the CLV methodology and the results are shown on **Exhibits 10a, 10b, and 10c.** The results of the CLV analyses indicate that all intersections operate at LOS "D" or better under total conditions, with the exception of the intersections of US 301 & MD 225 and US 301 & MD 6, which operate at LOS "E" under background and total conditions during the evening peak hour. The proposed development has minimal impact on these intersections, with a 0.5% impact at US 301 & MD 225 and a 2.1% impact on US 301 & MD 6. As discussed in more detail below, a traffic signal timing adjustment is recommended at these intersections to mitigate the impacts of the site.

The existing, background, and total peak hour traffic volumes were also evaluated using the HCM methodology and the results are shown on **Exhibits 11a, 11b, and 11c.** The results of the HCM analyses indicate that all intersections operate at LOS "D" or better under total conditions, with the exception of the intersections of US 301 & MD 225, US 301 & MD 6, and MD 6 & Washington Avenue. Traffic signal timing modifications were identified that will improve the overall intersection delay and fully mitigate the impact of the proposed development on the intersections of US 301 & MD 225 and US 301 & MD 6. Traffic signal timing adjustments at the intersection of MD 6 & Washington Avenue significantly improved the overall intersection delay, but did not quite fully mitigate the impact of the site. In order to fully mitigate the impact of the site, the westbound MD 6 approach can be restriped as left-turn, through, and shared through/right-turn lanes. This restriping improves the overall intersection to LOS "D".

As required in the scoping letter for this project, 95th percentile queues were evaluated at each of the signalized intersections in the study area using SimTraffic simulation analyses. The results of the queuing analyses are shown on **Exhibits 12a, 12b, and 12c.** As shown, while some movements exceed the available storage areas, the proposed development has minimal impacts on these movements. The proposed development only has a significant impact on queues at the intersection of MD 6 & Washington Avenue, specifically the eastbound left-turn. It is recommended that the eastbound approach of MD 6 at Washington Avenue is tied into the improvement being constructed by the Pinegrove development that will stripe 2 eastbound through lanes along MD 6 between US 301 and Calvert Street. Rather than terminating the 2nd through lane at Calvert Street, as currently approved, it is recommended that the 2nd through lane is carried through to Washington Avenue, and tied into the existing eastbound left-turn and through lanes.

A summary of the recommendations detailed above is provided below:

- Intersection of US 301 & MD 225
    - Traffic signal timing adjustment during the evening peak hour to give the southbound through and eastbound phases additional green time. Traffic signal timing sheets are provided in Appendix E.
- Intersection of US 301 & MD 6
    - Traffic signal timing adjustment during the evening peak hour to give the north- and southbound through phases additional green time. Traffic signal timing sheets are provided in Appendix E.
- Intersection of MD 6 & Washington Avenue
    - Restripe the westbound MD 6 approach to include left-turn, through, and shared through/right-turn lanes.
    - Extend the eastbound left-turn lane to tie into the Pinegrove development improvement for eastbound MD 6. Two eastbound lanes will be striped between US 301 and Washington Avenue with one becoming the eastbound left-turn at Washington Avenue and the second continuing through along eastbound MD 6. A concept plan for these improvements is provided in Appendix F.

4.5 Impacts of MDOT SHA MD 6 Project

As discussed in Section 3.5, MDOT SHA has a streetscape project along MD 6, currently in design. While this project will significantly improve pedestrian mobility, access, and safety along MD 6, Lenhart Traffic Consulting has concerns regarding vehicular operations and how the project will incorporate the previously approved improvements from the Pinegrove development and the recommended

improvements for this library development.

The current (65%) design plans available on SHA's MD 6 project website are included in Appendix D and indicate significant changes to the road conditions along MD 6 will be implemented with this project. These improvements eliminate several sections of the existing two-way left-turn lane along MD 6 between Washington Avenue and Willow Lane, construct several roundabout intersections, and construct textured pavement medians between the access points and intersections along MD 6.

It does not appear that the current design plan accounts for the approved Pinegrove improvements at US 301 & MD 6 and along MD 6 between US 301 and Calvert Street. While we acknowledge the improvements will improve pedestrian access to MD 6, MD 6 is classified as an arterial roadway and carries much of the traffic through the Town of La Plata. The current design plans of the MD 6 Project propose a 2-lane section (one in each direction) along MD 6 between US 301 and Washington Avenue. This conflicts with the findings and recommendations of this TIA, which recommends a 4-lane section (two in each direction) along MD 6 between US 301 and Washington Avenue in order to adequately accommodate traffic volumes and queues on this section of MD 6. With the current design of the SHA MD 6 Project, left-turn queues along MD 6 at US 301 and Washington Avenue will exceed the available storage space and spill back into the mainline traffic flow during the PM peak hour, thus increasing congestion and impairing mainline vehicular operations along MD 6.

MD 6 is currently marked with a two-way left-turn lane between La Grange Avenue and Severn Drive. This road marking allows vehicles making left-turns from the minor street roads and driveways to make a 2-stage movement into the two-way left-turn lane before merging into mainline traffic. It appears the MDOT SHA MD 6 Project proposes to remove the two-way left-turn marking for several sections of MD 6, replacing the markings with a textured pavement median. Removing the striped two-way left-turn lane will no longer allow vehicles to make 2-stage movements from the minor streets, thus making these movements more difficult and increasing delay. This will impact the intersections of MD 6 with La Grange Avenue, Anne Arundel Avenue, Somerset Street, Severn Drive, and numerous driveways.

We recommend that the Town of La Plata continues to coordinate with MDOT SHA to ensure that the vehicular impacts of these improvements are adequately evaluated as the design of the MD 6 Project progresses. At minimum, The MDOT SHA MD 6 Project plan should be revised to include a 4-lane section between US

301 and MD 6, as recommended in this TIA, but consideration should also be given to maintaining the two-way left-turn lane along MD 6 to help facilitate left-turn movements from the minor streets onto MD 6.

4.6 Talbot Street and Maple Avenue Extensions

As shown on the concept site plan provided in Appendix A, the site is proposed to be accessed via extensions of Talbot Street and Maple Avenue. These extensions will effectively create a new connection between MD 6 and Washington Avenue that will potentially allow vehicles to circumvent the signalized intersection of MD 6 & Washington Avenue. However, existing traffic patterns and the analyses conducted in this report indicate that the new connection is unlikely to be utilized by existing road users.

There is a similar, existing, connection between MD 6 and Washington Avenue via Maple Avenue and Baltimore Street. Existing traffic volumes at the intersection of MD 6 & Maple Avenue indicate that there is minimal existing cut-through traffic, with only 12, 23, and 12 vehicles making right-turn movements from MD 6 to Maple Avenue during the morning, evening, and Saturday peak hours, respectively, and even fewer making left-turn movements from Maple Avenue to MD 6. It is unlikely that any significant amount of traffic will divert from current travel patterns along MD 6 and Washington Avenue to utilize a longer travel route to the extensions of Maple Avenue and Talbot Street.

The HCM analyses of the future traffic conditions indicate that the current travel pattern through the intersection of MD 6 & Washington Avenue will be faster than using the new connection during the peak periods. This is due to the high mainline volumes along MD 6 and Washington Avenue that make turning movements from the side streets difficult compared to the signalized intersection of MD 6 & Washington Avenue. These results are supported by the existing traffic patterns, which show that there are very few vehicles using the existing, shorter connection between MD 6 and Washington Avenue via Maple Avenue and Baltimore Street to bypass the intersection of MD 6 & Washington Avenue.

While the new connection between Maple Avenue and Talbot Street is not inherently faster to use than current travel patterns during the peak periods, it is recommended that visual traffic calming techniques are implemented along these extensions in order to further discourage vehicles from using the new connection to bypass the MD 6 & Washington Avenue intersection. A concept traffic calming plan has been provided as Appendix G, which shows recommended signing and marking improvements that will discourage cut-through traffic by slowing down

traffic along the extended roadways. This includes stop-control at the sharp bend in the road (this was included in the road concept provided by Charles County for the development of the library), pedestrian crossing signs, and stop for pedestrian signs within the proposed crosswalks on this roadway. While significant cut-through traffic is not expected along the road extensions, these traffic calming features in conjunction with the sharp turn in the roadway will slow down drivers, increase travel time along the extended roadways, and thus discourage any additional cut-through traffic while also enhancing pedestrian safety.

Additional features could include physical traffic calming such as chicanes, medians, or speed humps, but those types of improvements would have negative impacts on emergency response vehicles and should only be considered in coordination with emergency services to ensure emergency vehicles will have no issues accessing the proposed library.

Trip Generation Rates

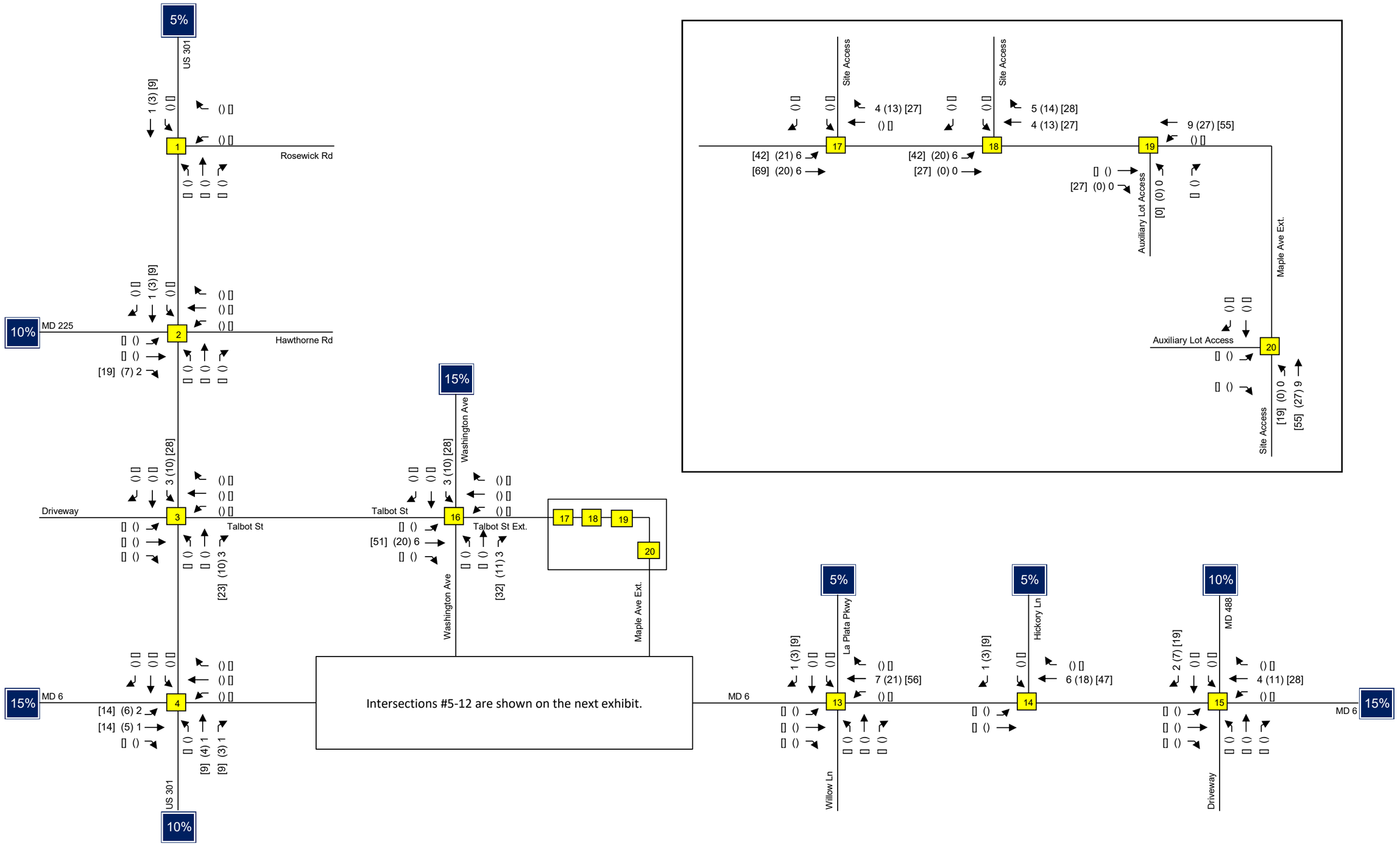
Library (ksf, ITE-590)	Trip Distribution (In/Out)
Morning Trips = 1.08 x ksf	71/29
Evening Trips = 8.90 x ksf - 5.11	48/52
Midday Saturday Trips = 12.60 x ksf	53/47

Trip Generation Totals

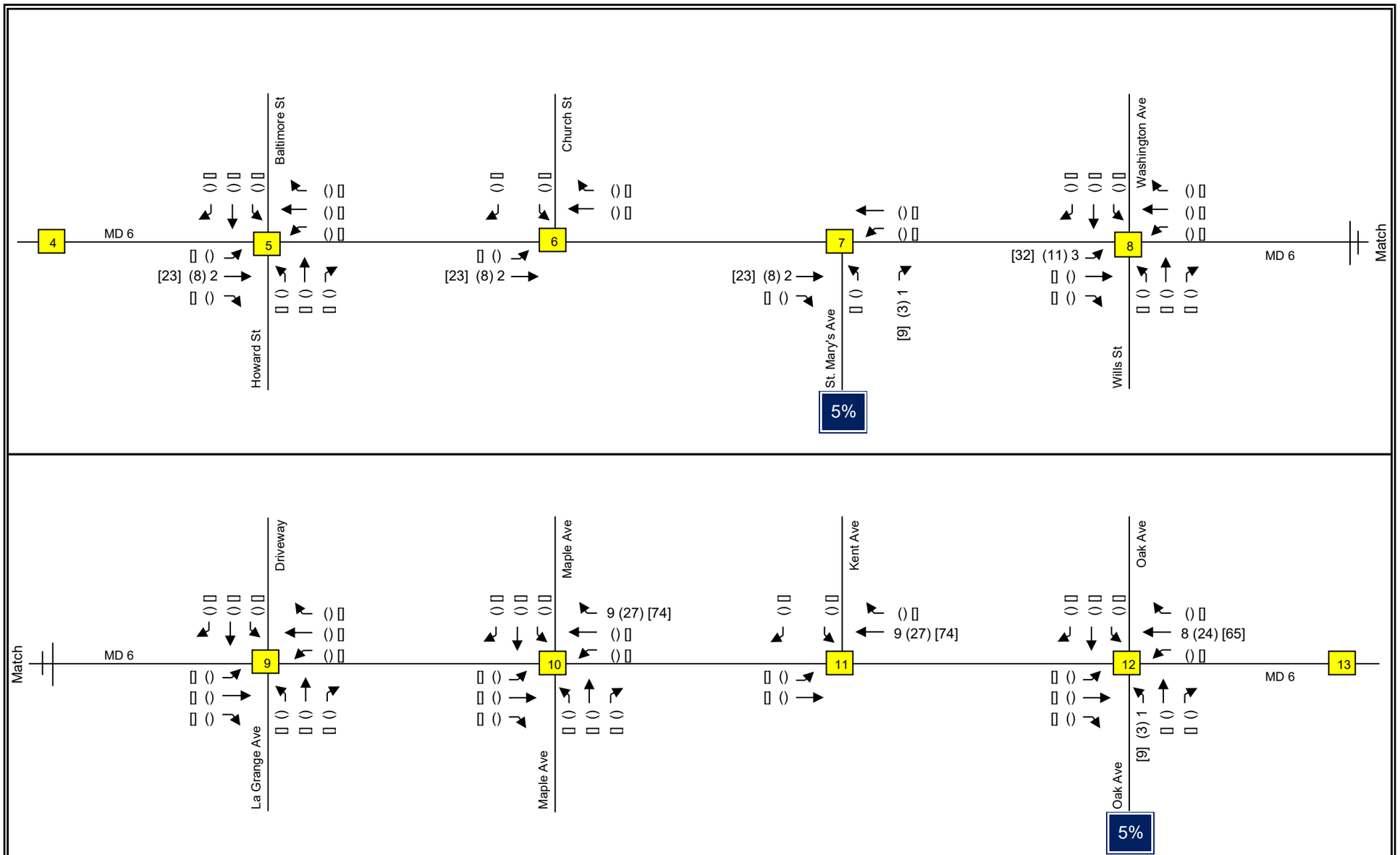
			AM Peak			PM Peak			Midday Sat. Peak		
			In	Out	Total	In	Out	Total	In	Out	Total
	Library (ksf, ITE-590)	27,799 sq.ft.	21	9	30	68	174	242	185	165	350
		Total:	**21**	**9**	**30**	**68**	**174**	**242**	**185**	**165**	**350**

NOTE: Trip Generation Rates obtained from the ITE Trip Generation Manual, 12th Edition

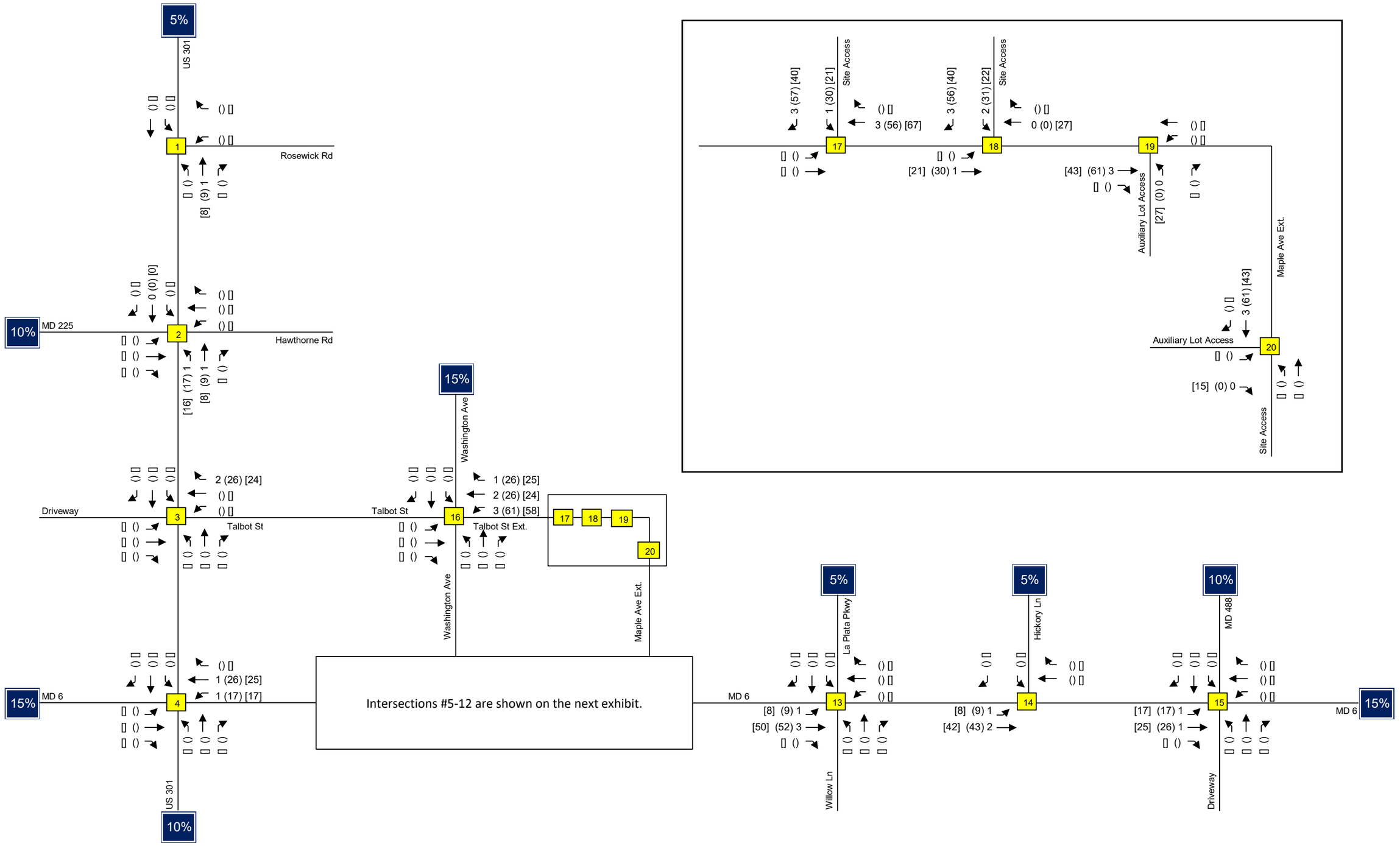
Traffic Impact Analysis	Trip Generation for Site	**Exhibit 6**
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning		



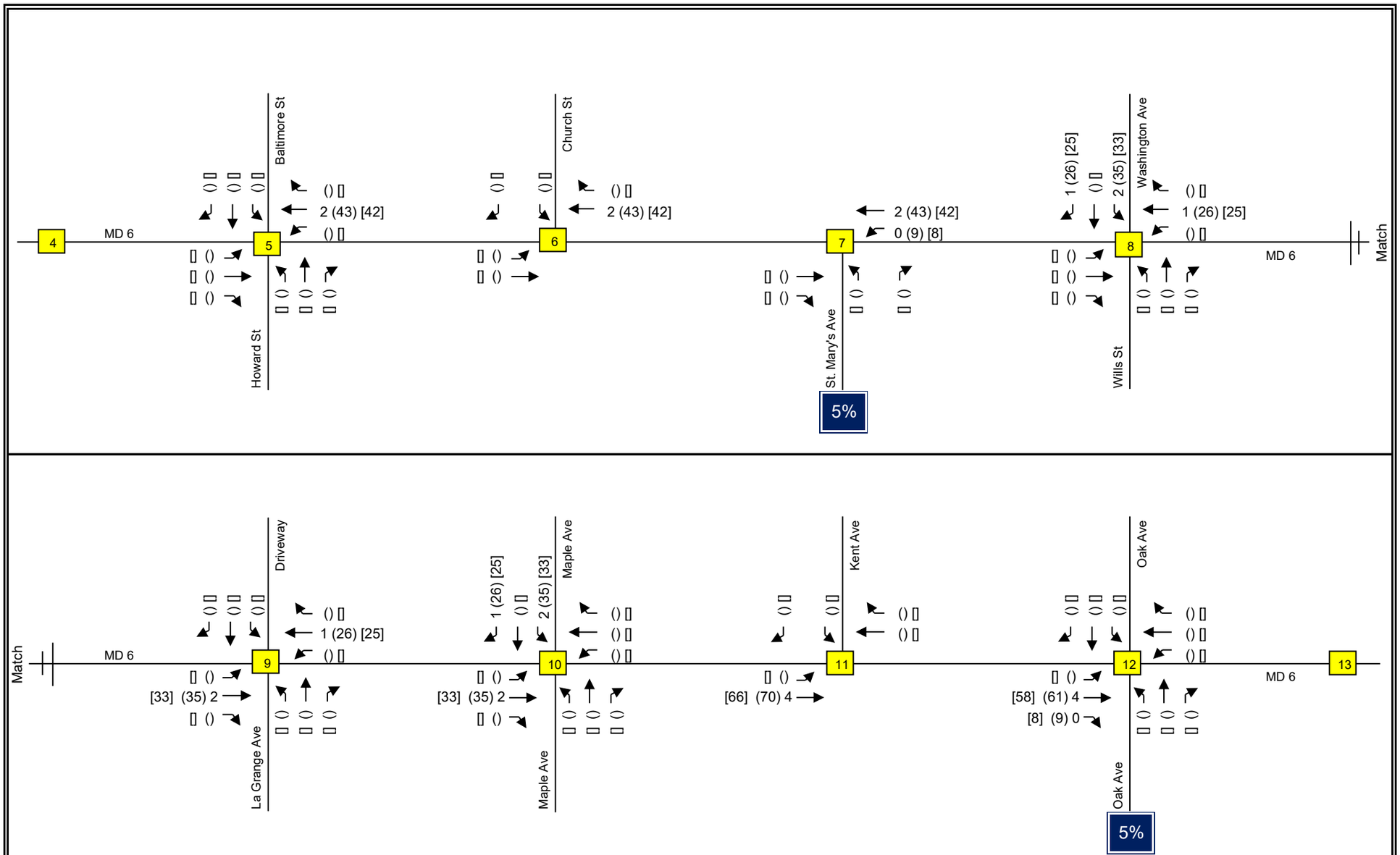
Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Inbound Trip Assignment for Site Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit 7a**



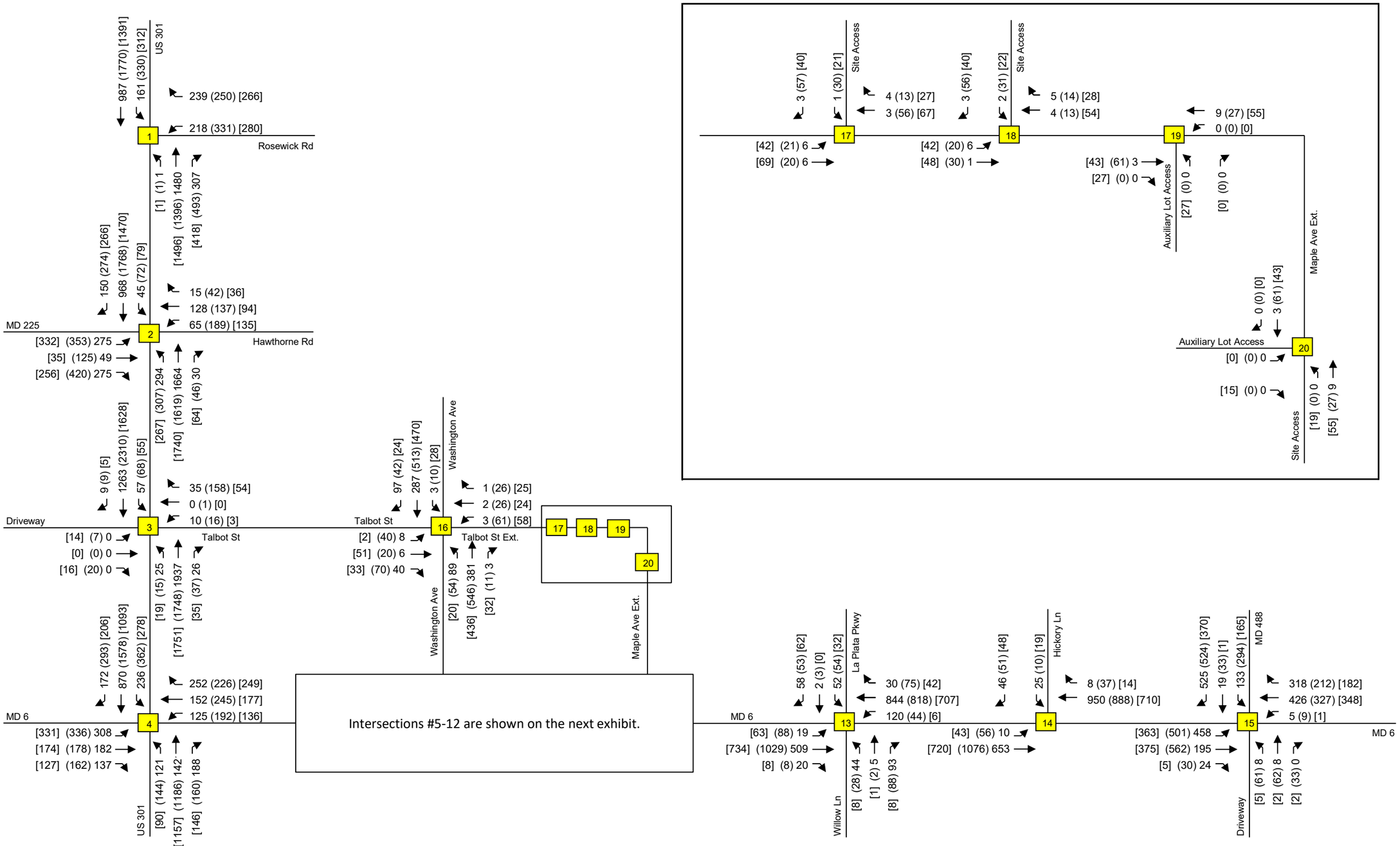
Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Inbound Trip Assignment for Site Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit 7b**



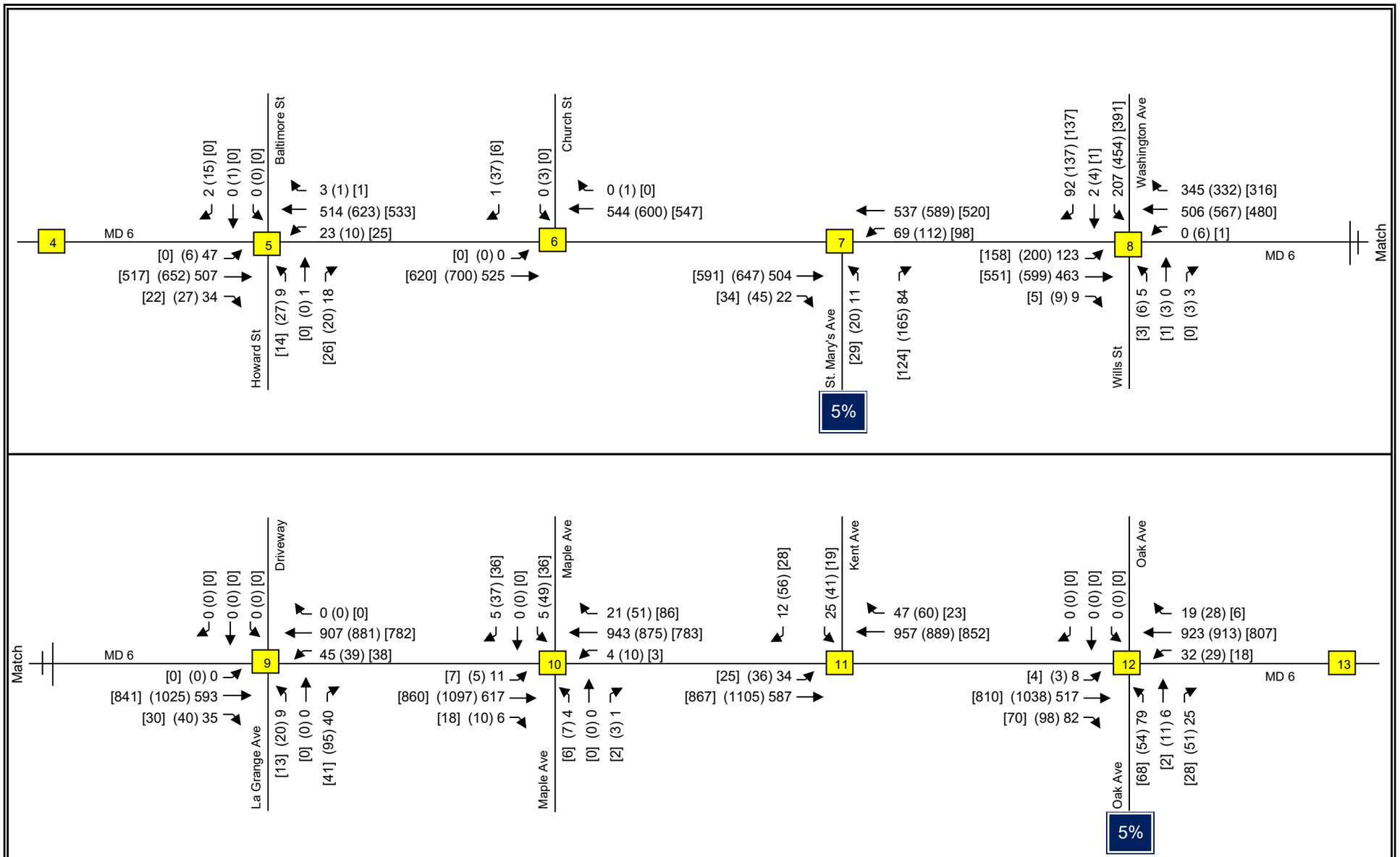
Traffic Impact Analysis	Outbound Trip Assignment for Site	**Exhibit 8a**
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	



Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Outbound Trip Assignment for Site Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit 8b**



Traffic Impact Analysis	Total Peak Hour Volumes	**Exhibit 9a**
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	



Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Total Peak Hour Volumes Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit 9b**

Critical Lane Volume (CLV) Level-of-Service Results

Morning Peak Hour	Existing CLV	Background CLV	Total CLV
1). US 301 & Rosewick Road	A / 717	B / 1105	B / 1106
2). US 301 & MD 225/Hawthorne Road	B / 1103	C / 1253	C / 1253
3). US 301 & Talbot Street	A / 875	B / 1130	B / 1133
4). US 301 & MD 6	C / 1196	D / 1380	D / 1384
5). MD 6 & Baltimore Street	A / 633	A / 667	A / 669
6). MD 6 & Church Street	A / 493	A / 524	A / 526
7). MD 6 & St. Mary's Avenue	A / 406	A / 464	A / 466
8). MD 6 & Washington Avenue	A / 849	A / 949	A / 956
9). MD 6 & La Grange Avenue	A / 877	A / 946	A / 947
10). MD 6 & Maple Avenue	A / 906	A / 977	A / 990
11). MD 6 & Kent Avenue	A / 993	B / 1066	B / 1075
12). MD 6 & Oak Avenue	A / 985	B / 1059	B / 1068
13). MD 6 & La Plata Parkway/Willow Lane	A / 929	B / 1045	B / 1054
14). MD 6 & Hickory Lane	A / 926	A / 989	A / 996
15). MD 6 & MD 488	A / 925	B / 1049	B / 1054
16). Washington Avenue & Talbot Street	A / 566	A / 607	A / 723
17). Talbot Street Extended & Site Access	--	--	A / 17
18). Talbot Street Extended & Site Access	--	--	A / 17
19). Talbot Street Extended & Auxiliary Lot Access	--	--	A / 9
20). Maple Street Extended & Auxiliary Lot Access	--	--	A / 9

Traffic Impact Analysis	Results of CLV Level-of-Service Analyses	**Exhibit 10a**
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	AM Peak Hour	

Critical Lane Volume (CLV) Level-of-Service Results

Evening Peak Hour	Existing CLV	Background CLV	Total CLV
1). US 301 & Rosewick Road	A / 901	C / 1292	C / 1297
2). US 301 & MD 225/Hawthorne Road	D / 1396	E / 1573	E / 1581
3). US 301 & Talbot Street	B / 1073	D / 1330	D / 1330
4). US 301 & MD 6	D / 1332	E / 1550	E / 1582
5). MD 6 & Baltimore Street	A / 684	A / 736	A / 750
6). MD 6 & Church Street	A / 680	A / 732	A / 740
7). MD 6 & St. Mary's Avenue	A / 591	A / 661	A / 694
8). MD 6 & Washington Avenue	C / 1202	D / 1312	D / 1413
9). MD 6 & La Grange Avenue	B / 1075	C / 1164	C / 1199
10). MD 6 & Maple Avenue	B / 1027	B / 1115	C / 1215
11). MD 6 & Kent Avenue	B / 1053	B / 1132	C / 1202
12). MD 6 & Oak Avenue	B / 1112	C / 1213	C / 1286
13). MD 6 & La Plata Parkway/Willow Lane	B / 1079	C / 1169	C / 1224
14). MD 6 & Hickory Lane	A / 966	B / 1043	B / 1086
15). MD 6 & MD 488	B / 1105	C / 1240	C / 1268
16). Washington Avenue & Talbot Street	A / 706	A / 764	C / 1231
17). Talbot Street Extended & Site Access	--	--	A / 177
18). Talbot Street Extended & Site Access	--	--	A / 177
19). Talbot Street Extended & Auxiliary Lot Access	--	--	A / 61
20). Maple Street Extended & Auxiliary Lot Access	--	--	A / 61

Traffic Impact Analysis	Results of CLV Level-of-Service Analyses	**Exhibit 10b**
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	PM Peak Hour	

Critical Lane Volume (CLV) Level-of-Service Results

Midday Saturday Peak Hour	Existing CLV	Background CLV	Total CLV
1). US 301 & Rosewick Road	A / 914	C / 1298	D / 1303
2). US 301 & MD 225/Hawthorne Road	C / 1258	D / 1366	D / 1370
3). US 301 & Talbot Street	A / 817	B / 1024	B / 1052
4). US 301 & MD 6	B / 1132	C / 1247	C / 1294
5). MD 6 & Baltimore Street	A / 511	A / 556	A / 579
6). MD 6 & Church Street	A / 557	A / 603	A / 626
7). MD 6 & St. Mary's Avenue	A / 502	A / 565	A / 601
8). MD 6 & Washington Avenue	A / 989	B / 1091	C / 1209
9). MD 6 & La Grange Avenue	A / 835	A / 917	A / 950
10). MD 6 & Maple Avenue	A / 787	A / 868	A / 963
11). MD 6 & Kent Avenue	A / 803	A / 873	A / 947
12). MD 6 & Oak Avenue	A / 837	A / 927	B / 1003
13). MD 6 & La Plata Parkway/Willow Lane	A / 716	A / 844	A / 917
14). MD 6 & Hickory Lane	A / 645	A / 717	A / 772
15). MD 6 & MD 488	A / 718	A / 839	A / 884
16). Washington Avenue & Talbot Street	A / 502	A / 549	B / 1108
17). Talbot Street Extended & Site Access	--	--	A / 197
18). Talbot Street Extended & Site Access	--	--	A / 197
19). Talbot Street Extended & Auxiliary Lot Access	--	--	A / 97
20). Maple Street Extended & Auxiliary Lot Access	--	--	A / 91

Traffic Impact Analysis	Results of CLV Level-of-Service Analyses	**Exhibit 10c**
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Midday Saturday Peak Hour	

Highway Capacity Manual (HCM) Level-of-Service Results

Morning Peak Hour	Existing LOS	Background LOS	Total LOS
1). US 301 & Rosewick Road	A / 7.1	B / 13.2	B / 13.2
2). US 301 & MD 225/Hawthorne Road	D / 37.5	D / 38.3	D / 38.3
3). US 301 & Talbot Street	A / 0.8	A / 1.1	A / 1.1
4). US 301 & MD 6	D / 47.8	D / 54.5	E / 55.3
5). MD 6 & Baltimore Street	A / 1.3	A / 1.1	A / 1.1
6). MD 6 & Church Street	A / 0.0	A / 0.0	A / 0.0
7). MD 6 & St. Mary's Avenue	A / 1.3	A / 1.6	A / 1.6
8). MD 6 & Washington Avenue	C / 25.5	C / 26.2	C / 26.3
9). MD 6 & La Grange Avenue	A / 0.7	A / 0.7	A / 0.7
10). MD 6 & Maple Avenue	A / 0.2	A / 0.3	A / 0.3
11). MD 6 & Kent Avenue	A / 0.6	A / 0.7	A / 0.7
12). MD 6 & Oak Avenue	A / 1.7	A / 2.3	A / 2.3
13). MD 6 & La Plata Parkway/Willow Lane	B / 11.9	B / 13.3	B / 13.3
14). MD 6 & Hickory Lane	A / 1.6	A / 2.1	A / 2.2
15). MD 6 & MD 488	C / 23.7	C / 27.4	C / 27.7
16). Washington Avenue & Talbot Street	A / 1.9	A / 1.9	A / 2.2
17). Talbot Street Extended & Site Access	--	--	A / 3.4
18). Talbot Street Extended & Site Access	--	--	A / 4.2
19). Talbot Street Extended & Auxiliary Lot Access	--	--	A / 0.0
20). Maple Street Extended & Auxiliary Lot Access	--	--	A / 0.0

Highway Capacity Manual (HCM) Level-of-Service Results

Evening Peak Hour	Existing LOS	Background LOS	Total LOS
1). US 301 & Rosewick Road	B / 10.8	B / 19.3	B / 19.5
2). US 301 & MD 225/Hawthorne Road	D / 48.3	F / 85.6	F / 88.6
With Improvements (Timing Adjustments)			*F / 85.2*
3). US 301 & Talbot Street	A / 1.9	A / 3.3	A / 5.9
4). US 301 & MD 6	E / 59.2	E / 79.1	F / 83.5
With Improvements (Timing Adjustments)			*E / 68.5*
5). MD 6 & Baltimore Street	A / 1.1	A / 1.1	A / 1.1
6). MD 6 & Church Street	A / 0.4	A / 0.3	A / 0.3
7). MD 6 & St. Mary's Avenue	A / 2.6	A / 3.1	A / 3.2
8). MD 6 & Washington Avenue	D / 43.7	E / 55.1	E / 67.0
With Improvements (Timing Adjustments)			*E / 56.7*
With Improvements (Restriping WB Approach)			*D / 50.6*
9). MD 6 & La Grange Avenue	A / 1.7	A / 2.1	A / 2.3
10). MD 6 & Maple Avenue	A / 0.4	A / 0.6	A / 2.0
11). MD 6 & Kent Avenue	A / 1.2	A / 1.3	A / 1.4
12). MD 6 & Oak Avenue	A / 1.9	A / 3.2	A / 4.3
13). MD 6 & La Plata Parkway/Willow Lane	B / 12.4	B / 14.4	B / 15.5
14). MD 6 & Hickory Lane	A / 1.2	A / 1.5	A / 1.8
15). MD 6 & MD 488	C / 27.9	C / 34.8	D / 36.5
16). Washington Avenue & Talbot Street	A / 2.7	A / 3.0	C / 19.6
17). Talbot Street Extended & Site Access	--	--	A / 177
18). Talbot Street Extended & Site Access	--	--	A / 177
19). Talbot Street Extended & Auxiliary Lot Access	--	--	A / 61
20). Maple Street Extended & Auxiliary Lot Access	--	--	A / 61

Traffic Impact Analysis	Results of HCM Level-of-Service Analyses	**Exhibit 11b**
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	PM Peak Hour	

Highway Capacity Manual (HCM) Level-of-Service Results

Midday Saturday Peak Hour	Existing LOS	Background LOS	Total LOS
1). US 301 & Rosewick Road	B / 14.0	C / 23.2	C / 23.3
2). US 301 & MD 225/Hawthorne Road	D / 44.6	D / 47.8	D / 48.8
3). US 301 & Talbot Street	A / 0.7	A / 0.9	A / 1.3
4). US 301 & MD 6	E / 67.5	D / 50.1	D / 53.3
5). MD 6 & Baltimore Street	A / 0.8	A / 0.8	A / 0.8
6). MD 6 & Church Street	A / 0.1	A / 0.1	A / 0.1
7). MD 6 & St. Mary's Avenue	A / 2.3	A / 2.7	A / 2.9
8). MD 6 & Washington Avenue	C / 26.6	C / 30.1	D / 37.7
9). MD 6 & La Grange Avenue	A / 0.7	A / 0.8	A / 0.9
10). MD 6 & Maple Avenue	A / 0.2	A / 0.3	A / 1.1
11). MD 6 & Kent Avenue	A / 0.6	A / 0.6	A / 0.6
12). MD 6 & Oak Avenue	A / 1.1	A / 1.5	A / 1.9
13). MD 6 & La Plata Parkway/Willow Lane	A / 6.6	A / 8.5	A / 8.9
14). MD 6 & Hickory Lane	A / 1.1	A / 1.3	A / 1.6
15). MD 6 & MD 488	B / 16.8	B / 19.3	C / 20.2
16). Washington Avenue & Talbot Street	A / 0.7	A / 0.7	A / 7.9
17). Talbot Street Extended & Site Access	--	--	A / 3.4
18). Talbot Street Extended & Site Access	--	--	A / 3.9
19). Talbot Street Extended & Auxiliary Lot Access	--	--	A / 1.6
20). Maple Street Extended & Auxiliary Lot Access	--	--	A / 2.1

SimTraffic 95th Percentile Queuing Results

Morning Peak Hour	Available Storage (feet)	Background Queue (feet)	Total Queue (feet)
1). US 301 & Rosewick Road			
WBL	450	112	121
NBU	250	12	0
SBL	400	164	156
2). US 301 & MD 225/Hawthorne Road Movements			
EBL	440	192	209
EBL	440	211	231
EBR	180	199	197
WBL	200	106	106
NBL	650	175	170
NBL	650	186	177
SBL	380	109	94
4). US 301 & MD 6			
EBL	270	310	292
NBL	260	352	352
SBL	700	164	147
SBL	700	175	160
8). MD 6 & Washington Avenue			
EBL	200	122	118
WBL	75	0	0
WBR	150	235	230
13). MD 6 & La Plata Parkway/Willow Lane			
EBL	250	37	34
WBL	150	85	88
15). MD 6 & MD 488			
EBL	300	279	274
WBR	185	245	246

Traffic Impact Analysis	Results of 95th Percentile Queuing Analysis	**Exhibit 12a**
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	AM Peak Hour	

SimTraffic 95th Percentile Queuing Results

Evening Peak Hour	Available Storage (feet)	Background Queue (feet)	Total Queue (feet)
1). US 301 & Rosewick Road			
WBL	450	203	198
NBU	250	33	32
SBL	400	330	371
2). US 301 & MD 225/Hawthorne Road Movements			
EBL	440	253	262
EBL	440	582	573
EBR	180	224	225
WBL	200	254	247
NBL	650	185	198
NBL	650	190	193
SBL	380	448	323
4). US 301 & MD 6			
EBL	270	340	349
NBL	260	334	337
SBL	700	205	201
SBL	700	212	251
8). MD 6 & Washington Avenue			
EBL	200	409	598
WBL	75	29	29
WBR	150	219	236
13). MD 6 & La Plata Parkway/Willow Lane			
EBL	250	60	97
WBL	150	111	142
15). MD 6 & MD 488			
EBL	300	316	320
WBR	185	254	271

Traffic Impact Analysis	Results of 95th Percentile Queuing Analysis	**Exhibit 12b**
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	PM Peak Hour	

SimTraffic 95th Percentile Queuing Results

Midday Saturday Peak Hour	Available Storage (feet)	Background Queue (feet)	Total Queue (feet)
1). US 301 & Rosewick Road			
WBL	450	228	233
NBU	250	9	31
SBL	400	395	396
2). US 301 & MD 225/Hawthorne Road Movements			
EBL	440	247	241
EBL	440	271	267
EBR	180	214	221
WBL	200	216	213
NBL	650	190	194
NBL	650	541	619
SBL	380	320	345
4). US 301 & MD 6			
EBL	270	312	327
NBL	260	283	315
SBL	700	237	212
SBL	700	273	266
8). MD 6 & Washington Avenue			
EBL	200	125	149
WBL	75	3	0
WBR	150	215	223
13). MD 6 & La Plata Parkway/Willow Lane			
EBL	250	47	54
WBL	150	15	15
15). MD 6 & MD 488			
EBL	300	193	201
WBR	185	146	162

Section 5 Conclusions / Recommendations

5.1 Results of Analyses

This Traffic Impact Analysis (TIA) has been prepared to support the proposed La Plata Library development. The subject site is located on the northeast quadrant of Washington Avenue & Talbot Street, in the Town of La Plata. The site is currently undeveloped and is proposed to be developed with 27,799 square foot public library

Access to the site is proposed along planned extensions of Talbot Street and Maple Avenue. Two access points are proposed for the main library parking lot, to be located on the north side of the Talbot Street extension, and two access points are proposed for the auxiliary parking lot, to be located south of the Talbot Street extension.

Based on the analyses contained in this report:

- All study intersections will operate at LOS "D" or better, with the exception of US 301 & MD 225, US 301 & MD 6, and MD 6 & Washington Avenue. The following improvements will mitigate the impact of the proposed development:
    - US 301 & MD 225: Traffic signal adjustment to give additional green time to the southbound through and eastbound phases.
    - US 301 & MD 6: Traffic signal adjustment to give additional green time to the north- and southbound through phases.
    - MD 6 & Washington Avenue: Traffic signal adjustment nearly mitigates the full impact of the developments. The westbound approach along MD 6 can be restriped as a left, through, and shared through/right-turn lanes to fully mitigate the impact. The eastbound left should be extended and tied into the improvement being constructed by the Pinegrove development. This will result in two eastbound lanes along MD 6 between US 301 and Washington Avenue and allow for sufficient left-turn storage for queues at MD 6 & Washington Avenue.
- MDOT SHA is in the design stage of a Capital Improvement Project (CIP) to provide streetscape improvements along MD 6. However, it appears the MD 6 Project will have a negative impact on vehicular operations along MD 6 and will not accommodate the previously approved and recommended improvements along MD 6 as part of the Pinegrove development and this TIA. It is recommended that the Town of La Plata and MDOT SHA coordinate to discuss the prioritization of pedestrian improvements at the expense of vehicular operations to ensure that both parties are in agreement with the direction of the project. Specific details of the vehicular impacts are

provided below.

- The MD 6 Project proposes a road diet between US 301 and Washington Avenue, reducing the travel lanes to one in each direction with a textured pavement median. This conflicts with the findings and recommendations of this TIA, which recommends a 4-lane section (two in each direction) along MD 6 between US 301 and Washington Avenue in order to adequately accommodate traffic volumes and queues on this section of MD 6. With the current design of the SHA MD 6 Project, left-turn queues along MD 6 at US 301 and Washington Avenue will exceed the available storage space and spill back into the mainline traffic flow during the PM peak hour, thus increasing congestion and impairing mainline vehicular operations along MD 6. The MDOT SHA MD 6 Project plan should be revised to include a 4-lane section between US 301 and MD 6, as recommended in this TIA.
- MD 6 is marked with a two-way left-turn lane between La Grange Avenue and Severn Drive. This road marking allows vehicles making left-turns from the minor street roads and driveways to make a 2-stage movement into the two-way left-turn lane before merging into mainline traffic. It appears the MDOT SHA MD 6 Project proposes to remove the two-way left-turn marking for several sections of MD 6, replacing the markings with textured pavement. Removing the striped two-way left-turn lane will no longer allow vehicles to make 2-stage movements from the minor streets, thus making these movements more difficult and increasing delay. This will impact the intersections of MD 6 with La Grange Avenue, Anne Arundel Avenue, Somerset Street, Severn Drive, and numerous driveways. It is recommended that the Town of La Plata and MDOT SHA coordinate to discuss the impacts of removing the two-way left-turn lane on vehicular operations

- The extensions of Talbot Street and Maple Avenue will create a new connection between MD 6 and Washington Avenue that will potentially allow vehicles to bypass the signalized intersection of MD 6 & Washington Avenue. It should be noted, however, that there is a similar, existing, connection between MD 6 and Washington Avenue via Maple Avenue and Baltimore Street. Existing traffic volumes at the intersection of MD 6 & Maple Avenue indicate that there is minimal existing cut-through traffic, with only 12, 23, and 12 vehicles making right-turn movements from MD 6 to Maple Avenue during the morning, evening, and Saturday peak hours, respectively, and even fewer making left-turn movements from Maple Avenue to MD 6. It is unlikely that any significant amount of traffic will

divert from current travel patterns along MD 6 and Washington Avenue to utilize a longer travel route to the extensions of Maple Avenue and Talbot Street. To further discourage cut through traffic between MD 6 and Washington Avenue, however, visual traffic calming measures in the form of signage and pavement markings are recommended along the Talbot Street and Maple Avenue extensions, as depicted on the concept plan in Appendix G. This includes stop-control at the sharp bend in the road (this was included in the road concept provided by Charles County for the development of the library), pedestrian crossing signs, and stop for pedestrian signs within the proposed crosswalks on this roadway. While significant cut-through traffic is not expected along the road extensions, these traffic calming features in conjunction with the sharp turn in the roadway will slow down drivers, increase travel time along the extended roadways, and thus discourage any additional cut-through traffic while also enhancing pedestrian safety. Further traffic calming can be considered in the future if excessive cut-through traffic should develop with the completion of these roads, however, we do not anticipate this to be needed at this time. Additional features could include physical traffic calming such as chicanes, medians, or speed humps, but those types of improvements would have negative impacts on emergency response vehicles and should only be considered in coordination with emergency services to ensure emergency vehicles will have no issues accessing the proposed library.

In light of the findings contained in this report, the proposed development will have minimal impact on the surrounding road network with the recommended improvements. As such, the proposed development should be approved.

Appendix A

Supplemental Information
Turning Movement Counts

La Plata Library Traffic Impact Study (TIS) Scope

Project Name: La Plata Library
Project Location: Talbot Street/Maple Avenue at Washington Street, La Plata, MD
Project Description: Proposed Gross Floor Area 27,799 SF (0.64 Acres)

Must Follow:

- ITE Transportation Impact Analyses for Sites, Latest Edition
- ITE Trip Generation Manual, Latest Edition
- MDOT SHA Traffic Impact Study Guidelines
- Manual of Unform Traffic Control Devices

Study Intersections:

The following intersections will be analyzed, and queueing analysis will be required for all vehicular turning movements:

1. US 301 at Rosewick Road (Signalized)
2. US 301 at MD 6 Port Tobacco Road/ Charles Street (Signalized)
3. US 301 at Talbot Street (Unsignalized)
4. US 301 at MD 225 Hawthorne Road (Signalized)
5. MD 6 Charles Street at Baltimore Street (Unsignalized)
6. MD 6 Charles Street at Church Street (Unsignalized)
7. MD 6 Charles Street at St. Mary's Avenue (Unsignalized)
8. MD 6 Charles Street at Washington Avenue (Signalized)
9. MD 6 Charles Street at La Grange Avenue (Unsignalized)
10. MD 6 Charles Street at Maple Avenue (Unsignalized)
11. MD 6 Charles Street at Kent Avenue (Unsignalized)
12. MD 6 Charles Street at Oak Avenue (Unsignalized)
13. MD 6 Charles Street at La Plata Parkway/ Willow Lane (Unsignalized)
14. MD 6 Charles Street at Hickory Lane (Unsignalized)
15. MD 6 Charles Street at MD 488 La Plata Road (Signalized)
16. Talbot Street at Washington Avenue (Unsignalized)
17. Talbot Street at West Site Access (Unsignalized)
18. Talbot Avenue at East Site Access (Unsignalized)

Traffic Count Hours[1]:

Weekday (Tuesday, Wednesday, or Thursday): 7:00 – 9:00 AM and 3:00 – 6:00 PM
Weekend (Saturday): 11:00 AM – 3:00 PM

Design Year: Charles County to provide (based on approval of water allocation)

[1] Study dates must not coincide with holidays, school closures, adverse weather events, special events, or construction.

Growth Rate[2]: Request from MDOT SHA Travel Forecasting and Analysis Division

Traffic Analysis Scenarios:

- Existing: 2025
- Future (TBD) Background[3]: (With the Approved Town and County Developments and Regional Growth)
- Future (TBD) Total: (With the Site Generated Trips)

Background Traffic[4]:

All approved TISs in the vicinity of the proposed library, including but not limited to:

A. Pinegrove Development
B. Villages of Roswick
C. Schultz Property
D. Rosewick Corner
E. Rosewick II Apartments
F. Sagepoint
G. Stagecoach Crossing
H. Villages of Steeplechase
I. Agricopia Development
J. La Plata Business Park

Other Approved Capital Projects to be Included in the Analysis:

- La Plata Dorchester Community Center
- La Plata Radio Station Road Bikeway
- Charles County La Plata High School Expansion (Add 100 seats from 300 to 400)
- MDOT SHA MD 6 Charles Street Community Safety and Enhancement Project (From US 301 to Willow Lane) – includes intersection improvements at Maple Avenue (Dog-bone Roundabout) and Oak Avenue (Mini Roundabout)

Transit Routes Within the Study Area (Charles County VanGO):

- La Plata Route (US 301, MD 6, Kent Avenue),
- Najemoy Route (US 301 and MD 6)
- Newburg Routes (US 301 and Hawthorne Road)

Daily Trip Generation Rates:

- Weekday: X Weekend: X

Institute of Transportation Engineers (ITE) Land Use: 590 (Library)

Trips Generated: 33 Weekday AM, 89 Weekday PM, 97 Saturday Mid-Day

Pass By Percentage: Not Applicable

[2] Email Ms. Rana Shams, Chief at RShams@mdot.maryland.gov.
[3] Should include mitigations proposed by background developments that have site plan approval.
[4] Check with Town of La Plata and Charles County to obtain a comprehensive list.

Traffic Operation Modeling, Simulation, and Analysis Software:

- Critical Lane Volume (CLV) Worksheets (All Intersections)
- Highway Capacity Software, Latest Version (All Intersections with CLV over 1,150)
- Synchro and SimTraffic (Signalized Intersections)

Measures of Effectiveness:

- Intersection Level of Service (LOS) - Critical Lane Volume Methodology (All Intersections)
- Intersection LOS – Highway Capacity Manual (HCM), 7th Edition 2022 (All intersections with CLV over 1,150)
- Intersection, Approach, and Movement LOS using Synchro HCM 6th Edition – 2016 Methodology and SimTraffic 95th Percentile Queue Lengths (For signalized intersections)

Mitigation Requirements:

- Intersection LOS worsens to LOS-E or LOS-F where the background traffic is LOS-D
- Intersection Delay increases where the background traffic is LOS-E or LOS-F.
- Individual Movement LOS worsens by one letter grade or higher where the background traffic is LOS-D (For MDOT SHA maintained intersections)
- Individual Movement Delay worsens, where the background traffic is LOS-E or LOS-F (For all MDOT SHA maintained intersections)
- Queue length worsens and exceeds the available storage length in Total Traffic condition (all intersection turning movements).

Master Plan Conformance:

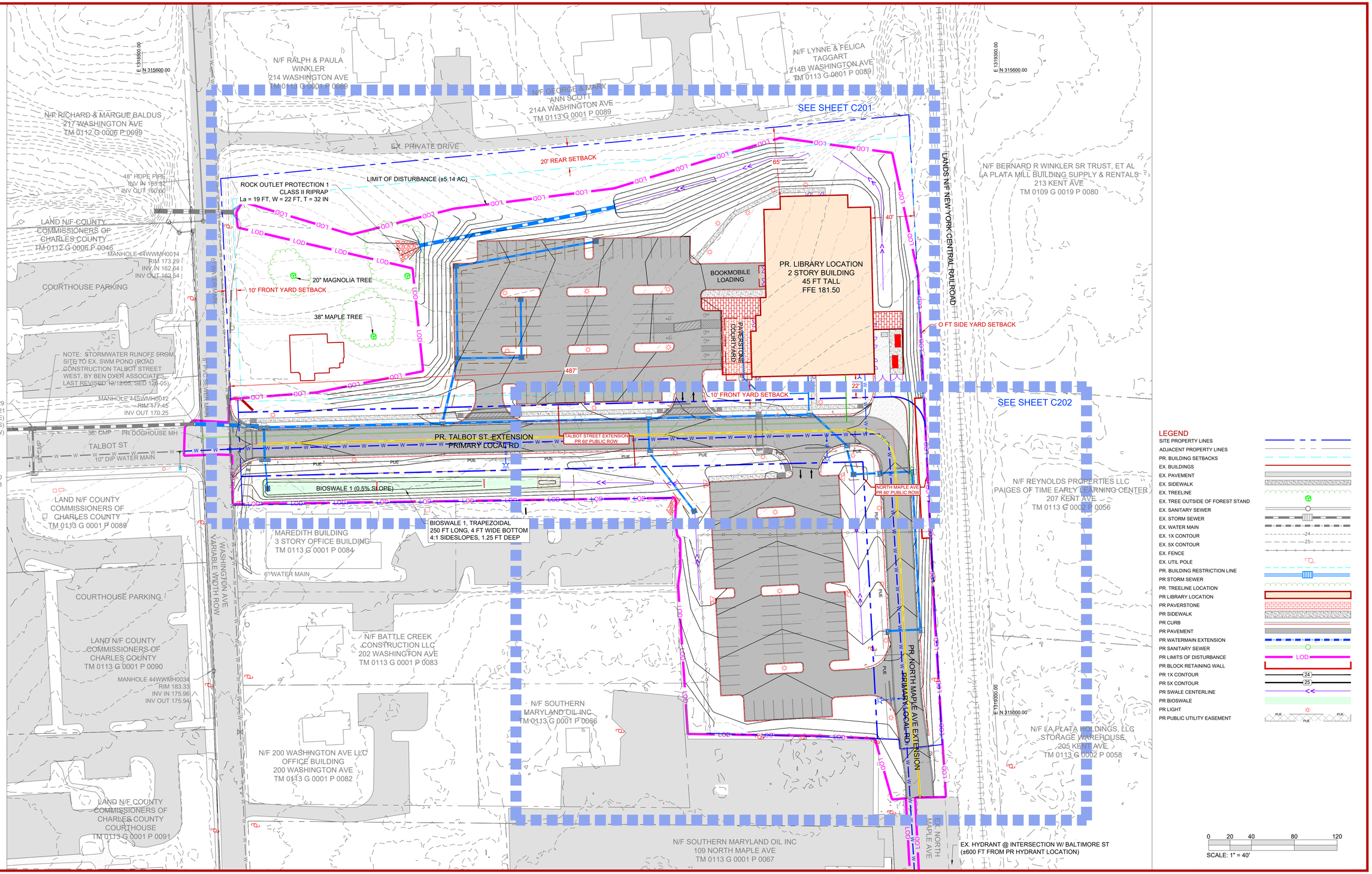
La Plata Transportation Plan:
https://townoflaplata.org/DocumentCenter/View/356/Transportation-Study-PDF

Avoid all impacts to the existing and future pedestrian and bicycle facilities and provide full pedestrian and bicycle facilities in conformance with the Transportation Plan along the frontage of the site.

Submittal Requirements:

Please provide site directional trip distribution percentages before submitting the TIS. TIS Submissions shall be made to Charles County Government, MDOT SHA, and Town of La Plata.

- Submit one (1) digital copy of the TIS to Charles County Department of Planning and Zoning.
- Submit one (1) digital copy and hard/paper copy to the Town of La Plata, Planning Department.
- TIS submittal to MDOT SHA must be made thru the MDOT SHA Salesforce link at https://mdotsha.force.com/accesspermit/login?ec=302&inst=4v&startURL=%2Faccesspermit. The review and project status can be viewed via SHA Access Management Division web page at https://www.roads.maryland.gov/mdotsha/pages/amd.aspx?Pageid=876.



NOTE:
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NOTE:
This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.

STATE OF MARYLAND — WILLIAM C. SCHMIDT — REG. NO. 36310 — PROFESSIONAL ENGINEER
LIC 36310 EXP 11/17/26

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LA PLATA LIBRARY

SITE PLAN INDEX AND STORMWATER MANAGEMENT/STORM DRAIN EASEMENTS SHEET

PROJECT DATA			
Tax Map:	0113	Parcel:	SEVERAL
LA PLATA, MD			
Drawn By:	WCS	Checked By:	WCS
Date:	2/12/25		
Scale:	1" = 40'		

REVISIONS	
1.	5/19/23 PER LA PLATA COMMENTS
2.	1/16/25 PER LA PLATA COMMENTS
..	1/16/25 PER CHARLES COUNTY SCD COMMENTS
4.	2/12/25 ISSUED FOR TEAM REVIEW
5.	7/22/25 PER TOWN COMMENTS

Project No.: 21-093
File Name: 071425BF.dwg
Sheet No.: C-200

Weekday Morning Peak Hour (7:00 am - 9:00 am)

	US 301 Northbound					US 301 Southbound					N/A Eastbound					Rosewick Rd Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:00-7:15	0	0	237	39	0	0	10	146	0	0	0	0	0	0	0	0	29	0	7	0	468
7:15-7:30	0	0	251	76	0	0	14	180	0	0	0	0	0	0	0	0	37	0	16	0	574
7:30-7:45	0	0	305	74	0	0	10	175	0	0	0	0	0	0	0	0	49	0	29	0	642
7:45-8:00	0	0	267	67	0	0	11	199	0	0	0	0	0	0	0	0	50	0	26	0	620
8:00-8:15	1	0	214	69	0	0	16	196	0	0	0	0	0	0	0	0	29	0	21	0	546
8:15-8:30	0	0	258	47	0	0	13	218	0	0	0	0	0	0	0	0	27	0	25	0	588
8:30-8:45	0	0	184	52	0	0	10	174	0	0	0	0	0	0	0	0	48	0	14	0	482
8:45-9:00	0	0	240	68	0	0	21	180	0	0	0	0	0	0	0	0	39	0	20	0	568
Hourly Totals																					
7:00-8:00	0	0	1060	256	0	0	45	700	0	0	0	0	0	0	0	0	165	0	78	0	2304
7:15-8:15	1	0	1037	286	0	0	51	750	0	0	0	0	0	0	0	0	165	0	92	0	2382
7:30-8:30	1	0	1044	257	0	0	50	788	0	0	0	0	0	0	0	0	155	0	101	0	2396
7:45-8:45	1	0	923	235	0	0	50	787	0	0	0	0	0	0	0	0	154	0	86	0	2236
8:00-9:00	1	0	896	236	0	0	60	768	0	0	0	0	0	0	0	0	143	0	80	0	2184

AM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
7:30-8:30	**1**	**0**	**1044**	**257**	**0**	**0**	**50**	**788**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**155**	**0**	**101**	**0**	**2396**

Weekday Evening Peak Hour (3:00 pm - 6:00 pm)

	US 301 Northbound					US 301 Southbound					N/A Eastbound					Rosewick Rd Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:00-3:15	1	0	229	83	0	0	33	306	0	0	0	0	0	0	0	0	58	0	27	0	737
3:15-3:30	0	0	264	73	0	0	50	265	0	0	0	0	0	0	0	0	50	0	30	0	732
3:30-3:45	0	0	251	78	0	0	30	313	0	0	0	0	0	0	0	0	57	0	28	0	757
3:45-4:00	0	0	226	86	0	0	50	309	0	0	0	0	0	0	0	0	68	0	27	0	766
4:00-4:15	1	0	237	111	0	0	37	312	0	0	0	0	0	0	0	0	66	0	26	0	790
4:15-4:30	1	0	268	81	0	1	46	299	0	0	0	0	0	0	0	0	68	0	36	0	800
4:30-4:45	0	0	277	107	0	0	27	339	0	0	0	0	0	0	0	0	61	0	35	0	846
4:45-5:00	0	0	275	114	0	1	35	318	0	0	0	0	0	0	0	0	64	0	29	0	836
5:00-5:15	0	0	269	94	0	0	35	335	0	0	0	0	0	0	0	0	75	0	38	0	846
5:15-5:30	1	0	269	104	0	1	39	346	0	0	0	0	0	0	0	0	71	0	32	0	863
5:30-5:45	0	0	262	111	0	0	31	284	0	0	0	0	0	0	0	0	68	0	30	0	786
5:45-6:00	0	0	244	97	0	0	27	312	0	0	0	0	0	0	0	0	67	0	32	0	779
Hourly Totals																					
3:00-4:00	1	0	970	320	0	0	163	1193	0	0	0	0	0	0	0	0	233	0	112	0	2992
3:15-4:15	1	0	978	348	0	0	167	1199	0	0	0	0	0	0	0	0	241	0	111	0	3045
3:30-4:30	2	0	982	356	0	1	163	1233	0	0	0	0	0	0	0	0	259	0	117	0	3113
3:45-4:45	2	0	1008	385	0	1	160	1259	0	0	0	0	0	0	0	0	263	0	124	0	3202
4:00-5:00	2	0	1057	413	0	2	145	1268	0	0	0	0	0	0	0	0	259	0	126	0	3272
4:15-5:15	1	0	1089	396	0	2	143	1291	0	0	0	0	0	0	0	0	268	0	138	0	3328
4:30-5:30	1	0	1090	419	0	2	136	1338	0	0	0	0	0	0	0	0	271	0	134	0	3391
4:45-5:45	1	0	1075	423	0	2	140	1283	0	0	0	0	0	0	0	0	278	0	129	0	3331
5:00-6:00	1	0	1044	406	0	1	132	1277	0	0	0	0	0	0	0	0	281	0	132	0	3274

PM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
4:30-5:30	**1**	**0**	**1090**	**419**	**0**	**2**	**136**	**1338**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**271**	**0**	**134**	**0**	**3391**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: US 301 & Rosewick Rd
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Thursday, December 4, 2025
Jurisdiction: Charles County

	Weekend Peak Hour (11:00 am - 3:00 pm)																				
	US 301 Northbound					US 301 Southbound					N/A Eastbound					Rosewick Rd Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
11:00-11:15	0	0	261	88	0	0	33	220	0	0	0	0	0	0	0	0	72	0	35	0	709
11:15-11:30	1	0	263	120	0	0	35	254	0	0	0	0	0	0	0	0	83	0	43	0	799
11:30-11:45	2	0	248	87	0	0	24	244	0	0	0	0	0	0	0	1	58	0	28	0	692
11:45-12:00	0	0	265	101	0	0	44	245	0	0	0	0	0	0	0	0	54	0	43	0	752
12:00-12:15	0	0	270	103	0	1	25	237	0	0	0	0	0	0	0	0	64	0	39	0	739
12:15-12:30	0	0	276	88	0	0	28	228	0	0	0	0	0	0	0	0	73	0	49	0	742
12:30-12:45	1	0	286	94	0	0	34	206	0	0	0	0	0	0	0	0	74	0	33	0	728
12:45-1:00	0	0	251	72	0	0	28	240	0	0	0	0	0	0	0	0	87	0	35	0	713
1:00-1:15	0	0	300	97	0	0	28	222	0	0	0	0	0	0	0	0	63	0	31	0	741
1:15-1:30	0	0	315	92	0	0	37	259	0	0	0	0	0	0	0	0	56	0	48	0	807
1:30-1:45	1	0	239	87	0	0	21	256	0	0	0	0	0	0	0	0	69	0	39	0	712
1:45-2:00	0	0	284	88	0	0	43	267	0	0	0	0	0	0	0	1	60	0	32	0	775
2:00-2:15	0	0	313	81	0	0	46	256	0	0	0	0	0	0	0	1	37	0	34	0	768
2:15-2:30	1	0	277	82	0	0	31	241	0	0	0	0	0	0	0	0	67	0	37	0	736
2:30-2:45	0	0	311	79	0	0	31	208	0	0	0	0	0	0	0	0	69	0	40	0	738
2:45-3:00	0	0	283	94	0	0	32	259	0	0	0	0	0	0	0	0	59	0	38	0	765
Hourly Totals																					
11:00-12:00	3	0	1037	396	0	0	136	963	0	0	0	0	0	0	0	1	267	0	149	0	2952
11:15-12:15	3	0	1046	411	0	1	128	980	0	0	0	0	0	0	0	1	259	0	153	0	2982
11:30-12:30	2	0	1059	379	0	1	121	954	0	0	0	0	0	0	0	1	249	0	159	0	2925
11:45-12:45	1	0	1097	386	0	1	131	916	0	0	0	0	0	0	0	0	265	0	164	0	2961
12:00-1:00	1	0	1083	357	0	1	115	911	0	0	0	0	0	0	0	0	298	0	156	0	2922
12:15-1:15	1	0	1113	351	0	0	118	896	0	0	0	0	0	0	0	0	297	0	148	0	2924
12:30-1:30	1	0	1152	355	0	0	127	927	0	0	0	0	0	0	0	0	280	0	147	0	2989
12:45-1:45	1	0	1105	348	0	0	114	977	0	0	0	0	0	0	0	0	275	0	153	0	2973
1:00-2:00	1	0	1138	364	0	0	129	1004	0	0	0	0	0	0	0	1	248	0	150	0	3035
1:15-2:15	1	0	1151	348	0	0	147	1038	0	0	0	0	0	0	0	2	222	0	153	0	3062
1:30-2:30	2	0	1113	338	0	0	141	1020	0	0	0	0	0	0	0	2	233	0	142	0	2991
1:45-2:45	1	0	1185	330	0	0	151	972	0	0	0	0	0	0	0	2	233	0	143	0	3017
2:00-3:00	1	0	1184	336	0	0	140	964	0	0	0	0	0	0	0	1	232	0	149	0	3007
PM	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
1:15-2:15	**1**	**0**	**1151**	**348**	**0**	**0**	**147**	**1038**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**222**	**0**	**153**	**0**	**3062**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: US 301 & Rosewick Rd
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Saturday, December 6, 2025
County: Charles County

Weekday Morning Peak Hour (7:00 am - 9:00 am)

	US 301 Northbound					US 301 Southbound					MD 225 Eastbound					MD 225 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:00-7:15	4	73	251	2	0	1	7	155	33	1	0	59	6	41	0	0	12	41	3	0	688
7:15-7:30	5	62	308	9	0	1	10	171	34	0	0	55	16	69	0	0	9	30	2	0	781
7:30-7:45	5	65	358	5	0	3	3	184	38	0	0	67	8	77	0	0	16	35	4	0	868
7:45-8:00	3	81	300	6	0	9	7	196	26	0	0	65	15	63	0	0	15	35	3	0	824
8:00-8:15	7	56	244	9	0	5	6	180	36	0	0	67	9	56	0	0	23	24	6	0	728
8:15-8:30	10	67	255	5	0	2	6	181	39	0	0	53	19	56	0	0	12	25	6	0	736
8:30-8:45	5	66	265	4	0	5	11	176	34	0	0	45	10	58	0	0	16	31	4	1	730
8:45-9:00	11	51	259	11	0	2	9	172	35	0	0	60	14	65	0	0	17	17	8	0	731
Hourly Totals																					
7:00-8:00	17	281	1217	22	0	14	27	706	131	1	0	246	45	250	0	0	52	141	12	0	3162
7:15-8:15	20	264	1210	29	0	18	26	731	134	0	0	254	48	265	0	0	63	124	15	0	3201
7:30-8:30	25	269	1157	25	0	19	22	741	139	0	0	252	51	252	0	0	66	119	19	0	3156
7:45-8:45	25	270	1064	24	0	21	30	733	135	0	0	230	53	233	0	0	66	115	19	1	3019
8:00-9:00	33	240	1023	29	0	14	32	709	144	0	0	225	52	235	0	0	68	97	24	1	2926

AM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:15-8:15	**20**	**264**	**1210**	**29**	**0**	**18**	**26**	**731**	**134**	**0**	**0**	**254**	**48**	**265**	**0**	**0**	**63**	**124**	**15**	**0**	**3201**

Weekday Evening Peak Hour (3:00 pm - 6:00 pm)

	US 301 Northbound					US 301 Southbound					MD 225 Eastbound					MD 225 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:00-3:15	6	50	266	16	0	7	11	322	52	1	0	72	19	85	0	0	43	19	4	0	972
3:15-3:30	13	35	290	9	0	10	14	278	48	0	0	77	20	120	0	0	36	35	8	0	993
3:30-3:45	14	45	283	12	0	5	7	311	67	0	0	76	29	116	1	0	46	34	3	0	1048
3:45-4:00	9	63	256	12	0	12	10	297	58	0	0	84	30	127	0	0	38	36	7	0	1039
4:00-4:15	13	55	284	14	0	18	7	328	60	0	0	75	19	79	0	0	57	38	6	0	1053
4:15-4:30	13	52	270	11	0	9	12	343	58	3	0	89	26	107	0	0	51	36	8	0	1085
4:30-4:45	8	63	337	14	0	11	6	323	48	0	0	78	29	103	0	0	45	38	9	0	1112
4:45-5:00	17	59	304	16	0	8	9	312	66	0	0	81	33	120	0	0	50	33	10	0	1118
5:00-5:15	8	45	324	6	0	12	9	354	51	0	0	90	26	100	0	0	51	26	15	0	1117
5:15-5:30	14	67	307	9	0	9	6	328	86	0	0	80	33	78	0	0	37	36	7	0	1097
5:30-5:45	11	41	300	15	0	7	5	324	76	0	0	83	27	88	0	0	41	43	6	0	1067
5:45-6:00	9	60	286	13	0	9	8	308	68	0	0	88	23	84	0	0	44	32	2	0	1034
Hourly Totals																					
3:00-4:00	42	193	1095	49	0	34	42	1208	225	1	0	309	98	448	1	0	163	124	22	0	4054
3:15-4:15	49	198	1113	47	0	45	38	1214	233	0	0	312	98	442	1	0	177	143	24	0	4134
3:30-4:30	49	215	1093	49	0	44	36	1279	243	3	0	324	104	429	1	0	192	144	24	0	4229
3:45-4:45	43	233	1147	51	0	50	35	1291	224	3	0	326	104	416	0	0	191	148	30	0	4292
4:00-5:00	51	229	1195	55	0	46	34	1306	232	3	0	323	107	409	0	0	203	145	33	0	4371
4:15-5:15	46	219	1235	47	0	40	36	1332	223	3	0	338	114	430	0	0	197	133	42	0	4435
4:30-5:30	47	234	1272	45	0	40	30	1317	251	0	0	329	121	401	0	0	183	133	41	0	4444
4:45-5:45	50	212	1235	46	0	36	29	1318	279	0	0	334	119	386	0	0	179	138	38	0	4399
5:00-6:00	42	213	1217	43	0	37	28	1314	281	0	0	341	109	350	0	0	173	137	30	0	4315

PM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
4:30-5:30	**47**	**234**	**1272**	**45**	**0**	**40**	**30**	**1317**	**251**	**0**	**0**	**329**	**121**	**401**	**0**	**0**	**183**	**133**	**41**	**0**	**4444**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: US 301 & MD 225
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Thursday, December 4, 2025
Jurisdiction: Charles County

	Weekend Peak Hour (11:00 am - 3:00 pm)																			
	US 301 Northbound					US 301 Southbound					MD 225 Eastbound					MD 225 Westbound				
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
11:00-11:15	20	30	337	15	0	5	6	267	42	0	0	74	10	45	0	0	36	11	10	0	908
11:15-11:30	8	50	353	12	0	7	5	269	58	0	0	84	7	58	0	0	24	17	5	0	957
11:30-11:45	8	36	336	16	0	8	10	297	65	0	0	53	15	52	0	0	43	26	11	0	976
11:45-12:00	11	48	324	19	0	7	9	298	70	0	0	73	22	58	0	0	45	26	9	0	1019
12:00-12:15	16	48	372	14	0	6	6	245	48	0	0	73	10	37	0	0	34	22	4	0	935
12:15-12:30	16	55	323	13	0	11	7	251	64	0	0	88	8	55	0	0	35	13	8	0	947
12:30-12:45	13	39	317	13	0	11	7	273	47	0	0	85	13	66	0	0	34	22	11	0	951
12:45-1:00	10	44	313	15	0	11	8	241	60	0	0	79	10	52	0	0	32	24	9	0	908
1:00-1:15	7	51	341	13	0	7	8	277	69	0	0	74	9	54	0	0	23	30	11	0	974
1:15-1:30	7	52	311	18	0	13	5	289	69	0	0	71	8	55	0	0	33	20	12	0	963
1:30-1:45	23	43	352	12	0	11	9	260	60	0	0	78	11	57	0	0	38	26	4	0	984
1:45-2:00	17	44	355	19	0	11	13	264	51	1	0	85	6	64	0	0	37	15	8	1	989
2:00-2:15	12	40	323	12	0	12	8	278	52	0	0	65	11	78	0	0	38	15	11	0	955
2:15-2:30	16	43	305	10	0	9	7	265	58	0	0	75	13	66	0	0	46	20	10	0	943
2:30-2:45	17	51	332	9	0	15	8	269	62	0	0	67	8	60	0	0	44	25	7	0	974
2:45-3:00	5	66	288	14	0	11	9	241	60	0	0	87	10	72	0	0	37	22	5	0	927
Hourly Totals																					
11:00-12:00	47	164	1350	62	0	27	30	1131	235	0	0	284	54	213	0	0	148	80	35	0	3860
11:15-12:15	43	182	1385	61	0	28	30	1109	241	0	0	283	54	205	0	0	146	91	29	0	3887
11:30-12:30	51	187	1355	62	0	32	32	1091	247	0	0	287	55	202	0	0	157	87	32	0	3877
11:45-12:45	56	190	1336	59	0	35	29	1067	229	0	0	319	53	216	0	0	148	83	32	0	3852
12:00-1:00	55	186	1325	55	0	39	28	1010	219	0	0	325	41	210	0	0	135	81	32	0	3741
12:15-1:15	46	189	1294	54	0	40	30	1042	240	0	0	326	40	227	0	0	124	89	39	0	3780
12:30-1:30	37	186	1282	59	0	42	28	1080	245	0	0	309	40	227	0	0	122	96	43	0	3796
12:45-1:45	47	190	1317	58	0	42	30	1067	258	0	0	302	38	218	0	0	126	100	36	0	3829
1:00-2:00	54	190	1359	62	0	42	35	1090	249	1	0	308	34	230	0	0	131	91	35	1	3912
1:15-2:15	59	179	1341	61	0	47	35	1091	232	1	0	299	36	254	0	0	146	76	35	1	3893
1:30-2:30	68	170	1335	53	0	43	37	1067	221	1	0	303	41	265	0	0	159	76	33	1	3873
1:45-2:45	62	178	1315	50	0	47	36	1076	223	1	0	292	38	268	0	0	165	75	36	1	3863
2:00-3:00	50	200	1248	45	0	47	32	1053	232	0	0	294	42	276	0	0	165	82	33	0	3799
PM	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
1:00-2:00	**54**	**190**	**1359**	**62**	**0**	**42**	**35**	**1090**	**249**	**1**	**0**	**308**	**34**	**230**	**0**	**0**	**131**	**91**	**35**	**1**	**3912**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: US 301 & MD 225
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Saturday, December 6, 2025
County: Charles County

Weekday Morning Peak Hour (7:00 am - 9:00 am)

	US 301 Northbound					US 301 Southbound					Parking Lot Eastbound					Talbot St Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:00-7:15	1	0	332	1	0	1	2	195	0	0	0	0	0	0	1	0	1	0	2	0	535
7:15-7:30	5	0	372	4	0	3	5	253	0	0	0	0	0	0	1	0	6	0	7	0	655
7:30-7:45	6	0	424	7	0	1	12	269	3	0	0	0	0	0	0	0	2	0	4	0	728
7:45-8:00	4	1	370	3	0	2	14	249	2	0	0	0	0	0	0	0	0	0	9	0	654
8:00-8:15	5	3	310	8	0	3	12	247	4	0	0	0	0	0	0	0	2	0	12	0	606
8:15-8:30	7	2	334	6	0	2	21	228	0	0	0	0	0	0	0	0	0	1	9	0	610
8:30-8:45	4	1	302	11	0	3	14	249	1	0	0	0	0	0	0	0	0	0	13	0	598
8:45-9:00	3	4	330	13	0	2	15	226	3	0	0	2	0	1	1	0	1	0	12	0	612
Hourly Totals																					
7:00-8:00	16	1	1498	15	0	7	33	966	5	0	0	0	0	0	2	0	9	0	22	0	2574
7:15-8:15	20	4	1476	22	0	9	43	1018	9	0	0	0	0	0	1	0	10	0	32	0	2644
7:30-8:30	22	6	1438	24	0	8	59	993	9	0	0	0	0	0	0	0	4	1	34	0	2598
7:45-8:45	20	7	1316	28	0	10	61	973	7	0	0	0	0	0	0	0	2	1	43	0	2468
8:00-9:00	19	10	1276	38	0	10	62	950	8	0	0	2	0	1	1	0	3	1	46	0	2427

AM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
7:15-8:15	**20**	**4**	**1476**	**22**	**0**	**9**	**43**	**1018**	**9**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**10**	**0**	**32**	**0**	**2644**

Weekday Evening Peak Hour (3:00 pm - 6:00 pm)

	US 301 Northbound					US 301 Southbound					Parking Lot Eastbound					Talbot St Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:00-3:15	3	3	298	8	1	9	3	425	1	0	0	1	0	3	2	0	0	0	13	0	767
3:15-3:30	4	1	326	14	0	7	5	462	0	0	0	2	0	5	0	0	0	0	17	0	843
3:30-3:45	2	3	324	5	0	3	6	450	5	0	0	2	0	5	0	0	2	0	9	0	816
3:45-4:00	2	2	328	3	0	8	3	464	2	0	0	2	0	3	0	0	5	0	21	0	843
4:00-4:15	6	1	344	9	1	9	2	458	8	0	0	1	0	6	1	0	1	1	23	0	869
4:15-4:30	2	2	317	6	0	8	4	450	3	0	0	0	1	3	0	0	1	0	23	0	820
4:30-4:45	3	0	355	2	0	8	5	464	3	0	0	2	0	8	0	0	7	0	54	0	911
4:45-5:00	4	1	336	12	0	13	1	473	3	0	0	0	0	5	0	0	5	1	34	0	888
5:00-5:15	3	0	348	7	0	8	8	469	0	0	0	4	0	4	0	0	3	0	19	0	873
5:15-5:30	2	2	367	5	0	6	7	440	3	0	0	1	0	2	0	0	1	0	21	0	857
5:30-5:45	2	4	322	5	0	10	5	433	0	0	0	0	0	3	0	0	0	0	17	0	801
5:45-6:00	2	2	329	6	0	11	4	439	0	0	0	2	0	7	0	0	2	0	16	0	820
Hourly Totals																					
3:00-4:00	11	9	1276	30	1	27	17	1801	8	0	0	7	0	16	2	0	7	0	60	0	3272
3:15-4:15	14	7	1322	31	1	27	16	1834	15	0	0	7	0	19	1	0	8	1	70	0	3373
3:30-4:30	12	8	1313	23	1	28	15	1822	18	0	0	5	1	17	1	0	9	1	76	0	3350
3:45-4:45	13	5	1344	20	1	33	14	1836	16	0	0	5	1	20	1	0	14	1	121	0	3445
4:00-5:00	15	4	1352	29	1	38	12	1845	17	0	0	3	1	22	1	0	14	2	134	0	3490
4:15-5:15	12	3	1356	27	0	37	18	1856	9	0	0	6	1	20	0	0	16	1	130	0	3492
4:30-5:30	12	3	1406	26	0	35	21	1846	9	0	0	7	0	19	0	0	16	1	128	0	3529
4:45-5:45	11	7	1373	29	0	37	21	1815	6	0	0	5	0	14	0	0	9	1	91	0	3419
5:00-6:00	9	8	1366	23	0	35	24	1781	3	0	0	7	0	16	0	0	6	0	73	0	3351

PM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
4:30-5:30	**12**	**3**	**1406**	**26**	**0**	**35**	**21**	**1846**	**9**	**0**	**0**	**7**	**0**	**19**	**0**	**0**	**16**	**1**	**128**	**0**	**3529**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: US 301 & Talbot St
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Thursday, December 4, 2025
Jurisdiction: Charles County

	Weekend Peak Hour (11:00 am - 3:00 pm)																				
	US 301 Northbound					US 301 Southbound					Parking Lot Eastbound					Talbot St Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
11:00-11:15	4	1	347	2	0	4	1	277	2	0	0	4	0	2	1	0	0	1	8	0	653
11:15-11:30	2	1	349	0	0	4	2	314	2	0	0	3	0	2	0	0	1	1	6	3	687
11:30-11:45	7	2	331	5	0	5	3	305	3	0	0	4	0	6	0	0	4	0	6	1	681
11:45-12:00	7	4	319	5	0	10	1	328	4	0	0	1	0	2	1	0	0	0	7	0	688
12:00-12:15	4	1	337	5	0	4	2	282	3	0	0	3	0	2	0	0	0	0	8	1	651
12:15-12:30	8	1	345	4	0	6	2	317	4	0	0	2	1	2	0	0	0	0	8	0	700
12:30-12:45	5	1	326	7	0	5	4	302	3	0	0	5	1	0	0	0	0	1	5	0	665
12:45-1:00	1	4	316	3	0	6	3	312	1	0	0	2	0	4	0	0	2	0	10	0	664
1:00-1:15	3	1	356	4	1	4	0	332	1	0	0	4	0	3	0	0	1	0	11	1	720
1:15-1:30	3	1	358	1	0	4	0	285	0	0	0	5	0	3	0	0	0	0	3	1	663
1:30-1:45	2	3	332	4	0	9	2	325	3	0	0	2	0	4	0	0	0	0	6	0	692
1:45-2:00	2	3	331	3	0	5	2	310	1	0	0	3	0	6	0	0	2	0	9	0	677
2:00-2:15	6	2	342	3	0	8	5	320	0	0	0	4	1	4	0	0	0	0	11	2	706
2:15-2:30	6	1	353	4	0	10	2	280	0	0	0	0	0	2	0	0	2	0	8	0	668
2:30-2:45	8	4	361	4	0	6	4	289	1	0	0	2	0	1	0	0	1	1	5	0	687
2:45-3:00	4	3	315	1	0	9	2	295	1	0	0	2	0	2	0	0	0	0	4	0	638
Hourly Totals																					
11:00-12:00	20	8	1346	12	0	23	7	1224	11	0	0	12	0	12	2	0	5	2	27	4	2715
11:15-12:15	20	8	1336	15	0	23	8	1229	12	0	0	11	0	12	1	0	5	1	27	5	2713
11:30-12:30	26	8	1332	19	0	25	8	1232	14	0	0	10	1	12	1	0	4	0	29	2	2723
11:45-12:45	24	7	1327	21	0	25	9	1229	14	0	0	11	2	6	1	0	0	1	28	1	2706
12:00-1:00	18	7	1324	19	0	21	11	1213	11	0	0	12	2	8	0	0	2	1	31	1	2681
12:15-1:15	17	7	1343	18	1	21	9	1263	9	0	0	13	2	9	0	0	3	1	34	1	2751
12:30-1:30	12	7	1356	15	1	19	7	1231	5	0	0	16	1	10	0	0	3	1	29	2	2715
12:45-1:45	9	9	1362	12	1	23	5	1254	5	0	0	13	0	14	0	0	3	0	30	2	2742
1:00-2:00	10	8	1377	12	1	22	4	1252	5	0	0	14	0	16	0	0	3	0	29	2	2755
1:15-2:15	13	9	1363	11	0	26	9	1240	4	0	0	14	1	17	0	0	2	0	29	3	2741
1:30-2:30	16	9	1358	14	0	32	11	1235	4	0	0	9	1	16	0	0	4	0	34	2	2745
1:45-2:45	22	10	1387	14	0	29	13	1199	2	0	0	9	1	13	0	0	5	1	33	2	2740
2:00-3:00	24	10	1371	12	0	33	13	1184	2	0	0	8	1	9	0	0	3	1	28	2	2701

PM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
1:00-2:00	**10**	**8**	**1377**	**12**	**1**	**22**	**4**	**1252**	**5**	**0**	**0**	**14**	**0**	**16**	**0**	**0**	**3**	**0**	**29**	**2**	**2755**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: US 301 & Talbot St
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Saturday, December 6, 2025
County: Charles County

Weekday Morning Peak Hour (7:00 am - 9:00 am)

	US 301 Northbound					US 301 Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:00-7:15	0	31	222	43	0	3	33	112	36	0	0	58	54	30	1	0	17	50	54	0	743
7:15-7:30	0	38	227	33	0	8	46	145	78	0	0	86	42	45	1	0	18	51	63	0	880
7:30-7:45	0	30	264	48	0	10	45	172	35	0	0	99	39	36	0	0	28	37	62	0	905
7:45-8:00	2	18	274	46	0	6	54	160	28	0	0	54	47	22	0	0	30	27	55	0	823
8:00-8:15	3	26	209	39	1	7	53	160	26	0	0	58	48	30	0	0	17	32	65	0	773
8:15-8:30	2	20	195	45	1	6	44	145	30	0	0	67	40	24	0	0	18	30	79	1	745
8:30-8:45	1	25	190	42	0	4	59	151	34	0	0	73	45	23	1	0	19	35	75	0	776
8:45-9:00	0	28	240	31	0	5	47	145	32	0	0	44	23	31	0	0	14	44	47	0	731
Hourly Totals																					
7:00-8:00	2	117	987	170	0	27	178	589	177	0	0	297	182	133	2	0	93	165	234	0	3353
7:15-8:15	5	112	974	166	1	31	198	637	167	0	0	297	176	133	1	0	93	147	245	0	3383
7:30-8:30	7	94	942	178	2	29	196	637	119	0	0	278	174	112	0	0	93	126	261	1	3249
7:45-8:45	8	89	868	172	2	23	210	616	118	0	0	252	180	99	1	0	84	124	274	1	3121
8:00-9:00	6	99	834	157	2	22	203	601	122	0	0	242	156	108	1	0	68	141	266	1	3029

AM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
7:15-8:15	**5**	**112**	**974**	**166**	**1**	**31**	**198**	**637**	**167**	**0**	**0**	**297**	**176**	**133**	**1**	**0**	**93**	**147**	**245**	**0**	**3383**

Weekday Evening Peak Hour (3:00 pm - 6:00 pm)

	US 301 Northbound					US 301 Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:00-3:15	1	30	183	43	0	10	73	287	61	0	0	64	36	43	0	0	33	49	57	0	970
3:15-3:30	0	28	208	36	0	7	81	297	43	0	0	61	38	49	1	0	27	45	54	1	974
3:30-3:45	0	18	212	35	2	8	86	258	69	0	0	53	42	48	2	0	32	31	69	1	961
3:45-4:00	1	23	198	33	2	8	88	263	64	0	0	62	49	53	1	0	31	46	66	1	985
4:00-4:15	4	24	216	26	1	7	93	290	68	0	0	69	46	37	0	0	45	46	55	0	1026
4:15-4:30	1	35	194	33	1	8	72	259	67	0	0	69	42	70	2	0	33	53	44	0	980
4:30-4:45	3	41	215	27	2	15	86	270	73	0	0	77	42	37	0	0	51	59	63	0	1059
4:45-5:00	3	30	204	35	1	7	84	278	68	0	0	80	47	44	0	0	31	51	46	0	1008
5:00-5:15	2	37	205	32	0	4	76	316	84	0	0	93	34	39	0	0	34	50	55	0	1061
5:15-5:30	3	21	233	27	2	3	76	272	59	0	0	70	45	37	0	0	32	53	55	0	986
5:30-5:45	2	22	214	32	0	10	69	266	51	1	0	58	32	36	1	0	28	52	59	0	931
5:45-6:00	0	24	226	30	0	6	76	290	60	0	0	53	36	37	0	0	20	33	43	0	934
Hourly Totals																					
3:00-4:00	2	99	801	147	4	33	328	1105	237	0	0	240	165	193	4	0	123	171	246	3	3901
3:15-4:15	5	93	834	130	5	30	348	1108	244	0	0	245	175	187	4	0	135	168	244	3	3958
3:30-4:30	6	100	820	127	6	31	339	1070	268	0	0	253	179	208	5	0	141	176	234	2	3965
3:45-4:45	9	123	823	119	6	38	339	1082	272	0	0	277	179	197	3	0	160	204	228	1	4060
4:00-5:00	11	130	829	121	5	37	335	1097	276	0	0	295	177	188	2	0	160	209	208	0	4080
4:15-5:15	9	143	818	127	4	34	318	1123	292	0	0	319	165	190	2	0	149	213	208	0	4114
4:30-5:30	11	129	857	121	5	29	322	1136	284	0	0	320	168	157	0	0	148	213	219	0	4119
4:45-5:45	10	110	856	126	3	24	305	1132	262	1	0	301	158	156	1	0	125	206	215	0	3991
5:00-6:00	7	104	878	121	2	23	297	1144	254	1	0	274	147	149	1	0	114	188	212	0	3916

PM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
4:30-5:30	**11**	**129**	**857**	**121**	**5**	**29**	**322**	**1136**	**284**	**0**	**0**	**320**	**168**	**157**	**0**	**0**	**148**	**213**	**219**	**0**	**4119**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: US 301 & MD 6
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Thursday, December 4, 2025
Jurisdiction: Charles County

	Weekend Peak Hour (11:00 am - 3:00 pm)																			
	US 301 Northbound					**US 301 Southbound**					**MD 225 Eastbound**					**MD 225 Westbound**					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
11:00-11:15	1	26	206	29	0	12	45	153	37	0	0	75	36	38	0	0	13	35	65	0	771
11:15-11:30	0	23	176	18	1	17	59	191	43	0	0	100	26	36	0	0	18	29	58	0	794
11:30-11:45	4	16	191	23	0	12	48	192	52	0	0	83	39	29	0	0	24	35	60	0	808
11:45-12:00	0	28	193	27	4	16	58	187	54	0	0	75	44	27	0	0	24	39	62	0	834
12:00-12:15	0	17	207	31	1	10	62	168	48	0	0	75	38	30	0	0	27	41	54	0	808
12:15-12:30	1	21	201	24	1	16	48	186	46	0	0	75	34	37	0	0	17	33	66	1	805
12:30-12:45	4	24	193	25	3	10	56	147	61	0	0	72	28	22	2	0	26	29	43	0	740
12:45-1:00	1	24	181	20	0	8	69	179	53	0	0	74	27	22	2	0	26	40	57	0	781
1:00-1:15	2	30	225	20	1	11	39	178	65	0	0	67	29	30	0	0	14	36	55	0	801
1:15-1:30	0	27	251	29	1	8	46	181	45	0	0	67	38	27	1	0	16	28	57	1	820
1:30-1:45	1	15	200	22	0	9	50	193	44	0	0	66	28	29	0	0	23	30	53	0	763
1:45-2:00	3	25	196	25	0	7	47	179	68	0	0	65	35	17	0	0	14	33	72	0	786
2:00-2:15	3	16	220	24	1	8	60	195	58	0	0	71	27	22	2	0	18	37	62	0	821
2:15-2:30	2	29	231	23	0	10	49	155	56	0	0	63	25	16	0	0	24	39	67	0	789
2:30-2:45	4	23	209	20	1	13	53	175	43	0	0	68	41	24	0	0	17	34	64	0	788
2:45-3:00	2	30	186	23	0	9	56	157	56	0	0	64	28	26	0	0	21	32	54	0	744
Hourly Totals																					
11:00-12:00	5	93	766	97	5	57	210	723	186	0	0	333	145	130	0	0	79	138	245	0	3212
11:15-12:15	4	84	767	99	6	55	227	738	197	0	0	333	147	122	0	0	93	144	234	0	3250
11:30-12:30	5	82	792	105	6	54	216	733	200	0	0	308	155	123	0	0	92	148	242	1	3262
11:45-12:45	5	90	794	107	9	52	224	688	209	0	0	297	144	116	2	0	94	142	225	1	3199
12:00-1:00	6	86	782	100	5	44	235	680	208	0	0	296	127	111	4	0	96	143	220	1	3144
12:15-1:15	8	99	800	89	5	45	212	690	225	0	0	288	118	111	4	0	83	138	221	1	3137
12:30-1:30	7	105	850	94	5	37	210	685	224	0	0	280	122	101	5	0	82	133	212	1	3153
12:45-1:45	4	96	857	91	2	36	204	731	207	0	0	274	122	108	3	0	79	134	222	1	3171
1:00-2:00	6	97	872	96	2	35	182	731	222	0	0	265	130	103	1	0	67	127	237	1	3174
1:15-2:15	7	83	867	100	2	32	203	748	215	0	0	269	128	95	3	0	71	128	244	1	3196
1:30-2:30	9	85	847	94	1	34	206	722	226	0	0	265	115	84	2	0	79	139	254	0	3162
1:45-2:45	12	93	856	92	2	38	209	704	225	0	0	267	128	79	2	0	73	143	265	0	3188
2:00-3:00	11	98	846	90	2	40	218	682	213	0	0	266	121	88	2	0	80	142	247	0	3146
PM	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
11:30-12:30	**5**	**82**	**792**	**105**	**6**	**54**	**216**	**733**	**200**	**0**	**0**	**308**	**155**	**123**	**0**	**0**	**92**	**148**	**242**	**1**	**3262**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: US 301 & MD 225
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Saturday, December 6, 2025
County: Charles County

Weekday Morning Peak Hour (7:00 am - 9:00 am)

	Howard St Northbound					Baltimore St Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:00-7:15	0	3	1	3	0	0	0	0	0	0	0	4	121	5	0	0	2	114	0	0	253
7:15-7:30	0	4	0	3	0	0	0	0	1	0	0	6	114	1	0	0	5	126	0	0	260
7:30-7:45	0	1	1	3	1	0	0	0	0	0	1	5	121	2	0	0	4	123	2	0	263
7:45-8:00	0	5	0	5	0	0	0	0	0	0	0	16	124	8	0	0	11	105	3	0	277
8:00-8:15	0	0	1	4	1	0	0	0	0	0	0	11	122	6	0	0	3	114	0	0	261
8:15-8:30	0	1	0	3	0	0	0	0	0	1	0	11	112	9	0	0	2	125	0	0	263
8:30-8:45	0	3	0	5	0	0	0	0	2	0	0	8	117	10	0	0	6	126	0	0	277
8:45-9:00	0	4	0	6	0	0	1	0	4	0	0	4	94	2	0	0	7	96	1	0	219
Hourly Totals																					
7:00-8:00	0	13	2	14	1	0	0	0	1	0	1	31	480	16	0	0	22	468	5	0	1054
7:15-8:15	0	10	2	15	2	0	0	0	1	0	1	38	481	17	0	0	23	468	5	0	1063
7:30-8:30	0	7	2	15	2	0	0	0	0	1	1	43	479	25	0	0	20	467	5	0	1067
7:45-8:45	0	9	1	17	1	0	0	0	2	1	0	46	475	33	0	0	22	470	3	0	1080
8:00-9:00	0	8	1	18	1	0	1	0	6	1	0	34	445	27	0	0	18	461	1	0	1022

AM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
7:45-8:45	**0**	**9**	**1**	**17**	**1**	**0**	**0**	**0**	**2**	**1**	**0**	**46**	**475**	**33**	**0**	**0**	**22**	**470**	**3**	**0**	**1080**

Weekday Evening Peak Hour (3:00 pm - 6:00 pm)

	Howard St Northbound					Baltimore St Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:00-3:15	0	8	0	6	0	0	0	0	6	0	0	1	148	8	0	0	7	122	0	0	306
3:15-3:30	0	4	0	7	0	0	0	0	5	1	0	0	151	2	0	0	3	121	0	0	293
3:30-3:45	0	7	0	3	2	0	0	0	4	0	0	1	151	11	0	0	4	123	0	0	304
3:45-4:00	0	9	0	6	1	0	0	1	1	1	2	1	152	8	0	0	2	126	1	0	309
4:00-4:15	0	5	0	6	0	0	0	0	5	0	1	1	162	4	0	0	4	133	0	0	321
4:15-4:30	0	2	0	5	0	0	0	0	5	0	1	0	139	8	0	0	0	125	0	0	285
4:30-4:45	0	10	0	2	0	0	0	0	4	0	0	0	141	6	0	0	4	157	0	0	324
4:45-5:00	0	3	0	12	1	0	0	0	3	0	0	0	162	3	0	0	5	119	0	0	307
5:00-5:15	0	9	0	6	0	0	1	0	1	0	0	2	130	9	0	0	4	129	0	0	291
5:15-5:30	0	3	0	10	0	0	0	1	1	2	0	1	147	1	0	0	4	137	0	0	305
5:30-5:45	0	3	0	4	0	0	0	0	0	1	0	1	128	1	0	1	4	121	0	0	263
5:45-6:00	0	4	1	5	0	0	0	0	4	0	0	2	138	3	0	0	4	88	0	0	249
Hourly Totals																					
3:00-4:00	0	28	0	22	3	0	0	1	16	2	2	3	602	29	0	0	16	492	1	0	1217
3:15-4:15	0	25	0	22	3	0	0	1	15	2	3	3	616	25	0	0	13	503	1	0	1232
3:30-4:30	0	23	0	20	3	0	0	1	15	1	4	3	604	31	0	0	10	507	1	0	1223
3:45-4:45	0	26	0	19	1	0	0	1	15	1	4	2	594	26	0	0	10	541	1	0	1241
4:00-5:00	0	20	0	25	1	0	0	0	17	0	2	1	604	21	0	0	13	534	0	0	1238
4:15-5:15	0	24	0	25	1	0	1	0	13	0	1	2	572	26	0	0	13	530	0	0	1208
4:30-5:30	0	25	0	30	1	0	1	1	9	2	0	3	580	19	0	0	17	542	0	0	1230
4:45-5:45	0	18	0	32	1	0	1	1	5	3	0	4	567	14	0	1	17	506	0	0	1170
5:00-6:00	0	19	1	25	0	0	1	1	6	3	0	6	543	14	0	1	16	475	0	0	1111

PM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
3:45-4:45	**0**	**26**	**0**	**19**	**1**	**0**	**0**	**1**	**15**	**1**	**4**	**2**	**594**	**26**	**0**	**0**	**10**	**541**	**1**	**0**	**1241**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: MD 6 & Howard St
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Thursday, December 4, 2025
Jurisdiction: Charles County

	Weekend Peak Hour (11:00 am - 3:00 pm)																				
	Howard St Northbound					Baltimore St Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
11:00-11:15	0	4	0	6	0	0	0	0	0	1	0	0	100	3	0	0	6	103	0	0	222
11:15-11:30	0	6	0	8	1	0	0	0	0	1	0	0	101	5	1	0	6	95	0	0	221
11:30-11:45	0	4	0	5	0	0	0	0	0	0	0	0	106	3	0	0	5	112	0	0	235
11:45-12:00	0	5	0	4	1	0	0	0	0	0	0	0	116	8	1	0	6	120	1	0	260
12:00-12:15	0	3	0	10	2	0	0	0	0	0	0	0	127	8	0	0	4	107	0	0	259
12:15-12:30	0	2	0	6	0	0	0	0	0	0	0	0	102	2	0	0	9	114	0	0	235
12:30-12:45	0	1	0	5	3	0	0	0	0	0	0	0	106	2	0	1	3	98	0	0	216
12:45-1:00	0	7	0	5	0	0	0	0	1	0	0	0	118	0	0	0	3	110	0	0	244
1:00-1:15	0	2	0	3	0	0	0	0	0	0	1	0	83	3	0	0	3	102	0	0	197
1:15-1:30	0	2	0	4	0	0	0	0	0	1	1	0	111	3	0	0	7	100	0	0	228
1:30-1:45	0	8	0	2	0	0	0	0	0	0	0	0	95	6	0	0	3	95	0	0	209
1:45-2:00	0	4	1	4	0	0	0	0	0	0	1	1	99	5	0	0	4	116	0	0	235
2:00-2:15	0	3	0	4	1	0	0	0	0	2	0	0	107	6	0	0	0	118	0	0	238
2:15-2:30	0	6	0	4	0	0	0	0	0	0	0	0	94	3	0	0	6	121	0	0	234
2:30-2:45	0	0	0	5	1	0	0	0	0	0	0	0	113	1	0	0	2	117	0	0	238
2:45-3:00	0	3	0	4	0	0	0	0	0	0	0	0	100	6	0	0	5	101	0	0	219
Hourly Totals																					
11:00-12:00	0	19	0	23	2	0	0	0	0	2	0	0	423	19	2	0	23	430	1	0	944
11:15-12:15	0	18	0	27	4	0	0	0	0	1	0	0	450	24	2	0	21	434	1	0	982
11:30-12:30	0	14	0	25	3	0	0	0	0	0	0	0	451	21	1	0	24	453	1	0	993
11:45-12:45	0	11	0	25	6	0	0	0	0	0	0	0	451	20	1	1	22	439	1	0	977
12:00-1:00	0	13	0	26	5	0	0	0	1	0	0	0	453	12	0	1	19	429	0	0	959
12:15-1:15	0	12	0	19	3	0	0	0	1	0	1	0	409	7	0	1	18	424	0	0	895
12:30-1:30	0	12	0	17	3	0	0	0	1	1	2	0	418	8	0	1	16	410	0	0	889
12:45-1:45	0	19	0	14	0	0	0	0	1	1	2	0	407	12	0	0	16	407	0	0	879
1:00-2:00	0	16	1	13	0	0	0	0	0	1	3	1	388	17	0	0	17	413	0	0	870
1:15-2:15	0	17	1	14	1	0	0	0	0	3	2	1	412	20	0	0	14	429	0	0	914
1:30-2:30	0	21	1	14	1	0	0	0	0	2	1	1	395	20	0	0	13	450	0	0	919
1:45-2:45	0	13	1	17	2	0	0	0	0	2	1	1	413	15	0	0	12	472	0	0	949
2:00-3:00	0	12	0	17	2	0	0	0	0	2	0	0	414	16	0	0	13	457	0	0	933
PM	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
11:30-12:30	**0**	**14**	**0**	**25**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**451**	**21**	**1**	**0**	**24**	**453**	**1**	**0**	**993**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: MD 6 & Howard St
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Saturday, December 6, 2025
County: Charles County

Weekday Morning Peak Hour (7:00 am - 9:00 am)

	Parking Lot Northbound					Church St Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:00-7:15	0	0	0	0	0	0	0	0	2	0	0	0	130	0	0	0	0	118	0	0	250
7:15-7:30	0	0	0	0	0	0	0	0	0	0	0	0	111	0	0	0	0	133	0	0	244
7:30-7:45	0	0	0	0	0	0	0	0	0	0	0	0	119	0	0	0	0	127	0	0	246
7:45-8:00	0	0	0	0	2	0	0	0	1	0	0	0	124	0	0	0	0	122	0	0	247
8:00-8:15	0	0	0	0	1	0	0	0	0	0	0	0	122	0	0	0	0	115	0	0	237
8:15-8:30	0	0	0	1	1	0	0	0	0	1	0	0	120	0	0	0	0	133	0	0	254
8:30-8:45	0	0	0	0	0	0	0	0	0	0	0	0	126	0	0	0	0	129	0	0	255
8:45-9:00	0	0	0	0	0	0	0	0	0	0	0	0	102	0	0	0	0	104	0	0	206
Hourly Totals																					
7:00-8:00	0	0	0	0	2	0	0	0	3	0	0	0	484	0	0	0	0	500	0	0	989
7:15-8:15	0	0	0	0	3	0	0	0	1	0	0	0	476	0	0	0	0	497	0	0	977
7:30-8:30	0	0	0	1	4	0	0	0	1	1	0	0	485	0	0	0	0	497	0	0	989
7:45-8:45	0	0	0	1	4	0	0	0	1	1	0	0	492	0	0	0	0	499	0	0	998
8:00-9:00	0	0	0	1	2	0	0	0	0	1	0	0	470	0	0	0	0	481	0	0	955

AM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
7:45-8:45	**0**	**0**	**0**	**1**	**4**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**492**	**0**	**0**	**0**	**0**	**499**	**0**	**0**	**998**

Weekday Evening Peak Hour (3:00 pm - 6:00 pm)

	Parking Lot Northbound					Church St Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:00-3:15	0	0	0	0	0	0	0	0	0	1	0	0	152	0	0	0	0	124	0	0	276
3:15-3:30	0	0	0	0	0	0	0	0	0	1	0	0	151	1	0	0	0	118	0	0	270
3:30-3:45	0	1	0	0	1	0	0	0	0	0	0	0	158	0	0	0	0	126	0	0	285
3:45-4:00	0	0	0	1	1	0	0	0	0	2	0	0	159	0	0	0	0	120	0	0	280
4:00-4:15	0	0	0	0	0	0	0	0	4	0	0	0	165	0	0	0	0	139	0	0	308
4:15-4:30	0	0	0	1	0	0	0	0	2	0	0	0	144	1	0	0	0	139	0	0	287
4:30-4:45	0	0	0	1	1	0	1	0	22	0	0	0	162	0	0	0	0	126	1	0	313
4:45-5:00	0	0	0	0	1	0	2	0	8	0	0	0	170	0	0	0	0	114	0	0	294
5:00-5:15	0	0	0	0	0	0	3	0	5	2	0	0	147	0	0	0	0	133	0	0	288
5:15-5:30	0	0	0	0	3	0	2	0	5	0	0	0	159	0	0	0	0	129	0	0	295
5:30-5:45	0	0	0	0	0	0	2	0	3	1	0	0	144	0	0	0	0	124	0	0	273
5:45-6:00	0	0	0	0	0	0	2	0	2	0	0	0	145	0	0	0	0	92	0	0	241
Hourly Totals																					
3:00-4:00	0	1	0	1	2	0	0	0	0	4	0	0	620	1	0	0	0	488	0	0	1117
3:15-4:15	0	1	0	1	2	0	0	0	4	3	0	0	633	1	0	0	0	503	0	0	1148
3:30-4:30	0	1	0	2	2	0	0	0	6	2	0	0	626	1	0	0	0	524	0	0	1164
3:45-4:45	0	0	0	3	2	0	1	0	28	2	0	0	630	1	0	0	0	524	1	0	1192
4:00-5:00	0	0	0	2	2	0	3	0	36	0	0	0	641	1	0	0	0	518	1	0	1204
4:15-5:15	0	0	0	2	2	0	6	0	37	2	0	0	623	1	0	0	0	512	1	0	1186
4:30-5:30	0	0	0	1	5	0	8	0	40	2	0	0	638	0	0	0	0	502	1	0	1197
4:45-5:45	0	0	0	0	4	0	9	0	21	3	0	0	620	0	0	0	0	500	0	0	1157
5:00-6:00	0	0	0	0	3	0	9	0	15	3	0	0	595	0	0	0	0	478	0	0	1103

PM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
4:00-5:00	**0**	**0**	**0**	**2**	**2**	**0**	**3**	**0**	**36**	**0**	**0**	**0**	**641**	**1**	**0**	**0**	**0**	**518**	**1**	**0**	**1204**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: MD 6 & Church St
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Thursday, December 4, 2025
Jurisdiction: Charles County

	Weekend Peak Hour (11:00 am - 3:00 pm)																				
	Parking Lot Northbound					Church St Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
11:00-11:15	0	0	0	0	0	0	0	0	1	0	0	0	119	1	0	0	0	125	0	0	246
11:15-11:30	0	1	0	1	0	0	0	0	1	1	0	0	118	0	0	0	0	138	0	0	259
11:30-11:45	0	0	0	1	0	0	0	0	1	0	0	0	117	0	0	0	1	117	0	0	237
11:45-12:00	0	0	0	1	0	0	0	0	0	0	0	0	126	0	0	0	0	113	0	0	240
12:00-12:15	0	1	0	2	0	0	0	0	1	0	0	0	131	0	0	0	0	115	0	0	250
12:15-12:30	0	0	0	0	0	0	0	0	1	0	0	0	114	1	0	0	1	131	0	0	248
12:30-12:45	0	0	0	0	0	0	0	0	0	0	0	0	111	0	0	0	0	122	0	0	233
12:45-1:00	0	0	0	1	0	0	0	0	1	1	0	0	134	0	0	0	0	119	0	0	255
1:00-1:15	0	1	0	0	0	0	0	0	1	1	0	0	113	0	1	0	0	108	1	0	224
1:15-1:30	0	0	0	1	0	0	0	0	0	0	0	0	141	0	0	0	0	122	0	0	264
1:30-1:45	0	1	0	0	0	0	0	0	3	1	0	0	143	0	0	0	1	114	0	0	262
1:45-2:00	0	0	0	2	1	0	0	0	1	2	0	0	128	0	0	0	0	122	0	0	253
2:00-2:15	0	0	0	0	0	0	0	0	2	3	0	0	139	0	0	0	0	109	0	0	250
2:15-2:30	0	0	0	0	0	0	1	0	1	0	0	0	133	0	0	0	0	120	0	0	255
2:30-2:45	0	0	0	0	2	0	1	0	0	0	0	0	127	0	0	0	0	133	0	0	261
2:45-3:00	0	1	0	1	1	0	0	0	0	0	0	0	131	1	0	0	1	125	0	0	260
Hourly Totals																					
11:00-12:00	0	1	0	3	0	0	0	0	3	1	0	0	480	1	0	0	1	493	0	0	983
11:15-12:15	0	2	0	5	0	0	0	0	3	1	0	0	492	0	0	0	1	483	0	0	987
11:30-12:30	0	1	0	4	0	0	0	0	3	0	0	0	488	1	0	0	2	476	0	0	975
11:45-12:45	0	1	0	3	0	0	0	0	2	0	0	0	482	1	0	0	1	481	0	0	971
12:00-1:00	0	1	0	3	0	0	0	0	3	1	0	0	490	1	0	0	1	487	0	0	987
12:15-1:15	0	1	0	1	0	0	0	0	3	2	0	0	472	1	1	0	1	480	1	0	963
12:30-1:30	0	1	0	2	0	0	0	0	2	2	0	0	499	0	1	0	0	471	1	0	979
12:45-1:45	0	2	0	2	0	0	0	0	5	3	0	0	531	0	1	0	1	463	1	0	1009
1:00-2:00	0	2	0	3	1	0	0	0	5	4	0	0	525	0	1	0	1	466	1	0	1009
1:15-2:15	0	1	0	3	1	0	0	0	6	6	0	0	551	0	0	0	1	467	0	0	1036
1:30-2:30	0	1	0	2	1	0	1	0	7	6	0	0	543	0	0	0	1	465	0	0	1027
1:45-2:45	0	0	0	2	3	0	2	0	4	5	0	0	527	0	0	0	0	484	0	0	1027
2:00-3:00	0	1	0	1	3	0	2	0	3	3	0	0	530	1	0	0	1	487	0	0	1032

PM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
1:15-2:15	**0**	**1**	**0**	**3**	**1**	**0**	**0**	**0**	**6**	**6**	**0**	**0**	**551**	**0**	**0**	**0**	**1**	**467**	**0**	**0**	**1036**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: MD 6 & Church St
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Saturday, December 6, 2025
County: Charles County

Weekday Morning Peak Hour (7:00 am - 9:00 am)

	St. Mary's Ave Northbound					N/A Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:00-7:15	0	0	0	21	0	0	0	0	0	0	0	0	128	2	0	0	2	120	0	0	273
7:15-7:30	0	1	0	17	0	0	0	0	0	0	0	0	108	3	0	0	6	131	0	0	266
7:30-7:45	0	1	0	22	0	0	0	0	0	0	0	0	114	4	0	0	13	127	0	0	281
7:45-8:00	0	1	0	19	1	0	0	0	0	0	0	0	120	4	0	0	11	120	0	0	275
8:00-8:15	0	2	0	14	1	0	0	0	0	0	0	0	117	6	0	0	12	113	0	0	264
8:15-8:30	0	1	0	13	1	0	0	0	0	0	0	0	115	6	0	0	11	133	0	0	279
8:30-8:45	0	7	0	22	1	0	0	0	0	0	0	0	120	5	0	0	17	126	0	0	297
8:45-9:00	0	2	0	18	0	0	0	0	0	0	0	0	95	7	0	0	23	101	0	0	246
Hourly Totals																					
7:00-8:00	0	3	0	79	1	0	0	0	0	0	0	0	470	13	0	0	32	498	0	0	1096
7:15-8:15	0	5	0	72	2	0	0	0	0	0	0	0	459	17	0	0	42	491	0	0	1088
7:30-8:30	0	5	0	68	3	0	0	0	0	0	0	0	466	20	0	0	47	493	0	0	1102
7:45-8:45	0	11	0	68	4	0	0	0	0	0	0	0	472	21	0	0	51	492	0	0	1119
8:00-9:00	0	12	0	67	3	0	0	0	0	0	0	0	447	24	0	0	63	473	0	0	1089

AM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
7:45-8:45	**0**	**11**	**0**	**68**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**472**	**21**	**0**	**0**	**51**	**492**	**0**	**0**	**1119**

Weekday Evening Peak Hour (3:00 pm - 6:00 pm)

	St. Mary's Ave Northbound					N/A Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:00-3:15	0	2	0	18	0	0	0	0	0	0	0	0	145	8	0	0	25	124	0	0	322
3:15-3:30	0	3	0	27	0	0	0	0	0	0	0	0	137	16	0	0	26	115	0	0	324
3:30-3:45	0	0	0	33	1	0	0	0	0	0	0	0	144	16	0	0	23	126	0	0	342
3:45-4:00	0	2	0	34	0	0	0	0	0	0	0	0	152	7	0	0	24	118	0	0	337
4:00-4:15	0	3	0	36	0	0	0	0	0	0	0	0	155	10	0	0	14	136	0	0	354
4:15-4:30	0	9	0	34	0	0	0	0	0	0	0	0	136	9	0	0	23	133	0	0	344
4:30-4:45	0	5	0	36	2	0	0	0	0	0	0	0	146	18	0	0	23	121	0	0	349
4:45-5:00	0	0	0	28	1	0	0	0	0	0	0	0	159	14	0	0	23	112	0	0	336
5:00-5:15	0	7	0	36	0	0	0	0	0	0	0	0	136	17	0	0	22	127	0	0	345
5:15-5:30	0	2	0	26	3	0	0	0	0	0	0	0	149	12	0	0	20	129	0	0	338
5:30-5:45	0	3	0	25	0	0	0	0	0	0	0	0	137	10	0	0	22	120	0	0	317
5:45-6:00	0	6	0	29	0	0	0	0	0	0	0	0	134	12	0	0	28	87	0	0	296
Hourly Totals																					
3:00-4:00	0	7	0	112	1	0	0	0	0	0	0	0	578	47	0	0	98	483	0	0	1326
3:15-4:15	0	8	0	130	1	0	0	0	0	0	0	0	588	49	0	0	87	495	0	0	1358
3:30-4:30	0	14	0	137	1	0	0	0	0	0	0	0	587	42	0	0	84	513	0	0	1378
3:45-4:45	0	19	0	140	2	0	0	0	0	0	0	0	589	44	0	0	84	508	0	0	1386
4:00-5:00	0	17	0	134	3	0	0	0	0	0	0	0	596	51	0	0	83	502	0	0	1386
4:15-5:15	0	21	0	134	3	0	0	0	0	0	0	0	577	58	0	0	91	493	0	0	1377
4:30-5:30	0	14	0	126	6	0	0	0	0	0	0	0	590	61	0	0	88	489	0	0	1374
4:45-5:45	0	12	0	115	4	0	0	0	0	0	0	0	581	53	0	0	87	488	0	0	1340
5:00-6:00	0	18	0	116	3	0	0	0	0	0	0	0	556	51	0	0	92	463	0	0	1299

PM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
3:45-4:45	**0**	**19**	**0**	**140**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**589**	**44**	**0**	**0**	**84**	**508**	**0**	**0**	**1386**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: MD 6 & St. Mary's Ave
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Thursday, December 4, 2025
Jurisdiction: Charles County

	Weekend Peak Hour (11:00 am - 3:00 pm)																				
	St. Mary's Ave Northbound					N/A Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
11:00-11:15	0	2	0	26	0	0	0	0	0	0	0	0	111	8	0	0	17	125	0	0	289
11:15-11:30	0	4	0	30	0	0	0	0	0	0	0	0	111	7	0	0	13	134	0	0	299
11:30-11:45	0	3	0	20	0	0	0	0	0	0	0	0	107	11	0	0	18	115	0	0	274
11:45-12:00	0	7	0	20	0	0	0	0	0	0	0	0	117	11	0	0	22	108	0	0	285
12:00-12:15	0	5	0	26	0	0	0	0	0	0	0	0	124	7	0	0	21	112	0	0	295
12:15-12:30	0	8	0	26	0	0	0	0	0	0	0	0	108	7	0	0	13	123	0	0	285
12:30-12:45	0	7	0	16	0	0	0	0	0	0	0	0	103	9	0	0	17	115	0	0	267
12:45-1:00	0	4	0	20	0	0	0	0	0	0	0	0	124	10	0	0	24	116	0	0	298
1:00-1:15	0	8	0	17	0	0	0	0	0	0	0	0	99	13	1	0	10	98	0	0	245
1:15-1:30	0	7	0	25	0	0	0	0	0	0	0	0	134	8	0	0	20	116	0	0	310
1:30-1:45	0	10	0	18	0	0	0	0	0	0	0	0	135	9	0	0	20	107	0	0	299
1:45-2:00	0	8	0	21	1	0	0	0	0	0	0	0	126	5	0	0	16	111	0	0	287
2:00-2:15	0	3	0	30	0	0	0	0	0	0	0	0	128	11	0	0	18	107	0	0	297
2:15-2:30	0	6	0	16	0	0	0	0	0	0	0	0	127	6	0	0	10	114	0	0	279
2:30-2:45	0	3	0	16	4	0	0	0	0	0	0	0	118	10	0	0	10	130	0	0	287
2:45-3:00	0	4	0	17	1	0	0	0	0	0	0	0	120	11	0	0	18	121	0	0	291
Hourly Totals																					
11:00-12:00	0	16	0	96	0	0	0	0	0	0	0	0	446	37	0	0	70	482	0	0	1147
11:15-12:15	0	19	0	96	0	0	0	0	0	0	0	0	459	36	0	0	74	469	0	0	1153
11:30-12:30	0	23	0	92	0	0	0	0	0	0	0	0	456	36	0	0	74	458	0	0	1139
11:45-12:45	0	27	0	88	0	0	0	0	0	0	0	0	452	34	0	0	73	458	0	0	1132
12:00-1:00	0	24	0	88	0	0	0	0	0	0	0	0	459	33	0	0	75	466	0	0	1145
12:15-1:15	0	27	0	79	0	0	0	0	0	0	0	0	434	39	1	0	64	452	0	0	1096
12:30-1:30	0	26	0	78	0	0	0	0	0	0	0	0	460	40	1	0	71	445	0	0	1121
12:45-1:45	0	29	0	80	0	0	0	0	0	0	0	0	492	40	1	0	74	437	0	0	1153
1:00-2:00	0	33	0	81	1	0	0	0	0	0	0	0	494	35	1	0	66	432	0	0	1143
1:15-2:15	0	28	0	94	1	0	0	0	0	0	0	0	523	33	0	0	74	441	0	0	1194
1:30-2:30	0	27	0	85	1	0	0	0	0	0	0	0	516	31	0	0	64	439	0	0	1163
1:45-2:45	0	20	0	83	5	0	0	0	0	0	0	0	499	32	0	0	54	462	0	0	1155
2:00-3:00	0	16	0	79	5	0	0	0	0	0	0	0	493	38	0	0	56	472	0	0	1159
PM	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
1:15-2:15	**0**	**28**	**0**	**94**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**523**	**33**	**0**	**0**	**74**	**441**	**0**	**0**	**1194**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: MD 6 & St. Mary's Ave
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Saturday, December 6, 2025
County: Charles County

Weekday Morning Peak Hour (7:00 am - 9:00 am)

	Parking Lot Northbound					Washington Ave Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:00-7:15	0	2	0	0	0	0	41	0	4	0	0	29	118	1	0	0	1	117	72	0	385
7:15-7:30	0	1	1	0	0	0	33	0	9	0	0	21	104	0	1	0	0	128	120	0	417
7:30-7:45	0	1	0	0	0	0	35	0	14	0	0	35	98	3	1	0	0	127	76	0	389
7:45-8:00	0	0	0	0	2	0	43	1	24	0	0	31	106	3	1	0	0	107	81	0	396
8:00-8:15	0	2	0	0	2	0	40	1	13	0	0	20	109	1	0	0	0	110	78	0	374
8:15-8:30	0	1	0	2	1	0	42	0	19	1	0	23	104	2	0	0	0	124	81	0	398
8:30-8:45	0	2	0	1	1	0	55	0	20	0	0	34	111	3	0	0	0	119	81	0	426
8:45-9:00	0	1	0	0	0	0	44	1	17	0	0	34	79	0	0	0	0	106	78	0	360
Hourly Totals																					
7:00-8:00	0	4	1	0	2	0	152	1	51	0	0	116	426	7	3	0	1	479	349	0	1592
7:15-8:15	0	4	1	0	4	0	151	2	60	0	0	107	417	7	3	0	0	472	355	0	1583
7:30-8:30	0	4	0	2	5	0	160	2	70	1	0	109	417	9	2	0	0	468	316	0	1565
7:45-8:45	0	5	0	3	6	0	180	2	76	1	0	108	430	9	1	0	0	460	321	0	1602
8:00-9:00	0	6	0	3	4	0	181	2	69	1	0	111	403	6	0	0	0	459	318	0	1563

AM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
7:45-8:45	**0**	**5**	**0**	**3**	**6**	**0**	**180**	**2**	**76**	**1**	**0**	**108**	**430**	**9**	**1**	**0**	**0**	**460**	**321**	**0**	**1602**

Weekday Evening Peak Hour (3:00 pm - 6:00 pm)

	Parking Lot Northbound					Washington Ave Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:00-3:15	0	1	0	0	0	0	102	1	26	0	0	24	140	0	0	0	1	123	63	0	481
3:15-3:30	0	1	2	1	0	0	89	1	24	1	0	35	127	0	0	0	1	112	62	0	455
3:30-3:45	0	1	2	0	1	0	112	2	24	0	0	35	139	0	0	0	1	124	83	0	523
3:45-4:00	0	1	1	0	1	0	94	0	22	1	0	44	145	3	0	0	3	118	70	0	501
4:00-4:15	0	1	0	2	0	0	85	1	20	0	0	45	141	2	0	0	2	131	71	0	501
4:15-4:30	0	3	0	1	0	0	98	1	30	0	0	45	122	4	0	0	0	126	78	0	508
4:30-4:45	0	0	2	1	1	0	90	1	30	0	0	44	136	3	1	0	0	111	86	0	504
4:45-5:00	0	0	3	1	0	0	114	0	28	0	0	47	137	2	0	0	0	107	62	0	501
5:00-5:15	0	3	3	2	1	0	103	2	23	1	0	47	124	2	1	0	1	123	63	0	496
5:15-5:30	0	1	1	0	3	0	97	0	35	0	0	36	140	0	0	0	0	114	72	0	496
5:30-5:45	0	1	1	1	0	0	85	2	29	1	0	31	131	0	0	0	0	112	86	0	479
5:45-6:00	0	2	0	0	0	0	110	0	28	0	0	31	132	2	0	0	0	87	75	0	467
Hourly Totals																					
3:00-4:00	0	4	5	1	2	0	397	4	96	2	0	138	551	3	0	0	6	477	278	0	1964
3:15-4:15	0	4	5	3	2	0	380	4	90	2	0	159	552	5	0	0	7	485	286	0	1984
3:30-4:30	0	6	3	3	2	0	389	4	96	1	0	169	547	9	0	0	6	499	302	0	2036
3:45-4:45	0	5	3	4	2	0	367	3	102	1	0	178	544	12	1	0	5	486	305	0	2018
4:00-5:00	0	4	5	5	1	0	387	3	108	0	0	181	536	11	1	0	2	475	297	0	2016
4:15-5:15	0	6	8	5	2	0	405	4	111	1	0	183	519	11	2	0	1	467	289	0	2014
4:30-5:30	0	4	9	4	5	0	404	3	116	1	0	174	537	7	2	0	1	455	283	0	2005
4:45-5:45	0	5	8	4	4	0	399	4	115	2	0	161	532	4	1	0	1	456	283	0	1979
5:00-6:00	0	7	5	3	4	0	395	4	115	2	0	145	527	4	1	0	1	436	296	0	1945

PM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
3:30-4:30	**0**	**6**	**3**	**3**	**2**	**0**	**389**	**4**	**96**	**1**	**0**	**169**	**547**	**9**	**0**	**0**	**6**	**499**	**302**	**0**	**2036**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: MD 6 & Washington Ave
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Thursday, December 4, 2025
Jurisdiction: Charles County

	Weekend Peak Hour (11:00 am - 3:00 pm)																				
	Parking Lot Northbound					Washington Ave Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
11:00-11:15	0	1	0	0	1	0	67	1	27	0	0	24	113	0	0	0	0	117	71	0	421
11:15-11:30	0	1	0	0	1	0	72	0	23	0	0	36	105	0	1	0	1	121	80	0	439
11:30-11:45	0	0	1	0	0	0	76	0	25	0	0	30	97	2	0	0	0	109	70	0	410
11:45-12:00	0	2	0	0	0	0	80	0	28	0	0	26	111	0	0	0	2	101	70	0	420
12:00-12:15	0	0	0	0	0	0	88	1	28	0	0	35	114	1	0	0	0	104	58	0	429
12:15-12:30	0	2	0	0	0	0	92	3	30	0	0	23	109	1	0	0	0	104	85	0	449
12:30-12:45	0	1	1	0	0	0	68	0	24	0	0	25	97	0	0	0	1	107	61	0	385
12:45-1:00	0	0	1	0	0	0	79	2	35	0	0	21	120	0	0	0	2	106	81	0	447
1:00-1:15	0	0	1	2	0	0	102	0	23	0	0	24	92	1	0	0	0	85	64	0	394
1:15-1:30	0	0	0	0	0	0	90	0	26	0	0	30	129	0	0	0	1	112	82	0	470
1:30-1:45	0	1	0	0	0	0	85	0	15	1	0	25	125	2	0	0	0	110	72	0	435
1:45-2:00	0	1	1	0	1	0	84	0	29	0	0	29	117	2	0	0	0	97	70	0	430
2:00-2:15	0	1	0	0	0	0	70	1	27	0	0	26	131	1	0	0	0	97	62	0	416
2:15-2:30	0	0	0	0	0	0	83	1	26	1	0	23	117	2	0	0	0	98	50	0	400
2:30-2:45	0	0	0	0	4	0	77	2	31	0	0	26	108	3	0	0	0	110	65	0	422
2:45-3:00	0	0	0	0	1	0	80	0	32	1	0	17	115	2	0	0	0	107	72	0	425
Hourly Totals																					
11:00-12:00	0	4	1	0	2	0	295	1	103	0	0	116	426	2	1	0	3	448	291	0	1693
11:15-12:15	0	3	1	0	1	0	316	1	104	0	0	127	427	3	1	0	3	435	278	0	1700
11:30-12:30	0	4	1	0	0	0	336	4	111	0	0	114	431	4	0	0	2	418	283	0	1708
11:45-12:45	0	5	1	0	0	0	328	4	110	0	0	109	431	2	0	0	3	416	274	0	1683
12:00-1:00	0	3	2	0	0	0	327	6	117	0	0	104	440	2	0	0	3	421	285	0	1710
12:15-1:15	0	3	3	2	0	0	341	5	112	0	0	93	418	2	0	0	3	402	291	0	1675
12:30-1:30	0	1	3	2	0	0	339	2	108	0	0	100	438	1	0	0	4	410	288	0	1696
12:45-1:45	0	1	2	2	0	0	356	2	99	1	0	100	466	3	0	0	3	413	299	0	1747
1:00-2:00	0	2	2	2	1	0	361	0	93	1	0	108	463	5	0	0	1	404	288	0	1731
1:15-2:15	0	3	1	0	1	0	329	1	97	1	0	110	502	5	0	0	1	416	286	0	1753
1:30-2:30	0	3	1	0	1	0	322	2	97	2	0	103	490	7	0	0	0	402	254	0	1684
1:45-2:45	0	2	1	0	5	0	314	4	113	1	0	104	473	8	0	0	0	402	247	0	1674
2:00-3:00	0	1	0	0	5	0	310	4	116	2	0	92	471	8	0	0	0	412	249	0	1670
PM	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
1:15-2:15	**0**	**3**	**1**	**0**	**1**	**0**	**329**	**1**	**97**	**1**	**0**	**110**	**502**	**5**	**0**	**0**	**1**	**416**	**286**	**0**	**1753**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: MD 6 & Washington Ave
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Saturday, December 6, 2025
County: Charles County

Weekday Morning Peak Hour (7:00 am - 9:00 am)

	La Grange Ave Northbound					Coca-Cola Driveway Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:00-7:15	0	0	0	8	0	0	0	0	0	0	0	0	145	7	0	0	0	190	0	0	350
7:15-7:30	0	3	0	8	0	0	0	0	0	0	0	0	135	7	0	0	6	252	0	0	411
7:30-7:45	0	0	0	9	0	0	0	0	0	0	0	0	126	5	0	0	5	203	0	0	348
7:45-8:00	0	1	0	10	2	0	0	0	0	0	0	0	138	9	0	0	20	188	0	0	366
8:00-8:15	0	2	0	11	2	0	0	0	0	0	0	0	141	8	0	0	11	196	0	0	369
8:15-8:30	0	2	0	9	0	0	0	0	0	0	0	0	145	5	0	0	9	199	0	0	369
8:30-8:45	0	3	0	7	1	0	0	0	0	0	0	0	162	5	0	0	12	193	0	0	382
8:45-9:00	0	5	0	6	0	0	0	0	0	0	0	0	120	7	0	0	15	185	0	0	338
Hourly Totals																					
7:00-8:00	0	4	0	35	2	0	0	0	0	0	0	0	544	28	0	0	31	833	0	0	1477
7:15-8:15	0	6	0	38	4	0	0	0	0	0	0	0	540	29	0	0	42	839	0	0	1498
7:30-8:30	0	5	0	39	4	0	0	0	0	0	0	0	550	27	0	0	45	786	0	0	1456
7:45-8:45	0	8	0	37	5	0	0	0	0	0	0	0	586	27	0	0	52	776	0	0	1491
8:00-9:00	0	12	0	33	3	0	0	0	0	0	0	0	568	25	0	0	47	773	0	0	1461

AM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:15-8:15	**0**	**6**	**0**	**38**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**540**	**29**	**0**	**0**	**42**	**839**	**0**	**0**	**1498**

Weekday Evening Peak Hour (3:00 pm - 6:00 pm)

	La Grange Ave Northbound					Coca-Cola Driveway Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:00-3:15	0	2	0	23	0	0	0	0	0	0	0	0	229	13	0	0	14	180	0	0	461
3:15-3:30	0	4	0	23	0	0	0	0	0	0	0	0	213	11	0	0	5	172	0	0	428
3:30-3:45	0	4	0	10	1	0	0	0	0	0	0	0	243	7	0	0	11	207	0	0	482
3:45-4:00	0	4	0	20	2	0	0	0	0	0	0	0	235	6	0	0	9	189	0	0	463
4:00-4:15	0	5	0	28	0	0	0	0	0	0	0	0	223	11	0	0	9	196	0	0	472
4:15-4:30	0	2	0	32	0	0	0	0	0	0	0	0	212	11	0	0	8	196	0	0	461
4:30-4:45	0	3	0	19	2	0	0	0	0	0	0	0	219	7	0	0	14	197	0	0	459
4:45-5:00	0	2	0	17	2	0	0	0	0	0	0	0	243	5	0	0	12	175	0	0	454
5:00-5:15	0	3	0	23	1	0	0	0	0	0	0	0	230	6	0	0	9	176	0	0	447
5:15-5:30	0	3	0	15	5	0	0	0	0	0	0	0	223	8	0	0	5	187	0	0	441
5:30-5:45	0	2	0	18	0	0	0	0	0	0	0	0	212	7	0	0	10	191	0	0	440
5:45-6:00	0	3	0	9	0	0	0	0	0	0	1	0	236	8	0	0	11	159	0	0	427
Hourly Totals																					
3:00-4:00	0	14	0	76	3	0	0	0	0	0	0	0	920	37	0	0	39	748	0	0	1837
3:15-4:15	0	17	0	81	3	0	0	0	0	0	0	0	914	35	0	0	34	764	0	0	1848
3:30-4:30	0	15	0	90	3	0	0	0	0	0	0	0	913	35	0	0	37	788	0	0	1881
3:45-4:45	0	14	0	99	4	0	0	0	0	0	0	0	889	35	0	0	40	778	0	0	1859
4:00-5:00	0	12	0	96	4	0	0	0	0	0	0	0	897	34	0	0	43	764	0	0	1850
4:15-5:15	0	10	0	91	5	0	0	0	0	0	0	0	904	29	0	0	43	744	0	0	1826
4:30-5:30	0	11	0	74	10	0	0	0	0	0	0	0	915	26	0	0	40	735	0	0	1811
4:45-5:45	0	10	0	73	8	0	0	0	0	0	0	0	908	26	0	0	36	729	0	0	1790
5:00-6:00	0	11	0	65	6	0	0	0	0	0	1	0	901	29	0	0	35	713	0	0	1761

PM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:30-4:30	**0**	**15**	**0**	**90**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**913**	**35**	**0**	**0**	**37**	**788**	**0**	**0**	**1881**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: MD 6 & La Grange Ave
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Thursday, December 4, 2025
Jurisdiction: Charles County

	Weekend Peak Hour (11:00 am - 3:00 pm)																				
	La Grange Ave Northbound					Coca-Cola Driveway Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
11:00-11:15	0	5	0	10	1	0	0	0	0	0	0	0	147	4	0	0	2	153	0	0	321
11:15-11:30	0	2	0	5	2	0	0	0	0	0	0	0	168	3	0	0	12	149	0	0	339
11:30-11:45	0	1	0	14	5	0	0	0	0	0	0	0	181	6	0	0	9	169	0	0	380
11:45-12:00	0	2	0	8	2	0	0	0	0	0	0	0	169	5	0	0	10	189	0	0	383
12:00-12:15	0	2	0	9	1	0	0	0	0	0	0	0	196	6	0	0	4	160	0	0	377
12:15-12:30	0	3	0	7	4	0	0	0	0	0	0	0	192	7	0	0	12	176	0	0	397
12:30-12:45	0	0	0	5	4	0	0	0	0	0	1	0	176	4	0	0	5	163	0	0	354
12:45-1:00	0	5	0	5	0	0	0	0	0	0	0	0	181	10	0	0	10	165	0	0	376
1:00-1:15	0	3	0	6	2	0	0	0	0	0	0	0	156	8	0	0	11	167	0	0	351
1:15-1:30	0	1	0	10	0	0	0	0	0	0	0	0	184	4	0	0	4	171	0	0	374
1:30-1:45	0	1	0	2	0	0	0	0	0	0	0	0	158	6	0	0	5	143	0	0	315
1:45-2:00	0	3	0	11	1	0	0	0	0	0	0	0	160	1	0	0	10	176	0	0	361
2:00-2:15	0	1	0	7	2	0	0	0	0	0	0	0	175	4	0	0	4	139	0	0	330
2:15-2:30	0	6	0	4	7	0	0	0	0	0	0	0	171	8	0	0	3	174	0	0	366
2:30-2:45	0	2	0	3	3	0	0	0	0	0	0	0	188	10	0	0	10	179	0	0	392
2:45-3:00	0	0	0	10	0	0	0	0	0	0	0	0	191	3	0	0	9	162	0	0	375
Hourly Totals																					
11:00-12:00	0	10	0	37	10	0	0	0	0	0	0	0	665	18	0	0	33	660	0	0	1433
11:15-12:15	0	7	0	36	10	0	0	0	0	0	0	0	714	20	0	0	35	667	0	0	1489
11:30-12:30	0	8	0	38	12	0	0	0	0	0	0	0	738	24	0	0	35	694	0	0	1549
11:45-12:45	0	7	0	29	11	0	0	0	0	0	1	0	733	22	0	0	31	688	0	0	1522
12:00-1:00	0	10	0	26	9	0	0	0	0	0	1	0	745	27	0	0	31	664	0	0	1513
12:15-1:15	0	11	0	23	10	0	0	0	0	0	1	0	705	29	0	0	38	671	0	0	1488
12:30-1:30	0	9	0	26	6	0	0	0	0	0	1	0	697	26	0	0	30	666	0	0	1461
12:45-1:45	0	10	0	23	2	0	0	0	0	0	0	0	679	28	0	0	30	646	0	0	1418
1:00-2:00	0	8	0	29	3	0	0	0	0	0	0	0	658	19	0	0	30	657	0	0	1404
1:15-2:15	0	6	0	30	3	0	0	0	0	0	0	0	677	15	0	0	23	629	0	0	1383
1:30-2:30	0	11	0	24	10	0	0	0	0	0	0	0	664	19	0	0	22	632	0	0	1382
1:45-2:45	0	12	0	25	13	0	0	0	0	0	0	0	694	23	0	0	27	668	0	0	1462
2:00-3:00	0	9	0	24	12	0	0	0	0	0	0	0	725	25	0	0	26	654	0	0	1475
PM Peak Hour	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					
	U-Turn	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
11:30-12:30	**0**	**8**	**0**	**38**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**738**	**24**	**0**	**0**	**35**	**694**	**0**	**0**	**1549**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: MD 6 & La Grange Ave
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Saturday, December 6, 2025
County: Charles County

Weekday Morning Peak Hour (7:00 am - 9:00 am)

	Maple Ave Northbound					Maple Ave Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:00-7:15	0	0	0	0	1	0	0	0	2	0	0	2	151	0	0	0	0	191	4	0	350
7:15-7:30	0	0	0	0	0	0	1	0	1	0	0	5	140	0	0	0	1	258	3	0	409
7:30-7:45	0	0	0	0	0	0	1	0	3	0	0	1	132	0	0	0	0	200	4	0	341
7:45-8:00	0	0	0	0	1	0	0	0	0	1	0	3	146	0	0	0	1	211	1	0	362
8:00-8:15	0	0	0	0	2	0	1	0	0	2	0	2	150	0	0	0	0	207	4	0	364
8:15-8:30	0	0	0	0	0	0	1	0	1	1	0	0	154	1	0	0	0	210	2	0	369
8:30-8:45	0	0	0	1	1	0	2	0	3	0	0	4	164	1	0	0	0	197	2	0	374
8:45-9:00	0	0	0	0	0	0	3	0	2	0	0	0	125	1	0	0	2	203	3	0	339
Hourly Totals																					
7:00-8:00	0	0	0	0	2	0	2	0	6	1	0	11	569	0	0	0	2	860	12	0	1465
7:15-8:15	0	0	0	0	3	0	3	0	4	3	0	11	568	0	0	0	2	876	12	0	1482
7:30-8:30	0	0	0	0	3	0	3	0	4	4	0	6	582	1	0	0	1	828	11	0	1443
7:45-8:45	0	0	0	1	4	0	4	0	4	4	0	9	614	2	0	0	1	825	9	0	1477
8:00-9:00	0	0	0	1	3	0	7	0	6	3	0	6	593	3	0	0	2	817	11	0	1452
AM	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
7:15-8:15	**0**	**0**	**0**	**0**	**3**	**0**	**3**	**0**	**4**	**3**	**0**	**11**	**568**	**0**	**0**	**0**	**2**	**876**	**12**	**0**	**1482**

Weekday Evening Peak Hour (3:00 pm - 6:00 pm)

	Maple Ave Northbound					Maple Ave Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:00-3:15	0	0	0	0	0	0	0	0	5	0	0	2	247	1	0	0	3	191	7	0	456
3:15-3:30	0	0	0	0	0	0	0	0	4	0	0	4	236	1	0	0	1	173	2	0	421
3:30-3:45	0	0	0	0	0	0	0	0	10	0	0	0	251	1	0	0	1	209	6	0	478
3:45-4:00	0	0	0	0	0	0	3	0	1	1	0	1	244	1	0	0	0	207	3	0	460
4:00-4:15	0	0	0	0	0	0	1	0	1	0	0	2	241	2	0	0	1	207	5	0	460
4:15-4:30	0	1	0	1	0	0	2	0	2	0	0	1	243	0	0	0	3	206	7	0	466
4:30-4:45	0	0	0	0	2	0	9	0	4	0	0	0	244	3	1	0	2	204	6	0	472
4:45-5:00	0	0	0	0	0	0	2	0	4	0	0	2	258	0	0	0	3	195	5	0	469
5:00-5:15	0	0	0	1	0	0	2	0	2	1	0	2	250	3	0	0	1	172	8	0	441
5:15-5:30	0	0	0	0	2	0	4	0	5	0	0	0	242	1	0	0	0	199	5	0	456
5:30-5:45	0	0	0	0	0	0	0	1	0	0	0	1	229	1	0	0	0	195	3	0	430
5:45-6:00	0	0	0	0	2	0	0	0	0	0	0	2	240	2	0	0	2	168	1	0	415
Hourly Totals																					
3:00-4:00	0	0	0	0	0	0	3	0	20	1	0	7	978	4	0	0	5	780	18	0	1816
3:15-4:15	0	0	0	0	0	0	4	0	16	1	0	7	972	5	0	0	3	796	16	0	1820
3:30-4:30	0	1	0	1	0	0	6	0	14	1	0	4	979	4	0	0	5	829	21	0	1865
3:45-4:45	0	1	0	1	2	0	15	0	8	1	0	4	972	6	1	0	6	824	21	0	1862
4:00-5:00	0	1	0	1	2	0	14	0	11	0	0	5	986	5	1	0	9	812	23	0	1870
4:15-5:15	0	1	0	2	2	0	15	0	12	1	0	5	995	6	1	0	9	777	26	0	1852
4:30-5:30	0	0	0	1	4	0	17	0	15	1	0	4	994	7	1	0	6	770	24	0	1844
4:45-5:45	0	0	0	1	2	0	8	1	11	1	0	5	979	5	0	0	4	761	21	0	1799
5:00-6:00	0	0	0	1	4	0	6	1	7	1	0	5	961	7	0	0	3	734	17	0	1747
PM	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
4:00-5:00	**0**	**1**	**0**	**1**	**2**	**0**	**14**	**0**	**11**	**0**	**0**	**5**	**986**	**5**	**1**	**0**	**9**	**812**	**23**	**0**	**1870**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: MD 6 & Maple Ave
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Thursday, December 4, 2025
Jurisdiction: Charles County

	Weekend Peak Hour (11:00 am - 3:00 pm)																				
	Maple Ave Northbound					Maple Ave Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
11:00-11:15	0	0	0	0	1	0	0	0	1	0	0	0	158	2	0	0	1	157	3	0	322
11:15-11:30	0	0	0	0	2	0	1	0	1	0	0	0	166	1	0	1	0	165	2	0	337
11:30-11:45	0	0	0	0	7	0	1	0	0	1	0	0	194	3	1	0	1	180	2	1	381
11:45-12:00	0	0	0	0	0	0	0	0	2	0	0	2	169	2	0	0	0	203	4	0	382
12:00-12:15	0	0	0	0	3	0	2	0	3	0	0	3	198	5	0	0	0	164	2	0	377
12:15-12:30	0	0	0	0	6	0	0	0	6	0	0	2	199	2	0	0	0	176	4	0	389
12:30-12:45	0	0	0	0	1	0	1	0	0	0	0	1	178	1	0	0	1	169	2	0	353
12:45-1:00	0	0	0	0	7	0	0	0	3	0	0	1	182	1	0	0	0	172	2	1	361
1:00-1:15	0	0	0	0	0	0	0	0	0	1	0	0	163	0	0	0	0	183	0	0	346
1:15-1:30	0	0	0	1	2	0	1	0	2	1	0	0	191	2	0	0	0	167	3	0	367
1:30-1:45	0	0	0	0	1	0	0	0	3	0	0	3	158	0	0	0	0	144	3	0	311
1:45-2:00	0	0	0	0	1	0	1	0	1	0	0	1	166	1	0	0	0	180	5	0	355
2:00-2:15	0	0	0	0	1	0	0	0	1	2	0	2	176	2	0	0	0	140	0	0	321
2:15-2:30	0	0	0	0	0	0	1	0	2	0	0	0	176	1	0	0	2	177	1	0	360
2:30-2:45	0	0	0	0	1	0	2	0	0	0	0	2	201	0	0	0	1	185	2	0	393
2:45-3:00	0	0	0	0	0	0	0	0	1	0	0	1	202	1	2	0	1	173	1	0	380

Hourly Totals																					
11:00-12:00	0	0	0	0	10	0	2	0	4	1	0	2	687	8	1	1	2	705	11	1	1435
11:15-12:15	0	0	0	0	12	0	4	0	6	1	0	5	727	11	1	1	1	712	10	1	1492
11:30-12:30	0	0	0	0	16	0	3	0	11	1	0	7	760	12	1	0	1	723	12	1	1548
11:45-12:45	0	0	0	0	10	0	3	0	11	0	0	8	744	10	0	0	1	712	12	0	1511
12:00-1:00	0	0	0	0	17	0	3	0	12	0	0	7	757	9	0	0	1	681	10	1	1498
12:15-1:15	0	0	0	0	14	0	1	0	9	1	0	4	722	4	0	0	1	700	8	1	1465
12:30-1:30	0	0	0	1	10	0	2	0	5	2	0	2	714	4	0	0	1	691	7	1	1440
12:45-1:45	0	0	0	1	10	0	1	0	8	2	0	4	694	3	0	0	0	666	8	1	1398
1:00-2:00	0	0	0	1	4	0	2	0	6	2	0	4	678	3	0	0	0	674	11	0	1385
1:15-2:15	0	0	0	1	5	0	2	0	7	3	0	6	691	5	0	0	0	631	11	0	1362
1:30-2:30	0	0	0	0	3	0	2	0	7	2	0	6	676	4	0	0	2	641	9	0	1352
1:45-2:45	0	0	0	0	3	0	4	0	4	2	0	5	719	4	0	0	3	682	8	0	1434
2:00-3:00	0	0	0	0	2	0	3	0	4	2	0	5	755	4	2	0	4	675	4	0	1460

PM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
11:30-12:30	**0**	**0**	**0**	**0**	**16**	**0**	**3**	**0**	**11**	**1**	**0**	**7**	**760**	**12**	**1**	**0**	**1**	**723**	**12**	**1**	**1548**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: MD 6 & Maple Ave
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Saturday, December 6, 2025
County: Charles County

Weekday Morning Peak Hour (7:00 am - 9:00 am)

	N/A Northbound					Kent Ave Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:00-7:15	0	0	0	0	0	0	10	0	3	0	0	5	144	0	1	0	0	194	5	0	361
7:15-7:30	0	0	0	0	0	0	3	0	2	0	0	11	129	0	0	0	0	259	8	0	412
7:30-7:45	0	0	0	0	0	0	9	0	0	0	0	3	129	0	0	0	0	203	6	0	350
7:45-8:00	0	0	0	0	0	0	6	0	4	1	0	9	138	0	0	0	0	210	20	0	387
8:00-8:15	0	0	0	0	0	0	6	0	2	3	0	9	141	0	0	0	0	211	12	0	381
8:15-8:30	0	0	0	0	0	0	4	0	0	0	0	2	151	0	0	0	0	206	3	0	366
8:30-8:45	0	0	0	0	0	0	8	0	6	0	0	7	160	0	0	0	0	191	5	0	377
8:45-9:00	0	0	0	0	0	0	4	0	13	0	0	6	120	0	0	0	0	197	8	0	348
Hourly Totals																					
7:00-8:00	0	0	0	0	0	0	28	0	9	1	0	28	540	0	1	0	0	866	39	0	1512
7:15-8:15	0	0	0	0	0	0	24	0	8	4	0	32	537	0	0	0	0	883	46	0	1534
7:30-8:30	0	0	0	0	0	0	25	0	6	4	0	23	559	0	0	0	0	830	41	0	1488
7:45-8:45	0	0	0	0	0	0	24	0	12	4	0	27	590	0	0	0	0	818	40	0	1515
8:00-9:00	0	0	0	0	0	0	22	0	21	3	0	24	572	0	0	0	0	805	28	0	1475

AM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
7:15-8:15	**0**	**0**	**0**	**0**	**0**	**0**	**24**	**0**	**8**	**4**	**0**	**32**	**537**	**0**	**0**	**0**	**0**	**883**	**46**	**0**	**1534**

Weekday Evening Peak Hour (3:00 pm - 6:00 pm)

	N/A Northbound					Kent Ave Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:00-3:15	0	0	0	0	0	0	7	0	14	0	0	9	235	0	1	0	0	183	4	2	452
3:15-3:30	0	0	0	0	0	0	7	0	12	1	0	6	231	0	0	0	0	167	4	0	427
3:30-3:45	0	0	0	0	0	0	6	0	10	0	0	5	240	0	1	0	0	207	10	0	478
3:45-4:00	0	0	0	0	0	0	6	0	6	1	0	8	243	0	0	0	0	207	18	0	488
4:00-4:15	0	0	0	0	0	0	7	0	18	0	0	4	241	0	0	0	0	195	16	0	481
4:15-4:30	0	0	0	0	0	0	10	0	11	0	0	6	237	0	0	0	0	205	13	0	482
4:30-4:45	0	0	0	0	0	0	12	0	9	0	0	10	236	0	0	0	0	207	15	1	489
4:45-5:00	0	0	0	0	0	0	11	0	13	0	0	11	248	0	0	0	0	195	14	0	492
5:00-5:15	0	0	0	0	0	0	6	0	14	1	0	7	236	0	0	0	0	167	10	4	440
5:15-5:30	0	0	0	0	0	1	8	0	3	0	0	4	243	0	0	0	0	204	16	2	479
5:30-5:45	0	0	0	0	0	0	12	0	8	1	0	7	216	0	0	0	0	190	15	1	448
5:45-6:00	0	0	0	0	0	0	6	0	2	0	0	5	227	0	0	0	0	170	4	0	414
Hourly Totals																					
3:00-4:00	0	0	0	0	0	0	26	0	42	2	0	28	949	0	2	0	0	764	36	2	1851
3:15-4:15	0	0	0	0	0	0	26	0	46	2	0	23	955	0	1	0	0	776	48	0	1877
3:30-4:30	0	0	0	0	0	0	29	0	45	1	0	23	961	0	1	0	0	814	57	0	1931
3:45-4:45	0	0	0	0	0	0	35	0	44	1	0	28	957	0	0	0	0	814	62	1	1942
4:00-5:00	0	0	0	0	0	0	40	0	51	0	0	31	962	0	0	0	0	802	58	1	1945
4:15-5:15	0	0	0	0	0	0	39	0	47	1	0	34	957	0	0	0	0	774	52	5	1909
4:30-5:30	0	0	0	0	0	1	37	0	39	1	0	32	963	0	0	0	0	773	55	7	1908
4:45-5:45	0	0	0	0	0	1	37	0	38	2	0	29	943	0	0	0	0	756	55	7	1868
5:00-6:00	0	0	0	0	0	1	32	0	27	2	0	23	922	0	0	0	0	731	45	7	1790

PM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
4:00-5:00	**0**	**0**	**0**	**0**	**0**	**0**	**40**	**0**	**51**	**0**	**0**	**31**	**962**	**0**	**0**	**0**	**0**	**802**	**58**	**1**	**1945**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: MD 6 & Kent Ave
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Thursday, December 4, 2025
Jurisdiction: Charles County

	Weekend Peak Hour (11:00 am - 3:00 pm)																				
	N/A Northbound					Kent Ave Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
11:00-11:15	0	0	0	0	0	0	3	0	7	0	0	4	151	0	0	0	0	155	4	0	324
11:15-11:30	0	0	0	0	0	0	4	0	6	0	0	3	159	0	0	0	0	160	4	0	336
11:30-11:45	0	0	0	0	0	0	6	0	4	0	0	6	191	0	0	0	0	182	1	1	390
11:45-12:00	0	0	0	0	0	0	5	0	8	0	0	2	161	0	0	0	0	201	5	0	382
12:00-12:15	0	0	0	0	0	0	4	0	8	0	1	6	193	0	0	0	0	161	14	0	387
12:15-12:30	0	0	0	0	0	0	3	0	3	0	0	5	192	0	0	0	0	176	2	0	381
12:30-12:45	0	0	0	0	0	0	4	0	5	0	0	5	172	0	0	0	0	171	5	0	362
12:45-1:00	0	0	0	0	0	0	6	0	4	2	0	1	177	0	0	0	0	170	4	1	362
1:00-1:15	0	0	0	0	0	0	8	0	7	1	1	3	156	0	0	0	0	175	4	0	354
1:15-1:30	0	0	0	0	0	0	4	0	7	2	0	2	188	0	0	0	0	167	4	0	372
1:30-1:45	0	0	0	0	0	0	4	0	5	0	0	4	154	0	0	0	0	143	7	0	317
1:45-2:00	0	0	0	0	0	0	4	0	6	0	0	6	159	0	0	1	0	179	4	0	359
2:00-2:15	0	0	0	0	0	0	2	0	4	0	0	7	165	0	0	0	0	136	5	0	319
2:15-2:30	0	0	0	0	0	0	6	0	7	0	0	4	163	0	0	0	0	172	3	0	355
2:30-2:45	0	0	0	0	0	0	5	0	6	0	0	8	187	0	0	0	0	183	1	0	390
2:45-3:00	0	0	0	0	0	0	3	0	7	0	0	4	192	0	0	0	0	171	4	0	381
Hourly Totals																					
11:00-12:00	0	0	0	0	0	0	18	0	25	0	0	15	662	0	0	0	0	698	14	1	1433
11:15-12:15	0	0	0	0	0	0	19	0	26	0	1	17	704	0	0	0	0	704	24	1	1496
11:30-12:30	0	0	0	0	0	0	18	0	23	0	1	19	737	0	0	0	0	720	22	1	1541
11:45-12:45	0	0	0	0	0	0	16	0	24	0	1	18	718	0	0	0	0	709	26	0	1512
12:00-1:00	0	0	0	0	0	0	17	0	20	2	1	17	734	0	0	0	0	678	25	1	1495
12:15-1:15	0	0	0	0	0	0	21	0	19	3	1	14	697	0	0	0	0	692	15	1	1463
12:30-1:30	0	0	0	0	0	0	22	0	23	5	1	11	693	0	0	0	0	683	17	1	1456
12:45-1:45	0	0	0	0	0	0	22	0	23	5	1	10	675	0	0	0	0	655	19	1	1411
1:00-2:00	0	0	0	0	0	0	20	0	25	3	1	15	657	0	0	1	0	664	19	0	1405
1:15-2:15	0	0	0	0	0	0	14	0	22	2	0	19	666	0	0	1	0	625	20	0	1369
1:30-2:30	0	0	0	0	0	0	16	0	22	0	0	21	641	0	0	1	0	630	19	0	1350
1:45-2:45	0	0	0	0	0	0	17	0	23	0	0	25	674	0	0	1	0	670	13	0	1423
2:00-3:00	0	0	0	0	0	0	16	0	24	0	0	23	707	0	0	0	0	662	13	0	1445
PM	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
11:30-12:30	**0**	**0**	**0**	**0**	**0**	**0**	**18**	**0**	**23**	**0**	**1**	**19**	**737**	**0**	**0**	**0**	**0**	**720**	**22**	**1**	**1541**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: MD 6 & Kent Ave
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Saturday, December 6, 2025
County: Charles County

Weekday Morning Peak Hour (7:00 am - 9:00 am)

	Oak Ave Northbound					Oak Ave Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:00-7:15	0	8	0	8	0	0	0	0	0	0	0	0	132	24	0	0	7	190	3	0	372
7:15-7:30	0	24	2	5	0	0	0	0	0	0	0	0	114	17	0	0	4	243	6	0	415
7:30-7:45	0	16	0	5	0	0	0	0	0	0	0	2	122	14	0	0	9	191	3	0	362
7:45-8:00	0	17	2	7	0	0	0	0	0	0	0	3	119	22	0	0	6	211	4	0	391
8:00-8:15	0	12	2	2	1	0	0	0	0	2	0	3	123	18	0	0	6	213	5	1	384
8:15-8:30	0	7	1	1	1	0	0	0	0	0	0	2	135	20	3	0	6	196	3	0	371
8:30-8:45	0	16	1	8	0	0	0	0	0	0	0	1	150	16	1	0	3	181	1	0	377
8:45-9:00	0	10	2	6	0	0	0	0	0	0	0	0	105	21	0	0	11	195	6	0	356
Hourly Totals																					
7:00-8:00	0	65	4	25	0	0	0	0	0	0	0	5	487	77	0	0	26	835	16	0	1540
7:15-8:15	0	69	6	19	1	0	0	0	0	2	0	8	478	71	0	0	25	858	18	1	1556
7:30-8:30	0	52	5	15	2	0	0	0	0	2	0	10	499	74	3	0	27	811	15	1	1516
7:45-8:45	0	52	6	18	2	0	0	0	0	2	0	9	527	76	4	0	21	801	13	1	1532
8:00-9:00	0	45	6	17	2	0	0	0	0	2	0	6	513	75	4	0	26	785	15	1	1497

AM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
7:15-8:15	**0**	**69**	**6**	**19**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**8**	**478**	**71**	**0**	**0**	**25**	**858**	**18**	**1**	**1556**

Weekday Evening Peak Hour (3:00 pm - 6:00 pm)

	Oak Ave Northbound					Oak Ave Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:00-3:15	0	12	1	8	1	0	0	0	0	0	0	1	218	25	1	0	5	172	2	0	444
3:15-3:30	0	10	0	7	0	0	0	0	0	0	0	3	219	19	1	0	11	162	3	0	434
3:30-3:45	0	10	2	11	2	0	0	0	0	0	0	1	218	23	4	0	2	208	6	0	481
3:45-4:00	0	6	3	9	0	0	0	0	0	1	0	2	227	21	0	0	10	218	4	2	500
4:00-4:15	0	12	1	12	0	0	0	0	0	0	0	1	233	16	0	0	2	199	8	0	484
4:15-4:30	0	12	4	10	0	0	0	0	0	0	0	0	222	23	0	0	8	208	6	0	493
4:30-4:45	0	10	3	12	2	0	0	0	0	0	0	0	232	18	2	0	2	213	9	2	499
4:45-5:00	0	6	4	7	1	0	0	0	0	0	0	4	227	25	0	0	5	201	6	0	485
5:00-5:15	0	11	2	13	1	0	0	0	0	1	0	0	216	24	2	0	1	169	4	0	440
5:15-5:30	0	9	2	9	2	0	0	0	0	0	0	0	228	21	2	0	2	214	9	0	494
5:30-5:45	0	9	2	5	0	0	0	0	0	0	0	0	210	19	0	0	3	190	4	0	442
5:45-6:00	0	7	1	5	0	0	0	0	0	1	0	0	211	21	1	0	6	170	1	0	422
Hourly Totals																					
3:00-4:00	0	38	6	35	3	0	0	0	0	1	0	7	882	88	6	0	28	760	15	2	1871
3:15-4:15	0	38	6	39	2	0	0	0	0	1	0	7	897	79	5	0	25	787	21	2	1909
3:30-4:30	0	40	10	42	2	0	0	0	0	1	0	4	900	83	4	0	22	833	24	2	1967
3:45-4:45	0	40	11	43	2	0	0	0	0	1	0	3	914	78	2	0	22	838	27	4	1985
4:00-5:00	0	40	12	41	3	0	0	0	0	0	0	5	914	82	2	0	17	821	29	2	1968
4:15-5:15	0	39	13	42	4	0	0	0	0	1	0	4	897	90	4	0	16	791	25	2	1928
4:30-5:30	0	36	11	41	6	0	0	0	0	1	0	4	903	88	6	0	10	797	28	2	1933
4:45-5:45	0	35	10	34	4	0	0	0	0	1	0	4	881	89	4	0	11	774	23	0	1870
5:00-6:00	0	36	7	32	3	0	0	0	0	2	0	0	865	85	5	0	12	743	18	0	1808

PM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
3:45-4:45	**0**	**40**	**11**	**43**	**2**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	**914**	**78**	**2**	**0**	**22**	**838**	**27**	**4**	**1985**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: MD 6 & Oak Ave
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Thursday, December 4, 2025
Jurisdiction: Charles County

	Weekend Peak Hour (11:00 am - 3:00 pm)																				
	Oak Ave Northbound					Oak Ave Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
11:00-11:15	0	11	0	1	0	0	0	0	0	0	0	1	145	9	0	0	6	150	0	0	323
11:15-11:30	0	17	2	6	0	0	0	0	0	0	0	0	146	15	3	0	3	147	2	0	338
11:30-11:45	0	9	0	5	3	0	0	0	0	0	0	2	183	9	0	0	4	173	1	0	386
11:45-12:00	0	15	2	6	0	0	0	0	0	0	0	0	155	13	0	0	1	189	2	0	383
12:00-12:15	0	14	0	5	0	0	0	0	0	1	0	0	181	11	2	0	4	166	1	0	382
12:15-12:30	0	10	0	4	0	0	0	0	0	0	0	2	178	19	1	0	4	167	2	0	386
12:30-12:45	0	11	0	12	1	0	1	0	0	0	0	0	160	13	1	0	5	163	1	0	366
12:45-1:00	0	14	2	5	0	0	0	0	0	2	0	2	167	16	5	0	3	157	2	0	368
1:00-1:15	0	6	0	3	1	0	0	0	0	1	0	1	147	15	4	0	3	173	1	0	349
1:15-1:30	0	11	1	5	1	0	0	0	1	0	0	1	170	20	3	0	5	159	2	0	375
1:30-1:45	0	8	0	6	0	0	0	0	1	0	0	2	147	11	0	0	1	140	1	0	317
1:45-2:00	0	10	1	4	0	0	0	0	0	0	0	0	143	16	0	0	5	178	1	0	358
2:00-2:15	0	9	2	8	0	0	0	0	0	0	0	0	157	12	0	0	2	135	1	0	326
2:15-2:30	0	15	2	8	1	0	0	0	0	0	0	0	158	15	7	0	4	159	2	0	363
2:30-2:45	0	13	1	5	1	0	0	0	0	0	0	1	169	25	4	0	1	169	2	0	386
2:45-3:00	0	12	0	5	4	0	0	0	0	2	0	2	173	24	2	0	5	165	2	0	388
Hourly Totals																					
11:00-12:00	0	52	4	18	3	0	0	0	0	0	0	3	629	46	3	0	14	659	5	0	1436
11:15-12:15	0	55	4	22	3	0	0	0	0	1	0	2	665	48	5	0	12	675	6	0	1498
11:30-12:30	0	48	2	20	3	0	0	0	0	1	0	4	697	52	3	0	13	695	6	0	1544
11:45-12:45	0	50	2	27	1	0	1	0	0	1	0	2	674	56	4	0	14	685	6	0	1523
12:00-1:00	0	49	2	26	1	0	1	0	0	3	0	4	686	59	9	0	16	653	6	0	1515
12:15-1:15	0	41	2	24	2	0	1	0	0	3	0	5	652	63	11	0	15	660	6	0	1485
12:30-1:30	0	42	3	25	3	0	1	0	1	3	0	4	644	64	13	0	16	652	6	0	1477
12:45-1:45	0	39	3	19	2	0	0	0	2	3	0	6	631	62	12	0	12	629	6	0	1426
1:00-2:00	0	35	2	18	2	0	0	0	2	1	0	4	607	62	7	0	14	650	5	0	1409
1:15-2:15	0	38	4	23	1	0	0	0	2	0	0	3	617	59	3	0	13	612	5	0	1380
1:30-2:30	0	42	5	26	1	0	0	0	1	0	0	2	605	54	7	0	12	612	5	0	1372
1:45-2:45	0	47	6	25	2	0	0	0	0	0	0	1	627	68	11	0	12	641	6	0	1446
2:00-3:00	0	49	5	26	6	0	0	0	0	2	0	3	657	76	13	0	12	628	7	0	1484
PM	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
11:30-12:30	**0**	**48**	**2**	**20**	**3**	**0**	**0**	**0**	**0**	**1**	**0**	**4**	**697**	**52**	**3**	**0**	**13**	**695**	**6**	**0**	**1544**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: MD 6 & Oak Ave
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Saturday, December 6, 2025
County: Charles County

Weekday Morning Peak Hour (7:00 am - 9:00 am)

	Willow Ln Northbound					La Plata Pkwy Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:00-7:15	0	7	3	18	0	0	7	1	12	1	0	4	128	10	0	0	57	175	8	0	430
7:15-7:30	0	22	2	52	0	0	3	1	10	0	0	3	108	8	0	0	43	235	5	0	492
7:30-7:45	0	8	0	16	0	0	2	0	9	0	0	2	118	0	0	0	10	178	4	0	347
7:45-8:00	0	6	0	4	0	0	7	0	12	0	0	4	117	1	0	0	6	201	1	0	359
8:00-8:15	0	1	0	10	0	0	3	0	9	1	0	7	112	3	0	0	18	220	4	0	387
8:15-8:30	0	1	3	6	0	0	5	0	13	0	0	4	119	1	0	0	10	191	2	0	355
8:30-8:45	0	2	0	8	0	0	6	0	16	0	0	4	128	3	0	0	9	169	4	0	349
8:45-9:00	0	14	0	19	0	0	8	0	12	0	0	6	97	6	0	0	10	190	4	0	366
Hourly Totals																					
7:00-8:00	0	43	5	90	0	0	19	2	43	1	0	13	471	19	0	0	116	789	18	0	1629
7:15-8:15	0	37	2	82	0	0	15	1	40	1	0	16	455	12	0	0	77	834	14	0	1586
7:30-8:30	0	16	3	36	0	0	17	0	43	1	0	17	466	5	0	0	44	790	11	0	1449
7:45-8:45	0	10	3	28	0	0	21	0	50	1	0	19	476	8	0	0	43	781	11	0	1451
8:00-9:00	0	18	3	43	0	0	22	0	50	1	0	21	456	13	0	0	47	770	14	0	1458

AM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:00-8:00	**0**	**43**	**5**	**90**	**0**	**0**	**19**	**2**	**43**	**1**	**0**	**13**	**471**	**19**	**0**	**0**	**116**	**789**	**18**	**0**	**1629**

Weekday Evening Peak Hour (3:00 pm - 6:00 pm)

	Willow Ln Northbound					La Plata Pkwy Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:00-3:15	0	1	0	8	0	0	6	0	3	0	0	10	201	4	0	0	13	159	3	0	408
3:15-3:30	0	3	0	10	0	0	6	0	8	3	0	8	219	5	0	0	26	152	4	0	441
3:30-3:45	0	20	1	43	0	0	9	0	10	0	0	14	205	5	0	0	10	185	8	0	510
3:45-4:00	0	2	1	22	0	0	9	1	11	2	0	16	210	0	0	0	9	190	9	0	480
4:00-4:15	0	3	0	11	0	0	7	0	11	1	0	12	249	0	0	0	11	179	10	0	493
4:15-4:30	0	2	0	9	0	0	7	2	9	0	0	20	258	3	0	0	13	196	12	0	531
4:30-4:45	0	4	2	10	0	0	3	1	12	1	0	11	231	2	0	0	6	165	13	0	460
4:45-5:00	0	2	0	11	0	0	8	0	17	0	0	17	208	3	0	0	11	169	5	0	451
5:00-5:15	0	1	0	9	1	0	12	0	9	0	0	13	218	2	0	0	9	174	5	1	452
5:15-5:30	0	2	1	5	1	0	7	0	8	0	0	14	236	2	0	0	13	195	5	1	488
5:30-5:45	0	3	0	5	0	0	3	0	8	0	0	18	200	2	0	0	8	170	7	0	424
5:45-6:00	0	3	0	8	0	0	11	0	9	0	0	16	190	6	0	0	14	151	6	0	414
Hourly Totals																					
3:00-4:00	0	26	2	83	0	0	30	1	32	5	0	48	835	14	0	0	58	686	24	0	1844
3:15-4:15	0	28	2	86	0	0	31	1	40	6	0	50	883	10	0	0	56	706	31	0	1930
3:30-4:30	0	27	2	85	0	0	32	3	41	3	0	62	922	8	0	0	43	750	39	0	2017
3:45-4:45	0	11	3	52	0	0	26	4	43	4	0	59	948	5	0	0	39	730	44	0	1968
4:00-5:00	0	11	2	41	0	0	25	3	49	2	0	60	946	8	0	0	41	709	40	0	1937
4:15-5:15	0	9	2	39	1	0	30	3	47	1	0	61	915	10	0	0	39	704	35	1	1897
4:30-5:30	0	9	3	35	2	0	30	1	46	1	0	55	893	9	0	0	39	703	28	2	1856
4:45-5:45	0	8	1	30	2	0	30	0	42	0	0	62	862	9	0	0	41	708	22	2	1819
5:00-6:00	0	9	1	27	2	0	33	0	34	0	0	61	844	12	0	0	44	690	23	2	1782

PM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:30-4:30	**0**	**27**	**2**	**85**	**0**	**0**	**32**	**3**	**41**	**3**	**0**	**62**	**922**	**8**	**0**	**0**	**43**	**750**	**39**	**0**	**2017**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: MD 6 & La Plata Pkwy
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Thursday, December 4, 2025
Jurisdiction: Charles County

	Weekend Peak Hour (11:00 am - 3:00 pm)																				
	Willow Ln Northbound					La Plata Pkwy Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
11:00-11:15	0	2	0	6	0	0	2	0	5	0	0	2	136	1	0	0	3	148	2	0	307
11:15-11:30	0	0	0	1	0	0	2	0	12	2	0	5	131	0	0	0	1	125	2	1	279
11:30-11:45	0	4	0	3	0	0	2	0	8	0	0	13	156	2	0	0	1	159	2	0	350
11:45-12:00	0	2	0	4	0	0	2	0	6	2	0	5	152	0	0	0	0	173	3	0	347
12:00-12:15	0	2	1	1	0	0	0	0	12	0	0	11	163	4	0	0	4	151	4	0	353
12:15-12:30	0	0	0	0	0	0	0	0	15	0	0	12	166	2	0	0	1	129	1	0	326
12:30-12:45	0	2	0	2	0	0	3	0	9	1	0	6	144	1	1	0	0	156	3	0	326
12:45-1:00	0	1	0	2	0	0	8	0	11	1	0	12	157	1	0	0	2	137	3	0	334
1:00-1:15	0	4	0	3	0	0	3	0	13	0	0	8	127	2	0	0	4	155	3	0	322
1:15-1:30	0	1	0	1	0	0	5	0	11	0	0	12	152	2	0	0	1	145	1	0	331
1:30-1:45	1	2	0	3	0	0	0	0	9	0	0	10	126	4	0	0	0	114	3	0	272
1:45-2:00	0	3	0	2	0	0	2	0	6	0	0	10	135	2	0	0	2	166	4	0	332
2:00-2:15	0	1	0	0	0	0	4	0	1	0	0	8	148	2	0	0	3	128	1	0	296
2:15-2:30	0	3	0	3	0	0	0	0	12	0	0	10	150	2	0	0	1	138	4	0	323
2:30-2:45	0	2	0	1	0	0	3	0	11	0	0	15	146	2	0	0	1	156	8	0	345
2:45-3:00	0	1	0	1	0	0	3	0	16	0	0	13	165	0	0	0	1	146	2	0	348
Hourly Totals																					
11:00-12:00	0	8	0	14	0	0	8	0	31	4	0	25	575	3	0	0	5	605	9	1	1288
11:15-12:15	0	8	1	9	0	0	6	0	38	4	0	34	602	6	0	0	6	608	11	1	1334
11:30-12:30	0	8	1	8	0	0	4	0	41	2	0	41	637	8	0	0	6	612	10	0	1378
11:45-12:45	0	6	1	7	0	0	5	0	42	3	0	34	625	7	1	0	5	609	11	0	1356
12:00-1:00	0	5	1	5	0	0	11	0	47	2	0	41	630	8	1	0	7	573	11	0	1342
12:15-1:15	0	7	0	7	0	0	14	0	48	2	0	38	594	6	1	0	7	577	10	0	1311
12:30-1:30	0	8	0	8	0	0	19	0	44	2	0	38	580	6	1	0	7	593	10	0	1316
12:45-1:45	1	8	0	9	0	0	16	0	44	1	0	42	562	9	0	0	7	551	10	0	1260
1:00-2:00	1	10	0	9	0	0	10	0	39	0	0	40	540	10	0	0	7	580	11	0	1257
1:15-2:15	1	7	0	6	0	0	11	0	27	0	0	40	561	10	0	0	6	553	9	0	1231
1:30-2:30	1	9	0	8	0	0	6	0	28	0	0	38	559	10	0	0	6	546	12	0	1223
1:45-2:45	0	9	0	6	0	0	9	0	30	0	0	43	579	8	0	0	7	588	17	0	1296
2:00-3:00	0	7	0	5	0	0	10	0	40	0	0	46	609	6	0	0	6	568	15	0	1312
PM	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
11:30-12:30	**0**	**8**	**1**	**8**	**0**	**0**	**4**	**0**	**41**	**2**	**0**	**41**	**637**	**8**	**0**	**0**	**6**	**612**	**10**	**0**	**1378**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: MD 6 & La Plata Pkwy
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Saturday, December 6, 2025
County: Charles County

Weekday Morning Peak Hour (7:00 am - 9:00 am)

	N/A Northbound					Hickory Ln Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:00-7:15	0	0	0	0	0	0	6	0	9	1	0	2	158	0	0	0	0	248	2	0	425
7:15-7:30	0	0	0	0	0	0	5	0	14	0	0	2	164	0	0	0	0	259	2	0	446
7:30-7:45	0	0	0	0	0	0	7	0	11	0	0	2	136	0	0	0	0	166	2	0	324
7:45-8:00	0	0	0	0	0	0	6	0	10	1	0	3	122	0	0	0	0	209	2	0	352
8:00-8:15	0	0	0	0	0	0	4	0	9	1	0	3	122	0	0	0	0	226	1	0	365
8:15-8:30	0	0	0	0	0	0	9	0	6	0	0	3	119	0	0	0	0	201	5	0	343
8:30-8:45	0	0	0	0	0	0	5	0	6	0	0	7	135	0	0	0	0	168	4	0	325
8:45-9:00	0	0	0	0	0	0	4	0	8	0	0	4	127	0	0	0	0	204	6	0	353
Hourly Totals																					
7:00-8:00	0	0	0	0	0	0	24	0	44	2	0	9	580	0	0	0	0	882	8	0	1549
7:15-8:15	0	0	0	0	0	0	22	0	44	2	0	10	544	0	0	0	0	860	7	0	1489
7:30-8:30	0	0	0	0	0	0	26	0	36	2	0	11	499	0	0	0	0	802	10	0	1386
7:45-8:45	0	0	0	0	0	0	24	0	31	2	0	16	498	0	0	0	0	804	12	0	1387
8:00-9:00	0	0	0	0	0	0	22	0	29	1	0	17	503	0	0	0	0	799	16	0	1387

AM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
7:00-8:00	**0**	**0**	**0**	**0**	**0**	**0**	**24**	**0**	**44**	**2**	**0**	**9**	**580**	**0**	**0**	**0**	**0**	**882**	**8**	**0**	**1549**

Weekday Evening Peak Hour (3:00 pm - 6:00 pm)

	N/A Northbound					Hickory Ln Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:00-3:15	0	0	0	0	0	0	1	0	7	0	0	4	202	0	0	0	0	175	5	0	394
3:15-3:30	0	0	0	0	0	0	4	0	8	0	0	11	232	0	0	0	0	162	11	0	428
3:30-3:45	0	0	0	0	0	0	2	0	9	1	0	12	223	0	0	0	0	207	8	0	461
3:45-4:00	0	0	0	0	0	0	4	0	11	0	0	13	240	0	0	0	0	203	7	0	478
4:00-4:15	0	0	0	0	0	0	3	0	15	1	0	7	258	0	0	0	0	192	11	0	486
4:15-4:30	0	0	0	0	0	0	1	0	12	0	0	14	235	0	0	0	0	185	10	0	457
4:30-4:45	0	0	0	0	0	0	4	0	10	1	0	4	239	0	0	0	0	172	6	0	435
4:45-5:00	0	0	0	0	0	0	4	0	6	0	0	5	226	0	0	0	0	168	9	0	418
5:00-5:15	0	0	0	0	0	0	2	0	8	0	0	11	218	0	0	0	0	207	5	0	451
5:15-5:30	0	0	0	0	0	0	2	0	9	0	0	12	235	0	0	0	0	188	8	0	454
5:30-5:45	0	0	0	0	0	0	3	0	8	0	0	11	210	0	0	0	0	163	5	0	400
5:45-6:00	0	0	0	0	0	0	3	0	16	0	0	13	189	0	0	0	0	162	9	0	392
Hourly Totals																					
3:00-4:00	0	0	0	0	0	0	11	0	35	1	0	40	897	0	0	0	0	747	31	0	1762
3:15-4:15	0	0	0	0	0	0	13	0	43	2	0	43	953	0	0	0	0	764	37	0	1855
3:30-4:30	0	0	0	0	0	0	10	0	47	2	0	46	956	0	0	0	0	787	36	0	1884
3:45-4:45	0	0	0	0	0	0	12	0	48	2	0	38	972	0	0	0	0	752	34	0	1858
4:00-5:00	0	0	0	0	0	0	12	0	43	2	0	30	958	0	0	0	0	717	36	0	1798
4:15-5:15	0	0	0	0	0	0	11	0	36	1	0	34	918	0	0	0	0	732	30	0	1762
4:30-5:30	0	0	0	0	0	0	12	0	33	1	0	32	918	0	0	0	0	735	28	0	1759
4:45-5:45	0	0	0	0	0	0	11	0	31	0	0	39	889	0	0	0	0	726	27	0	1723
5:00-6:00	0	0	0	0	0	0	10	0	41	0	0	47	852	0	0	0	0	720	27	0	1697

PM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
3:30-4:30	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**47**	**2**	**0**	**46**	**956**	**0**	**0**	**0**	**0**	**787**	**36**	**0**	**1884**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: MD 6 & Hickory Ln
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Thursday, December 4, 2025
Jurisdiction: Charles County

	Weekend Peak Hour (11:00 am - 3:00 pm)																				
	N/A Northbound					Hickory Ln Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
11:00-11:15	0	0	0	0	0	0	3	0	3	0	0	5	138	0	0	0	0	148	2	0	299
11:15-11:30	0	0	0	0	0	0	4	0	13	0	0	14	119	0	0	0	0	116	6	0	272
11:30-11:45	0	0	0	0	0	0	7	0	12	0	0	6	153	0	0	0	0	153	1	0	332
11:45-12:00	0	0	0	0	0	0	3	0	10	2	0	7	143	0	0	0	0	165	3	0	331
12:00-12:15	0	0	0	0	0	0	1	0	11	0	0	13	144	0	0	0	0	143	7	0	319
12:15-12:30	0	0	0	0	0	0	7	0	5	0	0	8	164	0	0	0	0	132	3	0	319
12:30-12:45	0	0	0	0	0	0	4	0	9	0	0	9	135	0	0	0	0	149	5	0	311
12:45-1:00	0	0	0	0	0	0	2	0	10	1	0	7	163	0	0	0	0	137	5	0	324
1:00-1:15	0	0	0	0	0	0	2	0	8	0	0	7	129	0	0	0	0	152	3	0	301
1:15-1:30	0	0	0	0	0	0	3	0	10	0	0	5	150	0	0	0	0	133	3	0	304
1:30-1:45	0	0	0	0	0	0	3	0	8	0	0	9	115	0	0	0	0	114	9	0	258
1:45-2:00	0	0	0	0	0	0	4	0	11	0	0	10	136	0	0	0	0	153	6	0	320
2:00-2:15	0	0	0	0	0	1	3	0	5	0	0	2	146	0	0	0	0	126	5	0	288
2:15-2:30	0	0	0	0	0	0	4	0	11	0	0	8	143	0	0	0	0	135	11	0	312
2:30-2:45	0	0	0	0	0	0	1	0	8	0	0	13	140	0	0	0	0	156	8	0	326
2:45-3:00	0	0	0	0	0	0	4	0	13	0	0	12	157	0	0	0	0	134	8	0	328
Hourly Totals																					
11:00-12:00	0	0	0	0	0	0	17	0	38	2	0	32	553	0	0	0	0	582	12	0	1236
11:15-12:15	0	0	0	0	0	0	15	0	46	2	0	40	559	0	0	0	0	577	17	0	1256
11:30-12:30	0	0	0	0	0	0	18	0	38	2	0	34	604	0	0	0	0	593	14	0	1303
11:45-12:45	0	0	0	0	0	0	15	0	35	2	0	37	586	0	0	0	0	589	18	0	1282
12:00-1:00	0	0	0	0	0	0	14	0	35	1	0	37	606	0	0	0	0	561	20	0	1274
12:15-1:15	0	0	0	0	0	0	15	0	32	1	0	31	591	0	0	0	0	570	16	0	1256
12:30-1:30	0	0	0	0	0	0	11	0	37	1	0	28	577	0	0	0	0	571	16	0	1241
12:45-1:45	0	0	0	0	0	0	10	0	36	1	0	28	557	0	0	0	0	536	20	0	1188
1:00-2:00	0	0	0	0	0	0	12	0	37	0	0	31	530	0	0	0	0	552	21	0	1183
1:15-2:15	0	0	0	0	0	1	13	0	34	0	0	26	547	0	0	0	0	526	23	0	1170
1:30-2:30	0	0	0	0	0	1	14	0	35	0	0	29	540	0	0	0	0	528	31	0	1178
1:45-2:45	0	0	0	0	0	1	12	0	35	0	0	33	565	0	0	0	0	570	30	0	1246
2:00-3:00	0	0	0	0	0	1	12	0	37	0	0	35	586	0	0	0	0	551	32	0	1254
PM	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
11:30-12:30	**0**	**0**	**0**	**0**	**0**	**0**	**18**	**0**	**38**	**2**	**0**	**34**	**604**	**0**	**0**	**0**	**0**	**593**	**14**	**0**	**1303**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: MD 6 & Hickory Ln
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Saturday, December 6, 2025
County: Charles County

Weekday Morning Peak Hour (7:00 am - 9:00 am)

	Church Access Northbound					MD 488 Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:00-7:15	0	3	3	0	0	0	10	1	132	0	0	106	47	5	0	0	0	115	108	0	530
7:15-7:30	0	1	0	0	0	0	27	3	157	0	0	120	42	0	0	0	0	108	64	0	522
7:30-7:45	0	3	3	0	0	0	25	5	87	0	0	100	51	8	0	0	2	68	48	0	400
7:45-8:00	0	1	2	0	0	0	18	9	103	0	0	83	32	10	0	0	3	113	54	0	428
8:00-8:15	0	29	20	5	0	0	22	25	107	0	0	69	33	24	0	0	17	89	43	0	483
8:15-8:30	0	38	21	6	0	0	16	18	88	0	0	69	33	23	0	0	10	85	45	0	452
8:30-8:45	0	2	1	0	0	0	12	8	84	0	0	74	42	5	0	0	0	92	49	0	369
8:45-9:00	0	11	9	1	0	0	12	9	107	0	0	71	44	6	0	0	0	95	36	0	401
Hourly Totals																					
7:00-8:00	0	8	8	0	0	0	80	18	479	0	0	409	172	23	0	0	5	404	274	0	1880
7:15-8:15	0	34	25	5	0	0	92	42	454	0	0	372	158	42	0	0	22	378	209	0	1833
7:30-8:30	0	71	46	11	0	0	81	57	385	0	0	321	149	65	0	0	32	355	190	0	1763
7:45-8:45	0	70	44	11	0	0	68	60	382	0	0	295	140	62	0	0	30	379	191	0	1732
8:00-9:00	0	80	51	12	0	0	62	60	386	0	0	283	152	58	0	0	27	361	173	0	1705

AM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:00-8:00	**0**	**8**	**8**	**0**	**0**	**0**	**80**	**18**	**479**	**0**	**0**	**409**	**172**	**23**	**0**	**0**	**5**	**404**	**274**	**0**	**1880**

Weekday Evening Peak Hour (3:00 pm - 6:00 pm)

	Church Access Northbound					MD 488 Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:00-3:15	0	1	2	0	0	0	64	8	104	0	0	104	76	10	0	0	3	74	24	0	470
3:15-3:30	0	3	1	0	0	0	41	16	107	0	0	106	121	14	0	0	7	63	30	0	509
3:30-3:45	0	42	31	22	0	0	37	16	107	0	0	96	115	12	0	0	4	66	32	0	580
3:45-4:00	0	13	14	1	0	0	61	7	119	0	0	113	122	7	0	0	3	83	28	0	571
4:00-4:15	0	3	9	8	0	0	74	5	121	0	0	115	150	5	0	0	0	70	36	0	596
4:15-4:30	0	1	6	1	0	0	69	4	116	0	0	110	123	5	0	0	2	69	56	0	562
4:30-4:45	0	9	8	3	0	0	55	3	97	0	0	124	121	4	0	0	0	79	44	0	547
4:45-5:00	0	2	1	1	0	0	57	4	99	0	0	115	107	9	0	0	0	77	46	0	518
5:00-5:15	0	7	6	3	0	0	59	3	107	0	0	114	105	2	0	0	0	84	41	0	531
5:15-5:30	0	1	1	0	0	0	65	0	106	0	0	120	105	1	0	0	0	90	43	0	532
5:30-5:45	0	3	4	0	0	0	66	2	92	0	0	100	119	1	0	0	0	72	44	0	503
5:45-6:00	0	1	0	4	0	0	60	1	110	0	0	101	90	2	0	0	2	58	35	0	464
Hourly Totals																					
3:00-4:00	0	59	48	23	0	0	203	47	437	0	0	419	434	43	0	0	17	286	114	0	2130
3:15-4:15	0	61	55	31	0	0	213	44	454	0	0	430	508	38	0	0	14	282	126	0	2256
3:30-4:30	0	59	60	32	0	0	241	32	463	0	0	434	510	29	0	0	9	288	152	0	2309
3:45-4:45	0	26	37	13	0	0	259	19	453	0	0	462	516	21	0	0	5	301	164	0	2276
4:00-5:00	0	15	24	13	0	0	255	16	433	0	0	464	501	23	0	0	2	295	182	0	2223
4:15-5:15	0	19	21	8	0	0	240	14	419	0	0	463	456	20	0	0	2	309	187	0	2158
4:30-5:30	0	19	16	7	0	0	236	10	409	0	0	473	438	16	0	0	0	330	174	0	2128
4:45-5:45	0	13	12	4	0	0	247	9	404	0	0	449	436	13	0	0	0	323	174	0	2084
5:00-6:00	0	12	11	7	0	0	250	6	415	0	0	435	419	6	0	0	2	304	163	0	2030

PM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:30-4:30	**0**	**59**	**60**	**32**	**0**	**0**	**241**	**32**	**463**	**0**	**0**	**434**	**510**	**29**	**0**	**0**	**9**	**288**	**152**	**0**	**2309**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: MD 6 & MD 488
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Thursday, December 4, 2025
Jurisdiction: Charles County

	Weekend Peak Hour (11:00 am - 3:00 pm)																				
	Church Access Northbound					MD 488 Southbound					MD 6 Eastbound					MD 6 Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
11:00-11:15	0	2	0	0	0	0	32	1	79	0	0	65	77	0	0	0	0	69	24	0	349
11:15-11:30	0	1	0	0	0	0	28	1	61	0	0	67	54	0	0	0	0	61	28	0	301
11:30-11:45	0	3	0	1	0	0	34	0	79	0	0	74	82	2	0	0	0	77	32	0	384
11:45-12:00	0	0	0	0	0	0	31	0	88	0	0	69	87	0	0	0	1	69	41	0	386
12:00-12:15	0	1	0	1	0	0	28	0	70	0	0	64	75	2	0	0	0	84	28	0	353
12:15-12:30	0	1	2	0	0	0	27	1	70	0	0	89	81	1	0	0	0	64	27	0	363
12:30-12:45	0	1	0	0	0	0	22	0	64	0	0	66	73	0	0	0	0	88	28	0	342
12:45-1:00	0	0	0	0	0	0	27	0	62	0	0	73	89	2	0	0	0	81	24	0	358
1:00-1:15	0	0	0	0	0	0	21	0	78	0	0	58	69	2	0	0	0	76	16	0	320
1:15-1:30	0	0	0	1	0	0	30	0	60	0	0	61	83	1	0	0	0	72	18	0	326
1:30-1:45	0	1	0	0	0	0	29	1	61	0	0	53	75	0	0	0	0	65	31	0	316
1:45-2:00	0	1	0	0	0	0	27	0	83	0	0	57	78	1	0	0	0	72	16	0	335
2:00-2:15	0	0	0	1	0	0	24	1	59	0	0	67	85	0	0	0	0	76	22	0	335
2:15-2:30	0	0	0	0	0	0	36	0	63	0	0	56	86	1	0	0	1	77	18	0	338
2:30-2:45	0	0	3	0	0	0	25	2	84	0	0	64	80	1	0	0	0	77	21	0	357
2:45-3:00	0	2	0	1	0	0	31	3	73	0	0	67	86	3	0	0	1	69	24	0	360
Hourly Totals																					
11:00-12:00	0	6	0	1	0	0	125	2	307	0	0	275	300	2	0	0	1	276	125	0	1420
11:15-12:15	0	5	0	2	0	0	121	1	298	0	0	274	298	4	0	0	1	291	129	0	1424
11:30-12:30	0	5	2	2	0	0	120	1	307	0	0	296	325	5	0	0	1	294	128	0	1486
11:45-12:45	0	3	2	1	0	0	108	1	292	0	0	288	316	3	0	0	1	305	124	0	1444
12:00-1:00	0	3	2	1	0	0	104	1	266	0	0	292	318	5	0	0	0	317	107	0	1416
12:15-1:15	0	2	2	0	0	0	97	1	274	0	0	286	312	5	0	0	0	309	95	0	1383
12:30-1:30	0	1	0	1	0	0	100	0	264	0	0	258	314	5	0	0	0	317	86	0	1346
12:45-1:45	0	1	0	1	0	0	107	1	261	0	0	245	316	5	0	0	0	294	89	0	1320
1:00-2:00	0	2	0	1	0	0	107	1	282	0	0	229	305	4	0	0	0	285	81	0	1297
1:15-2:15	0	2	0	2	0	0	110	2	263	0	0	238	321	2	0	0	0	285	87	0	1312
1:30-2:30	0	2	0	1	0	0	116	2	266	0	0	233	324	2	0	0	1	290	87	0	1324
1:45-2:45	0	1	3	1	0	0	112	3	289	0	0	244	329	3	0	0	1	302	77	0	1365
2:00-3:00	0	2	3	2	0	0	116	6	279	0	0	254	337	5	0	0	2	299	85	0	1390
PM	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
11:30-12:30	**0**	**5**	**2**	**2**	**0**	**0**	**120**	**1**	**307**	**0**	**0**	**296**	**325**	**5**	**0**	**0**	**1**	**294**	**128**	**0**	**1486**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: MD 6 & MD 488
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Saturday, December 6, 2025
County: Charles County

Weekday Morning Peak Hour (7:00 am - 9:00 am)

	Washington Ave Northbound					Washington Ave Southbound					Talbot St Eastbound					N/A Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:00-7:15	0	8	95	0	0	0	0	50	8	0	0	1	0	2	0	0	0	0	0	0	164
7:15-7:30	0	16	130	0	0	0	0	51	14	0	0	2	0	2	0	0	0	0	0	0	215
7:30-7:45	0	11	91	0	0	0	0	47	23	0	0	4	0	7	0	0	0	0	0	0	183
7:45-8:00	0	22	86	0	0	0	0	70	33	0	0	4	0	4	0	0	0	0	0	0	219
8:00-8:15	0	18	81	0	0	0	0	50	19	0	0	2	0	9	0	0	0	0	0	0	179
8:15-8:30	0	21	85	0	0	0	0	56	17	0	0	1	0	16	0	0	0	0	0	0	196
8:30-8:45	0	25	95	0	0	0	0	71	25	0	0	1	0	10	0	0	0	0	0	0	227
8:45-9:00	0	26	83	0	0	0	0	69	29	0	0	5	0	7	0	0	0	0	0	0	219
Hourly Totals																					
7:00-8:00	0	57	402	0	0	0	0	218	78	0	0	11	0	15	0	0	0	0	0	0	781
7:15-8:15	0	67	388	0	0	0	0	218	89	0	0	12	0	22	0	0	0	0	0	0	796
7:30-8:30	0	72	343	0	0	0	0	223	92	0	0	11	0	36	0	0	0	0	0	0	777
7:45-8:45	0	86	347	0	0	0	0	247	94	0	0	8	0	39	0	0	0	0	0	0	821
8:00-9:00	0	90	344	0	0	0	0	246	90	0	0	9	0	42	0	0	0	0	0	0	821
AM	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
7:45-8:45	**0**	**86**	**347**	**0**	**0**	**0**	**0**	**247**	**94**	**0**	**0**	**8**	**0**	**39**	**0**	**0**	**0**	**0**	**0**	**0**	**821**

Weekday Evening Peak Hour (3:00 pm - 6:00 pm)

	Washington Ave Northbound					Washington Ave Southbound					Talbot St Eastbound					N/A Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:00-3:15	0	6	90	0	0	0	0	112	9	0	0	10	0	15	0	0	0	0	0	0	242
3:15-3:30	0	9	83	0	0	0	0	107	16	0	0	6	0	16	0	0	0	0	0	0	237
3:30-3:45	0	11	126	0	0	0	0	119	9	0	0	6	0	17	0	0	0	0	0	0	288
3:45-4:00	0	14	106	0	0	0	0	104	9	0	0	4	0	8	0	0	0	0	0	0	245
4:00-4:15	0	4	122	0	0	0	0	112	12	0	0	9	0	16	0	0	0	0	0	0	275
4:15-4:30	0	8	124	0	0	0	0	110	11	0	0	8	0	8	0	0	0	0	0	0	269
4:30-4:45	0	12	150	0	0	0	0	99	7	0	0	15	0	34	0	0	0	0	0	0	317
4:45-5:00	0	14	110	0	0	0	0	119	14	0	0	10	0	15	0	0	0	0	0	0	282
5:00-5:15	0	11	116	0	0	0	0	129	11	0	0	10	0	9	0	0	0	0	0	0	286
5:15-5:30	0	15	119	0	0	0	0	122	9	0	0	4	0	10	0	0	0	0	0	0	279
5:30-5:45	0	12	113	0	0	0	0	122	17	0	0	7	0	4	0	0	0	0	0	0	275
5:45-6:00	0	8	104	0	0	0	0	111	9	0	1	7	0	6	0	0	0	0	0	0	246
Hourly Totals																					
3:00-4:00	0	40	405	0	0	0	0	442	43	0	0	26	0	56	0	0	0	0	0	0	1012
3:15-4:15	0	38	437	0	0	0	0	442	46	0	0	25	0	57	0	0	0	0	0	0	1045
3:30-4:30	0	37	478	0	0	0	0	445	41	0	0	27	0	49	0	0	0	0	0	0	1077
3:45-4:45	0	38	502	0	0	0	0	425	39	0	0	36	0	66	0	0	0	0	0	0	1106
4:00-5:00	0	38	506	0	0	0	0	440	44	0	0	42	0	73	0	0	0	0	0	0	1143
4:15-5:15	0	45	500	0	0	0	0	457	43	0	0	43	0	66	0	0	0	0	0	0	1154
4:30-5:30	0	52	495	0	0	0	0	469	41	0	0	39	0	68	0	0	0	0	0	0	1164
4:45-5:45	0	52	458	0	0	0	0	492	51	0	0	31	0	38	0	0	0	0	0	0	1122
5:00-6:00	0	46	452	0	0	0	0	484	46	0	1	28	0	29	0	0	0	0	0	0	1086
PM	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
4:30-5:30	**0**	**52**	**495**	**0**	**0**	**0**	**0**	**469**	**41**	**0**	**0**	**39**	**0**	**68**	**0**	**0**	**0**	**0**	**0**	**0**	**1164**

Peak Hour
Turning Movement Count

LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: Washington Ave & Talbot St
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Thursday, December 4, 2025
Jurisdiction: Charles County

	Weekend Peak Hour (11:00 am - 3:00 pm)																				
	Washington Ave Northbound					Washington Ave Southbound					Talbot St Eastbound					N/A Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
11:00-11:15	0	3	86	0	0	0	0	93	5	0	0	0	0	2	0	0	0	0	0	0	189
11:15-11:30	0	3	84	0	0	0	0	101	8	0	0	1	0	3	0	0	0	0	0	0	200
11:30-11:45	0	5	92	0	0	0	0	101	4	0	0	3	0	5	0	0	0	0	0	0	210
11:45-12:00	0	3	107	0	0	0	0	94	3	0	0	1	0	6	0	0	0	0	0	0	214
12:00-12:15	0	5	98	0	0	0	0	104	3	0	0	1	0	5	0	0	0	0	0	0	216
12:15-12:30	0	3	101	0	0	0	0	123	8	0	0	1	0	7	0	0	0	0	0	0	243
12:30-12:45	0	4	94	0	0	0	0	98	3	0	0	0	0	14	0	0	0	0	0	0	213
12:45-1:00	0	7	97	0	0	0	0	101	9	0	0	0	0	6	0	0	0	0	0	0	220
1:00-1:15	0	5	89	0	0	0	0	96	9	0	0	0	0	4	0	0	0	0	0	0	203
1:15-1:30	0	1	104	0	0	0	0	105	3	0	0	0	0	2	0	0	0	0	0	0	215
1:30-1:45	0	1	93	0	0	0	0	101	8	0	0	0	0	6	0	0	0	0	0	0	209
1:45-2:00	0	6	102	0	0	0	0	86	5	0	0	2	0	4	0	0	0	0	0	0	205
2:00-2:15	0	4	72	0	0	0	0	102	8	0	0	5	0	5	0	0	0	0	0	0	196
2:15-2:30	0	5	77	0	0	0	0	114	4	0	0	2	0	2	0	0	0	0	0	0	204
2:30-2:45	0	4	99	0	0	0	0	102	6	0	0	0	0	8	0	0	0	0	0	0	219
2:45-3:00	0	4	80	0	0	0	0	111	3	0	0	1	0	4	0	0	0	0	0	0	203
Hourly Totals																					
11:00-12:00	0	14	369	0	0	0	0	389	20	0	0	5	0	16	0	0	0	0	0	0	813
11:15-12:15	0	16	381	0	0	0	0	400	18	0	0	6	0	19	0	0	0	0	0	0	840
11:30-12:30	0	16	398	0	0	0	0	422	18	0	0	6	0	23	0	0	0	0	0	0	883
11:45-12:45	0	15	400	0	0	0	0	419	17	0	0	3	0	32	0	0	0	0	0	0	886
12:00-1:00	0	19	390	0	0	0	0	426	23	0	0	2	0	32	0	0	0	0	0	0	892
12:15-1:15	0	19	381	0	0	0	0	418	29	0	0	1	0	31	0	0	0	0	0	0	879
12:30-1:30	0	17	384	0	0	0	0	400	24	0	0	0	0	26	0	0	0	0	0	0	851
12:45-1:45	0	14	383	0	0	0	0	403	29	0	0	0	0	18	0	0	0	0	0	0	847
1:00-2:00	0	13	388	0	0	0	0	388	25	0	0	2	0	16	0	0	0	0	0	0	832
1:15-2:15	0	12	371	0	0	0	0	394	24	0	0	7	0	17	0	0	0	0	0	0	825
1:30-2:30	0	16	344	0	0	0	0	403	25	0	0	9	0	17	0	0	0	0	0	0	814
1:45-2:45	0	19	350	0	0	0	0	404	23	0	0	9	0	19	0	0	0	0	0	0	824
2:00-3:00	0	17	328	0	0	0	0	429	21	0	0	8	0	19	0	0	0	0	0	0	822
PM	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					
Peak Hour	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**U-Turn**	**Left**	**Thru**	**Right**	**Peds**	**Total**
12:00-1:00	**0**	**19**	**390**	**0**	**0**	**0**	**0**	**426**	**23**	**0**	**0**	**2**	**0**	**32**	**0**	**0**	**0**	**0**	**0**	**0**	**892**

Peak Hour
Turning Movement Count

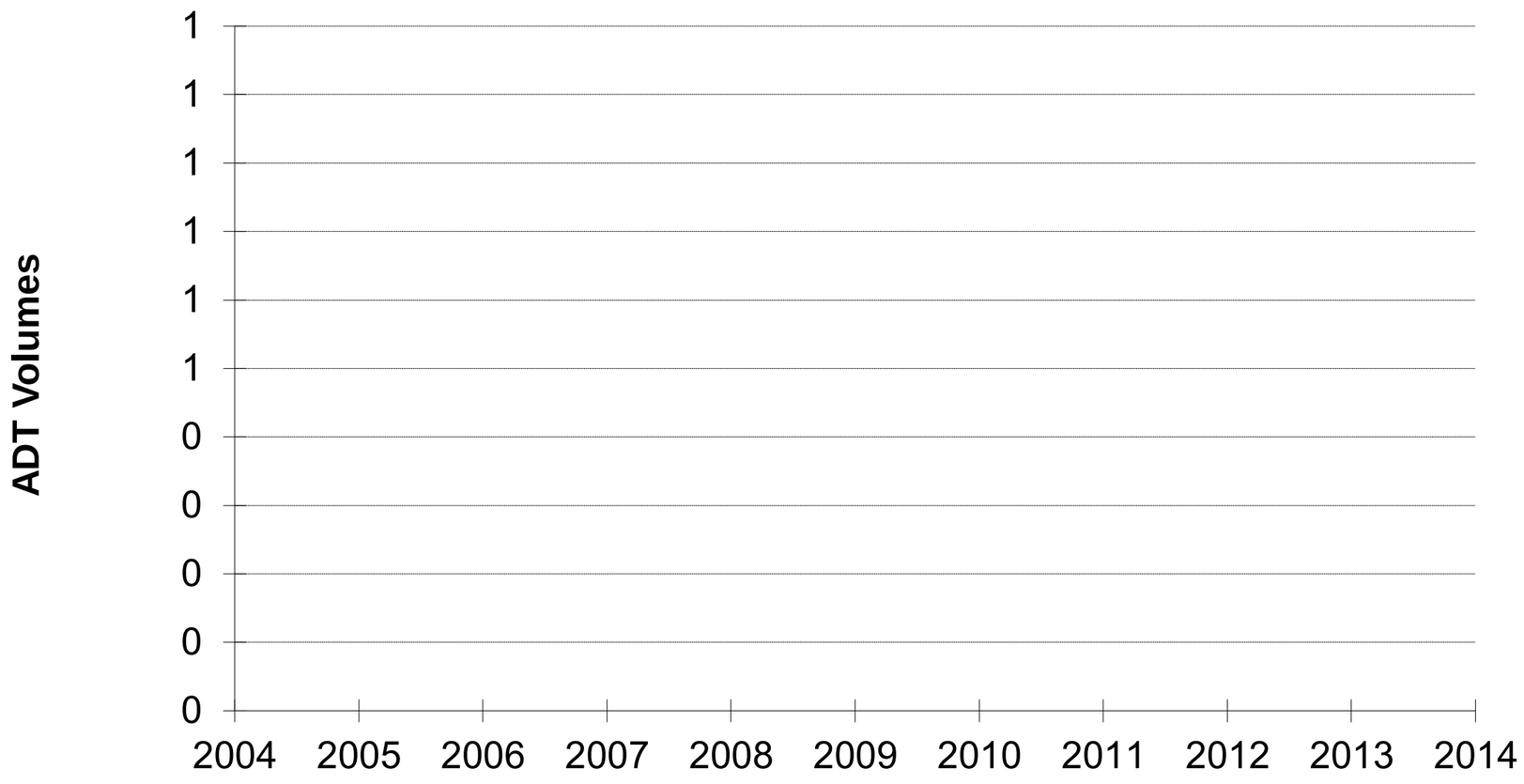
LENHART TRAFFIC CONSULTING, INC.
231 NAJOLES ROAD, SUITE 250
MILLERSVILLE, MD 21108
www.lenharttraffic.com

Intersection: Washington Ave & Talbot St
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Saturday, December 6, 2025
County: Charles County

TRAFFIC GROWTH PROJECTION

LOCATION:
REPORT DATE:
AVERAGE GROWTH: #DIV/0!
MATHEMATICAL GROWTH: #DIV/0!

Year	ADT Volume	Vol. increase	% increase	Average %
2004				
2005		0	#DIV/0!	#DIV/0!
2006		0	#DIV/0!	#DIV/0!
2007		0	#DIV/0!	#DIV/0!
2008		0	#DIV/0!	#DIV/0!
2009		0	#DIV/0!	#DIV/0!
2010		0	#DIV/0!	#DIV/0!
2011		0	#DIV/0!	#DIV/0!
2012		0	#DIV/0!	#DIV/0!
2013		0	#DIV/0!	#DIV/0!
2014		0	#DIV/0!	#DIV/0!



TRAFFIC GROWTH
0

Appendix B

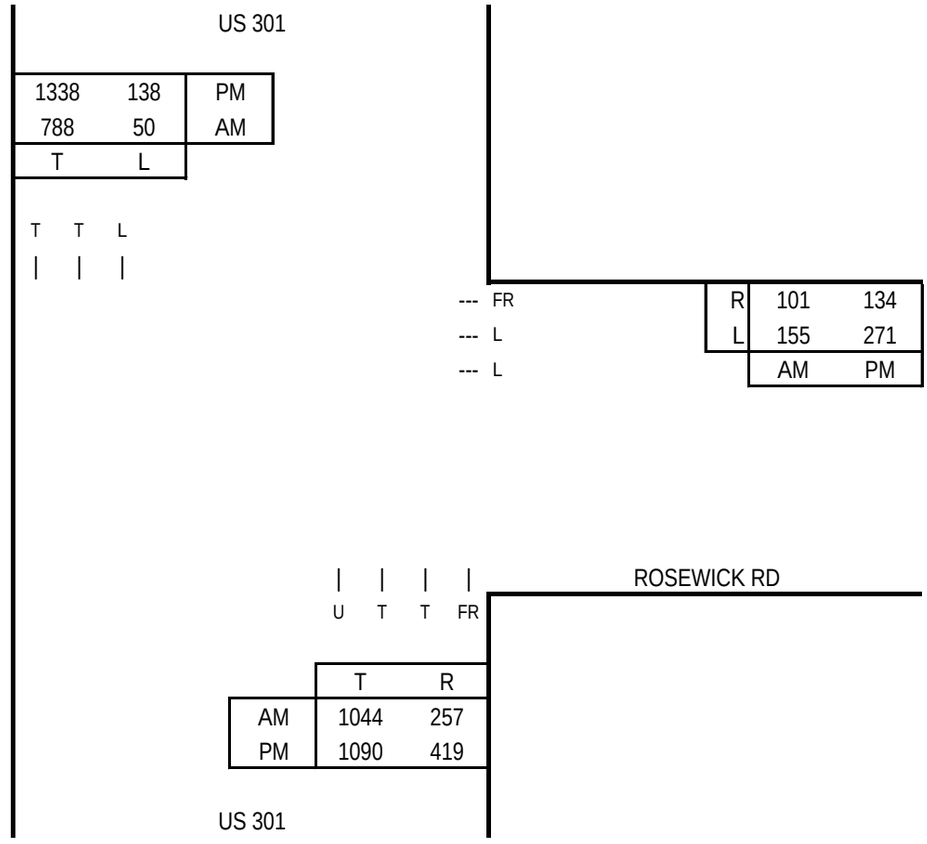
Level of Service (LOS) Worksheets

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: US 301
and: Rosewick Rd
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Morning Peak Hour							
	Thru Volumes			+ Opposing Lefts			AM
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
WB	155	0.60	93				93
NB	1044	0.55	574	50	1.00	50	624
SB	788	0.55	433				
						CLV TOTAL=	717
						Level of Service (LOS)=	A

Evening Peak Hour							
	Thru Volumes			+ Opposing Lefts			PM
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
WB	271	0.60	163				163
NB	1090	0.55	600	138	1.00	138	738
SB	1338	0.55	736				
						CLV TOTAL=	901
						Level of Service (LOS)=	A

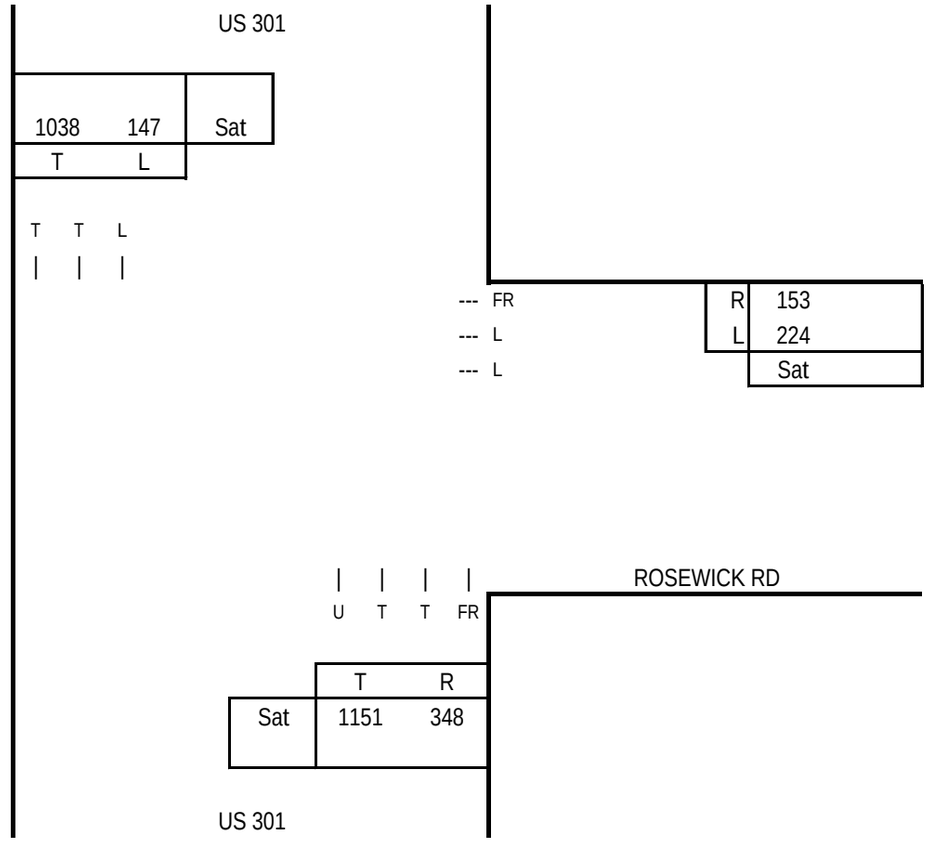
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	US 301 & Rosewick Rd (Existing Traffic)	Intersection **1**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: US 301
and: Rosewick Rd
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
WB	224	0.60	134				134
NB	1151	0.55	633	147	1.00	147	780
SB	1038	0.55	571				
						CLV TOTAL=	914
						Level of Service (LOS)=	A

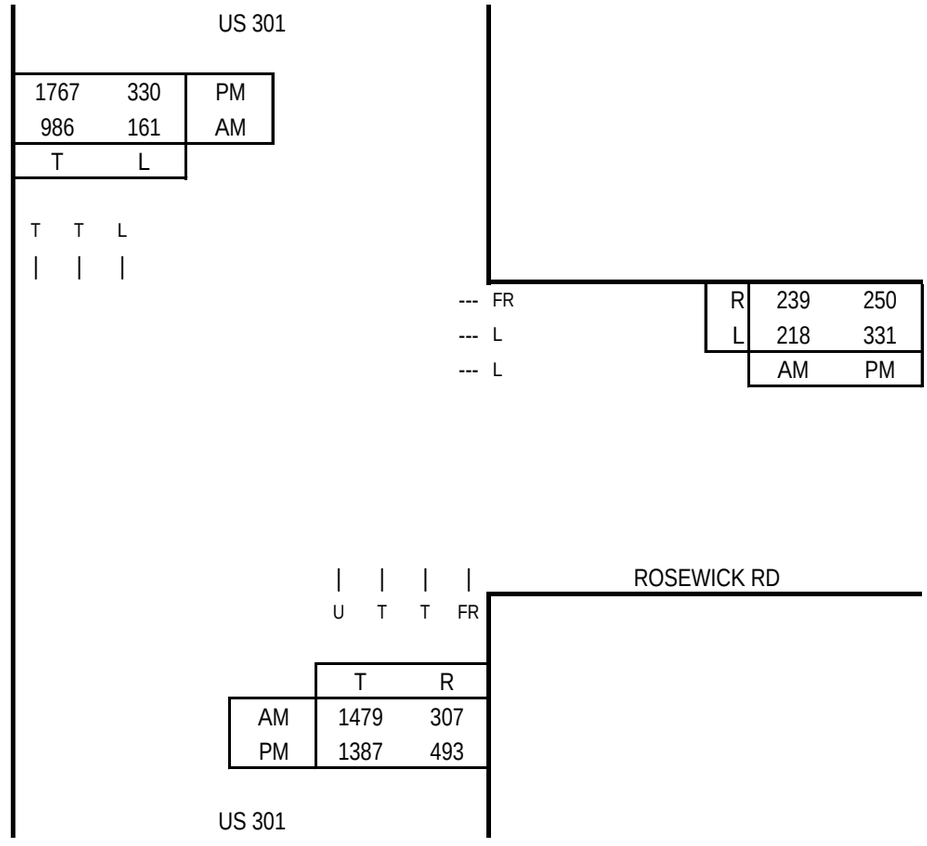
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	US 301 & Rosewick Rd (Existing Traffic)	Intersection **1**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: US 301
and: Rosewick Rd
Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Morning Peak Hour							
	Thru Volumes			+ Opposing Lefts			AM
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
WB	218	0.60	131				131
NB	1479	0.55	813	161	1.00	161	974
SB	986	0.55	542				
						CLV TOTAL=	1105
						Level of Service (LOS)=	B

Evening Peak Hour							
	Thru Volumes			+ Opposing Lefts			PM
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
WB	331	0.60	199				199
NB	1387	0.55	763	330	1.00	330	1093
SB	1767	0.55	972				
						CLV TOTAL=	1292
						Level of Service (LOS)=	C

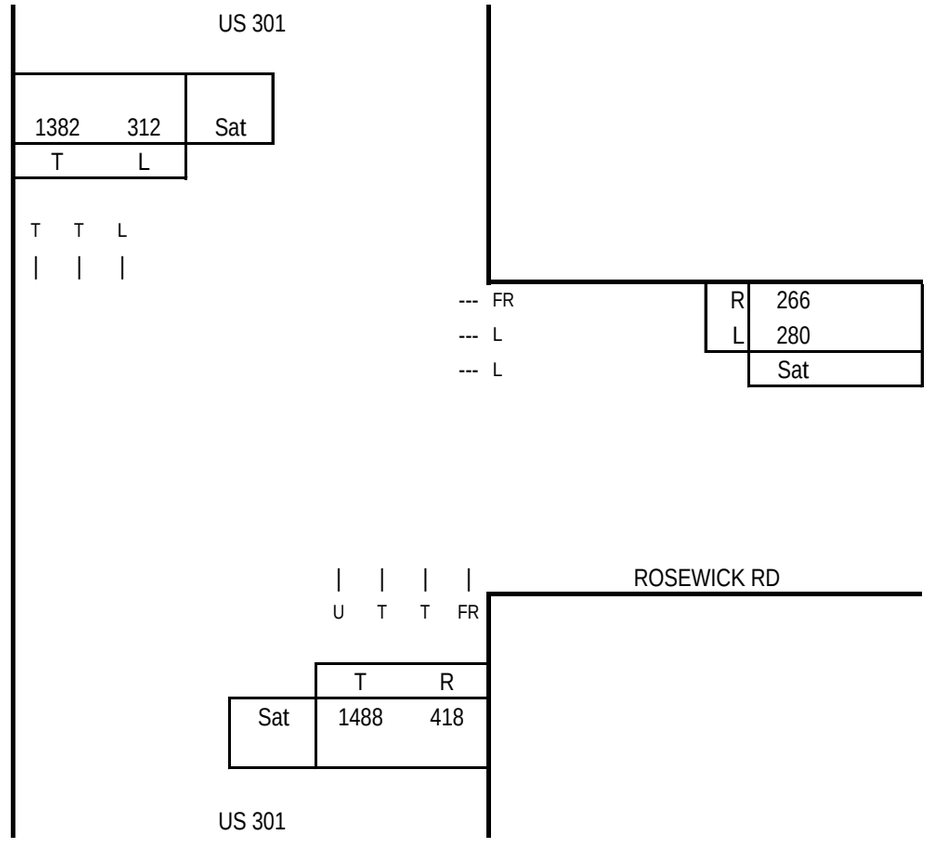
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	US 301 & Rosewick Rd (Background Traffic)	Intersection **1**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: US 301
and: Rosewick Rd
Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
WB	280	0.60	168				168
NB	1488	0.55	818	312	1.00	312	1130
SB	1382	0.55	760				
						CLV TOTAL=	1298
						Level of Service (LOS)=	C

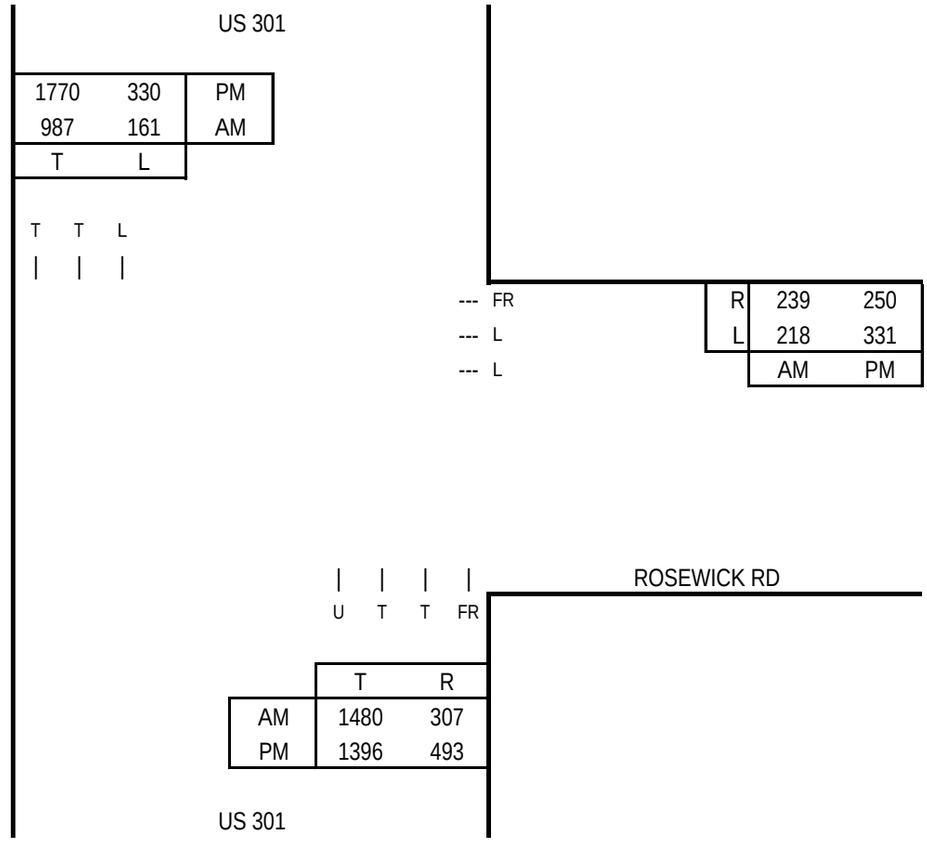
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	US 301 & Rosewick Rd (Background Traffic)	Intersection **1**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: US 301
and: Rosewick Rd
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Morning Peak Hour							
	Thru Volumes			+ Opposing Lefts			AM
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
WB	218	0.60	131				131
NB	1480	0.55	814	161	1.00	161	975
SB	987	0.55	543				
						CLV TOTAL=	1106
						Level of Service (LOS)=	B

Evening Peak Hour							
	Thru Volumes			+ Opposing Lefts			PM
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
WB	331	0.60	199				199
NB	1396	0.55	768	330	1.00	330	1098
SB	1770	0.55	974				
						CLV TOTAL=	1297
						Level of Service (LOS)=	C

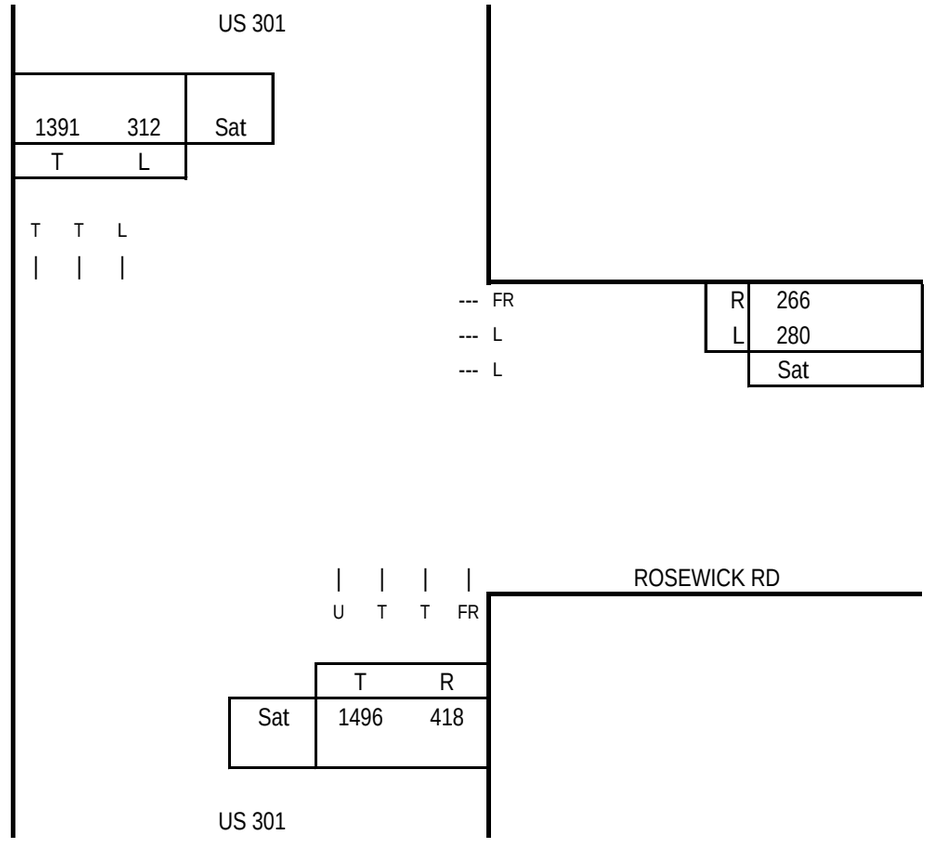
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	US 301 & Rosewick Rd (Total Traffic)	Intersection **1**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: US 301
and: Rosewick Rd
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
WB	280	0.60	168				168
NB	1496	0.55	823	312	1.00	312	1135
SB	1391	0.55	765				
						CLV TOTAL=	1303
						Level of Service (LOS)=	D

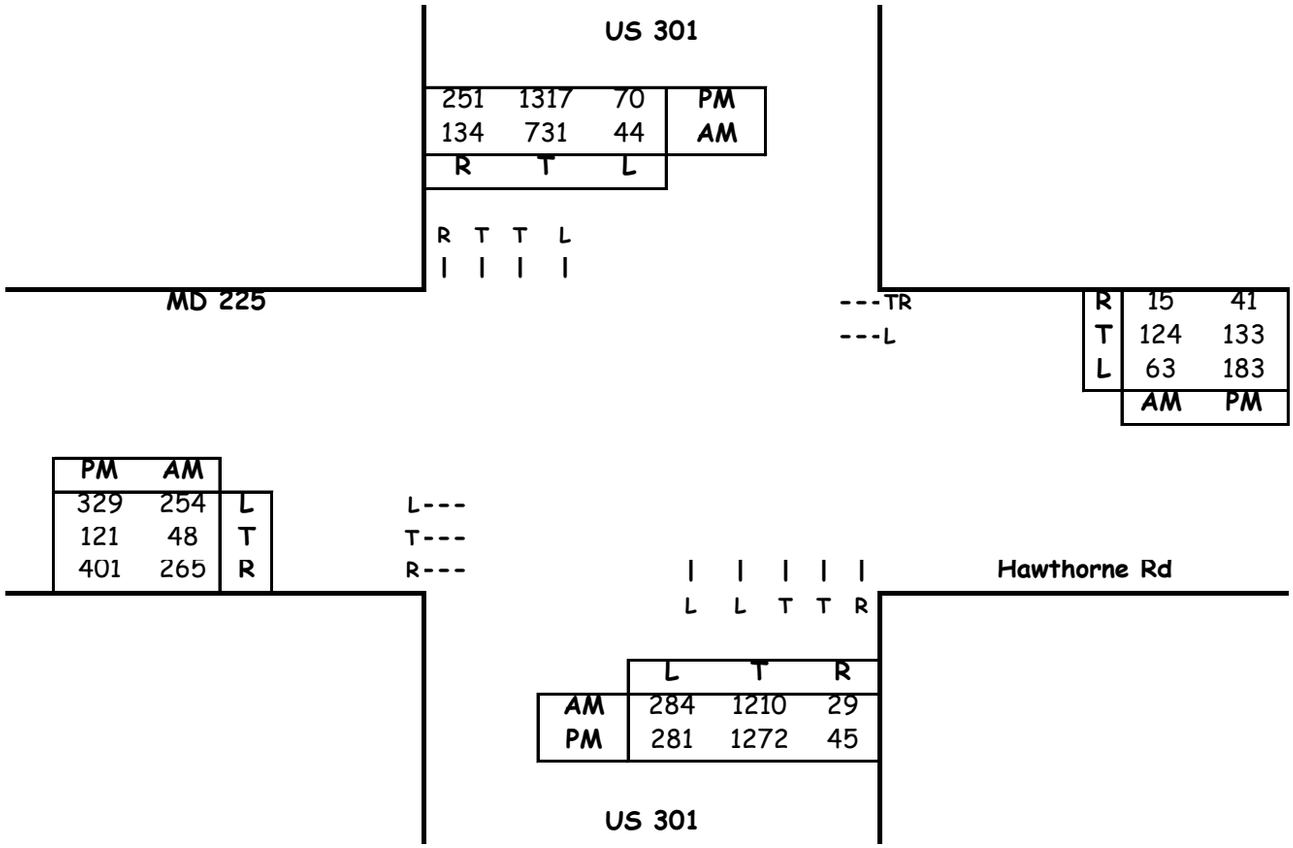
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	US 301 & Rosewick Rd (Total Traffic)	Intersection **1**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: US 301
and: Hawthorne Rd
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	1210	0.55	666	44	1	44	710
SB	731	0.55	402	284	0.6	170	
EB	95	1	95	63	1	63	393
WB	139	1	139	254	1	254	

CLV TOTAL= **1103**
Level of Service (LOS)= **B**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	1272	0.55	700	70	1	70	893
SB	1317	0.55	724	281	0.6	169	
EB	232	1	232	183	1	183	503
WB	174	1	174	329	1	329	

CLV TOTAL= **1396**
Level of Service (LOS)= **D**

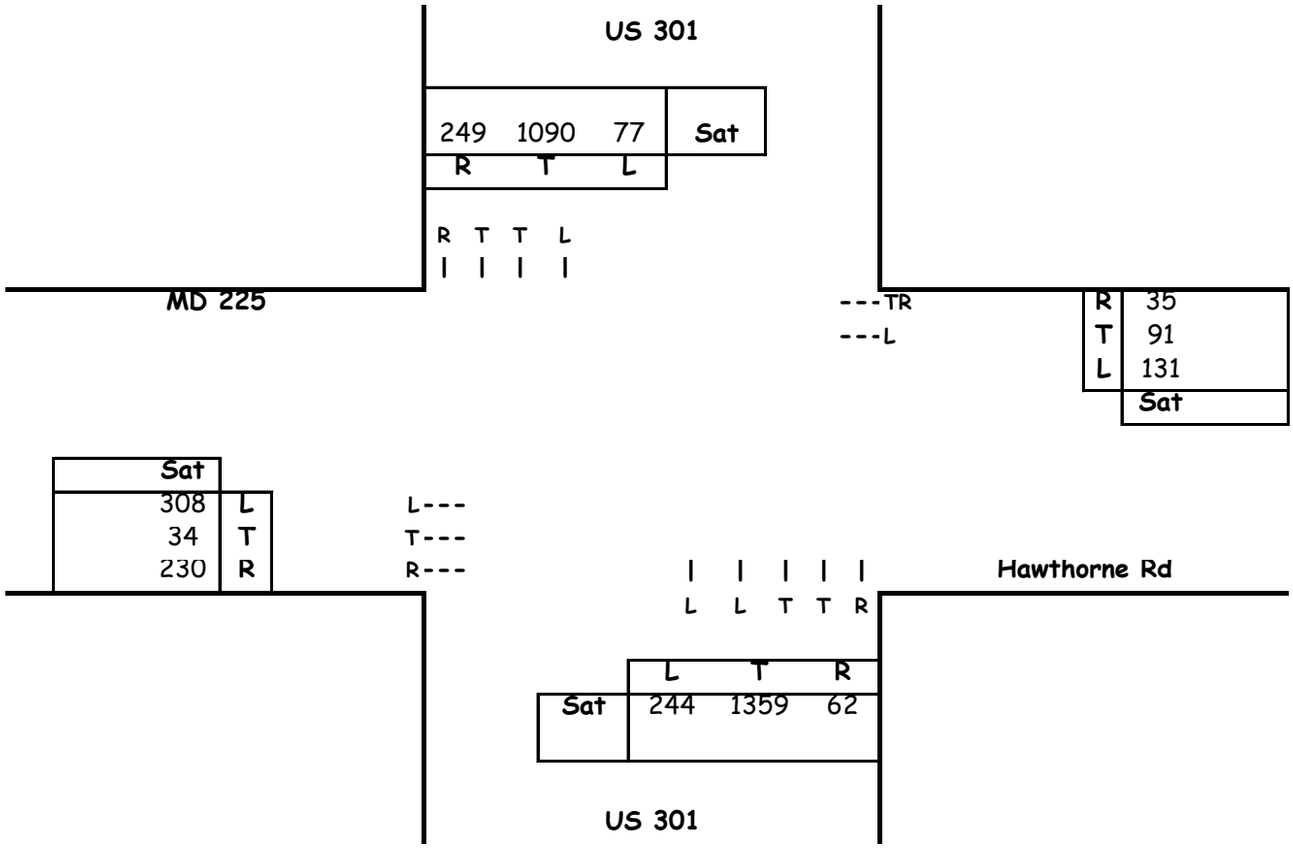
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	US 301 & Hawthorne Rd (Existing Traffic)	Intersection **2**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: US 301
and: Hawthorne Rd
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	1359	0.55	747	77	1	77	824
SB	1090	0.55	600	244	0.6	146	
EB	84	1	84	131	1	131	434
WB	126	1	126	308	1	308	
						CLV TOTAL=	**1258**
						Level of Service (LOS)=	***C***

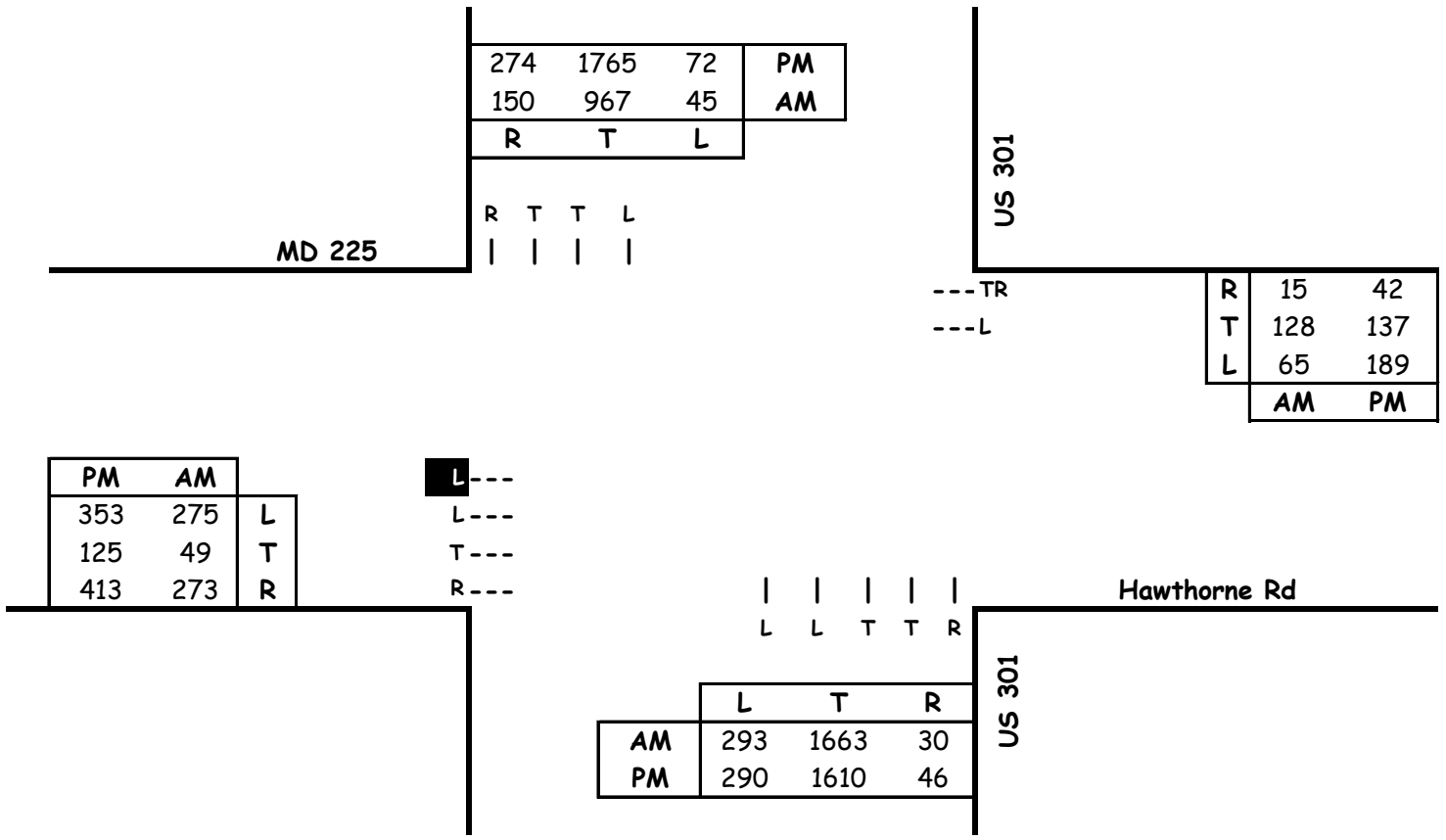
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	US 301 & Hawthorne Rd (Existing Traffic)	Intersection **2**

Critical Lane Volume (CLV) Methodology for MSHA

Intersection of: US 301
and: Hawthorne Rd
Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Traffic Signal Phasing includes East/West Split Phase

AM Peak Hour

Dir	Through Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
EB	275	0.60	165				165
WB	128	1.00	128				128
NB	1663	0.55	915	45	1.00	45	960
SB	967	0.55	532	293	0.60	176	

CLV TOTAL= **1253**
Level of Service (LOS)= **C**

PM Peak Hour

Dir	Through Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
EB	239	1.00	239				239
WB	189	1.00	189				189
NB	1610	0.55	886	72	1.00	72	1145
SB	1765	0.55	971	290	0.60	174	

CLV TOTAL= **1573**
Level of Service (LOS)= **E**

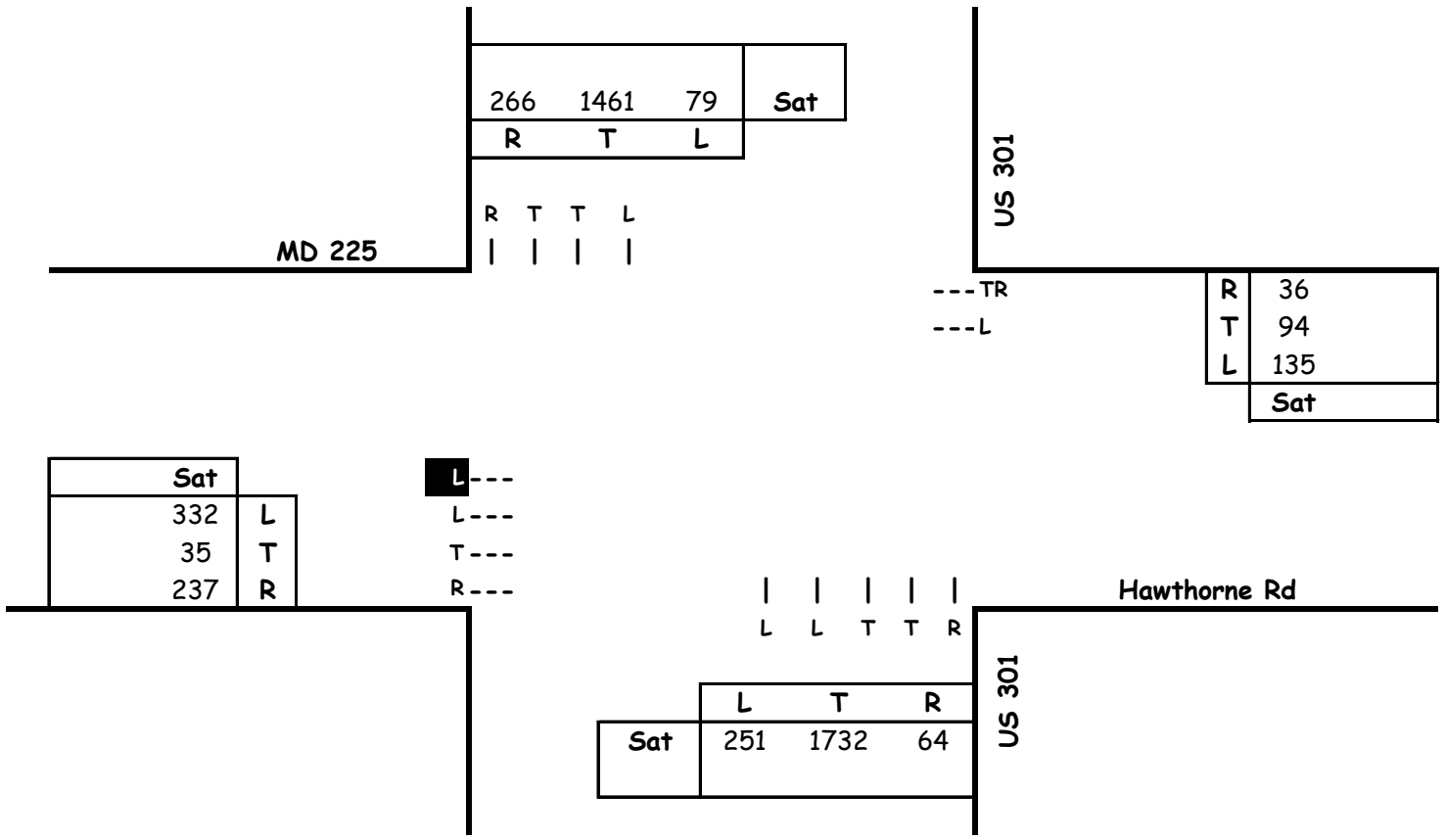
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	US 301 & Hawthorne Rd (Background Traffic)	Intersection **2**

Critical Lane Volume (CLV) Methodology for MSHA

Intersection of: US 301
and: Hawthorne Rd
Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Traffic Signal Phasing includes East/West Split Phase

Sat. Midday Peak Hour

Dir	Through Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	Sat CLV
EB	332	0.60	199				199
WB	135	1.00	135				135
NB	1732	0.55	953	79	1.00	79	1032
SB	1461	0.55	804	251	0.60	151	

CLV TOTAL= **1366**

Level of Service (LOS)= **D**

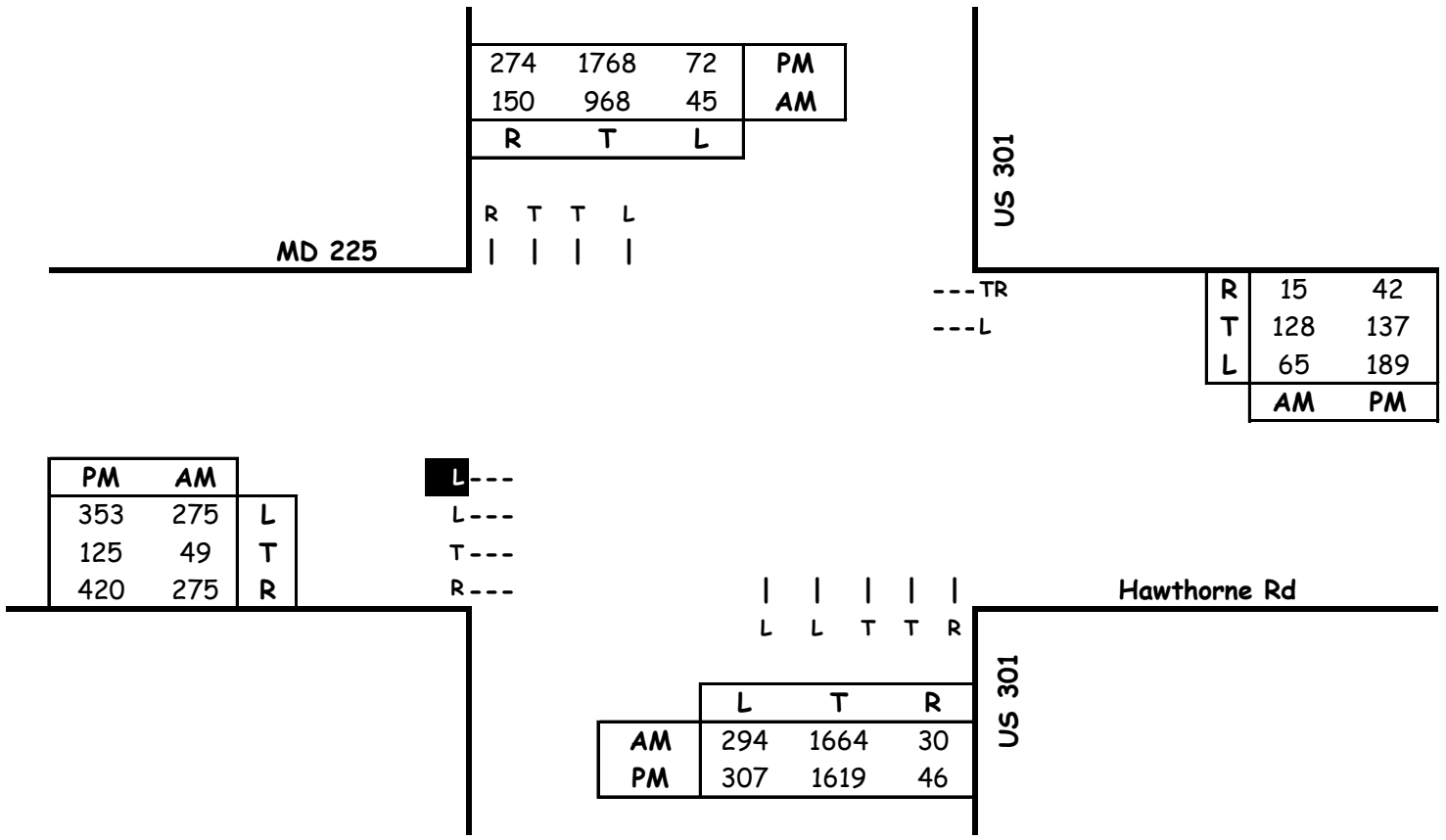
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	US 301 & Hawthorne Rd (Background Traffic)	Intersection **2**

Critical Lane Volume (CLV) Methodology for MSHA

Intersection of: US 301
and: Hawthorne Rd
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Traffic Signal Phasing includes East/West Split Phase

AM Peak Hour

Dir	Through Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
EB	275	0.60	165				165
WB	128	1.00	128				128
NB	1664	0.55	915	45	1.00	45	960
SB	968	0.55	532	294	0.60	176	

CLV TOTAL= **1253**
Level of Service (LOS)= **C**

PM Peak Hour

Dir	Through Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
EB	236	1.00	236				236
WB	189	1.00	189				189
NB	1619	0.55	890	72	1.00	72	1156
SB	1768	0.55	972	307	0.60	184	

CLV TOTAL= **1581**
Level of Service (LOS)= **E**

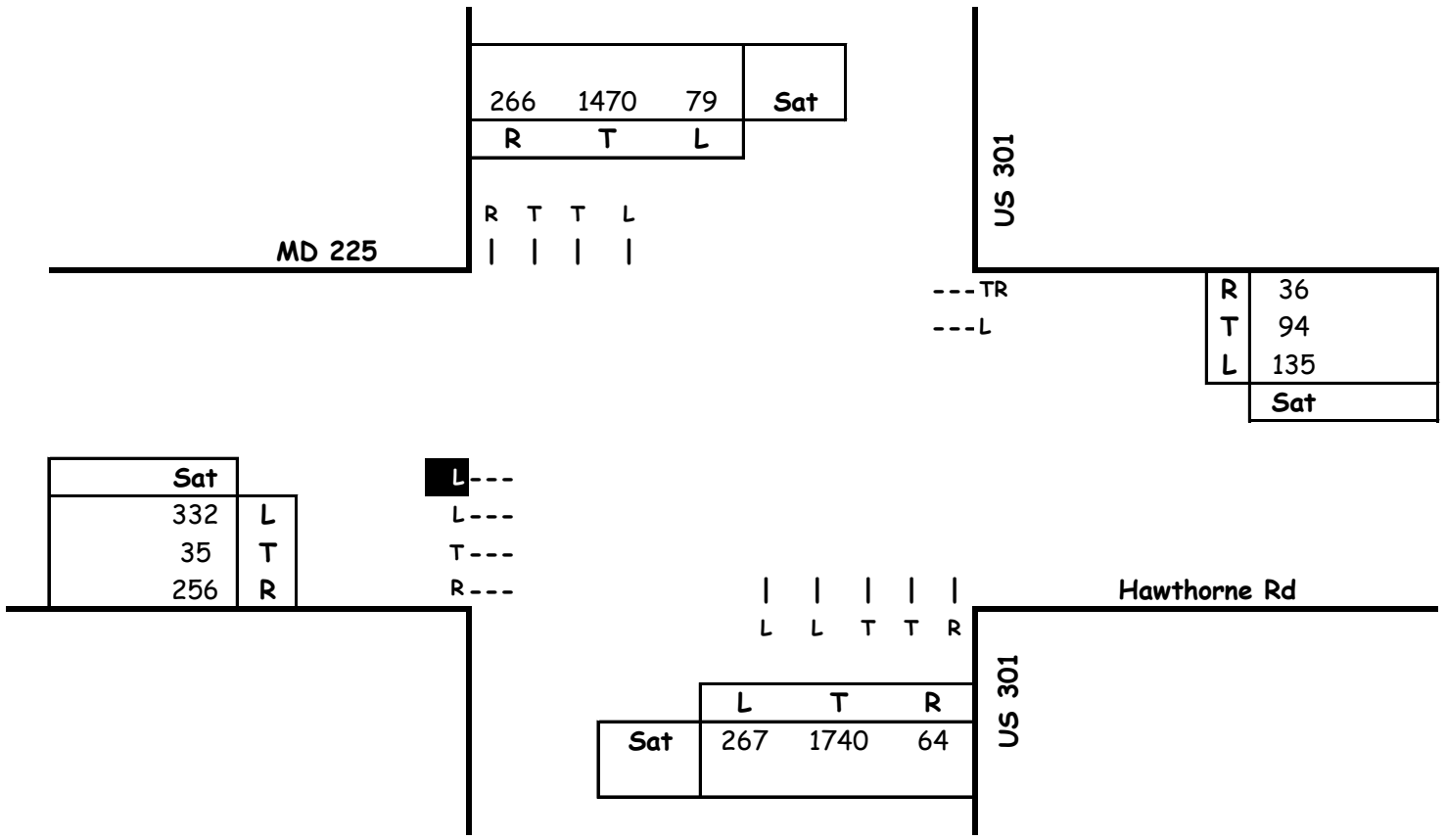
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	US 301 & Hawthorne Rd (Total Traffic)	Intersection **2**

Critical Lane Volume (CLV) Methodology for MSHA

Intersection of: US 301
and: Hawthorne Rd
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Traffic Signal Phasing includes East/West Split Phase

Sat. Midday Peak Hour

Dir	Through Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	Sat CLV
EB	332	0.60	199				199
WB	135	1.00	135				135
NB	1740	0.55	957	79	1.00	79	1036
SB	1470	0.55	809	267	0.60	160	
						CLV TOTAL=	**1370**
						Level of Service (LOS)=	**D**

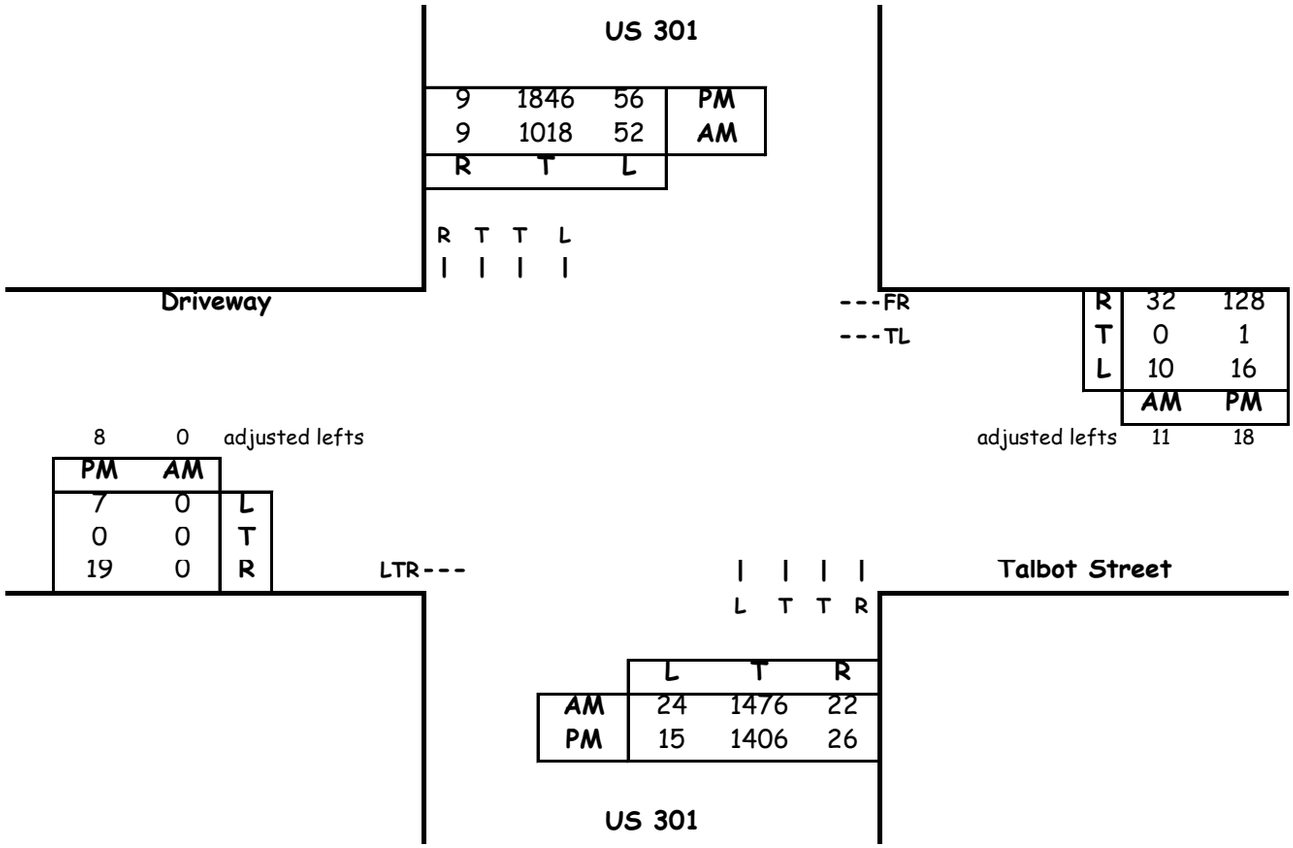
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	US 301 & Hawthorne Rd (Total Traffic)	Intersection **2**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: US 301
and: Talbot Street
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	1476	0.55	812	52	1	52	864
SB	1018	0.55	560	24	1	24	
EB	0	1	0	10	1	10	11
WB	11	1	11	0	1	0	

CLV TOTAL= **875**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	1406	0.55	773	56	1	56	1030
SB	1846	0.55	1015	15	1	15	
EB	27	1	27	16	1	16	43
WB	19	1	19	7	1	7	

CLV TOTAL= **1073**
Level of Service (LOS)= **B**

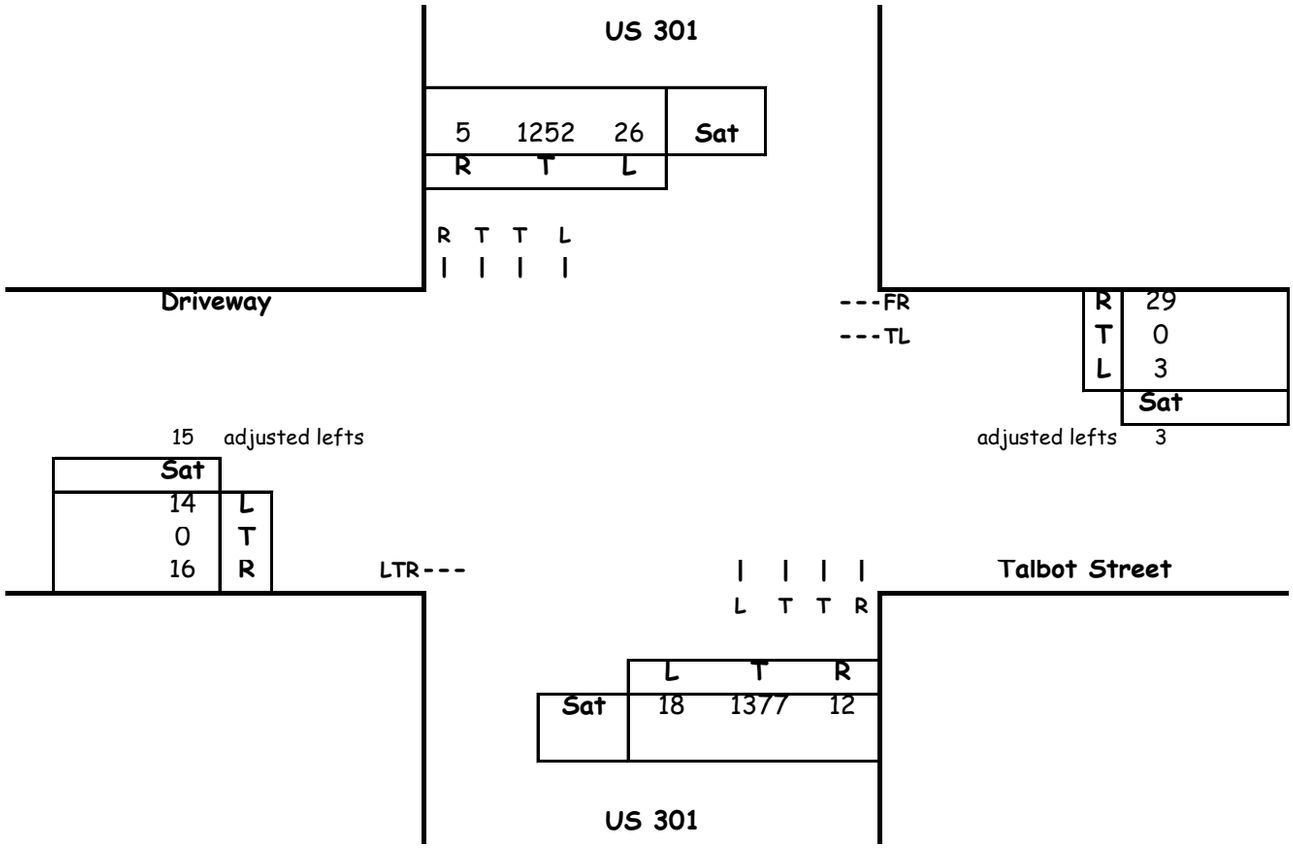
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	US 301 & Talbot Street (Existing Traffic)	Intersection **3**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: US 301
and: Talbot Street
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

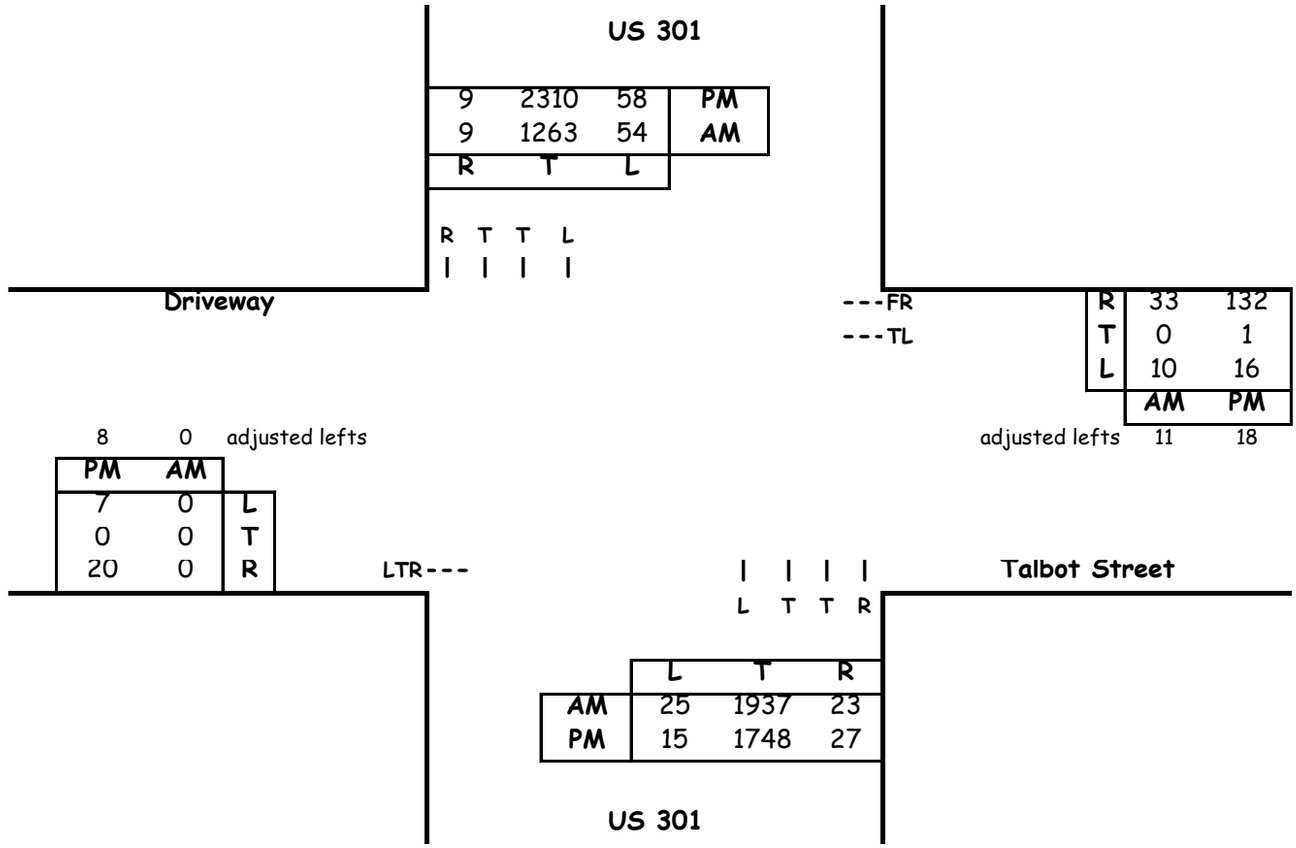
Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	1377	0.55	757	26	1	26	783
SB	1252	0.55	689	18	1	18	
EB	31	1	31	3	1	3	34
WB	3	1	3	14	1	14	
						CLV TOTAL=	**817**
						Level of Service (LOS)=	**A**

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	US 301 & Talbot Street (Existing Traffic)	Intersection **3**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: US 301 **Analyst:** Lenhart Traffic Consulting
and: Talbot Street
Study Period: Background Traffic

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	1937	0.55	1065	54	1	54	1119
SB	1263	0.55	695	25	1	25	
EB	0	1	0	10	1	10	11
WB	11	1	11	0	1	0	

CLV TOTAL= **1130**
Level of Service (LOS)= **B**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	1748	0.55	961	58	1	58	1286
SB	2310	0.55	1271	15	1	15	
EB	28	1	28	16	1	16	44
WB	19	1	19	7	1	7	

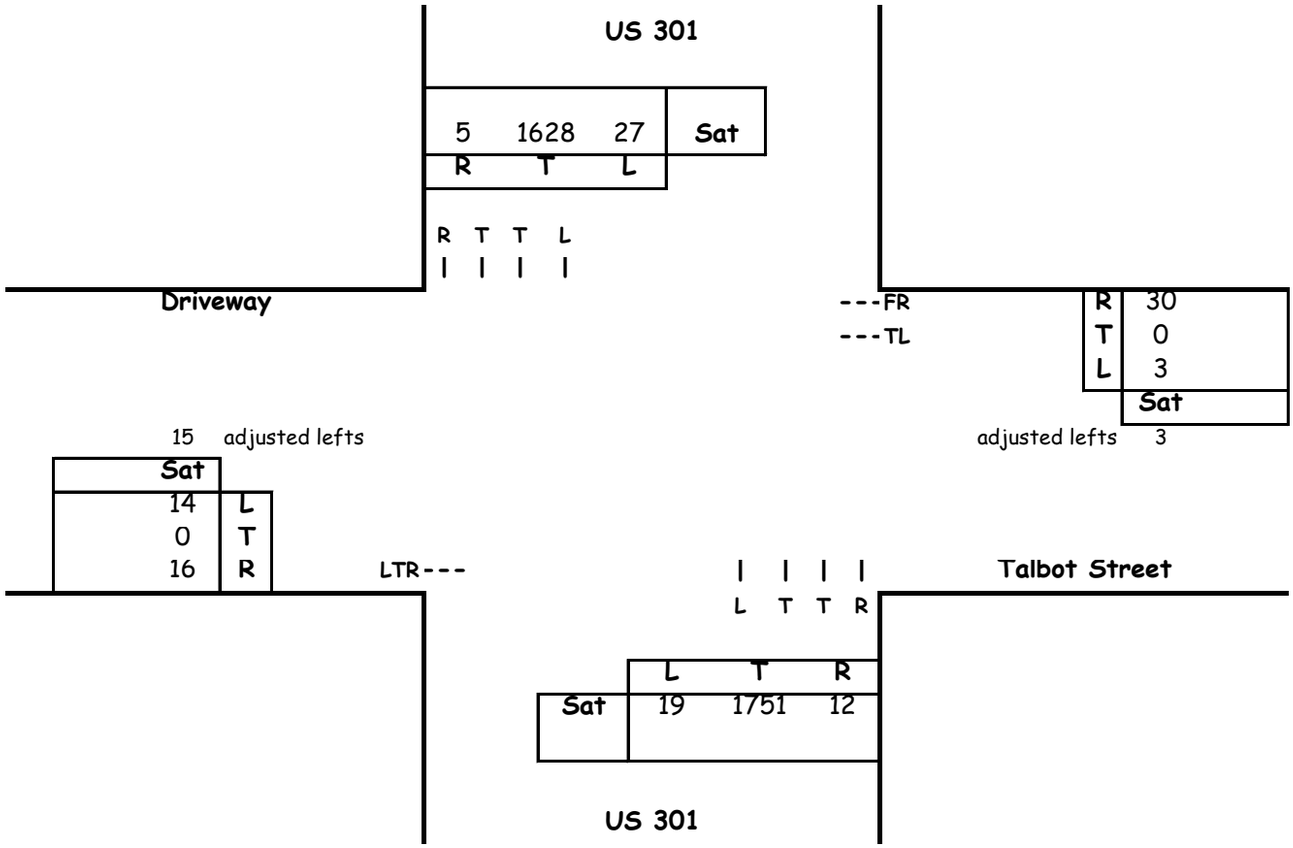
CLV TOTAL= **1330**
Level of Service (LOS)= **D**

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	US 301 & Talbot Street (Background Traffic)	Intersection **3**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: US 301 **Analyst:** Lenhart Traffic Consulting
and: Talbot Street
Study Period: Background Traffic

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	1751	0.55	963	27	1	27	990
SB	1628	0.55	895	19	1	19	
EB	31	1	31	3	1	3	34
WB	3	1	3	14	1	14	
						CLV TOTAL=	1024
						Level of Service (LOS)=	B

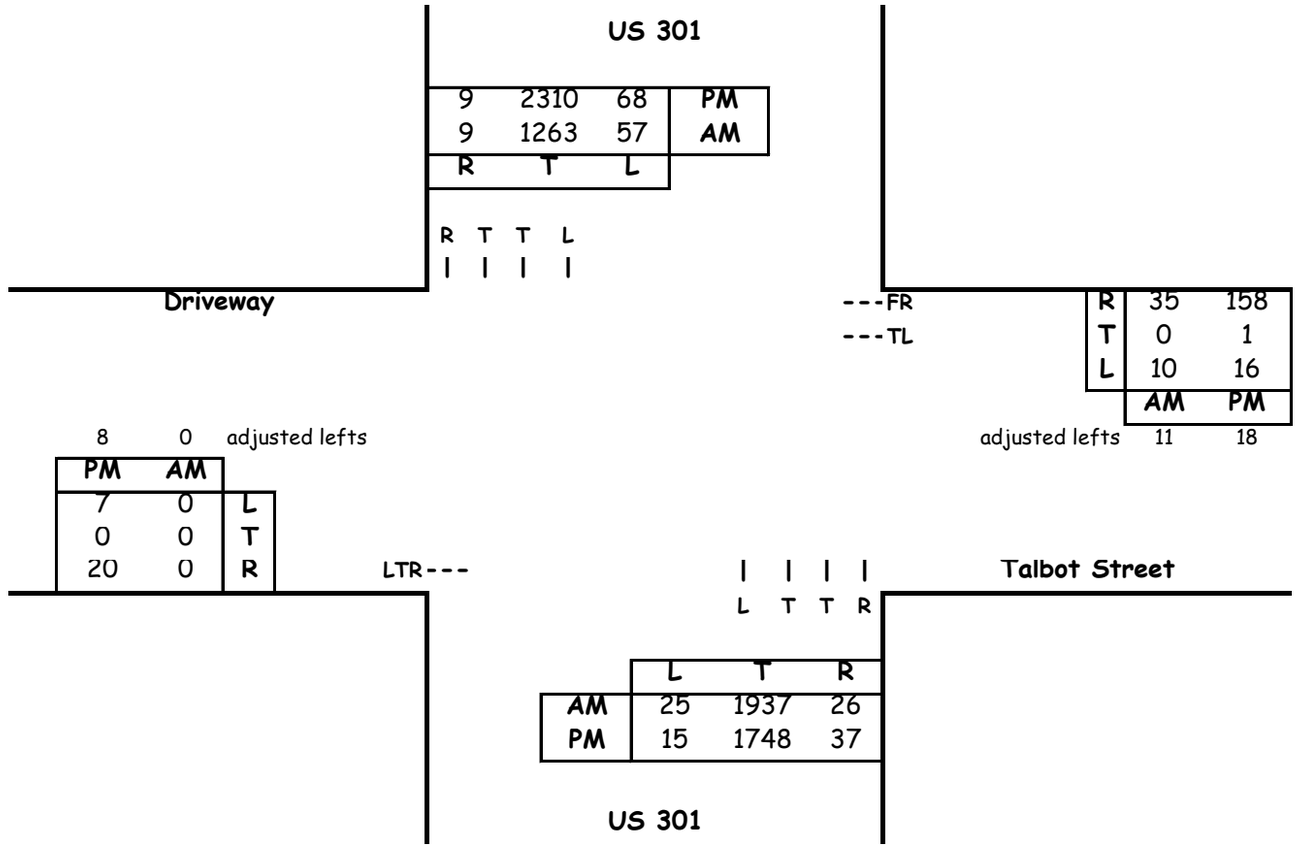
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	US 301 & Talbot Street (Background Traffic)	Intersection **3**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: US 301
and: Talbot Street
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	1937	0.55	1065	57	1	57	1122
SB	1263	0.55	695	25	1	25	
EB	0	1	0	10	1	10	11
WB	11	1	11	0	1	0	

CLV TOTAL= **1133**
Level of Service (LOS)= **B**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	1748	0.55	961	68	1	68	1286
SB	2310	0.55	1271	15	1	15	
EB	28	1	28	16	1	16	44
WB	19	1	19	7	1	7	

CLV TOTAL= **1330**
Level of Service (LOS)= **D**

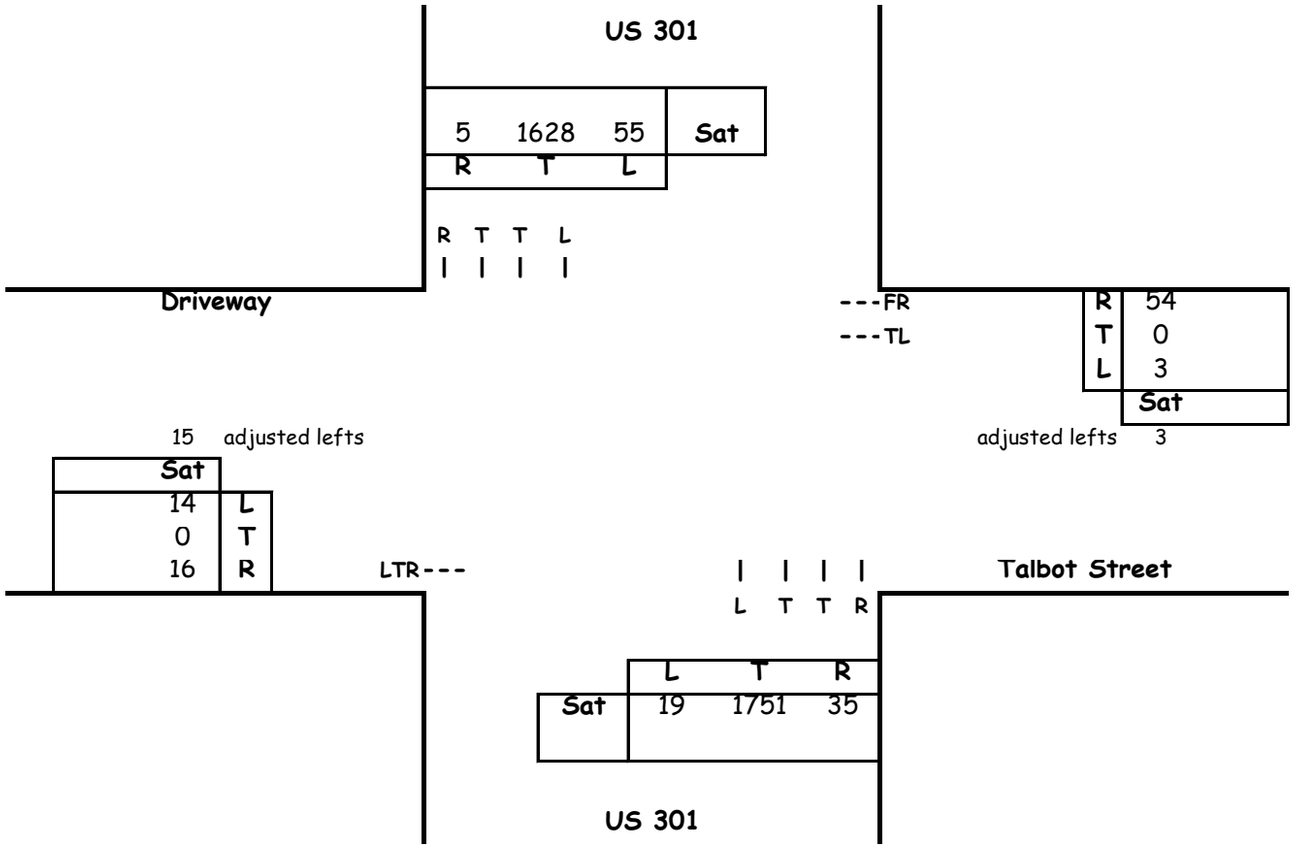
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	US 301 & Talbot Street (Total Traffic)	Intersection **3**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: US 301
and: Talbot Street
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	1751	0.55	963	55	1	55	1018
SB	1628	0.55	895	19	1	19	
EB	31	1	31	3	1	3	34
WB	3	1	3	14	1	14	
						CLV TOTAL=	1052
						Level of Service (LOS)=	B

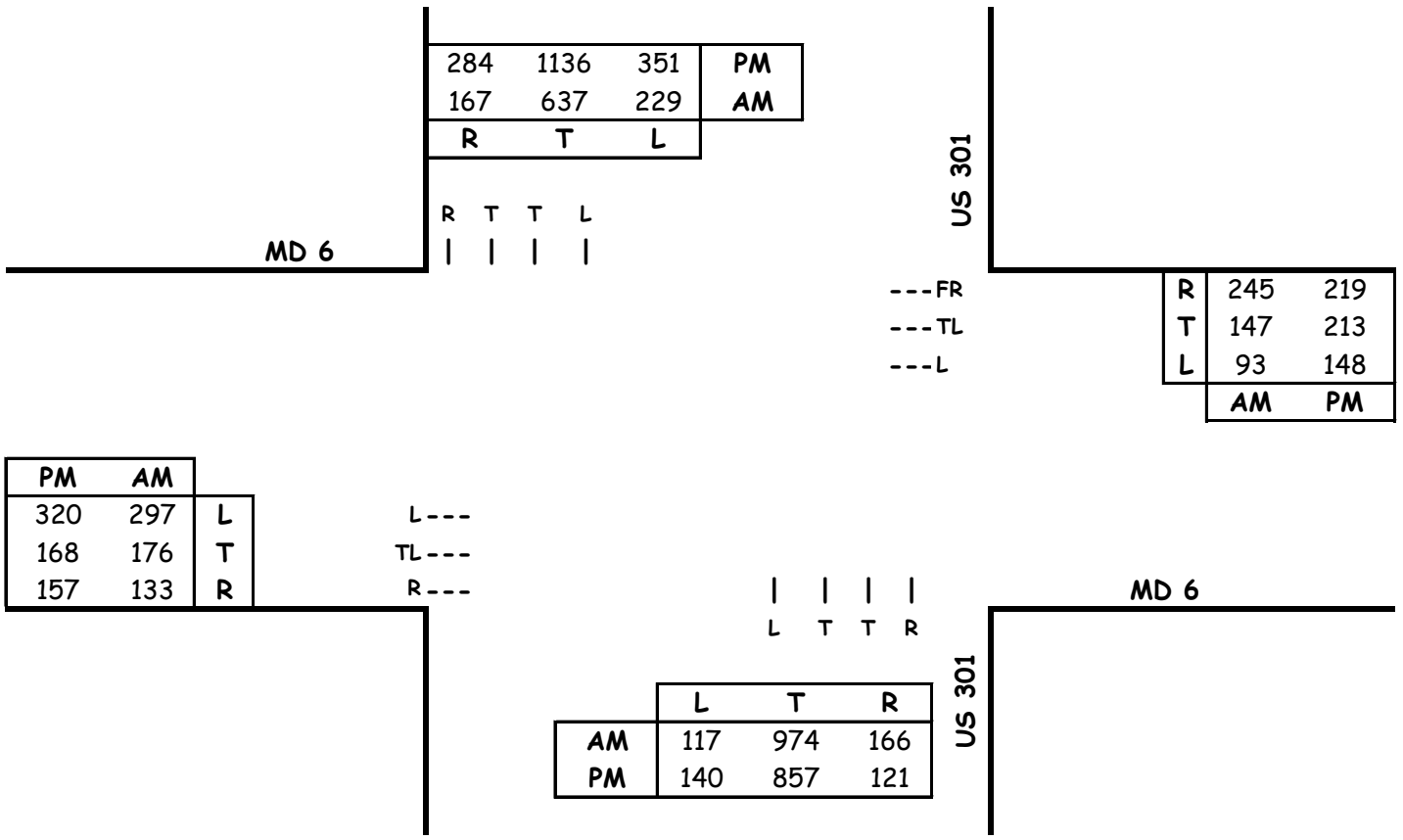
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	US 301 & Talbot Street (Total Traffic)	Intersection **3**

Critical Lane Volume (CLV) Methodology for MSHA

Intersection of: US 301
and: MD 6
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Traffic Signal Phasing includes East/West Split Phase

AM Peak Hour

Dir	Through Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
EB	473	0.60	284				284
WB	147	1.00	147				147
NB	974	0.55	536	229	1.00	229	765
SB	637	0.55	350	117	1.00	117	

CLV TOTAL= **1196**
Level of Service (LOS)= **C**

PM Peak Hour

Dir	Through Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
EB	488	0.60	293				293
WB	361	0.60	217				217
NB	857	0.55	471	351	1.00	351	822
SB	1136	0.55	625	140	1.00	140	

CLV TOTAL= **1332**
Level of Service (LOS)= **D**

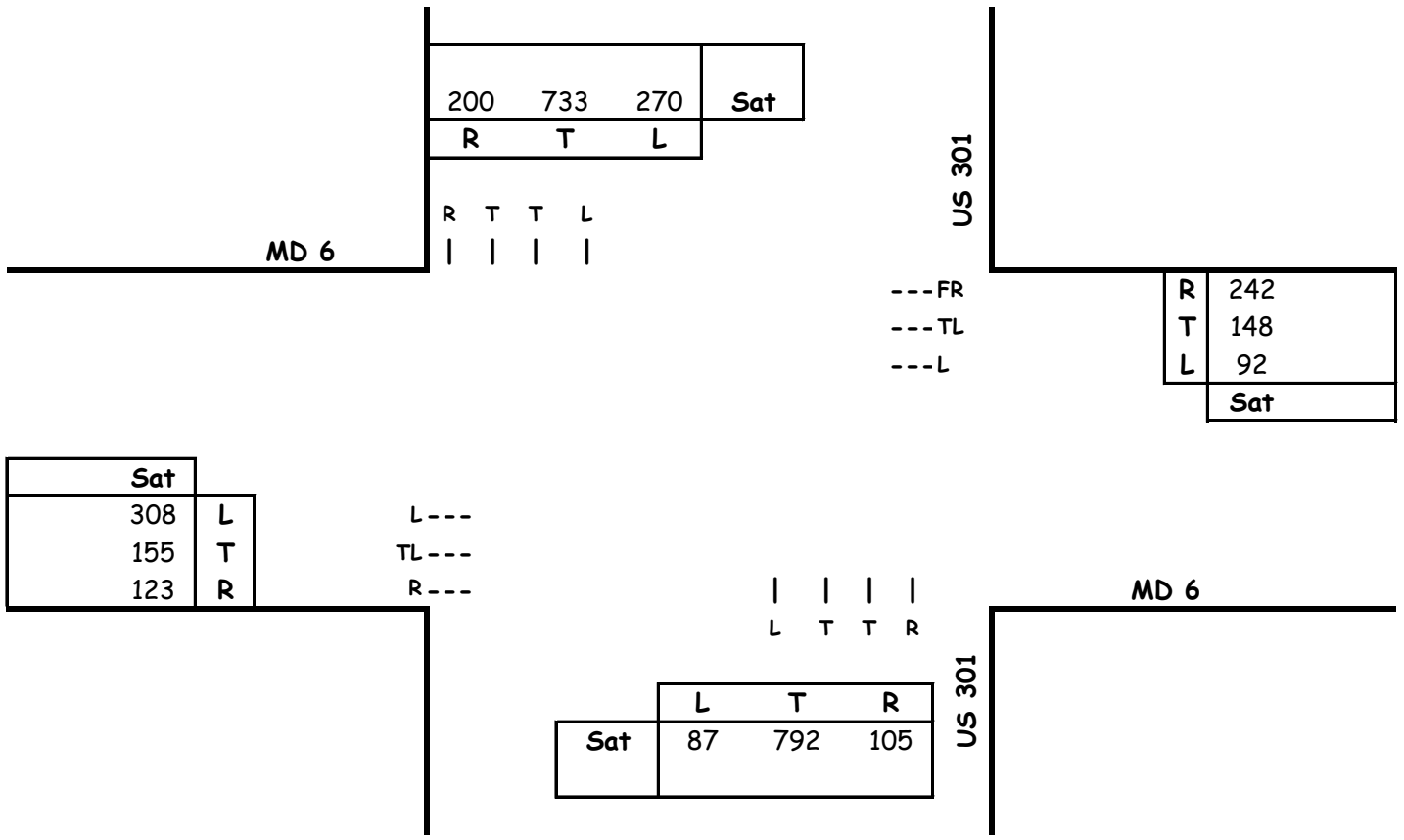
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	US 301 & MD 6 (Existing Traffic)	Intersection **4**

Critical Lane Volume (CLV) Methodology for MSHA

Intersection of: US 301
and: MD 6
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Traffic Signal Phasing includes East/West Split Phase

Sat. Midday Peak Hour							
	Through Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	463	0.60	278				278
WB	148	1.00	148				148
NB	792	0.55	436	270	1.00	270	706
SB	733	0.55	403	87	1.00	87	
						CLV TOTAL=	**1132**
						Level of Service (LOS)=	**B**

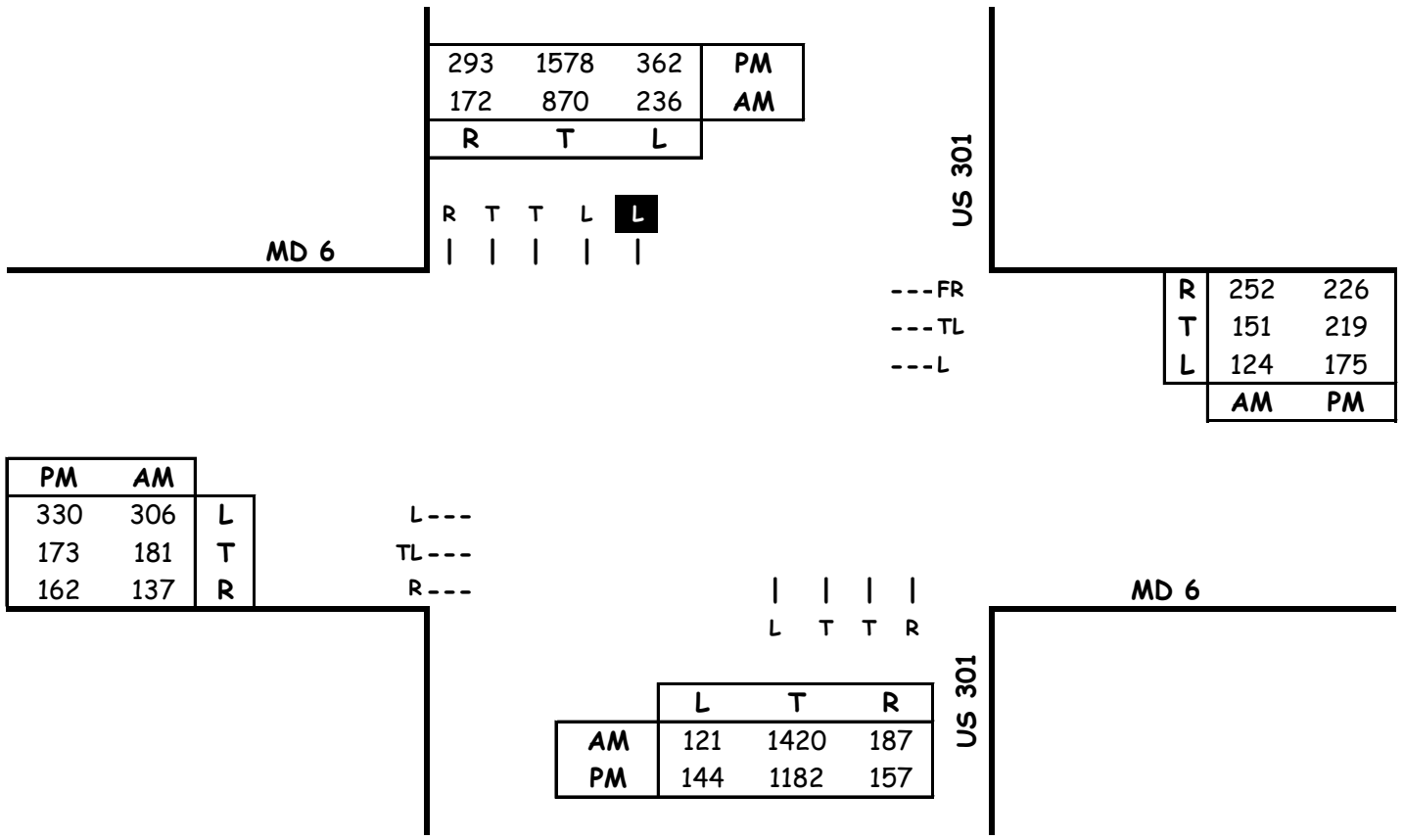
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	US 301 & MD 6 (Existing Traffic)	Intersection **4**

Critical Lane Volume (CLV) Methodology for MSHA

Intersection of: US 301
and: MD 6
Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



	L	T	R
AM	121	1420	187
PM	144	1182	157

Traffic Signal Phasing includes East/West Split Phase

AM Peak Hour

Dir	Through Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
EB	487	0.60	292				292
WB	275	0.60	165				165
NB	1420	0.55	781	236	0.60	142	923
SB	870	0.55	479	121	1.00	121	

CLV TOTAL= **1380**
Level of Service (LOS)= **D**

PM Peak Hour

Dir	Through Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
EB	503	0.60	302				302
WB	394	0.60	236				236
NB	1182	0.55	650	362	0.60	217	1012
SB	1578	0.55	868	144	1.00	144	

CLV TOTAL= **1550**
Level of Service (LOS)= **E**

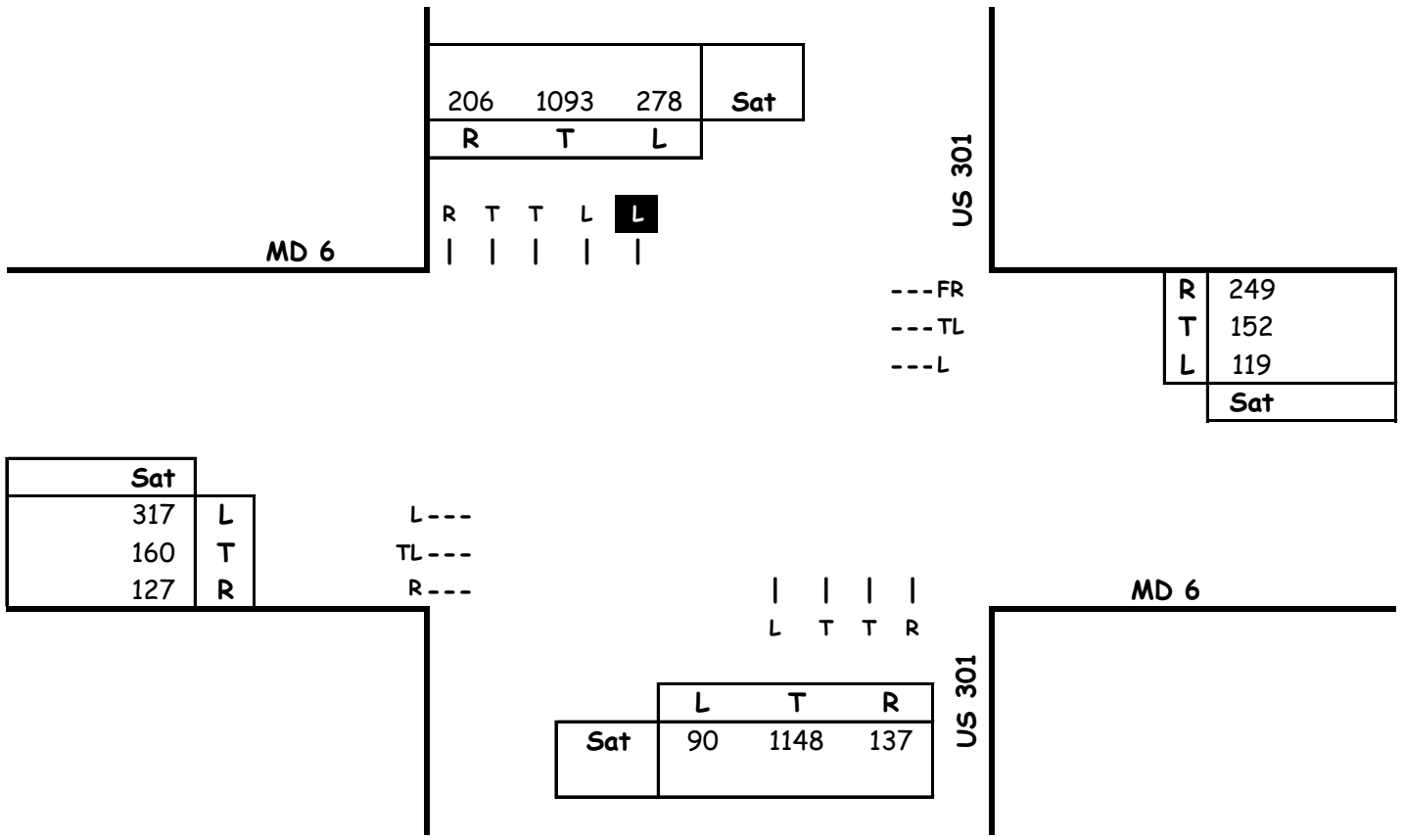
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	US 301 & MD 6 (Background Traffic)	Intersection **4**

Critical Lane Volume (CLV) Methodology for MSHA

Intersection of: US 301
and: MD 6
Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Traffic Signal Phasing includes East/West Split Phase

Sat. Midday Peak Hour							
	Through Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	477	0.60	286				286
WB	271	0.60	163				163
NB	1148	0.55	631	278	0.60	167	798
SB	1093	0.55	601	90	1.00	90	
						CLV TOTAL=	**1247**
						Level of Service (LOS)=	**C**

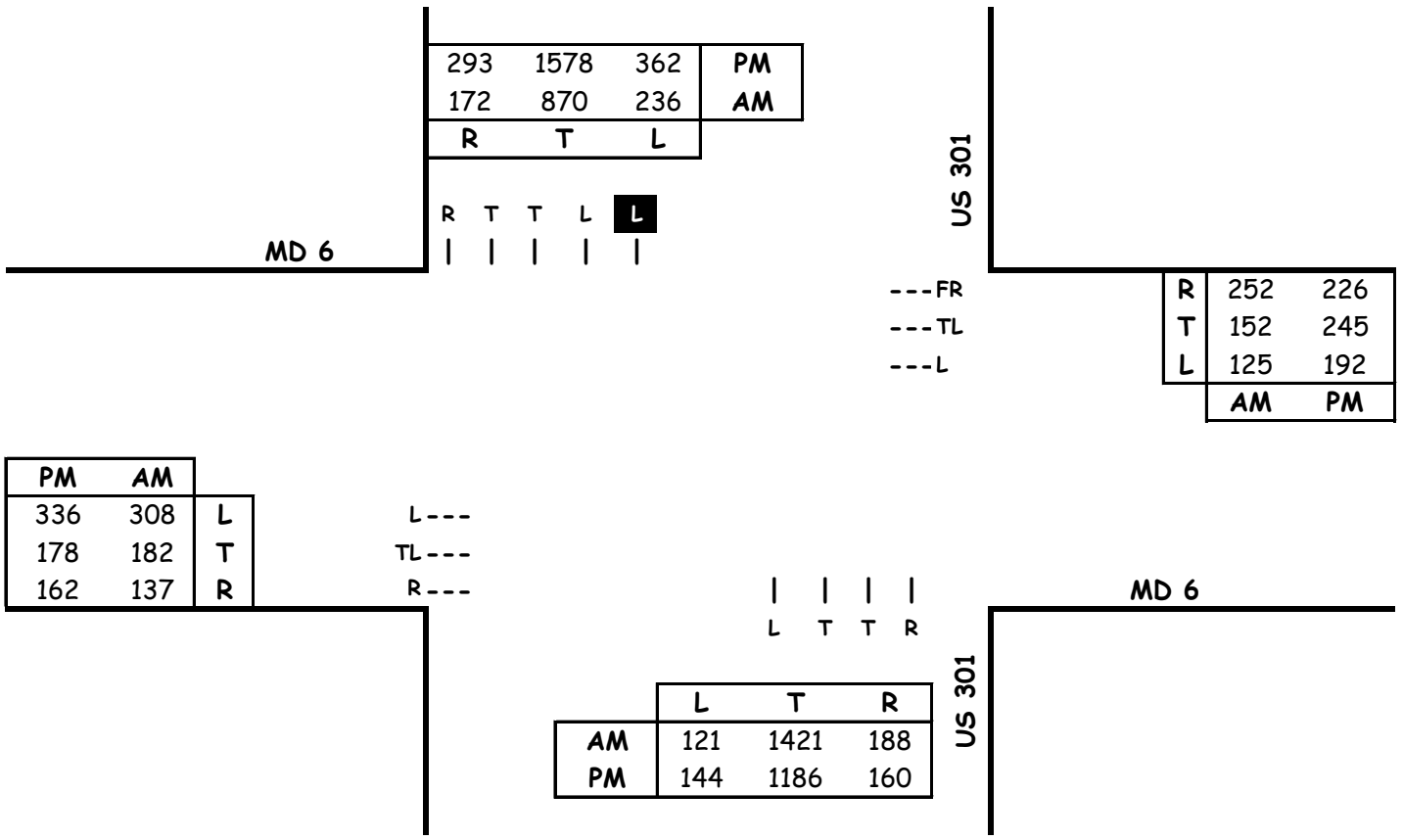
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	US 301 & MD 6 (Background Traffic)	Intersection **4**

Critical Lane Volume (CLV) Methodology for MSHA

Intersection of: US 301
and: MD 6
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Traffic Signal Phasing includes East/West Split Phase

AM Peak Hour

Dir	Through Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
EB	490	0.60	294				294
WB	277	0.60	166				166
NB	1421	0.55	782	236	0.60	142	924
SB	870	0.55	479	121	1.00	121	

CLV TOTAL= **1384**
Level of Service (LOS)= **D**

PM Peak Hour

Dir	Through Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
EB	514	0.60	308				308
WB	437	0.60	262				262
NB	1186	0.55	652	362	0.60	217	1012
SB	1578	0.55	868	144	1.00	144	

CLV TOTAL= **1582**
Level of Service (LOS)= **E**

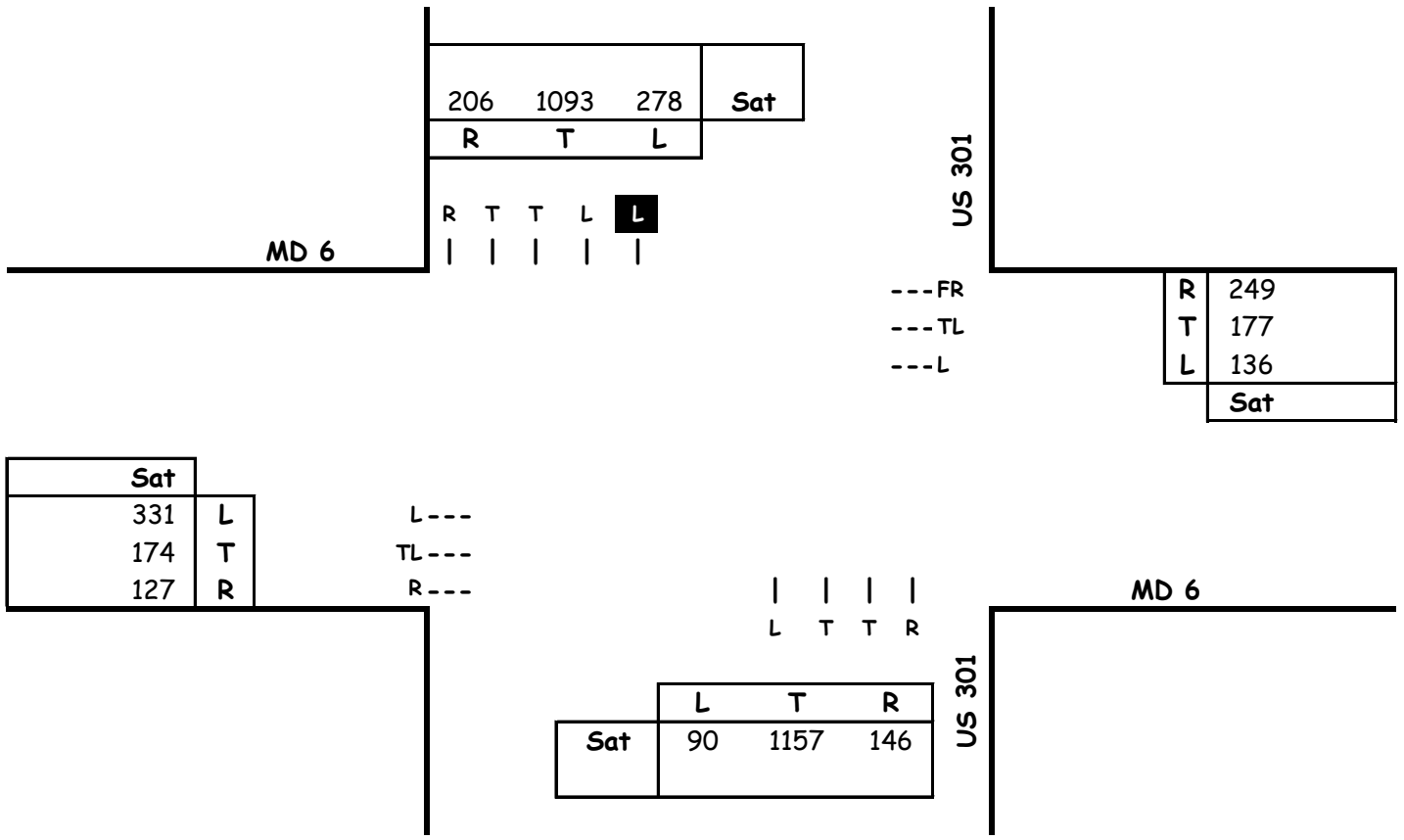
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	US 301 & MD 6 (Total Traffic)	Intersection **4**

Critical Lane Volume (CLV) Methodology for MSHA

Intersection of: US 301
and: MD 6
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Traffic Signal Phasing includes East/West Split Phase

Sat. Midday Peak Hour							
	Through Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	505	0.60	303				303
WB	313	0.60	188				188
NB	1157	0.55	636	278	0.60	167	803
SB	1093	0.55	601	90	1.00	90	
						CLV TOTAL=	**1294**
						Level of Service (LOS)=	**C**

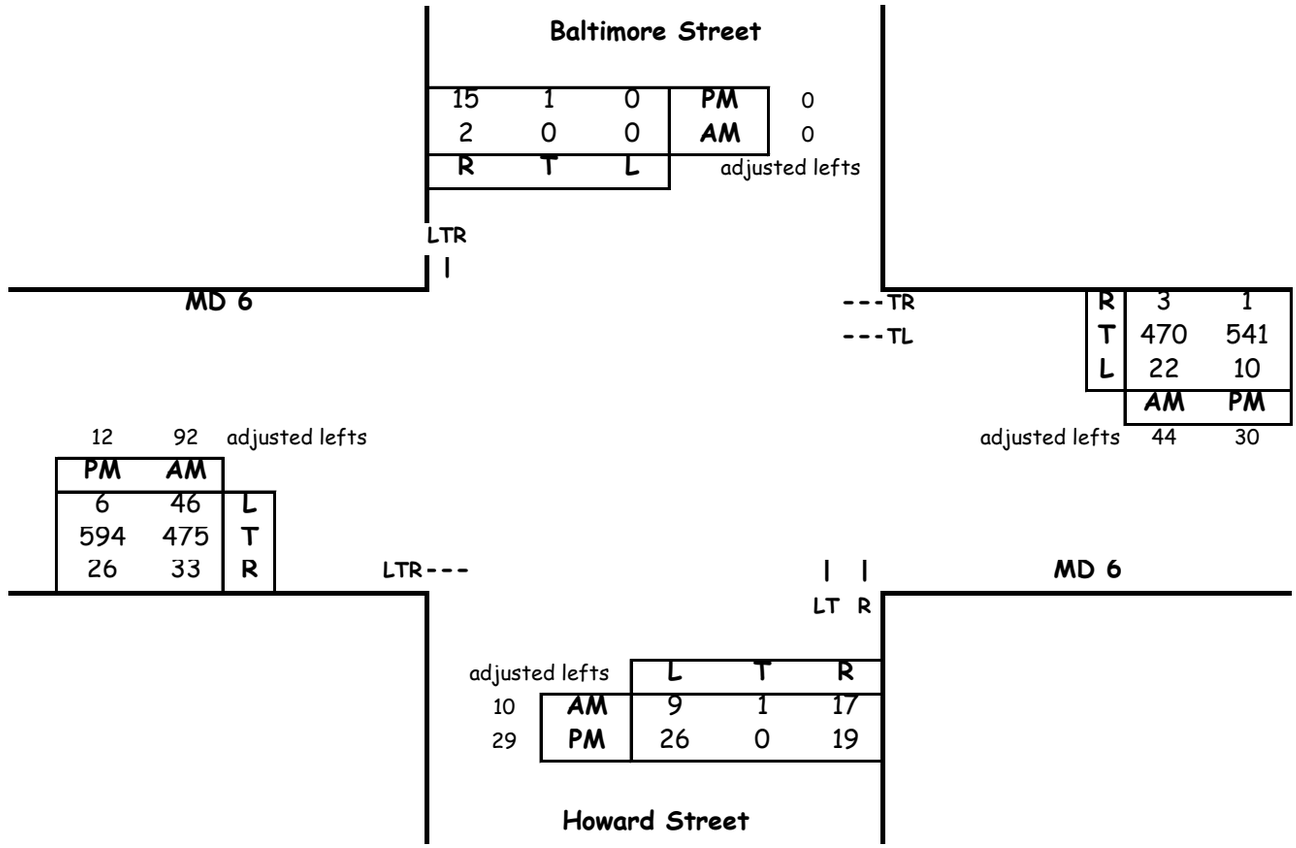
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	US 301 & MD 6 (Total Traffic)	Intersection **4**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Baltimore Street
and: MD 6
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	11	1.00	11	0	1	0	11
SB	2	1.00	2	9	1	9	
EB	600	1	600	22	1	22	622
WB	517	0.55	284	46	1	46	

CLV TOTAL= **633**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	29	1.00	29	0	1	0	42
SB	16	1.00	16	26	1	26	
EB	632	1	632	10	1	10	642
WB	572	0.55	315	6	1	6	

CLV TOTAL= **684**
Level of Service (LOS)= **A**

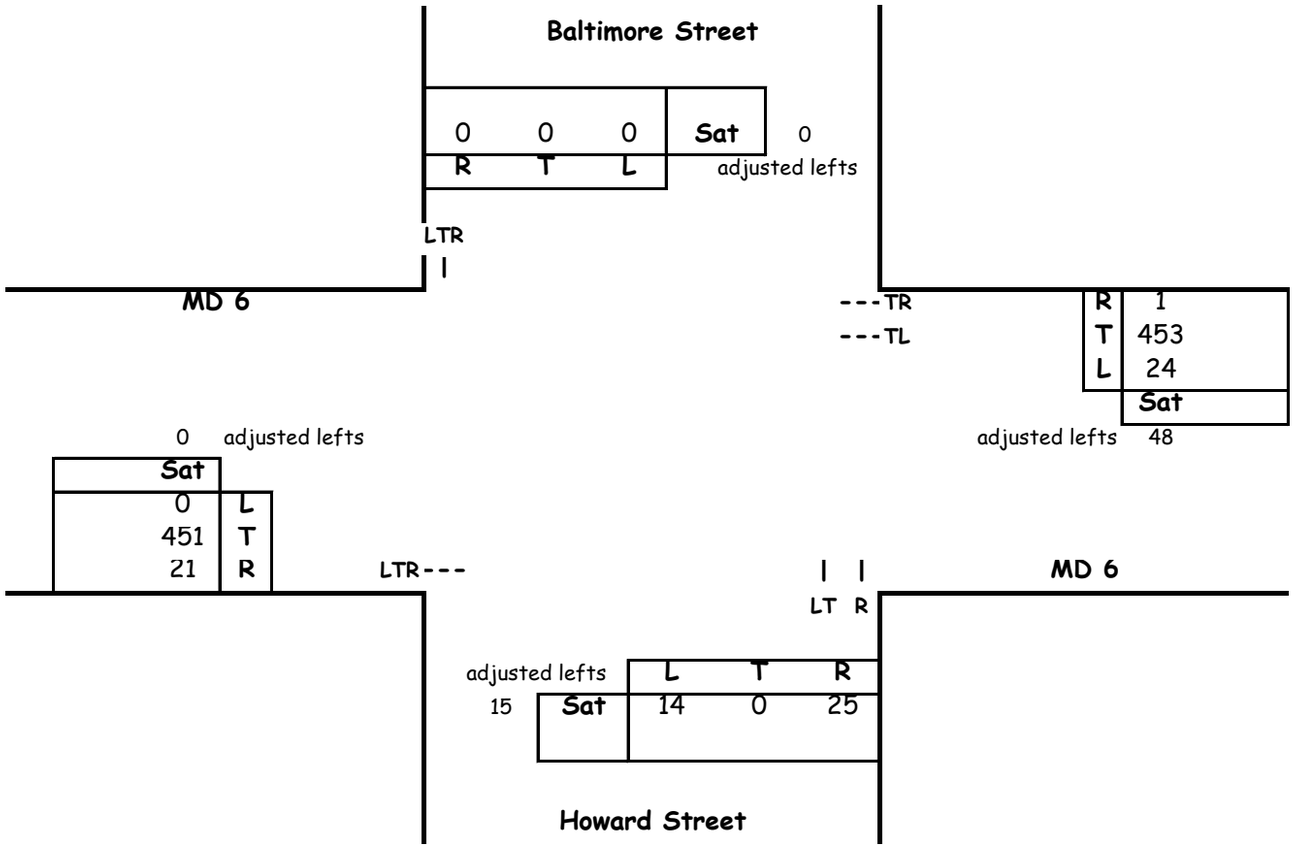
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	Baltimore Street & MD 6 (Existing Traffic)	Intersection **5**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Baltimore Street
and: MD 6
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	15	1.00	15	0	1	0	15
SB	0	1.00	0	14	1	14	
EB	472	1	472	24	1	24	496
WB	502	0.55	276	0	1	0	
						CLV TOTAL=	**511**
						Level of Service (LOS)=	**A**

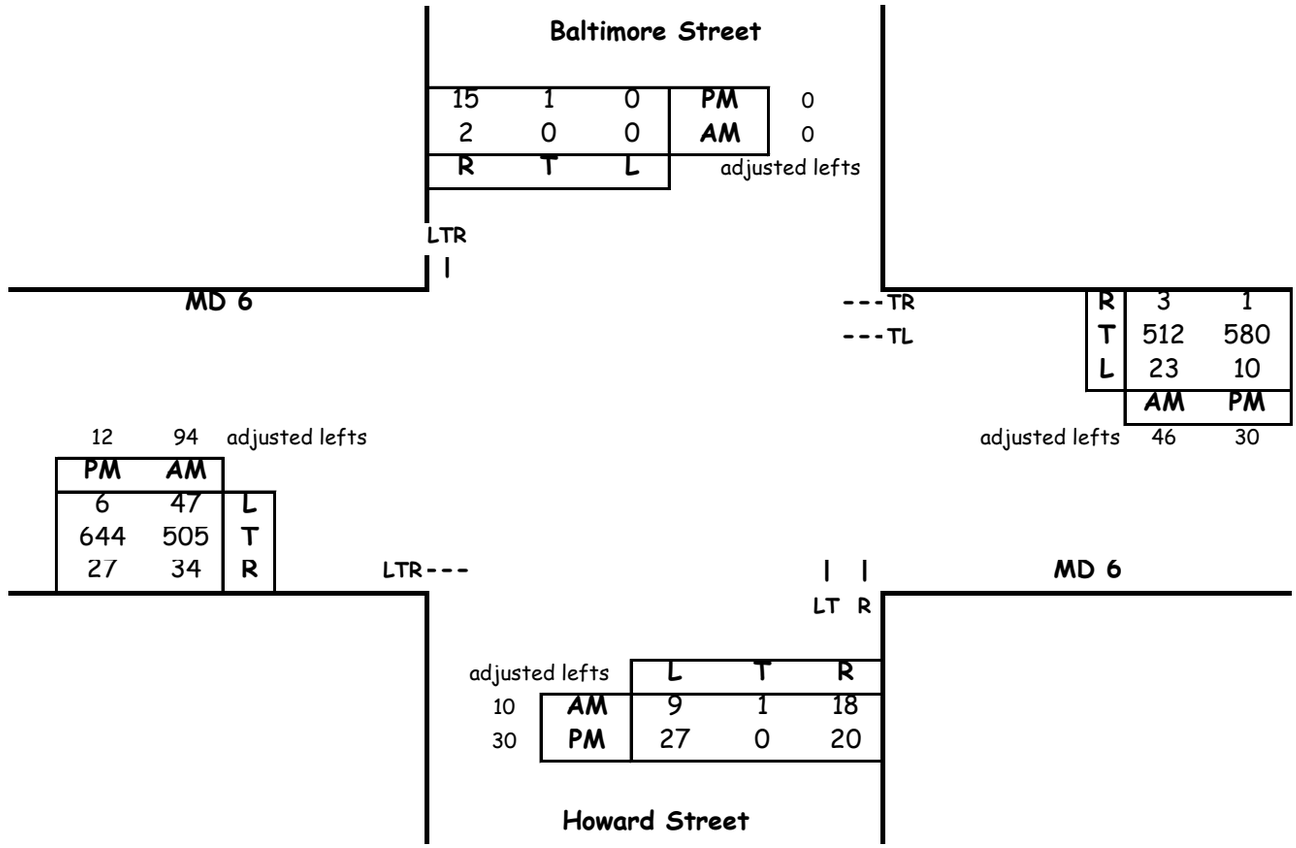
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	Baltimore Street & MD 6 (Existing Traffic)	Intersection **5**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Baltimore Street
and: MD 6
Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	11	1.00	11	0	1	0	11
SB	2	1.00	2	9	1	9	
EB	633	1	633	23	1	23	656
WB	561	0.55	309	47	1	47	

CLV TOTAL= **667**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	30	1.00	30	0	1	0	43
SB	16	1.00	16	27	1	27	
EB	683	1	683	10	1	10	693
WB	611	0.55	336	6	1	6	

CLV TOTAL= **736**
Level of Service (LOS)= **A**

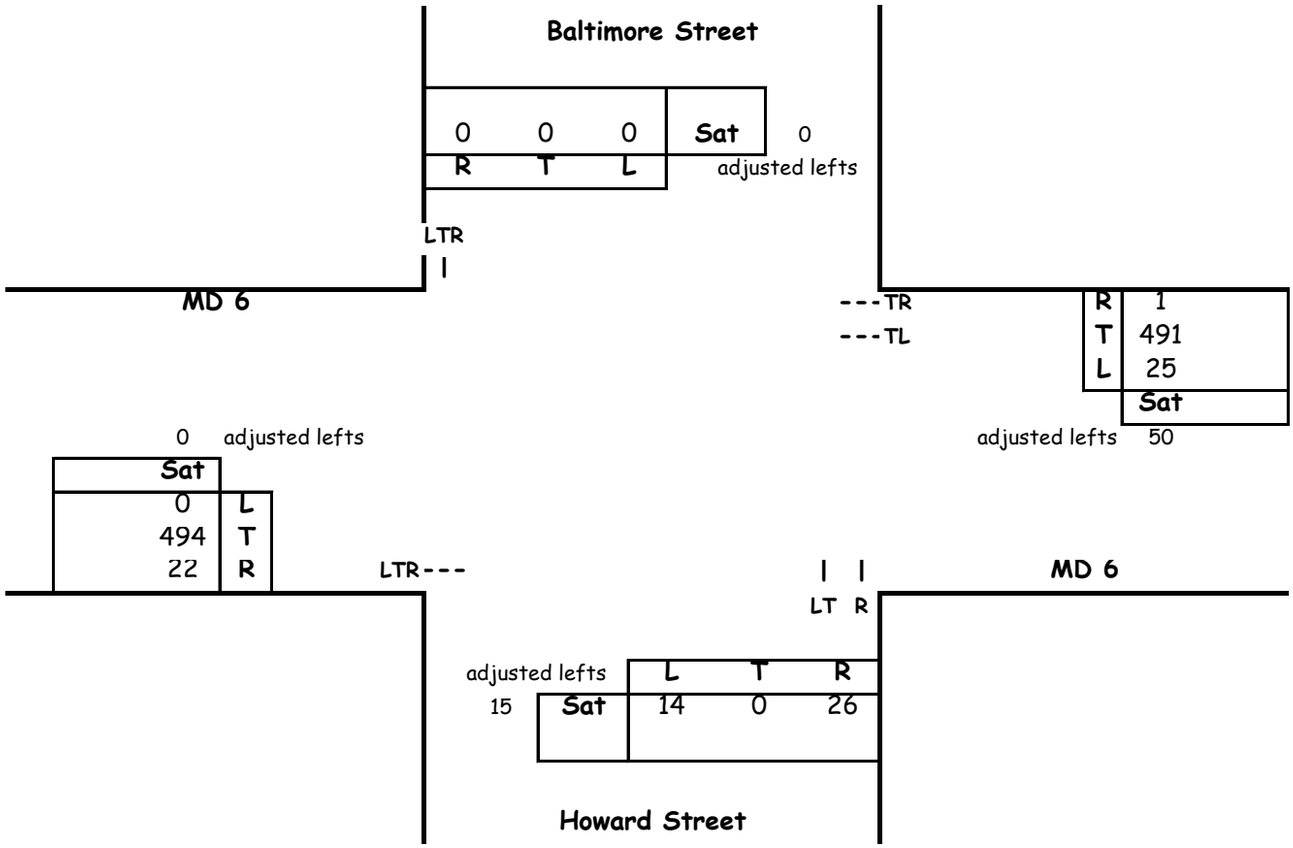
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	Baltimore Street & MD 6 (Background Traffic)	Intersection **5**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Baltimore Street
and: MD 6
Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	15	1.00	15	0	1	0	15
SB	0	1.00	0	14	1	14	
EB	516	1	516	25	1	25	541
WB	542	0.55	298	0	1	0	
						CLV TOTAL=	556
						Level of Service (LOS)=	A

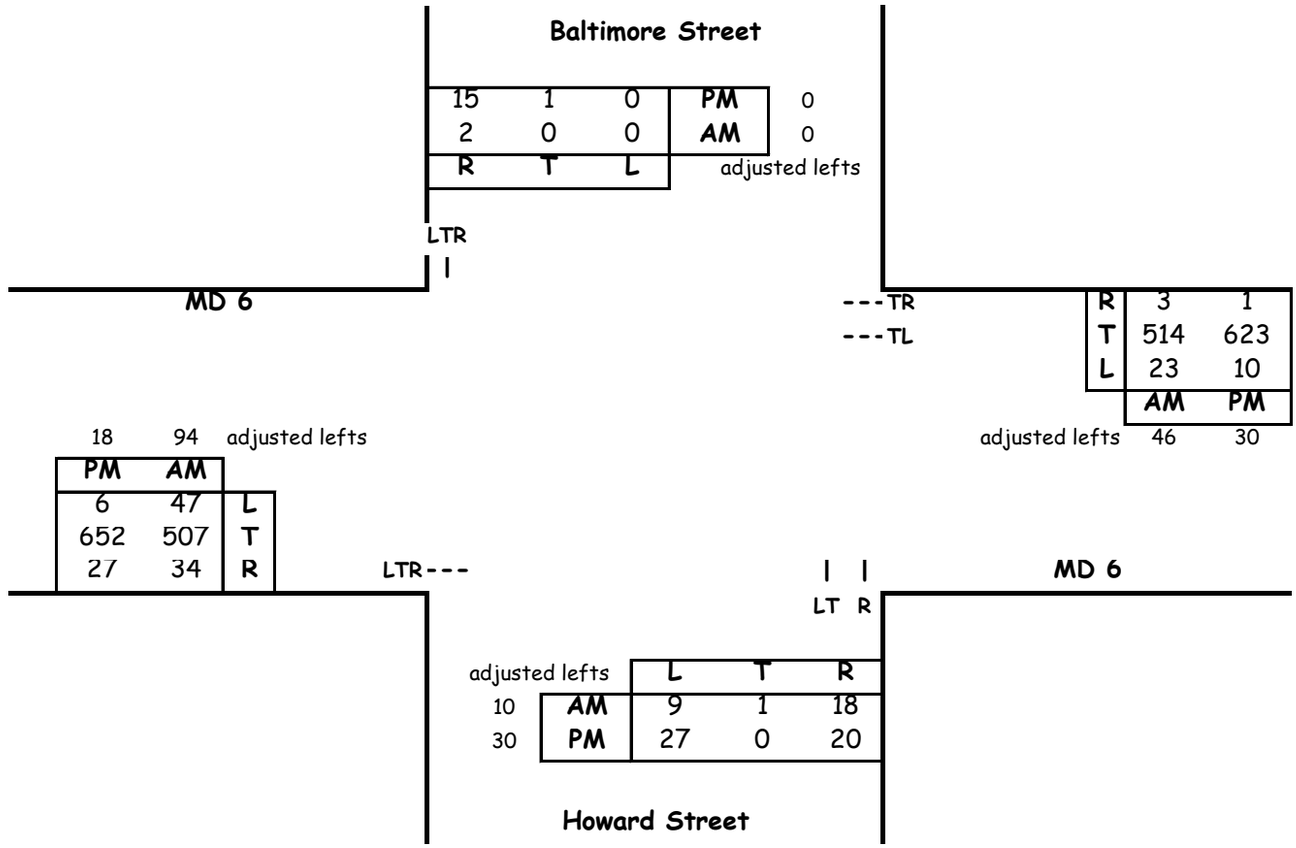
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	Baltimore Street & MD 6 (Background Traffic)	Intersection **5**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Baltimore Street
and: MD 6
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	11	1.00	11	0	1	0	11
SB	2	1.00	2	9	1	9	
EB	635	1	635	23	1	23	658
WB	563	0.55	310	47	1	47	

CLV TOTAL= **669**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	30	1.00	30	0	1	0	43
SB	16	1.00	16	27	1	27	
EB	697	1	697	10	1	10	707
WB	654	0.55	360	6	1	6	

CLV TOTAL= **750**
Level of Service (LOS)= **A**

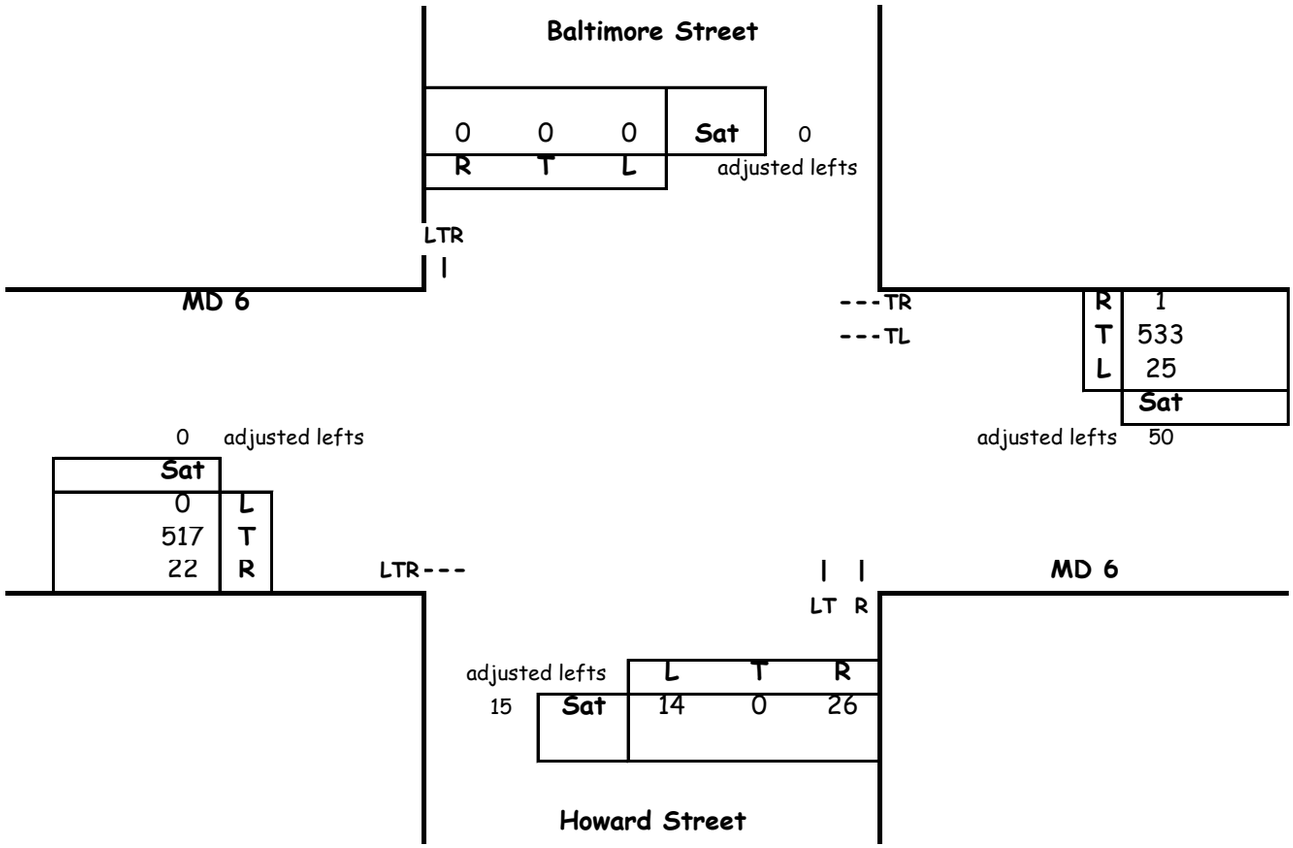
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	Baltimore Street & MD 6 (Total Traffic)	Intersection **5**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Baltimore Street
and: MD 6
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	15	1.00	15	0	1	0	15
SB	0	1.00	0	14	1	14	
EB	539	1	539	25	1	25	564
WB	584	0.55	321	0	1	0	
					CLV TOTAL=		579
					Level of Service (LOS)=		A

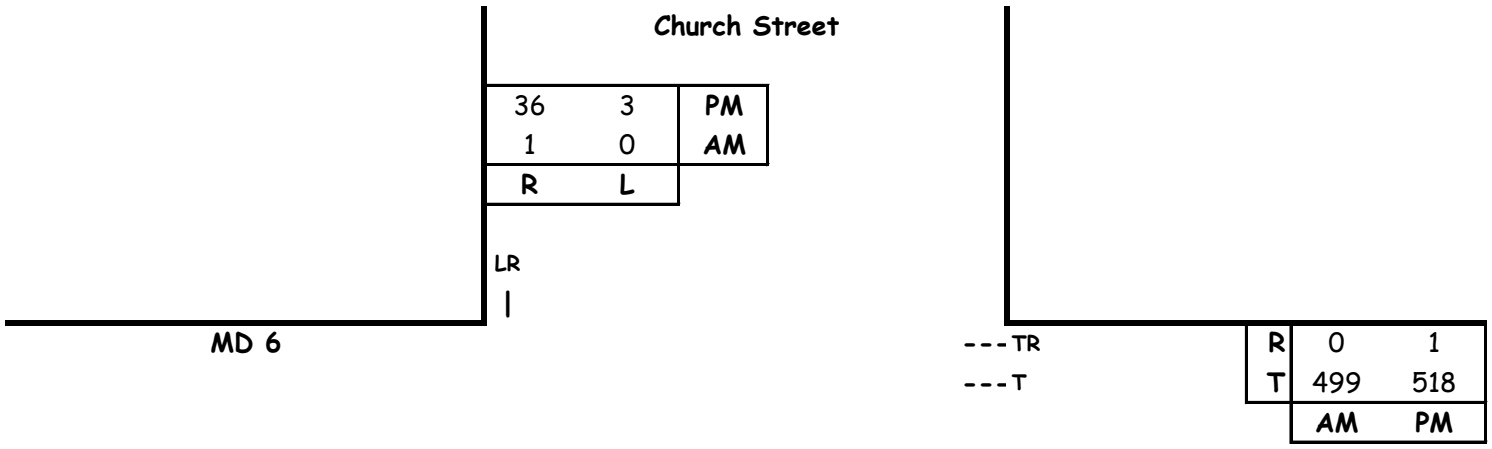
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	Baltimore Street & MD 6 (Total Traffic)	Intersection **5**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Church Street
and: MD 6
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



0 0 adjusted lefts

PM	AM	
0	0	L
641	492	T

TL---

MD 6

Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
SB	1	1.00	1				1
EB	492	1.00	492				492
WB	499	0.55	274	0	1.00	0	

CLV TOTAL= **493**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
SB	39	1.00	39				39
EB	641	1.00	641				641
WB	519	0.55	285	0	1.00	0	

CLV TOTAL= **680**
Level of Service (LOS)= **A**

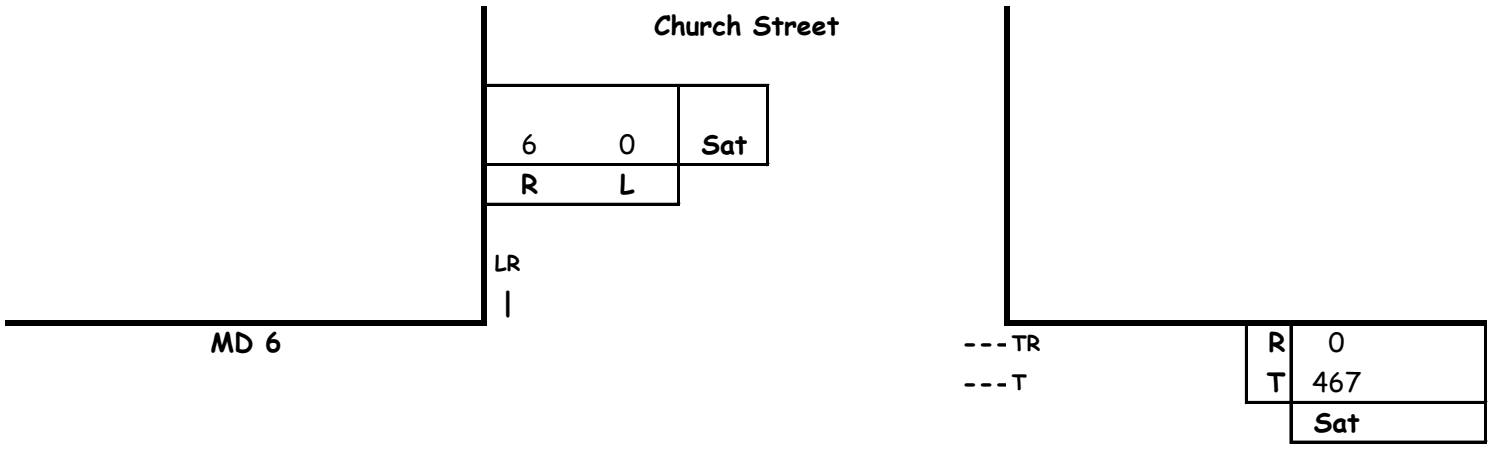
Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	Church Street & MD 6 (Existing Traffic)	Intersection **6**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Church Street
and: MD 6
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



0 adjusted lefts

Sat	
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TL---

MD 6

Capacity Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
SB	6	1.00	6				6
EB	551	1.00	551				551
WB	467	0.55	257	0	1.00	0	
					CLV TOTAL=		557
					Level of Service (LOS)=		A

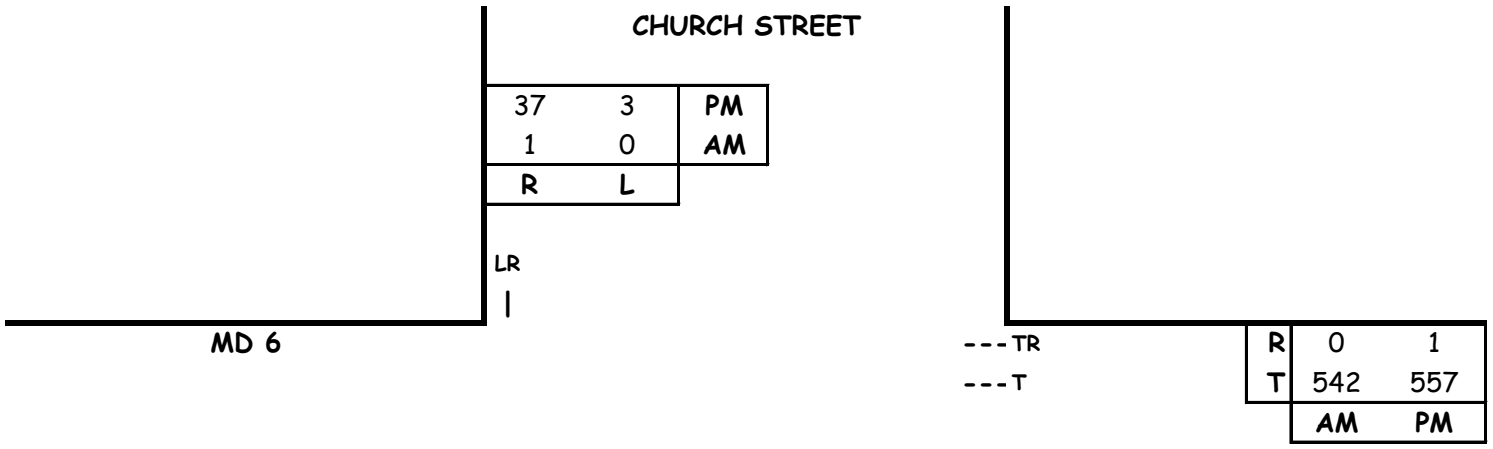
Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	Church Street & MD 6 (Existing Traffic)	Intersection 6

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Church Street
and: MD 6
Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
SB	1	1.00	1				1
EB	523	1.00	523				523
WB	542	0.55	298	0	1.00	0	

CLV TOTAL= **524**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
SB	40	1.00	40				40
EB	692	1.00	692				692
WB	558	0.55	307	0	1.00	0	

CLV TOTAL= **732**
Level of Service (LOS)= **A**

Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	Church Street & MD 6 (Background Traffic)

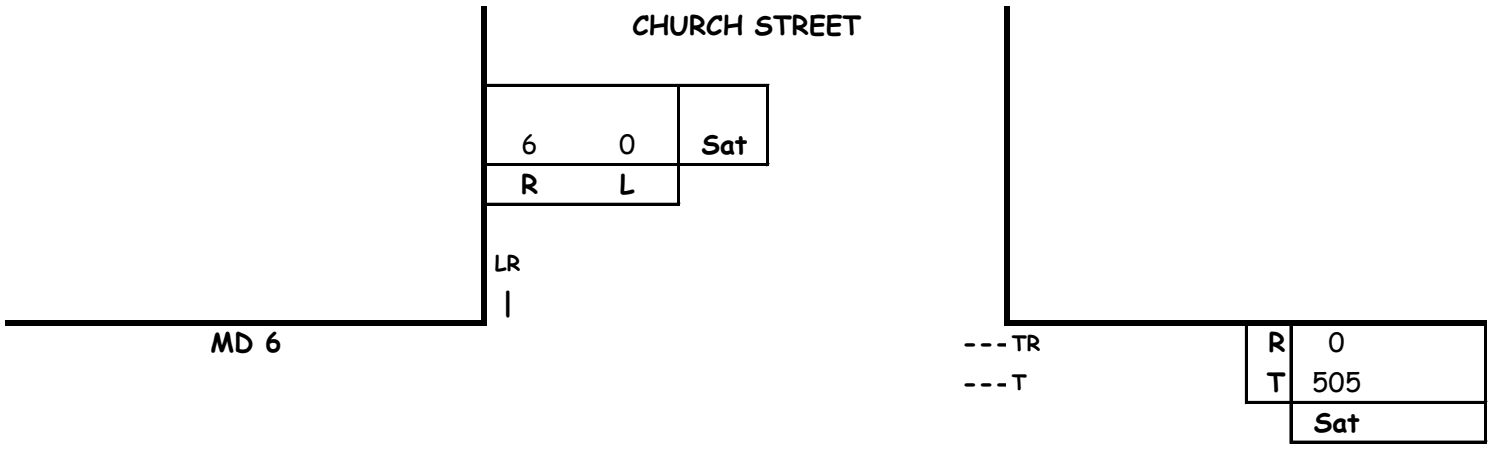
Intersection
6

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Church Street
and: MD 6
Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



0 adjusted lefts

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597	T

TL---

MD 6

Capacity Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
SB	6	1.00	6				6
EB	597	1.00	597				597
WB	505	0.55	278	0	1.00	0	

CLV TOTAL=	**603**
Level of Service (LOS)=	**A**

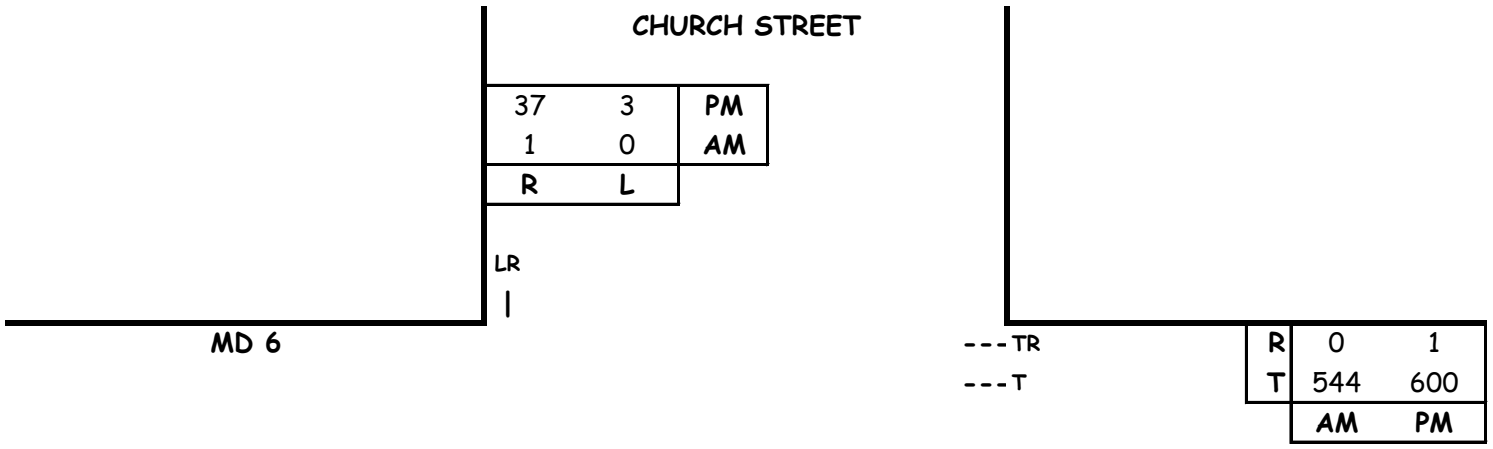
Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	Church Street & MD 6 (Background Traffic)	Intersection **6**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Church Street
and: MD 6
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
SB	1	1.00	1				1
EB	525	1.00	525				525
WB	544	0.55	299	0	1.00	0	

CLV TOTAL= **526**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
SB	40	1.00	40				40
EB	700	1.00	700				700
WB	601	0.55	331	0	1.00	0	

CLV TOTAL= **740**
Level of Service (LOS)= **A**

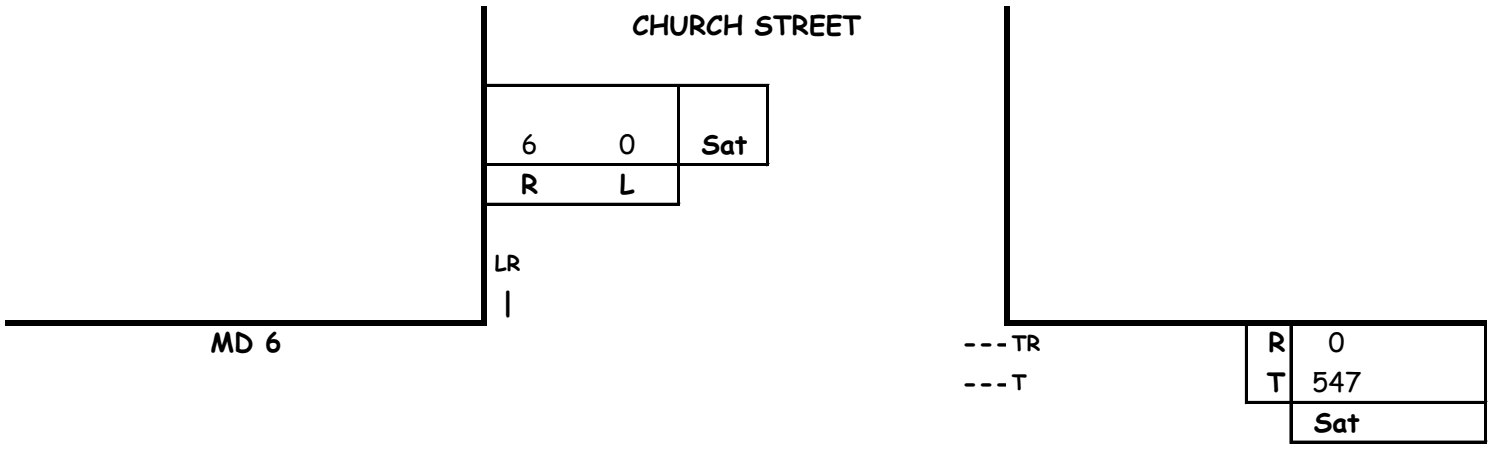
Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	Church Street & MD 6 (Total Traffic)	Intersection **6**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Church Street
and: MD 6
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



0 adjusted lefts

Sat	
0	L
620	T

TL---

MD 6

Capacity Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
SB	6	1.00	6				6
EB	620	1.00	620				620
WB	547	0.55	301	0	1.00	0	

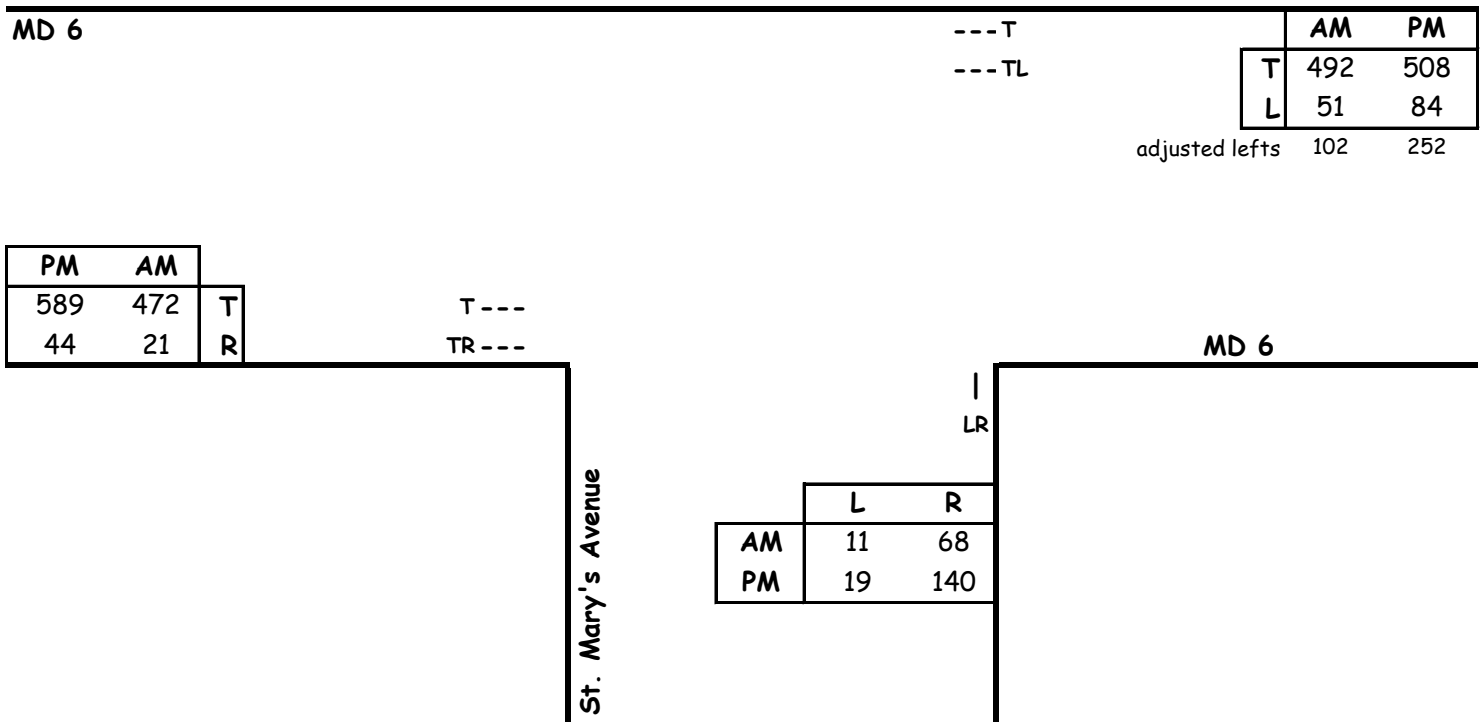
CLV TOTAL=	**626**
Level of Service (LOS)=	**A**

Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	Church Street & MD 6 (Total Traffic)	Intersection **6**

Critical Lane Volume (CLV) Methodology for MSHA

Intersection of: MD 6
and: St. Mary's Avenue
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	79	1.00	79				79
EB	493	0.55	271	51	1.00	51	327
WB	594	0.55	327				
			CLV TOTAL=				**406**
			Level of Service (LOS)=				**A**

Evening Peak Hour

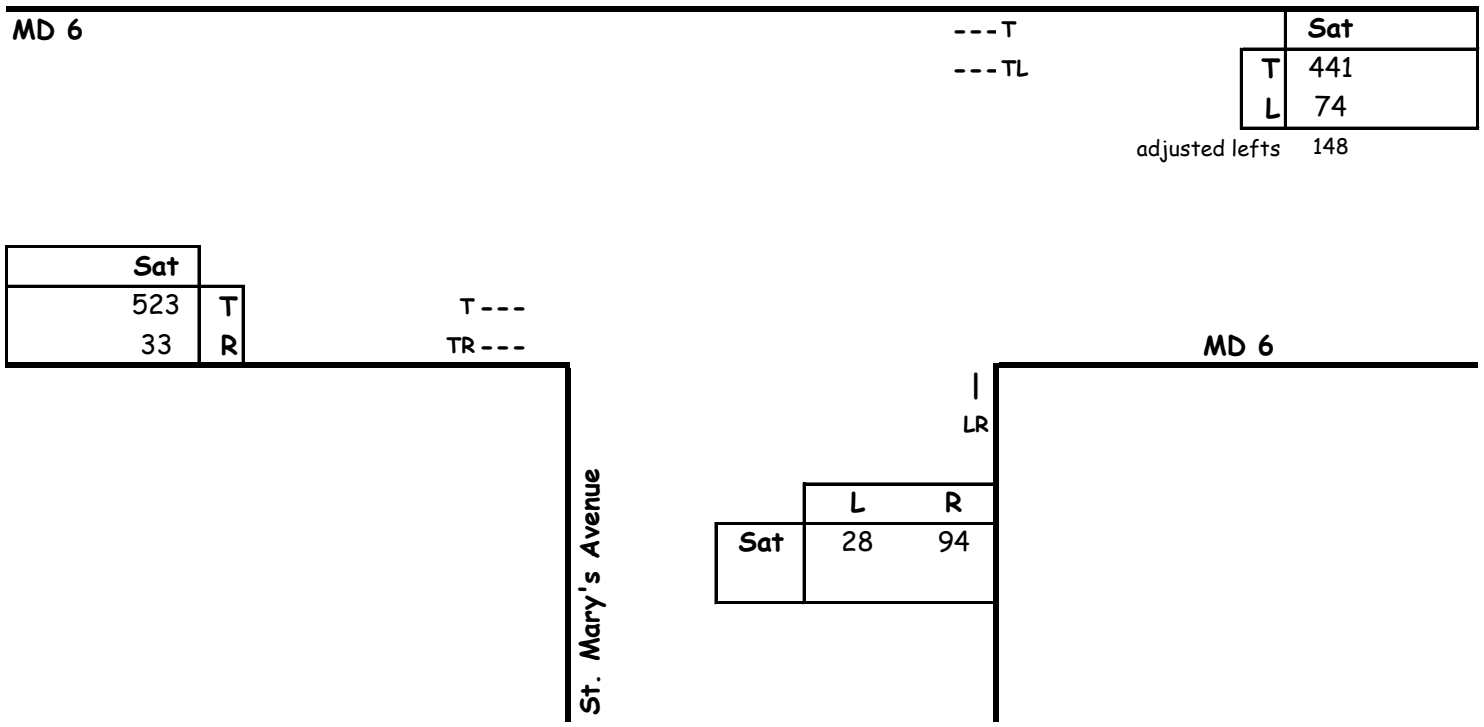
Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	159	1.00	159				159
EB	633	0.55	348	84	1.00	84	432
WB	760	0.55	418				
			CLV TOTAL=				**591**
			Level of Service (LOS)=				**A**

Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	MD 6 & St. Mary's Avenue (Existing Traffic)	Intersection **7**

Critical Lane Volume (CLV) Methodology for MSHA

Intersection of: MD 6
and: St. Mary's Avenue
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting



Critical Lane Volume Analysis

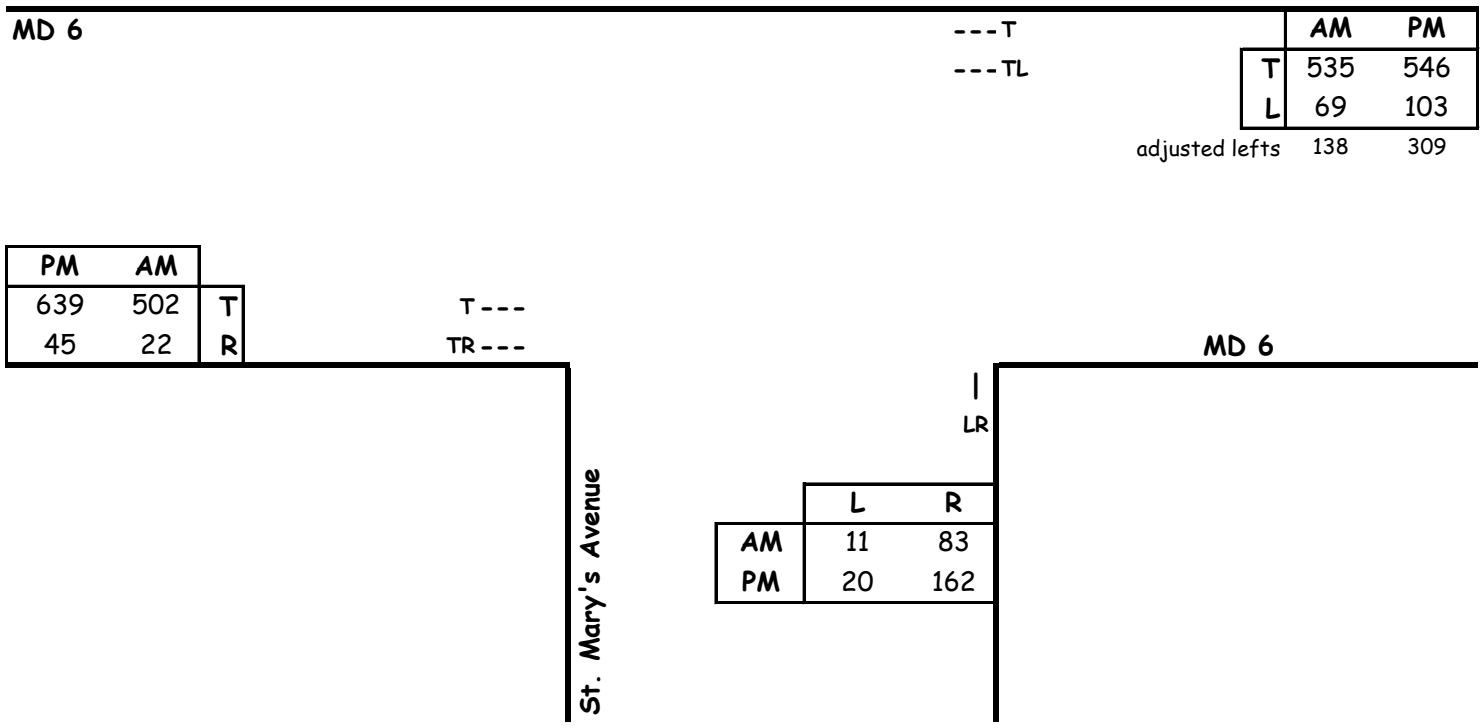
Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	122	1.00	122				122
EB	556	0.55	306	74	1.00	74	380
WB	589	0.55	324				
						CLV TOTAL=	502
						Level of Service (LOS)=	A

Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	MD 6 & St. Mary's Avenue (Existing Traffic)	Intersection **7**

Critical Lane Volume (CLV) Methodology for MSHA

Intersection of: MD 6
and: St. Mary's Avenue
Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	94	1.00	94				94
EB	524	0.55	288	69	1.00	69	370
WB	673	0.55	370				
			CLV TOTAL=				**464**
			Level of Service (LOS)=				**A**

Evening Peak Hour

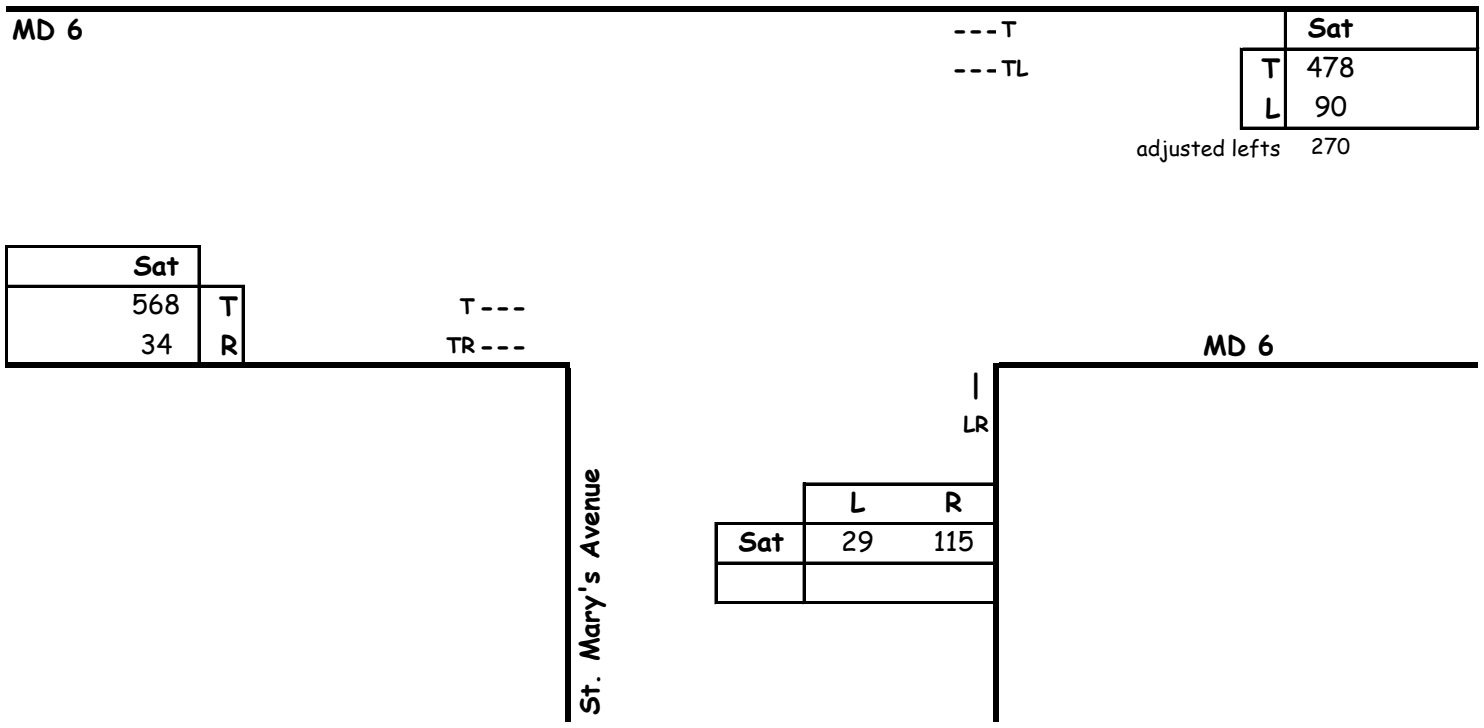
Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	182	1.00	182				182
EB	684	0.55	376	103	1.00	103	479
WB	855	0.55	470				
			CLV TOTAL=				**661**
			Level of Service (LOS)=				**A**

Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	MD 6 & St. Mary's Avenue (Background Traffic)	Intersection **7**

Critical Lane Volume (CLV) Methodology for MSHA

Intersection of: MD 6
and: St. Mary's Avenue
Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting



Critical Lane Volume Analysis

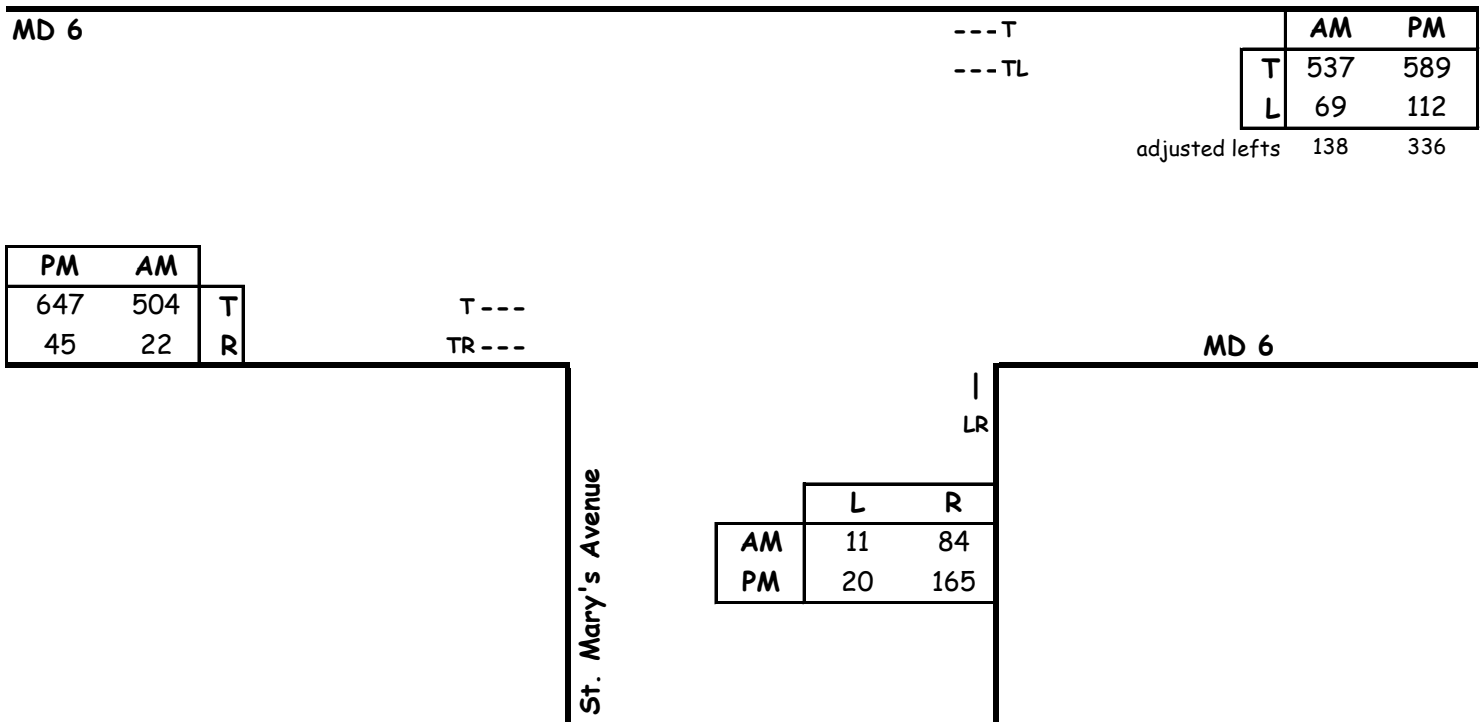
Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	144	1.00	144				144
EB	602	0.55	331	90	1.00	90	421
WB	748	0.55	411				
						CLV TOTAL=	565
						Level of Service (LOS)=	A

Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	MD 6 & St. Mary's Avenue (Background Traffic)	Intersection **7**

Critical Lane Volume (CLV) Methodology for MSHA

Intersection of: MD 6
and: St. Mary's Avenue
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	95	1.00	95				95
EB	526	0.55	289	69	1.00	69	371
WB	675	0.55	371				
			CLV TOTAL=				**466**
			Level of Service (LOS)=				**A**

Evening Peak Hour

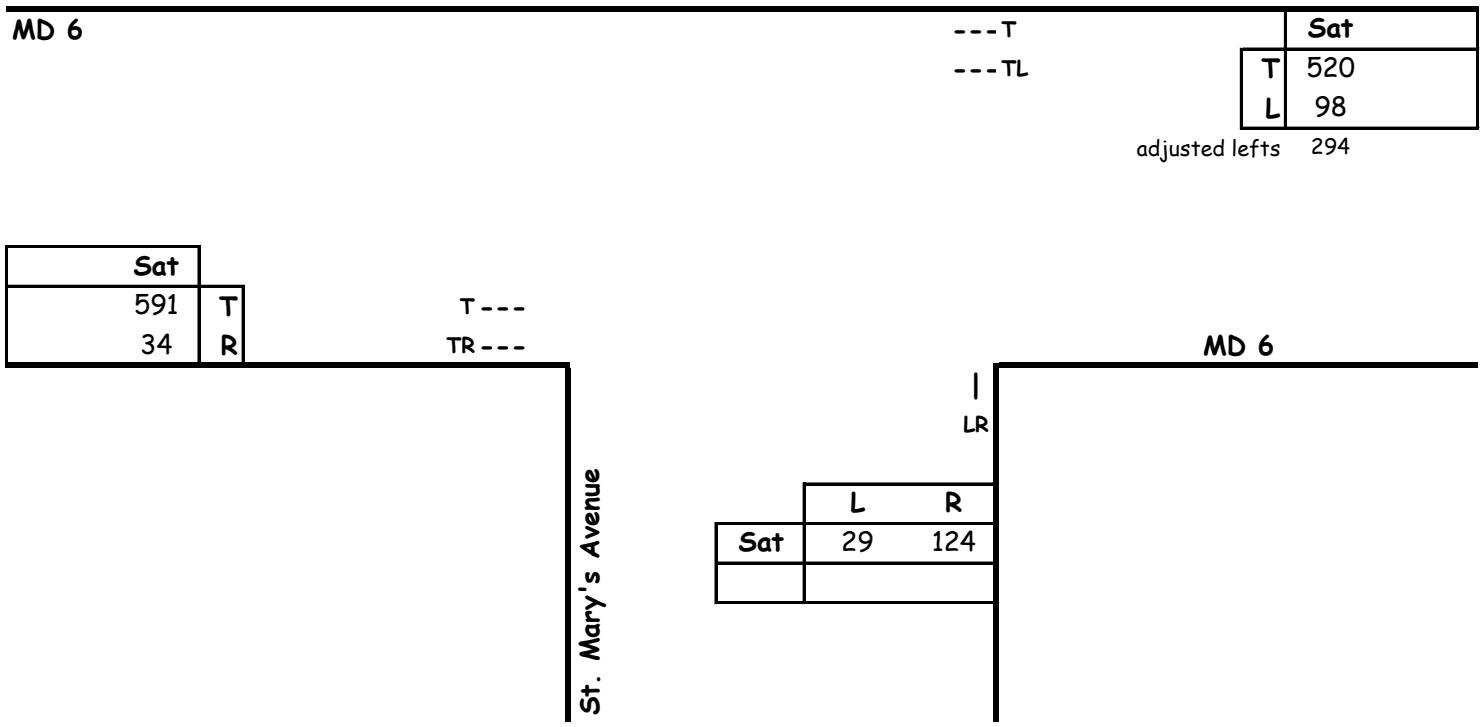
Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	185	1.00	185				185
EB	692	0.55	381	112	1.00	112	509
WB	925	0.55	509				
			CLV TOTAL=				**694**
			Level of Service (LOS)=				**A**

Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	MD 6 & St. Mary's Avenue (Total Traffic)	Intersection **7**

Critical Lane Volume (CLV) Methodology for MSHA

Intersection of: MD 6
and: St. Mary's Avenue
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting



Critical Lane Volume Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	153	1.00	153				153
EB	625	0.55	344	98	1.00	98	448
WB	814	0.55	448				
						CLV TOTAL=	**601**
						Level of Service (LOS)=	**A**

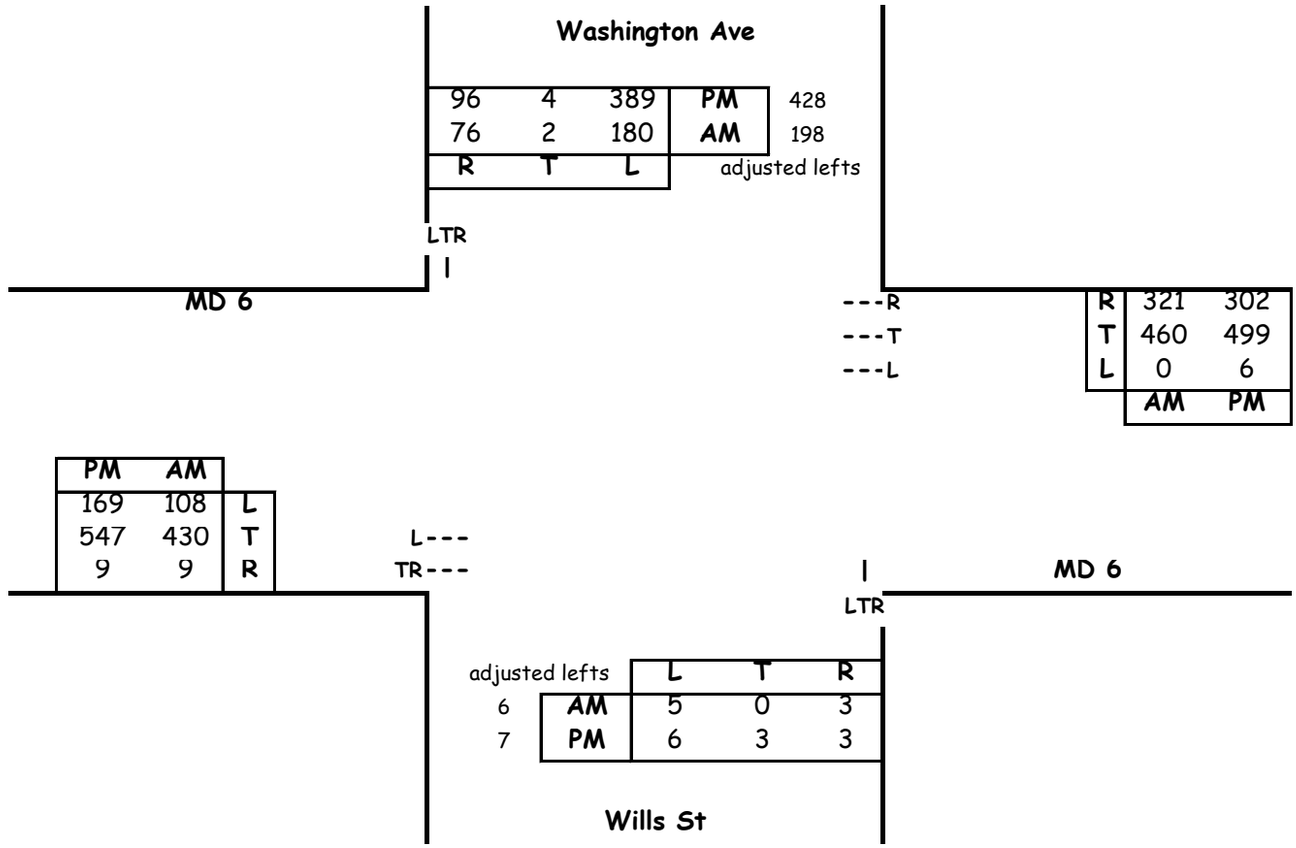
Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	MD 6 & St. Mary's Avenue (Total Traffic)	Intersection **7**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6
and: Washington Ave
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	9	1.00	9	180	1	180	281
SB	276	1.00	276	5	1	5	
EB	439	1	439	0	1	0	568
WB	460	1	460	108	1	108	

CLV TOTAL= **849**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	13	1.00	13	389	1	389	534
SB	528	1.00	528	6	1	6	
EB	556	1	556	6	1	6	668
WB	499	1	499	169	1	169	

CLV TOTAL= **1202**
Level of Service (LOS)= **C**

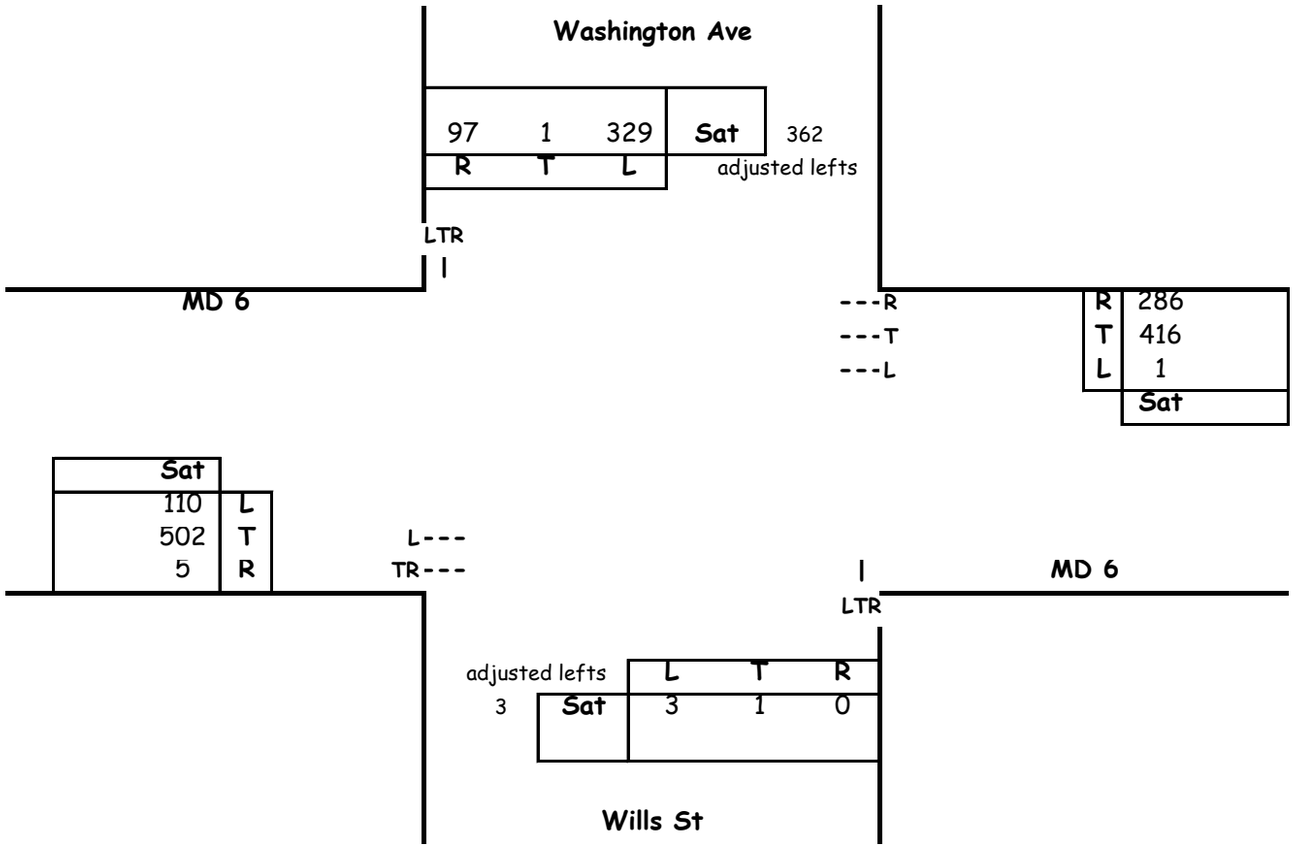
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 6 & Washington Ave (Existing Traffic)	Intersection **8**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6
and: Washington Ave
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

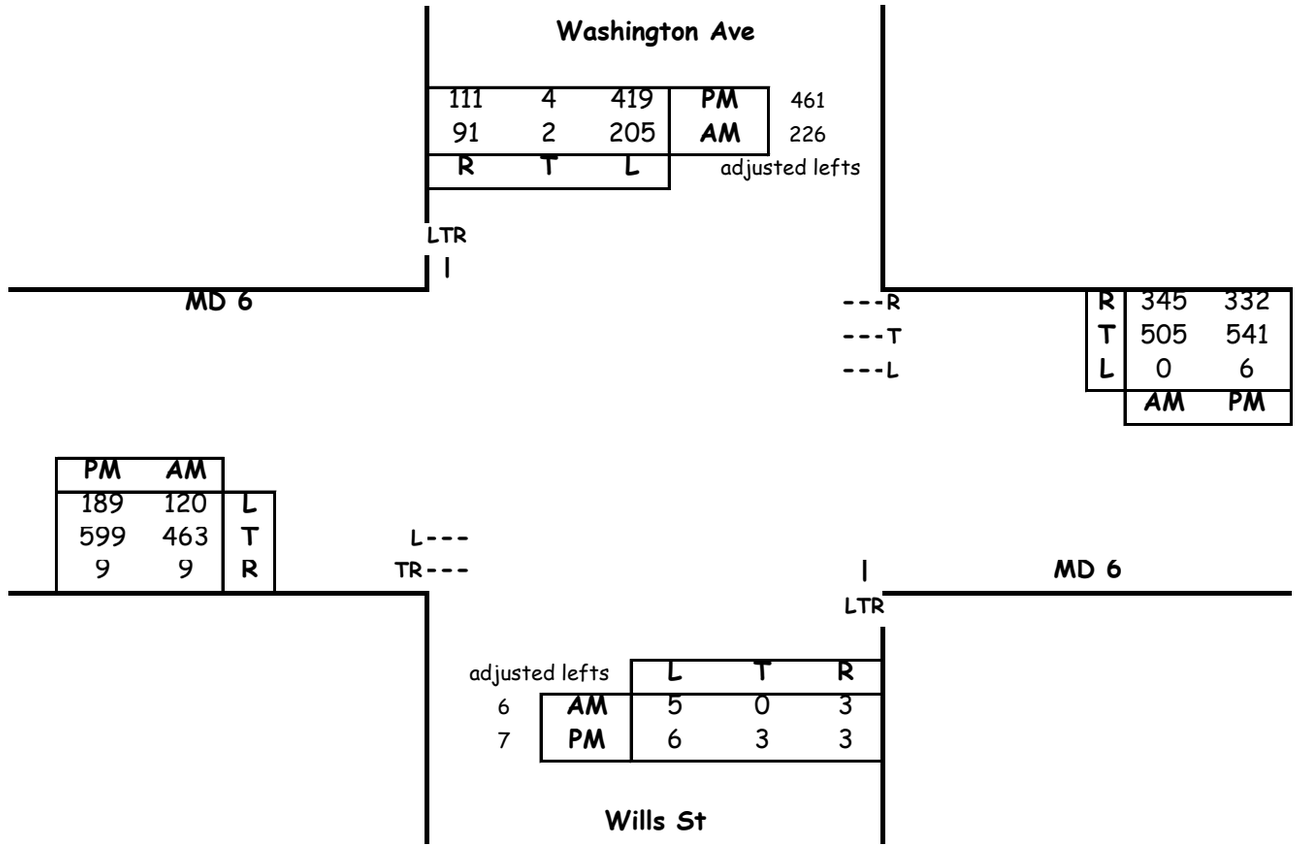
Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	4	1.00	4	329	1	329	463
SB	460	1.00	460	3	1	3	
EB	507	1	507	1	1	1	526
WB	416	1	416	110	1	110	
					CLV TOTAL=		989
					Level of Service (LOS)=		A

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 6 & Washington Ave (Existing Traffic)	Intersection **8**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Washington Ave
Study Period: Background Traffic

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	9	1.00	9	205	1	205	324
SB	319	1.00	319	5	1	5	
EB	472	1	472	0	1	0	625
WB	505	1	505	120	1	120	

CLV TOTAL= **949**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	13	1.00	13	419	1	419	582
SB	576	1.00	576	6	1	6	
EB	608	1	608	6	1	6	730
WB	541	1	541	189	1	189	

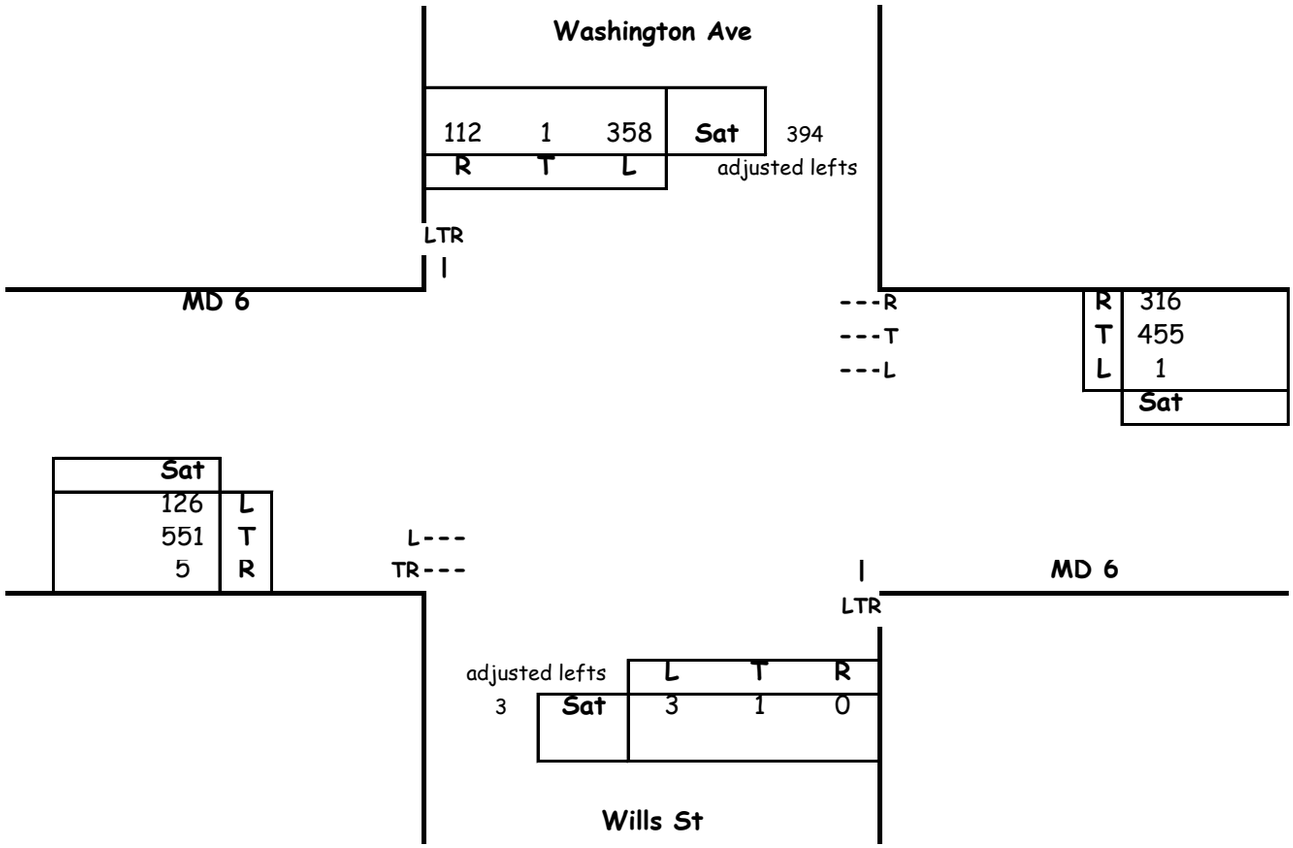
CLV TOTAL= **1312**
Level of Service (LOS)= **D**

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 6 & Washington Ave (Background Traffic)	Intersection **8**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Washington Ave
Study Period: Background Traffic

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	4	1.00	4	358	1	358	510
SB	507	1.00	507	3	1	3	
EB	556	1	556	1	1	1	581
WB	455	1	455	126	1	126	
						CLV TOTAL=	1091
						Level of Service (LOS)=	B

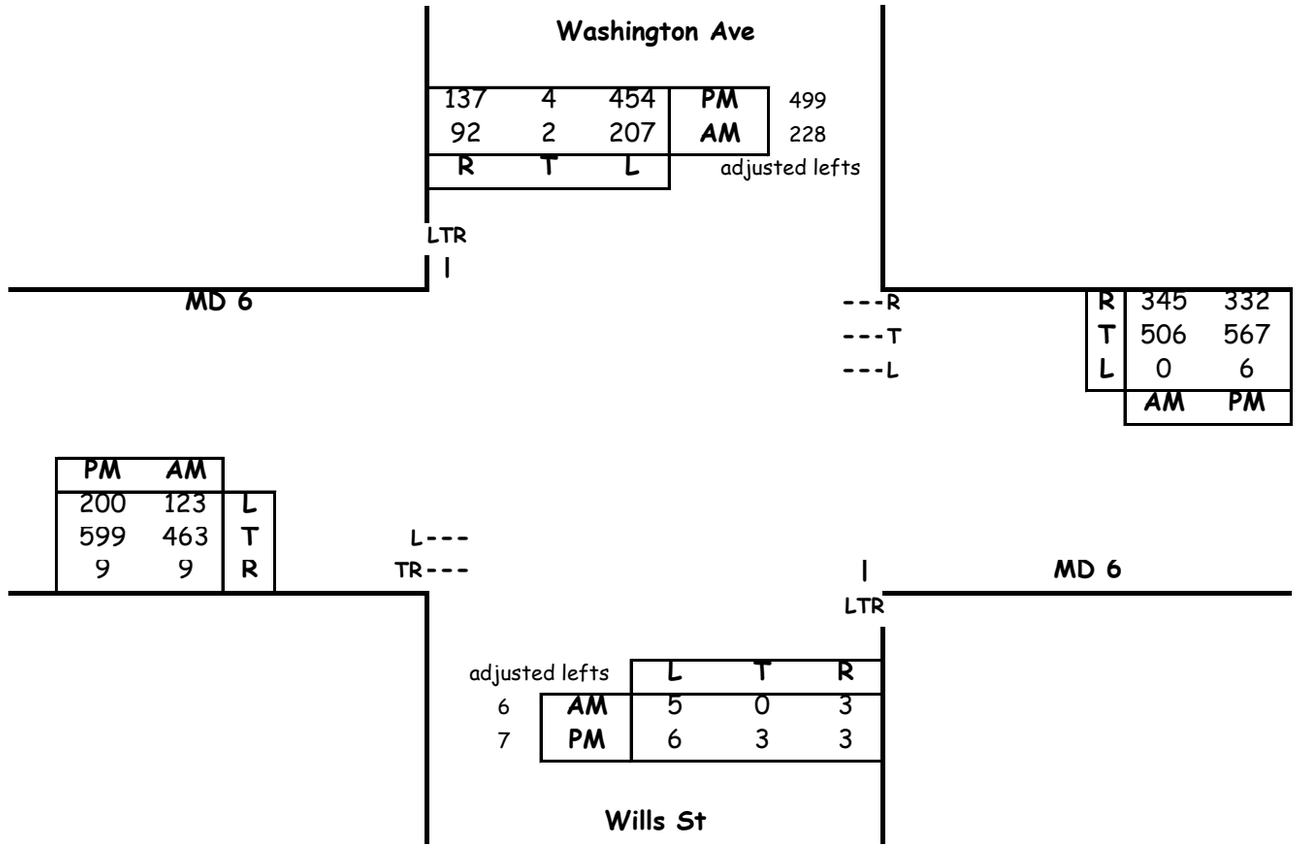
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 6 & Washington Ave (Background Traffic)	Intersection **8**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6
and: Washington Ave
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	9	1.00	9	207	1	207	
							327
SB	322	1.00	322	5	1	5	
EB	472	1	472	0	1	0	
							629
WB	506	1	506	123	1	123	

CLV TOTAL= **956**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	13	1.00	13	454	1	454	
							646
SB	640	1.00	640	6	1	6	
EB	608	1	608	6	1	6	
							767
WB	567	1	567	200	1	200	

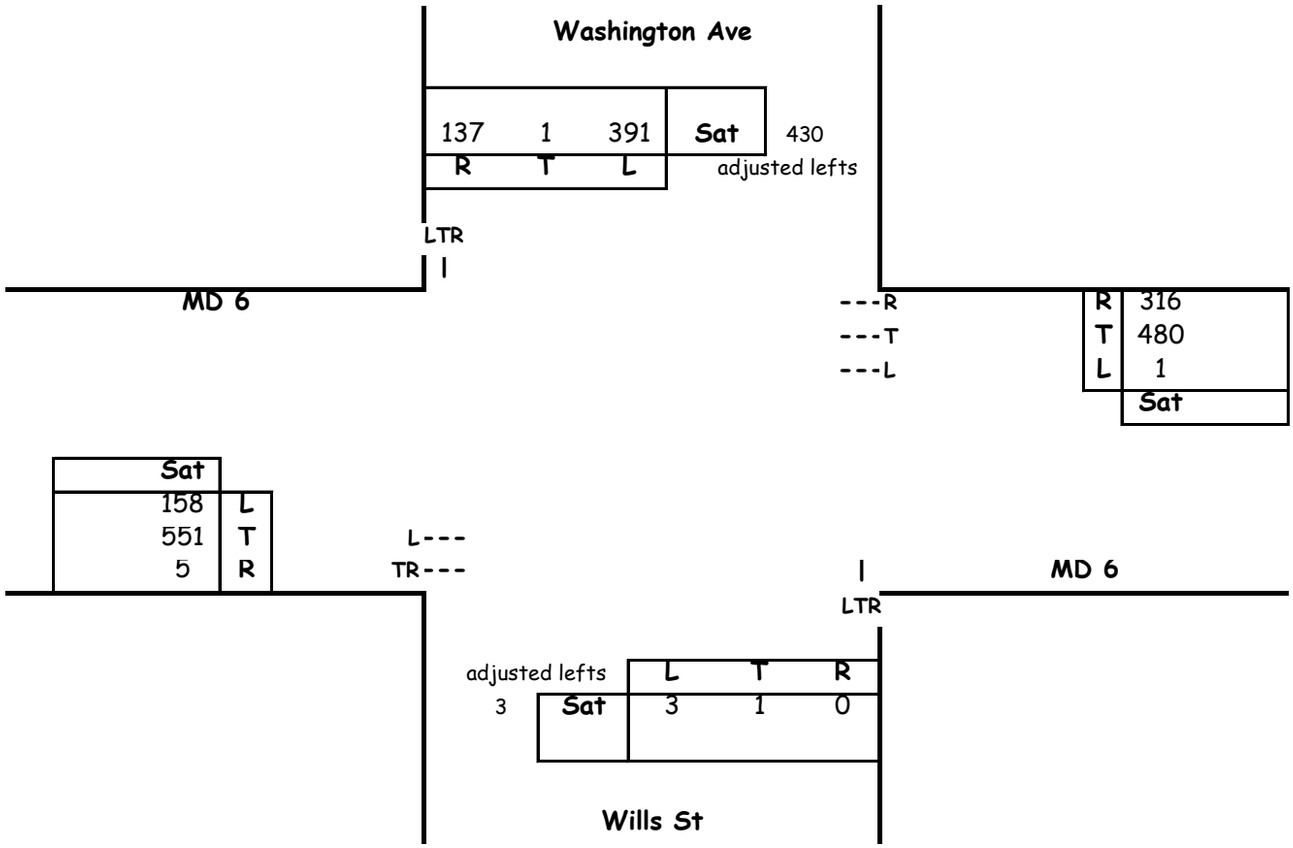
CLV TOTAL= **1413**
Level of Service (LOS)= **D**

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 6 & Washington Ave (Total Traffic)	Intersection **8**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Washington Ave
Study Period: Total Traffic

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	4	1.00	4	391	1	391	571
SB	568	1.00	568	3	1	3	
EB	556	1	556	1	1	1	638
WB	480	1	480	158	1	158	
						CLV TOTAL=	1209
						Level of Service (LOS)=	C

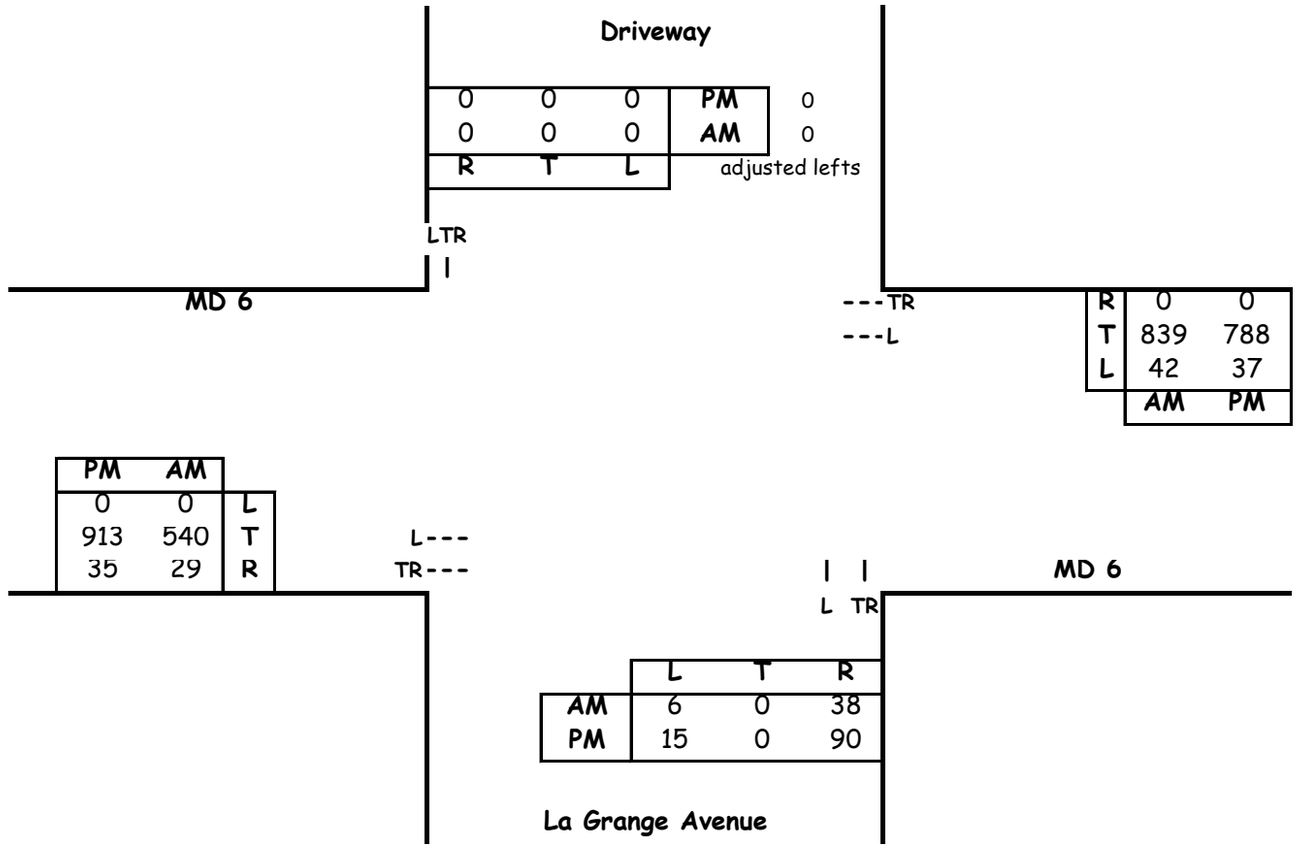
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 6 & Washington Ave (Total Traffic)	Intersection **8**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6
and: Driveway
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	38	1.00	38	0	1	0	38
SB	0	1.00	0	6	1	6	
EB	569	1	569	42	1	42	839
WB	839	1	839	0	1	0	

CLV TOTAL= **877**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	90	1.00	90	0	1	0	90
SB	0	1.00	0	15	1	15	
EB	948	1	948	37	1	37	985
WB	788	1	788	0	1	0	

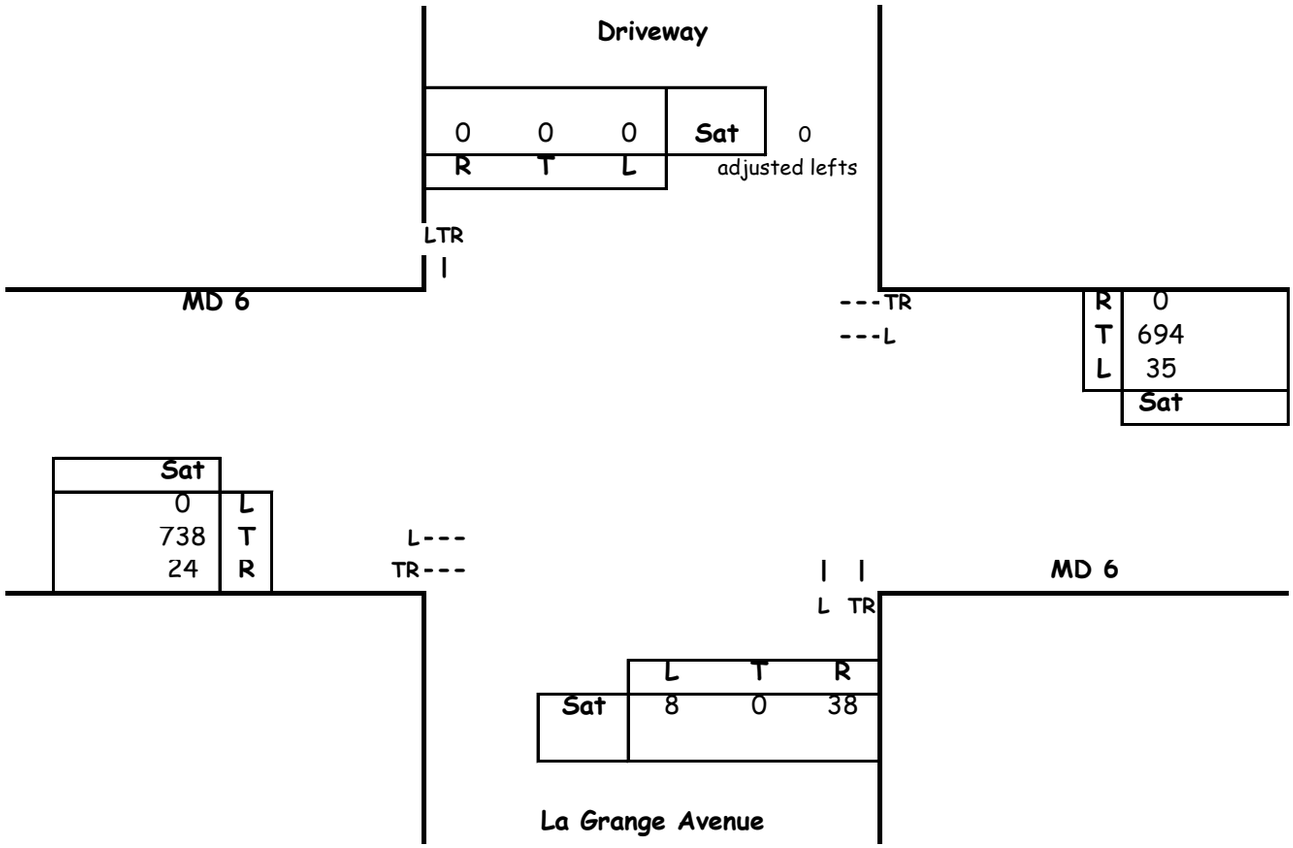
CLV TOTAL= **1075**
Level of Service (LOS)= **B**

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 6 & Driveway (Existing Traffic)	Intersection **9**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Driveway
Study Period: Existing Traffic

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

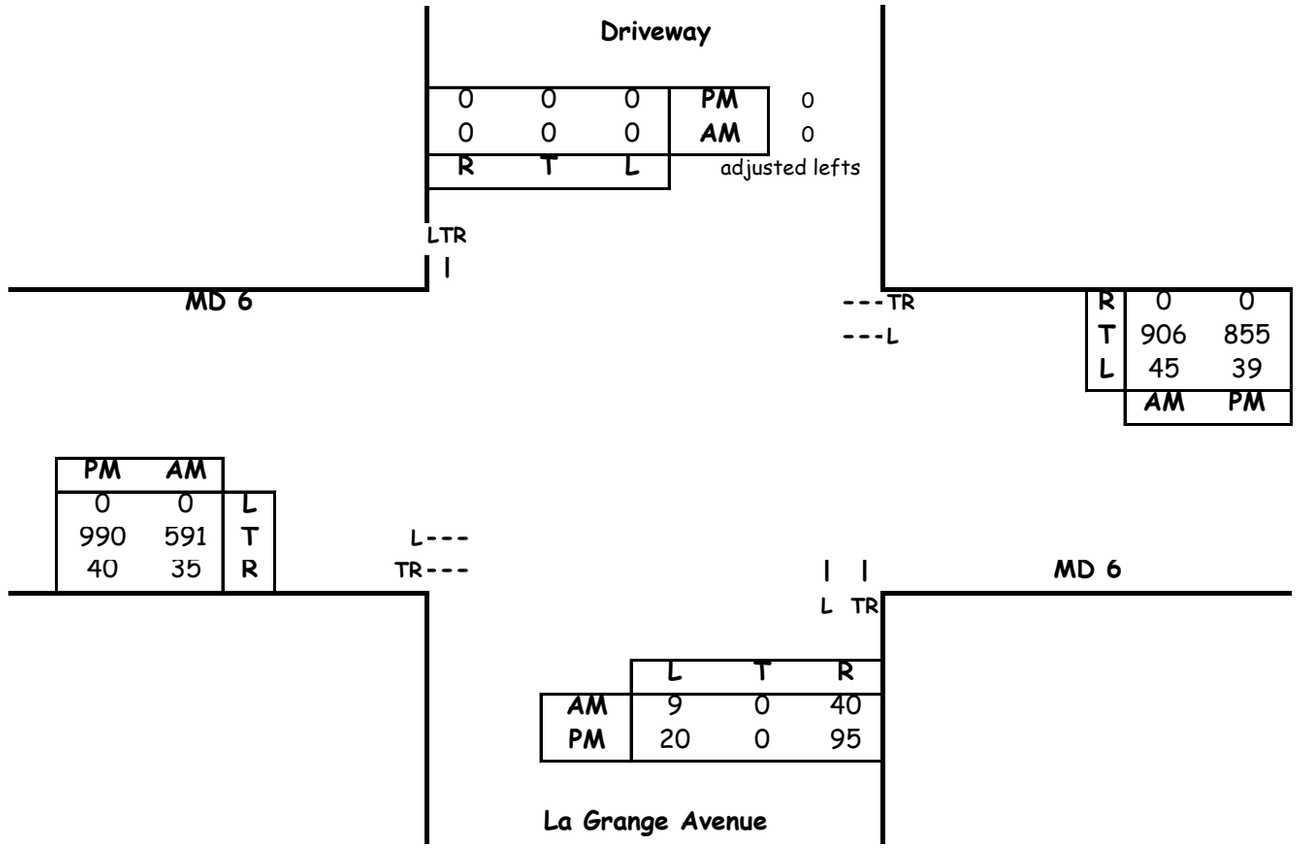
Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	38	1.00	38	0	1	0	38
SB	0	1.00	0	8	1	8	
EB	762	1	762	35	1	35	797
WB	694	1	694	0	1	0	
						CLV TOTAL=	835
						Level of Service (LOS)=	A

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 6 & Driveway (Existing Traffic)	Intersection **9**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Driveway
Study Period: Background Traffic

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	40	1.00	40	0	1	0	40
SB	0	1.00	0	9	1	9	
EB	626	1	626	45	1	45	906
WB	906	1	906	0	1	0	

CLV TOTAL= **946**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	95	1.00	95	0	1	0	95
SB	0	1.00	0	20	1	20	
EB	1030	1	1030	39	1	39	1069
WB	855	1	855	0	1	0	

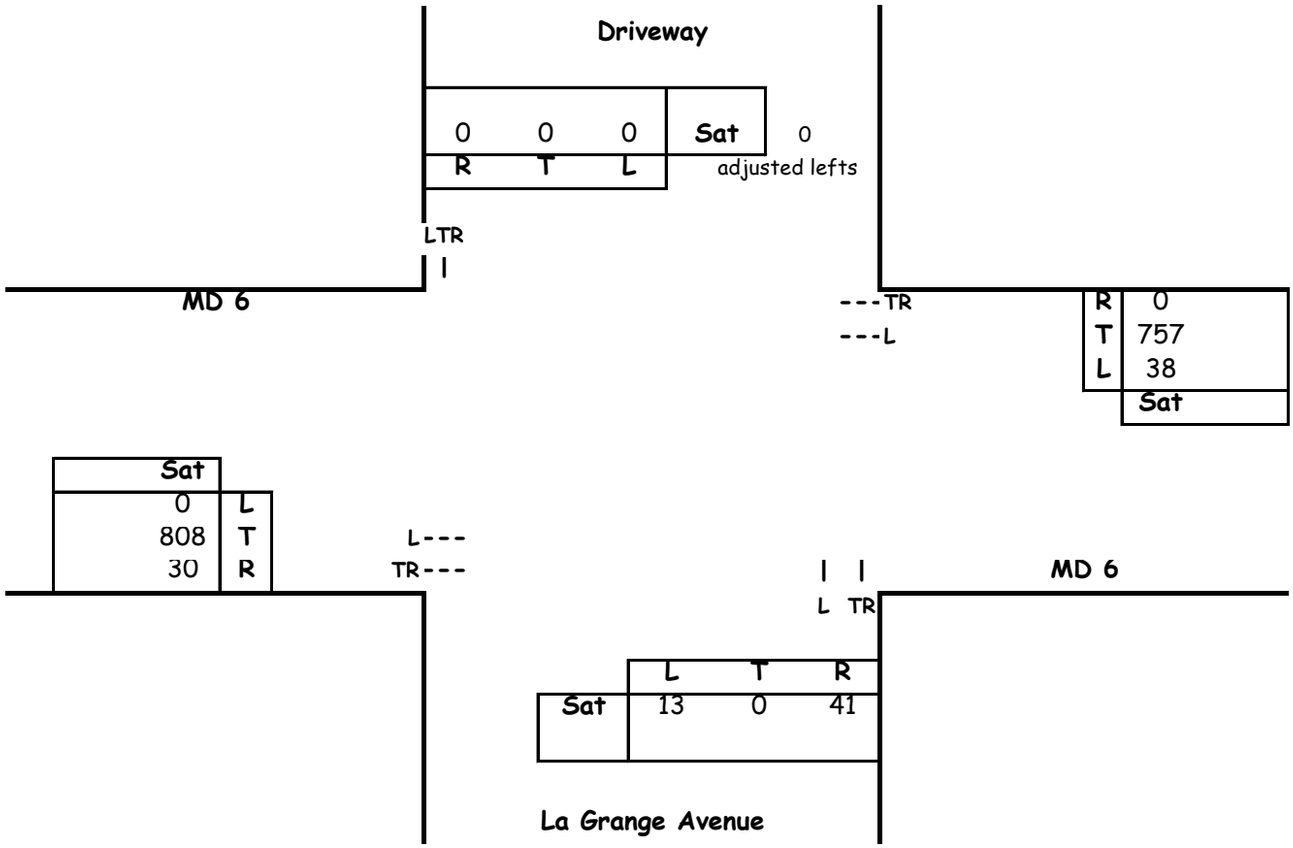
CLV TOTAL= **1164**
Level of Service (LOS)= **C**

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 6 & Driveway (Background Traffic)	Intersection **9**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Driveway
Study Period: Background Traffic

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	41	1.00	41	0	1	0	41
SB	0	1.00	0	13	1	13	
EB	838	1	838	38	1	38	876
WB	757	1	757	0	1	0	
						CLV TOTAL=	**917**
						Level of Service (LOS)=	**A**

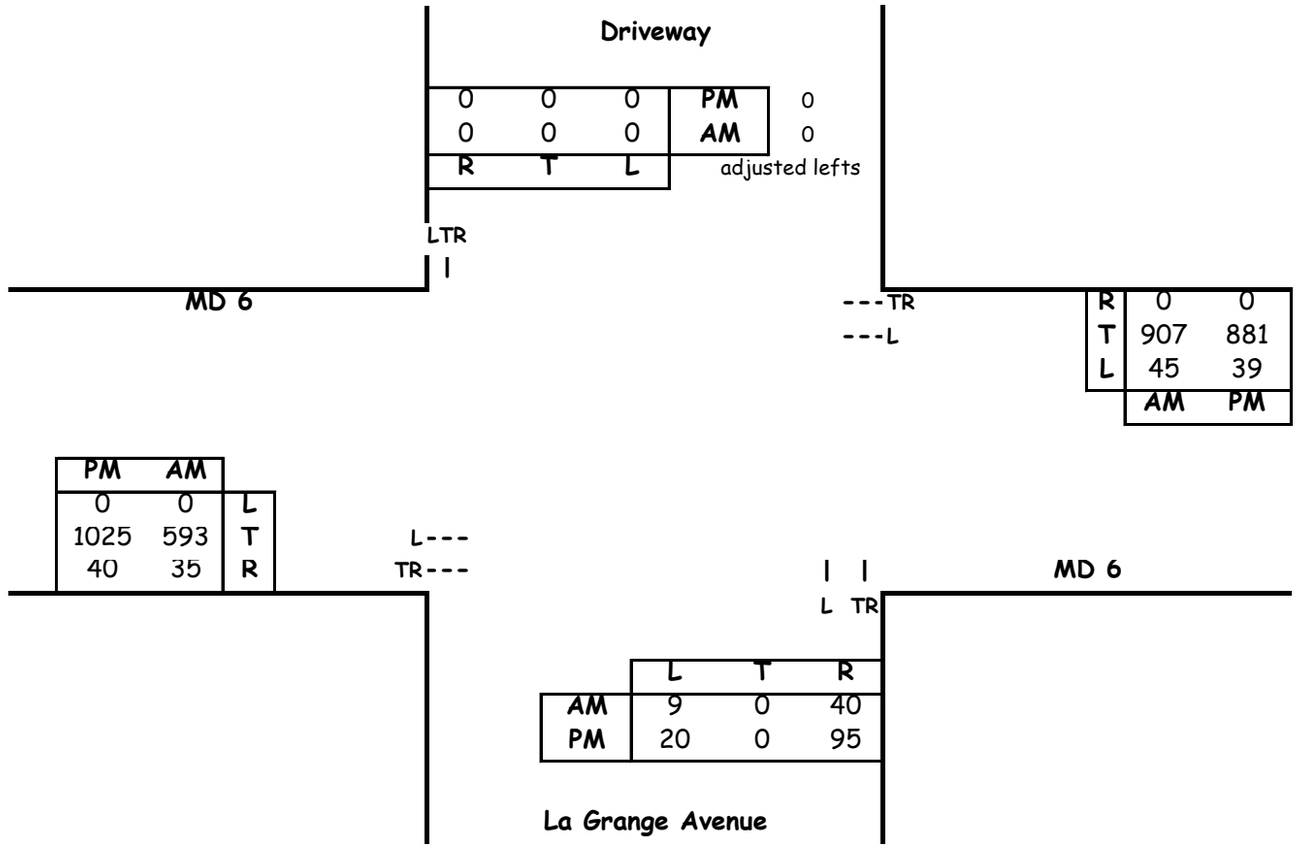
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 6 & Driveway (Background Traffic)	Intersection **9**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6
and: Driveway
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	40	1.00	40	0	1	0	40
SB	0	1.00	0	9	1	9	
EB	628	1	628	45	1	45	907
WB	907	1	907	0	1	0	

CLV TOTAL= **947**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	95	1.00	95	0	1	0	95
SB	0	1.00	0	20	1	20	
EB	1065	1	1065	39	1	39	1104
WB	881	1	881	0	1	0	

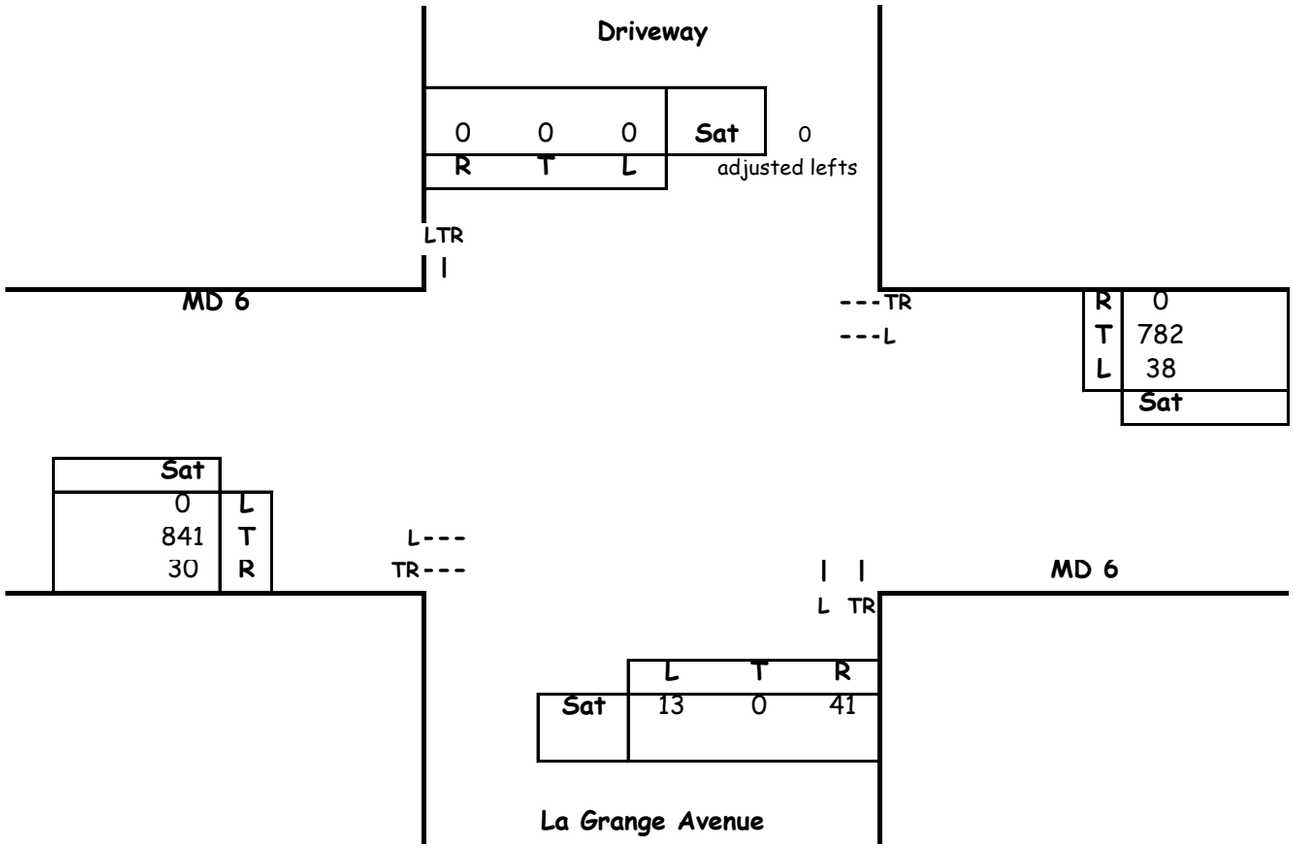
CLV TOTAL= **1199**
Level of Service (LOS)= **C**

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 6 & Driveway (Total Traffic)	Intersection **9**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Driveway
Study Period: Total Traffic

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

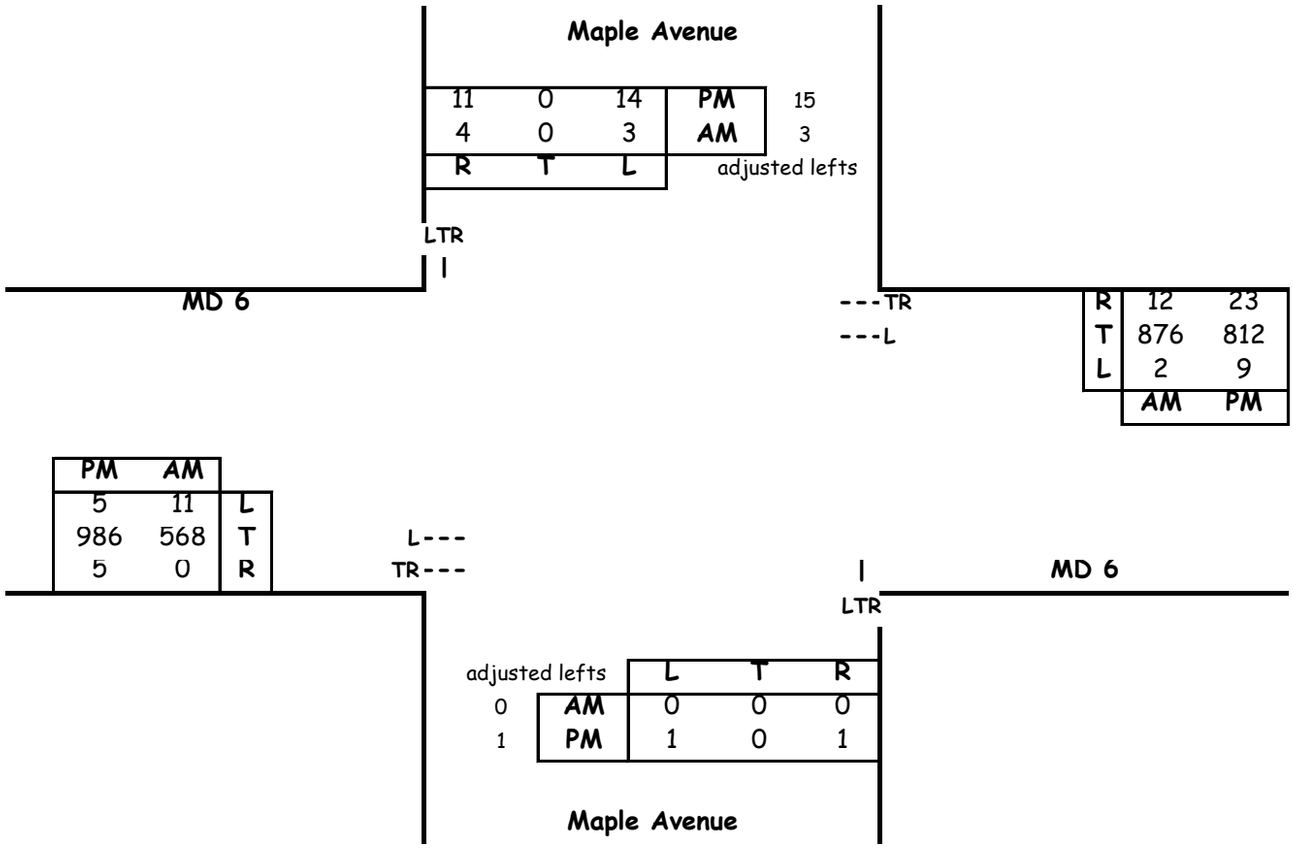
Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	41	1.00	41	0	1	0	41
SB	0	1.00	0	13	1	13	
EB	871	1	871	38	1	38	909
WB	782	1	782	0	1	0	
					CLV TOTAL=		950
					Level of Service (LOS)=		A

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 6 & Driveway (Total Traffic)	Intersection **9**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Maple Avenue
Study Period: Existing Traffic

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	0	1.00	0	3	1	3	7
SB	7	1.00	7	0	1	0	
EB	568	1	568	2	1	2	899
WB	888	1	888	11	1	11	

CLV TOTAL= **906**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	2	1.00	2	14	1	14	27
SB	26	1.00	26	1	1	1	
EB	991	1	991	9	1	9	1000
WB	835	1	835	5	1	5	

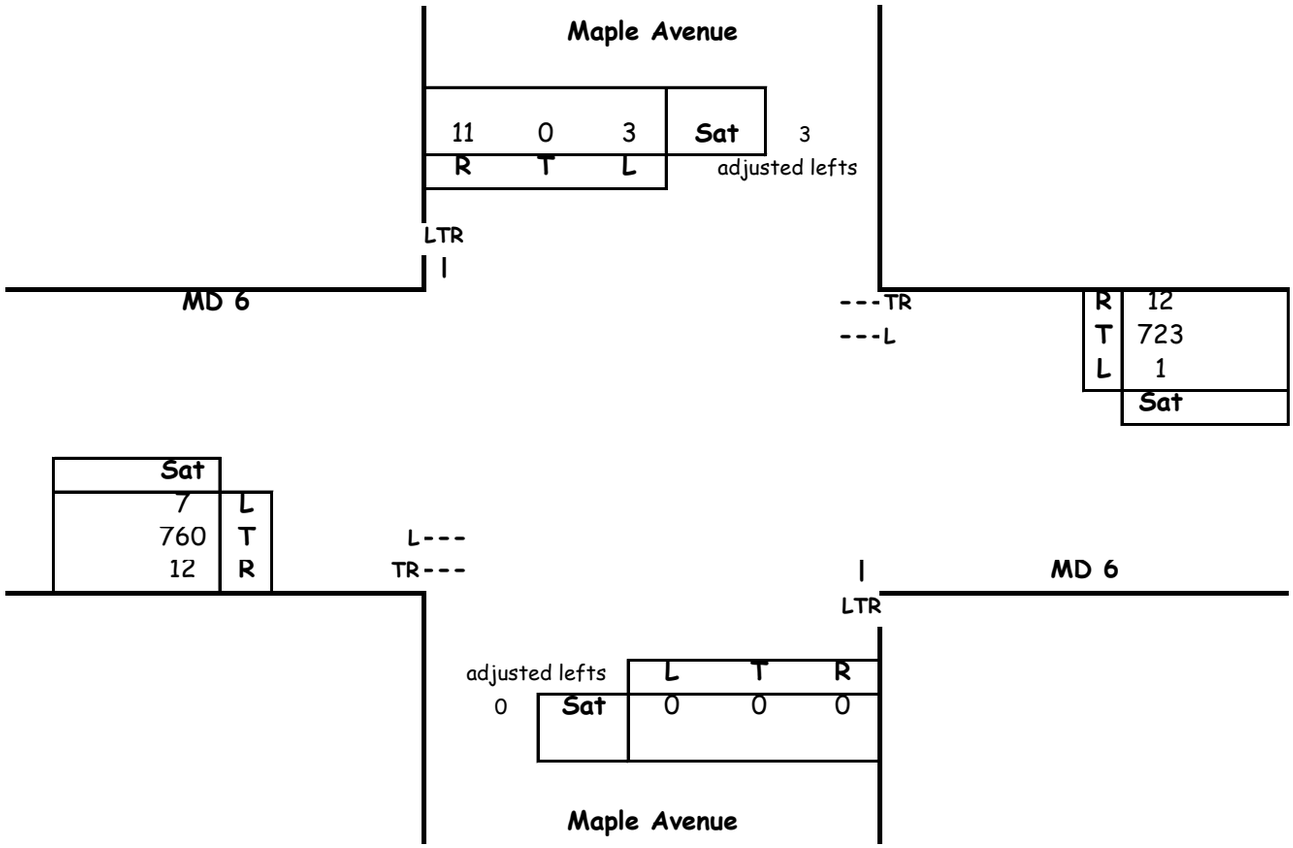
CLV TOTAL= **1027**
Level of Service (LOS)= **B**

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 6 & Maple Avenue (Existing Traffic)	Intersection **10**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Maple Avenue
Study Period: Existing Traffic

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

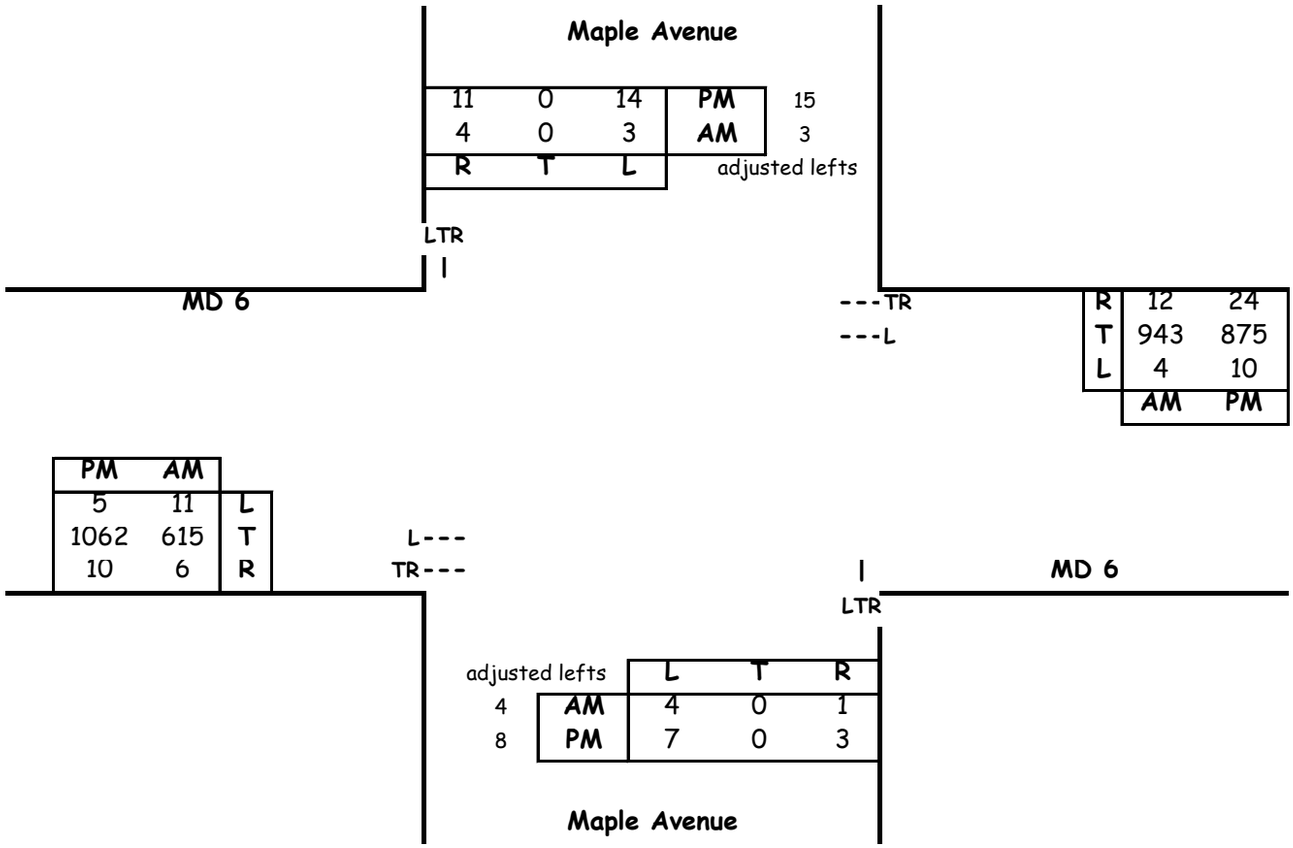
Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	0	1.00	0	3	1	3	14
SB	14	1.00	14	0	1	0	
EB	772	1	772	1	1	1	773
WB	735	1	735	7	1	7	
						CLV TOTAL=	**787**
						Level of Service (LOS)=	**A**

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 6 & Maple Avenue (Existing Traffic)	Intersection **10**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Maple Avenue
Study Period: Background Traffic

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	5	1.00	5	3	1	3	
							11
SB	7	1.00	7	4	1	4	
EB	621	1	621	4	1	4	
							966
WB	955	1	955	11	1	11	

CLV TOTAL= **977**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	11	1.00	11	14	1	14	
							33
SB	26	1.00	26	7	1	7	
EB	1072	1	1072	10	1	10	
							1082
WB	899	1	899	5	1	5	

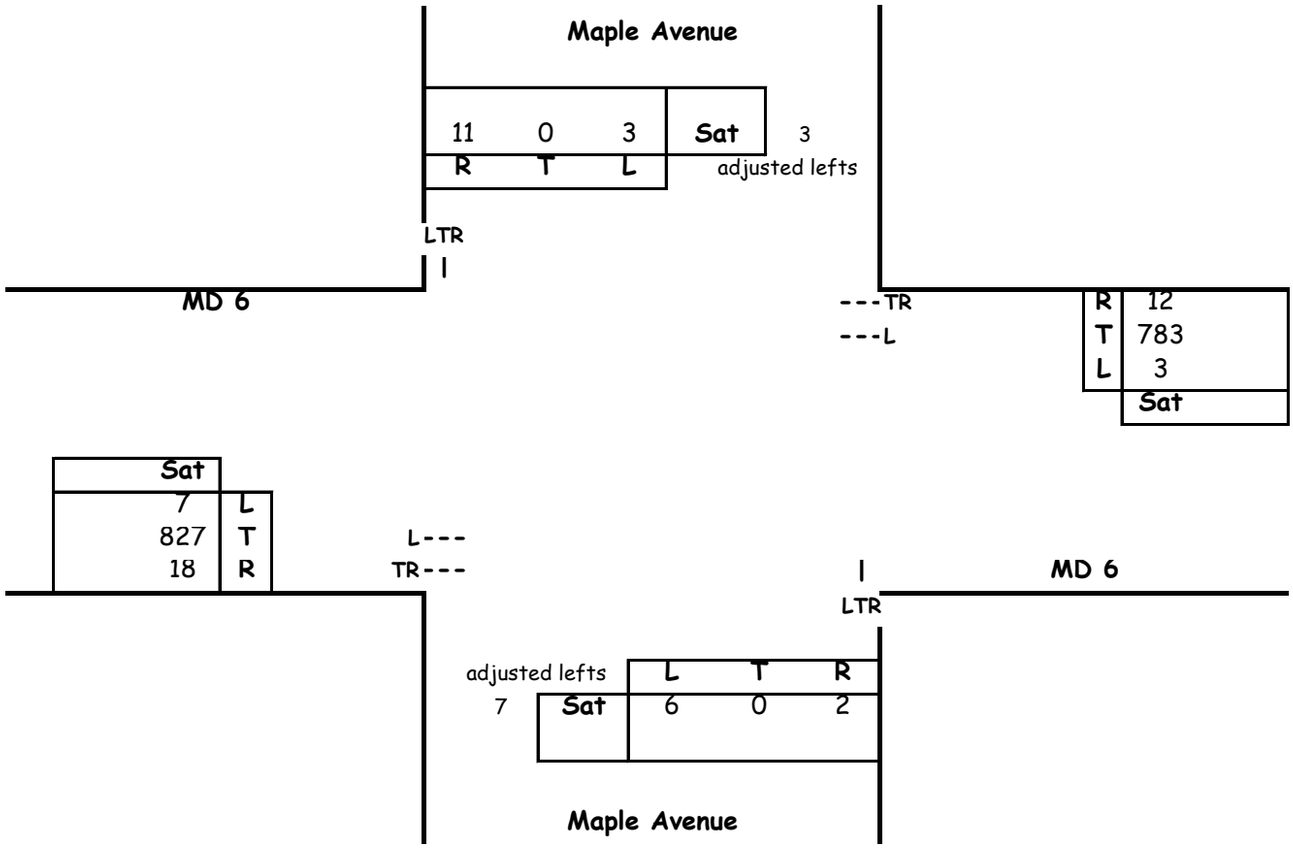
CLV TOTAL= **1115**
Level of Service (LOS)= **B**

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 6 & Maple Avenue (Background Traffic)	Intersection **10**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Maple Avenue
Study Period: Background Traffic

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	9	1.00	9	3	1	3	20
SB	14	1.00	14	6	1	6	
EB	845	1	845	3	1	3	848
WB	795	1	795	7	1	7	
						CLV TOTAL=	**868**
						Level of Service (LOS)=	**A**

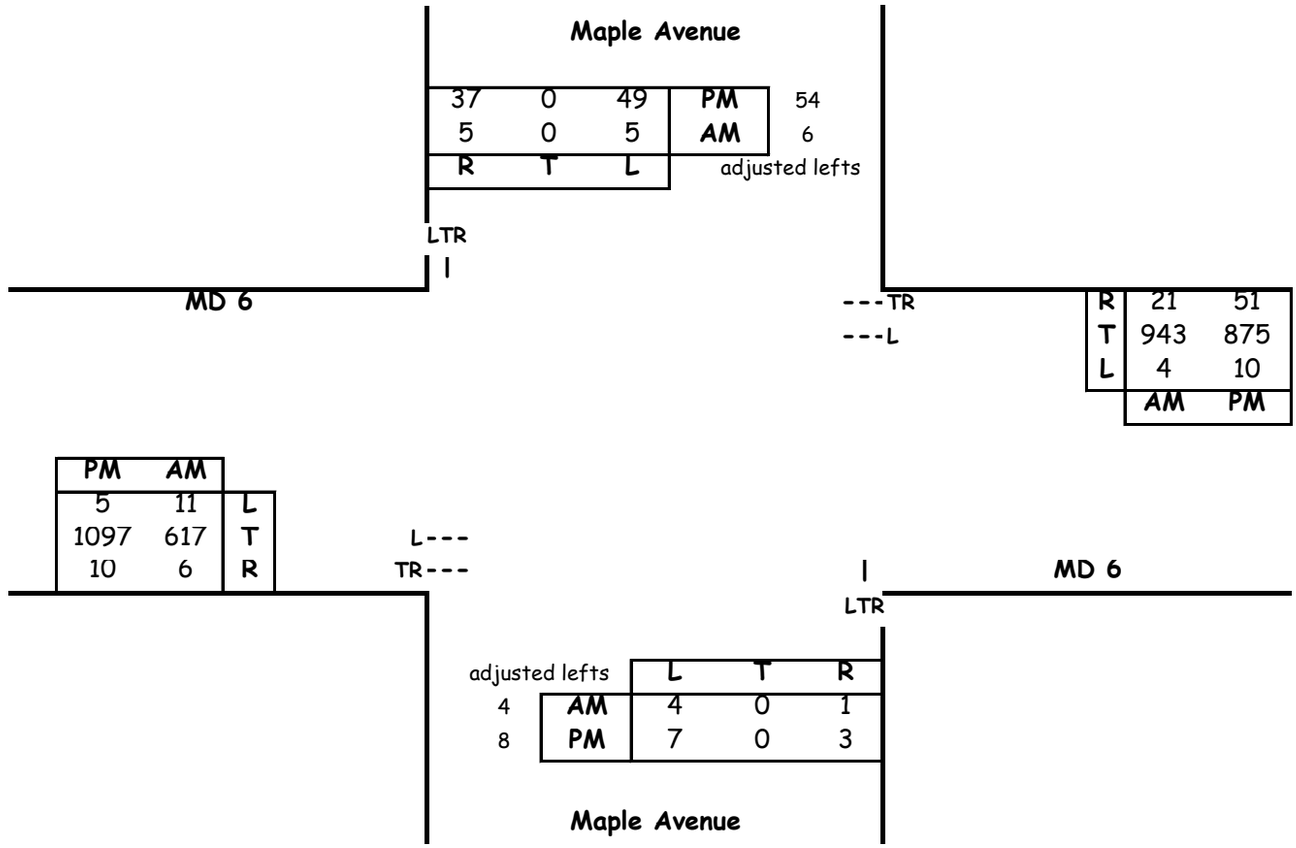
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 6 & Maple Avenue (Background Traffic)	Intersection **10**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6
and: Maple Avenue
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	5	1.00	5	5	1	5	15
SB	11	1.00	11	4	1	4	
EB	623	1	623	4	1	4	975
WB	964	1	964	11	1	11	

CLV TOTAL= **990**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	11	1.00	11	49	1	49	98
SB	91	1.00	91	7	1	7	
EB	1107	1	1107	10	1	10	1117
WB	926	1	926	5	1	5	

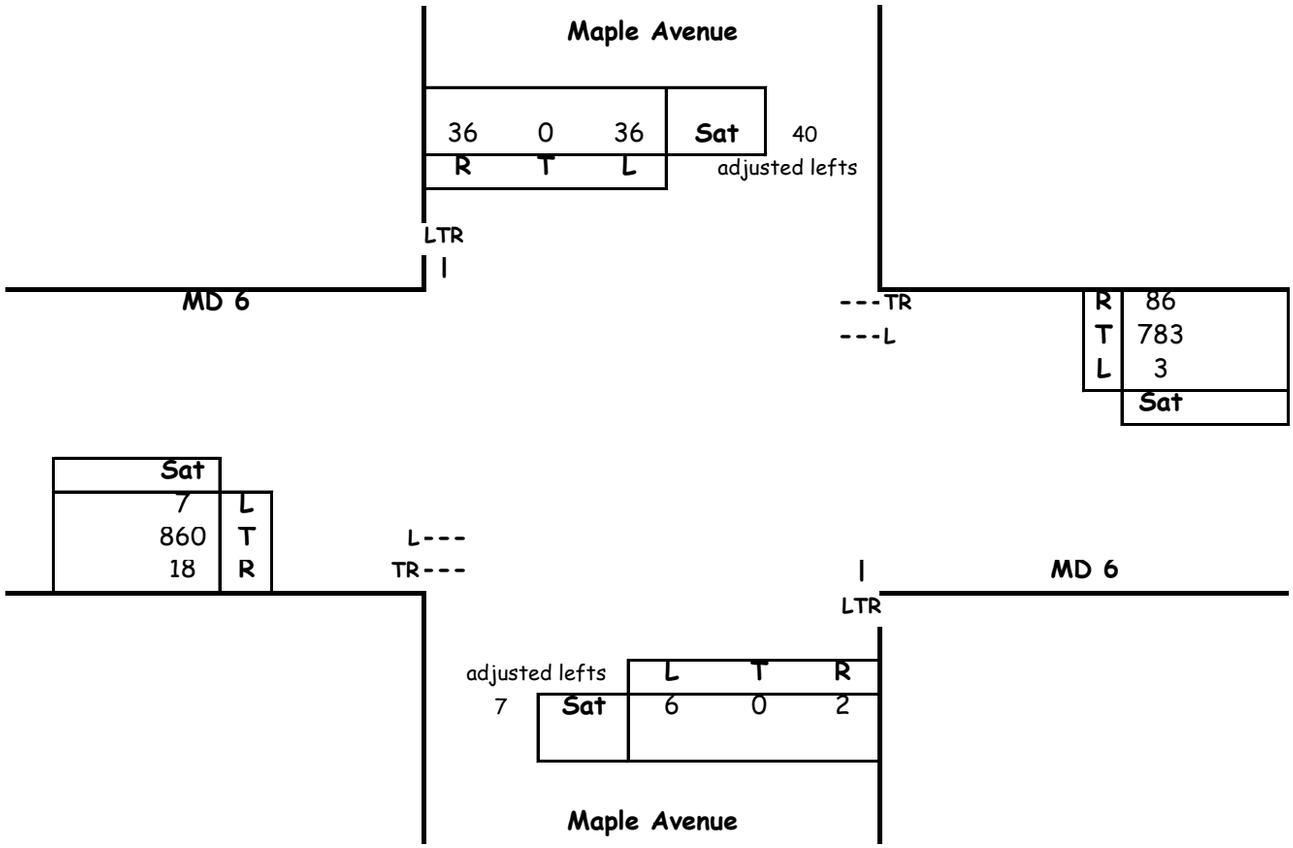
CLV TOTAL= **1215**
Level of Service (LOS)= **C**

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 6 & Maple Avenue (Total Traffic)	Intersection **10**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Maple Avenue
Study Period: Total Traffic

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

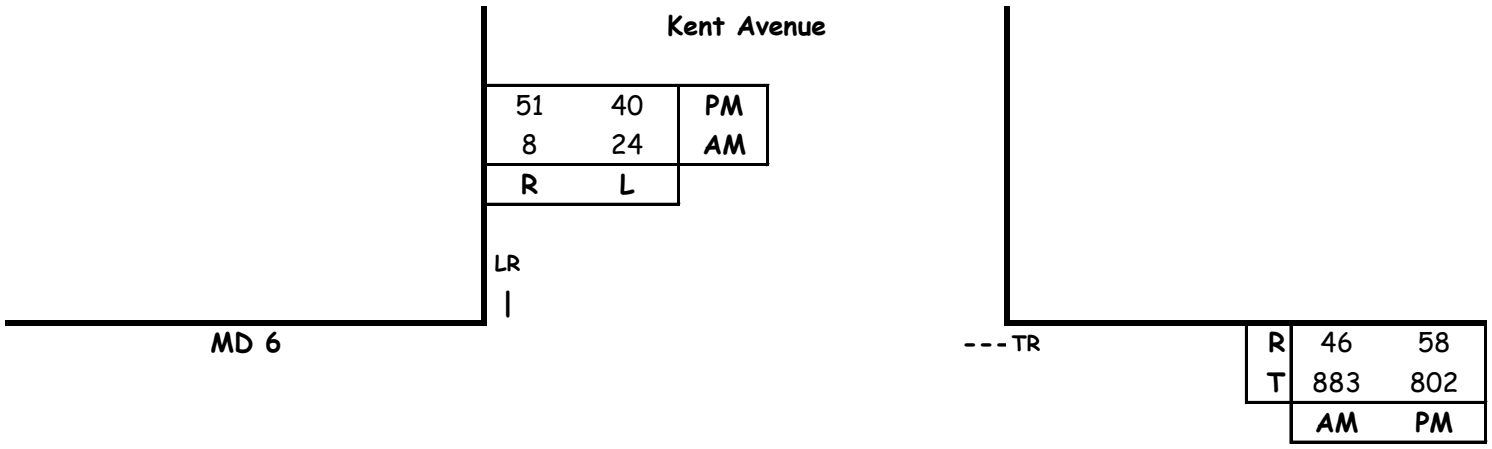
Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	9	1.00	9	36	1	36	82
SB	76	1.00	76	6	1	6	
EB	878	1	878	3	1	3	881
WB	869	1	869	7	1	7	
					CLV TOTAL=		963
					Level of Service (LOS)=		A

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 6 & Maple Avenue (Total Traffic)	Intersection **10**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Kent Avenue
Study Period: Existing Traffic

Lane Use + Traffic Volumes



PM	AM		
31	32	L	L---
962	537	T	T--- MD 6

Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
SB	32	1.00	32				32
EB	537	1.00	537				961
WB	929	1.00	929	32	1.00	32	
					CLV TOTAL=		**993**
					Level of Service (LOS)=		**A**

Evening Peak Hour

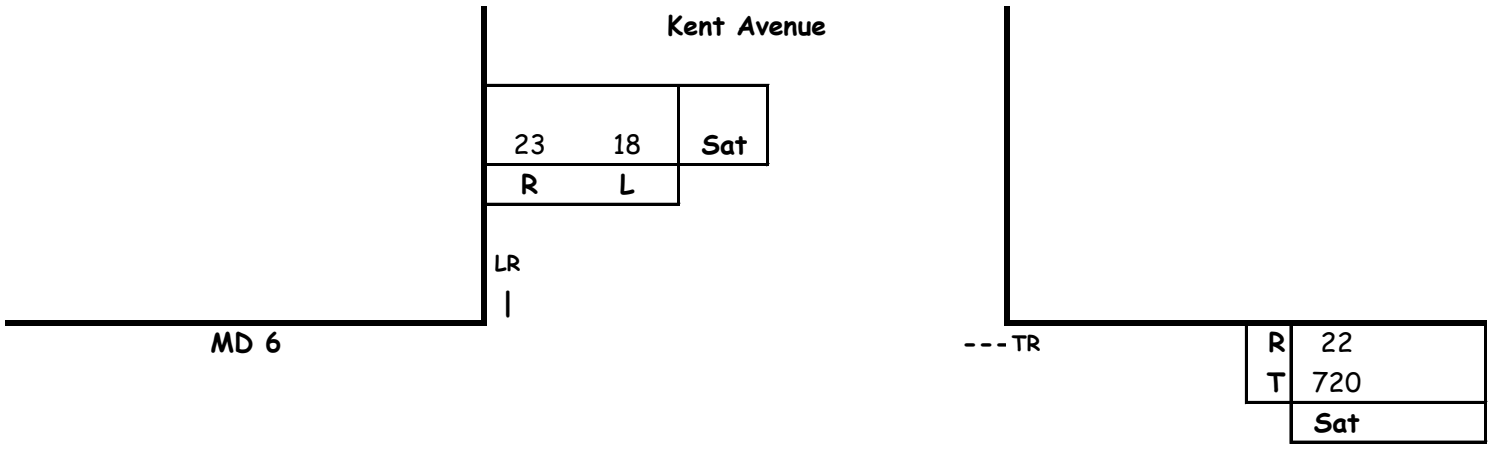
Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
SB	91	1.00	91				91
EB	962	1.00	962				962
WB	860	1.00	860	31	1.00	31	
					CLV TOTAL=		**1053**
					Level of Service (LOS)=		**B**

Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	MD 6 & Kent Avenue (Existing Traffic)	Intersection **11**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Kent Avenue
Study Period: Existing Traffic

Lane Use + Traffic Volumes



Sat		
20	L	L---
737	T	T---

MD 6

Capacity Analysis

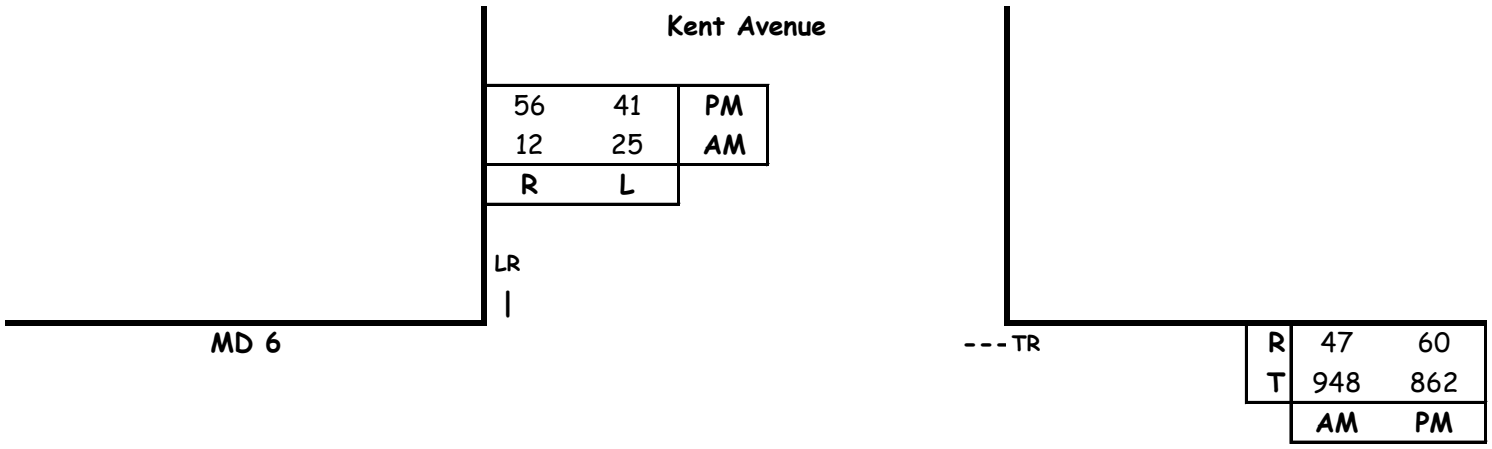
Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
SB	41	1.00	41				41
EB	737	1.00	737				762
WB	742	1.00	742	20	1.00	20	
					CLV TOTAL=		803
					Level of Service (LOS)=		A

Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	MD 6 & Kent Avenue (Existing Traffic)	Intersection **11**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Kent Avenue
Study Period: Background Traffic

Lane Use + Traffic Volumes



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
SB	37	1.00	37				37
EB	583	1.00	583				1029
WB	995	1.00	995	34	1.00	34	

CLV TOTAL= **1066**
Level of Service (LOS)= **B**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
SB	97	1.00	97				97
EB	1035	1.00	1035				1035
WB	922	1.00	922	36	1.00	36	

CLV TOTAL= **1132**
Level of Service (LOS)= **B**

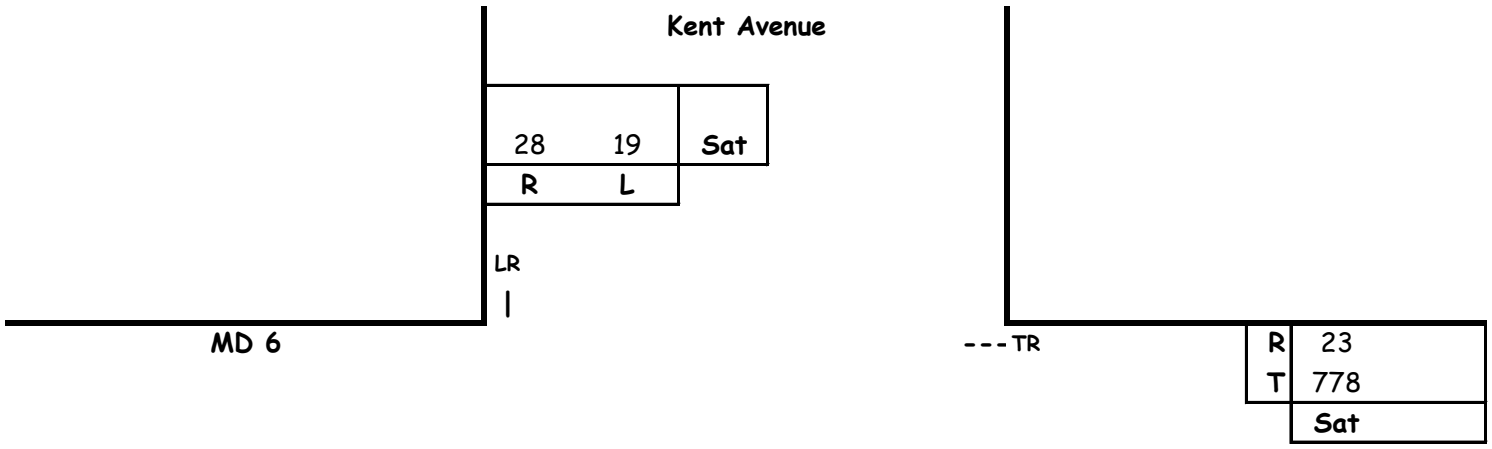
Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	MD 6 & Kent Avenue (Background Traffic)

Intersection **11**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Kent Avenue
Study Period: Background Traffic

Lane Use + Traffic Volumes



Sat			
25	L	L---	
801	T	T---	MD 6

Capacity Analysis

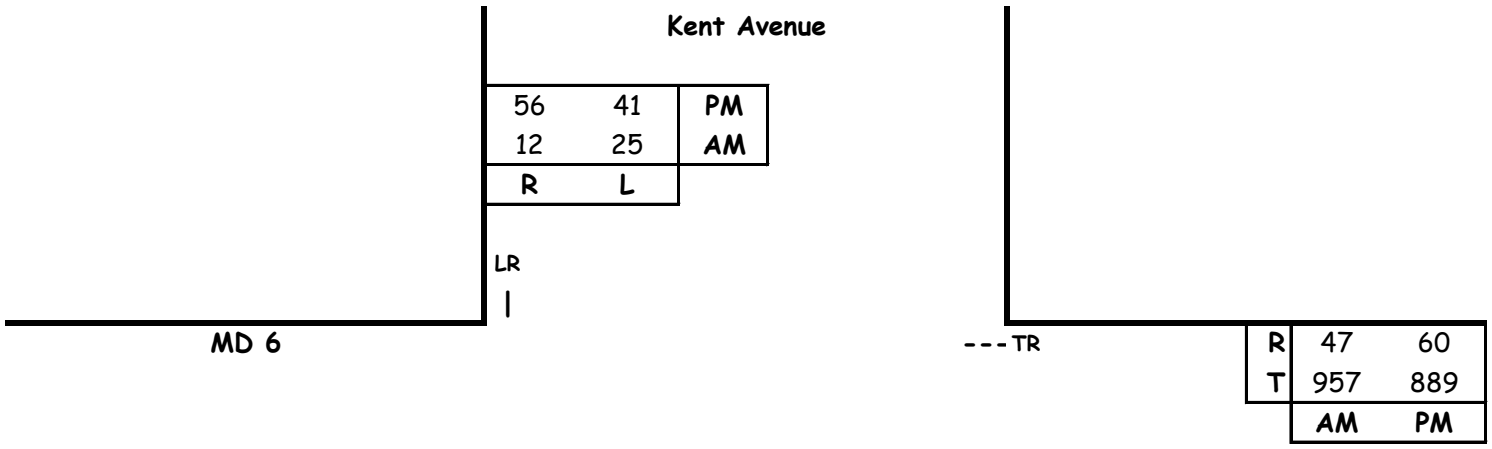
Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
SB	47	1.00	47				47
EB	801	1.00	801				826
WB	801	1.00	801	25	1.00	25	
					CLV TOTAL=		873
					Level of Service (LOS)=		A

Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	MD 6 & Kent Avenue (Background Traffic)	Intersection **11**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Kent Avenue
Study Period: Total Traffic

Lane Use + Traffic Volumes



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
SB	37	1.00	37				37
EB	587	1.00	587				1038
WB	1004	1.00	1004	34	1.00	34	

CLV TOTAL= **1075**
Level of Service (LOS)= **B**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
SB	97	1.00	97				97
EB	1105	1.00	1105				1105
WB	949	1.00	949	36	1.00	36	

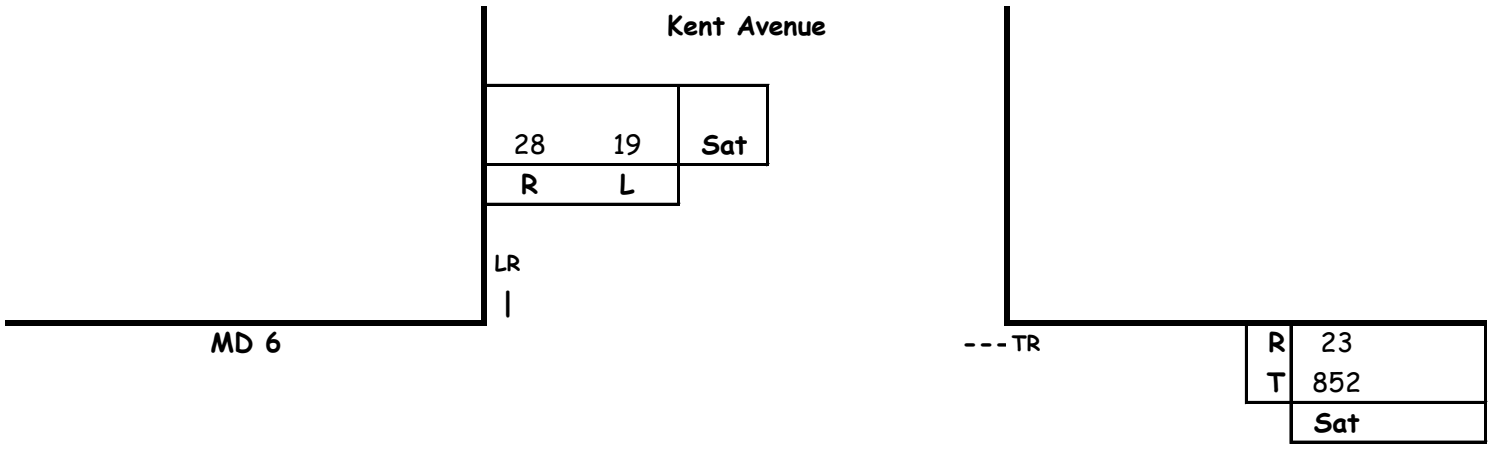
CLV TOTAL= **1202**
Level of Service (LOS)= **C**

Critical Lane Volume Analysis		MD 6 & Kent Avenue (Total Traffic)	Intersection 11
Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N		

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Kent Avenue
Study Period: Total Traffic

Lane Use + Traffic Volumes



Sat			
25	L	L---	
867	T	T---	MD 6

Capacity Analysis

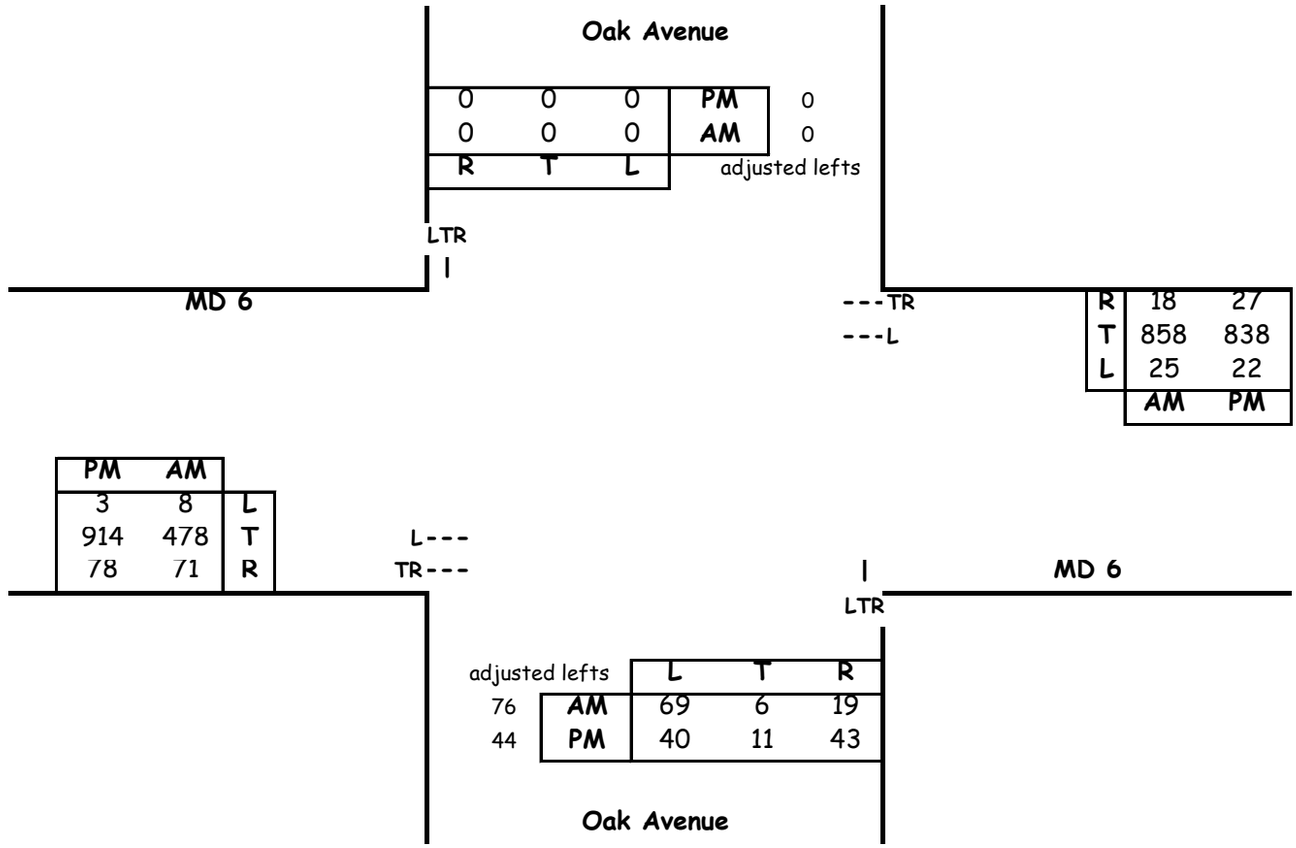
Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
SB	47	1.00	47				47
EB	867	1.00	867				900
WB	875	1.00	875	25	1.00	25	
					CLV TOTAL=		947
					Level of Service (LOS)=		A

Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	MD 6 & Kent Avenue (Total Traffic)	Intersection **11**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Oak Avenue
Study Period: Existing Traffic

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	101	1.00	101	0	1	0	101
SB	0	1.00	0	69	1	69	
EB	549	1	549	25	1	25	884
WB	876	1	876	8	1	8	

CLV TOTAL= **985**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	98	1.00	98	0	1	0	98
SB	0	1.00	0	40	1	40	
EB	992	1	992	22	1	22	1014
WB	865	1	865	3	1	3	

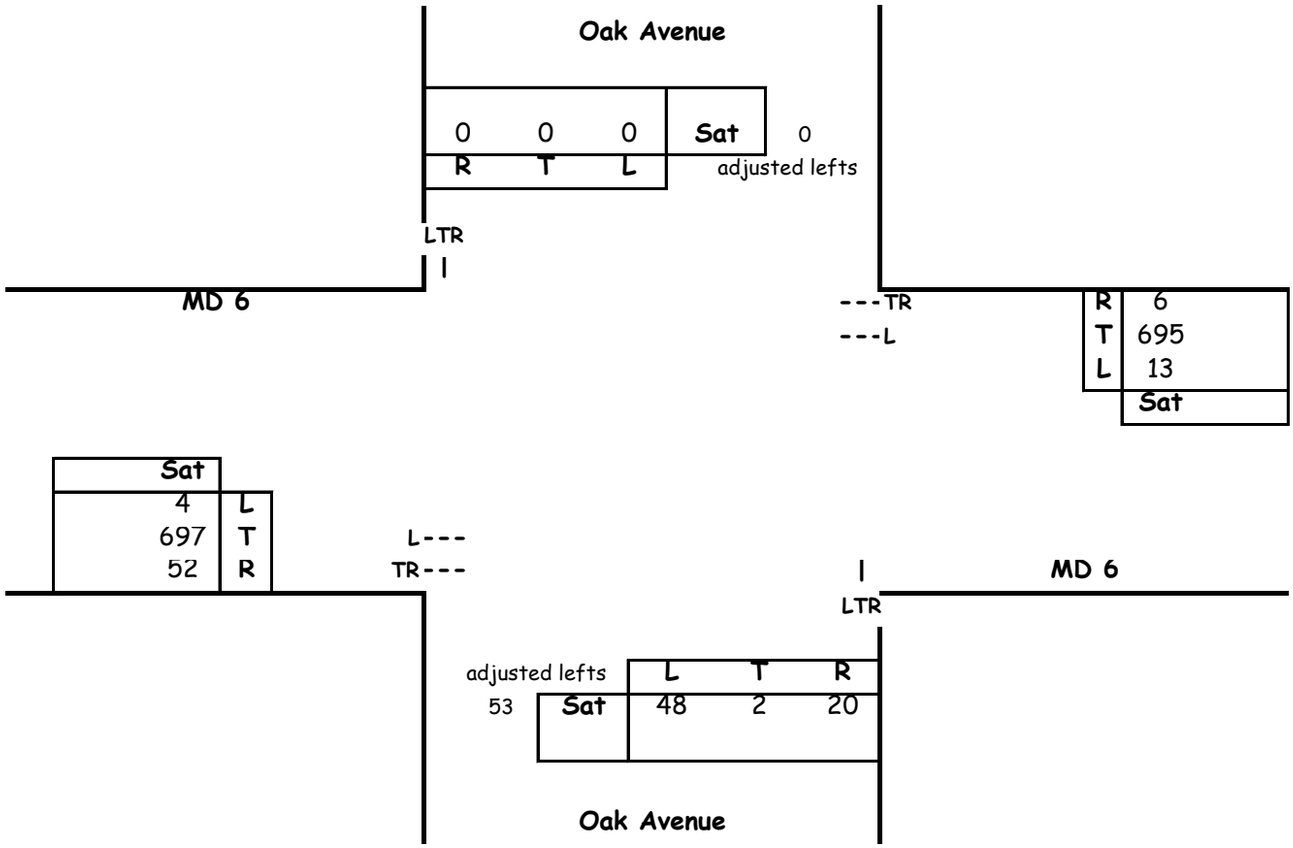
CLV TOTAL= **1112**
Level of Service (LOS)= **B**

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 6 & Oak Avenue (Existing Traffic)	Intersection **12**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Oak Avenue
Study Period: Existing Traffic

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

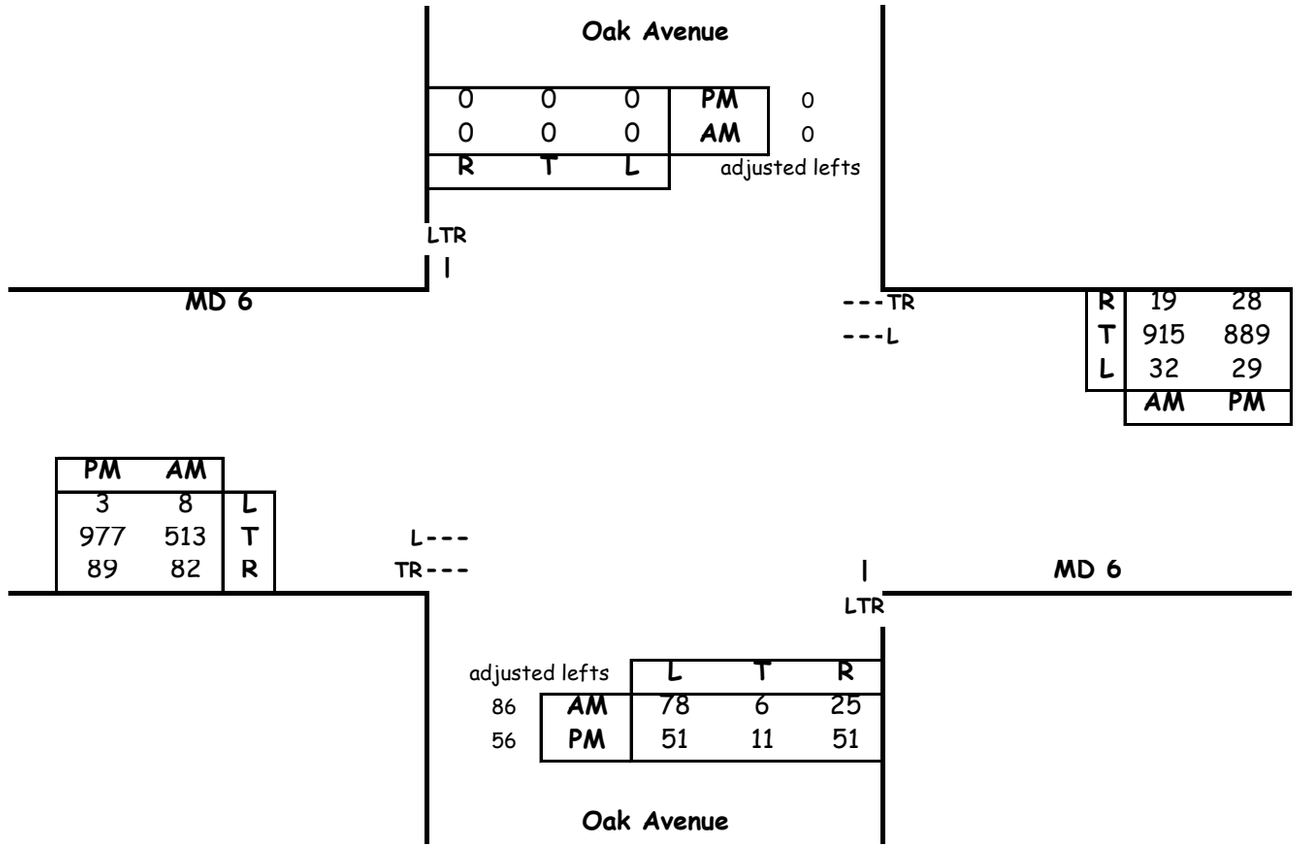
Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	75	1.00	75	0	1	0	75
SB	0	1.00	0	48	1	48	
EB	749	1	749	13	1	13	762
WB	701	1	701	4	1	4	
						CLV TOTAL=	**837**
						Level of Service (LOS)=	**A**

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 6 & Oak Avenue (Existing Traffic)	Intersection **12**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Oak Avenue
Study Period: Background Traffic

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	117	1.00	117	0	1	0	117
SB	0	1.00	0	78	1	78	
EB	595	1	595	32	1	32	942
WB	934	1	934	8	1	8	

CLV TOTAL= **1059**
Level of Service (LOS)= **B**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	118	1.00	118	0	1	0	118
SB	0	1.00	0	51	1	51	
EB	1066	1	1066	29	1	29	1095
WB	917	1	917	3	1	3	

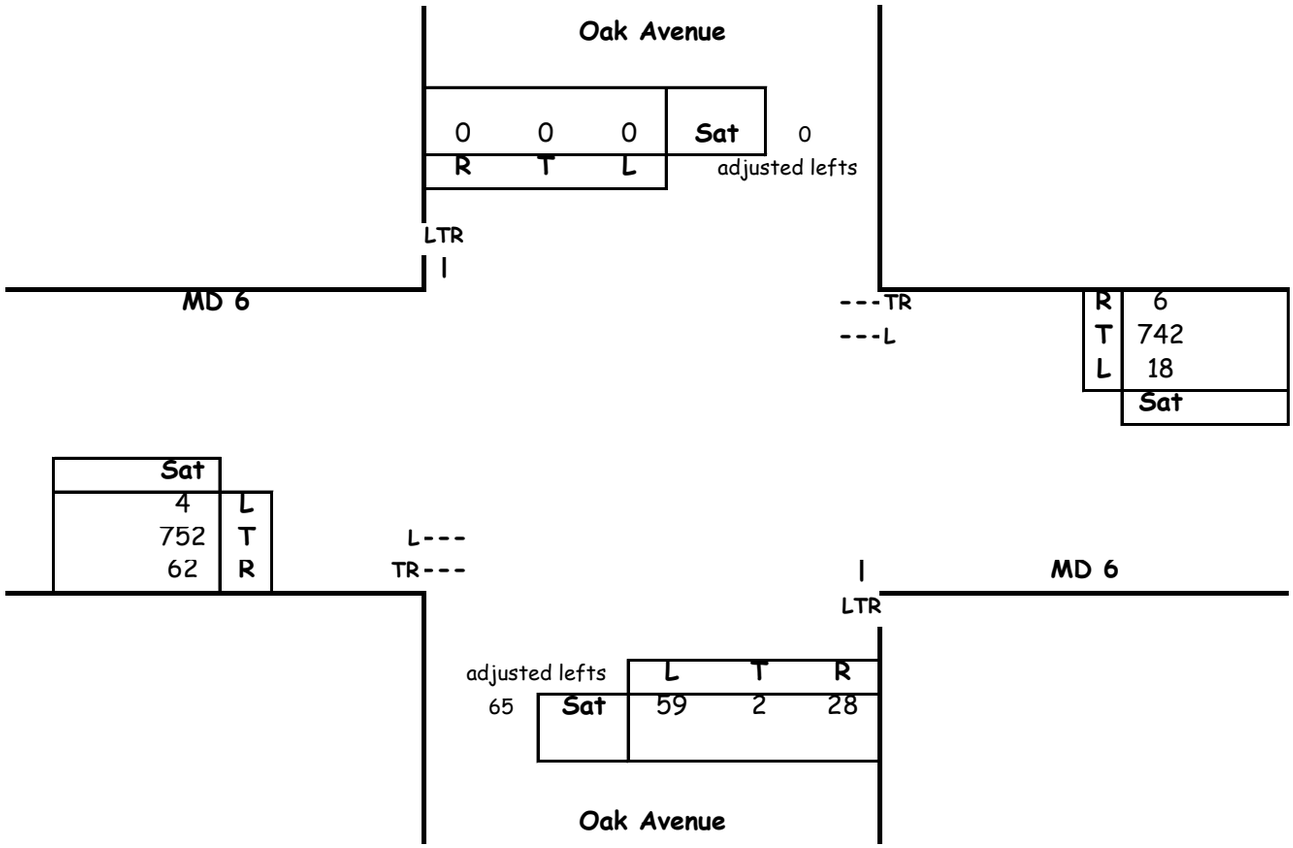
CLV TOTAL= **1213**
Level of Service (LOS)= **C**

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 6 & Oak Avenue (Background Traffic)	Intersection **12**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Oak Avenue
Study Period: Background Traffic

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

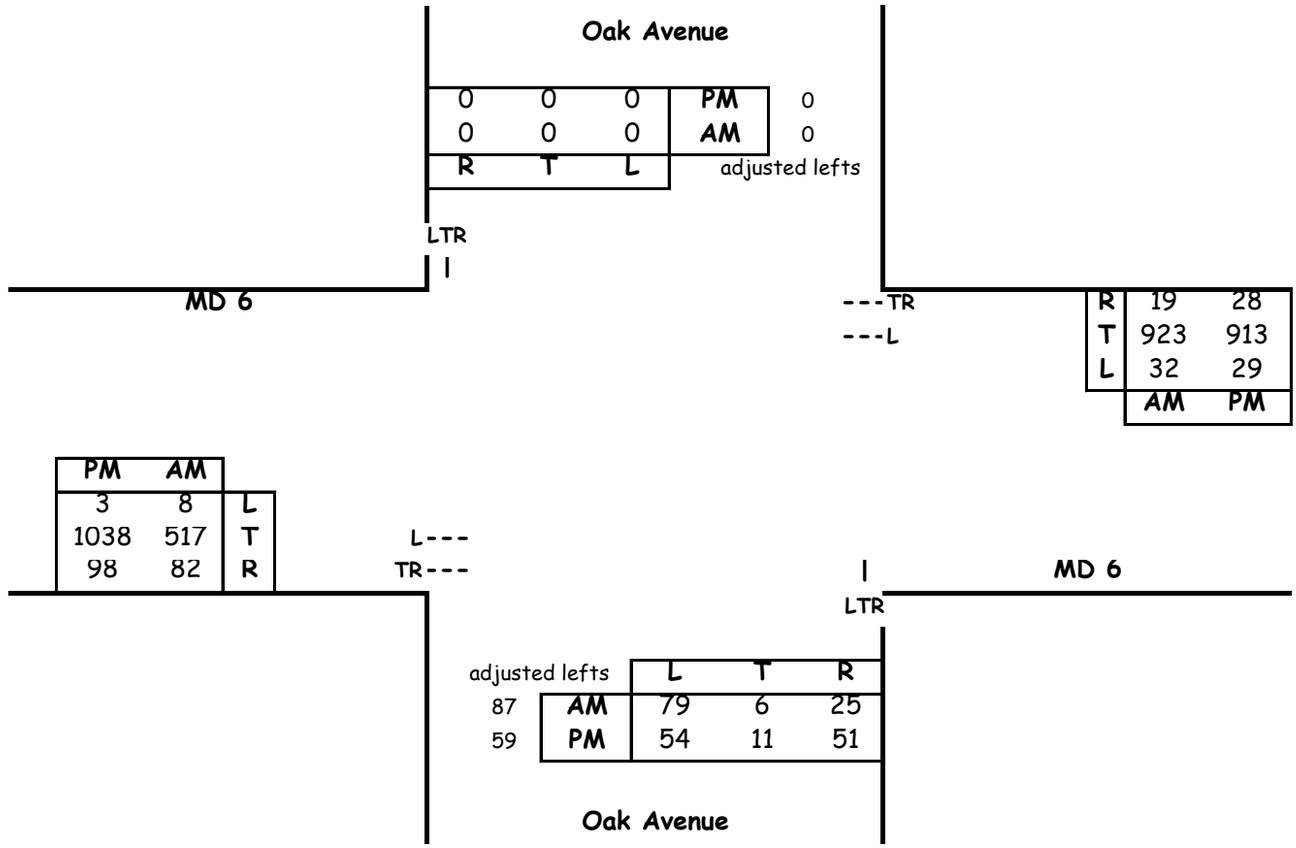
Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	95	1.00	95	0	1	0	95
SB	0	1.00	0	59	1	59	
EB	814	1	814	18	1	18	832
WB	748	1	748	4	1	4	
					CLV TOTAL=		**927**
					Level of Service (LOS)=		**A**

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 6 & Oak Avenue (Background Traffic)	Intersection **12**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Oak Avenue
Study Period: Total Traffic

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	118	1.00	118	0	1	0	118
SB	0	1.00	0	79	1	79	
EB	599	1	599	32	1	32	950
WB	942	1	942	8	1	8	

CLV TOTAL= **1068**
Level of Service (LOS)= **B**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	121	1.00	121	0	1	0	121
SB	0	1.00	0	54	1	54	
EB	1136	1	1136	29	1	29	1165
WB	941	1	941	3	1	3	

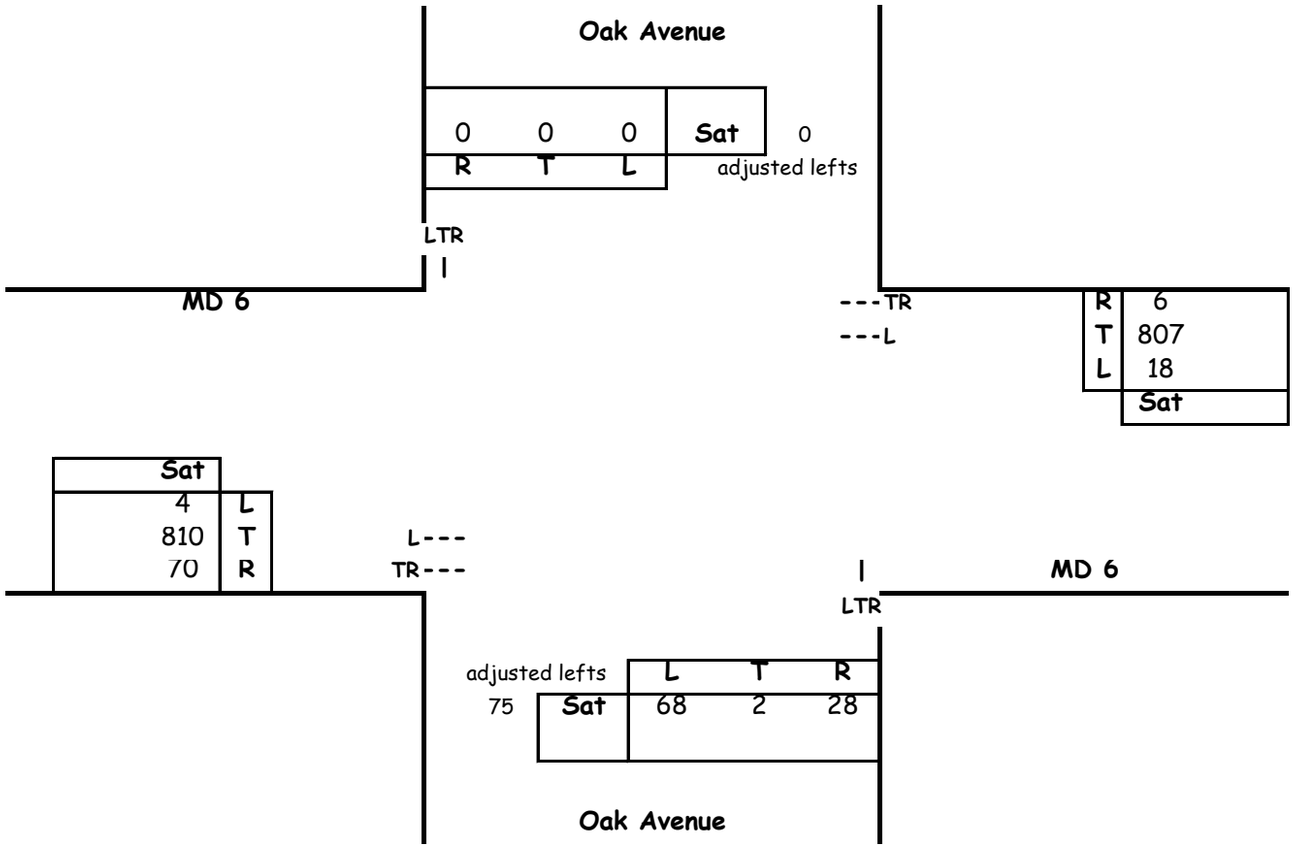
CLV TOTAL= **1286**
Level of Service (LOS)= **C**

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 6 & Oak Avenue (Total Traffic)	Intersection **12**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Oak Avenue
Study Period: Total Traffic

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	105	1.00	105	0	1	0	105
SB	0	1.00	0	68	1	68	
EB	880	1	880	18	1	18	898
WB	813	1	813	4	1	4	
					CLV TOTAL=		1003
					Level of Service (LOS)=		B

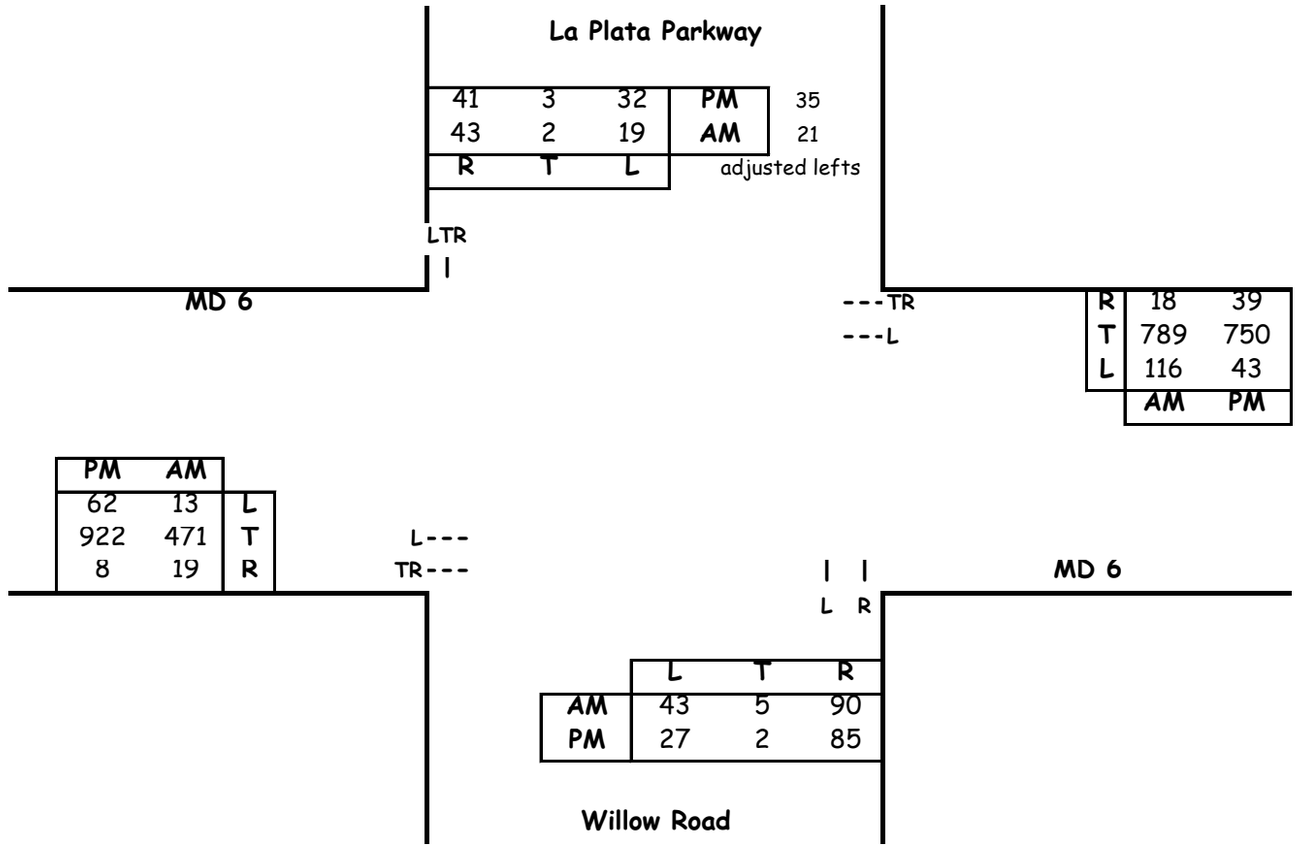
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 6 & Oak Avenue (Total Traffic)	Intersection **12**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Willow Road
and: MD 6
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	5	0.00	0	19	1	19	109
SB	66	1.00	66	43	1	43	
EB	490	1	490	116	1	116	820
WB	807	1	807	13	1	13	

CLV TOTAL= **929**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	42	1.00	42	32	1	32	106
SB	79	1.00	79	27	1	27	
EB	930	1	930	43	1	43	973
WB	789	1	789	62	1	62	

CLV TOTAL= **1079**
Level of Service (LOS)= **B**

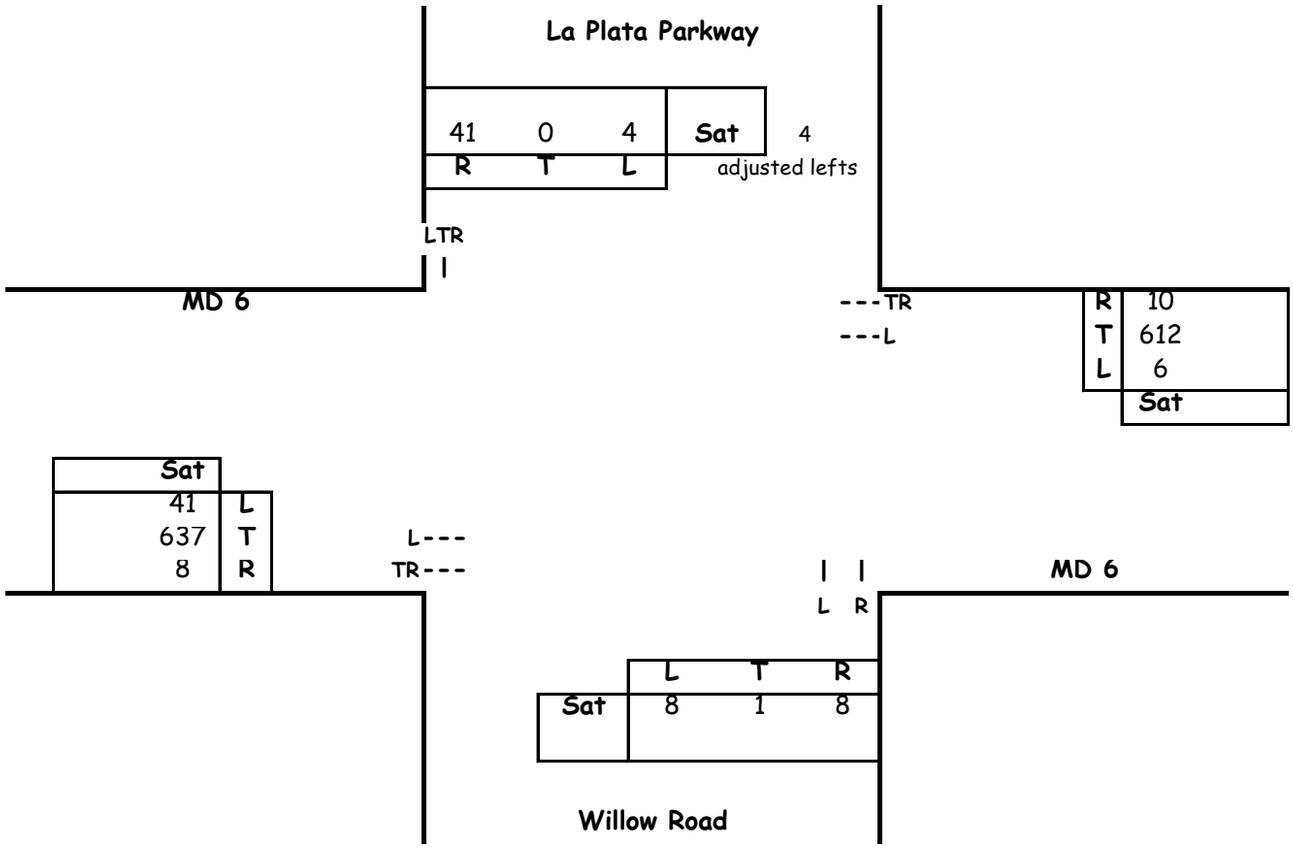
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	Willow Road & MD 6 (Existing Traffic)	Intersection **13**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Willow Road
and: MD 6
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	2	1.00	2	4	1	4	53
SB	45	1.00	45	8	1	8	
EB	645	1	645	6	1	6	663
WB	622	1	622	41	1	41	
						CLV TOTAL=	**716**
						Level of Service (LOS)=	**A**

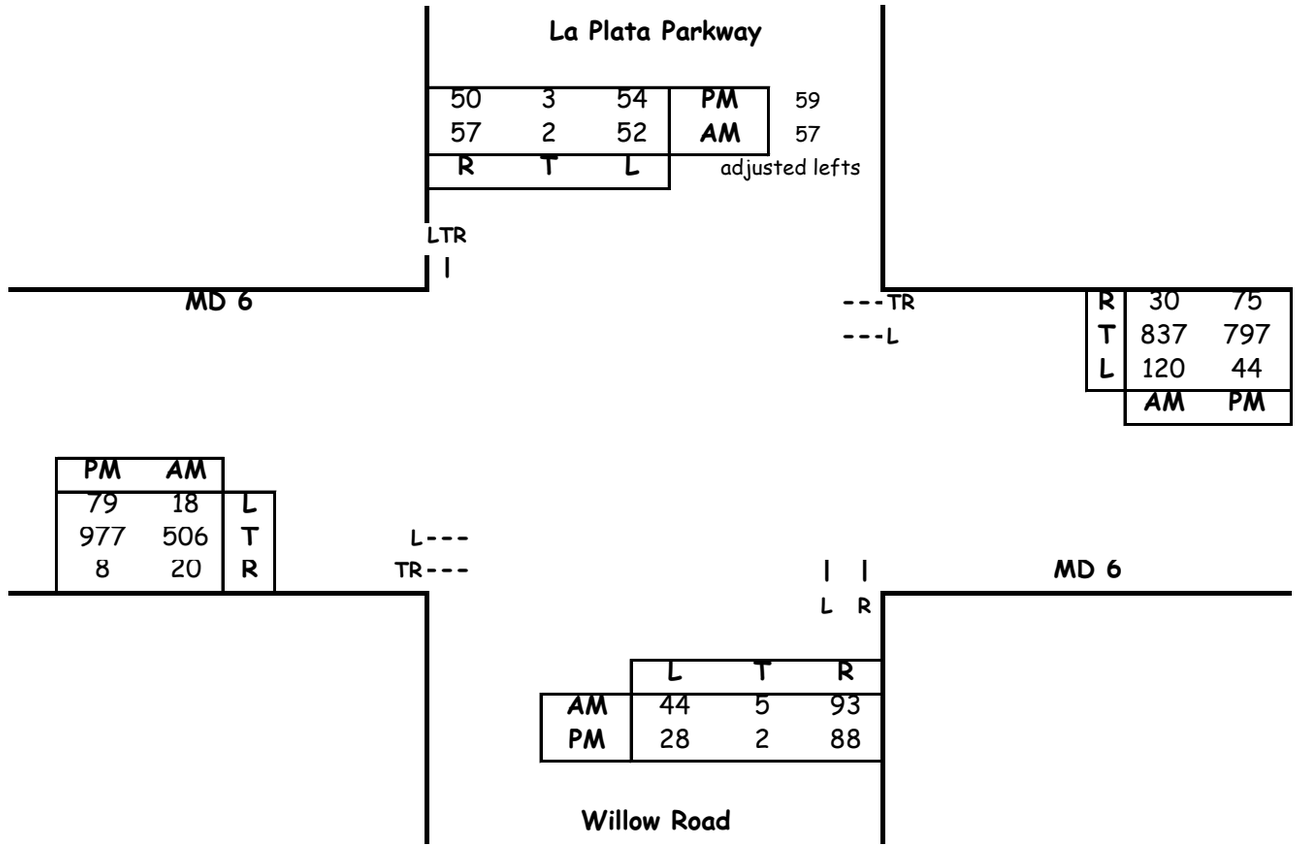
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	Willow Road & MD 6 (Existing Traffic)	Intersection **13**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Willow Road
and: MD 6
Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	5	0.00	0	52	1	52	160
SB	116	1.00	116	44	1	44	
EB	526	1	526	120	1	120	885
WB	867	1	867	18	1	18	

CLV TOTAL= **1045**
Level of Service (LOS)= **B**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	44	1.00	44	54	1	54	140
SB	112	1.00	112	28	1	28	
EB	985	1	985	44	1	44	1029
WB	872	1	872	79	1	79	

CLV TOTAL= **1169**
Level of Service (LOS)= **C**

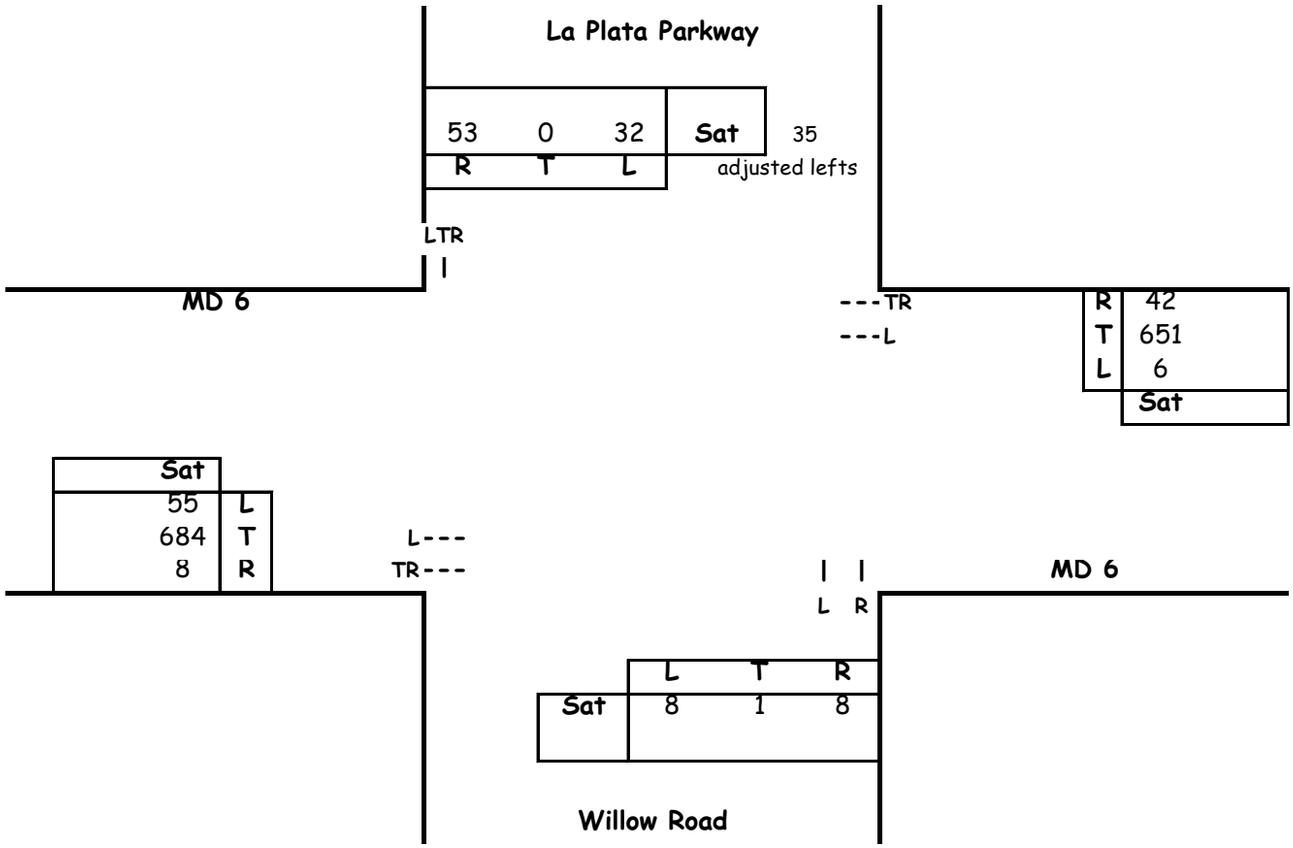
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	Willow Road & MD 6 (Background Traffic)	Intersection **13**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Willow Road
and: MD 6
Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	2	1.00	2	32	1	32	96
SB	88	1.00	88	8	1	8	
EB	692	1	692	6	1	6	748
WB	693	1	693	55	1	55	
						CLV TOTAL=	**844**
						Level of Service (LOS)=	**A**

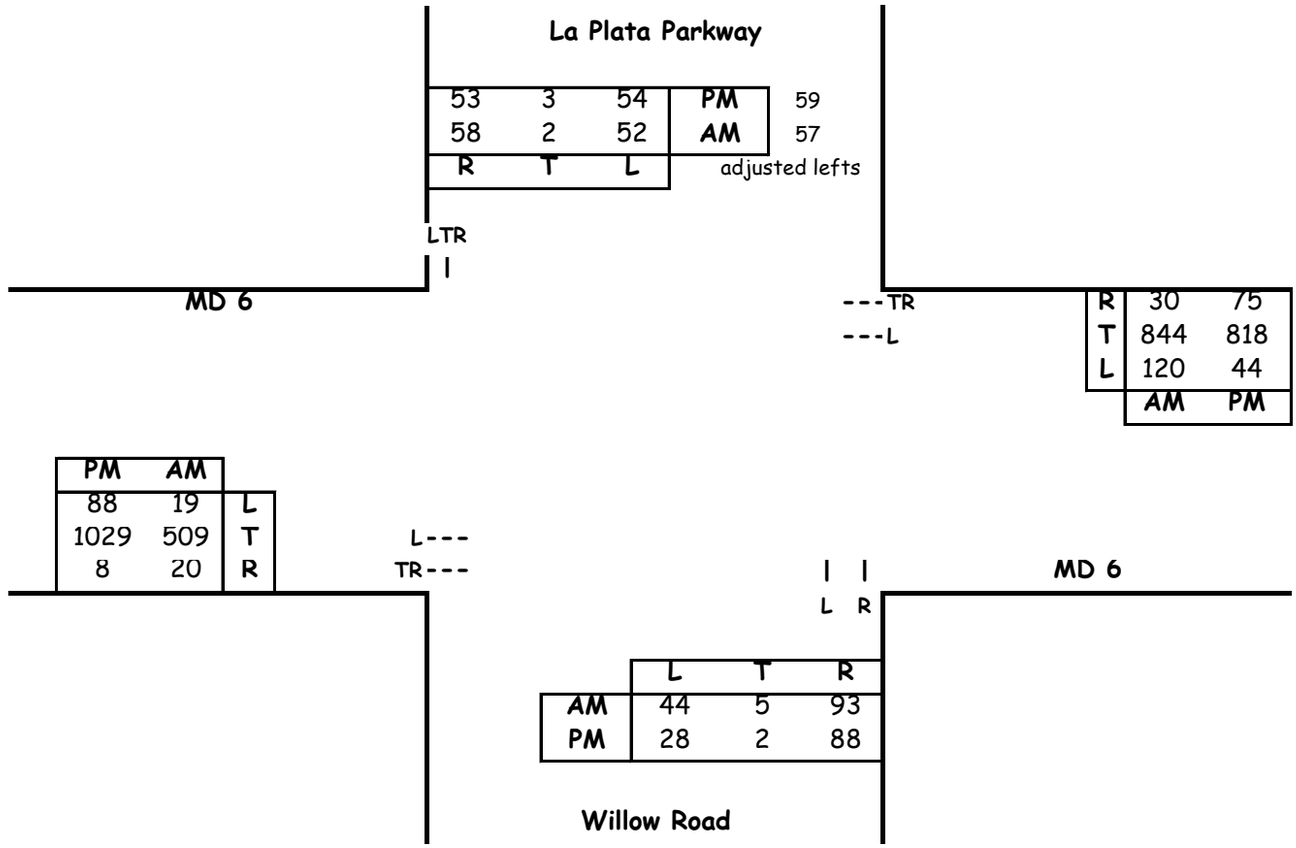
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	Willow Road & MD 6 (Background Traffic)	Intersection **13**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Willow Road
and: MD 6
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	5	0.00	0	52	1	52	161
SB	117	1.00	117	44	1	44	
EB	529	1	529	120	1	120	893
WB	874	1	874	19	1	19	

CLV TOTAL= **1054**
Level of Service (LOS)= **B**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	44	1.00	44	54	1	54	143
SB	115	1.00	115	28	1	28	
EB	1037	1	1037	44	1	44	1081
WB	893	1	893	88	1	88	

CLV TOTAL= **1224**
Level of Service (LOS)= **C**

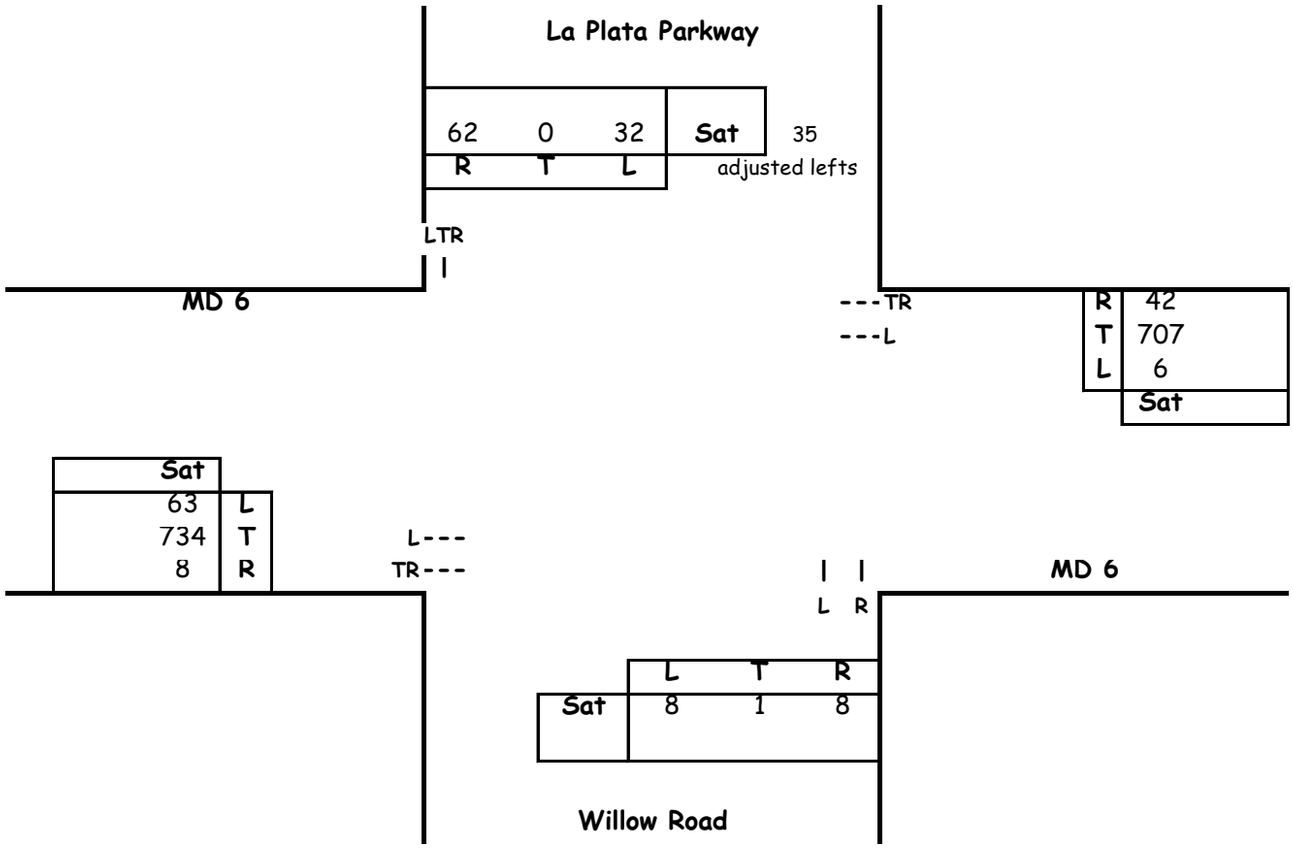
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	Willow Road & MD 6 (Total Traffic)	Intersection **13**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Willow Road
and: MD 6
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

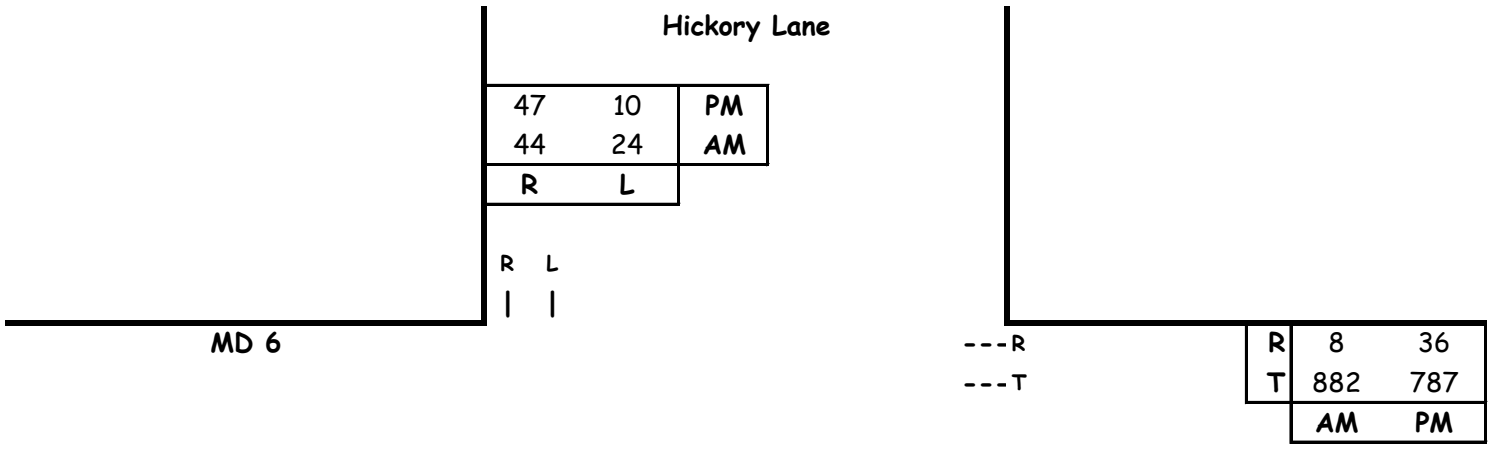
Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	2	1.00	2	32	1	32	105
SB	97	1.00	97	8	1	8	
EB	742	1	742	6	1	6	812
WB	749	1	749	63	1	63	
						CLV TOTAL=	**917**
						Level of Service (LOS)=	**A**

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	Willow Road & MD 6 (Total Traffic)	Intersection **13**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Hickory Lane
Study Period: Existing Traffic

Lane Use + Traffic Volumes



PM	AM		
46	9	L	L---
956	580	T	T--- MD 6

Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
SB	35	1.00	35				35
EB	580	1.00	580				891
WB	882	1.00	882	9	1.00	9	
					CLV TOTAL=		926
					Level of Service (LOS)=		A

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
SB	10	1.00	10				10
EB	956	1.00	956				956
WB	787	1.00	787	46	1.00	46	
					CLV TOTAL=		966
					Level of Service (LOS)=		A

Critical Lane Volume Analysis

Lenhart Traffic Consulting
Traffic Engineering & Transportation Planning

N

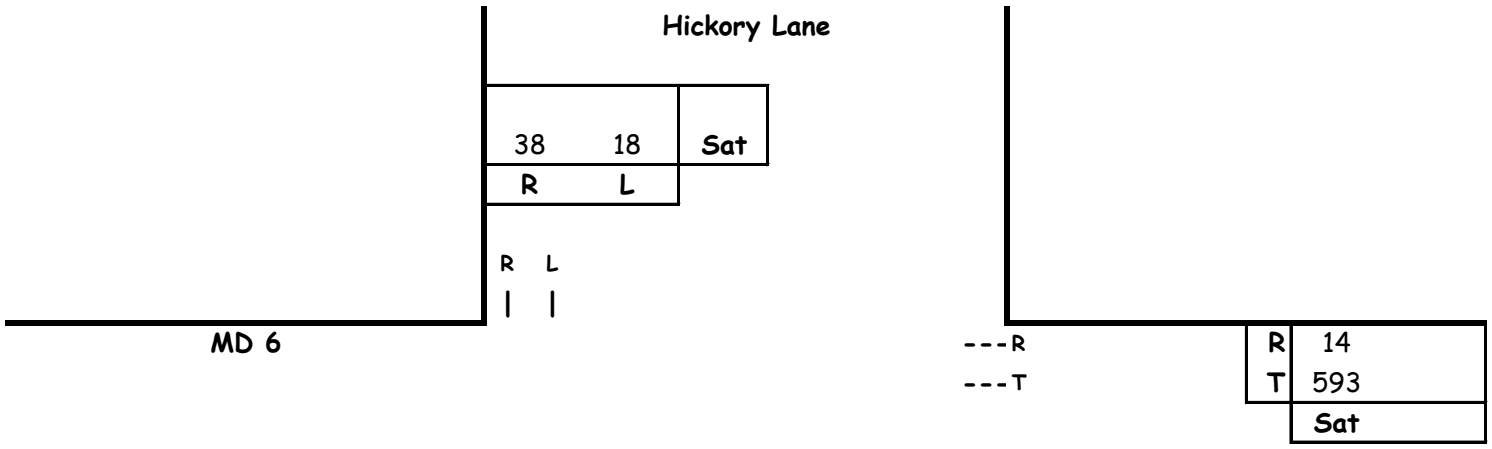
MD 6 &
Hickory Lane
(Existing Traffic)

Intersection
14

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Hickory Lane
Study Period: Existing Traffic

Lane Use + Traffic Volumes



Sat			
34	L	L---	
604	T	T---	MD 6

Capacity Analysis

Sat. Midday Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	Sat CLV
SB	18	1.00	18				18
EB	604	1.00	604				627
WB	593	1.00	593	34	1.00	34	

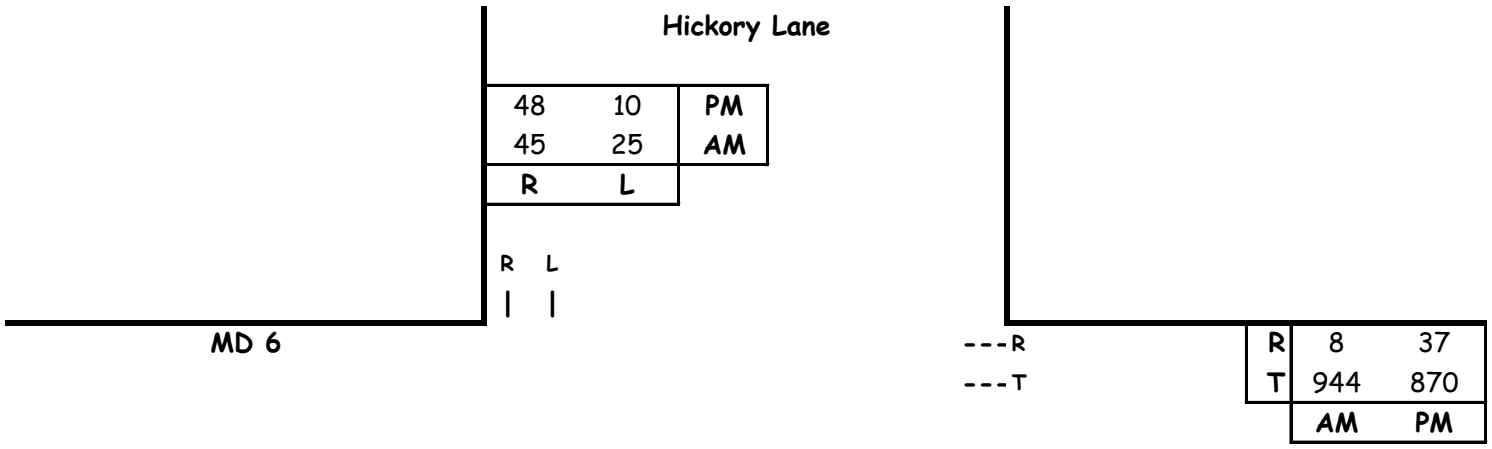
CLV TOTAL= **645**
Level of Service (LOS)= **A**

Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	MD 6 & Hickory Lane (Existing Traffic)	Intersection **14**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Hickory Lane
Study Period: Background Traffic

Lane Use + Traffic Volumes



PM	AM			
47	9	L	L---	
1033	651	T	T---	MD 6

Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
SB	36	1.00	36				36
EB	651	1.00	651				953
WB	944	1.00	944	9	1.00	9	
					CLV TOTAL=		**989**
					Level of Service (LOS)=		**A**

Evening Peak Hour

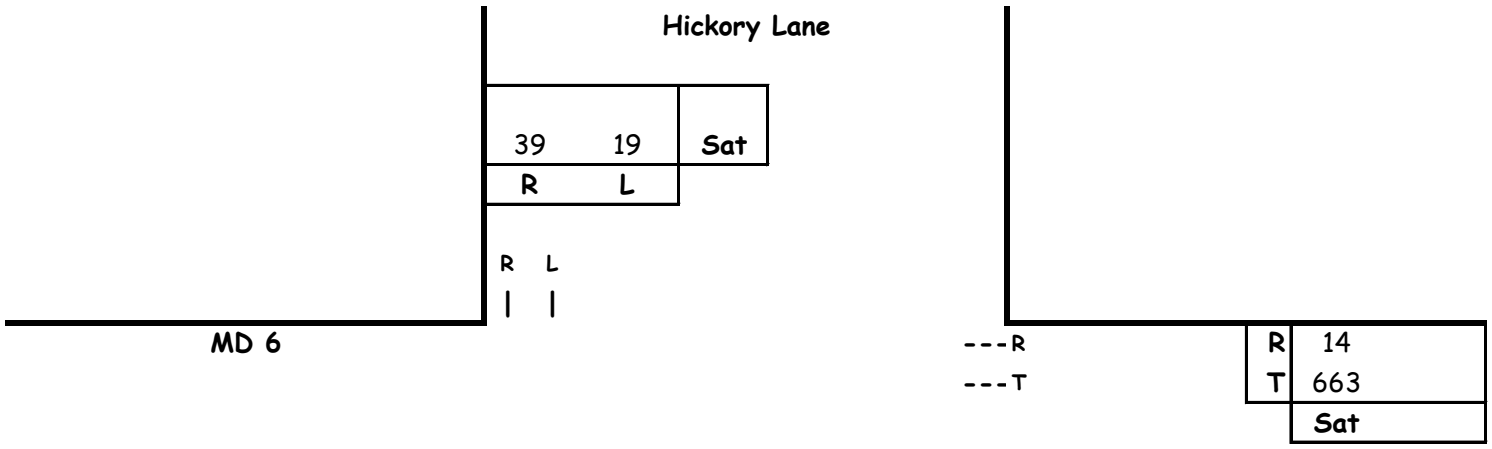
Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
SB	10	1.00	10				10
EB	1033	1.00	1033				1033
WB	870	1.00	870	47	1.00	47	
					CLV TOTAL=		**1043**
					Level of Service (LOS)=		**B**

Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	MD 6 & Hickory Lane (Background Traffic)	Intersection **14**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Hickory Lane
Study Period: Background Traffic

Lane Use + Traffic Volumes



Sat			
35	L	L---	
678	T	T---	MD 6

Capacity Analysis

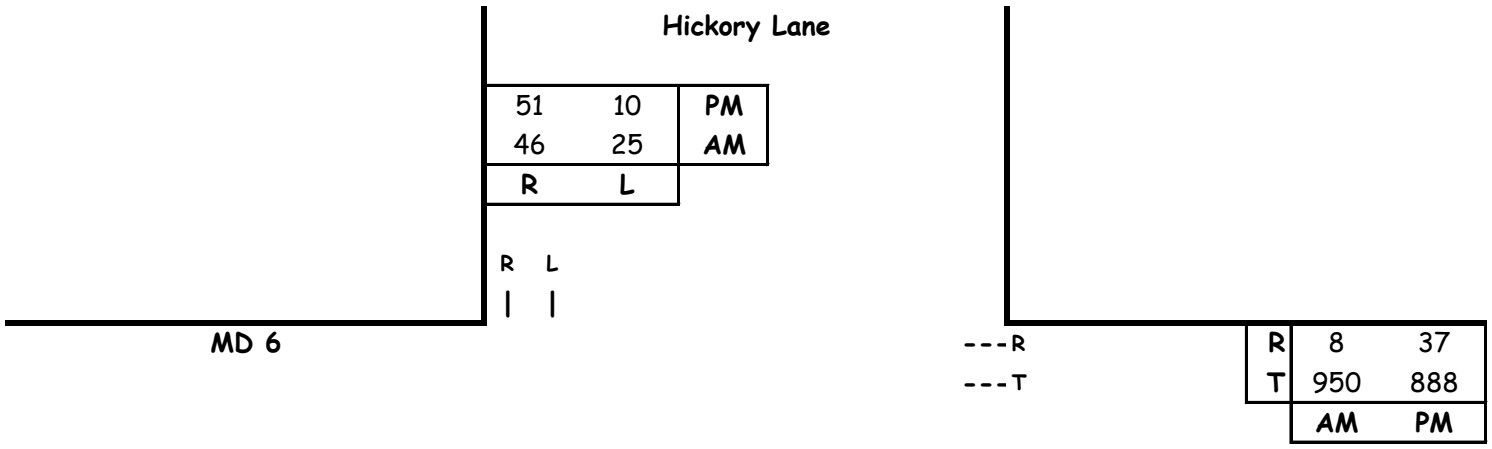
Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
SB	19	1.00	19				19
EB	678	1.00	678				698
WB	663	1.00	663	35	1.00	35	
					CLV TOTAL=		717
					Level of Service (LOS)=		A

Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	MD 6 & Hickory Lane (Background Traffic)	Intersection **14**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6 **Analyst:** Lenhart Traffic Consulting
and: Hickory Lane
Study Period: Total Traffic

Lane Use + Traffic Volumes



PM	AM		
56	10	L	L---
1076	653	T	T---

MD 6

Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
SB	36	1.00	36				36
EB	653	1.00	653				960
WB	950	1.00	950	10	1.00	10	
					CLV TOTAL=		**996**
					Level of Service (LOS)=		**A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
SB	10	1.00	10				10
EB	1076	1.00	1076				1076
WB	888	1.00	888	56	1.00	56	
					CLV TOTAL=		**1086**
					Level of Service (LOS)=		**B**

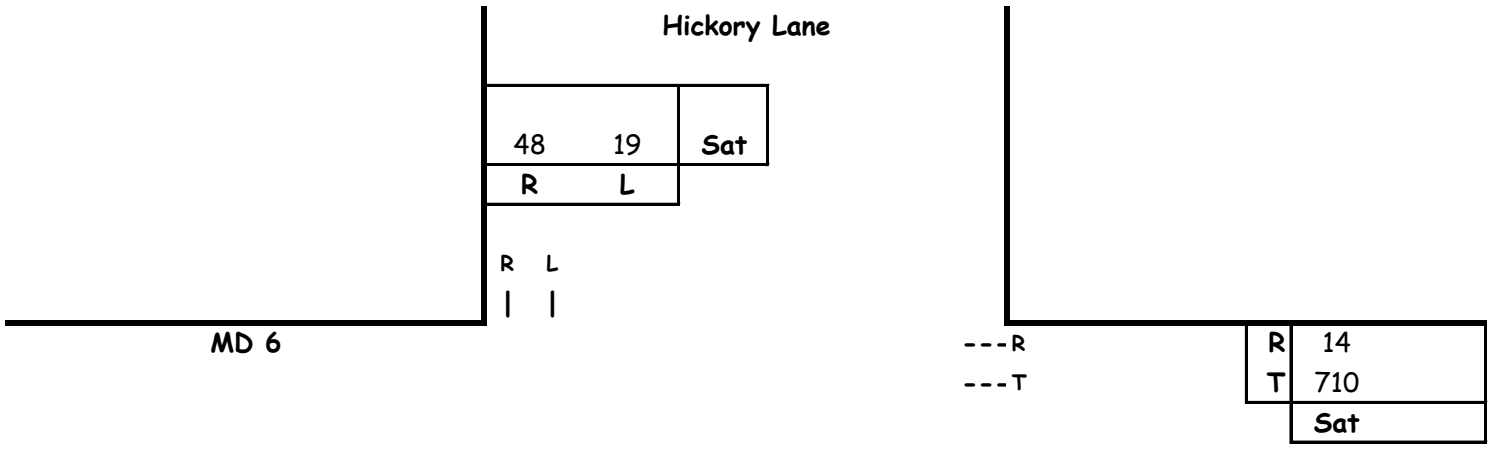
Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	MD 6 & Hickory Lane (Total Traffic)	Intersection **14**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 6
and: Hickory Lane
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Sat		
43	L	L---
720	T	T---

MD 6

Capacity Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
SB	19	1.00	19				19
EB	720	1.00	720				753
WB	710	1.00	710	43	1.00	43	
					CLV TOTAL=		772
					Level of Service (LOS)=		A

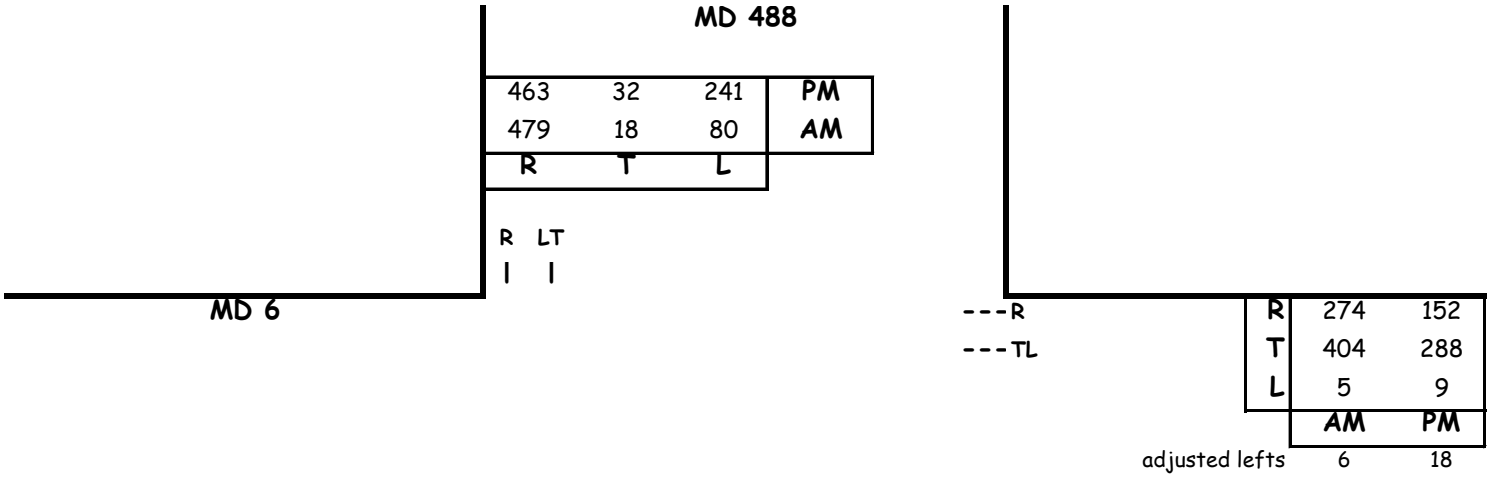
Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	MD 6 & Hickory Lane (Total Traffic)	Intersection **14**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 488
and: MD 6
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis - North/South Split

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	8	1	8				8
SB	98	1	98				98
EB	195	1	195	5	1	5	819
WB	410	1	410	409	1	409	

CLV TOTAL= **925**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	92	1	92				92
SB	273	1	273				273
EB	539	1	539	9	1	9	740
WB	306	1	306	434	1	434	

CLV TOTAL= **1105**
Level of Service (LOS)= **B**

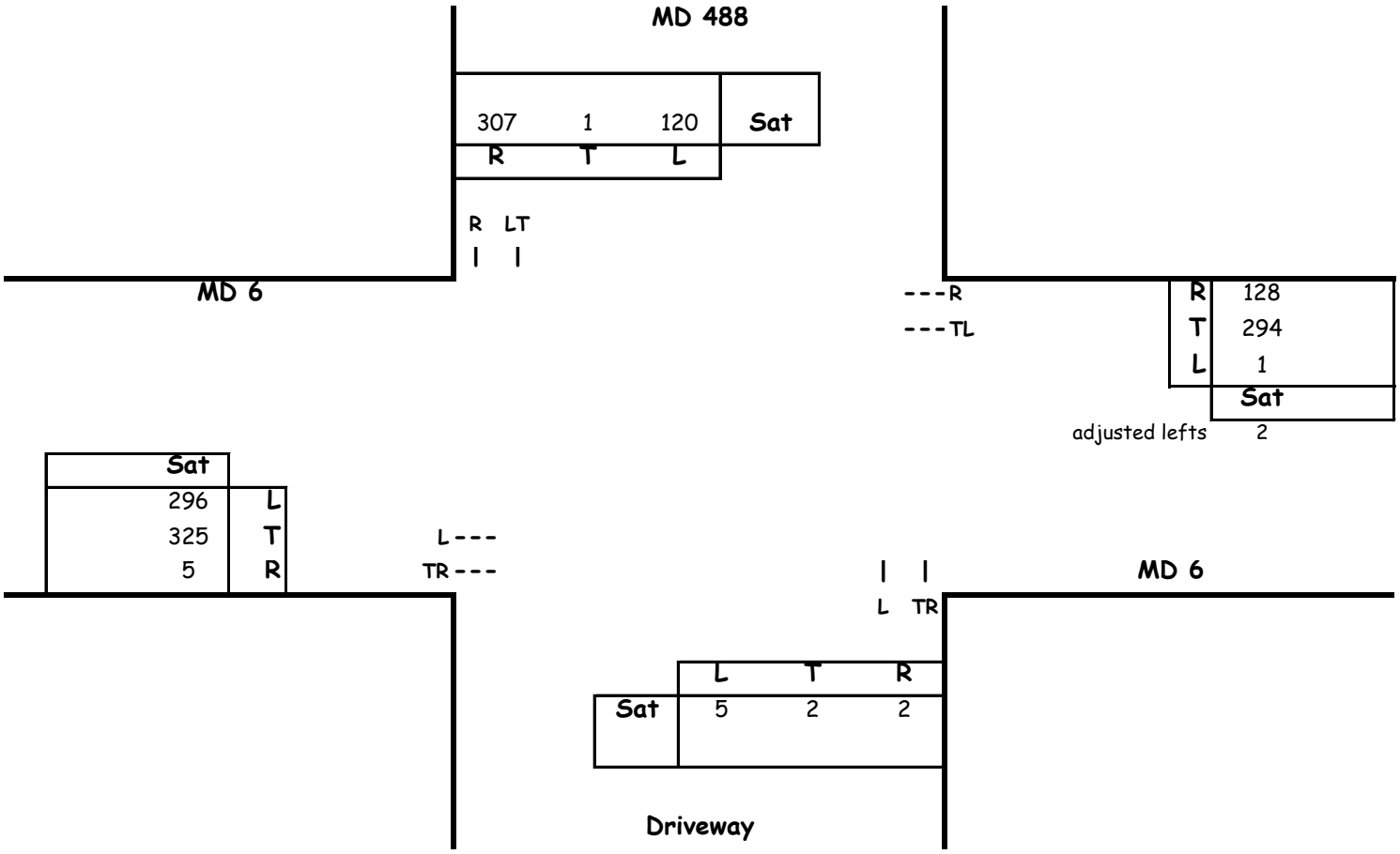
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 488 & MD 6 (Existing Traffic)	Intersection **15**

CRITICAL LANE VOLUME (CLV) METHODOLOGY

for MSHA

Intersection of: MD 488 **Analyst:** Lenhart Traffic Consulting
and: MD 6
Study Period: Existing Traffic

Lane Use + Traffic Volumes



Capacity Analysis - North/South Split

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	5	1	5				5
SB	121	1	121				121
EB	330	1	330	1	1	1	592
WB	296	1	296	296	1	296	

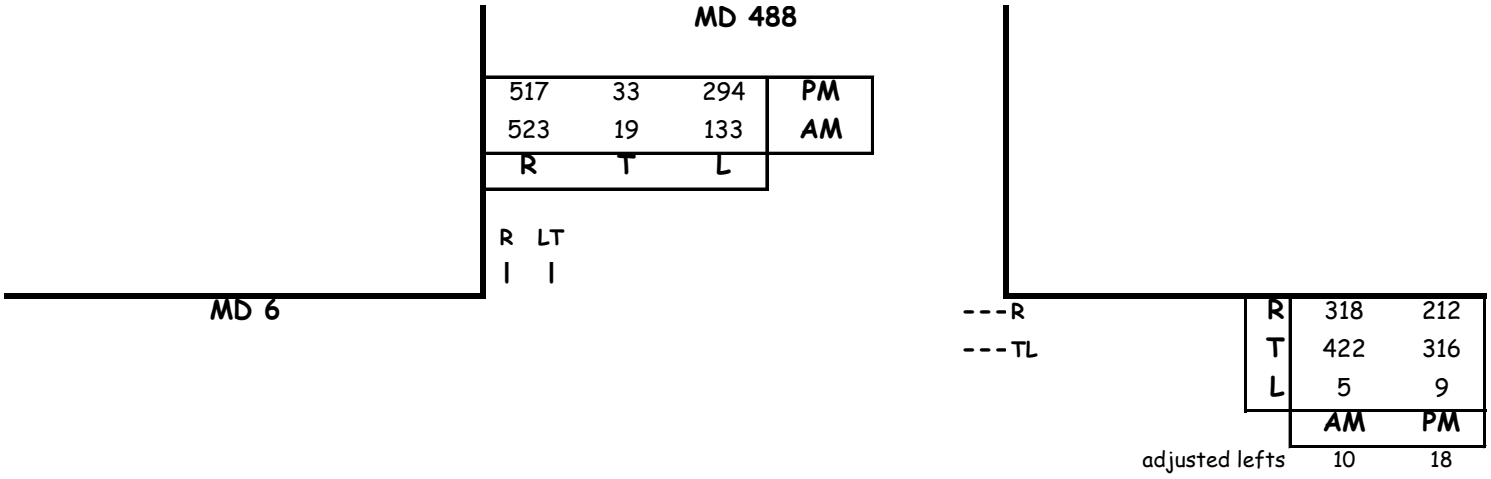
CLV TOTAL=	**718**
Level of Service (LOS)=	**A**

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 488 & MD 6 (Existing Traffic)	Intersection **15**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 488 **Analyst:** Lenhart Traffic Consulting
and: MD 6
Study Period: Background Traffic

Lane Use + Traffic Volumes



Capacity Analysis - North/South Split

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	8	1	8				8
SB	152	1	152				152
EB	218	1	218	5	1	5	889
WB	432	1	432	457	1	457	

CLV TOTAL= **1049**
Level of Service (LOS)= **B**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	95	1	95				95
SB	327	1	327				327
EB	566	1	566	9	1	9	818
WB	334	1	334	484	1	484	

CLV TOTAL= **1240**
Level of Service (LOS)= **C**

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 488 & MD 6 (Background Traffic)	Intersection **15**

CRITICAL LANE VOLUME (CLV) METHODOLOGY

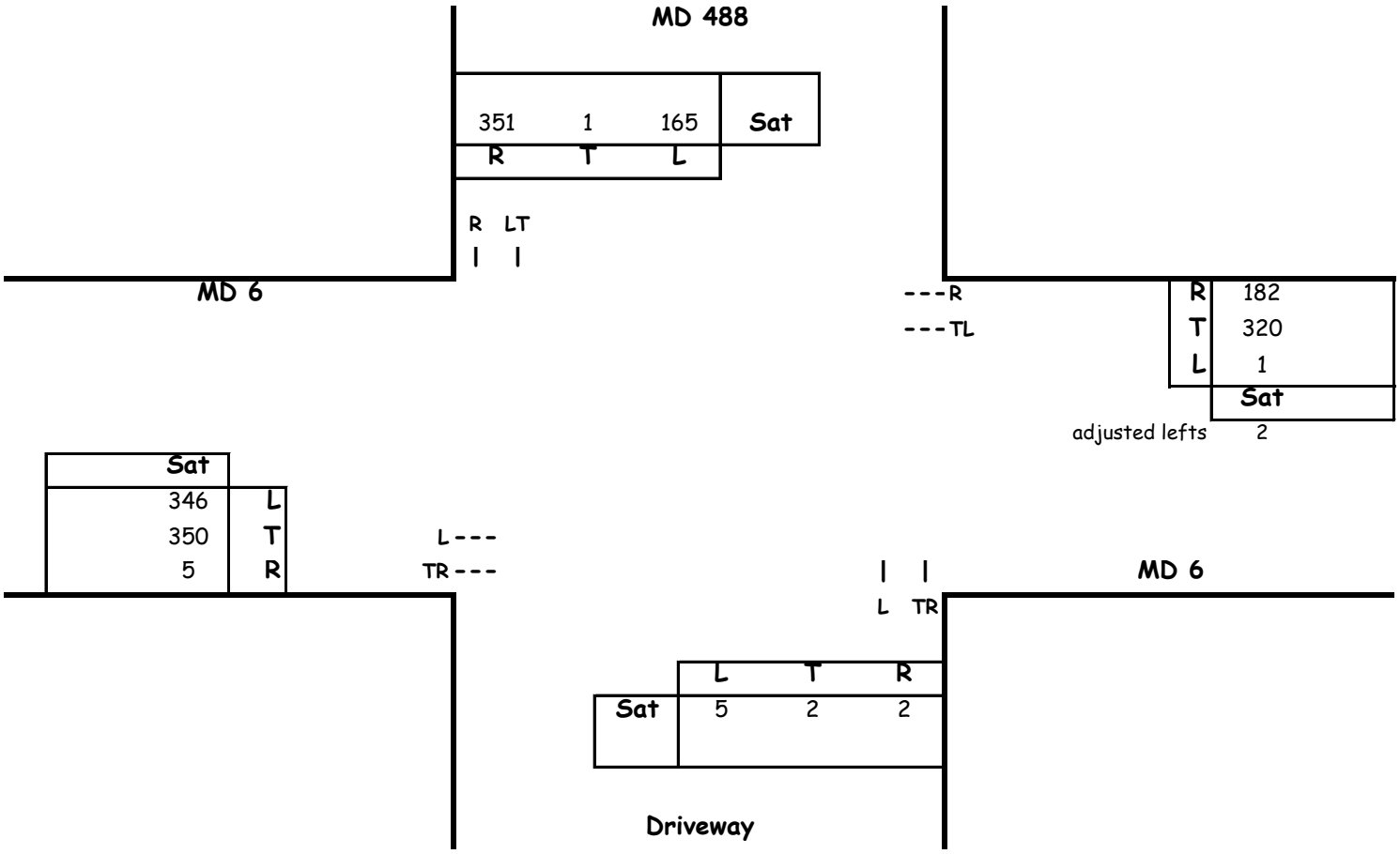
for MSHA

Intersection of: MD 488 **Analyst:** Lenhart Traffic Consulting

and: MD 6

Study Period: Background Traffic

Lane Use + Traffic Volumes



Capacity Analysis - North/South Split

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	5	1	5				5
SB	166	1	166				166
EB	355	1	355	1	1	1	668
WB	322	1	322	346	1	346	

CLV TOTAL= **839**

Level of Service (LOS)= **A**

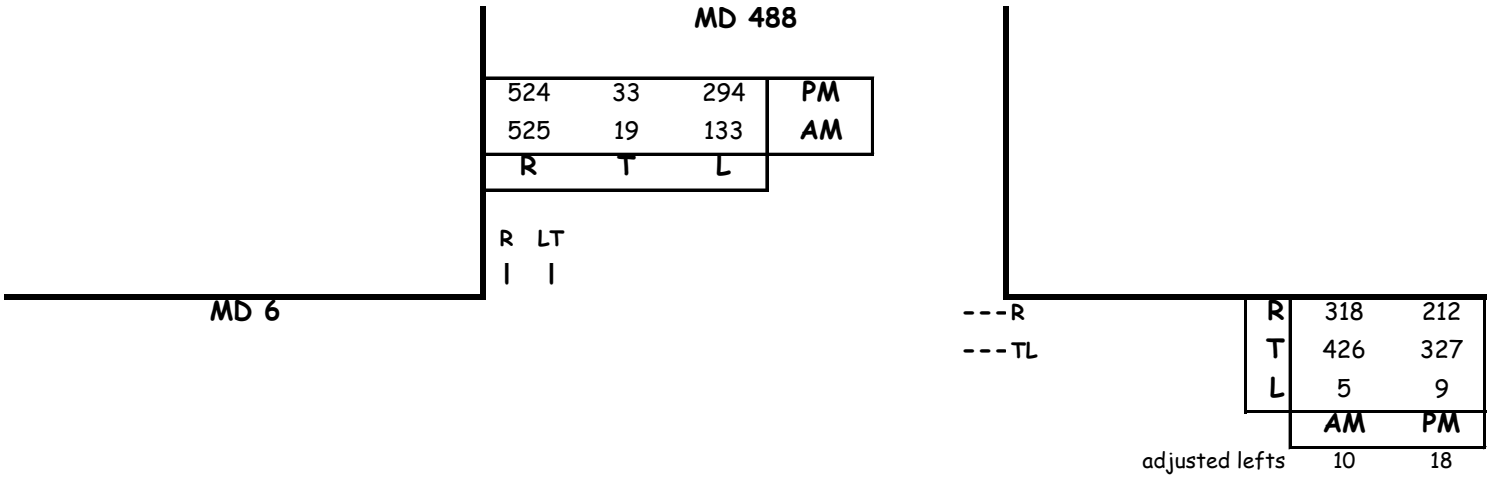
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 488 & MD 6 (Background Traffic)	Intersection **15**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: MD 488
and: MD 6
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis - North/South Split

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	8	1	8				8
SB	152	1	152				152
EB	219	1	219	5	1	5	894
WB	436	1	436	458	1	458	

CLV TOTAL= **1054**
Level of Service (LOS)= **B**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	95	1	95				95
SB	327	1	327				327
EB	592	1	592	9	1	9	846
WB	345	1	345	501	1	501	

CLV TOTAL= **1268**
Level of Service (LOS)= **C**

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 488 & MD 6 (Total Traffic)	Intersection **15**

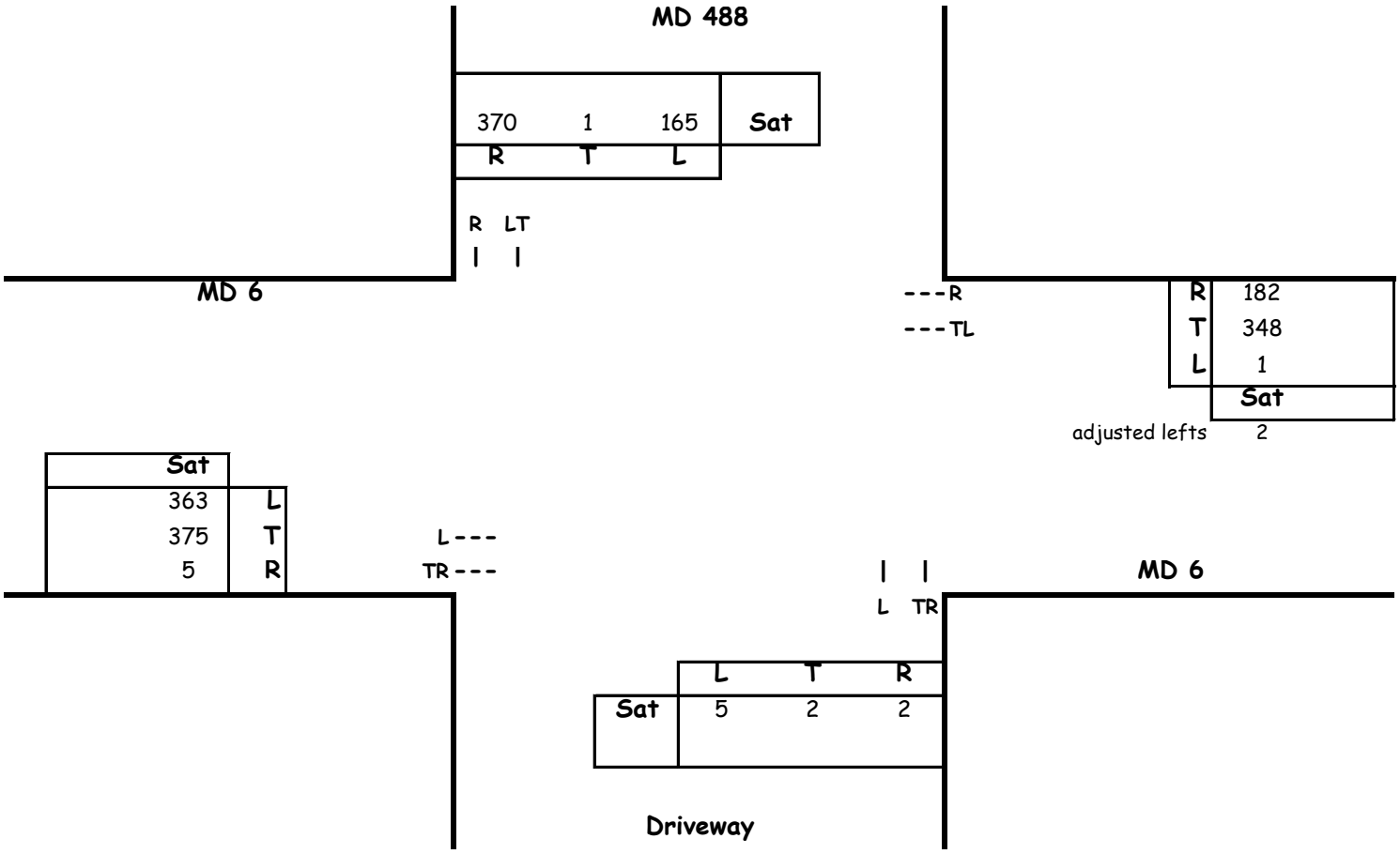
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for MSHA

Intersection of: MD 488
and: MD 6
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis - North/South Split

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	5	1	5				5
SB	166	1	166				166
EB	380	1	380	1	1	1	713
WB	350	1	350	363	1	363	

CLV TOTAL=	**884**
Level of Service (LOS)=	**A**

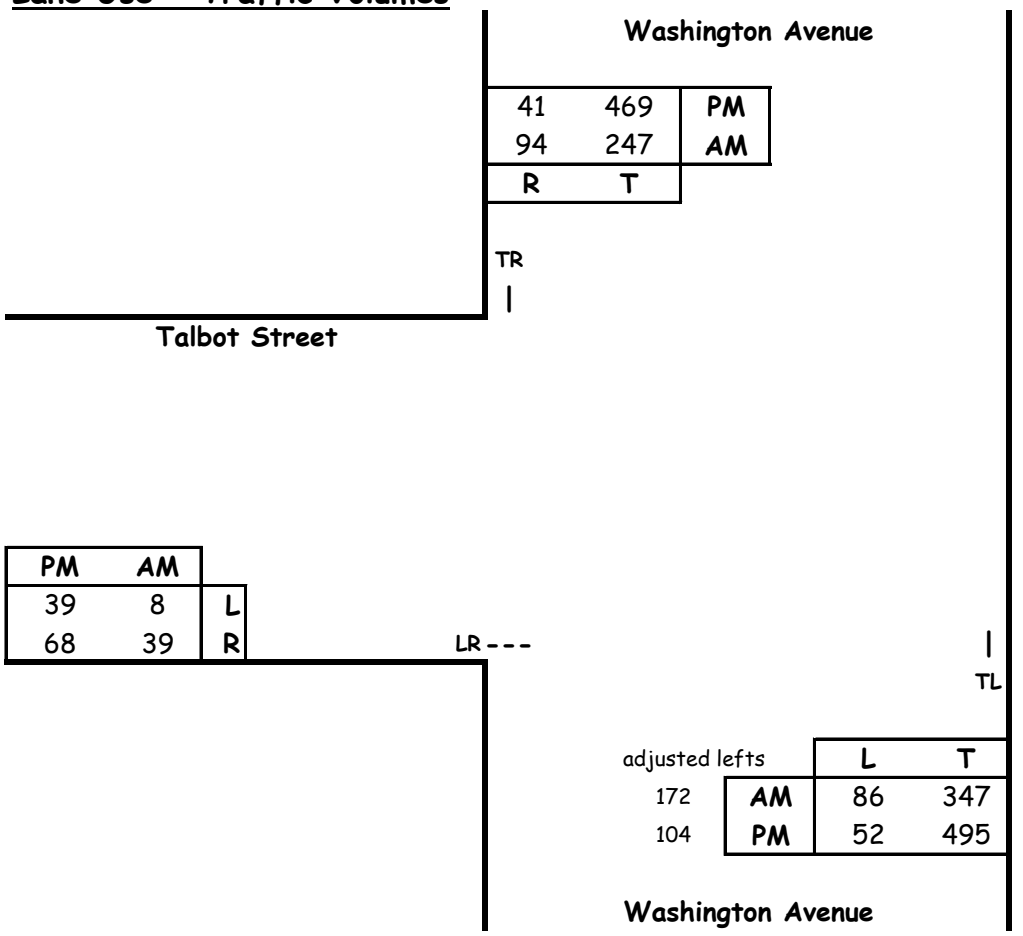
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	MD 488 & MD 6 (Total Traffic)	Intersection **15**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Washington Avenue
and: Talbot Street
Conditions: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
EB	47	1.00	47				47
NB	519	1.00	519				519
SB	341	1.00	341	86	1.00	86	

CLV TOTAL= **566**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
EB	107	1.00	107				107
NB	599	1.00	599				599
SB	510	1.00	510	52	1.00	52	

CLV TOTAL= **706**
Level of Service (LOS)= **A**

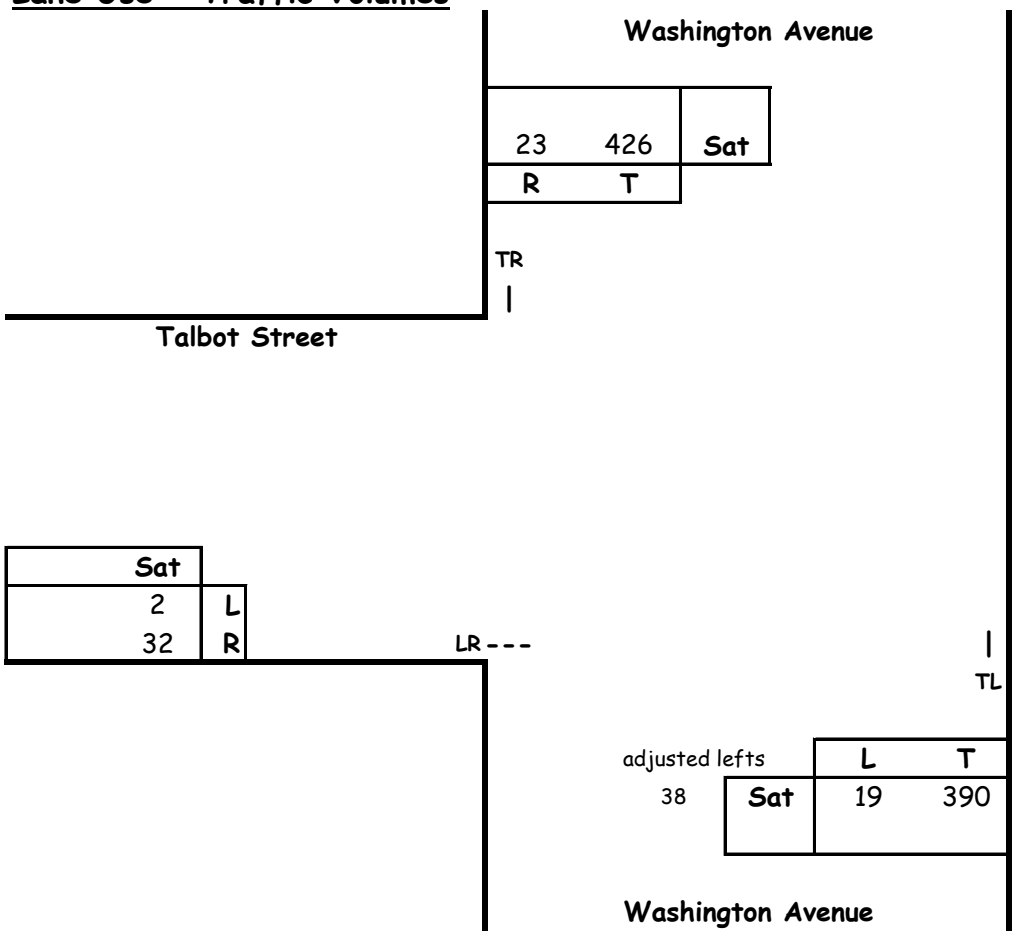
Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	Washington Avenue & Talbot Street (Existing Traffic)	Intersection **16**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Washington Avenue
and: Talbot Street
Conditions: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	34	1.00	34				34
NB	428	1.00	428				468
SB	449	1.00	449	19	1.00	19	
					CLV TOTAL=		502
					Level of Service (LOS)=		A

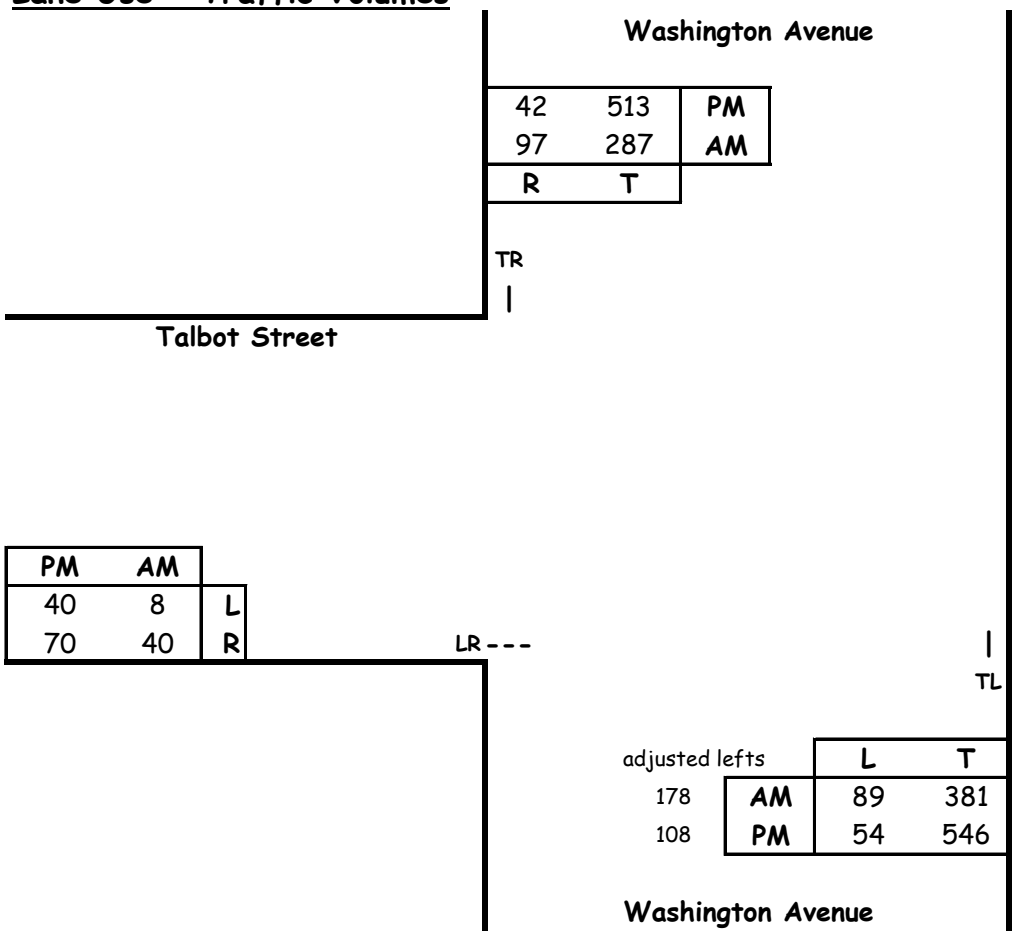
Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	Washington Avenue & Talbot Street (Existing Traffic)	Intersection **16**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Washington Avenue
and: Talbot Street
Conditions: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
EB	48	1.00	48				48
NB	559	1.00	559				559
SB	384	1.00	384	89	1.00	89	

CLV TOTAL= **607**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
EB	110	1.00	110				110
NB	654	1.00	654				654
SB	555	1.00	555	54	1.00	54	

CLV TOTAL= **764**
Level of Service (LOS)= **A**

Critical Lane Volume Analysis

Lenhart Traffic Consulting
Traffic Engineering & Transportation Planning

N

Washington Avenue &
Talbot Street
(Background Traffic)

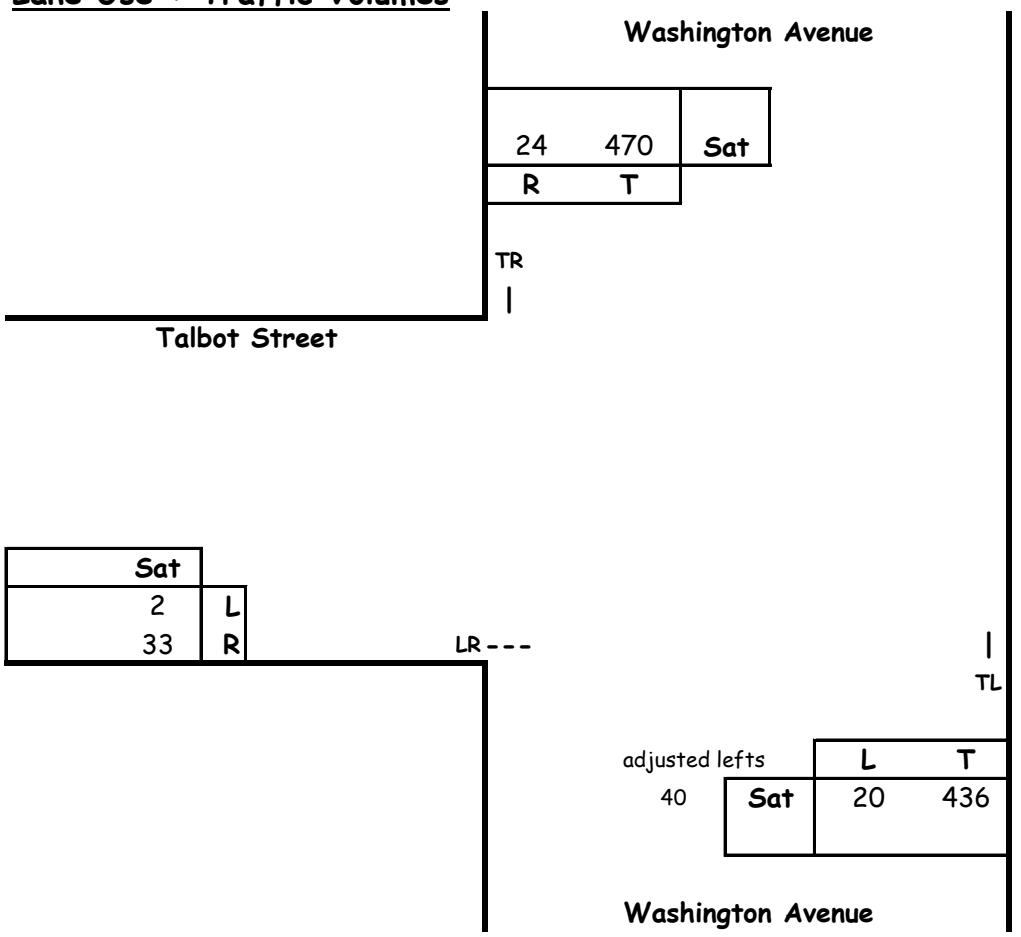
Intersection
16

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Washington Avenue
and: Talbot Street
Conditions: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	35	1.00	35				35
NB	476	1.00	476				514
SB	494	1.00	494	20	1.00	20	
					CLV TOTAL=		**549**
					Level of Service (LOS)=		**A**

Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	Washington Avenue & Talbot Street (Background Traffic)	Intersection **16**

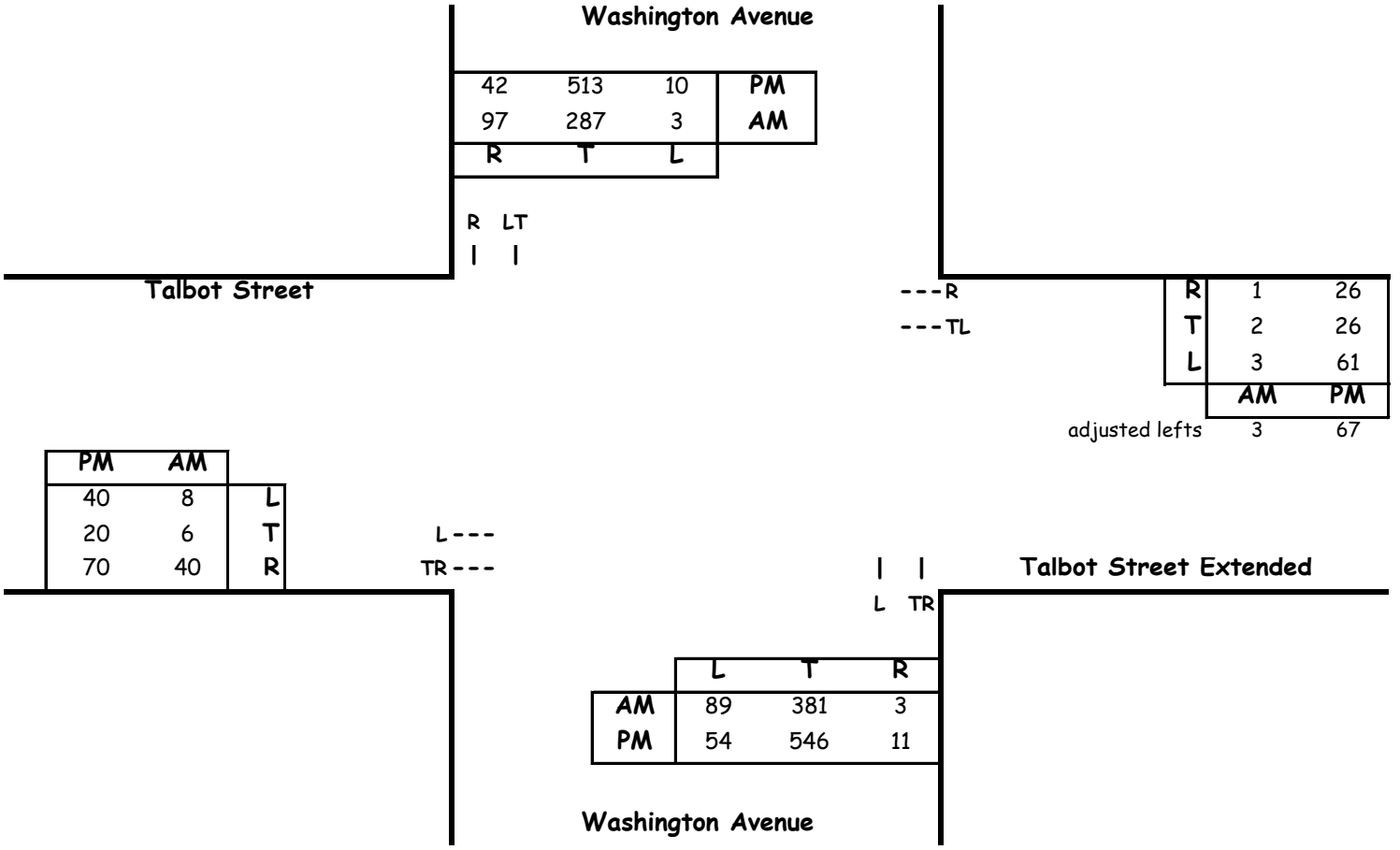
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for MSHA

Intersection of: Washington Avenue
and: Talbot Street Extended
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis - North/South Split

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	384	1	384				384
SB	290	1	290				290
EB	46	1	46	3	1	3	49
WB	5	1	5	8	1	8	

CLV TOTAL= **723**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	557	1	557				557
SB	523	1	523				523
EB	90	1	90	61	1	61	151
WB	93	1	93	40	1	40	

CLV TOTAL= **1231**
Level of Service (LOS)= **C**

Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	Washington Avenue & Talbot Street Extended (Total Traffic)	Intersection **16**

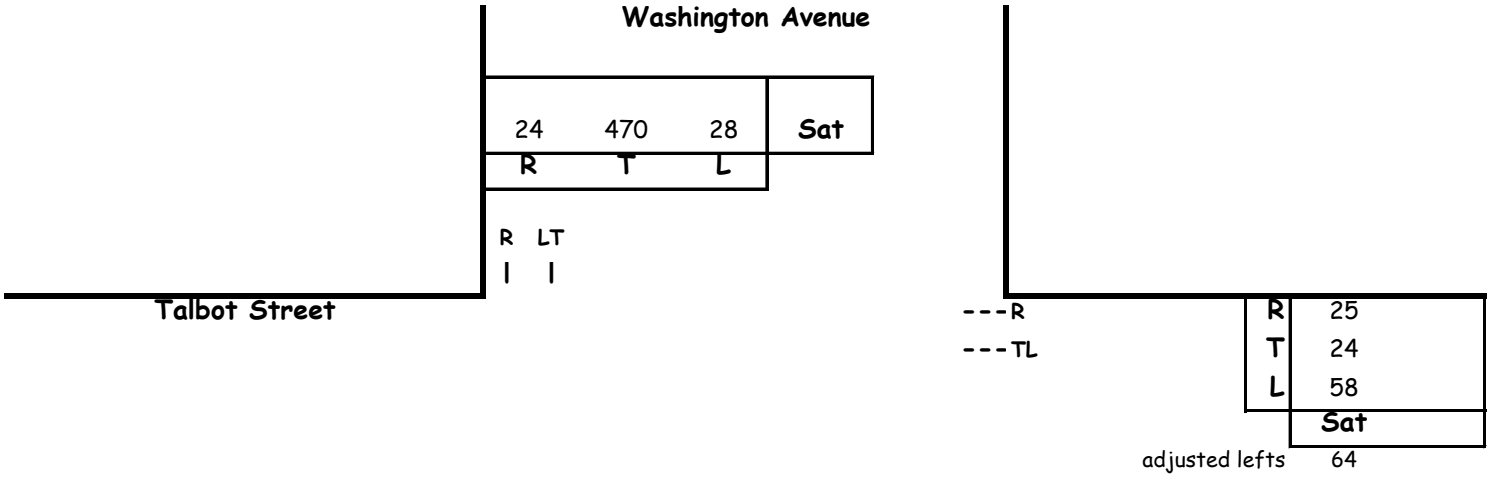
CRITICAL LANE VOLUME (CLV) METHODOLOGY

for MSHA

Intersection of: Washington Avenue
and: Talbot Street Extended
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis - North/South Split

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	468	1	468				468
SB	498	1	498				498
EB	84	1	84	58	1	58	142
WB	88	1	88	2	1	2	

CLV TOTAL=	**1108**
Level of Service (LOS)=	**B**

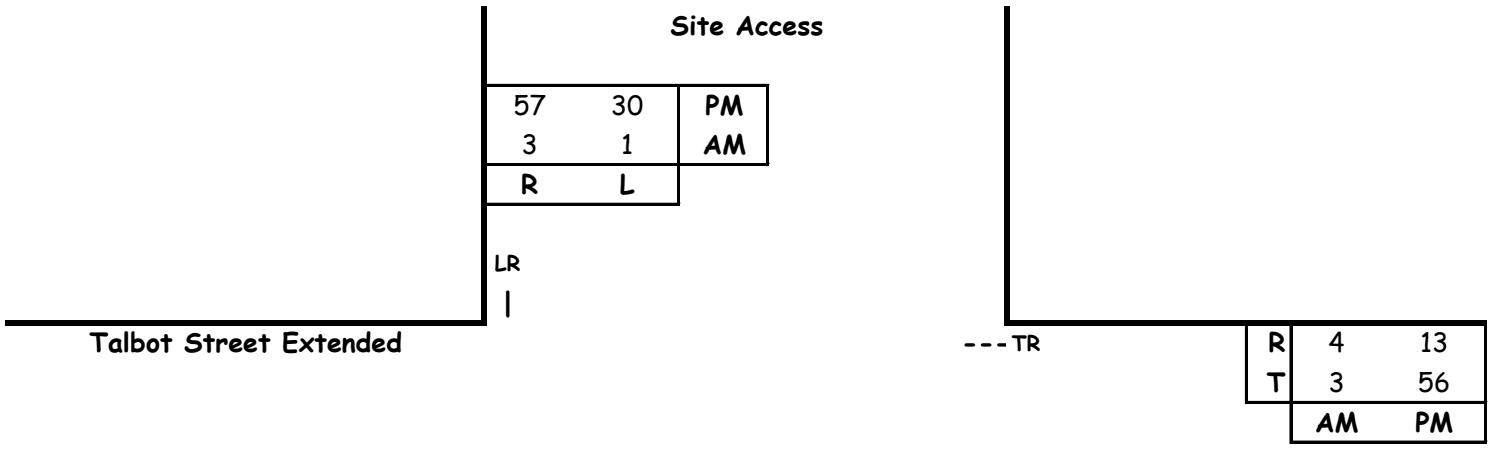
Critical Lane Volume Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	N	Washington Avenue & Talbot Street Extended (Total Traffic)	Intersection **16**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Talbot Street Extended
and: Site Access
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
SB	4	1.00	4				4
EB	13	1.00	13				13
WB	7	1.00	7	6	1.00	6	

CLV TOTAL= **17**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
SB	87	1.00	87				87
EB	43	1.00	43				90
WB	69	1.00	69	21	1.00	21	

CLV TOTAL= **177**
Level of Service (LOS)= **A**

Critical Lane Volume Analysis

Lenhart Traffic Consulting
Traffic Engineering & Transportation Planning

N

Talbot Street Extended &
Site Access
(Total Traffic)

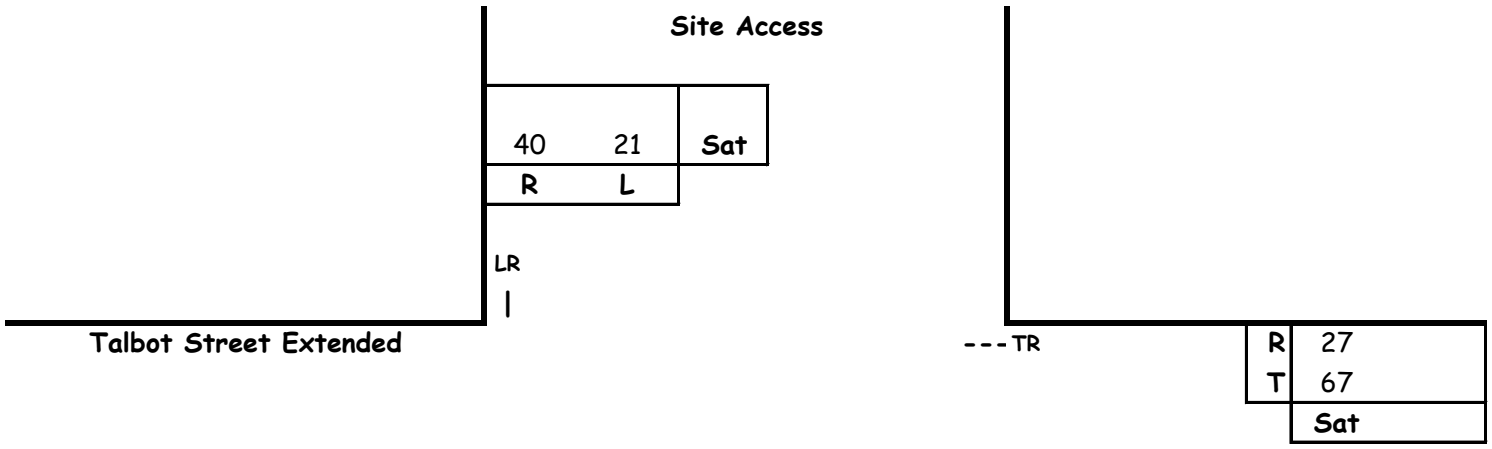
Intersection
17

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Talbot Street Extended
and: Site Access
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes





Capacity Analysis

Sat. Midday Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	Sat CLV
SB	61	1.00	61				61
EB	115	1.00	115				136
WB	94	1.00	94	42	1.00	42	
					CLV TOTAL=		**197**
					Level of Service (LOS)=		**A**

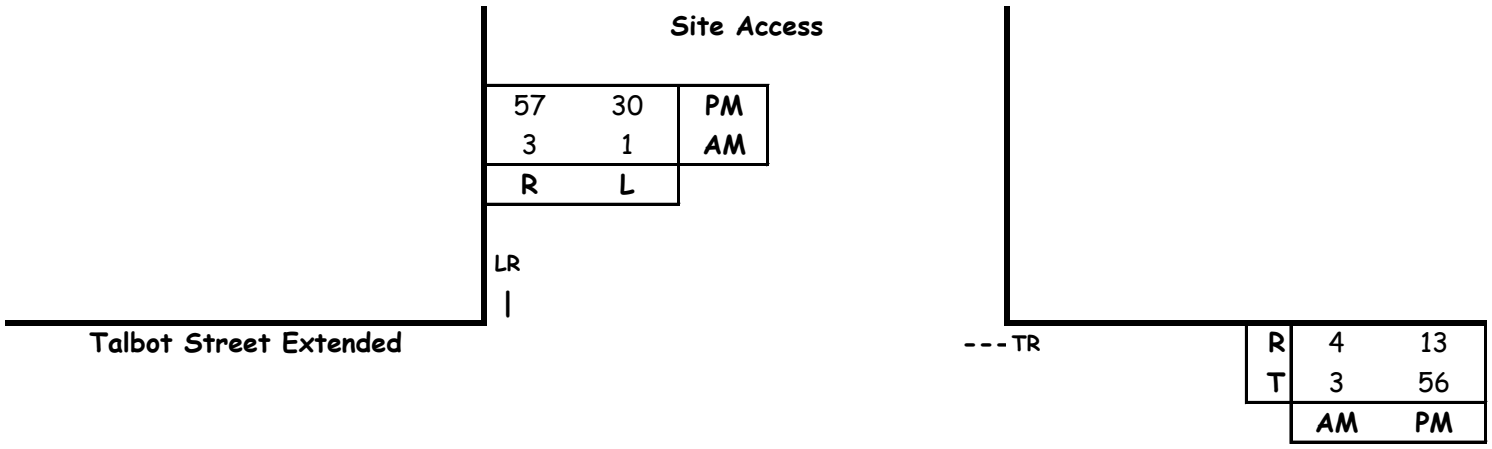
Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	Talbot Street Extended & Site Access (Total Traffic)	Intersection **17**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Talbot Street Extended
and: Site Access
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
SB	4	1.00	4				4
EB	13	1.00	13				13
WB	7	1.00	7	6	1.00	6	

CLV TOTAL= **17**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
SB	87	1.00	87				87
EB	43	1.00	43				90
WB	69	1.00	69	21	1.00	21	

CLV TOTAL= **177**
Level of Service (LOS)= **A**

Critical Lane Volume Analysis

Lenhart Traffic Consulting
Traffic Engineering & Transportation Planning

N

Talbot Street Extended &
Site Access
(Total Traffic)

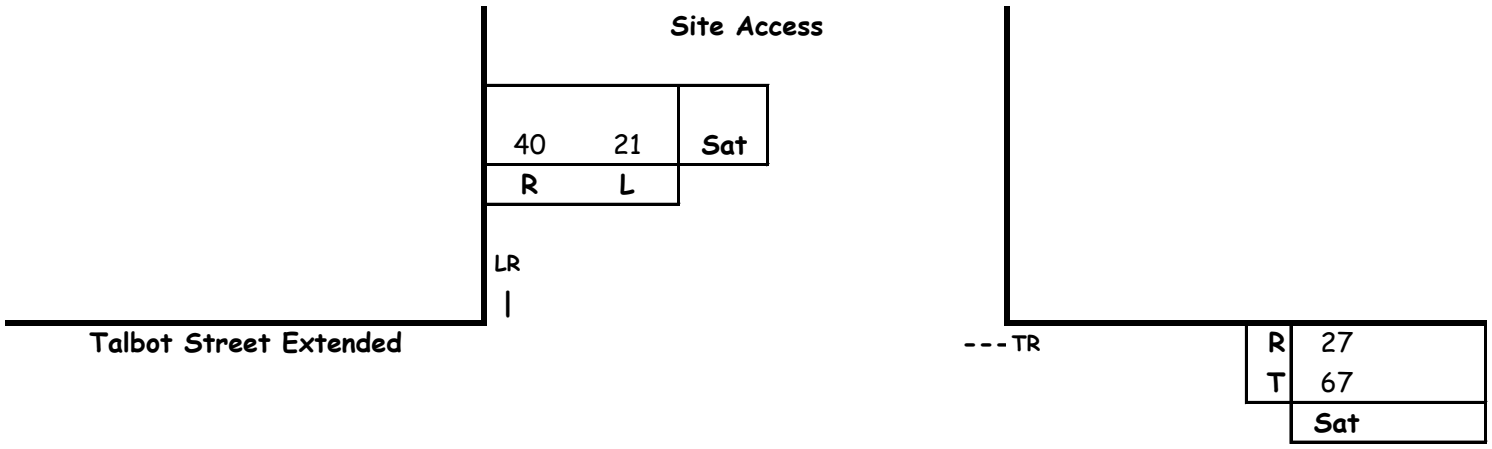
Intersection
18

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Talbot Street Extended
and: Site Access
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
SB	61	1.00	61				61
EB	115	1.00	115				136
WB	94	1.00	94	42	1.00	42	
					CLV TOTAL=		197
					Level of Service (LOS)=		A

Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	Talbot Street Extended & Site Access (Total Traffic)	Intersection **18**

Critical Lane Volume (CLV) Methodology for MSHA

Intersection of: Talbot Street Extended
and: Auxiliary Lot Access
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Talbot Street Extended ---TL

	AM	PM
T	9	27
L	0	0
adjusted lefts	0	0

PM	AM	
61	3	T
0	0	R

TR---

Auxiliary Lot Access

Talbot Street Extended

|LR

	L	R
AM	0	0
PM	0	0

Critical Lane Volume Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
NB	0	1.00	0				0
EB	3	1.00	3	0	1.00	0	9
WB	9	1.00	9				
					CLV TOTAL=		9
					Level of Service (LOS)=		A

Evening Peak Hour

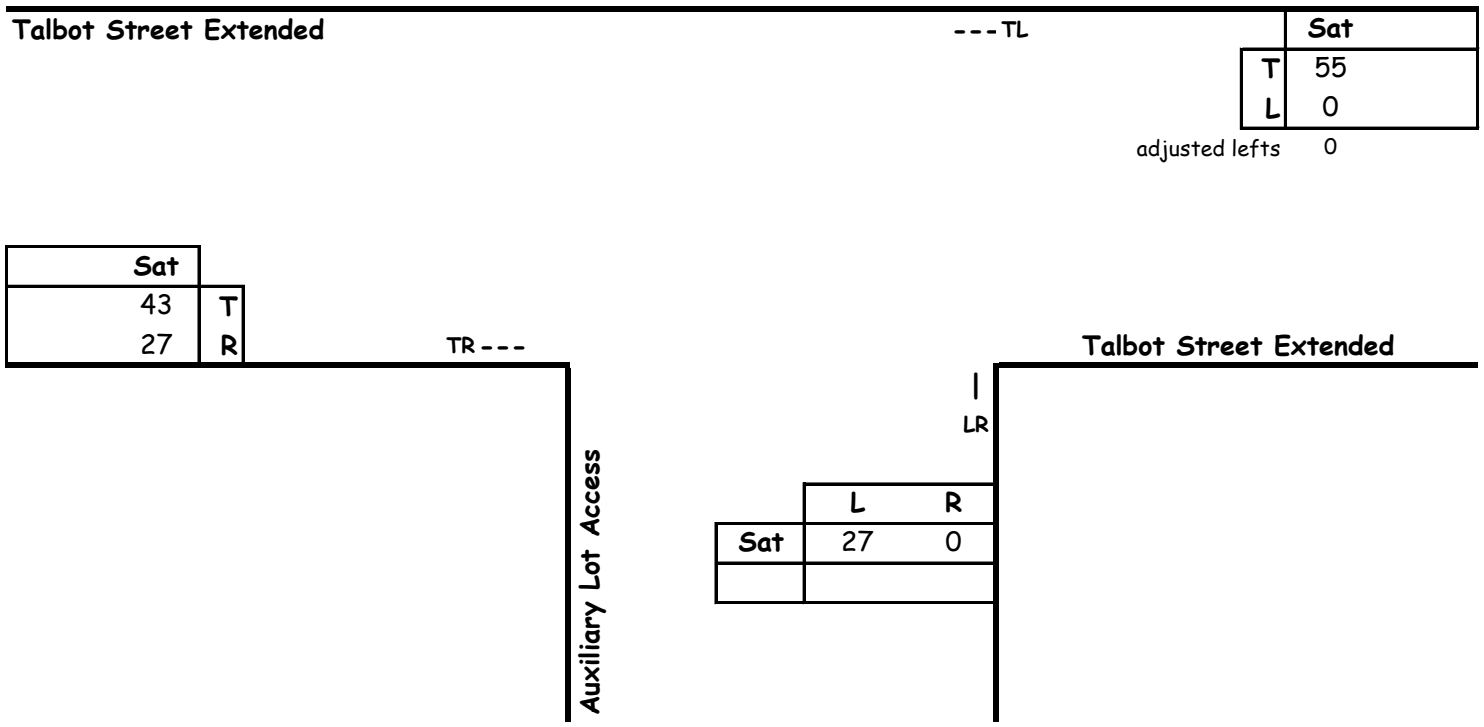
Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
NB	0	1.00	0				0
EB	61	1.00	61	0	1.00	0	61
WB	27	1.00	27				
					CLV TOTAL=		61
					Level of Service (LOS)=		A

Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	Talbot Street Extended & Auxiliary Lot Access (Total Traffic)	Intersection **19**

Critical Lane Volume (CLV) Methodology for MSHA

Intersection of: Talbot Street Extended
and: Auxiliary Lot Access
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting



Critical Lane Volume Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	27	1.00	27				27
EB	70	1.00	70	0	1.00	0	70
WB	55	1.00	55				
					CLV TOTAL=		97
					Level of Service (LOS)=		A

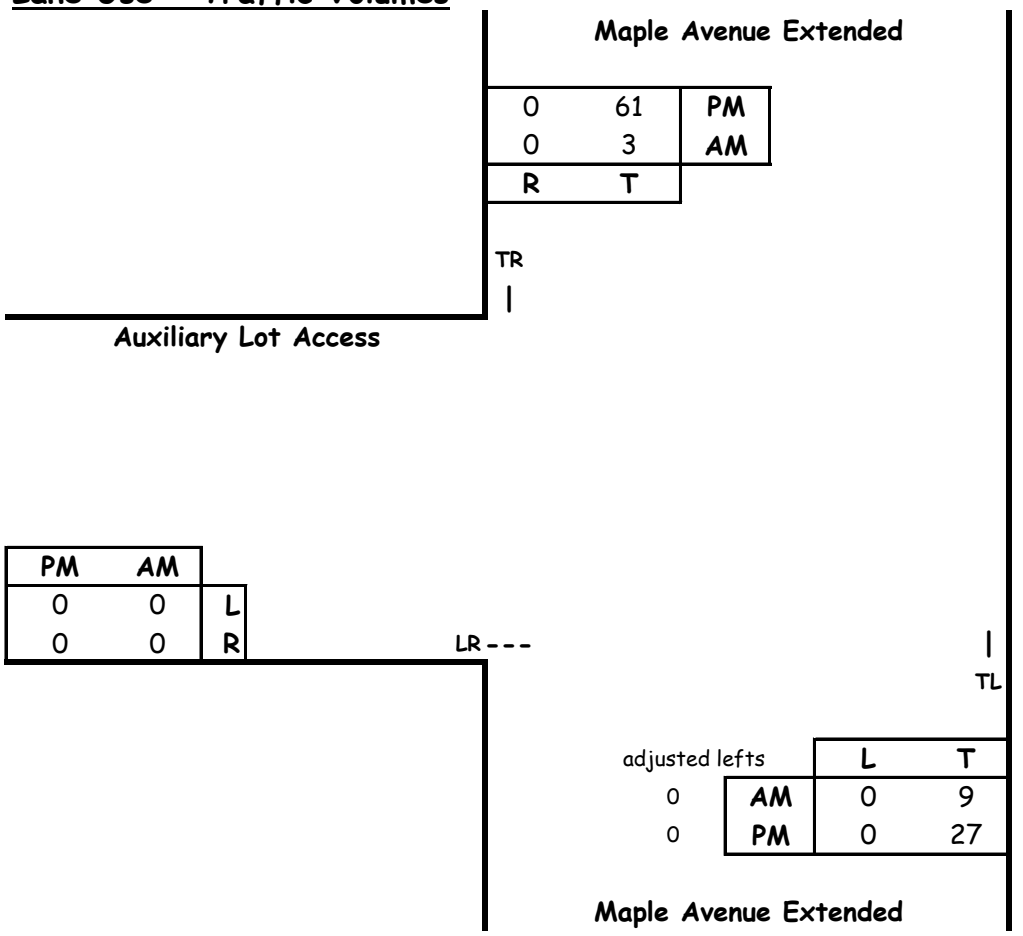
Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	Talbot Street Extended & Auxiliary Lot Access (Total Traffic)	Intersection **19**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Maple Avenue Extended
and: Auxiliary Lot Access
Conditions: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Morning Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	AM CLV
EB	0	1.00	0				0
NB	9	1.00	9				9
SB	3	1.00	3	0	1.00	0	

CLV TOTAL= **9**
Level of Service (LOS)= **A**

Evening Peak Hour

Dir	Thru Volumes VOL	x LUF	= Total	+ Opposing Lefts VOL	x LUF	= Total	PM CLV
EB	0	1.00	0				0
NB	27	1.00	27				61
SB	61	1.00	61	0	1.00	0	

CLV TOTAL= **61**
Level of Service (LOS)= **A**

Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	Maple Avenue Extended & Auxiliary Lot Access (Total Traffic)

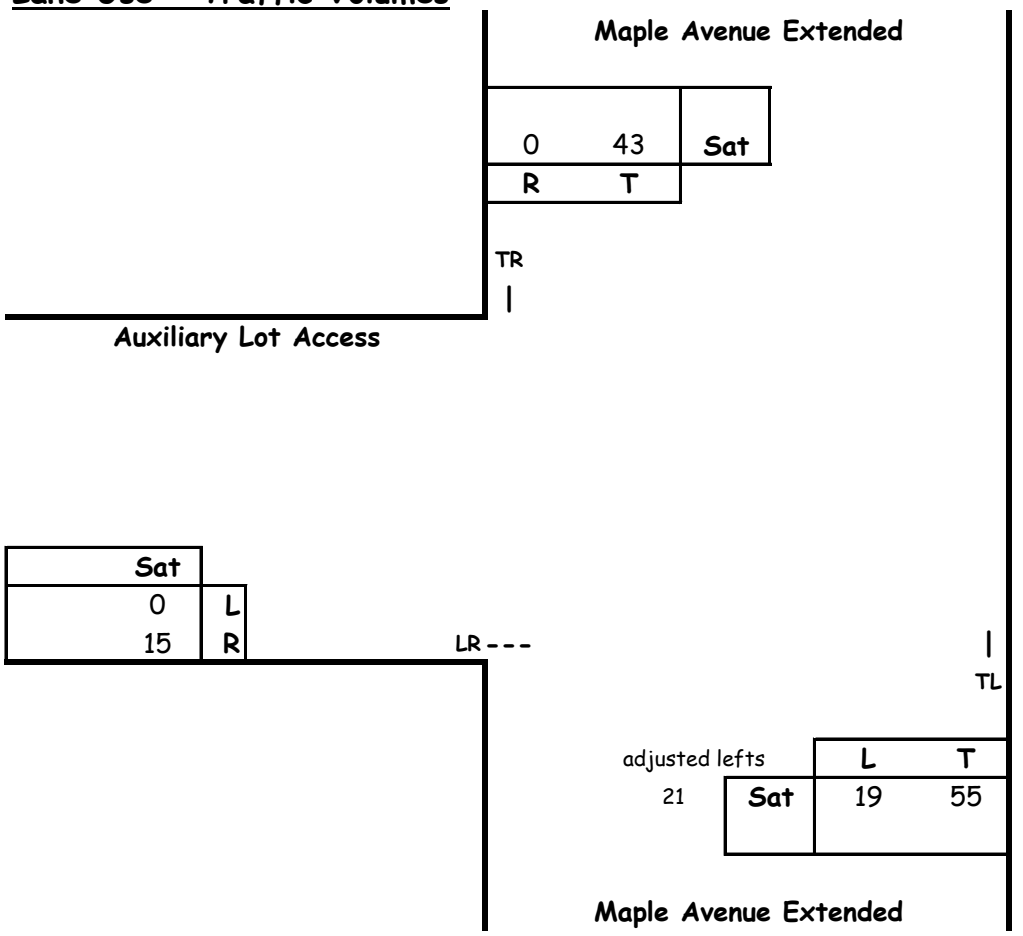
Intersection **20**

CRITICAL LANE VOLUME (CLV) METHODOLOGY
for MSHA

Intersection of: Maple Avenue Extended
and: Auxiliary Lot Access
Conditions: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Sat. Midday Peak Hour							
	Thru Volumes			+ Opposing Lefts			Sat
Dir	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	15	1.00	15				15
NB	76	1.00	76				76
SB	43	1.00	43	19	1.00	19	

CLV TOTAL=	**91**
Level of Service (LOS)=	**A**

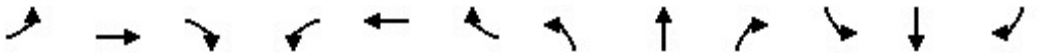
Critical Lane Volume Analysis Lenhart Traffic Consulting Traffic Engineering & Transportation Planning	N	Maple Avenue Extended & Auxiliary Lot Access (Total Traffic)	Intersection **20**



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	155	101	1	1044	257	50	788
Future Volume (vph)	155	101	1	1044	257	50	788
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583	1770	3539	1583	1770	3539
Flt Permitted	0.95	1.00	0.33	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583	615	3539	1583	1770	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	168	110	1	1135	279	54	857
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	168	110	1	1135	279	54	857
Turn Type	Perm	Free	Perm	NA	Free	Prot	NA
Protected Phases				2		1	6
Permitted Phases	8	Free	2		Free		
Actuated Green, G (s)	9.4	82.8	55.6	55.6	82.8	5.3	65.4
Effective Green, g (s)	9.4	82.8	55.6	55.6	82.8	5.3	65.4
Actuated g/C Ratio	0.11	1.00	0.67	0.67	1.00	0.06	0.79
Clearance Time (s)	4.0		4.0	4.0		4.5	4.0
Vehicle Extension (s)	3.0		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	389	1583	412	2376	1583	113	2795
v/s Ratio Prot				c0.32		c0.03	0.24
v/s Ratio Perm	c0.05	0.07	0.00		0.18		
v/c Ratio	0.43	0.07	0.00	0.48	0.18	0.48	0.31
Uniform Delay, d1	34.2	0.0	4.5	6.6	0.0	37.4	2.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8	0.1	0.0	0.7	0.2	3.2	0.1
Delay (s)	35.0	0.1	4.5	7.3	0.2	40.6	2.5
Level of Service	C	A	A	A	A	D	A
Approach Delay (s)	21.2			5.9			4.7
Approach LOS	C			A			A

Intersection Summary			
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	82.8	Sum of lost time (s)	12.5
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		

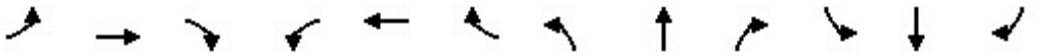
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	254	48	265	63	124	15	284	1210	29	44	731	134
Future Volume (vph)	254	48	265	63	124	15	284	1210	29	44	731	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1833		3433	3539	1583	1770	3539	1583
Flt Permitted	0.30	1.00	1.00	0.72	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	568	1863	1583	1347	1833		3433	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	276	52	288	68	135	16	309	1315	32	48	795	146
RTOR Reduction (vph)	0	0	219	0	3	0	0	0	15	0	0	76
Lane Group Flow (vph)	276	52	69	68	148	0	309	1315	17	48	795	70
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8					2			6
Actuated Green, G (s)	46.3	34.2	34.2	24.6	17.0		15.0	76.0	76.0	7.7	68.7	68.7
Effective Green, g (s)	46.3	34.2	34.2	24.6	17.0		15.0	76.0	76.0	7.7	68.7	68.7
Actuated g/C Ratio	0.32	0.24	0.24	0.17	0.12		0.10	0.53	0.53	0.05	0.48	0.48
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	390	444	377	253	217		358	1874	838	94	1694	757
v/s Ratio Prot	c0.12	0.03		0.01	0.08		c0.09	c0.37		0.03	0.22	
v/s Ratio Perm	c0.11		0.04	0.03					0.01			0.04
v/c Ratio	0.71	0.12	0.18	0.27	0.68		0.86	0.70	0.02	0.51	0.47	0.09
Uniform Delay, d1	39.6	42.8	43.5	51.2	60.7		63.2	25.3	16.0	66.1	25.1	20.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.8	0.1	0.2	0.6	8.6		18.8	2.2	0.0	4.6	0.9	0.2
Delay (s)	45.4	42.9	43.7	51.8	69.3		82.1	27.5	16.1	70.7	26.1	20.6
Level of Service	D	D	D	D	E		F	C	B	E	C	C
Approach Delay (s)		44.4			63.8			37.5			27.4	
Approach LOS		D			E			D			C	

Intersection Summary			
HCM 2000 Control Delay	37.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	143.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	74.1%	ICU Level of Service	D
Analysis Period (min)	15		

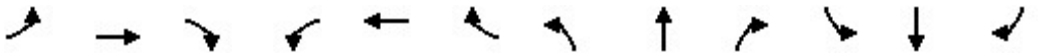
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	10	0	32	24	1476	22	52	1018	9
Future Volume (Veh/h)	0	0	0	10	0	32	24	1476	22	52	1018	9
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)	0	0	0	11	0	35	26	1604	24	57	1107	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2110	2901	554	2324	2887	802	1117			1628		
vC1, stage 1 conf vol	1221	1221		1656	1656							
vC2, stage 2 conf vol	889	1680		668	1231							
vCu, unblocked vol	2110	2901	554	2324	2887	802	1117			1628		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	88	100	89	96			86		
cM capacity (veh/h)	124	78	476	91	111	327	621			395		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	0	11	35	26	802	802	24	57	554	554	10
Volume Left	0	11	0	26	0	0	0	57	0	0	0
Volume Right	0	0	35	0	0	0	24	0	0	0	10
cSH	1700	91	327	621	1700	1700	1700	395	1700	1700	1700
Volume to Capacity	0.00	0.12	0.11	0.04	0.47	0.47	0.01	0.14	0.33	0.33	0.01
Queue Length 95th (ft)	0	10	9	3	0	0	0	12	0	0	0
Control Delay (s)	0.0	49.7	17.3	11.1	0.0	0.0	0.0	15.6	0.0	0.0	0.0
Lane LOS	A	E	C	B				C			
Approach Delay (s)	0.0	25.1		0.2				0.8			
Approach LOS	A	D									

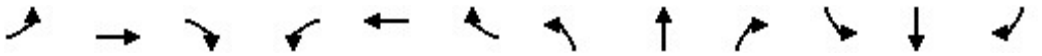
Intersection Summary					
Average Delay	0.8				
Intersection Capacity Utilization	53.2%	ICU Level of Service		A	
Analysis Period (min)	15				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	297	176	133	93	147	245	117	974	166	229	637	167
Future Volume (vph)	297	176	133	93	147	245	117	974	166	229	637	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1746	1583	1681	1764	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1746	1583	1681	1764	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	323	191	145	101	160	266	127	1059	180	249	692	182
RTOR Reduction (vph)	0	0	119	0	0	231	0	0	108	0	0	100
Lane Group Flow (vph)	252	262	26	91	170	35	127	1059	72	249	692	82
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	25.7	25.7	25.7	18.4	18.4	18.4	15.5	56.6	56.6	22.0	63.1	63.1
Effective Green, g (s)	25.7	25.7	25.7	18.4	18.4	18.4	15.5	56.6	56.6	22.0	63.1	63.1
Actuated g/C Ratio	0.18	0.18	0.18	0.13	0.13	0.13	0.11	0.40	0.40	0.16	0.45	0.45
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	307	318	289	219	230	207	194	1423	636	276	1587	709
v/s Ratio Prot	0.15	c0.15		0.05	c0.10		0.07	c0.30		c0.14	0.20	
v/s Ratio Perm			0.02			0.02			0.05			0.05
v/c Ratio	0.82	0.82	0.09	0.42	0.74	0.17	0.65	0.74	0.11	0.90	0.44	0.12
Uniform Delay, d1	55.3	55.3	47.8	56.2	58.8	54.3	60.0	35.9	26.3	58.3	26.6	22.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	16.0	15.7	0.1	1.3	11.7	0.4	7.7	3.6	0.4	30.0	0.9	0.3
Delay (s)	71.3	71.1	47.9	57.5	70.6	54.7	67.7	39.4	26.7	88.3	27.5	22.9
Level of Service	E	E	D	E	E	D	E	D	C	F	C	C
Approach Delay (s)		66.0			60.3			40.4			40.2	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	47.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	140.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		

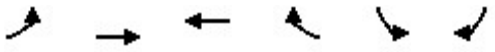
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	475	33	22	470	3	9	1	17	0	0	2
Future Volume (Veh/h)	46	475	33	22	470	3	9	1	17	0	0	2
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)	50	516	36	24	511	3	10	1	18	0	0	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		371			998							
pX, platoon unblocked				0.88			0.88	0.88	0.88	0.88	0.88	
vC, conflicting volume	514			552			940	1196	534	1213	1212	257
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	514			425			865	1155	405	1175	1174	257
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 %	95			98			95	99	97	100	100	100
cM capacity (veh/h)	1048			997			206	160	525	118	156	742

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	602	280	258	11	18	2
Volume Left	50	24	0	10	0	0
Volume Right	36	0	3	0	18	2
cSH	1048	997	1700	201	525	742
Volume to Capacity	0.05	0.02	0.15	0.05	0.03	0.00
Queue Length 95th (ft)	4	2	0	4	3	0
Control Delay (s)	1.3	1.0	0.0	23.9	12.1	9.9
Lane LOS	A	A		C	B	A
Approach Delay (s)	1.3	0.5		16.6		9.9
Approach LOS				C		A

Intersection Summary				
Average Delay	1.3			
Intersection Capacity Utilization	60.5%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	492	499	0	0	1
Future Volume (Veh/h)	0	492	499	0	0	1
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)	0	535	542	0	0	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1114	255			
pX, platoon unblocked					1.00	
vC, conflicting volume	542				1077	271
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	542				1077	271
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1023				214	727

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	535	361	181	1
Volume Left	0	0	0	0
Volume Right	0	0	0	1
cSH	1023	1700	1700	727
Volume to Capacity	0.00	0.21	0.11	0.00
Queue Length 95th (ft)	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	10.0
Lane LOS				A
Approach Delay (s)	0.0	0.0		10.0
Approach LOS				A

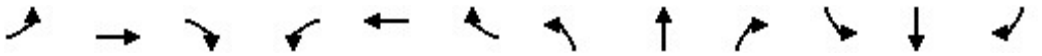
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	35.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	472	21	51	492	11	68
Future Volume (Veh/h)	472	21	51	492	11	68
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)	513	23	55	535	12	74
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1185			184		
pX, platoon unblocked						
vC, conflicting volume			536		902	268
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			536		902	268
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		95	90
cM capacity (veh/h)			1028		262	730

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	342	194	233	357	86
Volume Left	0	0	55	0	12
Volume Right	0	23	0	0	74
cSH	1700	1700	1028	1700	585
Volume to Capacity	0.20	0.11	0.05	0.21	0.15
Queue Length 95th (ft)	0	0	4	0	13
Control Delay (s)	0.0	0.0	2.4	0.0	12.2
Lane LOS			A		B
Approach Delay (s)	0.0		1.0		12.2
Approach LOS					B

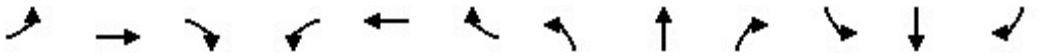
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	430	9	0	460	321	5	0	3	180	2	76
Future Volume (vph)	108	430	9	0	460	321	5	0	3	180	2	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5		4.5			4.5	
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Frt	1.00	1.00			1.00	0.85		0.95			0.96	
Flt Protected	0.95	1.00			1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1770	1857			1863	1583		1715			1728	
Flt Permitted	0.16	1.00			1.00	1.00		0.89			0.79	
Satd. Flow (perm)	298	1857			1863	1583		1570			1408	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	117	467	10	0	500	349	5	0	3	196	2	83
RTOR Reduction (vph)	0	1	0	0	0	178	0	5	0	0	11	0
Lane Group Flow (vph)	117	476	0	0	500	171	0	3	0	0	270	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	47.1	47.1			33.0	33.0		41.9			41.9	
Effective Green, g (s)	47.1	47.1			33.0	33.0		41.9			41.9	
Actuated g/C Ratio	0.48	0.48			0.34	0.34		0.43			0.43	
Clearance Time (s)	4.5	4.5			4.5	4.5		4.5			4.5	
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	287	892			627	533		671			601	
v/s Ratio Prot	0.04	c0.26			c0.27							
v/s Ratio Perm	0.16					0.11		0.00			c0.19	
v/c Ratio	0.41	0.53			0.80	0.32		0.01			0.45	
Uniform Delay, d1	17.8	17.8			29.5	24.2		16.1			19.9	
Progression Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2	0.9	0.6			7.0	0.3		0.0			2.4	
Delay (s)	18.8	18.4			36.5	24.5		16.1			22.3	
Level of Service	B	B			D	C		B			C	
Approach Delay (s)		18.5			31.5			16.1			22.3	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	25.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	98.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

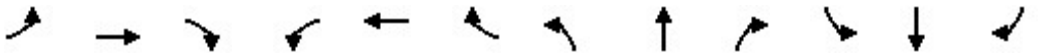
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	540	29	42	839	0	6	0	38	0	0	0
Future Volume (Veh/h)	0	540	29	42	839	0	6	0	38	0	0	0
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)	0	587	32	46	912	0	7	0	41	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		342										
pX, platoon unblocked				0.82			0.82	0.82	0.82	0.82	0.82	
vC, conflicting volume	912			619			1607	1607	603	1632	1623	912
vC1, stage 1 conf vol							603	603		1004	1004	
vC2, stage 2 conf vol							1004	1004		628	619	
vCu, unblocked vol	912			430			1630	1630	410	1660	1649	912
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			95			97	100	92	100	100	100
cM capacity (veh/h)	747			930			243	261	528	228	253	332

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	0	619	46	912	7	41	0
Volume Left	0	0	46	0	7	0	0
Volume Right	0	32	0	0	0	41	0
cSH	1700	1700	930	1700	243	528	1700
Volume to Capacity	0.00	0.36	0.05	0.54	0.03	0.08	0.00
Queue Length 95th (ft)	0	0	4	0	2	6	0
Control Delay (s)	0.0	0.0	9.1	0.0	20.3	12.4	0.0
Lane LOS			A		C	B	A
Approach Delay (s)	0.0		0.4		13.5		0.0
Approach LOS					B		A

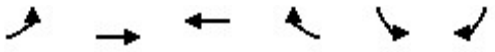
Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	54.2%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	568	0	2	876	12	0	0	0	3	0	4
Future Volume (Veh/h)	11	568	0	2	876	12	0	0	0	3	0	4
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)	12	617	0	2	952	13	0	0	0	3	0	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		687										
pX, platoon unblocked				0.84			0.84	0.84	0.84	0.84	0.84	
vC, conflicting volume	965			617			1601	1610	617	1604	1604	958
vC1, stage 1 conf vol							641	641		962	962	
vC2, stage 2 conf vol							960	969		641	641	
vCu, unblocked vol	965			448			1620	1631	448	1623	1623	958
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			100	100	100	99	100	99
cM capacity (veh/h)	714			934			248	267	513	257	274	312

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	12	617	2	965	0	7
Volume Left	12	0	2	0	0	3
Volume Right	0	0	0	13	0	4
cSH	714	1700	934	1700	1700	286
Volume to Capacity	0.02	0.36	0.00	0.57	0.00	0.02
Queue Length 95th (ft)	1	0	0	0	0	2
Control Delay (s)	10.1	0.0	8.9	0.0	0.0	17.9
Lane LOS	B		A		A	C
Approach Delay (s)	0.2		0.0		0.0	17.9
Approach LOS					A	C

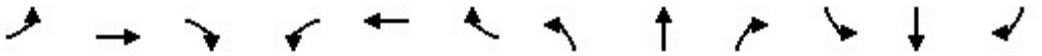
Intersection Summary				
Average Delay	0.2			
Intersection Capacity Utilization	56.8%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	32	537	883	46	24	8
Future Volume (Veh/h)	32	537	883	46	24	8
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)	35	584	960	50	26	9
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		814				
pX, platoon unblocked					0.86	
vC, conflicting volume	1010				1639	985
vC1, stage 1 conf vol					985	
vC2, stage 2 conf vol					654	
vCu, unblocked vol	1010				1662	985
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	95				91	97
cM capacity (veh/h)	686				295	301

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	35	584	1010	26	9
Volume Left	35	0	0	26	0
Volume Right	0	0	50	0	9
cSH	686	1700	1700	295	301
Volume to Capacity	0.05	0.34	0.59	0.09	0.03
Queue Length 95th (ft)	4	0	0	7	2
Control Delay (s)	10.5	0.0	0.0	18.4	17.3
Lane LOS	B			C	C
Approach Delay (s)	0.6		0.0	18.1	
Approach LOS				C	

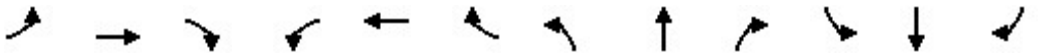
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	478	71	25	858	18	69	6	19	0	0	0
Future Volume (Veh/h)	8	478	71	25	858	18	69	6	19	0	0	0
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)	9	520	77	27	933	20	75	7	21	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		993										
pX, platoon unblocked				0.87			0.87	0.87	0.87	0.87	0.87	
vC, conflicting volume	953			597			1564	1584	558	1560	1612	943
vC1, stage 1 conf vol							576	576		997	997	
vC2, stage 2 conf vol							987	1007		562	615	
vCu, unblocked vol	953			462			1573	1596	418	1568	1629	943
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			70	97	96	100	100	100
cM capacity (veh/h)	721			956			248	262	552	246	262	318

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	9	597	27	953	103	0
Volume Left	9	0	27	0	75	0
Volume Right	0	77	0	20	21	0
cSH	721	1700	956	1700	280	1700
Volume to Capacity	0.01	0.35	0.03	0.56	0.37	0.00
Queue Length 95th (ft)	1	0	2	0	41	0
Control Delay (s)	10.1	0.0	8.9	0.0	25.1	0.0
Lane LOS	B		A		D	A
Approach Delay (s)	0.1		0.2		25.1	0.0
Approach LOS					D	A

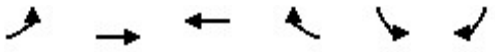
Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	471	19	116	789	18	43	5	90	19	2	43
Future Volume (vph)	13	471	19	116	789	18	43	5	90	19	2	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85		1.00	0.85	1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1852		1770	1863	1583		1782	1583	1770	1595	
Flt Permitted	0.29	1.00		0.40	1.00	1.00		0.71	1.00	0.72	1.00	
Satd. Flow (perm)	539	1852		750	1863	1583		1325	1583	1347	1595	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	512	21	126	858	20	47	5	98	21	2	47
RTOR Reduction (vph)	0	1	0	0	0	4	0	0	90	0	43	0
Lane Group Flow (vph)	14	532	0	126	858	16	0	52	8	21	6	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	91.9	89.6		101.1	94.3	94.3		9.9	9.9	9.9	9.9	
Effective Green, g (s)	91.9	89.6		101.1	94.3	94.3		9.9	9.9	9.9	9.9	
Actuated g/C Ratio	0.77	0.75		0.84	0.79	0.79		0.08	0.08	0.08	0.08	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	436	1382		691	1464	1243		109	130	111	131	
v/s Ratio Prot	0.00	0.29		c0.01	c0.46						0.00	
v/s Ratio Perm	0.02			0.14		0.01		c0.04	0.01	0.02		
v/c Ratio	0.03	0.39		0.18	0.59	0.01		0.48	0.06	0.19	0.04	
Uniform Delay, d1	4.2	5.4		2.4	5.1	2.8		52.6	50.8	51.3	50.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.0	0.8		0.1	1.7	0.0		3.3	0.2	0.8	0.1	
Delay (s)	4.2	6.2		2.5	6.8	2.8		55.8	51.0	52.1	50.8	
Level of Service	A	A		A	A	A		E	D	D	D	
Approach Delay (s)		6.2			6.2			52.7			51.2	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		

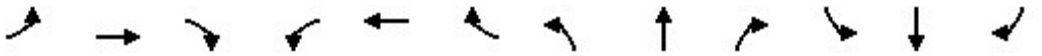
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	9	580	882	8	24	44
Future Volume (Veh/h)	9	580	882	8	24	44
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)	10	630	959	9	26	48
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1084			
pX, platoon unblocked	0.78				0.78	0.78
vC, conflicting volume	968				1609	959
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	814				1641	802
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				69	84
cM capacity (veh/h)	631				84	298

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	10	630	959	9	26	48
Volume Left	10	0	0	0	26	0
Volume Right	0	0	0	9	0	48
cSH	631	1700	1700	1700	84	298
Volume to Capacity	0.02	0.37	0.56	0.01	0.31	0.16
Queue Length 95th (ft)	1	0	0	0	29	14
Control Delay (s)	10.8	0.0	0.0	0.0	65.9	19.4
Lane LOS	B				F	C
Approach Delay (s)	0.2		0.0		35.8	
Approach LOS					E	

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	56.4%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	409	172	23	5	404	274	8	8	0	80	18	479
Future Volume (vph)	409	172	23	5	404	274	8	8	0	80	18	479
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5	4.5	4.5			4.5	4.5
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00
Frt	1.00	0.98			1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00			0.96	1.00
Satd. Flow (prot)	1770	1830			1862	1583	1770	1863			1790	1583
Flt Permitted	0.15	1.00			1.00	1.00	0.95	1.00			0.96	1.00
Satd. Flow (perm)	285	1830			1857	1583	1770	1863			1790	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	445	187	25	5	439	298	9	9	0	87	20	521
RTOR Reduction (vph)	0	5	0	0	0	200	0	0	0	0	0	187
Lane Group Flow (vph)	445	207	0	0	444	98	9	9	0	0	107	334
Turn Type	pm+pt	NA		Perm	NA	Perm	Split	NA		Split	NA	pm+ov
Protected Phases	7	4			8		2	2		6	6	7
Permitted Phases	4			8		8						6
Actuated Green, G (s)	57.1	57.1			24.6	24.6	6.2	6.2			9.8	37.8
Effective Green, g (s)	57.1	57.1			24.6	24.6	6.2	6.2			9.8	37.8
Actuated g/C Ratio	0.66	0.66			0.28	0.28	0.07	0.07			0.11	0.44
Clearance Time (s)	4.5	4.5			4.5	4.5	4.5	4.5			4.5	4.5
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	668	1206			527	449	126	133			202	773
v/s Ratio Prot	c0.22	0.11					c0.01	0.00			c0.06	0.14
v/s Ratio Perm	0.22				c0.24	0.06						0.07
v/c Ratio	0.67	0.17			0.84	0.22	0.07	0.07			0.53	0.43
Uniform Delay, d1	15.6	5.7			29.2	23.7	37.5	37.5			36.2	16.9
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	2.5	0.1			11.7	0.2	0.2	0.2			2.5	0.4
Delay (s)	18.2	5.7			40.8	23.9	37.8	37.7			38.7	17.3
Level of Service	B	A			D	C	D	D			D	B
Approach Delay (s)		14.1			34.0			37.7			21.0	
Approach LOS		B			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	23.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	86.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	39	86	347	247	94
Future Volume (Veh/h)	8	39	86	347	247	94
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)	9	42	93	377	268	102
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				959		
pX, platoon unblocked						
vC, conflicting volume	882	319	370			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	882	319	370			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	94	92			
cM capacity (veh/h)	292	722	1189			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	51	470	370
Volume Left	9	93	0
Volume Right	42	0	102
cSH	573	1189	1700
Volume to Capacity	0.09	0.08	0.22
Queue Length 95th (ft)	7	6	0
Control Delay (s)	11.9	2.3	0.0
Lane LOS	B	A	
Approach Delay (s)	11.9	2.3	0.0
Approach LOS	B		

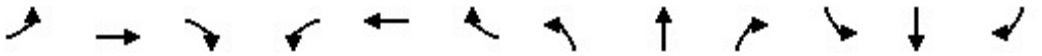
Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	218	239	1	1479	307	161	986
Future Volume (vph)	218	239	1	1479	307	161	986
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583	1770	3539	1583	1770	3539
Flt Permitted	0.95	1.00	0.27	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583	497	3539	1583	1770	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	237	260	1	1608	334	175	1072
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	237	260	1	1608	334	175	1072
Turn Type	Perm	Free	Perm	NA	Free	Prot	NA
Protected Phases				2		1	6
Permitted Phases	8	Free	2		Free		
Actuated Green, G (s)	11.6	89.5	51.3	51.3	89.5	14.1	69.9
Effective Green, g (s)	11.6	89.5	51.3	51.3	89.5	14.1	69.9
Actuated g/C Ratio	0.13	1.00	0.57	0.57	1.00	0.16	0.78
Clearance Time (s)	4.0		4.0	4.0		4.5	4.0
Vehicle Extension (s)	3.0		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	444	1583	284	2028	1583	278	2763
v/s Ratio Prot				c0.45		c0.10	0.30
v/s Ratio Perm	c0.07	0.16	0.00		0.21		
v/c Ratio	0.53	0.16	0.00	0.79	0.21	0.63	0.39
Uniform Delay, d1	36.4	0.0	8.2	14.9	0.0	35.3	3.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	0.2	0.0	3.3	0.3	4.4	0.1
Delay (s)	37.7	0.2	8.2	18.2	0.3	39.7	3.2
Level of Service	D	A	A	B	A	D	A
Approach Delay (s)	18.1			15.1			8.3
Approach LOS	B			B			A

Intersection Summary			
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	89.5	Sum of lost time (s)	12.5
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	275	49	273	65	128	15	293	1663	30	45	967	150
Future Volume (vph)	275	49	273	65	128	15	293	1663	30	45	967	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00		0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1863	1583	1770	1834		3433	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1863	1583	1770	1834		3433	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	299	53	297	71	139	16	318	1808	33	49	1051	163
RTOR Reduction (vph)	0	0	257	0	3	0	0	0	14	0	0	83
Lane Group Flow (vph)	299	53	40	71	152	0	318	1808	19	49	1051	80
Turn Type	Split	NA	Perm	Split	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	18.6	18.6	18.6	16.0	16.0		17.7	79.6	79.6	5.8	67.7	67.7
Effective Green, g (s)	18.6	18.6	18.6	16.0	16.0		17.7	79.6	79.6	5.8	67.7	67.7
Actuated g/C Ratio	0.13	0.13	0.13	0.12	0.12		0.13	0.58	0.58	0.04	0.49	0.49
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	462	251	213	205	212		440	2041	913	74	1736	776
v/s Ratio Prot	c0.09	0.03		0.04	c0.08		c0.09	c0.51		0.03	0.30	
v/s Ratio Perm			0.03						0.01			0.05
v/c Ratio	0.65	0.21	0.19	0.35	0.72		0.72	0.89	0.02	0.66	0.61	0.10
Uniform Delay, d1	56.6	53.2	53.0	56.2	58.8		57.8	25.3	12.5	65.1	25.5	18.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.1	0.4	0.4	1.0	11.0		5.8	6.1	0.0	20.0	1.6	0.3
Delay (s)	59.7	53.6	53.4	57.2	69.9		63.6	31.4	12.5	85.2	27.0	19.1
Level of Service	E	D	D	E	E		E	C	B	F	C	B
Approach Delay (s)		56.3			65.9			35.8			28.3	
Approach LOS		E			E			D			C	

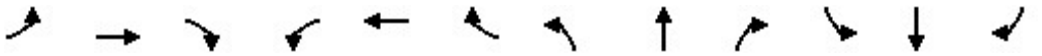
Intersection Summary			
HCM 2000 Control Delay	38.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	138.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	10	0	33	25	1937	23	54	1263	9
Future Volume (Veh/h)	0	0	0	10	0	33	25	1937	23	54	1263	9
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)	0	0	0	11	0	36	27	2105	25	59	1373	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)						3						
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2598	3675	686	2964	3660	1052	1383			2130		
vC1, stage 1 conf vol	1491	1491		2159	2159							
vC2, stage 2 conf vol	1106	2184		804	1501							
vCu, unblocked vol	2598	3675	686	2964	3660	1052	1383			2130		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	75	100	84	95			77		
cM capacity (veh/h)	73	19	390	44	62	223	491			252		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	0	47	27	1052	1052	25	59	686	686	10
Volume Left	0	11	27	0	0	0	59	0	0	0
Volume Right	0	36	0	0	0	25	0	0	0	10
cSH	1700	187	491	1700	1700	1700	252	1700	1700	1700
Volume to Capacity	0.62	0.25	0.05	0.62	0.62	0.01	0.23	0.40	0.40	0.01
Queue Length 95th (ft)	0	24	4	0	0	0	22	0	0	0
Control Delay (s)	0.0	45.0	12.8	0.0	0.0	0.0	23.6	0.0	0.0	0.0
Lane LOS	A	E	B				C			
Approach Delay (s)	0.0	45.0	0.2				1.0			
Approach LOS	A	E								

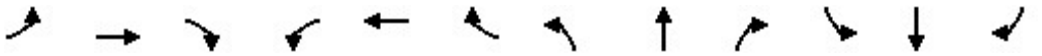
Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	63.5%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	306	181	137	124	151	252	121	1420	187	236	870	172
Future Volume (vph)	306	181	137	124	151	252	121	1420	187	236	870	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1746	1583	1681	1763	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.95	0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1746	1583	1681	1763	1583	1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	333	197	149	135	164	274	132	1543	203	257	946	187
RTOR Reduction (vph)	0	0	121	0	0	232	0	0	117	0	0	108
Lane Group Flow (vph)	260	270	28	121	178	42	132	1543	86	257	946	79
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	25.6	25.6	25.6	18.3	18.3	18.3	15.4	56.9	56.9	15.5	57.0	57.0
Effective Green, g (s)	25.6	25.6	25.6	18.3	18.3	18.3	15.4	56.9	56.9	15.5	57.0	57.0
Actuated g/C Ratio	0.19	0.19	0.19	0.14	0.14	0.14	0.11	0.42	0.42	0.12	0.42	0.42
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	320	332	301	229	240	215	202	1499	670	396	1502	671
v/s Ratio Prot	c0.15	0.15		0.07	c0.10		0.07	c0.44		c0.07	0.27	
v/s Ratio Perm			0.02			0.03			0.05			0.05
v/c Ratio	0.81	0.81	0.09	0.53	0.74	0.19	0.65	1.03	0.13	0.65	0.63	0.12
Uniform Delay, d1	52.1	52.1	44.8	54.0	55.7	51.5	56.9	38.7	23.6	56.8	30.4	23.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	14.5	14.1	0.1	2.2	11.7	0.4	7.4	31.1	0.4	3.6	2.0	0.4
Delay (s)	66.5	66.1	44.9	56.2	67.4	51.9	64.3	69.8	24.0	60.4	32.4	23.8
Level of Service	E	E	D	E	E	D	E	E	C	E	C	C
Approach Delay (s)		61.6			57.6			64.5			36.4	
Approach LOS		E			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	54.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	134.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		

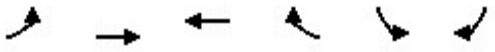
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	505	34	23	512	3	9	1	18	0	0	2
Future Volume (Veh/h)	47	505	34	23	512	3	9	1	18	0	0	2
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)	51	549	37	25	557	3	10	1	20	0	0	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		371			998							
pX, platoon unblocked												
vC, conflicting volume	560			586			1000	1280	293	1006	1296	280
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	560			586			1000	1280	293	1006	1296	280
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 %	95			97			95	99	97	100	100	100
cM capacity (veh/h)	1007			985			186	152	703	178	149	717

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	326	312	304	282	11	20	2
Volume Left	51	0	25	0	10	0	0
Volume Right	0	37	0	3	0	20	2
cSH	1007	1700	985	1700	182	703	717
Volume to Capacity	0.05	0.18	0.03	0.17	0.06	0.03	0.00
Queue Length 95th (ft)	4	0	2	0	5	2	0
Control Delay (s)	1.8	0.0	1.0	0.0	26.1	10.3	10.0
Lane LOS	A		A		D	B	B
Approach Delay (s)	0.9		0.5		15.9		10.0
Approach LOS					C		B

Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	48.5%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	523	542	0	0	1
Future Volume (Veh/h)	0	523	542	0	0	1
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)	0	568	589	0	0	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1114	255			
pX, platoon unblocked						
vC, conflicting volume	589				873	294
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	589				873	294
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	982				289	702

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	189	379	393	196	1
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	1
cSH	982	1700	1700	1700	702
Volume to Capacity	0.00	0.22	0.23	0.12	0.00
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	10.1
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.1
Approach LOS					B

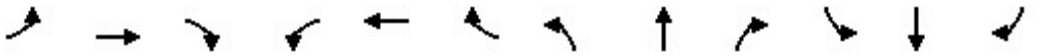
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	25.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	502	22	69	535	11	83
Future Volume (Veh/h)	502	22	69	535	11	83
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)	546	24	75	582	12	90
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1185			184		
pX, platoon unblocked						
vC, conflicting volume			570		999	285
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			570		999	285
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		95	87
cM capacity (veh/h)			999		222	712

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	364	206	269	388	102
Volume Left	0	0	75	0	12
Volume Right	0	24	0	0	90
cSH	1700	1700	999	1700	565
Volume to Capacity	0.21	0.12	0.08	0.23	0.18
Queue Length 95th (ft)	0	0	6	0	16
Control Delay (s)	0.0	0.0	3.0	0.0	12.8
Lane LOS			A		B
Approach Delay (s)	0.0		1.2		12.8
Approach LOS					B

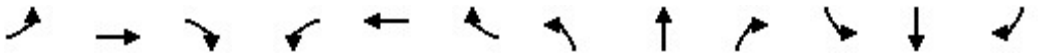
Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	463	9	0	505	345	5	0	3	205	2	91
Future Volume (vph)	120	463	9	0	505	345	5	0	3	205	2	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5		4.5			4.5	
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Frt	1.00	1.00			1.00	0.85		0.95			0.96	
Flt Protected	0.95	1.00			1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1770	1857			1863	1583		1715			1726	
Flt Permitted	0.15	1.00			1.00	1.00		0.88			0.79	
Satd. Flow (perm)	270	1857			1863	1583		1554			1410	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	130	503	10	0	549	375	5	0	3	223	2	99
RTOR Reduction (vph)	0	0	0	0	0	167	0	5	0	0	12	0
Lane Group Flow (vph)	130	513	0	0	549	208	0	3	0	0	312	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	51.7	51.7			37.4	37.4		42.0			42.0	
Effective Green, g (s)	51.7	51.7			37.4	37.4		42.0			42.0	
Actuated g/C Ratio	0.50	0.50			0.36	0.36		0.41			0.41	
Clearance Time (s)	4.5	4.5			4.5	4.5		4.5			4.5	
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	279	934			678	576		635			576	
v/s Ratio Prot	0.04	c0.28			c0.29							
v/s Ratio Perm	0.19					0.13		0.00			c0.22	
v/c Ratio	0.47	0.55			0.81	0.36		0.01			0.54	
Uniform Delay, d1	18.4	17.5			29.4	23.9		18.0			23.0	
Progression Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.2	0.7			7.1	0.4		0.0			3.6	
Delay (s)	19.6	18.2			36.5	24.3		18.0			26.7	
Level of Service	B	B			D	C		B			C	
Approach Delay (s)		18.5			31.6			18.0			26.7	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	26.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	102.7	Sum of lost time (s)	13.5
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		

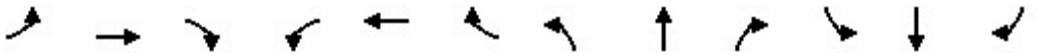
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	591	35	45	906	0	9	0	40	0	0	0
Future Volume (Veh/h)	0	591	35	45	906	0	9	0	40	0	0	0
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)	0	642	38	49	985	0	10	0	43	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		342										
pX, platoon unblocked				0.81			0.81	0.81	0.81	0.81	0.81	
vC, conflicting volume	985			680			1744	1744	661	1768	1763	985
vC1, stage 1 conf vol							661	661		1083	1083	
vC2, stage 2 conf vol							1083	1083		685	680	
vCu, unblocked vol	985			490			1801	1801	466	1830	1824	985
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			94			95	100	91	100	100	100
cM capacity (veh/h)	701			871			216	236	484	202	227	301

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	0	680	49	985	10	43	0
Volume Left	0	0	49	0	10	0	0
Volume Right	0	38	0	0	0	43	0
cSH	1700	1700	871	1700	216	484	1700
Volume to Capacity	0.00	0.40	0.06	0.58	0.05	0.09	0.00
Queue Length 95th (ft)	0	0	4	0	4	7	0
Control Delay (s)	0.0	0.0	9.4	0.0	22.4	13.2	0.0
Lane LOS			A		C	B	A
Approach Delay (s)	0.0		0.4		14.9		0.0
Approach LOS					B		A

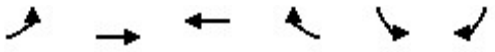
Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	57.7%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	615	6	4	943	12	4	0	1	3	0	4
Future Volume (Veh/h)	11	615	6	4	943	12	4	0	1	3	0	4
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)	12	668	7	4	1025	13	4	0	1	3	0	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		687										
pX, platoon unblocked				0.83			0.83	0.83	0.83	0.83	0.83	
vC, conflicting volume	1038			675			1732	1742	672	1732	1738	1032
vC1, stage 1 conf vol							696	696		1040	1040	
vC2, stage 2 conf vol							1037	1046		693	699	
vCu, unblocked vol	1038			502			1781	1792	497	1781	1789	1032
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			98	100	100	99	100	99
cM capacity (veh/h)	670			878			222	242	473	231	249	283

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	12	675	4	1038	5	7
Volume Left	12	0	4	0	4	3
Volume Right	0	7	0	13	1	4
cSH	670	1700	878	1700	248	258
Volume to Capacity	0.02	0.40	0.00	0.61	0.02	0.03
Queue Length 95th (ft)	1	0	0	0	2	2
Control Delay (s)	10.5	0.0	9.1	0.0	19.8	19.4
Lane LOS	B		A		C	C
Approach Delay (s)	0.2		0.0		19.8	19.4
Approach LOS					C	C

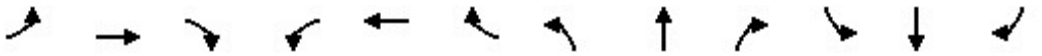
Intersection Summary				
Average Delay	0.2			
Intersection Capacity Utilization	60.4%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	34	583	948	47	25	12
Future Volume (Veh/h)	34	583	948	47	25	12
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)	37	634	1030	51	27	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		814				
pX, platoon unblocked					0.84	
vC, conflicting volume	1081				1764	1056
vC1, stage 1 conf vol					1056	
vC2, stage 2 conf vol					708	
vCu, unblocked vol	1081				1812	1056
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	94				90	95
cM capacity (veh/h)	645				270	274

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	37	634	1081	27	13
Volume Left	37	0	0	27	0
Volume Right	0	0	51	0	13
cSH	645	1700	1700	270	274
Volume to Capacity	0.06	0.37	0.64	0.10	0.05
Queue Length 95th (ft)	5	0	0	8	4
Control Delay (s)	10.9	0.0	0.0	19.8	18.8
Lane LOS	B			C	C
Approach Delay (s)	0.6		0.0	19.5	
Approach LOS				C	

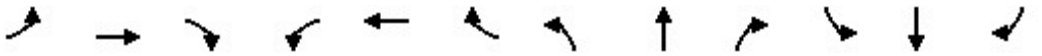
Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	513	82	32	915	19	78	6	25	0	0	0
Future Volume (Veh/h)	8	513	82	32	915	19	78	6	25	0	0	0
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)	9	558	89	35	995	21	85	7	27	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		993										
pX, platoon unblocked				0.86			0.86	0.86	0.86	0.86	0.86	
vC, conflicting volume	1016			647			1686	1706	602	1682	1740	1006
vC1, stage 1 conf vol							620	620		1076	1076	
vC2, stage 2 conf vol							1065	1086		606	665	
vCu, unblocked vol	1016			504			1717	1741	452	1712	1781	1006
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			96			62	97	95	100	100	100
cM capacity (veh/h)	683			908			221	237	520	218	236	293

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	9	647	35	1016	119	0
Volume Left	9	0	35	0	85	0
Volume Right	0	89	0	21	27	0
cSH	683	1700	908	1700	255	1700
Volume to Capacity	0.01	0.38	0.04	0.60	0.47	0.00
Queue Length 95th (ft)	1	0	3	0	58	0
Control Delay (s)	10.3	0.0	9.1	0.0	30.8	0.0
Lane LOS	B		A		D	A
Approach Delay (s)	0.1		0.3		30.8	0.0
Approach LOS					D	A

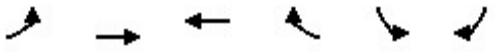
Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	62.1%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	506	20	120	837	30	44	5	93	52	2	57
Future Volume (vph)	18	506	20	120	837	30	44	5	93	52	2	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85		1.00	0.85	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1852		1770	1863	1583		1782	1583	1770	1592	
Flt Permitted	0.26	1.00		0.38	1.00	1.00		0.70	1.00	0.72	1.00	
Satd. Flow (perm)	489	1852		708	1863	1583		1304	1583	1346	1592	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	550	22	130	910	33	48	5	101	57	2	62
RTOR Reduction (vph)	0	1	0	0	0	7	0	0	92	0	57	0
Lane Group Flow (vph)	20	571	0	130	910	26	0	53	9	57	7	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	91.4	89.0		100.6	93.7	93.7		10.4	10.4	10.4	10.4	
Effective Green, g (s)	91.4	89.0		100.6	93.7	93.7		10.4	10.4	10.4	10.4	
Actuated g/C Ratio	0.76	0.74		0.84	0.78	0.78		0.09	0.09	0.09	0.09	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	398	1373		656	1454	1236		113	137	116	137	
v/s Ratio Prot	0.00	0.31		c0.01	c0.49						0.00	
v/s Ratio Perm	0.04			0.15		0.02		0.04	0.01	c0.04		
v/c Ratio	0.05	0.42		0.20	0.63	0.02		0.47	0.06	0.49	0.05	
Uniform Delay, d1	4.8	5.8		2.7	5.6	2.9		52.2	50.3	52.3	50.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	0.9		0.1	2.0	0.0		3.1	0.2	3.3	0.2	
Delay (s)	4.8	6.7		2.9	7.7	3.0		55.2	50.5	55.5	50.4	
Level of Service	A	A		A	A	A		E	D	E	D	
Approach Delay (s)		6.7			7.0			52.1			52.8	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		

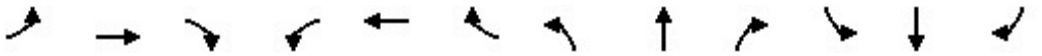
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	9	651	944	8	25	45
Future Volume (Veh/h)	9	651	944	8	25	45
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)	10	708	1026	9	27	49
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1084			
pX, platoon unblocked	0.76				0.76	0.76
vC, conflicting volume	1035				1754	1026
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	889				1834	877
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				57	81
cM capacity (veh/h)	580				63	264

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	10	708	1026	9	27	49
Volume Left	10	0	0	0	27	0
Volume Right	0	0	0	9	0	49
cSH	580	1700	1700	1700	63	264
Volume to Capacity	0.02	0.42	0.60	0.01	0.43	0.19
Queue Length 95th (ft)	1	0	0	0	42	17
Control Delay (s)	11.3	0.0	0.0	0.0	100.7	21.7
Lane LOS	B				F	C
Approach Delay (s)	0.2		0.0		49.7	
Approach LOS					E	

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	457	194	24	5	422	318	8	8	0	133	19	523
Future Volume (vph)	457	194	24	5	422	318	8	8	0	133	19	523
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5	4.5	4.5			4.5	4.5
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00
Frt	1.00	0.98			1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00			0.96	1.00
Satd. Flow (prot)	1770	1832			1862	1583	1770	1863			1785	1583
Flt Permitted	0.14	1.00			1.00	1.00	0.95	1.00			0.96	1.00
Satd. Flow (perm)	266	1832			1857	1583	1770	1863			1785	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	497	211	26	5	459	346	9	9	0	145	21	568
RTOR Reduction (vph)	0	5	0	0	0	219	0	0	0	0	0	174
Lane Group Flow (vph)	497	232	0	0	464	127	9	9	0	0	166	394
Turn Type	pm+pt	NA		Perm	NA	Perm	Split	NA		Split	NA	pm+ov
Protected Phases	7	4			8		2	2		6	6	7
Permitted Phases	4			8		8						6
Actuated Green, G (s)	63.2	63.2			28.0	28.0	6.1	6.1			11.9	42.6
Effective Green, g (s)	63.2	63.2			28.0	28.0	6.1	6.1			11.9	42.6
Actuated g/C Ratio	0.67	0.67			0.30	0.30	0.06	0.06			0.13	0.45
Clearance Time (s)	4.5	4.5			4.5	4.5	4.5	4.5			4.5	4.5
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	665	1222			549	468	114	120			224	787
v/s Ratio Prot	c0.24	0.13					c0.01	0.00			c0.09	0.16
v/s Ratio Perm	0.26				c0.25	0.08						0.09
v/c Ratio	0.75	0.19			0.85	0.27	0.08	0.07			0.74	0.50
Uniform Delay, d1	19.5	6.0			31.3	25.5	41.7	41.6			39.9	18.5
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	4.6	0.1			11.4	0.3	0.3	0.3			12.4	0.5
Delay (s)	24.1	6.1			42.8	25.9	42.0	41.9			52.3	19.0
Level of Service	C	A			D	C	D	D			D	B
Approach Delay (s)		18.3			35.5			41.9			26.5	
Approach LOS		B			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	27.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	94.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	74.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	40	89	381	287	97
Future Volume (Veh/h)	8	40	89	381	287	97
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)	9	43	97	414	312	105
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				959		
pX, platoon unblocked						
vC, conflicting volume	972	364	417			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	972	364	417			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	94	92			
cM capacity (veh/h)	256	680	1142			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	52	511	417
Volume Left	9	97	0
Volume Right	43	0	105
cSH	529	1142	1700
Volume to Capacity	0.10	0.08	0.25
Queue Length 95th (ft)	8	7	0
Control Delay (s)	12.5	2.4	0.0
Lane LOS	B	A	
Approach Delay (s)	12.5	2.4	0.0
Approach LOS	B		

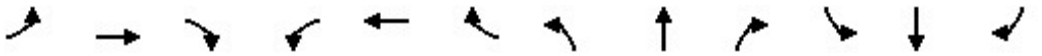
Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	218	239	1	1480	307	161	987
Future Volume (vph)	218	239	1	1480	307	161	987
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583	1770	3539	1583	1770	3539
Flt Permitted	0.95	1.00	0.27	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583	496	3539	1583	1770	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	237	260	1	1609	334	175	1073
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	237	260	1	1609	334	175	1073
Turn Type	Perm	Free	Perm	NA	Free	Prot	NA
Protected Phases				2		1	6
Permitted Phases	8	Free	2		Free		
Actuated Green, G (s)	11.6	89.5	51.3	51.3	89.5	14.1	69.9
Effective Green, g (s)	11.6	89.5	51.3	51.3	89.5	14.1	69.9
Actuated g/C Ratio	0.13	1.00	0.57	0.57	1.00	0.16	0.78
Clearance Time (s)	4.0		4.0	4.0		4.5	4.0
Vehicle Extension (s)	3.0		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	444	1583	284	2028	1583	278	2763
v/s Ratio Prot				c0.45		c0.10	0.30
v/s Ratio Perm	c0.07	0.16	0.00		0.21		
v/c Ratio	0.53	0.16	0.00	0.79	0.21	0.63	0.39
Uniform Delay, d1	36.4	0.0	8.2	15.0	0.0	35.3	3.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	0.2	0.0	3.3	0.3	4.4	0.1
Delay (s)	37.7	0.2	8.2	18.2	0.3	39.7	3.2
Level of Service	D	A	A	B	A	D	A
Approach Delay (s)	18.1			15.2			8.3
Approach LOS	B			B			A

Intersection Summary			
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	89.5	Sum of lost time (s)	12.5
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		

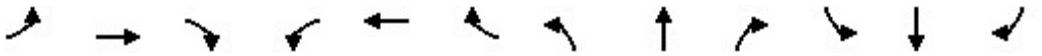
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	275	49	275	65	128	15	294	1664	30	45	968	150
Future Volume (vph)	275	49	275	65	128	15	294	1664	30	45	968	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00		0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1863	1583	1770	1834		3433	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1863	1583	1770	1834		3433	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	299	53	299	71	139	16	320	1809	33	49	1052	163
RTOR Reduction (vph)	0	0	259	0	3	0	0	0	14	0	0	83
Lane Group Flow (vph)	299	53	40	71	152	0	320	1809	19	49	1052	80
Turn Type	Split	NA	Perm	Split	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	18.6	18.6	18.6	16.0	16.0		17.8	79.6	79.6	5.8	67.6	67.6
Effective Green, g (s)	18.6	18.6	18.6	16.0	16.0		17.8	79.6	79.6	5.8	67.6	67.6
Actuated g/C Ratio	0.13	0.13	0.13	0.12	0.12		0.13	0.58	0.58	0.04	0.49	0.49
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	462	251	213	205	212		442	2041	913	74	1733	775
v/s Ratio Prot	c0.09	0.03		0.04	c0.08		c0.09	c0.51		0.03	0.30	
v/s Ratio Perm			0.03						0.01			0.05
v/c Ratio	0.65	0.21	0.19	0.35	0.72		0.72	0.89	0.02	0.66	0.61	0.10
Uniform Delay, d1	56.6	53.2	53.0	56.2	58.8		57.7	25.3	12.5	65.1	25.6	18.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.1	0.4	0.4	1.0	11.0		5.8	6.1	0.0	20.0	1.6	0.3
Delay (s)	59.7	53.6	53.4	57.2	69.9		63.5	31.4	12.5	85.2	27.1	19.2
Level of Service	E	D	D	E	E		E	C	B	F	C	B
Approach Delay (s)		56.3			65.9			35.9			28.4	
Approach LOS		E			E			D			C	

Intersection Summary			
HCM 2000 Control Delay	38.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	138.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		

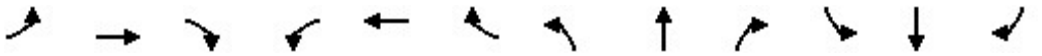
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	10	0	35	25	1937	26	57	1263	9
Future Volume (Veh/h)	0	0	0	10	0	35	25	1937	26	57	1263	9
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)	0	0	0	11	0	38	27	2105	28	62	1373	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)						3						
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2604	3684	686	2970	3666	1052	1383			2133		
vC1, stage 1 conf vol	1497	1497		2159	2159							
vC2, stage 2 conf vol	1106	2187		810	1507							
vCu, unblocked vol	2604	3684	686	2970	3666	1052	1383			2133		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	75	100	83	95			75		
cM capacity (veh/h)	70	16	390	44	61	223	491			251		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	0	49	27	1052	1052	28	62	686	686	10
Volume Left	0	11	27	0	0	0	62	0	0	0
Volume Right	0	38	0	0	0	28	0	0	0	10
cSH	1700	195	491	1700	1700	1700	251	1700	1700	1700
Volume to Capacity	1.31	0.25	0.05	0.62	0.62	0.02	0.25	0.40	0.40	0.01
Queue Length 95th (ft)	0	24	4	0	0	0	24	0	0	0
Control Delay (s)	0.0	44.3	12.8	0.0	0.0	0.0	24.0	0.0	0.0	0.0
Lane LOS	A	E	B				C			
Approach Delay (s)	0.0	44.3	0.2				1.0			
Approach LOS	A	E								

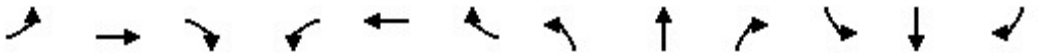
Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	63.5%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	308	182	137	125	152	252	121	1421	188	236	870	172
Future Volume (vph)	308	182	137	125	152	252	121	1421	188	236	870	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1746	1583	1681	1763	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.95	0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1746	1583	1681	1763	1583	1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	335	198	149	136	165	274	132	1545	204	257	946	187
RTOR Reduction (vph)	0	0	121	0	0	232	0	0	118	0	0	108
Lane Group Flow (vph)	261	272	28	122	179	42	132	1545	86	257	946	79
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	25.7	25.7	25.7	18.6	18.6	18.6	15.5	56.9	56.9	15.5	56.9	56.9
Effective Green, g (s)	25.7	25.7	25.7	18.6	18.6	18.6	15.5	56.9	56.9	15.5	56.9	56.9
Actuated g/C Ratio	0.19	0.19	0.19	0.14	0.14	0.14	0.12	0.42	0.42	0.12	0.42	0.42
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	320	333	302	232	243	218	203	1494	668	395	1494	668
v/s Ratio Prot	0.16	c0.16		0.07	c0.10		0.07	c0.44		c0.07	0.27	
v/s Ratio Perm			0.02			0.03			0.05			0.05
v/c Ratio	0.82	0.82	0.09	0.53	0.74	0.19	0.65	1.03	0.13	0.65	0.63	0.12
Uniform Delay, d1	52.2	52.2	44.9	54.0	55.7	51.4	57.0	38.9	23.8	57.0	30.7	23.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	14.7	14.3	0.1	2.1	11.0	0.4	7.2	32.6	0.4	3.8	2.1	0.4
Delay (s)	66.9	66.5	45.0	56.1	66.7	51.8	64.3	71.5	24.2	60.8	32.7	24.0
Level of Service	E	E	D	E	E	D	E	E	C	E	C	C
Approach Delay (s)		62.0			57.4			65.8			36.7	
Approach LOS		E			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	55.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	134.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		

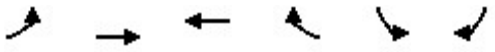
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	507	34	23	514	3	9	1	18	0	0	2
Future Volume (Veh/h)	47	507	34	23	514	3	9	1	18	0	0	2
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)	51	551	37	25	559	3	10	1	20	0	0	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		371			998							
pX, platoon unblocked												
vC, conflicting volume	562			588			1003	1284	294	1008	1300	281
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	562			588			1003	1284	294	1008	1300	281
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 %	95			97			95	99	97	100	100	100
cM capacity (veh/h)	1005			983			185	151	702	177	148	716

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	326	312	304	282	11	20	2
Volume Left	51	0	25	0	10	0	0
Volume Right	0	37	0	3	0	20	2
cSH	1005	1700	983	1700	181	702	716
Volume to Capacity	0.05	0.18	0.03	0.17	0.06	0.03	0.00
Queue Length 95th (ft)	4	0	2	0	5	2	0
Control Delay (s)	1.8	0.0	1.0	0.0	26.2	10.3	10.0
Lane LOS	A		A		D	B	B
Approach Delay (s)	0.9		0.5		15.9		10.0
Approach LOS					C		B

Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	48.7%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	525	544	0	0	1
Future Volume (Veh/h)	0	525	544	0	0	1
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)	0	571	591	0	0	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1114	255			
pX, platoon unblocked						
vC, conflicting volume	591				876	296
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	591				876	296
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	981				288	701

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	190	381	394	197	1
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	1
cSH	981	1700	1700	1700	701
Volume to Capacity	0.00	0.22	0.23	0.12	0.00
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	10.1
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.1
Approach LOS					B

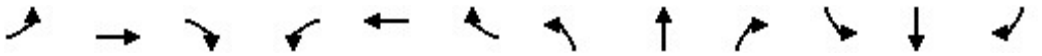
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	25.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	504	22	69	537	11	84
Future Volume (Veh/h)	504	22	69	537	11	84
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)	548	24	75	584	12	91
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1185			184		
pX, platoon unblocked						
vC, conflicting volume			572		1002	286
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			572		1002	286
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		95	87
cM capacity (veh/h)			997		221	711

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	365	207	270	389	103
Volume Left	0	0	75	0	12
Volume Right	0	24	0	0	91
cSH	1700	1700	997	1700	565
Volume to Capacity	0.21	0.12	0.08	0.23	0.18
Queue Length 95th (ft)	0	0	6	0	17
Control Delay (s)	0.0	0.0	3.0	0.0	12.8
Lane LOS			A		B
Approach Delay (s)	0.0		1.2		12.8
Approach LOS					B

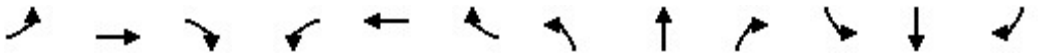
Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	463	9	0	506	345	5	0	3	207	2	92
Future Volume (vph)	123	463	9	0	506	345	5	0	3	207	2	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5		4.5			4.5	
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Frt	1.00	1.00			1.00	0.85		0.95			0.96	
Flt Protected	0.95	1.00			1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1770	1857			1863	1583		1715			1726	
Flt Permitted	0.14	1.00			1.00	1.00		0.88			0.79	
Satd. Flow (perm)	270	1857			1863	1583		1553			1410	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	134	503	10	0	550	375	5	0	3	225	2	100
RTOR Reduction (vph)	0	0	0	0	0	166	0	5	0	0	12	0
Lane Group Flow (vph)	134	513	0	0	550	209	0	3	0	0	315	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	51.9	51.9			37.5	37.5		41.9			41.9	
Effective Green, g (s)	51.9	51.9			37.5	37.5		41.9			41.9	
Actuated g/C Ratio	0.50	0.50			0.36	0.36		0.41			0.41	
Clearance Time (s)	4.5	4.5			4.5	4.5		4.5			4.5	
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	280	937			679	577		632			574	
v/s Ratio Prot	0.05	c0.28			c0.30							
v/s Ratio Perm	0.20					0.13		0.00			c0.22	
v/c Ratio	0.48	0.55			0.81	0.36		0.01			0.55	
Uniform Delay, d1	18.4	17.4			29.4	23.9		18.1			23.2	
Progression Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.3	0.7			7.3	0.4		0.0			3.7	
Delay (s)	19.7	18.1			36.7	24.3		18.1			27.0	
Level of Service	B	B			D	C		B			C	
Approach Delay (s)		18.4			31.7			18.1			27.0	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	26.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	102.8	Sum of lost time (s)	13.5
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		

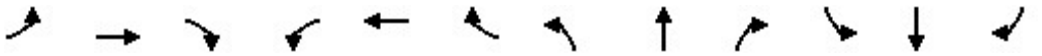
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	593	35	45	907	0	9	0	40	0	0	0
Future Volume (Veh/h)	0	593	35	45	907	0	9	0	40	0	0	0
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)	0	645	38	49	986	0	10	0	43	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		342										
pX, platoon unblocked				0.81			0.81	0.81	0.81	0.81	0.81	
vC, conflicting volume	986			683			1748	1748	664	1772	1767	986
vC1, stage 1 conf vol							664	664		1084	1084	
vC2, stage 2 conf vol							1084	1084		688	683	
vCu, unblocked vol	986			494			1805	1805	471	1835	1829	986
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			94			95	100	91	100	100	100
cM capacity (veh/h)	701			869			216	236	482	201	227	301

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	0	683	49	986	10	43	0
Volume Left	0	0	49	0	10	0	0
Volume Right	0	38	0	0	0	43	0
cSH	1700	1700	869	1700	216	482	1700
Volume to Capacity	0.00	0.40	0.06	0.58	0.05	0.09	0.00
Queue Length 95th (ft)	0	0	4	0	4	7	0
Control Delay (s)	0.0	0.0	9.4	0.0	22.5	13.2	0.0
Lane LOS			A		C	B	A
Approach Delay (s)	0.0		0.4		15.0		0.0
Approach LOS					B		A

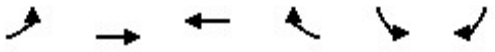
Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	57.7%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	617	6	4	943	21	4	0	1	5	0	5
Future Volume (Veh/h)	11	617	6	4	943	21	4	0	1	5	0	5
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)	12	671	7	4	1025	23	4	0	1	5	0	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		687										
pX, platoon unblocked				0.83			0.83	0.83	0.83	0.83	0.83	
vC, conflicting volume	1048			678			1736	1754	674	1740	1746	1036
vC1, stage 1 conf vol							698	698		1044	1044	
vC2, stage 2 conf vol							1038	1056		696	702	
vCu, unblocked vol	1048			506			1786	1808	501	1791	1798	1036
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			98	100	100	98	100	98
cM capacity (veh/h)	664			875			221	240	471	229	247	281

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	12	678	4	1048	5	10
Volume Left	12	0	4	0	4	5
Volume Right	0	7	0	23	1	5
cSH	664	1700	875	1700	247	252
Volume to Capacity	0.02	0.40	0.00	0.62	0.02	0.04
Queue Length 95th (ft)	1	0	0	0	2	3
Control Delay (s)	10.5	0.0	9.1	0.0	19.9	19.9
Lane LOS	B		A		C	C
Approach Delay (s)	0.2		0.0		19.9	19.9
Approach LOS					C	C

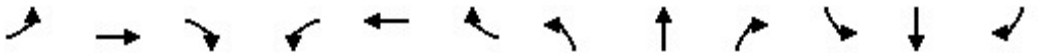
Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	60.9%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	34	587	957	47	25	12
Future Volume (Veh/h)	34	587	957	47	25	12
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)	37	638	1040	51	27	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		814				
pX, platoon unblocked					0.84	
vC, conflicting volume	1091				1778	1066
vC1, stage 1 conf vol					1066	
vC2, stage 2 conf vol					712	
vCu, unblocked vol	1091				1829	1066
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	94				90	95
cM capacity (veh/h)	640				267	270

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	37	638	1091	27	13
Volume Left	37	0	0	27	0
Volume Right	0	0	51	0	13
cSH	640	1700	1700	267	270
Volume to Capacity	0.06	0.38	0.64	0.10	0.05
Queue Length 95th (ft)	5	0	0	8	4
Control Delay (s)	11.0	0.0	0.0	20.0	19.0
Lane LOS	B			C	C
Approach Delay (s)	0.6		0.0	19.7	
Approach LOS				C	

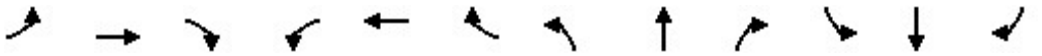
Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	517	82	32	923	19	79	6	25	0	0	0
Future Volume (Veh/h)	8	517	82	32	923	19	79	6	25	0	0	0
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)	9	562	89	35	1003	21	86	7	27	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		993										
pX, platoon unblocked				0.86			0.86	0.86	0.86	0.86	0.86	
vC, conflicting volume	1024			651			1698	1718	606	1694	1752	1014
vC1, stage 1 conf vol							624	624		1084	1084	
vC2, stage 2 conf vol							1073	1094		610	669	
vCu, unblocked vol	1024			509			1730	1755	458	1726	1795	1014
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			96			61	97	95	100	100	100
cM capacity (veh/h)	678			905			219	235	517	216	234	290

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	9	651	35	1024	120	0
Volume Left	9	0	35	0	86	0
Volume Right	0	89	0	21	27	0
cSH	678	1700	905	1700	252	1700
Volume to Capacity	0.01	0.38	0.04	0.60	0.48	0.00
Queue Length 95th (ft)	1	0	3	0	59	0
Control Delay (s)	10.4	0.0	9.1	0.0	31.5	0.0
Lane LOS	B		A		D	A
Approach Delay (s)	0.1		0.3		31.5	0.0
Approach LOS					D	A

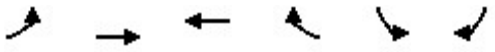
Intersection Summary				
Average Delay	2.3			
Intersection Capacity Utilization	62.6%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	509	20	120	844	30	44	5	93	52	2	58
Future Volume (vph)	19	509	20	120	844	30	44	5	93	52	2	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85		1.00	0.85	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1852		1770	1863	1583		1782	1583	1770	1592	
Flt Permitted	0.26	1.00		0.38	1.00	1.00		0.70	1.00	0.72	1.00	
Satd. Flow (perm)	483	1852		705	1863	1583		1303	1583	1346	1592	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	553	22	130	917	33	48	5	101	57	2	63
RTOR Reduction (vph)	0	1	0	0	0	7	0	0	92	0	58	0
Lane Group Flow (vph)	21	574	0	130	917	26	0	53	9	57	7	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	91.4	89.0		100.6	93.7	93.7		10.4	10.4	10.4	10.4	
Effective Green, g (s)	91.4	89.0		100.6	93.7	93.7		10.4	10.4	10.4	10.4	
Actuated g/C Ratio	0.76	0.74		0.84	0.78	0.78		0.09	0.09	0.09	0.09	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	393	1373		654	1454	1236		112	137	116	137	
v/s Ratio Prot	0.00	0.31		c0.01	c0.49						0.00	
v/s Ratio Perm	0.04			0.15		0.02		0.04	0.01	c0.04		
v/c Ratio	0.05	0.42		0.20	0.63	0.02		0.47	0.06	0.49	0.05	
Uniform Delay, d1	4.9	5.8		2.7	5.7	2.9		52.2	50.3	52.3	50.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	0.9		0.2	2.1	0.0		3.1	0.2	3.3	0.2	
Delay (s)	4.9	6.7		2.9	7.8	3.0		55.3	50.5	55.5	50.5	
Level of Service	A	A		A	A	A		E	D	E	D	
Approach Delay (s)		6.7			7.0			52.2			52.8	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		

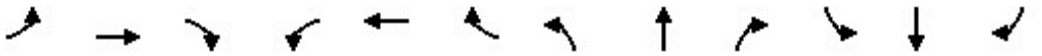
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	10	653	950	8	25	46
Future Volume (Veh/h)	10	653	950	8	25	46
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)	11	710	1033	9	27	50
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1084			
pX, platoon unblocked	0.76				0.76	0.76
vC, conflicting volume	1042				1765	1033
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	896				1849	884
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				56	81
cM capacity (veh/h)	574				61	261

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	11	710	1033	9	27	50
Volume Left	11	0	0	0	27	0
Volume Right	0	0	0	9	0	50
cSH	574	1700	1700	1700	61	261
Volume to Capacity	0.02	0.42	0.61	0.01	0.44	0.19
Queue Length 95th (ft)	1	0	0	0	43	17
Control Delay (s)	11.4	0.0	0.0	0.0	104.8	22.0
Lane LOS	B				F	C
Approach Delay (s)	0.2		0.0		51.1	
Approach LOS					F	

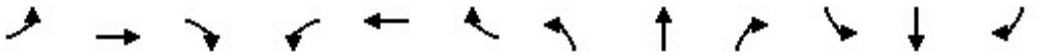
Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	458	195	24	5	426	318	8	8	0	133	19	525
Future Volume (vph)	458	195	24	5	426	318	8	8	0	133	19	525
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5	4.5	4.5			4.5	4.5
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00
Frt	1.00	0.98			1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00			0.96	1.00
Satd. Flow (prot)	1770	1832			1862	1583	1770	1863			1785	1583
Flt Permitted	0.14	1.00			1.00	1.00	0.95	1.00			0.96	1.00
Satd. Flow (perm)	262	1832			1857	1583	1770	1863			1785	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	498	212	26	5	463	346	9	9	0	145	21	571
RTOR Reduction (vph)	0	5	0	0	0	216	0	0	0	0	0	174
Lane Group Flow (vph)	498	233	0	0	468	130	9	9	0	0	166	397
Turn Type	pm+pt	NA		Perm	NA	Perm	Split	NA		Split	NA	pm+ov
Protected Phases	7	4			8		2	2		6	6	7
Permitted Phases	4			8		8						6
Actuated Green, G (s)	63.6	63.6			28.3	28.3	6.1	6.1			11.9	42.7
Effective Green, g (s)	63.6	63.6			28.3	28.3	6.1	6.1			11.9	42.7
Actuated g/C Ratio	0.67	0.67			0.30	0.30	0.06	0.06			0.13	0.45
Clearance Time (s)	4.5	4.5			4.5	4.5	4.5	4.5			4.5	4.5
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	663	1225			552	471	113	119			223	785
v/s Ratio Prot	c0.24	0.13					c0.01	0.00			c0.09	0.16
v/s Ratio Perm	0.26				c0.25	0.08						0.09
v/c Ratio	0.75	0.19			0.85	0.28	0.08	0.08			0.74	0.51
Uniform Delay, d1	19.7	6.0			31.4	25.6	41.9	41.8			40.1	18.7
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	4.8	0.1			11.6	0.3	0.3	0.3			12.6	0.5
Delay (s)	24.5	6.1			42.9	25.9	42.2	42.1			52.8	19.2
Level of Service	C	A			D	C	D	D			D	B
Approach Delay (s)		18.6			35.7			42.1			26.8	
Approach LOS		B			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	27.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	95.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		

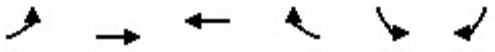
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	6	40	3	2	1	89	381	3	3	287	97
Future Volume (Veh/h)	8	6	40	3	2	1	89	381	3	3	287	97
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)	9	7	43	3	2	1	97	414	3	3	312	105
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								959				
pX, platoon unblocked												
vC, conflicting volume	982	982	364	1026	1032	416	417			417		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	982	982	364	1026	1032	416	417			417		
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 %	96	97	94	98	99	100	92			100		
cM capacity (veh/h)	211	227	680	182	212	637	1142			1142		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total	59	5	1	514	420
Volume Left	9	3	0	97	3
Volume Right	43	0	1	3	105
cSH	432	193	637	1142	1142
Volume to Capacity	0.14	0.03	0.00	0.08	0.00
Queue Length 95th (ft)	12	2	0	7	0
Control Delay (s)	14.6	24.2	10.7	2.4	0.1
Lane LOS	B	C	B	A	A
Approach Delay (s)	14.6	21.9		2.4	0.1
Approach LOS	B	C			

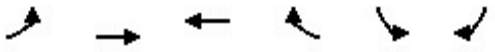
Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	66.2%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	6	6	3	4	1	3
Future Volume (Veh/h)	6	6	3	4	1	3
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)	7	7	3	4	1	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	7				26	5
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	7				26	5
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1614				985	1078

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	14	7	4
Volume Left	7	0	1
Volume Right	0	4	3
cSH	1614	1700	1053
Volume to Capacity	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	3.6	0.0	8.4
Lane LOS	A		A
Approach Delay (s)	3.6	0.0	8.4
Approach LOS			A

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	15.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	6	1	4	5	2	3
Future Volume (Veh/h)	6	1	4	5	2	3
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)	7	1	4	5	2	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	9				22	6
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	9				22	6
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1611				991	1076

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	8	9	5
Volume Left	7	0	2
Volume Right	0	5	3
cSH	1611	1700	1040
Volume to Capacity	0.00	0.01	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	6.3	0.0	8.5
Lane LOS	A		A
Approach Delay (s)	6.3	0.0	8.5
Approach LOS			A

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	15.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	3	0	0	9	0	0
Future Volume (Veh/h)	3	0	0	9	0	0
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)	3	0	0	10	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			3		13	3
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			3		13	3
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1619		1006	1081

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	3	10	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1619	1700
Volume to Capacity	0.00	0.00	0.03
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	9	3	0
Future Volume (Veh/h)	0	0	0	9	3	0
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	0	0	10	3	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	13	3	3			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	13	3	3			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	1006	1081	1619			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	10	3
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1619	1700
Volume to Capacity	0.02	0.00	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

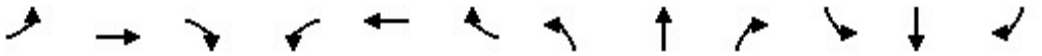
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	271	134	1	1090	419	138	1338
Future Volume (vph)	271	134	1	1090	419	138	1338
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583	1770	3539	1583	1770	3539
Flt Permitted	0.95	1.00	0.18	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583	338	3539	1583	1770	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	295	146	1	1185	455	150	1454
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	295	146	1	1185	455	150	1454
Turn Type	Perm	Free	Perm	NA	Free	Prot	NA
Protected Phases				2		1	6
Permitted Phases	8	Free	2		Free		
Actuated Green, G (s)	13.0	89.7	51.3	51.3	89.7	12.9	68.7
Effective Green, g (s)	13.0	89.7	51.3	51.3	89.7	12.9	68.7
Actuated g/C Ratio	0.14	1.00	0.57	0.57	1.00	0.14	0.77
Clearance Time (s)	4.0		4.0	4.0		4.5	4.0
Vehicle Extension (s)	3.0		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	497	1583	193	2023	1583	254	2710
v/s Ratio Prot				c0.33		0.08	c0.41
v/s Ratio Perm	c0.09	0.09	0.00		0.29		
v/c Ratio	0.59	0.09	0.01	0.59	0.29	0.59	0.54
Uniform Delay, d1	35.9	0.0	8.2	12.4	0.0	35.9	4.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.9	0.1	0.0	1.2	0.5	3.6	0.2
Delay (s)	37.8	0.1	8.3	13.6	0.5	39.6	4.4
Level of Service	D	A	A	B	A	D	A
Approach Delay (s)	25.3			10.0			7.7
Approach LOS	C			A			A

Intersection Summary			
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	89.7	Sum of lost time (s)	12.5
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		

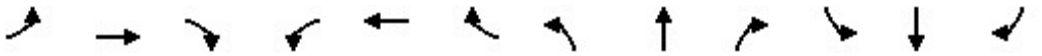
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	329	121	401	183	133	41	281	1272	45	70	1317	251
Future Volume (vph)	329	121	401	183	133	41	281	1272	45	70	1317	251
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1797		3433	3539	1583	1770	3539	1583
Flt Permitted	0.20	1.00	1.00	0.67	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	380	1863	1583	1253	1797		3433	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	358	132	436	199	145	45	305	1383	49	76	1432	273
RTOR Reduction (vph)	0	0	119	0	8	0	0	0	24	0	0	144
Lane Group Flow (vph)	358	132	317	199	182	0	305	1383	25	76	1432	129
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8					2			6
Actuated Green, G (s)	49.8	35.8	35.8	27.4	17.9		14.5	75.2	75.2	8.5	69.2	69.2
Effective Green, g (s)	49.8	35.8	35.8	27.4	17.9		14.5	75.2	75.2	8.5	69.2	69.2
Actuated g/C Ratio	0.34	0.24	0.24	0.19	0.12		0.10	0.51	0.51	0.06	0.47	0.47
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	387	453	385	266	218		338	1810	809	102	1665	745
v/s Ratio Prot	c0.17	0.07		0.05	0.10		c0.09	0.39		0.04	c0.40	
v/s Ratio Perm	c0.14		0.20	0.09					0.02			0.08
v/c Ratio	0.93	0.29	0.82	0.75	0.84		0.90	0.76	0.03	0.75	0.86	0.17
Uniform Delay, d1	41.4	45.3	52.6	55.2	63.1		65.5	28.8	17.8	68.2	34.6	22.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	27.6	0.4	13.3	10.9	23.2		26.0	3.1	0.1	25.2	6.1	0.5
Delay (s)	69.0	45.6	66.0	66.2	86.3		91.5	31.9	17.9	93.4	40.7	22.9
Level of Service	E	D	E	E	F		F	C	B	F	D	C
Approach Delay (s)		64.2			76.0			42.0			40.2	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	48.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	147.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	87.1%	ICU Level of Service	E
Analysis Period (min)	15		

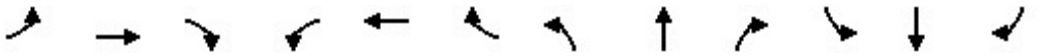
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	0	19	16	1	128	15	1406	26	56	1846	9
Future Volume (Veh/h)	7	0	19	16	1	128	15	1406	26	56	1846	9
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)	8	0	21	17	1	139	16	1528	28	61	2007	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	3064	3717	1004	2706	3699	764	2017			1556		
vC1, stage 1 conf vol	2129	2129		1560	1560							
vC2, stage 2 conf vol	936	1588		1146	2139							
vCu, unblocked vol	3064	3717	1004	2706	3699	764	2017			1556		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	79	100	91	80	98	60	94			86		
cM capacity (veh/h)	38	56	240	84	53	346	279			421		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	29	17	140	16	764	764	28	61	1004	1004	10
Volume Left	8	17	0	16	0	0	0	61	0	0	0
Volume Right	21	0	139	0	0	0	28	0	0	0	10
cSH	97	84	333	279	1700	1700	1700	421	1700	1700	1700
Volume to Capacity	0.30	0.20	0.42	0.06	0.45	0.45	0.02	0.14	0.59	0.59	0.01
Queue Length 95th (ft)	28	17	50	5	0	0	0	13	0	0	0
Control Delay (s)	57.0	58.1	23.4	18.7	0.0	0.0	0.0	15.0	0.0	0.0	0.0
Lane LOS	F	F	C	C				B			
Approach Delay (s)	57.0	27.2		0.2				0.4			
Approach LOS	F	D									

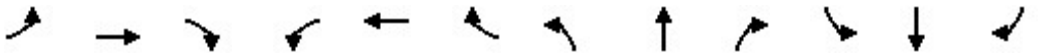
Intersection Summary					
Average Delay	1.9				
Intersection Capacity Utilization	65.7%	ICU Level of Service		C	
Analysis Period (min)	15				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	320	168	157	148	213	219	140	857	121	351	1136	284
Future Volume (vph)	320	168	157	148	213	219	140	857	121	351	1136	284
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1742	1583	1681	1764	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1742	1583	1681	1764	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	348	183	171	161	232	238	152	932	132	382	1235	309
RTOR Reduction (vph)	0	0	145	0	0	199	0	0	89	0	0	174
Lane Group Flow (vph)	261	270	26	145	248	39	152	932	43	382	1235	135
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	22.6	22.6	22.6	24.1	24.1	24.1	17.5	47.6	47.6	33.8	63.9	63.9
Effective Green, g (s)	22.6	22.6	22.6	24.1	24.1	24.1	17.5	47.6	47.6	33.8	63.9	63.9
Actuated g/C Ratio	0.15	0.15	0.15	0.16	0.16	0.16	0.12	0.33	0.33	0.23	0.44	0.44
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	260	269	244	277	290	261	212	1153	515	409	1547	692
v/s Ratio Prot	c0.16	0.16		0.09	c0.14		0.09	0.26		c0.22	c0.35	
v/s Ratio Perm			0.02			0.02			0.03			0.09
v/c Ratio	1.00	1.00	0.11	0.52	0.86	0.15	0.72	0.81	0.08	0.93	0.80	0.20
Uniform Delay, d1	61.8	61.8	53.1	55.8	59.3	52.2	61.9	45.1	34.1	55.1	35.5	25.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	56.8	55.8	0.2	1.8	21.1	0.3	11.0	6.1	0.3	28.3	4.4	0.6
Delay (s)	118.5	117.6	53.3	57.5	80.4	52.5	72.9	51.2	34.5	83.4	39.9	25.9
Level of Service	F	F	D	E	F	D	E	D	C	F	D	C
Approach Delay (s)		102.3			64.6			52.1			46.3	
Approach LOS		F			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	59.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	146.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	82.6%	ICU Level of Service	E
Analysis Period (min)	15		

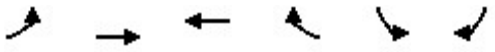
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	594	26	10	541	1	26	0	19	0	1	15
Future Volume (Veh/h)	6	594	26	10	541	1	26	0	19	0	1	15
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)	7	646	28	11	588	1	28	0	21	0	1	16
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		371			998							
pX, platoon unblocked				0.88			0.88	0.88	0.88	0.88	0.88	
vC, conflicting volume	589			674			1006	1285	660	1306	1298	294
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	589			560			939	1255	544	1279	1271	294
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			99			85	100	95	100	99	98
cM capacity (veh/h)	982			885			184	147	424	101	144	702

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	681	305	295	28	21	17
Volume Left	7	11	0	28	0	0
Volume Right	28	0	1	0	21	16
cSH	982	885	1700	184	424	571
Volume to Capacity	0.01	0.01	0.17	0.15	0.05	0.03
Queue Length 95th (ft)	1	1	0	13	4	2
Control Delay (s)	0.2	0.5	0.0	28.0	13.9	11.5
Lane LOS	A	A		D	B	B
Approach Delay (s)	0.2	0.2		22.0		11.5
Approach LOS				C		B

Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	52.4%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	641	518	1	3	36
Future Volume (Veh/h)	0	641	518	1	3	36
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)	0	697	563	1	3	39
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1114	255			
pX, platoon unblocked					0.96	
vC, conflicting volume	564				1260	282
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	564				1251	282
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	95
cM capacity (veh/h)	1004				158	715

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	697	375	189	42
Volume Left	0	0	0	3
Volume Right	0	0	1	39
cSH	1004	1700	1700	571
Volume to Capacity	0.00	0.22	0.11	0.07
Queue Length 95th (ft)	0	0	0	6
Control Delay (s)	0.0	0.0	0.0	11.8
Lane LOS				B
Approach Delay (s)	0.0	0.0		11.8
Approach LOS				B

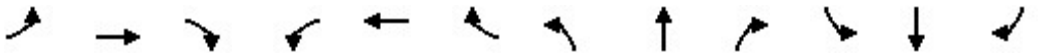
Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	589	44	84	508	19	140
Future Volume (Veh/h)	589	44	84	508	19	140
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)	640	48	91	552	21	152
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1185			184		
pX, platoon unblocked						
vC, conflicting volume			688		1122	344
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			688		1122	344
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			90		88	77
cM capacity (veh/h)			902		180	652

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	427	261	275	368	173
Volume Left	0	0	91	0	21
Volume Right	0	48	0	0	152
cSH	1700	1700	902	1700	494
Volume to Capacity	0.25	0.15	0.10	0.22	0.35
Queue Length 95th (ft)	0	0	8	0	39
Control Delay (s)	0.0	0.0	3.8	0.0	16.2
Lane LOS			A		C
Approach Delay (s)	0.0		1.6		16.2
Approach LOS					C

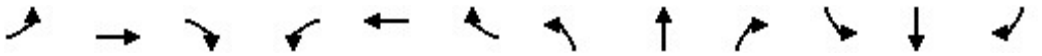
Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	169	547	9	6	499	302	6	3	3	389	4	96
Future Volume (vph)	169	547	9	6	499	302	6	3	3	389	4	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5			4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.96	
Satd. Flow (prot)	1770	1858		1770	1863	1583		1757			1744	
Flt Permitted	0.13	1.00		0.15	1.00	1.00		0.84			0.76	
Satd. Flow (perm)	249	1858		273	1863	1583		1524			1380	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	184	595	10	7	542	328	7	3	3	423	4	104
RTOR Reduction (vph)	0	1	0	0	0	130	0	2	0	0	7	0
Lane Group Flow (vph)	184	604	0	7	542	198	0	11	0	0	524	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	51.2	45.9		42.6	41.6	41.6		57.4			57.4	
Effective Green, g (s)	51.2	45.9		42.6	41.6	41.6		57.4			57.4	
Actuated g/C Ratio	0.43	0.39		0.36	0.35	0.35		0.49			0.49	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5			4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	176	723		111	657	559		742			672	
v/s Ratio Prot	c0.05	0.33		0.00	0.29							
v/s Ratio Perm	c0.41			0.02		0.13		0.01			c0.38	
v/c Ratio	1.05	0.84		0.06	0.82	0.35		0.02			0.78	
Uniform Delay, d1	33.3	32.5		27.4	34.8	28.2		15.6			25.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	80.3	8.3		0.2	8.3	0.4		0.0			8.7	
Delay (s)	113.6	40.8		27.6	43.1	28.6		15.6			33.7	
Level of Service	F	D		C	D	C		B			C	
Approach Delay (s)		57.8			37.5			15.6			33.7	
Approach LOS		E			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	43.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	117.8	Sum of lost time (s)	13.5
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		

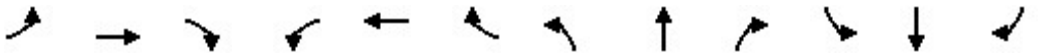
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	913	35	37	788	0	15	0	90	0	0	0
Future Volume (Veh/h)	0	913	35	37	788	0	15	0	90	0	0	0
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)	0	992	38	40	857	0	16	0	98	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		342										
pX, platoon unblocked				0.70			0.70	0.70	0.70	0.70	0.70	
vC, conflicting volume	857			1030			1948	1948	1011	2027	1967	857
vC1, stage 1 conf vol							1011	1011		937	937	
vC2, stage 2 conf vol							937	937		1090	1030	
vCu, unblocked vol	857			827			2142	2142	800	2255	2169	857
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			93			92	100	64	100	100	100
cM capacity (veh/h)	783			561			189	203	269	96	181	357

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	0	1030	40	857	16	98	0
Volume Left	0	0	40	0	16	0	0
Volume Right	0	38	0	0	0	98	0
cSH	1700	1700	561	1700	189	269	1700
Volume to Capacity	0.00	0.61	0.07	0.50	0.08	0.36	0.00
Queue Length 95th (ft)	0	0	6	0	7	40	0
Control Delay (s)	0.0	0.0	11.9	0.0	25.8	25.9	0.0
Lane LOS			B		D	D	A
Approach Delay (s)	0.0		0.5		25.9		0.0
Approach LOS					D		A

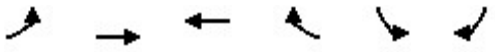
Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	62.4%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	986	5	9	812	23	1	0	1	14	0	11
Future Volume (Veh/h)	5	986	5	9	812	23	1	0	1	14	0	11
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)	5	1072	5	10	883	25	1	0	1	15	0	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		687										
pX, platoon unblocked				0.70			0.70	0.70	0.70	0.70	0.70	
vC, conflicting volume	908			1077			2000	2012	1074	1998	2002	896
vC1, stage 1 conf vol							1084	1084		916	916	
vC2, stage 2 conf vol							915	928		1083	1087	
vCu, unblocked vol	908			895			2214	2232	892	2212	2218	896
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			98			99	100	100	91	100	96
cM capacity (veh/h)	750			530			176	192	238	174	189	339

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	5	1077	10	908	2	27
Volume Left	5	0	10	0	1	15
Volume Right	0	5	0	25	1	12
cSH	750	1700	530	1700	202	222
Volume to Capacity	0.01	0.63	0.02	0.53	0.01	0.12
Queue Length 95th (ft)	1	0	1	0	1	10
Control Delay (s)	9.8	0.0	11.9	0.0	23.0	23.5
Lane LOS	A		B		C	C
Approach Delay (s)	0.0		0.1		23.0	23.5
Approach LOS					C	C

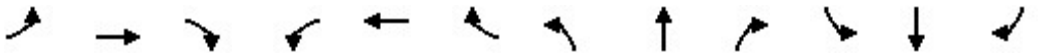
Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	62.2%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	31	962	802	58	40	51
Future Volume (Veh/h)	31	962	802	58	40	51
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)	34	1046	872	63	43	55
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		814				
pX, platoon unblocked					0.71	
vC, conflicting volume	935				2018	904
vC1, stage 1 conf vol					904	
vC2, stage 2 conf vol					1114	
vCu, unblocked vol	935				2232	904
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	95				79	84
cM capacity (veh/h)	732				206	336

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	34	1046	935	43	55
Volume Left	34	0	0	43	0
Volume Right	0	0	63	0	55
cSH	732	1700	1700	206	336
Volume to Capacity	0.05	0.62	0.55	0.21	0.16
Queue Length 95th (ft)	4	0	0	19	14
Control Delay (s)	10.2	0.0	0.0	27.0	17.8
Lane LOS	B			D	C
Approach Delay (s)	0.3		0.0	21.9	
Approach LOS				C	

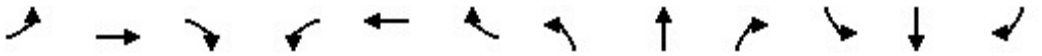
Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	914	78	22	838	27	40	11	43	0	0	0
Future Volume (Veh/h)	3	914	78	22	838	27	40	11	43	0	0	0
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)	3	993	85	24	911	29	43	12	47	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		993										
pX, platoon unblocked				0.71			0.71	0.71	0.71	0.71	0.71	
vC, conflicting volume	940			1078			2000	2030	1036	2026	2058	926
vC1, stage 1 conf vol							1042	1042		974	974	
vC2, stage 2 conf vol							959	988		1052	1084	
vCu, unblocked vol	940			905			2206	2247	845	2241	2286	926
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			95			76	94	82	100	100	100
cM capacity (veh/h)	729			533			182	194	257	139	177	326

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	3	1078	24	940	102	0
Volume Left	3	0	24	0	43	0
Volume Right	0	85	0	29	47	0
cSH	729	1700	533	1700	212	1700
Volume to Capacity	0.00	0.63	0.05	0.55	0.48	0.00
Queue Length 95th (ft)	0	0	4	0	59	0
Control Delay (s)	10.0	0.0	12.1	0.0	36.8	0.0
Lane LOS	A		B		E	A
Approach Delay (s)	0.0		0.3		36.8	0.0
Approach LOS					E	A

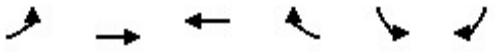
Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	922	8	43	750	39	27	2	85	32	3	41
Future Volume (vph)	62	922	8	43	750	39	27	2	85	32	3	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1860		1770	1863	1583		1780	1583	1770	1601	
Flt Permitted	0.29	1.00		0.20	1.00	1.00		0.70	1.00	0.74	1.00	
Satd. Flow (perm)	537	1860		376	1863	1583		1313	1583	1373	1601	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	67	1002	9	47	815	42	29	2	92	35	3	45
RTOR Reduction (vph)	0	0	0	0	0	10	0	0	85	0	42	0
Lane Group Flow (vph)	67	1011	0	47	815	32	0	31	7	35	6	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	98.1	93.0		97.7	92.8	92.8		8.6	8.6	8.6	8.6	
Effective Green, g (s)	98.1	93.0		97.7	92.8	92.8		8.6	8.6	8.6	8.6	
Actuated g/C Ratio	0.82	0.78		0.81	0.77	0.77		0.07	0.07	0.07	0.07	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	491	1441		363	1440	1224		94	113	98	114	
v/s Ratio Prot	c0.01	c0.54		0.01	0.44						0.00	
v/s Ratio Perm	0.11			0.10		0.02		0.02	0.00	c0.03		
v/c Ratio	0.14	0.70		0.13	0.57	0.03		0.33	0.06	0.36	0.05	
Uniform Delay, d1	3.6	6.7		6.2	5.5	3.1		53.0	51.9	53.1	51.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	2.9		0.2	1.6	0.0		2.1	0.2	2.2	0.2	
Delay (s)	3.7	9.5		6.4	7.1	3.2		55.0	52.1	55.3	52.1	
Level of Service	A	A		A	A	A		E	D	E	D	
Approach Delay (s)		9.2			6.9			52.9			53.5	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		

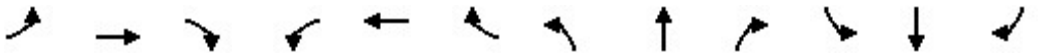
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	46	956	787	36	10	47
Future Volume (Veh/h)	46	956	787	36	10	47
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)	50	1039	855	39	11	51
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1084			
pX, platoon unblocked	0.85				0.85	0.85
vC, conflicting volume	894				1994	855
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	790				2078	745
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	93				76	86
cM capacity (veh/h)	709				47	354

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	50	1039	855	39	11	51
Volume Left	50	0	0	0	11	0
Volume Right	0	0	0	39	0	51
cSH	709	1700	1700	1700	47	354
Volume to Capacity	0.07	0.61	0.50	0.02	0.24	0.14
Queue Length 95th (ft)	6	0	0	0	20	12
Control Delay (s)	10.5	0.0	0.0	0.0	104.5	16.9
Lane LOS	B				F	C
Approach Delay (s)	0.5		0.0		32.4	
Approach LOS					D	

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	434	510	29	9	288	152	59	60	32	241	32	463
Future Volume (vph)	434	510	29	9	288	152	59	60	32	241	32	463
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5	4.5	4.5			4.5	4.5
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00
Frt	1.00	0.99			1.00	0.85	1.00	0.95			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00			0.96	1.00
Satd. Flow (prot)	1770	1847			1860	1583	1770	1765			1784	1583
Flt Permitted	0.20	1.00			0.98	1.00	0.95	1.00			0.96	1.00
Satd. Flow (perm)	376	1847			1819	1583	1770	1765			1784	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	472	554	32	10	313	165	64	65	35	262	35	503
RTOR Reduction (vph)	0	2	0	0	0	129	0	16	0	0	0	105
Lane Group Flow (vph)	472	584	0	0	323	36	64	84	0	0	297	398
Turn Type	pm+pt	NA		Perm	NA	Perm	Split	NA		Split	NA	pm+ov
Protected Phases	7	4			8		2	2		6	6	7
Permitted Phases	4			8		8						6
Actuated Green, G (s)	57.6	57.6			22.3	22.3	8.3	8.3			21.7	52.5
Effective Green, g (s)	57.6	57.6			22.3	22.3	8.3	8.3			21.7	52.5
Actuated g/C Ratio	0.57	0.57			0.22	0.22	0.08	0.08			0.21	0.52
Clearance Time (s)	4.5	4.5			4.5	4.5	4.5	4.5			4.5	4.5
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	638	1052			401	349	145	144			382	892
v/s Ratio Prot	c0.23	0.32					0.04	c0.05			c0.17	0.14
v/s Ratio Perm	c0.20				0.18	0.02						0.12
v/c Ratio	0.74	0.56			0.81	0.10	0.44	0.59			0.78	0.45
Uniform Delay, d1	18.6	13.7			37.3	31.4	44.2	44.7			37.4	15.2
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	4.5	0.6			11.2	0.1	2.1	6.0			9.6	0.4
Delay (s)	23.1	14.3			48.5	31.6	46.3	50.7			47.0	15.6
Level of Service	C	B			D	C	D	D			D	B
Approach Delay (s)		18.2			42.8			49.0			27.2	
Approach LOS		B			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	27.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	101.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	39	68	52	495	469	41
Future Volume (Veh/h)	39	68	52	495	469	41
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)	42	74	57	538	510	45
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				959		
pX, platoon unblocked	0.96					
vC, conflicting volume	1184	532	555			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1172	532	555			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	78	86	94			
cM capacity (veh/h)	193	547	1015			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	116	595	555
Volume Left	42	57	0
Volume Right	74	0	45
cSH	329	1015	1700
Volume to Capacity	0.35	0.06	0.33
Queue Length 95th (ft)	39	4	0
Control Delay (s)	21.8	1.5	0.0
Lane LOS	C	A	
Approach Delay (s)	21.8	1.5	0.0
Approach LOS	C		

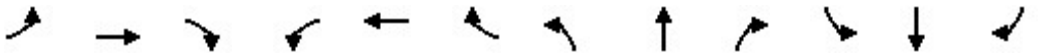
Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	331	250	1	1387	493	330	1767
Future Volume (vph)	331	250	1	1387	493	330	1767
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583	1770	3539	1583	1770	3539
Flt Permitted	0.95	1.00	0.11	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583	210	3539	1583	1770	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	360	272	1	1508	536	359	1921
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	360	272	1	1508	536	359	1921
Turn Type	Perm	Free	Perm	NA	Free	Prot	NA
Protected Phases				2		1	6
Permitted Phases	8	Free	2		Free		
Actuated Green, G (s)	16.4	105.6	51.3	51.3	105.6	25.4	81.2
Effective Green, g (s)	16.4	105.6	51.3	51.3	105.6	25.4	81.2
Actuated g/C Ratio	0.16	1.00	0.49	0.49	1.00	0.24	0.77
Clearance Time (s)	4.0		4.0	4.0		4.5	4.0
Vehicle Extension (s)	3.0		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	533	1583	102	1719	1583	425	2721
v/s Ratio Prot				c0.43		c0.20	0.54
v/s Ratio Perm	c0.10	0.17	0.00		0.34		
v/c Ratio	0.68	0.17	0.01	0.88	0.34	0.84	0.71
Uniform Delay, d1	42.1	0.0	14.0	24.3	0.0	38.2	6.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.4	0.2	0.2	6.7	0.6	14.2	0.9
Delay (s)	45.5	0.2	14.2	31.0	0.6	52.5	7.0
Level of Service	D	A	B	C	A	D	A
Approach Delay (s)	26.0			23.0			14.2
Approach LOS	C			C			B

Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	105.6	Sum of lost time (s)	12.5
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	353	125	413	189	137	42	290	1610	46	72	1765	274
Future Volume (vph)	353	125	413	189	137	42	290	1610	46	72	1765	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00		0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1863	1583	1770	1797		3433	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1863	1583	1770	1797		3433	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	384	136	449	205	149	46	315	1750	50	78	1918	298
RTOR Reduction (vph)	0	0	186	0	8	0	0	0	24	0	0	141
Lane Group Flow (vph)	384	136	263	205	187	0	315	1750	26	78	1918	157
Turn Type	Split	NA	Perm	Split	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	25.5	25.5	25.5	19.6	19.6		18.7	78.6	78.6	7.5	67.4	67.4
Effective Green, g (s)	25.5	25.5	25.5	19.6	19.6		18.7	78.6	78.6	7.5	67.4	67.4
Actuated g/C Ratio	0.17	0.17	0.17	0.13	0.13		0.13	0.53	0.53	0.05	0.45	0.45
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	586	318	270	232	236		430	1864	833	88	1598	715
v/s Ratio Prot	0.11	0.07		c0.12	0.10		c0.09	c0.49		0.04	c0.54	
v/s Ratio Perm			c0.17						0.02			0.10
v/c Ratio	0.66	0.43	0.98	0.88	0.79		0.73	0.94	0.03	0.89	1.20	0.22
Uniform Delay, d1	57.7	55.3	61.5	63.7	62.8		62.8	33.0	17.0	70.4	40.9	24.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.6	0.9	47.5	30.2	16.5		6.3	10.7	0.1	59.6	96.4	0.7
Delay (s)	60.4	56.3	109.0	93.9	79.4		69.2	43.7	17.1	130.0	137.3	25.6
Level of Service	E	E	F	F	E		E	D	B	F	F	C
Approach Delay (s)		82.3			86.8			46.9			122.6	
Approach LOS		F			F			D			F	

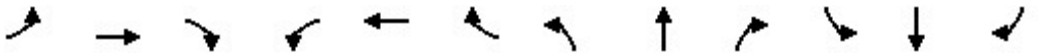
Intersection Summary			
HCM 2000 Control Delay	85.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	149.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	96.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	0	20	16	1	132	15	1748	27	58	2310	9
Future Volume (Veh/h)	7	0	20	16	1	132	15	1748	27	58	2310	9
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)	8	0	22	17	1	143	16	1900	29	63	2511	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)						3						
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	3620	4598	1256	3336	4579	950	2521			1929		
vC1, stage 1 conf vol	2637	2637		1932	1932							
vC2, stage 2 conf vol	982	1961		1404	2647							
vCu, unblocked vol	3620	4598	1256	3336	4579	950	2521			1929		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	51	100	86	64	95	45	91			79		
cM capacity (veh/h)	16	24	163	47	20	261	176			302		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	30	161	16	950	950	29	63	1256	1256	10
Volume Left	8	17	16	0	0	0	63	0	0	0
Volume Right	22	143	0	0	0	29	0	0	0	10
cSH	48	294	176	1700	1700	1700	302	1700	1700	1700
Volume to Capacity	0.62	0.55	0.09	0.56	0.56	0.02	0.21	0.74	0.74	0.01
Queue Length 95th (ft)	60	77	7	0	0	0	19	0	0	0
Control Delay (s)	161.8	45.0	27.5	0.0	0.0	0.0	20.1	0.0	0.0	0.0
Lane LOS	F	E	D				C			
Approach Delay (s)	161.8	45.0	0.2				0.5			
Approach LOS	F	E								

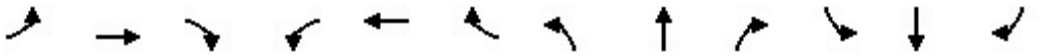
Intersection Summary				
Average Delay	2.9			
Intersection Capacity Utilization	78.6%	ICU Level of Service	D	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	330	173	162	175	219	226	144	1182	157	362	1578	293
Future Volume (vph)	330	173	162	175	219	226	144	1182	157	362	1578	293
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1741	1583	1681	1763	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1741	1583	1681	1763	1583	1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	359	188	176	190	238	246	157	1285	171	393	1715	318
RTOR Reduction (vph)	0	0	148	0	0	204	0	0	104	0	0	174
Lane Group Flow (vph)	269	278	28	171	257	42	157	1285	67	393	1715	144
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	22.6	22.6	22.6	24.1	24.1	24.1	17.5	56.2	56.2	21.6	60.3	60.3
Effective Green, g (s)	22.6	22.6	22.6	24.1	24.1	24.1	17.5	56.2	56.2	21.6	60.3	60.3
Actuated g/C Ratio	0.16	0.16	0.16	0.17	0.17	0.17	0.12	0.39	0.39	0.15	0.42	0.42
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	266	276	251	284	298	267	217	1395	624	520	1497	669
v/s Ratio Prot	c0.16	0.16		0.10	c0.15		0.09	0.36		c0.11	c0.48	
v/s Ratio Perm			0.02			0.03			0.04			0.09
v/c Ratio	1.01	1.01	0.11	0.60	0.86	0.16	0.72	0.92	0.11	0.76	1.15	0.21
Uniform Delay, d1	60.0	60.0	51.3	54.8	57.6	50.5	60.2	41.0	27.3	57.9	41.1	26.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	58.1	56.0	0.2	3.6	21.7	0.3	11.3	11.4	0.3	6.2	73.9	0.7
Delay (s)	118.0	116.0	51.5	58.3	79.3	50.8	71.5	52.4	27.6	64.1	115.0	26.8
Level of Service	F	F	D	E	E	D	E	D	C	E	F	C
Approach Delay (s)		101.1			63.6			51.7			95.2	
Approach LOS		F			E			D			F	

Intersection Summary			
HCM 2000 Control Delay	79.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	142.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	91.8%	ICU Level of Service	F
Analysis Period (min)	15		

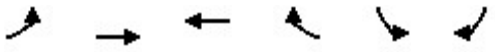
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	644	27	10	580	1	27	0	20	0	1	15
Future Volume (Veh/h)	6	644	27	10	580	1	27	0	20	0	1	15
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)	7	700	29	11	630	1	29	0	22	0	1	16
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		371			998							
pX, platoon unblocked												
vC, conflicting volume	631			729			1082	1382	364	1038	1396	316
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	631			729			1082	1382	364	1038	1396	316
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			99			82	100	97	100	99	98
cM capacity (veh/h)	947			871			164	140	632	176	137	680

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	357	379	326	316	29	22	17
Volume Left	7	0	11	0	29	0	0
Volume Right	0	29	0	1	0	22	16
cSH	947	1700	871	1700	164	632	552
Volume to Capacity	0.01	0.22	0.01	0.19	0.18	0.03	0.03
Queue Length 95th (ft)	1	0	1	0	15	3	2
Control Delay (s)	0.3	0.0	0.4	0.0	31.5	10.9	11.7
Lane LOS	A		A		D	B	B
Approach Delay (s)	0.1		0.2		22.6		11.7
Approach LOS					C		B

Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	38.0%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	692	557	1	3	37
Future Volume (Veh/h)	0	692	557	1	3	37
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)	0	752	605	1	3	40
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1114	255			
pX, platoon unblocked						
vC, conflicting volume	606				982	303
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	606				982	303
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	94
cM capacity (veh/h)	968				246	693

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	251	501	403	203	43
Volume Left	0	0	0	0	3
Volume Right	0	0	0	1	40
cSH	968	1700	1700	1700	615
Volume to Capacity	0.00	0.29	0.24	0.12	0.07
Queue Length 95th (ft)	0	0	0	0	6
Control Delay (s)	0.0	0.0	0.0	0.0	11.3
Lane LOS					B
Approach Delay (s)	0.0		0.0		11.3
Approach LOS					B

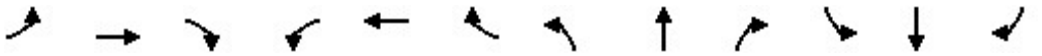
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	29.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	639	45	103	546	20	162
Future Volume (Veh/h)	639	45	103	546	20	162
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)	695	49	112	593	22	176
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1185			184		
pX, platoon unblocked						
vC, conflicting volume			744		1240	372
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			744		1240	372
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			87		85	72
cM capacity (veh/h)			859		146	625

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	463	281	310	395	198
Volume Left	0	0	112	0	22
Volume Right	0	49	0	0	176
cSH	1700	1700	859	1700	458
Volume to Capacity	0.27	0.17	0.13	0.23	0.43
Queue Length 95th (ft)	0	0	11	0	54
Control Delay (s)	0.0	0.0	4.5	0.0	18.7
Lane LOS			A		C
Approach Delay (s)	0.0		2.0		18.7
Approach LOS					C

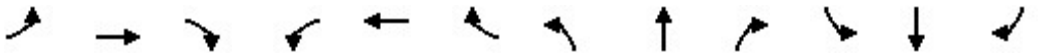
Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	58.3%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	189	599	9	6	541	332	6	3	3	419	4	111
Future Volume (vph)	189	599	9	6	541	332	6	3	3	419	4	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5			4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.96	
Satd. Flow (prot)	1770	1859		1770	1863	1583		1757			1742	
Flt Permitted	0.11	1.00		0.11	1.00	1.00		0.84			0.76	
Satd. Flow (perm)	203	1859		200	1863	1583		1507			1383	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	205	651	10	7	588	361	7	3	3	455	4	121
RTOR Reduction (vph)	0	1	0	0	0	129	0	2	0	0	8	0
Lane Group Flow (vph)	205	660	0	7	588	232	0	11	0	0	572	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	54.0	48.7		45.4	44.4	44.4		57.3			57.3	
Effective Green, g (s)	54.0	48.7		45.4	44.4	44.4		57.3			57.3	
Actuated g/C Ratio	0.45	0.40		0.38	0.37	0.37		0.48			0.48	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5			4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	159	751		88	686	583		716			657	
v/s Ratio Prot	c0.06	0.36		0.00	0.32							
v/s Ratio Perm	c0.52			0.03		0.15		0.01			c0.41	
v/c Ratio	1.29	0.88		0.08	0.86	0.40		0.02			0.87	
Uniform Delay, d1	32.0	33.2		28.0	35.1	28.2		16.7			28.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	169.0	11.4		0.4	10.3	0.4		0.0			14.7	
Delay (s)	201.1	44.6		28.4	45.4	28.6		16.7			43.0	
Level of Service	F	D		C	D	C		B			D	
Approach Delay (s)		81.7			39.0			16.7			43.0	
Approach LOS		F			D			B			D	

Intersection Summary			
HCM 2000 Control Delay	55.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	120.5	Sum of lost time (s)	13.5
Intersection Capacity Utilization	87.1%	ICU Level of Service	E
Analysis Period (min)	15		

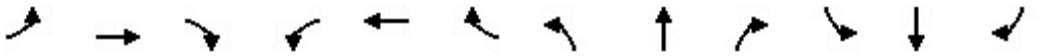
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	990	40	39	855	0	20	0	95	0	0	0
Future Volume (Veh/h)	0	990	40	39	855	0	20	0	95	0	0	0
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)	0	1076	43	42	929	0	22	0	103	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		342										
pX, platoon unblocked				0.66			0.66	0.66	0.66	0.66	0.66	
vC, conflicting volume	929			1119			2110	2110	1098	2192	2132	929
vC1, stage 1 conf vol							1098	1098		1013	1013	
vC2, stage 2 conf vol							1013	1013		1179	1119	
vCu, unblocked vol	929			924			2423	2423	892	2546	2455	929
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			91			86	100	54	100	100	100
cM capacity (veh/h)	736			489			161	176	226	58	152	324

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	0	1119	42	929	22	103	0
Volume Left	0	0	42	0	22	0	0
Volume Right	0	43	0	0	0	103	0
cSH	1700	1700	489	1700	161	226	1700
Volume to Capacity	0.00	0.66	0.09	0.55	0.14	0.46	0.00
Queue Length 95th (ft)	0	0	7	0	12	55	0
Control Delay (s)	0.0	0.0	13.1	0.0	30.9	33.7	0.0
Lane LOS			B		D	D	A
Approach Delay (s)	0.0		0.6		33.2		0.0
Approach LOS					D		A

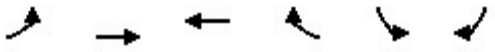
Intersection Summary				
Average Delay	2.1			
Intersection Capacity Utilization	67.1%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1062	10	10	875	24	7	0	3	14	0	11
Future Volume (Veh/h)	5	1062	10	10	875	24	7	0	3	14	0	11
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)	5	1154	11	11	951	26	8	0	3	15	0	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		687										
pX, platoon unblocked				0.66			0.66	0.66	0.66	0.66	0.66	
vC, conflicting volume	977			1165			2154	2168	1160	2153	2161	964
vC1, stage 1 conf vol							1170	1170		986	986	
vC2, stage 2 conf vol							985	999		1167	1175	
vCu, unblocked vol	977			994			2488	2510	986	2486	2498	964
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			98			95	100	98	90	100	96
cM capacity (veh/h)	706			461			150	166	199	145	161	310

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	5	1165	11	977	11	27
Volume Left	5	0	11	0	8	15
Volume Right	0	11	0	26	3	12
cSH	706	1700	461	1700	160	190
Volume to Capacity	0.01	0.69	0.02	0.57	0.07	0.14
Queue Length 95th (ft)	1	0	2	0	5	12
Control Delay (s)	10.1	0.0	13.0	0.0	29.1	27.0
Lane LOS	B		B		D	D
Approach Delay (s)	0.0		0.1		29.1	27.0
Approach LOS					D	D

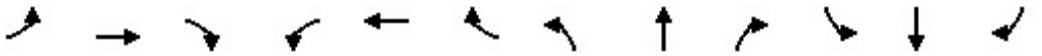
Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	66.5%	ICU Level of Service		C
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	36	1035	862	60	41	56
Future Volume (Veh/h)	36	1035	862	60	41	56
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)	39	1125	937	65	45	61
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		814				
pX, platoon unblocked					0.67	
vC, conflicting volume	1002				2172	970
vC1, stage 1 conf vol					970	
vC2, stage 2 conf vol					1203	
vCu, unblocked vol	1002				2503	970
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	94				74	80
cM capacity (veh/h)	691				176	307

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	39	1125	1002	45	61
Volume Left	39	0	0	45	0
Volume Right	0	0	65	0	61
cSH	691	1700	1700	176	307
Volume to Capacity	0.06	0.66	0.59	0.26	0.20
Queue Length 95th (ft)	4	0	0	24	18
Control Delay (s)	10.5	0.0	0.0	32.4	19.6
Lane LOS	B			D	C
Approach Delay (s)	0.4		0.0	25.0	
Approach LOS				D	

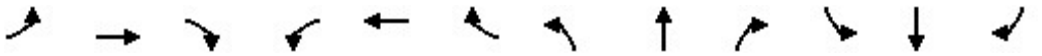
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	977	89	29	889	28	51	11	51	0	0	0
Future Volume (Veh/h)	3	977	89	29	889	28	51	11	51	0	0	0
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)	3	1062	97	32	966	30	55	12	55	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		993										
pX, platoon unblocked				0.67			0.67	0.67	0.67	0.67	0.67	
vC, conflicting volume	996			1159			2146	2176	1110	2174	2210	981
vC1, stage 1 conf vol							1116	1116		1045	1045	
vC2, stage 2 conf vol							1030	1060		1129	1165	
vCu, unblocked vol	996			993			2462	2506	921	2503	2556	981
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			93			65	93	75	100	100	100
cM capacity (veh/h)	695			468			157	170	221	102	147	303

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	3	1159	32	996	122	0
Volume Left	3	0	32	0	55	0
Volume Right	0	97	0	30	55	0
cSH	695	1700	468	1700	182	1700
Volume to Capacity	0.00	0.68	0.07	0.59	0.67	0.00
Queue Length 95th (ft)	0	0	5	0	100	0
Control Delay (s)	10.2	0.0	13.3	0.0	57.9	0.0
Lane LOS	B		B		F	A
Approach Delay (s)	0.0		0.4		57.9	0.0
Approach LOS					F	A

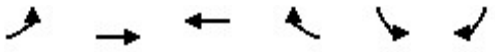
Intersection Summary				
Average Delay	3.2			
Intersection Capacity Utilization	70.0%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	977	8	44	797	75	28	2	88	54	3	50
Future Volume (vph)	79	977	8	44	797	75	28	2	88	54	3	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1860		1770	1863	1583		1779	1583	1770	1598	
Flt Permitted	0.25	1.00		0.16	1.00	1.00		0.70	1.00	0.74	1.00	
Satd. Flow (perm)	475	1860		305	1863	1583		1300	1583	1372	1598	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	86	1062	9	48	866	82	30	2	96	59	3	54
RTOR Reduction (vph)	0	0	0	0	0	13	0	0	88	0	49	0
Lane Group Flow (vph)	86	1071	0	48	866	69	0	32	8	59	8	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	96.3	90.9		95.7	90.6	90.6		10.5	10.5	10.5	10.5	
Effective Green, g (s)	96.3	90.9		95.7	90.6	90.6		10.5	10.5	10.5	10.5	
Actuated g/C Ratio	0.80	0.76		0.80	0.75	0.75		0.09	0.09	0.09	0.09	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	439	1408		305	1406	1195		113	138	120	139	
v/s Ratio Prot	c0.01	c0.58		0.01	0.46						0.00	
v/s Ratio Perm	0.15			0.12		0.04		0.02	0.01	c0.04		
v/c Ratio	0.20	0.76		0.16	0.62	0.06		0.28	0.06	0.49	0.06	
Uniform Delay, d1	5.0	8.3		9.1	6.7	3.8		51.2	50.2	52.2	50.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	3.9		0.2	2.0	0.1		1.4	0.2	3.1	0.2	
Delay (s)	5.2	12.2		9.4	8.8	3.9		52.6	50.4	55.4	50.4	
Level of Service	A	B		A	A	A		D	D	E	D	
Approach Delay (s)		11.7			8.4			51.0			52.9	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		

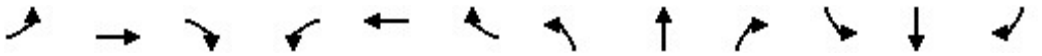
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	47	1033	870	37	10	48
Future Volume (Veh/h)	47	1033	870	37	10	48
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)	51	1123	946	40	11	52
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1084			
pX, platoon unblocked	0.83				0.83	0.83
vC, conflicting volume	986				2171	946
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	880				2309	832
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				66	83
cM capacity (veh/h)	637				32	306

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	51	1123	946	40	11	52
Volume Left	51	0	0	0	11	0
Volume Right	0	0	0	40	0	52
cSH	637	1700	1700	1700	32	306
Volume to Capacity	0.08	0.66	0.56	0.02	0.34	0.17
Queue Length 95th (ft)	7	0	0	0	28	15
Control Delay (s)	11.1	0.0	0.0	0.0	167.4	19.2
Lane LOS	B				F	C
Approach Delay (s)	0.5		0.0		45.0	
Approach LOS					E	

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	64.4%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	484	536	30	9	316	212	61	62	33	294	33	517
Future Volume (vph)	484	536	30	9	316	212	61	62	33	294	33	517
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5	4.5	4.5			4.5	4.5
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00
Frt	1.00	0.99			1.00	0.85	1.00	0.95			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00			0.96	1.00
Satd. Flow (prot)	1770	1848			1860	1583	1770	1765			1783	1583
Flt Permitted	0.15	1.00			0.98	1.00	0.95	1.00			0.96	1.00
Satd. Flow (perm)	286	1848			1821	1583	1770	1765			1783	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	526	583	33	10	343	230	66	67	36	320	36	562
RTOR Reduction (vph)	0	2	0	0	0	166	0	16	0	0	0	89
Lane Group Flow (vph)	526	614	0	0	353	64	66	87	0	0	356	473
Turn Type	pm+pt	NA		Perm	NA	Perm	Split	NA		Split	NA	pm+ov
Protected Phases	7	4			8		2	2		6	6	7
Permitted Phases	4			8		8						6
Actuated Green, G (s)	62.5	62.5			24.4	24.4	8.2	8.2			25.6	59.2
Effective Green, g (s)	62.5	62.5			24.4	24.4	8.2	8.2			25.6	59.2
Actuated g/C Ratio	0.57	0.57			0.22	0.22	0.07	0.07			0.23	0.54
Clearance Time (s)	4.5	4.5			4.5	4.5	4.5	4.5			4.5	4.5
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	616	1051			404	351	132	131			415	918
v/s Ratio Prot	c0.26	0.33					0.04	c0.05			c0.20	0.16
v/s Ratio Perm	c0.22				0.19	0.04						0.14
v/c Ratio	0.85	0.58			0.87	0.18	0.50	0.67			0.86	0.52
Uniform Delay, d1	26.1	15.3			41.2	34.6	48.8	49.5			40.4	16.1
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	11.1	0.8			18.4	0.3	3.0	12.1			15.9	0.5
Delay (s)	37.3	16.1			59.7	34.9	51.8	61.5			56.3	16.6
Level of Service	D	B			E	C	D	E			E	B
Approach Delay (s)		25.8			49.9			57.7			32.0	
Approach LOS		C			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	34.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	109.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	40	70	54	546	513	42
Future Volume (Veh/h)	40	70	54	546	513	42
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)	43	76	59	593	558	46
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				959		
pX, platoon unblocked	0.95					
vC, conflicting volume	1292	581	604			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1281	581	604			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	74	85	94			
cM capacity (veh/h)	163	514	974			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	119	652	604
Volume Left	43	59	0
Volume Right	76	0	46
cSH	289	974	1700
Volume to Capacity	0.41	0.06	0.36
Queue Length 95th (ft)	48	5	0
Control Delay (s)	25.9	1.6	0.0
Lane LOS	D	A	
Approach Delay (s)	25.9	1.6	0.0
Approach LOS	D		

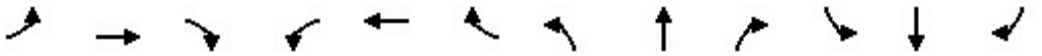
Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	331	250	1	1396	493	330	1770
Future Volume (vph)	331	250	1	1396	493	330	1770
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583	1770	3539	1583	1770	3539
Flt Permitted	0.95	1.00	0.11	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583	209	3539	1583	1770	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	360	272	1	1517	536	359	1924
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	360	272	1	1517	536	359	1924
Turn Type	Perm	Free	Perm	NA	Free	Prot	NA
Protected Phases				2		1	6
Permitted Phases	8	Free	2		Free		
Actuated Green, G (s)	16.4	105.6	51.3	51.3	105.6	25.4	81.2
Effective Green, g (s)	16.4	105.6	51.3	51.3	105.6	25.4	81.2
Actuated g/C Ratio	0.16	1.00	0.49	0.49	1.00	0.24	0.77
Clearance Time (s)	4.0		4.0	4.0		4.5	4.0
Vehicle Extension (s)	3.0		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	533	1583	101	1719	1583	425	2721
v/s Ratio Prot				c0.43		c0.20	0.54
v/s Ratio Perm	c0.10	0.17	0.00		0.34		
v/c Ratio	0.68	0.17	0.01	0.88	0.34	0.84	0.71
Uniform Delay, d1	42.1	0.0	14.0	24.4	0.0	38.2	6.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.4	0.2	0.2	7.0	0.6	14.2	0.9
Delay (s)	45.5	0.2	14.2	31.4	0.6	52.5	7.0
Level of Service	D	A	B	C	A	D	A
Approach Delay (s)	26.0			23.3			14.2
Approach LOS	C			C			B

Intersection Summary			
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	105.6	Sum of lost time (s)	12.5
Intersection Capacity Utilization	76.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	353	125	420	189	137	42	307	1619	46	72	1768	274
Future Volume (vph)	353	125	420	189	137	42	307	1619	46	72	1768	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00		0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1863	1583	1770	1797		3433	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1863	1583	1770	1797		3433	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	384	136	457	205	149	46	334	1760	50	78	1922	298
RTOR Reduction (vph)	0	0	186	0	8	0	0	0	24	0	0	142
Lane Group Flow (vph)	384	136	271	205	187	0	334	1760	26	78	1922	156
Turn Type	Split	NA	Perm	Split	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	25.5	25.5	25.5	19.6	19.6		19.3	78.5	78.5	7.5	66.7	66.7
Effective Green, g (s)	25.5	25.5	25.5	19.6	19.6		19.3	78.5	78.5	7.5	66.7	66.7
Actuated g/C Ratio	0.17	0.17	0.17	0.13	0.13		0.13	0.53	0.53	0.05	0.45	0.45
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	587	318	270	232	236		444	1863	833	89	1583	708
v/s Ratio Prot	0.11	0.07		c0.12	0.10		c0.10	c0.50		0.04	c0.54	
v/s Ratio Perm			c0.17						0.02			0.10
v/c Ratio	0.65	0.43	1.00	0.88	0.79		0.75	0.94	0.03	0.88	1.21	0.22
Uniform Delay, d1	57.7	55.3	61.8	63.6	62.8		62.6	33.3	17.0	70.3	41.2	25.3
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.6	0.9	56.0	30.2	16.5		7.1	11.3	0.1	56.4	102.4	0.7
Delay (s)	60.3	56.2	117.8	93.8	79.3		69.7	44.6	17.1	126.7	143.6	26.0
Level of Service	E	E	F	F	E		E	D	B	F	F	C
Approach Delay (s)		86.6			86.8			47.9			127.8	
Approach LOS		F			F			D			F	

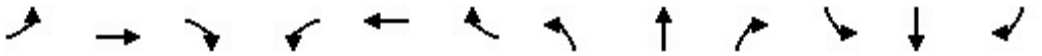
Intersection Summary			
HCM 2000 Control Delay	88.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	149.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	96.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	0	20	16	1	158	15	1748	37	68	2310	9
Future Volume (Veh/h)	7	0	20	16	1	158	15	1748	37	68	2310	9
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)	8	0	22	17	1	172	16	1900	40	74	2511	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)						3						
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	3642	4631	1256	3358	4601	950	2521			1940		
vC1, stage 1 conf vol	2659	2659		1932	1932							
vC2, stage 2 conf vol	982	1972		1426	2669							
vCu, unblocked vol	3642	4631	1256	3358	4601	950	2521			1940		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	86	62	94	34	91			75		
cM capacity (veh/h)	7	18	163	45	18	261	176			299		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	30	190	16	950	950	40	74	1256	1256	10
Volume Left	8	17	16	0	0	0	74	0	0	0
Volume Right	22	172	0	0	0	40	0	0	0	10
cSH	23	288	176	1700	1700	1700	299	1700	1700	1700
Volume to Capacity	1.31	0.66	0.09	0.56	0.56	0.02	0.25	0.74	0.74	0.01
Queue Length 95th (ft)	96	108	7	0	0	0	24	0	0	0
Control Delay (s)	545.9	51.0	27.5	0.0	0.0	0.0	21.0	0.0	0.0	0.0
Lane LOS	F	F	D				C			
Approach Delay (s)	545.9	51.0	0.2				0.6			
Approach LOS	F	F								

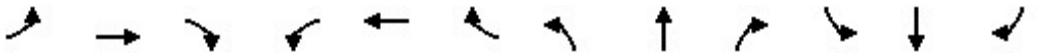
Intersection Summary				
Average Delay	5.9			
Intersection Capacity Utilization	78.6%	ICU Level of Service	D	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	336	178	162	192	245	226	144	1186	160	362	1578	293
Future Volume (vph)	336	178	162	192	245	226	144	1186	160	362	1578	293
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1742	1583	1681	1763	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1742	1583	1681	1763	1583	1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	365	193	176	209	266	246	157	1289	174	393	1715	318
RTOR Reduction (vph)	0	0	148	0	0	185	0	0	106	0	0	176
Lane Group Flow (vph)	274	284	28	188	287	61	157	1289	68	393	1715	142
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	22.5	22.5	22.5	25.6	25.6	25.6	17.6	56.0	56.0	21.8	60.2	60.2
Effective Green, g (s)	22.5	22.5	22.5	25.6	25.6	25.6	17.6	56.0	56.0	21.8	60.2	60.2
Actuated g/C Ratio	0.16	0.16	0.16	0.18	0.18	0.18	0.12	0.39	0.39	0.15	0.42	0.42
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	262	272	247	299	313	281	216	1377	616	520	1480	662
v/s Ratio Prot	0.16	c0.16		0.11	c0.16		0.09	0.36		c0.11	c0.48	
v/s Ratio Perm			0.02			0.04			0.04			0.09
v/c Ratio	1.05	1.04	0.11	0.63	0.92	0.22	0.73	0.94	0.11	0.76	1.16	0.22
Uniform Delay, d1	60.7	60.7	52.1	54.8	58.1	50.6	60.8	42.2	28.0	58.5	41.9	26.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	68.1	66.6	0.2	4.1	30.1	0.4	11.5	13.1	0.4	6.2	79.4	0.7
Delay (s)	128.8	127.3	52.3	58.9	88.2	51.0	72.4	55.4	28.4	64.7	121.3	27.5
Level of Service	F	F	D	E	F	D	E	E	C	E	F	C
Approach Delay (s)		109.9			67.8			54.1			99.8	
Approach LOS		F			E			D			F	

Intersection Summary			
HCM 2000 Control Delay	83.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	143.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		

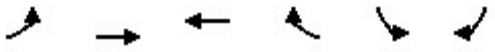
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	652	27	10	623	1	27	0	20	0	1	15
Future Volume (Veh/h)	6	652	27	10	623	1	27	0	20	0	1	15
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)	7	709	29	11	677	1	29	0	22	0	1	16
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		371			998							
pX, platoon unblocked												
vC, conflicting volume	678			738			1114	1438	369	1090	1452	339
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	678			738			1114	1438	369	1090	1452	339
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			99			81	100	96	100	99	98
cM capacity (veh/h)	910			864			155	129	628	161	127	657

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	362	384	350	340	29	22	17
Volume Left	7	0	11	0	29	0	0
Volume Right	0	29	0	1	0	22	16
cSH	910	1700	864	1700	155	628	527
Volume to Capacity	0.01	0.23	0.01	0.20	0.19	0.04	0.03
Queue Length 95th (ft)	1	0	1	0	17	3	2
Control Delay (s)	0.3	0.0	0.4	0.0	33.4	10.9	12.1
Lane LOS	A		A		D	B	B
Approach Delay (s)	0.1		0.2		23.7		12.1
Approach LOS					C		B

Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	39.2%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	700	600	1	3	37
Future Volume (Veh/h)	0	700	600	1	3	37
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)	0	761	652	1	3	40
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1114	255			
pX, platoon unblocked						
vC, conflicting volume	653				1033	326
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	653				1033	326
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	94
cM capacity (veh/h)	930				228	669

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	254	507	435	218	43
Volume Left	0	0	0	0	3
Volume Right	0	0	0	1	40
cSH	930	1700	1700	1700	590
Volume to Capacity	0.00	0.30	0.26	0.13	0.07
Queue Length 95th (ft)	0	0	0	0	6
Control Delay (s)	0.0	0.0	0.0	0.0	11.6
Lane LOS					B
Approach Delay (s)	0.0		0.0		11.6
Approach LOS					B

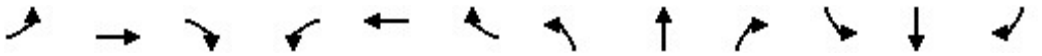
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	29.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	647	45	112	589	20	165
Future Volume (Veh/h)	647	45	112	589	20	165
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)	703	49	122	640	22	179
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1185			184		
pX, platoon unblocked						
vC, conflicting volume			752		1292	376
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			752		1292	376
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			86		83	71
cM capacity (veh/h)			853		133	622

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	469	283	335	427	201
Volume Left	0	0	122	0	22
Volume Right	0	49	0	0	179
cSH	1700	1700	853	1700	443
Volume to Capacity	0.28	0.17	0.14	0.25	0.45
Queue Length 95th (ft)	0	0	12	0	58
Control Delay (s)	0.0	0.0	4.6	0.0	19.7
Lane LOS			A		C
Approach Delay (s)	0.0		2.0		19.7
Approach LOS					C

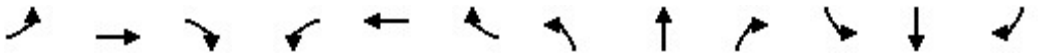
Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	599	9	6	567	332	6	3	3	454	4	137
Future Volume (vph)	200	599	9	6	567	332	6	3	3	454	4	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5			4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.96	
Satd. Flow (prot)	1770	1859		1770	1863	1583		1757			1738	
Flt Permitted	0.09	1.00		0.12	1.00	1.00		0.82			0.77	
Satd. Flow (perm)	172	1859		218	1863	1583		1488			1387	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	217	651	10	7	616	361	7	3	3	493	4	149
RTOR Reduction (vph)	0	1	0	0	0	121	0	2	0	0	9	0
Lane Group Flow (vph)	217	660	0	7	616	240	0	11	0	0	637	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	55.4	50.1		46.8	45.8	45.8		57.3			57.3	
Effective Green, g (s)	55.4	50.1		46.8	45.8	45.8		57.3			57.3	
Actuated g/C Ratio	0.45	0.41		0.38	0.38	0.38		0.47			0.47	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5			4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	147	764		96	699	594		699			651	
v/s Ratio Prot	c0.06	0.36		0.00	0.33							
v/s Ratio Perm	c0.61			0.03		0.15		0.01			c0.46	
v/c Ratio	1.48	0.86		0.07	0.88	0.40		0.02			0.98	
Uniform Delay, d1	30.8	32.8		27.7	35.5	28.0		17.2			31.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	247.2	10.0		0.3	12.5	0.5		0.0			30.4	
Delay (s)	278.0	42.8		28.0	48.0	28.5		17.3			62.1	
Level of Service	F	D		C	D	C		B			E	
Approach Delay (s)		100.9			40.7			17.3			62.1	
Approach LOS		F			D			B			E	

Intersection Summary			
HCM 2000 Control Delay	67.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	121.9	Sum of lost time (s)	13.5
Intersection Capacity Utilization	92.6%	ICU Level of Service	F
Analysis Period (min)	15		

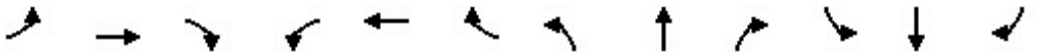
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1025	40	39	881	0	20	0	95	0	0	0
Future Volume (Veh/h)	0	1025	40	39	881	0	20	0	95	0	0	0
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)	0	1114	43	42	958	0	22	0	103	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		342										
pX, platoon unblocked				0.67			0.67	0.67	0.67	0.67	0.67	
vC, conflicting volume	958			1157			2178	2178	1136	2259	2199	958
vC1, stage 1 conf vol							1136	1136		1042	1042	
vC2, stage 2 conf vol							1042	1042		1217	1157	
vCu, unblocked vol	958			985			2518	2518	952	2640	2550	958
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			91			85	100	51	100	100	100
cM capacity (veh/h)	718			467			151	167	209	46	142	312

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	0	1157	42	958	22	103	0
Volume Left	0	0	42	0	22	0	0
Volume Right	0	43	0	0	0	103	0
cSH	1700	1700	467	1700	151	209	1700
Volume to Capacity	0.00	0.68	0.09	0.56	0.15	0.49	0.00
Queue Length 95th (ft)	0	0	7	0	12	61	0
Control Delay (s)	0.0	0.0	13.5	0.0	32.8	37.8	0.0
Lane LOS			B		D	E	A
Approach Delay (s)	0.0		0.6		36.9		0.0
Approach LOS					E		A

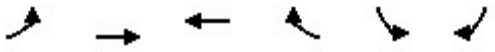
Intersection Summary				
Average Delay	2.3			
Intersection Capacity Utilization	68.9%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1097	10	10	875	51	7	0	3	49	0	37
Future Volume (Veh/h)	5	1097	10	10	875	51	7	0	3	49	0	37
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)	5	1192	11	11	951	55	8	0	3	53	0	40
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		687										
pX, platoon unblocked				0.67			0.67	0.67	0.67	0.67	0.67	
vC, conflicting volume	1006			1203			2220	2236	1198	2206	2214	978
vC1, stage 1 conf vol							1208	1208		1000	1000	
vC2, stage 2 conf vol							1013	1028		1205	1213	
vCu, unblocked vol	1006			1054			2582	2605	1046	2560	2572	978
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			94	100	98	61	100	87
cM capacity (veh/h)	689			440			135	158	185	136	153	304

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	5	1203	11	1006	11	93
Volume Left	5	0	11	0	8	53
Volume Right	0	11	0	55	3	40
cSH	689	1700	440	1700	146	179
Volume to Capacity	0.01	0.71	0.03	0.59	0.08	0.52
Queue Length 95th (ft)	1	0	2	0	6	65
Control Delay (s)	10.3	0.0	13.4	0.0	31.7	45.1
Lane LOS	B		B		D	E
Approach Delay (s)	0.0		0.1		31.7	45.1
Approach LOS					D	E

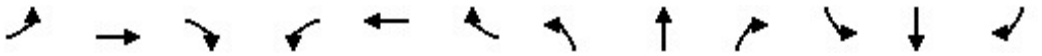
Intersection Summary				
Average Delay	2.0			
Intersection Capacity Utilization	70.4%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	36	1105	889	60	41	56
Future Volume (Veh/h)	36	1105	889	60	41	56
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)	39	1201	966	65	45	61
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		814				
pX, platoon unblocked					0.67	
vC, conflicting volume	1031				2278	998
vC1, stage 1 conf vol					998	
vC2, stage 2 conf vol					1279	
vCu, unblocked vol	1031				2655	998
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	94				72	79
cM capacity (veh/h)	674				158	296

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	39	1201	1031	45	61
Volume Left	39	0	0	45	0
Volume Right	0	0	65	0	61
cSH	674	1700	1700	158	296
Volume to Capacity	0.06	0.71	0.61	0.28	0.21
Queue Length 95th (ft)	5	0	0	28	19
Control Delay (s)	10.7	0.0	0.0	36.5	20.3
Lane LOS	B			E	C
Approach Delay (s)	0.3		0.0	27.2	
Approach LOS				D	

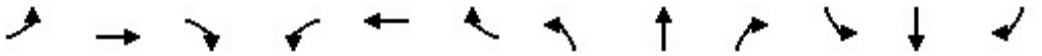
Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	1038	98	29	913	28	54	11	51	0	0	0
Future Volume (Veh/h)	3	1038	98	29	913	28	54	11	51	0	0	0
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)	3	1128	107	32	992	30	59	12	55	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		993										
pX, platoon unblocked				0.67			0.67	0.67	0.67	0.67	0.67	
vC, conflicting volume	1022			1235			2244	2274	1182	2266	2312	1007
vC1, stage 1 conf vol							1188	1188		1071	1071	
vC2, stage 2 conf vol							1056	1086		1195	1241	
vCu, unblocked vol	1022			1107			2602	2646	1028	2635	2703	1007
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			92			58	92	71	100	100	100
cM capacity (veh/h)	679			426			142	156	192	83	131	292

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	3	1235	32	1022	126	0
Volume Left	3	0	32	0	59	0
Volume Right	0	107	0	30	55	0
cSH	679	1700	426	1700	161	1700
Volume to Capacity	0.00	0.73	0.08	0.60	0.78	0.00
Queue Length 95th (ft)	0	0	6	0	125	0
Control Delay (s)	10.3	0.0	14.1	0.0	79.3	0.0
Lane LOS	B		B		F	A
Approach Delay (s)	0.0		0.4		79.3	0.0
Approach LOS					F	A

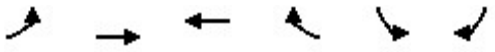
Intersection Summary				
Average Delay	4.3			
Intersection Capacity Utilization	73.9%	ICU Level of Service	D	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	88	1029	8	44	818	75	28	2	88	54	3	53
Future Volume (vph)	88	1029	8	44	818	75	28	2	88	54	3	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1861		1770	1863	1583		1779	1583	1770	1597	
Flt Permitted	0.23	1.00		0.14	1.00	1.00		0.70	1.00	0.74	1.00	
Satd. Flow (perm)	437	1861		260	1863	1583		1295	1583	1372	1597	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	96	1118	9	48	889	82	30	2	96	59	3	58
RTOR Reduction (vph)	0	0	0	0	0	14	0	0	88	0	53	0
Lane Group Flow (vph)	96	1127	0	48	889	68	0	32	8	59	8	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	97.6	90.9		94.4	89.3	89.3		10.5	10.5	10.5	10.5	
Effective Green, g (s)	97.6	90.9		94.4	89.3	89.3		10.5	10.5	10.5	10.5	
Actuated g/C Ratio	0.81	0.76		0.79	0.74	0.74		0.09	0.09	0.09	0.09	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	429	1409		268	1386	1178		113	138	120	139	
v/s Ratio Prot	c0.01	c0.61		0.01	0.48						0.01	
v/s Ratio Perm	0.17			0.13		0.04		0.02	0.01	c0.04		
v/c Ratio	0.22	0.80		0.18	0.64	0.06		0.28	0.06	0.49	0.06	
Uniform Delay, d1	5.8	8.9		11.2	7.5	4.1		51.2	50.2	52.2	50.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	4.8		0.3	2.3	0.1		1.4	0.2	3.1	0.2	
Delay (s)	6.1	13.8		11.5	9.8	4.2		52.6	50.4	55.4	50.4	
Level of Service	A	B		B	A	A		D	D	E	D	
Approach Delay (s)		13.2			9.4			51.0			52.8	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	79.7%	ICU Level of Service	D
Analysis Period (min)	15		

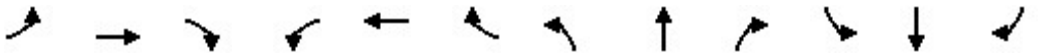
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	56	1076	888	37	10	51
Future Volume (Veh/h)	56	1076	888	37	10	51
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)	61	1170	965	40	11	55
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1084			
pX, platoon unblocked	0.82				0.82	0.82
vC, conflicting volume	1005				2257	965
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	898				2420	850
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	90				58	81
cM capacity (veh/h)	622				26	297

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	61	1170	965	40	11	55
Volume Left	61	0	0	0	11	0
Volume Right	0	0	0	40	0	55
cSH	622	1700	1700	1700	26	297
Volume to Capacity	0.10	0.69	0.57	0.02	0.42	0.19
Queue Length 95th (ft)	8	0	0	0	32	17
Control Delay (s)	11.4	0.0	0.0	0.0	216.3	19.9
Lane LOS	B				F	C
Approach Delay (s)	0.6		0.0		52.6	
Approach LOS					F	

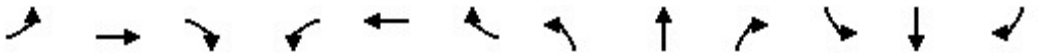
Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	501	562	30	9	327	212	61	62	33	294	33	524
Future Volume (vph)	501	562	30	9	327	212	61	62	33	294	33	524
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5	4.5	4.5			4.5	4.5
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00
Frt	1.00	0.99			1.00	0.85	1.00	0.95			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00			0.96	1.00
Satd. Flow (prot)	1770	1848			1860	1583	1770	1765			1783	1583
Flt Permitted	0.14	1.00			0.98	1.00	0.95	1.00			0.96	1.00
Satd. Flow (perm)	263	1848			1821	1583	1770	1765			1783	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	545	611	33	10	355	230	66	67	36	320	36	570
RTOR Reduction (vph)	0	2	0	0	0	160	0	16	0	0	0	85
Lane Group Flow (vph)	545	642	0	0	365	70	66	87	0	0	356	485
Turn Type	pm+pt	NA		Perm	NA	Perm	Split	NA		Split	NA	pm+ov
Protected Phases	7	4			8		2	2		6	6	7
Permitted Phases	4			8		8						6
Actuated Green, G (s)	64.0	64.0			25.2	25.2	8.2	8.2			26.0	60.3
Effective Green, g (s)	64.0	64.0			25.2	25.2	8.2	8.2			26.0	60.3
Actuated g/C Ratio	0.57	0.57			0.23	0.23	0.07	0.07			0.23	0.54
Clearance Time (s)	4.5	4.5			4.5	4.5	4.5	4.5			4.5	4.5
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	613	1058			410	357	129	129			415	918
v/s Ratio Prot	c0.27	0.35					0.04	c0.05			c0.20	0.16
v/s Ratio Perm	c0.24				0.20	0.04						0.14
v/c Ratio	0.89	0.61			0.89	0.20	0.51	0.68			0.86	0.53
Uniform Delay, d1	28.1	15.6			41.9	35.1	49.8	50.5			41.1	16.5
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	14.7	1.0			20.7	0.3	3.4	13.2			15.9	0.6
Delay (s)	42.8	16.6			62.6	35.3	53.2	63.6			57.0	17.1
Level of Service	D	B			E	D	D	E			E	B
Approach Delay (s)		28.6			52.1			59.6			32.4	
Approach LOS		C			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	36.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	111.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		

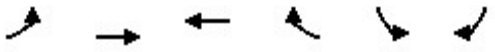
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	20	70	61	26	26	54	546	11	10	513	42
Future Volume (Veh/h)	40	20	70	61	26	26	54	546	11	10	513	42
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)	43	22	76	66	28	28	59	593	12	11	558	46
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								959				
pX, platoon unblocked	0.94	0.94		0.94	0.94	0.94				0.94		
vC, conflicting volume	1362	1326	581	1407	1343	599	604			605		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1354	1315	581	1401	1333	544	604			550		
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 %	52	84	85	16	79	94	94			99		
cM capacity (veh/h)	90	138	514	78	135	508	974			961		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total	141	94	28	664	615
Volume Left	43	66	0	59	11
Volume Right	76	0	28	12	46
cSH	179	90	508	974	961
Volume to Capacity	0.79	1.05	0.06	0.06	0.01
Queue Length 95th (ft)	131	155	4	5	1
Control Delay (s)	73.9	194.5	12.5	1.6	0.3
Lane LOS	F	F	B	A	A
Approach Delay (s)	73.9	152.7		1.6	0.3
Approach LOS	F	F			

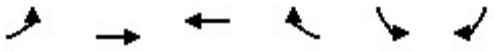
Intersection Summary				
Average Delay	19.6			
Intersection Capacity Utilization	80.6%	ICU Level of Service	D	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	21	20	56	13	30	57
Future Volume (Veh/h)	21	20	56	13	30	57
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)	23	22	61	14	33	62
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	75				136	68
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	75				136	68
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				96	94
cM capacity (veh/h)	1524				845	995

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	45	75	95
Volume Left	23	0	33
Volume Right	0	14	62
cSH	1524	1700	937
Volume to Capacity	0.02	0.04	0.10
Queue Length 95th (ft)	1	0	8
Control Delay (s)	3.8	0.0	9.3
Lane LOS	A		A
Approach Delay (s)	3.8	0.0	9.3
Approach LOS			A

Intersection Summary			
Average Delay	4.9		
Intersection Capacity Utilization	20.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	20	30	13	14	31	56
Future Volume (Veh/h)	20	30	13	14	31	56
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)	22	33	14	15	34	61
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	29				98	22
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	29				98	22
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				96	94
cM capacity (veh/h)	1584				888	1056

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	55	29	95
Volume Left	22	0	34
Volume Right	0	15	61
cSH	1584	1700	989
Volume to Capacity	0.01	0.02	0.10
Queue Length 95th (ft)	1	0	8
Control Delay (s)	3.0	0.0	9.0
Lane LOS	A		A
Approach Delay (s)	3.0	0.0	9.0
Approach LOS			A

Intersection Summary			
Average Delay	5.7		
Intersection Capacity Utilization	21.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	61	0	0	27	0	0
Future Volume (Veh/h)	61	0	0	27	0	0
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)	66	0	0	29	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			66		95	66
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			66		95	66
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1536		905	998

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	66	29	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1536	1700
Volume to Capacity	0.04	0.00	0.03
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

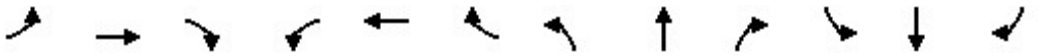
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	27	61	0
Future Volume (Veh/h)	0	0	0	27	61	0
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	0	0	29	66	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	95	66	66			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	95	66	66			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	905	998	1536			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	29	66
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1536	1700
Volume to Capacity	0.02	0.00	0.04
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

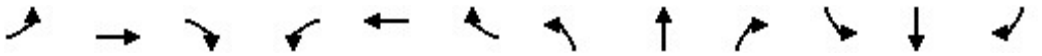
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	353	125	420	189	137	42	307	1619	46	72	1768	274
Future Volume (vph)	353	125	420	189	137	42	307	1619	46	72	1768	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00		0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1863	1583	1770	1797		3433	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1863	1583	1770	1797		3433	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	384	136	457	205	149	46	334	1760	50	78	1922	298
RTOR Reduction (vph)	0	0	100	0	7	0	0	0	24	0	0	148
Lane Group Flow (vph)	384	136	357	205	188	0	334	1760	26	78	1922	150
Turn Type	Split	NA	Perm	Split	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	27.5	27.5	27.5	18.0	18.0		13.5	78.8	78.8	7.7	73.0	73.0
Effective Green, g (s)	27.5	27.5	27.5	18.0	18.0		13.5	78.8	78.8	7.7	73.0	73.0
Actuated g/C Ratio	0.18	0.18	0.18	0.12	0.12		0.09	0.53	0.53	0.05	0.49	0.49
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	629	341	290	212	215		308	1859	831	90	1722	770
v/s Ratio Prot	0.11	0.07		c0.12	0.10		c0.10	0.50		0.04	c0.54	
v/s Ratio Perm			c0.23						0.02			0.09
v/c Ratio	0.61	0.40	1.23	0.97	0.87		1.08	0.95	0.03	0.87	1.12	0.19
Uniform Delay, d1	56.3	54.0	61.2	65.7	64.9		68.2	33.6	17.2	70.6	38.5	21.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.8	0.8	130.8	51.8	30.1		75.7	11.6	0.1	53.4	60.9	0.6
Delay (s)	58.1	54.7	192.1	117.5	95.0		143.9	45.2	17.3	124.0	99.4	22.4
Level of Service	E	D	F	F	F		F	D	B	F	F	C
Approach Delay (s)		120.3			106.5			59.9			90.2	
Approach LOS		F			F			E			F	

Intersection Summary			
HCM 2000 Control Delay	85.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	96.6%	ICU Level of Service	F
Analysis Period (min)	15		

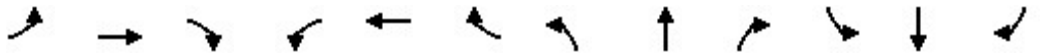
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	336	178	162	192	245	226	144	1186	160	362	1578	293
Future Volume (vph)	336	178	162	192	245	226	144	1186	160	362	1578	293
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1742	1583	1681	1763	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1742	1583	1681	1763	1583	1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	365	193	176	209	266	246	157	1289	174	393	1715	318
RTOR Reduction (vph)	0	0	148	0	0	162	0	0	99	0	0	166
Lane Group Flow (vph)	274	284	28	188	287	84	157	1289	75	393	1715	152
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	23.5	23.5	23.5	23.5	23.5	23.5	13.1	65.0	65.0	20.0	71.9	71.9
Effective Green, g (s)	23.5	23.5	23.5	23.5	23.5	23.5	13.1	65.0	65.0	20.0	71.9	71.9
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.16	0.09	0.43	0.43	0.13	0.48	0.48
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	263	272	248	263	276	248	154	1533	685	457	1696	758
v/s Ratio Prot	0.16	c0.16		0.11	c0.16		c0.09	0.36		0.11	c0.48	
v/s Ratio Perm			0.02			0.05			0.05			0.10
v/c Ratio	1.04	1.04	0.11	0.71	1.04	0.34	1.02	0.84	0.11	0.86	1.01	0.20
Uniform Delay, d1	63.2	63.2	54.3	60.1	63.2	56.3	68.5	37.9	25.3	63.6	39.0	22.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	66.8	66.6	0.2	8.9	64.9	0.8	77.7	5.7	0.3	14.9	24.6	0.6
Delay (s)	130.1	129.8	54.5	69.0	128.2	57.1	146.2	43.6	25.6	78.5	63.7	23.1
Level of Service	F	F	D	E	F	E	F	D	C	E	E	C
Approach Delay (s)		111.9			88.5			51.6			60.8	
Approach LOS		F			F			D			E	

Intersection Summary			
HCM 2000 Control Delay	68.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		

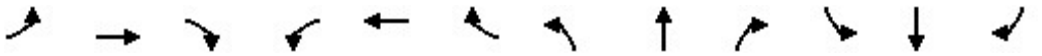
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	599	9	6	567	332	6	3	3	454	4	137
Future Volume (vph)	200	599	9	6	567	332	6	3	3	454	4	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5			4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.96	
Satd. Flow (prot)	1770	1859		1770	1863	1583		1757			1738	
Flt Permitted	0.08	1.00		0.17	1.00	1.00		0.82			0.77	
Satd. Flow (perm)	153	1859		316	1863	1583		1484			1387	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	217	651	10	7	616	361	7	3	3	493	4	149
RTOR Reduction (vph)	0	1	0	0	0	120	0	2	0	0	9	0
Lane Group Flow (vph)	217	660	0	7	616	241	0	11	0	0	637	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	59.5	54.0		45.1	44.1	44.1		55.1			55.1	
Effective Green, g (s)	59.5	54.0		45.1	44.1	44.1		55.1			55.1	
Actuated g/C Ratio	0.48	0.44		0.36	0.36	0.36		0.45			0.45	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5			4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	216	812		127	664	564		661			618	
v/s Ratio Prot	c0.09	0.36		0.00	0.33							
v/s Ratio Perm	c0.39			0.02		0.15		0.01			c0.46	
v/c Ratio	1.00	0.81		0.06	0.93	0.43		0.02			1.03	
Uniform Delay, d1	35.9	30.4		27.8	38.2	30.2		19.1			34.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	62.4	6.3		0.2	19.1	0.5		0.0			44.1	
Delay (s)	98.4	36.7		28.0	57.3	30.7		19.2			78.4	
Level of Service	F	D		C	E	C		B			E	
Approach Delay (s)		51.9			47.3			19.2			78.4	
Approach LOS		D			D			B			E	

Intersection Summary			
HCM 2000 Control Delay	56.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	123.6	Sum of lost time (s)	13.5
Intersection Capacity Utilization	92.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	599	9	6	567	332	6	3	3	454	4	137
Future Volume (vph)	200	599	9	6	567	332	6	3	3	454	4	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Lane Util. Factor	1.00	1.00		1.00	0.95			1.00			1.00	
Frt	1.00	1.00		1.00	0.94			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.96	
Satd. Flow (prot)	1770	1859		1770	3343			1757			1738	
Flt Permitted	0.09	1.00		0.14	1.00			0.82			0.77	
Satd. Flow (perm)	172	1859		267	3343			1488			1387	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	217	651	10	7	616	361	7	3	3	493	4	149
RTOR Reduction (vph)	0	1	0	0	69	0	0	2	0	0	9	0
Lane Group Flow (vph)	217	660	0	7	908	0	0	11	0	0	637	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	56.1	50.6		39.7	38.7			57.3			57.3	
Effective Green, g (s)	56.1	50.6		39.7	38.7			57.3			57.3	
Actuated g/C Ratio	0.46	0.41		0.32	0.32			0.47			0.47	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	247	768		98	1056			696			649	
v/s Ratio Prot	c0.09	0.36		0.00	0.27							
v/s Ratio Perm	c0.31			0.02				0.01			c0.46	
v/c Ratio	0.88	0.86		0.07	0.86			0.02			0.98	
Uniform Delay, d1	32.2	32.7		30.7	39.3			17.4			32.0	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	27.7	9.5		0.3	7.1			0.0			31.1	
Delay (s)	59.9	42.2		31.0	46.4			17.5			63.1	
Level of Service	E	D		C	D			B			E	
Approach Delay (s)		46.6			46.3			17.5			63.1	
Approach LOS		D			D			B			E	

Intersection Summary			
HCM 2000 Control Delay	50.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	122.4	Sum of lost time (s)	13.5
Intersection Capacity Utilization	89.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	224	153	1	1151	348	147	1038
Future Volume (vph)	224	153	1	1151	348	147	1038
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583	1770	3539	1583	1770	3539
Flt Permitted	0.95	1.00	0.25	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583	470	3539	1583	1770	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	243	166	1	1251	378	160	1128
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	243	166	1	1251	378	160	1128
Turn Type	Perm	Free	Perm	NA	Free	Prot	NA
Protected Phases				2		1	6
Permitted Phases	8	Free	2		Free		
Actuated Green, G (s)	15.6	145.9	99.3	99.3	145.9	18.5	122.3
Effective Green, g (s)	15.6	145.9	99.3	99.3	145.9	18.5	122.3
Actuated g/C Ratio	0.11	1.00	0.68	0.68	1.00	0.13	0.84
Clearance Time (s)	4.0		4.0	4.0		4.5	4.0
Vehicle Extension (s)	3.0		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	367	1583	319	2408	1583	224	2966
v/s Ratio Prot				c0.35		c0.09	0.32
v/s Ratio Perm	c0.07	0.10	0.00		0.24		
v/c Ratio	0.66	0.10	0.00	0.52	0.24	0.71	0.38
Uniform Delay, d1	62.6	0.0	7.5	11.5	0.0	61.2	2.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.4	0.1	0.0	0.8	0.4	10.3	0.1
Delay (s)	67.1	0.1	7.5	12.3	0.4	71.5	2.9
Level of Service	E	A	A	B	A	E	A
Approach Delay (s)	39.9			9.5			11.4
Approach LOS	D			A			B

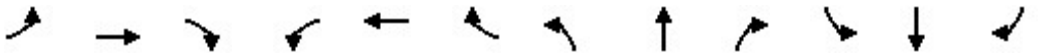
Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	145.9	Sum of lost time (s)	12.5
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	308	34	230	131	91	35	244	1359	62	77	1090	249
Future Volume (vph)	308	34	230	131	91	35	244	1359	62	77	1090	249
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1785		3433	3539	1583	1770	3539	1583
Flt Permitted	0.26	1.00	1.00	0.73	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	482	1863	1583	1365	1785		3433	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	335	37	250	142	99	38	265	1477	67	84	1185	271
RTOR Reduction (vph)	0	0	189	0	8	0	0	0	31	0	0	136
Lane Group Flow (vph)	335	37	61	142	129	0	265	1477	36	84	1185	135
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8					2			6
Actuated Green, G (s)	54.6	35.1	35.1	31.3	16.3		17.8	90.9	90.9	12.2	85.3	85.3
Effective Green, g (s)	54.6	35.1	35.1	31.3	16.3		17.8	90.9	90.9	12.2	85.3	85.3
Actuated g/C Ratio	0.32	0.21	0.21	0.18	0.10		0.10	0.53	0.53	0.07	0.50	0.50
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	408	381	324	285	169		356	1879	840	126	1763	788
v/s Ratio Prot	c0.16	0.02		0.04	0.07		c0.08	c0.42		0.05	0.33	
v/s Ratio Perm	c0.10		0.04	0.05					0.02			0.09
v/c Ratio	0.82	0.10	0.19	0.50	0.76		0.74	0.79	0.04	0.67	0.67	0.17
Uniform Delay, d1	49.6	55.2	56.3	62.1	75.6		74.5	32.3	19.3	77.5	32.4	23.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	12.5	0.1	0.3	1.4	18.2		8.2	3.4	0.1	12.5	2.1	0.5
Delay (s)	62.1	55.3	56.5	63.5	93.8		82.7	35.7	19.4	90.1	34.5	24.0
Level of Service	E	E	E	E	F		F	D	B	F	C	C
Approach Delay (s)		59.5			78.4			42.0			35.7	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	44.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	171.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	80.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	0	16	3	0	29	18	1377	12	26	1252	5
Future Volume (Veh/h)	14	0	16	3	0	29	18	1377	12	26	1252	5
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)	15	0	17	3	0	32	20	1497	13	28	1361	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)						3						
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2206	2967	680	2290	2959	748	1366			1510		
vC1, stage 1 conf vol	1417	1417		1537	1537							
vC2, stage 2 conf vol	788	1550		754	1422							
vCu, unblocked vol	2206	2967	680	2290	2959	748	1366			1510		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	87	100	96	97	100	91	96			94		
cM capacity (veh/h)	118	107	393	106	114	355	499			439		

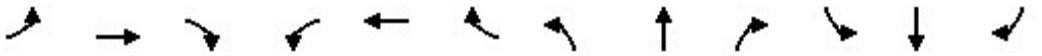
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	32	35	20	748	748	13	28	680	680	5
Volume Left	15	3	20	0	0	0	28	0	0	0
Volume Right	17	32	0	0	0	13	0	0	0	5
cSH	188	388	499	1700	1700	1700	439	1700	1700	1700
Volume to Capacity	0.17	0.09	0.04	0.44	0.44	0.01	0.06	0.40	0.40	0.00
Queue Length 95th (ft)	15	7	3	0	0	0	5	0	0	0
Control Delay (s)	28.0	18.2	12.5	0.0	0.0	0.0	13.8	0.0	0.0	0.0
Lane LOS	D	C	B				B			
Approach Delay (s)	28.0	18.2	0.2				0.3			
Approach LOS	D	C								

Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	54.7%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	308	155	123	92	148	242	87	792	105	270	733	200
Future Volume (vph)	308	155	123	92	148	242	87	792	105	270	733	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1740	1583	1681	1764	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1740	1583	1681	1764	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	335	168	134	100	161	263	95	861	114	293	797	217
RTOR Reduction (vph)	0	0	109	0	0	205	0	0	62	0	0	113
Lane Group Flow (vph)	248	255	25	90	171	58	95	861	52	293	797	104
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	29.5	29.5	29.5	21.3	21.3	21.3	13.9	72.1	72.1	17.6	75.8	75.8
Effective Green, g (s)	29.5	29.5	29.5	21.3	21.3	21.3	13.9	72.1	72.1	17.6	75.8	75.8
Actuated g/C Ratio	0.19	0.19	0.19	0.13	0.13	0.13	0.09	0.45	0.45	0.11	0.48	0.48
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	312	323	294	225	237	212	155	1609	720	196	1692	757
v/s Ratio Prot	c0.15	0.15		0.05	c0.10		0.05	c0.24		c0.17	c0.23	
v/s Ratio Perm			0.02			0.04			0.03			0.07
v/c Ratio	0.79	0.79	0.08	0.40	0.72	0.27	0.61	0.54	0.07	1.49	0.47	0.14
Uniform Delay, d1	61.6	61.5	53.3	62.8	65.8	61.6	69.7	31.1	24.3	70.5	27.8	23.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	13.0	12.1	0.1	1.2	10.3	0.7	7.0	1.3	0.2	247.7	0.9	0.4
Delay (s)	74.7	73.6	53.5	63.9	76.1	62.3	76.7	32.4	24.5	318.1	28.8	23.5
Level of Service	E	E	D	E	E	E	E	C	C	F	C	C
Approach Delay (s)		69.8			67.1			35.5			92.8	
Approach LOS		E			E			D			F	

Intersection Summary			
HCM 2000 Control Delay	67.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	158.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

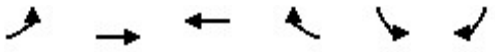
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	451	21	24	453	1	14	0	25	0	0	0
Future Volume (Veh/h)	0	451	21	24	453	1	14	0	25	0	0	0
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)	0	490	23	26	492	1	15	0	27	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		371			998							
pX, platoon unblocked				0.92			0.92	0.92	0.92	0.92	0.92	
vC, conflicting volume	493			513			800	1046	502	1073	1058	246
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	493			431			741	1009	419	1038	1021	246
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 %	100			97			95	100	95	100	100	100
cM capacity (veh/h)	1067			1039			276	215	539	159	212	754

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	513	272	247	15	27	0
Volume Left	0	26	0	15	0	0
Volume Right	23	0	1	0	27	0
cSH	1067	1039	1700	276	539	1700
Volume to Capacity	0.00	0.03	0.15	0.05	0.05	0.00
Queue Length 95th (ft)	0	2	0	4	4	0
Control Delay (s)	0.0	1.0	0.0	18.8	12.0	0.0
Lane LOS		A		C	B	A
Approach Delay (s)	0.0	0.5		14.5		0.0
Approach LOS				B		A

Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	40.4%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	551	467	0	0	6
Future Volume (Veh/h)	0	551	467	0	0	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)	0	599	508	0	0	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)		1114	255			
pX, platoon unblocked						
vC, conflicting volume	508				1107	254
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	508				1107	254
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	99
cM capacity (veh/h)	1053				204	745

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	599	339	169	7
Volume Left	0	0	0	0
Volume Right	0	0	0	7
cSH	1053	1700	1700	745
Volume to Capacity	0.00	0.20	0.10	0.01
Queue Length 95th (ft)	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	9.9
Lane LOS				A
Approach Delay (s)	0.0	0.0		9.9
Approach LOS				A

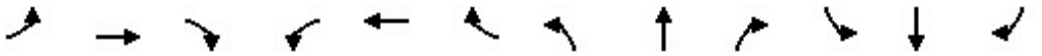
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	39.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	523	33	74	441	28	94
Future Volume (Veh/h)	523	33	74	441	28	94
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)	568	36	80	479	30	102
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1185			184		
pX, platoon unblocked						
vC, conflicting volume			604		986	302
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			604		986	302
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		87	85
cM capacity (veh/h)			970		225	694

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	379	225	240	319	132
Volume Left	0	0	80	0	30
Volume Right	0	36	0	0	102
cSH	1700	1700	970	1700	471
Volume to Capacity	0.22	0.13	0.08	0.19	0.28
Queue Length 95th (ft)	0	0	7	0	28
Control Delay (s)	0.0	0.0	3.6	0.0	15.6
Lane LOS			A		C
Approach Delay (s)	0.0		1.5		15.6
Approach LOS					C

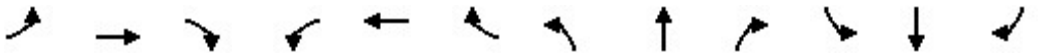
Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	47.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	502	5	1	416	286	3	1	0	329	1	97
Future Volume (vph)	110	502	5	1	416	286	3	1	0	329	1	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5			4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		1.00			0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96			0.96	
Satd. Flow (prot)	1770	1860		1770	1863	1583		1795			1739	
Flt Permitted	0.23	1.00		0.29	1.00	1.00		0.87			0.77	
Satd. Flow (perm)	421	1860		548	1863	1583		1618			1396	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	546	5	1	452	311	3	1	0	358	1	105
RTOR Reduction (vph)	0	1	0	0	0	190	0	0	0	0	8	0
Lane Group Flow (vph)	120	550	0	1	452	121	0	4	0	0	456	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	44.5	39.0		32.8	31.8	31.8		37.8			37.8	
Effective Green, g (s)	44.5	39.0		32.8	31.8	31.8		37.8			37.8	
Actuated g/C Ratio	0.49	0.43		0.36	0.35	0.35		0.41			0.41	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5			4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	326	794		210	648	551		669			577	
v/s Ratio Prot	c0.03	c0.30		0.00	0.24							
v/s Ratio Perm	0.15			0.00		0.08		0.00			c0.33	
v/c Ratio	0.37	0.69		0.00	0.70	0.22		0.01			0.79	
Uniform Delay, d1	15.4	21.3		19.5	25.6	21.0		15.7			23.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	0.7	2.6		0.0	3.3	0.2		0.0			10.6	
Delay (s)	16.1	23.9		19.5	28.9	21.2		15.7			33.9	
Level of Service	B	C		B	C	C		B			C	
Approach Delay (s)		22.5			25.7			15.7			33.9	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	26.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	91.3	Sum of lost time (s)	13.5
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		

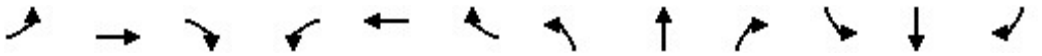
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	738	24	35	694	0	8	0	38	0	0	0
Future Volume (Veh/h)	0	738	24	35	694	0	8	0	38	0	0	0
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)	0	802	26	38	754	0	9	0	41	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		342										
pX, platoon unblocked				0.76			0.76	0.76	0.76	0.76	0.76	
vC, conflicting volume	754			828			1645	1645	815	1673	1658	754
vC1, stage 1 conf vol							815	815		830	830	
vC2, stage 2 conf vol							830	830		843	828	
vCu, unblocked vol	754			616			1691	1691	599	1728	1708	754
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			95			96	100	89	100	100	100
cM capacity (veh/h)	856			733			250	262	381	214	246	409

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	0	828	38	754	9	41	0
Volume Left	0	0	38	0	9	0	0
Volume Right	0	26	0	0	0	41	0
cSH	1700	1700	733	1700	250	381	1700
Volume to Capacity	0.00	0.49	0.05	0.44	0.04	0.11	0.00
Queue Length 95th (ft)	0	0	4	0	3	9	0
Control Delay (s)	0.0	0.0	10.2	0.0	19.9	15.6	0.0
Lane LOS			B		C	C	A
Approach Delay (s)	0.0		0.5		16.4		0.0
Approach LOS					C		A

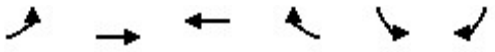
Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	50.3%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	760	12	1	723	12	0	0	0	3	0	11
Future Volume (Veh/h)	7	760	12	1	723	12	0	0	0	3	0	11
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	826	13	1	786	13	0	0	0	3	0	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		687										
pX, platoon unblocked				0.77			0.77	0.77	0.77	0.77	0.77	
vC, conflicting volume	799			839			1648	1650	832	1636	1650	792
vC1, stage 1 conf vol							848	848		794	794	
vC2, stage 2 conf vol							800	801		842	855	
vCu, unblocked vol	799			641			1693	1694	632	1677	1694	792
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	99	100	97
cM capacity (veh/h)	824			726			247	263	369	256	265	389

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	8	839	1	799	0	15
Volume Left	8	0	1	0	0	3
Volume Right	0	13	0	13	0	12
cSH	824	1700	726	1700	1700	352
Volume to Capacity	0.01	0.49	0.00	0.47	0.00	0.04
Queue Length 95th (ft)	1	0	0	0	0	3
Control Delay (s)	9.4	0.0	10.0	0.0	0.0	15.7
Lane LOS	A		A		A	C
Approach Delay (s)	0.1		0.0		0.0	15.7
Approach LOS					A	C

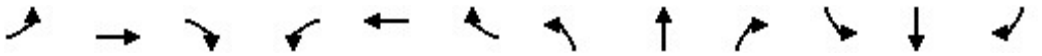
Intersection Summary				
Average Delay	0.2			
Intersection Capacity Utilization	50.7%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	20	737	720	22	18	23
Future Volume (Veh/h)	20	737	720	22	18	23
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)	22	801	783	24	20	25
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		814				
pX, platoon unblocked					0.78	
vC, conflicting volume	807				1640	795
vC1, stage 1 conf vol					795	
vC2, stage 2 conf vol					845	
vCu, unblocked vol	807				1679	795
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	97				93	94
cM capacity (veh/h)	818				296	388

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	22	801	807	20	25
Volume Left	22	0	0	20	0
Volume Right	0	0	24	0	25
cSH	818	1700	1700	296	388
Volume to Capacity	0.03	0.47	0.47	0.07	0.06
Queue Length 95th (ft)	2	0	0	5	5
Control Delay (s)	9.5	0.0	0.0	18.1	14.9
Lane LOS	A			C	B
Approach Delay (s)	0.3		0.0	16.3	
Approach LOS				C	

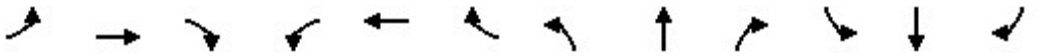
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	697	52	13	695	6	48	2	20	0	0	0
Future Volume (Veh/h)	4	697	52	13	695	6	48	2	20	0	0	0
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)	4	758	57	14	755	7	52	2	22	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		993										
pX, platoon unblocked				0.79			0.79	0.79	0.79	0.79	0.79	
vC, conflicting volume	762			815			1578	1584	786	1576	1610	758
vC1, stage 1 conf vol							794	794		786	786	
vC2, stage 2 conf vol							783	790		789	823	
vCu, unblocked vol	762			634			1598	1607	598	1595	1638	758
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			81	99	94	100	100	100
cM capacity (veh/h)	850			751			268	278	397	255	268	407

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	4	815	14	762	76	0
Volume Left	4	0	14	0	52	0
Volume Right	0	57	0	7	22	0
cSH	850	1700	751	1700	296	1700
Volume to Capacity	0.00	0.48	0.02	0.45	0.26	0.00
Queue Length 95th (ft)	0	0	1	0	25	0
Control Delay (s)	9.3	0.0	9.9	0.0	21.3	0.0
Lane LOS	A		A		C	A
Approach Delay (s)	0.0		0.2		21.3	0.0
Approach LOS					C	A

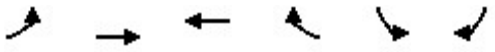
Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	50.5%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	637	8	6	612	10	8	1	8	4	0	41
Future Volume (vph)	41	637	8	6	612	10	8	1	8	4	0	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1859		1770	1863	1583		1783	1583	1770	1583	
Flt Permitted	0.36	1.00		0.38	1.00	1.00		0.71	1.00	0.75	1.00	
Satd. Flow (perm)	662	1859		702	1863	1583		1332	1583	1399	1583	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	45	692	9	7	665	11	9	1	9	4	0	45
RTOR Reduction (vph)	0	0	0	0	0	2	0	0	9	0	43	0
Lane Group Flow (vph)	45	701	0	7	665	9	0	10	0	4	2	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	103.8	99.0		96.4	95.3	95.3		6.4	6.4	6.4	6.4	
Effective Green, g (s)	103.8	99.0		96.4	95.3	95.3		6.4	6.4	6.4	6.4	
Actuated g/C Ratio	0.86	0.82		0.80	0.79	0.79		0.05	0.05	0.05	0.05	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	616	1533		573	1479	1257		71	84	74	84	
v/s Ratio Prot	c0.00	c0.38		0.00	0.36						0.00	
v/s Ratio Perm	0.06			0.01		0.01		c0.01	0.00	0.00		
v/c Ratio	0.07	0.46		0.01	0.45	0.01		0.14	0.01	0.05	0.03	
Uniform Delay, d1	1.9	3.0		2.4	4.0	2.6		54.2	53.8	53.9	53.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	1.0		0.0	1.0	0.0		0.9	0.0	0.3	0.1	
Delay (s)	2.0	3.9		2.5	4.9	2.6		55.1	53.8	54.2	54.0	
Level of Service	A	A		A	A	A		E	D	D	D	
Approach Delay (s)		3.8			4.9			54.5			54.0	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		

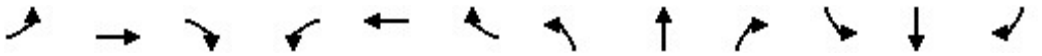
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	34	604	593	14	18	38
Future Volume (Veh/h)	34	604	593	14	18	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)	37	657	645	15	20	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)			1084			
pX, platoon unblocked	0.87				0.87	0.87
vC, conflicting volume	660				1376	645
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	533				1357	516
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				85	92
cM capacity (veh/h)	899				137	486

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	37	657	645	15	20	41
Volume Left	37	0	0	0	20	0
Volume Right	0	0	0	15	0	41
cSH	899	1700	1700	1700	137	486
Volume to Capacity	0.04	0.39	0.38	0.01	0.15	0.08
Queue Length 95th (ft)	3	0	0	0	12	7
Control Delay (s)	9.2	0.0	0.0	0.0	35.8	13.1
Lane LOS	A				E	B
Approach Delay (s)	0.5		0.0		20.5	
Approach LOS					C	

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	296	325	5	1	294	128	5	2	2	120	1	307
Future Volume (vph)	296	325	5	1	294	128	5	2	2	120	1	307
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5	4.5	4.5			4.5	4.5
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.93			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00			0.95	1.00
Satd. Flow (prot)	1770	1859			1862	1583	1770	1723			1775	1583
Flt Permitted	0.26	1.00			1.00	1.00	0.95	1.00			0.95	1.00
Satd. Flow (perm)	492	1859			1861	1583	1770	1723			1775	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	322	353	5	1	320	139	5	2	2	130	1	334
RTOR Reduction (vph)	0	0	0	0	0	105	0	2	0	0	0	194
Lane Group Flow (vph)	322	358	0	0	321	34	5	2	0	0	131	140
Turn Type	pm+pt	NA		Perm	NA	Perm	Split	NA		Split	NA	pm+ov
Protected Phases	7	4			8		2	2		6	6	7
Permitted Phases	4			8		8						6
Actuated Green, G (s)	41.3	41.3			17.5	17.5	6.0	6.0			10.8	30.1
Effective Green, g (s)	41.3	41.3			17.5	17.5	6.0	6.0			10.8	30.1
Actuated g/C Ratio	0.58	0.58			0.24	0.24	0.08	0.08			0.15	0.42
Clearance Time (s)	4.5	4.5			4.5	4.5	4.5	4.5			4.5	4.5
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	628	1072			454	386	148	144			267	764
v/s Ratio Prot	c0.14	0.19					c0.00	0.00			c0.07	0.05
v/s Ratio Perm	0.16				c0.17	0.02						0.04
v/c Ratio	0.51	0.33			0.71	0.09	0.03	0.02			0.49	0.18
Uniform Delay, d1	9.2	7.9			24.7	20.9	30.1	30.1			27.9	13.0
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	0.7	0.2			5.0	0.1	0.1	0.0			1.4	0.1
Delay (s)	9.9	8.1			29.7	21.0	30.2	30.1			29.3	13.2
Level of Service	A	A			C	C	C	C			C	B
Approach Delay (s)		9.0			27.1			30.2			17.7	
Approach LOS		A			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	71.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	2	32	19	390	426	23
Future Volume (Veh/h)	2	32	19	390	426	23
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)	2	35	21	424	463	25
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				959		
pX, platoon unblocked						
vC, conflicting volume	942	476	488			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	942	476	488			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	94	98			
cM capacity (veh/h)	286	589	1075			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	37	445	488
Volume Left	2	21	0
Volume Right	35	0	25
cSH	557	1075	1700
Volume to Capacity	0.07	0.02	0.29
Queue Length 95th (ft)	5	1	0
Control Delay (s)	11.9	0.6	0.0
Lane LOS	B	A	
Approach Delay (s)	11.9	0.6	0.0
Approach LOS	B		

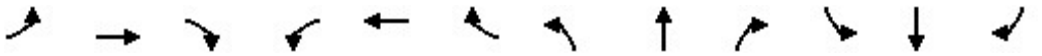
Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	280	266	1	1488	418	312	1382
Future Volume (vph)	280	266	1	1488	418	312	1382
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583	1770	3539	1583	1770	3539
Flt Permitted	0.95	1.00	0.17	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583	322	3539	1583	1770	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	304	289	1	1617	454	339	1502
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	304	289	1	1617	454	339	1502
Turn Type	Perm	Free	Perm	NA	Free	Prot	NA
Protected Phases				2		1	6
Permitted Phases	8	Free	2		Free		
Actuated Green, G (s)	18.8	167.3	99.4	99.4	167.3	36.6	140.5
Effective Green, g (s)	18.8	167.3	99.4	99.4	167.3	36.6	140.5
Actuated g/C Ratio	0.11	1.00	0.59	0.59	1.00	0.22	0.84
Clearance Time (s)	4.0		4.0	4.0		4.5	4.0
Vehicle Extension (s)	3.0		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	385	1583	191	2102	1583	387	2972
v/s Ratio Prot				c0.46		c0.19	0.42
v/s Ratio Perm	c0.09	0.18	0.00		0.29		
v/c Ratio	0.79	0.18	0.01	0.77	0.29	0.88	0.51
Uniform Delay, d1	72.3	0.0	13.8	25.4	0.0	63.2	3.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.3	0.3	0.0	2.8	0.5	19.3	0.1
Delay (s)	82.6	0.3	13.9	28.2	0.5	82.5	3.9
Level of Service	F	A	B	C	A	F	A
Approach Delay (s)	42.5			22.1			18.3
Approach LOS	D			C			B

Intersection Summary			
HCM 2000 Control Delay	23.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	167.3	Sum of lost time (s)	12.5
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	332	35	237	135	94	36	251	1732	64	79	1461	266
Future Volume (vph)	332	35	237	135	94	36	251	1732	64	79	1461	266
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00		0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1863	1583	1770	1785		3433	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1863	1583	1770	1785		3433	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	361	38	258	147	102	39	273	1883	70	86	1588	289
RTOR Reduction (vph)	0	0	218	0	8	0	0	0	27	0	0	122
Lane Group Flow (vph)	361	38	40	147	133	0	273	1883	43	86	1588	167
Turn Type	Split	NA	Perm	Split	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	24.0	24.0	24.0	18.6	18.6		18.6	96.9	96.9	9.5	87.8	87.8
Effective Green, g (s)	24.0	24.0	24.0	18.6	18.6		18.6	96.9	96.9	9.5	87.8	87.8
Actuated g/C Ratio	0.14	0.14	0.14	0.11	0.11		0.11	0.58	0.58	0.06	0.53	0.53
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	493	267	227	197	198		382	2053	918	100	1860	832
v/s Ratio Prot	c0.11	0.02		c0.08	0.07		c0.08	c0.53		0.05	0.45	
v/s Ratio Perm			0.03						0.03			0.11
v/c Ratio	0.73	0.14	0.17	0.75	0.67		0.71	0.92	0.05	0.86	0.85	0.20
Uniform Delay, d1	68.4	62.5	62.8	71.9	71.3		71.6	31.5	15.1	78.1	34.1	21.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.6	0.2	0.4	14.2	8.6		6.2	8.0	0.1	47.8	5.2	0.5
Delay (s)	74.0	62.7	63.2	86.1	79.9		77.9	39.4	15.2	125.9	39.3	21.5
Level of Service	E	E	E	F	E		E	D	B	F	D	C
Approach Delay (s)		69.1			83.1			43.4			40.5	
Approach LOS		E			F			D			D	

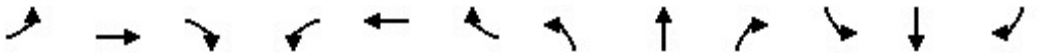
Intersection Summary			
HCM 2000 Control Delay	47.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	167.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	0	16	3	0	30	19	1751	12	27	1628	5
Future Volume (Veh/h)	14	0	16	3	0	30	19	1751	12	27	1628	5
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)	15	0	17	3	0	33	21	1903	13	29	1770	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)						3						
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2822	3786	885	2905	3778	952	1775			1916		
vC1, stage 1 conf vol	1828	1828		1945	1945							
vC2, stage 2 conf vol	994	1958		960	1833							
vCu, unblocked vol	2822	3786	885	2905	3778	952	1775			1916		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	77	100	94	95	100	87	94			90		
cM capacity (veh/h)	64	58	288	58	65	260	346			305		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	32	36	21	952	952	13	29	885	885	5
Volume Left	15	3	21	0	0	0	29	0	0	0
Volume Right	17	33	0	0	0	13	0	0	0	5
cSH	110	284	346	1700	1700	1700	305	1700	1700	1700
Volume to Capacity	0.29	0.13	0.06	0.56	0.56	0.01	0.10	0.52	0.52	0.00
Queue Length 95th (ft)	28	11	5	0	0	0	8	0	0	0
Control Delay (s)	50.8	25.0	16.1	0.0	0.0	0.0	18.0	0.0	0.0	0.0
Lane LOS	F	C	C				C			
Approach Delay (s)	50.8	25.0	0.2				0.3			
Approach LOS	F	C								

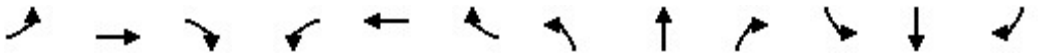
Intersection Summary					
Average Delay	0.9				
Intersection Capacity Utilization	65.1%	ICU Level of Service		C	
Analysis Period (min)	15				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	317	160	127	119	152	249	90	1148	137	278	1093	206
Future Volume (vph)	317	160	127	119	152	249	90	1148	137	278	1093	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1740	1583	1681	1763	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1740	1583	1681	1763	1583	1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	345	174	138	129	165	271	98	1248	149	302	1188	224
RTOR Reduction (vph)	0	0	112	0	0	180	0	0	82	0	0	119
Lane Group Flow (vph)	255	264	26	116	178	91	98	1248	67	302	1188	105
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	30.3	30.3	30.3	22.3	22.3	22.3	14.3	72.1	72.1	17.1	74.9	74.9
Effective Green, g (s)	30.3	30.3	30.3	22.3	22.3	22.3	14.3	72.1	72.1	17.1	74.9	74.9
Actuated g/C Ratio	0.19	0.19	0.19	0.14	0.14	0.14	0.09	0.45	0.45	0.11	0.47	0.47
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	318	329	300	234	246	220	158	1596	714	367	1658	741
v/s Ratio Prot	0.15	c0.15		0.07	c0.10		0.06	c0.35		c0.09	c0.34	
v/s Ratio Perm			0.02			0.06			0.04			0.07
v/c Ratio	0.80	0.80	0.09	0.50	0.72	0.41	0.62	0.78	0.09	0.82	0.72	0.14
Uniform Delay, d1	61.9	61.9	53.4	63.6	65.8	62.8	70.1	37.2	25.1	69.9	34.0	24.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	13.5	13.2	0.1	1.7	10.1	1.3	7.4	3.9	0.3	13.8	2.7	0.4
Delay (s)	75.4	75.1	53.5	65.2	75.9	64.1	77.5	41.1	25.4	83.7	36.6	24.6
Level of Service	E	E	D	E	E	E	E	D	C	F	D	C
Approach Delay (s)		70.7			68.0			41.9			43.4	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	50.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	159.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		

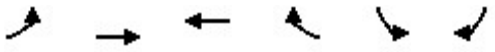
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	494	22	25	491	1	14	0	26	0	0	0
Future Volume (Veh/h)	0	494	22	25	491	1	14	0	26	0	0	0
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)	0	537	24	27	534	1	15	0	28	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		371			998							
pX, platoon unblocked												
vC, conflicting volume	535			561			870	1138	280	885	1150	268
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	535			561			870	1138	280	885	1150	268
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 %	100			97			94	100	96	100	100	100
cM capacity (veh/h)	1029			1006			241	195	717	225	192	731

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	268	292	294	268	15	28	0
Volume Left	0	0	27	0	15	0	0
Volume Right	0	24	0	1	0	28	0
cSH	1029	1700	1006	1700	241	717	1700
Volume to Capacity	0.00	0.17	0.03	0.16	0.06	0.04	0.00
Queue Length 95th (ft)	0	0	2	0	5	3	0
Control Delay (s)	0.0	0.0	1.0	0.0	21.0	10.2	0.0
Lane LOS			A		C	B	A
Approach Delay (s)	0.0		0.5		14.0		0.0
Approach LOS					B		A

Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	42.0%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	597	505	0	0	6
Future Volume (Veh/h)	0	597	505	0	0	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)	0	649	549	0	0	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)		1114	255			
pX, platoon unblocked						
vC, conflicting volume	549				874	274
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	549				874	274
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	99
cM capacity (veh/h)	1017				289	723

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	216	433	366	183	7
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	7
cSH	1017	1700	1700	1700	723
Volume to Capacity	0.00	0.25	0.22	0.11	0.01
Queue Length 95th (ft)	0	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	0.0	10.0
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.0
Approach LOS					B

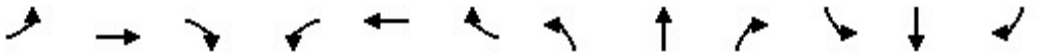
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	26.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	568	34	90	478	29	115
Future Volume (Veh/h)	568	34	90	478	29	115
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)	617	37	98	520	32	125
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1185			184		
pX, platoon unblocked						
vC, conflicting volume			654		1092	327
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			654		1092	327
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			89		83	81
cM capacity (veh/h)			929		187	669

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	411	243	271	347	157
Volume Left	0	0	98	0	32
Volume Right	0	37	0	0	125
cSH	1700	1700	929	1700	439
Volume to Capacity	0.24	0.14	0.11	0.20	0.36
Queue Length 95th (ft)	0	0	9	0	40
Control Delay (s)	0.0	0.0	4.1	0.0	17.7
Lane LOS			A		C
Approach Delay (s)	0.0		1.8		17.7
Approach LOS					C

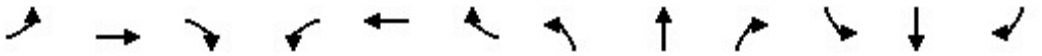
Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	551	5	1	455	316	3	1	0	358	1	112
Future Volume (vph)	126	551	5	1	455	316	3	1	0	358	1	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5			4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		1.00			0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96			0.96	
Satd. Flow (prot)	1770	1860		1770	1863	1583		1795			1737	
Flt Permitted	0.21	1.00		0.26	1.00	1.00		0.86			0.78	
Satd. Flow (perm)	387	1860		478	1863	1583		1604			1398	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	137	599	5	1	495	343	3	1	0	389	1	122
RTOR Reduction (vph)	0	1	0	0	0	184	0	0	0	0	8	0
Lane Group Flow (vph)	137	603	0	1	495	159	0	4	0	0	504	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	48.1	42.7		36.2	35.3	35.3		37.9			37.9	
Effective Green, g (s)	48.1	42.7		36.2	35.3	35.3		37.9			37.9	
Actuated g/C Ratio	0.51	0.45		0.38	0.37	0.37		0.40			0.40	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5			4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	316	836		194	692	588		639			557	
v/s Ratio Prot	c0.04	c0.32		0.00	0.27							
v/s Ratio Perm	0.18			0.00		0.10		0.00			c0.36	
v/c Ratio	0.43	0.72		0.01	0.72	0.27		0.01			0.90	
Uniform Delay, d1	15.7	21.3		19.3	25.5	20.9		17.2			26.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.0	3.1		0.0	3.5	0.2		0.0			20.6	
Delay (s)	16.7	24.4		19.3	29.1	21.1		17.2			47.5	
Level of Service	B	C		B	C	C		B			D	
Approach Delay (s)		23.0			25.8			17.2			47.5	
Approach LOS		C			C			B			D	

Intersection Summary			
HCM 2000 Control Delay	30.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

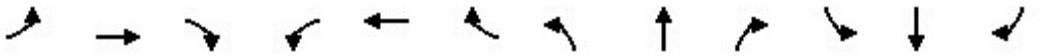
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	808	30	38	757	0	13	0	41	0	0	0
Future Volume (Veh/h)	0	808	30	38	757	0	13	0	41	0	0	0
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)	0	878	33	41	823	0	14	0	45	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		342										
pX, platoon unblocked				0.73			0.73	0.73	0.73	0.73	0.73	
vC, conflicting volume	823			911			1800	1800	894	1828	1816	823
vC1, stage 1 conf vol							894	894		905	905	
vC2, stage 2 conf vol							905	905		923	911	
vCu, unblocked vol	823			697			1908	1908	675	1947	1931	823
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			94			94	100	86	100	100	100
cM capacity (veh/h)	807			660			219	232	333	178	214	373

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	0	911	41	823	14	45	0
Volume Left	0	0	41	0	14	0	0
Volume Right	0	33	0	0	0	45	0
cSH	1700	1700	660	1700	219	333	1700
Volume to Capacity	0.00	0.54	0.06	0.48	0.06	0.14	0.00
Queue Length 95th (ft)	0	0	5	0	5	12	0
Control Delay (s)	0.0	0.0	10.8	0.0	22.6	17.5	0.0
Lane LOS			B		C	C	A
Approach Delay (s)	0.0		0.5		18.7		0.0
Approach LOS					C		A

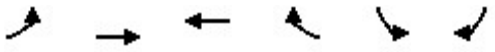
Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	54.3%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	827	18	3	783	12	6	0	2	3	0	11
Future Volume (Veh/h)	7	827	18	3	783	12	6	0	2	3	0	11
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	899	20	3	851	13	7	0	2	3	0	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		687										
pX, platoon unblocked				0.74			0.74	0.74	0.74	0.74	0.74	
vC, conflicting volume	864			919			1794	1795	909	1780	1798	858
vC1, stage 1 conf vol							925	925		864	864	
vC2, stage 2 conf vol							869	870		917	935	
vCu, unblocked vol	864			717			1896	1898	703	1878	1902	858
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			97	100	99	99	100	97
cM capacity (veh/h)	779			656			217	235	324	224	234	357

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	8	919	3	864	9	15
Volume Left	8	0	3	0	7	3
Volume Right	0	20	0	13	2	12
cSH	779	1700	656	1700	235	319
Volume to Capacity	0.01	0.54	0.00	0.51	0.04	0.05
Queue Length 95th (ft)	1	0	0	0	3	4
Control Delay (s)	9.7	0.0	10.5	0.0	21.0	16.8
Lane LOS	A		B		C	C
Approach Delay (s)	0.1		0.0		21.0	16.8
Approach LOS					C	C

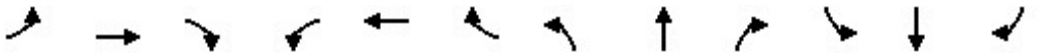
Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	54.6%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	25	801	778	23	19	28
Future Volume (Veh/h)	25	801	778	23	19	28
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)	27	871	846	25	21	30
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		814				
pX, platoon unblocked					0.76	
vC, conflicting volume	871				1784	858
vC1, stage 1 conf vol					858	
vC2, stage 2 conf vol					925	
vCu, unblocked vol	871				1875	858
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	97				92	92
cM capacity (veh/h)	774				263	356

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	27	871	871	21	30
Volume Left	27	0	0	21	0
Volume Right	0	0	25	0	30
cSH	774	1700	1700	263	356
Volume to Capacity	0.03	0.51	0.51	0.08	0.08
Queue Length 95th (ft)	3	0	0	6	7
Control Delay (s)	9.8	0.0	0.0	19.9	16.0
Lane LOS	A			C	C
Approach Delay (s)	0.3		0.0	17.6	
Approach LOS				C	

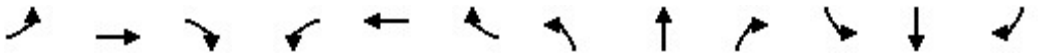
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	52.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	752	62	18	742	6	59	2	28	0	0	0
Future Volume (Veh/h)	4	752	62	18	742	6	59	2	28	0	0	0
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)	4	817	67	20	807	7	64	2	30	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		993										
pX, platoon unblocked				0.76			0.76	0.76	0.76	0.76	0.76	
vC, conflicting volume	814			884			1706	1712	850	1706	1742	810
vC1, stage 1 conf vol							858	858		850	850	
vC2, stage 2 conf vol							847	854		856	892	
vCu, unblocked vol	814			693			1769	1778	650	1770	1818	810
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			73	99	92	100	100	100
cM capacity (veh/h)	813			689			239	251	358	220	238	380

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	4	884	20	814	96	0
Volume Left	4	0	20	0	64	0
Volume Right	0	67	0	7	30	0
cSH	813	1700	689	1700	267	1700
Volume to Capacity	0.00	0.52	0.03	0.48	0.36	0.00
Queue Length 95th (ft)	0	0	2	0	39	0
Control Delay (s)	9.4	0.0	10.4	0.0	25.9	0.0
Lane LOS	A		B		D	A
Approach Delay (s)	0.0		0.2		25.9	0.0
Approach LOS					D	A

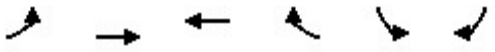
Intersection Summary				
Average Delay	1.5			
Intersection Capacity Utilization	55.1%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	684	8	6	651	42	8	1	8	32	0	53
Future Volume (vph)	55	684	8	6	651	42	8	1	8	32	0	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1859		1770	1863	1583		1783	1583	1770	1583	
Flt Permitted	0.33	1.00		0.35	1.00	1.00		0.75	1.00	0.75	1.00	
Satd. Flow (perm)	610	1859		644	1863	1583		1391	1583	1399	1583	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	60	743	9	7	708	46	9	1	9	35	0	58
RTOR Reduction (vph)	0	0	0	0	0	10	0	0	8	0	54	0
Lane Group Flow (vph)	60	752	0	7	708	36	0	10	1	35	4	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	101.8	96.8		94.2	93.0	93.0		8.5	8.5	8.5	8.5	
Effective Green, g (s)	101.8	96.8		94.2	93.0	93.0		8.5	8.5	8.5	8.5	
Actuated g/C Ratio	0.85	0.81		0.79	0.78	0.78		0.07	0.07	0.07	0.07	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	565	1499		516	1443	1226		98	112	99	112	
v/s Ratio Prot	c0.00	c0.40		0.00	0.38						0.00	
v/s Ratio Perm	0.09			0.01		0.02		0.01	0.00	c0.03		
v/c Ratio	0.11	0.50		0.01	0.49	0.03		0.10	0.01	0.35	0.04	
Uniform Delay, d1	2.7	3.8		3.1	4.9	3.1		52.2	51.8	53.1	51.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	1.2		0.0	1.2	0.0		0.5	0.0	2.2	0.1	
Delay (s)	2.8	5.0		3.1	6.1	3.2		52.6	51.8	55.3	52.1	
Level of Service	A	A		A	A	A		D	D	E	D	
Approach Delay (s)		4.8			5.9			52.3			53.3	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	8.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		

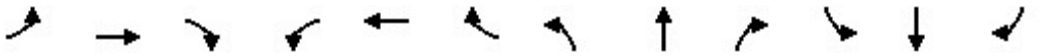
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	35	678	663	14	19	39
Future Volume (Veh/h)	35	678	663	14	19	39
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)	38	737	721	15	21	42
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1084			
pX, platoon unblocked	0.84				0.84	0.84
vC, conflicting volume	736				1534	721
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	591				1540	574
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				79	90
cM capacity (veh/h)	828				102	436

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	38	737	721	15	21	42
Volume Left	38	0	0	0	21	0
Volume Right	0	0	0	15	0	42
cSH	828	1700	1700	1700	102	436
Volume to Capacity	0.05	0.43	0.42	0.01	0.21	0.10
Queue Length 95th (ft)	4	0	0	0	18	8
Control Delay (s)	9.6	0.0	0.0	0.0	49.3	14.1
Lane LOS	A				E	B
Approach Delay (s)	0.5		0.0		25.9	
Approach LOS					D	

Intersection Summary				
Average Delay	1.3			
Intersection Capacity Utilization	45.7%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	346	350	5	1	320	182	5	2	2	165	1	351
Future Volume (vph)	346	350	5	1	320	182	5	2	2	165	1	351
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5	4.5	4.5			4.5	4.5
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.93			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00			0.95	1.00
Satd. Flow (prot)	1770	1859			1862	1583	1770	1723			1775	1583
Flt Permitted	0.23	1.00			1.00	1.00	0.95	1.00			0.95	1.00
Satd. Flow (perm)	425	1859			1861	1583	1770	1723			1775	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	376	380	5	1	348	198	5	2	2	179	1	382
RTOR Reduction (vph)	0	0	0	0	0	148	0	2	0	0	0	210
Lane Group Flow (vph)	376	385	0	0	349	50	5	2	0	0	180	172
Turn Type	pm+pt	NA		Perm	NA	Perm	Split	NA		Split	NA	pm+ov
Protected Phases	7	4			8		2	2		6	6	7
Permitted Phases	4			8		8						6
Actuated Green, G (s)	47.6	47.6			20.2	20.2	6.1	6.1			13.2	36.1
Effective Green, g (s)	47.6	47.6			20.2	20.2	6.1	6.1			13.2	36.1
Actuated g/C Ratio	0.59	0.59			0.25	0.25	0.08	0.08			0.16	0.45
Clearance Time (s)	4.5	4.5			4.5	4.5	4.5	4.5			4.5	4.5
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	634	1100			467	397	134	130			291	799
v/s Ratio Prot	c0.17	0.21					c0.00	0.00			c0.10	0.06
v/s Ratio Perm	0.18				c0.19	0.03						0.05
v/c Ratio	0.59	0.35			0.75	0.13	0.04	0.02			0.62	0.21
Uniform Delay, d1	10.6	8.4			27.7	23.3	34.4	34.4			31.3	13.5
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	1.5	0.2			6.4	0.1	0.1	0.1			3.9	0.1
Delay (s)	12.0	8.6			34.2	23.4	34.5	34.4			35.1	13.6
Level of Service	B	A			C	C	C	C			D	B
Approach Delay (s)		10.3			30.3			34.5			20.5	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	80.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	2	33	20	436	470	24
Future Volume (Veh/h)	2	33	20	436	470	24
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)	2	36	22	474	511	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				959		
pX, platoon unblocked						
vC, conflicting volume	1042	524	537			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1042	524	537			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	93	98			
cM capacity (veh/h)	249	553	1031			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	38	496	537
Volume Left	2	22	0
Volume Right	36	0	26
cSH	520	1031	1700
Volume to Capacity	0.07	0.02	0.32
Queue Length 95th (ft)	6	2	0
Control Delay (s)	12.5	0.6	0.0
Lane LOS	B	A	
Approach Delay (s)	12.5	0.6	0.0
Approach LOS	B		

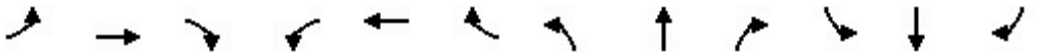
Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	280	266	1	1496	418	312	1391
Future Volume (vph)	280	266	1	1496	418	312	1391
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583	1770	3539	1583	1770	3539
Flt Permitted	0.95	1.00	0.17	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583	319	3539	1583	1770	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	304	289	1	1626	454	339	1512
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	304	289	1	1626	454	339	1512
Turn Type	Perm	Free	Perm	NA	Free	Prot	NA
Protected Phases				2		1	6
Permitted Phases	8	Free	2		Free		
Actuated Green, G (s)	18.8	167.3	99.4	99.4	167.3	36.6	140.5
Effective Green, g (s)	18.8	167.3	99.4	99.4	167.3	36.6	140.5
Actuated g/C Ratio	0.11	1.00	0.59	0.59	1.00	0.22	0.84
Clearance Time (s)	4.0		4.0	4.0		4.5	4.0
Vehicle Extension (s)	3.0		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	385	1583	189	2102	1583	387	2972
v/s Ratio Prot				c0.46		c0.19	0.43
v/s Ratio Perm	c0.09	0.18	0.00		0.29		
v/c Ratio	0.79	0.18	0.01	0.77	0.29	0.88	0.51
Uniform Delay, d1	72.3	0.0	13.8	25.5	0.0	63.2	3.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.3	0.3	0.1	2.8	0.5	19.3	0.1
Delay (s)	82.6	0.3	13.9	28.3	0.5	82.5	3.9
Level of Service	F	A	B	C	A	F	A
Approach Delay (s)	42.5			22.3			18.3
Approach LOS	D			C			B

Intersection Summary			
HCM 2000 Control Delay	23.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	167.3	Sum of lost time (s)	12.5
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		

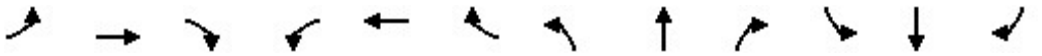
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	332	35	256	135	94	36	267	1740	64	79	1470	266
Future Volume (vph)	332	35	256	135	94	36	267	1740	64	79	1470	266
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00		0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1863	1583	1770	1785		3433	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1863	1583	1770	1785		3433	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	361	38	278	147	102	39	290	1891	70	86	1598	289
RTOR Reduction (vph)	0	0	218	0	8	0	0	0	27	0	0	123
Lane Group Flow (vph)	361	38	60	147	133	0	290	1891	43	86	1598	166
Turn Type	Split	NA	Perm	Split	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	24.2	24.2	24.2	18.7	18.7		19.4	96.9	96.9	9.5	87.0	87.0
Effective Green, g (s)	24.2	24.2	24.2	18.7	18.7		19.4	96.9	96.9	9.5	87.0	87.0
Actuated g/C Ratio	0.14	0.14	0.14	0.11	0.11		0.12	0.58	0.58	0.06	0.52	0.52
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	496	269	228	197	199		398	2049	916	100	1840	823
v/s Ratio Prot	c0.11	0.02		c0.08	0.07		c0.08	c0.53		0.05	0.45	
v/s Ratio Perm			0.04						0.03			0.10
v/c Ratio	0.73	0.14	0.26	0.75	0.67		0.73	0.92	0.05	0.86	0.87	0.20
Uniform Delay, d1	68.4	62.5	63.6	72.0	71.3		71.4	31.8	15.2	78.2	35.1	21.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.3	0.2	0.6	14.2	8.2		6.5	8.5	0.1	47.8	5.9	0.6
Delay (s)	73.7	62.7	64.2	86.2	79.5		78.0	40.3	15.3	126.0	41.0	22.1
Level of Service	E	E	E	F	E		E	D	B	F	D	C
Approach Delay (s)		69.2			83.0			44.4			42.0	
Approach LOS		E			F			D			D	

Intersection Summary			
HCM 2000 Control Delay	48.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	167.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	0	16	3	0	54	19	1751	35	55	1628	5
Future Volume (Veh/h)	14	0	16	3	0	54	19	1751	35	55	1628	5
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)	15	0	17	3	0	59	21	1903	38	60	1770	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)						3						
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2884	3873	885	2967	3840	952	1775			1941		
vC1, stage 1 conf vol	1890	1890		1945	1945							
vC2, stage 2 conf vol	994	1983		1022	1895							
vCu, unblocked vol	2884	3873	885	2967	3840	952	1775			1941		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	70	100	94	95	100	77	94			80		
cM capacity (veh/h)	51	34	288	56	56	260	346			298		

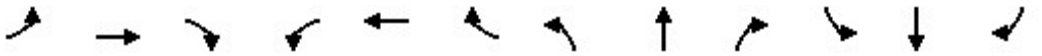
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	32	62	21	952	952	38	60	885	885	5
Volume Left	15	3	21	0	0	0	60	0	0	0
Volume Right	17	59	0	0	0	38	0	0	0	5
cSH	90	273	346	1700	1700	1700	298	1700	1700	1700
Volume to Capacity	0.35	0.23	0.06	0.56	0.56	0.02	0.20	0.52	0.52	0.00
Queue Length 95th (ft)	35	21	5	0	0	0	18	0	0	0
Control Delay (s)	65.4	25.2	16.1	0.0	0.0	0.0	20.1	0.0	0.0	0.0
Lane LOS	F	D	C				C			
Approach Delay (s)	65.4	25.2	0.2				0.7			
Approach LOS	F	D								

Intersection Summary					
Average Delay	1.3				
Intersection Capacity Utilization	65.1%	ICU Level of Service		C	
Analysis Period (min)	15				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	331	174	127	136	177	249	90	1157	146	278	1093	206
Future Volume (vph)	331	174	127	136	177	249	90	1157	146	278	1093	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1742	1583	1681	1763	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1742	1583	1681	1763	1583	1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	360	189	138	148	192	271	98	1258	159	302	1188	224
RTOR Reduction (vph)	0	0	111	0	0	174	0	0	89	0	0	122
Lane Group Flow (vph)	270	279	27	133	207	97	98	1258	70	302	1188	102
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	32.1	32.1	32.1	24.7	24.7	24.7	14.5	72.1	72.1	17.1	74.7	74.7
Effective Green, g (s)	32.1	32.1	32.1	24.7	24.7	24.7	14.5	72.1	72.1	17.1	74.7	74.7
Actuated g/C Ratio	0.20	0.20	0.20	0.15	0.15	0.15	0.09	0.44	0.44	0.10	0.46	0.46
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	329	340	309	253	265	238	156	1555	695	357	1611	721
v/s Ratio Prot	c0.16	0.16		0.08	c0.12		0.06	c0.36		c0.09	c0.34	
v/s Ratio Perm			0.02			0.06			0.04			0.06
v/c Ratio	0.82	0.82	0.09	0.53	0.78	0.41	0.63	0.81	0.10	0.85	0.74	0.14
Uniform Delay, d1	63.2	63.2	54.0	64.2	67.0	63.0	72.1	40.0	26.9	72.2	36.6	26.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	15.0	14.6	0.1	2.0	13.9	1.1	7.7	4.7	0.3	16.6	3.1	0.4
Delay (s)	78.2	77.8	54.1	66.2	80.9	64.2	79.8	44.6	27.2	88.8	39.7	26.4
Level of Service	E	E	D	E	F	E	E	D	C	F	D	C
Approach Delay (s)		73.2			70.3			45.1			46.6	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	53.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	164.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		

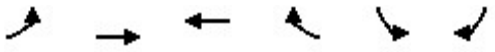
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	517	22	25	533	1	14	0	26	0	0	0
Future Volume (Veh/h)	0	517	22	25	533	1	14	0	26	0	0	0
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)	0	562	24	27	579	1	15	0	28	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		371			998							
pX, platoon unblocked												
vC, conflicting volume	580			586			918	1208	293	942	1220	290
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	580			586			918	1208	293	942	1220	290
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 %	100			97			93	100	96	100	100	100
cM capacity (veh/h)	990			985			222	177	703	204	174	707

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	281	305	316	290	15	28	0
Volume Left	0	0	27	0	15	0	0
Volume Right	0	24	0	1	0	28	0
cSH	990	1700	985	1700	222	703	1700
Volume to Capacity	0.00	0.18	0.03	0.17	0.07	0.04	0.00
Queue Length 95th (ft)	0	0	2	0	5	3	0
Control Delay (s)	0.0	0.0	1.0	0.0	22.4	10.3	0.0
Lane LOS			A		C	B	A
Approach Delay (s)	0.0		0.5		14.5		0.0
Approach LOS					B		A

Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	43.2%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	620	547	0	0	6
Future Volume (Veh/h)	0	620	547	0	0	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)	0	674	595	0	0	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)		1114	255			
pX, platoon unblocked						
vC, conflicting volume	595				932	298
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	595				932	298
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	99
cM capacity (veh/h)	977				265	699

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	225	449	397	198	7
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	7
cSH	977	1700	1700	1700	699
Volume to Capacity	0.00	0.26	0.23	0.12	0.01
Queue Length 95th (ft)	0	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	0.0	10.2
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.2
Approach LOS					B

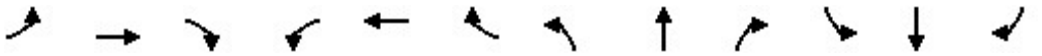
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	27.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	591	34	98	520	29	124
Future Volume (Veh/h)	591	34	98	520	29	124
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)	642	37	107	565	32	135
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1185			184		
pX, platoon unblocked						
vC, conflicting volume			679		1157	340
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			679		1157	340
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			88		81	79
cM capacity (veh/h)			909		167	656

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	428	251	295	377	167
Volume Left	0	0	107	0	32
Volume Right	0	37	0	0	135
cSH	1700	1700	909	1700	421
Volume to Capacity	0.25	0.15	0.12	0.22	0.40
Queue Length 95th (ft)	0	0	10	0	47
Control Delay (s)	0.0	0.0	4.2	0.0	19.1
Lane LOS			A		C
Approach Delay (s)	0.0		1.9		19.1
Approach LOS					C

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	158	551	5	1	480	316	3	1	0	391	1	137
Future Volume (vph)	158	551	5	1	480	316	3	1	0	391	1	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5			4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		1.00			0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96			0.96	
Satd. Flow (prot)	1770	1860		1770	1863	1583		1795			1734	
Flt Permitted	0.19	1.00		0.26	1.00	1.00		0.85			0.78	
Satd. Flow (perm)	356	1860		492	1863	1583		1588			1403	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	172	599	5	1	522	343	3	1	0	425	1	149
RTOR Reduction (vph)	0	1	0	0	0	172	0	0	0	0	9	0
Lane Group Flow (vph)	172	603	0	1	522	171	0	4	0	0	566	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	49.7	44.2		37.7	36.7	36.7		37.9			37.9	
Effective Green, g (s)	49.7	44.2		37.7	36.7	36.7		37.9			37.9	
Actuated g/C Ratio	0.51	0.46		0.39	0.38	0.38		0.39			0.39	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5			4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	307	851		205	707	601		623			550	
v/s Ratio Prot	c0.05	c0.32		0.00	0.28							
v/s Ratio Perm	0.24			0.00		0.11		0.00			c0.40	
v/c Ratio	0.56	0.71		0.00	0.74	0.28		0.01			1.03	
Uniform Delay, d1	16.5	21.0		19.1	25.8	20.8		17.9			29.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	2.3	2.7		0.0	4.0	0.3		0.0			46.0	
Delay (s)	18.8	23.8		19.1	29.9	21.1		17.9			75.3	
Level of Service	B	C		B	C	C		B			E	
Approach Delay (s)		22.7			26.4			17.9			75.3	
Approach LOS		C			C			B			E	

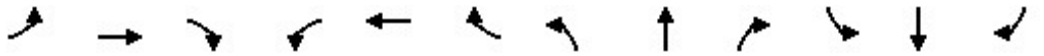
Intersection Summary			
HCM 2000 Control Delay	37.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	96.6	Sum of lost time (s)	13.5
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	841	30	38	782	0	13	0	41	0	0	0
Future Volume (Veh/h)	0	841	30	38	782	0	13	0	41	0	0	0
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)	0	914	33	41	850	0	14	0	45	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		342										
pX, platoon unblocked				0.74			0.74	0.74	0.74	0.74	0.74	
vC, conflicting volume	850			947			1862	1862	930	1891	1879	850
vC1, stage 1 conf vol							930	930		932	932	
vC2, stage 2 conf vol							932	932		959	947	
vCu, unblocked vol	850			750			1992	1992	728	2030	2014	850
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			94			93	100	86	100	100	100
cM capacity (veh/h)	788			633			207	222	312	166	203	360

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	0	947	41	850	14	45	0
Volume Left	0	0	41	0	14	0	0
Volume Right	0	33	0	0	0	45	0
cSH	1700	1700	633	1700	207	312	1700
Volume to Capacity	0.00	0.56	0.06	0.50	0.07	0.14	0.00
Queue Length 95th (ft)	0	0	5	0	5	12	0
Control Delay (s)	0.0	0.0	11.1	0.0	23.6	18.5	0.0
Lane LOS			B		C	C	A
Approach Delay (s)	0.0		0.5		19.7		0.0
Approach LOS					C		A

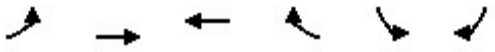
Intersection Summary				
Average Delay	0.9			
Intersection Capacity Utilization	56.1%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	860	18	3	783	86	6	0	2	36	0	36
Future Volume (Veh/h)	7	860	18	3	783	86	6	0	2	36	0	36
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	935	20	3	851	93	7	0	2	39	0	39
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		687										
pX, platoon unblocked				0.74			0.74	0.74	0.74	0.74	0.74	
vC, conflicting volume	944			955			1857	1911	945	1856	1874	898
vC1, stage 1 conf vol							961	961		904	904	
vC2, stage 2 conf vol							896	950		953	971	
vCu, unblocked vol	944			768			1979	2052	755	1979	2003	898
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			96	100	99	81	100	88
cM capacity (veh/h)	727			630			197	217	304	210	222	338

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	8	955	3	944	9	78
Volume Left	8	0	3	0	7	39
Volume Right	0	20	0	93	2	39
cSH	727	1700	630	1700	213	259
Volume to Capacity	0.01	0.56	0.00	0.56	0.04	0.30
Queue Length 95th (ft)	1	0	0	0	3	31
Control Delay (s)	10.0	0.0	10.7	0.0	22.6	24.8
Lane LOS	B		B		C	C
Approach Delay (s)	0.1		0.0		22.6	24.8
Approach LOS					C	C

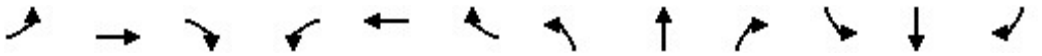
Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	57.4%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	25	867	852	23	19	28
Future Volume (Veh/h)	25	867	852	23	19	28
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)	27	942	926	25	21	30
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		814				
pX, platoon unblocked					0.76	
vC, conflicting volume	951				1934	938
vC1, stage 1 conf vol					938	
vC2, stage 2 conf vol					996	
vCu, unblocked vol	951				2073	938
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	96				91	91
cM capacity (veh/h)	722				236	320

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	27	942	951	21	30
Volume Left	27	0	0	21	0
Volume Right	0	0	25	0	30
cSH	722	1700	1700	236	320
Volume to Capacity	0.04	0.55	0.56	0.09	0.09
Queue Length 95th (ft)	3	0	0	7	8
Control Delay (s)	10.2	0.0	0.0	21.8	17.4
Lane LOS	B			C	C
Approach Delay (s)	0.3		0.0	19.2	
Approach LOS				C	

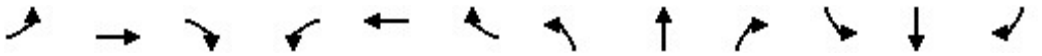
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	810	70	18	807	6	68	2	28	0	0	0
Future Volume (Veh/h)	4	810	70	18	807	6	68	2	28	0	0	0
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)	4	880	76	20	877	7	74	2	30	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		993										
pX, platoon unblocked				0.76			0.76	0.76	0.76	0.76	0.76	
vC, conflicting volume	884			956			1843	1850	918	1840	1884	880
vC1, stage 1 conf vol							926	926		920	920	
vC2, stage 2 conf vol							917	924		919	964	
vCu, unblocked vol	884			789			1948	1958	739	1944	2003	880
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			65	99	91	100	100	100
cM capacity (veh/h)	765			636			213	227	319	195	214	346

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	4	956	20	884	106	0
Volume Left	4	0	20	0	74	0
Volume Right	0	76	0	7	30	0
cSH	765	1700	636	1700	236	1700
Volume to Capacity	0.01	0.56	0.03	0.52	0.45	0.00
Queue Length 95th (ft)	0	0	2	0	54	0
Control Delay (s)	9.7	0.0	10.8	0.0	32.2	0.0
Lane LOS	A		B		D	A
Approach Delay (s)	0.0		0.2		32.2	0.0
Approach LOS					D	A

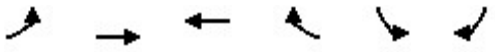
Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	59.1%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	734	8	6	707	42	8	1	8	32	0	62
Future Volume (vph)	63	734	8	6	707	42	8	1	8	32	0	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1860		1770	1863	1583		1783	1583	1770	1583	
Flt Permitted	0.30	1.00		0.32	1.00	1.00		0.74	1.00	0.75	1.00	
Satd. Flow (perm)	556	1860		597	1863	1583		1381	1583	1399	1583	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	68	798	9	7	768	46	9	1	9	35	0	67
RTOR Reduction (vph)	0	0	0	0	0	10	0	0	8	0	62	0
Lane Group Flow (vph)	68	807	0	7	768	36	0	10	1	35	5	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	101.9	96.8		94.1	92.9	92.9		8.5	8.5	8.5	8.5	
Effective Green, g (s)	101.9	96.8		94.1	92.9	92.9		8.5	8.5	8.5	8.5	
Actuated g/C Ratio	0.85	0.81		0.78	0.77	0.77		0.07	0.07	0.07	0.07	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5		4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	523	1500		479	1442	1225		97	112	99	112	
v/s Ratio Prot	c0.01	c0.43		0.00	0.41						0.00	
v/s Ratio Perm	0.10			0.01		0.02		0.01	0.00	c0.03		
v/c Ratio	0.13	0.54		0.01	0.53	0.03		0.10	0.01	0.35	0.04	
Uniform Delay, d1	3.2	4.0		3.3	5.2	3.1		52.2	51.8	53.1	52.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	1.4		0.0	1.4	0.0		0.5	0.0	2.2	0.2	
Delay (s)	3.3	5.3		3.3	6.6	3.2		52.7	51.8	55.3	52.1	
Level of Service	A	A		A	A	A		D	D	E	D	
Approach Delay (s)		5.2			6.4			52.3			53.2	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	63.0%	ICU Level of Service	B
Analysis Period (min)	15		

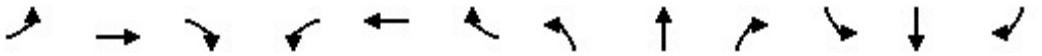
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	43	720	710	14	19	48
Future Volume (Veh/h)	43	720	710	14	19	48
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)	47	783	772	15	21	52
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1084			
pX, platoon unblocked	0.82				0.82	0.82
vC, conflicting volume	787				1649	772
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	630				1682	612
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				74	87
cM capacity (veh/h)	780				80	404

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	47	783	772	15	21	52
Volume Left	47	0	0	0	21	0
Volume Right	0	0	0	15	0	52
cSH	780	1700	1700	1700	80	404
Volume to Capacity	0.06	0.46	0.45	0.01	0.26	0.13
Queue Length 95th (ft)	5	0	0	0	24	11
Control Delay (s)	9.9	0.0	0.0	0.0	65.3	15.2
Lane LOS	A				F	C
Approach Delay (s)	0.6		0.0		29.6	
Approach LOS					D	

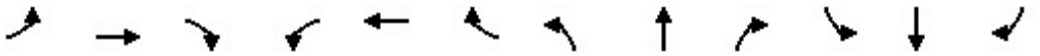
Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	363	375	5	1	348	182	5	2	2	165	1	370
Future Volume (vph)	363	375	5	1	348	182	5	2	2	165	1	370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5	4.5	4.5			4.5	4.5
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.93			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00			0.95	1.00
Satd. Flow (prot)	1770	1859			1862	1583	1770	1723			1775	1583
Flt Permitted	0.21	1.00			1.00	1.00	0.95	1.00			0.95	1.00
Satd. Flow (perm)	384	1859			1861	1583	1770	1723			1775	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	395	408	5	1	378	198	5	2	2	179	1	402
RTOR Reduction (vph)	0	0	0	0	0	146	0	2	0	0	0	222
Lane Group Flow (vph)	395	413	0	0	379	52	5	2	0	0	180	180
Turn Type	pm+pt	NA		Perm	NA	Perm	Split	NA		Split	NA	pm+ov
Protected Phases	7	4			8		2	2		6	6	7
Permitted Phases	4			8		8						6
Actuated Green, G (s)	50.5	50.5			22.1	22.1	6.1	6.1			13.4	37.3
Effective Green, g (s)	50.5	50.5			22.1	22.1	6.1	6.1			13.4	37.3
Actuated g/C Ratio	0.60	0.60			0.26	0.26	0.07	0.07			0.16	0.45
Clearance Time (s)	4.5	4.5			4.5	4.5	4.5	4.5			4.5	4.5
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	628	1124			492	418	129	125			284	792
v/s Ratio Prot	c0.18	0.22					c0.00	0.00			c0.10	0.06
v/s Ratio Perm	0.20				c0.20	0.03						0.05
v/c Ratio	0.63	0.37			0.77	0.13	0.04	0.02			0.63	0.23
Uniform Delay, d1	11.4	8.4			28.4	23.3	36.0	35.9			32.8	14.2
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	2.0	0.2			7.3	0.1	0.1	0.1			4.6	0.1
Delay (s)	13.4	8.6			35.7	23.5	36.1	36.0			37.3	14.4
Level of Service	B	A			D	C	D	D			D	B
Approach Delay (s)		10.9			31.5			36.0			21.5	
Approach LOS		B			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	83.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		

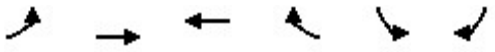
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	51	33	58	24	25	20	436	32	28	470	24
Future Volume (Veh/h)	2	51	33	58	24	25	20	436	32	28	470	24
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)	2	55	36	63	26	27	22	474	35	30	511	26
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								959				
pX, platoon unblocked	1.00	1.00		1.00	1.00	1.00				1.00		
vC, conflicting volume	1160	1137	524	1183	1132	492	537			509		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1159	1137	524	1183	1132	491	537			508		
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 %	99	71	93	46	87	95	98			97		
cM capacity (veh/h)	142	192	553	117	193	577	1031			1056		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total	93	89	27	531	567
Volume Left	2	63	0	22	30
Volume Right	36	0	27	35	26
cSH	254	132	577	1031	1056
Volume to Capacity	0.37	0.67	0.05	0.02	0.03
Queue Length 95th (ft)	40	92	4	2	2
Control Delay (s)	27.1	75.9	11.5	0.6	0.8
Lane LOS	D	F	B	A	A
Approach Delay (s)	27.1	60.9		0.6	0.8
Approach LOS	D	F			

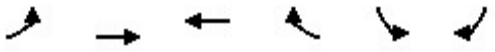
Intersection Summary				
Average Delay	7.9			
Intersection Capacity Utilization	54.7%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	42	69	67	27	21	40
Future Volume (Veh/h)	42	69	67	27	21	40
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)	46	75	73	29	23	43
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	102				254	88
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	102				254	88
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				97	96
cM capacity (veh/h)	1490				711	971

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	121	102	66
Volume Left	46	0	23
Volume Right	0	29	43
cSH	1490	1700	861
Volume to Capacity	0.03	0.06	0.08
Queue Length 95th (ft)	2	0	6
Control Delay (s)	3.0	0.0	9.5
Lane LOS	A		A
Approach Delay (s)	3.0	0.0	9.5
Approach LOS			A

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	22.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	42	48	54	28	22	40
Future Volume (Veh/h)	42	48	54	28	22	40
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)	46	52	59	30	24	43
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	89				218	74
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	89				218	74
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				97	96
cM capacity (veh/h)	1506				747	988

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	98	89	67
Volume Left	46	0	24
Volume Right	0	30	43
cSH	1506	1700	885
Volume to Capacity	0.03	0.05	0.08
Queue Length 95th (ft)	2	0	6
Control Delay (s)	3.6	0.0	9.4
Lane LOS	A		A
Approach Delay (s)	3.6	0.0	9.4
Approach LOS			A

Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	21.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	43	27	0	55	27	0
Future Volume (Veh/h)	43	27	0	55	27	0
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)	47	29	0	60	29	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			76		122	62
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			76		122	62
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		97	100
cM capacity (veh/h)			1523		874	1004

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	76	60	29
Volume Left	0	0	29
Volume Right	29	0	0
cSH	1700	1523	874
Volume to Capacity	0.04	0.00	0.03
Queue Length 95th (ft)	0	0	3
Control Delay (s)	0.0	0.0	9.3
Lane LOS			A
Approach Delay (s)	0.0	0.0	9.3
Approach LOS			A

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	13.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	15	19	55	43	0
Future Volume (Veh/h)	0	15	19	55	43	0
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	16	21	60	47	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	149	47	47			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	149	47	47			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	98	99			
cM capacity (veh/h)	832	1022	1560			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	16	81	47
Volume Left	0	21	0
Volume Right	16	0	0
cSH	1022	1560	1700
Volume to Capacity	0.02	0.01	0.03
Queue Length 95th (ft)	1	1	0
Control Delay (s)	8.6	2.0	0.0
Lane LOS	A	A	
Approach Delay (s)	8.6	2.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	20.6%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection: 1: US 301 & Rosewick Road

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	U	T	T	R	L	T	T
Maximum Queue (ft)	150	177	18	417	470	213	185	135	118
Average Queue (ft)	44	106	2	214	229	102	102	61	43
95th Queue (ft)	112	162	12	359	383	276	164	115	96
Link Distance (ft)		1006		5730	5730			502	502
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	700		190			188	400		
Storage Blk Time (%)				9	10	0			
Queuing Penalty (veh)				0	31	1			

Intersection: 2: US 301 & MD 225/Hawthorne Rd

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	L	T	R	L	TR	L	L	T	T	R	L
Maximum Queue (ft)	213	230	223	197	129	226	194	200	492	498	307	173
Average Queue (ft)	110	147	53	117	51	109	115	124	264	277	23	40
95th Queue (ft)	192	211	148	199	106	197	175	186	491	500	129	109
Link Distance (ft)			1156			719			1936	1936		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	440	440		180	200		650	650			285	380
Storage Blk Time (%)				3		1			0	9	0	
Queuing Penalty (veh)				10		1			0	3	0	

Intersection: 2: US 301 & MD 225/Hawthorne Rd

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	364	353	28
Average Queue (ft)	227	226	2
95th Queue (ft)	331	329	24
Link Distance (ft)	5730	5730	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			500
Storage Blk Time (%)	0		
Queuing Penalty (veh)	0		

Intersection: 4: US 301 & MD 6

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	LT	R	L	LT	R	L	T	T	R	L	L
Maximum Queue (ft)	295	390	66	167	303	224	285	1140	1104	626	196	216
Average Queue (ft)	202	265	6	77	137	24	191	862	822	313	93	104
95th Queue (ft)	310	364	36	135	234	137	352	1367	1342	901	164	175
Link Distance (ft)		848	848	1280	1280			1178	1178			
Upstream Blk Time (%)								16	13			
Queuing Penalty (veh)								0	0			
Storage Bay Dist (ft)	270					200	260			730	700	700
Storage Blk Time (%)	0	8			3	0	0	52	25	0		
Queuing Penalty (veh)	1	13			8	0	1	63	46	1		

Intersection: 4: US 301 & MD 6

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	394	400	103
Average Queue (ft)	240	245	20
95th Queue (ft)	380	382	74
Link Distance (ft)	1260	1260	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			510
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Wills St/Washington Ave & MD 6

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	T	R	LTR	LTR
Maximum Queue (ft)	141	379	610	175	39	271
Average Queue (ft)	69	189	293	138	4	133
95th Queue (ft)	122	331	525	235	22	232
Link Distance (ft)	1280	1280	2779		655	1118
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)				150		
Storage Blk Time (%)			38	0		
Queuing Penalty (veh)			129	1		

Intersection: 13: Willow Rd/La Plata Pkwy & MD 6

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	LT	R	L	TR
Maximum Queue (ft)	53	248	123	241	82	124	89	128	100
Average Queue (ft)	12	76	39	90	6	49	40	53	31
95th Queue (ft)	37	190	85	193	52	104	77	106	71
Link Distance (ft)		2779		1948		368		539	539
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	370		150		150		130		
Storage Blk Time (%)				2	0	0	0		
Queuing Penalty (veh)				2	0	0	0		

Intersection: 15: Driveway/MD 488 & MD 6

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	LT	R	L	TR	LT	R
Maximum Queue (ft)	274	388	444	210	35	36	224	271
Average Queue (ft)	181	75	206	132	6	5	99	139
95th Queue (ft)	279	240	349	245	25	22	182	243
Link Distance (ft)		523	738		185	185	759	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	250			185				315
Storage Blk Time (%)	4	0	9	0				0
Queuing Penalty (veh)	8	0	29	2				0

Zone Summary

Zone wide Queuing Penalty: 350

Intersection: 1: US 301 & Rosewick Road

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	L	T	T	L	T	T
Maximum Queue (ft)	152	180	386	378	174	136	109
Average Queue (ft)	50	107	211	228	95	60	43
95th Queue (ft)	121	166	346	361	156	113	91
Link Distance (ft)		1006	5729	5729		502	502
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	700				400		
Storage Blk Time (%)			9				
Queuing Penalty (veh)			0				

Intersection: 2: US 301 & MD 225/Hawthorne Rd

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	L	T	R	L	TR	L	L	T	T	R	L
Maximum Queue (ft)	208	262	261	204	147	231	202	200	538	557	258	119
Average Queue (ft)	115	161	47	116	49	117	111	120	326	348	23	44
95th Queue (ft)	209	231	137	197	106	201	170	177	525	550	129	94
Link Distance (ft)			893			719			1936	1936		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	440	440		180	200		650	650			285	380
Storage Blk Time (%)				3		1				14	0	
Queuing Penalty (veh)				11		1				4	0	

Intersection: 2: US 301 & MD 225/Hawthorne Rd

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	356	381	18
Average Queue (ft)	226	232	1
95th Queue (ft)	329	334	17
Link Distance (ft)	5729	5729	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			500
Storage Blk Time (%)	0		
Queuing Penalty (veh)	0		

Intersection: 4: US 301 & MD 6

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	LT	R	L	LT	R	L	T	T	R	L	L
Maximum Queue (ft)	294	400	73	190	273	225	285	1004	1010	624	159	175
Average Queue (ft)	183	229	8	80	153	34	192	739	698	209	88	101
95th Queue (ft)	292	326	42	146	246	166	352	1194	1164	736	147	160
Link Distance (ft)		1645	1645	1280	1280			1178	1178			
Upstream Blk Time (%)								7	5			
Queuing Penalty (veh)								0	0			
Storage Bay Dist (ft)	270					200	260			730	700	700
Storage Blk Time (%)	0	3			3	0	0	48	13	0		
Queuing Penalty (veh)	1	5			9	0	1	58	25	0		

Intersection: 4: US 301 & MD 6

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	408	429	118
Average Queue (ft)	232	240	19
95th Queue (ft)	396	409	72
Link Distance (ft)	1262	1262	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			510
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Wills St/Washington Ave & MD 6

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	T	R	LTR	LTR
Maximum Queue (ft)	152	345	564	175	38	264
Average Queue (ft)	67	176	286	129	3	126
95th Queue (ft)	118	314	531	230	19	212
Link Distance (ft)	1280	1280	2798		652	1038
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)				150		
Storage Blk Time (%)			35	0		
Queuing Penalty (veh)			120	1		

Intersection: 13: Willow Rd/La Plata Pkwy & MD 6

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	LT	R	L	TR
Maximum Queue (ft)	38	240	136	262	63	99	84	94	95
Average Queue (ft)	11	76	39	94	5	44	37	46	26
95th Queue (ft)	34	178	88	206	33	92	67	85	65
Link Distance (ft)		2798		1948		368		539	539
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	370		150		150		130		
Storage Blk Time (%)				2		0			
Queuing Penalty (veh)				2		0			

Intersection: 15: Driveway/MD 488 & MD 6

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	LT	R	L	TR	LT	R
Maximum Queue (ft)	274	337	487	210	40	38	253	306
Average Queue (ft)	169	67	239	140	8	8	105	153
95th Queue (ft)	274	230	415	246	29	28	196	274
Link Distance (ft)		523	738		185	185	759	
Upstream Blk Time (%)		0						
Queuing Penalty (veh)		2						
Storage Bay Dist (ft)	250			185				315
Storage Blk Time (%)	3		13	1				1
Queuing Penalty (veh)	7		40	3				1

Zone Summary

Zone wide Queuing Penalty: 292

Intersection: 1: US 301 & Rosewick Road

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	B40	B40
Directions Served	L	L	U	T	T	R	L	T	T	T	T
Maximum Queue (ft)	211	239	58	564	632	213	361	351	310	34	35
Average Queue (ft)	112	163	3	366	401	170	220	152	130	1	1
95th Queue (ft)	203	219	33	563	620	310	330	278	249	24	24
Link Distance (ft)		1006		5730	5730			502	502	951	951
Upstream Blk Time (%)								0	0		
Queuing Penalty (veh)								0	0		
Storage Bay Dist (ft)	700		190			188	400				
Storage Blk Time (%)				28	26	0		1			
Queuing Penalty (veh)				0	130	2		3			

Intersection: 2: US 301 & MD 225/Hawthorne Rd

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	L	T	R	L	TR	L	L	T	T	R	L
Maximum Queue (ft)	280	465	1153	205	225	385	213	234	682	694	310	405
Average Queue (ft)	164	364	786	200	169	188	121	126	397	409	71	177
95th Queue (ft)	253	582	1434	224	254	342	185	190	618	631	265	448
Link Distance (ft)			1156			719			1936	1936		
Upstream Blk Time (%)			16									
Queuing Penalty (veh)			0									
Storage Bay Dist (ft)	440	440		180	200		650	650			285	380
Storage Blk Time (%)		0	4	66	14	6			0	20	0	0
Queuing Penalty (veh)		0	31	316	25	12			1	9	0	0

Intersection: 2: US 301 & MD 225/Hawthorne Rd

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	5458	5464	525
Average Queue (ft)	3362	3384	421
95th Queue (ft)	5520	5533	764
Link Distance (ft)	5730	5730	
Upstream Blk Time (%)	0	0	
Queuing Penalty (veh)	2	2	
Storage Bay Dist (ft)			500
Storage Blk Time (%)	53	51	0
Queuing Penalty (veh)	38	141	2

Intersection: 4: US 301 & MD 6

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	LT	R	L	LT	R	L	T	T	R	L	L
Maximum Queue (ft)	295	654	132	209	351	225	285	714	681	93	240	241
Average Queue (ft)	256	372	41	108	197	68	182	424	382	17	127	140
95th Queue (ft)	340	585	110	185	302	238	334	635	584	65	205	212
Link Distance (ft)		848	848	1280	1280			1178	1178			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	270					200	260			730	700	700
Storage Blk Time (%)	1	30			11	0	0	29	0			
Queuing Penalty (veh)	4	49			25	0	0	42	0			

Intersection: 4: US 301 & MD 6

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	655	670	534
Average Queue (ft)	423	432	153
95th Queue (ft)	616	634	510
Link Distance (ft)	1260	1260	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			510
Storage Blk Time (%)	0	4	0
Queuing Penalty (veh)	0	13	1

Intersection: 8: Wills St/Washington Ave & MD 6

Movement	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	TR	L	T	R	LTR	LTR
Maximum Queue (ft)	434	506	67	2261	175	39	454
Average Queue (ft)	223	284	4	1685	163	7	269
95th Queue (ft)	409	465	29	2884	219	28	418
Link Distance (ft)	1280	1280		2779		655	1118
Upstream Blk Time (%)				1			
Queuing Penalty (veh)				12			
Storage Bay Dist (ft)			75		150		
Storage Blk Time (%)				60	1		
Queuing Penalty (veh)				204	3		

Intersection: 13: Willow Rd/La Plata Pkwy & MD 6

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	LT	R	L	TR
Maximum Queue (ft)	80	344	149	610	146	86	108	91	78
Average Queue (ft)	30	163	35	226	32	26	48	42	25
95th Queue (ft)	60	302	111	824	130	67	94	83	57
Link Distance (ft)		2779		1948		368		539	539
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	370		150		150		130		
Storage Blk Time (%)		0	0	11	0		0		
Queuing Penalty (veh)		0	0	13	0		0		

Intersection: 15: Driveway/MD 488 & MD 6

Movement	EB	EB	B31	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	T	LT	R	L	TR	LT	R
Maximum Queue (ft)	275	583	181	565	210	113	182	340	305
Average Queue (ft)	217	252	17	254	133	48	72	199	125
95th Queue (ft)	316	512	117	469	254	95	154	308	247
Link Distance (ft)		523	1948	738		185	185	759	
Upstream Blk Time (%)		2				0	2		
Queuing Penalty (veh)		26				0	0		
Storage Bay Dist (ft)	250				185				315
Storage Blk Time (%)	9	2		19	1			0	0
Queuing Penalty (veh)	49	9		41	2			2	0

Zone Summary

Zone wide Queuing Penalty: 1208

Intersection: 1: US 301 & Rosewick Road

Movement	WB	WB	NB	NB	NB	SB	SB	SB	B40	B40
Directions Served	L	L	U	T	T	L	T	T	T	T
Maximum Queue (ft)	191	226	61	509	516	392	458	450	333	324
Average Queue (ft)	112	154	2	296	313	235	186	165	28	24
95th Queue (ft)	198	221	32	460	479	371	407	382	253	220
Link Distance (ft)		1006		5729	5729		502	502	951	951
Upstream Blk Time (%)							4	3	0	0
Queuing Penalty (veh)							0	0	0	0
Storage Bay Dist (ft)	700		190			400				
Storage Blk Time (%)				21		0	4			
Queuing Penalty (veh)				0		4	12			

Intersection: 2: US 301 & MD 225/Hawthorne Rd

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	L	T	R	L	TR	L	L	T	T	R	L
Maximum Queue (ft)	302	465	917	205	224	383	225	209	591	585	310	334
Average Queue (ft)	167	355	595	201	161	184	131	130	363	377	57	130
95th Queue (ft)	262	573	1056	220	247	336	198	193	587	595	235	323
Link Distance (ft)			893			719			1936	1936		
Upstream Blk Time (%)			13									
Queuing Penalty (veh)			0									
Storage Bay Dist (ft)	440	440		180	200		650	650			285	380
Storage Blk Time (%)		0	3	62	9	7				18	0	
Queuing Penalty (veh)		0	24	296	16	14				8	0	

Intersection: 2: US 301 & MD 225/Hawthorne Rd

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	5660	5675	525
Average Queue (ft)	3689	3710	419
95th Queue (ft)	6000	6007	765
Link Distance (ft)	5729	5729	
Upstream Blk Time (%)	0	1	
Queuing Penalty (veh)	3	7	
Storage Bay Dist (ft)			500
Storage Blk Time (%)	54	52	0
Queuing Penalty (veh)	39	143	2

Intersection: 4: US 301 & MD 6

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	LT	R	L	LT	R	L	T	T	R	L	L
Maximum Queue (ft)	295	668	231	258	497	225	285	717	692	213	227	330
Average Queue (ft)	256	427	43	115	237	98	196	441	405	19	127	141
95th Queue (ft)	349	735	147	205	398	281	337	669	621	128	201	251
Link Distance (ft)		1645	1645	1280	1280			1178	1178			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	270					200	260			730	700	700
Storage Blk Time (%)	3	36			16	0	0	31	0			
Queuing Penalty (veh)	10	61			37	0	3	44	0			

Intersection: 4: US 301 & MD 6

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	659	694	535
Average Queue (ft)	449	460	167
95th Queue (ft)	643	665	517
Link Distance (ft)	1262	1262	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			510
Storage Blk Time (%)	0	6	0
Queuing Penalty (veh)	0	19	0

Intersection: 8: Wills St/Washington Ave & MD 6

Movement	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	TR	L	T	R	LTR	LTR
Maximum Queue (ft)	542	581	68	2603	175	42	470
Average Queue (ft)	331	298	4	1944	144	9	280
95th Queue (ft)	598	508	29	3286	236	32	413
Link Distance (ft)	1280	1280		2798		652	1038
Upstream Blk Time (%)				2			
Queuing Penalty (veh)				16			
Storage Bay Dist (ft)			75		150		
Storage Blk Time (%)				60	0		
Queuing Penalty (veh)				203	3		

Intersection: 13: Willow Rd/La Plata Pkwy & MD 6

Movement	EB	EB	WB	WB	WB	B31	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	T	LT	R	L	TR
Maximum Queue (ft)	154	361	153	1171	175	41	81	103	102	85
Average Queue (ft)	39	146	46	390	57	3	26	44	43	30
95th Queue (ft)	97	291	142	1250	184	39	66	86	93	64
Link Distance (ft)		2798		1948		523	368		539	539
Upstream Blk Time (%)				1						
Queuing Penalty (veh)				11						
Storage Bay Dist (ft)	370		150		150			130		
Storage Blk Time (%)		0		25	0			0		
Queuing Penalty (veh)		0		30	1			0		

Intersection: 15: Driveway/MD 488 & MD 6

Movement	EB	EB	B31	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	T	LT	R	L	TR	LT	R
Maximum Queue (ft)	275	604	301	672	210	138	161	312	283
Average Queue (ft)	235	302	38	345	151	57	82	192	131
95th Queue (ft)	320	602	206	657	271	116	154	291	236
Link Distance (ft)		523	1948	738		185	185	759	
Upstream Blk Time (%)		5		3		0	1		
Queuing Penalty (veh)		61		0		0	0		
Storage Bay Dist (ft)	250				185				315
Storage Blk Time (%)	13	3		33	0			0	0
Queuing Penalty (veh)	75	16		70	1			1	0

Zone Summary

Zone wide Queuing Penalty: 1230

Intersection: 1: US 301 & Rosewick Road

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	B40
Directions Served	L	L	U	T	T	R	L	T	T	T
Maximum Queue (ft)	255	286	18	590	644	213	412	456	410	16
Average Queue (ft)	143	181	1	322	345	100	264	120	83	1
95th Queue (ft)	228	252	9	581	629	275	395	315	234	11
Link Distance (ft)		1006		5729	5729			502	502	951
Upstream Blk Time (%)								0	0	
Queuing Penalty (veh)								0	0	
Storage Bay Dist (ft)	700		190			188	400			
Storage Blk Time (%)				17	17	0	2	0		
Queuing Penalty (veh)				0	71	1	11	0		

Intersection: 2: US 301 & MD 225/Hawthorne Rd

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	NB	NB	B27
Directions Served	L	L	T	R	L	TR	L	L	T	T	R	T
Maximum Queue (ft)	265	308	280	205	220	285	210	595	998	1027	310	6
Average Queue (ft)	155	193	68	136	126	132	114	220	529	548	68	0
95th Queue (ft)	247	271	199	214	216	237	190	541	1010	1029	263	4
Link Distance (ft)			893			719			1936	1936		450
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	770	770		180	200		570	570			285	
Storage Blk Time (%)			0	7	4	3		0	9	25	0	
Queuing Penalty (veh)			0	24	5	4		0	22	16	0	

Intersection: 2: US 301 & MD 225/Hawthorne Rd

Movement	SB	SB	SB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	334	702	693	525
Average Queue (ft)	155	422	422	94
95th Queue (ft)	320	620	622	415
Link Distance (ft)		5729	5729	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	310			500
Storage Blk Time (%)		19	4	0
Queuing Penalty (veh)		15	11	0

Intersection: 4: US 301 & MD 6

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	LT	R	L	LT	R	L	T	T	R	L	L
Maximum Queue (ft)	295	453	84	191	334	225	284	663	627	78	279	344
Average Queue (ft)	203	271	11	84	173	46	136	388	350	11	146	165
95th Queue (ft)	312	391	54	162	292	195	283	581	528	52	237	273
Link Distance (ft)		848	848	1091	1091			1179	1179			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	270					200	260			730	610	610
Storage Blk Time (%)	0	10			6	0	0	23				
Queuing Penalty (veh)	1	15			16	0	0	21				

Intersection: 4: US 301 & MD 6

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	552	544	287
Average Queue (ft)	301	306	30
95th Queue (ft)	473	473	175
Link Distance (ft)	1266	1266	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			510
Storage Blk Time (%)	0	0	0
Queuing Penalty (veh)	1	1	0

Intersection: 8: Wills St/Washington Ave & MD 6

Movement	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	TR	L	T	R	LTR	LTR
Maximum Queue (ft)	138	144	4	480	175	34	421
Average Queue (ft)	71	128	0	209	116	2	218
95th Queue (ft)	125	171	3	386	215	15	367
Link Distance (ft)	133	133		2737		663	880
Upstream Blk Time (%)	1	15					
Queuing Penalty (veh)	4	51					
Storage Bay Dist (ft)			75		150		
Storage Blk Time (%)				30	0		
Queuing Penalty (veh)				94	1		

Intersection: 13: Willow Rd/La Plata Pkwy & MD 6

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	LT	R	L	TR
Maximum Queue (ft)	55	159	21	182	52	34	37	69	65
Average Queue (ft)	21	60	3	54	6	6	7	22	22
95th Queue (ft)	47	130	15	128	32	27	28	56	47
Link Distance (ft)		2737		1948		368		539	539
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	370		150		150		130		
Storage Blk Time (%)				0					
Queuing Penalty (veh)				0					

Intersection: 15: Driveway/MD 488 & MD 6

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	LT	R	L	TR	LT	R
Maximum Queue (ft)	225	206	296	210	27	24	211	132
Average Queue (ft)	120	86	138	63	3	4	76	56
95th Queue (ft)	193	162	242	146	16	19	149	107
Link Distance (ft)		523	738		185	185	759	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	250			185				315
Storage Blk Time (%)	0		3	0			0	
Queuing Penalty (veh)	0		6	0			0	

Zone Summary

Zone wide Queuing Penalty: 393

Intersection: 1: US 301 & Rosewick Road

Movement	WB	WB	NB	NB	NB	NB	SB	SB	SB	B40
Directions Served	L	L	U	T	T	R	L	T	T	T
Maximum Queue (ft)	241	277	48	688	725	213	415	443	383	19
Average Queue (ft)	144	179	2	358	381	121	268	132	91	1
95th Queue (ft)	233	262	31	639	675	294	396	332	251	13
Link Distance (ft)		1006		5729	5729			502	502	951
Upstream Blk Time (%)								0		
Queuing Penalty (veh)								0		
Storage Bay Dist (ft)	700		190			188	400			
Storage Blk Time (%)				20	20	0	1	0		
Queuing Penalty (veh)				0	84	1	8	1		

Intersection: 2: US 301 & MD 225/Hawthorne Rd

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	L	T	R	L	TR	L	L	T	T	R	L
Maximum Queue (ft)	284	307	309	205	222	272	229	594	899	915	310	335
Average Queue (ft)	158	192	69	141	119	116	123	272	556	577	65	163
95th Queue (ft)	241	267	220	221	213	217	194	619	938	959	251	345
Link Distance (ft)			893			719			1936	1936		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	770	770		180	200		570	570			285	310
Storage Blk Time (%)				7	3	2		0	9	24	0	1
Queuing Penalty (veh)				27	4	3		0	24	15	0	8

Intersection: 2: US 301 & MD 225/Hawthorne Rd

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	754	764	525
Average Queue (ft)	427	442	128
95th Queue (ft)	651	676	490
Link Distance (ft)	5729	5729	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			500
Storage Blk Time (%)	20	6	0
Queuing Penalty (veh)	16	15	0

Intersection: 4: US 301 & MD 6

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	LT	R	L	LT	R	L	T	T	R	L	L
Maximum Queue (ft)	295	479	100	238	303	225	285	662	630	79	251	339
Average Queue (ft)	227	299	20	102	186	55	155	435	396	14	129	159
95th Queue (ft)	327	431	73	181	289	214	315	606	571	57	212	266
Link Distance (ft)		848	848	285	285			1179	1179			
Upstream Blk Time (%)				0	3							
Queuing Penalty (veh)				0	9							
Storage Bay Dist (ft)	270					200	260			730	610	610
Storage Blk Time (%)	0	14			9	0	0	29				
Queuing Penalty (veh)	1	24			22	0	0	26				

Intersection: 4: US 301 & MD 6

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	606	603	534
Average Queue (ft)	366	369	63
95th Queue (ft)	568	557	288
Link Distance (ft)	1265	1265	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			510
Storage Blk Time (%)	0	2	0
Queuing Penalty (veh)	1	4	0

Intersection: 8: Wills St/Washington Ave & MD 6

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	T	R	LTR	LTR
Maximum Queue (ft)	180	404	547	175	37	531
Average Queue (ft)	84	194	262	130	3	276
95th Queue (ft)	149	352	449	223	19	460
Link Distance (ft)	923	923	2737		660	856
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)				150		
Storage Blk Time (%)			35	0		
Queuing Penalty (veh)			110	1		

Intersection: 13: Willow Rd/La Plata Pkwy & MD 6

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	LT	R	L	TR
Maximum Queue (ft)	68	145	25	211	59	39	31	87	78
Average Queue (ft)	26	62	2	64	4	6	7	26	24
95th Queue (ft)	54	129	15	150	30	27	27	67	54
Link Distance (ft)		2737		1948		368		539	539
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	370		150		150		130		
Storage Blk Time (%)				1	0				
Queuing Penalty (veh)				0	0				

Intersection: 15: Driveway/MD 488 & MD 6

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	LT	R	L	TR	LT	R
Maximum Queue (ft)	239	227	273	210	35	28	178	176
Average Queue (ft)	122	88	144	70	4	4	82	71
95th Queue (ft)	201	173	235	162	21	19	146	144
Link Distance (ft)		523	738		185	185	759	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	250			185				315
Storage Blk Time (%)	0		3	0				
Queuing Penalty (veh)	1		5	0				

Zone Summary

Zone wide Queuing Penalty: 411

Appendix C

Background Developments

Trip Generation Equations

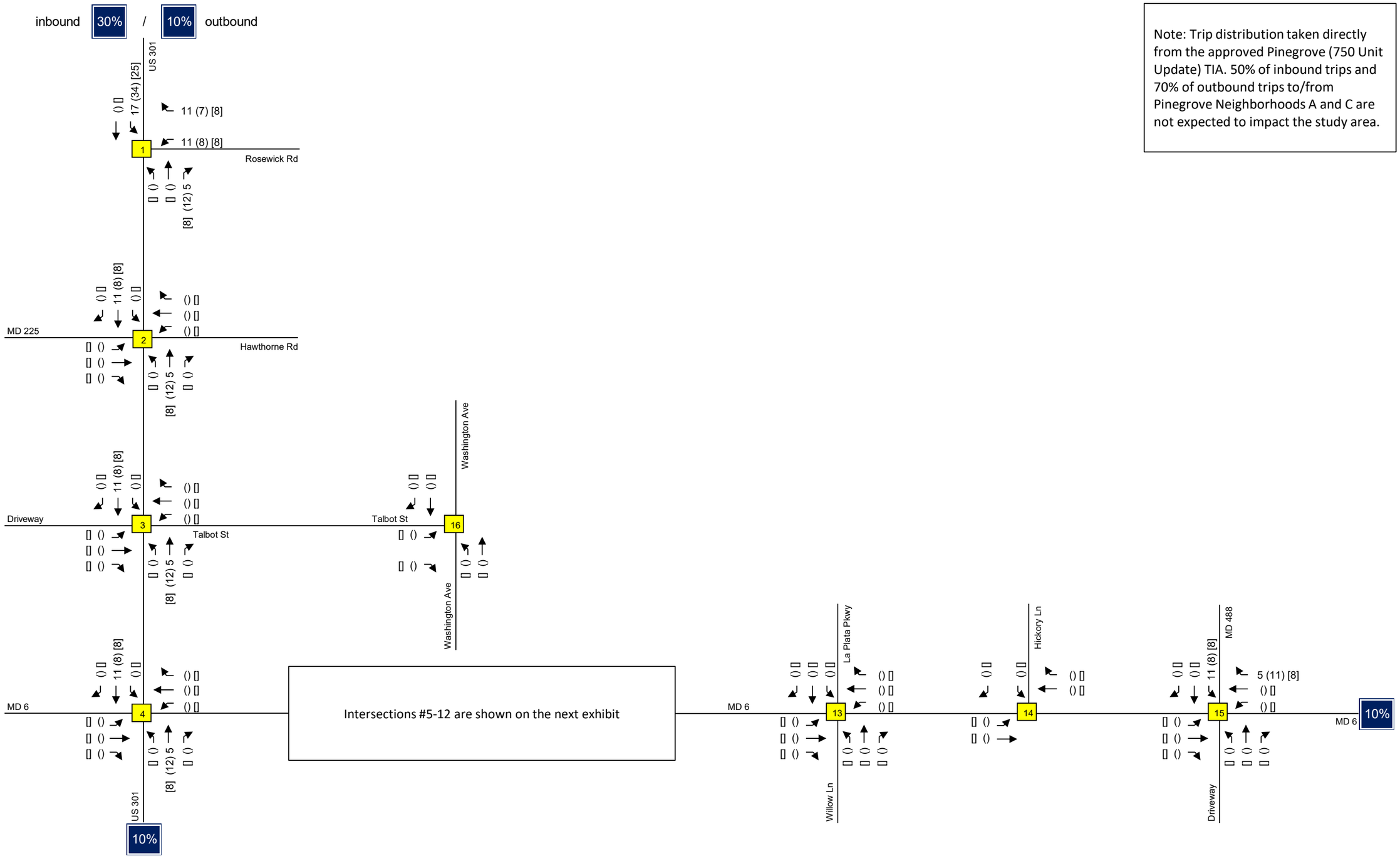
Single-Family Attached Housing (ITE-215, Units)	**Trip Distribution (In/Out)**
Morning Trips = 0.59 x Units - 15.25	25/75
Evening Trips = 0.57 x Units - 7.84	57/43
Midday Sat. Trips = 0.47 x Units	48/52
Senior Adult Housing - Single Family (ITE-251, Units)	**Trip Distribution (In/Out)**
Ln(Morning Trips) = 0.71 x Ln(Units) + 0.40	34/66
Ln(Evening Trips) = 0.79 x Ln(Units) + 0.15	61/39
Midday Saturday Trips = 0.18 x Units + 42.98	53/47
Single-Family Detached Housing (ITE-210, Units)	**Trip Distribution (In/Out)**
Morning Trips = 0.67 x Units + 5.59	27/73
Ln(Evening Trips) = 0.92 x Ln(Units) + 0.33	62/38
Midday Sat. Trips = 0.90 x Units + 10.97	53/47
Multifamily Housing, Low-Rise (ITE-220, Units) [Not Close to Rail Transit]	**Trip Distribution (In/Out)**
Morning Trips = 0.35 x Units + 12.93	24/76
Evening Trips = 0.48 x Units + 7.35	62/38
Midday Sat. Trips = 0.49 x Units	38/62

Trip Generation Totals for Previously Approved Pinegrove Neighborhoods

			AM Peak			PM Peak			Midday Sat. Peak		
			In	Out	Total	In	Out	Total	In	Out	Total
Neighborhood A	Single-Family Attached Housing (ITE-215, Units)	236 units	38	86	124	72	55	127	53	58	111
	Less Constructed and Occupied Units	*127 units*	*-19*	*-41*	*-60*	*-37*	*-28*	*-65*	*-29*	*-31*	*-60*
Neighborhood B	Single-Family Attached Housing (ITE-215, Units)	107 units	15	33	48	30	23	53	24	26	50
Neighborhood C	Senior Adult Housing - Single Family (ITE-251, Units)	386 units	35	67	102	78	50	128	59	53	112
Neighborhood I	Single-Family Detached Housing (ITE-210, Units)	220 units	41	112	153	123	76	199	111	98	209
	Less Constructed and Occupied Units	*61 units*	*-12*	*-34*	*-46*	*-38*	*-23*	*-61*	*-35*	*-31*	*-66*
Neighborhood K	Single-Family Detached Housing (ITE-210, Units)	176 units	33	91	124	100	62	162	90	79	169
	Less Constructed and Occupied Units	*176 units*	*-33*	*-91*	*-124*	*-100*	*-62*	*-162*	*-90*	*-79*	*-169*
Neighborhood O	Single-Family Detached Housing (ITE-210, Units)	68 units	14	37	51	42	25	67	38	34	72
	Less Constructed and Occupied Units	*68 units*	*-14*	*-37*	*-51*	*-42*	*-25*	*-67*	*-38*	*-34*	*-72*
Neighborhood Q	Multifamily Housing, Low-Rise (ITE-220, Units)	288 units	27	87	114	91	55	146	54	87	141
	Less Constructed and Occupied Units	*288 units*	*-27*	*-87*	*-114*	*-91*	*-55*	*-146*	*-54*	*-87*	*-141*
Neighborhood G		171 units	32	88	120	98	60	158	87	78	165
	Single-Family Detached Housing (ITE-210, Units)										

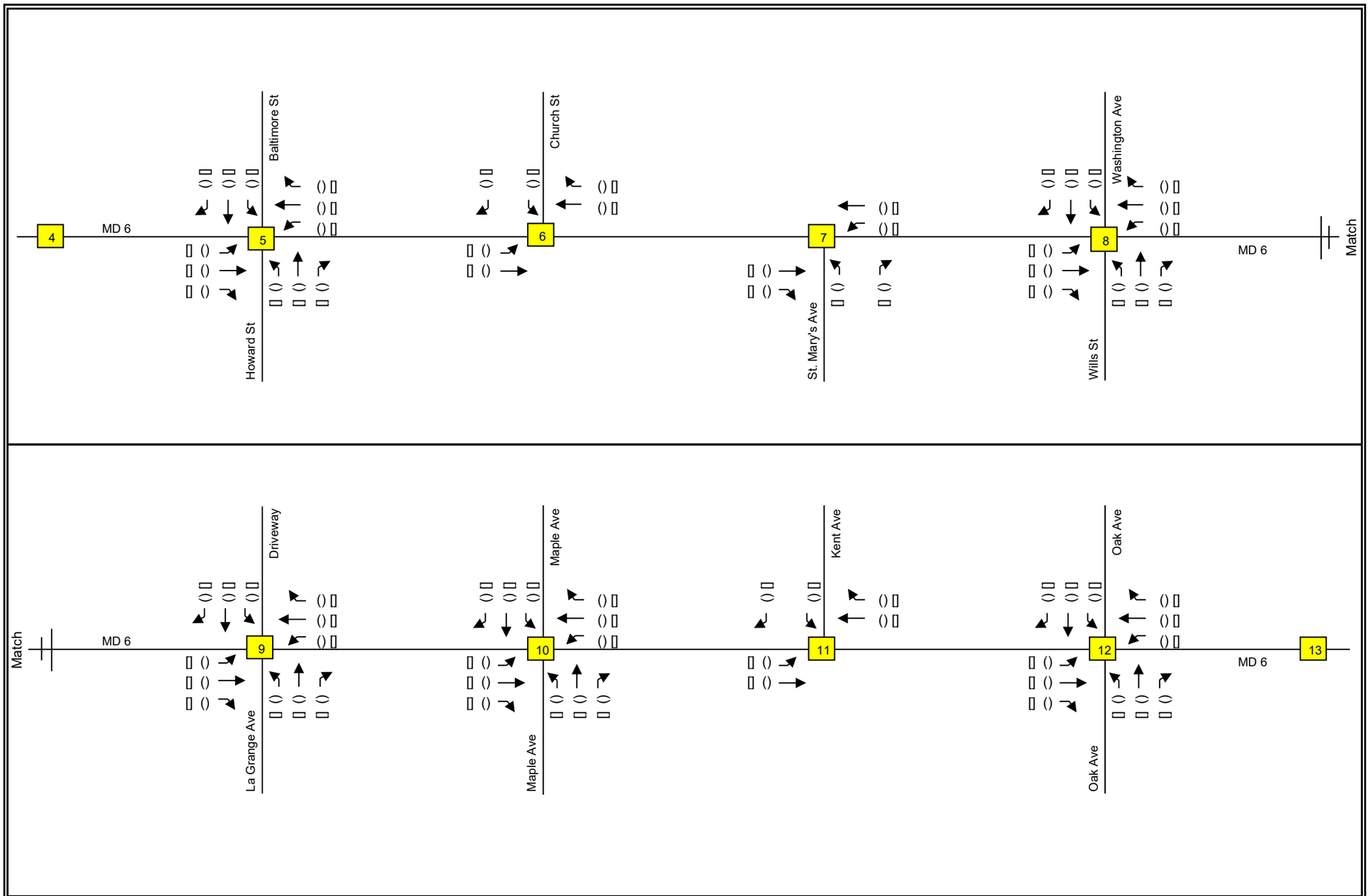
NOTES: 1. Trip Generation Rates obtained from the ITE Trip Generation Manual, 12th Edition.

Traffic Impact Analysis	Trip Generation for Approved Pinegrove Neighborhoods	**Exhibit C-1**
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning		

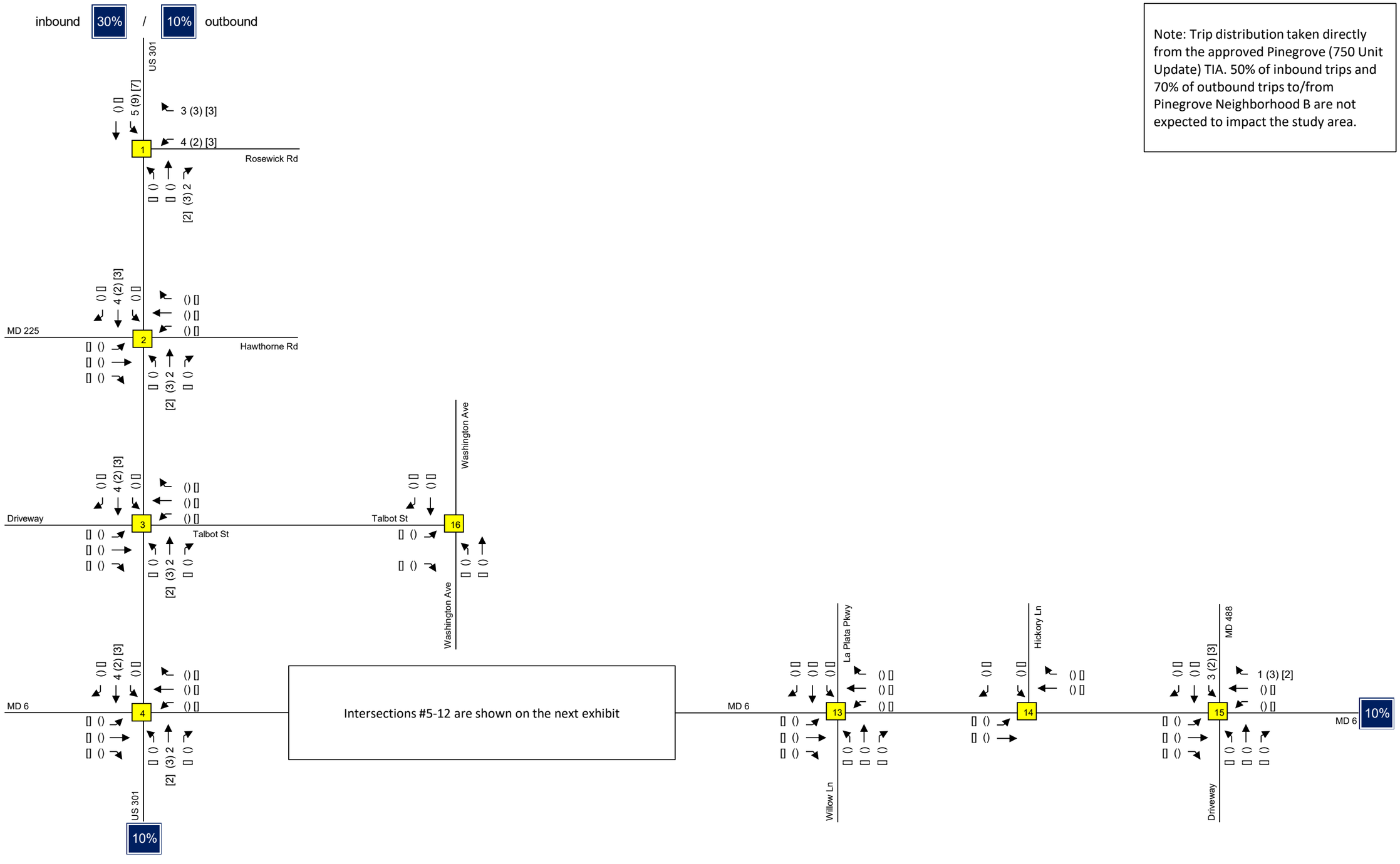


Note: Trip distribution taken directly from the approved Pinegrove (750 Unit Update) TIA. 50% of inbound trips and 70% of outbound trips to/from Pinegrove Neighborhoods A and C are not expected to impact the study area.

Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Trip Assignment for Pinegrove Neighborhoods A and C Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit C-2a**

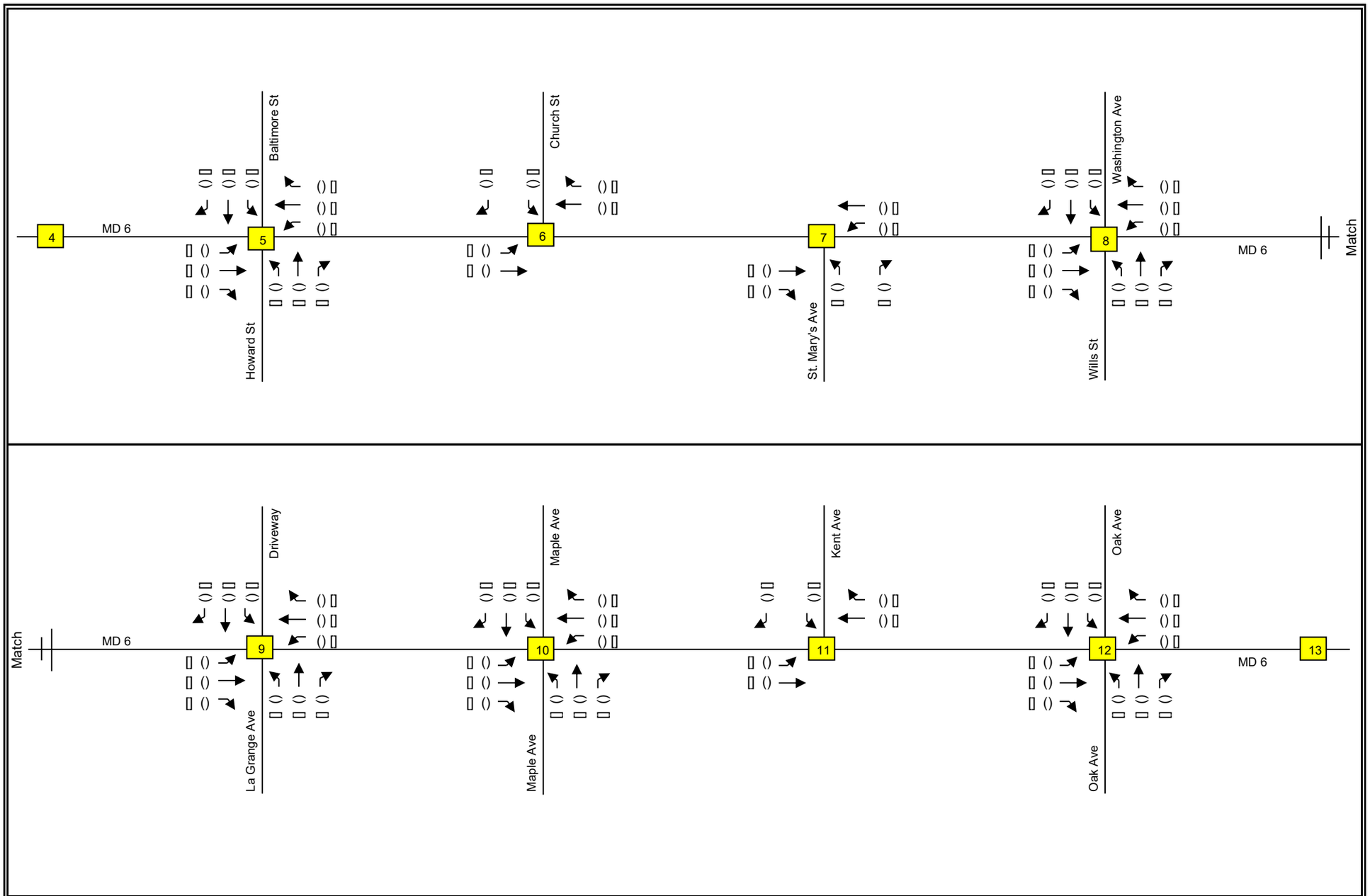


Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Trip Assignment for Pinegrove Neighborhoods A and C Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit C-2b**

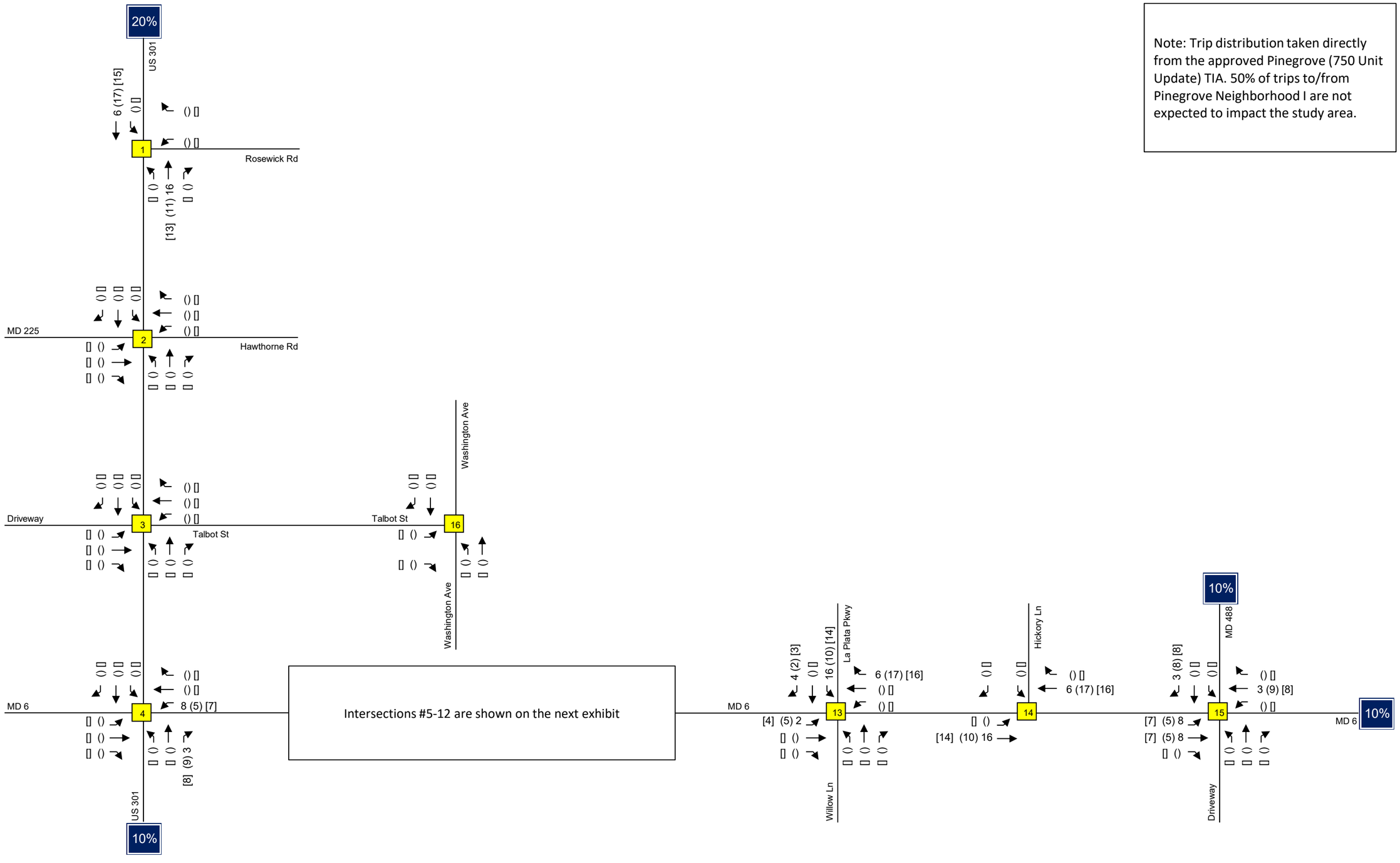


Note: Trip distribution taken directly from the approved Pinegrove (750 Unit Update) TIA. 50% of inbound trips and 70% of outbound trips to/from Pinegrove Neighborhood B are not expected to impact the study area.

Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Trip Assignment for Pinegrove Neighborhood B Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit C-3a**

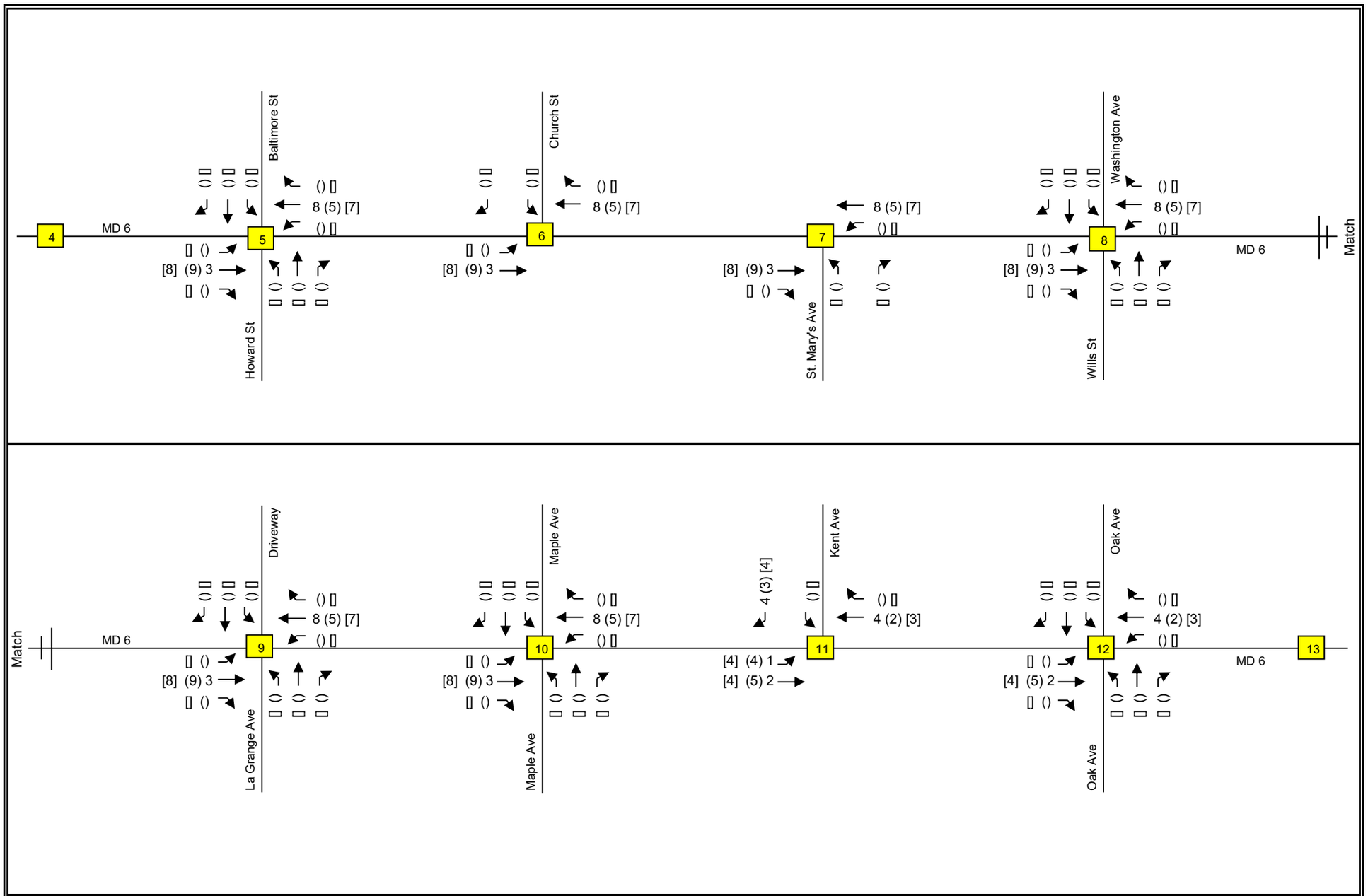


Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Trip Assignment for Pinegrove Neighborhood B Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit C-3b**



Note: Trip distribution taken directly from the approved Pinegrove (750 Unit Update) TIA. 50% of trips to/from Pinegrove Neighborhood I are not expected to impact the study area.

Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Trip Assignment for Pinegrove Neighborhood I Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit C-4a**



Traffic Impact Analysis

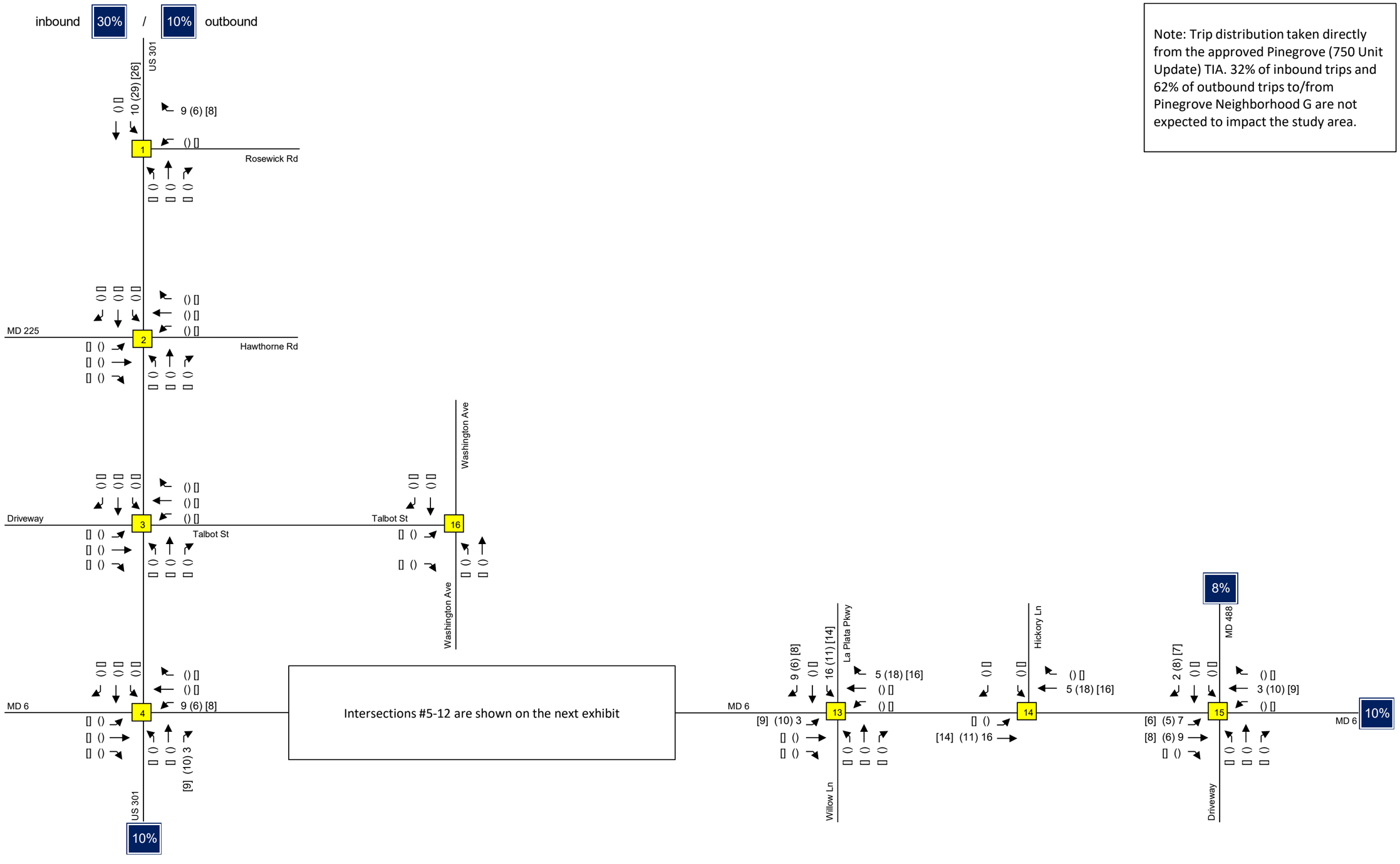
Lenhart Traffic Consulting, Inc.

Traffic Engineering & Transportation Planning

Trip Assignment for Pinegrove Neighborhood I

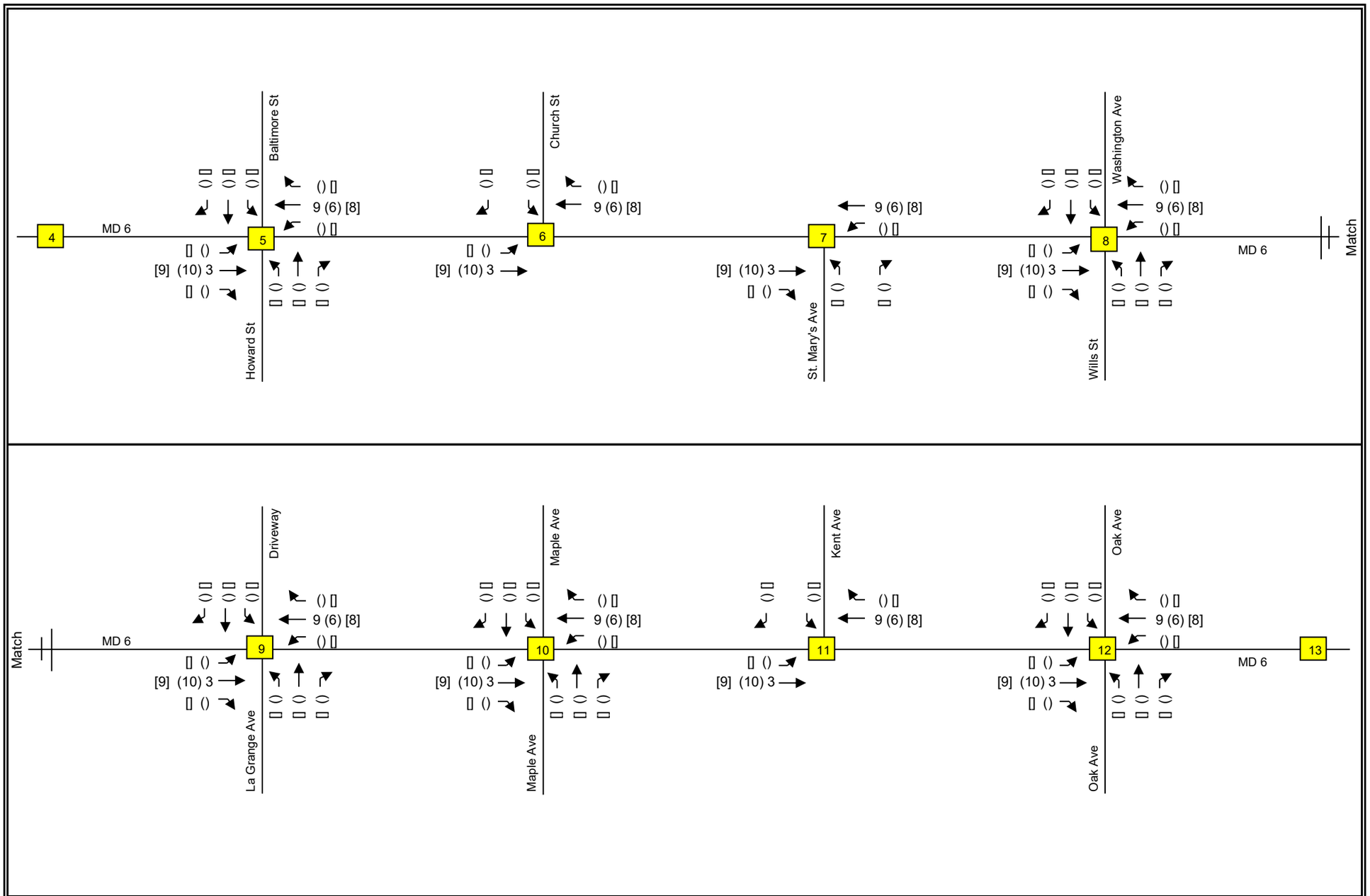
Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak

Exhibit C-4b



Note: Trip distribution taken directly from the approved Pinegrove (750 Unit Update) TIA. 32% of inbound trips and 62% of outbound trips to/from Pinegrove Neighborhood G are not expected to impact the study area.

Traffic Impact Analysis	Trip Assignment for Pinegrove Neighborhood G	**Exhibit C-2a**
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	



Traffic Impact Analysis	Trip Assignment for Pinegrove Neighborhood G	**Exhibit C-5b**
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	

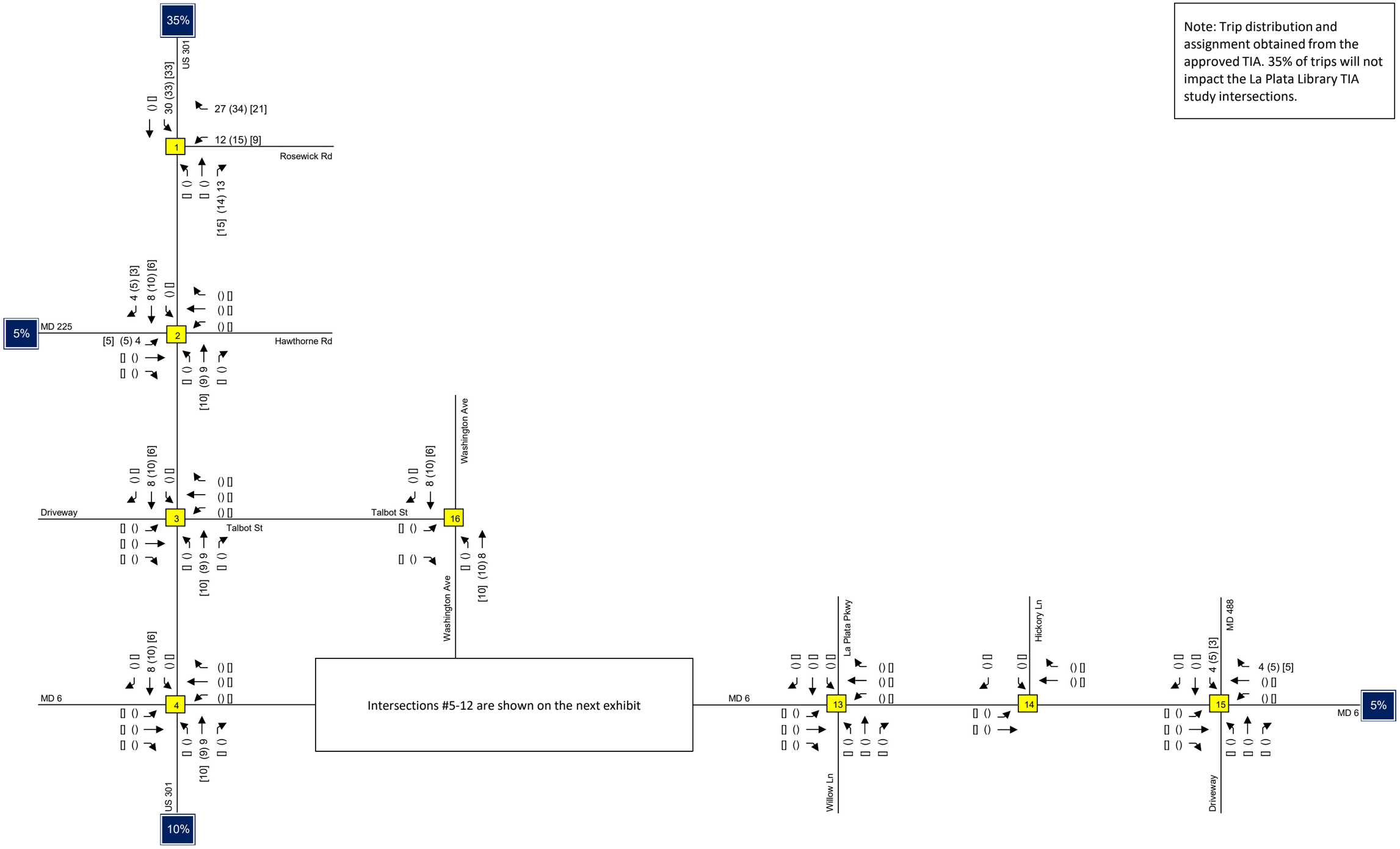
Trip Generaton Totals for Background Developments

			AM Peak			PM Peak			Midday Sat. Peak		
			In	Out	Total	In	Out	Total	In	Out	Total
Villages of Rosewick	Multifamily Housing, Mid-Rise (ITE-221, Urban/Suburban, Units) [Close	40 units	2	7	9	11	6	17	7	7	14
	Mid Rise Residential with 1st-Floor Commercial (ITE-231, Units)	192 units	19	46	65	54	23	77	54	23	77
	Strip Retail Plaza (<40k) (ksf, ITE-822)	9,600 sq.ft.	21	17	38	30	30	60	33	31	64
	Pass-by at 0% AM/40% PM/40% Sat:		*0*	*0*	*0*	*-12*	*-12*	*-24*	*-12*	*-14*	*-26*
	General Office (ksf, ITE-710)	28,800 sq.ft.	46	6	52	10	50	60	13	12	25
	Total Primary Trips:		**88**	**76**	**164**	**93**	**97**	**190**	**95**	**59**	**154**
Schultz Property	Single-Family Detached (ITE-210, Units)	24 units	6	16	22	16	10	26	17	16	33
	Multifamily Housing, Mid-Rise (ITE-221, Units)	120 units	10	33	43	29	17	46	22	21	43
	Total Primary Trips:		**16**	**49**	**65**	**45**	**27**	**72**	**39**	**37**	**76**
Rosewick Corner	Shopping Center (ksf, ITE-820)	0 sq.ft.	0	0	0	0	0	0	0	0	0
	Pass-by at 0% AM/34% PM:		0	0	0	0	0	0	0	0	0
	Fast Casual Restaurant (ksf, ITE-930)	3,428 sq.ft.	3	2	5	26	23	49	62	50	112
	Pass-by at 0% AM/43% PM:		0	0	0	-11	-10	-21	-26	-22	-48
	Supermarket (ksf, ITE-850)	0 sq.ft.	0	0	0	0	0	0	0	0	0
	Pass-by at 0% AM/36% PM:		0	0	0	0	0	0	0	0	0
	Convenience Store / Gas Station w/GFA from 4-5.5 ksf (VFP, ITE-945)	16 Fueling Positions	163	156	319	153	153	306	157	150	307
	Pass-by at 76% AM/76% PM:		-123	-119	-242	-117	-116	-233	-119	-114	-233
	Multifamily Housing, Mid-Rise (ITE-221 Urban/Suburban, Units)	193 units	17	56	73	47	26	73	35	34	69
	Net Primary External Trips:		**60**	**95**	**155**	**98**	**76**	**174**	**109**	**98**	**207**
Rosewick II Apartments	Multifamily Housing, Low-Rise (ITE-220, Units)	98 units	11	36	47	33	21	54	18	30	48
	Total Primary Trips:		**11**	**36**	**47**	**33**	**21**	**54**	**18**	**30**	**48**
Sagepoint	Assisted Living (ITE-254, Beds)	60 beds	6	5	11	5	9	14	7	9	16
	Total Primary Trips:		**6**	**5**	**11**	**5**	**9**	**14**	**7**	**9**	**16**
Villages of Steeplechase	Single-Family Detached Housing (ITE-210, Units)	36 units	8	22	30	24	14	38	23	20	43
	Single-Family Attached Housing (ITE-215, Units)	196 units	31	69	100	59	45	104	44	48	92
	Total Primary Trips:		**39**	**91**	**130**	**83**	**59**	**142**	**67**	**68**	**135**
Stagecoach Crossing	Single-Family Detached Housing (ITE-210, Units)	322 units	60	161	221	175	107	282	160	141	301
	Single-Family Attached Housing (ITE-215, Units)	314 units	53	117	170	97	74	171	71	77	148
	Total Primary Trips:		**113**	**278**	**391**	**272**	**181**	**453**	**231**	**218**	**449**
La Plata Business Park	General Light Industrial (ksf, ITE - 110)	151,200 sq.ft.	63	10	73	18	56	74	0	0	0
	Convenience Store / Gas Station w/GFA from 4-5.5 ksf (VFP, ITE-945)	16 Fuel.Pos.	163	156	319	153	153	306	157	150	307
	Pass-by Rates: AM Peak = 76%, PM Peak = 75%, and Midday Sat. Peak = 75%		*-124*	*-118*	*-242*	*-115*	*-115*	*-230*	*-118*	*-112*	*-230*
	Strip Retail Plaza (<40k) (ksf, ITE-822)	15,600 sq.ft.	34	27	61	51	52	103	53	50	103
	Pass-by Rates: AM Peak = N/A, PM Peak = 40%, and Midday Sat. Peak = 31%		*0*	*0*	*0*	*-20*	*-21*	*-41*	*-16*	*-16*	*-32*
	Total Primary Trips:		**136**	**75**	**211**	**87**	**125**	**212**	**76**	**72**	**148**

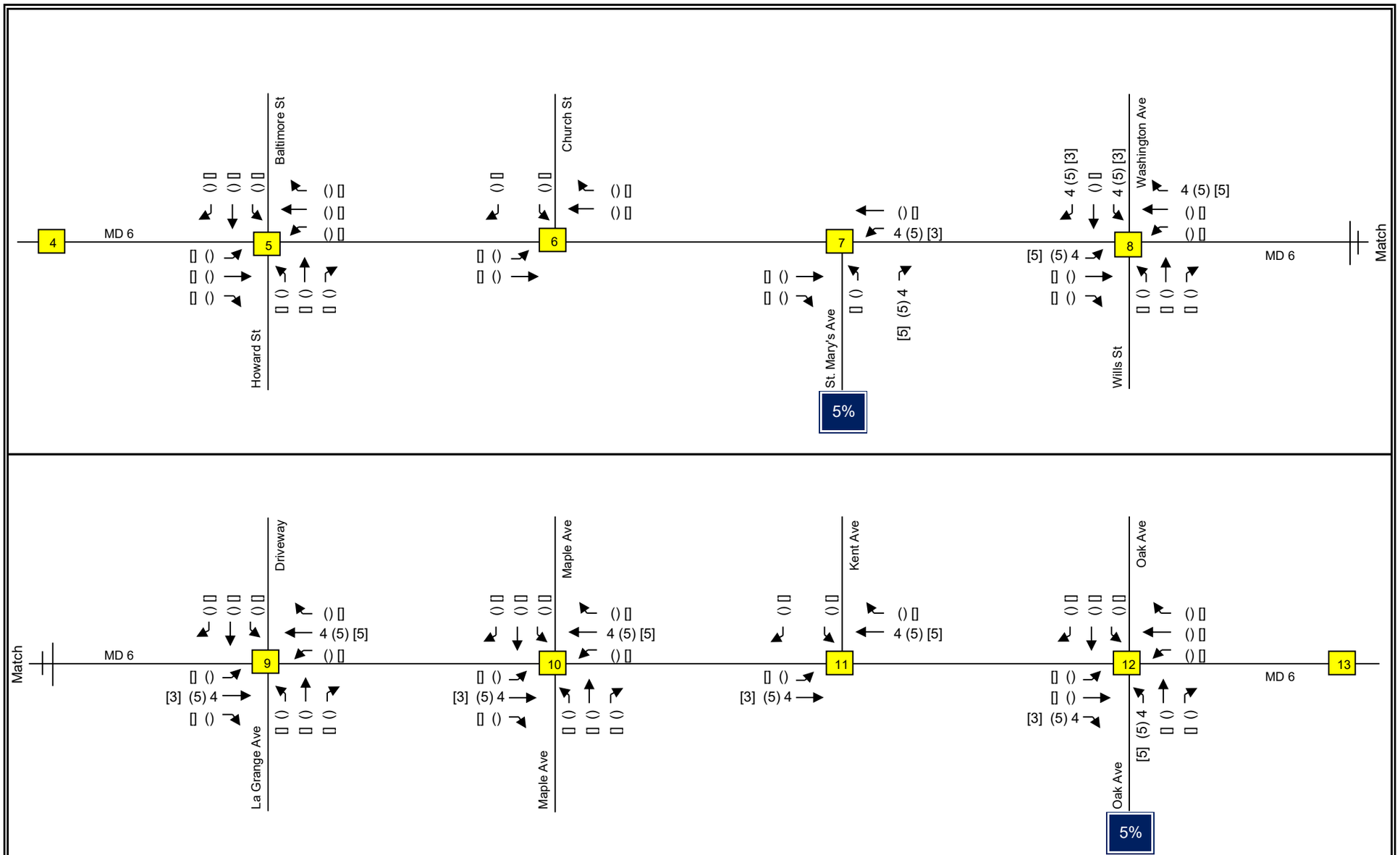
NOTES: 1. Land uses for the background developments were obtained from the respective TIA's. Trip generation rates have been updated to the ITE Trip Generation Manual, 12th Edition.

Traffic Impact Analysis	Trip Generation for Other Background Developments	**Exhibit C-6**
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning		

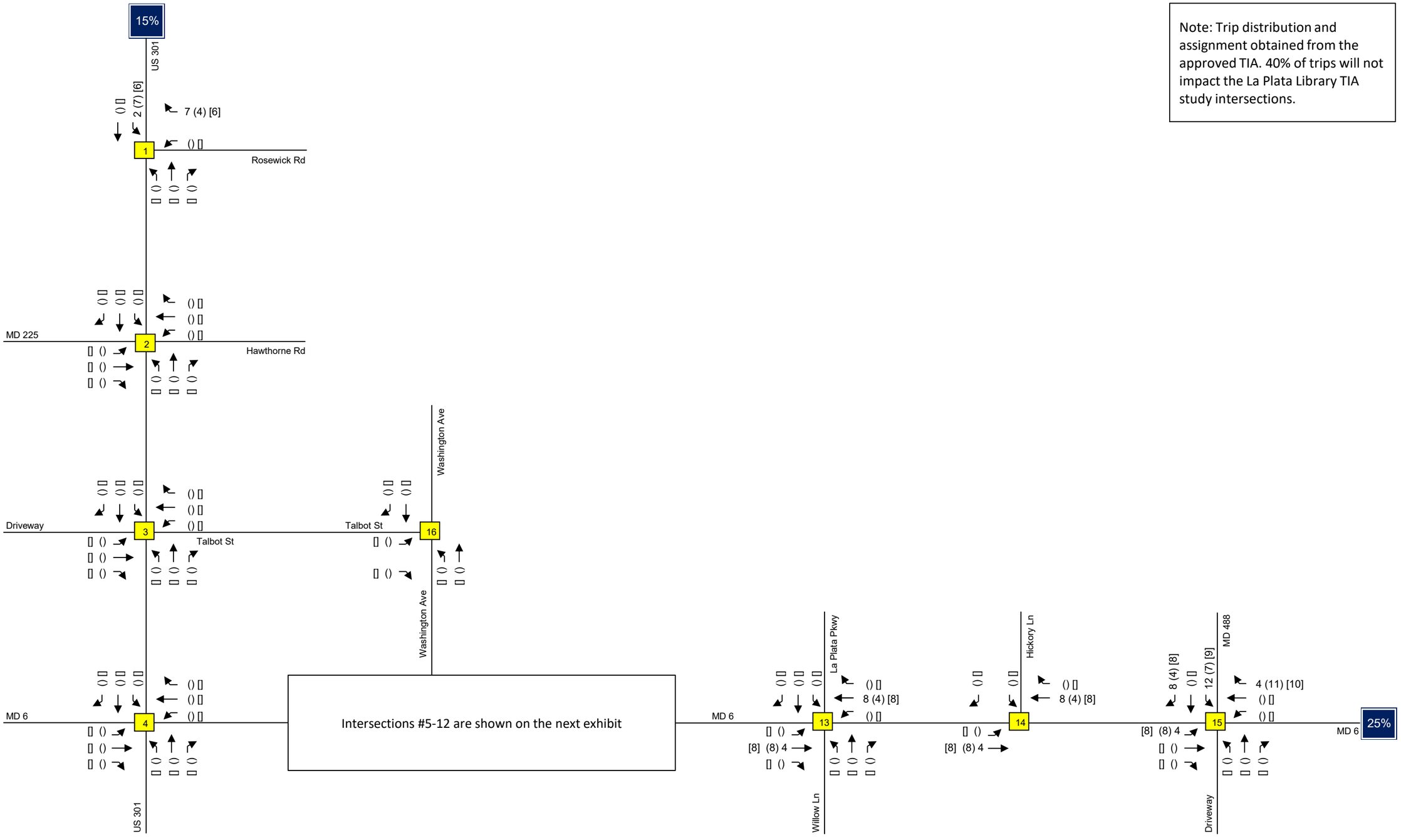
Note: Trip distribution and assignment obtained from the approved TIA. 35% of trips will not impact the La Plata Library TIA study intersections.



Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Trip Assignment for Villages of Rosewick Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit C-7a**

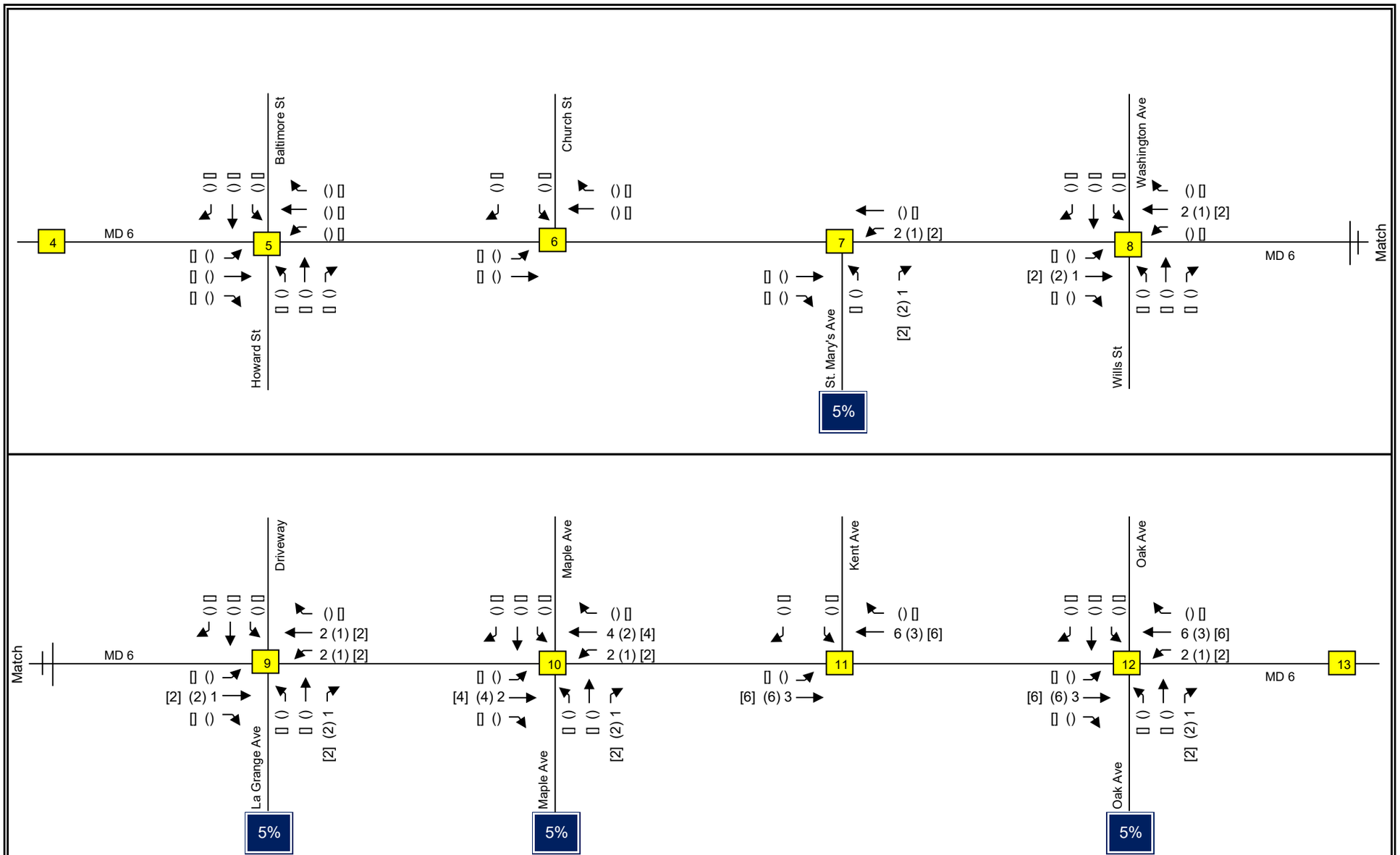


Traffic Impact Analysis	Trip Assignment for Villages of Rosewick	**Exhibit C-7b**
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	



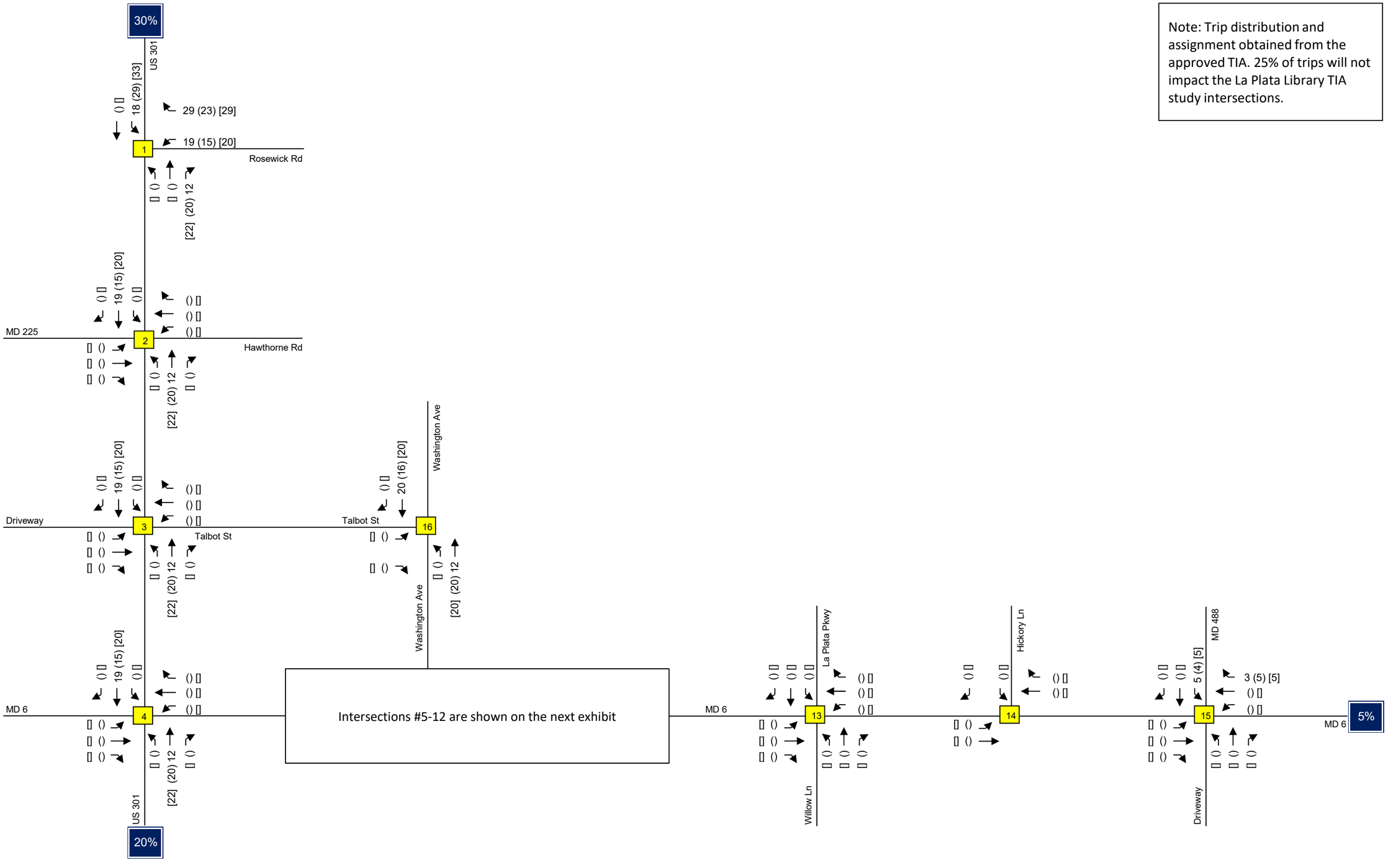
Note: Trip distribution and assignment obtained from the approved TIA. 40% of trips will not impact the La Plata Library TIA study intersections.

Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Trip Assignment for Schultz Property Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit C-8a**

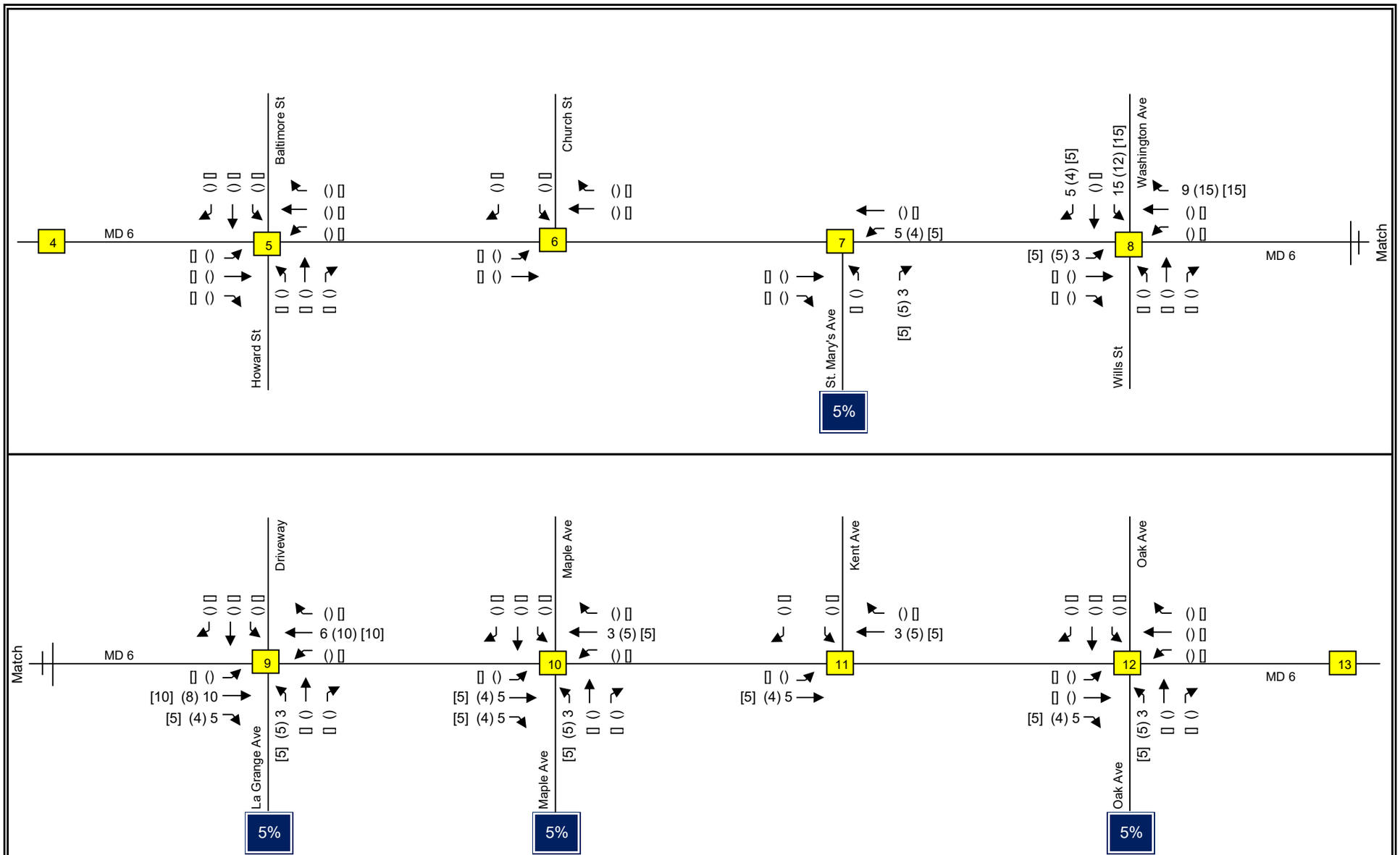


Traffic Impact Analysis	Trip Assignment for Schultz Property	**Exhibit C-8b**
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	

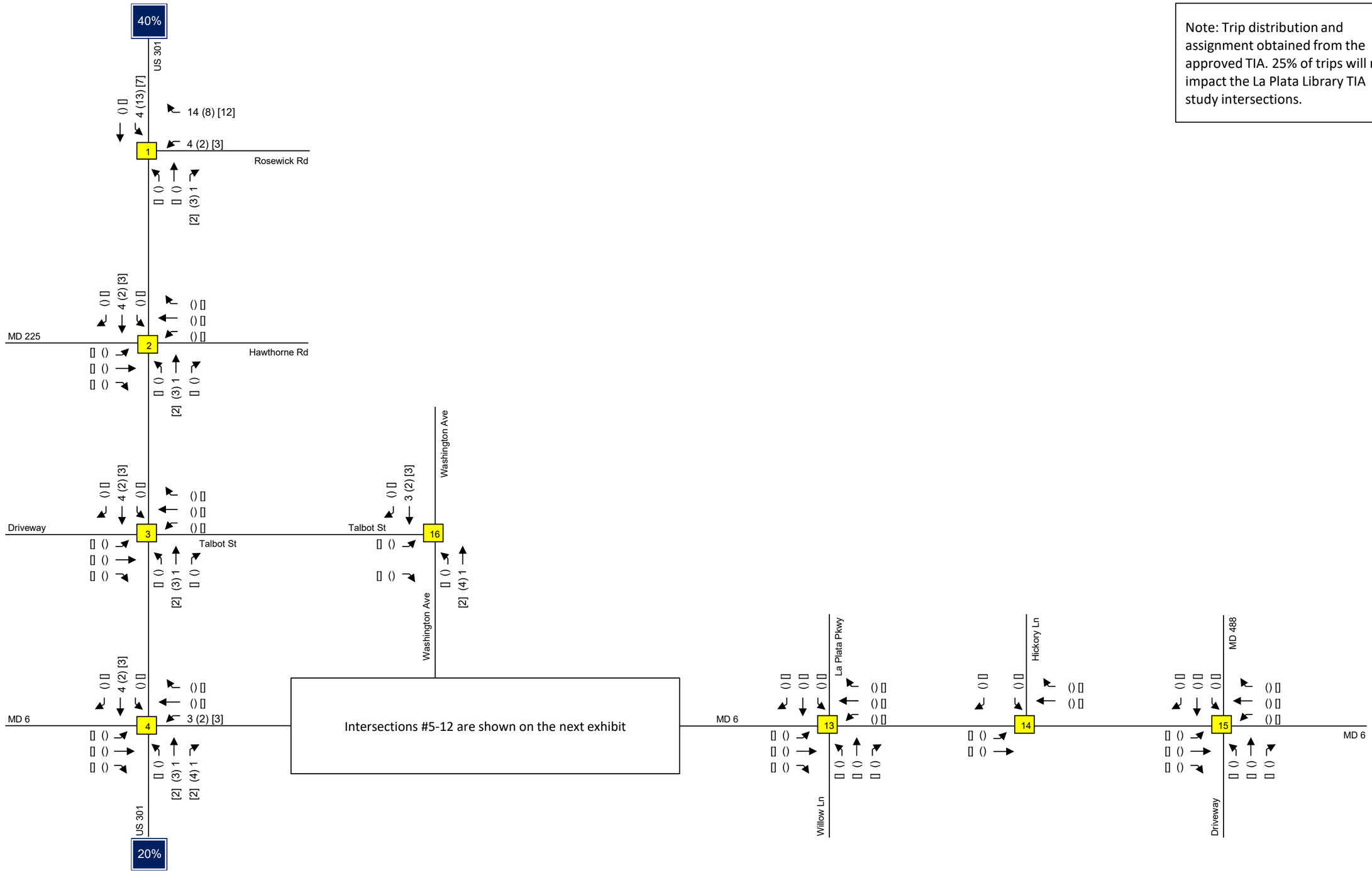
Note: Trip distribution and assignment obtained from the approved TIA. 25% of trips will not impact the La Plata Library TIA study intersections.



Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Trip Assignment for Rosewick Corner Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit C-9a**

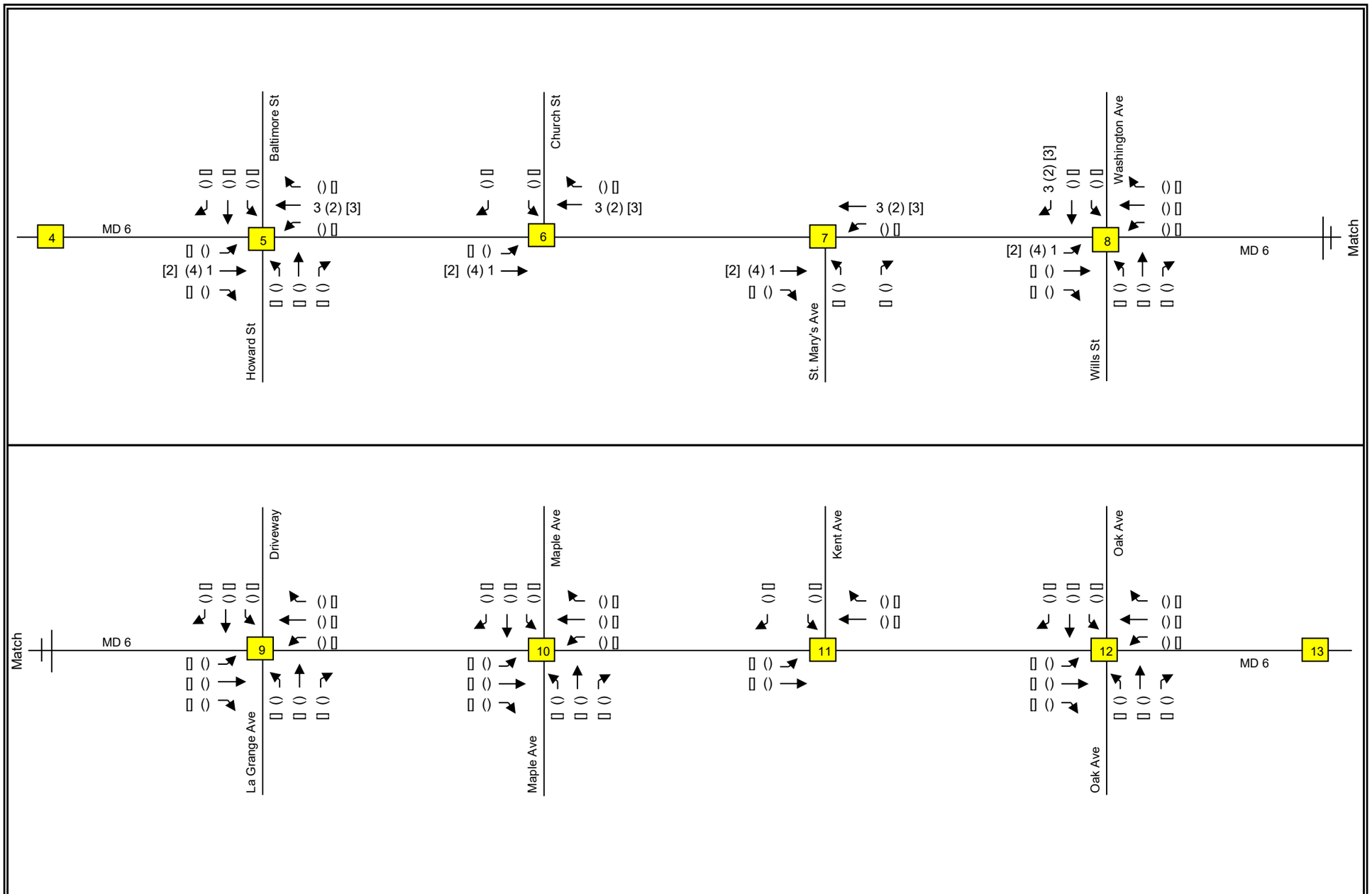


Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Trip Assignment for Rosewick Corner Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit C-9b**



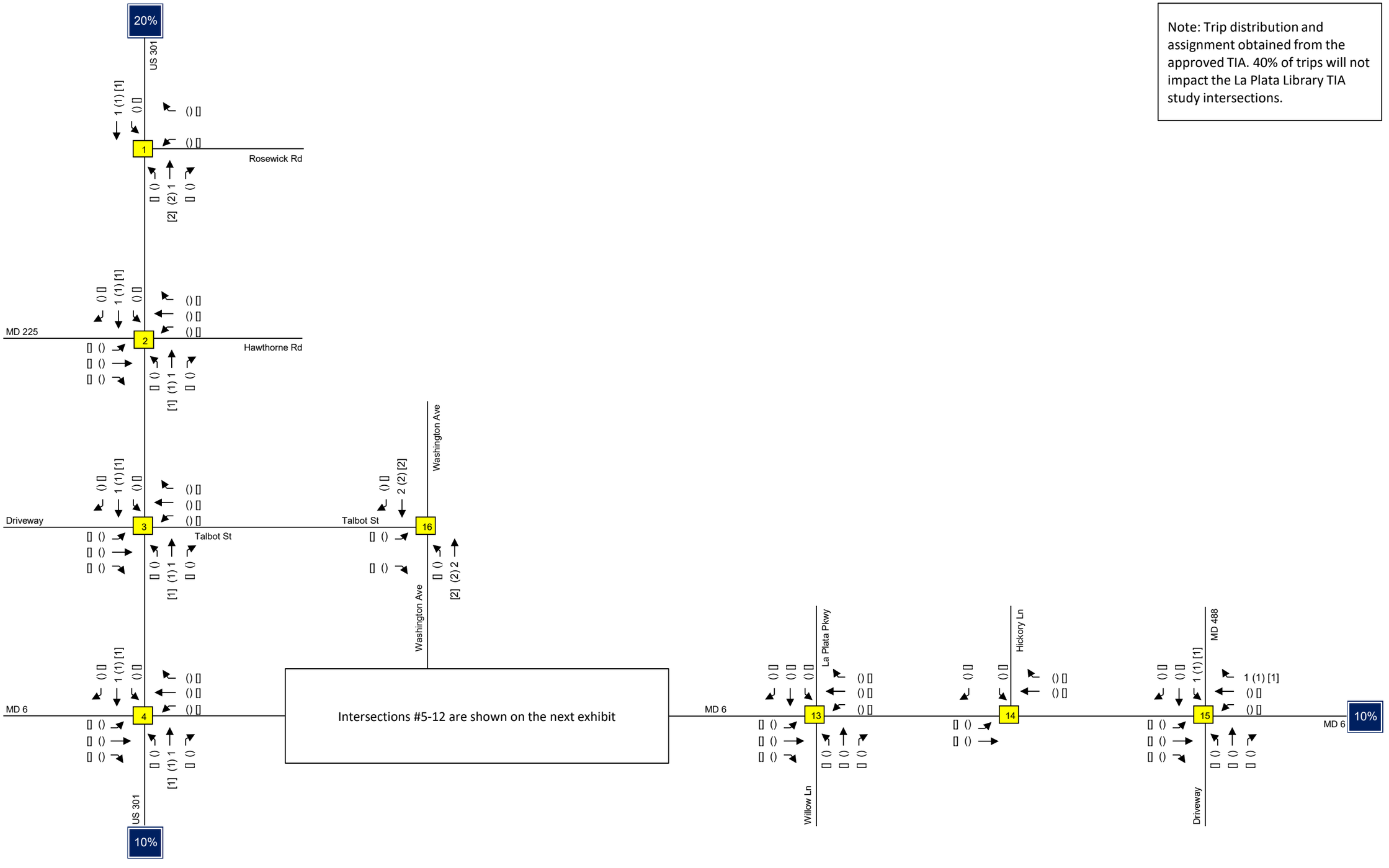
Note: Trip distribution and assignment obtained from the approved TIA. 25% of trips will not impact the La Plata Library TIA study intersections.

Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Trip Assignment for Rosewick II Apartments Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit C-10a**

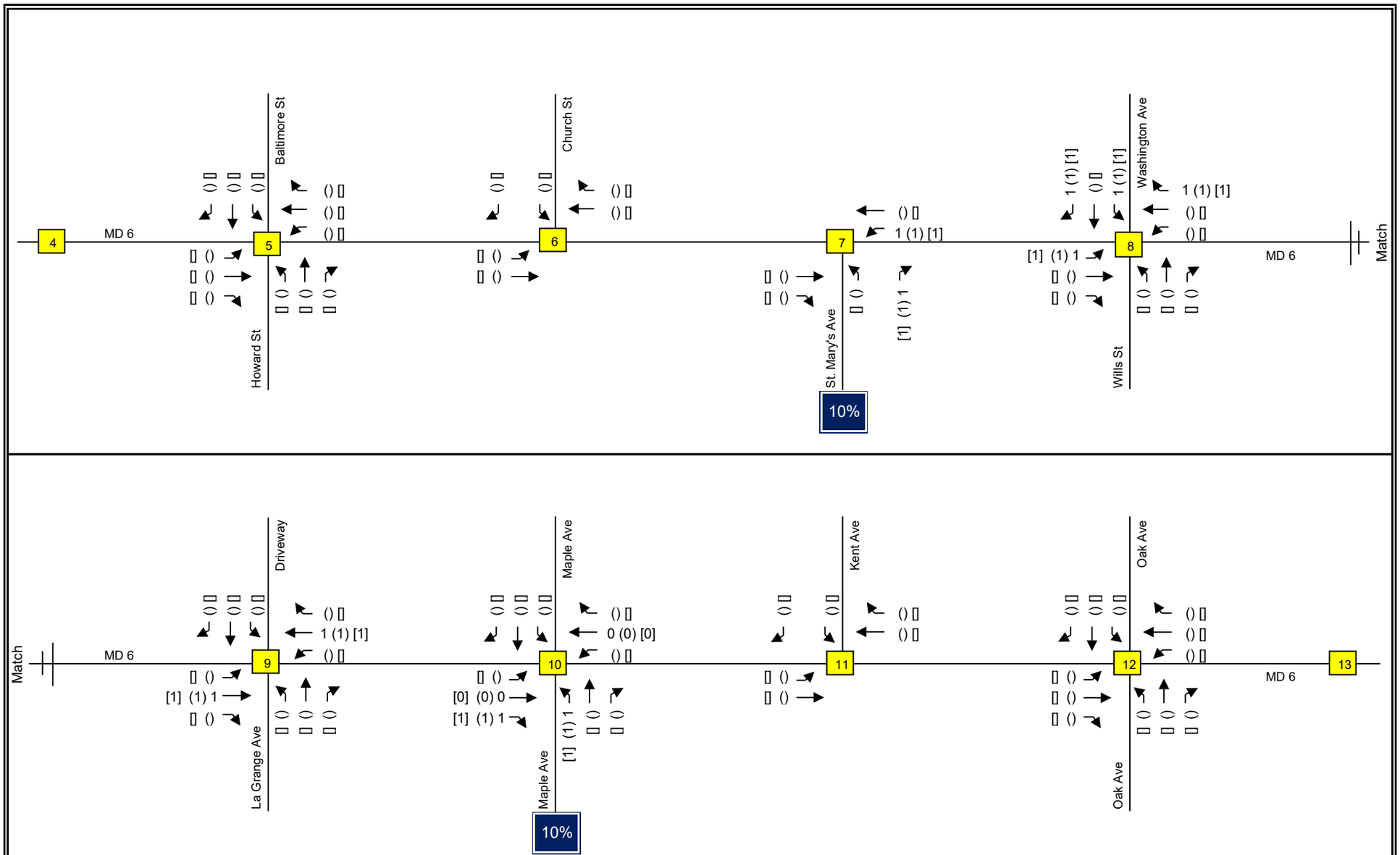


Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Trip Assignment for Rosewick II Apartments Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit C-10b**

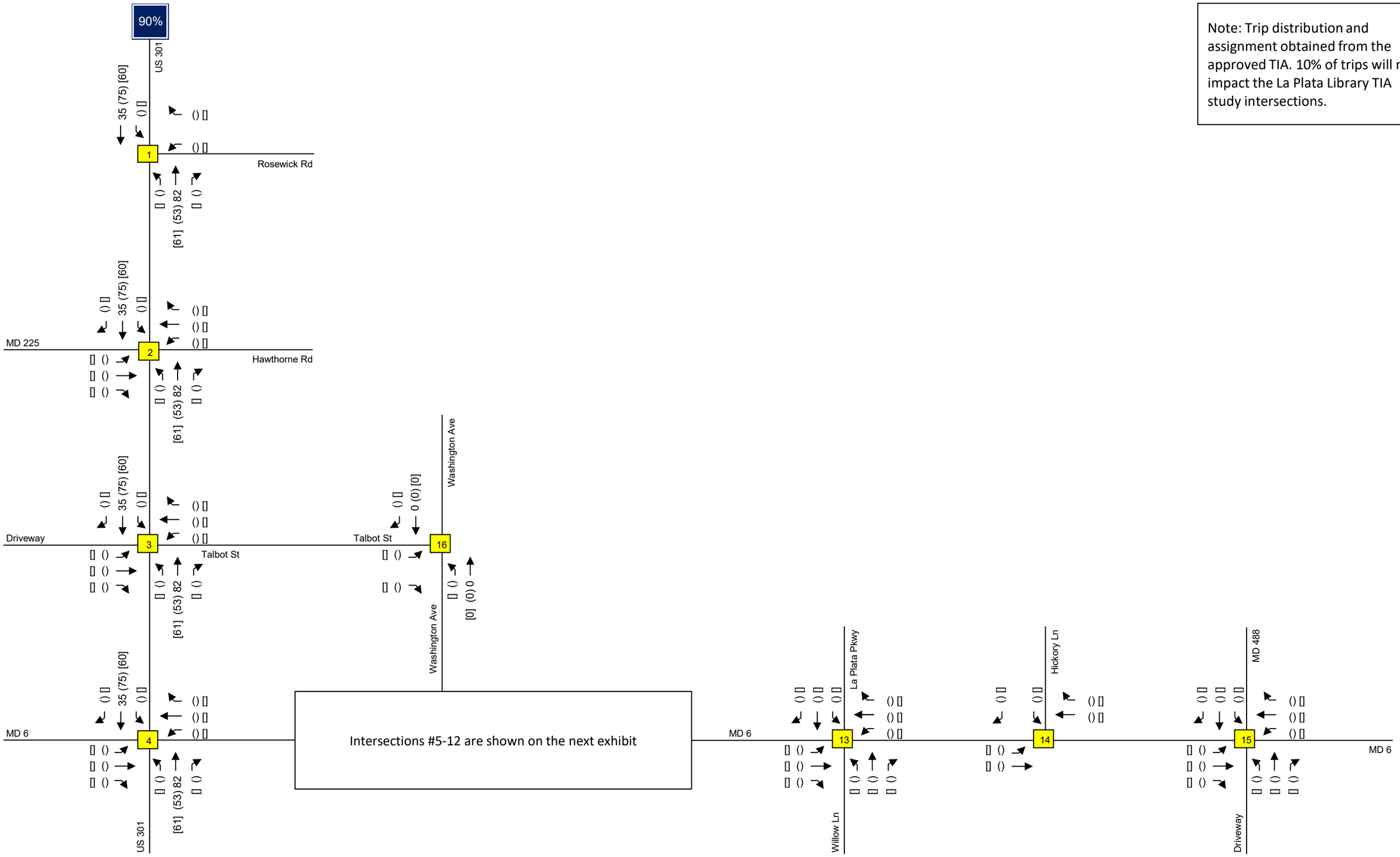
Note: Trip distribution and assignment obtained from the approved TIA. 40% of trips will not impact the La Plata Library TIA study intersections.



Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Trip Assignment for Sagepoint Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit C-9a**

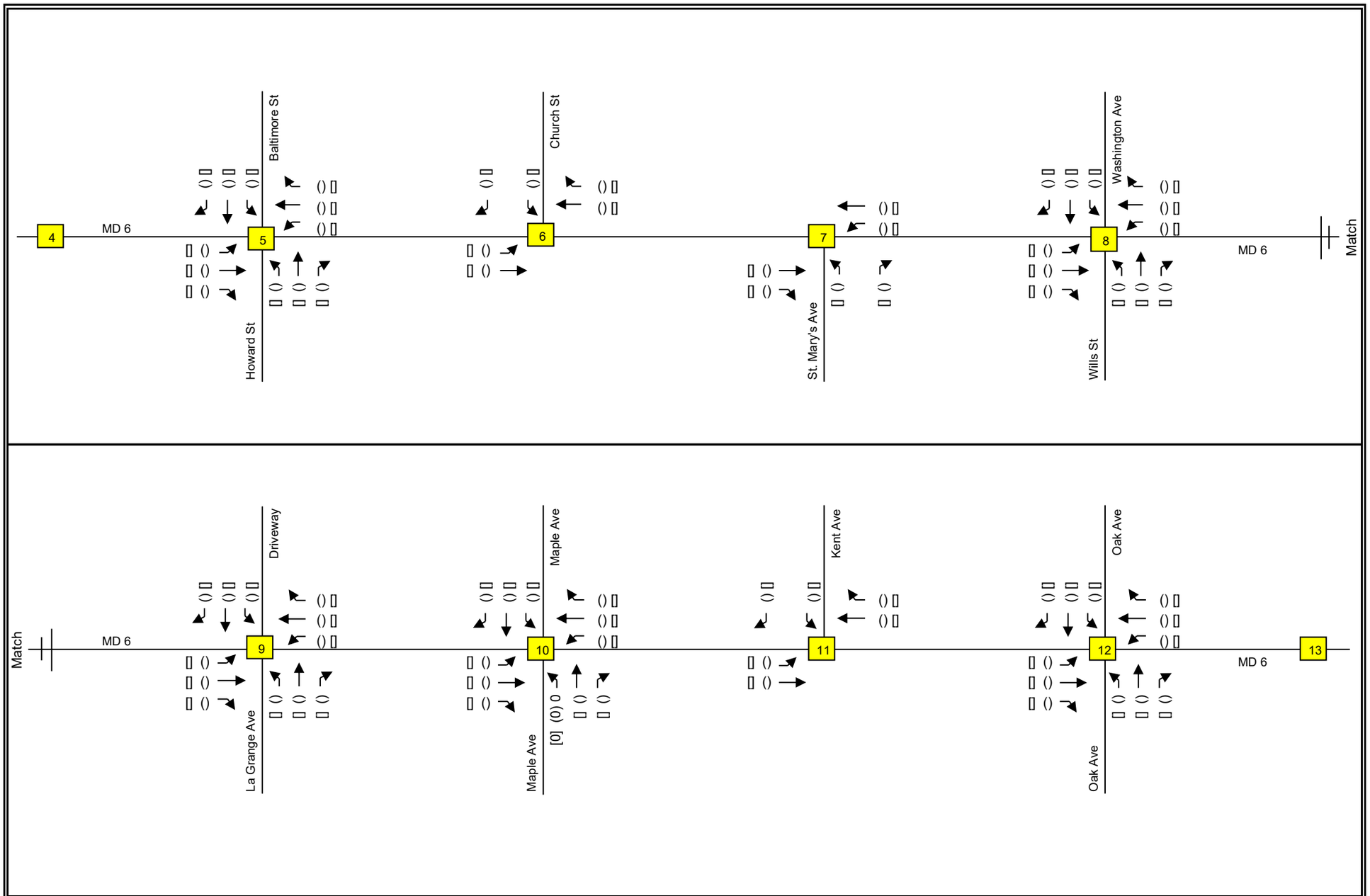


Traffic Impact Analysis	Trip Assignment for Sagepoint	**Exhibit C-9b**
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	

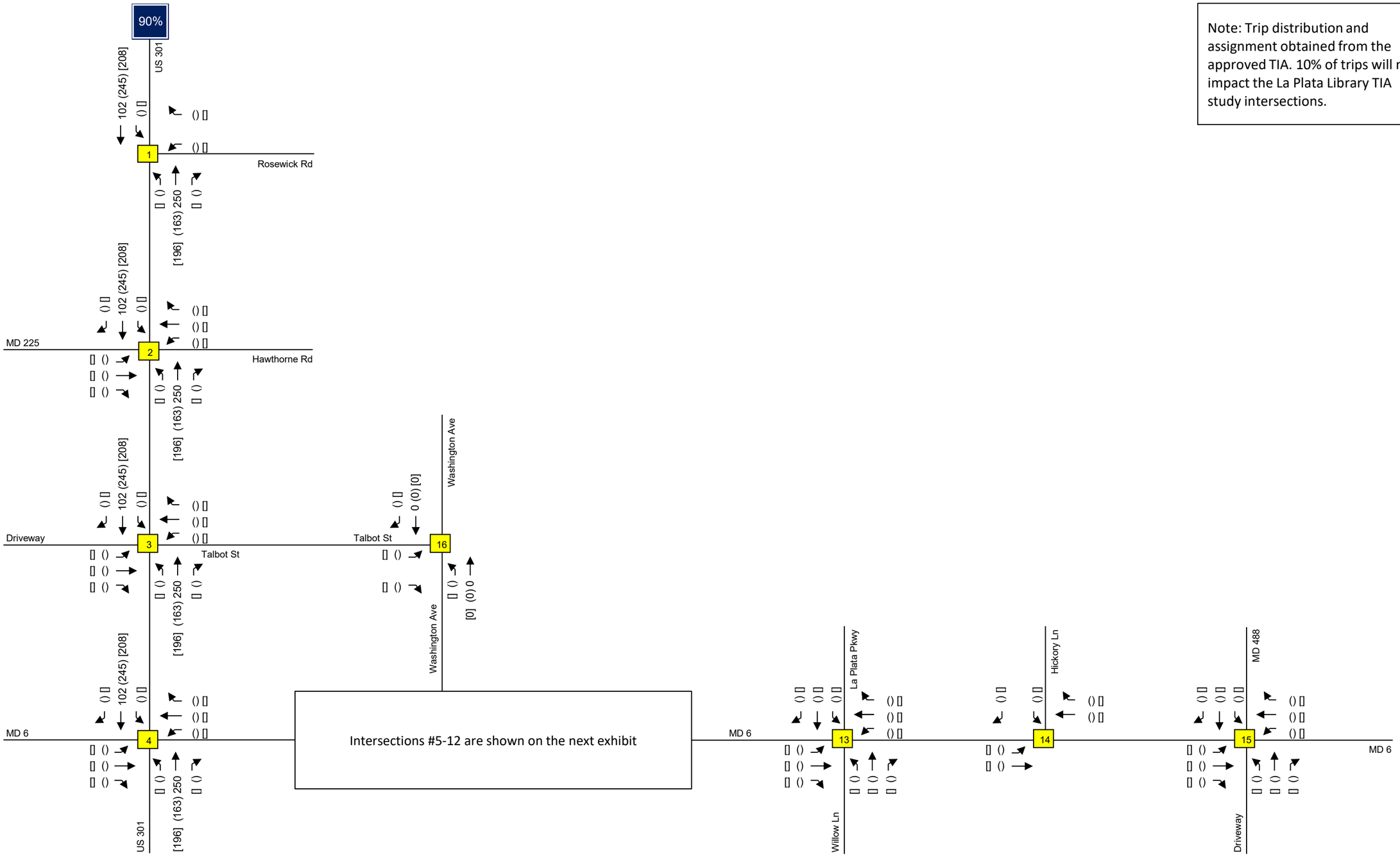


Note: Trip distribution and assignment obtained from the approved TIA. 10% of trips will not impact the La Plata Library TIA study intersections.

Traffic Impact Analysis	Trip Assignment for Villages of Steeplechase	**Exhibit** **C-12a**
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	

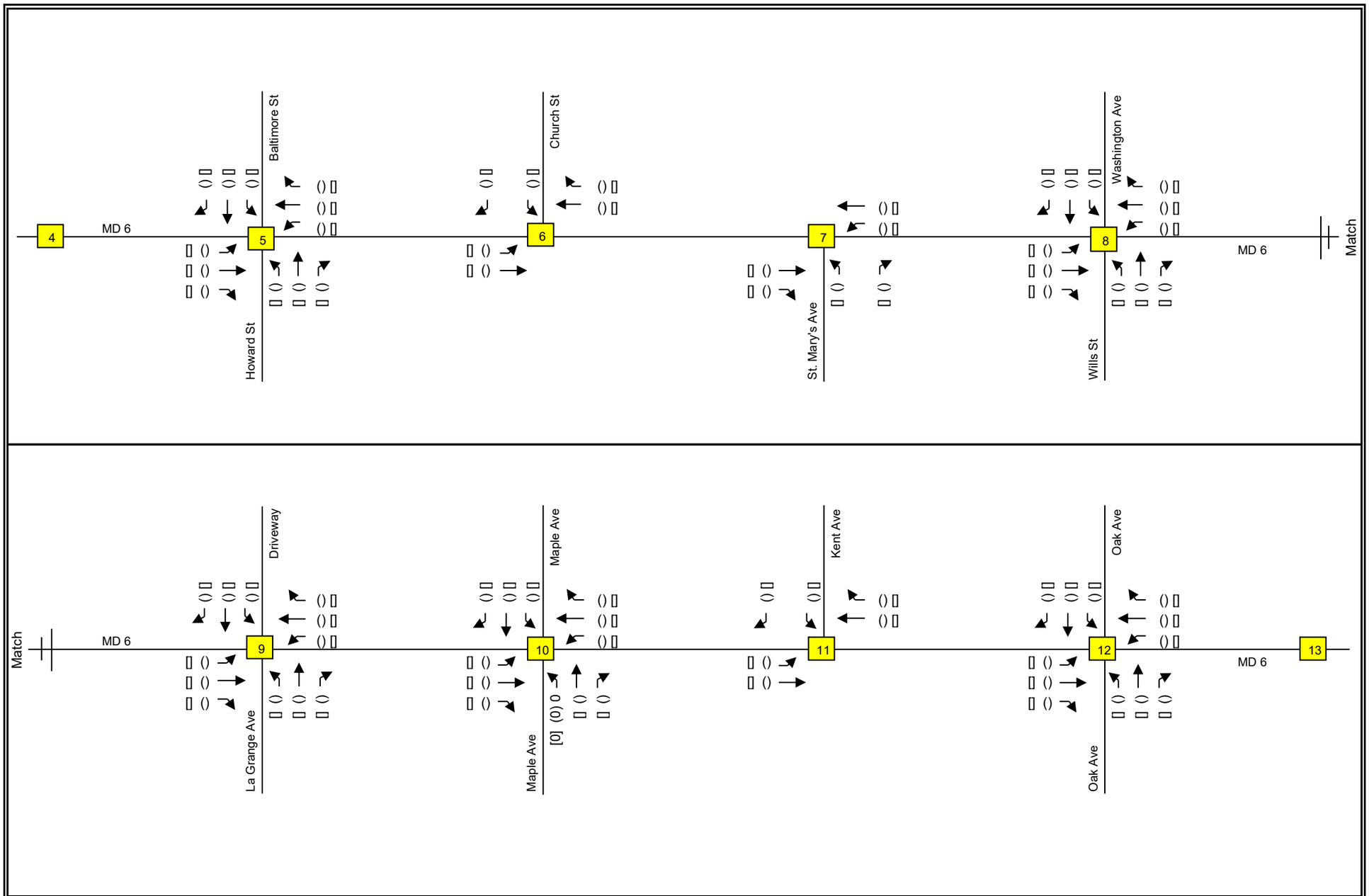


Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Trip Assignment for Villages of Steeplechase Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit C-12b**



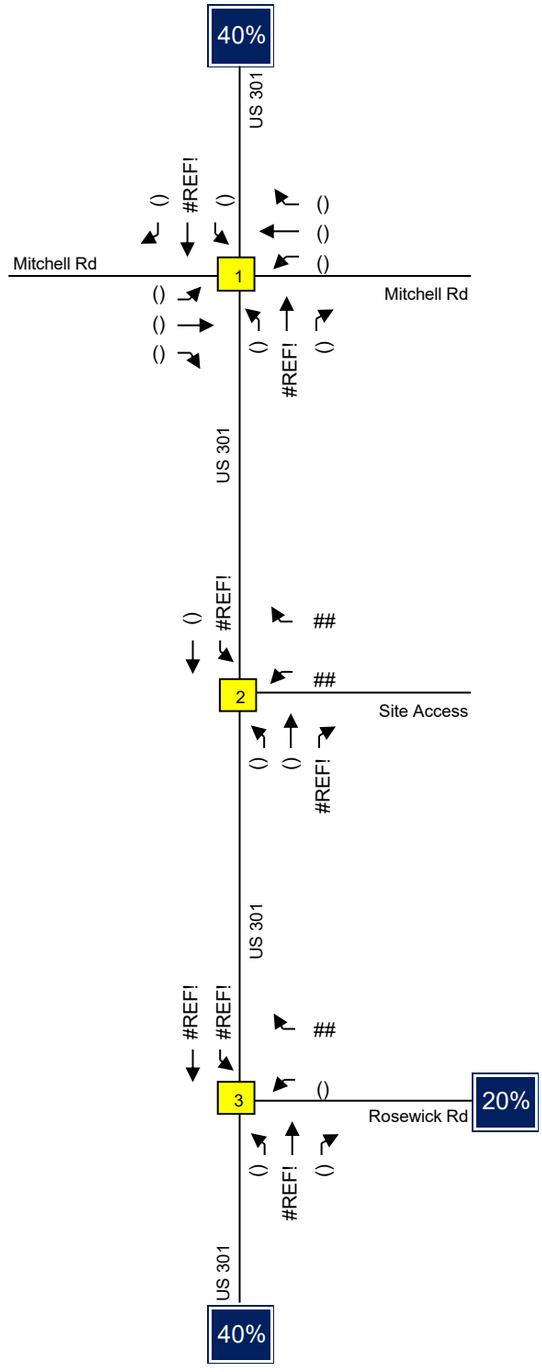
Note: Trip distribution and assignment obtained from the approved TIA. 10% of trips will not impact the La Plata Library TIA study intersections.

Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Trip Assignment for Stagecoach Crossing Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit C-13a**



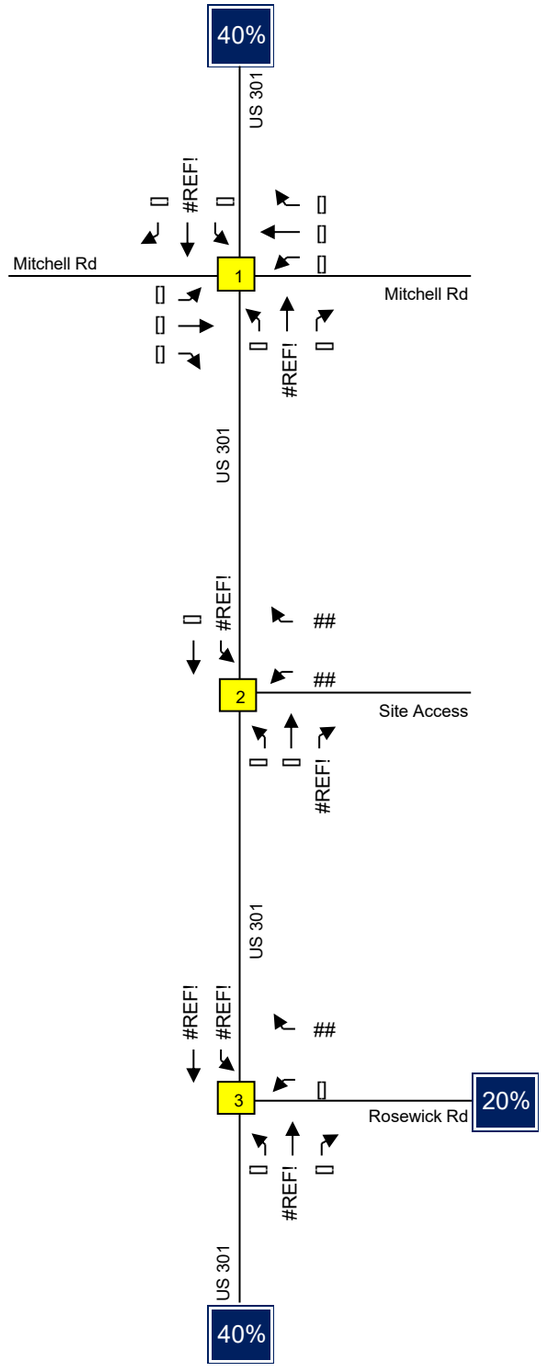
Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Trip Assignment for Stagecoach Crossing Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit C-13b**

Note: Pass-by trips for this development will not impact the study intersections of the La Plata Library TIA.



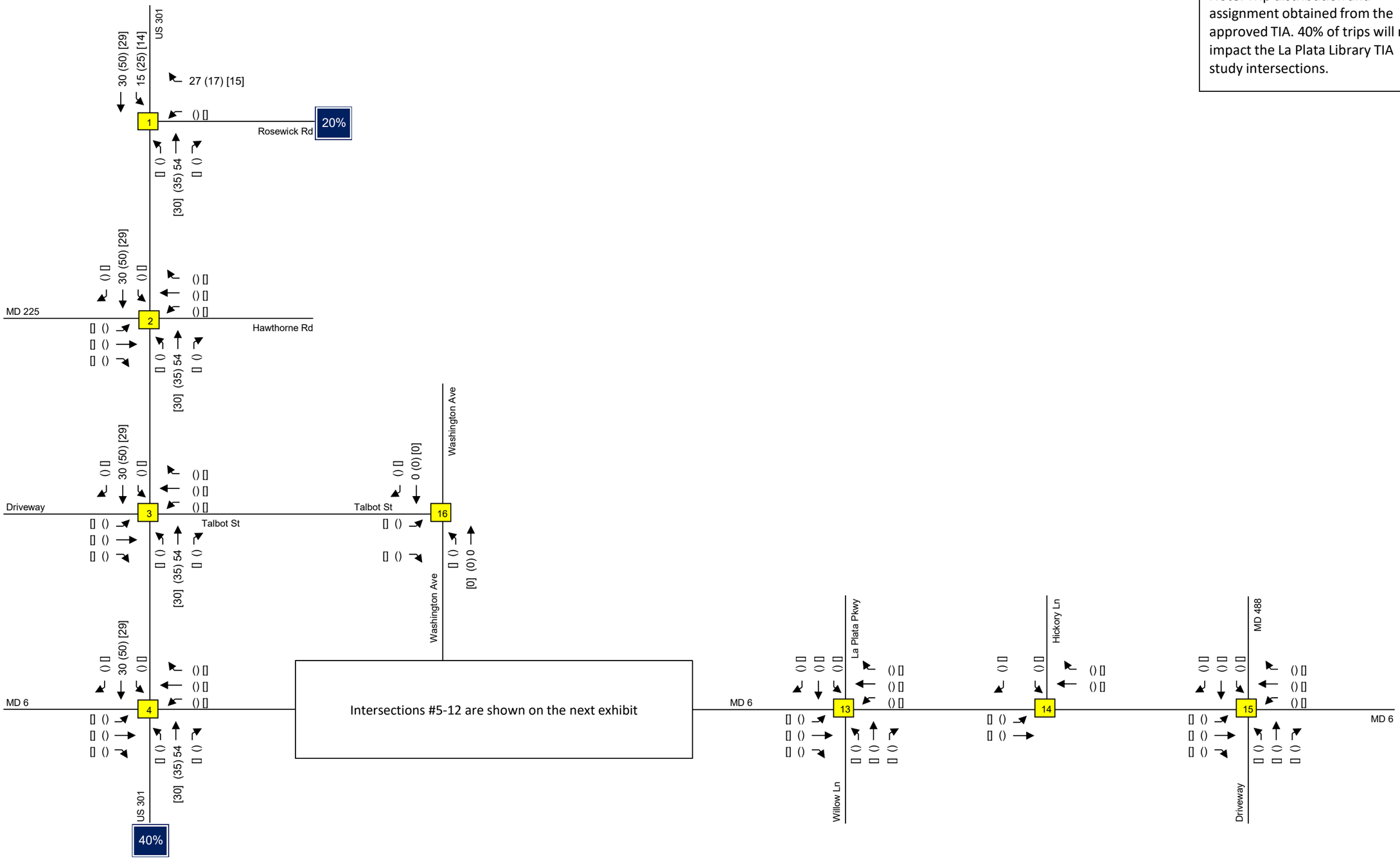
Traffic Impact Analysis	Primary Trip Assignment La Plata Business Park	**Exhibit 7a**
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Key: xx = AM Peak Vol's (xx) = PM Peak Vol's	

Note: Pass-by trips for this development will not impact the study intersections of the La Plata Library TIA.

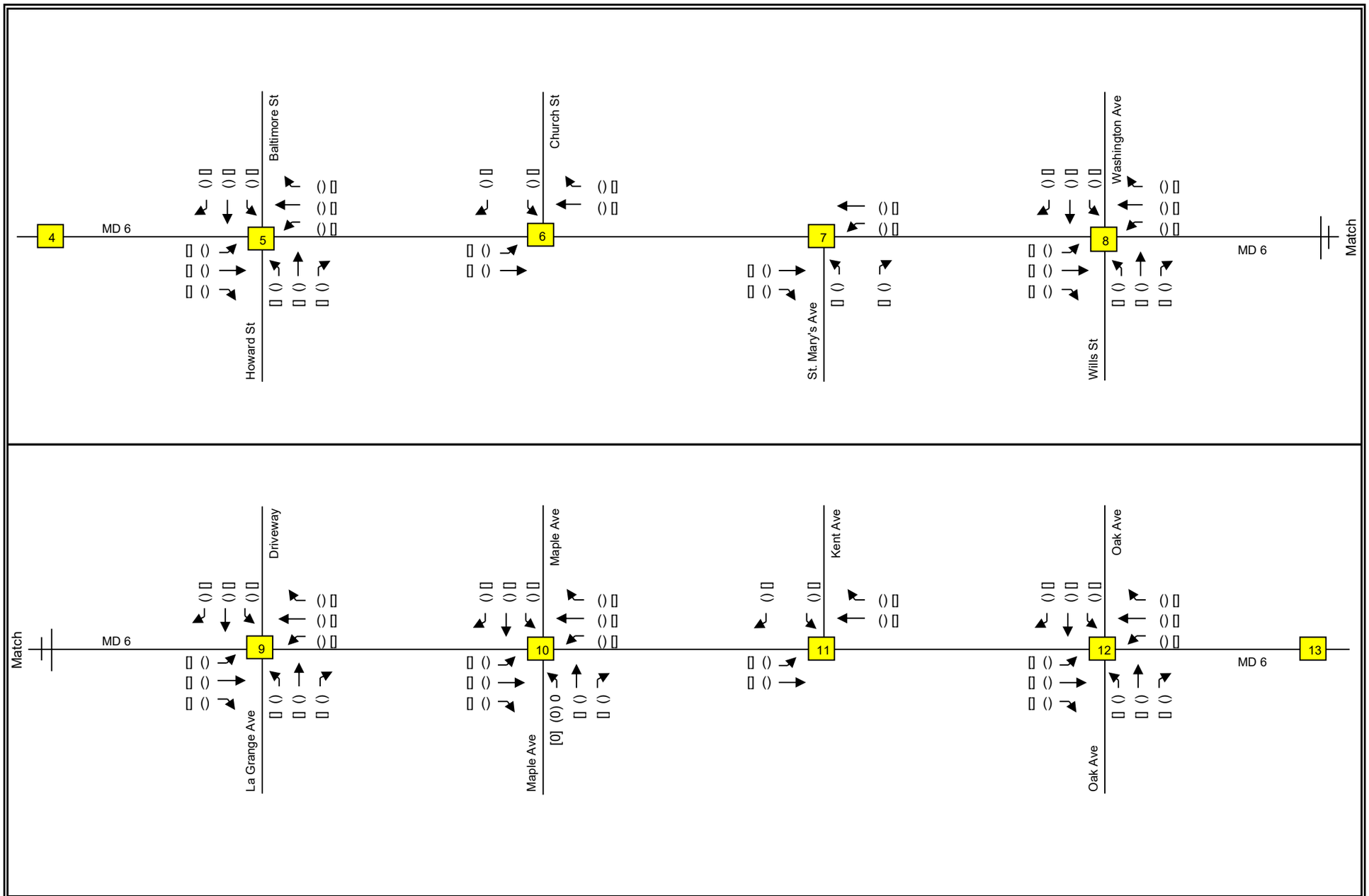


Traffic Impact Analysis	Primary Trip Assignment La Plata Business Park	**Exhibit 7a**
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Key: [xx] = Midday Sat. Peak Vol's	

Note: Trip distribution and assignment obtained from the approved TIA. 40% of trips will not impact the La Plata Library TIA study intersections.



Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Trip Assignment for La Plata Business Park Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit C-14a**



Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Trip Assignment for La Plata Business Park Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit C-14b**

Trip Generation Rates

High School (Students, ITE-530)

	Trip Distribution (In/Out)
Ln(Morning Trips) = 0.67 x Ln(Students) + 1.73	68/32
Evening Trips = 0.15 x Students	48/52
Midday Sat. Trips = 0.12 x Students	

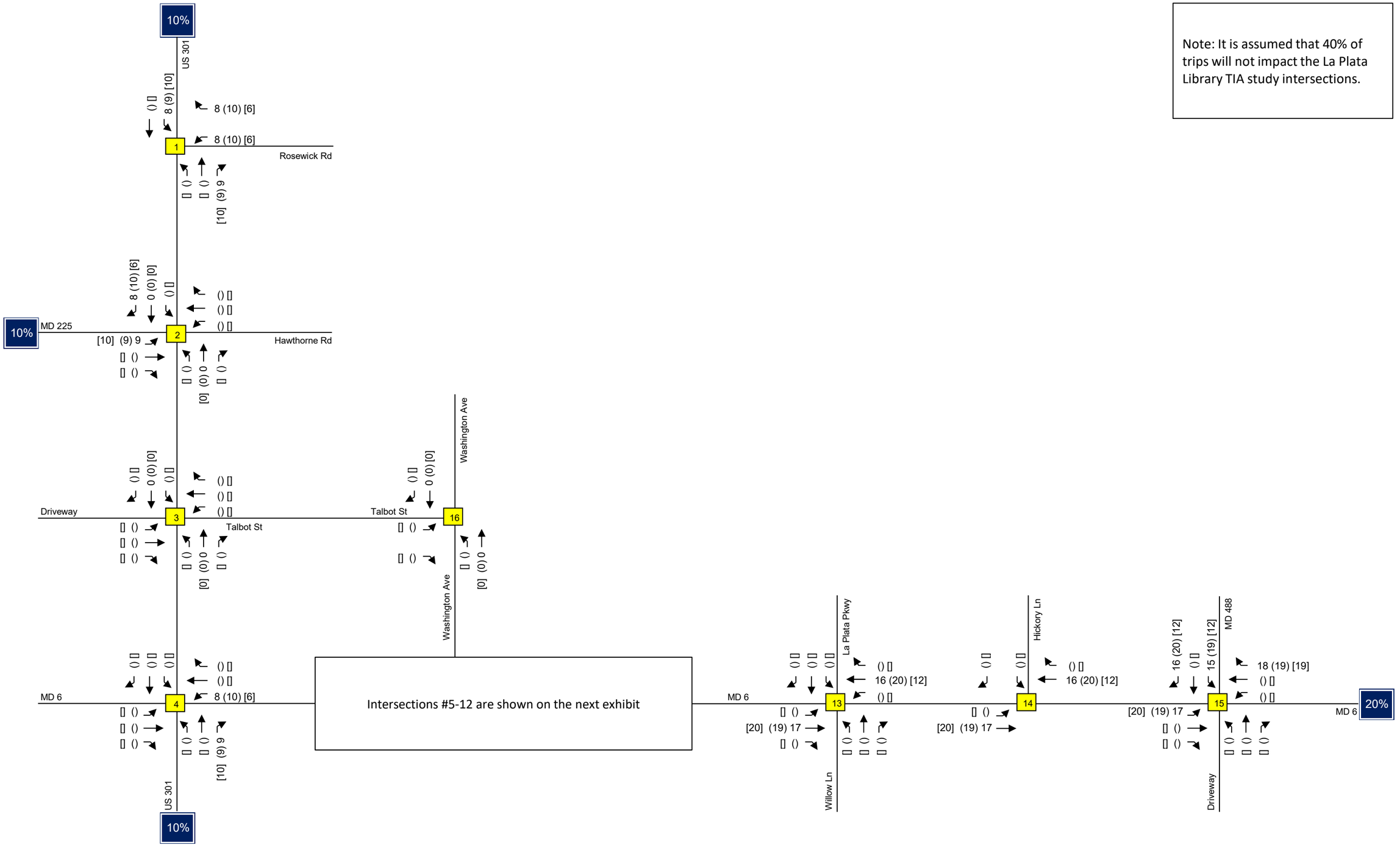
Trip Generation Totals

			AM Peak			PM Peak			Midday Sat. Peak		
			In	Out	Total	In	Out	Total	In	Out	Total
Existing	High School (Students, ITE-525)	300 students	175	83	258	22	23	45	23	13	36
Proposed	High School (Students, ITE-525)	400 students	212	100	312	29	31	60	30	18	48
		Net Primary Trips:	**37**	**17**	**54**	**7**	**8**	**15**	**7**	**5**	**12**

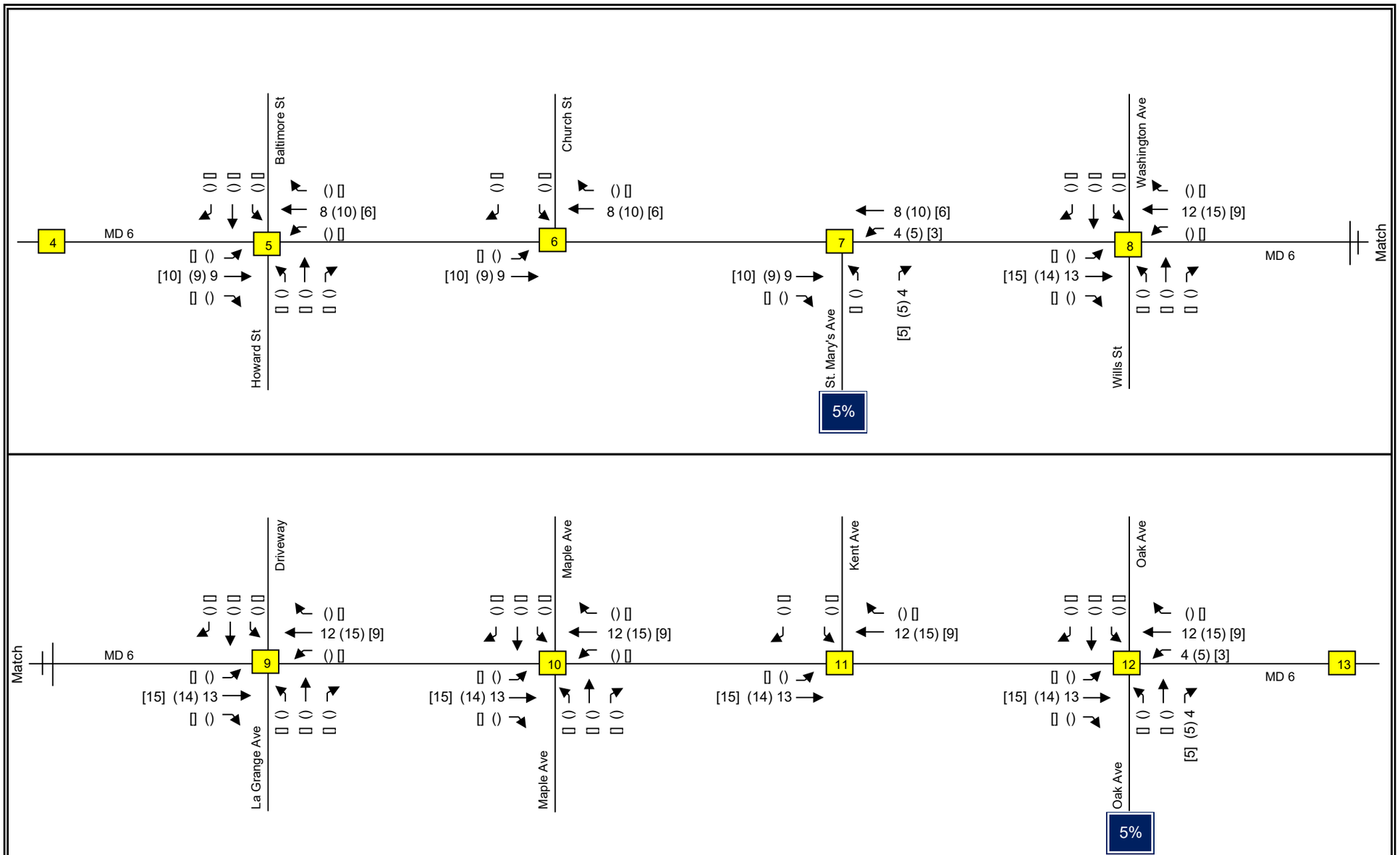
NOTE: Trip Generation and Passby Rates obtained from the ITE Trip Generation Manual, 12th Edition

Traffic Impact Analysis	Trip Generation for La Plata High School Student Increase	**Exhibit C-15**
Lenhart Traffic Consulting Traffic Engineering & Transportation Planning		

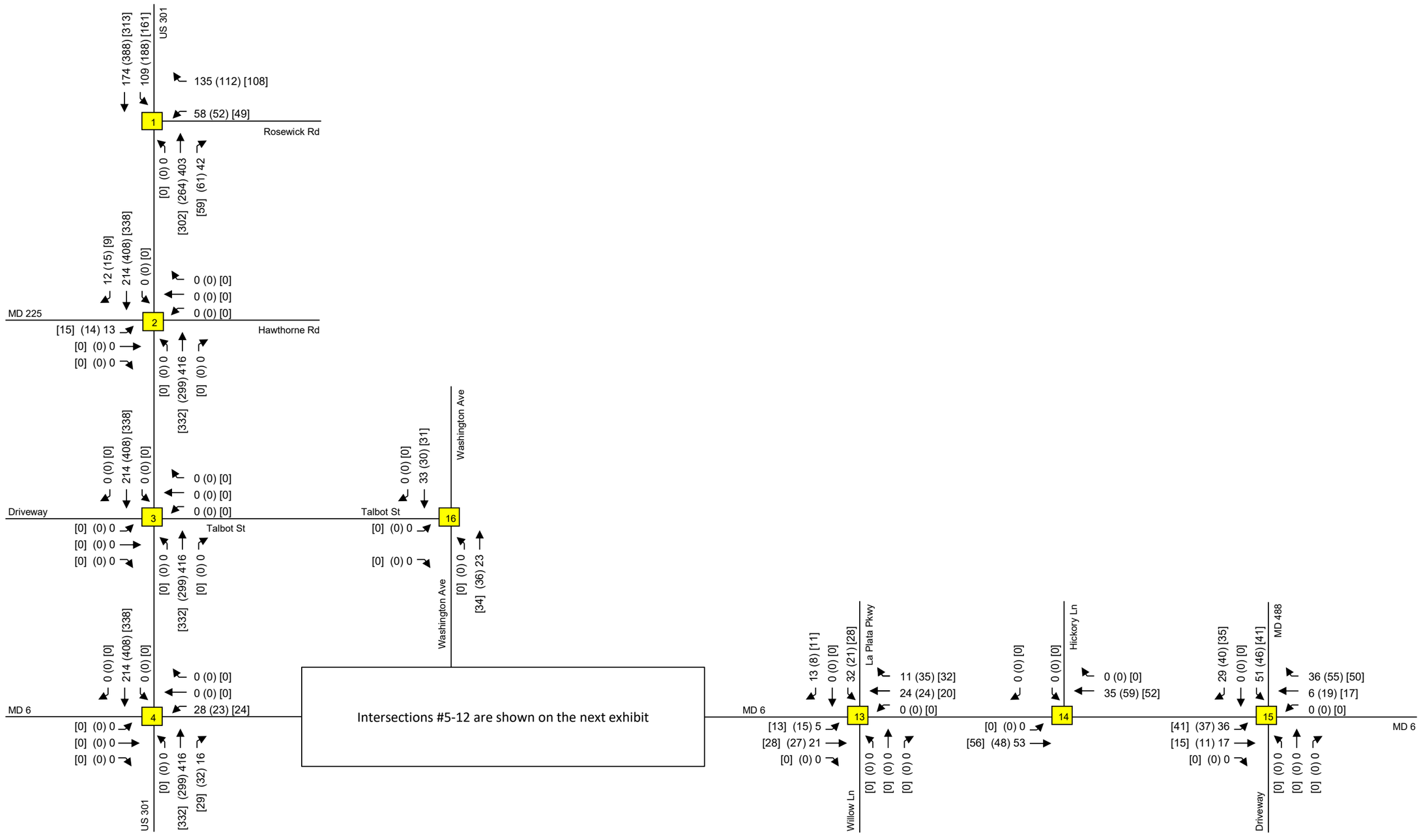
Note: It is assumed that 40% of trips will not impact the La Plata Library TIA study intersections.



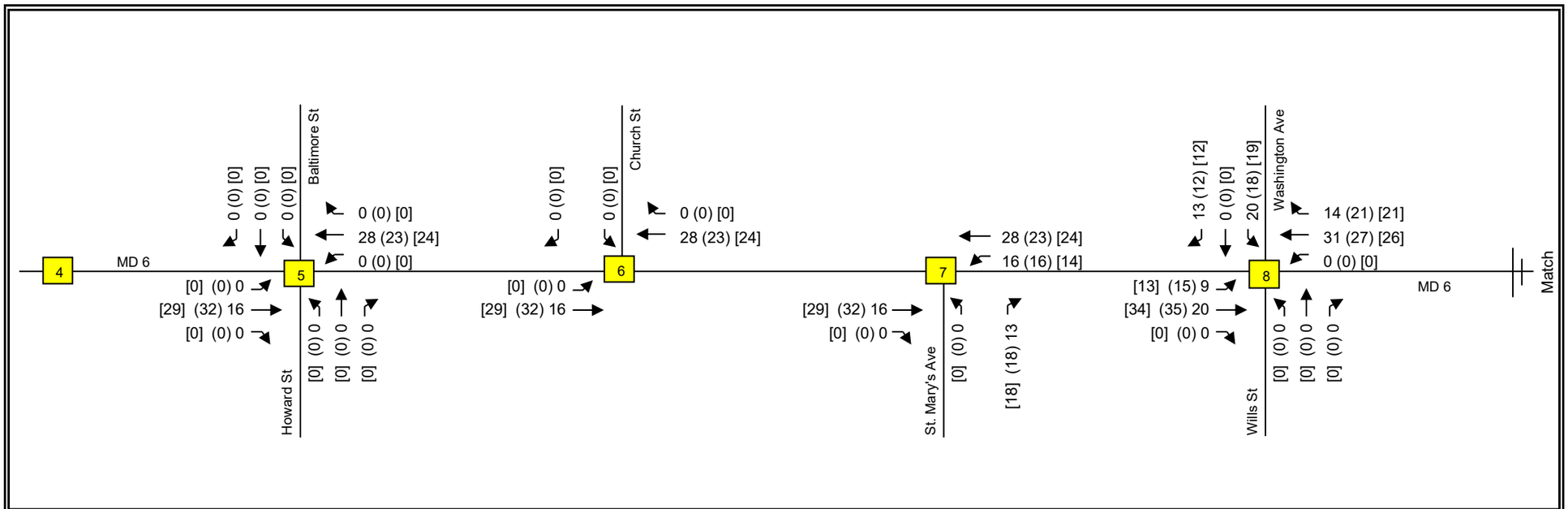
Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Trip Assignment for La Plata High School Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit C-16a**

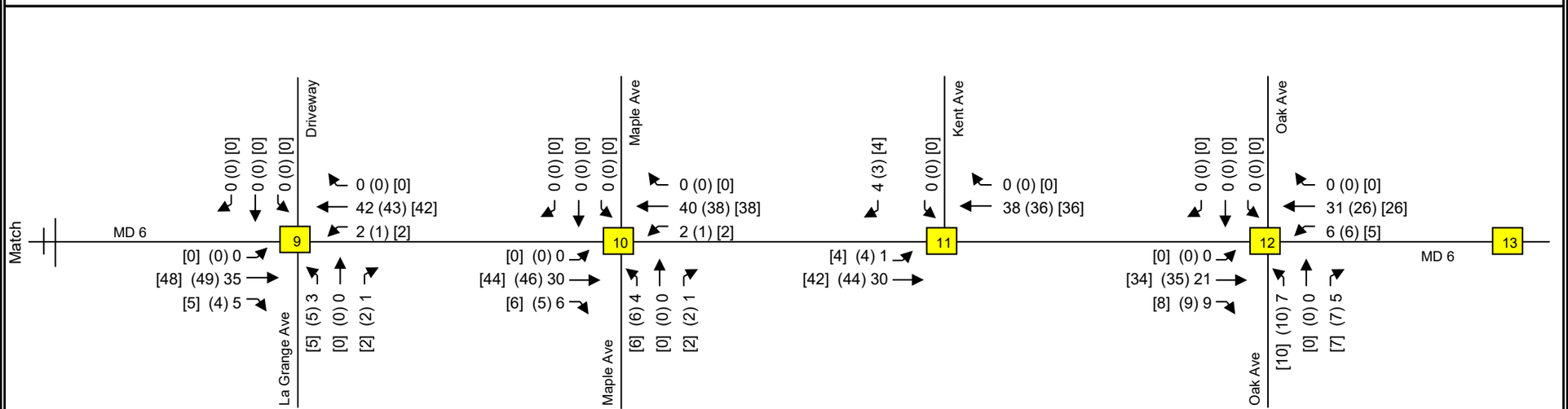


Traffic Impact Analysis	Trip Assignment for La Plata High School	**Exhibit C-16b**
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	



Traffic Impact Analysis Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Combined Trips from Background Developments Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	**Exhibit C-17a**





Traffic Impact Analysis	Combined Trips from Background Developments	**Exhibit C-17b**
Lenhart Traffic Consulting, Inc. Traffic Engineering & Transportation Planning	Key: xx = AM Peak (xx) = PM Peak [xx] = Sat Peak	

Appendix D

MDOT SHA MD 6 Project Information

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
TENTATIVE
NOVEMBER 2025
THIS DOCUMENT/PLAN IS DRAFT AND SUBJECT TO CHANGE

50 SCALE
AERIAL PHOTOGRAPHY 2011
CHARLES COUNTY

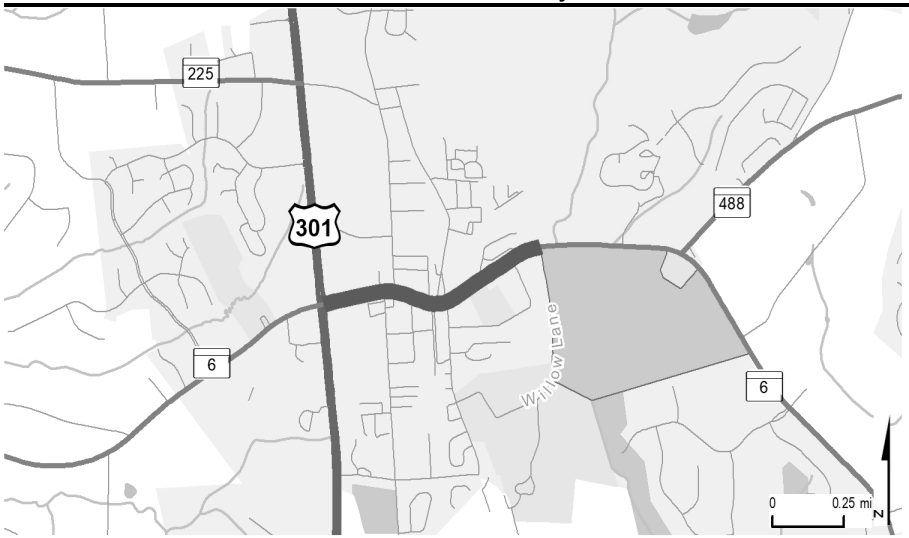
MD 6 (CHARLES ST) – FROM US 301 TO WILLOW LANE

PROPOSED IMPROVEMENTS

PUBLIC DISPLAY (65% DESIGN COMPLETION)

- TEXTURED PAVEMENT
- SHARED USE PATH
- CONCRETE SIDEWALK
- GREEN SPACE / LANDSCAPE BUFFER
- MILLING AND RESURFACING
- PAVEMENT REMOVAL
- PROPOSED R.O.W. LINE
- EXISTING R.O.W. LINE
- PROPERTY LINE
- TEMPORARY EASEMENT
- TRAFFIC SIGNAL (EXISTING)
- TRAFFIC SIGNAL (PROPOSED)





PROJECT: MD 6, Charles Street

DESCRIPTION: Safety and accessibility improvements between US 301 and Willow Lane. Improvements will include mountable roundabouts that will calm traffic, improve safety, and still allow for heavy vehicle and emergency vehicle access.

PURPOSE & NEED SUMMARY STATEMENT: This project will improve safety and accessibility for vulnerable users along MD 6 and provide streetscape treatments to create a sense of place in La Plata.

SMART GROWTH STATUS: ☐ Project Not Location Specific ☐ Not Subject to PFA Law

- ☒ Project Inside PFA
- ☐ Project Outside PFA
- ☐ PFA Status Yet to Be Determined

- ☐ Grandfathered
- ☐ Exception Will Be Required
- ☐ Exception Granted

STATUS: Engineering underway.

SIGNIFICANT CHANGE FROM FY 2024 - 29 CTP: The cost increase of $2.1 million is based on additional design needed for refinements to the project scope.

POTENTIAL FUNDING SOURCE: ☒ SPECIAL ☒ FEDERAL ☐ GENERAL ☐ OTHER

PHASE	TOTAL ESTIMATED COST ($000)	EXPENDED THRU 2024	EXPENDED IN 2024	CURRENT YEAR 2025	BUDGET YEAR 2026	PROJECTED CASH REQUIREMENTS FOR PLANNING PURPOSES ONLY ...2027...	...2028...	...2029...	...2030...	SIX YEAR TOTAL	BALANCE TO COMPLETE
Planning	0	0	0	0	0	0	0	0	0	0	0
Engineering	3,503	1,148	761	739	746	746	124	0	0	2,355	0
Right-of-way	500	0	0	0	250	250	0	0	0	500	0
Utilities	2,499	0	0	384	577	577	577	384	0	2,499	0
Construction	0	0	0	0	0	0	0	0	0	0	0
Total	**6,502**	**1,148**	**761**	**1,123**	**1,573**	**1,573**	**701**	**384**	**0**	**5,354**	**0**
Federal-Aid	6,001	1,044	680	1,032	1,478	1,478	631	338	0	4,957	0
Special	501	104	81	91	95	95	70	46	0	397	0
Other	0	0	0	0	0	0	0	0	0	0	0

Classification:

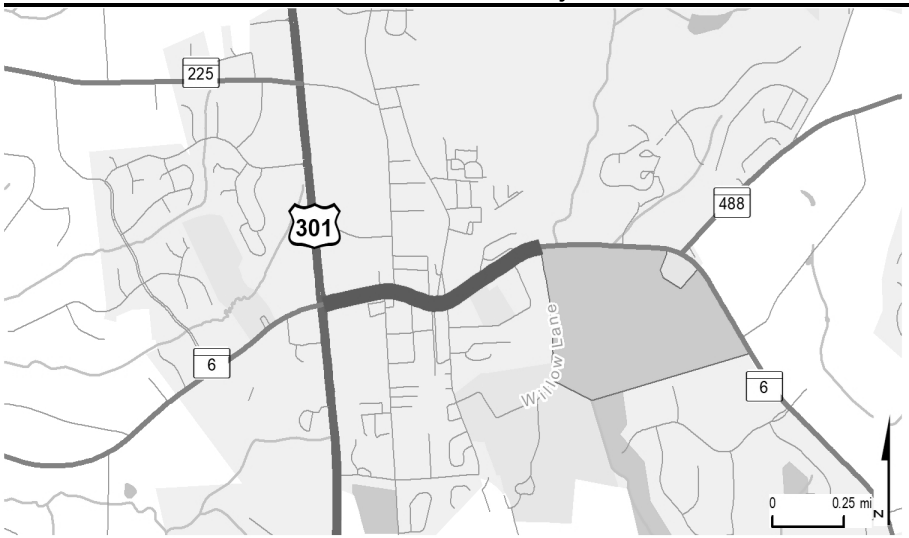
STATE - Minor Arterial
FEDERAL - Minor Arterial
STATE SYSTEM: Secondary

Estimated Annual Average Daily Traffic (vehicles per day)

CURRENT (2024) 22,700

PROJECTED (2044) 29,300

STIP REFERENCE #CH2481 12/1/2024



PROJECT: MD 6, Charles Street

DESCRIPTION: Safety and accessibility improvements between US 301 and Willow Lane. Improvements will include mountable roundabouts that will calm traffic, improve safety, and still allow for heavy vehicle and emergency vehicle access.

PURPOSE & NEED SUMMARY STATEMENT: This project will make Complete Streets safety and accessibility improvements for vulnerable users along MD 6 and provide other enhancements to create a sense of place in La Plata.

SMART GROWTH STATUS: ☐ Project Not Location Specific ☐ Not Subject to PFA Law

- ☒ Project Inside PFA
- ☐ Project Outside PFA
- ☐ PFA Status Yet to Be Determined

- ☐ Grandfathered
- ☐ Exception Will Be Required
- ☐ Exception Granted

STATUS: Engineering underway.

SIGNIFICANT CHANGE FROM FY 2025 - 30 CTP: None.

403 of 466

POTENTIAL FUNDING SOURCE: ☒ SPECIAL ☒ FEDERAL ☐ GENERAL ☐ OTHER

PHASE	TOTAL ESTIMATED COST ($000)	EXPENDED THRU 2025	EXPENDED IN 2025	CURRENT YEAR 2026	BUDGET YEAR 2027	PROJECTED CASH REQUIREMENTS FOR PLANNING PURPOSES ONLY ...2028...	...2029...	...2030...	...2031...	SIX YEAR TOTAL	BALANCE TO COMPLETE
Planning	0	0	0	0	0	0	0	0	0	0	0
Engineering	3,503	1,945	797	719	719	120	0	0	0	1,558	0
Right-of-way	592	0	0	148	148	148	148	0	0	592	0
Utilities	2,500	0	0	682	682	682	454	0	0	2,500	0
Construction	0	0	0	0	0	0	0	0	0	0	0
Total	**6,595**	**1,945**	**797**	**1,549**	**1,549**	**950**	**602**	**0**	**0**	**4,650**	**0**
Federal-Aid	6,059	1,783	739	1,448	1,448	850	530	0	0	4,276	0
Special	536	162	58	101	101	100	72	0	0	374	0
Other	0	0	0	0	0	0	0	0	0	0	0

Classification:

STATE - Minor Arterial
FEDERAL - Minor Arterial
STATE SYSTEM: Secondary

Estimated Annual Average Daily Traffic (vehicles per day)

CURRENT (2025) 22,700

PROJECTED (2045) 29,300

STIP REFERENCE #CH2481 8/1/2025

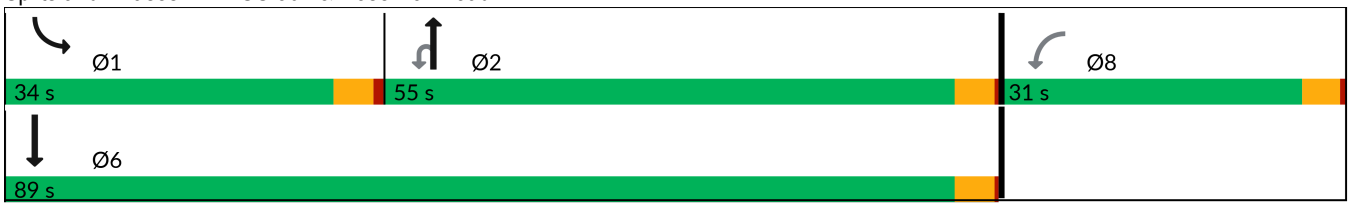
Appendix E

Traffic Signal Timing Sheets

Phase Number	1	2	6	8
Movement	SBL	NBTU	SBT	WBL
Lead/Lag	Lead	Lag		
Lead-Lag Optimize	Yes	Yes		
Recall Mode	None	Max	None	None
Maximum Split (s)	34	55	89	31
Maximum Split (%)	28.3%	45.8%	74.2%	25.8%
Minimum Split (s)	9.5	20	20	20
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	0.5	0.5	0.5
Minimum Initial (s)	5	4	4	4
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)		5	5	5
Flash Don't Walk (s)		11	11	11
Dual Entry	No	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	34	0	89
End Time (s)	34	89	89	0
Yield/Force Off (s)	29.5	85	85	116
Yield/Force Off 170(s)	29.5	74	74	105
Local Start Time (s)	86	0	86	55
Local Yield (s)	115.5	51	51	82
Local Yield 170(s)	115.5	40	40	71

Intersection Summary	
Cycle Length	120
Control Type	Semi Act-Uncoord
Natural Cycle	60

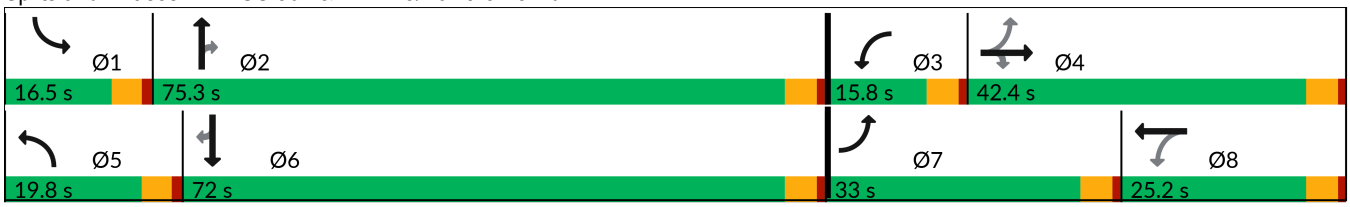
Splits and Phases: 1: US 301 & Rosewick Road



Phase Number	1	2	3	4	5	6	7	8
Movement	SBL	NBT	WBL	EBTL	NBL	SBT	EBL	WBTL
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)	16.5	75.3	15.8	42.4	19.8	72	33	25.2
Maximum Split (%)	11.0%	50.2%	10.5%	28.3%	13.2%	48.0%	22.0%	16.8%
Minimum Split (s)	9.5	22.5	9.5	22.5	9.5	22.5	9.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5	5	5
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 Don't 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	16.5	91.8	107.6	0	19.8	91.8	124.8
End Time (s)	16.5	91.8	107.6	0	19.8	91.8	124.8	0
Yield/Force Off (s)	12	87.3	103.1	145.5	15.3	87.3	120.3	145.5
Yield/Force Off 170(s)	12	76.3	103.1	134.5	15.3	76.3	120.3	134.5
Local Start Time (s)	130.2	146.7	72	87.8	130.2	0	72	105
Local Yield (s)	142.2	67.5	83.3	125.7	145.5	67.5	100.5	125.7
Local Yield 170(s)	142.2	56.5	83.3	114.7	145.5	56.5	100.5	114.7

Intersection Summary	
Cycle Length	150
Control Type	Actuated-Uncoordinated
Natural Cycle	80

Splits and Phases: 2: US 301 & MD 225/Hawthorne Rd



Phase Number	1	2	4	5	6	8
Movement	SBL	NBT	EBTL	NBL	SBT	WBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	27	60.8	35	30.2	57.6	27.2
Maximum Split (%)	18.0%	40.5%	23.3%	20.1%	38.4%	18.1%
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Don't Walk (s)		11	11		11	11
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	27	87.8	0	30.2	122.8
End Time (s)	27	87.8	122.8	30.2	87.8	0
Yield/Force Off (s)	22.5	83.3	118.3	25.7	83.3	145.5
Yield/Force Off 170(s)	22.5	72.3	107.3	25.7	72.3	134.5
Local Start Time (s)	119.8	146.8	57.6	119.8	0	92.6
Local Yield (s)	142.3	53.1	88.1	145.5	53.1	115.3
Local Yield 170(s)	142.3	42.1	77.1	145.5	42.1	104.3

Intersection Summary	
Cycle Length	150
Control Type	Actuated-Uncoordinated
Natural Cycle	90

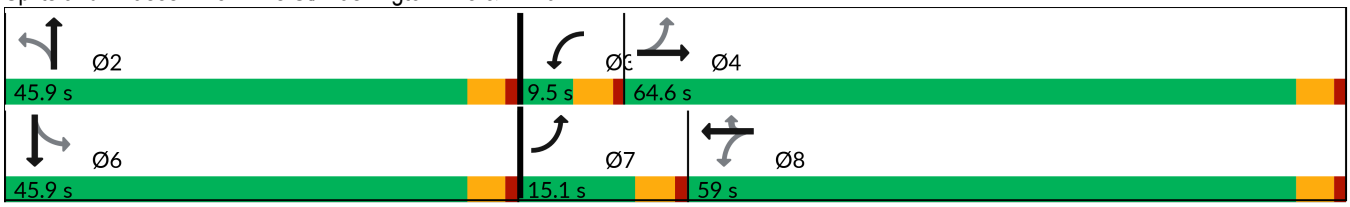
Splits and Phases: 4: US 301 & MD 6



Phase Number	2	3	4	6	7	8
Movement	NBTL	WBL	EBTL	SBTL	EBL	WBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	Max	None	None	Max	None	None
Maximum Split (s)	45.9	9.5	64.6	45.9	15.1	59
Maximum Split (%)	38.3%	7.9%	53.8%	38.3%	12.6%	49.2%
Minimum Split (s)	22.5	9.5	22.5	22.5	9.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	7		7	7		7
Flash Don't Walk (s)	11		11	11		11
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	45.9	55.4	0	45.9	61
End Time (s)	45.9	55.4	0	45.9	61	0
Yield/Force Off (s)	41.4	50.9	115.5	41.4	56.5	115.5
Yield/Force Off 170(s)	30.4	50.9	104.5	30.4	56.5	104.5
Local Start Time (s)	0	45.9	55.4	0	45.9	61
Local Yield (s)	41.4	50.9	115.5	41.4	56.5	115.5
Local Yield 170(s)	30.4	50.9	104.5	30.4	56.5	104.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	60

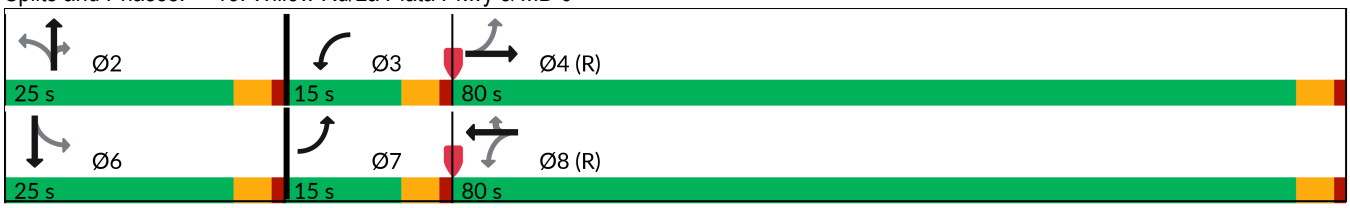
Splits and Phases: 8: Wills St/Washington Ave & MD 6



Phase Number	2	3	4	6	7	8
Movement	NBTL	WBL	EBTL	SBTL	EBL	WBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	Min	None	C-Max	Min	None	C-Max
Maximum Split (s)	25	15	80	25	15	80
Maximum Split (%)	20.8%	12.5%	66.7%	20.8%	12.5%	66.7%
Minimum Split (s)	22.5	9.5	22.5	22.5	9.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	7		7	7		7
Flash Don't Walk (s)	11		11	11		11
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	25	40	0	25	40
End Time (s)	25	40	0	25	40	0
Yield/Force Off (s)	20.5	35.5	115.5	20.5	35.5	115.5
Yield/Force Off 170(s)	20.5	35.5	104.5	20.5	35.5	104.5
Local Start Time (s)	80	105	0	80	105	0
Local Yield (s)	100.5	115.5	75.5	100.5	115.5	75.5
Local Yield 170(s)	100.5	115.5	64.5	100.5	115.5	64.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	75
Offset: 40 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	

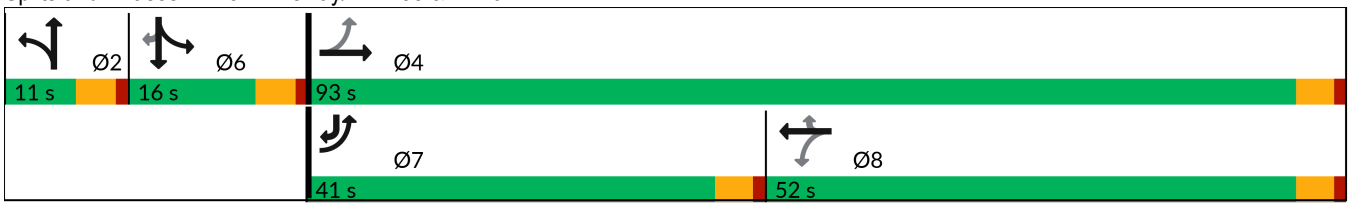
Splits and Phases: 13: Willow Rd/La Plata Pkwy & MD 6



Phase Number	2	4	6	7	8
Movement	NBTL	EBTL	SBTL	EBL	WBTL
Lead/Lag				Lead	Lag
Lead-Lag Optimize				Yes	Yes
Recall Mode	Min	None	Min	None	None
Maximum Split (s)	11	93	16	41	52
Maximum Split (%)	9.2%	77.5%	13.3%	34.2%	43.3%
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0
Walk Time (s)					
Flash Don't Walk (s)					
Dual Entry	Yes	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	27	11	27	68
End Time (s)	11	0	27	68	0
Yield/Force Off (s)	6.5	115.5	22.5	63.5	115.5
Yield/Force Off 170(s)	6.5	115.5	22.5	63.5	115.5
Local Start Time (s)	0	27	11	27	68
Local Yield (s)	6.5	115.5	22.5	63.5	115.5
Local Yield 170(s)	6.5	115.5	22.5	63.5	115.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	65

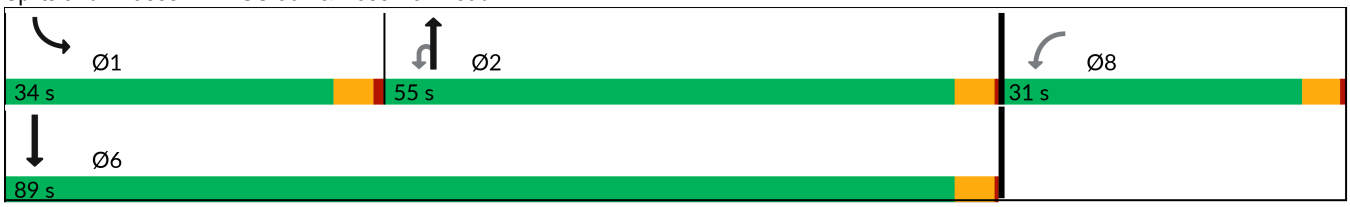
Splits and Phases: 15: Driveway/MD 488 & MD 6



Phase Number	1	2	6	8
Movement	SBL	NBTU	SBT	WBL
Lead/Lag	Lead	Lag		
Lead-Lag Optimize	Yes	Yes		
Recall Mode	None	Max	None	None
Maximum Split (s)	34	55	89	31
Maximum Split (%)	28.3%	45.8%	74.2%	25.8%
Minimum Split (s)	9.5	20	20	20
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	0.5	0.5	0.5
Minimum Initial (s)	5	4	4	4
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)		5	5	5
Flash Don't Walk (s)		11	11	11
Dual Entry	No	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	34	0	89
End Time (s)	34	89	89	0
Yield/Force Off (s)	29.5	85	85	116
Yield/Force Off 170(s)	29.5	74	74	105
Local Start Time (s)	86	0	86	55
Local Yield (s)	115.5	51	51	82
Local Yield 170(s)	115.5	40	40	71

Intersection Summary	
Cycle Length	120
Control Type	Semi Act-Uncoord
Natural Cycle	80

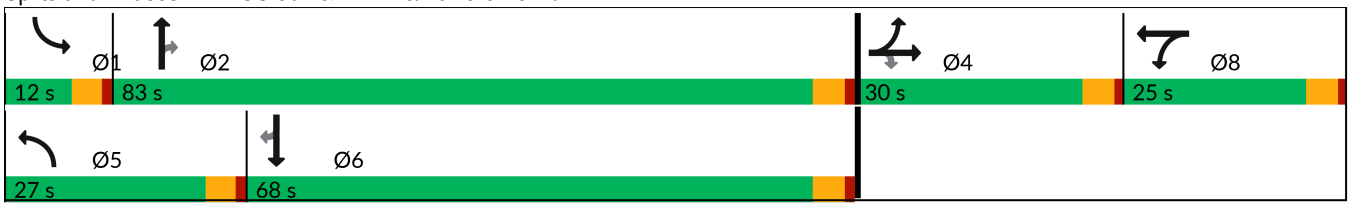
Splits and Phases: 1: US 301 & Rosewick Road



Phase Number	1	2	4	5	6	8
Movement	SBL	NBT	EBTL	NBL	SBT	WBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	12	83	30	27	68	25
Maximum Split (%)	8.0%	55.3%	20.0%	18.0%	45.3%	16.7%
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Don't Walk (s)		11	11		11	11
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	12	95	0	27	125
End Time (s)	12	95	125	27	95	0
Yield/Force Off (s)	7.5	90.5	120.5	22.5	90.5	145.5
Yield/Force Off 170(s)	7.5	79.5	109.5	22.5	79.5	134.5
Local Start Time (s)	123	135	68	123	0	98
Local Yield (s)	130.5	63.5	93.5	145.5	63.5	118.5
Local Yield 170(s)	130.5	52.5	82.5	145.5	52.5	107.5

Intersection Summary	
Cycle Length	150
Control Type	Actuated-Uncoordinated
Natural Cycle	120

Splits and Phases: 2: US 301 & MD 225/Hawthorne Rd



Phase Number	1	2	4	5	6	8
Movement	SBL	NBT	EBTL	NBL	SBT	WBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	27	60.8	35	30.2	57.6	27.2
Maximum Split (%)	18.0%	40.5%	23.3%	20.1%	38.4%	18.1%
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Don't Walk (s)		11	11		11	11
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	27	87.8	0	30.2	122.8
End Time (s)	27	87.8	122.8	30.2	87.8	0
Yield/Force Off (s)	22.5	83.3	118.3	25.7	83.3	145.5
Yield/Force Off 170(s)	22.5	72.3	107.3	25.7	72.3	134.5
Local Start Time (s)	119.8	146.8	57.6	119.8	0	92.6
Local Yield (s)	142.3	53.1	88.1	145.5	53.1	115.3
Local Yield 170(s)	142.3	42.1	77.1	145.5	42.1	104.3

Intersection Summary	
Cycle Length	150
Control Type	Actuated-Uncoordinated
Natural Cycle	110

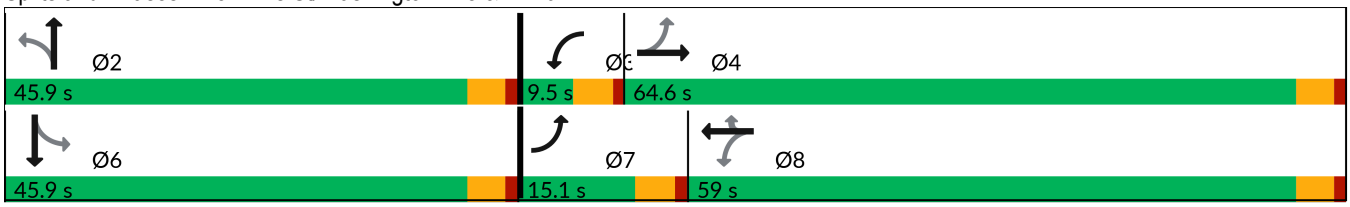
Splits and Phases: 4: US 301 & MD 6



Phase Number	2	3	4	6	7	8
Movement	NBTL	WBL	EBTL	SBTL	EBL	WBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	Max	None	None	Max	None	None
Maximum Split (s)	45.9	9.5	64.6	45.9	15.1	59
Maximum Split (%)	38.3%	7.9%	53.8%	38.3%	12.6%	49.2%
Minimum Split (s)	22.5	9.5	22.5	22.5	9.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	7		7	7		7
Flash Don't Walk (s)	11		11	11		11
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	45.9	55.4	0	45.9	61
End Time (s)	45.9	55.4	0	45.9	61	0
Yield/Force Off (s)	41.4	50.9	115.5	41.4	56.5	115.5
Yield/Force Off 170(s)	30.4	50.9	104.5	30.4	56.5	104.5
Local Start Time (s)	0	45.9	55.4	0	45.9	61
Local Yield (s)	41.4	50.9	115.5	41.4	56.5	115.5
Local Yield 170(s)	30.4	50.9	104.5	30.4	56.5	104.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	60

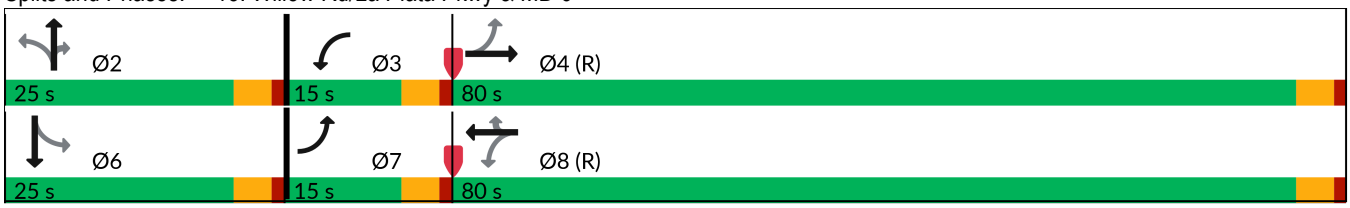
Splits and Phases: 8: Wills St/Washington Ave & MD 6



Phase Number	2	3	4	6	7	8
Movement	NBTL	WBL	EBTL	SBTL	EBL	WBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	Min	None	C-Max	Min	None	C-Max
Maximum Split (s)	25	15	80	25	15	80
Maximum Split (%)	20.8%	12.5%	66.7%	20.8%	12.5%	66.7%
Minimum Split (s)	22.5	9.5	22.5	22.5	9.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	7		7	7		7
Flash Don't Walk (s)	11		11	11		11
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	25	40	0	25	40
End Time (s)	25	40	0	25	40	0
Yield/Force Off (s)	20.5	35.5	115.5	20.5	35.5	115.5
Yield/Force Off 170(s)	20.5	35.5	104.5	20.5	35.5	104.5
Local Start Time (s)	80	105	0	80	105	0
Local Yield (s)	100.5	115.5	75.5	100.5	115.5	75.5
Local Yield 170(s)	100.5	115.5	64.5	100.5	115.5	64.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	80
Offset: 40 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	

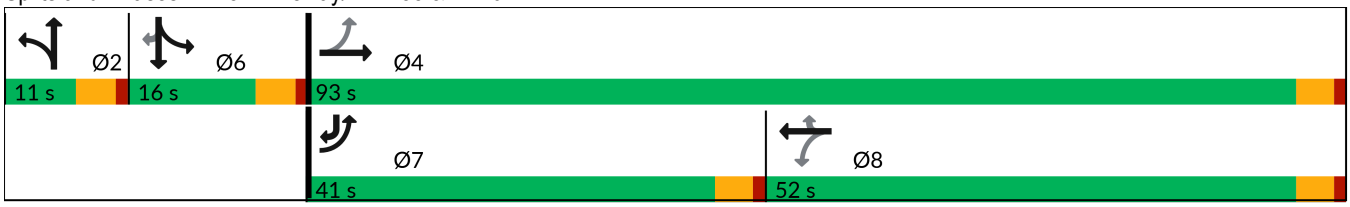
Splits and Phases: 13: Willow Rd/La Plata Pkwy & MD 6



Phase Number	2	4	6	7	8
Movement	NBTL	EBTL	SBTL	EBL	WBTL
Lead/Lag				Lead	Lag
Lead-Lag Optimize				Yes	Yes
Recall Mode	Min	None	Min	None	None
Maximum Split (s)	11	93	16	41	52
Maximum Split (%)	9.2%	77.5%	13.3%	34.2%	43.3%
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0
Walk Time (s)					
Flash Don't Walk (s)					
Dual Entry	Yes	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	27	11	27	68
End Time (s)	11	0	27	68	0
Yield/Force Off (s)	6.5	115.5	22.5	63.5	115.5
Yield/Force Off 170(s)	6.5	115.5	22.5	63.5	115.5
Local Start Time (s)	0	27	11	27	68
Local Yield (s)	6.5	115.5	22.5	63.5	115.5
Local Yield 170(s)	6.5	115.5	22.5	63.5	115.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	80

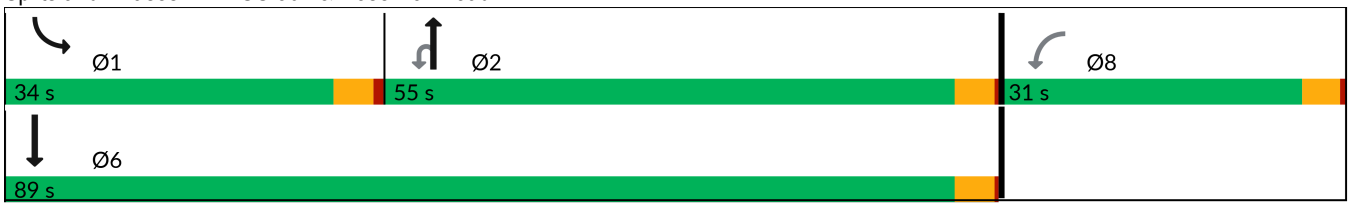
Splits and Phases: 15: Driveway/MD 488 & MD 6



Phase Number	1	2	6	8
Movement	SBL	NBTU	SBT	WBL
Lead/Lag	Lead	Lag		
Lead-Lag Optimize	Yes	Yes		
Recall Mode	None	Max	None	None
Maximum Split (s)	34	55	89	31
Maximum Split (%)	28.3%	45.8%	74.2%	25.8%
Minimum Split (s)	9.5	20	20	20
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	0.5	0.5	0.5
Minimum Initial (s)	5	4	4	4
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)		5	5	5
Flash Don't Walk (s)		11	11	11
Dual Entry	No	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	34	0	89
End Time (s)	34	89	89	0
Yield/Force Off (s)	29.5	85	85	116
Yield/Force Off 170(s)	29.5	74	74	105
Local Start Time (s)	86	0	86	55
Local Yield (s)	115.5	51	51	82
Local Yield 170(s)	115.5	40	40	71

Intersection Summary	
Cycle Length	120
Control Type	Semi Act-Uncoord
Natural Cycle	80

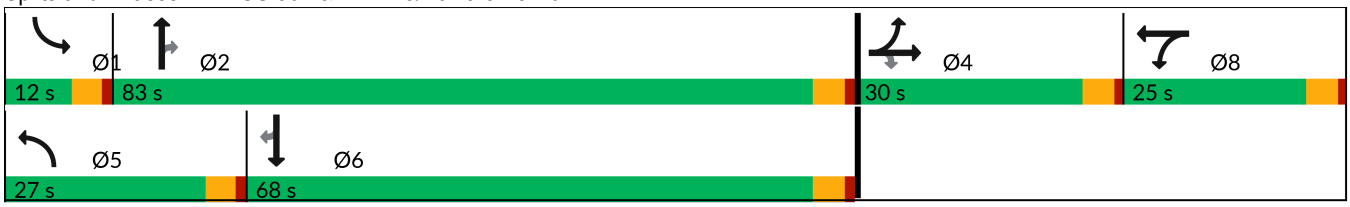
Splits and Phases: 1: US 301 & Rosewick Road



Phase Number	1	2	4	5	6	8
Movement	SBL	NBT	EBTL	NBL	SBT	WBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	12	83	30	27	68	25
Maximum Split (%)	8.0%	55.3%	20.0%	18.0%	45.3%	16.7%
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Don't Walk (s)		11	11		11	11
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	12	95	0	27	125
End Time (s)	12	95	125	27	95	0
Yield/Force Off (s)	7.5	90.5	120.5	22.5	90.5	145.5
Yield/Force Off 170(s)	7.5	79.5	109.5	22.5	79.5	134.5
Local Start Time (s)	123	135	68	123	0	98
Local Yield (s)	130.5	63.5	93.5	145.5	63.5	118.5
Local Yield 170(s)	130.5	52.5	82.5	145.5	52.5	107.5

Intersection Summary	
Cycle Length	150
Control Type	Actuated-Uncoordinated
Natural Cycle	120

Splits and Phases: 2: US 301 & MD 225/Hawthorne Rd



Phase Number	1	2	4	5	6	8
Movement	SBL	NBT	EBTL	NBL	SBT	WBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	27	60.8	35	30.2	57.6	27.2
Maximum Split (%)	18.0%	40.5%	23.3%	20.1%	38.4%	18.1%
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Don't Walk (s)		11	11		11	11
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	27	87.8	0	30.2	122.8
End Time (s)	27	87.8	122.8	30.2	87.8	0
Yield/Force Off (s)	22.5	83.3	118.3	25.7	83.3	145.5
Yield/Force Off 170(s)	22.5	72.3	107.3	25.7	72.3	134.5
Local Start Time (s)	119.8	146.8	57.6	119.8	0	92.6
Local Yield (s)	142.3	53.1	88.1	145.5	53.1	115.3
Local Yield 170(s)	142.3	42.1	77.1	145.5	42.1	104.3

Intersection Summary	
Cycle Length	150
Control Type	Actuated-Uncoordinated
Natural Cycle	110

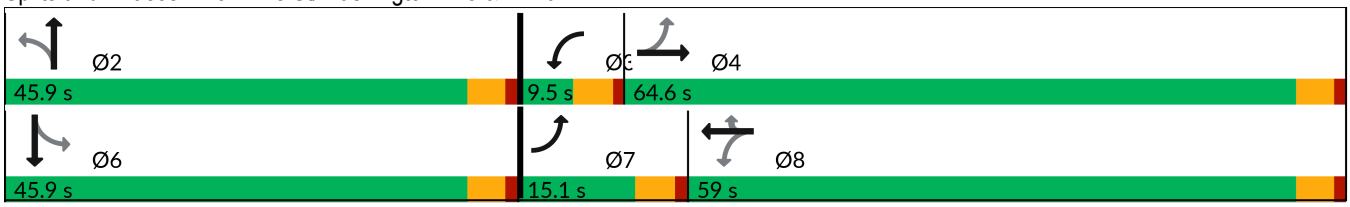
Splits and Phases: 4: US 301 & MD 6



Phase Number	2	3	4	6	7	8
Movement	NBTL	WBL	EBTL	SBTL	EBL	WBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	Max	None	None	Max	None	None
Maximum Split (s)	45.9	9.5	64.6	45.9	15.1	59
Maximum Split (%)	38.3%	7.9%	53.8%	38.3%	12.6%	49.2%
Minimum Split (s)	22.5	9.5	22.5	22.5	9.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	7		7	7		7
Flash Don't Walk (s)	11		11	11		11
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	45.9	55.4	0	45.9	61
End Time (s)	45.9	55.4	0	45.9	61	0
Yield/Force Off (s)	41.4	50.9	115.5	41.4	56.5	115.5
Yield/Force Off 170(s)	30.4	50.9	104.5	30.4	56.5	104.5
Local Start Time (s)	0	45.9	55.4	0	45.9	61
Local Yield (s)	41.4	50.9	115.5	41.4	56.5	115.5
Local Yield 170(s)	30.4	50.9	104.5	30.4	56.5	104.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	60

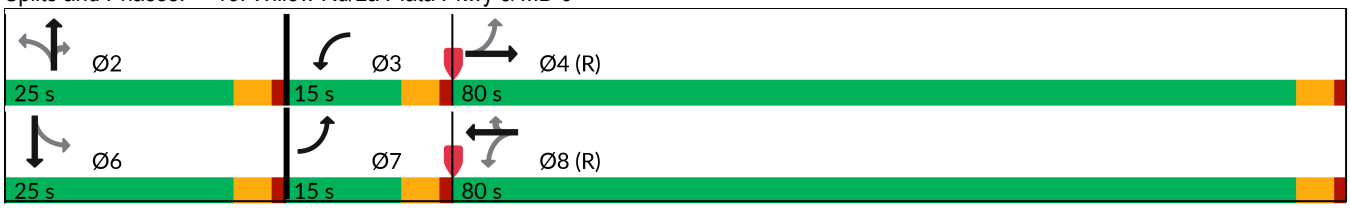
Splits and Phases: 8: Wills St/Washington Ave & MD 6



Phase Number	2	3	4	6	7	8
Movement	NBTL	WBL	EBTL	SBTL	EBL	WBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	Min	None	C-Max	Min	None	C-Max
Maximum Split (s)	25	15	80	25	15	80
Maximum Split (%)	20.8%	12.5%	66.7%	20.8%	12.5%	66.7%
Minimum Split (s)	22.5	9.5	22.5	22.5	9.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	7		7	7		7
Flash Don't Walk (s)	11		11	11		11
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	25	40	0	25	40
End Time (s)	25	40	0	25	40	0
Yield/Force Off (s)	20.5	35.5	115.5	20.5	35.5	115.5
Yield/Force Off 170(s)	20.5	35.5	104.5	20.5	35.5	104.5
Local Start Time (s)	80	105	0	80	105	0
Local Yield (s)	100.5	115.5	75.5	100.5	115.5	75.5
Local Yield 170(s)	100.5	115.5	64.5	100.5	115.5	64.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	80
Offset: 40 (33%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	

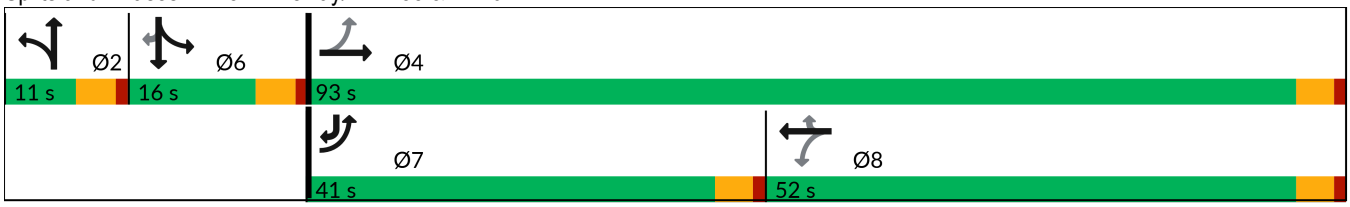
Splits and Phases: 13: Willow Rd/La Plata Pkwy & MD 6



Phase Number	2	4	6	7	8
Movement	NBTL	EBTL	SBTL	EBL	WBTL
Lead/Lag				Lead	Lag
Lead-Lag Optimize				Yes	Yes
Recall Mode	Min	None	Min	None	None
Maximum Split (s)	11	93	16	41	52
Maximum Split (%)	9.2%	77.5%	13.3%	34.2%	43.3%
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0
Walk Time (s)					
Flash Don't Walk (s)					
Dual Entry	Yes	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	27	11	27	68
End Time (s)	11	0	27	68	0
Yield/Force Off (s)	6.5	115.5	22.5	63.5	115.5
Yield/Force Off 170(s)	6.5	115.5	22.5	63.5	115.5
Local Start Time (s)	0	27	11	27	68
Local Yield (s)	6.5	115.5	22.5	63.5	115.5
Local Yield 170(s)	6.5	115.5	22.5	63.5	115.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	80

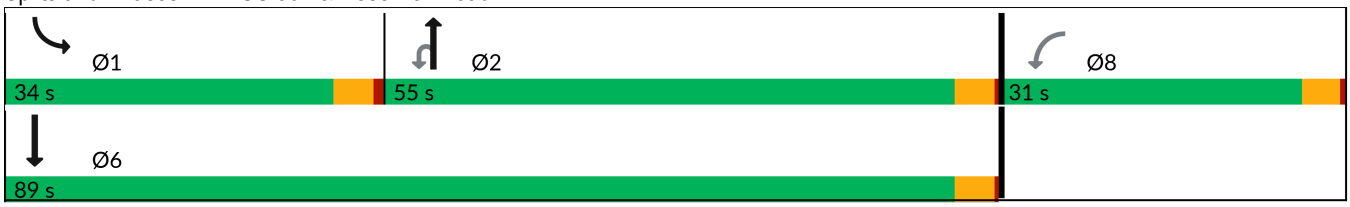
Splits and Phases: 15: Driveway/MD 488 & MD 6



Phase Number	1	2	6	8
Movement	SBL	NBTU	SBT	WBL
Lead/Lag	Lead	Lag		
Lead-Lag Optimize	Yes	Yes		
Recall Mode	None	Max	None	None
Maximum Split (s)	34	55	89	31
Maximum Split (%)	28.3%	45.8%	74.2%	25.8%
Minimum Split (s)	9.5	20	20	20
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	0.5	0.5	0.5
Minimum Initial (s)	5	4	4	4
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)		5	5	5
Flash Don't Walk (s)		11	11	11
Dual Entry	No	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	34	0	89
End Time (s)	34	89	89	0
Yield/Force Off (s)	29.5	85	85	116
Yield/Force Off 170(s)	29.5	74	74	105
Local Start Time (s)	86	0	86	55
Local Yield (s)	115.5	51	51	82
Local Yield 170(s)	115.5	40	40	71

Intersection Summary	
Cycle Length	120
Control Type	Semi Act-Uncoord
Natural Cycle	60

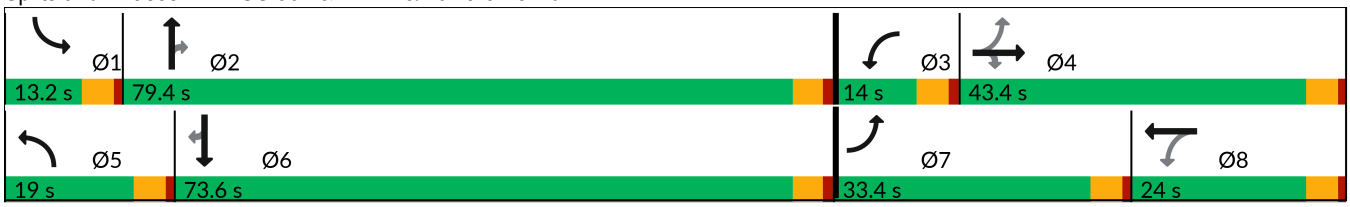
Splits and Phases: 1: US 301 & Rosewick Road



Phase Number	1	2	3	4	5	6	7	8
Movement	SBL	NBT	WBL	EBTL	NBL	SBT	EBL	WBTL
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)	13.2	79.4	14	43.4	19	73.6	33.4	24
Maximum Split (%)	8.8%	52.9%	9.3%	28.9%	12.7%	49.1%	22.3%	16.0%
Minimum Split (s)	9.5	22.5	9.5	22.5	9.5	22.5	9.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5	5	5
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 Don't 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	13.2	92.6	106.6	0	19	92.6	126
End Time (s)	13.2	92.6	106.6	0	19	92.6	126	0
Yield/Force Off (s)	8.7	88.1	102.1	145.5	14.5	88.1	121.5	145.5
Yield/Force Off 170(s)	8.7	77.1	102.1	134.5	14.5	77.1	121.5	134.5
Local Start Time (s)	131	144.2	73.6	87.6	131	0	73.6	107
Local Yield (s)	139.7	69.1	83.1	126.5	145.5	69.1	102.5	126.5
Local Yield 170(s)	139.7	58.1	83.1	115.5	145.5	58.1	102.5	115.5

Intersection Summary	
Cycle Length	150
Control Type	Actuated-Uncoordinated
Natural Cycle	100

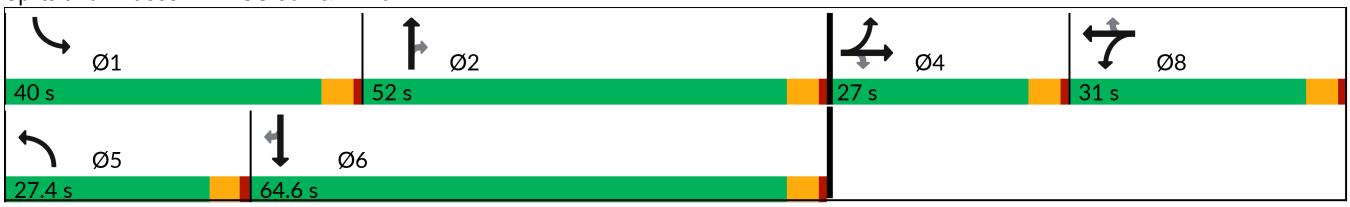
Splits and Phases: 2: US 301 & MD 225/Hawthorne Rd



Phase Number	1	2	4	5	6	8
Movement	SBL	NBT	EBTL	NBL	SBT	WBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	40	52	27	27.4	64.6	31
Maximum Split (%)	26.7%	34.7%	18.0%	18.3%	43.1%	20.7%
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Don't Walk (s)		11	11		11	11
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	40	92	0	27.4	119
End Time (s)	40	92	119	27.4	92	0
Yield/Force Off (s)	35.5	87.5	114.5	22.9	87.5	145.5
Yield/Force Off 170(s)	35.5	76.5	103.5	22.9	76.5	134.5
Local Start Time (s)	110	0	52	110	137.4	79
Local Yield (s)	145.5	47.5	74.5	132.9	47.5	105.5
Local Yield 170(s)	145.5	36.5	63.5	132.9	36.5	94.5

Intersection Summary	
Cycle Length	150
Control Type	Actuated-Uncoordinated
Natural Cycle	100

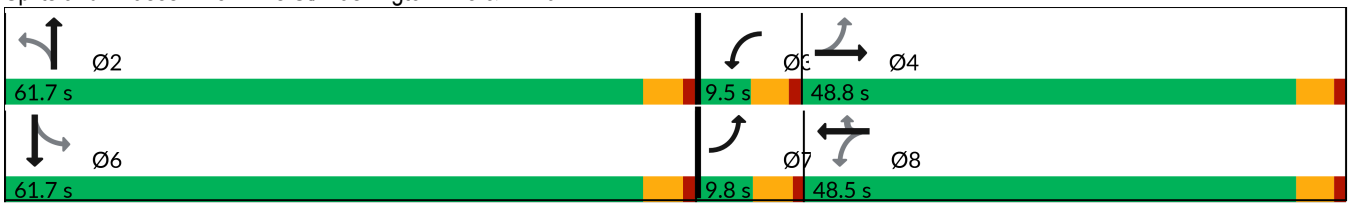
Splits and Phases: 4: US 301 & MD 6



Phase Number	2	3	4	6	7	8
Movement	NBTL	WBL	EBTL	SBTL	EBL	WBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	Max	None	None	Max	None	None
Maximum Split (s)	61.7	9.5	48.8	61.7	9.8	48.5
Maximum Split (%)	51.4%	7.9%	40.7%	51.4%	8.2%	40.4%
Minimum Split (s)	22.5	9.5	22.5	22.5	9.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	7		7	7		7
Flash Don't Walk (s)	11		11	11		11
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	61.7	71.2	0	61.7	71.5
End Time (s)	61.7	71.2	0	61.7	71.5	0
Yield/Force Off (s)	57.2	66.7	115.5	57.2	67	115.5
Yield/Force Off 170(s)	46.2	66.7	104.5	46.2	67	104.5
Local Start Time (s)	0	61.7	71.2	0	61.7	71.5
Local Yield (s)	57.2	66.7	115.5	57.2	67	115.5
Local Yield 170(s)	46.2	66.7	104.5	46.2	67	104.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	80

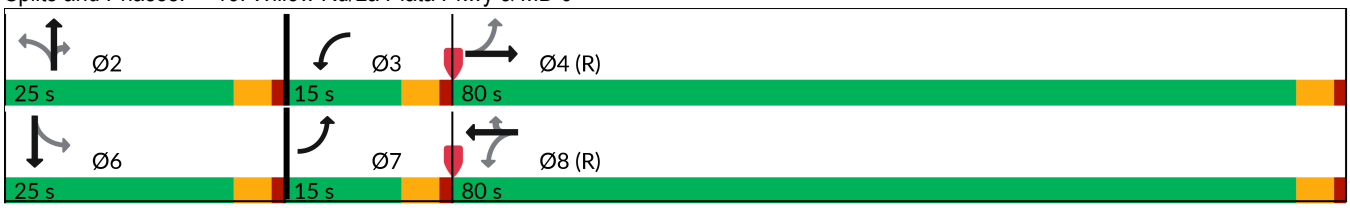
Splits and Phases: 8: Wills St/Washington Ave & MD 6



Phase Number	2	3	4	6	7	8
Movement	NBTL	WBL	EBTL	SBTL	EBL	WBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	Min	None	C-Max	Min	None	C-Max
Maximum Split (s)	25	15	80	25	15	80
Maximum Split (%)	20.8%	12.5%	66.7%	20.8%	12.5%	66.7%
Minimum Split (s)	22.5	9.5	22.5	22.5	9.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	7		7	7		7
Flash Don't Walk (s)	11		11	11		11
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	114	19	34	114	19	34
End Time (s)	19	34	114	19	34	114
Yield/Force Off (s)	14.5	29.5	109.5	14.5	29.5	109.5
Yield/Force Off 170(s)	14.5	29.5	98.5	14.5	29.5	98.5
Local Start Time (s)	80	105	0	80	105	0
Local Yield (s)	100.5	115.5	75.5	100.5	115.5	75.5
Local Yield 170(s)	100.5	115.5	64.5	100.5	115.5	64.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	90
Offset: 34 (28%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	

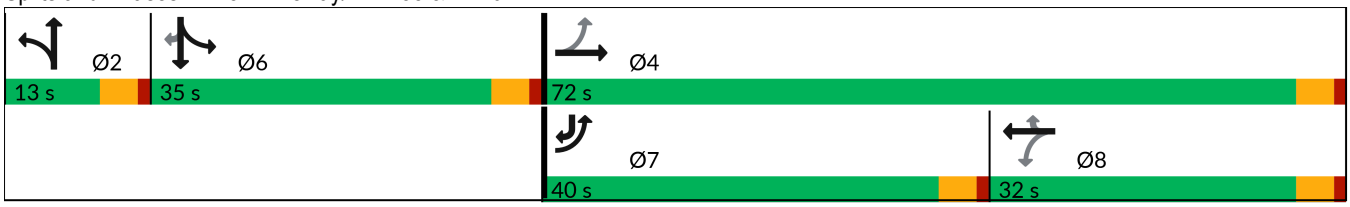
Splits and Phases: 13: Willow Rd/La Plata Pkwy & MD 6



Phase Number	2	4	6	7	8
Movement	NBTL	EBTL	SBTL	EBL	WBTL
Lead/Lag				Lead	Lag
Lead-Lag Optimize				Yes	Yes
Recall Mode	Min	None	Min	None	None
Maximum Split (s)	13	72	35	40	32
Maximum Split (%)	10.8%	60.0%	29.2%	33.3%	26.7%
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0
Walk Time (s)					
Flash Don't Walk (s)					
Dual Entry	Yes	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	48	13	48	88
End Time (s)	13	0	48	88	0
Yield/Force Off (s)	8.5	115.5	43.5	83.5	115.5
Yield/Force Off 170(s)	8.5	115.5	43.5	83.5	115.5
Local Start Time (s)	0	48	13	48	88
Local Yield (s)	8.5	115.5	43.5	83.5	115.5
Local Yield 170(s)	8.5	115.5	43.5	83.5	115.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	75

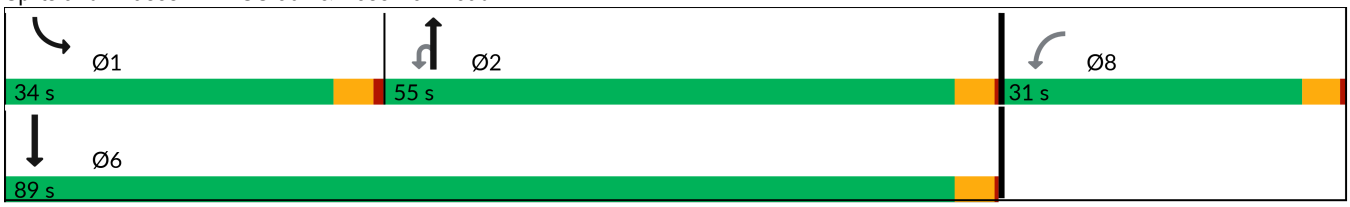
Splits and Phases: 15: Driveway/MD 488 & MD 6



Phase Number	1	2	6	8
Movement	SBL	NBTU	SBT	WBL
Lead/Lag	Lead	Lag		
Lead-Lag Optimize	Yes	Yes		
Recall Mode	None	Max	None	None
Maximum Split (s)	34	55	89	31
Maximum Split (%)	28.3%	45.8%	74.2%	25.8%
Minimum Split (s)	9.5	20	20	20
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	0.5	0.5	0.5
Minimum Initial (s)	5	4	4	4
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)		5	5	5
Flash Don't Walk (s)		11	11	11
Dual Entry	No	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	34	0	89
End Time (s)	34	89	89	0
Yield/Force Off (s)	29.5	85	85	116
Yield/Force Off 170(s)	29.5	74	74	105
Local Start Time (s)	86	0	86	55
Local Yield (s)	115.5	51	51	82
Local Yield 170(s)	115.5	40	40	71

Intersection Summary	
Cycle Length	120
Control Type	Semi Act-Uncoord
Natural Cycle	90

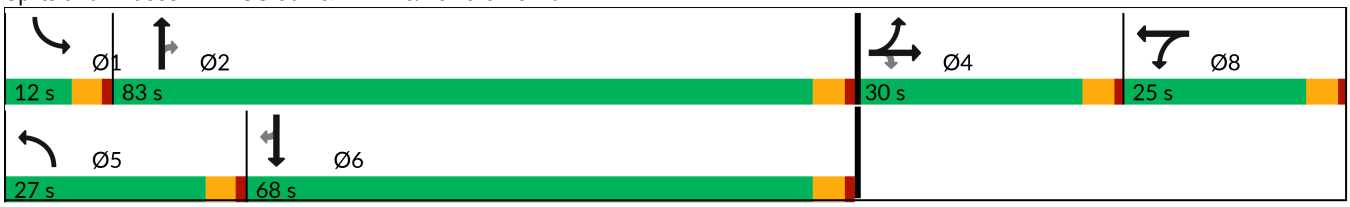
Splits and Phases: 1: US 301 & Rosewick Road



Phase Number	1	2	4	5	6	8
Movement	SBL	NBT	EBTL	NBL	SBT	WBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	12	83	30	27	68	25
Maximum Split (%)	8.0%	55.3%	20.0%	18.0%	45.3%	16.7%
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Don't Walk (s)		11	11		11	11
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	12	95	0	27	125
End Time (s)	12	95	125	27	95	0
Yield/Force Off (s)	7.5	90.5	120.5	22.5	90.5	145.5
Yield/Force Off 170(s)	7.5	79.5	109.5	22.5	79.5	134.5
Local Start Time (s)	123	135	68	123	0	98
Local Yield (s)	130.5	63.5	93.5	145.5	63.5	118.5
Local Yield 170(s)	130.5	52.5	82.5	145.5	52.5	107.5

Intersection Summary	
Cycle Length	150
Control Type	Actuated-Uncoordinated
Natural Cycle	150

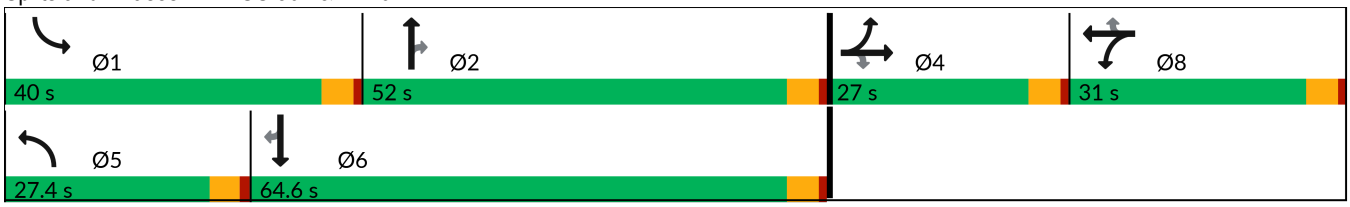
Splits and Phases: 2: US 301 & MD 225/Hawthorne Rd



Phase Number	1	2	4	5	6	8
Movement	SBL	NBT	EBTL	NBL	SBT	WBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	40	52	27	27.4	64.6	31
Maximum Split (%)	26.7%	34.7%	18.0%	18.3%	43.1%	20.7%
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Don't Walk (s)		11	11		11	11
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	40	92	0	27.4	119
End Time (s)	40	92	119	27.4	92	0
Yield/Force Off (s)	35.5	87.5	114.5	22.9	87.5	145.5
Yield/Force Off 170(s)	35.5	76.5	103.5	22.9	76.5	134.5
Local Start Time (s)	110	0	52	110	137.4	79
Local Yield (s)	145.5	47.5	74.5	132.9	47.5	105.5
Local Yield 170(s)	145.5	36.5	63.5	132.9	36.5	94.5

Intersection Summary	
Cycle Length	150
Control Type	Actuated-Uncoordinated
Natural Cycle	130

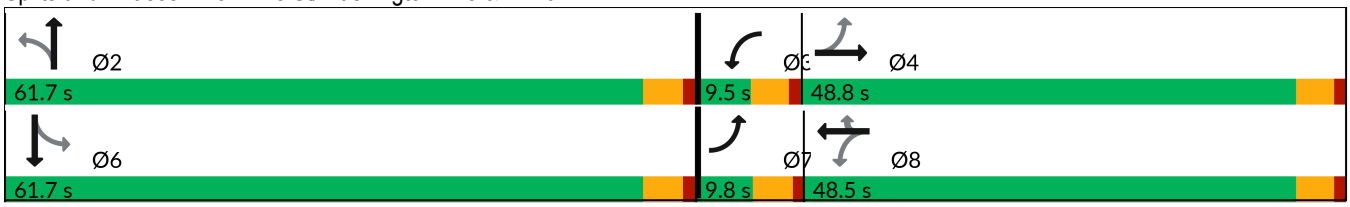
Splits and Phases: 4: US 301 & MD 6



Phase Number	2	3	4	6	7	8
Movement	NBTL	WBL	EBTL	SBTL	EBL	WBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	Max	None	None	Max	None	None
Maximum Split (s)	61.7	9.5	48.8	61.7	9.8	48.5
Maximum Split (%)	51.4%	7.9%	40.7%	51.4%	8.2%	40.4%
Minimum Split (s)	22.5	9.5	22.5	22.5	9.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	7		7	7		7
Flash Don't Walk (s)	11		11	11		11
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	61.7	71.2	0	61.7	71.5
End Time (s)	61.7	71.2	0	61.7	71.5	0
Yield/Force Off (s)	57.2	66.7	115.5	57.2	67	115.5
Yield/Force Off 170(s)	46.2	66.7	104.5	46.2	67	104.5
Local Start Time (s)	0	61.7	71.2	0	61.7	71.5
Local Yield (s)	57.2	66.7	115.5	57.2	67	115.5
Local Yield 170(s)	46.2	66.7	104.5	46.2	67	104.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	90

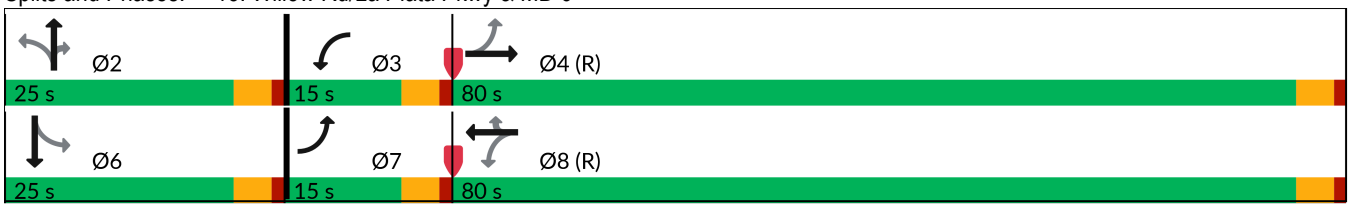
Splits and Phases: 8: Wills St/Washington Ave & MD 6



Phase Number	2	3	4	6	7	8
Movement	NBTL	WBL	EBTL	SBTL	EBL	WBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	Min	None	C-Max	Min	None	C-Max
Maximum Split (s)	25	15	80	25	15	80
Maximum Split (%)	20.8%	12.5%	66.7%	20.8%	12.5%	66.7%
Minimum Split (s)	22.5	9.5	22.5	22.5	9.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	7		7	7		7
Flash Don't Walk (s)	11		11	11		11
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	114	19	34	114	19	34
End Time (s)	19	34	114	19	34	114
Yield/Force Off (s)	14.5	29.5	109.5	14.5	29.5	109.5
Yield/Force Off 170(s)	14.5	29.5	98.5	14.5	29.5	98.5
Local Start Time (s)	80	105	0	80	105	0
Local Yield (s)	100.5	115.5	75.5	100.5	115.5	75.5
Local Yield 170(s)	100.5	115.5	64.5	100.5	115.5	64.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	90
Offset: 34 (28%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	

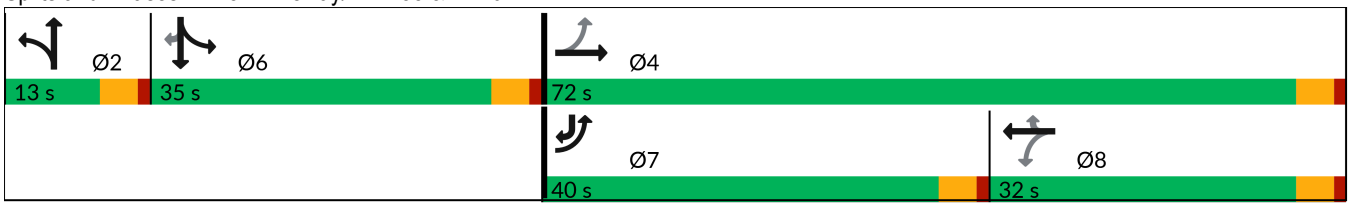
Splits and Phases: 13: Willow Rd/La Plata Pkwy & MD 6



Phase Number	2	4	6	7	8
Movement	NBTL	EBTL	SBTL	EBL	WBTL
Lead/Lag				Lead	Lag
Lead-Lag Optimize				Yes	Yes
Recall Mode	Min	None	Min	None	None
Maximum Split (s)	13	72	35	40	32
Maximum Split (%)	10.8%	60.0%	29.2%	33.3%	26.7%
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0
Walk Time (s)					
Flash Don't Walk (s)					
Dual Entry	Yes	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	48	13	48	88
End Time (s)	13	0	48	88	0
Yield/Force Off (s)	8.5	115.5	43.5	83.5	115.5
Yield/Force Off 170(s)	8.5	115.5	43.5	83.5	115.5
Local Start Time (s)	0	48	13	48	88
Local Yield (s)	8.5	115.5	43.5	83.5	115.5
Local Yield 170(s)	8.5	115.5	43.5	83.5	115.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	90

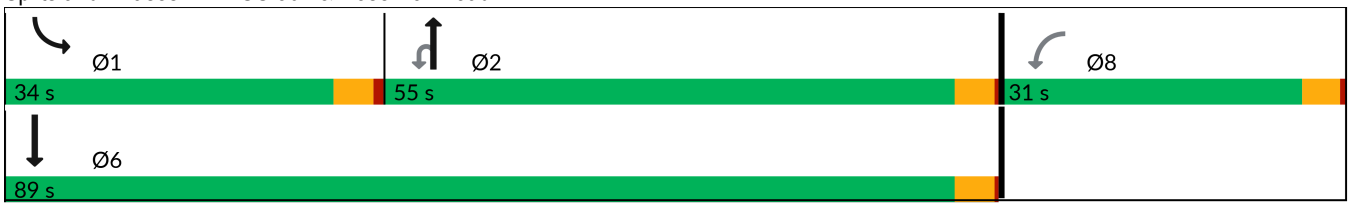
Splits and Phases: 15: Driveway/MD 488 & MD 6



Phase Number	1	2	6	8
Movement	SBL	NBTU	SBT	WBL
Lead/Lag	Lead	Lag		
Lead-Lag Optimize	Yes	Yes		
Recall Mode	None	Max	None	None
Maximum Split (s)	34	55	89	31
Maximum Split (%)	28.3%	45.8%	74.2%	25.8%
Minimum Split (s)	9.5	20	20	20
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	0.5	0.5	0.5
Minimum Initial (s)	5	4	4	4
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)		5	5	5
Flash Don't Walk (s)		11	11	11
Dual Entry	No	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	34	0	89
End Time (s)	34	89	89	0
Yield/Force Off (s)	29.5	85	85	116
Yield/Force Off 170(s)	29.5	74	74	105
Local Start Time (s)	86	0	86	55
Local Yield (s)	115.5	51	51	82
Local Yield 170(s)	115.5	40	40	71

Intersection Summary	
Cycle Length	120
Control Type	Semi Act-Uncoord
Natural Cycle	90

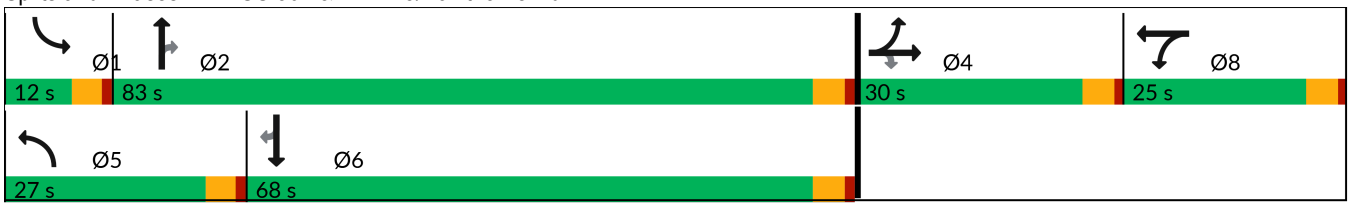
Splits and Phases: 1: US 301 & Rosewick Road



Phase Number	1	2	4	5	6	8
Movement	SBL	NBT	EBTL	NBL	SBT	WBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	12	83	30	27	68	25
Maximum Split (%)	8.0%	55.3%	20.0%	18.0%	45.3%	16.7%
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Don't Walk (s)		11	11		11	11
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	12	95	0	27	125
End Time (s)	12	95	125	27	95	0
Yield/Force Off (s)	7.5	90.5	120.5	22.5	90.5	145.5
Yield/Force Off 170(s)	7.5	79.5	109.5	22.5	79.5	134.5
Local Start Time (s)	123	135	68	123	0	98
Local Yield (s)	130.5	63.5	93.5	145.5	63.5	118.5
Local Yield 170(s)	130.5	52.5	82.5	145.5	52.5	107.5

Intersection Summary	
Cycle Length	150
Control Type	Actuated-Uncoordinated
Natural Cycle	150

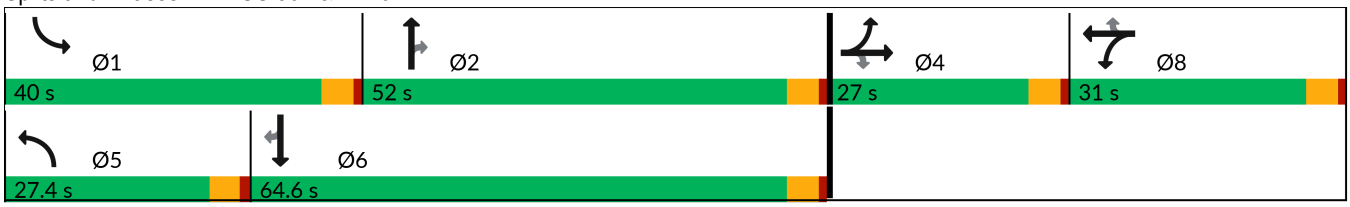
Splits and Phases: 2: US 301 & MD 225/Hawthorne Rd



Phase Number	1	2	4	5	6	8
Movement	SBL	NBT	EBTL	NBL	SBT	WBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	40	52	27	27.4	64.6	31
Maximum Split (%)	26.7%	34.7%	18.0%	18.3%	43.1%	20.7%
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Don't Walk (s)		11	11		11	11
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	40	92	0	27.4	119
End Time (s)	40	92	119	27.4	92	0
Yield/Force Off (s)	35.5	87.5	114.5	22.9	87.5	145.5
Yield/Force Off 170(s)	35.5	76.5	103.5	22.9	76.5	134.5
Local Start Time (s)	110	0	52	110	137.4	79
Local Yield (s)	145.5	47.5	74.5	132.9	47.5	105.5
Local Yield 170(s)	145.5	36.5	63.5	132.9	36.5	94.5

Intersection Summary	
Cycle Length	150
Control Type	Actuated-Uncoordinated
Natural Cycle	150

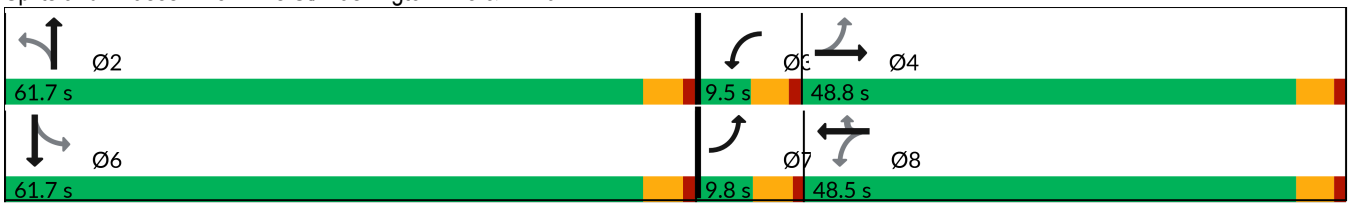
Splits and Phases: 4: US 301 & MD 6



Phase Number	2	3	4	6	7	8
Movement	NBTL	WBL	EBTL	SBTL	EBL	WBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	Max	None	None	Max	None	None
Maximum Split (s)	61.7	9.5	48.8	61.7	9.8	48.5
Maximum Split (%)	51.4%	7.9%	40.7%	51.4%	8.2%	40.4%
Minimum Split (s)	22.5	9.5	22.5	22.5	9.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	7		7	7		7
Flash Don't Walk (s)	11		11	11		11
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	61.7	71.2	0	61.7	71.5
End Time (s)	61.7	71.2	0	61.7	71.5	0
Yield/Force Off (s)	57.2	66.7	115.5	57.2	67	115.5
Yield/Force Off 170(s)	46.2	66.7	104.5	46.2	67	104.5
Local Start Time (s)	0	61.7	71.2	0	61.7	71.5
Local Yield (s)	57.2	66.7	115.5	57.2	67	115.5
Local Yield 170(s)	46.2	66.7	104.5	46.2	67	104.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	100

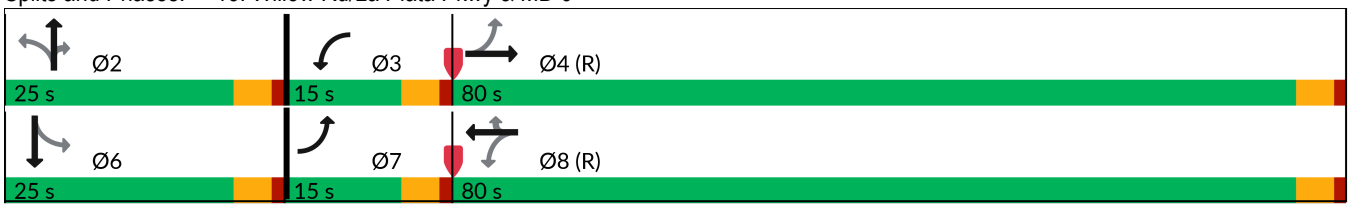
Splits and Phases: 8: Wills St/Washington Ave & MD 6



Phase Number	2	3	4	6	7	8
Movement	NBTL	WBL	EBTL	SBTL	EBL	WBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	Min	None	C-Max	Min	None	C-Max
Maximum Split (s)	25	15	80	25	15	80
Maximum Split (%)	20.8%	12.5%	66.7%	20.8%	12.5%	66.7%
Minimum Split (s)	22.5	9.5	22.5	22.5	9.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	7		7	7		7
Flash Don't Walk (s)	11		11	11		11
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	114	19	34	114	19	34
End Time (s)	19	34	114	19	34	114
Yield/Force Off (s)	14.5	29.5	109.5	14.5	29.5	109.5
Yield/Force Off 170(s)	14.5	29.5	98.5	14.5	29.5	98.5
Local Start Time (s)	80	105	0	80	105	0
Local Yield (s)	100.5	115.5	75.5	100.5	115.5	75.5
Local Yield 170(s)	100.5	115.5	64.5	100.5	115.5	64.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	90
Offset: 34 (28%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	

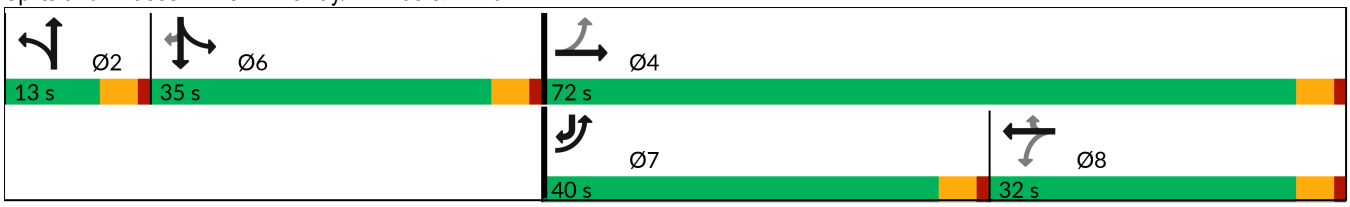
Splits and Phases: 13: Willow Rd/La Plata Pkwy & MD 6



Phase Number	2	4	6	7	8
Movement	NBTL	EBTL	SBTL	EBL	WBTL
Lead/Lag				Lead	Lag
Lead-Lag Optimize				Yes	Yes
Recall Mode	Min	None	Min	None	None
Maximum Split (s)	13	72	35	40	32
Maximum Split (%)	10.8%	60.0%	29.2%	33.3%	26.7%
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0
Walk Time (s)					
Flash Don't Walk (s)					
Dual Entry	Yes	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	48	13	48	88
End Time (s)	13	0	48	88	0
Yield/Force Off (s)	8.5	115.5	43.5	83.5	115.5
Yield/Force Off 170(s)	8.5	115.5	43.5	83.5	115.5
Local Start Time (s)	0	48	13	48	88
Local Yield (s)	8.5	115.5	43.5	83.5	115.5
Local Yield 170(s)	8.5	115.5	43.5	83.5	115.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	75

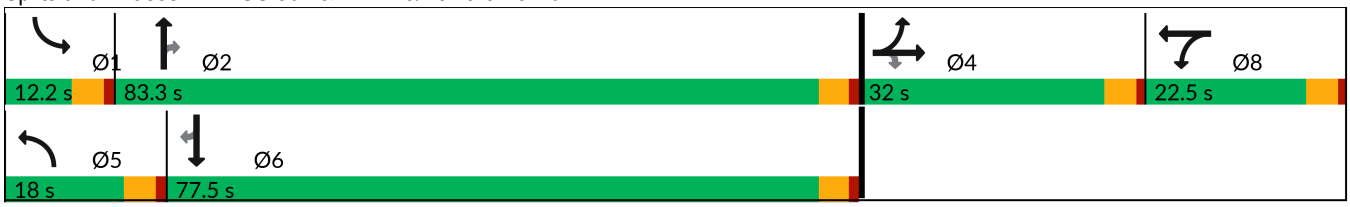
Splits and Phases: 15: Driveway/MD 488 & MD 6



Phase Number	1	2	4	5	6	8
Movement	SBL	NBT	EBTL	NBL	SBT	WBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	12.2	83.3	32	18	77.5	22.5
Maximum Split (%)	8.1%	55.5%	21.3%	12.0%	51.7%	15.0%
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Don't Walk (s)		11	11		11	11
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	12.2	95.5	0	18	127.5
End Time (s)	12.2	95.5	127.5	18	95.5	0
Yield/Force Off (s)	7.7	91	123	13.5	91	145.5
Yield/Force Off 170(s)	7.7	80	112	13.5	80	134.5
Local Start Time (s)	132	144.2	77.5	132	0	109.5
Local Yield (s)	139.7	73	105	145.5	73	127.5
Local Yield 170(s)	139.7	62	94	145.5	62	116.5

Intersection Summary	
Cycle Length	150
Control Type	Actuated-Uncoordinated
Natural Cycle	150

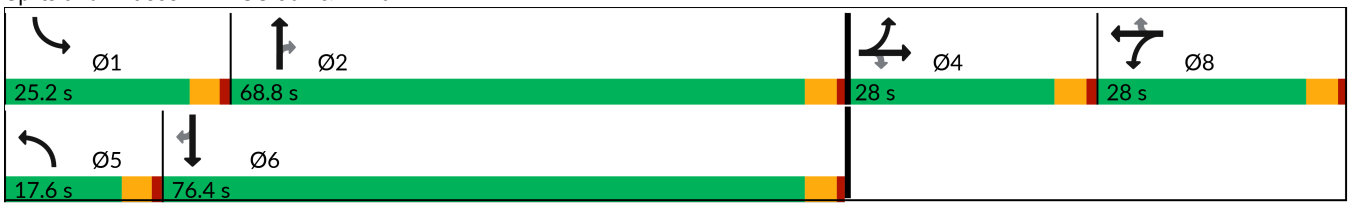
Splits and Phases: 2: US 301 & MD 225/Hawthorne Rd



Phase Number	1	2	4	5	6	8
Movement	SBL	NBT	EBTL	NBL	SBT	WBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	25.2	68.8	28	17.6	76.4	28
Maximum Split (%)	16.8%	45.9%	18.7%	11.7%	50.9%	18.7%
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Don't Walk (s)		11	11		11	11
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	25.2	94	0	17.6	122
End Time (s)	25.2	94	122	17.6	94	0
Yield/Force Off (s)	20.7	89.5	117.5	13.1	89.5	145.5
Yield/Force Off 170(s)	20.7	78.5	106.5	13.1	78.5	134.5
Local Start Time (s)	124.8	0	68.8	124.8	142.4	96.8
Local Yield (s)	145.5	64.3	92.3	137.9	64.3	120.3
Local Yield 170(s)	145.5	53.3	81.3	137.9	53.3	109.3

Intersection Summary	
Cycle Length	150
Control Type	Actuated-Uncoordinated
Natural Cycle	150

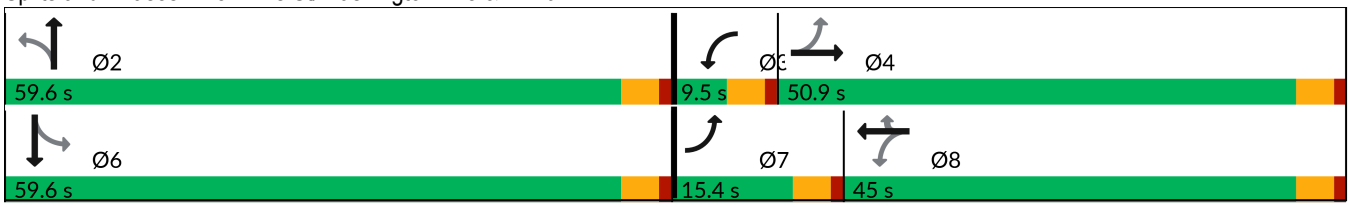
Splits and Phases: 4: US 301 & MD 6



Phase Number	2	3	4	6	7	8
Movement	NBTL	WBL	EBTL	SBTL	EBL	WBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	Max	None	None	Max	None	None
Maximum Split (s)	59.6	9.5	50.9	59.6	15.4	45
Maximum Split (%)	49.7%	7.9%	42.4%	49.7%	12.8%	37.5%
Minimum Split (s)	22.5	9.5	22.5	22.5	9.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	7		7	7		7
Flash Don't Walk (s)	11		11	11		11
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	59.6	69.1	0	59.6	75
End Time (s)	59.6	69.1	0	59.6	75	0
Yield/Force Off (s)	55.1	64.6	115.5	55.1	70.5	115.5
Yield/Force Off 170(s)	44.1	64.6	104.5	44.1	70.5	104.5
Local Start Time (s)	0	59.6	69.1	0	59.6	75
Local Yield (s)	55.1	64.6	115.5	55.1	70.5	115.5
Local Yield 170(s)	44.1	64.6	104.5	44.1	70.5	104.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	100

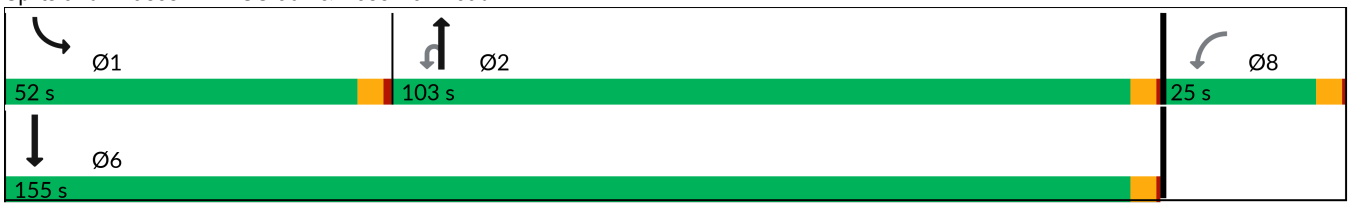
Splits and Phases: 8: Wills St/Washington Ave & MD 6



Phase Number	1	2	6	8
Movement	SBL	NBTU	SBT	WBL
Lead/Lag	Lead	Lag		
Lead-Lag Optimize	Yes	Yes		
Recall Mode	None	Max	None	None
Maximum Split (s)	52	103	155	25
Maximum Split (%)	28.9%	57.2%	86.1%	13.9%
Minimum Split (s)	9.5	20	20	20
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	0.5	0.5	0.5
Minimum Initial (s)	5	4	4	4
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)		5	5	5
Flash Don't Walk (s)		11	11	11
Dual Entry	No	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	52	0	155
End Time (s)	52	155	155	0
Yield/Force Off (s)	47.5	151	151	176
Yield/Force Off 170(s)	47.5	140	140	165
Local Start Time (s)	128	0	128	103
Local Yield (s)	175.5	99	99	124
Local Yield 170(s)	175.5	88	88	113

Intersection Summary	
Cycle Length	180
Control Type	Semi Act-Uncoord
Natural Cycle	60

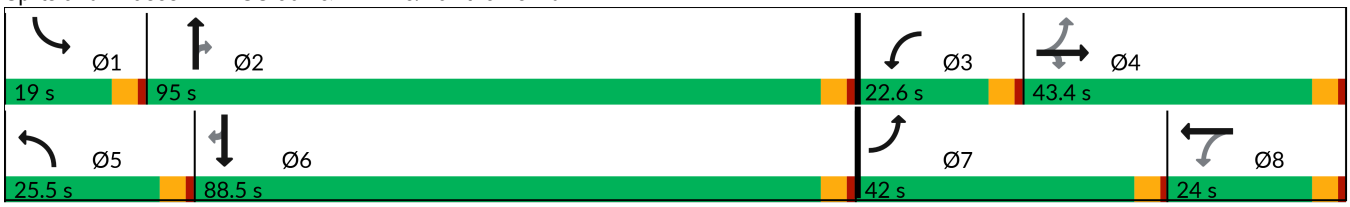
Splits and Phases: 1: US 301 & Rosewick Road



Phase Number	1	2	3	4	5	6	7	8
Movement	SBL	NBT	WBL	EBTL	NBL	SBT	EBL	WBTL
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)	19	95	22.6	43.4	25.5	88.5	42	24
Maximum Split (%)	10.6%	52.8%	12.6%	24.1%	14.2%	49.2%	23.3%	13.3%
Minimum Split (s)	9.5	22.5	22.5	22.5	9.5	22.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5	5	5
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	7	7
Flash Don't Walk (s)		11	11	11		11	11	11
Dual Entry	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	19	114	136.6	0	25.5	114	156
End Time (s)	19	114	136.6	0	25.5	114	156	0
Yield/Force Off (s)	14.5	109.5	132.1	175.5	21	109.5	151.5	175.5
Yield/Force Off 170(s)	14.5	98.5	121.1	164.5	21	98.5	140.5	164.5
Local Start Time (s)	154.5	173.5	88.5	111.1	154.5	0	88.5	130.5
Local Yield (s)	169	84	106.6	150	175.5	84	126	150
Local Yield 170(s)	169	73	95.6	139	175.5	73	115	139

Intersection Summary	
Cycle Length	180
Control Type	Actuated-Uncoordinated
Natural Cycle	100

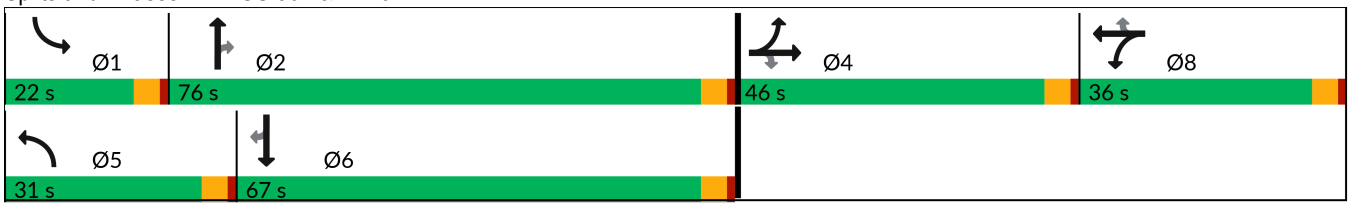
Splits and Phases: 2: US 301 & MD 225/Hawthorne Rd



Phase Number	1	2	4	5	6	8
Movement	SBL	NBT	EBTL	NBL	SBT	WBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	22	76	46	31	67	36
Maximum Split (%)	12.2%	42.2%	25.6%	17.2%	37.2%	20.0%
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Don't Walk (s)		11	11		11	11
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	22	98	0	31	144
End Time (s)	22	98	144	31	98	0
Yield/Force Off (s)	17.5	93.5	139.5	26.5	93.5	175.5
Yield/Force Off 170(s)	17.5	82.5	128.5	26.5	82.5	164.5
Local Start Time (s)	149	171	67	149	0	113
Local Yield (s)	166.5	62.5	108.5	175.5	62.5	144.5
Local Yield 170(s)	166.5	51.5	97.5	175.5	51.5	133.5

Intersection Summary	
Cycle Length	180
Control Type	Actuated-Uncoordinated
Natural Cycle	90

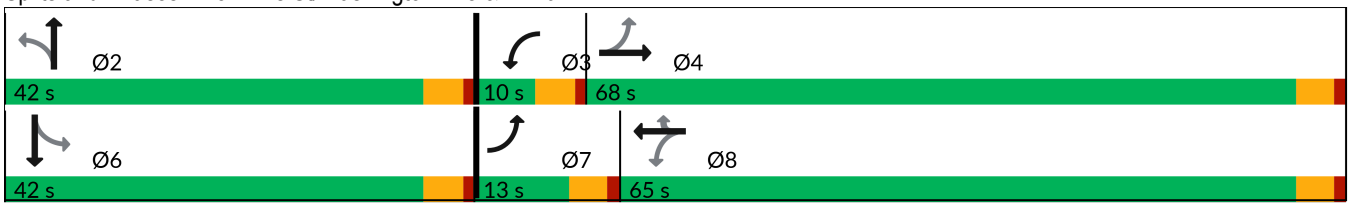
Splits and Phases: 4: US 301 & MD 6



Phase Number	2	3	4	6	7	8
Movement	NBTL	WBL	EBTL	SBTL	EBL	WBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	Max	None	None	Max	None	None
Maximum Split (s)	42	10	68	42	13	65
Maximum Split (%)	35.0%	8.3%	56.7%	35.0%	10.8%	54.2%
Minimum Split (s)	22.5	9.5	22.5	22.5	9.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	7		7	7		7
Flash Don't Walk (s)	11		11	11		11
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	42	52	0	42	55
End Time (s)	42	52	0	42	55	0
Yield/Force Off (s)	37.5	47.5	115.5	37.5	50.5	115.5
Yield/Force Off 170(s)	26.5	47.5	104.5	26.5	50.5	104.5
Local Start Time (s)	0	42	52	0	42	55
Local Yield (s)	37.5	47.5	115.5	37.5	50.5	115.5
Local Yield 170(s)	26.5	47.5	104.5	26.5	50.5	104.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	75

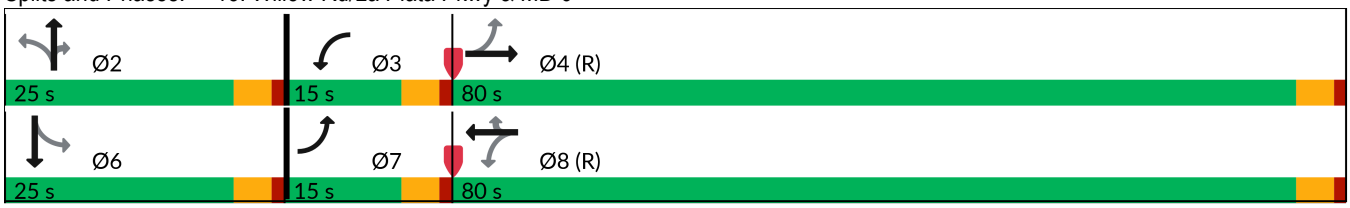
Splits and Phases: 8: Wills St/Washington Ave & MD 6



Phase Number	2	3	4	6	7	8
Movement	NBTL	WBL	EBTL	SBTL	EBL	WBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	Min	None	C-Max	Min	None	C-Max
Maximum Split (s)	25	15	80	25	15	80
Maximum Split (%)	20.8%	12.5%	66.7%	20.8%	12.5%	66.7%
Minimum Split (s)	22.5	9.5	22.5	22.5	9.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	7		7	7		7
Flash Don't Walk (s)	11		11	11		11
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	114	19	34	114	19	34
End Time (s)	19	34	114	19	34	114
Yield/Force Off (s)	14.5	29.5	109.5	14.5	29.5	109.5
Yield/Force Off 170(s)	14.5	29.5	98.5	14.5	29.5	98.5
Local Start Time (s)	80	105	0	80	105	0
Local Yield (s)	100.5	115.5	75.5	100.5	115.5	75.5
Local Yield 170(s)	100.5	115.5	64.5	100.5	115.5	64.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	65
Offset: 34 (28%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	

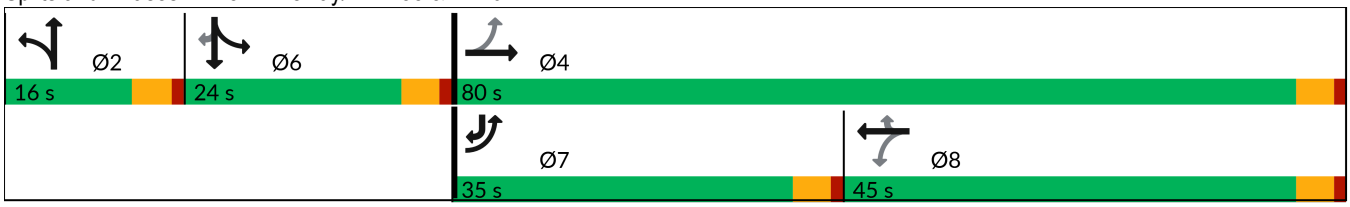
Splits and Phases: 13: Willow Rd/La Plata Pkwy & MD 6



Phase Number	2	4	6	7	8
Movement	NBTL	EBTL	SBTL	EBL	WBTL
Lead/Lag				Lead	Lag
Lead-Lag Optimize				Yes	Yes
Recall Mode	Min	None	Min	None	None
Maximum Split (s)	16	80	24	35	45
Maximum Split (%)	13.3%	66.7%	20.0%	29.2%	37.5%
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0
Walk Time (s)					
Flash Don't Walk (s)					
Dual Entry	Yes	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	40	16	40	75
End Time (s)	16	0	40	75	0
Yield/Force Off (s)	11.5	115.5	35.5	70.5	115.5
Yield/Force Off 170(s)	11.5	115.5	35.5	70.5	115.5
Local Start Time (s)	0	40	16	40	75
Local Yield (s)	11.5	115.5	35.5	70.5	115.5
Local Yield 170(s)	11.5	115.5	35.5	70.5	115.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	60

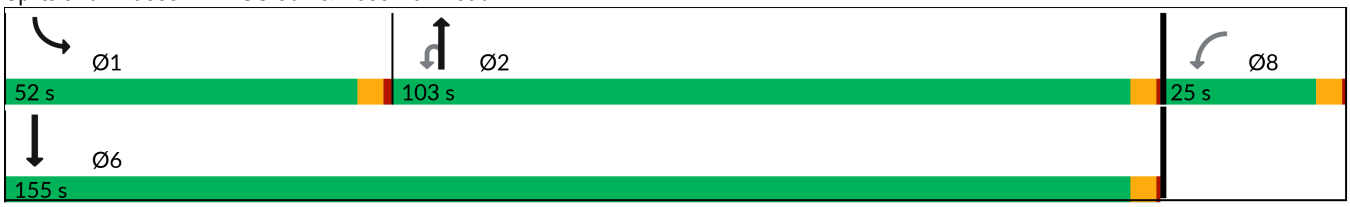
Splits and Phases: 15: Driveway/MD 488 & MD 6



Phase Number	1	2	6	8
Movement	SBL	NBTU	SBT	WBL
Lead/Lag	Lead	Lag		
Lead-Lag Optimize	Yes	Yes		
Recall Mode	None	Max	None	None
Maximum Split (s)	52	103	155	25
Maximum Split (%)	28.9%	57.2%	86.1%	13.9%
Minimum Split (s)	9.5	20	20	20
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	0.5	0.5	0.5
Minimum Initial (s)	5	4	4	4
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)		5	5	5
Flash Don't Walk (s)		11	11	11
Dual Entry	No	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	52	0	155
End Time (s)	52	155	155	0
Yield/Force Off (s)	47.5	151	151	176
Yield/Force Off 170(s)	47.5	140	140	165
Local Start Time (s)	128	0	128	103
Local Yield (s)	175.5	99	99	124
Local Yield 170(s)	175.5	88	88	113

Intersection Summary	
Cycle Length	180
Control Type	Semi Act-Uncoord
Natural Cycle	90

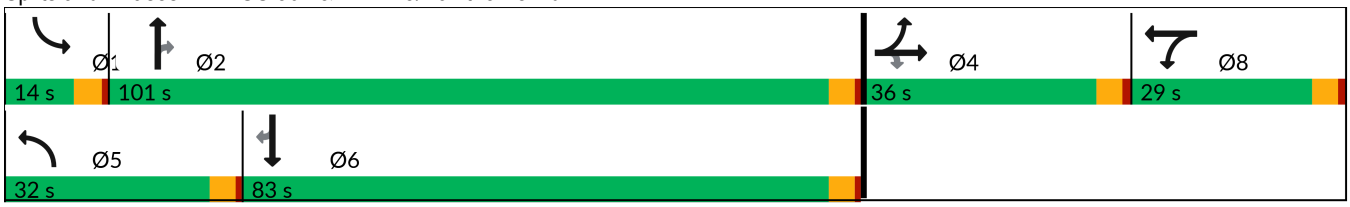
Splits and Phases: 1: US 301 & Rosewick Road



Phase Number	1	2	4	5	6	8
Movement	SBL	NBT	EBTL	NBL	SBT	WBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	14	101	36	32	83	29
Maximum Split (%)	7.8%	56.1%	20.0%	17.8%	46.1%	16.1%
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Don't Walk (s)		11	11		11	11
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	14	115	0	32	151
End Time (s)	14	115	151	32	115	0
Yield/Force Off (s)	9.5	110.5	146.5	27.5	110.5	175.5
Yield/Force Off 170(s)	9.5	99.5	135.5	27.5	99.5	164.5
Local Start Time (s)	148	162	83	148	0	119
Local Yield (s)	157.5	78.5	114.5	175.5	78.5	143.5
Local Yield 170(s)	157.5	67.5	103.5	175.5	67.5	132.5

Intersection Summary	
Cycle Length	180
Control Type	Actuated-Uncoordinated
Natural Cycle	130

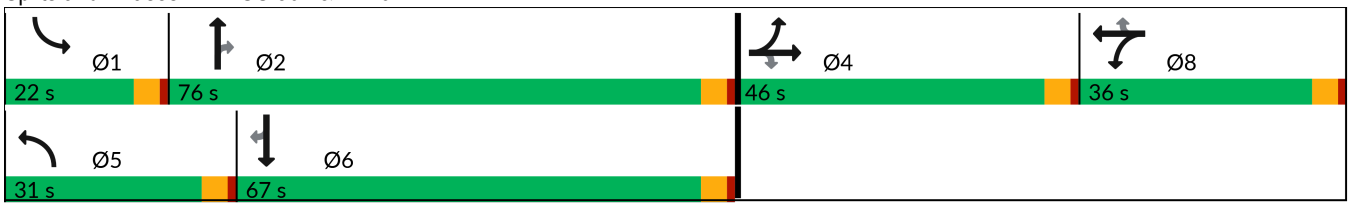
Splits and Phases: 2: US 301 & MD 225/Hawthorne Rd



Phase Number	1	2	4	5	6	8
Movement	SBL	NBT	EBTL	NBL	SBT	WBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	22	76	46	31	67	36
Maximum Split (%)	12.2%	42.2%	25.6%	17.2%	37.2%	20.0%
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Don't Walk (s)		11	11		11	11
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	22	98	0	31	144
End Time (s)	22	98	144	31	98	0
Yield/Force Off (s)	17.5	93.5	139.5	26.5	93.5	175.5
Yield/Force Off 170(s)	17.5	82.5	128.5	26.5	82.5	164.5
Local Start Time (s)	149	171	67	149	0	113
Local Yield (s)	166.5	62.5	108.5	175.5	62.5	144.5
Local Yield 170(s)	166.5	51.5	97.5	175.5	51.5	133.5

Intersection Summary	
Cycle Length	180
Control Type	Actuated-Uncoordinated
Natural Cycle	100

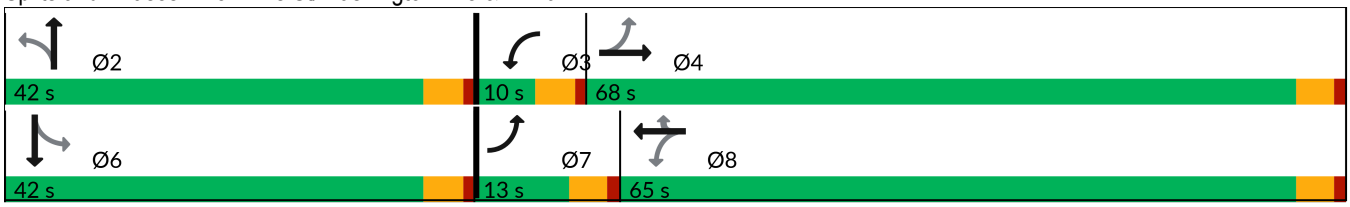
Splits and Phases: 4: US 301 & MD 6



Phase Number	2	3	4	6	7	8
Movement	NBTL	WBL	EBTL	SBTL	EBL	WBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	Max	None	None	Max	None	None
Maximum Split (s)	42	10	68	42	13	65
Maximum Split (%)	35.0%	8.3%	56.7%	35.0%	10.8%	54.2%
Minimum Split (s)	22.5	9.5	22.5	22.5	9.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	7		7	7		7
Flash Don't Walk (s)	11		11	11		11
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	42	52	0	42	55
End Time (s)	42	52	0	42	55	0
Yield/Force Off (s)	37.5	47.5	115.5	37.5	50.5	115.5
Yield/Force Off 170(s)	26.5	47.5	104.5	26.5	50.5	104.5
Local Start Time (s)	0	42	52	0	42	55
Local Yield (s)	37.5	47.5	115.5	37.5	50.5	115.5
Local Yield 170(s)	26.5	47.5	104.5	26.5	50.5	104.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	90

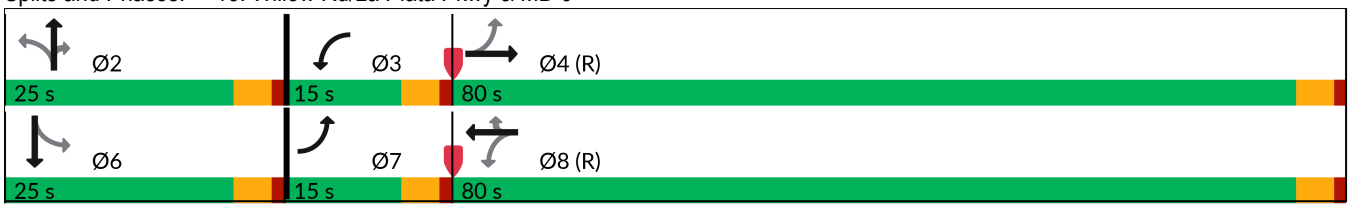
Splits and Phases: 8: Wills St/Washington Ave & MD 6



Phase Number	2	3	4	6	7	8
Movement	NBTL	WBL	EBTL	SBTL	EBL	WBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	Min	None	C-Max	Min	None	C-Max
Maximum Split (s)	25	15	80	25	15	80
Maximum Split (%)	20.8%	12.5%	66.7%	20.8%	12.5%	66.7%
Minimum Split (s)	22.5	9.5	22.5	22.5	9.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	7		7	7		7
Flash Don't Walk (s)	11		11	11		11
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	114	19	34	114	19	34
End Time (s)	19	34	114	19	34	114
Yield/Force Off (s)	14.5	29.5	109.5	14.5	29.5	109.5
Yield/Force Off 170(s)	14.5	29.5	98.5	14.5	29.5	98.5
Local Start Time (s)	80	105	0	80	105	0
Local Yield (s)	100.5	115.5	75.5	100.5	115.5	75.5
Local Yield 170(s)	100.5	115.5	64.5	100.5	115.5	64.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	70
Offset: 34 (28%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	

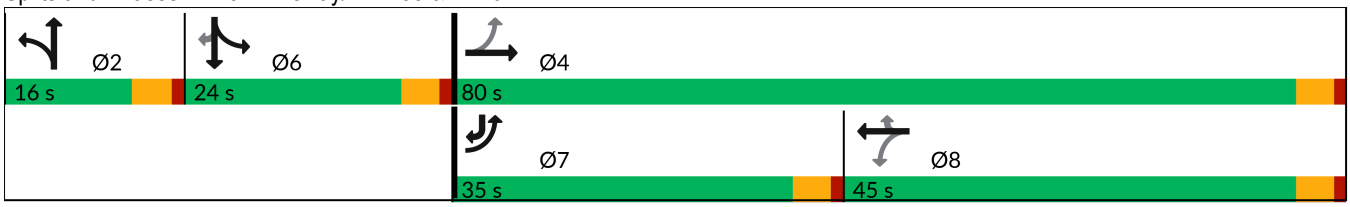
Splits and Phases: 13: Willow Rd/La Plata Pkwy & MD 6



Phase Number	2	4	6	7	8
Movement	NBTL	EBTL	SBTL	EBL	WBTL
Lead/Lag				Lead	Lag
Lead-Lag Optimize				Yes	Yes
Recall Mode	Min	None	Min	None	None
Maximum Split (s)	16	80	24	35	45
Maximum Split (%)	13.3%	66.7%	20.0%	29.2%	37.5%
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0
Walk Time (s)					
Flash Don't Walk (s)					
Dual Entry	Yes	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	40	16	40	75
End Time (s)	16	0	40	75	0
Yield/Force Off (s)	11.5	115.5	35.5	70.5	115.5
Yield/Force Off 170(s)	11.5	115.5	35.5	70.5	115.5
Local Start Time (s)	0	40	16	40	75
Local Yield (s)	11.5	115.5	35.5	70.5	115.5
Local Yield 170(s)	11.5	115.5	35.5	70.5	115.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	60

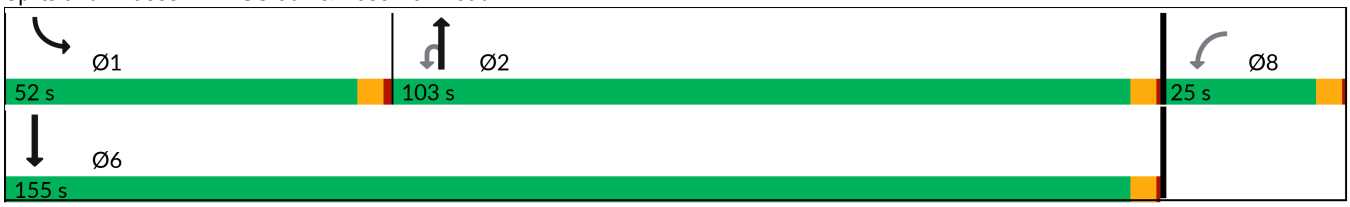
Splits and Phases: 15: Driveway/MD 488 & MD 6



Phase Number	1	2	6	8
Movement	SBL	NBTU	SBT	WBL
Lead/Lag	Lead	Lag		
Lead-Lag Optimize	Yes	Yes		
Recall Mode	None	Max	None	None
Maximum Split (s)	52	103	155	25
Maximum Split (%)	28.9%	57.2%	86.1%	13.9%
Minimum Split (s)	9.5	20	20	20
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1	0.5	0.5	0.5
Minimum Initial (s)	5	4	4	4
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)		5	5	5
Flash Don't Walk (s)		11	11	11
Dual Entry	No	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	52	0	155
End Time (s)	52	155	155	0
Yield/Force Off (s)	47.5	151	151	176
Yield/Force Off 170(s)	47.5	140	140	165
Local Start Time (s)	128	0	128	103
Local Yield (s)	175.5	99	99	124
Local Yield 170(s)	175.5	88	88	113

Intersection Summary	
Cycle Length	180
Control Type	Semi Act-Uncoord
Natural Cycle	90

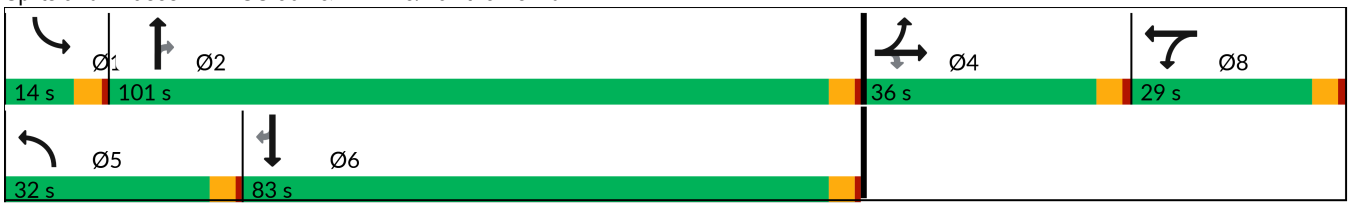
Splits and Phases: 1: US 301 & Rosewick Road



Phase Number	1	2	4	5	6	8
Movement	SBL	NBT	EBTL	NBL	SBT	WBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	14	101	36	32	83	29
Maximum Split (%)	7.8%	56.1%	20.0%	17.8%	46.1%	16.1%
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Don't Walk (s)		11	11		11	11
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	14	115	0	32	151
End Time (s)	14	115	151	32	115	0
Yield/Force Off (s)	9.5	110.5	146.5	27.5	110.5	175.5
Yield/Force Off 170(s)	9.5	99.5	135.5	27.5	99.5	164.5
Local Start Time (s)	148	162	83	148	0	119
Local Yield (s)	157.5	78.5	114.5	175.5	78.5	143.5
Local Yield 170(s)	157.5	67.5	103.5	175.5	67.5	132.5

Intersection Summary	
Cycle Length	180
Control Type	Actuated-Uncoordinated
Natural Cycle	130

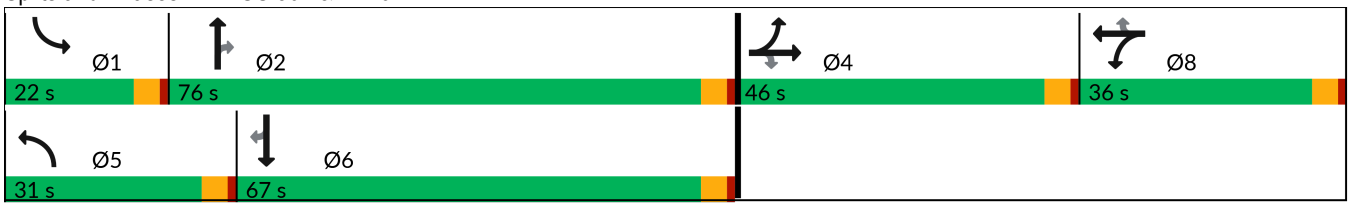
Splits and Phases: 2: US 301 & MD 225/Hawthorne Rd



Phase Number	1	2	4	5	6	8
Movement	SBL	NBT	EBTL	NBL	SBT	WBTL
Lead/Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	None	Max	None	None	Max	None
Maximum Split (s)	22	76	46	31	67	36
Maximum Split (%)	12.2%	42.2%	25.6%	17.2%	37.2%	20.0%
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Don't Walk (s)		11	11		11	11
Dual Entry	No	Yes	Yes	No	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	22	98	0	31	144
End Time (s)	22	98	144	31	98	0
Yield/Force Off (s)	17.5	93.5	139.5	26.5	93.5	175.5
Yield/Force Off 170(s)	17.5	82.5	128.5	26.5	82.5	164.5
Local Start Time (s)	149	171	67	149	0	113
Local Yield (s)	166.5	62.5	108.5	175.5	62.5	144.5
Local Yield 170(s)	166.5	51.5	97.5	175.5	51.5	133.5

Intersection Summary	
Cycle Length	180
Control Type	Actuated-Uncoordinated
Natural Cycle	100

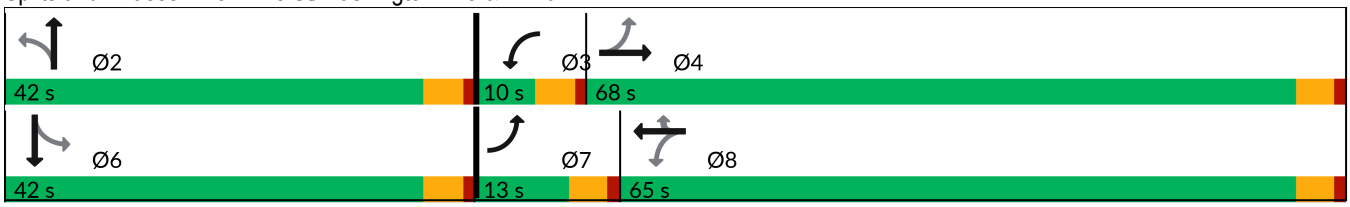
Splits and Phases: 4: US 301 & MD 6



Phase Number	2	3	4	6	7	8
Movement	NBTL	WBL	EBTL	SBTL	EBL	WBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	Max	None	None	Max	None	None
Maximum Split (s)	42	10	68	42	13	65
Maximum Split (%)	35.0%	8.3%	56.7%	35.0%	10.8%	54.2%
Minimum Split (s)	22.5	9.5	22.5	22.5	9.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	7		7	7		7
Flash Don't Walk (s)	11		11	11		11
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	42	52	0	42	55
End Time (s)	42	52	0	42	55	0
Yield/Force Off (s)	37.5	47.5	115.5	37.5	50.5	115.5
Yield/Force Off 170(s)	26.5	47.5	104.5	26.5	50.5	104.5
Local Start Time (s)	0	42	52	0	42	55
Local Yield (s)	37.5	47.5	115.5	37.5	50.5	115.5
Local Yield 170(s)	26.5	47.5	104.5	26.5	50.5	104.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	80

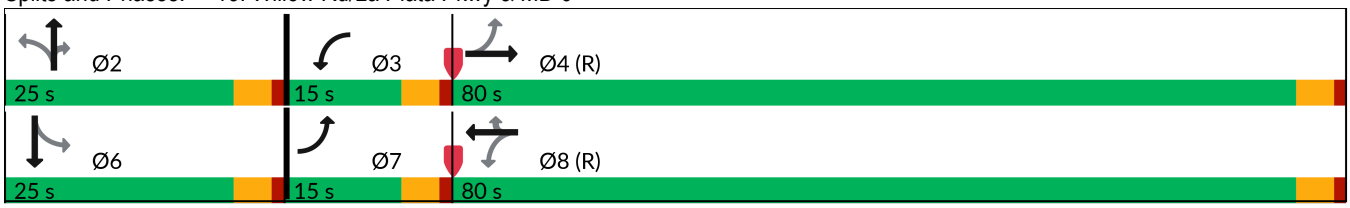
Splits and Phases: 8: Wills St/Washington Ave & MD 6



Phase Number	2	3	4	6	7	8
Movement	NBTL	WBL	EBTL	SBTL	EBL	WBTL
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	Min	None	C-Max	Min	None	C-Max
Maximum Split (s)	25	15	80	25	15	80
Maximum Split (%)	20.8%	12.5%	66.7%	20.8%	12.5%	66.7%
Minimum Split (s)	22.5	9.5	22.5	22.5	9.5	22.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	7		7	7		7
Flash Don't Walk (s)	11		11	11		11
Dual Entry	Yes	No	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	114	19	34	114	19	34
End Time (s)	19	34	114	19	34	114
Yield/Force Off (s)	14.5	29.5	109.5	14.5	29.5	109.5
Yield/Force Off 170(s)	14.5	29.5	98.5	14.5	29.5	98.5
Local Start Time (s)	80	105	0	80	105	0
Local Yield (s)	100.5	115.5	75.5	100.5	115.5	75.5
Local Yield 170(s)	100.5	115.5	64.5	100.5	115.5	64.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	70
Offset: 34 (28%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	

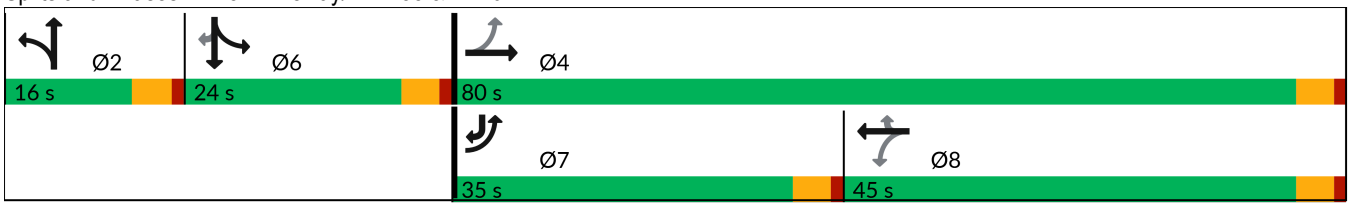
Splits and Phases: 13: Willow Rd/La Plata Pkwy & MD 6



Phase Number	2	4	6	7	8
Movement	NBTL	EBTL	SBTL	EBL	WBTL
Lead/Lag				Lead	Lag
Lead-Lag Optimize				Yes	Yes
Recall Mode	Min	None	Min	None	None
Maximum Split (s)	16	80	24	35	45
Maximum Split (%)	13.3%	66.7%	20.0%	29.2%	37.5%
Minimum Split (s)	9.5	9.5	9.5	9.5	9.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5
Vehicle Extension (s)	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0
Walk Time (s)					
Flash Don't Walk (s)					
Dual Entry	Yes	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	40	16	40	75
End Time (s)	16	0	40	75	0
Yield/Force Off (s)	11.5	115.5	35.5	70.5	115.5
Yield/Force Off 170(s)	11.5	115.5	35.5	70.5	115.5
Local Start Time (s)	0	40	16	40	75
Local Yield (s)	11.5	115.5	35.5	70.5	115.5
Local Yield 170(s)	11.5	115.5	35.5	70.5	115.5

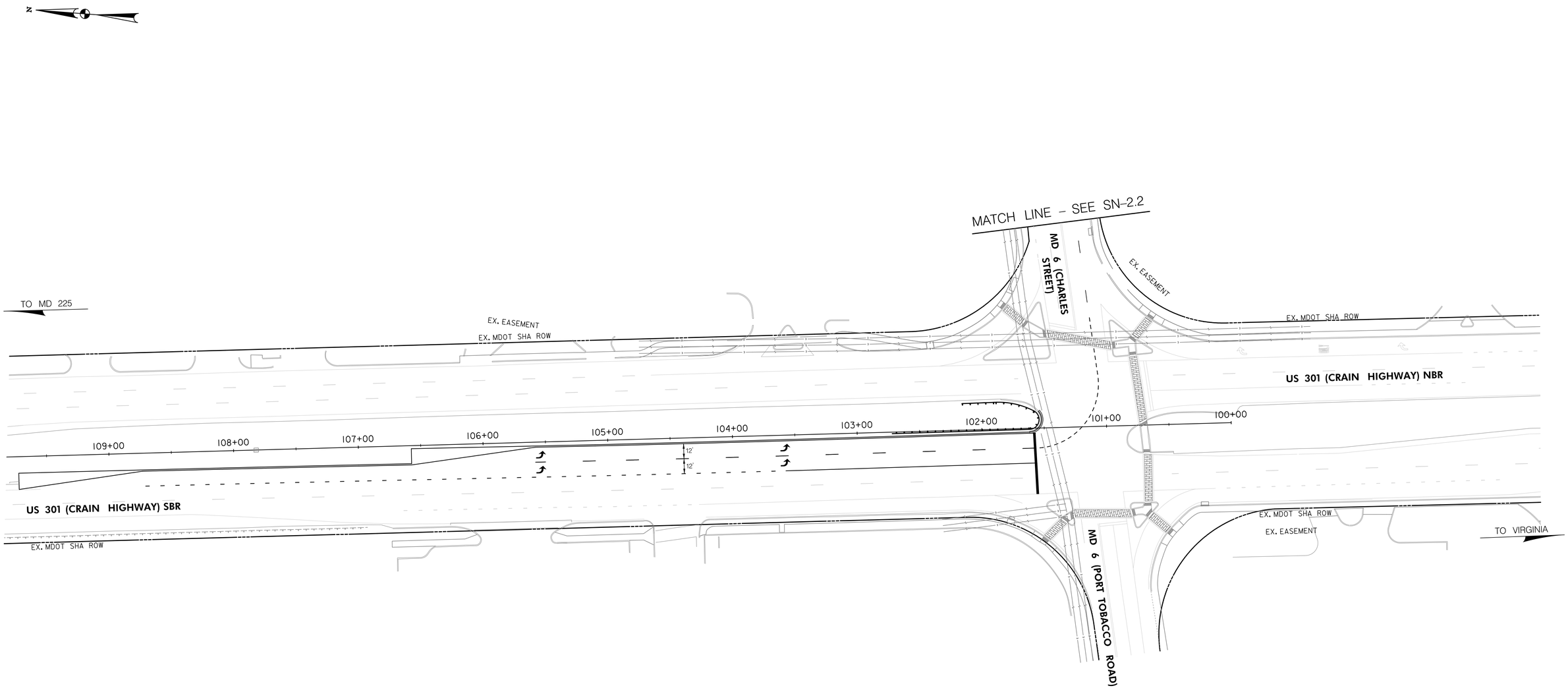
Intersection Summary	
Cycle Length	120
Control Type	Actuated-Uncoordinated
Natural Cycle	60

Splits and Phases: 15: Driveway/MD 488 & MD 6



Appendix F

Concept Plan for Recommended Improvements along MD 6



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BOULEVARD, SUITE 214
SEVERNA PARK, MD 21146
TEL: (410) 216-3333
FAX: (443) 782-2288
www.lenharttraffic.com

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

US 301 (ROBERT CRAIN HIGHWAY) AT MD 6 (CHARLES STREET/PORT TOBACCO ROAD)

(LA PLATA, MARYLAND)

REVISIONS

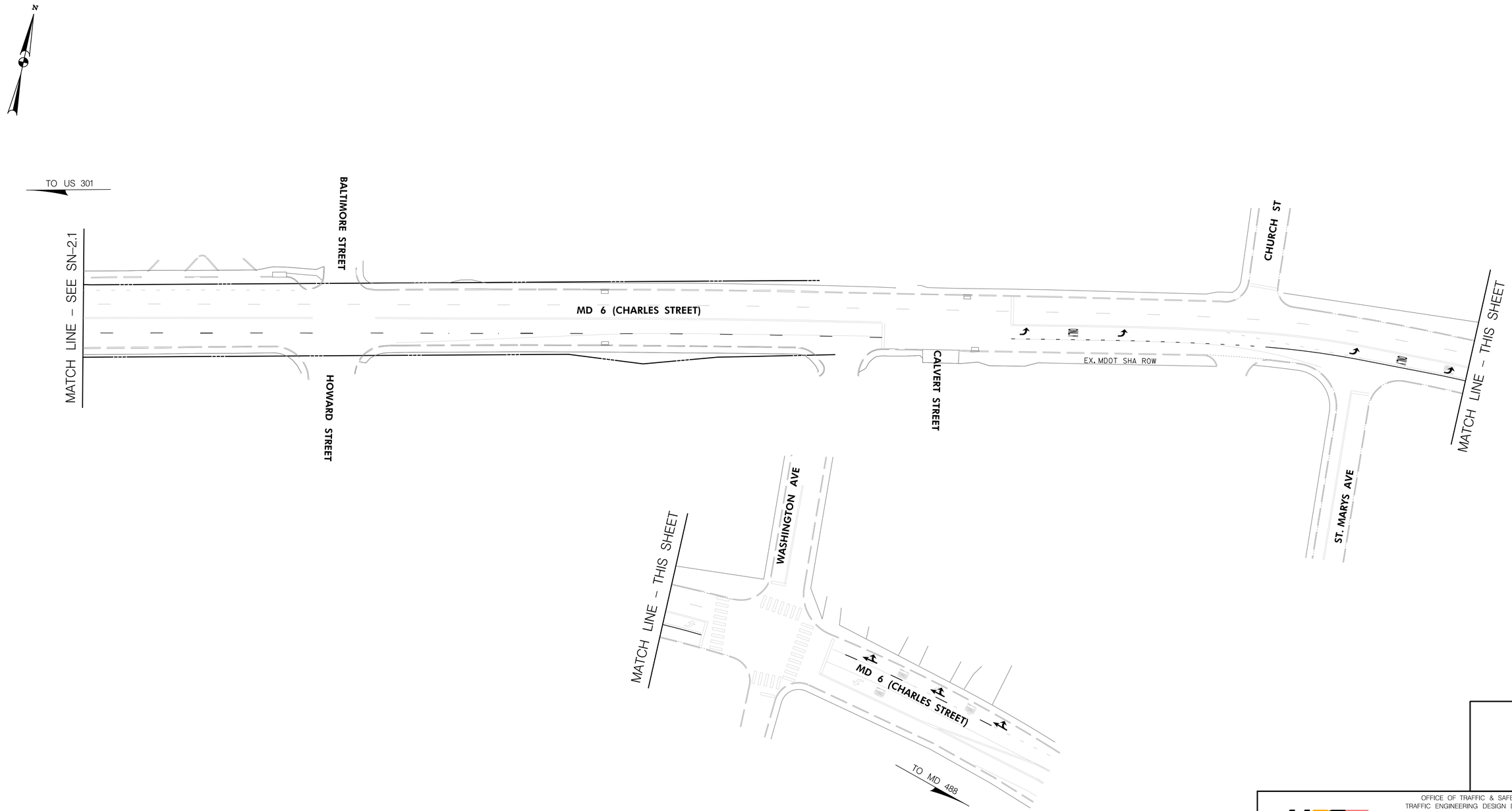
SIGNING AND PAVEMENT MARKING PLAN

SCALE 1" = 40' DATE JULY 2022 CONTRACT NO. BW996M82

DESIGNED BY LTC/BCS COUNTY CHARLES
DRAWN BY LTC/BCS LOGMILE 08030114.99-08030115.15
CHECKED BY LTC/BAB T.I.M.S. NO. P526
F.A.P. NO. TOD NO.

DRAWING NO. SN – 2.1 OF 2 SHEET NO. 28 OF 35

PLOTTED: WEDNESDAY, JANUARY 21, 2026 AT 12:09 PM
FILE: I:\LA PLATA LIBRARY\50_DESIGN\PSN-2001_US 301.DGN



SIGNING LEGEND

SYMBOL	DESCRIPTION
	EXISTING GROUND MOUNTED SIGN AND SUPPORT(S)
	PROPOSED GROUND MOUNTED SIGN AND SUPPORT(S)
	EXISTING SIGN TO REMAIN
	EXISTING SIGN TO BE REMOVED
	PROPOSED SIGN TO BE INSTALLED
	EXISTING GUARD RAIL
(105)	SIGN NUMBER

LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BOULEVARD, SUITE 214
SEVERNA PARK, MD 21146
TEL: (410) 216-3333
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US 301 (ROBERT CRAIN HIGHWAY) AT
MD 6 (CHARLES STREET/PORT TOBACCO ROAD)

(LA PLATA, MARYLAND)

REVISIONS

SIGNING AND PAVEMENT MARKING PLAN

SCALE 1" = 40' DATE JULY 2022 CONTRACT NO. BW996M82

DESIGNED BY LTC/BCS COUNTY CHARLES
DRAWN BY LTC/BCS LOGMILE 0800625.20-0800628.38
CHECKED BY LTC/BAB T.I.M.S. NO. P526
F.A.P. NO. TOD NO.

DRAWING NO. SN – 2.2 OF 2 SHEET NO. 29 OF 35

PLOTTED: WEDNESDAY, JANUARY 21, 2026 AT 12:15 PM
FILE: I:\LA PLATA LIBRARY\50_DESIGN\PSN-2002_US 301.DGN

Appendix G

Concept Traffic Calming Plan along Talbot St and Maple Ave Extensions

LEGEND

SITE PROPERTY LINES
ADJACENT PROPERTY LINES
PR. BUILDING SETBACKS
EX. BUILDINGS
EX. PAVEMENT
EX. SIDEWALK
EX. TREELINE
EX. TREE OUTSIDE OF FOREST STAND
EX. SANITARY SEWER
EX. STORM SEWER
EX. WATER MAIN
EX. 1X CONTOUR
EX. 5X CONTOUR
EX. FENCE
EX. UTIL POLE
PR. BUILDING RESTRICTION LINE
PR STORM SEWER
PR. TREELINE LOCATION
PR LIBRARY LOCATION
PR PAVERSTONE
PR SIDEWALK
PR CURB
PR PAVEMENT
PR WATERMAIN EXTENSION
PR SANITARY SEWER
PR LIMITS OF DISTURBANCE
PR BLOCK RETAINING WALL
PR 1X CONTOUR
PR 5X CONTOUR
PR SWALE CENTERLINE
PR BIOSWALE
PR LIGHT
PR PUBLIC UTILITY EASEMENT

N/F GEORGE & MARY ANN SCOTT
214A WASHINGTON AVE
TM 0113 G 0001 P 0089

N/F LYNNE & FELICA TAGGART
214B WASHINGTON AVE
TM 0113 G 0001 P 0089

LANDS N/F NEW YORK CENTRAL RAILROAD

EX. PRIVATE DRIVE

20' REAR YARD SETBACK

E 1318700.00
N 315500.00

E 1319150.00
N 315550.00

PR EW-1

REGRADE DITCH @ 1% TO PIPE

PR DI-10

6" BARRIER CURB

PR DI-8

PRIMARY PARKING LOT
87 PARKING SPACES
(6 HANDICAP)

6" BARRIER CURB (TYP)
TAPER TO FLUSH

PROPOSED LA PLATA LIBRARY
FFE 181.50
REFER TO ARCHITECTURAL PLANS

20" MAGNOLIA TREE

6" BARRIER CURB (TYP)

PR DI-9A

CONCRETE PAD WITH BOLLARDS AND FLAG
REFER TO SHEET A-002

REAR PATIO

38" MAPLE TREE

EX STORM PIPE TO BE REMOVED

PATIO FLUSH WITH PAVEMENT

PARKING LOT FLUSH WITH COURTYARD

TRASHPAD

DIESEL TANK (ELECTRICAL PLANS)

MASONRY SCREENING ENCLOSURE
(SEE SHEET A-003)

GENERATOR
(REFER TO ELECTRICAL PLANS)

EX. WINKLER HOUSE
(TO REMAIN)

10' FRONT YARD SETBACK

PR DI-7

PR DI-9

REAR ACCESS GATES
(REFER TO A-002)

BEGINNING OF TALBOT ST EXT STA 0+00

S87° 22' 29"W
6.51'

MARQUEE SIGN. SEE DETAILS A-003

N2° 28' 02"W
11.27'

PR DI-1

10' FRONT YARD SETBACK

HANDICAP RAMP (TYP)

PR DI-2

6" BARRIER CURB (TYP)

N88° 38' 40"E
610.84'

HANDICAP RAMP (TYP)

CONCRETE APRON
REFER TO DETAIL R2.32

HANDICAP RAMP (TYP)

PR DI-4

PR SIDEWALK

YELLOW FLEXPOSTS

PR SS MH2

L=46.25
R=30.00
Δ=88°19'23"

PR SIDEWALK

CURB TRANSITION

CURB TRANSITION

PR SS MH1

DEP CURB AND GUTTER ACROSS ENTRANCE

6" COMBINATION CURB AND GUTTER

DEP. CURB AND GUTTER ACROSS ENTRANCE

TALBOT STREET EXTENSION CENTERLINE 631.76 FT N 88° 38' 40" E

TALBOT ST EXT STA 6+31.76
MAPLE AVE EXT STA 0+00.00

TALBOT STREET EXTENSION
PR 60' PUBLIC ROW

PR 10" C-900 PVC WATER MAIN TO MAPLE AVE

PR BLOCK RETAINING WALL

6" COMBINATION CURB AND GUTTER

PR DI-3

PR DI-3A

PR DI-4A

PR DI-11

PR DI-5

PR DI-6

LIGHT POLE (TYP)

10' PUBLIC UTILITY EASEMENT

N88° 38' 40"E
580.64'

YELLOW FLEXPOSTS

CLASS 0 RIP RAP APRON W = 7.5'

CURB TRANSITION

PR DI-14

SWALE @ 1.5% TO BIOSWALE

AUXILIARY PARKING LOT
75 PARKING SPACES

3' WIDE CURB CUT
ELEV 182.00

STOP

STOP

STOP

STOP

N2° 28' 02"W
26.77'

PR OUT-1

BIOSWALE 1, TRAPEZOIDAL
250 FT LONG, 4 FT WIDE BOTTOM
4:1 SIDESLOPES, 1.25 FT DEEP 0.50% SLOPE

CLASS 0 RIP RAP FOREBAY
L=20', W = 12' D =6"

E 1318950.00
N 315200.00

10' PUBLIC UTILITY EASEMENT

NORTH MAPLE AVE
PR 60' PUBLIC ROW

PR 10" C-900 PVC WATER MAIN

PR 8" PVC SEWER

PR 8" PVC SEWER

150 FT OF SWALE @ 1%

6" WATER MAIN

WASHINGTON AVE
VARIABLE WIDTH ROW

MAREDITH BUILDING
3 STORY OFFICE BUILDING
TM 0113 G 0001 P 0084

0 10 20 40 60
SCALE: 1" = 20'

NOTE:
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NOTE:
This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.

STATE OF MARYLAND
STANLEY F. POPE
LICENSE #36310
PROFESSIONAL ENGINEER

LIC 36310 EXP 11/17/26

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ToLP PERMIT #00562-2021
LA PLATA LIBRARY

SITE PLAN
NORTHERN SECTION

PROJECT DATA

Tax Map:	0113	Parcel:	SEVERAL
LA PLATA, MD			
Drawn By:	WCS	Checked By:	WCS
Date:	2/12/25		
Scale:	1" = 20'		

REVISIONS

1. 5/19/23 PER LA PLATA COMMENTS
2. 1/16/25 PER LA PLATA COMMENTS
3. 1/16/25 PER CHARLES COUNTY SCD COMMENTS
4. 2/12/25 ISSUED FOR TEAM REVIEW
5. 7/22/25 PER TOWN COMMENTS

Project No.: 21-093
File Name: 071425BF.dwg
Sheet No.: C-201

Lenhart Traffic Consulting, Inc.

Transportation Planning & Traffic Engineering

Memorandum: ***Date:*** **January 16, 2026**

TO: Charles County
Department of Public Works
10430 Audie Lane
La Plata, MD 20646

FROM: Mike Lenhart

RE: La Plata Library

A point-by-point response to the comments provided to the Town of La Plata by BAI, dated January 5, 2026, is below. In addition to the point-by-point responses, a revised TIA is attached based on the comments provided by BAI and Town of La Plata Staff.

Summary Comments:

Comment #1: We recommend that Lenhart provide a schematic drawing of the recommended traffic calming features along Talbot Road Extended and Maple Avenue, and all-way stop control at the site access points, which is intended to discourage cut-through traffic and enhance pedestrian safety.

Response: *A concept traffic calming plan has been provided as Appendix G of the revised TIA.*

Please note that the formal traffic calming recommendations include stop-control at the sharp bend in the road at the intersection of Talbot Street and Maple Avenue, pedestrian crossing signs, and stop for pedestrian signs within the proposed crosswalks on this roadway. As discussed in the revised TIA, we do not anticipate a significant amount of cut-through traffic to utilize the extended roadways, but these recommendations will discourage cut-through traffic by slowing vehicles down and will provide safety improvements for pedestrians crossing the road.

Comment #2: The TIS Report has a few minor technical issues that we do not anticipate would substantially change the outcome of the study; however, we recommend that these comments be addressed by Lenhart Traffic Consulting, Inc., either by a point-by-point response or a revised TIS report, as appropriate. Please see the attached detailed comments.

Lenhart Traffic Consulting, Inc.
231 Najoles Road, Suite 250
Millersville, MD 21108

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email: mlenhart@lenharttraffic.com

Response: *Noted. Point-by-point responses to the detailed technical comments are also provided in this document.*

Comment #3: The TIS recommends improvements along state-maintained facilities:

a. Left Turn Lane extension along MD 6 (Charles Street) at Washington Avenue/Wills Street to Calvert Street. We recommend that the Town and Charles County contact the SHA Project Manager, Mr. Sean Boyle (SBoyle1@mdot.maryland.gov), and the Deputy Director, Mr. Jeff Davis (JDavis7@mdot.maryland.gov), at the SHA Office of Highway Development, and share the final TIS and the recommended improvements.
b. Recommend Lenhart to specify the Signal Timing improvements proposed at SHA-maintained intersections. We recommend that the Town and Charles County contact Mr. Ben Myrick at the SHA Office of Traffic and Safety, Traffic Development and Support Division (BMyrick@mdot.maryland.gov), and share the final TIS with the recommended improvements

Response: *Noted. The TIA has been provided to MDOT SHA and the traffic signal timings have been shared with MDOT SHA via the transmission of Synchro files. Traffic signal timings sheets have also been provided in Appendix E of the revised TIA.*

Comment #4: The Pine Grove Improvements include a second receiving lane along MD 6 (Charles Street), which would end at Calvert Street, and is not shown as existing conditions on the proposed 65% design plans for the SHA project CH2485184. We recommend that the Town and Charles County inform Mr. Boyle and Mr. Davis of SHA.

Response: *Lenhart Traffic Consulting concurs with the above comment. The Town and County should coordinate with MDOT SHA to ensure the recommended improvements are included in any future design plans for the MD 6 Project.*

Detailed Technical Comments:

Comment #1: Exhibit 2b - Lane Use and Traffic Control Devices (Page 10):

a. MD 6 (Charles Street) at St. Mary's Avenue – Per Google StreetView, the Lane Use along MD 6 is left-only and shared thru-right, not thru and thru-right. The left-only lane ends at Washington Avenue and does not operate as an additional thru lane.
b. MD 6 (Charles Street) at La Grange Avenue/ Coca Cola Vending Driveway – Per the 65% Design Display for the SHA project CH2485184, the existing two-way left-turn lane will be

reduced to begin east of La Grange Avenue. Therefore, the proposed future lane use along EB MD 6 should be one shared thru and right turn.

c. MD 6 (Charles Street) at Maple Avenue – Per the proposed 65% design plans for the SHA project CH2485184, this intersection will be reconstructed as a single-lane peanut roundabout with MD 6 (Charles Street), Kent Avenue, Graves Avenue, and Maple Avenue operating as approaches to the roundabout. Therefore, no direct left turns will be allowed in and out of these streets. Vehicles will only be able to turn right-in and out of these streets.

d. MD 6 (Charles Street) at Oak Avenue/ N. Oak Avenue – Per the proposed 65% design plans for the SHA project CH2485184, this intersection will be reconstructed as a single-lane roundabout. Therefore, no direct left turns will be allowed in and out of these streets. Vehicles will only be able to turn right-in and out of Oak Avenue and N. Oak Avenue.

Response:

a. At the intersection of MD 6 & St. Mary's Avenue, the eastbound approach consists of 2 lanes. Upstream, the innermost lane becomes the left-turn lane at the intersection with Washington Avenue, but this is still a through movement at the intersection with St. Mary's Avenue. There is no left-turn movement along eastbound MD 6 at St. Mary's Avenue. A note has been added to Exhibit 2b to acknowledge the innermost lane is the upstream left-turn lane at Washington Avenue.

b. As noted in Section 3.5 of the TIA, the MD 6 Project (CH2485184) is not funded for construction, and the design has not been finalized. As such, the road improvements shown on the 65% design plan for the SHA project have not been evaluated in this TIA. With the current project status of the SHA project, it is unclear how long it may take for the proposed improvements to be realized.

c. As noted in Section 3.5 of the TIA, the MD 6 Project (CH2485184) is not funded for construction, and the design has not been finalized. As such, the road improvements shown on the 65% design plan for the SHA project have not been evaluated in this TIA. With the current project status of the SHA project, it is unclear how long it may take for the proposed improvements to be realized.

d. As noted in Section 3.5 of the TIA, the MD 6 Project (CH2485184) is not funded for construction, and the design has not been finalized. As such, the road improvements shown on the 65% design plan for the SHA project have not been evaluated in this TIA. With the current project status of the SHA project, it is unclear how long it may take for the proposed

improvements to be realized.

Comment #2: Background Projects – Pine Grove Improvements and SHA MD 6 Improvements (Pages 13-14): Based on the CTP information provided on Pages 380-381. MD 6 improvements appear funded for design, right-of-way acquisition, and advanced utility relocations. As such, the project seems to be advancing, while construction remains unfunded.

Response: *As noted above, the MD 6 Project (CH2485184) is not funded for construction, and the design has not been finalized. As such, the road improvements shown on the 65% design plan for the SHA project have not been evaluated in this TIA. With the current project status of the SHA project, it is unclear how long it may take for the proposed improvements to be realized.*

Comment #3: Exhibit 4a - Base Peak Hour Volumes (Page 15): Were the volumes shown along US 301 between MD 6 and Hawthorne Road balanced? The NB through volumes drop significantly between Talbot Street and Hawthorne Road, and the SB through volumes drop significantly between Talbot Street and MD 6. However, there are only a few business driveways in between. Similar issues were noticed for Washington Street thru volumes between MD 6 and Baltimore Street.

Response: *Traffic volumes were not balance along US 301 or MD 6, because as noted, there are business driveways and other roadways in between most of the study intersections. Additionally, the analysis presented in this report provides a conservative evaluation of each individual study intersection as the traffic volumes evaluated are the induvial peak of each intersection, rather than the peak hour of the network. For example, the morning peak hour of the intersection of US 301 & MD 6 occurs between 7:15-8:15 AM, while the peak hour of the adjacent intersection of MD 6 & Baltimore Street occurs between 7:45 and 8:45 AM. Without using the same peak hour for each intersection, it is unlikely that volumes will balance, but as noted, this provides a conservative analysis of each intersection.*

Comment #4: Exhibit 7a - Inbound Trip Assignment and Exhibit 8a – Outbound Trip Assignment: Based on existing peak-period traffic patterns, the trip assignments from US 301 north appear too low and should be at least 10%. Also, from Washington Avenue north, it should be at least 20%, and from MD 488 east, it should be at least 20% as well. The existing traffic patterns suggest that people traveling from the south on US 301 would take Glen Albin Road, then take either St. Mary's Ave or Oak Ave to reach the library. Therefore, the trip assignments from South US 301 should be 5%. Also, the trip assignments of 5% each for La Plata Parkway and Hickory Lane seem too high, as these streets are not major streets. The outbound trip assignments are expected to be

similar, except that when going south, more people are expected to turn left onto MD 6 rather than take a detour via St. Mary's Avenue or Oak Avenue.

Response: *The trip distributions included in the TIA were determined based on the existing traffic patterns within La Plata, the density of residential areas (as these are the trip creators for the library), and the locations of other libraries within the county. Based on all of these factors, the trip distribution utilized in the study provides a reasonable estimation of the trip origin/destinations for the library. The requested changes will not significantly change the findings of the TIA, as the changes are all only differences of ~5%, and there is not sufficient evidence to suggest the requested distribution provides a more realistic distribution.*

Comment #5: Traffic Growth Projection (Page 78): Replace the current blank worksheet in the TIS report.

Response: *This page has been removed in the revised TIA.*

Comment #6: Appendix B - Synchro Analysis:

a. The observed Peak Hour Factors (PHF) based on the turning movement counts should be used for the Synchro and SimTraffic analysis, instead of the default 0.92.
b. Per the scoping document, HCM 6th Edition methodology should be used to report the Level of Service (LOS) from Synchro.
c. How were the existing signal timings obtained? Include the timing plans in the appendix.

Response:

a. Peak hour factor calculations have been provided for each peak period on the turning movement count sheets in Appendix A. As shown, nearly all of the calculated PHF's are greater than the assumed PHF of 0.92. Critically, all of the evening peak PHF's are greater than 0.92. The evening peak period is the period with higher levels of traffic and worse level of service throughout the study area. Since the findings and recommendations of the study are based on the evening peak period, and the Synchro calculations provide a more conservative analysis using the default PHF of 0.92 rather than the calculated PHF for each intersection, the analyses have not been updated with calculated PHF's.

b. The HCM 6th Edition could not properly produce level of service results for all the intersections within the study area due to the complexities of the HCM 6th Edition methodology. As such, the HCM 2000 methodology was utilized as this methodology provides a consistent evaluation for the data being analyzed in this study. The HCM 2000 methodology

continues to be a widely accepted method of analysis for level of service evaluations in Traffic Impact Studies.

c. *Traffic signal timings are based on the traffic signal timings approved as part of the Pinegrove development TIA. The existing, background, total, and recommended traffic signal timing sheets have been included in Appendix E.*

January 27, 2026

Don Dooley MPA, MHP
Director of Planning, Town of La Plata
305 Queen Anne Street
La Plata MD 20646

Ref: La Plata Library Traffic Impact Study Review Comments

Dear Mr. Dooley:

Brudis & Associates, Inc. (BAI) has completed our review of the revised Traffic Impact Study (TIS) and the responses to comments, dated January 16, 2026, prepared by Lenhart Traffic Consulting, Inc., for the proposed Public Library located on the northeast corner of Washington Avenue and Talbot Street in La Plata. We recommend that the TIS be approved, provided the following improvements are made:

- Install a stop sign at the Overflow Parking Lot entrance on North Maple Avenue Extension.
- Construct a raised median with a cut-through walkway at the pedestrian crosswalk connecting the overflow parking and the library. This will help make the crosswalk more visible and alert drivers.
- Remove the centerline marking along Talbot Avenue and North Maple Extensions. According to Maryland MUTCD guidelines, these markings are not needed for urban streets with low traffic volume (4,000 vehicles or fewer daily).
- Share all communication with the State Highway Administration (SHA) regarding the proposed changes to traffic signals and road markings along US 301 (Crain Highway) and MD 6 (Charles Street) with the Town. This information will be useful for future follow-ups since these signals and roads are maintained by SHA. Since these are SHA-maintained facilities, the feasibility of these improvements needs to be verified by SHA.

The study's conclusions indicate that most intersections should function well, maintaining an acceptable Level of Service of D or better, once the library is open. However, there are some intersections—like US 301 at MD 225, US 301 at MD 6/Port Tobacco Road, and MD 6 at Washington Avenue—that may experience higher traffic congestion. To help manage these traffic impacts, we recommend updating the traffic signal timings and road markings on US 301. Additionally, there may be a need to extend the left-turn lane to eastbound MD 6 (Charles Street) to prevent traffic queues from overflowing at Washington Avenue/Willis Street.

Should you have any questions or require any additional information, please do not hesitate to email me at PKar@brudis.com or call me at 667-290-4110.

Very truly yours,

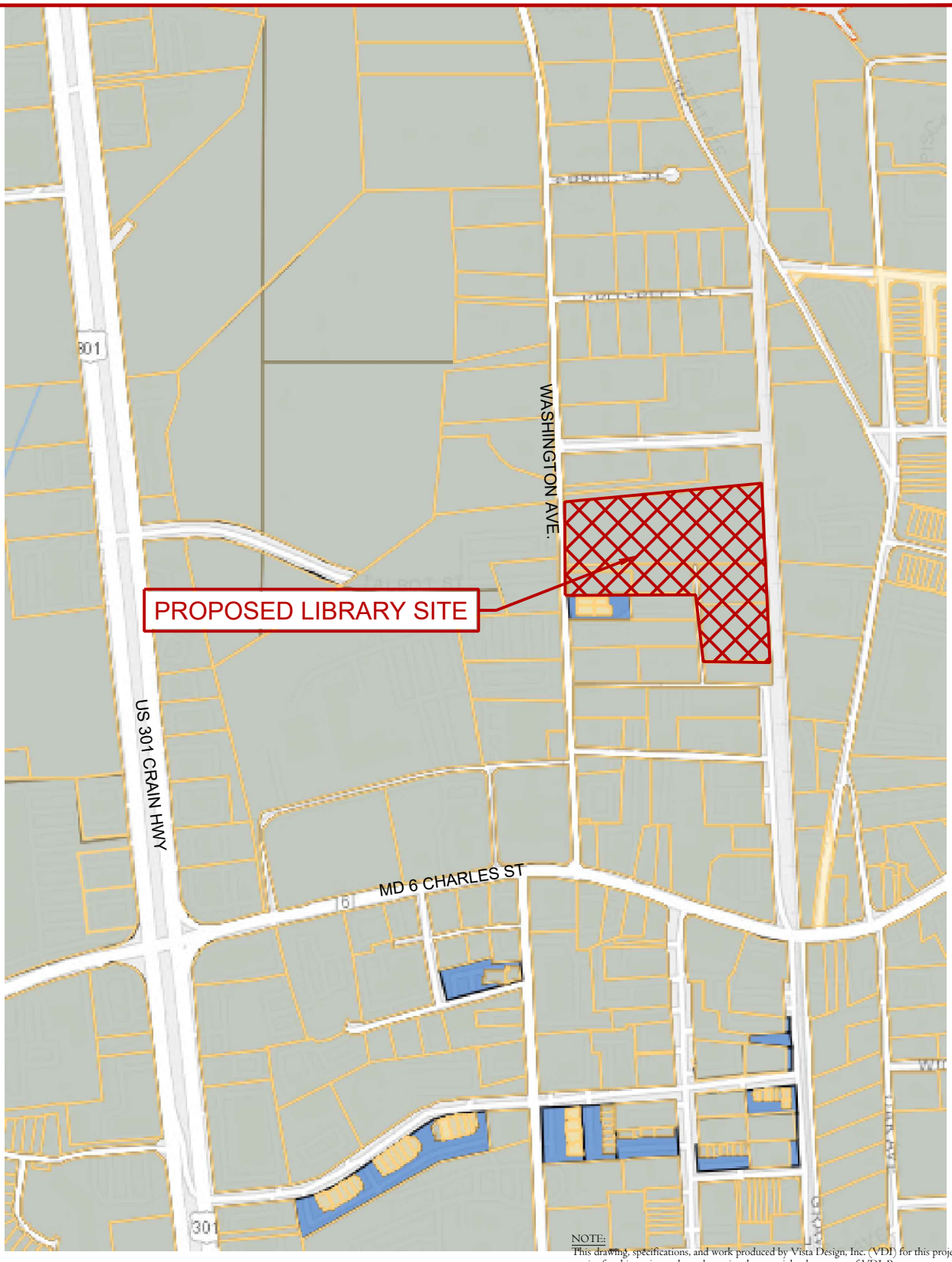
BRUDIS & ASSOCIATES, INC.



Puskar Kar, PE, PTOE
Director - Transportation Engineering

Attachments

cc: Ray Dagher, PE, Office Manager, BAI
Billy Brudis, PE, DBIA, Principal, BAI
Shayaq Ahmed, PE, PTOE, Deputy Director – Transportation Engineering, BAI



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NOTE:
This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.

LA PLATA
LIBRARY
TOPL 00526-2021

TAX ASSESSMENT
MAP EXHIBIT

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PROJECT DATA	
Project:	21-093
File:	TAXMAP.dwg
Date:	03/20/23
Scale:	NTS
Sheet:	1 of 1