

AGENDA MONTGOMERY TOWNSHIP BOARD OF SUPERVISORS FEBRUARY 8, 2021

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Tanya C. Bamford Candyce Fluehr Chimera Annette M. Long Matthew W. Quigg Beth A. Staab

Carolyn McCreary Township Manager

ACTION MEETING - 7:00 PM

- 1. Call Meeting to Order
- 2. Pledge of Allegiance
- 3. Public Comment
- 4. Announcements
- 5. Consent Agenda:
 - a. Consider Approval of Minutes of January 25, 2021 Meeting
 - b. Consider Payment of the Bills

Planning & Zoning:

- 6. Consider Authorization to Advertise Zoning Ordinance Text Amendment: Westrum Proposed Land Development
- 7. Escrow Releases:
 - a. Fire Fox Phase 3, Escrow Release No. 10 / Start of 18-month Maintenance Period
 - b. Fire Fox Phase 1, Escrow Release No. 13
 - c. Pete's Carwash, Escrow Release No. 2

Administration & Finance:

- 8. Consider Resolution Approving Volunteer Firefighter Stipend Based on 2020 Eligibility
- 9. Consider Authorization to Accept Quote for Engineering Services: Modernization of Route 309/Montgomery Mall Traffic Signals

Other Business:

10. Adjournment

PLEASE NOTE: For the safety of all participants, masks must be worn in the Township building and meeting room. Social distancing measures have been put into place which reduces the number of people who can safely occupy the meeting room. You may be asked to wait in the lobby if the room capacity has been reached. Thank you for your patience and cooperation in working to keep everyone safe.

MONTGOMERY TOWNSHIP BOARD OF SUPERVISORS BOARD ACTION SUMMARY

Item #3

SUBJECT:

Public Comment

MEETING DATE:

February 8, 2021

BOARD LIAISON:

INITIATED BY:

BACKGROUND:

Persons wishing to make public comment during this meeting on any items not listed on the agenda may do so at this time.

MONTGOMERY TOWNSHIP BOARD OF SUPERVISORS

BOARD ACTION SUMMARY

Item # 4

SUBJECT:

Announcements

MEETING DATE:

February 8, 2021

BOARD LIAISON:

INITIATED BY:

Tanya C. Bamford, Chair

 We want to remind our residents that the Montgomery Township Community and Recreation Center is open for business! Guidelines for safety are being implemented.
 Masks must be worn at all times.

Center hours are:

Monday to Friday: 5:30am to 7:30pm Saturday and Sunday: 8:00am to 2:00pm

- The Fitness Gym and Walking Track are open for Personal Fitness and configured for safety
- The gymnasium is available for individual basketball shooting; call to schedule a time
- Two indoor Pickleball Courts are now available special safety guidelines are required, call to register for a time slot
- Winter programs are happening now and include: ceramic workshops, pickleball lessons, arts & crafts for pre-school and youth, fitness fun programs, gaming night, chess club and many more new and fun activities. Check the website at www.montcrc.com or follow their Facebook for new and exciting programming

MONTGOMERY TOWNSHIP BOARD OF SUPERVISORS

BOARD ACTION SUMMARY

Item # 5

SUBJECT:

Consent Agenda:

Approval of Minutes of January 25, 2021 and Payment of Bills

MEETING DATE:

February 8, 2021

BOARD LIAISON:

INITIATED BY:

BACKGROUND:

Please review and contact Deb Rivas on Monday, February 8, 2021 with any changes to the minutes. Also, attached are the list of bills for review for payment on February 8, 2021.

MOTION TO APPROVE THE CONSENT AGENDA AS PRESENTED



MINUTES OF MEETING MONTGOMERY TOWNSHIP BOARD OF SUPERVISORS JANUARY 25, 2021

1. Call to Order: The January 25, 2021 action meeting of the Montgomery Township Board of Supervisors was held at the Montgomery Township Municipal Building, 1001 Stump Road, Montgomeryville, PA. Chair, Tanya C. Bamford called the meeting to order at 7:00 p.m.

IN ATTENDANCE:

Chair Tanya C. Bamford
Vice Chair Matthew W. Quigg
Supervisor Beth A. Staab
Supervisor Annette M. Long
Township Manager Carolyn McCreary
Township Solicitor Sean Kilkenny, Esq.

ALSO IN ATTENDANCE:

Police Chief J. Scott Bendig
Director of Finance Brian Shapiro
Director of Planning & Zoning Bruce Shoupe
Director of IT Rich Grier
Director of Public Works Greg Reiff
Recording Secretary Deborah A. Rivas

ABSENT:

Supervisor Candyce Fluehr Chimera

- 2. & 3. Pledge of Allegiance and Public Comment: Following the Pledge of Allegiance, there was no public comment.
- **4. Announcements:** Ms. Bamford acknowledged the recent passing of long time Township resident and volunteer, Anne Roller. Mrs. Roller served on many volunteer activities of the Township over the years and the Board sends its heartfelt condolences to her husband, Richard Roller.
- **5. Announcement of Executive Session**: Township Solicitor Sean Kilkenny, Esquire announced that the Board met in executive session at 6:30 p.m. this evening to discuss two (2) litigation and personnel matters.
- **6. Presentation:** The Board recognized long-time resident, Mary Griffith-Alfarano, for her recent selection to serve as the Chairperson of the Chamber of Commerce for Greater Montgomery County, as well as her many years of service to the Township on various committees and boards.

MOTION: Upon motion by Ms. Bamford, seconded by Ms. Long and unanimously carried, Resolution #2021-14 recognized and congratulated Mary Griffith-Alfarano for being named Chairperson of the Chamber of Commerce for Greater Montgomery County.



7 & 8. Consent Agenda:

MOTION: Upon motion by Mr. Quigg, seconded by Ms. Long and unanimously carried, the minutes of the January 4, 2021 meeting and the Bills List dated January 25, 2021 were approved as presented.

Public Works:

9. Authorization to Advertise for Bids – 2021 Curb and Sidewalk Project:

MOTION: Upon motion by Ms. Bamford, seconded by Mr. Quigg and unanimously carried, the bid advertisement for the 2021 Curb and Sidewalk Project was authorized.

10. Authorization to Advertise for Bids – 2021 Paving Project:

MOTION: Upon motion by Ms. Bamford, seconded by Mr. Quigg and unanimously carried, the bid advertisement for the 2021 Paving Project was authorized.

11. Authorization to Purchase Dump Truck under PA COSTARS Contract:

MOTION: Upon motion by Mr. Quigg, seconded by Ms. Staab and unanimously carried, the purchase of a new 2021 Peterbilt Dump Truck from G.L. Sayre Peterbilt at a cost of \$147,016.00 and the purchase of a dump body, snowplow and installation from Triad Truck Equipment at a total cost of \$89,225.00 was approved.

Planning & Zoning:

12. Authorization to Advertise for Conditional Use Hearing: Costco Gasoline Sales:

MOTION: Upon motion by Ms. Bamford, seconded by Ms. Long and unanimously carried, the advertisement and scheduling of the required Conditional Use public hearing, upon receipt of an application from Costco for gasoline sales, was approved.

13. Tree City USA Recertification and Growth Award Application:

MOTION: Upon motion by Ms. Staab, seconded by Mr. Quigg and unanimously carried, the submission of the application for the 2020 Tree City USA Recertification and 2020 Growth Award was approved.

13a. Board Positions for Zoning Hearing Board Application: Director of Planning and Zoning Bruce Shoupe presented the two applications to be considered by the Zoning Hearing Board at their February meeting. The two applications are for 311 Stump Road for a lot subdivision and 102 Ashley Circle for an addition that does not meet the requirements for setback from the property line. The Board declined to intervene on either application.



Public Safety:

14. Adoption of Amendment to Township Ordinance: Police Chief J. Scott Bendig reported that staff is recommending the amendment of Section 9-A of the Township ordinance for Vehicles and Traffic, specifically governing the speed limit of Vilsmeier Road. The current speed limit is 35 mph. It is recommended that the speed limit be reduced to 25 mph.

MOTION: Upon motion by Ms. Bamford, seconded by Mr. Quigg and unanimously carried, the adoption of amendment to Chapter 222, Section 9-A, reducing the speed limit on Vilsmeier Road to 25 miles per hour was approved.

15. Authorization to Purchase Replacement Police Vehicles:

MOTION: Upon motion by Mr. Quigg, seconded by Ms. Staab and unanimously carried, the purchase of two 2021 Ford Police Interceptor Utility vehicles from Fred Beans Ford Lincoln at a total cost of \$71,184.00 and the purchase and installation of equipment for the vehicles from Havis, Inc. at a cost of \$24,214.35 was approved.

Administration and Finance:

16. Escrow Release for Korean War Memorial and American-Korea Alliance Peace Park: Ms. McCreary reported that the committee has requested the release of the financial security that was held by the Township for this project. Ms. Bamford announced the recent passing of the Architect for the project, Mr. Joseph Lavalle. Ms. Long stated that Mr. Lavalle served his community in Upper Moreland Township as a Commissioner for a long time. When he was approached about serving as the architect for this project, he did not hesitate to join the committee. Ms. Long said that it was his design work on the project that brought the concept to life. He will be sorely missed and we have this park because of him.

MOTION: Upon motion by Ms. Bamford, seconded by Mr. Quigg and unanimously carried, with Ms. Long abstaining, the Board authorized the release of \$70,000 of the financial security posted to ensure completion of the memorial.

17. Affirm Tax Collector's Compensation:

MOTION: Upon motion by Ms. Bamford, seconded by Mr. Quigg and unanimously carried, the Board affirmed and maintained the current salary of \$16,735.00 for the Montgomery Township tax collector.

18. Approve Settlement of Board Assessment Appeals: Ms. McCreary reported that the North Penn School District and the property owners of 988 Bethlehem Pike (OSJ of Montgomeryville LLC) and 913 Bethlehem Pike (Lukoil North America LLC) have reached an agreement as to the assessment appeals and reverse assessment appeals, which now require action by the Board of



Supervisors on behalf of the Township. Settlement of the appeal for 988 Bethlehem Pike will result in the Township refunding \$2,091.11 for the year 2020 and settlement of the appeal for 913 Bethlehem Pike would result in the Township reimbursing the tax payer \$1,365.62 for the years 2017 through 2020.

MOTION: Upon motion by Ms. Bamford, seconded by Mr. Quigg and unanimously carried, the Board approved the stipulated settlements for the properties identified and authorized the Township Solicitor to execute the settlement stipulations.

19. Dissolution of Pension Committee for 401 and 457 Plans: Ms. McCreary reported that the current plan administrator for the non-uniform pension plan and the divert compensation plan for the employees was recently changed to Empower Retirement which provides excellent investment options and customer service for employees. Based on this change, the increased oversight being provided by the Finance Director and staff, the updating of the plan policies and the increased direct contact by Empower with individual employees, it is recommended that the Board dissolve the non-uniform pension committee.

MOTION: Upon motion by Ms. Bamford, seconded by Ms. Staab and unanimously carried, the Board dissolved the Money Purchase Plan/Deferred Compensation Plan Committee as permitted by the bylaws adopted by resolution of the Board of Supervisors on April 27, 2009.

20. Affirmation of Volunteer Firefighter Criteria for Qualified Active Member Status: Ms. McCreary reported that the Board approved the First Responder Recruitment and Retention Stipend on April 13, 2020 to incentivize volunteer first responders for their service in 2019. Prior to adopting this resolution in 2021, for volunteer service in 2020, the Township must acknowledge the fire company's or EMS squad's written criteria for determining Qualified Active Member status. Per FDMT by-laws, active status is determined with a point system. Members accrue various points for fire calls, duty crew, drills and meetings, stipend shifts, public relations/community events and fundraisers. Members must achieve 20% of total points accumulated to be considered as an active member and status as a member in good standing.

MOTION: Upon motion by Ms. Bamford, seconded by Mr. Quigg and unanimously carried, the Board affirmed the FDMT criteria for determining the Qualified Active Member status.

Other Business:

21. Department Reports: Ms. Bamford announced that Department reports for the month of December were available in the packet. Ms. Bamford also reported that there were two items that staff were seeking further direction on from the Board.

Chief Bendig reported that over the past few weeks there has been an uptick in food truck activity within the Township. Currently, these trucks are being regulated through the current ordinance



governing peddling and soliciting. Discussions have been held regarding this issue and staff is requesting further direction from the Board regarding how they would like the staff to proceed regarding the regulation of food truck activity within the Township. Township Solicitor, Mr. Kilkenny, reported that two other municipalities that he represents have decided to regulate food trucks through zoning, providing certain zoning districts, or a zoning district for approved trucks which are permitted with appropriate regulations in that district. Mr. Kilkenny stated that he recommends that food trucks be regulated through zoning with at least one district where it will be permitted because a zoning classification ordinance is more likely to be challenged successfully, if you don't permit that use somewhere. Discussion followed. The Board expressed the need to be sensitive to current established brick and mortar food establishments as well as the strong interest and demand for the food trucks. Under public comment, Vince Tulio of 101 Glasgow Circle stated that he watched a food truck come to his cul-de-sac on an early afternoon. Many kids were still riding bikes in the neighborhood. A lot of traffic drove into and out of the cul-de-sac to pick up their orders. Mr. Tulio recommended that if the Board were to approve some kind of regulation, that it be mindful of the pedestrian traffic and location. The Board agreed to allow staff to come forward with a potential zoning solution for their consideration.

Ms. McCreary reported that a resident had reached out to Mr. Reiff about placing a bench in one of the parks in memory of a loved one who passed away. Mr. Reiff shared that it had been past practice to not allow it because the sentiment was that if the Township did it for one, it would have to do it for all requests. It was suggested that a plan could be created which would allow only a certain number of benches per park, type of low maintenance bench and a tasteful presentation. The Board was agreeable to entertaining a recommendation of a memorial bench program from staff.

- **22. Committee Liaison Reports:** There were no committee reports discussed. Ms. Bamford reported that the Sewer Authority had met and discussed the latest BioBot study report. The numbers have come down slightly, but they are still very high. Everyone needs to continue to wear masks and stay socially distant.
- 23. Adjournment: Upon motion by Ms. Bamford and seconded by Ms. Staab, the meeting was adjourned at 8:00 p.m.

Respectfully submitted,

Deborah A. Rivas, Recording Secretary

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700 A1						30.00
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01 TOTALS:

(2 Checks Voided)
Total of 113 Disbursements:

464,086.51

Check Register Report For For Check Dates 01/26/2021 to 02/08/2021

Check Date	Name	Description	Amount
1/27/2021	STATE OF PA	Tax Payment	9,673.60
2/1/2021	ICMA RC	DROP Payment	16,345.64
2/4/2021	PA SCDU	Withholding Payment	852.17
2/4/2021	MORGAN STANLEY SMITH BARNEY INC	Police Pension	7,341.54
2/4/2021	UNITED STATES TREASURY	941 Tax Payment	84,228.15
2/4/2021	CITY OF PHILADELPHIA	Tax Payment	509.11
2/4/2021	EMPOWER RETIREMENT	401 Plan	14,498.12
2/4/2021	EMPOWER RETIREMENT	457 Plan	15,257.59
2/4/2021	PBA	Withholding Payment	1,291.00
2/4/2021			
		TOTAL	\$ 149,996.92

MONTGOMERY TOWNSHIP BOARD OF SUPERVISORS BOARD ACTION SUMMARY

Item # 6

CLIDI	CCT.	Duan
SUBJ	EU.10	Prop

Proposed Zoning Text Amendment for Development of 10 +/- acre

vacant parcel behind the Roadway Inn, 969 Bethlehem Pike – Westrum Development Company – Lifestyle Apartments.

MEETING DATE:

February 8, 2021

BOARD LIAISON

Tanya C. Bamford, Chair

INITIATED BY:

Bruce Shoupe, Director of Planning and Zoning

BACKGROUND:

Staff has met with Westrum Development Company concerning the development of the vacant 10 +/- acre parcel of land behind the Roadway Inn on Bethlehem Pike for approximately 230+ Lifestyle Apartments. The Developer expresses that creating this new use would provide a variety of housing types where vacant Limited Industrial zoned land are under-utilized and suitable as a transition use adjacent to residential districts.

The Township Staff and Consultants have reviewed the information provided with some items still outstanding and under review (signage, traffic, and park and recreation).

ZONING, SUBDIVISION OR LAND DEVELOPMENT IMPACT: Presently the use is not allowed in the I-Industrial zoning district.

<u>RECOMMENDATION:</u> Provide staff direction with direction on how you wish us to proceed:

MOTION/RESOLUTION:

MOTION to authorize setting a public hearing date for the attached proposed Zoning Text Amendment Ordinance or;

MOTION to continue to work with Staff and Consultant on revising the proposed ordinance

MOTION	SECOND	



Stone Manor Corporate Ctr. 2700 Kelly Road Suite 300 Warrington, PA 18976 Tel (215) 345-7500 Fax (215) 345-7507 www.foxrothschild.com

CARRIE B. NASE-POUST Direct No: 215.918.3646

Email: CNase-Poust@FoxRothschild.com

February 4, 2021

VIA EMAIL AND FEDERAL EXPRESS

Carolyn McCreary, Township Manager Montgomery Township 1001 Stump Road Montgomeryville, PA 18936

Re: Proposed Lifestyle Apartments - Stump Road, Montgomery Township

Dear Carolyn:

As you are aware, Westrum Development Co. ("Westrum") is proposing to develop the property located at 13-17 Bethlehem Pike with a lifestyle apartment building. However, the property is located in the LI-Limited Industrial District, which does not currently permit this type of use. Therefore, Westrum is proposing a text amendment to the Montgomery Township Zoning Ordinance that would create a new Lifestyle Apartment use which would be permitted in the LI-Limited Industrial District by conditional use approval. To that end, enclosed please find the following documents:

- 1. Six (6) copies of the Application for Change in Zoning/Text Amendment, along with the proposed Ordinance Amendment;
- 2. Six (6) copies of the Zoning Plan, prepared by Kimley-Horn, dated January 8, 2021, showing how the property could be developed if the proposed Ordinance Amendment is adopted;
- 3. Six (6) copies of the Landscape Concept Rendering, prepared by Kimley-Horn, dated January 5, 2021; and
- 4. One (1) copy of the Traffic Impact Assessment, prepared by Heinrich & Klein Associates, Inc., dated December 22, 2020;
- 5. One (1) copy of the Deed for the property; and

A Pennsylvania Limited Liability Partnership

California Colorado District of Columbia Florida Georgia Illinois Minnesota Nevada Delaware New Jersev New York North Carolina Pennsylvania South Carolina Texas Virginia Washington



February 4, 2021 Page 2

6. One (1) copy of the first and signature page of the Agreement of Sale showing my client's equitable interest in the property.

Please note that a check for the filing fee in the amount of \$2,000 and a check for the escrow deposit in the amount of \$5,000, as well as a check payable to Montgomery County in the amount of \$1,000.00, will be sent directly to you from Michael Maier.

I am respectfully requesting that this matter be included on the agenda of the Board of Supervisors for their meeting on Monday, February 8, 2021, to discuss the proposed Ordinance Amendment.

Should you have any questions regarding this matter, or need additional information in order to process this request, please feel free to contact me.

Thank you for your assistance in this regard.

Sincerely,

Carrie B. Nase-Poust

CBN:

Enclosures

cc: Sean Kilkenny, Esquire (w/encs. – via email)

Bruce Shoupe, Director of Planning and Zoning (w/encs. – via email)

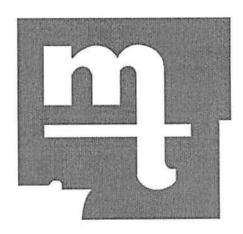
Judy Stern Goldstein (w/encs. – via email)

Michael Maier (w/encs. – via email)

Brian McKenzie (w/encs. – via email)

Anthony Caponigro, P.E. (w/encs. – via email)

Application for Change of Zoning/Text Amendment



Montgomery Township 1001 Stump Road Montgomeryville, PA 18936-9605

Telephone: 215-393-6920

Fax: 215-855-1498

www.montgomerytwp.org

1-2017

Application for Change in Zoning/Text Amendment

Montgomery Township, Montgomery County, Pennsylvania

Date of Application: Febr	ruary 2, 2021
	de for an amendment to the Code of the Township of Montgomery, ntgomery Township Zoning Map.
Applicant's name: (Corporation)	Westrum Development Co.
Person making application:	Michael Maier
Applicant's address:	1300 Virginia Drive, Suite 215
	Fort Washington, PA
Phone # 215-620-5610	Fax # 215-283-0991
E-Mail mmaier@westrum.com	
Owner's name (title holder) - Attach copy of Deed	Neil C. Hopkins and Gregory Kessell
• •	Berkeley Court
Do	ylestown, PA 18901
Phone #	Fax #
E-Mail	
,	Nase-Poust, Esquire
Attorney's Address Fox Rothso	hild LLP
2700 Kelly Road, Suite 300, War	rington, PA 18976
Phone # 215-918-3646	Fax # Fax #
E-Mailcnase-poust@foxroths	child.com
Description of Property Involved	;
Location13-1	7 Bethlehem Pike
Block & Unit #46-0	D-0012 4- 00-1

Present Zoning Classification LI - Limited Industrial	
Parcel Size 10 acres	
Applicant's Reasons for Rezoning/Text Amendment Request:	
Applicant proposes to create a new Lifestyle Apartment use in order to provide a variety of housing typ	es. Certain
portions in the Township zoned LI located adjacent to residential districts that are vacant, under utilized	d and suitable
for development for Lifestyle Apartments to transition uses along arterial corridors from single family or	mmunities
to commercial uses.	
Applicant requests that above referenced tract be changed in zoning classification from a	
to allow Lifestyle Apartments by conditional use approval in the LI - Limited Industrial Zoning District.	_district to a
See attached proposed Ordinance Amendment.	district

Montgomery Township Rezoning/Text Amendment Application Checklist:

- 1. Plans attached to Petitions shall contain the following information:
 - a) Plans to be prepared by a Registered Land Surveyor or Professional Engineer.
 - b) Name, date, address of the Surveyor or Engineer preparing the plans and description.
 - c) Complete scaled dimensions of property involved (all bearings and distances).
 - d) Block and unit number of property involved
 - e) Owners of record of all adjoining properties, including deed book and page number. Attach a separate list to petition.
 - f) Zoning classification of all adjoining properties.

- g) Existing use of all adjoining properties regardless of zoning classification.
- Existing use of subject property involved regardless of zoning classification.
- Description using the dimensions as shown on this plan.
- j) Area of property involved to be shown in acreage and square feet.
- k) If owner of tract, include a copy of the Deed with the application. If equitable owner, include a copy of the Deed <u>and</u> latest Agreement of Sale.
- I) Width of abutting roadway (right-of-way, cartway, improved or unimproved).
- If lot is in subdivision, show lot number(s), section number, name and recording information of the subdivision.
- n) A detailed description of the proposed change(s) to the zoning code.
- 2. Any other information as may be required by the Zoning Officer of Montgomery Township.
- 3. Six (6) paper sets of plans and descriptions, attached to the Rezoning/Text Amendment Petition, and folded to no larger than 8.5" x 11" and one plan set in electronic pdf format.
- One (1) paper copy and one (1) pdf version of a traffic study for the site (see Chapter 205, Article XVI for details) for rezoning request.
- 5. All information must be provided to Montgomery Township in a pdf format.
- 6. FEES: Two (2) checks made payable to "Montgomery Township".

Filing Fee \$2,000.00 Escrow Deposit \$5,000.00

- Administrative fee of 7% of charges incurred in conjunction therewith; if none incurred, minimum administrative fee of \$50.00.

All application fees paid are non-refundable and intended to cover all overhead, administrative and miscellaneous expenses of the Township. Escrow deposits will be returned to the applicant, without interest, after the proceedings are complete and after all appropriate charges have been made to the escrow account. In the event that the review costs exceed the deposited escrow amount, I hereby agree to make additional deposits to the escrow account. Should this balance fall below the minimum required amount, the Township has the authority to stop all reviews or take any other action it deems necessary.

One (1) check made payable to "Montgomery County" in the amount of \$1,000.00. The Township will forward to the County with the application.

I verify that the statements made in the above application are true and correct. I understand that false statements herein are made subject to penalties of 18PACS S4904 relating to

unsworn falsification to authorities.

Corporation name, if applicable)

or applicant

(Applicant's or Corporation Official's signature and title)

MONTGOMERY TOWNSHIP MONTGOMERY COUNTY, PENNSYLVANIA

ORDINANCE NO. 2021-____

AN ORDINANCE OF MONTGOMERY TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA, AMENDING THE MONTGOMERY TOWNSHIP ZONING CODE TO CREATE A DEFINITION FOR "LIFESTYLE APARTMENTS"; TO ALLOW LIFESTYLE APARTMENTS BY CONDITIONAL USE IN THE LI – LIMITED INDUSTRIAL DISTRICT; TO ADD AREA AND BULK REQUIREMENTS FOR LIFESTYLE APARTMENTS; AND PROVIDING A SEVERABILITY CLAUSE, A REPEALER CLAUSE AND AN EFFECTIVE DATE;

WHEREAS, Section 230-187 of the Montgomery Township Zoning Code and Section 609 of the Pennsylvania Municipalities Planning Code, 53 P.S. § 10609, authorize the Board of Supervisors of Montgomery Township to enact amendments to the Montgomery Township Zoning Code; and

WHEREAS, the Board of Supervisors of Montgomery Township has determined that it is in the best interests of the residents of Montgomery Township to define and provide standards for a new use entitled "Lifestyle Apartments", as such use is becoming more popular in the housing industry and provides positive economic, health and social benefits of the Township; and

WHEREAS, certain portions of the Montgomery Township LI-Limited Industrial District, being adjacent to the Township's residential districts are vacant and suitable for the development of Lifestyle Apartments to transition the uses along arterial corridors from single family communities to commercial uses; and

WHEREAS, Lifestyle Apartments encourage the development of underutilized land within certain portions of the LI-Limited Industrial District; and

WHEREAS, a public hearing was held, following public notice, for the purpose of considering this amendment to the Montgomery Township Zoning Code; and,

WHEREAS, the Board of Supervisors of Montgomery Township, after public hearing, pursuant to public notice, and after receipt of recommendations from the Montgomery Township Planning Commission and the Montgomery County Planning Commission, deems it appropriate and proper that the Zoning Code be amended as set forth herein and that such amendment is in accordance with the spirit and the intent of the Montgomery Township Zoning Code.

NOW, THEREFORE, be it, and it is hereby ORDAINED by the Montgomery Township Board of Supervisors, and it is hereby ENACTED and ORDAINED by authority of same as follows:

SECTION 1. The Zoning Code of Montgomery Township, Section 230-5.B, shall be amended by adding a new definition for Lifestyle Apartments as subsection (2)(b) under the definition of "Dwelling", as follows:

(2)(b) LIFESTYLE APARTMENTS – A multifamily dwelling offering communal Active\116561246.v6-2/4/21

amenities to its residents, such as, but not limited to, an outdoor pool, a fitness center, a business center, a recreation area, a dog washing station and/or a dog run area.

SECTION 2. The Zoning Code of Montgomery Township, Section 230-103 shall be amended by adding a new subsection C(4) to allow Lifestyle Apartments in the LI zoning district by conditional use:

- (4) Lifestyle Apartments, provided that:
 - (a) The property to be developed as Lifestyle Apartments shall have a minimum gross site area of ten (10) acres.
 - (b) The use is located on a lot that is immediately adjacent to an existing residential zoning district.
 - (c) The use is located on a lot that has two points of access to arterial streets. Such access may be permitted via a permanent easement over adjacent properties, with the terms of such easement to be reasonably approved by the Township. If such an easement is utilized, the lot shall not be considered a flag lot and shall not be subject to the regulations contained within Section 230-156.5.

SECTION 3. The Zoning Code of Montgomery Township, Section 230-115 shall be amended by designating the existing paragraph as subsection A and adding a new subsection B, as follows:

B. The maximum height of a building used for Lifestyle Apartments shall be 30 feet; provided, however, the height of such building shall be permitted to increase by one (1) foot for each additional foot the building is setback beyond the required minimum side yard setback line, but in no event shall the building height exceed 65 feet.

SECTION 4. The Zoning Code of Montgomery Township, Section 230-117 shall be amended by designating the existing paragraph as subsection A and adding a new subsection B, as follows:

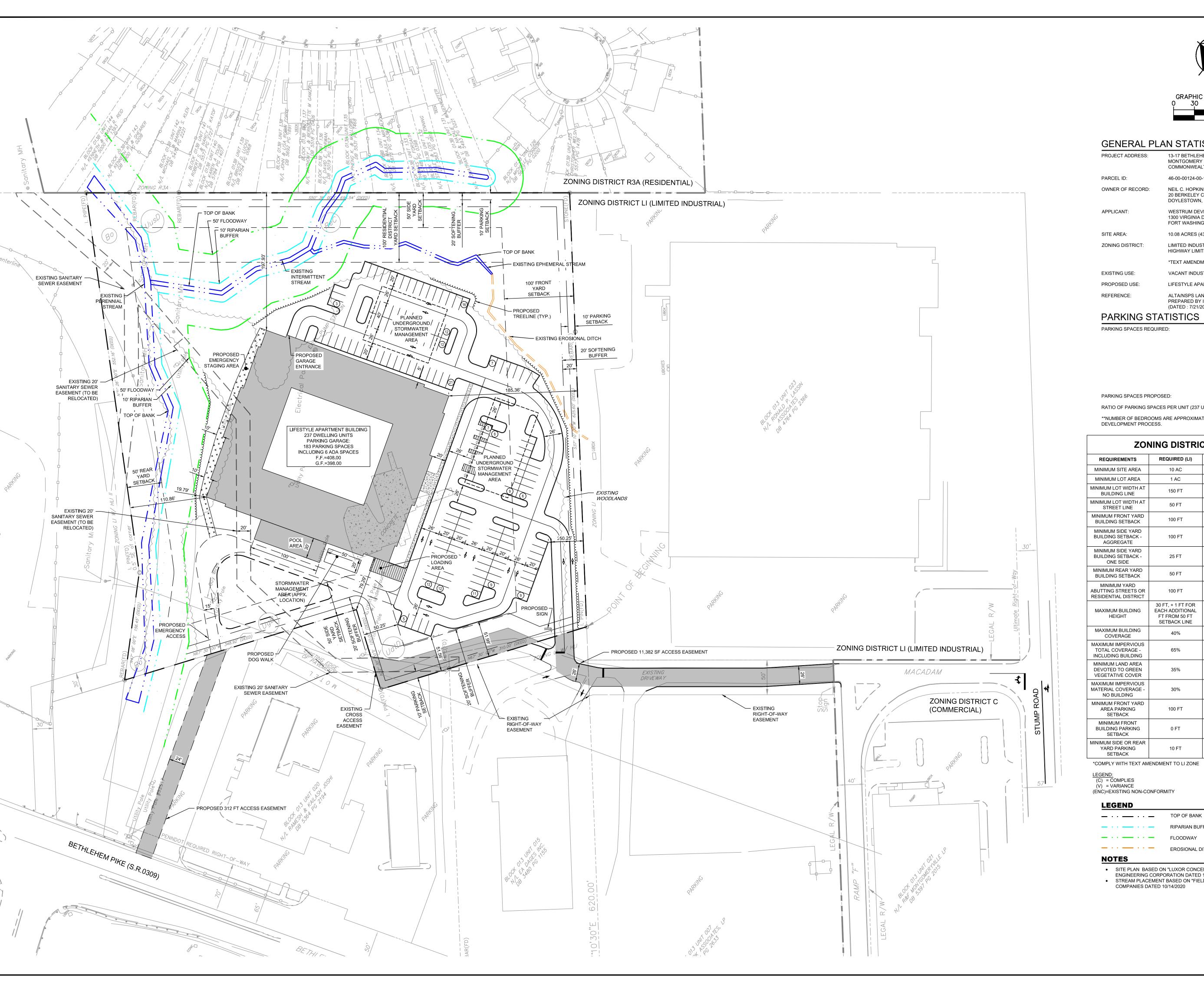
B. For Lifestyle Apartments, there shall be 1 parking space per dwelling unit, plus 0.33 parking spaces per bedroom. Parking may be permitted in the front yard of the subject property if the property does not have frontage immediately adjacent to a public right of way and/or in front of the proposed building; provided, however, parking shall be setback at least fifteen (15) feet from any property boundary line. In the event of a conflict between the requirements contained in this section and other requirements contained in this Chapter, the requirements of this §230-117.B shall supersede any requirements contained elsewhere in this Chapter.

SECTION 5. The Zoning Code of Montgomery Township, Section 230-118(B) is amended and

restated to read as follows:

- B. Upon receipt of plans for any proposed use in the LI-Limited Industrial District, and recommendations thereon by the Board of Supervisors, the Board shall have the power of approval or disapproval of these plans. The Secretary of the Board of Supervisors shall notify, in writing, the Zoning Officer of its final decision and any special conditions agreed upon regarding any limited industrial use.
- **SECTION 6.** The Zoning Code of Montgomery Township, Section 230-118 is amended by adding a new subsection C, as follow:
 - C. Plans for Lifestyle Apartments shall be submitted to the Board of Supervisors prior to the issuance of any zoning permit or certificate of occupancy as provided in Article XXII and such plans shall include, among other things, the following:
 - (1) An accurate plot plan, drawn to scale, of the lot, showing the location of all present and proposed buildings, driveways, parking areas, abutting streets, alleys, highways, grass areas and areas of plantings, and other constructional features on the lot and streams and other topographical features of the lot.
 - (2) Architectural plans for any proposed buildings.
- **SECTION 7.** The Zoning Code of Montgomery Township, Section 230-127.A(9) shall be amended and restated as follows:
 - (9) Off-premises signs.
 - (a) Except as set forth in subsection (b) below, all offpremises signs permitted in these districts shall comply with the standards herein prescribed for on-premises signs in Section 230-126;
 - (b) For properties located in the LI District to be developed for Lifestyle Apartments that do not have frontage to a public street, but rather provides access to an arterial street via a permanent easement as permitted under Section 230-103.C(4)(c), one (1) freestanding, off-site sign shall be permitted at each access point to an arterial street, provided such sign complies with the requirements set forth in Section 230-127.A(4).
- SECTION 8. Severability. If any sentence, clause, section or part of this Ordinance is for any reason found to be unconstitutional, illegal, or invalid, such unconstitutionality or invalidity shall not affect or impair any of the remaining provisions, sentences, or parts of this Ordinance. It is hereby declared to be the express intent of the Board of Supervisors that this Ordinance would have been adopted had such unconstitutional, illegal, or invalid sentence, clause, section, or parts thereof not

been included herein.
SECTION 9. Repealer. All Resolutions, Ordinances, or parts of Ordinances conflicting or inconsistent herewith are hereby repealed to the extent of the conflict or inconsistency.
SECTION 10. Effective Date. This Ordinance shall become effective immediately after adoption by the Board of Supervisors for Montgomery Township, Montgomery County, Pennsylvania.
Enacted and ordained by the Board of Supervisors for Montgomery Township, Montgomery County, Pennsylvania thisday of, 2021.
MONTGOMERY TOWNSHIP BOARD OF SUPERVISORS
Attest:





GENERAL PLAN STATISTICS

13-17 BETHLEHEM PIKE MONTGOMERY TOWNSHIP

COMMONWEALTH OF PENNSYLVANIA

46-00-00124-00-1

NEIL C. HOPKINS & GREGORY KESSELL

20 BERKELEY CT. DOYLESTOWN, PA 18901

WESTRUM DEVELOPMENT COMPANY 1300 VIRGINIA DRIVE, SUITE 215 FORT WASHINGTON, PA 19034

10.08 ACRES (439,306 SQ. FT.)

LIMITED INDUSTRIAL (LI)* HIGHWAY LIMITED INDUSTRIAL OVERLAY (HLI)

*TEXT AMENDMENT PROPOSED FOR LI ZONE VACANT INDUSTRIAL

LIFESTYLE APARTMENT

ALTA/NSPS LAND TITLE SURVEY PREPARED BY IRICK, EBERHARDT & MIENTUS INC. (DATED: 7/21/2014)

PARKING STATISTICS

PARKING SPACES REQUIRED:

1 SPACE PER 3 EMPLOYEES = N.A. (LI - LIMITED INDUSTRIAL REQ.) 1 SPACE PER UNIT PLUS 0.33 SPACES PER BEDROOM* (LI - TEXT AMENDMENT REQ.)

209 1 BEDROOM UNITS** x 1.33 28 2 BEDROOM UNITS ** x 1.66

325 PARKING SPACES REQUIRED

342 PARKING SPACES TOTAL

RATIO OF PARKING SPACES PER UNIT (237 UNITS): 1.44 PARKING SPACES PER UNIT

**NUMBER OF BEDROOMS ARE APPROXIMATE AND SUBJECT TO CHANGE DURING THE LAND

ZON	NING DISTRIC	T CHECKLI	ST
REQUIREMENTS	REQUIRED (LI)	EXISTING (LI)	PROPOSED (LI)
MINIMUM SITE AREA	10 AC	10.08 AC (C)	10.08 AC (C)
MINIMUM LOT AREA	1 AC	10.08 AC (C)	10.08 AC (C)
MINIMUM LOT WIDTH AT BUILDING LINE	150 FT	871 FT (C)	871 FT (C)
MINIMUM LOT WIDTH AT STREET LINE	50 FT	0 (ENC)	0 (ENC)
MINIMUM FRONT YARD BUILDING SETBACK	100 FT	N/A	185.36 FT (C)
MINIMUM SIDE YARD BUILDING SETBACK - AGGREGATE	100 FT	N/A	277.22 FT (C)
MINIMUM SIDE YARD BUILDING SETBACK - ONE SIDE	25 FT	N/A	197.93 FT, 79.29 F (C)
MINIMUM REAR YARD BUILDING SETBACK	50 FT	N/A	110.86 FT (C)
MINIMUM YARD ABUTTING STREETS OR RESIDENTIAL DISTRICT	100 FT	N/A	197.93 FT (C)
MAXIMUM BUILDING HEIGHT	30 FT, + 1 FT FOR EACH ADDITIONAL FT FROM 50 FT SETBACK LINE	N/A	59 FT (C*)
MAXIMUM BUILDING COVERAGE	40%	0% (C)	12.58% (C)
MAXIMUM IMPERVIOUS TOTAL COVERAGE - INCLUDING BUILDING	65%	3.01% (C)	40.26% (C)
MINIMUM LAND AREA DEVOTED TO GREEN VEGETATIVE COVER	35%	96.99% (C)	59.74% (C)
MAXIMUM IMPERVIOUS MATERIAL COVERAGE - NO BUILDING	30%	3.01% (C)	23.39% (C)
MINIMUM FRONT YARD AREA PARKING SETBACK	100 FT	N/A	50.25 FT (C*)
MINIMUM FRONT BUILDING PARKING SETBACK	0 FT	N/A	5.34 FT (C*)
MINIMUM SIDE OR REAR YARD PARKING SETBACK	10 FT	N/A	50.25 FT (C)

*COMPLY WITH TEXT AMENDMENT TO LI ZONE

(ENC)=EXISTING NON-CONFORMITY

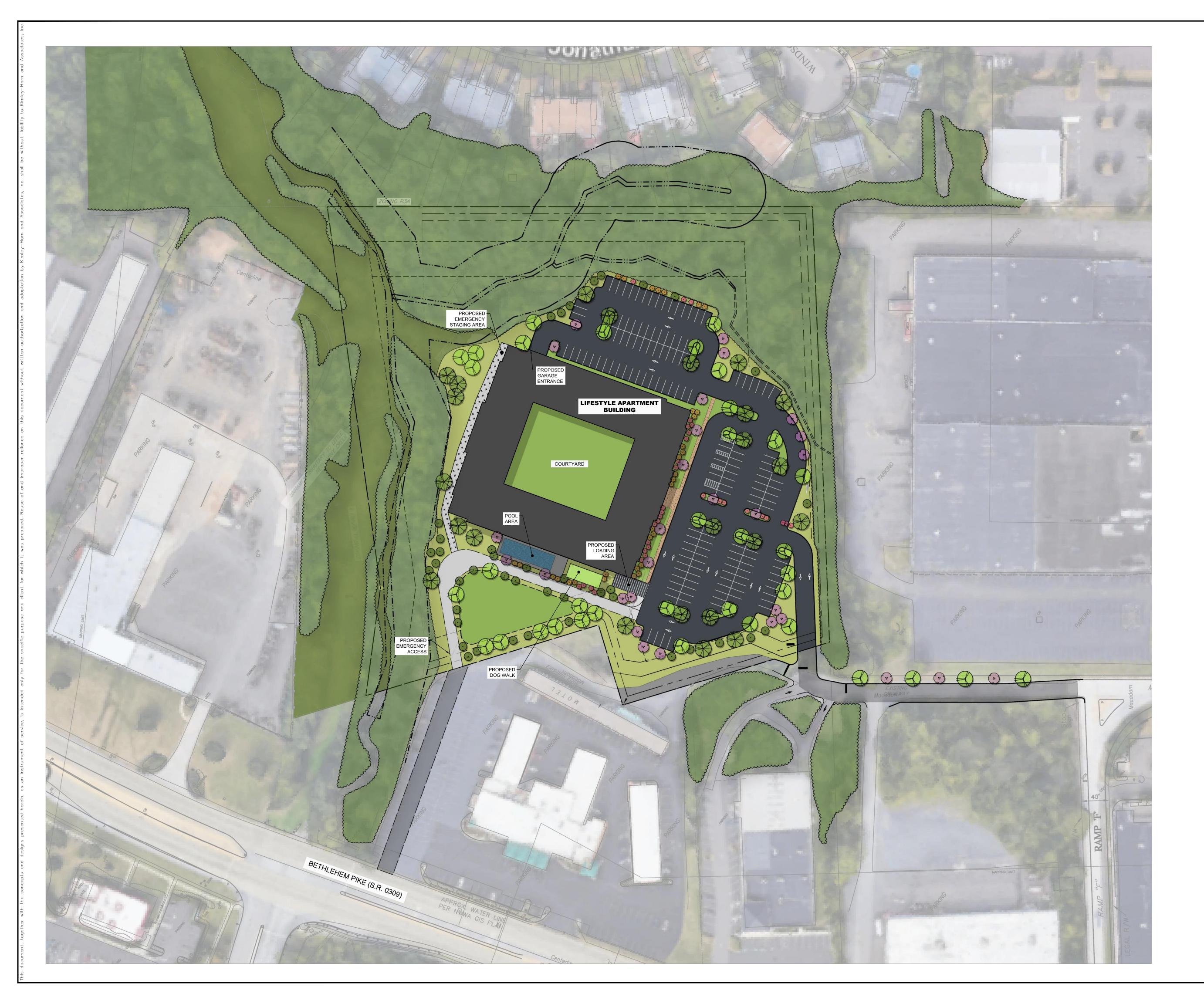
- SITE PLAN BASED ON "LUXOR CONCEPT PLAN 7" PREPARED BY CARROLL
- ENGINEERING CORPORATION DATED 10/07/2020
 STREAM PLACEMENT BASED ON "FIELD DATA LOCATION MAP" PREPARED BY BL

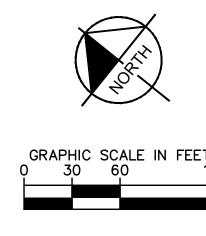
CALL BEFORE YOU DIG! PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE — STOP CALL SERIAL NUMBER: 20202821910

SHEET NUMBER

WESTRUM
MONTGOMERYVILLE
13-17 BETHLEHEM PIKE
MONTGOMERYVILLE, PA 18936

SONING





CALL BEFORE YOU DIG!

PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS IN DESIGN STAGE — STOP CALL

SHEET NUMBER



TRAFFIC ENGINEERING & PLANNING

1134 Heinrich Lane • Ambler, Pennsylvania 19002 215-793-4177 • FAX 215-793-4179

MEMORANDUM

TO: Michael Maier, Vice President

Westrum Development Company

FROM: Andreas Heinrich, P.E., P.T.O.E.

DATE: December 22, 2020

RE: Traffic Impact Assessment

Montgomeryville Apartment Building

Montgomery Township, Montgomery County, PA

As requested, please accept the results of this Traffic Impact Assessment for the proposed development of a 237-unit apartment building in the northwest quadrant of the intersection of Bethlehem Pike (PA Route 309) and Stump Road in Montgomery Township, Montgomery County, Pennsylvania. The site was formerly developed for industrial use. Access to the site will be provided via the jughandle ramp on the northwest corner of the intersection of Bethlehem Pike (PA Route 309) and Stump Road, with emergency access that will intersect Bethlehem Pike (PA Route 309) through the Rodeway Inn property south of the intersection with Knapp Road (Concept Plan attached).

It should be noted that this Traffic Impact Assessment assumes that 100% of the traffic to be generated by the proposed development will access the site via the Stump Road jughandle ramp. Access to the site is also, and will continue to be, available via right turn entry/right turn exit only to/from Bethlehem Pike (PA Route 309) through the adjacent Rodeway Inn property with its two driveways that intersect Bethlehem Pike (PA Route 309). To the extent that future residents use the Rodeway Inn access driveways for access to/from the proposed apartment development, less traffic will impact Stump Road and the jughandle ramp. Accordingly, this Traffic Impact Assessment considers the worst-case condition relative to the traffic impact to Stump Road and to the jughandle ramp.

The purpose of this Traffic Impact Assessment is to assess the potential traffic impact of the proposed residential development on the immediately adjacent roadways and

to comment on site access from the viewpoint of both traffic efficiency and safety. As such, our study has included:

- visits to the site to observe current traffic conditions and to note existing physical characteristics of the adjacent highways;
- completion and review of Turning Movement Traffic Counts on a typical weekday, adjusted for pre-Covid-19 conditions, from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM at the intersections listed below:
 - Bethlehem Pike (PA Route 309) and Stump Road
 - Stump Road and NW Corner Jughandle Ramp
 - NW Corner Jughandle Ramp and Private Driveway;
- estimation of the anticipated traffic generation characteristics and potential travel patterns of new traffic generated by the proposed apartment building;
- completion of volume/capacity analyses of existing (2020) and future (2023) peak hour traffic before and after development of the proposed apartment building;
- review of the Concept Plan relative to the provision of safe and efficient access to the proposed apartment building.

Existing Transportation Setting

Bethlehem Pike (S.R. 0309) is a two-way, multi-lane, divided State Highway. According to the PennDOT Traffic Information Repository (TIRe), Bethlehem Pike (PA Route 309) is classified as an Urban – Other Principal Arterial. Bethlehem Pike (PA Route 309) provides two travel lanes in each direction with a median divider to separate the two directions of travel, and paved shoulders along both sides of the highway. Bethlehem Pike (PA Route 309) is widened through the signalized intersection with Stump Road to provide a third through lane for right turns and for access to jughandle ramps for left turns on the northwest and southeast corners of the intersection. The posted speed limit along Bethlehem Pike (PA Route 309) is 45 miles per hour. Based on PennDOT's TIRe site, the average daily traffic volume along Bethlehem Pike (PA Route 309) is 40,993 vehicles per day (total both directions).

Stump Road is a two-way, two-lane local road. According to the PennDOT Traffic Information Repository (TIRe), Stump Road is classified as an Urban – Minor Arterial, Collector. Stump Road generally provides one travel lane in each direction. Stump Road is widened through the signalized intersection with Bethlehem Pike (PA Route 309) to provide a separate left turn lane on the northbound approach and dual left turn lanes on the westbound approach. The posted speed limit along Stump Road is 35 miles per hour. Based on PennDOT's TIRe site, the average daily traffic volume along Stump Road is 8,881 vehicles per day (total both directions).

Traffic traveling through the intersection of Bethlehem Pike (PA Route 309) and Stump Road is regulated by a multi-phased, actuated traffic control signal. The signalized intersection interconnected with 16 other intersections throughout the Township to provide Traffic Adaptive Operation; and, is programmed to operate on an approximate 170-second signal cycle during the weekday morning and weekday afternoon peak periods, and a 120-second or 150-second cycle during other time periods of the day or week.

Existing highway travel demand and traffic patterns in the vicinity of the site were determined from completion and review of Turning Movement Traffic Counts on a typical weekday from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM at the intersections listed below:

- Bethlehem Pike (PA Route 309) and Stump Road
- Stump Road and NW Corner Jughandle Ramp
- NW Corner Jughandle Ramp and Private Driveway;

Due to the effects of Covid-19 on driver habits including schools being out of session, traffic count data for the intersection of Bethlehem Pike (PA Route 309) and Stump Road is based on data collected in May 2016, which was subsequently factored using a background traffic growth of 0.64% per year compounded annually (3.24% total) and applied to the 2016 peak hour traffic volumes. The background traffic growth rate was obtained for Montgomery County from the Pennsylvania Department of Transportation Bureau of Planning and Research for the period August 2015 to July 2016, which was in effect at the time of the traffic counts. In addition, the specific traffic generation characteristics the Higher Rock Retail Development, now under construction and partially in operation, was added to the 2016 traffic count data, including traffic diversions for the Witchwood Drive Extension.

Figure 1 summarizes existing (2020) weekday morning and weekday afternoon peak hour traffic, respectively, at the study area intersections. A copy of the Traffic Count Summary Data sheets is attached. Worksheets illustrating the adjustments for background growth, Higher Rock Retail development traffic, and Witchwood Drive Extension traffic are attached in the Appendix.

Public Transportation

There is no public transit in the immediate vicinity of the site. The nearest public transit is provided via S.E.P.T.A. bus routes 94, 96, and 132 which provide regularly scheduled bus service from the Montgomery Mall to Chestnut Hill (Route 94), the Norristown Transportation Center (Route 96), and Souderton/Telford (Route 132).

Pedestrian Facilities

Existing pedestrian facilities in the vicinity of the site consist of sidewalks along the west side of Stump Road and intermittently along the east side of Stump Road, intermittently along the north side of Bethlehem Pike (PA Route 309) east of Stump Road and along the south side of Bethlehem Pike west of Stump Road. A crosswalk with curb

ramps, pedestrian pushbuttons and signal heads is provided across the north leg of the Stump Road at the signalized intersection with Bethlehem Pike (PA Route 309). Curb ramps are provided for the crossing of the jughandle ramp at the intersection with Stump Road.

Planned Roadway Improvements

There are no known intersection or roadway improvements proposed in the immediate vicinity of the site.

Traffic Generation Characteristics

As described previously, it is proposed to develop a 237-unit apartment building in the northwest quadrant of the intersection of Bethlehem Pike (PA Route 309) and Stump Road in Montgomery Township, Montgomery County, Pennsylvania. The site was formerly occupied by an industrial building but is now vacant. Development of the site will obviously generate some new traffic -- as might any development of the property. Indeed, traffic was formerly generated by the industrial building that formerly occupied the site.

Based on the size of the proposed new development, estimates of new traffic demand can be calculated for the proposed apartment building. The anticipated traffic generation of the proposed new development is estimated from trip generation data compiled by the Institute of Transportation Engineers and documented in the publication entitled <u>Trip Generation Manual</u>⁽¹⁾. Table 1 presents the calculated vehicular trip generation rates for the proposed new development. Application of these rates to the size of the proposed development produces the daily and peak hourly traffic volumes presented in the bottom of Table 1.

As shown in Table 1, it is anticipated that the proposed apartments may generate a total of about 1,290 trips per day (total inbound and outbound), with 80 trips per hour during the weekday morning peak hour and 101 trips per hour during the weekday afternoon peak hour.

It is anticipated that traffic generated by and attracted to the proposed development will approach and depart the site according to existing traffic patterns along the roads in the vicinity of the site. It is anticipated that about 50% of site-generated traffic will be oriented to/from the east on Bethlehem Pike (PA Route 309), 33% will be oriented to/from the west on Bethlehem Pike (PA Route 309), 11% will be oriented to/from the north on Stump Road, and 6% will oriented to/from the south on Stump Road. The assignment of new trip generation for the proposed development is presented in Figure 2.

^{(1) &}lt;u>Trip Generation Manual</u>, 10th Edition, Institute of Transportation Engineers, Washington DC, September 2017.

TABLE 1

TRAFFIC GENERATION CHARACTERISTICS WESTRUM APARTMENTS MONTGOMERY TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

TRIP RATES⁽¹⁾

<u>Description</u> Multi-Family Mid-Rise (237 DU) ⁽²⁾	<u>Daily</u> 5.44	<u>Morni</u> <u>In</u> 0.09	ng Peak Out 0.25	Hour Total	<u>After</u> <u>In</u> 0.26	0.17	hk Hour Total 0.43
Walt Falling Wild False (25 / 26)	3.11	0.05	0.23	0.5 1	0.20	0.17	0.15
	TRAFFIC VO	<u>OLUMES</u>					
Multi-Family Mid-Rise (237 DU)	1290	21	59	80	62	39	101

^{(1) &}lt;u>Trip Generation Manual</u>, 10th Edition, Institution of Transportation Engineers, Washington, D.C., 2017 (ITE Land Use Code 221).

⁽²⁾ Trips per Dwelling Unit (DU.

Volume/Capacity Analysis

While traffic volumes provide a measure of activity on the area road system, it is also important to calculate the ability of the road system to adequately accommodate the traffic demand. This involves a comparison of peak hour traffic demand with available roadway or intersection capacity. Intersections and driveways are usually the critical points in any road network. At intersections, conflicts occur between through, crossing and turning traffic. It is at intersections where congestion is most likely to occur.

A volume/capacity analysis was completed for the signalized and unsignalized intersections and driveways in the study area based upon the peak hour traffic volumes illustrated in Figure 1. The volume/capacity analysis was completed in accordance with the standard procedures contained in the "Highway Capacity Manual"⁽²⁾. By definition, vehicle capacity represents "the maximum number of vehicles that can pass a given point during a specified period under prevailing roadway, traffic and control conditions". The level of functioning of an intersection or a uniform section of lane or roadway can be expressed in terms of levels of service. A level of service is a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers. Such measures include speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience.

In calculating the capacity of an unsignalized intersection, it is assumed that the through movements on the major street and the right turns from the major street are unimpeded and have the right-of-way over all minor street traffic and left turns from the major street. All other movements in the intersection cross, merge with, or are affected by other flows. For each movement, all conflicting flows are summed and a "critical gap" is determined. The control delay of a critical movement includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

At signalized intersections other factors affect the various approach capacities including width of approach, number of lanes, signal green time, turning percentages, truck volumes, etc. The relative functioning of an intersection is, therefore, based on the average control delay per vehicle for the various movements within the intersection. While volume/capacity relationships affect the capacity, there are other parameters that affect delay and must also be considered. It is possible under certain conditions to have excessive delays without exceeding roadway capacity. Conversely, a saturated approach may have relatively low vehicular delay under certain conditions. Thus, both capacity and control delay must be considered to evaluate the overall operation of a signalized intersection.

^{(2) &}quot;Highway Capacity Manual", 6th Edition, Transportation Research Board of the National Academies, Washington, D.C., 2016.

TABLE 2

LEVEL OF SERVICE

UNSIGNALIZED INTERSECTIONS

At unsignalized intersections the criteria used to evaluate the quality of flow is the measure of the adequacy of the number of acceptable gaps in the through traffic stream for drivers facing a STOP or YIELD condition. Variables affecting the gaps are the distribution or arrival of vehicles in the through traffic stream, percentage of trucks, grades, and the amount of time it requires to enter the traffic stream from a stop position (critical gap size). The control delay of a critical movement includes the initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

As a result, the following criteria has been established:

Level of Service	Control Delay Range (sec./veh/)
A	less than 10
В	10 to 15
C	15 to 25
D	25 to 35
E	35 to 50
F	more than 50 and/or volume-to-capacity ratio greater than 1.0

TABLE 3

LEVEL OF SERVICE

SIGNALIZED INTERSECTIONS

Level of Service for signalized intersections is defined in terms of average stopped delay. Delay is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. Delay at a traffic signal is a complex measure and is dependent on a number of variables including quality of progression, the cycle length, the green time ratio, the volume to capacity ratio for each lane group on each approach, trucks, pedestrians, and signal phasing.

The following has therefore been established by the Transportation Research Board as the average stopped delay in vehicles per second:

LEVEL OF <u>SERVICE</u>	DESCRIPTION	AVERAGE STOPPED DELAY (sec./veh.)
A	Very low delay, good progression; most vehicles do not stop at intersection.	less than 10.0
В	Generally good signal progression and/or short cycle length; more vehicles stop at intersection than level of service A.	10.1 to 20.0
C	Fair progression and/or longer cycle length; significant numbers of vehicles stop at intersection.	20.1 to 35.0
D	Congestion becomes noticeable; individual cycle failures; longer delay from unfavorable progression, long cycle length, or high volume/capacity ratio; most vehicles stop at intersection.	35.1 to 55.0
E	Considered limit of acceptable delay, indicative of poor progression, long cycle length, high volume/capacity ratio; frequent individual cycle failures.	55.1 to 80.0
F	Unacceptable delay, frequently an indication of oversaturation (i.e., arrival flow exceeds available capacity).	greater than 80.0 and/or volume-to- capacity ratio greater than 1.0

A descriptive mechanism has been developed which relates capacity with the expected traffic delay. This is known as Level of Service (LOS). Level of service for a two-way stop-controlled intersection is determined by the computed or measured control delay and is defined for each minor movement. Level of service for a signalized intersection is defined in terms of delay. Table 2 provides the correlation between levels of service and the average total delay at unsignalized intersections. The correlation between levels of service and the stopped delay per vehicle at signalized intersections is provided in Table 3.

It should be noted that the analysis has been completed using Synchro 10 software incorporating the use of certain default values (PennDOT Publication 46 – Traffic Engineering Manual) for base saturation flow rates, start-up lost time and extension of effective green time at signalized intersections, base critical headways at unsignalized intersections, and base follow-up headways at unsignalized intersections.

The resultant levels of service calculated from the volume/capacity analysis of existing peak hour traffic conditions are illustrated in Figure 3 (volume/capacity analysis worksheets attached). The results of the analysis reveal that traffic on the Bethlehem Pike (PA Route 309) approaches to Stump Road is operating at LOS C during both peak hours, while traffic on both approaches of Stump Road is operating at LOS D, E or F during both peak hours. Overall, however, the intersection is operating at an acceptable LOS D during both peak hours. It should be noted that the lane utilization factors have been adjusted to reflect the use of the third through/right turn lanes carrying reduced traffic volume relative to the two major through lanes on both approaches of Bethlehem Pike (PA Route 309) (a worksheet is attached). All critical movements at the two unsignalized intersections are operating at an acceptable LOS C or better during both peak hours.

Future Conditions

Development generated traffic was then added to existing peak hour traffic volumes. Existing (2020) peak hour traffic was first increased to account for background traffic growth and traffic generated by other new development in the vicinity of the site. It is anticipated that the proposed development will be open within about two to three years. Background traffic growth of 0.34% per year was applied to existing (2020) peak hour traffic volumes in the study area. The background traffic growth rate was obtained for Montgomery County from the Pennsylvania Department of Transportation Bureau of Planning and Research for the period August 2015 to July 2016. years (to be consistent with the adjustments described previously for existing conditions). The opening year traffic volumes were then based on projecting traffic three years to the year 2023. For the 2023 opening year, background traffic growth of about 2.0% was applied.

Future (2023) peak hour traffic volume without development of the site is presented in Figure 4. The resultant levels of service calculated from the volume/capacity analysis of future (2023) peak hour traffic conditions without development of the site are illustrated in Figure 5 (volume/capacity analysis worksheets attached). The results of the analysis reveal that traffic on the Bethlehem Pike (PA Route 309) approaches to Stump Road will continue

Road will continue to operate at LOS D, E or F during both peak hours. Overall, however, the intersection will continue to operate at an acceptable LOS D during both peak hours. It should be noted that the signal timing is optimized to favor the heavy volume of traffic to operate at LOS C during both peak hours, while traffic on both approaches of Stump along the Bethlehem Pike (PA Route 309) Corridor. All critical movements at the two unsignalized intersections will continue to operate at an acceptable LOS C or better during both peak hours.

Future (2023) peak hour traffic volume after development of the site is presented in Figure 6. The resultant levels of service calculated from the volume/capacity analysis of future (2023) peak hour traffic conditions after development of the site are illustrated in Figure 7 (volume/capacity analysis worksheets attached). The results of a Turn Lane Warrant Analysis (worksheets attached) reveal that widening/re-striping of Stump Road at the Jughandle intersection is warranted for a separate left turn lane 11 feet wide and 75 feet long with approach/departure tapers. Widening for a separate right turn deceleration lane is not warranted. It is also recommended that the private driveway be widened and repaved, from the site to the jughandle ramp, to a width of at least 24 feet to adequately accommodate two-way traffic.

The results of the analysis reveal that traffic on the Bethlehem Pike (PA Route 309) approaches to Stump Road will operate at LOS C/D during both peak hours, while traffic on both approaches of Stump Road will continue to operate at LOS D, E or F during both peak hours. Overall, however, the intersection will continue to operate at an acceptable LOS D during both peak hours. Again, it should be noted that the signal timing is optimized to favor the heavy volume of traffic along the Bethlehem Pike (PA Route 309) Corridor. All critical movements at the two unsignalized intersections will continue to operate at an acceptable LOS C or better during both peak hours. Table 4 summarizes the results of the volume/capacity analysis for the existing, future (2023) without development, and future (2023) after development scenarios. Table 5 summarizes the results of the queue analysis for the existing, future (2023) without development, and future (2023) after development scenarios.

The results of the analysis of future traffic conditions without and after redevelopment of the site for the development as proposed reveal that there will be very little change in levels of service due to the addition of new traffic generated by the proposed development. Further, the change in peak hour traffic delay will be such that there is no requirement for mitigation in accordance with the criteria set forth by the Pennsylvania Department of Transportation.

TABLE 4
LEVEL OF SERVICE (DELAY) SUMMARY/OPENING YEAR 2023

		AM Peak Hour LOS (Delay sec./veh.)			PM Peak Hour LOS (Delay sec./veh.)		
Intersection	Approach	Existing	2023	2023	Existing	2023	2023
			W/O	After		W/O	After
			Development	Development		Development	Development
Bethlehem Pike	EB T	C(31.3)	C(32.7)	D(37.1)	C(22.4)	C(23.6)	C(26.1)
(PA Route 309) &	EB T/R	C(33.0)	C(34.6)	D(39.4)	C(23.1)	C(24.3)	C(27.0)
Stump Road	WB T	C(24.1)	C(25.8)	C(27.6)	C(29.1)	C(31.2)	D(35.5)
	WB T/R	C(25.0)	C(25.7)	C(28.8)	C(31.9)	C(34.4)	D(39.8)
	NB L	E(57.4)	E(57.1)	E(56.5)	E(57.0)	E(56.5)	D(54.8)
	NB T/R	F(94.0)	F(94.5)	F(93.7)	F(89.8)	F(90.3)	F(90.8)
	SB L	F(99.0)	F(102.6)	F(91.0)	F(92.7)	F(89.4)	F(89.5)
	SB T/R	D(52.8)	D(52.6)	D(50.8)	E(75.9)	E(74.1)	E(70.6)
·	INTERSECTION	D(40.7)	D(41.9)	D(44.1)	D(39.3)	D(40.4)	D(43.5)
Stump Road &	EB L/R	B(11.8)	B(11.9)	B(14.0)	C(18.7)	C(19.2)	C(20.4)
Jughandle	NB L	A(9.9)	A(9.9)	B(10.0)	A(9.9)	A(9.9)	B(10.2)
	INTERSECTION	A(0.1)	A(0.1)	A(1.0)	A(0.6)	A(0.6)	A(1.6)
Jughandle &	EB T	A(0.0)	A(0.0)	A(9.7)	A(9.4)	A(9.4)	B(10.0)
Private Driveway	NB L/R	A(8.1)	A(8.1)	A(8.2)	A(8.1)	A(8.1)	A(8.6)
	INTERSECTION	A(1.9)	A(1.9)	A(6.9)	A(7.6)	A(7.6)	A(6.3)

TABLE 5
QUEUE ANALYSIS

Intersection	Movement	Available/Proposed	Existing	2023	2023
		Storage		w/o Devel.	After Devel.

AM Peak Hour/PM Peak Hour

Bethlehem Pike	EB T	1000°,+/1000°,+	608'/403'	633'/423'	675'/450'
(PA Route 309) &	EB T/R	400'/400'	840'/543'	878'/568'	938'/605''
Stump Road	WB T	725'/725'	410'/648'	425'/685'	453'/743'
	WB T/R	400'/400'	535'/815'	553'/868'	590'/945'
	NB L	220'/220'	48'/95'	48'/98'	48'/98'
	NB T/R	500'/500'	485'/500'	493'/510'	503'/548'
	SB L	320'/320'	380'/298'	393'/298''	398'/315'
	SB T/R	650', 650',	303'/533'	305'/538'	330'/550'
Stump Road &	EB L/R	150'/150'	0'/13'	0'/13'	13'/25'
Jughandle	NB L	650'/75'	0'/0'	0'/0'	3'/5'
Jughandle &	EB T	350'/350'	0'/6'	0'/6'	11'/15'
Private Driveway	NB L/R	675'/675'	0'/1'	0'/1'	1'/3'

Note: The queue lengths represent the 95th% queue length.

Michael Maier, Vice President Westrum Development Company December 22, 2020 Page 8

Conclusions

The foregoing Traffic Impact Assessment for the proposed development of a 237-unit apartment building in the northwest quadrant of the intersection of Bethlehem Pike (PA Route 309) and Stump Road in Montgomery Township, Montgomery County, Pennsylvania, demonstrates that safe and efficient access will be provided to the proposed new development.

Andreas Heinrich, P.E., P.T.O.E.

Principal

AH:rh

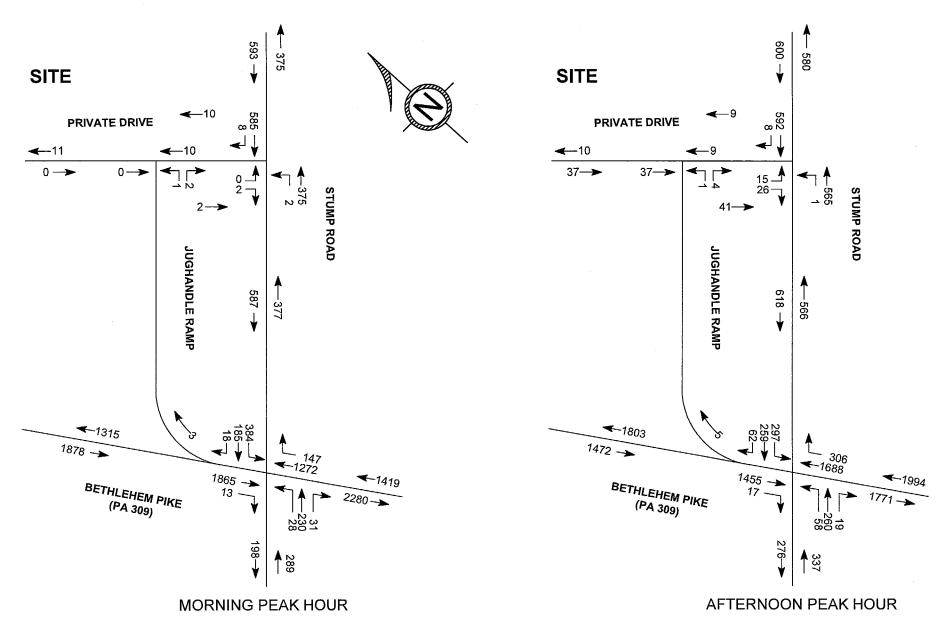


FIGURE 1 EXISTING (2020) PEAK HOUR TRAFFIC



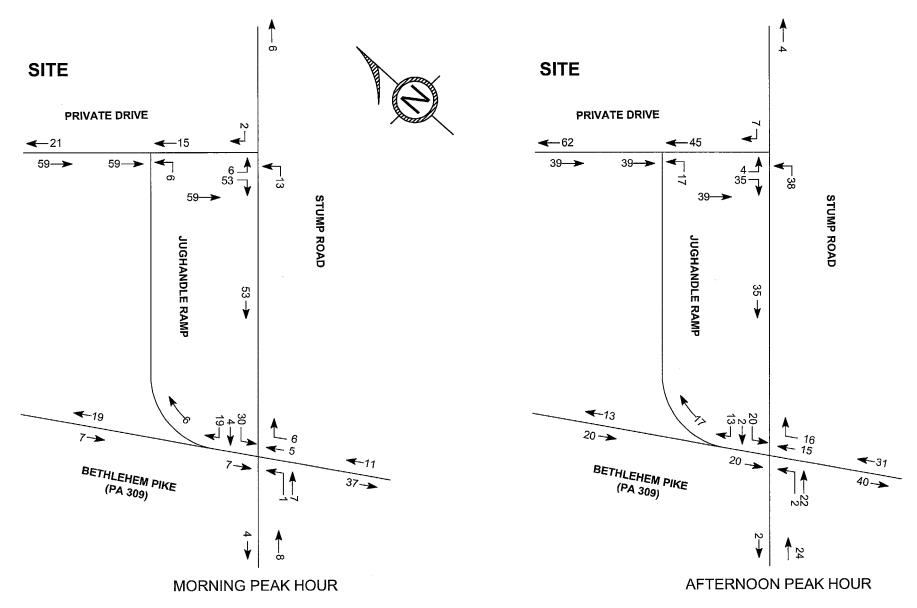


FIGURE 2
DEVELOPMENT GENERATED TRAFFIC



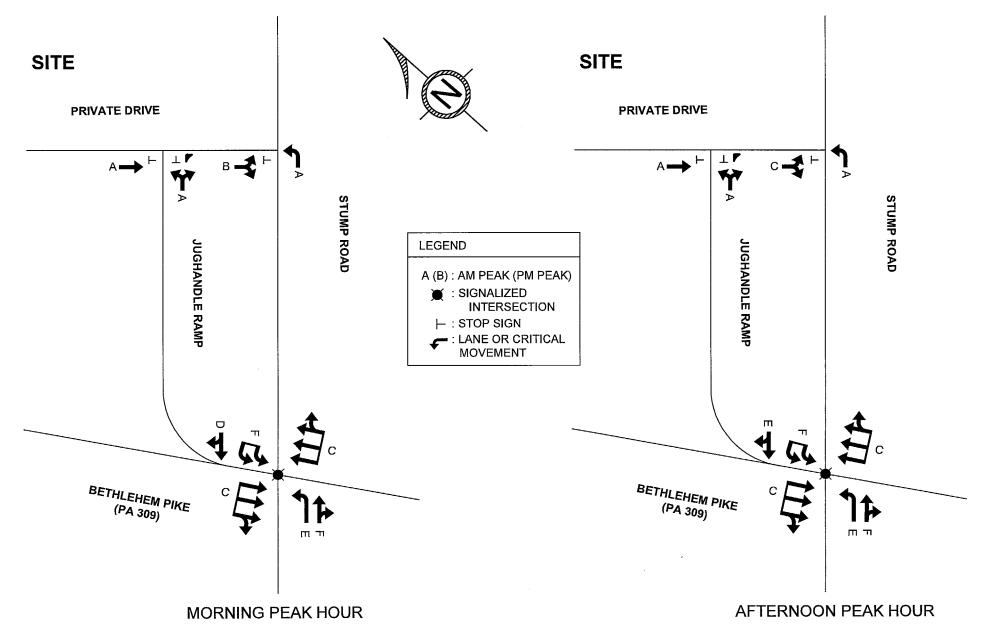


FIGURE 3 EXISTING (2020) PEAK HOUR LEVELS OF SERVICE



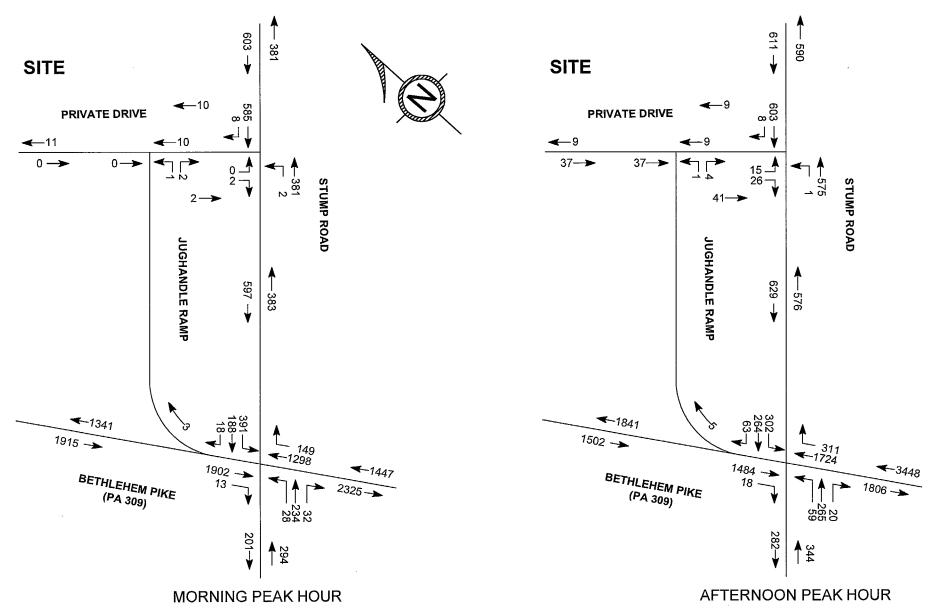


FIGURE 4
FUTURE (2023) PEAK HOUR TRAFFIC
WITHOUT DEVELOPMENT



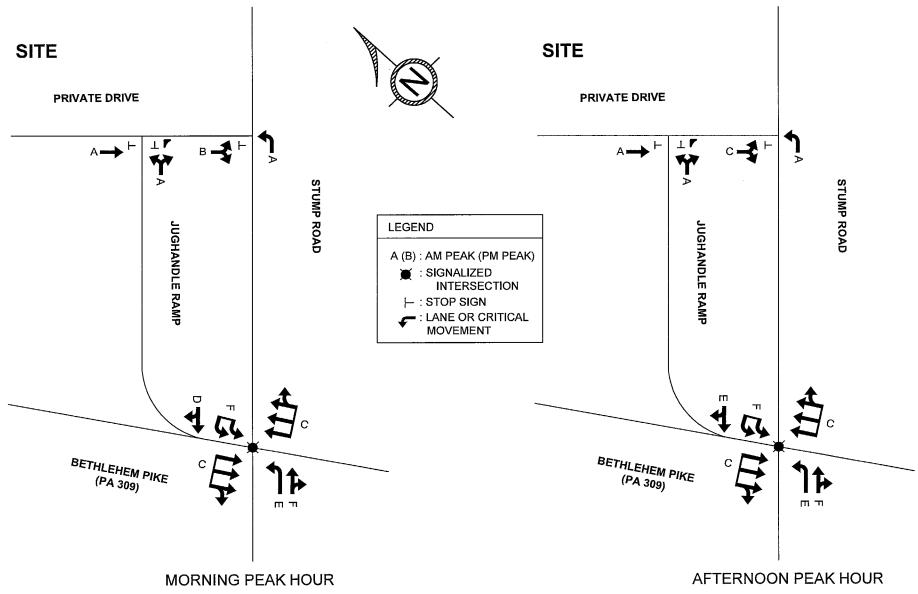


FIGURE 5
FUTURE (2023) PEAK HOUR LEVELS OF SERVICE
WITHOUT DEVELOPMENT



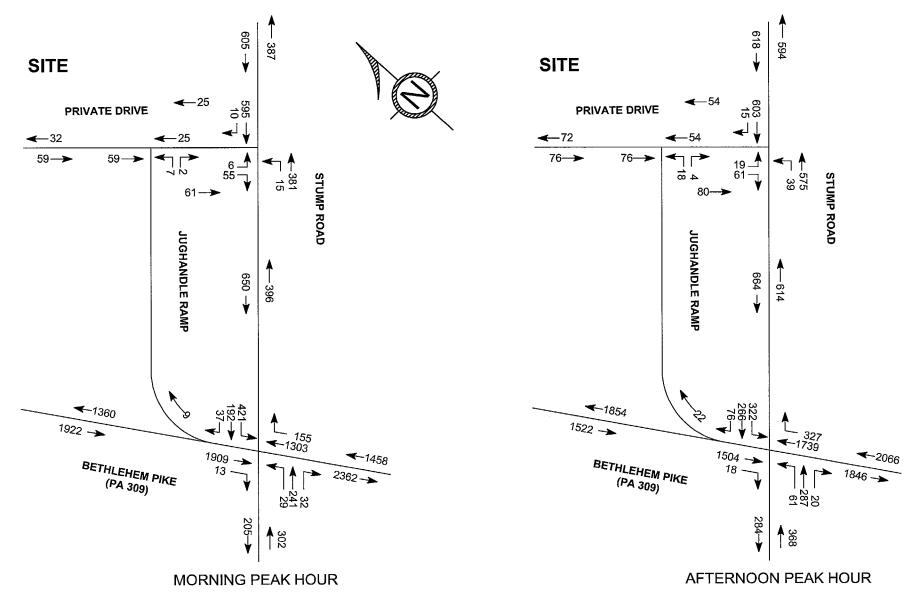


FIGURE 6 FUTURE (2023) PEAK HOUR TRAFFIC AFTER DEVELOPMENT



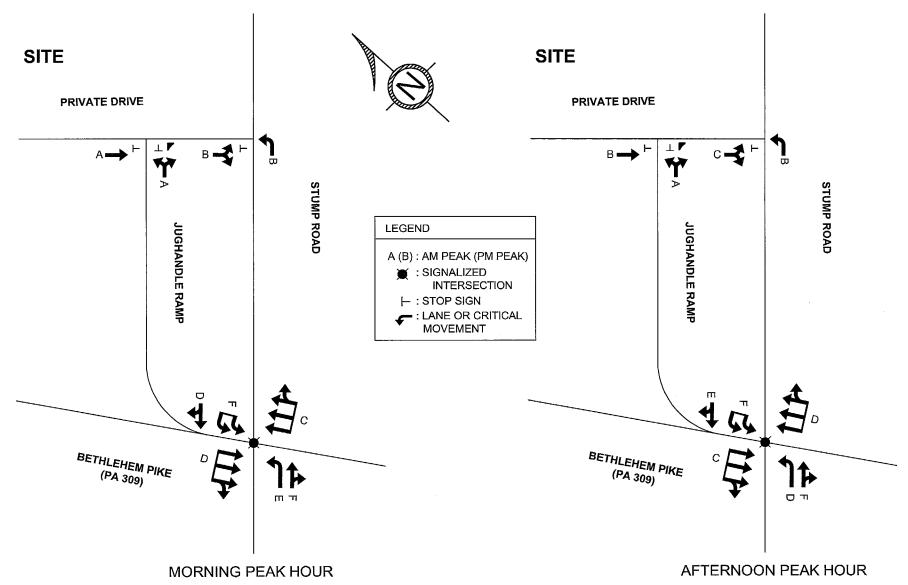
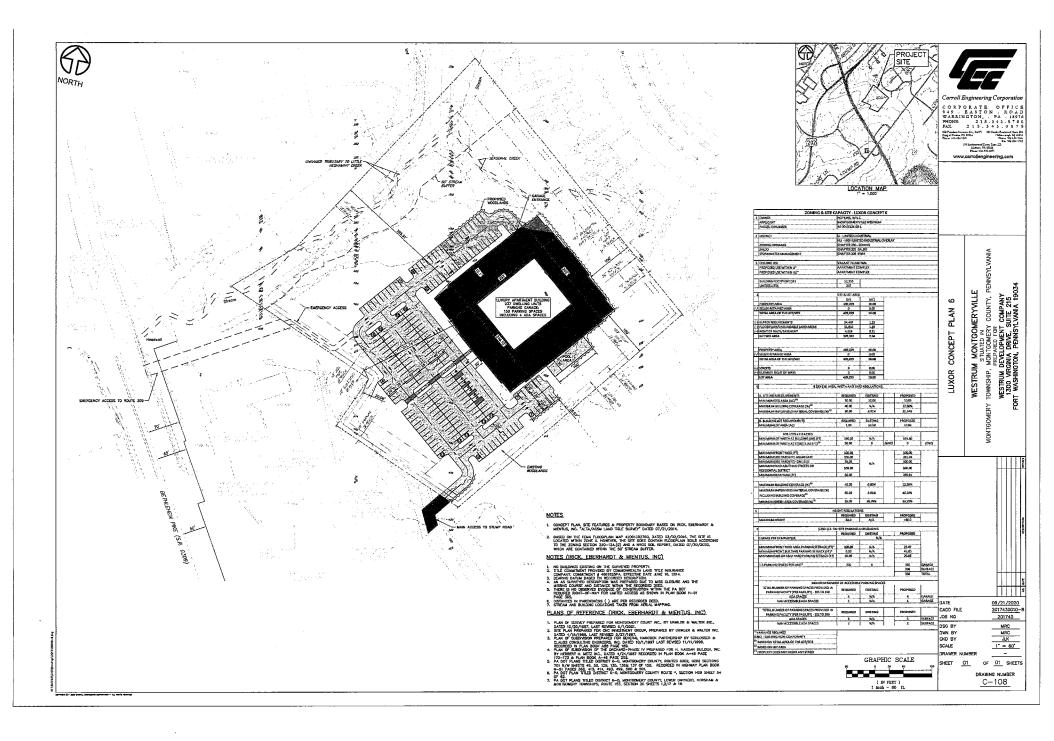
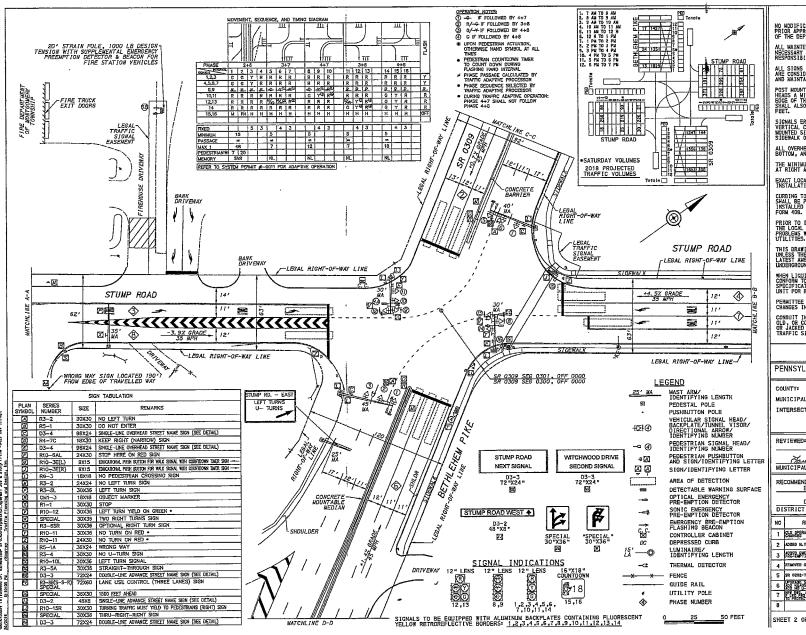


FIGURE 7
FUTURE (2023) PEAK HOUR LEVELS OF SERVICE
AFTER DEVELOPMENT







GENERAL NOTES

NO WODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED IN WRITING BY A REPRESENTATIVE OF THE DEPARTMENT OF TRANSPORTATION.

ALL MAINTENANCE WORK INCLUDING TRIMMING OF TREES, NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS IS THE RESPONSIBILITY OF THE PERMITTEE.

ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH PUBLICATION NO. 212.

POST MOUNTED SIGNALS SHALL BE INSTALLED WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF CURB OR THE EDGG OF THE SHOULDER. SUPPORT POLES FOR OVERHEAD SIGNALS SHALL ALSO HAVE A MINIMUM CLEARANCE HORIZONTALLY OF 2 FEET.

SIGNALS ERECTED OVER THE ROADWAY SHALL HAVE A WINIMUM VERTICAL CLEARANCE OF 16 FT. ABOVE THE ROADWAY. POST MOUNTED SIGNALS SHALL BE A MINIMUM OF 8 FT. ABOVE THE SIDEMALK OR PAVEMENT.

ALL OVERHEAD SIGNALS MUST BE RIGIDLY MOUNTED, TOP AND BOTTOM, AND EQUIPPED WITH BACKPLATES.

THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNALS MEASURED AT RIGHT ANGLES TO THE APPROACH SHALL BE 8 FEET.

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

CURBING TO BE INSTALLED BY MUNICIPALITY AND WHERE NOTED, SHALL BE PLAIN CEMENT CONCRETE CURB OR GRANITE CURB, INSTALLED IN ACCORDANCE WITH DEPARTMENT SPECIFICATIONS

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF THE LATEST ALEROMENT TO ACT 28T, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, DATED DECEMBER 20, 1974.

WHEN LIQUID FUELS MONEY IS USED, SIGNAL INSTALLATION NUST COMFORM TO FORM 408 AND A COPY OF THE PROPOSED SPECIFICATIONS MUST BE SUBMITTED TO THE DISTRICT TRAFFIC UNIT FOR REVIEW PRIOR TO BIDDING.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATION.

COMBUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC-8800 SERIES.

SYSTEM PERMIT # I-0011

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION ENGINEERING DISTRICT 6-0 MUNICIPALITY: MONTGOMERY TOWNSHIP INTERSECTION: BETHLEHEM PIKE (S.R. 0309) & STUMP ROAD (T-375)

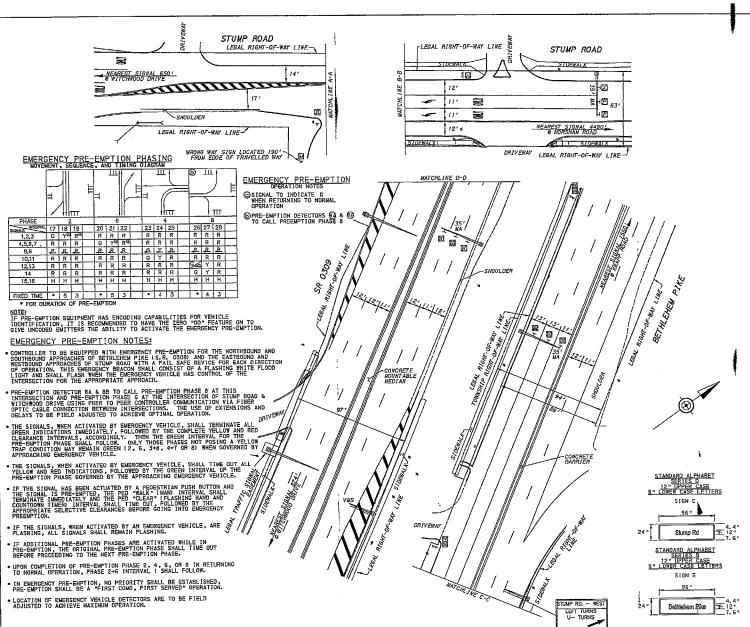
HUNICIPAL OFFICIAL	70 /1 /18 DATE
RECOMMENDED: EA	6-13-96

DOUGLAS W. MAY DISTRICT TRAFFIC ENGINEER DATE

DES/ DATE REVW DATE RECOW DATE 1 CLARGE RATION & TIMING MCM 4/14/98 MLK 4/14/98 DEM 4/1T/98 2 ADDED N.T.O.R. SIGNS BRB 4/29/39 4/29/99 DWW 5/3/99 PAI 8/10/04 M.K 9/2/04 LRB 9/20/04 PAI 10/3/07 ABP 10/17/07 LRB 10/22/ PAI 4/30/13 DLA 9/22/14 ABP 9/29/14

3 PRE-EMPTION 4 REMOVED STON "F"

SHEET 2 OF 3 PERMIT * 64-0429 FILE # 0429



GENERAL NOTES

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED IN WRITING BY A REPRESENTATIVE OF THE DEPARTMENT OF TRANSPORTATION.

ALL MAINTENANCE WORK INCLUDING TRIMMING OF TREES, NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS IS THE RESPONSIBILITY OF THE PERMITTEE.

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PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF THE LATEST AMEDIMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, DATED DECEMBER 20, 1974.

WHEN LIQUID FUELS MONEY IS USED, SIGNAL INSTALLATION MUST COMFORM TO FORM 408 AND A COPY OF THE PROPOSED SPECIFICATIONS MUST BE SUBMITTED TO THE DISTRICT TRAFFIC UNIT FOR REVIEW PRIOR TO BIDDING.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATION.

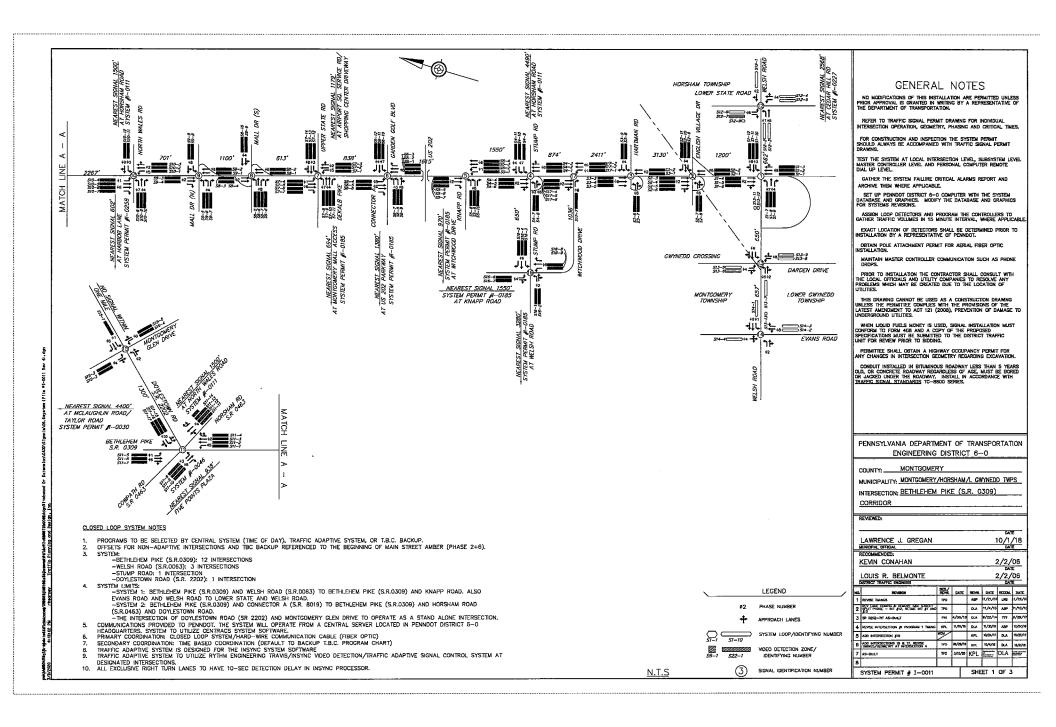
CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH

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2	ADDED M.T.D.R. SIGNS	BRB	4/23/39		4/29/99	DEN	5/3/95			
3	ADDED EVEROPHCY	PAI	8/10/04	MK	9/2/04	LAS	9/20/04			
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FILE # 0429

SHEET 3 OF 3 PERMIT * 64-0429

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WEEKLY TIMING PROGRAMS (ADAPTIVE ▲)

		TUNNEL PHASE		GLOBAL OFFSET (AT	LOCAL DEECET (SEC	TRAVEL TIME TO NEXT
CONFIGURATION: AM		DURATION (SEC)	PERIOD	FACILITATOR (SECI)	LOCAL OFFSET (SEC)	INTERSECTION (SEC)
INTERSECTIONS	FILE #	NB OR EBISB OR WB		TABLETTATOR EDECOT	NB OR EB SB OR WB	
A 1 BETHLEHEM PIKE (SR 309) & WELSH ROAD	0210	♦6= 75 ♦2= 8D	170	661 NB)= 168 +245B)= 60	66 = D 62 = -60	46 = 17 42 = N/A
A 2 BETHLEHEM PIKE (SR 309) & ENGLISH VILLAGE		66= 35 42= 80	170	46(NB)= 168(42(SB)= 60	\$6 = 0 \$2 = -57	+6 = 45 42 = 17
A 3 BETHLEHEM PIKE (SR 309) & HARTMAN ROAD		\$2= 100 \$6= 70	170	42(NB)= 168 4 4 SBJ = 60	\$3 = 15 \$6 = -57	+2 = 34 +6 = 45
A 4 BETHLEHEN PIKE (SR 309) & STUMP ROAD		♦6= 35 ♦2= 70	170	06(NB)= 16862(SB)= 60	\$6 = 0 \$2 = -57	♦6 = 22 + 2 = 13
A 5 BETHLEHEM PIKE (SR 309) & KNAPP ROAD		62 = 40 66 = 100	170	142(NB)= 168+4(SB)= ED	+2 = 0 +6 = -54	\$2 = 23 \$6 = 22
A G BETHLEHEM PIKE (SR 309) & GARDEN GOLF BLVD	3367		170	66(NB)= 16863(SB)= 60	66 = 0 62 = -55	\$6 = 13 +2 = 23
A 7 BETHLEHEM PIKE (SR 309) & DEKALB PIKE/UPPER STATE RD		62 = 60	170	\$2(NB)= 168 66(SB)= 60	¢2 = −3 ¢6 = −51	42 = B 46 = .13
A 8 BETHLEHEM PIKE (SR 309) & MALL DRIVE SOUTH	1984		170	66(NB)= 168+2(SB)= 60		96 = 18 42 = 8
A 9 BETHLEHEM PIKE (SR 309) & MALL DRIVE NORTH	1983	+2= 62 +6= 58	170	42(NB)= 168+4(SB)= 60	#2 = 75 #6 = -43	ψ2 = 13 ψ6 = 1B
▲ 10 BETHLEHEM PIKE (SR 309) & NORTH WALES ROAD	1594	♦2= 45 ♦6= 55	170	621 NBI= 168 64 SBI= 60	\$2 = 77 \$6 = -40	∳2 = 38 ∮ 6 = 13
A 11 BETHLEHEM PIKE (SR 309) & HORSHAM ROAD/DEKALB PIKE	0197	\$2 = 45 \$6 = 50	170	434 NBI= 168 + 45B)= 60	¢2 = 75 ¢6 = -40	42 = 61 46 = 38
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15						1
▲ 16 STUMP ROAD & WITCHWOOD DRIVE		\$2 N/A \$6 N/A	60	+21 NB)= 168 + +(581= 60		
A 17 BETHLEHEM PIKE (SR 309) & WITCHWOOD DRIVE		¢6≡ 47 ¢2≡ 77	170	46(NB)= 16842(SB) = 60		
		TUNNEL PHASE				
CONFIGURATION: MIDDAY	1	DURATION (SEC)	PERIOD	GLOBAL OFFSET (AT	LUCAL OFFSET (SEC)	TRAVEL TIME TO NEXT
INTERSECTIONS	E11 E #	NB OR EBISE OR WE	PERIOD	FACILITATOR [SEC3)	NB OR EBISB OR WB	INTERSECTION (SEC)
1 BETHLEHEN PIKE (SR 309) & WELSH ROAD		46 = 40 42 = 52	150	66(NB)= 30 162(SB) = 20		66 = 17 62 = N/A
2 BETHLEHEM PIKE (SR 309) & ENGLISH VILLAGE		46 = 50 42 = 55	150	#6(NB)= 30 #2(SB)= 20		
A 3 BETHLEHEM PIKE (SR 309) & HARTMAN ROAD		+2 = 55 +6 = 45	150	+21 NB = 168 + 4 SB = 20		62 = 34 66 = 45
A 4 BETHLEHEN PIKE (SR 309) & STUMP ROAD	0470	46 = 40 42 = 52	150	66(NB)= 30 62(SB) = 20		#6 = 22 #2 = 13
A 5 BETHLEHEM PIKE (SR 309) & KNAPP ROAD	3004	#3 = 69 #6 = 45	150	#2(NB)= 30 #4(SB) = 20		40 = 22 42 = 13 46 = 22
A 6 BETHLEHEM PIKE (SR 309) & GARDEN GOLF BLVD		\$6 = 40 \$2 = 45	150	66(NB)= 30 (02(SB)= 20		66 = 13 62 = 23
A 7 BETHLEHEM PIKE (SR 309) & DEXALB PIKE/UPPER STATE RD		42 = 50	150	#2(NB)= 30 0 4 580 = 20		62 = B
A 8 BETHLEHEM PIKE (SR 309) & MALL DRIVE SOUTH		46 = 55	150	66(NB)= 30 (415B)= 20		66 = 18
A 9 BETHLEHEM PIKE (SR 309) & MALL DRIVE NORTH		42 = 56 46 = 40	150	42(NB)= 30 44(SB)= 20		92 = 13 46 = 18
A 101 BETHLEHEN PIKE (SR 309) & NORTH WALES ROAD		42 = 40	150	#2(NB)= 30 #4 SB) = 20		92 = 13 96 = 18 92 = 38 96 = 13
111 BETHLEHEN PIKE (SR 309) & HORSHAM ROAD/DEKALB PIKE		42 = 40	150	#2(NB)= 30 #4 SB) = 20		92 = 38 90 = 13 92 = 61 96 = 38
12	0191	42 = 40 90 = 40	150	#2ENBF 30 # 45BI = 20	62 = 20 46 = 10	02 = 61 00 = 38
13	1					
14						
151	-			·		
A 16 STUMP ROAD & WITCHWOOD DRIVE	2044	+2 = N/A +6 = N/A	120	+24 MB3 = 30 + 44 SB3 = 20	42 - N/4 44 - N/4	42 - N/4 44 - N/4
17 BETHLEHEM PIKE (SR 309) & WITCHWOOD DRIVE		96 = 60 42 = 65	150	#4(NB)= 30 (*3(SB)= 20		
- III BEINCENEM FIRE (SR 309) & WITCHWOOD DRIVE	3243		120	701 MS/ 30 14-1367 - 20	V0 = -3 V2 = -8	V0 = 13 V2 = 34
l .	1	TUNNEL PHASE		GLOBAL OFFSET (AT	LOCAL DEECET LEECH	TRAVEL TIME TO NEXT
CONFIGURATION: PM	ł	DURATION (SEC)	PERIOD	FACILITATOR [SEC])	LUCAL OFFSET TSEC	INTERSECTION (SEC)
INTERSECTIONS	FILE #	NB OR EBISB OR WB		ACTELIATOR ESCOS	NB OR EB SB OR WB	THILLIBLE TON TOLO
A I I BETHLEHEM PIKE (SR 309) & WELSH ROAD		♦6 = 55 ♦2 = 70	170	#6(NB) = () 02(SB) = 49		46 = 17 42 = N/A
A 2 BETHLEHEM PIKE (SR 309) & ENGLISH VILLAGE		+6 = 60 62 = 70	170	66(NB) = () 62(SB) = 49		
A 3 BETHLEHEM PIKE (SR 309) & HARTMAN ROAD		+2 = 65 +4 = 46	170	+24 NB) = 0 +4 SB) = 49		
A 4 BETHLEHEN PIKE (SR 309) & STUMP ROAD		\$6 = 65 \$2 = 55	170	46(NB) = 0 +2(SB) = 49		
A 5 BETHLEHEM PIKE (SR 309) & KNAPP ROAD		62 = 72 66 = 51	170	+2(NB) = Q +4SB = 49		
A 6 BETHLEHEM PIKE (SR 309) & GARDEN GOLF BLVD		+6 = 65 +2 = 55	170	46(NB) = 0 42(SB) = 49		
A 7 BETHLEHEM PIKE (SR 309) & DEKALB PIKE/UPPER STATE RD		+2 = 65 +6 = 55	170	42(NB) = 0 64(SB) = 49		
A 8 BETHLEHEM PIKE (SR 309) & WALL DRIVE SOUTH		66 = 72 02 = 55	170	66(NR) = 0 62(SB) = 49		46 = 18 42 = 8
A 9 BETHLEHEM PIKE (SR 309) & MALL DRIVE NORTH		62 = 70 66 = 55	170	\$24 NB) = 0 44 SB) = 49		02 = 13 46 = 18
A 10 BETHLEHEM PIKE (SR 309) & NORTH WALES ROAD		42 = 75 46 = 55	170	\$2(NB) = 0 (66(SB)= 49		92 = 38 90 = 13
A 11 BETHLEHEM PIKE (SR 309) & HORSHAM ROAD/DEKALB PIKE		62 = 56 66 = 50	170	62(NB) = 0 66(SB) = 49		92 = 61 4n = 38
12	1 - 1 - 1	1 20 1 - 30				
13	 	 		i i		
14		i i		1		i
15				1		i
A 15 STUMP ROAD & WITCHWOOD DRIVE	3944	62 = N/A 66 = N/A	120	42(NB) = () 66(SB) = 49	62 = N/A 66 = N/A	02 = N/A 00 = N/A
▲ 17 BETHLEHEM PIKE (SR 309) & WITCHWOOD DRIVE		06 = 70 02 = 70	170	+61 NB0 = Q +2(SB) = 49		

NULL	-5.

- ALL SPLIT TIMES INCLUDE YELLOW AND RED TIMES FOR A GIVEN PHASE.
- REFER TO SIGNAL PERMIT PLAN FOR MAX 1, MAX 2 AND CLEARANCE AND PED TIMES.
- GLOBAL OFFSET (AT FACILITATOR): VALUE IN SECONDS THAT OF SECONDS THAT AS ENTERED IN THAT AFFIC
- LOCAL OFFSET: TUNNEL OFFSET AT INTERSECTION AS ENTERED IN INTRAFFIC
- TRAVEL TIME TO NEXT INTERSECTION: VALUE FOR TRAYEL HIME OF THE CORRESPONDING TUNNEL TAYEL HE NEXT INTERSECTION SO THE NEXT INTERSECTION SO THE NEXT HE NEXT INTERSECTION SO THE NEXT HE NEXT INTERSECTION SO THE NEXT HIME OF THE NEXT HIME.
- ▲ TIMING SELECTED BY TRAFFIC ADAPTIVE PROCESSOR

	AD	APTIV	E WEE	KLY PROGRAM CHAR	T
EVENT	DAY	TIME	PERIOD	PROGRAM	REMARKS
1	1-7	0:00	120	TUNNELLESS	ADAPTIVE
2	1-5	6:00	170	AM.	ADAPTIVE
3	1-5	9:15	150	MIDDAY	ADAPTIVE
4	1-5	15:00	170	PM	ADAPTIVE
5	1-5	19:00	150	MIDDAY	ADAPTIVE
6	1-5	22:00	120	TUNNELLESS	ADAPTIVE
7	6-7	7:30	150	MIDDAY	ADAPTIVE
В	- 6	23:00	120	TUNNELLESS	ADAPTIVE
9	7	22:00	120	TUNNELLESS	ADAPTIVE
(0)10414	\Box			·	

TUNNELLESS: UNCOORDINATED ADAPATIVE OPERATION

GENERAL NOTES

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED IN WRITING BY A REPRESENTATIVE OF THE DEPARTMENT OF TRANSPORTATION.

REFER TO TRAFFIC SIGNAL PERMIT DRAWING FOR INDIVIDUAL INTERSECTION OPERATION, GEOMETRY, PHASING AND CRITICAL TIMES.

FOR CONSTRUCTION AND INSPECTION THE SYSTEM PERMIT SHOULD ALWAYS BE ACCOMPANIED WITH TRAFFIC SIGNAL PERMIT DRAWING.

TEST THE SYSTEM AT LOCAL INTERSECTION LEVEL, SUBSYSTEM LEVEL MASTER CONTROLLER LEVEL AND PERSONAL COMPUTER REMOTE DIAL UP LEVEL.

GATHER THE SYSTEM FAILURE CRITICAL ALARMS REPORT AND ARCHIVE THEM WHERE APPLICABLE.

SET UP PENNDOT DISTRICT 6-0 COMPUTER WITH THE SYSTEM DATABASE AND GRAPHICS. MODIFY THE DATABASE AND GRAPHICS FOR SYSTEMS REVISIONS,

ASSIGN LOOP DETECTORS AND PROGRAM THE CONTROLLERS TO CATHER TRAFFIC VOLUMES IN 15 MINUTE INTERVAL, WHERE APPLICABLE.

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

CHITAIN POLE ATTACHMENT PERMIT FOR AERIAL FIBER OPTIC INSTALLATION.

MAINTAIN MASTER CONTROLLER COMMUNICATION SUCH AS PHONE DROPS.

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE, ANY PROGLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING
ULLESS THE PREMITTEE COMPLES WITH THE PROVISIONS OF THE
LATEST AMENDMENT TO ACT 121 (2008), PREVENTION OF DAMAGE TO
UNDERFRONCING ULLIES.

WHEN LOUID FUELS NOISEY IS USED, SIGNAL INSTALATION MUST
CONFORM TO FIGH 408 AND A COPY OF THE PROVISED
SPECIFICATIONS MUST BE SUBMITTED TO THE DISTRICT TRAFFIC
UNIT FOR REVIEW PRIOR TO BIODING.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATION.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC STRAIL STANDARDS TO-8800 SERIES.

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION ENGINEERING DISTRICT 6-0

COUNTY: MONTGOMERY
MUNICIPALITY: MONTGOMERY/HORSHAM/L GWYNEDD TWPS
INTERSECTION: BETHLEHEM PIKE (S.R. 0309)
CORRIDOR

REVIEWED:

LAWRENCE J. GREGAN 10/1/18

MINISTRA CONAMENDED:

KEVIN CONAHAN 2/2/06

LOUIS R. BELMONTE

2/2/06 DATE 2/2/06

esjekt middforjekonomy Tim Nordjekt Vituskija emmej filjaken i Vituskija kojan i toknood Dr. Externa i on Culdo Sajano i u Obs., 414 filj 56 j Pla. – rikeomesy – Traffilo Planning and Design, i Inc.

A 4	BETHLEHEM PIKE & STUMP ROAD	0429		52	16 (LEAD)	22		52	17 (LEAD)	21		90	20	
A 5	BETHLEHEM PIKE & KNAPP ROAD	3004	17 (LEAD)	55	IO (LLXIO)	17		73	17 (55115)			90	87	
1 5	BETHLEHEM PIKE & GARDEN GOLF BLVD	3367	(220)	44		18 (SPLIT)	15 (LEAD)	29		28 (SPLIT)		90	64	
	BETHLEHEM PIKE & DEKALB PIKE/UPPER STATE ROAD		13 (LEAD)	35	17 (LEAD)	25	13 (LEAD)	35	17 (LEAD)	25		90	50	
ΔB		1984	10 (CLAU)	67	17 (44.10)	23	15 (44.00)	87	I'r (LLND)	23		90	59	
1 9		1983		52		38		52	19 (LAG)	19		90	11	
A 10		1594	18 (LEAD)	34	17 (LEAD)	21	18 (LEAD)	34	17 (LEAD)	21		90	0	
111		0197	15 (LEAD)	42	17 (LEAD)	43	15 (LEAD)	42	17 (LLAU)	50	23	140	0	
12	WELSH ROAD & LOWER STATE ROAD	2040	17 (LEAD)	29	17 (66,00)	27 (SPLIT)	15 (5575)	45		17 (SPLIT)		90	73	
		2705	17 (66.00)	58	-	32	25 (LEAD)	33		32		90	8	
14		2508	14 (LEAD)	52		24	ZO (LEAD)	56		24		90	84	
15		2782	14 (LEMU)	. 32		24		- 00		-27		++	FREE	
115		3944	+	49		41		49	-	41		90	11	
117		3943	25 (LEAD)	65		41		90		41		90	51	
- 11/		J345	IZJ (LEAD)	65		Phase		7 30	٠					
	Program 2											Cycle	Offset*	Remarks
	Intersections	File # Maste	1	2	3	4	5	6	7	8	10			
▲ 1	WELSH ROAD & BETHLEHEM PIKE	0210		33	18 (LEAD)	29		33	18 (LEAD)	29		80	17	
▲ 2	BETHLEHEM PIKE & ENGLISH VILLAGE	2704		56		24		56		24		80	45	
▲ 3		1618		55		25		55		25		80	7	
▲ 4	BETHLEHEM PIKE & STUMP ROAD	0429		42	14 (LEAD)	24		42	17 (LEAD)	21		80	34	
▲ 5	BETHLEHEM PIKE & KNAPP ROAD	3004	21 (LEAD)	39		20		60				80	10	
▲ 6	BETHLEHEM PIKE & GARDEN GOLF BLVD	3367		36		16 (SPLIT)		21		28 (SPLIT)		80	_1_	
	BETHLEHEM PIKE & DEKALB PIKE/UPPER STATE ROAD		13 (LEAD)	29	15 (LEAD)	23	13 (LEAD)	29	15 (LEAD)	23		80	44	
▲ 8	BETHLEHEM PIKE & MALL DRIVE SOUTH	1984		57		23		57		23		80	57	
▲ 9	BETHLEHEM PIKE & MALL DRIVE NORTH	1983		38		42		38	21 (LAG)	21		80	2	
▲ 10		1594	17 (LEAD)	26	15 (LEAD)	21	17 (LEAD)	25	15 (LEAD)	21		80	78	
A 111		0197	20 (LEAD)	28	18 (LEAD)	31	2D (LEAD)	28		49	23	120	0	
12	WELSH ROAD & LOWER STATE ROAD	2040	1				1							
113		2705	,		1									
14	WELSH ROAD & EVANS ROAD	2508	1	28		31		28		49	25	120	0	
15		27B2				•						++	FREE	
▲ 16		3944		37		43	1	37		43		80	8	
A 17	BETHLEHEM PIKE & WITCHWOOD DRIVE	3943	26 (LEAD)	54				80				80	64	
	Program 3					Phase						Cycle	Offset*	Remarks
\vdash		File # Most	ed 1	2	3	4	5	6	7	8	10			Kentaras
A 1		D210	· ·	50	14 (LEAD)	45		60	14 (LEAD)	46		120	19	
. 2	DETHI FHEM DIKE & ENGLISH VILLAGE	2704		58		32		I 58		32		90	32	
A 2		2704		58 76	-	32		58 75		32 25		90 100	32 77	
A 3	BETHLEHEM PIKE & HARTMAN ROAD	1618		75	14 (IEAD)	25		75	17 (LEAD)	25		100	77	
▲ 3 ▲ 4	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD	1618 0429	23 () EAD)	75 51	14 (LEAD)	25 25		75 51	17 (LEAD)			100 90	77 22	
▲ 3 ▲ 4 ▲ 5	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & KNAPP ROAD	1618 0429 3004	23 (LEAD)	75 51 45	14 (LEAD)	25 25 22	t5 (LFAD)	75 51 68	17 (LEAD)	25 22		100 90 90	77 22 80	
4 4 4 5	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & KNAPP ROAD BETHLEHEM PIKE & GARDEN GOLF BLVD	1618 0429 3004 3367		75 51 45 49		25 25 22 15 (SPLIT)		75 51 68 34		25 22 26 (SPLIT)		90 90 90	77 22 80 78	
4 4 5 4 6 7	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & KNAPP ROAD BETHLEHEM PIKE & GARDEN GOLF BLVD BETHLEHEM PIKE & GARDEN GOLF BLVD BETHLEHEM PIKE & DEKALB PIKE/UPPER STATE ROAD	1618 0429 3004 3367 1055	23 (LEAD) 16 (LEAD)	75 51 45 49 41	14 (LEAD)	25 25 22 15 (SPLIT) 28	15 (LEAD) 15 (LEAD)	75 51 68 34 41	17 (LEAD)	25 22 26 (SPLIT) 28		90 90 90 90 100	77 22 80 78 50	
4 5 4 5 4 7 4 B	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & KNAPP ROAD BETHLEHEM PIKE & GARDEN GOLF BLVD BETHLEHEM PIKE & DEKALB PIKE/UPPER STATE ROAD BETHLEHEM PIKE & WALL DRIVE SOUTH	1618 0429 3004 3367 1055 1984		75 51 45 49 41 56		25 25 22 15 (SPLIT) 28 24		75 51 68 34 41 66	15 (LEAD)	25 22 26 (SPUT) 28 24		100 90 90 90 90 100	77 22 80 78 50 57	
4 5 4 6 7 A 8 9	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & KNAPP ROAD BETHLEHEM PIKE & KNAPP ROAD BETHLEHEM PIKE & GARDEN SOLF BLVD BETHLEHEM PIKE & DEKALP BIKE JUPPER STATE ROAD BETHLEHEM PIKE & MALL DRIVE SOUTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE NORTH	1618 0429 3004 3367 1055 1984 1983	16 (LEAD)	75 51 45 49 41 56 51	15 (LEAD)	25 25 22 15 (SPLIT) 28 24 39	15 (LEAD)	75 51 68 34 41 66 51	15 (LEAD)	25 22 26 (SPLIT) 28 24 20		100 90 90 90 90 100 90	77 22 80 78 50 57 89	
3 4 5 4 6 7 4 8 4 10	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & GARDEN GOLF BLVD BETHLEHEM PIKE & DERAED ROLF BLVD BETHLEHEM PIKE & DERAED RIKE FURPER STATE ROAD BETHLEHEM PIKE & MALL DRIVE SONTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MORTH WALES ROAD	1618 0429 3004 3367 1055 1984 1983 1594	16 (LEAD)	75 51 45 49 41 56 51 39	15 (LEAD)	25 25 22 15 (SPLIT) 28 24 39 24	15 (LEAD)	75 51 68 34 41 66 51	15 (LEAD)	25 22 26 (SPLIT) 28 24 20 20	24	100 90 90 90 90 100	77 22 80 78 50 57	
3 4 5 4 7 4 8 4 9 4 10	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & KNAPP ROAD BETHLEHEM PIKE & KNAPP ROAD BETHLEHEM PIKE & DEKALE PIKE ZUPPER STATE ROAD BETHLEHEM PIKE & MALL DRIVE SOUTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MORTH WALES ROAD BETHLEHEM PIKE & HORTH WALES ROAD BETHLEHEM PIKE & HORTH WALES ROAD	1618 0429 3004 3367 1055 1984 1983 1594 0197	16 (LEAD) 13 (LEAD) 15 (LEAD)	75 51 45 49 41 56 51 39	15 (LEAD)	25 25 22 15 (SPLIT) 28 24 39 24 43	15 (LEAD)	75 51 68 34 41 66 51 39	15 (LEAD)	25 22 26 (SPLIT) 28 24 20 20 60	24	90 90 90 90 100 90 90 90 90	77 22 80 78 50 57 89 83 0	
3 4 5 6 7 8 9 4 10	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & GARDEN GOLF BLVD BETHLEHEM PIKE & DERALB PIKE JUPPER STATE ROAD BETHLEHEM PIKE & DERALB PIKE JUPPER STATE ROAD BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MORTH WALSS ROAD BETHLEHEM PIKE & HORSHAM ROAD/DEKALB PIKE WELSH ROAD & LOWER STATE ROAD	1618 0429 3004 3367 1055 1984 1983 1594 0197 2040	16 (LEAD)	75 51 45 49 41 56 51 39 41 52	15 (LEAD)	25 25 22 15 (SPLIT) 28 24 39 24 43 33 (SPLIT)	15 (LEAD) 13 (LEAD) 15 (LEAD)	75 51 68 34 41 66 51 39 41 65	15 (LEAD)	25 22 26 (SPLIT) 28 24 20 20 60 22 (SPLIT)	24	100 90 90 90 100 90 90 90 90 140 120	77 22 80 78 50 57 89 83	
3 4 5 6 7 8 4 9 4 10 11 12 13	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STIMP ROAD BETHLEHEM PIKE & STIMP ROAD BETHLEHEM PIKE & SANEP ROAD BETHLEHEM PIKE & GARDEN GOLF BLYO BETHLEHEM PIKE & DEKALE PIKE/UPPER STATE ROAD BETHLEHEM PIKE & MALL DRIVE SOUTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MORTH WALES ROAD BETHLEHEM PIKE & HORTH WALES ROAD BETHLEHEM PIKE & HORTH WALES ROAD WELSH ROAD & LOWER STATE ROAD WELSH ROAD & COWER STATE ROAD WELSH ROAD & GWYHEDD CROSSING/DARDEN DRIVE	1618 0429 3004 3367 1055 1984 1983 1983 0197 2040 2705	16 (LEAD) 13 (LEAD) 15 (LEAD) 13 (LEAD)	75 51 45 49 41 56 51 39 41 52 88	15 (LEAD)	25 25 22 15 (SPLIT) 28 24 39 24 43 33 (SPLIT) 32	15 (LEAD)	75 51 68 34 41 66 51 39 41 65 83	15 (LEAD)	25 22 26 (SPLIT) 28 24 20 20 60 22 (SPLIT)	24	90 90 90 90 100 90 90 90 140 120	77 22 80 78 50 57 89 83 0 79 6	
4 4 5 6 7 4 8 4 9 4 10 11 12 13 14	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & GARDEN GOLF BLVD BETHLEHEM PIKE & DERALB PIKE JUPPER STATE ROAD BETHLEHEM PIKE & DERALB PIKE JUPPER STATE ROAD BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MORTH WALSS ROAD BETHLEHEM PIKE & HORSHAM ROAD/DEKALB PIKE WELSH ROAD & LOWER STATE ROAD WELSH ROAD & COWER STATE ROAD WELSH ROAD & COWER STATE ROAD WELSH ROAD & COWER STATE ROAD	1618 0429 3004 3367 1055 1984 1983 1594 0197 2040 2705 2508	16 (LEAD) 13 (LEAD) 15 (LEAD)	75 51 45 49 41 56 51 39 41 52	15 (LEAD)	25 25 22 15 (SPLIT) 28 24 39 24 43 33 (SPLIT)	15 (LEAD) 13 (LEAD) 15 (LEAD)	75 51 68 34 41 66 51 39 41 65	15 (LEAD)	25 22 26 (SPLIT) 28 24 20 20 60 22 (SPLIT)	24	90 90 90 90 100 90 90 90 140 120 120	77 22 80 78 50 57 89 83 0 79 6	
3 4 4 5 6 7 8 9 4 10 11 12 13 14	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & GARDEN GOLF BLVD BETHLEHEM PIKE & DERABL BIKE/UPPER STATE ROAD BETHLEHEM PIKE & DERABL BIKE/UPPER STATE ROAD BETHLEHEM PIKE & MALL DRIVE SOUTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE NORT	1618 0429 3004 3367 1055 1984 1983 1594 0197 2040 2705 2508 2782	16 (LEAD) 13 (LEAD) 15 (LEAD) 13 (LEAD)	75 51 45 49 41 56 51 39 41 52 88 77	15 (LEAD)	25 25 22 15 (SPLIT) 28 24 39 24 43 33 (SPLIT) 32 28	15 (LEAD) 13 (LEAD) 15 (LEAD)	75 51 68 34 41 66 51 39 41 65 63 92	15 (LEAD)	25 22 26 (SPLIT) 28 24 20 60 22 (SPLIT) 32 28	24	90 90 90 90 100 90 90 90 140 120	77 22 80 78 50 57 89 83 0 79 6	
3 4 4 5 4 5 4 7 4 8 9 4 10 11 12 13 14 15	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & SRAPEN GOLF BLVD BETHLEHEM PIKE & BRANEN GOLF BLVD BETHLEHEM PIKE & BRANL DRIVE SUTH BETHLEHEM PIKE & MALL DRIVE SOUTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MORTH WALES ROAD BETHLEHEM PIKE & HORSHAM ROAD/DEKALD PIKE WELSH ROAD & COWER STATE ROAD WELSH ROAD & COWER STATE ROAD DOYLSTOWN ROAD & MONTGOMERY GLEN DRIVE STUMP ROAD AND KOMENT STORE ROAD DOYLSTOWN ROAD & MONTGOMERY GLEN DRIVE STUMP ROAD AND MOTTOWERY GLEN DRIVE STUMP ROAD AND MOTTOWERY GLEN DRIVE STUMP ROAD AND MOTTOWERY GLEN DRIVE	1618 0429 3004 3064 3067 1055 1984 1983 1594 10197 2040 2705 2508 2708 2782 3944	16 (LEAD) 13 (LEAD) 15 (LEAD) 13 (LEAD) 15 (LEAD)	75 51 45 49 41 56 51 39 41 52 88 77	15 (LEAD)	25 25 22 15 (SPLIT) 28 24 39 24 43 33 (SPLIT) 32	15 (LEAD) 13 (LEAD) 15 (LEAD)	75 51 68 34 41 66 51 39 41 65 83	15 (LEAD)	25 22 26 (SPLIT) 28 24 20 20 60 22 (SPLIT)	24	100 90 90 90 100 90 90 90 90 140 120 120 ++	77 22 80 78 50 57 89 83 0 79 6 105 FREE	
3 4 4 5 6 7 8 9 4 10 11 12 13 14	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & SARDEN ROAD BETHLEHEM PIKE & GARDEN GOLF BLVD BETHLEHEM PIKE & DEKALB PIKE JUPPER STATE ROAD SETHLEHEM PIKE & MALL DRIVE SOUTH BETHLEHEM PIKE & MALL DRIVE SOUTH BETHLEHEM PIKE & MALL DRIVE SOUTH BETHLEHEM PIKE & MALL DRIVE ROBRIT BETHLEHEM PIKE & HORSTAM ROAD/DERALB PIKE WELSH ROAD & LOWER STATE ROAD WELSH ROAD & COMER STATE ROAD DOVLSTOWN ROAD & MOTOMOSSING/DARDEN DRIVE STUMP ROAD AND WITCHWOOD DRIVE STUMP ROAD AND WITCHWOOD DRIVE BETHLEHEM PIKE & WITCHWOODD DRIVE	1618 0429 3004 3367 1055 1984 1983 1594 0197 2040 2705 2508 2782	16 (LEAD) 13 (LEAD) 15 (LEAD) 13 (LEAD)	75 51 45 49 41 56 51 39 41 52 88 77	15 (LEAD)	25 25 22 15 (SPLIT) 28 24 39 24 43 33 (SPLIT) 32 28	15 (LEAD) 13 (LEAD) 15 (LEAD)	75 51 68 34 41 66 51 39 41 65 65 63	15 (LEAD)	25 22 26 (SPLIT) 28 24 20 60 22 (SPLIT) 32 28	24	100 90 90 90 90 90 100 90 90 140 120 120 ++	77 22 80 78 50 57 89 83 0 79 6 105 FREE 74 52	Domastir
3 4 4 5 4 5 4 7 4 8 9 4 10 11 12 13 14 15	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STIMP ROAD BETHLEHEM PIKE & STIMP ROAD BETHLEHEM PIKE & STIMP ROAD BETHLEHEM PIKE & GRADEN GOLF BLVD BETHLEHEM PIKE & DEKALB PIKE/UPPER STATE ROAD BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MORTH WALSE ROAD BETHLEHEM PIKE & MORTH WALSE ROAD WELSH ROAD & COWER STATE ROAD WELSH ROAD & GOWER STATE ROAD ODLISTOWN ROAD & MONTOOMERY GLEN DRIVE STUMP ROAD ALD WICHWOOD DRIVE STUMP ROAD AND WICHWOOD DRIVE BETHLEHEM PIKE & WITCHWOOD DRIVE PROGOTA	1618 0429 3304 3367 1056 1984 1983 1594 0197 2040 2705 2508 2782 3944 3943	16 (LEAD) 13 (LEAD) 15 (LEAD) 13 (LEAD) 15 (LEAD) 15 (LEAD)	75 51 45 49 41 56 51 39 41 52 88 77	15 (LEAD)	25 25 22 25 15 (SPLIT) 28 24 39 24 43 33 (SPLIT) 32 28 49	15 (LEAD) 13 (LEAD) 15 (LEAD) 25 (LEAD)	75 51 68 34 41 66 51 39 41 65 63 92	15 (LEAD) 19 (LAC) 18 (LEAD)	25 22 26 (SPUT) 28 24 20 20 60 22 (SPUT) 32 28		100 90 90 90 90 90 90 90 140 120 120 120 ++	77 22 80 78 50 57 89 83 0 79 6 105 FREE	Remarks
3 4 5 6 7 8 9 4 10 12 13 14 15 15 15 15 15 15 15 15 15 15 15 15 15	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & GARDEN GOLF BLVD BETHLEHEM PIKE & DEKALB PIKE/UPPER STATE ROAD BETHLEHEM PIKE & MALL DRIVE SOUTH BETHLEHEM PIKE & MALL DRIVE SOUTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & WORTH BETHLEHEM PIKE & WORTH WELSH ROAD & LOWER STATE ROAD DOYLSTOWN ROAD & MONTOWERY CLEN DRIVE STUMP ROAD AND WITCHWOOD DRIVE BETHLEHEM PIKE & WITCHWOOD DRIVE Program 4 Intersections	1618 0429 33004 3367 1055 1984 1983 1594 0197 2040 2705 2508 2705 2508 2782 3944 3943	16 (LEAD) 13 (LEAD) 15 (LEAD) 13 (LEAD) 15 (LEAD) 15 (LEAD)	75 51 45 49 41 56 51 39 41 52 88 77 41 58	15 (LEAD) 14 (LEAD) 17 (LEAD)	25 25 22 15 (SPLIT) 24 39 24 43 33 (SPLIT) 32 28 49	15 (LEAD) 13 (LEAD) 15 (LEAD)	75 51 68 34 41 66 51 39 41 65 63 92 41 90	15 (LEAD) 19 (LAG) 18 (LEAD)	25 22 26 (SPUT) 28 24 20 20 60 22 (SPUT) 32 28 49	24	100 90 90 90 90 90 90 90 90 120 120 120 ++ 90 Cycle	77 22 80 78 50 57 89 83 0 79 6 105 FREE 74 52 Offset*	Remarks
3 4 5 7 8 9 10 11 12 13 14 15 4 17	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & GARDEN GOLF BLVD BETHLEHEM PIKE & DEKALB PIKE/UPPER STATE ROAD BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MORTH WALSS ROAD BETHLEHEM PIKE & MORTH WALSS ROAD BETHLEHEM PIKE & WORTH WALSS ROAD WELSH ROAD & COWER STATE ROAD WELSH ROAD & GOWER STATE ROAD OPTISTOWN ROAD & MONTGOMERY GLEN DRIVE STUMP ROAD AND MOTHOWOOD DRIVE BETHLEHEM PIKE & WITCHWOOD DRIVE PROGRAM INTERSECTION INTERSECTION WELSH ROAD & BETHLEHEM PIKE	1618 0429 33004 3367 1055 1984 1983 1594 0197 2040 2705 2508 2782 3944 3943	16 (LEAD) 13 (LEAD) 15 (LEAD) 13 (LEAD) 15 (LEAD) 15 (LEAD)	75 51 45 49 41 56 51 39 41 52 88 77	15 (LEAD)	25 25 22 25 15 (SPLIT) 28 24 39 24 43 33 (SPLIT) 32 28 49	15 (LEAD) 13 (LEAD) 15 (LEAD) 25 (LEAD)	75 51 68 34 41 66 51 39 41 65 63 92	15 (LEAD) 19 (LAC) 18 (LEAD)	25 22 26 (SPUT) 28 24 20 20 60 22 (SPUT) 32 28		100 90 90 90 90 90 100 90 90 140 120 120 ++	77 22 80 78 50 57 89 83 0 79 6 105 FREE 74 52	Remarks
3 4 5 7 8 9 111 12 13 14 15 15 15 17 17 17 12	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & GARDEN GOLF BLVD BETHLEHEM PIKE & DEKALB PIKE/UPPER STATE ROAD BETHLEHEM PIKE & MALL DRIVE SOUTH BETHLEHEM PIKE & MALL DRIVE SOUTH BETHLEHEM PIKE & HORSTHAN ROAD/DEKALB PIKE WELSH ROAD & GEVANES ROAD BETHLEHEM PIKE & HORSTHAN ROAD/DEKALB PIKE WELSH ROAD & EVANS ROAD DOYLSTOWN ROAD & MONTOWART GEN DRIVE STUMP ROAD AND WITCHWOOD DRIVE BETHLEHEM PIKE & WITCHWOOD DRIVE BETHLEHEM PIKE & WITCHWOOD DRIVE Program 4 Intersections WELSH ROAD & BETHLEHEM PIKE BETHLEHEM PIKE & BORJISH VILLAGE BETHLEHEM PIKE & BORJISH VILLAGE	1618 0429 3004 3307 1055 1984 1983 1594 0197 2040 2705 2508 2782 3944 3943	16 (LEAD) 13 (LEAD) 15 (LEAD) 13 (LEAD) 15 (LEAD) 15 (LEAD)	75 51 45 49 41 56 51 39 41 52 88 77 41 58	15 (LEAD) 14 (LEAD) 17 (LEAD)	25 25 22 15 (SPLIT) 24 39 24 43 33 (SPLIT) 32 28 49	15 (LEAD) 13 (LEAD) 15 (LEAD) 25 (LEAD)	75 51 68 34 41 66 51 39 41 65 63 92 41 90	15 (LEAD) 19 (LAG) 18 (LEAD)	25 22 26 (SPUT) 28 24 20 20 60 22 (SPUT) 32 28 49		100 90 90 90 90 90 90 90 90 120 120 120 ++ 90 Cycle	77 22 80 78 50 57 89 83 0 79 6 105 FREE 74 52 Offset*	Remarks
3 4 5 5 6 7 8 9 9 111 12 133 144 15 15 15 15 15 15 15 15 15 15 15 15 15	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & GARDEN GOLF BLVD BETHLEHEM PIKE & DEKALB PIKE/UPPER STATE ROAD BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MORTH WALSS ROAD BETHLEHEM PIKE & MORTH WALSS ROAD BETHLEHEM PIKE & MORTH WALSS ROAD WELSH ROAD & COWER STATE ROAD WELSH ROAD & COWER STATE ROAD OUTLISTOWN ROAD & MONTGOMERY GLEN DRIVE STUMP ROAD ALD WITCHWOOD DRIVE BETHLEHEM PIKE & WITCHWOOD DRIVE PROGRAM FORD AND WITCHWOOD DRIVE BETHLEHEM PIKE & WORDSN VILLAGE BETHLEHEM PIKE & WORDSN VILLAGE BETHLEHEM PIKE & WARTMAN ROAD	1618 0429 3004 3367 1055 1884 1983 1983 1983 2040 27705 2508 2782 3944 3943 File #Masta	16 (LEAD) 13 (LEAD) 15 (LEAD) 13 (LEAD) 15 (LEAD) 15 (LEAD)	75 51 45 49 41 56 51 39 41 52 88 77 41 58	15 (LEAD) 14 (LEAD) 17 (LEAD)	25 25 22 15 (SPLIT) 24 39 24 43 33 (SPLIT) 32 28 49	15 (LEAD) 13 (LEAD) 15 (LEAD) 25 (LEAD)	75 51 68 34 41 66 51 39 41 65 63 92 41 90	15 (LEAD) 19 (LAG) 18 (LEAD)	25 22 26 (SPUT) 28 24 20 20 60 22 (SPUT) 32 28 49		100 90 90 90 90 90 90 90 90 120 120 120 ++ 90 Cycle	77 22 80 78 50 57 89 83 0 79 6 105 FREE 74 52 Offset*	Remarks
3 4 4 5 6 7 8 9 100 111 122 133 14 15 15 15 15 15 15 15 17 1 2 3 4 4	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & GARDEN GOLF BLVD BETHLEHEM PIKE & DEKALB PIKE/UPPER STATE ROAD BETHLEHEM PIKE & MALL DRIVE SOUTH BETHLEHEM PIKE & MALL DRIVE SOUTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & HORSHAM ROAD/DEKALB PIKE LEUS HART BETHLEHEM PIKE & HORSHAM ROAD/DEKALB PIKE WELSH ROAD SET STAND FOR DRIVE BETHLEHEM PIKE & WICHMOOD DRIVE STUMP ROAD AND WITCHWOOD DRIVE BETHLEHEM PIKE & WITCHWOOD DRIVE PROGRAM STAND ROAD & BETHLEHEM PIKE BETHLEHEM PIKE & WITCHWOOD DRIVE BETHLEHEM PIKE & BETHLEHEM PIKE BETHLEHEM PIKE & WITCHWOOD DRIVE BETHLEHEM PIKE & BETHLEHEM PIKE BETHLEHEM PIKE & WITCHWOOD BRIVE BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD	1618 0429 3004 3367 1055 1984 1983 1984 1983 2705 2705 2508 27705 3944 3943 3943	16 (LEAD) 13 (LEAD) 15 (LEAD) 13 (LEAD) 15 (LEAD) 15 (LEAD)	75 51 45 49 41 56 51 39 41 52 88 77 41 58	15 (LEAD) 14 (LEAD) 17 (LEAD)	25 25 22 15 (SPLIT) 24 39 24 43 33 (SPLIT) 32 28 49	15 (LEAD) 13 (LEAD) 15 (LEAD) 25 (LEAD)	75 51 68 34 41 66 51 39 41 65 63 92 41 90	15 (LEAD) 19 (LAG) 18 (LEAD)	25 22 26 (SPUT) 28 24 20 20 60 22 (SPUT) 32 28 49		100 90 90 90 90 90 90 90 90 120 120 120 ++ 90 Cycle	77 22 80 78 50 57 89 83 0 79 6 105 FREE 74 52 Offset*	Remarks
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34567 890011213145 1517 12345557	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & GARDEN GOLF BLVD BETHLEHEM PIKE & DEKALB PIKE/UPPER STATE ROAD BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MORTH WALSS ROAD BETHLEHEM PIKE & MORTH WALSS ROAD BETHLEHEM PIKE & WORTH WALSS ROAD WELSH ROAD & COWER STATE ROAD WELSH ROAD & GOWER STATE ROAD DOYLSTOWN ROAD & MONTGOMERY GLEN DRIVE STUMP ROAD ALD WOTCHWOOD DRIVE BETHLEHEM PIKE & WITCHWOOD DRIVE PROGROM 4 INDERSENDER OAD ALD WITCHWOOD DRIVE BETHLEHEM PIKE & ENGLISH VILLAGE BETHLEHEM PIKE & ENGLISH VILLAGE BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & KNAPP ROAD BETHLEHEM PIKE & KNAPP ROAD BETHLEHEM PIKE & KNAPP ROAD BETHLEHEM PIKE & CARDEN GOLF BLVD BETHLEHEM PIKE & STOMP ROAD	1618 0429 3004 3367 1055 1984 1983 1594 0197 2040 2705 2702 3944 3943 3943 FFIE #Maste 0210 1618 0429 3004 3367	16 (LEAD) 13 (LEAD) 15 (LEAD) 13 (LEAD) 15 (LEAD) 15 (LEAD)	75 51 45 49 41 56 51 39 41 52 88 77 41 58	15 (LEAD) 14 (LEAD) 17 (LEAD)	25 25 22 15 (SPLIT) 24 39 24 43 33 (SPLIT) 32 28 49	15 (LEAD) 13 (LEAD) 15 (LEAD) 25 (LEAD)	75 51 68 34 41 66 51 39 41 65 63 92 41 90	15 (LEAD) 19 (LAG) 18 (LEAD)	25 22 26 (SPUT) 28 24 20 20 60 22 (SPUT) 32 28 49		100 90 90 90 90 90 90 90 90 120 120 120 ++ 90 Cycle	77 22 80 78 50 57 89 83 0 79 6 105 FREE 74 52 Offset*	Remarks
34567 89 101 112 13 145 157 8 1 1 1 2 3 4 5 16 7 8	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & SCAPEN GOLF BLVD BETHLEHEM PIKE & DEKALB PIKE/UPPER STATE ROAD BETHLEHEM PIKE & MALL DRIVE SOUTH BETHLEHEM PIKE & MALL DRIVE SOUTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MORTH WALSE ROAD BETHLEHEM PIKE & HORSHAM ROAD/DEKALB PIKE WELSH ROAD & LOWER STATE ROAD WILSH ROAD & COWER STATE ROAD BETHLEHEM PIKE & HORSHAM POOD DRIVE STUMP ROAD AND WITCHMOOD DRIVE BETHLEHEM PIKE & WITCHMOOD DRIVE PROGRAM INTERNATIONAL & BETHLEHEM PIKE BETHLEHEM PIKE & HORSHAM PIKE BETHLEHEM PIKE & HORSHAM ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & ROADEN GOLF BLVD BETHL	1618 0429 3004 3367 1055 1884 1594 1097 2040 2705 2508 27782 23944 3943 3943 File #Moste 0429 3004 3004 3367 1056	16 (LEAD) 13 (LEAD) 15 (LEAD) 13 (LEAD) 15 (LEAD) 15 (LEAD)	75 51 45 49 41 56 51 39 41 52 88 77 41 58	15 (LEAD) 14 (LEAD) 17 (LEAD)	25 25 22 15 (SPLIT) 24 39 24 43 33 (SPLIT) 32 28 49	15 (LEAD) 13 (LEAD) 15 (LEAD) 25 (LEAD)	75 51 68 34 41 66 51 39 41 65 63 92 41 90	15 (LEAD) 19 (LAG) 18 (LEAD)	25 22 26 (SPUT) 28 24 20 20 60 22 (SPUT) 32 28 49		100 90 90 90 90 90 90 90 90 120 120 120 ++ 90 Cycle	77 22 80 78 50 57 89 83 0 79 6 105 FREE 74 52 Offset*	Remarks
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345 67 8 9 10 11 12 13 14 15 16 17	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & CARPEN GOLF BLVD BETHLEHEM PIKE & DEKALB PIKE JUPPER STATE ROAD BETHLEHEM PIKE & MALL DRIVE SOUTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE NORTH WELST ROAD & LOWER STATE ROAD BETHLEHEM PIKE & HORSTMAN ROAD DEKALB PIKE WELST ROAD & COWER STATE ROAD UNCLESSION ROAD & GONTOMER STATE ROAD STUMP ROAD AND WINTOMED DRIVE STUMP ROAD AND WINTOMED DRIVE BETHLEHEM PIKE & WINTOMED DRIVE PROGRAM WELST ROAD & BETHLEHEM PIKE BETHLEHEM PIKE & WINTOMED BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & KARTMAN ROAD BETHLEHEM PIKE & KARDEN GOLF BLVD	1618 0429 3004 3067 1055 1884 1594 1097 2040 2705 2508 27762 3944 3943 3943 3943 3944 3945 1618 0429 3006 1618 1985 1985	16 (LEAD) 13 (LEAD) 15 (LEAD) 13 (LEAD) 15 (LEAD) 15 (LEAD)	75 51 45 49 41 56 51 39 41 52 88 77 41 58	15 (LEAD) 14 (LEAD) 17 (LEAD)	25 25 22 15 (SPLIT) 24 39 24 43 33 (SPLIT) 32 28 49	15 (LEAD) 13 (LEAD) 15 (LEAD) 25 (LEAD)	75 51 68 34 41 66 51 39 41 65 63 92 41 90	15 (LEAD) 19 (LAG) 18 (LEAD)	25 22 26 (SPUT) 28 24 20 20 60 22 (SPUT) 32 28 49		100 90 90 90 90 90 90 90 90 120 120 120 ++ 90 Cycle	77 22 80 78 50 57 89 83 0 79 6 105 FREE 74 52 Offset*	Remarks
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3445677899171123141515578 4 4 5 6 7 7 8 8 9 9 10 11 11 11 11 11 11 11 11 11 11 11 11	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & CARPEN GOLF BLVD BETHLEHEM PIKE & DEKALB PIKE FUPPER STATE ROAD BETHLEHEM PIKE & MALL DRIVE SONTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MORTH WALSE ROAD BETHLEHEM PIKE & HORSHAM ROAD /DEKALB PIKE WELSH ROAD & LOWER STATE ROAD BETHLEHEM PIKE & WALL DRIVE SONTH WILSH ROAD & COWER STATE ROAD OULSTOWN ROAD & MONTCOMERY GLEN DRIVE STUMP ROAD AS WONTCOMERY GLEN DRIVE BETHLEHEM PIKE & WATCHHOOD DRIVE BETHLEHEM PIKE & WATCHHOOD DRIVE BETHLEHEM PIKE & BOOLDS VILLAGE BETHLEHEM PIKE & BOOLDS VILLAGE BETHLEHEM PIKE & BOOLDS VILLAGE BETHLEHEM PIKE & ROAD SOND BETHLEHEM PIKE & CARDEN GOLF BLVD BETHLEHEM PIKE & ROAD SOND BETHLEHEM PIKE & MALL DRIVE SONTH BETHLEHEM PIKE & MORTH WALES ROAD BETHLEHEM PIKE & MORTH WALES ROAD BETHLEHEM PIKE & HORSHAM ROAD /DEKALB PIKE WELST ROAD & LOWER STATE ROAD	1618 0429 3004 33067 1036 11984 11984 11984 11985 11987 2705 2702 2702 2704 1618 0210 1618 0429 1056 11985 11985	15 (LEAD) 13 (LEAD) 15 (LEAD) 17 (LEAD) 18 1	75 51 45 49 41 66 51 51 52 88 77 74 41 58	15 (LEAD) 14 (LEAD) 17 (LEAD) 3 3 14 (LEAD)	25 25 27 22 15 (SPLIT) 15 (SPLIT) 15 (SPLIT) 26 39 43 33 (SPLIT) 28 49 49 49 45 45 45 45 47 47 47 47 48 49 49 49 49 49 49 49 40 40 40 40 40 40 40 40 40 40 40 40 40	15 (LEAD) 13 (LEAD) 15 (LEAD) 25 (LEAD) 5 (LEAD) 15 (LEAD) 15 (LEAD)	75 51 68 34 41 66 51 59 41 65 65 65 65 65 65 65 65 65 65 65 65 65	15 (LEAD) 19 (LAG) 18 (LEAD) 7 14 (LEAD)	25 22 28 (SPUT) 28 29 20 50 50 22 (SPUT) 32 28 49 45 45 32 (SPUT) 33 (SPUT) 35 (SPUT) 37 (SPUT) 37 (SPUT) 37 (SPUT) 38 38 45 38		100 90 90 90 100 90 90 120 120 120 120 120 120 120 120 120 90 90 0 Cycle	77 22 80 78 50 78 50 57 89 83 0 79 6 105 FREE 74 52 Offset*	Remarks
3 3 4 5 6 6 6 8 9 9 1123 1145 115 117 4 4 2 3 3 4 4 4 6 6 7 8 8 9 9 1123 1145 115 117 117 117 117 117 117 117 117 11	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & GARDEN GOLF BLVD BETHLEHEM PIKE & GARDEN GOLF BLVD BETHLEHEM PIKE & DEKALB PIKE/UPPER STATE ROAD BETHLEHEM PIKE & MALL DRIVE SOUTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE NORTH WELSH ROAD & LOWER STATE ROAD WELSH ROAD & COMMER STATE ROAD DOYLSTOWN ROAD & MONTOOMERY CLEN DRIVE STUMP ROAD AND WITCHWOOD DRIVE BETHLEHEM PIKE & WITCHWOOD DRIVE PROGRAM FOR WITCHWOOD DRIVE BETHLEHEM PIKE & BROLISH VILLAGE BETHLEHEM PIKE & BROLISH VILLAGE BETHLEHEM PIKE & BROLISH VILLAGE BETHLEHEM PIKE & ROAD BETHLEHEM PIKE & ROATH WALES ROAD BETHLEHEM PIKE & ROAD	1618 0429 3004 33067 3008 1055 1884 1055 1884 1584 0197 2040 2705 2508 2706 2508 2704 1618 0429 2704 1618 1056 1985 11584 0710 1056 1985 11584 0797 2040	15 (LEAD) 13 (LEAD) 13 (LEAD) 13 (LEAD) 14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	75 51 45 49 41 66 51 51 52 88 77 41 58 61	15 (LEAD) 14 (LEAD) 17 (LEAD) 3 3 14 (LEAD)	25 25 25 26 27 28 39 24 33 33 (SPUT) 32 28 49 Phose 4 45 27 27 27	15 (LEAD) 13 (LEAD) 15 (LEAD) 25 (LEAD)	75 51 68 34 41 66 51 39 41 41 90 65 65 65 65 65 65 65 65 65 65 65 65 65	15 (LEAD) 19 (LAG) 18 (LEAD) 7 14 (LEAD)	25 22 28 (SPUT) 28 28 29 20 20 60 22 (SPUT) 32 28 49 49 8 45 21 32 (SPUT) 32 28 32 28 32 28 32 28 32 28 32 28 32 32 32 32 32 32 32 32 32 32 32 32 32		100 90 90 90 90 90 100 90 90 120 120 120 ++ 90 Cycle	77 22 80 78 50 78 83 0 79 83 0 79 6 105 FRE 74 52 Offset*	Remarks
3443466778999111211141111111111111111111111111111	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & CARPEN GOLF BLVD BETHLEHEM PIKE & DEKALB PIKE JUPPER STATE ROAD BETHLEHEM PIKE & MALL DRIVE SOUTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MORTH WALSE ROAD BETHLEHEM PIKE & HORSHAM ROAD JOEKALB PIKE WELSH ROAD & COWER STATE ROAD BETHLEHEM PIKE & WALL DRIVE SOUTH BETHLEHEM PIKE & WALCHOOD DRIVE STUMP ROAD AS WONTOMERY GLEN DRIVE STUMP ROAD AS WONTOMERY GLEN DRIVE STUMP ROAD AS WONTOMERY GLEN DRIVE BETHLEHEM PIKE & WACHHOOD DRIVE BETHLEHEM PIKE & BOOLSH VILLAGE BETHLEHEM PIKE & BOOLSH VILLAGE BETHLEHEM PIKE & BOOLSH VILLAGE BETHLEHEM PIKE & BORDISH VILLAGE BETHLEHEM PIKE & BORDISH VILLAGE BETHLEHEM PIKE & CARDEN GOLF BLVD BETHLEHEM PIKE & CARDEN GOLF BLVD BETHLEHEM PIKE & MALL DRIVE SOUTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE SOUTH BETHLEHEM PIKE & HORSHAM ROAD JOEKALB PIKE WELSH ROAD & LOWER STATE ROAD BEHLEHEM PIKE & WALL DRIVE SOUTH BETHLEHEM PIKE & WALL DRIVE SOUTH BETHLEHEM PIKE & HORSHAM ROAD JOEKALB PIKE WELSH ROAD & LOWER STATE ROAD BEHLEHEM PIKE & WALL DRIVE SOUTH BETHLEHEM PIKE & WALL DRIVE SOUTH	1618 0429 3004 33067 1036 11984 11984 11984 11985 11987 2705 2702 2704 1618 0210 1618 0210 1618 0210 1618 1985 1985 1985 1985	15 (LEAD) 15 (LEAD) 15 (LEAD) 15 (LEAD) 15 (LEAD) 15 (LEAD)	75 51 45 49 41 66 51 51 52 88 77 74 41 58	15 (LEAD) 14 (LEAD) 17 (LEAD) 3 3 14 (LEAD)	25 25 27 22 15 (SPLIT) 15 (SPLIT) 15 (SPLIT) 26 39 43 33 (SPLIT) 28 49 49 49 45 45 45 45 47 47 47 47 48 49 49 49 49 49 49 49 40 40 40 40 40 40 40 40 40 40 40 40 40	15 (LEAD) 13 (LEAD) 15 (LEAD) 25 (LEAD) 5 (LEAD) 15 (LEAD) 15 (LEAD)	75 51 68 34 41 66 51 59 41 65 65 65 65 65 65 65 65 65 65 65 65 65	15 (LEAD) 19 (LAG) 18 (LEAD) 7 14 (LEAD)	25 22 28 (SPUT) 28 29 20 50 50 22 (SPUT) 32 28 49 45 45 32 (SPUT) 33 (SPUT) 35 (SPUT) 37 (SPUT) 37 (SPUT) 37 (SPUT) 38 38 45 38		100 90 90 90 90 90 90 90 120 120 120 120 120 120 120 120 120 12	77 22 80 78 78 79 83 0 79 6 105 FREE 74 52 Offset* 19 83	Remorks
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3 4 5 6 6 7 8 8 9 10 11 12 13 14 15 15 15 15 15 15 15	BETHLEHEM PIKE & HARTMAN ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & CARPEN GOLF BLVD BETHLEHEM PIKE & DEKALB PIKE FUPPER STATE ROAD BETHLEHEM PIKE & MALL DRIVE SOUTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MORTH WALSE ROAD BETHLEHEM PIKE & HORSHAM ROAD /DEKALB PIKE WELSH ROAD & COWER STATE ROAD BETHLEHEM PIKE & WITCHHOOD DRIVE STUMP ROAD & MONITOMERY GLEN DRIVE STUMP ROAD AND WITCHHOOD DRIVE BETHLEHEM PIKE & WITCHHOOD DRIVE BETHLEHEM PIKE & WITCHHOOD DRIVE BETHLEHEM PIKE & BENGLISH VILLAGE BETHLEHEM PIKE & STUMP ROAD BETHLEHEM PIKE & MALL DRIVE SOUTH BETHLEHEM PIKE & MONIT SOLF BLVD BETHLEHEM PIKE & MALL DRIVE NORTH BETHLEHEM PIKE & MALL DRIVE SOUTH BETHLEHEM PIKE & WALL DRIVE SOUTH BETHLEHEM PI	1618 0429 3004 33067 1055 11984 11984 11984 11997 2040 2705 2508 2782 3944 3943 3943 3944 3943 3945 11985 11985 11986 11986 11986 11987 11987 11987 11988 11888 11888 11888 11	15 (LEAD) 13 (LEAD) 13 (LEAD) 13 (LEAD) 14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	75 51 45 49 41 66 51 51 52 88 77 41 58 61	15 (LEAD) 14 (LEAD) 17 (LEAD) 3 3 14 (LEAD)	25 25 25 26 27 28 39 24 33 33 (SPUT) 32 28 49 Phose 4 45 27 27 27	15 (LEAD) 13 (LEAD) 15 (LEAD) 25 (LEAD) 5 (LEAD) 15 (LEAD) 15 (LEAD)	75 51 68 34 41 66 51 39 41 41 90 65 65 65 65 65 65 65 65 65 65 65 65 65	15 (LEAD) 19 (LAG) 18 (LEAD) 7 14 (LEAD)	25 22 28 (SPUT) 28 28 29 20 20 60 22 (SPUT) 32 28 49 49 8 45 21 32 (SPUT) 32 28 32 28 32 28 32 28 32 28 32 28 32 32 32 32 32 32 32 32 32 32 32 32 32		100 90 90 90 90 90 90 90 120 120 120 120 120 120 120 120 120 12	77 22 80 78 78 79 83 0 79 6 105 FREE 74 52 Offset* 19 83	Remarks

WEEKLY TIMING PROGRAMS (NON ADAPTIVE)/BACKUP TBC TIMING PROGRAMS (ADAPTIVE ▲)

WE	EKLY	/BAC	KUP T	BC PRI	OGRAM C	HART
EVENT	DAY				PROGRAM	REMARKS
1	1-7	00:00	-		FREE	
2	1-5	07:00	VARIES		4	
3			VARIES		1 .	
4	1-5	15:00	VARIES		3	
5		20:00	_		2	
- 6	6.7	09:00	VARIES		3	
	1					

MONDAY = DAY 1

Cycle Offset*

Remarks

WE	EKLY IN	/BAC	KUP T	BC PR	OGRAM C	HART
EVENT	DAY	TIME	CYCLE		PROGRAM	REMARKS
1	1-7	00:00	_		FREE	
2	1-5	07:00	VARIES		1	
3	1-5	10:00	VARIES		2	
4	1-5	15:00	VARIES		3	
5	1-7	20:00	-		2	
6	6,7	09:00	VARIES		3*	

■ INTERSECTION 10 OPERATES UNDER PROGRAM 4.

W	EEKI	Y/BA	CKUP	PROGR	AM CHAI	रा
EVENT	DAY	TIME	CYCLE		PRDGRAM	REMARKS
1	1-7	00:00	-		FREE	8
2	1-5	07:00	120		4	COORD.
3	1-5	10:00	90		1	COORD.
4	1-5	15:00	120		3	COORD.
5	1-7	20:00	-		MAX	COORD.
5	6,7	09:00	120		3	COORD.

,	VEEK			PROGRAM CTION 15	CHART
EVENT :	DAY	TIME	CYCLE	PROGRAM	REMARKS
1	1-7	00:00	- 1	FREE	DILEMMA ZON
1 1	1-7	00:00	_	FREE	DILEM

GENERAL NOTES

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED IN WRITING BY A REPRESENTATIVE OF THE DEPARTMENT OF TRANSPORTATION.

REFER TO TRAFFIC SIGNAL PERMIT DRAWING FOR INDIVIDUAL INTERSECTION OPERATION, GEOMETRY, PHASING AND CRITICAL TIMES.

OR CONSTRUCTION AND INSPECTION THE SYSTEM PERMIT COULD ALWAYS BE ACCOMPANIED WITH TRAFFIC SIGNAL PERMIT AWARD.

TEST THE SYSTEM AT LOCAL INTERSECTION LEVEL, SUBSYSTEM LEVEL MASTER CONTROLLER LEVEL AND PERSONAL COMPUTER REMOTE DIAL UP LEVEL.

GATHER THE SYSTEM FAILURE CRITICAL ALARMS REPORT AND ARCHIVE THEM WHERE APPLICABLE.

SET UP PENNDOT DISTRICT 8-0 COMPUTER WITH THE SYSTEM DATABASE AND GRAPHICS. MODIFY THE DATABASE AND GRAPHICS FOR SYSTEMS REVISIONS.

ASSIGN LOOP DETECTORS AND PROGRAM THE CONTROLLERS TO GATHER TRAFFIC VOLUMES IN 15 MINUTE INTERVAL, WHERE APPLICABLE

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

OBTAIN POLE ATTACHMENT PERMIT FOR AERIAL FIBER OPTIC INSTALLATION.

MAINTAIN MASTER CONTROLLER COMMUNICATION SUCH AS PHONE DROPS.

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND LITLITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPUES WITH THE PROVISIONS OF THE LATEST AMENDMENT TO ACT 121 (2008), PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES.

WHEN LIQUID FUELS MONEY IS USED, SIGNAL INSTALLATION MUST CONFORM TO FORM 408 AND A COPY OF THE PROPOSED SPECIFICATIONS MUST BE SUBMITTED TO THE DISTRICT TRAFFIC UNIT FOR REVIEW PRIOR TO BIDDING.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATION.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH IRAFFIC SIGNAL STANDARDS TO-8800 SERIES.

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: MONTGOMERY
MUNICIPALITY: MONTGOMERY/HORSHAM/L GWYNEDD TWPS
INTERSECTION: BETHLEHEM PIKE (S.R. 0309)
CORRIDOR

REVIEWED:

JTILITIES.

LAWRENCE J. GREGAN 10/1/18

INDEPENDENT OFFICIAL DATE

PERCHANGED IN THE PROPERTY OF THE PROPE

KEVIN CONAHAN

LOUIS R. BELMONTE

2/2/06 DATE 2/2/06

NO.	MENERON	SES / REVIL	DA.	TΕ	REVAL	DATE	RECOM.	DATE
1	REVISE THINGS	TPD		П	182	11/21/07	URS	1/25/0
2	RIV LANE COMPLE & REMOVE SEE STREET	120	П		DLA	11/4/10	ABP	11/10/11
3	SR DZDZ-71T AS-BUILT	PAI	4/30	ŅΣ	마	9/22/14	777	9/29/13
4	REVISE INTERSECTION AT PROCESSE 1 TIMING	KPL	11/12	/16	DLA	11/30/15	ABP	12/07/16
5	ADD INTERSECTION \$15	No.	1		KPL	10/24/17	DLA	10/25/17
6	ADD INTERSECTIONS 15 & 17, REVISE TRANSS/CEDIAETRY AT INTERSECTION 4	TPO	05/2	1/13	KPL	10/4/18	DLA	10/9/16
7	AS-BUILT	IPD	3/10	720	KPL		DLA	
В								
Г	SYSTEM PERMIT # I-0011			Г	SHE	ET 3	OF 3	,

Notes:

CYCLE/SPLIT/OFFSET

Program 1

Intersections
WELSH ROAD & BETHLEHEM PIKE
BETHLEHEM PIKE & ENGLISH VILLAGE
BETHLEHEM PIKE & HARTMAN ROAD

- ALL SPLIT TIMES INCLUDE YELLOW AND RED TIMES FOR A GIVEN PHASE.

- REFER TO SIGNAL PERMIT PLAN FOR MAX 1, MAX 2 AND CLEARANCE AND PED TIMES.

++ REFER TO SIGNAL PERMIT PLAN FOR MAX 1 AND MAX 2 OPERATION TIMES.

A BACKUP COORDINATION. ACTUAL COORDINATION TIMINGS TO BE SELECTED BY TRAFFIC ADAPTIVE SYSTEM.



Montgomeryville, PA Rt 309/Stump Rd Tuesday, May 24, 2016 Location: 40.2251072786708, -75.2339512109757

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995

Count Name: Rt. 309/Stump Rd Tues Site Code: Start Date: 05/24/2016 Page No: 1

Turning Movement Data

	Turning Movement Data																												
	ĺ			Rt. 309						s	tump F	₹d			ļ		ı	Rt. 30	9					St	tump F	₹d			l
Chart			So	uthbol	und					W	estbou	nd					No	rthbou	ınd					Εa	stbou	nd			l
Start Time	Righ t	Righ t on Red	Thru	Left	Ų- Turn	Ped s	App. Tota	Righ t	Righ t on Red	Thru	Left	다- Turn	Ped s	App. Tota	Righ t	Righ t on Red	Thru	Left	U- Tum	Ped s	App. Tota I	Righ t	Righ t on Red	Thru	Left	U- Turn	Ped s	App. Tota I	Int. Tota I
7:00 AM	1	0	454	0	0	0	455	3	0	38	123	0	0	164	13	12	240	0	0	0	265	5	1	40	5	0	0	51	935
7:15 AM	0	0	443	0	0	0	443	3	0	49	115	0	0	167	16	14	249	0	0	0	279	12	0	40	6	0	0	58	947
7:30 AM	0	0	477	0	0	1	477	5	0	51	85	0	0	141	21	9	324	0	0	0	354	14	1	52	6	. 0	0	73	1045
7:45 AM	1	2	466	0	0	1	469	3	0	34	99	0	0	136	29	13	317	0	0	0	359	20	1	56	4	0	_1	81	1045
Hourly Total	2	2	1840	0	0	2	1844	14	0	172	422	0	0	608	79	48	1130	0	0	0	1257	51	3	188	21	0.	1	263	3972
8:00 AM	0	1	488	0	0	0	489	4	0	45	87	0	0	136	26	12	298	0	0	0	336	12	1	50	5	0	1	68	1029
8:15 AM	1	0	397	0	0	0	398	5	0	41	86	0	0	132	23	9	354	0	0	0	386	10	0	56	4	0	0	70	986
8:30 AM	3	0	370	0	0	_0	373	4	0	53	101	0	0	158	31	5	294	0	0	0	330	12	0	61	4	0	0	77	938
8:45 AM	0	1	349	0	0	1	350	5	0	38	86	0	0	129	31	12	282	0	0	0	325	4	0	48	9	0	0	61	865
Hourly Total	4	2	1604	0	0	1	1610	18	0	177	360	0	0	555	111	38	1228	0	0	0	1377	38	1_	215	22	0	1	276	3818
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***		-	-		-	-	-		-	-	-		-	-	-	-					-	-	-	-	-	-	4	-	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	5	0	311	0	0	0	316	17	0	58	80	0	0	155	41	15	478	0	0	0	534	9	1	50	22	0	11	82	1087
4:15 PM	3	0	320	0	0	0	323	13	0	65	54	0	0	132	51	18	410	0	0	0	479	9	1	65	10	0	0	85	1019
4:30 PM	8	0	294	0	0	0	302	16	1	87	69	0	0	173	59	14	397	0	0	0	470	14	0	60	9	0	0	83	1028
4:45 PM	2	0_	366	0	0	0	368	14	1	35	53	0	0	103	63	21	479	0	0	0	563	8	1	58	10	0	0	77	1111
Hourly Total	18	0	1291	0	0	0	1309	60	2	245	256	0	_0_	563	214	68	1764	0	0	0	2046	40	3	233	51	0	1	327	4245
5:00 PM	3	0	363	0	0	0	366	20	0	78	87	0	0	185	47	13	436	0	0	0	496	12	0	56	12	0	0	80	1127
5:15 PM	5	0	344	0	0	0	349	10	_1_	70	76	0	0	157	58	16	427	0	0	0	501	6	1	66	10	0	0	83	1090
5:30 PM	1	1	350	0	0	0	352	14	0	61	60	0	0	135	51	27	457	0	0	0	535	9	0	50	10	0	0	69	1091
5:45 PM	2	1	275	0	0	0	278	7	0	50	41	0_	0	98	67	12	399	0	0	0	478	13	0	65	10	0	0	88	942
Hourly Total	11	2	1332	0	0	0	1345	51	1	259	264	0	0	575	223	68	1719	0	0 .	0	2010	40	1	237	42	0	0	320	4250
6:00 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	_1_	0	0	0	_1_	_ 0	0	0	0	0	0	0	2
Grand Total	35	6	6068	0	0	3	6109	143	3	853	1302	0	0	2301	627	222	5842	0	0	0	6691	169	8	873	136	0	3	1186	16287
Approach %	0.6	0.1	99.3	0.0	0.0	-	-	6.2	0.1	37.1	56.6	0.0	4	-	9.4	3.3	87.3	0.0	0.0	•	-	14.2	0.7	73.6	11.5	0.0		-	-
Total %	0.2	0.0	37.3	0.0	0.0	-	37.5	0.9	0.0	5.2	8.0	0.0		14.1	3.8	1,4	35.9	0.0	0.0	,	41.1	1.0	0.0	5.4	0.8	0.0		7.3	<u></u> _
Lights	32	6	5816	0	0	-	5854	137	_3_	830	1258	0		2228	615	219	5620	0	0		6454	159	8	856	128	0		1151	15687
% Lights	91.4	100.0	95.8		-	•	95.8	95.8	100.0	97.3	96.6			96.8	98.1	98.6	96.2				96.5	94.1	100,0	98.1	94.1	•		97.0	96.3
Other Vehicles	3	0	252	0	0	-	255	6	0	23	44	0	•	73	12	3	222	0	0	•	237	10	0	17	8	0	-	35	600
% Other Vehicles	8.6	0.0	4.2	-	-	-	4.2	4.2	0.0	2.7	3.4	-	-	3.2	1.9	1.4	3.8	-	-		3.5	5.9	0.0	1.9	5.9	-		3.0	3.7
Bicycles on Crosswalk	-	•	-	-	-	0	-	-	-	-	-	-	0	•	-	-	-	-	-	0	-	-	-	-	-	-	0	-	_
% Bicycles on Crosswalk	-	-	-	•	•	0.0	-	-	•	-	-	-		-	_	-	-	-	-			-	_	-	-	-	0.0	-	-
Pedestrian s	-	-	-	-	-	3	-	-	-	-	-	-	0	-		-	-		_	0	-		•	-	-		3	-	-
% Pedestrian s	•	-	•	-		0000	-	•	•	•		-			-		-	-	•	-	•			•		-	100.0	-	-



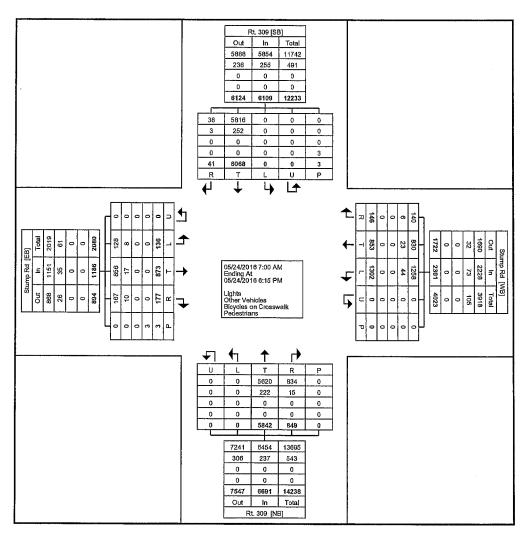
Montgomeryville, PA Rt 309/Stump Rd Tuesday, May 24, 2016 Location: 40.2251072786708, -75.2339512109757

www.TSTData.com 184 Baker Rd

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995

Count Name: Rt. 309/Stump Rd

Tues Site Code: Start Date: 05/24/2016 Page No: 2



Turning Movement Data Plot



Montgomeryville, PA Rt 309/Stump Rd Tuesday, May 24, 2016 Location: 40.2251072786708, -75.2339512109757

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995

Count Name: Rt. 309/Stump Rd Tues Site Code: Start Date: 05/24/2016 Page No: 3

Turning Movement Peak Hour Data (7:30 AM)

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			- 1	Rt. 30	9					S	tump F	₹d						Rt. 309)					S	tump F	₹d			ĺ
			So	uthbo	und					W	estbou	ind					No	orthbou	ınd					Ea	stbou	nd			
Start Time	Righ t	Righ t on Red	Thru	Left	U- Tum	Ped s	App. Tota	Righ t	Righ t on Red	Thru	Left	U- Turn	Ped s	App. Tota	Righ t	Righ t on Red	Thru		11	Ped s	App. Tota	Righ t	Righ t on Red			U- Tum	Ped s	App. Tota	Int. Tota
7:30 AM	0	0	477	0	0	1	477	5	0	51	85	0	0	141	21	9	324	0	0	0	354	14	1	52	6	0	0	73	1045
7:45 AM	1	2	466	0	0	1	469	3	0	34	99	0	0	136	29	13	317	0	0	0	359	20	1	56	4	0	1	81	1045
8:00 AM	0	1	488	0	0	0	489	4	0	45	87	0	0	136	26	12	298	0	0	0	336	12	1	50	5	0	1	68	1029
8:15 AM	1	0	397	0	0	0	398	5	0	41	86	0	0	132	23	9	354	0	0	0	386	10	0	56	4	0	0	70	986
Total	2	3	1828	0	0	2	1833	17	0	171	357	0	0	545	99	43	1293	0	0	0	1435	56	3	214	19	0	2		4105
Approach %	0.1	0.2	99.7	0.0	0.0	•	-	3,1	0.0	31.4	65.5	0.0		•	6.9	3.0	90.1	0.0	0.0	-	-	19.2	1.0	73.3	6.5	0.0		•	-
Total %	0.0	0.1	44.5	0.0	0.0	-	44.7	0.4	0.0	4.2	8.7	0.0	-	13.3	2.4	1.0	31.5	0.0	0.0	-	35.0	1.4	0.1	5.2	0.5	0.0	-	7.1	-
PHF	0.50 0	0.375	0.936	0.000	0.000		0.937	0.850	0.000	0,838	0.902	0.000		0.966	0,853		0.913		0,000		0.929	0.700	0.750						0,982
Lights	2	3	1740	0	0	-	1745	15	0	162	346	0	~	523	97	43	1231	0	0	-	1371	48	3	209	15	0	-	275	3914
% Lights	100. 0	100.0	95.2		-	-	95.2	88.2	-	94.7	96.9	-	-	96.0	98.0	100.0	95.2	-		-	95.5	85.7	100.0	97.7	78.9	-	-	94.2	95.3
Other Vehicles	0	0	88	0	0	-	88	2	0	9	11	0		22	2	0	62	0	0		64	8	0	5	4	0	-	17	191
% Other Vehicles	0.0	0.0	4.8	-		-	4.8	11.8	-	5.3	3.1	-	-	4.0	2.0	0.0	4.8	-	-		4.5	14.3	0.0	2.3	21.1	-	-	5.8	4.7
Bicycles on Crosswalk	-	-	-		-	0	-	-	-	-		-	0	-	-	-	-	-		0	-	-	_	-	_	-	0	-	
% Bicycles on Crosswalk	-	-	-	•	-	0.0	-	-	-	-	•	-		-	-	-	-	-	•	-	-	,	-	-	-	-	0.0	-	
Pedestrian s	-	-	-		-	2	-	-	-	-	-	-	0	-	-		-			0	-	-	-	-	-	-	2	-	-
% Pedestrian s	-	-	-	-	-	100.3	-	-	-	-	-	-		-	•	-	_	•	-	-	-	-	-	-	-		100.0	-	-

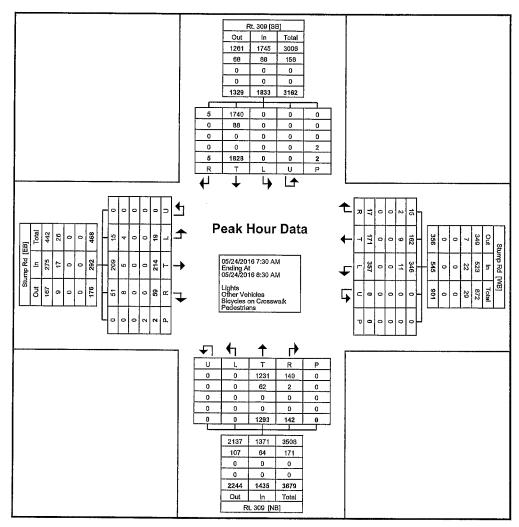


Montgomeryville, PA Rt 309/Stump Rd Tuesday, May 24, 2016 Location: 40.2251072786708, -75.2339512109757

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995

Count Name: Rt. 309/Stump Rd

Tues Site Code: Start Date: 05/24/2016 Page No: 4



Turning Movement Peak Hour Data Plot (7:30 AM)



Montgomeryville, PA Rt 309/Stump Rd Tuesday, May 24, 2016 Location: 40.2251072786708, -75.2339512109757

Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995

Count Name: Rt. 309/Stump Rd Tues Site Code: Start Date: 05/24/2016 Page No: 5

Turning Movement Peak Hour Data (4:45 PM)

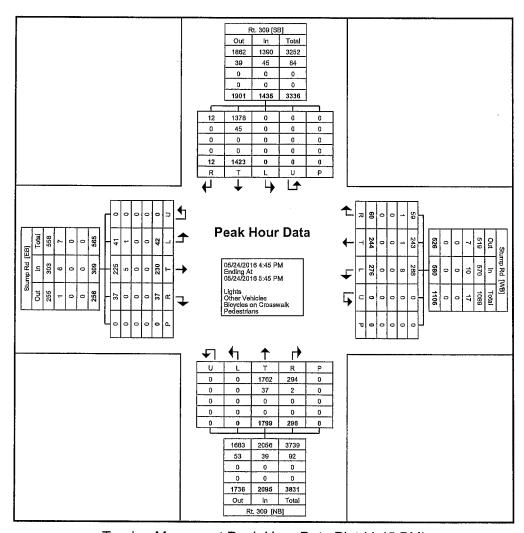
	l			.	_			1	.5						i	٠		•		•	٠,٠٠٠								ı
				Rt. 301							tump F							Rt. 309						S	tump F	₹d			
01-4	Ì		So	uthbo	und					W	estbou	ınd					No	orthbou	ınd					Ea	astbou	nd			
Start Time	Righ t	Righ t on Red	Thru	Left	U- Tum	Ped s	App. Tota I	Righ t	Righ t on Red	Thru	Left	U- Turn	Ped s	App. Tota I	Righ t	Righ t on Red	Thru	Left	U- Turn	Ped s	App. Tota	Righ t	Righ t on Red	Thru	Left	U- Turn	Ped s	App. Tota	Int. Tota
4:45 PM	2	0	366	0	0	0	368	14	1	35	53	0	0	103	63	21	479	0	0	0	563	8	1	58	10	0	0	77	1111
5:00 PM /	3	0	363	0	0	0	366	20	0	78	87	0	0	185	47	13	436	0	0	0	496	12	0	56	12	0	0	80	1127
5:15 PM	5	0	344	0	0	0	349	10	1	70	76	0	0	157	58	16	427	0	0	0	501	6	1	66	10	0	0	83	1090
5:30 PM	1	1	350	0	0	0	352	14	0	61	60	0	0	135	51	27	457	0	0	0	535	9	0	50	10	0	0	69	1091
Total	11	1	1423	0	0	0	1435	58	2	244	276	0	0	580	219	77	1799	0	0	0	2095	35	2	230	42	0	0	309	4419
Approach %	0.8	0.1	99.2	0.0	0.0	-	,	10.0	0.3	42.1	47.6	0.0		-	10.5	3.7	85.9	0.0	0.0		-	11.3	0.6	74.4	13.6	0.0	_	-	-
Total %	0.2	0.0	32.2	0.0	0.0	-	32.5	1.3	0.0	5.5	6.2	0.0	-	13,1	5.0	1.7	40.7	0.0	0.0	-	47.4	0.8	0.0	5.2	1.0	0.0	-	7.0	-
PHF	0.55 0	0.250	0,972	0.000	0.000		0.975	0.725	0.500	0.782	0,793	0.000		0.784	0.869	0.713	0.939	0.000	0.000	-	0,930	0.729	0,500	0,871	0,875	0,000	-	0.931	0.980
Lights	11	1	1378	0	0	•	1390	57	2	243	268	0	-	570	218	76	1762	0	0	-	2056	35	2	225	41	0	.,	303	4319
% Lights	100. 0	100.0	96.8	-	-	-	96.9	98.3	100.0	99.6	97.1	-	-	98.3	99.5	98.7	97.9	-	-		98.1	100.0	100.0	97.8	97.6	-		98.1	97.7
Other Vehicles	0	0	45	0	0	-	45	1	0	1	8	0		10	1	1	37	0	0		39	0	0	5	1	0	-	6	100
% Other Vehicles	0.0	0.0	3.2	-	-	•	3.1	1.7	0.0	0.4	2,9	-		1.7	0.5	1.3	2.1	-			1.9	0.0	0.0	2.2	2.4	-	-	1.9	2.3
Bicycles on Crosswalk	-	-	-	-	-	0	-	-		-	-	-	0	-	-	-		-	-	0		-	-	-	-	-	0		-
% Bicycles on Crosswalk	•	-	-	-	-	-	-	-		-		-		-	-	-	-	-	-	~	•	•	-	-	-	-	-	-	-
Pedestrian s	-	-	-	-	-	0	-		-	-		-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0		
% Pedestrian s	•	•		-	-		-		-	-	-	-	•	-	•	•	-	-	-	,		-	-			•	-	-	-



Montgomeryville, PA Rt 309/Stump Rd Tuesday, May 24, 2016 Location: 40.2251072786708, -75.2339512109757

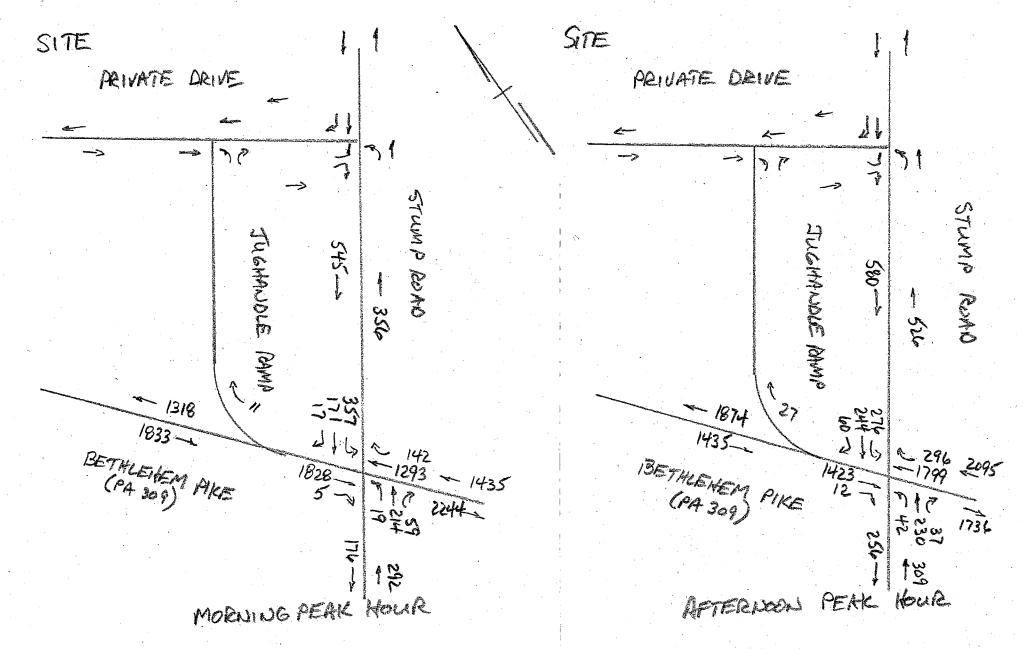
Coatesville, Pennsylvania, United States 19320 610-466-1469 Serving Transportation Professionals Since 1995

Count Name: Rt. 309/Stump Rd Tues Site Code: Start Date: 05/24/2016 Page No: 6



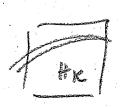
Turning Movement Peak Hour Data Plot (4:45 PM)

A		2	22		14 0) "	>	objection of the control of the cont	1000	50°	Nev	- Connection	No	Sand State			AND THE REAL PROPERTY.	Backgrown	5	um, NG	12	is. c	\ <		2ai	· p		
		\		2	Å		*		101	CONTRACTOR AND	And the second s	<u>y 5</u>		1	A Land Control of the		4	8			TOTAL		e ngana kis, un nganjunkan saliku		- Copy payer And Consider	- 64	Bodé n wasaniga k ka ang ka	-
715-730									0	Webself Wild Schmid	.,							eru esurjenteni (i- un espellisi	0	ne pripare en en	2	beriefum.		SE	A WA	1		
730-745					Nesterial Applicate		e de la companya de l	- The second section is a second seco	2		Cartanoparo (a Serra Africa)	jarijani jari jari jari jari		Total Management Co. 14	TO SECURE A	elik mereki enerke sepremenyi 14 km² takir ili makina ang	and the state of t	dir hammer (inches), passe ann die "wennes gene	2	ng ng nagaragan da pro	4	Middenius ,	-					
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EXISTING (2016) PEAK HOUR TRAFFIE

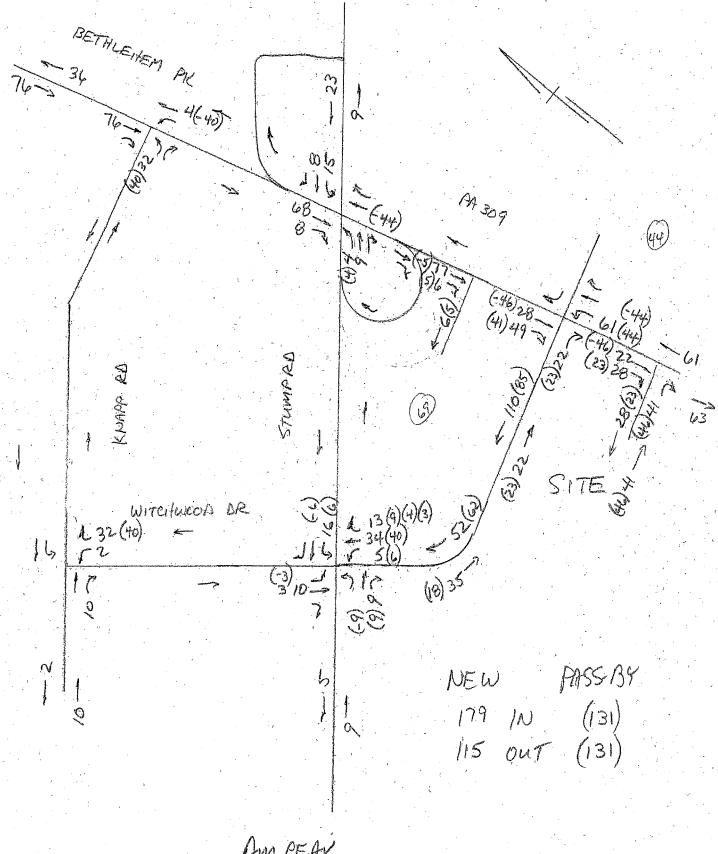
MONTGOMERY TOUNISHED, A





EXISTING (2020) PEAK HOUR TRAFFIC

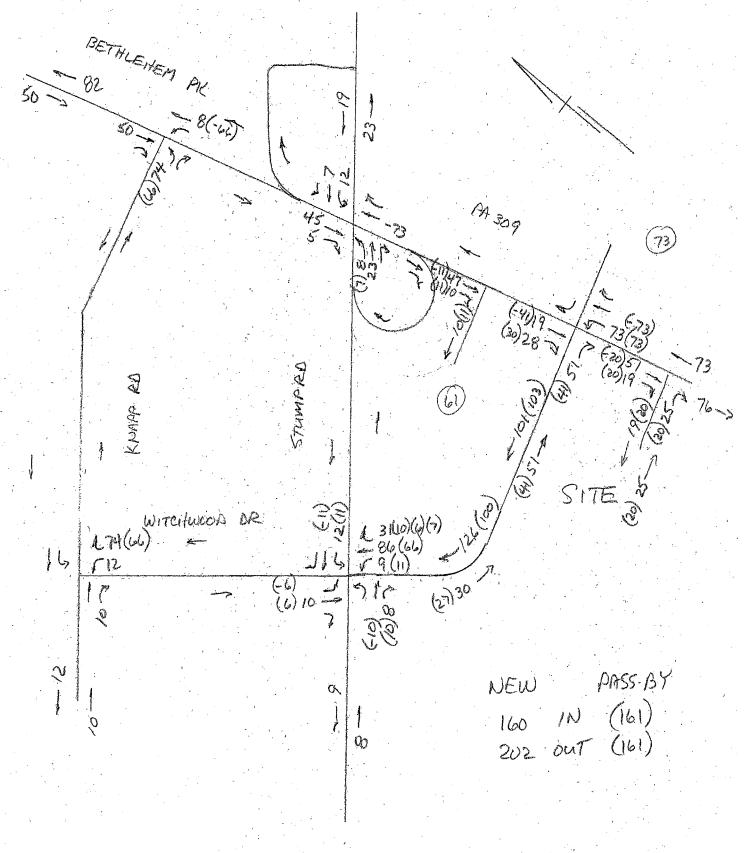




AM PEAK

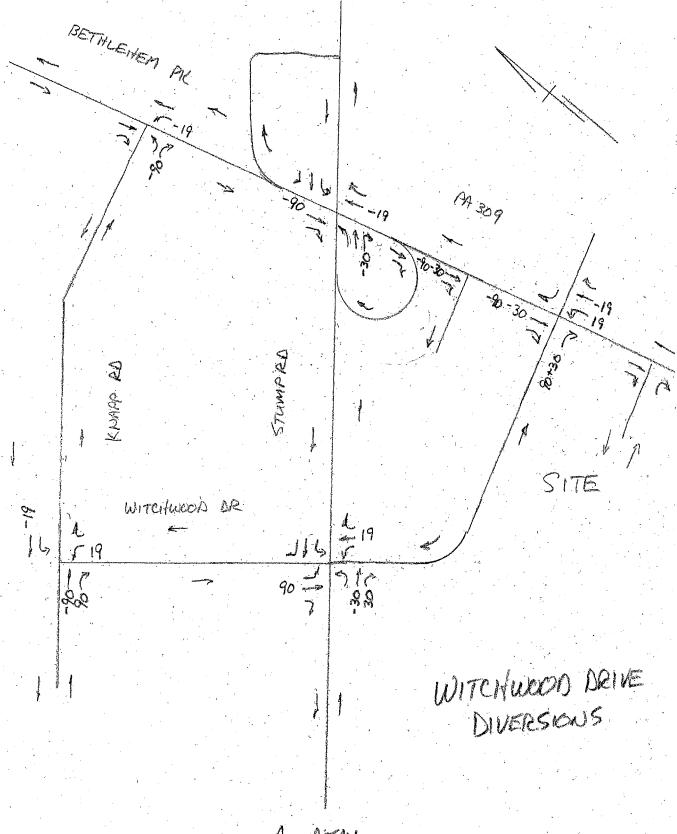
TERRA VISTA, LLC COMMERCIAL DEVELOPMENT MONTGOMERY TOWNSHIP, AT





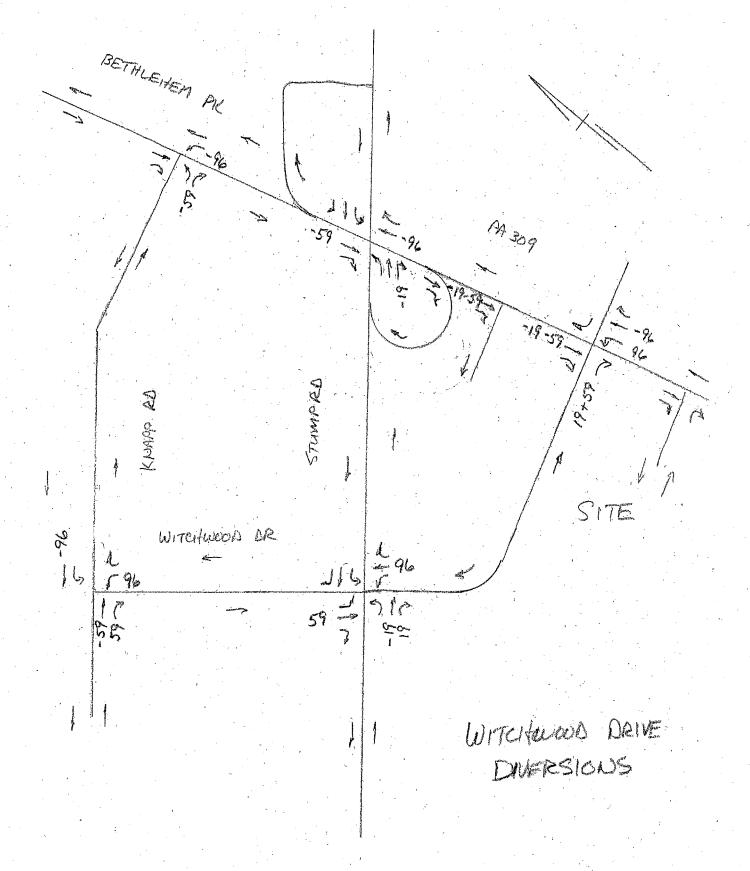
PM FEAK





AM PEAK





MALK



	LANE UTILIZATION 1	FACTORS
	AM	
SB 309	1878 (-) 1711 × 1525 = 898.275	1878 = 0,697
@ STUMP	1010	(898,275)3
	et e	
NB 309	1419 3 -3 1272 x,525= 667,8	1419
O STUMP	5 150	(467.8)3
	Pur	
	PM.	
SB 309	1472 3 -> 1310 x,525-687,75	(687.75) 3 = 0,713
@ STUMP	2 3 162	(687,75) 3
NB 309	1994 3 -3 1683 × ,525= 883,575	1994 - 0,752
O STUMP	(311	(883,575) 3
· · · · · · · · · · · · · · · · · · ·		

	ᄼ	-	>	*	-	•	1	†	/	>	↓	1
Movement	EBL	EBT	∵EBR*	- WBL	WBTS	: WBR -	- NBL	NBT	NBR	SBL	SBI	SBR
Lane Configurations		ተተ _ጉ			ተተ _ጉ		Tr j	þ		الرار	þ	***************
Traffic Volume (veh/h)	0	1865	13	0	1272	147	28	230	31	384	185	18
Future Volume (veh/h)	0	1865	13	0	1272	147	28	230	31	384	185	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1,00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1724	1794	0	1724	1780	1650	1921	1750	1618	1590	1492
Adj Flow Rate, veh/h	0	1903	13	0	1298	150	29	235	32	392	189	18
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	5	0	0	5	1	21	2	14	3	5	12
Cap, veh/h	0	2416	16	0	2161	250	260	262	36	422	388	37
Arrive On Green	0.00	0.59	0.59	0.00	0.59	0.59	0.03	0.16	0.16	0.14	0.27	0.27
Sat Flow, veh/h	0	4622	28	0	4172	424	1572	1655	225	2990	1430	136
Grp Volume(v), veh/h	0	1119	797	0	865	583	29	0	267	392	0	207
Grp Sat Flow(s), veh/h/ln	Ö	1207	1719	Ŏ	1224	1648	1572	0	1880	1495	0	1566
Q Serve(g_s), s	0.0	60.4	60.5	0.0	38.3	38.3	2.6	0.0	23.7	22.0	0.0	18.9
Cycle Q Clear(g_c), s	0.0	60.4	60.5	0.0	38.3	38.3	2.6	0.0	23.7	22.0	0.0	18.9
Prop In Lane	0.00		0.02	0.00	00.0	0.26	1.00	7.7	0.12	1.00	1.00	0.09
Lane Grp Cap(c), veh/h	0.00	1420	1012	0	1441	970	260	0	298	422	0	425
V/C Ratio(X)	0.00	0.79	0.79	0.00	0.60	0.60	0.11	0.00	0.90	0.93	0.00	0.49
Avail Cap(c_a), veh/h	0.00	1420	1012	0.00	1441	970	290	0.00	332	422	0.00	425
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1,00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.00	26.8	26.8	0.00	22.3	22.3	57.3	0.0	70.1	72.2	0.0	52.0
Incr Delay (d2), s/veh	0.0	4.5	6.2	0.0	1.9	2.8	0.2	0.0	23.8	26.8	0.0	02.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	24.3	33.6	0.0	16.4	21.4	1.9	0.0	19.4	15.2	0.0	12.1
%ile BackOfQ(95%),veh/ln	0.0	24.3	33,0	0.0	10.4	21.4	1.5	0.0	13.4	10,4	0,0	12.1
Unsig. Movement Delay, s/veh	ΛΛ.	94.9	22.0	Λ.Λ	04.4	25.0	E7 /	0.0	94.0	99.0	0.0	52.8
LnGrp Delay(d),s/veh	0.0	31.3	33.0	0,0	24.1	25.0	57.4	40 5 W. C. P. P. C.		99.0 F		52.0 D
LnGrp LOS	A	C	С	<u> </u>	<u>C</u>	<u> </u>	E	A	F	<u>Г</u>	A	<u>ט</u>
Approach Vol, veh/h		1916			1448			296	ya Miliki		599	
Approach Delay, s/veh		32.0	w	na ao amin	24.5	ned vite kud alem	engin seri	90.4	ra merci.	Number of States	83.0	1644
Approach LOS		С			С	Atribu.					in die F.	
Timer - Assigned Phs	11.	. 2	. 3	4		. 6	7	8,		÷.		
Phs Duration (G+Y+Rc), s		107.0	10.8	52.2		107.0	30.0	33.0				
Change Period (Y+Rc), s		8.0	7.0	7.0		8.0	7.0	7.0				
Max Green Setting (Gmax), s		96.0	7.0	45.0		96.0	23.0	29.0				
Max Q Clear Time (g_c+l1), s		62.9	5.1	20.9		40.8	24.5	25.7				
Green Ext Time (p_c), s		22.9	0.0	0.6		20.3	0.0	0.3				
Intersection Summary					¥ 2	***					1.5	
HCM 6th Ctrl Delay			40.7									
HCM 6th LOS			D									
Notes:								14.				* 50

User approved pedestrian interval to be less than phase max green.

	≯	-	*	•	₩	•	4	†	1	1	↓	4
Lane Group	· · EBL.	EBT	EBR	WBL :	WBT.	-WBR	NBL	NBT '	NBR*	SBL	SBT	SBR
Lane Configurations		<u>ተ</u> ተጉ			<u>ተ</u> ተጉ		ሻ	1}→		14.54	1→	
Traffic Volume (vph)	0	1865	13	0	1272	147	28	230	31	384	185	18
Future Volume (vph)	0	1865	13	0	1272	147	28	230	31	384	185	18
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	12	12	12	11	12	12	11	12	12
Grade (%)		1%			1%			-4%			5%	
Storage Length (ft)	0		400	0		400	220		0	320		0
Storage Lanes	0		0	0		1	1		0	2		Q
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1,00	*0.70	0.91	1.00	*0.71	0.91	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor												
Fit (1997)		0.999			0.984			0.982			0.987	
FIt Protected							0.950			0.950		
Satd. Flow (prot)	0	3580	0	0	3589	0	1393	1743	0	3036	1640	0
Flt Permitted							0.628			0.950		
Satd. Flow (perm)	0	3580	0	0	3589	0	921	1743	0	3036	1640	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)		1			14							
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		275			1000			1000			770	
Travel Time (s)		4.2			15.2			19.5			15.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)										1 01 1 1 1 1 1 1		and the same of the same of
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	5%	0%	0%	5%	1%	21%	2%	14%	3%	5%	12%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%	nese se mere ligge, agains	. Viter v drugeri	0%	eres de las las se	o, jugangera	0%	in the second second		0%	oran kawanasa
Adj. Flow (vph)	0	1903	13	0	1298	150	29	235	32	392	189	18
Shared Lane Traffic (%)	tive to the state	oto iki vite twiateli	eri i nometali im	ria organization	en insuns aktori		comment objects is	. 19 19k <u>8 (191</u> 17)	ggjar saka k <u>u</u> an	11791 to 2520.27	1 1 1 1 1 1 1 2 2 2 2 2 1 1 1 1 1 1 1 1	n order bergg
Lane Group Flow (vph)	0	1916	0	0	1448	0	29	267	0	392	207	0
Turn Type	rightering of the second	NA	um sive in A	n and substitution for	NA	er magni i mana	pm+pt	NA	ersanska er er er er er	Prot	NA	erining arama
Protected Phases		2	i de Bai		6		_ 3	8		7	4	
Permitted Phases		800 1835 C 18 07 S	900 C 40 1950 1	martinese a	•	- 987N9101	8	in the second	ranga ngaga			16899201
Detector Phase		2			6		3	δ			4	
Switch Phase	entra de la companya			nie w Engrand		tracer, ngawa	and poster and			33 - 2 8 3		0.60000000
Minimum Initial (s)		15.0		Alfania'i	15.0	Maria.	5.0	5.0	Niga St	5.0	5.0	
Minimum Split (s)	y sometiment of a	23.0	unta kan	NUTERATY'S	23.0		12.0	12.0	Agambabas	12.0	12.0	in establi
Total Split (s)		104.0			104.0		14.0	36.0		30.0	52.0	
Total Split (%)		61.2%	negroegeg	emeneranya.	61.2%	1.40.49(190 <u>9)</u>	8.2%	21.2%	15855197 4 40	17.6% 23.0	30.6%	Description
Maximum Green (s)		96.0			96.0	347650.7	7.0	29.0		and the first the second of	45.0	
Yellow Time (s)	n da ambada.	5.0		or y recor.	5.0	rijate tyaliji	4.0	4.0		4.0	4.0	946,8351
All-Red Time (s)	iadh kaiti	3.0		Balana)	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		-1.0	475 48 667		-1.0		-1.0	-1.0		-1.0 6.0	-1.0 6.0	
Total Lost Time (s)		7.0	las tedad.	Han Tal	7.0		6.0	6.0		and the second second second		
Lead/Lag		7574 J. 18172					Lead	Lag		Lead Yes	Lag Yes	ekerikile i
Lead-Lag Optimize?	4年19月前	En		Notes de la companya	E ^		Yes	Yes		3.0	3.0	Estatoff)
Vehicle Extension (s)		5.0			5.0		3.0	3.0		ა.∪	ა.Մ	

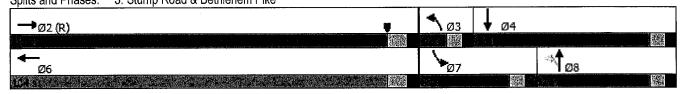
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Lane:Group	: Yebla Jebi *: 'Ebra.	WBL - WBT - WBR	NBL NBTA*	NBR SBL SBT SBR
Minimum Gap (s)	2.7	2.7	3.0 3.0	3.0 3.0
Time Before Reduce (s)	35.0	35.0	0.0 0.0	0.0 0.0
Time To Reduce (s)	15.0	15.0	0.0 0.0	0.0 0.0
Recall Mode	C-Max	Max	None None	None None
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				
Act Effct Green (s)	98.2	98.2	36.6 28.9	23.9 47.7
Actuated g/C Ratio	0.58	0.58	0.22 0.17	0.14 0.28
v/c Ratio	0.93	0.70	0.13 0.90	0.92 0.45
Control Delay	41.8	27.6	39.5 100.6	99.0 54.8
Queue Delay	0.0	0.0	0.0 0.0	0.0 0.0
Total Delay	41.8	27.6	39.5 100.6	99.0 54.8
LOS	D	C	D F	F D
Approach Delay	41.8	27.6	94.6	83.7
Approach LOS	D	C	F	F
Queue Length 50th (ft)	912	524	21 293	225 194
Queue Length 95th (ft)	1028	598	48 #457	#325 282
Internal Link Dist (ft)	195	920	920	690
Turn Bay Length (ft)			220	320
Base Capacity (vph)	2068	2078	222 307	428 459
Starvation Cap Reductn	0	0	0 0	0 0
Spillback Cap Reductn		0	0 0	0 0
Storage Cap Reductn	0	0	0 0	0 0
Reduced v/c Ratio	0.93	0.70	0.13 0.87	0.92 0.45

III(B) Section Summary		s. 1991 1971 1972 1974 1974 1974 1974 1974 1974 1974 1974	Mary Mary	Page 2 construction and the construction
Area Type: Other				
Cycle Length: 170				
Actuated Cycle Length: 170				
Offset: 20 (12%), Referenced to phase 2:EBT, Star	t of Yellow			
Natural Cycle: 100				
Control Type: Actuated-Coordinated				
Maximum v/c Ratio: 0.93				
Intersection Signal Delay: 46.5	Intersection	LOS: D		
Intersection Capacity Utilization 80.5%	ICU Level of	Service D		
Analysis Period (min) 15				
* User Entered Value				

Splits and Phases: 3: Stump Road & Bethlehem Pike

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.



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Movement	EBL	EBT	EBR	Wigh	WETT	WBR	NBL:	MBA	NBR	SBL	SBIE	SBR
Lane Configurations		ተተቡ			<u>ተ</u> ተጉ		*1	ĵ»		44	Þ	
Traffic Volume (veh/h)	0	1455	17	0	1688	306	58	260	19	297	259	62
Future Volume (veh/h)	0	1455	17	0	1688	306	58	260	19	297	259	62
Initial Q (Qb), veh	0	0	0	Ò	0	0	0	0	0	0	0	Q
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00	are a desir a freezione.	1.00	1.00	1,7 6 7 106	1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1,00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	and an after the	No	e in the second contracts of the	a de la companya de	No	and the second	historian a colo	No	and a provided a constant	rican rican rican di de-	No	. 015 ma - 152,000 m 1 1 2 7 9
Adj Sat Flow, veh/h/ln	0	1752	1794	0	1766	1766	1921	1921	1949	1618	1646	1646
Adj Flow Rate, veh/h	0	1485	17	0	1722	312	59	265	19	303	264	63
Peak Hour Factor	0.98	0.98	0.98	0.98	0,98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	3	0	0	2	2	2	2	0	3	1	1
Cap, veh/h	0	2525	29	0	2198	395	177	296	21	352	309	74
Arrive On Green	0.00	0.60	0.60	0.00	0.60	0.60	0.04	0.17	0.17	0.12	0.24	0.24
Sat Flow, veh/h	0	4692	48	0	4084	655	1829	1771	127	2990	1285	307
Grp Volume(v), veh/h	0	883	619	0	1249	785	59	0	284	303	0	327
Grp Sat Flow(s), veh/h/ln	0	1244	1744	Ö	1325	1648	1829	Ŏ	1898	1495	0	1591
Q Serve(g_s), s	0.0	37.1	37.1	0.0	60.1	61.3	4.5	0.0	24.9	16.9	0.0	33.4
Cycle Q Clear(g_c), s	0.0	37.1	37,1	0.0	60.1	61.3	4.5	0.0	24.9	16.9	0.0	33.4
Prop In Lane	0.00		0.03	0.00	YEN	0.40	1.00		0.07	1.00		0.19
Lane Grp Cap(c), veh/h	0	1502	1052	. 0	1599	995	177	0	317	352	0	383
V/C Ratio(X)	0.00	0.59	0.59	0.00	0.78	0.79	0.33	0.00	0.90	0.86	0.00	0.85
Avail Cap(c_a), veh/h	0.00	1502	1052	0.00	1599	995	182	0.00	380	352	0.00	431
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	20.7	20.7	0.0	25.3	25.5	55.9	0.0	69.3	73.6	0.0	61.7
Incr Delay (d2), s/veh	0.0	1.7	2.4	0.0	3.9	6.4	1.1	0.0	20.5	19.1	0.0	14.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	16.1	21.7	0.0	25.9	32.6	3.8	0.0	20.0	11.9	0.0	21.3
Unsig. Movement Delay, s/veh	0.0	10.1	(A)(()	0.0	20,0	UL.U	V. V. V.	ija ali yiy a i	20.0	Stock LIPS	0.0	
LnGrp Delay(d),s/veh	0.0	22.4	23,1	0.0	29.1	31,9	57,0	0.0	89,8	92.7	0.0	75.9
LnGrp LOS	Α.	22.7 C	20,1 C	Α.	23.1 C	0,.5 C	67,0 E	0.0 A	00.6 F	F	Α	, o.o
Approach Vol, veh/h		1502	-1-11-14-4-		2034			343			630	
· · · · · · · · · · · · · · · · · · ·		22.7		Same and Se	30.2		Military a.	84.2	AL TABLET		84.0	A Minak
Approach LOS		22.1 C	13.02.5 <u>2</u> 57		30.2 C			04.Z F	9,7 (R),8 (R)		04.U	
Approach LOS			PRESIDE									
Timer - Assigned Phs			: (j. 3)	4.		. 6	<i>i</i> >7.	- 8	w d d			
Phs Duration (G+Y+Rc), s		109.6	13.5	46.9		109.6	26.0	34.4				
Change Period (Y+Rc), s		8.0	7.0	7.0		8.0	7.0	7.0	140000000000000000000000000000000000000			present rock of the real
Max Green Setting (Gmax), s		96.0	7.0	45.0		96.0	19.0	33.0				
Max Q Clear Time (g_c+l1), s		39.6	7.0	35.4		63.3	19.4	26.9	market or second			re suo sorre e i
Green Ext Time (p_c), s		21.4	0.0	8,0		24.3	0.0	0.5				
hiersection Summary							11.0					
HCM 6th Ctrl Delay			39.3									
HCM 6th LOS	is I to Other Vice	English (State of State of Sta	D	a a salara di mengelakan berai	internal execut salvari	TO CALL DESCRIPTION	e se gestert te disch fo	and the second second second	eren er er er er er er	u tomortofoudam .	Care ne - Care (1970) Charles	o ali ana dibili a 635
		.				4	***		A STORY OF THE STORY			
Notes			10		S. (18. 19.5)					100		

User approved pedestrian interval to be less than phase max green.

	<i>></i>	-	\rightarrow	•	←	1	1	†	~	1	↓	1
Lane:Group	EBL«:	EBT	HEBR:	: WBL-	⊀WBT _€	. WBR*	: NBL	: NBT	:NBR	SBL-	SBT	SBR
Lane Configurations		ተተኈ			ተ ተጉ		ሻ	1̂∌		أيراير	þ	
Traffic Volume (vph)	0	1455	17	0	1688	306	58	260	19	297	259	62
Future Volume (vph)	0	1455	17	0	1688	306	58	260	19	297	259	62
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	12	12	12	11	12	12	11	12	12
Grade (%)		1%			1%			-4%			5%	
Storage Length (ft)	0		400	0	Andrew School Schools	400	220		0	320	Section 19 (1)	0
Storage Lanes	0		0	0		1	3/3/1		0	2		0
Taper Length (ft)	100		ali ne na espekular sed	100	elle a decidence de la cele	2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -	100		The of the Arthur San Lee	100	r a see to the war.	Travellar of softmale
Lane Util. Factor	1.00	*0.71	0,91	1.00	*0.75	0.91	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor	A PARAMETER STATE		i i isto mitae.	A CARACTER.	Limitan Tu.	ta a sagaran basa	2 1.025FF.00.	, No. 1 double de la se	 186 	(+ 1) A and 1 (44% day)		e esta il produ
Fit		0.998			0.977	75.877.E	ener vinde yn Sy'n Delector	0.990			0.971	
Flt Protected	9-24-08-17-26	" - TAPE # T - A		il e uu kaali waxaa		A-4. 9 17 1	0.950	n eer er aandere.	ualette e at it.	0.950	or favorething of	SLETEL OF CHARLES
Satd. Flow (prot)	0	3698	0	0	3860	0	1653	1784	0	3036	1687	0
Flt Permitted	in aline priinti					an an air in air in air an an air	0.415	er in Charles	1 12 THE	0.950	::1::3:7:77.740	us for ell 14 s 6 🖼
Satd. Flow (perm)	0	3698	0	0	3860	0	722	1784	0	3036	1687	0
Right Turn on Red	alaan ka Estabbili		Yes			Yes		. ""	No		and Market	No
Satd. Flow (RTOR)		900.04			26							
Link Speed (mph)	Disvir Nober No.	45	the reduction	ivan indialkii tee	45	. N. 367 (1961). . N. 367 (1961).	A. V. A. Wilson	35	ni suu Tire	de la consta	35	The seedal
Link Opeca (mph)		275			1000		gariwani Sariwani	1000	8.40.33E	305 AV	770	
Travel Time (s)	ard I blancowi.	4.2	A 3 445 4E)	Faction 305	15.2	in kashini ater	estica na natifisio	19.5	is forest to the co	-1.4 A.A.A. to	15.0	Javi i telugid
Confl. Peds. (#/hr)					10. <u>2</u> 20.20		BARRE	- 10.0 - 1349 X	F.E.			
Confl. Bikes (#/hr)					a West Salahiya Salahiya a salahiya	ali Ali ali alibi. Neme ran ta di	nduktekt. nameraken	e in SE SECT.	afin in Jinaka In na un biba	u filosofia): v svenenere	n Bibeltu Avelbite Karalanza I. Jawa	soli 2. Medi Telepambia
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	0%	0%	2%	2%	2%	2%	0%	3%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)	and the second of the second	0%			0%		or as to see at	0%	and an army regard about	TORNAS, TORNAS, CONT.	0%	911 1 09859
Adj. Flow (vph)	0	1485	17	0	1722	312	59	265	19	303	264	63
Shared Lane Traffic (%)				mental access	* * 1 * * * * * * * * * * * * * * * * *			· · · · · · · · · · · · · · · · · · ·		2 · · · · · · · · · · · · · · · · · · ·	* 0390-404-90	1545 . 10 1-14
Lane Group Flow (vph)	0	1502	0	0	2034	Ø	59	284	0	303	327	0
Turn Type		NA			NA		pm+pt	NA		Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases							8			. A construction of the construction	and the second second	The April 1
Detector Phase		2			6		3	8		7	4	
Switch Phase												
Minimum Initial (s)		15.0			15.0		5.0	5.0		5.0	5.0	
Minimum Split (s)		23.0			23.0		12.0	12.0		12.0	12.0	
Total Split (s)		104.0			104.0		14.0	40.0		26.0	52.0	
Total Split (%)		61.2%			61.2%		8.2%	23.5%		15.3%	30.6%	
Maximum Green (s)		96.0			96.0		7.0	33.0		19.0	45.0	
Yellow Time (s)		5.0			5.0		4.0	4.0		4.0	4.0	
All-Red Time (s)		3,0			3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	e i Pro-obere dadi	-1.0		The tradition to star	-1.0	eredu. Talakter	-1.0	-1.0	all as a section set	-1.0	-1.0	**************************************
Total Lost Time (s)		7.0			7.0		6.0	6.0		6.0	6.0	
Lead/Lag	Acceptation and the	d., en dine nen S	a ne taka makaina	en kartin de la Euro († 1917)	Louis Maria Maria (1945)	and the second second	Lead	Lag	grand to the second	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	T. 54
Vehicle Extension (s)	u sativitu ta feu filia	5.0	Section 19 years	eur um viterille ir tudi	5.0	sa tulist ia ili Mili	3.0	3.0	araben 1997 (1996)	3.0	3.0	tion technical and 1
. Sindle Extendion (b)		0.0			5.0		3.0	310		310	5.0	

	→	→ ✓ ←	* 1	†	× ×	ļ	4
Lane Group	ATESLO LEBIT	: EBR WBL WBT	WBR. NBL	, ANBT	NBR * SBL	- SBT	: SBR
Minimum Gap (s)	2.7	2.7	3.0	3.0	3,0	3.0	
Time Before Reduce (s)	35.0	35.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	15.0	15.0	0.0	0.0	0.0	0.0	
Recall Mode	C-Max	Max	None	None	None	None	
Walk Time (s)							
Flash Dont Walk (s)							
Pedestrian Calls (#/hr)							
Act Effct Green (s)	100.1	100.1	39.1	31.2	19.6	45.7	
Actuated g/C Ratio	0.59	0.59	0.23	0.18	0.12	the state of the s	되어를
v/c Ratio	0.69	0.89	0.28	0.87	0.86	0.72	
Control Delay	26.8	36.5	42.5	92.3	96.9	66.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	en de la
Total Delay	26.8	36.5	42.5	92.3	96.9	66.9	
LOS	С	<u>D</u>	D.	F	F	ΕΕ.	
Approach Delay	26.8	36.5		83.7		81.4	
Approach LOS	С	D	and the second of the second o	F	A CONTROL OF THE SECOND SECOND	,F	
Queue Length 50th (ft)	549	873	44	306	173	333	
Queue Length 95th (ft)	627	978	81	#444	#253	455	a consequences
Internal Link Dist (ft)	195	920		920		690	
Turn Bay Length (ft)	من میں دیادہ کی انہا میں اس	en e	220		320	sin en sees	aria mare nos
Base Capacity (vph)	2178	2284	210	356	357	461	
Starvation Cap Reductn	0		0	0	0	0	en state of the same
Spillback Cap Reductn	0	0	0	0		0	ilwa d
Storage Cap Reductn	0	0		0	O compression of the compression	0	er eg erstalem
Reduced v/c Ratio	0.69	0.89	0.28	0.80	0.85	0.71	

iliter 260	JUUII C	Mill	ildi y	
Area Ty	/pe:			Other

Cycle Length: 170

Actuated Cycle Length: 170

Offset: 22 (13%), Referenced to phase 2:EBT, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 43.1

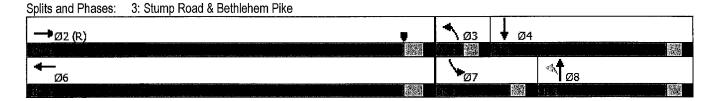
Intersection Capacity Utilization 82.1%

Intersection LOS: D ICU Level of Service E

Analysis Period (min) 15

- * User Entered Value
- # 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.



Intersection 200	9 4				79 V	en e	÷ †					Av. y	nd"			K.
Int Delay, s/veh	0.1						55050112474			es es		rs, ne				TO SERVE
Movement 3		EBR	NBL.	NBT4		· SBR										
Lane Configurations Traffic Vol, veh/h	\	2	2	4 375	∱ 585	8	8, 18, 125gF	::31 <u>0</u> :31		7415/35 C						7327
Future Vol, veh/h	0	2	2	375	585	and the second second		War Kile		In Military	wall444		Profile (S.		000000000	
Conflicting Peds, #/hr	0	Ō	Ō	0.0	000											55.3
Sign Control	Stop	Stop	Free	Free	Free	Free	** 1, #(P+)	A S. Limite S	ale sattle e a l	Andre attended 199	1 W 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	2 Carl 1970	and the second			
RT Channelized		None		None		None										
Storage Length	0		·	e Proprior State	- 	- ver e jagan	প্ৰত ক্ৰুছ ভূচ	T.700/08 N.15-W	grijekst Hriger,	ermentist m	ngganan kan	Turkes III		g mang pa	7 1 1 5 6 <i>3</i> 5	n i n
Veh in Median Storage,	# 0			Ŏ	0						1.57					
Grade, %	1 98	- - 00	-	-3 98	3 98				\$9:2055							Fe 94
Peak Hour Factor Heavy Vehicles, %	90	98 0	98 0	2	4		Alle Sale.	MLE NE			Pal se		Sa W.J. Lil	Avel 200	- 1124.4	is d
Mymt Flow	0	2	2	383	597							7.53% *				
	24 J. 76	া : ১৮৮১ জীৱ	34 44 F ****	·			ut whishter	urt met til s		* YETF.	- 1 a la Wa	nedut Steed		e tablika sa	e triAdica 640	23 A 27 A 4
Vi ioni(V)NojaW	lnor2		Major1.		Major2											
Conflicting Flow All	988	601	605	0	_	0			THE RESERVE OF THE PERSON NAMED IN	and a second			Harris Salvin Salvin Line	XXXXX EXCEPTION OF THE PARTY OF		
Stage 1	601			•												
Stage 2	387	-	-		-	-										
Critical Hdwy	7.2	6.2	4.3													
Critical Hdwy Stg 1	5.6		enement e	general ge	- 7 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	-	nam, province	rumpamumi.	* 15 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	er al la al	n anggis	n nangawaya	na Navasa.	ner grande.		n, eq.a
Critical Hdwy Stg 2	5.6		7			• • • •						Alle Mai				
Follow-up Hdwy	3 244	3.1 528	3 742	Parti š	1977-1	- 1979-981	97 GSA	7775-F90	najera.		namy			Santa de	Tat 138	1941
Pot Cap-1 Maneuver Stage 1	599	320	/4Z -				digatherist.			Repúblic		5-947.13	ka Milawa			Carl d
Stage 2	769		la. Sa sah≆				10.59				KI, ST					EVA.
Platoon blocked, %	17.27 %			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	4, 20 ° 4.4° •	i i i i i i i i i i i i i i i i i i i	A LE PROPERTY	2015 P. P. C. C.	eta 16 dia 64 di	ess of Mil	(5) (1) (4) (4)	.8 00 i 184 sa	alla shekir di siri	at Chapter Const.	Andrew Charles Sadde	a i Sangga
Mov Cap-1 Maneuver	243	528	742													
Mov Cap-2 Maneuver	243	_		-	-			yaar gaa	men of a fermion delice.		was gan	ga lengga sen	* * * * * * * * * * * * * * * * * * *	e ajong on a gert	ng kanagang	swingerung
Stage 1	597			•	-				Dine						Market William	
Stage 2	769	- Suan proti	- 145 150 - 151	1.00001 T	• 08:55 *0	· · · · · · · · · · · · · · · · · · ·	Spritting b	aran deri	nguruga.		ego ne se evenes es A como la		S 1011 P4	WERTON	13,74549	45.41 3
	ta dini	SSAP				Tan Ar	3151.1x	videlity.	Casa.		Ubath				tidakti.	urarrantenski
Approach	EB		NB		## SB	*****										
HCM Control Delay, s	11.8		0.1		0										W. A.	
HCM LOS	В	0.1 W +657 F		50, 5,5 W		7.45 BYS	PYTER UT	TURNEYER.		AMUN EŞ		WTT, 415	78.77.4.14.	rojevatili s	en vega	. 9377534]
		Verille.										£-11,456.3		van Mo	(A.Seb.	
Minor Lane/Major Mymi		NBL	MBI	EBLM1	SBT	SBR										
Capacity (veh/h)		742		528		•										
HCM Lane V/C Ratio	11.25%17	0.003	- 46 (1772	0.004		Jun jesti			erekar K			aranyen.		guran nerin		어드라다.
HCM Long LOS	is i en	9.9	0	1970 1985 6						Madred		Dakú Yis		Santa A		A ALM
HCM Lane LOS HCM 95th %tile Q(veh)		A 0	A 	B 0	- 11452	26072	27 JUN		84717		YEMLES			13 5.153	0),[344	FEG 18
LIGHT SOUL WING MACH	i . Mil a.	ar en d y .	19 S T	Sega Linu		salai kilet	Suddiki S	uateur (A	No. 2000 Trial	i waket.	kun si Vil	. BALEMIE	an dayan (il)	31012 14.Y.,		sectivii.

Movement IEBL EBR NBL NBL SBL SBR	Intersection: Int Delay, s/veh 0	6			
Lane Configurations Y ↓ ↓ Traffic Vol, veh/h 15 26 1 565 592 8 Future Vol, veh/h 15 26 1 565 592 8 Conflicting Peds, #/hr 0 0 0 0 0 0 Sign Control Stop Stop Free Free Free Free RT Channelized - None - None - None Storage Length 0 - - - - - Veh in Median Storage, # 0 - - - - - Grade, % 1 - - - - - - - - Peak Hour Factor 98 98 98 98 98 98 98 Heavy Vehicles, % 0 0 0 1 2 0			NBI.	l≽NBT•	USBT SBR
Traffic Vol, veh/h 15 26 1 565 592 8 Future Vol, veh/h 15 26 1 565 592 8 Conflicting Peds, #/hr 0 0 0 0 0 0 0 Sign Control Stop Stop Free Free Free Free RT Channelized - None - None Storage Length 0 Veh in Median Storage, # 0 0 0 - Grade, % 1 3 3 - Peak Hour Factor 98 98 98 98 98 98 Heavy Vehicles, % 0 0 0 1 2 0				MA IN THE REAL PROPERTY.	
Conflicting Peds, #/hr 0 0 0 0 0 Sign Control Stop Stop Free Free Free RT Channelized - None - None Storage Length 0 - - - - Veh in Median Storage, # 0 - - 0 0 - Grade, % 1 - - - 3 3 - Peak Hour Factor 98 98 98 98 98 98 Heavy Vehicles, % 0 0 0 1 2 0	Traffic Vol, veh/h	5 26	1	565	592 8
Sign Control Stop Stop Free Free Free Free RT Channelized - None - None - None Storage Length 0	the contract of the contract of the following section is a second of the contract of the contr				
RT Channelized - None - None Storage Length 0 Veh in Median Storage, # 0 0 0 Grade, % 1 3 3 Peak Hour Factor 98 98 98 98 Heavy Vehicles, % 0 0 0 1 2 0	 Betaline and a first the control of th	医骶骨 医多种性病 化氯化二甲基	The Control of the Control	Contract of the	Note that are also that all the contract of th
Storage Length 0 Veh in Median Storage, # 0 0 0			and the second of the second	19.00.00.00.00.00.00.00.00.00	
Veh in Median Storage, # 0 0 0 - Grade, % 13 3 - Peak Hour Factor 98 98 98 98 98 Heavy Vehicles, % 0 0 0 1 2 0		and the first owners.		INOHE	nik na 1914 (19 46), majakin ninga kinga kinga kinga kinga kana kana kana kana kana kana kana k
Grade, % 13 3 - Peak Hour Factor 98 98 98 98 98 Heavy Vehicles, % 0 0 0 1 2 0		<u> </u>		0	
Heavy Vehicles, % 0 0 0 1 2 0	Grade, %	1 -	-		3 -
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					The state of the s
Mymt Flow 15 27 1 577 604 8	Mvmt Flow	5 27	1.	577	604
	,				
		26.1.14.1100.24.11.14.07.2	ANALYSIA PROBABILI	and the second second	
	The state of the s		612	0	
Stage 1 608					는 맛도 바이트 등 등 등 중에 있는 것이 되었다. 그는 말로 하는 것이 없는 것이 되었다. 그는 기
Stage 2 579 Critical Hdwy 7.2 6.2 4.3			_ 	- 677,844	
			4. 0	, Belolati •	고하기 한 경기 있다면 한 경기 경기 전략을 하는 것이 되었다. 현재 전략 전략 전략을 하는 것이 되었다. 전략
	Follow-up Hdwy	3 3.1	3	**************************************	MM Turket province of the state
		6 524	737		실하는 것이 되었다. 이 사람들은 사람들은 사람들은 사람들은 사람들은 사람들은 사람들은 사람들은
Stage 1 594					
Stage 2		5 -			
	Platoon blocked, %	C 501	727	. 1981 -	
			131		. 마음을 가졌는데 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.
Stage 1					
Stage 2 615	The reality of the control of the co		avenin silven in		united the first traditional content of the content of the section of the content
Approach ES NB SB	iloseioieA		NB		89 .
The contract of the contract o	THE RESIDENCE AND ADDRESS OF THE PROPERTY OF T	A CHANGE OF THE CASE OF THE CA			
表情,我就是我们的是我们,我们就是一个人的,我们就是我们的,我们就是一个人的,我们就是一个人的,我们就是一个人的,我们就是一个人的,我们就是一个人的,我们就会	HCM LOS	and the state of the state of the		an in the ori	The interest and the first develop the entries where it is not before the any first the interest of a contract and the held is a
경험을 하면 한다면 함께 되면 하면 되었다. 그는 이 보고 있는 사람들은 전에 되었다. 그는 사람들이 함께 함께 함께 되었다. 그는 사람들이 되었다. 그는 사람들은 사람들은 사람들은 사람들은 사람들은 그는 그들은 사람들은 것 같다. 그는 사람들은 사람들은 사람들은 사람들은 사람들은 사람들은 사람들은 사람들은					는 마일이 마일이 되었다. 그는 사람들은 이번 경기에 되었다면 보고 있다면 보고 있다. 그는 사람들은 사람들은 사람들은 사람들은 사람들은 사람들은 사람들은 사람들은
Minor Lene/Mejor-Munit NBL NBR EBLIN SBR SBR	Minor Lane/Meior-Mvini	NEL	A NIBTE	EBLIN'S	SH SHR
	Capacity (veh/h)				
HCM Lane V/C Ratio 0.001 - 0.138	HCM Lane V/C Ratio	and the second second	and the second of the second	tracker for the file of	entrollering the formula of the control of the cont
HCM Control Delay (s) 9.9 0 18.7	HCM Control Delay (s)				
HCM Lane LOS A A C	HCM Lane LOS			C	
HCM 95th %tile Q(veh) 0 - 0.5	HCM 95th %tile Q(veh)	0		0.5	

	•	•	†	/	-	↓					
Movement	WBL	- WBR	TEM	NBR	SBL	S					
Lane Configurations	National Control of the Control of t	7	1}		ኣ			SCOOL SCHOOL COMMISSION SCHOOL			enia de tentro
Traffic Volume (veh/h)	0	10	1	2	Ō	0					
Future Volume (Veh/h)	0	10	1	2 2	0	0			,		
Sign Control	Free		Stop			Stop					
Grade	-1%		-3%			1%					
Peak Hour Factor	0.54	0.54	0.54	0.54	0.54	0.54					
Hourly flow rate (vph)	0	19	2	4	0	0	menti yaya davas	grander i Gart	95 88758 KI +	i, ura i ar server susuer	4, 77
Pedestrians	Marcé.										Trians!
Lane Width (ft)	negi ayr	en benuter			ji mayay x		an kamsan m	and was tive			Valar
Walking Speed (ft/s)					OMELICA:				WO EUR		
Percent Blockage Right turn flare (veh)		#1.525.54									7,73
Median type	None		And Annual Control of the Control of			A. 149 A.M.1.10		a generalijenij			. in
Median storage veh)	TONG			ik terset	de de la composição de la						43
Upstream signal (ft)		70 Nation (497).			endas fizik	aranti (Baraya) -	as ione utility		. Pratición à	resear ou de S.	124
pX, platoon unblocked		4,000,000									e Se
vC, conflicting volume	0	e for the five and	19	0	1	0	Studio de la composición			e salah di silah di silah di	P. 15" 4 2
vC1, stage 1 conf vol									Maria II		
vC2, stage 2 conf vol											
vCu, unblocked vol	0		19	0	1	0					
tC, single (s)	4.1		*7.2	6.2	7.1	6.5		Carrier da acide de cons	on nemona w	and the second	
tC, 2 stage (s)											
tF (s)	2.2	rane ojne z	*3.0	*3.1	3.5	4.0	an open kaj terener	tavato um	ja – Reinstatings	ku orași filiza propuns	11110
p0 queue free %	100	114 (114)	100	100	100	100					AVS:
cM capacity (veh/h)	1636		1164	1161	1022	900					Militaria e
Direction, Lame/#	WB 1	NB (SB1								
Volume Total	19	6	0		and southern all	reage en la contra co	angaran Jagar Bar			eri ga inaggween.	riy.
Volume Left	0	0	Ŏ	girus i							
Volume Right	19 1700	4162	1700	i Janaji kirki							120.3
cSH Volume to Capacity	1700 0.01	1162 0.01	1700 0.00			CAST CLV4	Revision for		võe, kii		f su
Queue Length 95th (ft)	0.01	0.01	0.00								
Control Delay (s)	0.0	8.1	0.0	A Cartifold	na baké A	SVWSVV sec		iedo Malo	n Esmi	idustria (1897 bil)	
Lane LOS		Ă	0.0 A								T. S.
Approach Delay (s)	0.0	8.1	0.0	patura i um em em	A programme of the control of the co	u Italie Albert in Kelter		e CM silved .	than distric	Mark Distributions	
Approach LOS		Ā	A					NINA S			
Intersection Summary	4 c c	, j	* *					10 PM		184	
Average Delay			1,9								
Intersection Capacity Utilization	1		13.3%	IC	CU Level	of Service	age of the second second		Α	ing the second second	
Analysis Period (min)			15								

	•	•	†	*	/	↓	
Movement	WBL	-WBR	-NBT	**NBR	: SBL-C	≗ SBT	
Lane Configurations		7	Դ	and the second of the second	ሻ		
Traffic Volume (veh/h)	0	9	1	4	37	Ŏ	
Future Volume (Veh/h)	0	9 18. 18. 1970, 1	1	4	37	0	PRODUKTURA TRADERIKAN TANGKAN ARUSAN KALAMINATAN MAKANAN KATAN
Sign Control Grade	Free -1%	N. Hakadadar 1	Stop -3%		Mar 1994.	Stop 1%	a Modalili mida ele 1805 e al 2015 a Maria (1806 e al 14).
Peak Hour Factor	0.54	0.54	0.54	0.54	0.54	0.54	
Hourly flow rate (vph)	0.01	17	2	7	69	0.51	 (a) As Seed to a field filling to A but some of the adequation in the fill starting to a
Pedestrians				NIME			
Lane Width (ft)	المراجعة عروا مردار مار	an a see an open	98 K (1951)		ta i strata		and the second of the second o
Walking Speed (ft/s)	自己計画			Mathiffine			
Percent Blockage	en er er en er		N. Weiller	richa yera	- 200 VALSA		To played to the experiment statement of the entire of
Right turn flare (veh) Median type	None		s fillion				
Median storage veh)	None	Hadib <u>il</u> ya		eryoje, v			
Upstream signal (ft)			resise File	i i i ili see iliisee.		Marketti (a.e.)	aus and Maria de Court and a Messacha in a research and Messacha and Messacha in Messacha and a second and a s The court of the Court o
pX, platoon unblocked							
vC, conflicting volume	0		17	0	1	0	
vC1, stage 1 conf vol							NAMBARIA NAMBARIAN KALANGA
vC2, stage 2 conf vol	.	****. 458.49+4	47		errogas.		To opticity one house whose in our responses to the second section of the second section of the second section
vCu, unblocked vol tC, single (s)	0 4.1		17 *7.2	0 6.2	1 *6.5	0 6.5	
tC, 2 stage (s)	7.1		1.4	0.2	0.0	0.5	HER HANDE OF THE PROPERTY OF THE PARTY OF TH
tF (s)	2.2		*3.0	*3.1	*4.0	4.0	ele to a local case lines to case went of the calendaria calliforning specific pair such
p0 queue free %	100		100	99	92	100	
cM capacity (veh/h)	1636		1168	1161	892	900	
Direction, Lane#	Weit	NB 1	SB1				
Volume Total	17	9	69	usangsungs er sa	e de grae d	en elektrik	Line was projektion interam kas sekana se saman kan persaman kan persaman kan persaman kan persaman kan bersam
Volume Left	0 17	0 7	69 0		Adda.		histikas (nika nasalan Aslankas) (nasai
Volume Right cSH	1700	1163	892	34 6.514 D.			
Volume to Capacity	0.01	0.01	0.08		2.5% 33		u vintera i en la cue vinta de la ción de la didebididad de las colonidades en la colonidad. La colonidad de la colonidad d
Queue Length 95th (ft)	0	1	6				JUDIE 35 기본 15 18 18 18 18 18 18 18 18 18 18 18 18 18
Control Delay (s)	0.0	8.1	9.4				
Lane LOS_		A	Α				
Approach Delay (s)	0.0	8.1	9.4	n ningkistij		er er er, e	entre i de la composito de la compositació de la co
Approach LOS		A	A				
Intersection Summary			7.0				
Average Delay Intersection Capacity Utiliza	ifion		7.6 13.3%	ارا	ا ا میما د	of Service	en 1907 en 1906 en 190 A
Analysis Period (min)			15.5 %	100	7 F010	VI OCI NICE	e
Same Anna Canada Manda	al to a way dispersion	aut lier Attua	Taki 3%.		estratio		 Continues of the State and the Medical Affiliation of the Continue Fig.
* User Entered Value							

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Movement		en"	EBR	Walt	W.BT	WBR	NBE	NBT	NBR	8BL	SBT	SBR
Lane Configurations		ተተቡ			ተተ _ጉ		ሻ	4		ሻሻ	1₃	
Traffic Volume (veh/h)	0	1902	13	0	1298	149	28	234	32	391	188	18
Future Volume (veh/h)	0	1902	13	0	1298	149	28	234	32	391	188	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1724	1794	0	1724	1780	1650	1921	1750	1618	1590	1492
Adj Flow Rate, veh/h	0	1941	13	0	1324	152	29	239	33	399	192	18
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	5	0	0	5	1	21	2	14	3	5	12
Cap, veh/h	0	2406	16	0	2153	247	263	266	37	422	392	37
Arrive On Green	0.00	0.59	0.59	0.00	0.59	0.59	0.03	0.16	0.16	0.14	0.27	0.27
Sat Flow, veh/h	0	4623	27	0	4175	422	1572	1652	228	2990	1432	134
Grp Volume(v), veh/h	0	1141	813	0	882	594	29	0	272	399	0	210
Grp Sat Flow(s), veh/h/ln	Ŏ	1207	1719	Ō	1224	1648	1572	Ö	1880	1495	0	1566
Q Serve(g_s), s	0.0	63.1	63.1	0.0	39.6	39.6	2.6	0.0	24.1	22.5	0.0	19.1
Cycle Q Clear(g_c), s	0.0	63.1	63.1	0.0	39.6	39.6	2.6	0,0	24.1	22.5	0.0	19.1
Prop In Lane	0.00		0.02	0.00		0.26	1.00	a Carantina	0.12	1.00		0.09
Lane Grp Cap(c), veh/h	0.00	1414	1007	0.00	1435	966	263	0	303	422	0	429
V/C Ratio(X)	0.00	0.81	0.81	0.00	0.61	0.61	0.11	0.00	0.90	0.95	0.00	0.49
Avail Cap(c_a), veh/h	0.00	1414	1007	0.00	1435	966	292	0.00	332	422	0.00	429
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	27.6	27.6	0.0	22.8	22.8	56.9	0.0	69.9	72.3	0.0	51.7
Incr Delay (d2), s/veh	0.0	5.0	6.9	0.0	2.0	2,9	0.2	0.0	24.5	30.2	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	25,3	35.1	0.0	17.0	22.1	1.9	0.0	19.7	15.7	0.0	12.2
%ile BackOfQ(95%),veh/ln	0.0	20,3	JJ. 1	0.0	17.0	. 44.1	1.0	0.0	19.1	10.7	0.0	12.2
Unsig. Movement Delay, s/veh	0.0	20.7	24.0	0.0	24.8	25.7	57.1	0.0	94.5	102.6	0,0	52.6
LnGrp Delay(d),s/veh	0.0	32.7	34.6	and the same that there are		at the action to the Contract of the		er alfan a base er al	94.0 F	102.0 F		02.0 D
LnGrp LOS	A	<u>C</u>	C	A	<u>C</u>	<u>C</u>	E	A			A	ט
Approach Vol, veh/h		1954			1476	Historia		301			609	
Approach Delay, s/veh		33.5	r Kristina. 1	n en lang member	25.1	ing separation of	da in arthur e	90.9	er anti-more	voka atraga	85.3	sus ne julis.
Approach LOS		C		is di Pa	C						Mark Control	dely.Histori
Timer - Assigned Phs 💎 🔭		2:2	3.	4		+ + +6	7	. 1.81				
Phs Duration (G+Y+Rc), s		106.6	10.8	52.6		106.6	30.0	33.4				
Change Period (Y+Rc), s		8.0	7.0	7.0		8.0	7.0	7.0	to. z to o o	garang mera	e, m. jeste je reggjar i	ra grandini il
Max Green Setting (Gmax), s		96.0	7.0	45.0		96.0	23.0	29.0				
Max Q Clear Time (g_c+l1), s		65.6	5.1	21.1		42.1	25.0	26.1			t at a constant of	
Green Ext Time (p_c), s		22.0	0.0	0.7		20.8	0.0	0,3				
intersection Summary					· ·					•		
HCM 6th Ctrl Delay			41.9									
HCM 6th LOS			D		and the second of							
Notes		7.5									Ţ	

Lane Configurations		•	-	7	1	4	•	4	†	1	-	. ↓	1
Traffic Volume (γph)	Lane Group	EBL:	EBT :	: EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	(981)	SBR
Traffic Volume (γρh)			ቀ ቀቤ			ቀ ቀኄ	(4.17)	14	1 3		ኻኻ	₽	
Future Volume (vph)		0		13	0		149			32			18
Ideal Flow (yphpt)		Programme and the first of	Cabour British a too a fi			And through recognition to	149	The Contract of the Contract o	234	32	391	188	18
Lane Width (fit)	and the second second second is the second s	1800		1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Strate (%)		 A STATE AND A STATE OF THE STAT	The state of the s			and the board and dis-	and the first transfer of the	The factor of Parks	Control of the control of	医结束 医硫酸铁矿 法国际政策 隐止	11	12	12
Storage Length (ft)	and the contract of the contra	andi.							-4%			5%	
Storage Lanes		0	ing selection for the	400	0		400	220	Marie (Marie)	0	320	3.500 2.0020	0
Taper Length (ft)		and the same of the same		and the second of	-			 Jacquaranam 	MINEL.				0
Lame Utili, Factor				19 Y T .	and a first of a first or a	and that are	. J. 188 (1997)	Talan 180. 1	de grafter fra	ন্দ্ৰীক চেটি লিকী কটি বি	. The regulation		1.11 1 1 227
Pet Bike Factor Fit			*0.70	0.91		*0.71	0.91		1.00	1.00		1.00	1.00
Fit Protected Protected	and the control of th	THE STATE	9 11 9	0.01	1177	i ar Mitabol			de SVT	walat distanti	(), () () (PP (** T) (*) ()	ana Amma	
Fit Protected Satd. Flow (prot) 0 3580 0 0 3593 0 1393 1743 0 3036 1640 0 0 1741 0 3036 1640 0 0 1741 0 3036 1640 0 0 1841 1741 0 3036 1640 0 0 1841 1741 0 3036 1640 0 0 1841 1741 0 3036 1640 0 0 1841 1741 0 3036 1640 0 0 1841 1741 0 3036 1640 0 0 1841 1741 0 3036 1640 0 0 1841 1741 0 3036 1640 0 0 1841 1741 0 3036 1640 0 0 1841	A REPORT OF THE PROPERTY OF TH		0 999			0.985	17 A-41		0.982	F 46,445		0.987	
Said. Flow (prot)	A COLUMN CONTRACTOR OF THE COLUMN CONTRACTOR	ula salah Hali-	0.000	industrial di	Million of the con-	0,000	Market Salaba	0.950		uma ul Berta (F	0.950	2 AMMEDIA	William Werning ♥
Fit Permitted	The second of th	n	3580	- n	n	3503	n o		1743	0		1640	0
Satd. Flow (perm)	the state of the s	Salah Bara	VOCC	i si Ma	etalika Y	0000	Austra Med	and the first of the control of the	in and	ára Tria₩a.	and the same of the	17.15	
Right Turn on Red	the approximate programmer of the contract of	ñ	3580	n	n	3503	ń	ALCOHOL STREET, BUILDING TO	1743	n		1640	ď
Satd. Flow (RTOR) 1 14 14 35 35 35 Link Distance (ft) 275 1000 1000 770 15.0 770 15.0 770 15.0 19.0			5550	The state of the s		5050	A 40 PAGE 30	010	1179		0000	1919	and the second second second
Link Speed (mph)		**************************************		163	er er er	1/1	169	S. 18. 19. 1			800,000	HAREN	3 4 T.]
Link Distance (ft)		Marchaeofach	The court of Table		Janki Bir				35	ad Konstilla		35	W4 65 41
Travel Time (s) 4.2 15.2 19.5 19.5 15.0				TO PERSONAL PROPERTY.		ALL DESCRIPTION OF THE RESIDENCE				43.875,70			
Confl. Peds. (#/hr) Peak Hour Factor 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98							es (1875). A	. NOOSAA	to the factor of the second	si Maryi, si	Jan 1987	the control of the co	5 (545) 3
Confl. Bikes (#/hr) Peak Hour Factor 0.98 0		sayran garaga	4.2	ent er er		10.2		areter in	19.5	and the second		10.0	Preferre
Peak Hour Factor 0.98 0.						Alsah Co. v			faraffile				West 4th
Growth Factor 100%		0.00	0.00	0.00	0.00	0.00	0.00	0.00	A 00	0.00	0.00	0.00	0.00
Heavy Vehicles (%) 0% 5% 0% 0% 5% 1% 21% 2% 14% 3% 5% 12% Bus Blockages (#/hr) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	· · · · · · · · · · · · · · · · · · ·		化压 化氯化二甲基甲基甲基		and the state of the state of	t á airt meathráil - i	and the first and the second	and the first of the second of the		The same of the same of	for the second of		THE RESIDENCE AND ADDRESS.
Bus Blockages (#/hr) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	and the second s						1 4 10 4 40 40 40					and the second second second	
Parking (#/hr) Mid-Block Traffic (%) Adj. Flow (vph) 0 1941 13 0 1324 152 29 239 33 399 192 18 Shared Lane Traffic (%) Lane Group Flow (vph) 0 1954 0 0 1476 0 29 272 0 399 210 0 Turn Type NA Protected Phases 2 6 3 8 7 4 Permitted Phases Detector Phase Switch Phase Minimum Initial (s) 15.0 15.0 5.0 5.0 5.0 Minimum Split (s) 23.0 23.0 12.0 12.0 12.0 Total Split (s) Total Split (%) 61.2% Maximum Green (s) 96.0 96.0 7.0 29.0 23.0 45.0 Yellow Time (s) All-Red Time (s) 3.0 6.0 6.0 6.0		A STATE OF THE STA			Charles and the second	A 1 1 20 00 10 10 10	on contract the second	1 11 5 145 5 111	The state of the s		and the second		12%
Mid-Block Traffic (%) 0% 0% 0% 0% 0% 0% Adj. Flow (vph) 0 1941 13 0 1324 152 29 239 33 399 192 18 Shared Lane Traffic (%) Lane Group Flow (vph) 0 1954 0 0 1476 0 29 272 0 399 210 0 Turn Type NA NA NA pm+pt NA Prot NA Protected Phases 2 6 3 8 7 4 1 Permitted Phases 2 6 3 8 7 4 1 Permitted Phases 2 6 3 8 7 4 1 Switch Phase 2 6 3 8 7 4 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 <t< td=""><td></td><td>0</td><td></td><td>Ü</td><td>U</td><td>U</td><td>U</td><td></td><td>U</td><td>U</td><td>a jas a sjært</td><td>U</td><td>U</td></t<>		0		Ü	U	U	U		U	U	a jas a sjært	U	U
Adj. Flow (vph) 0 1941 13 0 1324 152 29 239 33 399 192 18 Shared Lane Traffic (%) Lane Group Flow (vph) 0 1954 0 0 1476 0 29 272 0 399 210 0 Turn Type NA NA pm+pt NA Prot NA Permitted Phases 2 6 3 8 7 4 Permitted Phases 2 6 3 8 7 4 Switch Phase 2 6 3 8 7 4 Minimum Initial (s) 15.0 15.0 5.0 5.0 5.0 5.0 Minimum Split (s) 23.0 23.0 12.0 12.0 12.0 12.0 Total Split (s) 104.0 104.0 14.0 36.0 30.0 52.0 Total Split (%) 61.2% 61.2% 8.2% 21.2% 17.6% 30.6% Maximum Green (s) 96.0 7.0 29.0 23.0 45.0 </td <td></td> <td></td> <td></td> <td></td> <td>Malla.</td> <td>00/</td> <td>SE SEA</td> <td></td> <td>00/</td> <td></td> <td>14/1/20</td> <td>00/</td> <td></td>					Malla.	00/	SE SEA		00/		14/1/20	00/	
Shared Lane Traffic (%) Lane Group Flow (vph) 0 1954 0 0 1476 0 29 272 0 399 210 0 Turn Type NA NA pm+pt NA Prot NA Protected Phases 2 6 3 8 7 4 Permitted Phases 8 8 Permitted Phases 8 7 4 1 Detector Phase 2 6 3 8 7 4 1 Switch Phase 2 6 3 8 7 4 1 Switch Phase 2 6 3 8 7 4 1 Switch Phase 2 15.0 5.0		necessaria 🕳 S			s arvinago			artawart			000		10
Lane Group Flow (vph) 0 1954 0 0 1476 0 29 272 0 399 210 0 Turn Type NA NA pm+pt NA Prot NA Protected Phases 2 6 3 8 7 4 Permitted Phases 8 8 7 4 8 Detector Phase 2 6 3 8 7 4 Switch Phase 2 6 3 8 7 4 Minimum Initial (s) 15.0 15.0 5.0 5.0 5.0 5.0 Minimum Split (s) 23.0 23.0 12.0 12.0 12.0 12.0 Total Split (s) 104.0 104.0 14.0 36.0 30.0 52.0 Total Split (%) 61.2% 61.2% 8.2% 21.2% 17.6% 30.6% Maximum Green (s) 96.0 96.0 7.0 29.0 23.0 45.0		0	1941	13	0	1324	152	29	239	33	399	192	18
Turn Type NA NA pm+pt NA Prot NA Protected Phases 2 6 3 8 7 4 Permitted Phases 8 8 7 4 Detector Phase 2 6 3 8 7 4 Switch Phase Minimum Initial (s) 15.0 5.0 5.0 5.0 5.0 5.0 Minimum Split (s) 23.0 23.0 12.0 12.0 12.0 12.0 Total Split (s) 104.0 104.0 14.0 36.0 30.0 52.0 Total Split (%) 61.2% 61.2% 8.2% 21.2% 17.6% 30.6% Maximum Green (s) 96.0 96.0 7.0 29.0 23.0 45.0 Yellow Time (s) 5.0 5.0 4.0 4.0 4.0 4.0 All-Red Time (s) 3.0 3.0 3.0 3.0 3.0 3.0 Lost Time (s) 7.0 7.0		o arguma e egg	of marking 1		major ne mesagente	rayaya yangan	ng kakamat (<u>sa</u> ab)	n at le <u>s l</u> a	or . Hazzan	1 (Wales a 2 2)	energaan Koroaaan	. 117. 22.6	nmerest a
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Detector Phase 2 6 3 8 7 4 Switch Phase Minimum Initial (s) 15.0 15.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 12.0	· · · · · · · · · · · · · · · · · · ·		2			6		Carlo Contraction	8	Mark M		4	
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Minimum Initial (s) 15.0 15.0 5.0 5.0 5.0 Minimum Split (s) 23.0 23.0 12.0 12.0 12.0 Total Split (s) 104.0 104.0 14.0 36.0 30.0 52.0 Total Split (%) 61.2% 61.2% 8.2% 21.2% 17.6% 30.6% Maximum Green (s) 96.0 96.0 7.0 29.0 23.0 45.0 Yellow Time (s) 5.0 5.0 4.0 4.0 4.0 All-Red Time (s) 3.0 3.0 3.0 3.0 3.0 Lost Time Adjust (s) -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 Total Lost Time (s) 7.0 7.0 6.0 6.0 6.0 6.0			2			6		3	8		7	4	
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Total Split (s) 104.0 104.0 14.0 36.0 30.0 52.0 Total Split (%) 61.2% 61.2% 8.2% 21.2% 17.6% 30.6% Maximum Green (s) 96.0 96.0 7.0 29.0 23.0 45.0 Yellow Time (s) 5.0 5.0 4.0 4.0 4.0 All-Red Time (s) 3.0 3.0 3.0 3.0 3.0 Lost Time Adjust (s) -1.0 -1.0 -1.0 -1.0 -1.0 Total Lost Time (s) 7.0 7.0 6.0 6.0 6.0													
Total Split (%) 61.2% 61.2% 8.2% 21.2% 17.6% 30.6% Maximum Green (s) 96.0 96.0 7.0 29.0 23.0 45.0 Yellow Time (s) 5.0 5.0 4.0 4.0 4.0 All-Red Time (s) 3.0 3.0 3.0 3.0 3.0 Lost Time Adjust (s) -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 Total Lost Time (s) 7.0 7.0 6.0 6.0 6.0 6.0	Minimum Split (s)												
Maximum Green (s) 96.0 96.0 7.0 29.0 23.0 45.0 Yellow Time (s) 5.0 5.0 4.0 4.0 4.0 All-Red Time (s) 3.0 3.0 3.0 3.0 3.0 Lost Time Adjust (s) -1.0 -1.0 -1.0 -1.0 -1.0 Total Lost Time (s) 7.0 7.0 6.0 6.0 6.0	Total Split (s)							* 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
Yellow Time (s) 5.0 5.0 4.0 4.0 4.0 4.0 All-Red Time (s) 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 1.0 </td <td>Total Split (%)</td> <td></td>	Total Split (%)												
All-Red Time (s) 3.0 3.0 3.0 3.0 3.0 Lost Time Adjust (s) -1.0 -1.0 -1.0 -1.0 -1.0 Total Lost Time (s) 7.0 7.0 6.0 6.0 6.0	Maximum Green (s)		96.0					7.0	29.0				
Lost Time Adjust (s) -1.0<	Yellow Time (s)		5.0			5.0		4.0	4.0				
Lost Time Adjust (s) -1.0<						3.0					医甲酰胺乳色 网络二氢磺酸		
Total Lost Time (s) 7.0 7.0 6.0 6.0 6.0	Lost Time Adjust (s)	a to the first terms				-1.0		-1.0	-1.0		-1.0	-1.0	
						7.0		6.0	6.0		6.0	6.0	
Lead Lag Lead Lag	Lead/Lag	a daga Kata et e e e		an an early seeds		e a in the scale of the of		Lead	Lag		Lead	Lag	
Lead-Lag Optimize? Yes Yes Yes											Yes		
Vehicle Extension (s) 5.0 5.0 3.0 3.0 3.0			5.0	The state of the state of	and the second property of	5.0	a manager of the second		3.0		3.0	3.0	

	→	Y -	* *	†	<i>→ →</i>	. ↓	4
Lane Group	: EBLA SEBTA	HER WEL WEI	WBR : NBL	NBT	- NBR SBL	SBT	SBR
Minimum Gap (s)	2.7	2.7	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	35.0	35.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	15.0	15.0	0.0	0.0	0.0	0.0	
Recall Mode	C-Max	Max	None	None	None	None	
Walk Time (s)							
Flash Dont Walk (s)		e terminal de la companya de la comp					
Pedestrian Calls (#/hr)							
Act Effct Green (s)	97.9	97.9	36.7	29.1	24.0	48.0	
Actuated g/C Ratio	0.58	0.58	0.22	0.17	0.14	0.28	
v/c Ratio	0.95	0.71	0.13	0.91	0.93	0.45	
Control Delay	44.8	28.2	39.5	102.3	100.6	54.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	44.8	28.2	39.5	102.3	100.6	54.8	
LOS	D	С	D	F	F	D	
Approach Delay	44.8	28.2		96.3		84.8	
Approach LOS	D	C		F		F	
Queue Length 50th (ft)	953	542	21	300	230	197	
Queue Length 95th (ft)	#1097	617	48	#469	#333	286	
Internal Link Dist (ft)	195	920		920		690	
Turn Bay Length (ft)			220		320		
Base Capacity (vph)	2062	2075	222	307	428	462	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.95	0.71	0.13	0.89	0.93	0.45	

Intersection Summary

Area Type: Other

Cycle Length: 170

Actuated Cycle Length: 170

Offset: 20 (12%), Referenced to phase 2:EBT, Start of Yellow

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.95
Intersection Signal Delay: 48.3
Intersection Capacity Utilization 81.8%

Intersection LOS: D
ICU Level of Service D.

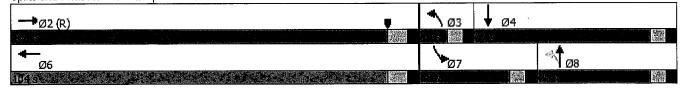
Analysis Period (min) 15

* User Entered Value

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Stump Road & Bethlehem Pike



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Movement 🚁 🗱 🗱	* EBL	e EBI	EBR	WBL	WBT	WER	NBL	- MBT	NBR	83L	SET	(SBR
Lane Configurations		ተተኈ			ተተኈ		ሻ			ሻሻ	ĵ,	
Traffic Volume (veh/h)	0	1484	18	0	1724	311	59	265	20	302	264	63
Future Volume (veh/h)	0	1484	18	0	1724	311	59	265	20	302	264	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00	+ / · · · + i/2 f · ·	1.00	1.00	10 To 2 Card Co. (1975)	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	F	No	de distribuit	. Assembli 5. Gira	No		ire Litaninu.	No	A SAME.	7 (84) (175) (84)	No	eres de Moderneta
Adj Sat Flow, veh/h/ln	0	1752	1794	0	1766	1766	1921	1921	1949	1618	1646	1646
Adj Flow Rate, veh/h	0	1514	18	0	1759	317	60	270	20	308	269	64
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0,98	0,98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	3	0	0	2	2	2	2	0	3	1	1
Cap, veh/h	Ŏ	2494	30	Ŏ	2175	389	182	301	22	364	318	76
Arrive On Green	0.00	0.60	0.60	0.00	0.60	0.60	0.04	0.17	0.17	0.12	0.25	0.25
Sat Flow, veh/h	0.00	4690	50	0.00	4089	652	1829	1766	131	2990	1286	306
		901	631	0	1274	802	60		290	308	0	333
Grp Volume(v), veh/h	0			0	1325		1829	0		1495	the contract of the second	
Grp Sat Flow(s), veh/h/ln	ere treatment of the	1244	1743	20 Carlotte 14 (22-14)		1649	and the second of	0	1897	a company of the state of the	0	1591
Q Serve(g_s), s	0.0	38.9	38.9	0.0	63.5	65.0	4.5	0.0	25.5	17.1	0.0	33.9
Cycle Q Clear(g_c), s	0.0	38.9	38.9	0.0	63.5	65.0	4.5	0.0	25.5	17.1	0,0	33.9
Prop In Lane	0.00	n na anaisin	0.03	0.00		0.40	1.00	e america A	0.07	1.00	garangan ngan	0.19
Lane Grp Cap(c), veh/h	0	1484	1040	0	1580	983	182	0	323	364	0	393
V/C Ratio(X)	0.00	0.61	0.61	0.00	0.81	0.82	0.33	0.00	0.90	0.85	0.00	0.85
Avail Cap(c_a), veh/h	0	1484	1040	0	1580	983	186	0	379	369	0	440
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1,00	1.00	0.00	1,00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	21.7	21.7	0.0	26.7	27.0	55.4	0.0	69.1	73.1	0.0	60.9
Incr Delay (d2), s/veh	0.0	1.9	2.6	0.0	4.5	7.4	1.0	0.0	21.2	16.3	0.0	13.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	16.9	22.7	0.0	27,4	34.7	3.9	0.0	20.4	11.9	0.0	21.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	23.6	24.3	0.0	31.2	34.4	56.5	0.0	90.3	89.4	0,0	74.1
LnGrp LOS	Α	С	С	Α	С	С	E	Â	F	F	A	Ε
Approach Vol, veh/h		1532			2076			350			641	
Approach Delay, s/veh		23.9	n neu vidin a vine	areta i la alla alla arte f	32.4	JAM D Walle		84.5	Radio No. ora siftee a di	erania ir.	81.4	Auffestales and I
Approach LOS		C			Ç			E			Ė	
Timer- Assigned Phs 😥 😘 🙏		. 7.1.21	. 13	, 4		6	74	. 8		- 19 - 19		
Phs Duration (G+Y+Rc), s		108.4	13.6	48.0		108.4	26.7	34.9				
Change Period (Y+Rc), s		8.0	7.0	7.0	FRACTORES TO	8.0	7.0	7.0	Marking Andrews		2 - an an 24, mayaba	ness., 260 TE
Max Green Setting (Gmax), s	WIE.	95.0	7.0	46.0	53 147 3	95.0	20.0	33.0	STATE FOR			
Max Q Clear Time (g_c+l1), s	1814 18 14 de de la constanta d La constanta de la constanta d	41.4	7.0	35.9	Maria Warfel wa	67.0	19.6	27.5	at turbs, form 12	tatof or a disc	n in a second risk.	eschelu 24
Green Ext Time (p_c), s		21.7	0.0	0,8	3513	21.9	0.0	0.5				
Intersection Summary					c 7 ng			100		71		
HCM 6th Ctrl Delay			40.4									
HCM 6th LOS	um rijis uli s	and distributed a fee	D	Princia Masu	A. 4 (22 th 135 f 1 1 1 4 a	a ili galer teliki	mas a 1000	e u Negorio e P	wasiny Nobil	Maria di Maria Maria Maria Maria Ma		ou meri huld
Notes												

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Lane Group	- EBL	EBT	EBR -	a WBL	WBT	. WBR	. NBL	a NBT	NBR	SBL	SBT	SBR
Lane Configurations		ተተ ው			ተ ተጉ	•	ሻ			ሻሻ	₽	
Traffic Volume (vph)	0	1484	18	0	1724	311	59	265	20	302	264	63
Future Volume (vph)	0	1484	18	0	1724	311	59	265	20	302	264	63
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	12	12	12	11	12	12	11	12	12
Grade (%)		1%			1%			-4%			5%	
Storage Length (ft)	0		400	0	er david i die Proposition	400	220	e a la Marijono in a	0	320	er and a comment	0
Storage Lanes	0		0	0		1			0	2		0
Taper Length (ft)	100		The second of the second	100	S. Williams Sec. 43	ang kiri Nabata iyo	100		na araban n	100		22.5 0.4 0.29
Lane Util. Factor	1.00	*0.71	0.91	1.00	*0.75	0.91	1,00	1,00	1.00	0.97	1.00	1.00
Ped Bike Factor	40,000	V	12 K 19 N L 2 N	a or tellerich		eriteta manatika inder	Parker Service	A MAIN TO PROPERTY OF A MAIN	a alto del tri di Na	Classic Control of the Control		The Sales of Pro-
	图图路	0.998		MINE R	0.977			0.990			0.971	
Flt Protected		and the state of	ra a Mirediannese	u v dvari vita	. (1.1) No. 4 (M. 1994) - 71	Constitution of the	0.950	es par este a		0.950	A PARTER AND	antido a f
Satd. Flow (prot)	0	3698	0	0	3860	0	1653	1784	0	3036	1687	0
Flt Permitted	ut latina i Milia	and the second	att is a fifther	a de la compania de La compania de la co	er amana e	ala di 1975. Il	0.421	nerala an	alvalute.	0.950		and the second
Satd. Flow (perm)	0	3698	0	0	3860	0	733	1784	0	3036	1687	0
Right Turn on Red			Yes	, e u mer a ru,		Yes	alia ya Bara.	in tima.	No	· .2.5-5-5-5	1.0300	No
Satd. Flow (RTOR)	75 V.				25			M. Francis			isty s	
Link Speed (mph)	the search of a fac-	45		Mari Marchia	45	of kild and a sh	er of Albahil ca	35	to test	Sugar Sugar	35	and deliver
Link Distance (ft)		275		PETERS.	1000	. P. P. T. T.		1000	i Karai		770	FI 301
Travel Time (s)	a Burt I strik	4.2		suit avel tesse finitis	15.2	r b. stout direk.		19.5	\$ 5947 PM		15.0	e de Para e d
Confl. Peds. (#/hr)		e					Settle Server					ani water
Confl. Bikes (#/hr)	eho uustasi nn umbasi		katili oti. Naterolom	ordenialidas Ordenialidas	Takin dalik disib Takin dan dalah dari	tilkelijuski ur menulise e m	landikterion Sveneseese	141594 (131) 11 - 444 mil		n inggradiga (1997) manggradigan	ad Maria. Companyana	n eri tiladi. Vida teredik
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0,98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	0%	0%	2%	2%	2%	2%	0%	3%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												Maria de la composição de
Mid-Block Traffic (%)	n en la general de la company	0%	a carolin k		0%	on serve un sum	garage and the	0%	nave de la celebrate		0%	115.89
Adj. Flow (vph)	0	1514	18 -	0	1759	317	60	270	20	308	269	64
Shared Lane Traffic (%)		er engligen jeden je Programa jeden	armanasan Militaria	V 1 1 1 1 138 15		TENNISH VIOLENCE	THE STORMS OF	Contracting to	nu vizornes el n	raumstraum	ena i Herioladori	na samuna samung
Lane Group Flow (vph)	0	1532	0	0	2076	0	60	290	0	308	333	0
Turn Type		NA			NA		pm+pt	NA		Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	al education and en				rater too ensile in it	20 10 20 00	8 3	. m. n. z Jerna i n. n. z	, a processor, agency or con-	nan naga garan		r monte con cue s
Detector Phase		2			6	\$41.1T	3	8		7	4	
Switch Phase			and the second second		State of the State					E-11-100-1-40-1-11-1		a tank tangga
Minimum Initial (s)		15.0			15.0		5.0	5.0		5.0	5.0	
Minimum Split (s)		23.0			23.0		12.0	12.0		12.0	12.0	
Total Split (s)		103.0			103.0		14.0	40.0		27.0	53.0	
Total Split (%)		60.6%			60.6%		8.2%	23.5%		15.9%	31.2%	
Maximum Green (s)		95.0			95.0		7.0	33.0		20.0	46.0	
Yellow Time (s)		5.0			5.0		4.0	4.0		4.0	4.0	
All-Red Time (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)		7.0			7.0		6.0	6.0		6.0	6.0	
Lead/Lag			1140 m/211 D		May	and the second of the second	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	e Screen Cate S	5.0		and the second of the	5.0	and the second second Second	3.0	3.0		3.0	3.0	eranicalist to the

	→ →	· ·	1	†	/ h	↓	4
bane Group		BR WBL WBT	- WBR•• NBL•	. NBTe	NBR SBL	SBI	SBR
Minimum Gap (s)	2.7	2.7	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	35.0	35.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	15.0	15.0	0.0	0.0	0.0	0,0	
Recall Mode	C-Max	Max	None	None	None	None	
Walk Time (s)							
Flash Dont Walk (s)							
Pedestrian Calls (#/hr)							
Act Effct Green (s)	99.0	99.0	39.5	31.6	20.4	46.8	
Actuated g/C Ratio	0.58	0.58	0.23	0.19	0.12	0.28	
v/c Ratio	0.71	0.92	0.28	0.88	0.84	0.72	
Control Delay	28.2	39.9	41.8	93.0	93.5	65.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	28.2	39.9	41.8	93.0	93.5	65.7	
LOS	<u> </u>	D	D	F	F	Ε	
Approach Delay	28.2	39.9		84.2		79.0	
Approach LOS	C	D		F	and the same agreement to the same and the s	E	v rank rank
Queue Length 50th (ft)	579	930	45	313	175	337	
Queue Length 95th (ft)	656	1037	82	#458	#248	460	
Internal Link Dist (ft)	195	920		920		690	
Turn Bay Length (ft)	n in the state of		220		320	Eduloum des	
Base Capacity (vph)	2153	2257	214	356	375	471	
Starvation Cap Reductn		0	0	0	· · · · · · · · · · · · · · · · · · ·	0	man is a mag
Spillback Cap Reductn		0	0	0	0	0	
Storage Cap Reductn		0	0	0	0	0	a na men
Reduced v/c Ratio	0.71	0.92	0.28	0.81	0.82	0.71	

U	I(e)(S¢	ΟĮ	on	Ö	Ш	ma	Y			
A	rea	T	уp	e;					0	ther	

Cycle Length: 170

Actuated Cycle Length: 170

Offset: 22 (13%), Referenced to phase 2:EBT, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92 Intersection Signal Delay: 44.8 Intersection Capacity Utilization 83.4%

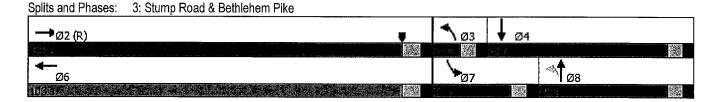
Intersection LOS: D
ICU Level of Service E

Analysis Period (min) 15

* User Entered Value

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.



Intersection															
Int Delay, s/veh 0.		AND THE PROPERTY OF THE PERSON		SONOR YE YERSEN RETURNE				rasaman varian an de tassa m			OCHERONY CHARGOSTON	NAN INGGONALISAN BINANCOUNTS	andrandamine analytimori	THE REPORT OF THE PARTY OF THE	DOMESTIC STATE OF THE PARTY OF
Movement EB		NBL	* NBT	SBT	SBR	5			tal tar	A 4		340			
Lane Configurations \frac{\frac{1}{3}}{\frac{1}{3}}	• 0 2	2	औ 381	f > 595	8				30.0040.0						51
The state of the s	0 2		381	595	8		Heli táre Av	200 v.P.A.	Fish Will	l Maste A	nit 9 \$	23 P.O.S	he MML s		254
Conflicting Peds, #/hr	0 0	0	0	0	0										
Sign Control Sto			Free	Free	Free	. 43.7.7.	0.555.5003	whatter sections		December 2013	7 - 5 - 54 - 121.55	aga wa	70 (250 F6)	ar asas	1504
RT Channelized	- None		None		None										
ACTION CONTROL OF THE PROPERTY	0 - 0 -	4.55 <u>.</u>	0	0					ATTATS			artik ja			33
Grade, %	1 -	10.01 (10.00) -	-3	3	71.41.41.44. -	i anaria				Talk To Salvair	nudiae e Pa			JEL A LIBER	14.74°
Peak Hour Factor 9		98		98	98								a y Siri I. In i ka ab		
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Major/Minor / Minor Conflicting Flow All 100	Contractor de propositiones	Major1 615	0	Major2	0										
Stage 1 61		010									NOTES!				a.
Stage 2 39		23 a	•	er i i e e e e e e e e e e e e e e e e e	-	District of the S	t Arrest W	. * 2.44 22	MATERIAL TOTAL				- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	Alternative (A)	17 - 3
Critical Hdwy 7.		4.3													
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Critical Hdwy Stg 2 5. Follow-up Hdwy	o - 3 3.1	3						A. Huscis			Ord Sulle)				
Pot Cap-1 Maneuver 23		736													
Stage 1 59	2 -		-	-	•	1.5 7.141		A Markettan	Acces - Secret		and the state of				,
Stage 2 76	4 -	•								An Ez		Att.			
Platoon blocked, % Mov Cap-1 Maneuver 23	7 521	736	enga nak	- 	e Name of		946 AP (1)	it aya ay	ngaray kariya		est pages		rwygy, sy		20 N
Mov Cap-1 Maneuver 23	a contract of the contract of	130				t Drawich								i D.Abat	2. 1
Stage 1 59															
Stage 2 76	4 -	• ••• • • • • • • • • • • • • • • • • •	_	Entre - 2000	- 	age ig a kg		was an ange a mi	agent agent, agent	garana ara					
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HCM LOS	3 1451 H.M.	11971,77			STANE!			a igek		11.545.8 11.545.8					831
	li sara			WASH.		A DOMESTIC						a 1854-2850 A			
Minor Lane/Major Mymt	NBL 726	**NR18	EBLIN1	**88/	SBR										
Capacity (veh/h) HCM Lane V/C Ratio	736 0.003	역 . 대생 T: -	521 0.004	8844.5 -							AGAIN.		13,473.4		Det
HCM Control Delay (s)	9.9		11.9						MARCON F						234
HCM Lane LOS	Α	Α	В	erin jako jako mi				at Mark And Ma	er versioner ⁹⁰⁴	and the second	on the color 27%			4 1.5 No. 1	second
HCM 95th %tile Q(veh)	0		0											ETAX	MM .

Intersection	.6	er.													
<i>,</i>	antinonia versione marane monte de la	N NO.	. Tring	* ODT	F 355										
	IL VEBR	R. NBL	_NB™	* SBT	T SBR		- 15	100			100 c. 1	1	***		
	r * 5 26	erana Erana	€Î 575	∱ 603	8				taeurs		16Th 241		STATE OF	PENERS	481
	5 26		575	603	8	evintilei (e	65 PATEL 54	76-1. di 77		Links A	bers 1005	MANIAN.		niga (Piliki)	10.24
Conflicting Peds, #/hr	0 0		0	0	Ŏ										
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RT Channelized	- None	•	None		None										
Storage Length	0 .	Healiga yay	_ 2007 10 2 0	_ ''''' ''''''''''		roat matricipas	g garagera	o garanti in s	ev surete aust	ungurum man	gram descent	t majorgaj si		Server of the section	THURST A
Veh in Median Storage, #	0 ·		0	0				Mali							aa l
Grade, % Peak Hour Factor)8 98	98	-3 98	3 98	- 98			waten.				TK, 530			MACH
Heavy Vehicles, %	0 0	****	1	2	0		A MERC	Marke Gull	el ve k	All House	A. 341.3	ter Call Cr	alini stalan	a-all	1001
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Stage 1 6		•	•												
Stage 2 58			 -1911, 3911	- 1.1.1458	- - 20,4575.1	. 1777 1774	0254 + 30	89 (J.745)	ana ang	.4345) FE (346)	ang pulas		migal saw	9 6 85°	5.771
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Pot Cap-1 Maneuver 17		731						を と と は は は は に に に に に に に に に に に に に に							
Stage 1 58		. est nga man y	<u>-</u>	a en estaga	un gari kawa	n ereces o	erturen, eta	en in Jake	ini Lagrangian	nggarangenetik	. 70., 2 - 2 - 2 - 2 - 2	41.1584	175	. k savenja, ke	5180 S.E
Stage 2 60	7					Moetin:						in W			
Platoon blocked, % Mov Cap-1 Maneuver 17	0 516	731			- 1970/128		. 1347213	n wron s		Tana ya				12861941 12861941	
Mov Cap-2 Maneuver 17		* 6/4 * * * * * * * * * * * * * * * * * * *			#14 (1471) 4 ■	Halku Mili		P akduh		ribi - Hak	Blaid an.	l Maratia		en In Iva i P	araid
Stage 1 58															
Stage 2 60)7 -	Tanan karana			ejeny i po tenjac	les extinent			n er hin enek			ngeræmme sin	gyr, ror, ee		
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	B	NB		⊗B											
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Minor Lane/Major Mymit	NBL	ALDED MAKES MAKES	EBLITA OOO	S SBT	SBR										
Capacity (veh/h) HCM Lane V/C Ratio	731 0.001	production of the first of the first	296 0.141										William VI		
HCM Control Delay (s)	9.9		tigg contains you are a	Yapıdı		BYKU.	AUCUA.	. J.W. (* 4)			Oct. Assi				
HCM Lane LOS	Δ.Δ		C	1844 - F. -	waterkiji. •	en darini.	Land William .		CENHOLOUS CENHOLOUS	: 45 MALE	rusii na i		.tt.52,40,1	1286.5 3,000.	wilded .
HCM 95th %tile Q(veh)	0		0.5						NEW .						
					· · · · · · · · · · · · · · · · · ·										

	•	*	†	*	\	↓	
Movement	1. WBL	WBR	· NBT	#NBR	SBL4	SBT	ALLERY CONTROL TO SERVICE CONTROL OF THE PROPERTY OF THE PROPE
Lane Configurations	15157P.J.J.1929A	7	þ	nganggan gaggay	**	rakos cualkoras	ratificataris montre de commentario de consentrario de consentrario de la companya de la consentario del consentario della consentario del
Traffic Volume (veh/h) Future Volume (Veh/h)	0 0	10 10		2 2	0 0	0	
Sign Control	Free		Stop			Stop	
Grade	-1%	Midden Tres	-3%	ti urā duesāridi.		1%	AND COMPANY OF THE STATE OF THE
Peak Hour Factor	0.54	0.54	0.54	0.54	0.54	0,54	
Hourly flow rate (vph)	0	19	2	4	0	0	ngan kanangga, yanggasan ay yangga naja kanan sa sa na naga say yangga kanna najaka sa da sa ka sa sa sa sa sa
Pedestrians		JAKAN S		tiisikkis			
Lane Width (ft) Walking Speed (ft/s)	yu anto	Transaction					1914 - Maria Maria Maria (1914), 1914 - 1914 - 1914 (1914), 1914 (1914), 1914 (1914), 1914 (1914), 1914 (1914)
Percent Blockage	Notes in the Second	ar matari	ara kukurkulla		andrille Tar		u Diener Beitre (1. Der Seif dieren im Wilde der Die Afrika est 1993) bei die Der sterne der der der der der der der der der de
Right turn flare (veh)							
Median type	None				United States		
Median storage veh)							
Upstream signal (ft) pX, platoon unblocked		jamatan jar		erez eta italia.	nar gradig		
vC, conflicting volume	0	Alabatalia.	19	0	√1. s-kni ≥si 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	集会 安哥基礎 使用某人的 "这个人,我们还是不是一个人的。" "
vC1, stage 1 conf vol		N. J. GER	b Wild		Kaji Ka	i saya	
vC2, stage 2 conf vol		er sarret a	A N. J. P. N. New Johnson, 42	Norman e Tito a e Carros	rani Laba rasa k		n sakah Masa Abasa nebesar sa salah salah padadhan kahasa nesebatika basas salah salah salah salah salah salah Salah
vCu, unblocked vol	0		19	0	1	0	
tC, single (s)	4.1		*7.2	6.2	7.1	6.5	Besternige internesia kiraliserasen birresen etwes jihan jihan rasi igeli gereka eseker.
tC, 2 stage (s) tF (s)	2.2		*3.0	*3.1	3.5	4.0	n parki di Arima Affali ani dalemina mandan independina
p0 queue free %	100		100	100	100	100	The AST OR FOR THE TOTAL MARKET
cM capacity (veh/h)	1636	eler i Fui	1164	1161	1022	900	difficient securitat (Const. Resp. 1986), in direktar en soudi'n brien et de despite (Const. Post. 1997).
Direction, lane #	WB:1:	NB.1	∜ SB 1				
Volume Total	19	6	0	n yasalı da innas ann	grigorian and agent	ggan en er en en e	ng manilike membagai mengerakan dan arang paga mengangan dan sagar megan mengangan dan sebagai mengan sebagai
Volume Left	0	0	0				원지가 50명 보다 1시간 하나 10명 회사를 모르는 경쟁
Volume Right cSH	19 1700	4 1162	0 1700				
Volume to Capacity	0.01	0.01	0.00	Politika Pili	1. 22.79.241,12.2	al) ASHRIK DA	NA SELETT DE ETERMENTE. ANA EL NASAUNTE ET NAS DE DE DE L E
Queue Length 95th (ft)	0	0	0		HARAK		
Control Delay (s)	0.0	8.1	0.0				
Lane LOS		Α	A				
Approach Delay (s) Approach LOS	0.0	8.1 A	0.0 A		25.70 .5 45		본 배역수있는 상대에 된다면 하는 이상되는 도망로 하는 대략 전기를 하였다.
intérsection Summery	a Maria dila		,	otumento barios. Esta posicione			
Average Delay			1.9				
Intersection Capacity Utilization	on On	14 - 21 - 121 NA	13.3%	IC	U Level o	f Service	A The Control of the
Analysis Period (min)			15				
	Jaga its saare	maj viga nestici	earth to grow the con-	gregoria, con	ran iyo garan dayan		and the second
* User Entered Value		alariy		a Bik			

	ane Configurations raffic Volume (veh/h) 0 9 1 4 37 0 uture Volume (veh/h) 0 9 1 4 37 0 uture Volume (Veh/h) 0 9 1 4 37 0 stop rade 1/% -3% 1/% edservinas ane Woth (ft) (alking Speed (ft/s) ercent Blockage ight turn flare (veh) ledian type None ledian storage veh) pstream signal (ft) X, platoon unblocked C, conflicting volume C1, stage 1 conf vol C2, stage 2 conf vol Cu, unblocked vol C2, stage 8 C, 2 alage (s) -(s) -(s) -(s) -(s) -(s) -(s) -(s) -		€	•	†	<i>></i>	\	↓		
Traffic Volume (Veh/h)	raffic Volume (vehrh) 0 9 1 4 37 0 uttire Volume (vehrh) 0 9 1 4 37 0 ign Control Free Stop Stop iracle -1% -3% 1% eds Hour Factor 0.54 0.54 0.54 0.54 0.54 0.54 outly flow rate (vph) 0 17 2 7 69 0 edestrians ane Width (ft) falking Speed (ft/s) ercent Blockage ight turn flare (veh) ledian type None ledian storage veh) pstream signal (ft) X, platoon unblocked C, conflicting volume 0 17 0 1 0 C1, stage 1 conf vol C2, stage 2 conf vol Cu, unblocked vol 0 17 0 1 0 C3, single (s) 4.1 "7.2 6.2 "6.5 6.5 C, 2 stage (s) (s) 2 2 "3.0 "3.1 "4.0 4.0 0 queue free % 100 100 99 92 100 M capacity (vehrh) 1636 1168 1161 892 900 M capacity (vehrh) 1636 1168 1161 892 900 Insciton (Late # VEH NB/1 SB) olume Total 0 0 69 olume Right 17 7 0 69 olume Left 0 0 69 olume Left 0 0 0 69 olume Legh 95th (ft) 0 1 6 ontrol Delay (s) 0.0 8.1 9.4 ane LOS A A propach LOS A A propach LOS S A A insciton Symmary verage Delay T.6 tersection Capacity Utilization 13,3% ICU Level of Service A analysis Period (min) 15	Movement	WBL	-WBR	4 NBT	**NBR	SBL	∵ SBT		i a se
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Pedestrians ane Width (ft) Walking speed (ft/s) Percent Blockage Right turn flare (veh) Median type	edestrians ane Width (ft) (alking Speed (ft/s) ercent Blockage ight turn flare (veh) lectian type	Carrier Market Control of the Contro	and the second of	a the second of the second			and the first of the control of the	and the second second second		
Anne Width (ft) Valking Speed (ft/s) Percent Blockage Right turn flare (veh) Aedian type	ane Width (ft) // Alking Speed (ft/s) ercent Blockage ight turn flare (veh) ledian type				.			ga ika		
Walking Speed (ft/s) Percent Blockage Right rum flare (veh) Median storage veh) Upstream signal (ft) XX, platoon unblocked CC, conflicting volume 0 17 0 1 0 C1, stage 1 conf vol C2, stage 2 conf vol 0 17 0 1 0 C2, stage (s) 4.1 *7.2 6.2 *6.5 6.5 C, 2 stage (s) F(s) 2.2 *3.0 *3.1 *4.0 4.0 30 queue free % 100 100 99 92 100 M capacity (veh/h) 1636 1168 1161 892 900 Direction Lane # WBN NB 11 SB.1 Volume Total 17 9 69 Volume Right 17 7 0 SH 1700 1163 892 Volume Left 0 0 69 Volume Right 17 7 0 SH 1700 1 6 Countrol Delay (s) 0 <t< td=""><td>/alking Speed (ft/s) ercent Blockage ight turn flare (veh) ledian type</td><td>"我们就是我们的我们的,我们就是一个人的,我们就是一个人的。""我们就是一个人的,我们就是一个人的,我们就是一个人的,我们就是一个人的,我们就是一个人的,我们就</td><td>anto e neso Musico III</td><td>u i kiru dite kulti si</td><td>A 5 4 11 1 4 A 11 4</td><td>ete salalle bible ete</td><td>t nachbartaut de</td><td>Jahren di sebi</td><td>i Ballo din Callo di Silandi nda Aria di Libraria de Salaria de Salaria de Callo de Salaria de Sala</td><td>all the land</td></t<>	/alking Speed (ft/s) ercent Blockage ight turn flare (veh) ledian type	"我们就是我们的我们的,我们就是一个人的,我们就是一个人的。""我们就是一个人的,我们就是一个人的,我们就是一个人的,我们就是一个人的,我们就是一个人的,我们就	anto e neso Musico III	u i kiru dite kulti si	A 5 4 11 1 4 A 11 4	ete salalle bible ete	t nachbartaut de	Jahren di sebi	i Ballo din Callo di Silandi nda Aria di Libraria de Salaria de Salaria de Callo de Salaria de Sala	all the land
Right turn flare (veh) Median type None Median storage veh) Upstream signal (ft) VX, platoon unblocked CC, conflicting volume C1, stage 1 conf vol C2, stage 2 conf vol C0, unblocked vol C0, single (s) C, 2 stage (s) F (s) C, 3 stage 2 conf vol COLUME (s) C, 5 stage 2 con Colume (s)	Ight turn flare (veh) Ight turn flare (veh) Ight turn flare (veh)									
Median type None Median storage veh) Upstream signal (ft) VX, platoon unblocked C, conflicting volume 0	ledian type None ledian storage veh pistream signal (ft) X, platoon unblocked C, conflicting volume O									
Median storage veh)	ledian storage veh) pstream signal (ft) X, platonon unblocked C, conflicting volume 0 17 0 1 0 C1, stage 1 conf vol C2, stage 2 conf vol Cu, unblocked voi 0 17 0 1 0 C3, single (s) 3, 2 stage (s) F (s) 0 2.2 *3.0 *3.1 *4.0 4.0 0 queue free % 100 100 99 92 100 M capacity (veh/h) 1636 1168 1161 892 900 Irrection, Lane # WB41 NB.1 SB4 olume Total 17 9 69 olume Right 17 7 0 SH 1700 1163 892 olume to Capacity 0.01 0.01 0.08 tueue Length 95th (ft) 0 1 6 ontrol Delay (s) 0 0.0 8.1 9.4 ane LOS A A A pproach Delay (s) 0 0.0 8.1 9.4 pproach LOS A A A tersection Summary verage Delay 7.6 tersection Capacity Utilization nalysis Period (min) 15									
Upstream signal (ft) XX, platon unblocked CC, conflicting volume	pstream signal (ft) X, platoon unblocked C, conflicting volume 0 17 0 1 0 C1, stage 2 conf vol C2, stage 2 conf vol C3, stage 2 conf vol C4, unblocked vol C5, stage (s) C5, stage (s) C6) C9		None	grant state.	11 895 t	en engalastyten.	s naguanagas kita	en e nombre gang in ye k	Sana sanggayan kanangga usukan kalagan sanan mangga Subahar kangga k	1,31917,319
DX, platoon unblocked CC, conflicting volume C1, stage 1 conf vol C2, stage 2 conf vol CCu, unblocked vol CC, stage 2 conf vol CCu, unblocked vol CC, stage (s) F (s) C, 2 stage	X, platoon unblocked C, conflicting volume 0 17 0 1 0 1 0 C2, stage 1 conf vol C2, stage 2 conf vol C2, stage 2 conf vol C3, stage 2 conf vol C4, unblocked vol 0 17 0 1 0 1 0 0 0 17 0 1 0 0 0 0 0 17 0 1 0 0 0 0									
/C, conflicting volume 0 17 0 1 0 /C1, stage 1 conf vol /C2, stage 2 conf vol /C2, stage 2 conf vol /C3, stage 3 conf vol /C4, unblocked vol 0 17 0 1 0 /C5, single (s) 4.1 *7.2 6.2 *6.5 6.5 /C, 2 stage (s) F (s) 2.2 *3.0 *3.1 *4.0 4.0 /C6 queue free % 100 100 99 92 100 /C7 getion, Lane # WB/I NB/I SB.I Volume Total 17 9 69 /C0 lume Total 17 9 69 /Colume Right 17 7 0 /CSH 1700 1163 892 /Colume Right 17 7 0 /CSH 1700 1163 892 /Colume to Capacity 0.01 0.01 0.08 /Cueue Length 95th (ff) 0 1 6 /Control Delay (s) 0.0 8.1 9.4 /Approach Delay (s) 0.0 8.1 9.4 /Approach LOS A A /Approach LOS A A /Approach LOS A A /Approach Cosming WB/I SE/I /Colume Cospacity Utilization 13.3% ICU Level of Service A	C, conflicting volume C1, stage 1 conf vol C2, stage 2 conf vol C3, stage 2 conf vol C4, unblocked vol C5, single (s) C7, stage (s) C7, stage (s) C8, single (s) C9, stage			onugas, s						
/C1, stage 1 conf vol /C2, stage 2 conf vol /C3, stage 2 conf vol /C4, unblocked vol	C1, stage 1 conf vol C2, stage 2 conf vol Cu, unblocked vol		0		17	0	::∀#151;;; 1	1.119 (1.114.14.14.14.14.14.14.14.14.14.14.14.1		
CC2, stage 2 conf vol CCu, unblocked vol C, single (s) C, 2 stage (s) F (s) 2.2 *3.0 *3.1 *4.0 4.0 00 queue free % 100 100 99 92 100 M capacity (veh/h) 1636 1168 1168 1161 892 900 Direction, Lane # Volume Total 17 9 69 Volume Left 0 0 69 Volume Right 17 7 0 SBH 1700 1163 892 Volume Right 17 7 0 SBH 1700 1163 892 Volume to Capacity 0.01 0.01 0.08 Queue Length 95th (ft) 0 1 6 Control Delay (s) 0 0 8.1 9.4 Approach Delay (s) A A A Antersection Summary Average Delay ntersection Capacity Utilization 13.3% ICU Level of Service A	C2, stage 2 conf vol Cu, unblocked vol 0 17 0 1 0 2, single (s) 4.1 *7.2 6.2 *6.5 6.5 C, 2 stage (s) E (s) 2.2 *3.0 *3.1 *4.0 4.0 0 queue free % 100 100 99 92 100 M capacity (veh/h) 1636 1168 1161 892 900 Ilrection, Lane # WB-1 NB-1 SB-1 olume Total 17 9 69 olume Right 17 7 0 SH 1700 1163 892 olume to Capacity 0.01 0.01 0.08 tueue Length 95th (ft) 0 1 6 ontrol Delay (s) 0.0 8.1 9.4 ane LOS A A pproach LOS A A proroach LOS A A tersection Summary werage Delay tersection Capacity Utilization 13.3% ICU Level of Service A nalysis Period (min) 15				gyania.	gareta e			2위 1일 1학 기업 (1학 2학 2학 1일	355 E.C.
Cu, unblocked vol 0 17 0 1 0 C, single (s) 4.1 *7.2 6.2 *6.5 6.5 C, 2 stage (s) F (s) 2.2 *3.0 *3.1 *4.0 4.0 00 queue free % 100 100 99 92 100 M capacity (veh/h) 1636 1168 1161 892 900 Direction Lane # WB-1 NB-1 SB-1 Volume Total 17 9 69 Volume Left 0 0 69 Volume Right 17 7 0 SBH 1700 1163 892 Volume to Capacity 0.01 0.01 0.08 Queue Length 95th (ft) 0 1 6 Control Delay (s) 0.0 8.1 9.4 Approach Delay (s) 0.0 8.1 9.4 Approach LOS A A A A A A A A A A A A A A	Cu, unblocked vol 0 17 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		ma i Mila i Na	Company of Mary				N 1994 - 1822 - 1822 - 1824 1824 1824 1824 1824 1824 1824 1824 1824 1824 1824 1824 182 	une de pulativo e en la colluste diversión en estado en la collidad de la collidad.	All Market
C, 2 stage (s) F (s) 2.2 *3.0 *3.1 *4.0 4.0 10 queue free % 100 100 99 92 100 M capacity (veh/h) 1636 1168 1161 892 900 Direction, Lane # WB·1 NB·1 SB·1 /olume Total 17 9 69 /olume Left 0 0 69 /olume Right 17 7 0 ISH 1700 1163 892 /olume to Capacity 0.01 0.01 0.08 Queue Length 95th (ft) 0 1 6 Control Delay (s) 0.0 8.1 9.4 Approach Delay (s) 0.0 8.1 9.4 Approach LOS A A Intersection Summary Average Delay Intersection Capacity Utilization 13.3% ICU Level of Service A	C, 2 stage (s) F (s) C (0		17	0	1	0		
F (s) 2.2 *3.0 *3.1 *4.0 4.0 70 queue free % 100 100 99 92 100 70 queue free % 100 1168 1161 892 900 70 queue free % 100 1636 1168 1161 892 900 70 queue free % 100 NB 1 SB 1 70 queue free % 17 9 69 70 queue Left 0 0 69 70 queue Right 17 7 0 70 SBH 1700 1163 892 70 queue Length 95th (ft) 0 1 6 70 queue Length 95th (ft)	F (s) 2.2 *3.0 *3.1 *4.0 4.0 0 0 queue free % 100 100 99 92 100 M capacity (veh/h) 1636 1168 1161 892 900 P	C, single (s)	4.1		*7.2	6.2	*6.5	6.5		
20 queue free % 100 100 99 92 100 25M capacity (veh/h) 1636 1168 1161 892 900 25Prection, Lane # WB-11 NB-11 SB-12 27/olume Total 17 9 69 27/olume Left 0 0 69 28H 1700 1163 892 27/olume to Capacity 0.01 0.01 0.08 20ueue Length 95th (ft) 0 1 6 20notrol Delay (s) 0.0 8.1 9.4 24pproach LOS A A 24pproach LOS A A 25pproach LOS A A 26pproach LOS A A 26pproach LOS A A 27 A 28 A 29 CU Level of Service A	0 queue free % 100 100 99 92 100 M capacity (veh/h) 1636 1168 1161 892 900 irrection, Lane # WB41 NB 15 SB 15 olume Total 17 9 69 olume Right 17 7 0 SH 1700 1163 892 olume to Capacity 0 0.01 0.01 0.08 queue Length 95th (ft) 0 1 6 ontrol Delay (s) 0.0 8.1 9.4 ane LOS A A pproach Delay (s) 0.0 8.1 9.4 pproach LoS A A itersection Summary verage Delay tersection Capacity Utilization 13.3% ICU Level of Service A nalysis Period (min) 15									
Micapacity (veh/h) 1636 1168 1161 892 900 Direction, Lane # WB / NB / SB / SB / Volume Total 17 9 69 /olume Left 0 0 69 /olume Right 17 7 0 SSH 1700 1163 892 /olume to Capacity 0.01 0.01 0.08 Queue Length 95th (ft) 0 1 6 Control Delay (s) 0.0 8.1 9.4 Approach Delay (s) 0.0 8.1 9.4 Approach LOS A A Approach LOS A A Antersection Summary Average Delay 7.6 Intersection Capacity Utilization 13.3% ICU Level of Service A	M capacity (veh/h) 1636 1168 1161 892 900 irrection, Lane # WB·1 NB·1 SB·1 olume Total 17 9 69 olume Right 0 0 69 olume Right 17 7 0 SH 1700 1163 892 olume to Capacity 0.01 0.01 0.08 queue Length 95th (ft) 0 1 6 ontrol Delay (s) 0.0 8.1 9.4 ane LOS A A A pproach Delay (s) 0.0 8.1 9.4 pproach LOS A A itersection Summary verage Delay 7.6 ttersection Capacity Utilization 13.3% ICU Level of Service A nalysis Period (min)			unin magnimus.						ethorise go
Direction, Lane # WB/I NB/I SB/I	Olume Total								Karabilik di beli ibeliyeta	
Volume Total 17 9 69 Volume Left 0 0 69 Volume Right 17 7 0 ISH 1700 1163 892 Volume to Capacity 0.01 0.08 Queue Length 95th (ft) 0 1 6 Control Delay (s) 0.0 8.1 9.4 Approach Delay (s) 0.0 8.1 9.4 Approach LOS A A Antersection Summary Average Delay 7.6 Intersection Capacity Utilization 13.3% ICU Level of Service A	colume Total 17 9 69 colume Left 0 0 69 colume Right 17 7 0 SH 1700 1163 892 colume to Capacity 0.01 0.08 queue Length 95th (ft) 0 1 6 control Delay (s) 0.0 8.1 9.4 ane LOS A A pproach Delay (s) 0.0 8.1 9.4 pproach LOS A A attersection Summary. verage Delay 7.6 attersection Capacity Utilization 13.3% ICU Level of Service A nalysis Period (min) 15			NO 4		1101	692	900	en.	421000
Volume Left 0 0 69 Volume Right 17 7 0 SH 1700 1163 892 Volume to Capacity 0.01 0.01 0.08 Queue Length 95th (ft) 0 1 6 Control Delay (s) 0.0 8.1 9.4 Approach Delay (s) 0.0 8.1 9.4 Approach LOS A A Antersection Summary Average Delay 7.6 Intersection Capacity Utilization 13.3% ICU Level of Service A	olume Left 0 0 69 olume Right 17 7 0 SH 1700 1163 892 olume to Capacity 0.01 0.08 queue Length 95th (ft) 0 1 6 ontrol Delay (s) 0.0 8.1 9.4 ane LOS A A pproach Delay (s) 0.0 8.1 9.4 pproach LOS A A attersection Summary verage Delay 7.6 attersection Capacity Utilization 13.3% ICU Level of Service A nalysis Period (min) 15			With the second control of the second	non-months with the second			.	****	
Volume Right 17 7 0 SH 1700 1163 892 Volume to Capacity 0.01 0.08 Queue Length 95th (ft) 0 1 6 Control Delay (s) 0.0 8.1 9.4 ane LOS A A Approach Delay (s) 0.0 8.1 9.4 Approach LOS A A Antersection Summary Average Delay 7.6 Intersection Capacity Utilization 13.3% ICU Level of Service A	olume Right 17 7 0 SH 1700 1163 892 olume to Capacity 0.01 0.08 tueue Length 95th (ft) 0 1 6 ontrol Delay (s) 0.0 8.1 9.4 ane LOS A A pproach Delay (s) 0.0 8.1 9.4 pproach LOS A A itersection Summary 7.6 verage Delay 7.6 itersection Capacity Utilization 13.3% ICU Level of Service A nalysis Period (min) 15	and the second of the second o	The second of the second of the second							
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Queue Length 95th (ft)	Nueue Length 95th (ft)		1700	1163	892					
Control Delay (s) ane LOS A A Approach Delay (s) 0.0 8.1 9.4 Approach LOS A A A Intersection Summary Everage Delay ntersection Capacity Utilization 13.3% ICU Level of Service A	ane LOS A A pproach Delay (s) 0.0 8.1 9.4 pproach LOS A A pproach LOS A A pproach LOS A A proach		0.01	0.01	0.08					
Anne LOS A A Approach Delay (s) 0.0 8.1 9.4 Approach LOS A A Intersection Summary Average Delay 7.6 Intersection Capacity Utilization 13.3% ICU Level of Service A	ane LOS A A pproach Delay (s) 0.0 8.1 9.4 pproach LOS A A itersection Summary verage Delay 7.6 itersection Capacity Utilization 13.3% ICU Level of Service A nalysis Period (min) 15		weedle the collection							
Approach Delay (s) 0.0 8.1 9.4 Approach LOS A A Intersection Summary Average Delay 7.6 Intersection Capacity Utilization 13.3% ICU Level of Service A	pproach Delay (s) 0.0 8.1 9.4 pproach LOS A A Itersection Summary verage Delay itersection Capacity Utilization 13.3% ICU Level of Service A nalysis Period (min) 15		0.0	1.000	CONTRACTOR	ng kropper in similar			ing in a significance case, come injectivity in a literal case extension of the other case.	en en en en
Approach LOS A A Intersection Summary Average Delay 7.6 Intersection Capacity Utilization 13.3% ICU Level of Service A	pproach LOS A A Itersection Summary verage Delay Itersection Capacity Utilization 13.3% ICU Level of Service A nalysis Period (min) 15				A			95. AAS		
ntersection Summary. Average Delay 7.6 ntersection Capacity Utilization 13.3% ICU Level of Service A	verage Delay stersection Capacity Utilization 13.3% ICU Level of Service A nalysis Period (min) 15		0.0		the strain company	gris tett væt			Transport e el compres montaga un proposo de los comos presentares en la compresión de la comoción de la compr	3383.35
Average Delay 7.6 ntersection Capacity Utilization 13.3% ICU Level of Service A	verage Delay Itersection Capacity Utilization 13.3% ICU Level of Service A nalysis Period (min) 15		***************************************	A	A	Nice at 18			ajita da a 190 sawakita da a katid Hatari	
ntersection Capacity Utilization 13.3% ICU Level of Service A	ntersection Capacity Utilization 13.3% ICU Level of Service A nalysis Period (min) 15					1				e (in City
	nalysis Period (min) 15									
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	AND CONTROL OF THE CO	marysis renod (min)	North Co. N		ıo		Harton VI			49 W 49

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	∛ SBL∗	SBT	SBR
Lane Configurations		ተተኁ			ተተጉ	-	ሻ	ĵ∍		J. J.	<u>}</u>	
Traffic Volume (veh/h)	0	1909	13	0	1303	155	29	241	32	421	192	37
Future Volume (veh/h)	0	1909	13	0	1303	155	29	241	32	421	192	37
Initial Q (Qb), veh	Ó	0	Ó	Ó	0	Ó	0	Ó	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1724	1794	0	1724	1780	1650	1921	1750	1618	1590	1492
Adj Flow Rate, veh/h	0	1948	13	0	1330	158	30	246	33	430	196	38
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	5	0	0	5	1	21	2	14	3	5	12
Cap, veh/h	0	2318	15	Ö	2066	245	264	273	37	475	382	74
Arrive On Green	0.00	0.56	0.56	0.00	0.56	0.56	0.03	0.16	0.16	0.16	0.29	0.29
Sat Flow, veh/h	0.00	4623	27	0	4160	435	1572	1658	222	2990	1294	251
Grp Volume(v), veh/h	0	1145	816	0	890	598	30	0	279	430	0	234
Grp Sat Flow(s), veh/h/ln	0	1207	1719	0	1224	1646	1572	0	1881	1495	. 0	1545
	0.0	66.8	66.9	0.0	42.3	42.3	2.7	0.0	24.7	24.0	0.0	21.4
Q Serve(g_s), s Cycle Q Clear(g_c), s	0.0	66.8	66.9	0.0	42.3	42.3	2.7	0.0	24.7	24.0	0.0	21.4
Prop In Lane	0.00	00.0	0.02	0.00	42.3	0.26	1.00	0.0	0.12	1.00	0.0	0.16
•		1363	971		1382	929	264	0	310	475	0	455
Lane Grp Cap(c), veh/h	0			0	0.64	0.64	0.11	0.00	0.90	0.91	0.00	0.51
V/C Ratio(X)	0.00	0.84	0.84	0.00			292	0.00	343	475	0.00	455
Avail Cap(c_a), veh/h	1.00	1363	971	1.00	1382	929						1.00
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	30.7	30.7	0.0	25.3	25.3	56.3	0.0	69.6	70.2	0.0	49.8
Incr Delay (d2), s/veh	0.0	6.4	8.7	0.0	2.3	3.4	0.2	0.0	24.1	20.8	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	27.0	37.5	0.0	18.1	23.6	1.9	0.0	20.1	15.9	0.0	13.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	37.1	39.4	0.0	27.6	28.8	56.5	0.0	93.7	91.0	0.0	50.8
LnGrp LOS	A	D	<u>D</u>	A	С	C_	E	Α	F	F	A	<u>D</u>
Approach Vol, veh/h		1961			1488			309			664	
Approach Delay, s/veh		38.0			28.1			90.1			76.8	
Approach LOS		D			C			F			E	
Timer - Assigned Phs		2,	3	4		+ 6	7.	. 8				
Phs Duration (G+Y+Rc), s		103.0	10.9	56.1		103.0	33.0	34.0				
Change Period (Y+Rc), s		8.0	7.0	7.0		8.0	7.0	7.0				
Max Green Setting (Gmax), s		92.0	7.0	49.0		92.0	26.0	30.0				
Max Q Clear Time (g_c+l1), s		69.3	5.2	23.4		44.8	26.5	26.7				
Green Ext Time (p_c), s		17.6	0.0	0.8		20.1	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay			44.1	arante in the second		and the second second			on the second second second			
HCM 6th LOS			D									
Notes					Marine St.			es libralia				

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⊥ane Group	EBL	EBT	EBR.	. WBL	-WBT	::WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ተተ _ጮ		0.000	ተ ተጮ		ኽ	ቕ	A 10 10 10 10 10 10 10 10 10 10 10 10 10	ች ች	β.	HC944000 275400.1
Traffic Volume (vph)	0	1909	13	0	1303	155	29	241	32	421	192	37
Future Volume (vph)	0	1909	13	0	1303	155	29	241	32	421	192	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	12	12	12	11	12	12	11	12	12
Grade (%)		1%			1%			-4%			5%	
Storage Length (ft)	0		400	0		400	220		0	320		0
Storage Lanes	0		0	0		1	1		0	2		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	*0.70	0.91	1.00	*0.71	0.91	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor												
Frt		0.999			0.984			0.982			0.976	
Flt Protected							0.950			0.950		
Satd. Flow (prot)	. 0	3580	0	0	3590	0	1393	1743	0	3036	1614	0
Flt Permitted							0.613			0.950		
Satd. Flow (perm)	0	3580	0	0	3590	0	899	1743	0	3036	1614	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)		1			14							
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		275			1000			1000			770	
Travel Time (s)		4.2			15.2			19.5			15.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	5%	0%	0%	5%	1%	21%	2%	14%	3%	5%	12%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	1948	13	0	1330	158	30	246	33	430	196	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	. 0	1961	0	0	1488	0	30	279	0	430	234	0
Turn Type		NA			NA		pm+pt	NA		Prot	NA	
Protected Phases		2			6		- 3	8		7	4	
Permitted Phases							8					
Detector Phase		2			6		3	8		7	4	
Switch Phase												
Minimum Initial (s)		15.0			15.0		5.0	5.0		5.0	5.0	
Minimum Split (s)		23.0			23.0		12.0	12.0		12.0	12.0	
Total Split (s)		100.0			100.0		14.0	37.0		33.0	56.0	
Total Split (%)		58.8%			58.8%		8.2%	21.8%		19.4%	32.9%	
Maximum Green (s)		92.0			92.0		7.0	30.0		26.0	49.0	
Yellow Time (s)		5.0			5.0		4.0	4.0		4.0	4.0	
All-Red Time (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)		7.0			7.0		6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)		5.0			5.0		3.0	3.0		3.0	3.0	

3: Stump Road & Bethlehem Pike

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Lane Group	EBL EBT	EBR V	VBL WBT	·WBR:: NBL	. NBT+	NBR SBL	SBT	SBR
Minimum Gap (s)	2.7		2.7	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	35.0		35.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	15.0		15.0	0.0	0.0	0.0	0.0	
Recall Mode	C-Max		Max	None	None	None	None	
Walk Time (s)								
Flash Dont Walk (s)								
Pedestrian Calls (#/hr)								
Act Effct Green (s)	94.5		94.5	37.6	30.0	26.5	51.3	
Actuated g/C Ratio	0.56		0.56	0.22	0,18	0.16	0.30	
v/c Ratio	0.99		0.74	0.14	0.91	0.91	0.48	
Control Delay	53.9		31.5	37.4	100.8	93.7	52.9	
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	53.9		31.5	37.4	100.8	93.7	52.9	
LOS	D		C	, D	F	F	D	
Approach Delay	53.9		31.5		94.6		79.3	
Approach LOS	D		С		F		E	
Queue Length 50th (ft)	~1020		582	21	307	245	217	
Queue Length 95th (ft)	#1194		663	47	#475	#341	310	
Internal Link Dist (ft)	195		920		920		690	
Turn Bay Length (ft)				220		320		
Base Capacity (vph)	1990		2002	223	317	482	487	
Starvation Cap Reductn	0		0	0	0	0	0	
Spillback Cap Reductn	0		0	0	0	0	0	
Storage Cap Reductn			0	0	0	0	0	
Reduced v/c Ratio	0.99		0.74	0.13	0.88	0.89	0.48	

Intersection Summary

Area Type:

Cycle Length: 170

Actuated Cycle Length: 170

Offset: 20 (12%), Referenced to phase 2:EBT, Start of Yellow

Other

Natural Cycle: 120

Control Type: Actuated-Coordinated

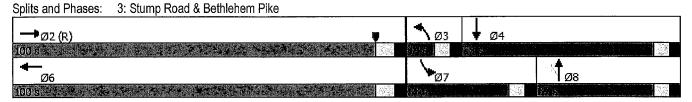
Maximum v/c Ratio: 0.99 Intersection Signal Delay: 53.0 Intersection Capacity Utilization 83.2%

Intersection LOS: D
ICU Level of Service E

Analysis Period (min) 15
* User Entered Value

- ~ Volume exceeds capacity, queue is theoretically infinite.
 - Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.

 Queue shown is maximum after two cycles.



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Movement	EBL	EBT	EBR	WBL	: WBT	WBR	NBL-	NBT	NBR.	SBL	- SBT₄.	SBR
Lane Configurations		ተተኁ			<u>ተ</u> ተጉ		Tr _j	ĵ»		7676	1}	
Traffic Volume (veh/h)	0	1504	. 18	0	1739	327	61	287	20	322	266	76
Future Volume (veh/h)	0	1504	18	0	1739	327	61	287	20	322	266	76
Initial Q (Qb), veh	0	0	0	0	0	. 0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	Ó	1752	1794	0	1766	1766	1921	1921	1949	1618	1646	1646
Adj Flow Rate, veh/h	0	1535	18	0	1774	334	62	293	20	329	271	78
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	3	0	0	2	2	2	2	0	3	1	1
Cap, veh/h	0	2417	28	0	2092	390	192	323	22	384	326	94
Arrive On Green	0.00	0.58	0.58	0.00	0.58	0.58	0.05	0.18	0.18	0.13	0.26	0.26
Sat Flow, veh/h	0	4691	49	0	4061	675	1829	1777	121	2990	1229	354
Grp Volume(v), veh/h	0	913	640	0	1294	814	62	0	313	329	0	349
Grp Sat Flow(s),veh/h/ln	0	1244	1743	0	1325	1645	1829	0	1899	1495	0	1583
Q Serve(g_s), s	0.0	41.6	41.6	0.0	68.5	70.3	4.6	0.0	27.5	18.3	0.0	35.4
Cycle Q Clear(g_c), s	0.0	41.6	41.6	0.0	68.5	70.3	4.6	0.0	27.5	18.3	0.0	35.4
Prop In Lane	0.00		0.03	0.00		0.41	1.00		0.06	1.00		0.22
Lane Grp Cap(c), veh/h	0	1438	1008	0	1531	951	192	0	345	384	. 0	419
V/C Ratio(X)	0.00	0.64	0.64	0.00	0.84	0.86	0.32	0.00	0.91	0.86	0.00	0.83
Avail Cap(c_a), veh/h	0	1438	1008	0	1531	951	195	0	391	387	0	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	23.9	23.9	0.0	29.6	30.0	53.9	0.0	68.1	72.5	0.0	58.9
Incr Delay (d2), s/veh	0.0	2.1	3,1	0.0	5.9	9.8	1.0	0.0	22.6	16.9	0.0	11.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	18.0	24.2	0.0	29.7	37.8	3.9	0.0	21.9	12.6	0.0	22.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	26.1	27.0	0.0	35.5	39.8	54.8	0.0	90.8	89.5	0.0	70.6
LnGrp LOS	Α	С	С	Α	D	D	D	Α	F	F	Α	E
Approach Vol, veh/h		1553			2108			375			678	
Approach Delay, s/veh		26.4			37.2			84.8			79.8	
Approach LOS		С			D			F			E	
Timer - Assigned Phs	10. 10 ⁴	. 2	3	. 4.		6	7	8				
Phs Duration (G+Y+Rc), s		105.2	13.7	51.0		105.2	27.8	36.9				
Change Period (Y+Rc), s		8.0	7.0	7.0		8.0	7.0	7.0				
Max Green Setting (Gmax), s		93.0	7.0	48.0		93.0	21.0	34.0				
Max Q Clear Time (g_c+I1), s		44.1	7.1	37.4		72.3	20.8	29.5				4
Green Ext Time (p_c), s		21.5	0.0	0.9		17.2	0.0	0.5				
Intersection Summary							1980					416
HCM 6th Ctrl Delay			43.5		-							
HCM 6th LOS			D								•	
Notes 🔩 🐇					7							

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Lane Group	- EBL	EBT	EBR	WBL	WBT	:WBR	::NBL	NBT	NBR :	SBL	SBT	SBR
Lane Configurations		ተተ ነ _ን			ተ ተጉ		*	<u></u>		أيزايز	4	
Traffic Volume (vph)	0	1504	18	0	1739	327	61	287	20	322	266	76
Future Volume (vph)	0	1504	18	0	1739	327	61	287	20	322	266	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	12	12	12	11	12	12	11	12	12
Grade (%)		1%			1%			-4%			5%	
Storage Length (ft)	0		400	0		400	220		0	320		0
Storage Lanes	0		0	0		1	1		0	2		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	*0.71	0.91	1.00	*0.75	0.91	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor	11.00	· · · ·	0.0				1.00				,,,,,	,,,,,,
Frt		0.998			0.976			0.990			0.966	
Flt Protected		0.000			01010		0.950	0.000		0.950	0.000	
Satd. Flow (prot)	0	3698	0	0	3856	0	1653	1784	. 0	3036	1679	0
Flt Permitted	U	0000	· ·	. 0	0000	v	0.384	1104	, 0	0.950	1010	•
Satd. Flow (perm)	0	3698	.0	0	3856	0	668	1784	0	3036	1679	Ö
Right Turn on Red	. 0	3080	Yes	v	3030	Yes	000	1704	No	5000	1010	No
Satd. Flow (RTOR)		1	100		26	163			NO			INO
Link Speed (mph)		45			45			35			35	
, , , , ,		275			1000			1000			770	
Link Distance (ft)		4.2			15.2			19.5			15.0	
Travel Time (s)		4.2			10.2			19.5			10.0	
Confl. Peds. (#/hr)		,		1								
Confl. Bikes (#/hr)	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00	0.98	0.98	0.98	0.98
Peak Hour Factor	0.98	0.98 100%	0.98 100%	0.98 100%	0.98 100%	100%	0.98 100%	0.98 100%	100%	100%	100%	100%
Growth Factor	100%						2%	2%	0%	3%	100%	1%
Heavy Vehicles (%)	0%	3%	0%	0%	2%	2%	2% 0		076	3% 0	0	170
Bus Blockages (#/hr)	0	0	0	0	0	0	U	0	U	U	U	U
Parking (#/hr)		00/			00/			0%			0%	
Mid-Block Traffic (%)	0	0%	40	0	0%	ani	00		- 00	220		78
Adj. Flow (vph)	0	1535	18	0	1774	334	62	293	20	329	271	10
Shared Lane Traffic (%)	0	4550	0	0	0400	^	00	242		200	OK C	0
Lane Group Flow (vph)	0	1553	0	. 0	2108	0	62	313	0	329	349	0
Turn Type		NA			NA		pm+pt	NA		Prot 7	NA 4	
Protected Phases		2			6		3	8		1	4	
Permitted Phases		•					8	0		7	4	
Detector Phase		2			6		3	8		1	4	
Switch Phase		450			450		" A	F 6		<i>-</i> 0	E 0	
Minimum Initial (s)		15.0			15.0		5.0	5.0		5.0	5.0	
Minimum Split (s)		23.0			23.0		12.0	12.0		12.0	12.0	
Total Split (s)		101.0			101.0		14.0	41.0		28.0	55.0	
Total Split (%)		59.4%			59.4%		8.2%	24.1%		16.5%	32.4%	
Maximum Green (s)		93.0			93.0		7.0	34.0		21.0	48.0	
Yellow Time (s)		5.0			5.0		4.0	4.0		4.0	4.0	
All-Red Time (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)		7.0			7.0		6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?		L L			4 - 2 - 2		Yes	Yes		Yes	Yes	
Vehicle Extension (s)		5.0			5.0		3.0	3.0		3.0	3.0	

	→	→ ✓ ←	1	†	r 🐆	ļ	4
Lane Group	EBL EBT	EBR. WBL WBT	WBR NBL	NBT	NBR SBL	∮ SBT¢	SBR
Minimum Gap (s)	2.7	2.7	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	35.0	35.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	15.0	15.0	0.0	0.0	0.0	0.0	
Recall Mode	C-Max	Max	None	None	None	None	
Walk Time (s)							
Flash Dont Walk (s)							
Pedestrian Calls (#/hr)							
Act Effct Green (s)	96.5	96.5	41.0	33.1	21.5	46.6	
Actuated g/C Ratio	0.57	0.57	0.24	0.19	0.13	0.27	
v/c Ratio	0.74	0.96	0.30	0.90	0.86	0.76	
Control Delay	30.6	46.4	40.9	95.2	93.9	67.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	30.6	46.4	40.9	95.2	93.9	67.8	
LOS	С	D	D	F	F	Е	
Approach Delay	30.6	46.4		86.2		80.5	
Approach LOS	С	D		F		F	
Queue Length 50th (ft)	610	991	45	340	187	352	
Queue Length 95th (ft)	691	#1161	83	#504	#264	478	
Internal Link Dist (ft)	195	920		920		690	
Turn Bay Length (ft)			220		320		
Base Capacity (vph)	2098	2198	207	367	392	483	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.74	0.96	0.30	0.85	0.84	0.72	

Intersection Summary

Area Type:

Cycle Length: 170

Actuated Cycle Length: 170

Offset: 22 (13%), Referenced to phase 2:EBT, Start of Yellow

Other

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.96 Intersection Signal Delay: 49.3 Intersection Capacity Utilization 85.9%

Intersection LOS: D
ICU Level of Service E

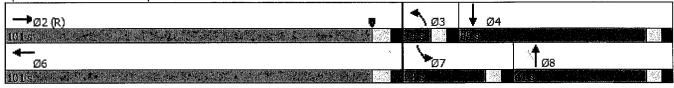
Analysis Period (min) 15

* User Entered Value

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Stump Road & Bethlehem Pike



Intersection											1980					
Int Delay, s/veh	1															
Movement	EBL	EBR	NBL	NBT	SBT	SBR										
Lane Configurations	¥;#		ኘ	†	1→											
Traffic Vol, veh/h	6	55	15	381	595	10										
Future Vol, veh/h	6	55	15	381	595	10										
Conflicting Peds, #/hr	0	0	0	0	0	0										
Sign Control	Stop	Stop	Free	Free	Free	Free										
RT Channelized	-	None	-	None	· · ·	None										
Storage Length	0	-	75		-	.										
Veh in Median Storage,		· . •	-	0	0	.										
Grade, %	1	-	-	-3	3	-										
Peak Hour Factor	98	98	98	98	98	98										
Heavy Vehicles, %	0	0	0	2	4	0										
Mvmt Flow	6	56	15	389	607	10										
	***************************************	Dagger and Michigan Services	COMPLA SAMENSON AND AND ASSESSMENT	mag specie not state to a second or one	THE SECOND COME STATE OF THE SECOND	NATIONAL PROPERTY.	and the second s	AND THE PROPERTY OF THE PROPER	KZAMBOLIZOTO POPONIA	THE STATE OF THE S	CONTRACTOR WATER	. MITTERSONAL PROPERTY.	nest establishment on	and the state of t	ON ATTEMPTS AND ASSESSMENT	ECHTAN PARTAMANTA (100
					Vajor2					i e e						
Conflicting Flow All	1031	612	617	0	-	0										
Stage 1	612	-		-	-	-										
Stage 2	419		-	-	-	-										
Critical Hdwy	7.2	6.2	4.3	-	-	-										
Critical Hdwy Stg 1	5.6	-		-	-	-										
Critical Hdwy Stg 2	5.6			-	.**	-										
Follow-up Hdwy	3	3.1	3		-	-										
Pot Cap-1 Maneuver	227	521	735			-										:
Stage 1	591	-		-	-	-										
Stage 2	741			• • •	•	•										
Platoon blocked, %	222	521	735	-	-	-										
Mov Cap-1 Maneuver Mov Cap-2 Maneuver	222	021	1.55		-	-										
Stage 1	579															
Stage 2	741				_											
Stage 2	741															
			· ·													
Approach	EB		NB		SB			6 a					100			
HCM Control Delay, s	14		0.4		0											
HCM LOS	В															
					•		-	1								
Minor Lane/Major Mym	t iii	NBL	NBT	EBLn1	SBT	SBR					A. N					
Capacity (veh/h)		735	-	460		-										
HCM Lane V/C Ratio		0.021	-	0.135	_	-										
HCM Control Delay (s)		10		14	-	-										
HCM Lane LOS		В	_	В	-	-										
HCM 95th %tile Q(veh)		0.1	-	0.5												

Intersection Int Delay, s/veh	1.6						
Movement	EBL	ERR	NIRI	: NBT	QĒT.	SBR	
Lane Configurations	T	S COM	`	†	2773	OUN	
Traffic Vol, veh/h	19	61	39	т 575	1₃ 603	15	
Future Vol, veh/h	19	61	39	575	603	15	
Conflicting Peds, #/hr	0	0	0	0	003	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	Stop-	None	1166	None	rice.	None	
Storage Length	0	NOUG	75	NOHE		None	
Veh in Median Storage		٠	10	0	0	-	
Grade, %	,# 0 1	_	•	-3	3	-	
Peak Hour Factor	98	98	98	-3 98	98	98	
Heavy Vehicles, %	0	90	90	1	2		
Mvmt Flow						0	
MALLETOM	19	62	40	587	615	15	
Major/Minor 💮 🖟 🧢 N	/linor2		Major1		//ajor2	t ding	
Conflicting Flow All	1290	623	630	0	-	0	
Stage 1	623					-	
Stage 2	667	-	-	-	-	_	
Critical Hdwy	7.2	6.2	4.3	_	_	-	
Critical Hdwy Stg 1	5.6	_		-	· -	-	
Critical Hdwy Stg 2	5.6	, =	_	
Follow-up Hdwy	3	3.1	3	-	· <u>-</u>		
Pot Cap-1 Maneuver	148	513	727				
Stage 1	584	-	-	_		_	
Stage 2	554		_	-			
Platoon blocked, %						_	
Mov Cap-1 Maneuver	140	513	727				
Mov Cap-2 Maneuver	140		-	_	_	_	
Stage 1	552				_	<u></u>	
Stage 2	554	-	_	_	-		
	e es		e vita				
Approach Approach	EB	100	NB		SB.		
HCM Control Delay, s	20.4		0.7		. 0		
HCM LOS	C						
Minor Lane/Major Mvm		NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	CAN MEET VALUE	727	Market America	314	Sisteman Mari	_	
HCM Lane V/C Ratio	* •	0.055	_	0.26			
HCM Control Delay (s)		10.2	_	20.4	-		
HCM Lane LOS		В		20.4 C			
HCM 95th %tile Q(veh)		0.2		1			
LIGIAL ODDI MAND ON AQUI)		V.Z	· -	ı		-	

	1	*	†	1	1	↓				
Movement	WBL	• WBR	NBT	NBR	SBL.	SBT.			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Lane Configurations	SCHOOL STATE OF THE STATE OF TH	7	ĵ _è		ሻ	- ALL CONTROLLED AND ADDRESS OF THE				
Traffic Volume (veh/h)	0	25	7	2	59	. 0				
Future Volume (Veh/h)	0	25	7	2	59	0				
Sign Control	Free		Stop	**		Stop				
Grade	-1%		-3%			1%				
Peak Hour Factor	0.54	0.54	0.54	0.54	0.54	0.54				
Hourly flow rate (vph)	0	46	13	4	109	0				
Pedestrians										
Lane Width (ft)										
Walking Speed (ft/s)										
Percent Blockage										
Right turn flare (veh)										
Median type	None									
Median storage veh)										
Upstream signal (ft)										
pX, platoon unblocked	0		46	0	6	0				
vC, conflicting volume vC1, stage 1 conf vol	0		40	U	0	U				
vC1, stage 1 conf vol										
vCu, unblocked vol	0		46	0	6	0				
tC, single (s)	4.1		*7.2	6.2	*6.5	6.5				
tC, 2 stage (s)	7.1		1.2	0.2	0.0	0.0				
tF (s)	2.2		*3.0	*3.1	*4.0	4.0				
p0 queue free %	100		99	100	88	100				
cM capacity (veh/h)	1636		1116	1161	882	900				
Direction, Lane #	WB·1	NB 1	SB.1							
Volume Total	46	17	109							
Volume Left	0	0	109							
Volume Right	46	4	0							
cSH	1700	1126	882							
Volume to Capacity	0.03	0.02	0.12							
Queue Length 95th (ft)	0	1	11							
Control Delay (s)	0.0	8.2	9.7							
Lane LOS		Α	Α							
Approach Delay (s)	0.0	8.2	9.7							
Approach LOS										
Intersection Summary		Α	Α							
PRODUCT AND AND ADDRESS OF THE PARTY OF THE		A	А							
Average Delay		A				,				
Average Delay Intersection Capacity Utilization	on	A	6.9 13.5%	IC	U Level o	of Service	e	A		

^{*} User Entered Value

	€	*	†	<i>></i>	1	↓					
Movement	WBL	. WBR	· NBT·	NBR -	SBL	SBT					
Lane Configurations		7*	1>		إبر						
Traffic Volume (veh/h)	0	54	18	4	76	0					
Future Volume (Veh/h)	0	54	18	4	76	0					
Sign Control	Free		Stop			Stop					
Grade	-1%		-3%			1%					
Peak Hour Factor	0.54	0.54	0.54	0.54	0.54	0.54		•			
Hourly flow rate (vph)	0	100	33	7	141	0					
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type	None										
Median storage veh)											
Upstream signal (ft)					,						
pX, platoon unblocked											
vC, conflicting volume	0		100	0	16	0					
vC1, stage 1 conf vol											
vC2, stage 2 conf vol											
vCu, unblocked vol	. 0		100	0	16	0					
tC, single (s)	4.1		*7.2	6.2	*6.5	6.5					
tC, 2 stage (s)											
tF (s)	2.2		*3.0	*3.1	*4.0	4.0					
p0 queue free %	100		97	99	84	100					
cM capacity (veh/h)	1636		1024	1161	855	900					
Direction, Lane #	WB 1	NB 1	SB 1								
Volume Total	100	40	141								
Volume Left	0	0	141								
Volume Right	100	7	0								
cSH	1700	1046	855							÷	
Volume to Capacity	0.06	0.04	0.16								
Queue Length 95th (ft)	0	3	15								
Control Delay (s)	0.0	8.6	10.0								
Lane LOS	0.0	A	В								
Approach Delay (s)	0.0	8.6	10.0								
Approach LOS		- A	В								
Intersection Summary								T _u il.			
Average Delay			6.3								
Intersection Capacity Utiliz	zation		14.4%	IC	U Level	or Service	e ,		A		
Analysis Period (min)			15								

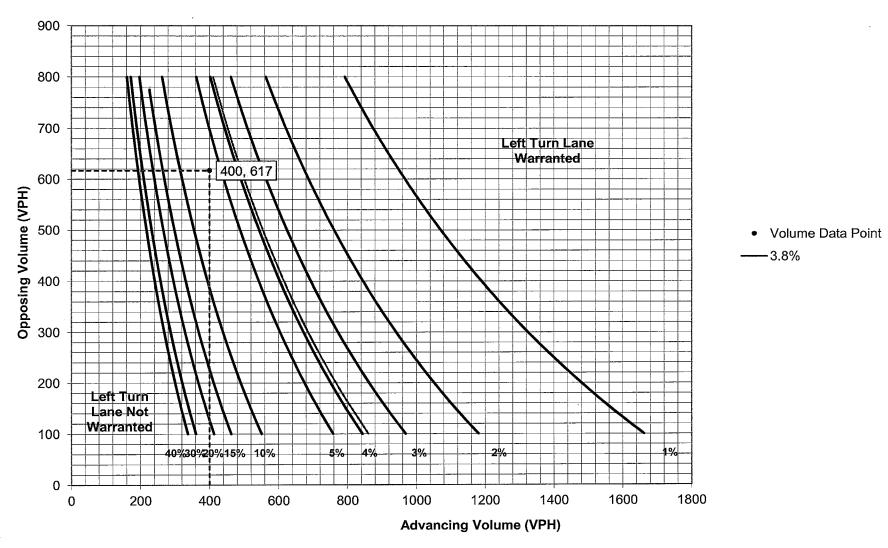
^{*} User Entered Value

Turn Lane Warrant and Length Analysis Workbook

Municipality:		iicipality:	Montgomery Township			Analysis Date:		12/21/2020		
		County:	Montgom	ery County		Conducted	Ву:	AUH	1	
PennDOT Engineering District:				6		Checked By:			1	
					Ager	ncy/Company Na	me:	H&I	<u> </u>	
ersection & Ap	proach Des	scription: Stu	ımp Road & P	rivate Drivewa	y/Jughandle	,				
	Analysi	is Period:	2023	Build]	Number of	Approach	Lanes:	1	
Design Hour: Intersection Control: Posted Speed Limit (MPH): Type of Terrain:				ak Hour		Undivided or Divided Highway: Undivided				
				nalized					····	
				35	_	I -fe B!-be T			e of Ana ft Turn La	
	Type of	r rerrain:		vel	<u> </u>	Left or Right-Tur	II Lalle Alla	iiysisr: Le	it fulli La	ane
			St	VOLUME			Ale Wight			
· · · · · · · · · · · · · · · · · · ·				eft Turn Lane		culations				
Movemer	Left	Include? Yes	Volume 15	% Trucks 0.0%	PCEV 15		A di	ancina Valun	na.	400
Advancing	Through	res	381	2.0%	385			vancing Volun oposing Volun		617
, www.nomg	Right	No No	0	0.0%	N/A			eft Turn Volur		15
	Left	No	0	0.0%	N/A					
Opposing	Through	-	595	4.0%	607					
	Right	Yes	10	0.0%	10	% Left T	urns in Ad	vancing Volur	ne:	3.75%
i i			Rig	ght Turn Lan	e Volume Ca	lculations				
Movemer		Include?	Volume	% Trucks	PCEV					
Advancina	Left	No -	0 595	0.0% 4.0%	N/A		الم ٥			N/A
Advancing	Through Right		· 1 0	0.0%	N/A N/A			vancing Volur ht Turn Volur		N/A N/A
Lei	t Turri La	ne Warrant]		Applicable Wa		e Warrant F	/A	7
Applicable \	Narrant Fi	gure: Fi	gure 1							_]
Applicable \			No.]]		w	arrant Me	+2· N	/Δ	┙
	Warrant Fi		No	 	NOTH CALL		arrant Me	nt?: N	/A	
	Warrant N	Viet?:	No TURN		NGTH CAL	w CULATIONS	arrant Me	et?: N	/A	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Warrant N	Met?:	No TURN Unsignalize		NGTH CAL		arrant Me	et?: N	/A	
lı sign Hour Volu	Warrant N	Met?:	No TURN		NGTH CAL		arrant Me	et?: N	/A	
lı sign Hour Voluı Cycles P	Warrant N	Vet?: Control: ing Lane: ssumed):	No TURN Unsignalize 15					et?: N	/A	
lı sign Hour Voluı Cycles P	Warrant M ntersection me of Turni er Hour (As	Vet?: Control: ing Lane: ssumed):	No TURN Unsignalize 15 60 40		Average # 0	CULATIONS of Vehicles/Cycle			/A	
lı sign Hour Voluı Cycles P	Warrant M intersection me of Turni er Hour (As Per Hour (If	Ocontrol: ing Lane: ssumed): Known):	No TURN Unsignalize 15 60 40	ed	Average # 0 ication 46, Exl Spee	CULATIONS of Vehicles/Cycle	:		<u>/A</u>	and a second second
lı sign Hour Voluı Cycles P	Warrant M intersection me of Turni er Hour (As Per Hour (If	Vet?: Control: ing Lane: ssumed):	No TURN Unsignalize 15 60 40	PennDOT Publ	Average # 6 ication 46, Exl Spee 4 Turn Den	of Vehicles/Cycle hibit 11-6 d (MPH) 0-45 hand Volume	:	N/A 0-60	<u>/A</u>	and American
lı sign Hour Voluı Cycles P	Marrant M intersection me of Turni er Hour (As Per Hour (If	Met?: I Control: ing Lane: ssumed): Known):	No TURN Unsignalize 15 60 40 rol High	PennDOT Publ	Average # 6 lication 46, Exh Spee 4 Turn Den High	of Vehicles/Cycle hibit 11-6 d (MPH) 0-45 hand Volume Low	: 50	N/A 0-60	<u>/A</u>]	
lı sign Hour Voluı Cycles P	warrant M ntersection me of Turni er Hour (As Per Hour (If	Ocontrol: ing Lane: ssumed): Known):	No TURN Unsignalize 15 60 40	PennDOT Publ	Average # 6 ication 46, Exl Spee 4 Turn Den	of Vehicles/Cycle hibit 11-6 d (MPH) 0-45 hand Volume	:	N/A 0-60	/A]	and the second
lı sign Hour Voluı Cycles P	warrant M ntersection me of Turni er Hour (As Per Hour (If	Met?: I Control: ing Lane: ssumed): Known): Of Traffic Cont	No TURN Unsignalize 15 60 40 rol High	PennDOT Pub 25-35 Low A	Average # 6 ication 46, Exh Spee 4 Turn Den High B or C C	of Vehicles/Cycle hibit 11-6 d (MPH) 10-45 Low B or C B	Figh B or C B or C	N/A D-60 Low B or C B		
lı sign Hour Voluı Cycles P	warrant M ntersection me of Turni er Hour (As Per Hour (If	Met?: I Control: ing Lane: ssumed): Known): Of Traffic Cont	No TURN Unsignalize 15 60 40 rol High	PennDOT Pub 25-35 Low A	Average # 6 ication 46, Exh Spee 4 Turn Den High B or C C	of Vehicles/Cycle hibit 11-6 d (MPH) 0-45 hand Volume Low B or C B ength, Condition	High Bor C Bor C	N/A -60 Low B or C B N/A	Feet	
lı sign Hour Voluı Cycles P	warrant M ntersection me of Turni er Hour (As Per Hour (If	Met?: I Control: ing Lane: ssumed): Known): Of Traffic Cont	No TURN Unsignalize 15 60 40 rol High	PennDOT Pub 25-35 Low A	Average # 6 ication 46, Exh Spee 4 Turn Den High B or C C	of Vehicles/Cycle hibit 11-6 d (MPH) 10-45 Low B or C B	High Bor C Bor C	N/A Low B or C B N/A N/A		en e
lı sign Hour Voluı Cycles P	warrant M ntersection me of Turni er Hour (As Per Hour (If	Met?: I Control: ing Lane: ssumed): Known): Of Traffic Cont	No TURN Unsignalize 15 60 40 rol High	PennDOT Pub 25-35 Low A	Average # 6 ication 46, Exh Spee 4 Turn Den High B or C C	of Vehicles/Cycle hibit 11-6 d (MPH) 0-45 hand Volume Low B or C B ength, Condition	Sign Bor C Bor C nn A:	N/A -60 Low B or C B N/A	Feet	and Annual Confession
lı sign Hour Voluı Cycles P	warrant M ntersection me of Turni er Hour (As Per Hour (If	Met?: I Control: ing Lane: ssumed): Known): Of Traffic Cont	No TURN Unsignalize 15 60 40 rol High	PennDOT Publ 25-35 Low A A Left Turn La	Average # 6 ication 46, Exh Spee Turn Den High B or C C	of Vehicles/Cycle hibit 11-6 d (MPH) 0-45 hand Volume B or C B ength, Conditio	High Bor C Bor C n A: n B: n C:	N/A Low B or C B N/A N/A	 	
lı sign Hour Voluı Cycles P	warrant M ntersection me of Turni er Hour (As Per Hour (If	Met?: I Control: ing Lane: ssumed): Known): Of Traffic Cont	No TURN Unsignalize 15 60 40 rol High	PennDOT Publ 25-35 Low A A Left Turn La	Average # 6 ication 46, Exh Spee Turn Den High B or C C	of Vehicles/Cycle hibit 11-6 d (MPH) 0-45 land Volume Low B or C B or C Conditio Conditio	High B or C B or C n A: n B: n C: gth:	N/A D-60 Low B or C B N/A N/A N/A N/A	Feet Feet Feet Feet	
lı sign Hour Voluı Cycles P	Marrant M ntersection me of Turni er Hour (As Per Hour (If Type o	Met?: In Control: Ing Lane: Ing Lan	No TURN Unsignalize 15 60 40 rol High	PennDOT Publ 25-35 Low A A Left Turn La	Average # 6 ication 46, Exh Spee Turn Den High B or C C	of Vehicles/Cycle hibit 11-6 d (MPH) 0-45 land Volume Low B or C B or C Conditio Conditio	High B or C B or C n A: n B: n C: gth:	N/A D-60 Low B or C B N/A N/A N/A	Feet Feet Feet Feet	



Figure 1. Warrant for left turn lanes on two-lane roadways (speeds to 35 mph, unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)

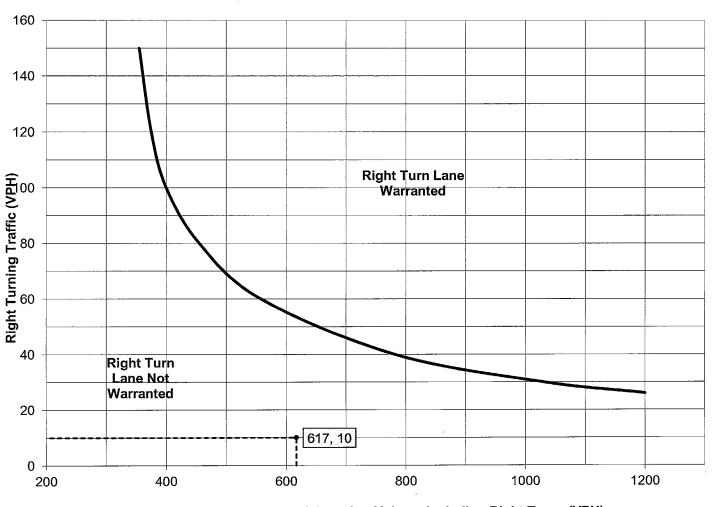


Turn Lane Warrant and Length Analysis Workbook

Municipality: County: PennDOT Engineering District:			Montgomery Township Montgomery County 6		_	Analysis Conduct		12/21/ AU	
					_	Conduct	AU		
renilibul	rugmeerin	8 DISHING			i Ager	cneck ncy/Company	-	H8	
tarcastia- G A	nnroad D	rerintian C:	on Dood O	Private Dates	-	71 ==p=)			
tersection & A	իխլսգ ւ ը D6	scription: Stur	iih uosa & l	Tivate Drivewa	iy/Jugnandie				
	Analys	is Period:		Build			of Approach		1
Design Hour: Intersection Control: Posted Speed Limit (MPH): Type of Terrain:				ak Hour		Undivided o	r Divided Hi	ghway:	Undivided
				nalized 35				T 7	pe of Analysis
			Level			Left or Right-T	urn Lane An		ight Turn Lane
				VOLUME	CALCULAT				
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Moveme	ent	Include?	Volume	% Trucks	PCEV				
	Left	Yes	15	0.0%	N/A		Ac	dvancing Volu	ıme: N/A
Advancing	Through		381	2.0%	N/A		0	pposing Volu	ıme: N/A
	Right	No	0	0.0%	N/A		L	eft Turn Volu	ıme: N/A
0	Left	No	0	0.0%	N/A				
Opposing	Through Right	- Yes	595 10	4.0% 0.0%	N/A N/A	% Lef	t Turns in Ac	dvancing Volu	ıme: N/A
	1				e Volume Ca				
Moveme	ent	Include?	Volume	% Trucks	PCEV	,			
	Left	No	0	0.0%	N/A				<u></u>
			=	1 200		Advancing Volume:			617
Advancing	Through Right	-	595 10	4.0% 0.0%	607 10			dvancing Volu ght Turn Volu	
Advancing			10	0.0%		FINDINGS	Ri	_	
	Right	- - nne Warrant I	10 TUF	0.0%	10	2	Ri	_	ıme: 10
L	Right eft Turn La	nne Warrant	10 TUF Findings	0.0%	10	2	Ri ht Turn Lar	ght Turn Volu	me: 10
	Right eft Turn La Warrant F	ine Warrant	10 TUF Indings	0.0%	10	Rigi Applicable V	Rij ht Turn Lar Warrant Fig	ght Turn Volune Warrant I	Findings ure 9
L	Right eft Turn La	ine Warrant	TUF Findings N/A N/A	0.0% O.0% O.	VARRANT	Rigi Applicable V	Ri ht Turn Lar Varrant Fig Warrant M	ght Turn Volune Warrant I	me: 10
L	Right eft Turn La Warrant F	ine Warrant	TUF Findings N/A N/A	0.0% O.0% O.	10	Rigi Applicable V	Ri ht Turn Lar Varrant Fig Warrant M	ght Turn Volune Warrant I	Findings ure 9
L _i Applicable	Right eft Turn Le Warrant F Warrant	ane Warrant igure: Met?:	TUFFINDINGS N/A N/A TURN Unsignalize	0.0% RN LANE W	VARRANT	Rigi Applicable V	Ri ht Turn Lar Varrant Fig Warrant M	ght Turn Volune Warrant I	Findings ure 9
Lo Applicable	Right eft Turn La Warrant F Warrant Intersection ume of Turn	igure:	TUF Findings N/A N/A TURN Unsignalize 10	0.0% RN LANE W	VARRANT	Rigi Applicable V	Ri ht Turn Lar Varrant Fig Warrant M	ght Turn Volune Warrant I	Findings ure 9
Lo Applicable sign Hour Vol Cycles	Right eft Turn Le Warrant F Warrant	me Warrant igure: Met?: n Control: ning Lane: assumed):	TUFFINDINGS N/A N/A TURN Unsignalize	0.0% RN LANE W	VARRANT	Rigi Applicable V	nt Turn Lar Warrant Fig Warrant M	ght Turn Volune Warrant I	Findings ure 9
Lo Applicable sign Hour Vol Cycles	Right eft Turn Le Warrant F Warrant Intersection ume of Turn Per Hour (A	me Warrant igure: Met?: n Control: ning Lane: assumed):	TURN Unsignalize 10 60 40	0.0% RN LANE W J LANE LEF	VARRANT NGTH CALC	Rigi Applicable V CULATION of Vehicles/Cy	nt Turn Lar Warrant Fig Warrant M	me Warrant I ure: Fig	Findings ure 9
Lo Applicable sign Hour Vol Cycles	Right eft Turn Le Warrant F Warrant Intersection ume of Turn Per Hour (A	me Warrant igure: Met?: n Control: ning Lane: assumed):	TURN Unsignalize 10 60 40	0.0% RN LANE W LANE LEI ed PennDOT Pub	Average # c	Rigi Applicable V CULATION of Vehicles/Cychibit 11-6 ed (MPH)	Right Turn Lar Warrant Fig Warrant M	me Warrant I ure: Fig	Findings ure 9
Lo Applicable sign Hour Vol Cycles	Right eft Turn Le Warrant F Warrant Intersection ume of Turn Per Hour (F	me Warrant igure: Met?: n Control: ning Lane: assumed):	TURN Unsignalize 10 60 40	0.0% RN LANE W J LANE LEF	Average # colication 46, Extremely Spee	Rigi Applicable V CULATION of Vehicles/Cychibit 11-6 od (MPH)	Right Turn Lar Warrant Fig Warrant M	me Warrant I ure: Fig	Findings ure 9
Lo Applicable sign Hour Vol Cycles	Right eft Turn Le Warrant F Warrant Intersection ume of Turn Per Hour (F	me Warrant igure: Met?: n Control: ning Lane: assumed): f Known):	TURN Unsignalize 40 High	O.0% RN LANE W LANE LEF ed PennDOT Pub 25-35	Average # c lication 46, Ext Spee 4 Turn Dem High	Rigi Applicable V CULATION of Vehicles/Cychibit 11-6 ad (MPH) 10-45 nand Volume Low	Rij	me Warrant I ure: Fig et?: I	Findings ure 9
Lo Applicable sign Hour Vol Cycles	Right eft Turn Le Warrant F Warrant Intersection ume of Turn Per Hour (F) Per Hour (F)	nne Warrant igure: Met?: n Control: ning Lane: ssumed): f Known): of Traffic Control	TURN Unsignalize 10 60 40 High	O.0% RN LANE W J LANE LEI ed PennDOT Pub 25-35 Low A	Average # C lication 46, Exh Spee Turn Den High B or C	Rigi Applicable V CULATION of Vehicles/Cynhibit 11-6 and (MPH) 10-45 nand Volume Low B or C	Rij	me Warrant I ure: Fig et?: I N/A 60-60 Low B or C	Findings ure 9
Lo Applicable sign Hour Vol Cycles	Right eft Turn Le Warrant F Warrant Intersection ume of Turn Per Hour (F) Per Hour (F)	me Warrant igure: Met?: n Control: ning Lane: assumed): f Known):	TURN Unsignalize 40 High	PennDOT Pub 25-35 Low A A	Average # 6 Lication 46, Exh Spee 4 Turn Den High B or C C	Rigi Applicable V CULATION of Vehicles/Cychibit 11-6 ad (MPH) 10-45 nand Volume Low B or C B	Narrant Fig Warrant M S Cle: High Bor C Bor C	ne Warrant I ure: Fig let?: I N/A 10-60 Low B or C B or C	Findings ure 9
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Lo Applicable esign Hour Vol Cycles	Right eft Turn Le Warrant F Warrant Intersection ume of Turn Per Hour (F) Per Hour (F)	nne Warrant igure: Met?: n Control: ning Lane: sssumed): f Known): of Traffic Control	TURN Unsignalize 10 60 40 High	O.0% RN LANE W LANE LEI ed PennDOT Pub 25-35 Low A Right Turn La	Average # 6 Average # 6 Lication 46, Exh Spee 4 Turn Den High B or C C Anne Storage Le	Rigi Applicable V CULATION of Vehicles/Cynhibit 11-6 ad (MPH) 10-45 nand Volume Low B or C B ength, Condit Condit	Narrant Fig Warrant M S cle: High B or C B or C clion A: clion B: clion C: ength:	me Warrant I ure: Fig et?: I N/A Low B or C B N/A N/A N/A	Findings ure 9 No Feet Feet Feet Feet Feet



Figure 9. Warrant for right turn lanes on two-lane roadways (40 mph or lower speeds, unsignalized and signalized intersections)



Volume Data Point

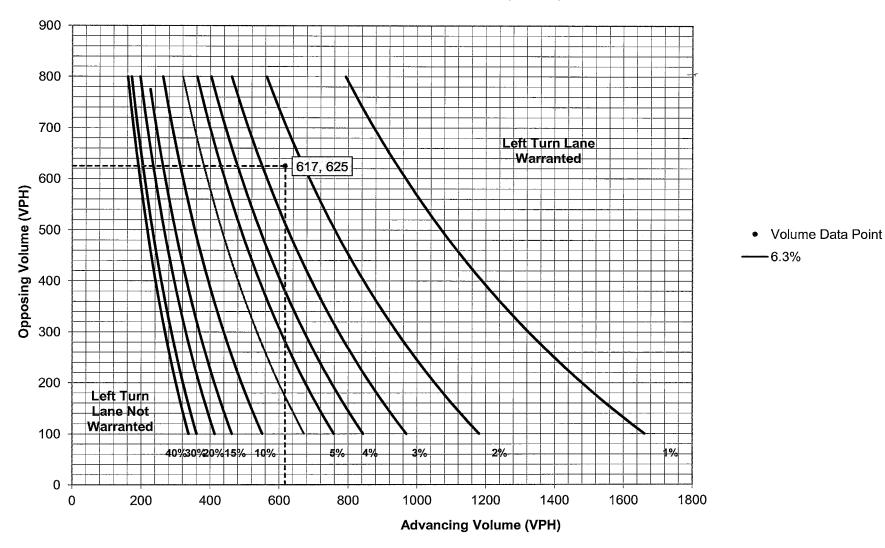
Advancing Volume including Right Turns (VPH)

Turn Lane Warrant and Length Analysis Workbook

Municipality: N				ry Township	4	Analysis			./2020	
DannDOT !	- - - -	· -		ery County 6	\dashv	Conducted By: AUH Checked By: AUH				
PennDOT Engineering District:				<u> </u>	l Age	ncy/Company N	· —		ун &К	
ersection & Ap	proach Des	scription: St	ump Road & P	'rivate Drivewa		· · · · · · · · · · · · · · · · · · ·				
·		, L	•							
Analysis Period: Design Hour: Intersection Control: Posted Speed Limit (MPH): Type of Terrain:				Build	\exists	Number of Approach Lanes: 1 Undivided or Divided Highway: Undivided				
				ak Hour nalized	_					
				35	\dashv			T.	pe of Analys	is
				evel	J	Left or Right-To	urn Lane An		Left Turn Lane	
				VOLUME	CALCULA	TIONS				
			Le	eft Turn Lane	Volume Ca	Iculations				
Movemen	t	Include?	Volume	% Trucks	PCEV					
	Left	Yes	39	0.0%	39		Ad	vancing Volu	ıme:	617
Advancing	Through		575	1.0%	578			pposing Volu		625
	Right	No	0	0.0%	N/A		Le	eft Turn Volu	ıme:	39
Onnosina	Left	No -	0	0.0%	N/A					
Opposing	Through Right	Yes	603 15	2.0% 0.0%	610 15	% Left	: Turns in Ad	vancing Volu	ıme: 6.	.32%
			'	ght Turn Lan						
Movemen	it T	Include?	Volume	% Trucks	PCEV	······································				
	Left	No	0	0.0%	N/A					
Advancing	Through	-	603	2.0%	N/A		Ad	vancing Volu	ıme: I	N/A
	Right	-	15	0.0%	N/A					
			TUR	IN LANE W	/ARRANT	FINDINGS				
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Applicable V	Varrant Fi	gure: F	t Findings igure 1 Yes			Righ Applicable W	Varrant Figu Warrant Me	e Warrant l	Findings	
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Applicable V	Varrant Fi Warrant N	gure: Fi	t Findings igure 1 Yes TURN Unsignalize	LANE LEN		Righ Applicable W	Varrant Figu Warrant Me	e Warrant l	Findings	
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Applicable V Ir sign Hour Volur Cycles P	Varrant Fi Warrant N	gure: Fi	t Findings igure 1 Yes TURN Unsignalize	LANE LEN	NGTH CAL	Righ Applicable W	Varrant Figu Warrant Me	e Warrant I	Findings	
Applicable V Ir ign Hour Volur Cycles P	Warrant Fi	gure: Fi	t Findings igure 1 Yes TURN Unsignalize 39 60 40	LANE LEN	Average # 6	Righ Applicable W CULATION: of Vehicles/Cychibit 11-6	Varrant Figu Warrant Me	e Warrant ure: N	Findings	
Applicable V Ir sign Hour Volur Cycles P	Warrant Fi Warrant M ntersection ne of Turn er Hour (As er Hour (If	gure: Fi Viet?: Control: ing Lane: ssumed): Known):	t Findings igure 1 Yes TURN Unsignalize 39 60 40	LANE LEN	Average # 6 ication 46, Exi	Righ Applicable W CULATION: of Vehicles/Cyc	Varrant Figu Warrant Me S	e Warrant Ire: N et?: N	Findings	
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Figure 1. Warrant for left turn lanes on two-lane roadways (speeds to 35 mph, unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)

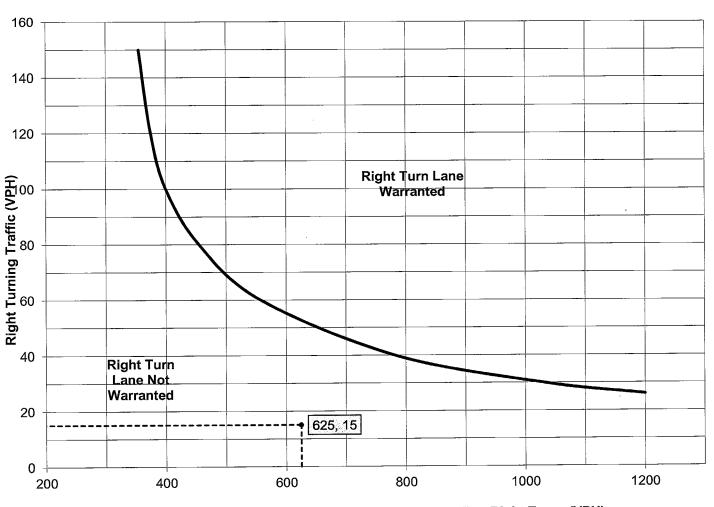


Turn Lane Warrant and Length Analysis Workbook

Municipality:				ry Township		Analysis			21/2020	
	County: Montgomery County PennDOT Engineering District: 6			_	Conducted By:					
rennout Engineering District:[6	」	Checked By: Agency/Company Name:			AUH H&K	
		<u></u>			Agen	icy/Company r	vame:		TI SUK	
tersection & Ap	proach Des	scription: Stu	mp Road & F	Private Drivewa	ay/Jughandle					
Analysis Period: Design Hour:			2023	3 Build		Number of Approach Lanes: 1				
				ak Hour	Undivided or Divided Highway: Undivided					
Intersection Control:				nalized	_			-		
Posted Speed Limit (MPH): Type of Terrain:				35 evel		Left or Right-T	urn Lane Δn		Type of Analys Right Turn Lan	
				VOLUME	 CALCULAT					343 Mg
			Le	<u> </u>	Volume Cal	AUTO CATALONIA CANALA	1804861010		4(g) kto jage; \$565.	
Movemer	nt	Include?	Volume	% Trucks	PCEV		······································	· .		
	Left	Yes	39	0.0%	N/A		Ac	lvancing Vo	lume:	N/A
Advancing	Through	-	575	1.0%	N/A			pposing Vo	lume:	N/A
	Right	No	0	0.0%	N/A		L	eft Turn Vo	lume:	N/A
Onnasi	Left	No	0	0.0%	N/A					
Opposing	Through Right	- Yes	603 15	2.0% 0.0%	N/A N/A	% I aft	Turns in Ac	dvancing Vo	olume:	N/A
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Figure 9. Warrant for right turn lanes on two-lane roadways (40 mph or lower speeds, unsignalized and signalized intersections)



Volume Data Point

Advancing Volume including Right Turns (VPH)





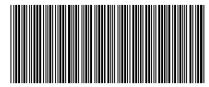
RECORDER OF DEEDS MONTGOMERY COUNTY Nancy J. Becker

One Montgomery Plaza Swede and Airy Streets ~ Suite 303 P.O. Box 311 ~ Norristown, PA 19404 Office: (610) 278-3289 ~ Fax: (610) 278-3869

DEED BK 5762 PG 02158 to 02163

INSTRUMENT #: 2010026098

RECORDED DATE: 04/01/2010 11:15:48 AM



MONTGOMERY COUNTY ROD

OFFICIAL RECORDING COVER PAGE Page					
Document Type: Deed	Transaction #:	1217886 - 1 Doc(s)			
Document Date: 09/15/2009	Document Page Count:	5			
Reference Info:	Operator Id:	sford			
RETURN TO: (Mail)	SUBMITTED BY:				
NEIL HOPKINS	NEIL HOPKINS				
374 MAPLE AVE	374 MAPLE AVE				
DOYLESTOWN PA 18901	DOYLESTOWN PA 18901				

* PROPERTY DATA:

46-00-00124-00-1 Parcel ID #: **BETHLEHEM PIKE** Address:

Municipality: Montgomery Township (100%)

School District: North Penn * ASSOCIATED DOCUMENT(S):

CONSIDERATION/SECURED AMT:	\$1.00	DEED BK 5762 PG 02158 to 02163

FEES / TAXES:

Recording Fee:Deed \$65.00 Additional Pages Fee \$2.00 Affordable Housing Pages \$2.00 Total: \$69.00 Recorded Date: 04/01/2010 11:15:48 AM

I hereby CERTIFY that this document is recorded in the Recorder of Deeds Office in Montgomery County, Pennsylvania.



Nancy J. Becker Recorder of Deeds

PLEASE DO NOT DETACH

THIS PAGE IS NOW PART OF THIS LEGAL DOCUMENT

NOTE: If document data differs from cover sheet, document data always supersedes. *COVER PAGE DOES NOT INCLUDE ALL DATA, PLEASE SEE INDEX AND DOCUMENT FOR ANY ADDITIONAL INFORMATION.

JG

RECORDER OF DEEDS MONTGOMERY COUNTY

2010 APR -1 AM 11: 10

MONTGOMERY COUNTY COMMISSIONERS REGISTRY 46-00-00124-00-1 MONTGOMERY **BETHLEHEM PIKE** \$10.00 HOPKINS NEIL C

B 013 U 017 L 2309 DATE: 04/01/2010

Prepared by: GREGORY KESSELL

15 JOHN DYER WAY DOYLESTOWN, PA

Return to: NEIL HOPKINS
374 MARLE AVE
DOYLESTOWN, PA 18901

Parcel # 46-00-00124-00-1

SPECIAL WARRANTY DEED

THIS DEED is made the ________ day of September, in the year Two Thousand nine (2009) between NEIL HOPKINS, an individual residing at 374 Maple Avenue, Doylestown, Bucks County, Pennsylvania, 18901 ("Grantor"),

AND

NEIL C. HOPKINS, an adult individual, of 374 Maple Ave., Doylestown, Bucks County, Pennsylvania 18901, and **GREGORY KESSELL**, an individual residing at 15 John Dyer Way, Doylestown, Bucks County, Pennsylvania, 18902 ("**Grantee"**),

WITNESSETH, that in consideration of One (\$1.00) Dollar, in hand truly paid by Grantee at or before the sealing and delivery of these presents, the receipt whereof is hereby acknowledged, the Grantor does hereby grant and convey to the Grantee, their heirs and assigns,

ALL THAT CERTAIN tract, piece or parcel of land situate, lying and being in the Township of Montgomery, County of Montgomery and Commonwealth of Pennsylvania, and known as Parcel Number 46-00-00124-00-1 and being the premises that Montgomery Court, Inc, a corporation, by Special Warranty Deed dated June 23, 2001, recorded in the Office of the Recorder of Deeds of Montgomery County, Pennsylvania in Deed Book 5364 Page 2194, granted and conveyed unto Neil Hopkins in fee and bounded and described as follows, to wit:

BEGINNING at a point, a corner on the line of land now or late of Lewis J. and Florence Strong, said point of beginning being North 37 degrees, ten minutes, thirty seconds East, six hundred twenty feet from a point on the middle line of Bethlehem Pike (sixty feet wide), said point being a corner between land now or late of Mary L. Post and land now or late of Frank Crisci; thence along lot No. 4-B the three following courses and distances to wit: (1) North sixty seven degrees, thirty minutes West, three hundred ten feet to a point, a corner; (2) North twenty two degrees, thirty minutes East, one hundred twenty feet to a point, a corner; (3) North sixty seven degrees, thirty minutes West, three hundred forty eight and ninety two one hundredths feet crossing a small creek to a point, a corner in the middle line of a strip reserved for change of creek channel, said last mentioned being on line of lot no. 3: thence along the same and along said strip reserved for change of creek channel the following courses and distances, to wit: (1) North forty seven degrees, eight minutes East, one hundred fifty six and forty five one hundreths feet to a point, a corner in the line of land now or late of William Weidner, thence along the same, South fifty degrees, thirty six minutes East, six hundred ninety six and sixty one hundreths feet to a point, a corner; thence along land now or late of Lewis J. and Florence Strong, South thirty seven degrees, ten

THIS TRANSACTION IS TAX EXEAPT. DEED GOING FROM FATHER-IN-LAW TO FATHER-IN-LAW & SON-IN-LAW. minutes thirty seconds West, six hundred twenty five and fifty eight one hundredths feet to the point and place of beginning.

TOGETHER WITH all and singular the buildings, improvements, ways, waters, water courses, rights, liberties, privileges, hereditaments and appurtenances whatsoever thereunto belonging, or in anywise appertaining, and the reversions and remainders, rents, issues and profits thereof; and all the estate, right, title, interest, property, claim and demand whatsoever of the Grantor, its successors and assigns, in law, equity or otherwise, of, in and to the same, and every part thereof.

TO HAVE AND TO HOLD the lot or piece of ground above described, with the improvements thereon erected, hereditaments and premises hereby granted or mentioned, and intended so to be, with the appurtenances, unto the Grantee, his heirs and assigns to and for the only proper use and behoof of the Grantee, his heirs and assigns, forever.

TOGETHER, with the free and common use, right, liberty and privilege and right of ingress and egress over parcel 46-00-00118-0007 as set forth in a certain Declaration of Easement dated June 4, 2001 and recorded in the Recorder of Deeds Office for the County of Montgomery in Deed Book 5362 Page 1148.

TOGETHER ALSO, with the free and common use, right, liberty and privilege and right of ingress and egress as set forth in a certain deed of Right of Way dated January 28, 1992 and recorded in the Recorder of Deeds Office for the County of Montgomery in Deed Book 5001 Page 1216.

UNDER AND SUBJECT to all matters of record affecting title to said premises, including without limitation, all

THE GRANTOR, for itself, its successors and assigns, does by these presents covenant, grant and agree to and with the Grantee, his heirs and assigns, that it, the Grantor, and its successors and assigns, all and singular the hereditaments and premises hereinabove described and granted, or mentioned, and intended so to be.

with the appurtenances, unto the Grantee, his heirs and assigns, against it, the Grantor and its successors and assigns, and against all and every other person or persons whomsoever, lawfully claiming or to claim the same, or any part thereof,

by, from or under Grantor,

SHALL AND WILL SPECIALLY WARRANT AND FOREVER DEFEND.

IN WITNESS WHEREOF, the Grantor has caused this Deed to be executed by its Executive Vice President and attested by its Assistant Secretary, on the day and year first above written.

WITNESSETA

NEIL HODKING

COMMONWEALTH OF PENNSYLVANIA

: SS:

COUNTY OF BUCKS

2009

On this the 15th day of September before me, the subscriber, a duly authorized Notary Public, personally appeared NEIL HOPKINS, an individual known to me (or satisfactorily proven) to be the person who signed his name to the within instrument, being authorized to do so, for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

8. Zeblocki

Notary Public

My Commission Expires:

COMMONWEALTH OF PENNSYLVANIA

Notarial Seal Rebecca S. Zablocki, Notary Public Doylestown Boro, Bucks County My Commission Expires Aug. 10, 2010

Member, Pennsylvania Association of Notaries

I hereby certify that the correct address of the Grantee herein is:

Neil Hopkins: 374 Maple Ave.

Doylestown, PA 18901

Gregory Kessell: 15 John Dyer Way Doylestown, PA 18902

AGREEMENT OF SALE

THIS AGREEMENT is made this 7th day of July, 2020, by and between Neil C. Hopkins and Gregory Kessell (collectively, "Seller") and COMMERCE PURSUIT CAPITAL, L.P., acting on behalf of a nominee, a yet-to-be formed single purpose entity to be formed prior to Closing ("Buyer"). For purposes of this Agreement, the term "Effective Date" shall mean the date on which Buyer receives from Seller a fully executed copy of this Agreement provided such date is a Business Day, and if such date is not a Business Day, then the Effective Date shall be the first Business Day immediately following such date.

In consideration of the mutual covenants and agreements contained herein, and intending to be legally bound hereby, the parties hereto agree as follows:

1. Agreement to Sell and Purchase. Seller agrees to sell to Buyer, and Buy Seller, subject to the terms and conditions of this Agreement,	yer agrees to purchase from that certain tract
or parcel of land consisting of approximately 9.43 acres and known as tax parcel number	46-00-00124-00-1 (the
"Overall Parcel"), located in Montgomery Township, Montgomery County, Pennsylvania	, having a street address of
	ore particularly depicted
on Exhibit "A", including any buildings and other improvements located thereon (the "Im	provements"), together
with (a) any land lying in the bed of any street, road or alley, open or proposed, in front, a	butting or adjoining the
subject property, (b) any easement, privilege, license or right-of-way inuring to the benefit and (c) the appurtenances and hereditament belonging or otherwise pertaining to the subject the "Property").	

2.	Purchase	Price

3. <u>Closing</u>. Closing (the "Closing") hereunder shall occur on a date not later than sixty (60) days after the earlier to occur of (a) the Development Approval Deadline Date (hereinafter defined), or (b) receipt of the

Witness:

Witness:

Witness:

Witness:

Witness:

Witness:

Neil C. Hopkins

BUYER:

COMMERCE PURSUIT CAPITAL, L.P.

By:

Commerce Operating GP. U.C.

By:

Name: Jesse Kovach

Neil C. Hopkins

By:

Commerce Operating GP. U.C.

Name: John A. Westurn

Title: Managing Munifer

MONTGOMERY TOWNSHIP BOARD OF SUPERVISORS

BOARD ACTION SUMMARY

Item # 7a.

SUBJECT:

Consider Construction Escrow Release 10 / Start of 18-month

Maintenance Period – Maple Dr/Crystal Road – Firefox Phase 3 -

LDS 639

MEETING DATE:

February 8, 2021

BOARD LIAISON

Tanya C. Bamford, Chair

INITIATED BY:

Bruce Shoupe, Director of Planning and Zoning

BACKGROUND:

Attached is a construction escrow release requested by Crystal Road Enterprise, LLC for Firefox Phase 3 as recommended by the Township Engineer.

The original amount of the escrow for Phase 3 was \$876,309.28, held as Letter of Credit with the Township. This release for is in the amount of \$119,948.41. The new balance would be \$0.00,

ALTERNATIVES/OPTIONS:

Approve or not approve the construction escrow release.

RECOMMENDATION:

That this construction escrow be released.

MOTION/RESOLUTION:

MOTION to authorize a construction escrow release for the Crystal Road Enterprise, LLC, contingent upon the developer satisfying all outstanding Township invoices related to this project, and receipt of an approved maintenance security by the Township Solicitor in the amount of \$119,948.41.

MOTION	SI	ECOND _	
		_	



VIA EMAIL

February 3, 2021

File No. 2012-10074

Ms. Carolyn McCreary, Township Manager Montgomery Township 1001 Stump Road Montgomeryville, PA 18936

Reference:

Maple Dr / Crystal Rd Townhouse Project - LD/S #639

Financial Security Release 10

Dear Carolyn:

We have received and reviewed the Request for Escrow Release for the above-referenced project. This letter is to certify that the improvements attached to this letter in the amount of \$119,948.41 have been completed. Please find enclosed a copy of our escrow calculations and the application for release of funds for your use. We recommend that this release be contingent upon the developer satisfying all outstanding Township invoices related to this project and Township receipt of maintenance security in the amount of \$119,496.72.

Please be advised that these improvements will be subject to a final inspection at the end of the maintenance period. Any deficiencies will be required to be corrected by the developer.

Should you have any further questions or require any additional information, please do not hesitate to contact our office.

Sincerely,

James P. Dougherty, P.E. Senior Project Manager

Gilmore & Associates, Inc.

JPD/sl

Enclosures:

Release of Escrow Form, Escrow Status Report, (2/3/21)

CC:

Bruce S. Shoupe, Director of Planning and Zoning

Brian C. Grant - Select Properties

Stephen Mansfield, Mansfield Development LLC

Valerie Liggett, R.L.A., Senior Landscape Architect - Gilmore & Associates, Inc.

Damon A. Drummond, P.E., PTOE, Senior Transportation Engineer - Gilmore & Associates, Inc.

65 East Butler Avenue | Suite 100 | New Britain, PA 18901 | Phone: 215-345-4330 | Fax: 215-345-8606

RELEASE OF ESCROW FORM

James P. Dougherty, P.E. Date: 01/22/2021
Senior Project Manager Gilmore & Associates, Inc. 65 East Butler Avenue, Suite 100
New Britain, PA 18901 215-345-4330
Development: Maple Dr / Crystal Rd Townhouse Project - LD/S #639 G&A Project #: 2012-10074 Release #: 10
Dear Mr. Dougherty:
This is an escrow release request in the amount of with the quantities noted. \$119,948.41 . Enclosed is a copy of our escrow spreadsheet with the quantities noted.
ESCROW RELEASE REQUESTS ARE LIMITED TO ONE PER MONTH.
Ms. Carolyn McCreary Date: 02/03/2021
Township Manager Montgomery Township
1001 Stump Road
Montgomeryville, PA 18936
Dear Ms. McCreary:
We have reviewed the developer's request for an escrow release. We therefore, recommend that be released. These improvements will be subject to a final observation prior to dedication and again at the end of the maintenance period. Any deficiencies will be required to be corrected by the developer. 2/3/2021
James P. Dougherty, P.E., SeniorProject Manager, Gilmore & Associates, Inc.
Resolution #
WHEREAS, a request for release of escrow was received from Crystal Road Enterprises, LLC
for Maple Dr / Crystal Rd Townhouse Project - LD/S #639 , in the amount of \$119,948.41 , on the
representation that work set forth in the Land Development Agreement to the extent has been completed and;
WHEREAS, said request has been reviewed by the Township Engineer who recommends release of \$119,948.41; NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of Montgomery Township that we do hereby authorize the Township are
release of \$119,948.41; in accordance with the developer's request, and the officers of the Township are
authorized to take the necessary action to obtain release of said sum.
BE IT FURTHER RESOLVED that Township records indicate that escrow has been deposited via with Montgomery Township in total sum of \$876,309.28 pursuant to a signed Land Development
with Montgomery Township in total sum of Agreement and that \$756,360.87 pursuant to a signed Land Development has previously been released from escrow. Therefore, the action of the Board
releasing said sum leaves a new balance of \$0.00 in escrow.
MOTION BY: VOTE:
SECOND BY:
DATED:
RELEASED BY:

Department Director

SUMMARY OF ESCROW ACCOUNT

RELEASE NO.: RELEASE DATE: 3-Feb-2021

Maple Dr / Crystal Rd Townhouse Project

ORIGINAL CONSTRUCTION AMOUNT: \$ 876,309.28

PROJECT NAME: PROJECT NO.: TOWNSHIP NO.:

2012-10074 Crystal Road Enterprises, LLC

AMOUNT OF THIS RELEASE: \$ 119,948.41

PROJECT OWNER:

LD/S #639

TOTAL CONSTRUCTION: \$ 796,644,80

TOTAL CONSTRUCTION CONTINGENCY (10%): \$ 79,664,48

TOTAL CONSTRUCTION ESCROW POSTED: \$ 876,309,28

ESCROW STATUS REPORT

Montgomery Township Univest National Bank Letter of Credit

TOTAL ENG/INSP/LEGAL (CASH ACCOUNT): \$ 39,900.00 TOTAL ADMINISTRATION (CASH ACCOUNT): \$ 5,000.00

PRIOR CONSTRUCTION RELEASED: \$ 756,360.87
TOTAL CONSTRUCTION RELEASED TO DATE: \$ 876,309.28

MUNICIPALITY: ESCROW AGENT: TYPE OF SECURITY: AGREEMENT DATE:

10-Oct-2014

MAINTENANCE BOND AMOUNT (15%): \$ 119,496,72

ESCROW TABULAT	ESCROW TABULATION						CURRENT RELEASE		RELEASED TO DATE		AVAILABLE FOR RELEASE		RELEASE REQ # 11
CONSTRUCTION ITEMS	UNITS	QUANTITY	UNIT PRICE		TOTAL AMOUNT	QUANTITY		OTAL OUNT	QUANTITY	TOTAL AMOUNT	QUANTITY	TOTAL AMOUNT	QUANTITY
EARTHWORK	LS	1	s 40 331 (no 9	40,331,00		s		1.00 \$	40,331.00		· .	
1. Clearing & Grubbing	CY	5,163			15,127.59		5	- 27	5,163,00 \$				
Strip Topsoil	CY	7.954			25,611.88		s		7,954.00 \$	25,611.88			
3. Cut Fill & Compact		6,150			1,414.50	9	Š	- 2	6,150.00 \$	1,414.50			
4, Grade	SY	6,150	φ U ₁₂	.5 4	1,414,00			- 1					
EROSION CONTROL					1								
Frosion & Sediment Controls					- 1		2.1	- 1	1.00 \$	3,392.00			
1. Construction Entrance	EΑ	1			3,392.00		3	ैं ।	620.00 \$		1	- 1	
2 18" Silt Fence	LF	620					\$	- 3	798.00 \$		1 3		
3. Super Silt Fence	LF	798	\$ 6.4		5,147.10		5		1.420.00 \$		ľ ŝ		
4 Tree Protection Fence	LF	1,420			2,186.80		5	+			1 3		
5 Temporary Vegetation - Excess Fill Piles	SY	4,850	\$ 0.3	29	1,406.50		5	3	4,850.00 \$	20 11	1 3		
6. Grade Swales #A,B,C,D,E,F	SY	1,230	\$ 0.5	55			\$	*	1,230.00 \$		1 3		
7. Swale Matting #A,B,C,D,E,F (North American Green S-150br)	SY	1,230	\$ 1.0	35	2,029.50		S		1,230.00		1 8		
8. Rock Filters	EA	2					\$		2.00 \$				
9 Permanent Rake & Vegelation (Lawn Area)	LS	1	\$ 4,000	00	\$ 4,000.00		S	- 3	1 00 \$	4,000.00	1 3		
Sediment Trap C											1 3	\$	_
	CY	240	\$ 3.	32	\$ 796.80		\$		240.00 \$				
Strip Topsoil Cut Fill & Compact	CY	771	\$ 3,	68	\$ 2,837.28		\$		771.00 \$				
	SY	1,072	S 0.	28	\$ 300.16		\$	25	1,072.00			\$	_
3. Grade 4. Core Cut & Fill Keyway	LF	250	\$ 10.	ов	5 2,520.00		\$		250.00				
	CY	240		24	\$ 1,017.60		\$	- 2	240.00			5	
5. Respread Topsoll	SY	202			5 96.96		\$		202.00			5	
6. Grade Spillway	SY	202		00	\$ 1,212.00		\$		202.00			\$	
7 Spillway Matting (North American Green C-125	SF	9,800	*		5 1,470.00	9,800,00	\$ 1	1,470.00	9,800.00			\$	
8 Permanent Rake & Vegetation (Meadow Mix)	EA	3,000			5 1,554.00		\$	- 1	1.00			5	
9 15" CMP Temporary Riser	LF	30			\$ 1,176.90		\$	196	30.00	1,176,90	1 1	5	
10. 18" RCP	LF	30	ψ 55		8 01/70							48	
 Outlet Structure w/Wier Wall and Precast Footer with Trash Reck, #23 	EA	4	c 2.081	00	5 3,081.00		5		1.00	3,081.00		\$	

SUMMARY OF ESCROW ACCOUNT

RELEASE NO .: RELEASE DATE: 3-Feb-2021

PROJECT NAME: PROJECT NO.; TOWNSHIP NO.; PROJECT OWNER:

Maple Dr / Crystal Rd Townhouse Project

TOTAL CONSTRUCTION: \$ 796,644,80

ORIGINAL CONSTRUCTION AMOUNT: \$ 876,309.28

2012-10074 LD/S #639

ESCROW STATUS REPORT

TOTAL CONSTRUCTION CONTINGENCY (10%): \$ 79,664,48
TOTAL CONSTRUCTION ESCROW POSTED: \$ 876,309,28

AMOUNT OF THIS RELEASE: \$ 119,948.41

Crystal Road Enterprises, LLC

TOTAL ENG/INSP/LEGAL (CASH ACCOUNT): \$ 39,900,00 TOTAL ADMINISTRATION (CASH ACCOUNT): \$ 5,000,00 PRIOR CONSTRUCTION RELEASED: \$ 756,360.87
TOTAL CONSTRUCTION RELEASED TO DATE: \$ 876,309.28

MUNICIPALITY: ESCROW AGENT: TYPE OF SECURITY: AGREEMENT DATE: Montgomery Township Univest National Bank Letter of Credit 10-Oct-2014

MAINTENANCE BOND AMOUNT (15%): \$ 119,496,72

ESCROW TABULAT	ION					CURRENT RELEASE		RELEASE	O TO DATE	AVAILABLE FOR RELEASE		RELEASE REQ # 11
			UNIT		TOTAL	QUANTITY	TOTAL AMOUNT	QUANTITY	TOTAL	QUANTITY	TOTAL AMOUNT	QUANTITY
CONSTRUCTION ITEMS	UNITS	QUANTITY	PRICE		AMOUNT	QUANTITY		2.00		-		C 4500010011
12. Antiseep Collars	EA				2,612.00		s -	1.00			9 9	
13. 18° DW Endwalls, #24	EA	1 1	,		1,500,00		\$	8.00			€ 1	
14 R-4 Rip Rap Dissipator	TON	8 :					\$	1.00			× 1	
15. Sediment Trap As-Built Plan	LS	1 :	500.0	0 \$	500,00		e :	1,00	, 000.00			
Rain Gardens #1,2,B1,C1							s -	450.00	1,494,00			
 Strip Topsoil - Rain Garden #1,2,B1,C1 	CY	450			1,494,00		S =	4.976.00			1	
2 Cut Fill & Compact - Rain Garden #1,2,B1,C1	CY	4,976			18,311,68		s -	1.825.00			* 1	
Grade - Rain Garden #1,2,81,C1	SY	1,825					•	450.00	20		- 1	
4 Respread Topsoil - Rain Garden #1,2,81,C1	CY	450			1,908.00	1.800.00	\$ 270.00	1,800,00] :		
 Permanent Rake & Vegetation (Meadow Mix) - RG #1,2,B1,C 		1,800				4.00		100		1 :	s 💲	
Rain Gardens # 1, 2, B1, B2 As-Built Plans	EA	4	250.0	U 3	1,000.00	4,00	\$ 1,000,00	,,,,,,	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
STORM SEWER								70.00	0 0 0 4 7 6 4	1 .		
1. 15" RCP	LF	76			2,347,64		\$ =	76,00				
2. 18" RCP	LF	751			22,627.63		\$	751.00			9 1	
3. 36" HDPE (Dual Runs) w/2a Mod 6" Under Pipe to 12" Over	LF	224			24,640.00		\$ =	224,00		1	6	
4. 48" HDPE Pipe w/2a Mod 6" Under Pipe to 12" Over	LF	80			7,112.80		\$	80,00		1 3		
 Typc C Inlet (Average Depth 3.84') #5,8,9,11,16 	EA	4			6,820,00		\$ -	4,00		1 :		
6. Type C inlet Mod (Average Depth 4.13') 42"x48"#15	EA	1	\$ 1,820.0	10 5	1,820,00		\$	1.00	\$ 1,820,00	2	5	
7. Type M Inlet Mod w/Weir Wall (Average Depth 4 48')							27			9	s a	
42"x48" #12	EA	1	\$ 2,075.0	00 5	3 2,075.00		\$ -	1,00	\$ 2,075,00	1	,	
8 Type M Inlet (Average Depth 4.23')#1,2,3,4,6,14,17-1									40.540.00	l		
17-2.17a,21	EA				18,513,00		5		5 18,513.00		\$ 6	
9 Type M Inlet (Average Depth 4.33') #7,10	EA				3,236,00		\$ -	2.00			š [
10 Type C Inlet Mod 24"x72"(Average Depth 7 18") #18-1,18-2	EA	2			6,058,00		s	2.00				-
11. Type C Inlet Mod (Average Depth 7.38')2'x12" #19	EΑ	1			\$ 3,571.00		\$ -	1.00			\$	-
12 18" DW Endwalls #13,22	EA	2			\$ 3,000.00		5	2.00			e e	
13 48" DW Endwalls #20	EA	1			\$ 4,000,00		\$ -	1.00			•	
14. R-4 Rip Rap Dissipator	TON	51	\$ 55.4	3 5	\$ 2,826.93		\$ -	51.00	\$ 2,826.93		D	

ESCROW STATUS REPORT

SUMMARY OF ESCROW ACCOUNT

RELEASE NO.:

RELEASE DATE: 3-Feb-2021

Maple Dr / Crystal Rd Townhouse Project

ORIGINAL CONSTRUCTION AMOUNT: \$ 876,309.28

PROJECT NAME: PROJECT NO.: TOWNSHIP NO.:

AMOUNT OF THIS RELEASE: \$ 119,948.41

2012-10074 LD/S #639

TOTAL CONSTRUCTION: \$ 796,644.80
TOTAL CONSTRUCTION CONTINGENCY (10%): \$ 79,664.48
TOTAL CONSTRUCTION ESCROW POSTED: \$ 876,309.28

PROJECT OWNER: MUNICIPALITY:

Crystal Road Enterprises, LLC

TOTAL ENG/INSP/LEGAL (CASH ACCOUNT): \$ 39,900,00 TOTAL ADMINISTRATION (CASH ACCOUNT): \$ 5,000,00

PRIOR CONSTRUCTION RELEASED: \$ 756,360.87
TOTAL CONSTRUCTION RELEASED TO DATE: \$ 876,309.28

ESCROW AGENT: TYPE OF SECURITY: AGREEMENT DATE: Montgomery Township
Univest National Bank Letter of Credit 10-Oct-2014

MAINTENANCE BOND AMOUNT (15%): \$ 119,496,72

ESCROW TABUL	ATION				CURRENT RELEASE		RELEASED TO DATE		AVAILABLE FOR RELEASE		RELEASE REQ #11
CONSTRUCTION ITEMS	UNITS	QUANTITY	UNIT	TOTAL AMOUNT	QUANTITY	TOTAL AMOUNT	QUANTITY	TOTAL AMOUNT	QUANTITY	TOTAL AMOUNT	QUANTITY
DETENTION FACILITY #B2 In Infiltration Bed #B2 w/36" Storm Tank As-Built Plan	LS EA	1 :		\$ 90,000.00 \$ 500.00	1.00	\$ 5 500.00	1,00 \$		\$	2	
ROADWAY SITE 1. Excavate & Backfill, Curb - Roadway Site 2. 18" Belgian Block Curb - Roadway Site 3. Fine Grade Paving - Roadway Site 4. 3" 2a Modified - Roadway Site 5. "BCBC Paving - Roadway Site 6. 1.5" Wearing Paving 7. Street Sweeping 8. Tack Coat 9. Curb & Joint Seal 10. Striping	LF LF SY SY SY SY SY LF LS	1,721 1,721 3,790 3,790 3,790 3,790 3,790 3,790 1,721	\$ 14.00 \$ 1.12 \$ 3.01 \$ 19.00 7.12 \$ 0.12 \$ 0.19 \$ 0.63	\$ 26,984.80 \$ 454.80 \$ 720.10 \$ 1,084.23	3,790.00 3,790.00 3,790.00 1,721.00 1.00	\$ 454.80 \$ 720.10 \$ 1,084.23	1,721,00 \$ 1,721,00 \$ 1,721,00 \$ 3,790,00 \$ 3,790,00 \$ 3,790,00 \$ 3,790,00 \$ 3,790,00 \$ 1,721,00 \$ 1,00 \$	24,094.00 4,244.60 5 11,407.90 5 72,010.00 5 26,984.80 454.80 720.10 5 1,084.23	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	
Roadway - Emergency Access 11. Excavate for Widening 12. Permanent Paving Repairs (5" BCBC, 1.5" Wearing) Emergency Access 13. Fine Grade & Compact 14. Pave (8" 3A Modified Stone, 5" BCBC Aspalt Paving) 15. Posts (2), Chain (1), Knox Box (1), Pad Lock (1)	SY SY SY SF EA	93 93 983 8,838 2	\$ 99.00 \$ 1.31 \$ 2.76	\$ 775,62 \$ 9,207,00 \$ 1,287,73 \$ 24,392,88 \$ 1,100,00		s - s - s -	93,00 : 93,00 : 983,00 : 6,838,00 : 2,00 :	9,207.00 \$ 1,287.73 \$ 24,392.88	\$		
ONSITE SIDEWALKS Excavate and Place 4" 2a Modified for Sidewalks and Driveway Aprons Sidewalks (4") Driveway Aprons (6" and wire) Handicap Ramps (incl. DWS)	SF SF SF EA	8,610 2,690 5,920	\$ 5.72 \$ 10.00	\$ 13,431.60 \$ 15,386.80 \$ 59,200.00 \$ 4,000.00		s - s - s -	8,610.00 2,690.00 5,920.00 8,00	\$ 15,386.80 \$ 59,200.00	\$		

ESCROW STATUS REPORT

SUMMARY OF ESCROW ACCOUNT

RELEASE NO.:

10 RELEASE DATE: 3-Feb-2021

Maple Dr / Crystal Rd Townhouse Project

ORIGINAL CONSTRUCTION AMOUNT: \$ 876,309.28

PROJECT NAME: PROJECT NO : TOWNSHIP NO :

2012-10074

AMOUNT OF THIS RELEASE: \$ 119,948.41

PROJECT OWNER:

Crystal Road Enterprises, LLC

TOTAL CONSTRUCTION: \$ 798.644.80
TOTAL CONSTRUCTION CONTINGENCY (10%): \$ 79.664.48
TOTAL CONSTRUCTION ESCROW POSTED: \$ 876.309.28

Montgomery Township Univest National Bank

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MUNICIPALITY: ESCROW AGENT: TYPE OF SECURITY: AGREEMENT DATE:

Letter of Credit 10-Oct-2014

MAINTENANCE BOND AMOUNT (15%): \$ 119,496,72

ESCROW TABULAT	ION				CURRENT RELEASE		RELEASED TO DATE		AVAILABLE FOR RELEASE		REQ#11
CONSTRUCTION ITEMS	UNITS	QUANTITY	UNIT PRICE	TOTAL AMOUNT	QUANTITY	TOTAL AMOUNT	QUANTITY	TOTAL AMOUNT	QUANTITY	TOTAL AMOUNT	QUANTIT
RAIN GARDEN CONVERSION Excavate Rain Garden Areas for Compost and Underdrein #1,2,81,C1 As-Built Plan	EA EA	4		\$ 53,428.00 \$ 1,000.00	4,00	5 \$ 1,000.00	4.00 \$		5	5 ÷	
II. STREET LIGHTS 1. Street Lights	EA	4	\$ 3,000,00	\$ 12,000.00		s -	4.00 \$	12,000,00		\$	
Shade Trees 1. Acer rubrum - Red Maple (3" Cal.) 2. Acer saccharum - Sugar Maple (3" Cal.) 3. Gleditsia triancanthos var. inermis - Thornless Honeylocust (3" Cal.) 4. Liquidambar styraciflua - Sweetgum (3" Cal.) 5. Liriodendron tulipifera - Tulip Poplar (3" Cal.) 6. Platanus x acerifolia - London Plain Tree (3" Cal.) 7. Quercus palustris - Pin Oak (3" Cal.) Evergreen Trees 8. Pinus strobus - Eastern White Pine (6" Ht.) 9. Pseudotsuga menziesii - Douglas Fir (6" Ht.) 10. Picea abies - Norway Spruce (6" Ht.)	EA EA EA EA EA EA EA EA	27 18 16 21 15 21 24 11 14	\$ 350,00 \$ 350,00 \$ 350,00 \$ 350,00 \$ 350,00 \$ 350,00 \$ 250,00 \$ 250,00	\$ 9,450.00 \$ 5,600.00 \$ 5,600.00 \$ 7,350.00 \$ 7,350.00 \$ 7,350.00 \$ 8,400.00 \$ 2,750.00 \$ 3,500.00 \$ 3,500.00		\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	27.00	5,600.00 5,600.00 5,600.00 5,250.00 7,350.00 8,400.00 2,750.00 3,500.00		5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	
Ornamental/ Flowering Trees 11. Amelanchier cenadensis - Shadblow (6' Ht.) 12. Magnolia virginiana - Sweelbay Magnolia (6' Ht.)	EA EA	17 15		\$ 5,525,00 \$ 4,875.00		\$ - \$ -	17,00 5 15,00 5			5 5	
Deciduous Shrubs 13. Aronia arbuffolia - Red Chokeberry (30° Ht.) 4. Clethra ainifolia - Summersweet (30° Ht.) 15. Cornus stoionifera - Red Twig Dogwood (30° Ht.) 16. Forsythia x intermedia - Forsythia (30° Ht.) 17. Ilex verticitale - Winterberry Holly (30° Ht.)	EA EA EA EA	19 19 23 15	\$ 65.00 \$ 65.00 \$ 65.00 \$ 65.00	\$ 1,235,00 \$ 1,495,00 \$ 975,00 \$ 565,00		\$ \$ \$ \$ \$ \$ \$	19.00 ! 19.00 ! 23.00 ! 15.00 ! 9.00 !	1,235.00 1,495.00 975.00 585.00		5 - 5 - 5 - 5 -	
18. Itea virginia 'Henry's Garnet' - Itea (30" Ht.) 19. Viburnum dentatum - Arrowood Viburnum (30" Ht.)	EA EA	19 8	\$ 65.00	\$ 1,235,00		\$ \$ -	19.00 8.00			\$ \$	

ESCROW STATUS REPORT

SUMMARY OF ESCROW ACCOUNT

RELEASE NO :

10 RELEASE DATE: 3-Feb-2021

Maple Dr / Crystal Rd Townhouse Project

ORIGINAL CONSTRUCTION AMOUNT: \$ 876,309,28

PROJECT NAME: PROJECT NO.: TOWNSHIP NO.;

2012-10074

TOTAL CONSTRUCTION: \$ 796,644.80 TOTAL CONSTRUCTION CONTINGENCY (10%): \$ 79,664.48

PROJECT OWNER:

LD/S #639

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AMOUNT OF THIS RELEASE: \$ 119,948.41

Crystal Road Enterprises, LLC Montgomery Township

TOTAL ENG/INSP/LEGAL (CASH ACCOUNT): \$ 39,900.00 TOTAL ADMINISTRATION (CASH ACCOUNT): \$ 5,000.00

PRIOR CONSTRUCTION RELEASED: \$ 756,360.87
TOTAL CONSTRUCTION RELEASED TO DATE: \$ 876,309.28

MUNICIPALITY: ESCROW AGENT: TYPE OF SECURITY: AGREEMENT DATE:

Univest National Bank Letter of Credit 10-Oct-2014

MAINTENANCE BOND AMOUNT (15%): \$ 119,496,72

ESCROW TABL	ESCROW TABULATION					CURRENT RELEASE		RELEASED TO DATE		AVAILABLE FOR RELEASE	
CONSTRUCTION ITEMS	UNITS	QUANTITY	UNIT PRICE	TOTAL AMOUNT	QUANTITY	TOTAL AMOUNT	QUANTITY	TOTAL AMOUNT	QUANTITY	TOTAL AMOUNT	QUANTITY
X. OTHER 1. Construction Stakeout 2. Pins and Monuments 3. As-Builts (Final Site)	LS EA EA	1	\$ 1,800,00	\$ 25,225,00 \$ 1,800,00 \$ 4,500.00	1_00 1_00		1.00 1.00 1.00	\$ 25,225 00 \$ 1,800 00 \$ 4,500 00	\$ \$ \$	8 838	
CONTINGENCY 1. 10% Contingency (Released upon certification of completion and receipt of Main	LS (tenance Bond)		\$ 79,664.48	\$ 79,664.48	1,00	\$ 79,664.48	1.00	\$ 79,664,48	s	2	

MONTGOMERY TOWNSHIP BOARD OF SUPERVISORS

BOARD ACTION SUMMARY

Item # 76.

SUBJECT:

Consider Construction Escrow Release 13 - Firefox Phase 1 -

LDS 630

MEETING DATE:

February 8, 2021

BOARD LIAISON

Tanya C. Bamford, Chair

INITIATED BY:

Bruce Shoupe, Director of Planning and Zoning

BACKGROUND:

Attached is a construction escrow release requested by Crystal Road Enterprise, LLC for Firefox Phase 1 as recommended by the Township Engineer.

The original amount of the escrow for Phase 1 was \$2,627,817.72, held by Univest Bank. This release for is in the amount of \$69,944.31. The new balance would be \$358,344.84.

ALTERNATIVES/OPTIONS:

Approve or not approve the construction escrow release.

RECOMMENDATION:

That this construction escrow be released.

MOTION/RESOLUTION:

MOTION to authorize a construction escrow release in the amount of \$69,944.31 as recommended by the Township Engineer for the Crystal Road Enterprise, LLC.

MOTION	SECOND	



VIA EMAIL

February 2, 2021

File No. 2012-09009

Ms. Carolyn McCreary, Township Manager Montgomery Township 1001 Stump Road Montgomeryville, PA 18936

Reference:

Firefox Phase 1 (Southern Village) - LD/S #630

Financial Security Release 13

Dear Carolyn:

We have received and reviewed the Request for Escrow Release for the above-referenced project. This letter is to certify that the improvements attached to this letter in the amount of \$69,944.31 have been completed. Please find enclosed a copy of our escrow calculations and the application for release of funds for your use.

Note the remainder of the requested amount was withheld due to incomplete punch list items and until the maintenance security is provided to the Township.

Please be advised that these improvements will be subject to a final inspection prior to dedication and again at the end of the maintenance period. Any deficiencies will be required to be corrected by the developer.

Should you have any further questions or require any additional information, please do not hesitate to contact our office.

Sincerely,

James P. Dougherty, P.E. Senior Project Manager

Gilmore & Associates, Inc.

JPD/sl

Enclosures:

Release of Escrow Form (2/2/21), Escrow Status Report (2/2/21), Developer's Request

(1/22/21)

CC:

Bruce S. Shoupe, Director of Planning and Zoning

Brian C. Grant - Select Properties

P. Doughut

Valerie Liggett, R.L.A., Senior Landscape Architect - Gilmore & Associates, Inc.

Damon A. Drummond, P.E., PTOE, Senior Transportation Engineer – Gilmore & Associates, Inc.

65 East Butler Avenue | Suite 100 | New Britain, PA 18901 | Phone: 215-345-4330 | Fax: 215-345-8606

RELEASE OF ESCROW FORM

James P. Dougherty, P.E.			Date:	01/22/2021
Senior Project Manager Gilmore & Associates, Inc. 65 East Butler Avenue, Suite 100 New Britain, PA 18901 215-345-4330				
	DS-630	G&A Pr	oject #:_	2012-09009
Release #.				
Dear Mr. Dougherty:				1.1
This is an escrow release request in the amour with the quantities noted.	1t of \$189,396.6	. Enclosed is a copy of or	ar escrow	spreadsneet
Senior Project Manager Gilmore & Associates, Inc. 65 East Butler Avenue, Suite 100 New Britain, PA 18901 215-345-4330 Development: Firefox - Ph. 1 (Southern) - LDS-630 Release #: 13 Dear Mr. Dougherty: This is an escrow release request in the amount of \$189,396.64 . Enclosed is a copy of our escrewith the quantities noted. ESCROW RELEASE REQUESTS ARE LIMITED TO ONE PER MONTH. Ms. Carolyn McCreary Township Manager Montgomery Township 1001 Stump Road Montgomeryville, PA 18936 Dear Ms. McCreary: We have reviewed the developer's request for an escrow release. We therefore, recommend that be released. These improvements will be subject to a final observation prior to dedication and again at the maintenance period. Any deficiencies will be released of the developer. Determine Project Manager, Gilmore & Associates, Inc. Resolution # WHEREAS, a request for release of escrow was received from friefox - Ph. 1 (Southern) - LDS-630 representation that work set forth in the Land Development Agreement to the extent has been completed wHEREAS, said request has been reviewed by the Township Engineer who recommends release of \$69, NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of Montgomery Township that w release of \$69, 944.31 BE IT FURTHER RESOLVED that Township records indicate that escrow has been deposited via Laar authorized to take the necessary action to obtain release of said sum. BE IT FURTHER RESOLVED that Township records indicate that escrow has been deposited via Loan.				
Ms. Carolyn McCreary			Date:	02/02/2021
Township Manager				
Wontgomery vine, 1 A 18550				
Dear Ms. McCreary:				
be released. These improvements will be subj maintenance period. Any deficiencies will be	ect to a final observed required to be corre	ation prior to dedication and aga	\$69,944 in at the er	
James P. Dougherty, P.E., Senior Project Man	nager, Gilmore & A	ssociates, Inc.		
Resolution #				
				, on the
for Firefox - Ph. 1 (Southern) - LDS-630	D 1 1 4	, in the amount of \$189	,390.04	
representation that work set forth in the Land	Development Agre	gineer who recommends release	of \$69,944	4.31 ;
NOW THEREFORE BE IT RESOLVED by	the Board of Supe	rvisors of Montgomery Township	that we d	lo hereby authorize
release of \$69,944.31; in accorda	ance with the devel	oper's request, and the officers of	the Town	ship are
authorized to take the necessary action to obta	ain release of said s	um.		
		that escrow has been deposited vi	a Loan	nmant
with Montgomery Township in total sum of	\$2,627,817.72	pursuant to a signed Lar en released from escrow. Therefore	are the act	tion of the Board
Agreement and that \$2,199,528.57	has previously be \$358,344.84	in escrow.	710, the act	non or and board
releasing said sum leaves a new balance of	ψουςο Επισ τ	III OSOLOWA		
MOTION BY:		VOTE:		
SECOND BY:				
DATED:				
RELEASED BY:				

Department Director

ESCROW RELEASE NO.

ELEASE NO. 13
DATE PREPARED: 2-Feb-2021

GILMORE & ASSOCIATES, INC.
ENDITERRY'S CONTRIBUTES FRANCIA

PROJECT NAME:
DEVELOPER Crystal Road Enterprises, LLC
ESCROW AGENT:
TYPE OF SECURITY: Loan

TOTAL ENGINSPILEDAL (CASH ESCROW) \$
TOTAL ADMINISTRATION (CASH ESCROW): \$

MONTGOMERY TOWNSHIP
TOWNSHIP NO LDS-630
G&A PROJECT NO : 2012-09009
AGREEMENT DATE: 10-Oct-2014

MAINTENANCE BOND AMOUNT (15%). \$ 358,338,78

TOTAL CONTRACT CONTRA	TOTAL	Ri			
SUMMARY OF IMPROVEMENT ESCROW ACCOUNT	COST	CURRENT	PRIOR	TOTAL	BALANCE
CONSTRUCTION ANNUAL 10% CONSTRUCTION COST INCREASE (Balance as of 31/31/4) - \$342,827.51] CONTINGENCY (10%)	\$ 2,354,642 45 \$ 34,282 75 \$ 238,892 52	\$ 63,586.74 \$ 6,358.57 \$	\$ 2,182,387,19 \$ 17,141,38 \$ -	\$ 2,245,972 93 \$ 23,499 95 \$	\$ 108 669 52 \$ 10,782 80 \$ 238 892 52
TOTAL	\$2,627,817.72	\$ 69,944.31	\$ 2,199,528 57	\$ 2,269,472.88	\$ 358,344.84

CONSTRUCTION (TEMS	UNIT	QUANTITY	UNIT		TOTAL	CURRENT	REQUE	ST	PRIOR REQ	UESTS	TOTAL REQ (incl. current		AVAILABLE FOR (Incl. current re	elease)
			COST		0001	QTY	COS	ST	QTY	COST	QTY	COST	QTY	COST
PHASE I (SOUTHERN VILLAGE)	-	- 70	or to decision and	235	ANNUOTISE's				100 €	73,227.00	1.00 \$	73,227 00	s	
I.A. MOBILIZATION	LS	1 5	73,227.00	\$	73,227.00		\$	-	1,00 \$	73,227.00	100 3	13,221 00		
WERE THE PRODUCT PRODUCT										- 1			1/24	
1.B. EARTHWORK	LS	74.4	52,482.00		52 482 00		S		1.00 \$	52,482 00	1.00 \$	52,482 00	5	3.7
Clearing & Grubbing	CY	11.338 5			28,004.86		s	(=)	11,338 00 \$	28,004.86	11,338 00 \$	28,004.86	5	- 4
2 Strip Topsoil		16,335 \$			40,837.50		\$	2	16,335.00 \$	40,837.50	16,335 00 \$	40,837.50	5	- 33
3 Cut Fill & Compact	CY				9,967 16		s		35,597.00 \$	9,987.16	35,597 00 \$	9,967 16	5	-
4. Grade	SY	35,597 \$	0.28	ಿ	8,907.10	467	•							
1.C. RETAINING WALL										0.054.40	321 00 S	2,054 40	\$	100
Excavate Retaining Wall	LF	321 5	6.40	S	2,054.40		\$		321 00 \$	2,054 40		50,000 00	\$	100
2 Retaining Wall	SF	1,250 \$	40.00	\$	50,000.00		\$		1,250 00 \$	50,000.00	1,250.00 \$		5	- 8
3 Sleeves for Guide Rail behind Wall #1	1.5	1 5	1,785.00	5	1,785.00		\$		1 00 \$	1,785 00	1.00 \$	1,785 00	3	
1.D. EROSION CONTROL														
Erosion & Sediment Controls									l .			0.000.00	\$	24
1 Construction Entrance	EA	11 5	3,392.00	\$	3,392.00		5		1.00 \$	3,392,00	1 00 \$	3,392.00		
2 12" Weighted Sediment Tube	LF	31 5	10.35	5	320 85		5	- 12	31.00 \$	320 85	31 00 \$	320 85	50	
3 12 Filtrex Sock	LF	138 5	3.81	5	525.78		5	- 3	138 00 \$	525.78	138 00 \$	525.78	- 2	
	LF	350 5			546.00		5	3	350.00 \$	546.00	350 00 \$	546 00		
4 18" Silt Fence - Stockpiles	LF	646 3			1,233.86		5	(4)	646 00 \$	1,233 86	646 OD \$	1,233.86		
5. 30" Sit Fence	LF	607 5	2 070		4,431.15		\$		687.00 \$	4,431.15	687.00 \$	4,431.15		- 0
6 Super Silt Fence	LF	3,000 5			19,350.00		5	- 2	3,000.00 \$	19,350.00	3,000 00 \$	19,350 00	5	
7 Super Silt Fence w/ Tree Protection Fence	LF	1,520			2,340.80		s		1,520.00 \$	2,340.80	1,520.00 \$	2,340 80	\$	
8 Orange Construction Fence		3.753			5,779.62		5	3.1	3,753.00 5	5,779 62	3,753.00 \$	5,779 62	\$	
9 Tree Protection Fence	LF	19,360			5,614.40		s		19,360.00 \$	5,614.40	19,360.00 \$	5,614.40	5	
 Temporary Vegetation - Excess Fill Piles 	SY				4,588.50		2	-	3,059.00 \$	4,588 50	3,059,00 \$	4,588.50	S	
11. Slope Matting (North American Green 5-75)	SY	3,059 8			1,359.05		2	- 5	2.471.00 \$	1,359.05	2.471.00 \$	1,359.05	\$	
12 Grade Swales #A,A1 5,B12 2,B6,B13)	SY	2,471			3 706 50		Š	- 4	2,471.00 \$	3,706.50	2,471.00 \$	3,706.50	5	
 Swale Matting (North American Green S-75) 	SY	2,471 1					Š	- 55	6.00 \$	792.00	6.00 \$	792 00	5	
14 Rock Filters	EA	6 5			792.00		s	- 2	29 00 \$	3,886.00	29.00 \$	3,886.00	s	
15. Inlet Protection Silt Sack	EA	29 3			3,885.00				1.00 \$	12,000.00	1.00 \$	12,000 00		
 Pumped Water Filter Bag, Pump, Clean Water Pump Bypass, Sandbag Cofferdam 	LS	11.5	12,000.00	S	12,000.00		\$	2	1,00 %	12,000,00	100 \$	12,000	s	
Sediment Basin B				3	0.040.00		\$		1.058.00 \$	2.613.26	1,058.00 \$	2.613 26	\$	
20 Strip Topsoil	CY	1,058			2,613.26		s	- 5	3.683 00 \$	9,207 50	3,683.00 \$	9,207 50		
21. Cut Fill & Compact	CY	3,583 \$					3		4,737.00 \$	1,326.36	4.737.00 \$	1,326 36		
22. Grade	CY	4,737			1,326.36		3	35		2,772 00	275 00 \$	2,772 00		
23. Core Cut & Fill Keyway	LF	275			2,772.00		s	4	275.00 \$		1.058.00 \$	3,142.26	-	
24. Respread Topsoil	CY	1,058			3,142.26		5	(4	1,058 00 \$	3,142 26	1,058.00 \$	63 36		
25 Grade Spillway	SY	132 3			63.36		S		132 00 \$	63 36		747 12		
26. Spillway Matting (North American Green P-300)	SY	132	5.66	\$	747.12		S	-4	132.00 \$	747 12	132 00 \$	12,375.75		
27. Permanent Rake & Vegetation	SF	42,675	0.29	5			\$	33	42,675 0D \$	12,375 75	42,675.00 \$	1,644.75		
28 Super Sitt Fence Baffle Wall, 3.05' hgt.	LF	255	6.45	. 5	1,644.75		\$		255.00 \$	1,644.75	255.00 \$	1,644.75	3	

DATE PREPARED: 2-Feb-2021

MONTGOMERY TOWNSHIP WINSHIP NO : LD9-830 ROJECT NO : 2012-09009 MENT DATE: 10-0ct-2014

GILMORE & ASSOCIATES INC. PROJECT NAME Firefox DEVELOPER Crystal ESCROW AGENT: Unives TYPE OF SECURITY: Loan

Firefox - Ph. 1 (Southern) Crystal Road Enterprises, LLC Univest

TOTAL ENGANSPAEGAL (CASH ESCROW) \$ 45,000 00 TOTAL ADMINISTRATION (CASH ESCROW) \$ 5,000 00

TOWNSHIP NO : G&A PROJECT NO : AGREEMENT DATE:

MAINTENANCE BOND AMOUNT (15%): \$ 358,338,78 RELEASE REQUESTS TOTAL SUMMARY OF IMPROVEMENT ESCROW ACCOUNT BALANCE \$ 108,669.52 \$ 10,782.80 \$ 238,892.52 TOTAL \$ 2,245,972.93 \$ 23,499.95 **COST ** 34,282.75 ** 238,892.52 ** CURRENT PRIOR 5 2,182,387 1 CONSTRUCTION
ANNUAL 10% CONSTRUCTION COST INCREASE (Balance as of 3/31/19 - \$342,827.51) 63.585.74 \$ 17,141.38 \$ 6,358.57 CONTINGENCY (10% 69,944.31 \$ 2,199,528.57

	CONSTRUCTION ITEMS	UNIT	QUANTITY	UNIT		TOTAL	CURRENT RE	QUEST	PRIOR REG	DESTS	TOTAL REC		AVAILABLE FOR (incl. current	
				COST		COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST
- 07	24" x 38" Elliptical RCP (Dual Runs)	LF	88 \$	143.00	s	12,584 00	s		88.00 \$	12,584.00	88 00 \$	12,584.00	\$	(4)
		EA			5	10,505.00	S	2	1 00 \$	10,505 00	1.00 \$	10,505 00	5	3.5
30	30" x 120" Modified Type C Inlets (#802, 803)	EA	2 \$			10,174 00	S	26	2.00 \$	10,174.00	2 00 \$	10,174,00	\$	1.00
	**	EA	2 \$			3,618.00	5	S 1	2 00 \$	3,618.00	2.00 \$	3,618,00	5	(2)
32		EA		11,715 00		11,715.00	s	34	1.00 \$	11,715 00	1,00 \$	11,715 00	5	
33		EA	1 \$			1,900.00	s		1.00 \$	1,900.00	1.00 \$	1,900 00	\$	
34			80 \$	54 00		4,320.00	s	- 9	80.00 \$	4,320.00	80.00 \$	4,320 00	5	
35	6 R-5 Rip Rap Dissipator	TON	80 2	54 00	*	4,520.00	· ·							
E. S	TORM SEWER		*			26.670.00	s		762.00 \$	26,670.00	762.00 \$	26.670.00	5	1 12
1	18" RCP	LF	762 \$				s		410.00 \$	18,450 00	410.00 \$	18,450.00	5	7.6
2	24" RCP	LF	410 S			18,450,00	5	2 1	112.00 \$	8,960 00	112 00 \$	8,960.00	5	
3	36" RCP	LF	112 \$		5	8,960 00	\$	- 1	73.00 \$	11,826 00	73.00 \$	11,826.00	5	
4	34" x 53" Ellipticat RCP	LF	73 \$		S	11,826 00		- 1	26.00 \$	70,200.00	26 00 \$	70,200 00	\$	0.00
5	Typc C Inlet (#A01 3, A01 4, A03, A04, A05, A06, B02 1, B03 1	, EA	26 \$			70,200 00	\$	- 5		6,800.00	2.00 \$	6,800.00	s	
6	Type C Inlet Mod, 42"x48", (#803 4, B04)	EA	2 \$			6,800.00	\$		2,00 \$	12,608.00	1.00 \$	12,608.00	8	- 55
7.	Type C Inlet Mod 8' x 8' (Outlet Structure #A02)	EA	1 \$	12,608 00		12,608 00	\$	- 5	1.00 \$		200 \$	2,400 00	5	
8	18" DW Endwalls (#A01.2, A01.5)	EA	2 \$			2,400 00	\$	-	2.00 \$	2,400.00	1.00 \$	1,850.00	5	17
9	36' DW Endwalls (#B10)	EA	1 \$	1,850 00	\$	1,850,00	\$	*	1 00 \$	1,850 00		10.314.00	\$	-
10	R-5 Rip Rap Dissipator	TON	191 \$	54.00	\$	10,314.00	\$	3	191,00 \$	10,314.00	191 00 \$	10,314.00		-
. <u>D</u>	FIGURE 4A, B1, B2 Facility A, Systems #1 and 2, w/ Structure #A7, w/ #57 Stone to	LS	1 \$	48,161.00	\$	48,161.00	\$	v	1_00 S	48,161.00	1.00 \$	48,161.00	s	12
1	Springline of Pipe and On-site Backfill (No Fabric) Facility B1, Systems #1,2 and 3, w/ Structures #85, 86, and B7	LS	1 \$	117,195.00	5	117,195 00	5		1 00 \$	117,195 00	1,00 \$	117,195 00	·	
2	w/ #57 Stone to Springline of Pipe and On-Site Backfill (No Fabric)	,		313,500.00		240 500 00	s		1.00 %	313,500.00	1.00 \$	313,500 00	5	i i
3	Facility B2, Syslems #1 through 8, w/ Structures #910,1, B11, B12, B12,1, B12,2, B14, B15, and B16, w/ #57 Stone to Springline of Pipe and On-Site Backfill (No Fabric)	LS	1 &	313,500 00	•	313,500 00	ų.		1,00 4				\$	÷
a R	DADWAY (Interior)							-			la 447.00 B	40 540 00		
1	Excavate & Backfill Curb	LF	6,117 \$			19,513 23	5	3	6,117.00 \$	19,513 23	6,117.00 \$	19,513 23	1	
2	Belgian Block Curb	LF	6,117 \$	14.00	5	85,638.00	s		6,117.00 \$	85,638,00	6,117.00 \$	85,638 00	3	
3	Fine Grade and Compact Subgrade	SY	9,489 \$	1 12	\$	10,627 68	\$	- 25	9,489 00 \$	10,627.68	9,489.00 \$	10,627.68		,
4	3" 2a Modified	SY	9,489 \$	3.01	5	28,561 89	S		9,489 00 \$	28,561.89	9,489 00 \$	28,561 89	3	
5	5" (25MM) Base Course	SY	9,489 \$		5	180,291.00	s		9,489 00 \$	180,291.00	9,489.00 \$	180,291 00	5	
6	1.5" (9.5MM) Wearing Paving (Note 5)	SY	6,204 \$			44,172.48	s		\$	- 2	\$	-	6,204.00 \$	44,172
7	Speed Bump	LS	1 \$			1,200.00	1.00 \$	1,200.00	\$		1.00 \$	1,200 00	\$	
		SY	6.204 \$.,		744 48	6,204.00 \$	744.48	\$	3.1	6,204 00 \$	744.48	5	
8		SY	6,204 \$			1.178 76	6,204.00 \$	1,178.76	\$	- 3	6,204.00 \$	1,178.76	5	
9		LF	3,883 \$			2,446 29	1,650.00 \$	1,039 50	\$	- 2	1,650 00 \$	1,039 50	2,233.00 \$	1,408
10		LS	1 \$			1,750 00	5		\$	2	s	54	1.00 \$	1,750
11	Line Painting	LS		2.307.00		2,307.00	s	- 8	0.50 \$	1,153 50	0.50 \$	1.153.50	0.50 \$	1,153

ELEASE NO. 13
DATE PREPARED: 2-Feb-2021

GILMORE & ASSOCIATES, INC.

PROJECT NAME
DEVELOPER: Crystal Road Enterprises, LLC
TYPE OF SECURITY. Loan

TOTAL ENG/INSPREGAL (CASH ESCROW) \$ 45,000.00
TOTAL ADMINISTRATION (CASH ESCROW) \$ 5,000.00

MONTGOMERY TOWNSHIP DWNSHIP NO: LDS 630 PROJECT NO: 2012-09009 EMENT DATE: 10-Oct-2014 TOWNSHIP NO: G&A PROJECT NO: AGREEMENT DATE:

MAINTENANCE BOND AMOUNT (15%) \$ 358,338.78

RELEASE REQUESTS
PRIOR SUMMARY OF IMPROVEMENT ESCROW ACCOUNT TOTAL TOTAL CURRENT \$ 2,245,972 93 \$ 23,499 95 \$ \$ 108,869 52 \$ 10,782 80 \$ 238,892 52 \$ 2,182,387.19 \$ 2,354,642,45 \$ 34,282,75 \$ 238,892,52 **63,585 74** 6,358 57 \$ 17,141.38 \$ ANNUAL 10% CONSTRUCTION COST INCREASE (Balance as of 3/31/19 - \$342,827.51)
CONTINGENCY (10%) \$ 2,269,472.68 \$ 2,199,528.57 \$2,627,817.72

CONSTRUCTION ITEMS	UNIT	QUANTITY	UNIT		COST	CURRENT RE	QUEST	PRIOR REC	34,450,5011	(Incl. current	release)	AVAILABLE FOR	release)
						QTY	COST	QTY	COST	QTY	COST	QTY	COST
13 Type 2S Guide Rail (Includes 3 Terminal Sections)	LF	760 S	20 71	5	15,739.60	\$	8	760 00 \$	15,739.60	760.00 \$	15,739 60	s	
I.H. ROADWAY (Sethlehem Pike)							1		1.904.40	360.00 \$	1,904.40	5	245
Excavate & Backfill, Concrete Curb	LF	360 \$			1,904 40	s	- 8	360,00 \$	4,806.00	360 00 \$	4,806.00	5	2.41
2. 18" Concrete Curb	LF	360 \$		\$	4,806 00	5	~ ~	360.00 \$ 450.00 \$	1,426.50	450.00 \$	1,426.50	5	7.53
3. Saw Cut	LF	450 \$	3 17		1,426 50	\$	3	500 00 S	4,220.00	500.00 \$	4,220.00	s	193
Excavate for Widening	SY	500 \$		5	4,220 00	5	- 5	261.00 \$	4,940 73	261 00 \$	4,940.73	5	
5. 6" Pavement Base Orain	LF	261 \$		\$	4,940.73	3		65.00 \$	3,599.70	65 00 \$	3,599.70	\$	183
6. 18" RCP	LF	65 \$	55 38	\$	3,599,70	3	2	200 \$	3,450.00	2 00 \$	3,450.00	s	700
7. Tie-In to Existing Inlets	EΑ	2 \$			3,450,00	3	2.7	2.00 \$	6,374.00	200 \$	6,374.00	\$	
8 Type C Inlets (#B1, B2)	EA	2 \$	3,187 00		6,374.00	3		520.00 \$	582 40	520.00 \$	582 40	5	100
Fine Grade and Compact Subgrade	SY	520 \$	1 12		582 40		1	500.00 \$	5,965.00	500 00 \$	5,965 00	5	6.3
10. 8" 2a Modified	SY	500 S			5,965 00	3		500.00 \$	17,690.00	500.00 \$	17,690 00	\$	
11. 8" (25MM) Base Course	SY	500 \$		\$	17,690,00	3	1	500.00 \$	7,290.00	500 00 5	7,290 00	5	10-1
12. 2 5" (19MM) Base Course	SY	500 \$	14.58		7,290.00	3		1.133.00 \$	10.865 47	1,133.00 \$	10.865.47	S	
13. 1.5" (12MM) Wearing Paving	SY	1,133 \$		\$	10,865,47	5		1,133.00 \$	181.28	1,133.00 \$	181 28	s	- 3
14. Street Sweeping	SY	1,133 \$	0.10		181 28	3	S 1	1,200 00 \$	756.00	1,200 00 \$	756 00	\$	
15. Curb & Joint Seal	LF	1,200 \$	0.63		756.00	,		1,133 OD \$	215.27	1,133.00 \$	215 27	S	25
16 Tack Coal	SY	1,133 \$	0.19		215 27	3	18	1.00 \$	7.645.00	1 00 \$	7,645.00	s	65
17 Milling for Overlay	LS	1 \$			7,645 00	3	20	100 \$	6,540 00	100 \$	6,540.00	\$	
18. Line Painting	LS	1 \$			6,540,00	3		1.00 \$	215,889.00	1 00 5	215,889.00	s	- 2
19. Signalization	LS	1 \$	215,889.00		215,889 00	3	8.1	1.00 \$	8,350.00	1.00 \$	8,350.00	s	- 1
20. Type 2S Guide Rail, Remove & Replace	LS	1 \$			8,350.00	5	- 1	1.00 \$	2,725 00	1.00 \$	2,725.00		27
21 Figure 24 Signage	LS	1 \$			2,725 00	s			7,200.00	8.00 \$	7,200 00	s	27
22 Traffic Control	DY	8 \$			7,200 00	\$	85.1	8.00 \$		1,400.00 \$	2,184.00	2	-
23. Excavate & Backfill, Place 4" 2A Mod Stone for Sidewalk	SF	1,400 \$			2,184 00	s		1,400 00 \$	2,184 00	1,400.00 \$	11,200 00	5	- 3
24. Sidewalk (4")	SF	1,400 \$			11,200 00	s	88	1,400.00 \$	11,200,00	4.00 \$	2.000 00	5	
25. Handicap Ramps (incl DWS)	EA	4 \$	500 00	\$	2,000 00	\$	18	4,00 \$	2,000 00	4.00 3	2,000 00		
I. ONSITE SIDEWALKS						-	= 1	8.700 00 \$	69,600 00	8,700.00 \$	69,600.00	s	
1 Sidewalk (4")	SF	8,700 \$			69,600 00	s		57.00 \$	62,700 00	57.00 \$	62,700 00	\$	
2 Driveway Apron (6" w/ wire mesh)	EA	57 \$			62,700 00	s	- 3	10.00 \$	5,000.00	10 00 S	5,000 00	2 00 \$	1,000.0
3 Handicap Ramps (incl DWS)	EA	12 \$	500 00	\$	6,000 00	5	15	10 00 3	5,000.00	10 00 0	0,000.00		.,
J. BIOSWALE CONVERSION							74.11	1.00 \$	23,202 00	1,00 \$	23,202 00	s	70
1. Convert bioswales A1.5 and B12.2 to permanent infiltration	LS	1 \$	23,202 00	\$	23,202 00	\$	- 1	1.00.2	20,202.00	1,00 0	20,202 00		
K. SEDIMENT BASIN B CONVERSION					40.040.00	5	25	\$		5		1.00 \$	43,918,0
1 Earthwork	LS				43,918 00	462.00 S	6,930.00	\$		462 00 \$	6,930 00	s	-
2 Post and rail fencing	LF	462 \$	15 00	5	6,930 00	402.00 3	0,830.00	Þ	8	.52.00	-,500		
L. STREET LIGHTS			0.700.00		43,200.00			16.00 \$	43.200.00	16.00 \$	43,200 00	5	×
1. Street Lights	EA	16 \$	2,700.00	5	43,200.00			10.00	10,200.00				

GILMORE & ASSOCIATES, INC.

DEVELOPER OF SEAMOR OF SEAMOR

TYPE OF SECURITY

GILMORE & ASSOCIATES, INC.

SEAMOR OF SEAMOR OF SEAMOR

Firefox - Ph. 1 (Southern)

Crystal Road Enterprises, LLC

ESCROWAGENT: University Loan

TOTAL ENG/INSP/LEGAL (CASH ESCROW) \$ 45,000.00 TOTAL ADMINISTRATION (CASH ESCROW) \$ 5,000.00

MONTGOMERY TOWNSHIP DWNSHIP NO : LDS 630 PROJECT NO 2012-09009 EMENT DATE: 10-Oct-2014 TOWNSHIP NO: G&A PROJECT NO AGREEMENT DATE:

MAINTENANCE BOND AMOUNT (15%) \$ 358,338,78

	TOTAL	RE	LEASE REQUESTS		BALANCE
UMMARY OF IMPROVEMENT ESCROW ACCOUNT	COST	CURRENT	PRIOR	TOTAL	
CONSTRUCTION ANNUAL 10% CONSTRUCTION COST INCREASE (Balance as of 3/31/19 - \$342,827 51) CONTINGENCY (10%)	\$ 2,354,642 45 \$ 34,282 75 \$ 238 892 52	\$ 63,585.74 \$ 6,358.57 \$	\$ 2,182,387 19 \$ 17,141 38 \$	\$ 2,245,972,93 \$ 23,499,95 \$	\$ 108,669 \$ 10,782 \$ 238,892
TOTAL	\$2,627,817.72	\$ 69,944.31	5 2,199,528 57	\$ 2,269,472 88	\$ 358,344

CONSTRUCTION ITEMS	UNIT	QUANTITY	UNIT	COST	CURRENT R	EQUEST	PRIOR REQ	UESTS	(Incl. current		AVAILABLE FOR (Incl. current	release)
			COST		QTY	COST	QTY	COST	QTY	COST	QTY	COST
.M. LANDSCAPING												
Shade Trees						- 1			31.00 \$	10,850.00	S	-
	EA	31 \$	350.00	\$ 10,850.00	3.00 \$	1,050.00	28 00 \$	9,800 00	19.00 \$	6,650 00	5	
1 Acer rubrum	EA	19 5	350 00	\$ 6,650.00	5 00 \$	1,750.00	14.00 \$	4,900,00		6,080.00	s	-
2 Acer saccherum	EA	16 \$	380 00	5 6,080 00	10.00 \$	3,800.00	6.00 \$	2,280 00	16.00 \$		100 5	350 0
3 Cercidiphyllum Japonica	EA	27 \$		\$ 9,450.00	14 00 \$	4,900.00	12.00 \$	4,200 00	26.00 \$	9,100 00	1,00 3	330 0
4 Gleditsia T. Shademaster	EA	23 5		\$ 8,050.00	9.00 \$	3,150 00	14.00 \$	4,900 00	23 00 \$	8,050 00	3	
5 Liquidambar slyraciflua	EA	21 \$		\$ 7,350.00	10.00 \$	3,500.00	11.00 \$	3,850.00	21.00 \$	7,350 00		- 3
6 Liriodendron lulipifera		13 \$		\$ 4,550.00	9.00 \$	3,150.00	4.00 \$	1,400 00	13.00 \$	4,550.00	5	
7 Platanus x acerifolia	EA			5 5,600 00	7.00 \$		9.00 \$	3,150.00	16.00 \$	5,600 00	\$	
8 Pyrus C Chanticleer	EA	16 \$		\$ 4,680.00	\$		13.00 \$	4,680.00	13.00 \$	4,680.00	\$	1.5
9 Quercus borealis	EA	13 \$	000,110	S	9.00 \$		S	- 1	9.00 \$	3,150 00	\$	
10 Quercus pelustris	EA	9 \$			4.00 \$		18,00 \$	6,480.00	22.00 \$	7,920 00	\$	5.5
11. Quercus phellos	EA	22 \$		5 7,920 00	11.00 \$		7.00 \$	2,450 00	18.00 \$	6,300 00	\$	1.6
12 Tilia cordala	EA	18 \$		\$ 6,300.00			13.00 \$	4,550 00	26.00 \$	9,100.00	\$	0.0
13 Zelkova serrela	EA	28 \$	350.00	\$ 9,100.00	13 00 \$	4,550.00	13.00	4,555 00	20.00		l	
Evergreen Trees							\$		15.00 \$	3,750.00	11.00 \$	2,750
	EA	26 \$	250.00	\$ 6,500.00	15.00 \$		-	E 050 00	23 00 \$	5,750.00	11.00 S	2,750
17 Juniperus virginiana	EA	34 \$	250.00	\$ B,500.00	2.00 \$		21 00 \$	5,250.00	32.00 \$	8,000.00	11.00 \$	2,750
16 Picea ables	EA	43 \$	250.00	\$ 10,750.00	1.00 \$	250 00	31.00 \$	7,750 00			11 00 \$	2,750
14 Pinus strobus	EA	29 \$		\$ 7,250.00	18 00 \$	4,500 00	\$	- 2	18 00 \$	4,500.00	1100 4	2,100
15 Pseudolsuga menziesii	5	20 8									l .	
Shrubs	EA	10 \$	65.00	\$ 650.00	5		10.00 \$	650 00	10,00 \$	650.00	\$	
18 Euonymous A Compacta		10 \$			10 00 \$	650.00	\$		10.00 \$	650.00	s	
19. Forsythia Lynwood Gold	EA			\$ 1,105.00	17.00 \$	1,105.00	S		17.00 \$	1,105 00	\$	
20 llex verticitete	EA	17 \$		\$ 715.00	5		11.00 \$	715.00	11.00 \$	715.00	\$	
22. Taxus Densiformis	EA	11 \$			9,00 \$		5		9.00 \$	585,00	\$	
21 Virburnum Plicatum	EA	9 \$	65 00	3 363 00	500 \$	000 00		- 1			1	
Miscellaneous					44400.00 €	1,702 80	s		14,190.00 \$	1,702.80	5	
23 Seed Mix "A" for Besin (ERNMX 126)	SF	14,190 \$			14,190,00 \$		3		12,960 00 \$	1,555 20	5	
24 Seed Mix "B" for Basin (ERNMX 127)	SF	12,960 \$	0.12	\$ 1,555.20	12,960 00 \$	1,555 20	[]		10,111			
24 0000 11111 = 101 = 111								56,420.00	1.645 00 \$	57,575 00	\$,
I.N. BITUMINOUS PATHWAYS	SY	1,645 \$	35.00	\$ 57,575 00	33.00 \$	1,155.00	1,612.00 \$	30,420.00	1,045 00 4	01,070.00		
I.N. BITUMINOUS PAINTENIS									1.00 \$	10,000.00	s	
O. 6-FT-HIGH OPAQUE (BUFFER) FENCING	LS	1 5	10,000.00	\$ 10,000.00	\$		1.00 \$	10,000.00	1 00 3	10,000.00	1	
.O. 64-1-HIGH UPAQUE IBUTTERITE BUILD											s	3
	LS	1 3	30,000.00	\$ 30,000 00	\$		1,00 \$	30,000.00	1,00 \$	30,000.00		
.P. RESPREAD TOPSOIL (8")	LO		00,000			1		- 1			100	
	05	1,310 \$	8 65	\$ 11,331.50	s	Ten	1,310.00 \$	11,331.50	1,310,00 \$	11,331 50	5	
Q. MONOS AB PAVERS (access to sanitary easement)	SF	1,310 4	, 600								I .	
						U.						
I.R. OTHER		7,016	40 704 60	s 46,781.00	s	8 90	1.00 \$	46,781,00	1.00 \$			
1 Construction Slakeoul	LS		1-11-1		s		0.75 \$		0.75 \$	11,756 25	0.25 \$	3,918
2 Pins and Monuments and As-Builits	LS	1 5	15,675 00	\$ 15,675,00		E1 57 1	U, U W	,				

ESCROW RELEASE NO.

DATE PREPARED 2-Feb-2021

GILMORE & ASSOCIATES, INC.

LONG TOWNS THE PROJECT NAME:
PROJECT NAME:
DEVELOPER:
Crystal Road Enterprises, LLC
ESCROW ASENT:
Univest
TYPE OF SECURITY:
Loan TOTAL ENGINSPILEGAL (CASH ESCROW) \$ 45,000 00 TOTAL ADMINISTRATION (CASH ESCROW) \$ 5,000 00 MAINTENANCE BOND AMOUNT (15%): \$ 358,338.78

MONTGOMERY TOWNSHIP
TOWNSHIP NO L03-630
G&A PROJECT NO : 2012-09009 AGREEMENT DATE 10-Oct-2014

AND OF HISPORTAGET ESCHOW ACCOUNT	TOTAL	RE	LEASE REQUESTS		
SUMMARY OF IMPROVEMENT ESCROW ACCOUNT	COST	CURRENT	PRIOR	TOTAL	BALANCE
CONSTRUCTION ANNUAL 10% CONSTRUCTION COST INCREASE (Balance as of 3/31/19 - \$342,827.51) CONTINGENCY (10%)	\$ 2,354,642,45 \$ 34,282,75 \$ 238,892,52	\$ 63,585.74 \$ 6,358.57 \$	\$ 2,162,367 19 \$ 17,141.38 \$	\$ 2,245,972 93 \$ 23,499 95 \$	\$ 108,669.50 \$ 10,782.80 \$ 238,892.50
TOTAL	\$2,627,817.72	\$ 69,944.31	\$ 2,199,528 57	\$ 2,269,472.88	\$ 358,344.

CONSTRUCTION ITEMS	UNIT	QUANTITY	UNIT	TOTAL	CURRENT R	EQUEST	PRIOR REG	UESTS	TOTAL REQ		AVAILABLE FO	
			COST	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST
ANNUAL CONSTRUCTION COST INCREASE PER PA MPC \$598/th Construction Cost Subtotal Released as of December 2017 (Release #11) \$ 2,011,614.94 Batance as of December 2017 (Release #11) \$ 342,827.51 10% Annual Construction Cost Increase (Balance as of 3/31/19 - \$342,827.51)	LS	.3	\$ 34,282.75	\$ 34,282.75	0.19 \$	6,358 57	050\$	17,141,38	0.69 \$	23,499.95	0.31 :	\$ 10,782.80
CONTINGENCY 10% Contingency Released upon certification of completion and receipt of Maintenance I	LS Bond)	9	\$ 238,892 52	\$ 238,892.52	\$	×	\$		\$	*	1.00	\$ 238,892 52

- NOTES:
 1 2014-09-24, Initial construction cost issued for Phase I Land Development Agreement
 2 2016-08-04, Phase II costs updated prior to recording of Phase II Land Devleopment Agreement. Not change to construction cost = \$0.00, 30, 2018-04-04. Phase I and Phase II spreadsheels separated for release purposes.
 4 2018-04-04. Engineering/Legal & Administration cash escrow amounts based upon Phases I and II.
 5 2018-05-13. Moved Fox Meadow wearing course from Phase 1 to Phase 2 (line items 1, G, 6, 8, 9 (3,286 SY), & 10 (2,234 LF)).
 6 2019-05-13. Added 10% annual increase per PA MPC \$508(h) (line item 1,5.1)

MANSFIELD DEVELOPMENT LLC

PO Box 8896 Hamilton, NJ 08650 609-638-2907 stephenamansfield@gmail.com

January 22, 2021

James P. Dougherty, P.E. Gilmore & Associates 65 East Butler Ave. Suite 100 New Britain, PA 18901

Re:

Walnut Creek Phase 1 (a.k.a. Firefox) – Montgomery Township

Escrow Reduction Request #13

Dear Mr. Dougherty:

On behalf of Crystal Road Enterprises, LLC (a.k.a. Select Properties), enclosed for review and approval is Escrow Reduction Request #13 dated January 22, 2021, in the amount of \$189,396.64 for work completed at the Walnut Creek Phase 1 community as outlined in the attached detailed reduction request.

If you require any additional information, please feel free to contact me at either 609-638-2907 or stephenamansfield@gmail.com. Thank you again for all your assistance.

Sincerely,

Stephen Mansfield

Cc: Brian Desault, Gilmore & Associates (via US Mail and email with attachment)

Brian Grant, Select Properties (via email with attachment)

13

DATE PREPARED: 22-Jan-2021

PROJECT NAME: DEVELOPER: ESCROW AGENT: Firefox - Ph. 1 (Southern)

Crystal Road Enterprises, LLC

Univest

TOTAL ENG/INSP/LEGAL (CASH ESCROW): \$ 45,000 00 TOTAL ADMINISTRATION (CASH ESCROW): \$ 5,000.00

MONTGOMERY TOWNSHIP TOWNSHIP NO .:

G&A PROJECT NO .: AGREEMENT DATE:

LDS-630 2012-09009 10-Oct-2014

TYPE OF SECURITY: Loan

GILMORE & ASSOCIATES, INC.

MAINTENANCE BOND AMOUNT (15%): \$ 358,338.78

SUMMARY OF IMPROVEMENT ESCROW ACCOUNT	TOTAL	F	ELEASE REQUESTS		
	COST	CURRENT	PRIOR	TOTAL	BALANCE
CONSTRUCTION ANNUAL 10% CONSTRUCTION COST INCREASE (Balance as of 3/31/19 - \$342,827.51) CONTINGENCY (10%)	\$2,354,542,45 \$ 34,282,75 \$ 238,892,52	\$ 172,255,26 \$ 17,141,38 \$	\$ 2,182,387,19 \$ 17,141,38 \$ -	\$ 2,354,642 45 \$ 34,282.75 \$	\$. \$. \$ 238.892.50
TOTAL	\$ 2,627,817.72	\$ 189,396.64	\$ 2,199,528.57	5 2:388,925.20	\$ 238,892.5

CONSTRUCTION ITEMS	UNIT	QUANTITY	UNIT	TOTAL	CURRENT R	EQUEST	PRIOR REGI	JESTS	TOTAL REQ		AVAILABLE FOR	
			COST	COST	077/	COST	QTY	COST	(incl. current	COST	QTY	COST
					QTY	COBT	GIT	COST	0.00	0031	0.00	50.0
HASE I (SOUTHERN VILLAGE)				\$0.00	0.00.0		1 00 \$	73,227 00	1.00 S	73,227.00	0.00 \$	
A. MOBILIZATION	L8	1 5	73,227.00	73,227 00	0.00 \$		1,00 \$	13,221 00	1,00 5	13,221,00	#VALUE!	
								1		j,	#VALUE!	
B. <u>EARTHWORK</u>					0.00.0		1.00 S	52,482.00	1.00 S	52,482.00	0.00 S	
Clearing & Grubbing	L8	1 B			0.00 \$		11.338.00 \$	28,004.86	11,338.00 \$	28,004 86	0.00 \$	
2. Strip Topsoil	CY	11,338 \$	2.47	. 17	0.00 \$		16.335.00 \$	40.837.50	16,335 00 S	40,837.50	0 00 5	
3. Cut Fill & Compact	CY	16,335 \$	2,50		0.00 S		35,597 00 5	9,967 16	35,597 00 S	9,967 16	0.00 \$	
4. Grade	SY	35,597 \$	0.28	\$ 9,967 16	0,00 \$		35,591 00 \$	3,507 10	33,357 00 9	3,307 10	#VALUE!	
											#VALUE1	
C. RETAINING WALL			- 40	0.054.40	0.00 5		321 00 \$	2,054 40	321 00 S	2.054.40	0.00 S	
1. Excavate Retaining Wall	LF	321 \$	6.40		0.00 \$		1,250,00 S	50,000 00	1.250,00 5	50.000.00	0 00 S	
2. Retaining Wall	8F	1,250 \$		\$ 50,000.00	0.00 \$		1,250,00 S	1.785.00	1.00 \$	1.785.00	0.00 \$	
 Sleeves for Guide Rail behind Wall #1 	LS	1 \$	1,785.00	\$ 1,785,00	0 00 5		100 3	1,705.00	100 \$	1,705,00	#VALUE!	
							l	1			#VALUE!	
D. EROSION CONTROL							1				#VALUE!	
Erosion & Sediment Controls					0.00 \$	E 160	1.00 S	3,392.00	100 \$	3.392.00	0 00 \$	
Construction Entrance	EA	1 \$	-1	\$ 3,392,00	1131 8		31 00 \$	320.85	31 00 S	320.85	0.00 S	
12" Weighted Sediment Tube	LF	31 \$		\$ 320 85	0.00 \$		138.00 S	525 78	138 00 S	525.78	0 00 S	
3. 12" Filtrex Sock	LF	138 \$		s 525.78	0.00 \$			546 00	350.00 \$	546.00	0.00 S	
4. 18° Slit Fence - Stockpiles	LF	350 \$		\$ 546,00	0,00 8		350.00 \$		646 00 S	1,233.86	0 00 5	
5. 30' Bilt Fence	LF	646 \$		\$ 1,233,86	0.00		646,00 S	1,233.86		4,431 15	0 00 \$	
6. Super Bilt Fence	LF	687 \$		\$ 4,431 15	0.00		687,00 \$	4,431 15	687 00 \$	19,350.00	0 00 \$	
Super Silt Fence w/ Tree Protection Fence	LF	3,000 \$		\$ 19,350,00	0.00		3,000,00 \$	19,350 00	3,000 00 \$		0 00 5	
8. Orange Construction Fence	LF	1,520 \$		\$ 2,340,80	0.00 \$		1,520,00 S	2,340 80	1,520 00 \$	2,340,80 5,779 62	0 00 5	
9. Tree Protection Fence	LF	3,753 \$		5 5,779.62	0.00		3,753,00 \$	5,779.62	3,753 00 \$			
10. Temporary Vegetation - Excess Fill Piles	87	19,360 \$		\$ 5,814.40	0.00		19,360,00 S	5,614 40	19 360 00 \$	5,614,40	0 00 S	
11. Slope Matting (North American Green S-75)	8Y	3,059 \$		\$ 4,588.50	0.00		3,059,00 \$	4,588 50	3,059.00 \$	4,588,50	0 00 S	
12. Grade Swales #A,A1.5,B12.2,B6,B13)	SY	2,471 8		\$ 1,359,05	0 00		2,471.00 S	1,359 05	2,471 00 S	1,359.05		
13. Swale Matting (North American Green S-75)	BY	2,471 \$		\$ 3,706,50	0.00		2,471.00 S	3,708.50	2,471 00 \$	3,706,50		
14. Rock Filters	EA	6 \$		\$ 792.00	0.00		6,00 \$	792 00	6 00 S	792,00		
15. Inlet Protection Silt Sack	EA	29 \$	134.00	\$ 3,886.00	0.00		29.00 \$	3_886_00	29 00 S	3,886,00		
18. Pumped Water Filter Bag, Pump, Clean Water Pump Bypass,	LG	1 5	12,000.00	\$ 12,000.00	0.00	\$	1,00 S	12 000 00	100 \$	12,000.00	1	
Sandbag Cofferdam					1			1			5	
Sediment Besin B										0.545.00	#VALUE!	
20. Strip Topsoil	CY	1,058 \$			0.00		1,058.00 \$	2,613 26	1,058.00 \$	2,613,26		
21. Cut Fill & Compact	CY	3,883 \$		\$ 9,207 50	0 00		3,683 00 \$	9 207 50	3,683.00 \$	9,207.50		
22. Grade	CY	4,737			0.00		4,737.00 \$	1 326 36	4,737 00 S	1,325 36		
23. Core Cut & Fill Keyway	LF	275		\$ 2,772 00	0.00		275.00 \$	2,772,00	275 00 \$	2,772,00		
24. Respread Topsoli	CY	1,058					1.058.00 S		1,058.00 \$	3,142.26		
25. Grade Spillway	SY	132			0,00		132.00 \$		132.00 \$	63,36		
26. Spillway Matting (North American Green P-300)	8Y	132					132.00 5		132 00 \$	747 12		
27. Permanent Rake & Vegetation	SF	42,675					42,875.00 \$		42,675 00 \$			
2B. Super Silt Fence Baffle Wall, 3.05' hgt.	LF	255	\$ 6.45				255.00 S		255.00 \$			
29, 24" x 38" Elliptical RCP (Dual Runs)	LF	88	\$ 143.00	\$ 12,584.00			88.00 \$		88.00 \$			
30. Outlet Structure (#B3.3) w/Wingwalls and Trash Rack	EA	1	\$ 10,505.00	\$ 10,505.00			1.00 \$		1.00 \$			
31. 30" x 120" Modified Type C inlets (#802, 803)	EA	2	\$ 5,087.00	\$ 10,174.00	0.00	\$	2.00 5		200 \$			
32. Antiseep Collars	EA	2	\$ 1,809.00	\$ 3,618.00			2.00 \$		2 00 \$			
33. 24" x 38" Elliptical Endwall (#B1) w/Concrete Apron	EA	1 -	\$ 11,715.00	\$ 11,715.00	0 00	\$	1.00 \$		1.00 \$			
34. 36" CMP Temporary Riser	EA	1	\$ 1,900.00	\$ 1,900.00	0.00	\$	1.00 \$	1,900 00	1.00 \$	1,900.00	0.00 S	

8 SEWER 8" RCP 8" RCP 8" RCP 5" RCP 9" x 53" Elliptical RCP ypc C Inlet (#A01.3, A01.4, A03, A04, A05, A06, B02.1, B03.1, ype C Inlet Mod, 42"x48" (#B03.4, B04) ype C Inlet Mod 9" x 8" (Outlet Structure #A02) 8" DW Endwalls (#A01.2, A01.5) 6" STONE ADDITION OF A BOOK AND ADDITION OF ADDITION	LF LF LF LF EA EA EA TON LS LS	1 \$	35.00 \$ 45.00 \$ 80.00 \$ 162.00 \$ 2,700.00 \$ 12,608.00 \$ 1,200.00 \$ 1,200.00 \$ 48,161.00 \$ 117,195.00 \$	26,670 00 18,450 00 8,960 00 11,626 00 70,200 00 6,800 00 12,608 00 2,400 00 10,314 00	0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$		762.00 \$ 410.00 \$ 112.00 \$ 73.00 \$ 26.00 \$ 2.00 \$ 1,00 \$ 2.00 \$ 1.00 \$	26,670,00 18,450,00 8,960,00 11,826,00 70,200,00 6,800,00 12,608,00 2,400,00 1,850,00	762 00 \$ 410.00 \$ 112.00 \$ 73.00 \$ 26 00 \$ 2.00 \$ 1.00 \$ 2.00 \$ 1.00 \$	26,670.00 18,450.00 8,960.00 11,826.00 70,200.00 6,800.00 12,608.00 2,400.00	#VALUE! 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$	
3" RCP 5" RCP 5" RCP 6" x 53" Elliptical RCP ypc C Inlet (#A01.3, A01.4, A03, A04, A05, A06, B02.1, B03.1, ypc C Inlet (MA01.3, A01.4, A03, A04, A05, A06, B02.1, B03.1, ypc C Inlet Mod 8" x 8" (Outlet Structure #A02) 8" DW Endwalls (#A01.2, A01.5) 6" DW Endwalls (#B10) -5 Rip Rap Dissipator VITION FACILITIES #A, B1, B2 acility A, Systems #1 and 2, w/ Structure #A7, w/ #57 Stone to pringline of Pipe and On-site Backfill (No Fabric) 5" Stone to Springline of Pipe and On-Site Backfill (No Fabric) 5" Stone to Springline of Pipe and On-Site Backfill (No Fabric) 5" Stone to Springline of Pipe and On-Site Backfill (No Fabric) 5" Stone to Springline of Pipe and On-Site Backfill (No Fabric) 5" Stone to Springline of Pipe and On-Site Backfill (No Fabric) 5" Stone to Springline of Pipe and On-Site Backfill (No Fabric)	LF LF EA EA EA TON LS LS	410 S 112 S 73 S 26 S 2 S 1 S 2 S 1 S 1 S 191 S	45.00 \$ 80.00 \$ 162.00 \$ 2,700.00 \$ 3,400.00 \$ 12,608.00 \$ 1,200.00 \$ 1,850.00 \$ 54.00 \$	18,450.00 8,960.00 11,826.00 70,200.00 6,800.00 12,608.00 2,400.00 1,850.00 10,314.00	0.00 S 0.00 S 0.00 S 0.00 S 0.00 S 0.00 S 0.00 S 0.00 S	(F)	410.00 \$ 112.00 \$ 73.00 \$ 26.00 \$ 2.00 \$ 1.00 \$ 2.00 \$ 1.00 \$	18,450.00 8,960.00 11,826.00 70,200.00 6,800.00 12,608.00 2,400.00	410.00 S 112.00 S 73.00 S 26.00 S 2.00 S 1.00 S 2.00 S	18,450,00 8,960,00 11,825,00 70,200,00 6,800,00 12,608,00 2,400,00	0.00 S 0.00 S 0.00 S 0.00 S 0.00 S 0.00 S	*
4° RCP 5° RCP 5° RCP 9° X 53° Elliptical RCP ypc C Inlet (#A01.3, A01.4, A03, A04, A05, A06, B02.1, B03.1, ype C Inlet Mod, 42°x48°, (#B03.4, B04) ype C Inlet Mod, 42°x48°, (#B03.4, B04) ype C Inlet Mod 8' x 8' (Oullet Structure #A02) 8° DW Endwalls (#A01.2, A01.5) 8° DW Endwalls (#B10) -5 Rip Rap Dissipator **TION FACILITIES #A, B1, B2 acility A, Systems #1 and 2, w/ Structure #A7, w/ #57 Stone to pringline of Pipe and On-site Backfill (No Fabric) acility 81, Systems #1, 2 and 3, w/ Structures #B5, B6, and B7, w/ 57 Stone to Springline of Pipe and On-Site Backfill (No Fabric) **acility 82, Systems #1 through 8, w/ Structures #B10.1, B11, B12, 112.1, B12.2, B14, B15, and B16, w/ #57 Stone to Springline of Pipe	LF LF EA EA EA TON LS LS	410 S 112 S 73 S 26 S 2 S 1 S 2 S 1 S 1 S 191 S	45.00 \$ 80.00 \$ 162.00 \$ 2,700.00 \$ 3,400.00 \$ 12,608.00 \$ 1,200.00 \$ 1,850.00 \$ 54.00 \$	18,450.00 8,960.00 11,826.00 70,200.00 6,800.00 12,608.00 2,400.00 1,850.00 10,314.00	0.00 S 0.00 S 0.00 S 0.00 S 0.00 S 0.00 S 0.00 S 0.00 S	(F)	410.00 \$ 112.00 \$ 73.00 \$ 26.00 \$ 2.00 \$ 1.00 \$ 2.00 \$ 1.00 \$	18,450.00 8,960.00 11,826.00 70,200.00 6,800.00 12,608.00 2,400.00	410.00 S 112.00 S 73.00 S 26.00 S 2.00 S 1.00 S 2.00 S	18,450,00 8,960,00 11,825,00 70,200,00 6,800,00 12,608,00 2,400,00	0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$	*
5" RCP 4" x 53" Elliptical RCP ypc C Inlet (#A01.3, A01.4, A03, A04, A05, A06, B02.1, B03.1, ype C Inlet Mod. 42"x48", (#B03.4, B04) ype C Inlet Mod. 42"x48", (#B03.4, B04) ype C Inlet Mod 8" x 8" (Oullet Structure #A02) 8" DW Endwalls (#A01.2, A01.5) 6" DW Endwalls (#B10) -5 Rip Rap Dissipator WITON FACILITIES #A, B1, B2 acility A, Systems #1 and 2, w/ Structure #A7, w/ #57 Stone to pringline of Pipe and On-site Backfill (No Fabric) acility 81, Systems #1, 2 and 3, w/ Structures #85, B6, and B7, w/ 57 Stone to Springline of Pipe and On-Site Backfill (No Fabric)	LF LF EA EA EA TON LS LS	112 \$ 73 \$ 26 \$ 2 \$ 2 \$ 1 \$ 2 \$ \$ 1 \$ \$ 191 \$ \$ 1 \$	80.00 \$ 162.00 \$ 2,700.00 \$ 3,400.00 \$ 12,608.00 \$ 1,200.00 \$ 1,850.00 \$ 54.00 \$	8,960.00 11,826.00 70,200.00 6,800.00 12,608.00 2,400.00 1,850.00 10,314.00	0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$	**************************************	112 00 \$ 73,00 \$ 26,00 \$ 2 00 \$ 1,00 \$ 2,00 \$ 1 00 \$	8,960 00 11,826,00 70,200,00 6,800,00 12,608 00 2,400,00	112.00 S 73.00 S 26.00 S 2.00 S 1.00 S 2.00 S	8,960.00 11,826.00 70,200.00 6,800.00 12,608.00 2,400.00	0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$	*
4" x 53" Elliptical RCP ypc C Inlet (#A01.3, A01.4, A03, A04, A05, A06, B02.1, B03.1, ype C Inlet Mod 4" x48", (#B03.4, B04) ype C Inlet Mod 6" x 8" (Cullet Structure #A02) 8" DW Endwalls (#A01.2, A01.5) 6" DW Endwalls (#B10) -5 Rip Rap Dissipator **TION FACILITIES #A, B1, B2 acility A, Systems #1 and 2, w/ Structure #A7, w/ #57 Stone to pringline of Pipe and On-site Backfill (No Fabric) structures #B5, B6, and B7, w/ 57 Stone to Springline of Pipe and On-Site Backfill (No Fabric) structures #B10.1, B11, B12, 312.1, B12.2, B14, B15, and B16, w/ #57 Stone to Springline of Pipe	LF EA EA EA EA TON LS LS	73 \$ 26 \$ 2 \$ 1 \$ 5 2 \$ 1 \$ 5 191 \$ 1 \$ 5	162.00 \$ 2,700,00 \$ 3,400.00 \$ 12,608.00 \$ 1,200.00 \$ 1,850.00 \$ 54.00 \$	11,826.00 70,200.00 6,800.00 12,608.00 2,400.00 1,850.00 10,314.00	0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$	2005 2005 2005 (2005	73.00 \$ 26.00 \$ 2.00 \$ 1.00 \$ 2.00 \$ 1.00 \$	11,826,00 70,200,00 6,800,00 12,608,00 2,400,00	73.00 \$ 26.00 \$ 2.00 \$ 1.00 \$ 2.00 \$	11,826,00 70,200,00 6,800,00 12,608,00 2,400,00	0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$	* * *
ypc C Inlet (#A01.3, A01.4, A03, A04, A05, A06, B02.1, B03.1, ype C Inlet Mod, 42"x48" (#B03.4, B04) ype C Inlet Mod 8" x 8" (Outlet Structure #A02) 8" DW Endwalls (#A01.2, A01.5) 6" DW Endwalls (#A01.2, A01.5) 6" DW Endwalls (#B10) -5 Rip Rap Dissipator VITION FACILITIES #A, B1, B2 acility A, Systems #1 and 2, w/ Structure #A7, w/ #57 Stone to pringline of Pipe and On-site Backfill (No Fabric) acility 81, Systems #1,2 and 3, w/ Structures #85, B6, and B7, w/ 57 Stone to Springline of Pipe and On-Site Backfill (No Fabric) facility 82, Systems #1 through 8, w/ Structures #B10.1, B11, B12, 112.2, B14, B15, and B16, w/ #57 Stone to Springline of Pipe	EA EA EA EA TON LS LS	26 \$ 2 \$ 1 \$ 2 \$ 1 \$ 1 \$ 1 \$ 1 \$	2,700.00 \$ 3,400.00 \$ 12,608.00 \$ 1,200.00 \$ 1,850.00 \$ 54.00 \$	70,200 00 6,800.00 12,608.00 2,400.00 1,850 00 10,314.00	0.00 S 0.00 S 0.00 S 0.00 S 0.00 S	2005 2005 2005 (2005	26.00 \$ 2.00 \$ 1.00 \$ 2.00 \$ 1.00 \$	70,200,00 6,800,00 12,608,00 2,400,00	26 00 \$ 2 00 \$ 1.00 \$ 2 00 \$	70,200.00 6,800.00 12,608.00 2,400.00	0.00 \$ 0.00 \$ 0.00 \$	* *
ppe C Inlet Mod, 42"x48", (#B03.4, B04) ype C Inlet Mod 8" x 8" (Oullet Structure #A02) 6" DW Endwalls (#A01.2, A01.5) 6" DW Endwalls (#B10) -5 Rip Rap Dissipator ### TION FACILITIES #A, B1, B2 acility A, Systems #1 and 2, w/ Structure #A7, w/ #57 Stone to pringline of Pipe and On-site Backfill (No Fabric) acility 81, Systems #1, 2 and 3, w/ Structures #B5, B6, and B7, w/ 57 Stone to Springline of Pipe and On-Site Backfill (No Fabric) facility 81, Systems #1 through 8, w/ Structures #B10.1, B11, B12, ###################################	EA EA EA EA TON LS LS	2 S 1 S 2 S 1 S 191 S	3,400.00 \$ 12,608.00 \$ 1,200.00 \$ 1,850.00 \$ \$4.00 \$	8,800.00 12,608.00 2,400.00 1,850.00 10,314.00	0.00 S 0.00 S 0.00 S 0.00 S	2005 2005 2005 (2005	2 00 S 1,00 S 2 00 S 1 00 S	6,800.00 12,608.00 2,400.00	2 00 S 1.00 S 2 00 S	6,800.00 12,608.00 2,400.00	0.00 S 0.00 S	* 1
ype C Inlet Mod 8' x 8' (Coullet Structure #A02) 8" DW Endwalls (#A01.2, A01.5) 6" DW Endwalls (#B10) -5 Rip Rap Dissipator VITION FACILITIES #A, B1, B2 acility A, Systems #1 and 2, w/ Structure #A7, w/ #57 Stone to pringine of Pipe and On-site Backfill (No Fabric) acility B1, Systems #1, and 3, w/ Structures #B5, B6, and B7, w/ 57 Stone to Springline of Pipe and On-Site Backfill (No Fabric)	EA EA EA TON LS LS	1 \$ 2 \$ 1 \$ 191 \$ 1 \$	12,608.00 \$ 1,200.00 \$ 1,850.00 \$ 54.00 \$	12,608.00 2,400.00 1,850.00 10,314.00	0.00 S 0.00 S 0.00 S	(3)	1,00 \$ 2,00 \$ 1,00 \$	12,608,00 2,400,00	1.00 S 2.00 S	12,608 00 2,400 00	0.00 \$	- 6
ype C Inlet Mod 8' x 8' (Coullet Structure #A02) 8" DW Endwalls (#A01.2, A01.5) 6" DW Endwalls (#B10) -5 Rip Rap Dissipator VITION FACILITIES #A, B1, B2 acility A, Systems #1 and 2, w/ Structure #A7, w/ #57 Stone to pringine of Pipe and On-site Backfill (No Fabric) acility B1, Systems #1, and 3, w/ Structures #B5, B6, and B7, w/ 57 Stone to Springline of Pipe and On-Site Backfill (No Fabric)	EA EA TON LS LS	2 \$ 1 \$ 191 \$ 1 \$	1,200.00 \$ 1,850.00 \$ 54.00 \$	2,400,00 1,850,00 10,314,00	0.00 \$ 0.00 \$	555 (3)	2.00 \$ 1.00 \$	2,400,00	2 00 \$	2,400.00		8
6" DW Endwalls (#810) -5 Rip Rap Dissipator VTION FACILITIES #A, B1, B2 acility A, Systems #1 and 2, w/ Structure #A7, w/ #57 Stone to pringline of Pipe and On-site Backfill (No Fabric) acility 81, Systems #1,2 and 3, w/ Structures #85, B6, and B7, w/ 57 Stone to Springline of Pipe and On-Site Backfill (No Fabric) facility 82, Systems #1 through 8, w/ Structures #810.1, 811, B12, 142.1, B12.2, B14, B15, and B16, w/ #57 Stone to Springline of Pipe	EA TON LS LS	1 \$ 191 \$ 1 \$ 1 \$	1,850.00 \$ 54.00 \$	1,850 00 10,314,00	0.00 S	(30	1 00 \$				o.au s	
-5 Rip Rap Dissipator NTION FACILITIES #A, B1, B2 acility A, Systems #1 and 2, w/ Structure #A7, w/ #57 Stone to pringine of Pipe and On-site Backfill (No Fabric) acility B1, Systems #1,2 and 3, w/ Structures #B5, B6, and B7, w/ 57 Stone to Springline of Pipe and On-Site Backfill (No Fabric) acility B2, Systems #1 through 8, w/ Structures #B10.1, B11, B12, 112.1, B12.2, B14, B15, and B16, w/ #57 Stone to Springline of Pipe	TON LS LS LS	191 \$ 1 \$ 1 \$	54.00 \$	10,314,00		500		1 850 00	1.00 S			
ATTION FACILITIES #A, B1, B2 acility A, Systems #1 and 2, w/ Structure #A7, w/ #57 Stone to pringline of Pipe and On-site Backfill (No Fabric) acility B1, Systems #1,2 and 3, w/ Structures #85, B6, and B7, w/ 57 Stone to Springline of Pipe and On-Site Backfill (No Fabric) facility B2, Systems #1 through 8, w/ Structures #B10.1, B11, B12, 112.1, B12.2, B14, B15, and B16, w/ #57 Stone to Springline of Pipe	LS LS	1 \$	48,161.00 S		0,00 \$	30	191.00 S			1,850,00	0.00 \$	- 3
acility A, Systems #1 and 2, w/ Structure #A7, w/ #57 Stone to pringline of Pipe and On-site Backfill (No Fabric) acility 81, Systems #1,2 and 3, w/ Structures #85, B6, and B7, w/ 57 Stone to Springline of Pipe and On-Site Backfill (No Fabric) acility 82, Systems #1 through 8, w/ Structures #B10.1, B11, B12, 112.1, B12.2, B14, B15, and B16, w/ #57 Stone to Springline of Pipe	LS	1 \$		48,161 00		1		10,314,00	191,00 S	10,314.00	0.00 S	~
acility A, Systems #1 and 2, w/ Structure #A7, w/ #57 Stone to pringline of Pipe and On-site Backfill (No Fabric) acility 81, Systems #1,2 and 3, w/ Structures #85, B6, and B7, w/ 57 Stone to Springline of Pipe and On-Site Backfill (No Fabric) acility 82, Systems #1 through 8, w/ Structures #B10.1, B11, B12, 112.1, B12.2, B14, B15, and B16, w/ #57 Stone to Springline of Pipe	LS	1 \$		48,161 00		1					#VALUE!	- 1
ipringline of Pipe and On-site Backfill (No Fabric) actility B1, Systems #1,2 and 3, w/ Structures #85, B6, and B7, w/ 57 Stone to Springline of Pipe and On-Site Backfill (No Fabric) facility B2, Systems #1 through 8, w/ Structures #B10.1, B11, B12, 312.1, B12.2, B14, B15, and B16, w/ #57 Stone to Springline of Pipe	LS	1 \$		48,161 00		- 4					#VALUEI	- 1
ipringline of Pipe and On-site Backfill (No Fabric) actility B1, Systems #1,2 and 3, w/ Structures #85, B6, and B7, w/ 57 Stone to Springline of Pipe and On-Site Backfill (No Fabric) facility B2, Systems #1 through 8, w/ Structures #B10.1, B11, B12, 312.1, B12.2, B14, B15, and B16, w/ #57 Stone to Springline of Pipe	LS		117,195.00 S		0.00 \$	(2.1	1,00 S	48,161.00	1,00 \$	48,161.00	0 00	
57 Stone to Springline of Pipe and On-Site Backfill (No Fabric) acility 82, Systems #1 through 8, w/ Structures #810.1, 811, B12, 312.1, B12.2, B14, B15, and B16, w/ #57 Stone to Springline of Pipe	LS		117,195.00 S	1				(1)				
facility B2, Systems #1 through 8, w/ Structures #B10.1, B11, B12, 312.1, B12.2, B14, B15, and B16, w/ #57 Stone to Springline of Pipe				117,195 00	0.00 \$	- 4	1.00 \$	117,195 00	1 00 \$	117 195 00	0.00	- 1
312.1, B12.2, B14, B15, and B16, w/ #57 Stone to Springline of Pipe												
312.1, B12.2, B14, B15, and B16, w/ #57 Stone to Springline of Pipe				- 1							\$	3
312.1, B12.2, B14, B15, and B16, w/ #57 Stone to Springline of Pipe		1 \$	313,500,00 \$	313,500.00	0.00 \$	29	100 \$	313,500 00	100 S	313,500 00	0 00	
				1						- 1		
								1		- 1	\$	201
				1		1				1	#VALUE!	1
WAY (Interior)				1		1				1	#VALUE!	
Excavate & Backfill Curb	LF	6,117 \$		19,513 23	0.00 \$		6,117,00 \$	19,513 23	6,117,00 \$	19,513,23	0.00 \$	100
Belgian Block Curb	LF	6,117 \$		85,638.00	0.00 \$	× 3	6,117.00 S	85,638.00	6,117,00 \$	85,638,00	0.00 \$	(0)
Fine Grade and Compact Subgrade	SY	9,489 \$	1.12 S	10,627.68	0.00 \$	> 1	9,489,00 S	10,627,68	9,489.00 \$	10.627.68	0.00 \$: # :
3 2a Modified	SY	9,489 \$	3,01 \$	28,561,89	0.00 \$		9,480 00 S	28,561.89	9,489 00 \$	28,561,89	0.00 \$	100
5" (25MM) Base Course	SY	9,489 \$	19,00 \$	180,291.00	0.00 \$	*	9,489,00 \$	180,291.00	9,489.00 \$	180,291 00	0.00 \$	- 5
1.5" (9.5MM) Wearing Paving (Note 5)	SY	6,204 \$	7,12 S	44,172,48	6,204.00 \$	44,172 48	0.00 \$		6,204 00 \$	44,172 48	0.00 \$	- 8
Speed Bump	LS	1 \$	1,200.00 S	1,200.00	1.00 \$	1,200 00	0.00 \$		100 \$	1,200 00	0.00 \$	- 5
Street Sweeping (Note 5)	SY	6,204 \$	0.12 \$	744.4B	6,204.00 \$	744,48	0,00 S		6,204 00 \$	744.48	0 00 \$	**
Tack Coal (Note 5)	SY	6,204 \$		1,178.76	6,204.00 5	1,178.76	0.00 \$		6,204 00 \$	1,178 76	0.00 \$	*
Curb & Joint Seal (Note 5)	LF	3,883 \$	0.63 \$	2,446.29	3,883.00 \$	2,446.29	0.00 \$	- 8	3,883.00 \$	2,446 29	0.00 \$	**
Line Painting	LS	1 S	1,750.00 \$	1,750.00	1.00 5	1,750.00	0.00 S	54	100 \$	1,750.00	0 00 \$	- 5
Site Signage	LS	1 \$	2.307.00 \$	2,307 00	0.50 \$	1,153,50	0.50 S	1,153.50	1 00 S	2,307.00	0 00 \$	
Type 2S Guide Rail (Includes 3 Terminal Sections)	LF	760 S		15,739 60	0.00 \$		760.00 \$	15,739 60	760 00 S	15,739 60	0 00 \$	4
Type 20 Color Trail (Modern 2 Total Color)					f .						#VALUE!	
DWAY (Bethlehem Pike)					1	- 1					#VALUE!	
Excavate & Backfill, Concrete Curb	LF	360 \$	5,29	1,904.40	0.00 \$	19	360.00 \$	1,904.40	350 00 \$	1.904 40	0.00 \$	
18" Concrete Curb	LF	360 S	13.35	4,806.00	0.00 S	29.	360,00 S	4,806.00	360 00 \$	4,806 00	0.00 \$	* 1
Saw Cut	LF	450 S	3,17	1,426.50	0.00 S		450,00 S	1,426 50	450.00 \$	1,426.50	0 00 \$	V .
Excavate for Widening	SY	500 S		4,220.00	0.00 \$	331	500,00 S	4,220,00	500.00 \$	4,220.00	0.00 \$	201
6" Pavement Base Drain	LF	261 \$			0.00 \$	191	261,00 \$	4,940 73	261 00 \$	4 940 73	0 00 \$	180
18" RCP	LF	65 \$			0.00 S	(2)	85 00 S	3,599.70	65.00 \$	3,599,70	0.00 \$	
Tie-In to Existing Inlets	EA	2 \$			0 00 \$	585	2.00 \$	3,450.00	2 00 \$	3,450,00	0 00 \$	
Type C Inlets (#81, B2)	EA	2 \$			0.00 \$	1000	2 00 \$	6,374 00	2 00 5	6,374,00	0.00 \$	12
Fine Grade and Compact Subgrade	SY	520 \$			0,00 \$	200	520,00 \$	582.40	520 00 S	582.40	0.00 \$	- 9
8" 2a Modified	SY	500 8			0.00 \$	8	500 00 \$	5,965.00	500 00 S	5,965.00	0 00 \$	37
G Zd WOGINGO	SY	500 \$			0.00 \$		500.00 \$		500.00 S	17.690 DD	0 00 5	12
9" MEANA Dage Course	SY	500 5			0.00 S		500.00 S		500.00 \$	7,290 00	0.00 \$	4
8" (25MM) Base Course	SY	1.133 8			0.00 S		1,133.00 \$		1,133 00 \$	10,865,47	0.00 \$	
2.5" (19MM) Base Course	SY	1,133 \$			0.00 S		1,133.00 \$		1,133,00 \$	181.28	0.00 \$	- 1
2.5" (19MM) Base Course 1.5" (12MM) Wearing Paving		1,200 \$			0.00 S		1,200.00 S		1,200.00 \$	756 00	0.00 \$	(3)
2.5" (19MM) Base Course 1.5" (12MM) Wearing Paving Street Sweeping		-	•						1,133.00 \$	215.27	0.00 5	32.5
2.5" (19MM) Base Course 1.5" (12MM) Wearing Paving Street Sweeping Curb & Joint Seal	LF			2.0					1.00 S	7,645 00	0.00 \$	
2.5" (19MM) Base Course 1.5" (12MM) Wearing Paving Street Sweeping Curb & John Seal Tack Coat	LF SY				0.00				1,00 S			
2.5" (19MM) Base Course 1.5" (12MM) Wearing Paving Street Sweeping Curb & Joint Seal Tack Coat Mälling for Overlay	LF SY LS		g 0,540.00						1 00 S		0 00 \$	192
2.5" (19MM) Base Course 1.5" (12MM) Wearing Paving Street Sweeping Curb & Joint Seal Tack Coat Milling for Overlay Line Painting	LF SY LS LS	1 :	C 245 889 00				17.1				0.00 \$	100
2.5" (19MM) Base Course 1.5" (12MM) Wearing Paving Street Sweeping Curb & John Seal Tack Coat Milling for Overlay Line Painting Signalization	LF SY LS LS LS	1 :			1 000 4		1 100 3					800
2.5" (19MM) Base Course 1.5" (12MM) Wearing Paving Street Sweeping Curb & Joint Seal Tack Coat Milling for Overlay Line Painting Signalization Type 2S Guide Rail, Remove & Replace	LF SY LS LS LS	1:	\$ 8,350.00	\$ 8,350.00			- 03		1.00 S	2,725.00	0 00 \$	
2.5" (19MM) Base Course 1.5" (12MM) Wearing Paving Street Sweeping Curb & Joint Seal Tack Coat Mälling for Overlay Line Painting Signalization Type 28 Guide Rail, Remove & Replace Figure 24 Signage	LF SY LS LS LS LS	1 : 1 : 1 :	\$ 8,350.00 \$ 2,725.00	\$ 8,350.00 \$ 2,725.00	0.00 \$	2	1 00 \$	2,725.00				- 3
2.5" (19MM) Base Course 1.5" (12MM) Wearing Paving Street Sweeping Curb & John Seal Tack Coat Milling for Overlay Line Painting Signalization Type 28 Guide Rail, Remove & Replace Figure 24 Signage Traffic Control	LF SY LS LS LS LS LS	1 : 1 : 1 : 8 :	\$ 8,350.00 \$ 2,725.00 \$ 900.00	\$ 8,350 00 \$ 2,725 00 \$ 7,200 00	0.00 \$ 0.00 \$		1 00 S 8 00 S	2,725.00 7,200.00	1.00 S	7,200.00	0.00 \$	
2.5" (19MM) Base Course 1.5" (12MM) Wearing Paving Street Sweeping Curb & John Seal Tack Coat Milling for Overlay Line Painting Signalization Type 28 Guide Rail, Remove & Replace Figure 24 Signage Traffic Control Excavate & Backfilt, Pface 4" 2A Mod. Stone for Sidewalk	LF SY LS LS LS LS DY SF	1 : 1 : 1 : 8 :	\$ 8,350.00 \$ 2,725.00 \$ 900.00 \$ 1,56	\$ 8,350 00 \$ 2,725 00 \$ 7,200 00 \$ 2,184 00	0.00 \$ 0.00 \$ 0.00 \$		1 00 \$ 8 00 \$ 1,400 00 \$	2,725.00 7,200.00 2,184.00	1.00 S 8.00 S 1,400.00 S	7,200.00 2,184.00	0.00 \$	- 6
2.5" (19MM) Base Course 1.5" (12MM) Wearing Paving Street Sweeping Curb & Joint Seal Tack Coat Mälling for Overlay Line Painting Signalization Type 28 Guide Rail, Remove & Replace Figure 24 Signage Traffic Control Excavate & Backfill, Pface 4" 2A Mod. Stone for Sidewalk Sidewalk (4")	LF SY LS LS LS LS DY SF SF	1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5	\$ 8,350.00 \$ 2,725.00 \$ 900.00 \$ 1.56 \$ 8.00	\$ 8,350 00 \$ 2,725 00 \$ 7,200 00 \$ 2,184 00 \$ 11,200 00	0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$	*	1 00 \$ 8.00 \$ 1,400 00 \$ 1,400 00 \$	2,725,00 7,200,00 2,184,00 11,200,00	1.00 S 8.00 S	7,200.00 2,184.00 11,200.00	0 00 \$ 0 00 \$ 0 00 \$	
2.5" (19MM) Base Course 1.5" (12MM) Wearing Paving Street Sweeping Curb & John Seal Tack Coat Milling for Overlay Line Painting Signalization Type 28 Guide Rail, Remove & Replace Figure 24 Signage Traffic Control Excavate & Backfilt, Pface 4" 2A Mod. Stone for Sidewalk	LF SY LS LS LS LS DY SF	1 : 1 : 1 : 8 :	\$ 8,350.00 \$ 2,725.00 \$ 900.00 \$ 1.56 \$ 8.00	\$ 8,350 00 \$ 2,725 00 \$ 7,200 00 \$ 2,184 00	0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$	*	1 00 \$ 8 00 \$ 1,400 00 \$	2,725,00 7,200,00 2,184,00 11,200,00	1,00 S 8,00 S 1,400,00 S 1,400,00 S	7,200.00 2,184.00 11,200.00	0 00 \$ 0 00 \$ 0 00 \$	
2.5" (19MM) Base Course 1.5" (12MM) Wearing Paving Street Sweeping Curb & Joint Seal Tack Coat Mälling for Overlay Line Painting Signalization Type 28 Guide Rail, Remove & Replace Figure 24 Signage Traffic Control Excavate & Backfill, Pface 4" 2A Mod. Stone for Sidewalk Sidewalk (4")	LF SY LS LS LS LS DY SF SF	1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5	\$ 8,350.00 \$ 2,725.00 \$ 900.00 \$ 1.56 \$ 8.00	\$ 8,350 00 \$ 2,725 00 \$ 7,200 00 \$ 2,184 00 \$ 11,200 00	0.00 \$ 0.00 \$ 0.00 \$ 0.00 \$	*	1 00 \$ 8.00 \$ 1,400 00 \$ 1,400 00 \$	2,725,00 7,200,00 2,184,00 11,200,00	1,00 S 8,00 S 1,400,00 S 1,400,00 S	7,200.00 2,184.00 11,200.00	0 00 \$ 0 00 \$ 0 00 \$ 0 00 \$	
1 5		Fack Coat SY	Fack Coat SY 1,133 : Milling for Overlay LS 1	Add North Seal	Add Non Seal SY 1,133 0.19 S 215.27 Crack Coal LS 1 \$ 7,845.00 \$ 7,645.00 Adding for Overlay LS 1 \$ 6,540.00 \$ 6,540.00 Line Paintling LS 1 \$ 6,540.00 \$ 6,540.00 Signalization LS 1 \$ 215,689.00 \$ 215,889.00	September Sept	Sty	SY 1,133 S 0.19 S 215 27 0.00 S 1,133 00 S Gale Coat S 1,133 S 0.19 S 215 27 0.00 S 1,133 00 S Gale Coat S 1,133 S 0.19 S 215 27 0.00 S 1,00 S	Auto A John Seal Care Care Care Care Care Care Care Care	Auto A John Seal Str. 1,133 0 5 1,133 0 5 215,27 1,133 0 5 1,133 0	Auth A binn Seal St. 1,133 & 0.19 & 215.27 & 0.00 & 1,133 0 & 215.27 & 1,133.00 & 215.	Auth A birth Seal Clot S Y 1,133 \$ 0.19 \$ 215.27 0.00 \$ 1,133 0 \$ 215.27 1,133.00 \$ 215.27 0.00 \$ 1,00 \$ 7,645.00 \$ 7,645.00 \$ 7,645.00 \$ 7,645.00 \$ 1,00 \$

				10				61				14
2. Driveway Apron (6" w/ wire mesh)	EA	57 \$	1,100.00 S	62,700 00	0.00 \$	*	57.00 S	62,700.00	57,00 S	62,700,00	0.00 S	285
Handicap Ramps (Incl. DWS)	EA	12 \$	500.00 s	6,000 00	2.00 S	1,000 00	10 00 S	5,000,00	12 00 \$	6,000,00		181
				1		- 1		- 1		1	#VALUE!	- 1
J. BIOSWALE CONVERSION				1							#VALUE!	
 Convert bioswales A1.5 and B12.2 to permanent infiltration swales 	LS	1 \$	23,202.00 S	23,202 00	0.00 \$		1 00 \$	23,202,00	1.00 \$	23,202,00	0.00 \$	*:
											#VALUE1	1
K. SEDIMENT BASIN B CONVERSION				1		- 1		- 1		- 1	#VALUE!	
1. Earthwork	LS	1 5	43,918.00 S	43,918.00	1.00 \$	43,918,00	0.00 \$		1,00 \$	43,918,00	0.00 \$	50
2. Post and rall fencing	LF	462 S	15,00 S	6,930.00	462,00 S	6,930.00	0.00 \$	35.	462,00 \$	6,930,00	0,00 5	20
Z. Foat and rain fortising	_										#VALUE!	- 1
L STREET LIGHTS				- 1				- 1			#VALUE!	- 0
1. Street Lights	EA	18 S	2,700,00 S	43,200 00	0.00 \$	3	16 0D S	43 200 00	16 00 S	43,200 00	0 00 S	- 8
1. Sileat Diffus			-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					1			#VALUE!	
W I ANDROADING						- 1		- 1		- 1	#VALUE!	
.M. LANDSCAPING Shade Trees				- 1		- 1		- 1		- 1	#VALUE!	
1. Acer rubrum	EA	31 \$	350.00 s	10.850.00	3.00 S	1,050 00	28.00 \$	9,800,00	31.00 \$	10,850.00	0.00 3	8
	EA	19 \$	350,00 S		5.00 S	1,750.00	14 00 \$	4,900,00	19.00 \$	6,650 00	0.00 \$	~
2. Acer saccharum	EA	16 \$	380.00 S		10.00 S	3.800.00	8 00 s	2,280,00	16.00 \$	6,080,00	0.00 \$	
Cercidiphyllum Japonica	EA	27 \$	350.00 S		15.00 \$	5,250,00	12 00 \$	4,200,00	27 00 S	9,450,00	0.00 \$	
4. Gleditsia T. Shademaster	EA	27 5	350.00 S		9.00 \$	3,150.00	14 00 5	4,900.00	23.00 \$	8,050.00	0.00 \$	2
5. Liquidember styreciflue	EA EA	23 \$	350.00 \$		10.00 \$	3,500.00	11 00 S	3,850,00	21.00 S	7.350.00	0.00 S	*
6. Lirlodendron tulipifera	EA EA				9,00 \$	3.150.00	4.00 S	1,400.00	13 00 S	4,550.00	0.00 \$	
7. Płatanus x acerifolia		13 \$			7.00 \$	2,450 00	9.00 S	3,150.00	16 00 \$	5,600,00	0.00 5	
8. Pyrus C. Chenticleer	EA	16 S		-,	0.00 \$	2,450 00	13.00 \$	4,680 00	13 00 \$	4 680 00	0.00 5	
9. Quercus borealis	EA	13 \$	350.00 S		9.00 \$	3,150.00	0.00 \$	4,000 00	9.00 \$	3,150,00	0.00 \$	Ş.
10. Quercus palustris	EA	9 S	360.00 5		4.00 \$	1,440 00	18.00 \$	6,480 00	22.00 S	7,920.00	0.00 \$	7.4
11. Quercus phellos	EA	22 \$	350.00 8		11.00 \$	3,850.00	7 00 5	2,450 00	18.00 S	6,300.00	0.00 S	
12. Tilla cordala	EA	18 5	350.00 9		13.00 \$	4,550.00	13.00 \$	4,550 00	26 00 \$	9,100 00	0 00 S	Ca.
13. Zelkova serrata	EA	26 S	330.00	9,100.00	13.00 \$	4,550.00	13.00 3	4,550 00	20 00 9	5,100 00	#VALUE!	
Evergreen Trees			250.00	6,500 00	26.00 S	6,500.00	0.00 \$		26 00 S	6,500 00	0.00 S	02
17. Juniperus virginiana	EA	26 \$				3,250.00	21 00 \$	5,250 00	34 00 \$	8,500.00	0.00 \$	19
16. Picea ablas	EA	34 S	250.00 ±		13.00 S 12.00 S	3,000.00	31.00 \$	7,750.00	43 00 5	10,750 00	0.00 \$	174
14. Pinus strobus	EA	43 \$					0.00 \$	7,730.00	29.00 \$	7,250 00	0.00 S	14
15. Pseudotsuga menziesii	EA	29 \$	250.00	7,250.00	29.00 \$	7,250.00	000 3		25.00 3	1,230,00	#VALUE!	
Shruba							*****	650 00	10 00 S	650.00	0.00 S	527
18. Euonymous A. Compacta	EA	10 S	65.00		0.00 \$	650 OD	10 00 \$ 0 00 \$	650 00	10.00 \$	650.00	0.00 S	747
19. Forsythia Lynwood Gold	EA	10 \$	65.00		10,00 S			8 1	17.00 S	1,105 00	0 00 S	
20. ilex verticilata	EA	17 S	65.00		17 00 S	1,105 00	0.00 \$	715 00	11 00 S	715.00	0.00 5	200
22. Taxus Densiformia	EA	11 \$	65.00		0 00 \$	500.00	11 00 \$	71000	9 00 \$	585 00	0.00 S	1000
21. Virbumum Piloatum	EA	9 \$	65.00	5 585.00	9.00 \$	585 00	0.00 \$		9 00 3	365 66	#VALUE!	
Miscellansous						4 700 00	0 00 S		14.190.00 S	1,702.80	0 00 S	
23. Seed Mix "A" for Basin (ERNMX 126)	8F	14,190 \$			14,190,00 5	1,702 80	0.00 \$	S	12,960,00 \$	1,555.20	0.00 S	190
24. Seed Mix "B" for Basin (ERNMX 127)	SF	12,960 \$	0.12	\$ 1,555.20	12,960 00 \$	1,555 20	0.00 3		12,000 00 0	.,000	#VALUE!	
Const.		4046.0	25.00		33 00 \$	1,155.00	1,612,00 S	56,420 00	1,645 00 \$	57,575.00	0.00 s	
1.N. BITUMINOUS PATHWAYS	SY	1,845 \$	35,00	\$ 57,575,00	3300 \$	1,155 00	1,012,00 3	30,420.00	1,040 00 0	0,0,00	#VALUE!	
			40 000 00	40,000,00	0.00 S		1 00 S	10,000.00	1 00 S	10,000 00	0.00 \$	**
1.0. 8-FT-HIGH OPAQUE (BUFFER) FENCING	LB	1 \$	10,000.00	s 10,000.00	0.00 \$	(7)	100 3	10,000,00	1 00 0	10,000 00	#VALUE!	
3.0m							1.00 S	30,000 00	100 S	30,000 00	0 00 s	40
1.P. RESPREAD TOPSOIL (8")	LS	1 \$	30,000.00	\$ 30,000,00	0.00 \$		1,00 \$	30,000 00	1,00 3	55,500 00	#VALUE!	
							1.310.00 S	11.331.50	1,310,00 S	11 331 50	0 00 s	- 2
1.Q. MONOSLAB PAVERS (access to sanitary gesement)	SF	1,310 S	8.65	\$ 11,331 50	0.00 S	19	1,310,00 5	11.331.30	1,310,00 3	11,351,30	#VALUE!	
									8		#VALUE!	
1.R. OTHER			10 701 65				1.00 \$	46,781 00	100 S	46.781.00	0 00 s	-
1. Construction Stakeoul	LS	1 \$			0.00 S		100000000000000000000000000000000000000	11.756 25	100 \$	15,675.00	0.00 \$	
2. Pins and Monuments and As-Bullits	L8	1 \$	15,675.00	\$ 15,675 00	0.25 \$	3,918 75	0.75	11.730.23		70.070.00	#VALUE!	
					-		-				#VALUE!	
1.8. ANNUAL CONSTRUCTION COST INCREASE PER PA MPC \$509(h)	45			57			t					
Construction Cost Subtotal \$ 2,354,642							1					
Released as of December 2017 (Release #11) \$ 2,011,814.9												
Balance as of December 2017 (Release #11) \$ 342,827		1.5	34,282 75	s 34 282 75	0.50 S	17.141.38	0.50 S	17,141,38	100 S	34,282.75	0.00 \$	
1. 10% Annual Construction Cost Increase	LS	1 3	34,202 / 3	3 34 202 13	0.30 \$	11,141120	1					
(Belance as of 3/31/19 - \$342,827.51)					1				1		#VALUE!	
9									1		#VALUE!	
1.T. CONTINGENCY			5 238,892 52	S 238.892.52	0.00 8	- 2	0.00 \$		0.00 \$	54		238,892.5
1. 10% Contingency	LS	1 3	230,092 02	2 720 Day 27	0.00 8		1				#VALUE!	
(Released upon certification of completion and receipt of Maintenance Bo	ulia)											\$0.0

\$0.00 \$0.00 \$0.00

NOTES:

1. 2014-09-24, Initial construction cost issued for Phase I Land Development Agreement.

MONTGOMERY TOWNSHIP BOARD OF SUPERVISORS

BOARD ACTION SUMMARY

Item # 7c.

CI	ID	I E /	\sim	г.
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Consider Construction Escrow Release 2 – 1274 Welsh Road-

PEMV Partners, LP - LDS 699

MEETING DATE:

February 8, 2021

BOARD LIAISON

Tanya C. Bamford, Chair

INITIATED BY:

Bruce Shoupe, Director of Planning and Zoning

BACKGROUND:

Attached is a construction escrow release requested by PEMV Partners, LP for 1274 Welsh Road as recommended by the Township Engineer.

The original amount of the escrow was \$810,086.09, held as Tri-Party Set Aside Agreement with Bryn Mawr Trust. This is the second release for this project and is in the amount of \$160,334.83. The new balance would be \$549,377.47.

ALTERNATIVES/OPTIONS:

Approve or not approve the construction escrow release.

RECOMMENDATION:

That this construction escrow be released.

MOTION/RESOLUTION:

MOTION to authorize a construction escrow release in the amount of \$160,334.83 as recommended by the Township Engineer for PEMV Partners, LP.

MOTION	 SECOND	



January 29, 2021

File No. 2018-01153-01

Carolyn McCreary, Manager Montgomery Township 1001 Stump Road Montgomeryville, PA 18936-9605

Reference:

PEMV Partners. LP - LD/S#699

Escrow Release 2

Dear Carolyn:

We have received and reviewed the Request for Escrow Release for the above-referenced project. This letter is to certify that the improvements noted on the enclosed escrow summary in the amount of \$160,334.83 have been completed. Please find enclosed a copy of our escrow calculations and the application for release of funds for your

Note the requested sidewalk and curb ramps were not included in this release. The sidewalk and ramps that have been installed to date are within the PennDOT ROW and have been escrowed with PennDOT and were not included in the escrow held by the Township.

Please be advised that these improvements will be subject to a final inspection prior to dedication and again at the end of the maintenance period. Any deficiencies will be required to be corrected by the developer.

Should you have any further questions or require any additional information, please do not hesitate to contact our office.

Sincerely,

James P. Dougherty, P.E. Senior Project Manager

Gilmore & Associates, Inc.

JPD/sl

Enclosure: Release of Escrow Form & Summary of Improvement Escrow Account (January 29, 2021)., Applicant's

Request (January 27, 2021)

cc: Bruce S. Shoupe, Director of Planning and Zoning

Doughuth

Marianne McConnell, Deputy Zoning Officer - Montgomery Township

Mary Gambino, Project Coordinator - Montgomery Township

Sean Kilkenny, Esq., Solicitor - Kilkenny Law

Drew Altringer - Pete's Express Carwash

Jeff Altringer - Pete's Express Carwash

Paul F. Boettinger, P.E., - T&M Associates

John Detweiler - RAM Construction

Damon Drummon, PE, PTOE - Gilmore & Associates, Inc.

Judith Stern Goldstein, ASLA, R.L.A. - Gilmore & Associates, Inc.

Brian Dusault, Construction Services Manager - Gilmore & Associates, Inc.

65 East Butler Avenue | Suite 100 | New Britain, PA 18901 | Phone: 215-345-4330 | Fax: 215-345-8606

RELEASE OF ESCROW FORM

James P. Dougherty, P.E.			Date:	01/2//2021
			-	
Senior Project Manager				
Gilmore & Associates, Inc.				
65 East Butler Avenue, Suite 100				
New Britain, PA 18901				
215-345-4330				
Development: Pete's Express Car Wash (1274	Welsh Rd) - LDS-	699	&A Project #: _	2018-01153-01
Release #: 2				
Keitast II.				
Dear Mr. Dougherty:				
This is an escrow release request in the amount	of \$164.834.83	Enclosed is a co	opy of our escrow	spreadsheet
	y1		1.5	•
with the quantities noted.				
ESCROW RELEASE REQUESTS ARE LIM	IITED TO ONE PE	ER MONTH.		
				01/00/2021
Ms. Carolyn McCreary			Date:	01/29/2021
Township Manager				
Montgomery Township				
1001 Stump Road				
Montgomeryville, PA 18936				
Dear Ms. McCreary:				
We have reviewed the developer's request for a	n escrow release. W	e therefore, recommen	id that \$160,3	
be released. These improvements will be subject	t to a final observati	on prior to dedication	and again at the	end of the
maintenance period. Any deficiencies will be re	quired to be correcte	ed by the developer.		
maintenance period. They deficiencies will be to	1	•		
	1/29/2021			
James P. Dougherty, P.E., Senior Project Manag	ger, Gilmore & Asso	ciates, Inc.		
Resolution #				
	N 20 10	T. D.		
WHEREAS, a request for release of escrow was		EMV Partners, LP		41
for Pete's Express Car Wash (1274 Welsh	Rd) - LDS-699	, in the amount of		, on the
representation that work set forth in the Land D	evelopment Agreem	ent to the extent has b	een completed an	d;
WHEREAS said request has been reviewed by	the Township Engin	eer who recommends	release of \$160,.	334.83
NOW THEREFORE BE IT RESOLVED by t	ne Board of Supervi	sors of Montgomery 1	ownship that we	do nereby authorize
release of \$160,334.83; in accordance	ce with the develope	r's request, and the of	ficers of the Tow	nship are
authorized to take the necessary action to obtain	release of said sum			
BE IT FURTHER RESOLVED that Township	records indicate that	escrow has been depo	osited via Tri-Part	y Set Aside Agreement
with Montgomery Township in total sum of	\$810.086.09	pursuant to a sign	gned Land Devel	opment
Agreement and that \$100,373.79	has previously been	released from escrow.	Therefore, the a	ction of the Board
	\$549,377.47	in escrow.		
Teleasing said sum leaves a new balance of				
MOTION BY:		VOT	E:	
SECOND BY:				
DATED:				
DELEVED BA				

Department Director

ESCROW RELEASE NO.: 2 DATE PREPARED: 29-Jan-2021

GILMORE & ASSOCIATES, INC PROJECT NAME:
DEVELOPER
ESCROW AGENT:
TYPE OF SECURITY:
Tri-Party Set Aside Agreement

TOTAL ENGINEPALEGAL (CASH ESCROW) \$ 45,000 00 TOTAL ADMINISTRATION (CASH ESCROW): \$ 5,000 00 MAINTENANCE BOND AMOUNT (15%): \$ 110,466,29 MONTGOMERY TOWNSHIP
TOWNSHIP NO. LDS-699
G&A PROJECT NO. 2018-01153-01
AGREEMENT DATE: 16-Dec-2019

ALL INTROVEMENT SECTION ACCOUNT	TOTAL	RE			
UMMARY OF IMPROVEMENT ESCROW ACCOUNT	COST	CURRENT	PRIOR	TOTAL	BALANCE
CONSTRUCTION ANNUAL 10% CONSTRUCTION COST INCREASE (Balance as of mm/ddy) = \$0.00)	\$ 736,441.90 \$ \$ 73,644.19	\$ 160,334 83 \$ - \$	\$ 100,373.79 \$ - \$ -	\$ 260,708 62 \$ \$	\$ 475,733.28 \$ \$ 73,644.19
CONTINGENCY (10%)	\$ 810,086.09	\$ 160,334.83	\$ 100,373.79	\$ 260,708.62	\$ 549,377.4

CONSTRUCTION ITEMS		UNIT	QUANTITY	COST		COST	CURRENT RE	EQUEST	PRIOR REG	UESTS	TOTAL REC		AVAILABLE FO	l release)
	photodel deliverable plan 4-75 are 5-1-50			COST		COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST
	SOIL EROSION AND SEDIMENT CONTROL						20		4.00	3,500.00	1.00 \$	3,500.00	s	
30.00	1 Construction Entrance	EA	1 \$			3,500 00	\$	850	1,00 \$		921 00 \$	7,828.50	\$	- 5
	2 12 inch Filter Sock	LF	921 \$			7,828.50	S	2000	921.00 5	7,828 50	604 00 \$	6,342 00	\$	- 6
	3 24 inch Filter Sock	LF	604 \$	10 50	S	6,342.00	\$	181	604.00 \$	6,342 00	13 00 \$	1,950,00	5	
	4 Filter Bag Inlet Protection	EA	13 \$	150 00		1,950 00	13.00 \$	1,950 00	5		1300 5	1,930 00	1,130 00 \$	169.5
	5 Temporary Seed Stockpile	SF	1,130 \$	0.15	5	169 50	5				5		5,480,00 \$	1,370 0
	6 NAG S75 Erosion Control Malting	SF	5,480 \$	0 25	\$	1,370.00	\$	3	3	26	5	- 33	1.00 \$	2,150 0
	7 Remove E&S Measures	LS	1 \$	2,150 00	5	2,150 00	S	: :::::::::::::::::::::::::::::::::::::	\$	*	•		1,00 3	2,100 0
В	EARTHWORK			07.007.00	•	97 207 00	0.20. \$	17,477,58	0.10 \$	8,738.79	0.30 \$	26,216 37	0.70 \$	61,171,5
	1 Site Excavation & Grading	LS	1 5	87,387.90	2	87,387 90	0.20 \$	(7,477,50	0 10 4	0,700,70				
0	STORMWATER	LF	25 \$	30.75	5	768.75	25.00 \$	768,75	s		25 00 \$	768,75	s	
	1 4 in HDPE	LF	510 \$			19,380.00	196.00 \$	7,448.00	314 00 \$	11,932 00	510.00 \$	19,380 00	\$	40
	2 15 in HDPE	LF	132 \$			5,808.00	132 00 \$	5,808.00	\$	4	132.00 \$	5,808.00	\$	
	3. 18 in_HDPE	EA	1 \$			4,000 00	1.00 \$	4,000.00	5	- 25	1 00 5	4,000 00	s	
	4 Outlet Structure	EA	12 \$.,		29,100.00	3.00 \$	7,275.00	9.00 \$	21,825 00	12 00 \$	29,100.00		- 8
	5 Type C Inlet	EA	1 \$			2,520.00	1.00 \$		\$	- 3	1 00 \$	2,520 00	\$	
	6 Storm Manhole	LS		110,000 00		110,000 00	1.00 \$	110,000,00	\$	90	1.00 \$	110,000.00		+
	7 Underground Detention Basin	EA	1 \$			1,500.00	\$	- 23	\$	9 (\$	5.0	1,00 \$	
	8 Flared End Section 9 Level Spreader	EA		11,875.00		11,875 00	s	181	\$		S	-	1,00 \$	11,875.0
D.S.I	SITE IMPROVEMENTS						544			40,000,00	960.0D \$	16,320.00	2.515.00 \$	42.755 0
	1 Concrete Curb, inc curb line sealing	LF	3,475 \$			59,075 00	s		960 00 \$	16,320 00	\$ 00.00	10,320.00	4.631.00 \$	
	2 15 in 95mm Wearing Course	SY	4,631 \$			41,679.00	\$		\$	40 000 00	780.00 \$	13,260 00	1 551	
	3 in 25mm Binder Course	SY	4,631 \$			78,727.00	\$		780 00 S	13,260 00 8,775 00	780 00 S	8,775 00		
	4 6 in 2A Stone	SY	4,631 \$		100	52,098.75	5		780.00 \$	8,775 00	\$	0,775 00	103.00 \$	
	5 Concrete Pad (4,000 psi w/ fiber), inc. 6 inch 2A	SY	103 \$			10,300.00	s		\$	12	Š		3,747 00 S	
	6 Concrete Sidewalk (4,000 psi w/ fiber), inc. 4 inch 2A	SF	3,747 \$			28,102 50	s				5	- 3		10,500.0
	7 ADA/PennDOT Compliant Ramp, Inc. DWS	EA	7 \$	1,500 00	S	10,500.00	\$	5 ES	\$		*	56	150.18	
177	LIGHTING			0.500.00		20 000 02	\$		5	8.1	\$	93	8.00 \$	28,000 0
	 Pole Mounted Light w/Shield & Foundation 	EA	В \$			28,000.00	\$		\$		S		6 00 \$	30,000.0
	2 Double Pole Mounted Light w/Shield & Foundation	EA	6 S			30,000,00	\$		s	100	\$	- 3	1 00 \$	2,000.0
	3 S4H Fixture (DeKalb Pike Egress)	EA	1 \$	2,000 00	\$	2,000 00	2	=1						
45	LANDSCAPING													
	Deciduous Trees	EA	8 5	650.00	5	5,200.00	\$	8 #0	S		\$	51	8 00 \$	
	Acer rubrum Bowhall' (3" cal. min.)	EA	13 5	377777		8,450.00	5		5	(2)	\$		13 00 \$	
	Ginkgo Bioba Princeton Sentry (3" cal. min.)	EA	6 5	100000000		3,900.00	5		S	1 1	S	**	6 00 \$	
	Gleditnia Triacanthos 'Skyline' (3' cal min.)	EA	9 5	1 (5555550)		5,850.00	5	- 41	s	7	\$		9 00 \$	
	Liquidambar Styraoflua 'Rotundiloba' TM (3" cal. min.)	EA	7 5			4,550.00	s		5	3 1	\$		7 00 \$	
	Quercus Palustris (3" cal. min.) Zelkova Serrata 'Green Vasa' (3" cal. min.)	EA	12 5	1 NEW YORK	1.7	7.800.00	8		S	-	S .		12 00 \$	7,800.0

ESCROW RELEASE NO.: 2

DATE PREPARED 29-Jan-2021

GILMONE & ASPOCIATES, INC.

EXECUTION OF THE SERVICES CAT Wash (1274 Welsh Rd)
DEVELOPER
ESCROW AGENT: Bryn Mawr Trust Company
TYPE OF SECURITY Tri-Party Set Aside Agreement MONTGOMERY TOWNSHIP
TOWNSHIP NO. LDS: 699
G&A PROJECT NO. 2018-01153-01
AGREEMENT DATE 16-Dec: 2019 TOTAL ENGANSPLEGAL (CASH ESCROW) \$ 45,000.00 TOTAL ADMINISTRATION (CASH ESCROW) \$ 5,000.00 MAINTENANCE BOND AMOUNT (15%): \$ 110,466.29

SUMMARY OF IMPROVEMENT ESCROW ACCOUNT	TOTAL	RE	20.3000			
JUMMARY OF IMPROVEMENT ESCROW ACCOUNT	COST	CURRENT	PRIOR	TOTAL	BALANCE	
CONSTRUCTION ANNUAL 10% CONSTRUCTION COST INCREASE (Balance as of mm/dd/yy = \$0.00)	\$ 736,441.90 \$ \$ 73,644.19	\$ 160,334.83 \$	\$ 100,373.79 \$	\$ 260,708.62 \$	\$ 475,733.28 \$ - \$ 73,644.18	
CONTINGENCY (10%)	\$ 810,086,09	\$ 160,334.83	\$ 100,373.79	\$ 260,708.62	5 549,377.4	

CONSTRUCTION ITEMS		UNIT	QUANTITY	UNIT		TOTAL	CURRENT RE	QUEST	PRIOR REQUESTS		TOTAL REQUESTS (Incl. current release)		(incl. current release)	
							QTY	COST	QTY	COST	DTY	COST	QTY	COST
_	Shrubs	II HAVE	1001.00	- Caraman							s	100	9.00 \$	855 00
i ii	Cornus Sericea Bailey (30 - 36 in ht.)	EA	9 5	95.00		655.00 665.00	3	8 1			5		7.00 \$	665 00
1.0	Fothergilla Gardenii 'Mt Airy' (30 - 30 in. ht.)	EA	7 \$	95 00				S 11.			5	1.4	97.00 \$	9,215.00
- II	Ilex Glatra 'Shamrock' (24 - 30 in ht.)	EA	97 S			9,215.00	3			\$ P	5		35.00 S	3,325 00
	10. Ilex Verticillata 'Sparkdeberry' (30 - 35 in. ht.)	EA	35 S	95.00		3,325.00	•	3	~		s	2.65	30.00 \$	2,850.00
	11 Ilex Virginica 'Henry's Garnet' (30 - 36 in. ht.)	EA	30 S			2,850.00	3				2	(2)	29 00 \$	2,755 00
	12. Taxus Canadensis (24 - 30 in. ht.)	EA	29 \$			2,755.00		3		- 4	\$	597	5.00 \$	475 00
	13 Viburnum Dentatum 'Chicago Luster' (30 - 36 in. ht.) Ornamental Grasses & Ground Cover	EA	5 \$	95.00	5	475.00	3		•					
		EA	6 5	15.00	5	90.00	\$	1911	5		\$	3.44	6.00 \$	90 00
	14. Calamagrostis X Acutifiora ' Karl Forester' (2 gal.)	EA	40 S			600.00	8	Sec. 1	\$	3-0	5	3.77	40.00 \$	600 00
	15. Hemerocallis X 'Stella De Oro' (1 gal.)	EA	45 S			675.00	5		\$	2	\$		45.00 \$	675 00
	15. Juniperus Conferta 'Ernerald Sea' (15 - 18 in. ht.)	EA	97 S			1,455.00	s	32	S		5	0.00	97 00 \$	1,455 00
	17 Liriope Muscari ' Big Blue' (1 gal.)	EA	100	13.00		1,455,00								
G.	MISCELLANEOUS										\$	48	1.00 \$	6,500.00
	1 Trash Enclosure	EA	U 8	6,500.00		6,500.00	3	- 39	į.	- 6	2	7.65	41 00 \$	10,250 00
- 33	2 Regulatory/Warning Signs	EA	41 S			10,250.00	3				5		1.00 \$	5.000.00
	3. Striping	LS	1 5	5,000.00		5,000.00	0 25 \$	3,087 50	0.15 \$	1,852.50	0.40 5	4,940.00	0.60 \$	7,410.00
-77	Construction Stakeout	LS	1.5			12,350.00	0 25		U 15 3	1,002.00	5.40 \$		1 00 \$	7,500 00
	S As-Built Plans	LS	7.5	7,500 00	s	7,500 00	3			_ `				.,
4	ANNUAL CONSTRUCTION COST INCREASE PER PA MPC 6	509(h)				- 1				- 1	\$		1.00 S	- 3
	1 10% Annual Construction Cost Increase	LS	1.5	40	\$	*	5	5.82	\$		3		1,00 \$	
	(Balance as of mm/dd/yy - \$0,00)					- 1								
(i) (i)	CONTINGENCY										\$		1.00 \$	73,644.19
W 55	1 10% Contingency	LS	1 5	73,844.19	\$	73,644 19	\$	546	\$		\$		100 4	10,044 10
- 77	Released upon certification of completion and receipt of Mainte	nance Bon	d)										L	

APPLICANT REQUEST 1/27/2021 SUMMARY OF IMPROVEMENT ESCROW ACCOUNT

DATE PREPARED: 6-May-2020

8 00 \$ 13.00 \$ 6.00 \$ 6.00 \$ 7.00 \$ 12.00 \$

GILMONE & ARROCIATES, INC. MONTGOMERY TOWNSHIP TOWNSHIP NO LDS 699 G&A PROJECT NO 2018-01153-01 AGREEMENT DATE; TOTAL ENGINEPIXEGAL (CASH ESCROW) \$ 45,000.00 TOTAL ADMINISTRATION (CASH ESCROW) \$ 5,000.00 PROJECT NAME: DEVELOPER: ESCROW AGENT TYPE OF SECURITY: TOTAL COST 726,441.90 SUMMARY OF IMPROVEMENT ESCROW ACCOUNT RELEASE REQUESTS BALANCE 730 441.80 TOTAL CURRENT CONSTRUCTIO ANNUAL 10% CONSTRUCTION COST INCREASE (Balance as of mm/dd/yy = \$0.00)
CONTINGENCY (10%) \$ 73,644.19 \$ 810,086.09 AVAILABLE FOR RELEASE CONSTRUCTION ITEMS CURRENT REQUEST PRIOR REQUESTS TOTAL REQUESTS COST QTY COST QTY COST SOIL EROSION AND SEDIMENT CONTROL 1 \$ 3,500 00 \$ 921 \$ 6.50 \$ 604 \$ 10.50 \$ 1,130 \$ 0.25 \$ 5,480 \$ 2,150.00 \$ 3,500 00 7,828 50 6,342 00 1,950 00 169 50 1,370 00 2,150 00 1 00 5 921 00 5 604 00 5 13 00 5 1,130 00 3 EARTHWORK 1.00 5 87-387-90 LS 1 \$ 87,387,90 \$ Site Excavation & Grading 87,387,90 25.00 \$ 768.75 510.00 \$ 19.390.00 132.00 \$ 5805.00 1.00 \$ 4.000.00 1.00 \$ 29.100.00 1.00 \$ 11.000.00 1.00 \$ 11.675.00 STORMWATER 25 \$ 30.75 \$ 510 \$ 38.00 \$ 132 \$ 44.00 \$ 1 \$ 4,000.00 \$ 12 \$ 2,520.00 \$ 1 \$ 1,500.00 \$ 1 \$ 1,500.00 \$ 1 \$ 1,875.00 \$ 1 768.75
19,380.00
5,808.00
4,000.00
29,100.00
2,520.00
110,000.00
1,500.00
11,875.00 LELEAGASSAS Outlet Structure
Type C Iniet
Storm Manhole
Underground Detention Basin
Flared End Section
Level Spreeder SITE IMPROVEMENTS
1. Concrete Cuth, Inc. curb line sealing
2. 1.5 in. 9.5 mm Wearing Course
3. 3 in. 25mm Binder Course
4.6 in. 2A Stone
5. Concrete Pad (4,000 pat w/ fiber), inc. 6 inch 2A
6. Concrete Sidewalk (4,000 pat w/ fiber), inc. 4 inch 2A
7. ADA/PennDOT Compliant Ramp, inc. DWS 59,075,00 41,679,00 78,727,00 52,098,75 10,300,00 69,075.00 41,879.00 76,727.00 62,998.75 10,303.00 28,103.50 10,500.00 LIGHTING

1 Pote Mounted Light w/Shield & Foundation

2 Double Pote Mounted Light w/Shield & Foundation

3 SAH Fedure (DeKatb Pike Egress) 8 \$ 3,500.00 \$ 6 \$ 5,000.00 \$ 1 \$ 2,000.00 \$ 28,000.00 30,000.00 2,000.00 LANDSCAPING
Deciduous Trees

1. Acer rubrum 'Bowhall' (3' cel. min)
Ginkgo Blobbo "Princeton Santry (3' cel. min)
Gloditale Triecanthoe "Skyline" (3' cel. min)
Liquidames Flyerdine Robundiobe "TM (3' cel min)
Cuercus Palustris (3' cel. min)

APPLICANT REQUEST 1/27/2021

Zelkova Serrala 'Green Vane' (3" cal min)

APPLICANT REQUEST 1/27/2021 SUMMARY OF IMPROVEMENT ESCROW ACCOUNT

GILNORE & ASSOCIATES, INC.	- 10 '9K')	e e e	SEL.		A sum	PPLIC MARY C	OF IMPROVEMEN	EST 1/27/2021 FESCROW ACCOUNT ATE PREPARED: 6-May-2020
PROJECT RAME Spankles Xpress Car Wash DEVELOPER Pin Real Vantures, LLC ESCROW AGENT 1YPE OF SECURITY	TOTAL ADMIN	NSPILEGAL (CAS ISTRATION (CAS NANCE BOND AM	HESCROW: \$	45,000 00 5,000 00 110,465 29				MONTGOMERY TOWNSHIP NO: LDS-694 A PROJECT NO: 2018-01153-0 REEMENT DATE:
SUMMARY OF IMPROVEMENT ESCROW ACCOUNT		TOTAL		URRENT	RELEASE REC	UESTS RIOR I	TOTAL	BALANCE
CONSTRUCTION COST INCREASE (Balance as of mm/ddys \$ 0,00) CONTINGENCY (10%)		\$ 736,441.50 \$ 73,644.19	\$ \$ \$	Unnerti	5 5 3		5	\$ 736,441.90 \$ \$ 73,644.19
TOYAL		\$ 610,000.00	5	- 4.	- 1		- 5 .	\$ 510,066.09
CONSTRUCTION ITEMS UNIT QUANTITY	COST	COST	GUARENT RE	COST	PRIOR REQU	STS COST	TOTAL REQUESTS (Incl. current release) QTY COST	AVAILABLE FOR RELEASE (Incl. current release) QTY COST
Charles								

CONSTRUCTION ITEMS	UNIT	QUANTITY	COST	COST	CURRE	IT REC	DUEST	PRIOR	REQU	ESTS	(Incl. current		(Incl. current	
			uuu i	COST	QTY		COST	QTY		CDST	QTY	COST	QTY	COST
Shrubs						_			9		960		(@)	855.00
7 Cornus Sences Barley (30 - 36 in. ht.)	EA	9 5				2	13			523		53	9 00 \$	
8. Folhergille Gerdenii 'Mt Airy' (30 - 36 in ht.)	EA	7 \$				\$	4		5	245	\$	- 6	7.00 \$	665,00
9 Ilex Glabra 'Shamrock' (24 -30 in. hl.)	EA	97 🖠		\$ 9,215.00		5	- 12		3	- 1	5		97,00 \$	9,215 00
10 Ilex Verticillata 'Sparkfeberry' (30 - 36 in. ht.)	EA	35 1		\$ 3,325.00		1	7.5		3	- 11			35 00 5	3,325,00
11 Itex Virginica 'Henry's Gamet" (30 - 36 in ht)	EA	30 1				5	- 4		5	E+31	\$	-	30.00 \$	2,850 00
12 Taxus Canadensis (24 - 30 in ht.)	EA	29 1					9		5				29.00 \$	2,755 00
13 Viburnum Dentelum 'Chicago Lueter' (30 - 36 in ht.) Ornamental Grasses & Ground Cover	EA	5 \$	95 00	475 00		3	27		\$	52.			5 00 \$	475,00
14. Calamagrostis X Acutiflora ' Karl Forester' (2 gal.)	EA	6 \$	15.00	\$ 90.00		\$	- 6		\$	2+3	2	100	6 00 \$	90,00
15 Hemerocallis X 'Stella De Oro' (1 gal)	EA	40 \$	15.00	\$ 800.00		S	- 3		5	727	\$		40,00 \$	600.00
16 Juniperus Conferte 'Ernerald Sea' (15 - 18 in, ht.)	EA	45 \$	15 00	\$ 675.00		S	- 6		\$	2.60	\$	4.0	45.00 \$	675.00
17 Lirlope Muscari ' Big Blue' (1 gal)	EA	97 \$	15.00	\$ 1,455.00		2	- 1		\$	3,67	\$		97,00 \$	1,455,00
MISCELLANEOUS							- 1			- 0			2.0	
1. Trash Enclosure	EA	1 \$	6,500.00	\$ 6,500.00		\$	24		S	.897		100	1 00 \$	6,500 00
2 Regulatory/Warning Signs	EA	41 \$	250 00	\$ 10,250.00		\$	100		\$	>-0.1	3		41.00 \$	10,250 00
3 Striping	LS	1 \$	5,000.00	5,000.00		\$	1.0		\$		1		1.00 \$	5,000,00
4. Construction Stakeout:	LS	1 \$	12,350 00	\$ 12,350.00	25 54	\$ 1	37 50		\$:	12 20	5	100	1,1:00	12,350,00
5 As-Built Plans	LS	1 \$	7,500.00	7,500 00		s			\$	39	\$	- 6	1.00 \$	7,500,00
ANNUAL CONSTRUCTION COST INCREASE PER PAIMPC	4509(b)						- 1			- 1			1	
1 10% Annual Construction Cost Increase	LS	1 \$		\$		\$			5	270	5		1,00 \$	
(Balance as of mm/dd/yy - \$0 00)														
CONTINGENCY					7	681	30,74						100.0	73,644.18
1 10% Conlingency	LS		73,644 19	\$ 73,644.19		2	7		8		\$	- 53	100 \$	73,044,18
(Released upon certification of completion and receip of Maint	cenance florid	n												

APPLICANT REQUEST 1/27/2021

Page 2 of 2

1/27/2021

MONTGOMERY TOWNSHIP BOARD OF SUPERVISORS

BOARD ACTION SUMMARY

Item #8

SUBJECT: MEETING DATE: BOARD LIAISON: INITIATED BY:	Consider Resolution Setting Volunteer Firefighter Stipend for 2020 February 8, 2021 Tanya C. Bamford, Chair Carolyn McCreary, Township Manager
The annual stipend	oved a First Responder Recruitment and Retention Stipend program in 2018 program is incorporated in the 2021 budget. In order to proceed with unteers, the Board of Supervisors would need to approve the attached
	meeting of the Board of Supervisors the board acknowledge the written ning Qualified Active Member status, which was a prerequisite of the
The FDMT submitte	d the qualified active members for 2020, which is 30 volunteers.
<u>PREVIOUS BOARD A</u> None.	<u>.CTION</u> :
	has been incorporated in the 2021 budget. With 30 qualified members and e payment to the FDMT would be \$15,000.00
RECOMMENDATION To approve the 202	<u>N</u> : O First Responder Recruitment and Retention Stipend.
MOTION/RESOLUTI	<u>ON</u> :
See attached.	
MOTION BY:	SECOND BY:

а

RESOLUTION #2021-

WHEREAS, The Montgomery Township Board of Supervisors created a First Responder Recruitment and Retention Stipend to incentivize volunteer first responders who are Township Residents; and

WHEREAS, Township staff has created and developed an incentive program that allows for a lump sum distribution per "Qualified Active Member" in a local fire company or EMS squad; and

WHEREAS, a Qualified Active Member is a candidate that must be a resident of Montgomery Township during the qualifying eligibility period of January 1st through December 31st ('Eligibility Year") and who has met criteria established by his/her fire company/EMS squad for meeting "Active Member" status during the Eligibility Year; and

WHEREAS, each fire company or EMS squad must provide to the Township by January 31st of each year a certified, notarized list of Qualified Active Members; and

WHEREAS, each fire company or EMS squad must establish written qualifying criteria for achieving Active Member status and submit it to the Township by December 31st of each year and each fire company or EMS squad must determine the Qualified Active Member status of all its members which will then be certified and notarized by January 31st of each year; and

WHEREAS, the Township must vote to approve each fire company's or EMS squad's written criteria for determining Qualified Active Member status by December 31st of each year, and must vote to accept the certified and notarized list of Qualified Active Members by January 31st of each year; and

WHEREAS, the Township shall issue one lump-sum check to each fire company or EMS squad representing the First Responder Recruitment/Retention Stipend calculated in the amount of \$500.00 per Qualified Active Member in place by the fire company or EMS squad on the list accepted by the Township, and shall issue First Responder Recruitment/Retention Stipend within the first quarter of the year following the Qualifying Year; and

WHEREAS, the Township shall annually pass a resolution before the end of the year, setting the terms and conditions for the First Responder Recruitment and Retention Program, as well as setting the monetary amount per Qualified Active Member;

NOW THEREFORE BE IT RESOLVED that the Montgomery Township Board of Supervisors approves, by adoption of this resolution, responder recruitment and retention stipend for volunteer first responders.

MOTION BY:	
SECOND BY:	VOTE:
DATE:	

CC: B. Shapiro, W. Wiegman, VMSC, Resolution File

MONTGOMERY TOWNSHIP BOARD OF SUPERVISORS

BOARD ACTION SUMMARY

Item # **9**

SUBJECT:	Consider Authorization to Accept Quote for Engineering Services – Traffic Signal
MEETING DATE:	January 25, 2021
BOARD LIAISON:	
INITIATED BY:	Carolyn McCreary, Township Manager
BACKGROUND:	
intersections of the I Go grant, which w Additionally, the Tow	tal Investment Plan (CIP) is the anticipated work on the traffic signals at the Montgomery Mall with Route 309. The Township was awarded a Green Light ill be used to offset the cost to make these necessary improvements. Inship has received notification from PennDOT of the need to inspect all traffic aluation will be utilized to prioritize signal upgrades in the CIP.
PREVIOUS BOARD AC	CTION: None
BUDGET IMPACT:	
The 2021 adopted bu	udget includes funds specifically designated for this project.
RECOMMENDATION	;
Authorize acceptanc	e of the quote for services.
MOTION/RESOLUTIO	<u>DN</u> :
	ne proposal from Gilmore & Associates dated $01/27/21$ in the amount of engineering services related to the modernization of the Route 309 & affic signals.
Motion by:	Seconded by:

January 27, 2021

File No. 2020-12014

Carolyn McCreary, Township Manager Montgomery Township 1001 Stump Road Montgomeryville, PA 18936-9605

Reference:

Proposal for Professional Services for

Modernization of Route 309/Montgomery Mall Traffic Signals

Dear Ms. McCreary:

Pursuant to your request, Gilmore & Associates, Inc. is providing a scope of work and fee proposal to prepare construction plans and documents for the modernization of the two signalized intersections of Bethlehem Pike (SR 0309) & Montgomery Mall South Access Drive and Bethlehem Pike (SR 0309) & Montgomery Mall North Access Drive. Improvements will include installing new mast arms, traffic signal heads, video detection, emergency pre-emption, and battery back-up.

The scope of work to prepare construction plans and documents for this project includes the following:

- Task 1 Existing Conditions Survey
- Task 2 Design and Permitting
- Task 3 Construction Documents and Specifications
- Task 4 Public Bid Support & Review
- Task 5 Construction, Observation, Signal Inspection and As-Built Plans

SCOPE OF WORK AND FEE PROPOSAL

TASK 1 - Existing Conditions Survey

This task includes limited topographic survey at the two intersections to verify existing conditions of the project area and to locate utilities in order to minimize potential conflicts during construction. This information will be used to prepare a base plan for the construction plans.

TASK 2 - Design and Permitting

This task includes the following:

- a. Obtain Traffic Counts at the intersections of Bethlehem Pike (SR 0309) & Montgomery Mall North Access Drive and Bethlehem Pike (SR 0309) & Montgomery Mall South Access Drive. It is assumed a vehicular count will be conducted from 7:00AM to 7:00PM on a typical weekday and 11:00AM to 3:00PM on a Saturday at the intersections.
- b. Attend one meeting with PennDOT and the Township to discuss the proposed improvements.
- c. Prepare Traffic Signal plans, PennDOT Permitting and supporting documentation.
- d. Prepare plans for Highway Occupancy Permit (HOP) at the intersection of Bethlehem Pike (SR 0309) and Montgomery Mall Northern Access Drive/ Airport Square North Jug-handle.

TASK 3 - Construction Documents and Specifications

Task 3 includes preparation of the bid documents, which will consist of the contract documents (e.g. Bid Form, Agreement, General Conditions, Supplementary Conditions, Prevailing Wage Rates, etc.) and the technical specifications. These documents will be specific to this project.

65 East Butler Avenue | Suite 100 | New Britain, PA 18901 | Phone: 215-345-4330 | Fax: 215-345-8606

TASK 4 - Public Bid Support & Review

Task 4 includes responding to bidder questions during the public notice period, attending a pre-bid meeting if determined to be needed, attending the bid opening, review and tabulation of the bids, and providing a recommendation with respect to potential award of a contract.

TASK 5 - Construction Administration, Observation, Signal Inspection and As-Built Plans

These tasks include oversight management of the work. The effort involved with construction observation is dependent upon the duration of the work and the level of oversight required by the Township. For the purposes of this proposal, we have assumed the duration of the work will be approximately 40 hours. Construction administration includes project management, coordination between the Township and contractor, and review and recommendations regarding payment requests. Also included are the pole spot inspection and two signal inspection meetings. An as-built signal plan will also be submitted to PennDOT, if needed.

Our proposed fee for these services outline above is not to exceed:

Task 1 - Existing Conditions Survey	\$10,000
Task 2 - Design and Permitting	\$45,000
Task 3 - Construction Documents and Specifications	\$8,000
Task 4 - Public Bid Support & Review	\$4,000
Task 5 - Construction, Observation, Signal Inspection and As-Built Plans	\$8,000

TOTAL - Not to Exceed

\$75,000

Should you find this scope of work and fee proposal acceptable, please let us know and we will commence work shortly thereafter. If you have any questions regarding the above, please contact this office.

Sincerely,

Damon Drummond, P.E., PTOE Senior Transportation Engineer

Damon Drummond

Gilmore & Associates, Inc.

DAD/las

Enclosure:

cc: Greg Reiff, Director of Public Works Jim Dougherty, P.E.

Leslie Salsbury, P.E.